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AFCRC-TR-60-134(II)

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ANTENNA CATALOG

Volume II

UNCLASSIFIED

GROUND ANTENNAS

(Title Unclassified)

ASTIA
MAY 24 1961
TISIA

October 1960

Prepared for

Electronics Research Directorate
AIR FORCE CAMBRIDGE RESEARCH LABORATORIES
Contract AF 19(604)-4101

by

GEORGIA INSTITUTE OF TECHNOLOGY
Engineering Experiment Station

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AFCRC-TR-60-134(II)

ANTENNA CATALOG

Volume II

GROUND ANTENNAS

(Title Unclassified)

October 1960

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INTRODUCTION

This publication is one of six catalogs produced in order to collect data on all types of military antennas in readily accessible form. The idea for such a collection originated with the Interservice Antenna Group (better known as ISAG). ISAG is an informal group from Air Force, Army, and Navy laboratories who meet periodically to discuss mutual antenna problems. With the endorsement of this group, funds were allocated by the Air Force and the Army, and the work was initiated under Air Force administration as Contract AF 19(604)-4101.

The specific responsibilities included the collection of electrical and mechanical data on all military antennas which had been assigned a Department of Defense nomenclature number. In addition, other antennas which were expected to receive a nomenclature number within a year were included along with selected industrial antennas.

The primary objective for the catalogs is to supply information which will facilitate the procurement of existing antennas and reduce duplication in antenna development. The design of duplicate antennas appears to be more widespread than would be expected. A review of these catalogs shows quite clearly that whips and other simple antennas have been redesigned repeatedly. Even the more complex antennas frequently duplicate earlier designs. Many factors influence the design, and many of the apparent duplications are unquestionably well justified. However, at least part of the time, redesign is a result of lack of knowledge about the existence of earlier models. It is hoped that these catalogs will greatly reduce the number of antenna duplications.

No matter how much information is given in a catalog, it will always be necessary to have additional data in order to determine the suitability of a particular antenna for a specific purpose. Thus, the catalogs will serve primarily as a guide to more complete reference material and to development agencies and manufacturers of antennas which may prove suitable for a new application.

The entire set of catalogs prepared under this contract is as follows:

Volume 1 - Missile Antennas (Secret): missile antennas of all types and all security classifications.

Volume 2 - Ground Antennas (Confidential)*: unclassified ground antennas.

Volume 3 - Ship Antennas - (Confidential)*: unclassified shipboard and buoy antennas.

Volume 4 - Aircraft Antennas (Confidential)*: unclassified airborne antennas.

Volume 5 - Confidential Ground, Ship, and Aircraft Antennas (Confidential): all confidential military antennas except those intended specifically for missile use.

Volume 6 - Secret Ground, Ship, and Aircraft Antennas (Secret): all secret military antennas except those intended specifically for missile use.

Antennas are listed as "ground", "ship", etc., according to available information about their installations. Hence, many antennas are listed in more than one volume. No attempt was made to make extra listings or cross references.

Antennas are identified by numbers or names. The most common identification number is the Joint Nomenclature System ("AN System"). It is explained in JANAP-196, and on the Communication-Electronic Nomenclature Subpanel's summary sheet A 56190. Many Navy antennas were assigned Navy numbers such as Mark 25, Mod 6A; 66010; 69001; and 66ABL. Navy Model designation is described in the Navy Stock List of the Electronics Supply Office, Bureau of Ships Section - Part III. The catalogs omit manufacturer identification letters which precede Navy numbers. A third major type of identification consists of manufacturers' designations. As a group, the manufacturers' identifications can be considered arbitrary. Manufacturers' antennas are grouped together at the back of the text.

Each catalog consists of a collection of data arranged in order of nomenclature number, and an appendix with five separate indexes. Indexes are provided for stock number, antenna type, associated equipment, function of associated equipment, and frequency. The antenna types and the functions of associated equipment are defined in the sections immediately following this introduction.

In both the text and the indexes the identifying numbers are arranged first of all in alphabetical order and secondly in numerical order. Thus, 66AWG precedes 66010, but both numbers are preceded by AS-307. The indexes were prepared by machine. Because of complications in programming the computer, ordering in the index is accomplished with the characters justified from the left. Thus, in the index the AS-3 is followed by the AS-355 before the AS-4 is given.

In the Department of Defense nomenclature system, many antennas are given a number as a simple antenna, but they are part of a more complex system. In most such cases, the antenna is cross-referenced from its basic number to the nomenclature number for the system with which it is associated, e.g., antenna AT-178/APS-42 is cross-referenced to the AS-428(*)/APS-42.

*The volumes of unclassified antennas are classified as "confidential" because they contain a large collection of data on defense systems. Consequently, although each page of Volumes 2, 3, and 4 (except in the indexes) is unclassified, the publications themselves are classified.

Several types of equipment have antenna-type nomenclature numbers even though they do not fit our definition of antennas. Most notably, sonar transducers and antenna simulators used in training devices have such numbers. Equipment of these types are not included in the catalogs.

Originally, it was planned to eliminate all "obsolete" antennas from these catalogs. However, as the work progressed it was found that some antennas which are declared obsolete in a publication from one military service are still in use in other services. In fact, some cases were observed in which it appeared that antennas were still being procured by one military service even though they were declared obsolete by another. Consequently, very little consideration was given to a statement that an antenna is obsolete. An additional reason for including such antennas is the fact that although an antenna may be obsolete for one purpose, all or part of it may be useful in another application.

The information recorded in these catalogs has come largely from Department of Defense publications. In some cases, reports or other authoritative information were unavailable on certain antennas and the Department of Defense nomenclature cards were used. Other information sources include military antenna catalogs, personal interviews with employees of the Department of Defense and correspondence with antenna manufacturers. Each of these sources have contributed substantially to the information recorded. The references cited at the end of each antenna section generally give sources of additional information about the antenna. An attempt was made to list the most authoritative sources of information used in compiling the data, as well as any documents which present conflicting data. If conflicting data could be resolved by logical considerations, no comment was made in the catalogs. When no reason for preference of one choice was obvious, the fact was noted.

No specific date can be set as the cut-off date for data included in these catalogs. In August 1960, a final survey was made of nomenclature cards which had been issued in the categories AS, AT, and OA. At the same time a review was also made of applications for nomenclature numbers in these same categories. Unfortunately, 100 confidential and 25 secret nomenclature cards were identified, but copies have not yet been forwarded to this project. Most information which was collected directly from manufacturers was supplied during the spring of 1960. A considerable portion of the missile information was obtained directly from development people concerned with the electronic equipment for the missiles. Much of this information was collected late in the summer of 1960.

The Department of Defense nomenclature cards have proved very helpful in the preparation of these catalogs. However, they have also proved to be the most frequent source of unclear descriptions and incorrect data. It seems extremely desirable for project officers who are responsible for the submission of the nomenclature applications to go to greater lengths to assure the correctness of the information. In many cases, it seems that the antenna nomenclature cards were written by individuals who were not familiar with antennas.

It should be noted that frequency, range, and some of the other data given for individual antennas actually represent characteristics of the associated equipment rather than characteristics of the antennas.

The information compiled on missile antennas is considerably less complete than that given in the other volumes. There are four main reasons. In the first place, because missile work is generally fluid and developmental in nature, there frequently is no assurance that the antenna cited is a production item rather than a development item. A further consequence of the fluid state of missile work is that documentation is often incomplete or nonexistent. In addition, missile antennas are usually an integral part of the missile itself. The performance of an antenna in one missile will be quite different from its performance in another missile. Finally, missile people are extremely reluctant to release information about their equipment.

A very large proportion of the information desired for review during the preparation of these catalogs was not available. Also, it is noted that a fairly large number of antennas -- probably about 200 -- are developed or modified each year. Thus, it would seem desirable for some organization to undertake the compilation of a catalog of antennas annually, while the information is still accessible. Such a compilation probably should show both antennas which have been developed and antennas which have gone into production. Apparently, there is little interest in military circles for such a compilation at the present time. However, the authors of these catalogs believe that such reports would reduce the time required for the acquisition of critical equipment, and they would provide current information regarding antennas under development.

Many individuals have made substantial contributions to the preparation of these catalogs. However, Mr. J. L. Allen and Mr. D. F. Eagle deserve to be singled out for their efforts in the preparation of this information. Other people who have made major contributions are P. T. Hutchison, S. T. Alford, E. N. Bone, A. P. Jensen, S. G. Baxter, D. T. Paris, J. G. Holey, T. A. Lewis, C. C. Boykin, J. J. Curtis, R. E. Moseley, M. E. Blair, F. W. Woodside, and J. T. Dawson. Also, Mr. R. L. Passow of H. R. B. Singer provided many illustrations and data. Finally, it is appropriate to extend special thanks to Mr. C. E. Ellis, CRRDM, Air Force Cambridge Development Division, who has been project officer for this project.

EQUIPMENT FUNCTION

Most antennas can be used with equipments which perform many different functions. Often, however, an antenna is best known in terms of the equipment with which it is associated. The functions of equipments used with the antennas listed in this catalog can be described by one or more of the terms defined below. These terms are used throughout the catalog and an equipment function index will be found in the appendices.

The coverage of this catalog is restricted to electronic equipment. Sonic, infrared, and optical devices are not included, even those with "antenna" nomenclature numbers.

Altimeter: A term for electronic devices that determine altitude by measuring the time required for radio energy to travel from an aircraft or space vehicle to the earth and back; both pulse techniques and frequency modulation are used.

Approach Control: This term includes the following types of landing systems:

A. Beam approach systems that usually consist of localizer and glidepath beams, and marker beacons, all of which operate independently of the aircraft. Approach information is analyzed on the aircraft. Pulse and CW techniques are used.

B. Surface-controlled approach systems that usually consist of a search radar system, a precision radar system (azimuth and elevation), and a communication system, all located on the surface. Approach data is analyzed on the surface and directions are relayed to the aircraft.

C. Beacon approach systems that usually consist of localizer and glide-path beams which operate only when interrogated by an aircraft.

Beacon: A generic term used when the term "IFF" or "Radar, Beacon" is not applicable and the device in question is not a part of a navigation system. The term, when used, refers to devices that radiate signals, which can be used to identify and/or locate the point from which the signal originated; e.g., a device aboard a pilotless carrier that transmits a signal to a remote installation to aid in tracking the pilotless carrier.

Bombing: A term for equipments used for locating targets, determining an appropriate course for the bomb run, and determining the bomb-release point.

Carrier Control Approach (CCA): See "Approach Control".

Combat Information Center (CIC): See "Search, Air", or "Search, Surface".

Communications: Self-descriptive.

Countermeasures: A generic term used only when one of the more specific terms for countermeasures functions cannot be used. The term refers to devices that in some manner deal with enemy signals.

Countermeasures, Deception: A term for devices used to mislead the enemy; e.g., a device that produces a spurious response in an enemy radar system.

Countermeasures, Direction Finding: A term for devices that determine the directions of arrival of enemy signals.

Countermeasures, Homing: See "Countermeasures, Direction Finding".

Countermeasures, Jamming: A term for devices used to jam enemy electronic equipment.

Countermeasures, Monitoring: A term for devices whose function is passive detection and/or intelligence monitoring of enemy signals.

Countermeasures, Search: A term for devices used to detect enemy signals, but not make bearing determination.

Direction Finding: A generic term used only when a more specific term ("Countermeasures, Direction Finding" or "Navigation, Direction Finding") cannot be used.

Dummy Load: Not included in the catalog. The term refers to circuit elements that are used to simulate the loading effect of an antenna.

Early Warning: See "Search, Air".

Fire Control: A term for devices used for gun laying and associated functions, including aircraft interception (AI).

Ground Control Approach (GCA): See "Approach Control".

Ground Control Intercept (GCI): See "Search, Surface" or "Search, Air" and "Height Finding".

Guidance: A generic term used only when a more specific term ("Guidance, Command" or "Guidance, Passive Homing", for instance) cannot be used. The term refers to devices that direct and regulate pilotless carriers.

Guidance, Active Homing: A term for the devices that comprise pilotless carrier homing systems for which the equipment for illuminating and perceiving targets and for computing the control signals are all located on the pilotless carrier.

Guidance, Beamrider: A term for the devices that comprise pilotless carrier guidance systems for which the equipment for illuminating, perceiving and tracking the target are externally located; i.e., surface installations or "mother" vehicles. The pilotless carrier detects its position relative to the radar beam tracking the target and computes control signals to keep itself centered in the beam.

EQUIPMENT FUNCTION (Continued)

Guidance, Command: A term for devices that comprise pilotless carrier guidance systems in which externally derived control signals are relayed to the pilotless carrier. See also "Guidance, Quasi-Active Homing".

Guidance, Passive Homing: A term for the devices that comprise homing systems for pilotless carriers that home on a source of energy originating at the target. The detection equipment and the control-signal computing equipment are located on the pilotless carrier.

Guidance, Quasi-Active Homing: A term for the devices that comprise pilotless carrier homing systems for which the equipment for illuminating the target is located on the pilotless carrier, and the equipment for perceiving the target and for computing control signals is externally located; i.e., surface installations or "mother" vehicles. The computed control signals are relayed to the pilotless carrier.

Guidance, Semi-Active Homing: A term for the devices that comprise pilotless carrier homing systems for which the equipment for illuminating the target is externally located; i.e., surface installations or "mother" vehicles, and the equipment for perceiving the target and computing the control signals is located on the pilotless carrier.

Guidance, Surface Reference: A term for the devices that comprise pilotless carrier guidance systems which utilize the technique of comparing the relative position of the pilotless carrier to a number of fixed surface transmitters; e.g., Loran guidance.

Gun Laying: See "Fire Control".

Height Finding: A term for radar systems that are used to determine the relative height of an airborne object with respect to the antenna for the system. If the height finder is a part of a surface-controlled approach system, see "Approach Control".

IFF ("Identification, friend or foe"): A term for systems utilizing coded-beacon techniques to distinguish between friendly and unfriendly units.

Meteorological Measurement: A term for devices used to measure meteorological parameters; e.g., wind velocity or temperature.

Navigation: A generic term used only when a more specific term ("Navigation, Direction Finding" or "Navigation, Surface Reference")cannot be used.

Navigation, Direction Finding: A term for direction finding devices that are used to determine the relative bearing of a transmitter from the vehicle on which the device is located.

Navigation, Glide Path: See "Approach Control".

Navigation, Homing: See "Navigation, Direction Finding" if the device is for use by a piloted carrier. If the device is for use by a pilotless carrier, see the guidance term which is applicable; e.g., "Guidance, Active Homing".

Navigation, Localizer: See "Approach Control".

Navigation, Loran: See "Navigation, Surface Reference" if the device is used by a piloted carrier See "Guidance, Surface Reference" if the device is used by a pilotless carrier.

Navigation, Marker Beacon: See "Approach Control" if the device is a part of a landing-control system; otherwise, see "Navigation, Surface Reference".

Navigation, Radio Range: See "Navigation, Surface Reference".

Navigation, Shoran: See "Navigation, Surface Reference" if the device is for use by a piloted carrier. See "Guidance, Surface Reference" if the device is for use by a pilotless carrier.

Navigation, Surface Reference: A term for the devices comprising navigational-aid systems in which reference signals are broadcast from surface installations to be utilized by properly equipped vehicles. Examples of this type of system are Loran, Shoran, VOR, TACAN, and marker beacons, when they are not used in "Approach Control" systems or in pilotless carrier guidance systems.

Navigation, TACAN: See "Navigation, Surface Reference".

Navigation, VOR: See "Navigation, Surface Reference".

Radar Beacon: A term for devices that, upon reception of suitable interrogating signals, automatically respond with another signal.

Radar, Fighter Intercept: See "Fire Control".

Radar, Final Approach: See "Approach Control".

Relay: See "Telemetering".

Remote Control: A term for devices used in controlling remote items of equipment. See "Guidance" or a subdivision of "Guidance" for devices used in pilotless carrier guidance systems.

Search: A generic term used only when "Search, Air" or "Search, Surface" cannot be used.

Search, Air: A term for devices used for airborne-target detection and location.

Search, Surface: A term for devices used for surface-target detection and location.

Sounding: See "Meteorological Measurement".

Speed Indicator: Self-descriptive.

EQUIPMENT FUNCTION (Continued)

Tail Warning: A term for devices used specifically to detect objects approaching an airborne vehicle from the rear.

Telemetering: A term for devices which involve measuring and/or processing and transmitting data to a remote point; e.g., a system that measures fuel consumption for a pilotless carrier and transmits the information to a remote installation for evaluation.

Television: Self-descriptive.

Test: Self-descriptive.

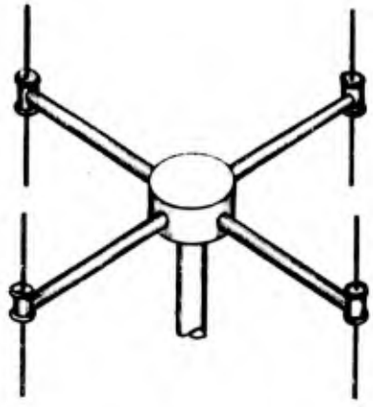
Tracking: A generic term used only when a more specific term; e.g., "Fire Control", cannot be used. The term, when used, refers to devices used for "continuously" determining the position of moving objects (usually missiles or satellites).

Training: Self-descriptive.

ANTENNA TYPES

The terminology used to identify various types of antennas is, to say the least, not standardized. To avoid confusion, the terms used in this catalog are listed and defined below. An index of antenna types will be found in the appendices.

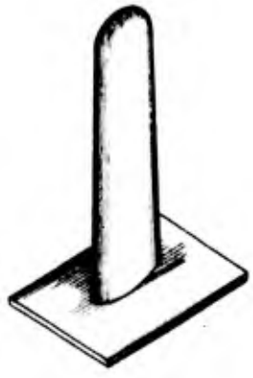
Adcock: The Adcock, in its simplest form, consists of a rotating assembly composed of a pair of vertical elements separated by one-half wavelength or less, and connected in phase opposition to produce a radiation pattern having the shape of a figure-of-eight. Variations of the basic Adcock technique include fixed crossed-Adcocks with goniometers and multielement Adcocks (4, 8, or even 16 vertical elements). The "sense" of the bearing may be resolved by an associated nondirectional antenna in the system.



Amplitude Modulating: The amplitude modulating antenna is a narrow aperture antenna configuration consisting of a stationary, vertical element about which a reflector is rotated at high speed. The reflector may be either a multielement parasitic one or a continuous sheet. The rotating reflector amplitude modulates the received signal at the rotation frequency. The resulting rotating horizontal radiation pattern is essentially cardioid in shape.

Biconical: See "Conical".

Blade: A streamlined stub. See also "Stub".

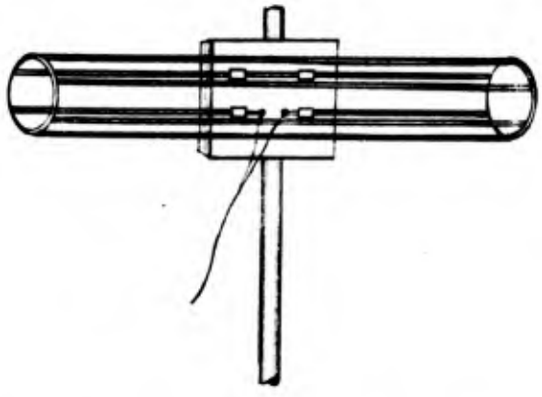


Bow Tie (or butterfly antenna): A dipole antenna having flat triangular-shaped radiating elements.

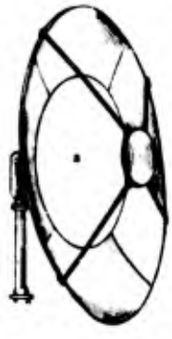


Broadside Array: An antenna array whose maximum radiation is approximately perpendicular to the axis or plane of the array.

Cage Dipole: A broadband dipole in which the radiating elements are arranged in a cylindrical fashion and connected at their ends (i.e., an extension of the folded dipole principle) with one of the elements fed at its center.



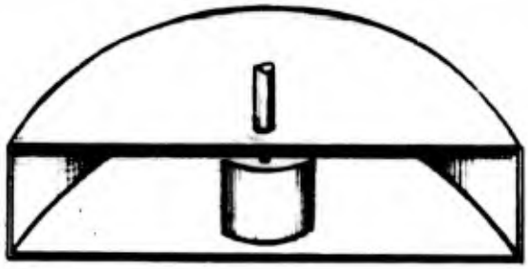
Cassegrainian: An antenna consisting of a small convex hyperboloidal reflector mounted in front of a large concave paraboloidal reflector with the primary feed located behind the paraboloidal reflector. This arrangement effectively increases the focal length of the paraboloidal reflector.



ANTENNA TYPES (Continued)

Cavity: Refers to a cavity-backed slot. See "Slot".

Cheese: A parabolic-cylinder reflector enclosed by two parallel plates mounted perpendicular to the cylinder and spaced so that propagation in more than one mode is possible in the desired direction of polarization. See also "Pillbox" antenna.



Circular Array: An antenna array composed of vertical radiators arranged in concentric circles. Directivity can be controlled by space phasing of the elements or by adjusting the phase of the excitation currents.

Coaxial Dipole: See dipole.

Collinear Array: An antenna array in which the elements of the array are arranged end-to-end along the same line.

Conical: A broadband antenna in which the driven element(s) is conical in shape. Many varieties of conical antennas exist; examples are discone, collinear biconical, and "V" biconical antennas.

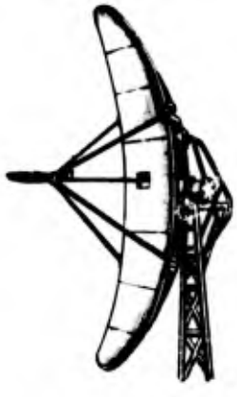


Corner Reflector: A reflector consisting of flat conducting sheets (or grids of parallel conductors) intersecting at an angle or corner. Dihedral corners are commonly used for transmitting and receiving; trihedral and tetrahedral cornors are frequently used to increase radar cross sections.



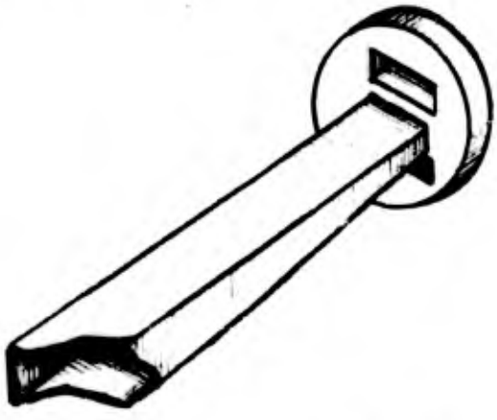
Counterpoise: A network of wires extending outward from the base of an antenna and suspended above and usually insulated from the earth. The antenna is "grounded" to the counterpoise (artificial ground) instead of the earth (used especially when the antenna is located over ground of poor conductivity). When soil of relatively good conductivity is available, a similar arrangement of wires is sometimes buried beneath the antenna to improve the ground connection.

Cut Paraboloidal Reflector: A reflector formed in the shape of a section cut from a paraboloid of revolution. The term "orange peel" is often applied to this type of reflector.

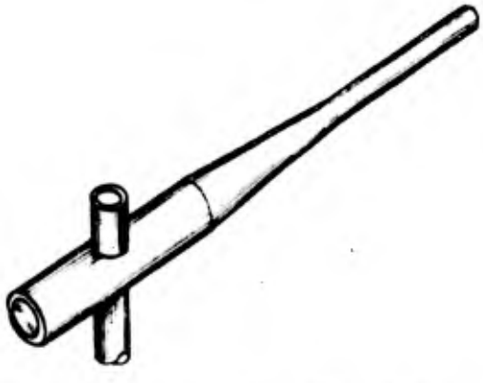


ANTENNA TYPES (Continued)

Cutler: The Cutler feed is a waveguide dual-aperture rear feed which essentially splits the energy in the waveguide into two branches that are folded back on themselves so that the energy is radiated towards the reflector from two slots.

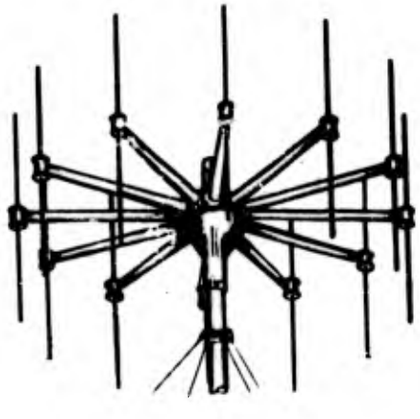


Dielectric Rod: An end-fire directional dielectric antenna consisting of a dielectric rod (usually tapered) fed from a section of waveguide.



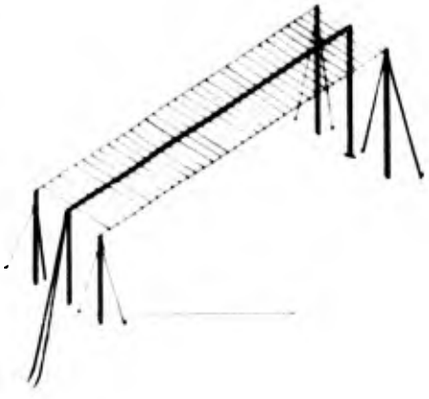
Dipole (or doublet): A linear radiator, usually fed at the center, producing a maximum of radiation in a plane normal to its axis.

Doppler: An antenna which possesses the equivalent of a moving antenna of some form of simulation of this antenna motion by the rapid sequential switching of fixed antenna elements. The Doppler is usually a medium aperture antenna (1 to 5λ).



End-Fire Array: An antenna array whose maximum radiation is approximately along the axis of the array.

Fishbone: An antenna composed of a series of coplanar elements arranged in collinear pairs and loosely coupled to a balanced transmission line.



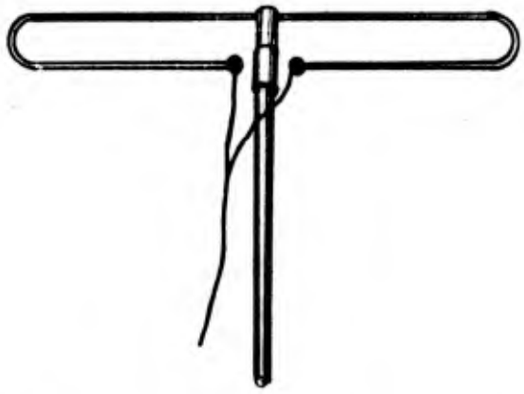
Flat-Screen Reflector: A flat reflecting surface; the surface may be of the continuous, slotted, or mesh type.

Flat Top: The flat-top antenna is a low-frequency antenna utilizing a folded top to increase the effective length of the vertical radiator from which the principle radiation occurs.



ANTENNA TYPES (Continued)

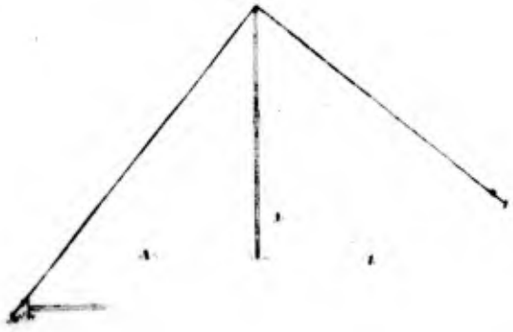
Folded Dipole: An arrangement of two or more parallel, closely spaced, radiating elements connected at their ends with one of the elements fed at its center. It gives an increased bandwidth and a higher impedance than a single dipole element.



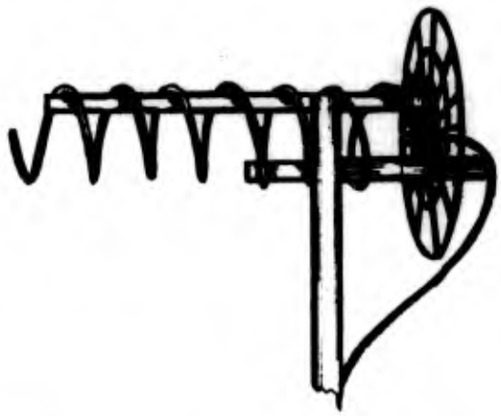
Ground Plane: An antenna (e.g., a stub) with a self-contained ground plane. The ground plane may take many forms; e.g., a number of radial rods or a flat disk (stub perpendicular to the disk), or the ground plane may be modified to a skirt or cone shape.



Half Rhombic (or inverted "V"): The half rhombic or inverted "V" antenna is a long-wire type antenna with the radiating elements comprising the sides of an inverted "V" mounted over a ground plane. The half rhombic may be properly terminated (nonresonant and unidirectional) or unterminated (resonant and bidirectional).



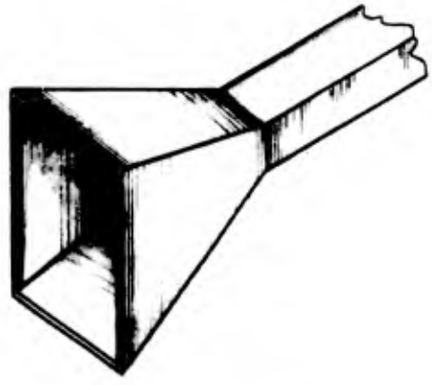
Helical: An antenna that has a helix as a driven element. The parameters of the radiating element may be varied (e.g., diameter of the conductor, and diameter and pitch of the helix).



Hoghorn: A portion of a pillbox fed by a waveguide horn. See "Pillbox".

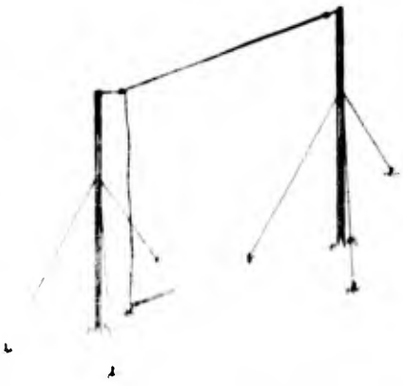


Horn: A relatively broadband antenna that usually takes the form of an open, flared extension of a waveguide which may be proportioned to provide directional characteristics and an impedance transition between the waveguide and



free space. The horn may be of a number of types; e.g., sectorial horn-flared in one plane, pyramidal horn-flared in both planes.

Inverted "L": An antenna, used primarily at low frequencies, that utilizes the technique of bending a portion of the radiating element into a horizontal position to keep the current maximum on the vertical portion as high as possible, which increases the radiation efficiency.

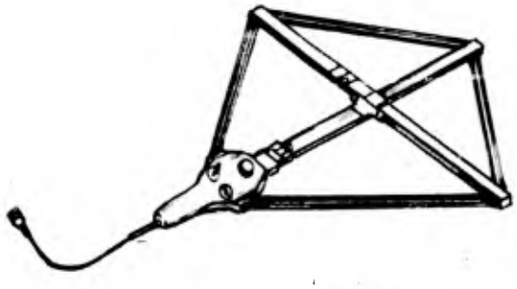


Inverted "U": A type of doublet antenna used primarily at low frequencies. The ends are folded down to increase the radiation efficiency. Primary radiation is from the horizontal portion of the doublet.

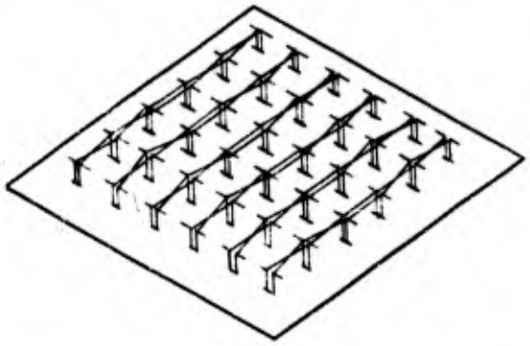
Lens: A microwave device that focuses electromagnetic energy by controlling the electrical path length of the energy through the lens. Lenses may take several forms; e.g., dielectric, artificial dielectric, metal plate, and geodesic lens.

Long Wire: A linear antenna of considerable length in comparison with the operating wavelength (e.g., fixed wire or trailing wire).

Loop: An antenna consisting of one or more complete turns of conductor that form a closed circuit in which a circulatory current flows. The loop may be wound in several shapes (e.g., circular, square, triangular) and may be shielded.



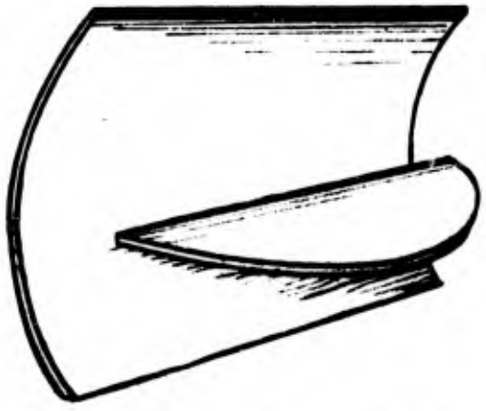
Mattress: A planar array of dipoles backed by a flat reflecting surface. The reflecting surface may be continuous or made up of discrete elements (e.g., slats, rods, or mesh). This type of antenna is sometimes called a billboard antenna or a bedspring array.



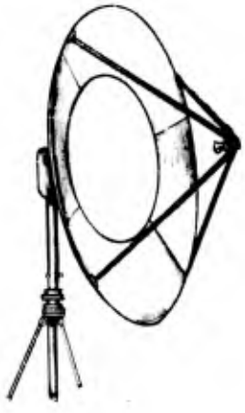
Monopole: A ground-plane analogy of a dipole. This term is assigned only when more specific identification (e.g., "Tower", "Whip", or "Rod") cannot be determined.

Orange Peel: See "Cut Paraboloidal".

Parabolic-Cylinder Reflector: A reflector whose reflecting surface is in the form of a portion of a surface generated by moving a parabola perpendicular to the plane in which it lies. The reflecting surface may be solid, perforated, mesh, or slatted.



Paraboloidal Reflector: A reflector whose reflecting surface is in the form of a surface of revolu-

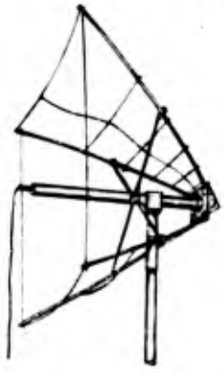


ANTENNA TYPES (Continued)

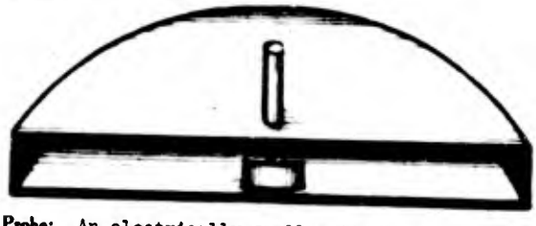
tion generated by the rotation of a parabola around its axis. The reflecting surface may be solid, perforated, mesh, or slatted.

Parasitic Array: An array consisting of a driven element(s) and an element(s) that, though not directly connected to the antenna feed line, affects the radiation pattern of the antenna.

Periodic Structure: Broadband (frequency range about 10 to 1 or greater) antenna structures for which the input impedance and radiation patterns vary periodically with frequency, and the variation of electrical characteristics is negligible over a single period. An example of this type is the logarithmic periodic antenna.



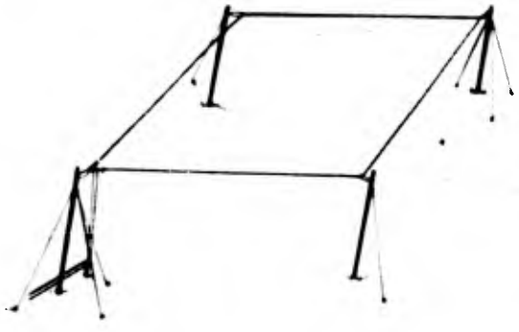
Pillbox: A parabolic-cylinder reflector enclosed by two parallel plates mounted perpendicular to the cylinder and spaced so that only one mode of propagation is possible in the desired direction of polarization. See also "Cheese" antenna.



Probe: An electrically small antenna used to explore radiation fields.

Rectangular Array: A directive array of vertical elements arranged in rectangular fashion.

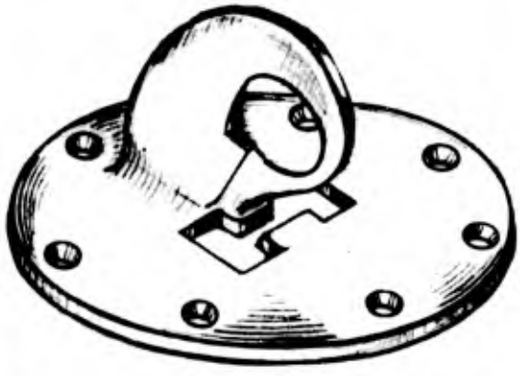
Rhombic: A long wire type antenna in which the radiating elements comprise the sides of a rhombus. The rhombic antenna may be properly terminated (nonresonant and unidirectional) or unterminated (resonant and bidirectional).



Rhombic, Multiwire: A rhombic antenna which instead of having a single conductor for each leg has several to improve impedance characteristics.

Rod: An electrically short radiating element (often 1/4 λ long), having a relatively large length-to-circumference ratio, that is designed to mount on an external ground plane.

Scimitar: A broadband antenna that looks like the blade of a scimitar.



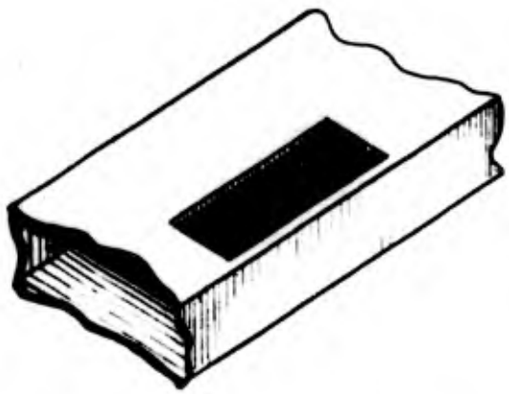
Sleeve Dipole: The sleeve dipole antenna is a balanced form of the stub sleeve antenna (i.e., the image of the antenna is replaced by a real antenna of identical configuration and the ground plane is removed). See also Stub Sleeve.





ANTENNA TYPES (Continued)

Slot: A radiating element formed by cutting a slot in a conducting surface.



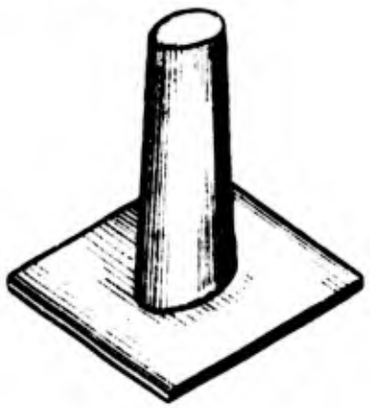
Spiral: A broadband (frequency range about 10 to 1 or greater) antenna named for its geometrical configuration.



Stacked Array: The term, stacked array, refers to the general category of antenna arrays where the radiating elements (e.g., slots, dipoles, turnstile, etc.) are stacked on or near but not collinearly along the axis of the array. The stacked array, in general, produces a beam that is omnidirectional in the plane perpendicular to the axis of the array.

Structural: An antenna which is an integral part of the structure of an aircraft; e.g., a section of the vertical stabilizer of an aircraft that is insulated from the remaining portion and fed by a coaxial cable.

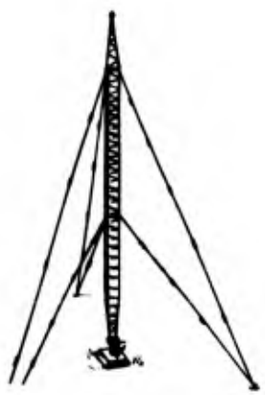
Stub: An electrically short radiating element (often 1/4 λ long), having a relatively small length to circumference ratio, that is designed to mount on an external ground plane (e.g., 1/4 λ stub mounted on an aircraft, using the skin of the aircraft as a ground plane).



Stub Sleeve: The stub sleeve antenna is a type of unbalanced antenna which mounts over a ground plane and incorporates a conducting collar on tube (i.e., the sleeve), the exterior of which is utilized as a radiating element and the interior as the outer conductor of the coaxial feed line. The length of the sleeve may be any portion of the total length of the antenna.

Tail Cap: See "Structural".

Tower: A low-frequency antenna constructed in the form of a tower. The tower itself is the radiating element.



Turnstile: An antenna consisting of two dipoles mounted perpendicular to each other with their axes intersecting at their mid-points. The dipoles are usually fed by currents that are equal in magnitude and in phase quadrature.

"V": An arrangement of conductors in the shape of a V with the two legs of the V being fed equal amounts of power of opposite phase. The "V" antenna may be properly terminated (non-resonant and unidirectional) or unterminated (resonant and bidirectional).

ANTENNA TYPES (Continued)

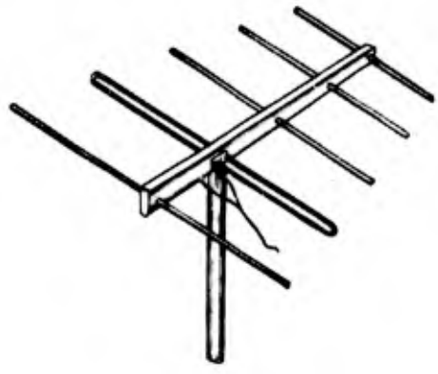
Whip: A simple (usually vertical) antenna consisting of a slender whip-like conductor, often made adjustable and/or retractable, mounted on an insulator and usually fed at or near its base.



Wing Cap: See "Structural".

Wullenweber Array: A multipurpose antenna in which the equivalent pattern of a mechanically rotating planar array of elements is obtained by means of properly phasing and switching a number of fixed antenna elements symmetrically arranged in a circle. The array includes a circle of discrete reflectors or a continuous reflector placed within the antenna ring. The Wullenweber array is usually a wide aperture (greater than 5 λ) antenna.

Yagi: A parasitic array consisting of a driven element and a number of parallel parasitic elements; normally the Yagi antenna consists of one reflector, one driven element, and one or more directors.



ANTENNA EQUIPMENT A-26

MAJOR COMPONENTS: 1 antenna AN-46, 1 100-foot tower TR-8, 1 azimuth indicator, and 1 r-f transmission line.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-270-B.

MISCELLANEOUS: Antenna Equipment A-26 was not procured after 4 Jan. 46.

COGNIZANT AGENCY: WL-45-C176.

STOCK NUMBER: Federal Stock Number 6760-559-9727.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT A-63

Cancelled 27 December 1945 per Nomenclature Card. This antenna was never procured.

ANTENNA EQUIPMENT A-64

Cancelled 27 December 1945 per Nomenclature Card. This antenna was never procured.

ANTENNA EQUIPMENT A-65

Cancelled 27 December 1945 per Nomenclature Card. This antenna was never procured.

ANTENNA EQUIPMENT A-66

Cancelled 27 December 1945 per Nomenclature Card. This antenna was never procured.

ANTENNA EQUIPMENT A-67

Cancelled 27 December 1945 per Nomenclature Card. This antenna was never procured.

ANTENNA EQUIPMENT A-70

DESCRIPTION: The Nomenclature Card states that this antenna equipment consists of identical receiving and transmitting antennas. The description is inadequate for identification of these antennas.

ASSOCIATED EQUIPMENT: Radio Equipment RC-150-() and Radio Sets SCR-270-B and SCR-271. Equipment function - probably communication.

COGNIZANT AGENCY: SCRL-136.

MANUFACTURER: Contract W-2279-sc-11.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT A-81

MAJOR COMPONENTS: 1 antenna AN-118, 1 100-foot tower TR-8-A, 1 antenna control MC-298, 1 conduit equipment MC-405, and 1 transmission line equipment MC-298.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-270.

MISCELLANEOUS: Nomenclature card recommends that A-81 antenna equipment be converted to A-81-A equipment by use of Antenna Conversion Kit D71-A2 and Data Transmitter Kit C70-D1.

COGNIZANT AGENCY: CESL.

MANUFACTURER: Westinghouse Electric and Manufacturing Co., contract W-2279-sc-52, order 84-SCRL-42.

STOCK NUMBER: AN-118 ... Federal Stock Number 5840-144-3569.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA A-81-A

MAJOR COMPONENTS: 1 antenna AN-140, 1 tower TR-8-B, 1 transmission-line equipment MC-541; 1 Motor-generator MG-32-B, 1 data transmitter BC-1282-A, 1 driver MC-399, and 1 conduit equipment MC-540.

DESCRIPTION: See AN-140 for description of the antenna.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-270-E.

COGNIZANT AGENCY: CESL.

MANUFACTURER: Blaw-Knox Co., contract W-3435-sc-416, order 832-MPD-43 and McGlynn Hays Co., contract W-3435-sc-538, order 118-MPD-44.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT A-88-B

TYPE: Two mattress antennas.

DESCRIPTION: The antenna equipment consists of two 10-foot by 30-foot bill-board antenna arrays with a flat, wire-mesh reflector screen and associated feed lines. The antennas are mounted on a steel tower, approximately 17 feet high.

SCAN DATA: The antennas can be rotated at a variable speed in azimuth in either direction.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-588-B.

COGNIZANT AGENCY: SCRL-198.

MANUFACTURER: War Industries, Ltd., order 61-SCRL-42 (DP42-S-39).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA A-500

FREQUENCY: UHF band, 480 - 500 mc.

TYPE: Paraboloidal reflector.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-1.

MISCELLANEOUS: The reference below lists this antenna as obsolete.

REFERENCE:
Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (March 14, 1957). UNCLASSIFIED.

ANTENNA SECTION AB-21/GR

DESCRIPTION: The antenna section is a rod 23-1/2 inches long and 0.39 inches in diameter. It is threaded for a male connector at one end and a female connector at the other. It is used as a component in various whip, ground-plane, and dipole antennas.

STOCK NUMBER: Federal Stock Number N5985-228-0244.

REFERENCES:
1) Department of the Army, Antenna AS-412/FRC-6, Technical Manual, TM 11-5023, (May 1949). UNCLASSIFIED.
2) Departments of the Army and the Air Force, Radio Sets AN/VRC-6, -6X, and -6Y, Department of the Army Technical Manual and Department of the Air Force Technical Order, TM 11-283, TO 16-30VRC6-5, (July 1954). UNCLASSIFIED.

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ANTENNA SECTION AB-22/GR

DESCRIPTION: The antenna section is a rod 23-1/2 inches long and 0.37 inches in diameter. It is threaded for a male connector on one end and female connector on the other. It is used as a component in various whip, ground-plane, and dipole antennas.

STOCK NUMBER: Federal Stock Number N5985-372-0970.

REFERENCES:
1) Department of the Army, Antenna AS-412/FRC-6, Technical Manual, TM 11-5023, (May 1949). UNCLASSIFIED.
2) Departments of the Army and the Air Force, Radio Sets AN/GRC-3,-4,-5,-6,-7, and -8, Department of the Army Technical Manual and Department of the Air Force Technical Order, TM 11-284, TO 16-30GRC-3-6, (May 1953). UNCLASSIFIED.

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ANTENNA SECTION AB-23/GR

DESCRIPTION: The antenna section is a rod 23-1/2 inches long and 0.25 inches in diameter. It is threaded for a male connector at one end and a female connector at the other. It is used as a component in various whip, ground-plane, and dipole antennas.

STOCK NUMBER: Federal Stock Number N5985-642-7302.

REFERENCE:
Department of the Army, Antenna Equipment RC-292, Technical Manual, TM 11-5020, (May 1950). UNCLASSIFIED.

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ANTENNA SECTION AB-24/GR

DESCRIPTION: The antenna section is a rod 23-1/2 inches long and 0.25 inches in diameter. It has a male thread at one end and a steel ball at the other. It is used as a component in various whip, ground-plane, and dipole antennas.

STOCK NUMBER: Federal Stock Number N5985-240-3720.

REFERENCES:
1) Department of the Army, Antenna Equipment RC-292, Technical Manual, TM 11-5020, (May 1950). UNCLASSIFIED.
2) Departments of the Army and the Air Force, Radio Sets AN/VRC-20, -21, and -22, Technical Manual and Technical Order, TM 11-642, TO 16-30URC20-5, (July 1952). UNCLASSIFIED.

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ANTENNA ELEMENT AB-78/TRC-7

DESCRIPTION: The antenna element is a copper-plated steel tube, 21-1/2 inches long and 7/32 inch in outside diameter. It is normally used as an element in Antenna AS-112/TRC-7.

STOCK NUMBER: Federal Stock Number N5985-038-2408.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA TOWER AB-127(*)/FR

FREQUENCY: MF band, 0.55 - 1.68 mc.

TYPE: Tower antenna.

DESCRIPTION: The antenna is a 180-foot, guyed steel tower that rests on an insulator mounted on a concrete pedestal. For supporting purposes, 4 sets of 3 guys each are attached to the tower at the 40-foot, 80-foot, 120-foot, and 160-foot levels. The steel tower consists of 18 ten-foot sections each composed of 3 ten-foot supporting posts and the necessary cross and diagonal braces. The cross braces on one face of the antenna tower form a ladder that is used to climb the tower for inspection and repair purposes.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Transmitting Sets AN/MRT-5 and AN/MRT-5A, Radio Transmitter T-5/FRC, and other transmitters. Equipment function - communication.

MISCELLANEOUS: AB-127(*)/FR denotes AB-127A/FR, AB-127B/FR, AB-127C/FR, and AB-127D/FR. The differences between models are insignificant.

REFERENCE:
Departments of the Army and the Air Force, Antenna Towers AB-127A/FR, AB-127B/FR, AB-127C/FR and AB-127D/FR, Technical Manual and Technical Order, TM 11-5012, TO 31R1-2FR-111, (Aug. 1957). UNCLASSIFIED.

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ANTENNA SECTION AB-129/PR

DESCRIPTION: The antenna section is a steel cylinder 8 inches long and 11/16 inch in diameter. One end has a 3/8-24 threaded bushing 3/8 inch long. The other end has a 3/8-24 tapped hole 3/8 inch deep. The antenna section contains a spring-loading device. It is used as the bottom section of several whip antennas including AT-271/PRC and AN-131-A.

COGNIZANT AGENCY: SCLC-5056.

STOCK NUMBER: Federal Stock Number N5985-038-2383.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA AB-371/U

FREQUENCY: VHF and UHF bands, 88 - 400 mc.

TYPE: Dipole.

BEAM DATA:
Polarization - Adjustable to any angle from horizontal to vertical.

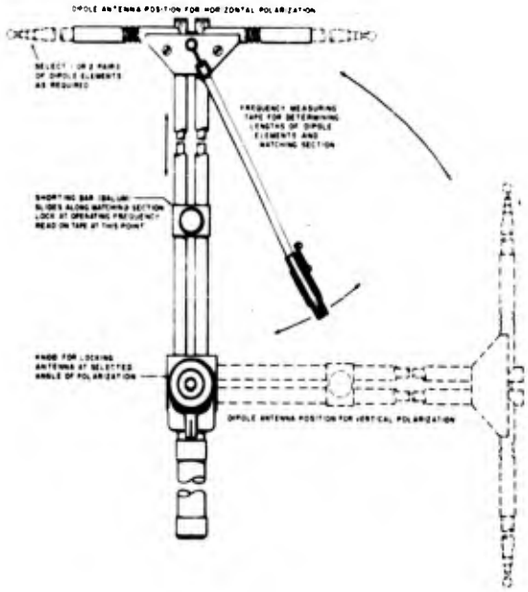
TUNING/MATCHING DEVICES: The antenna has a balun with an adjustable shorting bar. A calibrated measuring tape is furnished for determining the lengths of dipole elements and the position of the shorting bar.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-47A. Equipment function - test.

MANUFACTURER: Stoddart Aircraft Radio Co., Inc.

REFERENCE:
NAVSHIPS 93147.



AB-371/U

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MASK SECTION AB-491/G

Nomenclature changed to Antenna Element MX-2535/G.

MAST SECTION AB-492/G

Nomenclature changed to Antenna Element MX-2536/G.

MAST SECTION AB-493/G

Nomenclature changed to Antenna Element MX-2537/G.

MAST SECTION AB-494/G

Nomenclature changed to Antenna Element MX-2538/G.

MAST SECTION AB-495/G

Nomenclature changed to Antenna Element MX-2539/G.

ANTENNA AN-19

FREQUENCY: MF and HF bands, 1.5 - 18 mc.

DESCRIPTION: The antenna is 62 feet long and weighs 1.3 lbs.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Receiver BC-342-() which is part of Radio Set SCR-277-(). Equipment function - communication.

STOCK NUMBER: Probably Signal Corps 2A219. Current stock number lists indicate that this item is not stocked by the U. S. Air Force.

REFERENCE:
U. S. Army Air Force, Handbook of Maintenance Instructions for Radio Set SCR-277-A, Radio Set SCR-277-B, Radio Set SCR-277-C, and Test Set I-77, T. O. No. 16-10-10, (March 3, 1943). UNCLASSIFIED.

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ANTENNA AN-22-A

See AS-126/CR.

ANTENNA AN-23-A

See AS-126/CR.

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ANTENNA AN-24-(*)

FREQUENCY: MF and HF bands, 1.5 to 18 mc.

TYPE: Long wire.

DESCRIPTION: AN-24-(*) is a single-wire antenna 45 feet long. It is solid, tinned-copper wire with malleable-iron snaps and brass termination mounted on insulators.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Sets SCR-506-(). SCR-193, and AN/VRC-1. Equipment function - communications.

MISCELLANEOUS: AN-24-(*) includes AN-24 and AN-24-A.

COGNIZANT AGENCY: SCL-10813.

STOCK NUMBER: Federal Stock Number 5985-223-1420 (AN-24), Federal Stock Number 5985-247-8233 (AN-24-A).

REFERENCES:
1) Department of the Army, Radio Set SCR-506-A, Supply Manual - Organizational Maintenance Allowances and Field and Depot Maintenance Stockate Guide, TO 31R2-3SCR-506-4, (March 9, 1956). UNCLASSIFIED.
2) War Department, Radio Set AN/VRC-1, Technical Manual, TM 11-277 (also TO 16-30 VRC 1-5), (June 17, 1944). UNCLASSIFIED.
3) War Department, Radio Set SCR-506-A, Technical Manual, TM 11-630, (Nov. 1944). UNCLASSIFIED.
4) Drawing No. SC-D-1263.
5) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-25

See AS-126/CR.

ANTENNA AN-26

See AS-126/CR.

ANTENNA AN-27

See AS-126/CR.

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ANTENNA AN-29-(*)

FREQUENCY: HF and VHF bands, 27 to 38.9 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a telescopic whip antenna, approximately 15 inches long when collapsed and 12 feet 9 inches long extended.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-609-(), Radio Set SCR-610-(), and Radio Set SCR-194. Equipment function - communications.

MISCELLANEOUS: Models are interchangeable. There are differences in collapsed length, material, and finish of the different models. AN-29-(*) includes AN-29-B, AN-29-C, and AN-29-D.

COGNIZANT AGENCY: SCL-7096.

STOCK NUMBERS: Signal Corps 2A229() and Federal Stock Number 5985-296-1413.

REFERENCES:

1) War Department, Radio Sets SCR-609-A and B and SCR-610-A and -B, Technical Manual, TM 11-615. (April 1945). UNCLASSIFIED.

2) U. S. Air Force, Marker Beacon Set AN/MRN-3 and Marker Beacon Set AN/MRN-3A, Handbook Operating Instructions, T.O. 31R4-2MRN3-11, (August 20, 1945). UNCLASSIFIED.

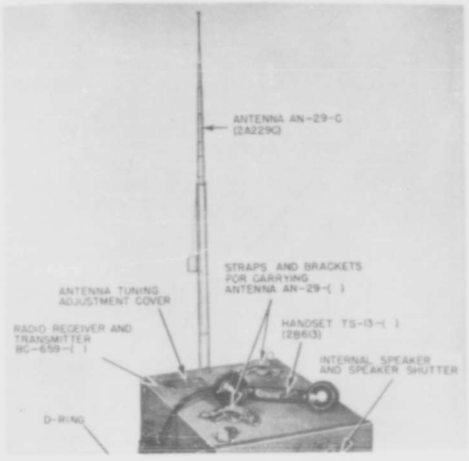
3) War Department, Radio Set SCR-609-A, B, Supply Catalog of Organizational and Higher Echelon Spare Parts, T.O. 31R1-3SCR609-4, (August 1946). UNCLASSIFIED.

4) U. S. War and Navy Departments and the Air Council of the United Kingdom, Radio Set SCR-610-A, Handbook of Maintenance Instructions, T.O. 31R1-3SCR610-12, (Jan. 15, 1945). UNCLASSIFIED.

5) Specification No. 71-1374.

6) Drawing No. SC-D-5686.

7) U. S. Department of Defense Nomenclature Card.



AN-29-(*) collapsed, with Radio Set SCR-609-()

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ANTENNA AN-30-B

TYPE: Whip.

DESCRIPTION: The antenna is a telescopic whip antenna 7/8-inch in diameter, 14-3/4 inches long when collapsed, and 8 feet 10 inches long when extended.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-195.

STOCK NUMBER: Probably Signal Corps 2A230B.

REFERENCES:

1) MIL Specification No. 71-1374.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-31

TYPE: Long wire.

DESCRIPTION: The antenna consists of 100 feet of W-20 wire with an insulator at each end.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: SCR-197-A.

MANUFACTURER: W. E. & M. Co.

STOCK NUMBER: Probably Signal Corps 2A231.

REFERENCES:

1) W. E. & M. No. T-7605682.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-32

DESCRIPTION: AN-32 is a receiving antenna and concentric line used at ground stations recording meteorograph signals.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: BC-380; probably part of SCM-2. Equipment function - meteorological measurement.

COGNIZANT AGENCY: SCL-631.

STOCK NUMBER: Probably Signal Corps 2A232.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AN-33 and AN-34

MAJOR COMPONENTS: 4 AN-33, 4 AN-34, 1 Mast MA-4-A, and guys, stakes, etc.

FREQUENCY: LF and MF bands, 0.2 to 0.4 mc.

TYPE: Crossed loop antenna.

DESCRIPTION: Two AN-33 horizontal antenna wires and two AN-34 sloping antenna wires form one triangular loop antenna, 300 feet long on the base and 70 feet high at the apex. The antenna system consists of two electrically separate loop antennas mounted at right angles.

BEAM DATA:
Beam type - Crossed figure eights (4 leaf clover).

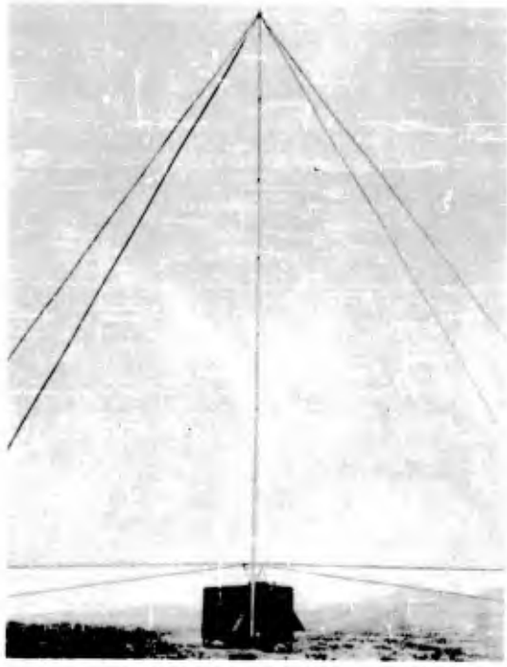
INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-277-(). Equipment function - navigation, surface reference.

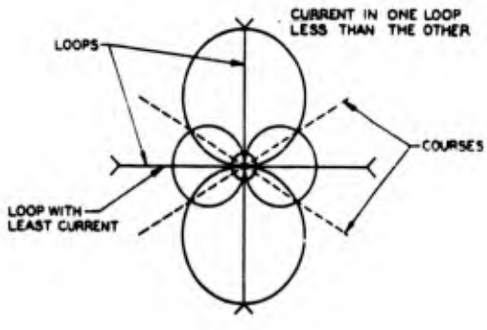
MISCELLANEOUS: Reference 2) states that these antennas are obsolete.

STOCK NUMBERS: Probably Signal Corps 2A233 & 2A234 and Federal Stock Numbers 5820-217-1599; 5825-217-1600.

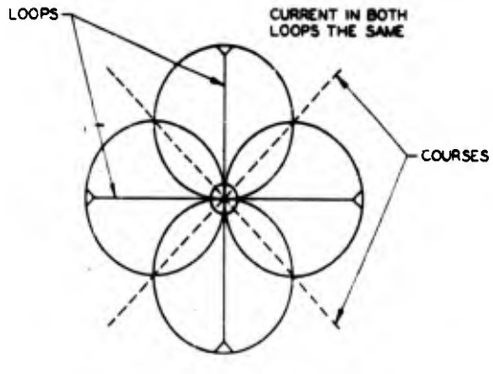
REFERENCES:
1) U. S. Air Force, Radio Set SCR-277-A, Radio Set SCR-277-B, Radio Set SCR-277-C, and Test Set I-77, Handbook of Maintenance Instructions, T.O. No. 16-10-10, (March 3, 1943 - revised June 5, 1945). UNCLASSIFIED.
2) Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (March 14, 1957). UNCLASSIFIED.
3) Mil. Spec. 71-1117.
4) U. S. Department of Defense Nomenclature Card.



AN-33 and AN-34



AN-33, AN-34 Radiation Pattern



AN-33, AN-34 Radiation Pattern

ANTENNA AN-35-(*)

MAJOR COMPONENTS: MS-95, MS-96, MS-97, and MS-98.

TYPE: Rod antenna.

DESCRIPTION: The antenna is a sectional vertical-rod antenna for supplying the balancing voltage and sense indication of a direction indicator.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-206-(). Equipment function - direction finding.

MISCELLANEOUS: AN-35-(*) includes AN-35-C.

MANUFACTURER: Finch Telecommunications, Inc., order 860-Chi-41 (DP-41-135).

STOCK NUMBER: Probably Signal Corps 2A235().

REFERENCES:
1) Spec. 71-915.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-36

See RC-63.

ANTENNA AN-37

See RC-63.

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ANTENNA AN-44-A

FREQUENCY: MF band, 1.7 to 2.75 mc.

TYPE: Vertical whip.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Set SCR-281-(). Equipment function - communication.

STOCK NUMBER: Probably Signal Corps 2A244A.

REFERENCES:
1) War Department, Radio Sets SCR-281-A, -B, and -D, Technical Manual, TM 11-244, (April 1945). UNCLASSIFIED.
2) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A, TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.

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ANTENNA AN-45-(*)

FREQUENCY: LF, MF, HF and VHF bands, 0.1 to 65 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a telescopic whip, 1/2 inch in diameter, 97 to 98-1/2 inches long when extended and 16-1/2 to 17-1/2 inches long when collapsed. It weighs 0.7 pounds.

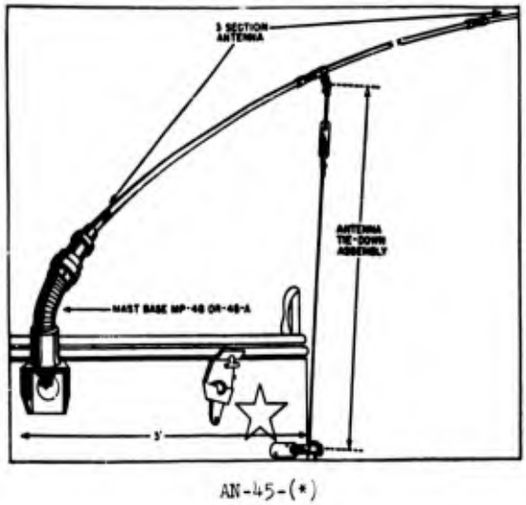
INSTALLATION: Ground, vehicular or portable.

ASSOCIATED EQUIPMENT: AN/TRR-8. Equipment function - countermeasures, monitoring.
SCR-509-() and SCR-510-(). Equipment function - communication.
SCR-503-(), SCR-511-() (AN-45-H only), and BC-973-() (AN-45-F). Equipment function - direction finding.

MISCELLANEOUS: Variqus models are interchangeable, but only AN-45-H can be used with SCR-511-(). AN-45-(*) includes models through AN-45-H.

STOCK NUMBER: Federal Stock Number: N5820-090-2674, Signal Corps 2A245().

REFERENCES:
1) Department of the Army, Radio Receiving Set AN/TRR-8, Technical Manual, TM 11-606, (June 1955). UNCLASSIFIED.
2) Department of the Army, Directory of U. S. Army Signal Equipments Radio Direction Finding Equipment, Technical Manual, TM 11 487D, (March 1958). UNCLASSIFIED.
3) Department of the Army, Radio Set SCR-510-A, B, Supply Catalog of Organizational and Higher Echelon Spare Parts, T.O. 31R2-3SCR510-4, (Jan. 1946). UNCLASSIFIED.



AN-45-(*)

4) War Department, Radio Set SCR-509-A, B, Supply Catalog of Organizational and Higher Echelon Spare Parts, T.O. 31R2-3-SCR509-4, (Aug. 1946). UNCLASSIFIED.

5) Department of the Army, Radio Sets SCR-509-(*) and SCR-510-(*), Technical Manual, T.O. 31R2-3SCR-171, (March 30, 1954). UNCLASSIFIED.

6) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

7) Department of the Navy, Radio Set SCR-729-A, Navy Stock List of the Electronics Supply Office, (Oct. 1957). UNCLASSIFIED.

8) Drawing: SC-D-9047-().

9) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-46

See Antenna Equipment A-26.

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ANTENNA AN-59

MAJOR COMPONENTS: Six dipoles and six reflectors.

TYPE: Dipole array.

DESCRIPTION: The antenna assembly, 3 dipoles high and 2 dipoles wide, consists of six antenna dipoles and six reflectors mounted on one wooden frame. The unit is 147 inches high and 582 inches wide.

ASSOCIATED EQUIPMENT: Radio Set SCR-268.

COGNIZANT AGENCY: SCL-1641.

STOCK NUMBER: Probably Signal Corps 2A259.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-62-( )

MAJOR COMPONENTS: Three director dipoles.

TYPE: Dipole (Yagi when used with BC-681-()).

DESCRIPTION: The antenna is an assembly of three director dipoles on a spacing rod which is inserted into a support on Radio Transmitter BC-681-(). When so installed, it combines with the dipole on the transmitter to form a Yagi antenna system.

ASSOCIATED EQUIPMENT: Radio Set SCR-532-().

COGNIZANT AGENCY: ARL-893, SPSGE.

MANUFACTURER: General Electric Co.

STOCK NUMBER: Probably Signal Corps 2A262().

REFERENCES:
1) G. E. Spec. BRD-91.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-75-(*)

FREQUENCY: MF and HF bands, 2 - 6 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of a telescoping rod, 12 inches long when collapsed and 81 to 100 inches long when extended.

INSTALLATION: Ground, vehicular or portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-593-(). Equipment function - communication.

MISCELLANEOUS: AN-75-(*) represents models AN-75, AN-75-A, AN-75-B, AN-75-C, and AN-75-D.

COGNIZANT AGENCY: SPSAD.

MANUFACTURER: Snyder Mfg. Co., procurement order No. 34920-P-45-59; Insuline Corp., procurement order No. 31359-Phila-45; Electromatic Mfg. Co., procurement order No. 31360-P-45.

STOCK NUMBERS: Signal Corps 2A275-75() and Federal Stock Number 5820-230-5476.

REFERENCES:
1) War Department, Radio Set SCR-593-A, Technical Manual, TM 11-859, (March 2, 1943). UNCLASSIFIED.

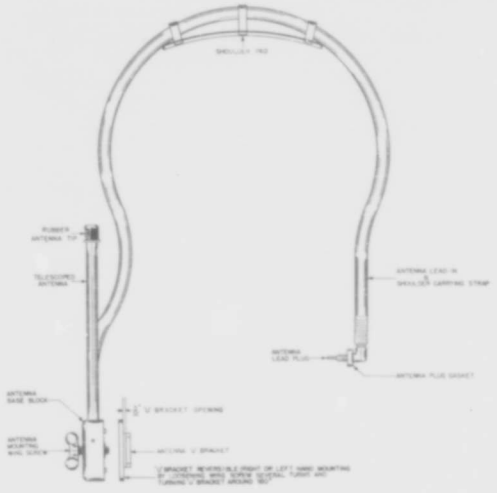
2) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A.

TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.

3) Contractors Part No. 1X38080.

4) Specification 271-1527.

5) U. S. Department of Defense Nomenclature Card.



AN-75-(*) Collapsed



AN-75-(*) In Use

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REFERENCES:
1) Brach Drawing TL-11919.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-81-(*)

TYPE: Dipole array with reflecting screen.

DESCRIPTION: The antenna consists of 24 half-wave, vertically polarized radiators employing an equal-angle reflector screen. The equipment also includes open-wire connectors, concentric transmission-line elevator, and matching section, all mounted on a frame of steel tubing.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Equipment RC-101-() and Radio Set SCR-271.

MISCELLANEOUS: This antenna is the same as AN-76-() and AN-82-(), except in provision for mounting. AN-81-(*) represents AN-81, AN-81-A, and AN-81-B.

COGNIZANT AGENCY: CESL-1449.

MANUFACTURER: General Electric Co., orders 82-SCRL-42, W-1077-sc-1116, 579-SCR-42, W-2279-sc-51.

STOCK NUMBER: Probably Signal Corps 2A281().

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-82-(*)

TYPE: Dipole array with reflecting screen.

DESCRIPTION: This antenna consists of 24 half-wave, vertically polarized radiators employing an equal-angle reflector screen. It includes open-wire connectors, 50-ohm concentric transmission line and a matching section. All parts are mounted on a frame of steel tubing.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Equipment RC-100-().

MISCELLANEOUS: AN-82-(*) represents models AN-82 and AN-82-A, B, and C. AN-82-(*) is similar to AN-81-() and AN-76-() except for the mounting.

COGNIZANT AGENCY: CESL-1448.

MANUFACTURER: General Electric Co., order 82-SCRL-42.

STOCK NUMBER: Probably Signal Corps 2A282().

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-85

TYPE: Yagi array.

DESCRIPTION: The elements of the Yagi array are mounted on a tube which is connected to a supporting structure.

ASSOCIATED EQUIPMENT: Antenna Equipment RC-142.

COGNIZANT AGENCY: ARL-1095.

MANUFACTURER: Vendo Co., order 549-WF-42.

STOCK NUMBER: Signal Corps 2A285.

REFERENCE:
1) ES-D-4032.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-87

TYPE: Yagi array.

DESCRIPTION: The elements of the Yagi array are mounted on a tube which is connected to a supporting structure.

ASSOCIATED EQUIPMENT: Radio Set SCR-521-().

COGNIZANT AGENCY: ARL.

MANUFACTURER: Vendo Co., order 549-WF-42.

STOCK NUMBER: Signal Corps 2A287.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-88-()

TYPE: Probably a mattress antenna.

DESCRIPTION: The antenna is made in 2 sections, each 2 feet 6-1/2 inches high and 4 feet 10 inches long, made of 1-inch-square, chromonoly (SIC.) steel tubing. Each section has 8 antenna elements approximately 9-3/16 inches long and has a reflector of expanded metal. Approximate weight is 30 pounds per section.

ASSOCIATED EQUIPMENT: Radio Equipment RC-167 and Radio Set SCR-527-A.

COGNIZANT AGENCY: SCRL-566.

STOCK NUMBER: Probably Sig. C. 2A288().

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-89-(*)

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of one special mattress-type, demountable antenna array, four dipoles wide and four dipoles high, similar to the lower bay of the antenna for Radio Set SCR-588-B. The array is split into two bays, each being four dipoles wide and two dipoles high.

ASSOCIATED EQUIPMENT: Radio Set SCR-636-().

MISCELLANEOUS: Procurement discontinued after 10 Jan. 1946. AN-89-(*) represents AN-89 and AN-89-A.

COGNIZANT AGENCY: WL-45-C174.

STOCK NUMBER: Probably Signal Corps 2A289().

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-91-(*)

DESCRIPTION: AN-91-(*) is similar to AN-92-() in size, weight, and location and number of elements, but the radio range antenna is built in as an integral part of this antenna. Antenna AN-91 is not interchangeable with antenna AN-92.

ASSOCIATED EQUIPMENT: Radio Set SCR-527-A.
Equipment function - to receive tracking signals and to transmit and receive radio range signals.

MISCELLANEOUS: AN-91(*) represents AN-91, AN-91-A, and AN-91-C.

COGNIZANT AGENCY: ATSC.

MANUFACTURER: General Electric Co., order 81-SCRL-42.

STOCK NUMBER: Probably Signal Corps 2A291().

REFERENCES:
1) Spec. SCRL-162.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-92-(*)

DESCRIPTION: The antenna is of welded, tubular-frame construction. It is 21 feet 7-3/8 inches long and 9 feet 11 inches high and supports four horizontal rows of radiating elements which are fed with an open-wire system. The antenna is designed to be dismantled into four sections which are transported on Trailer K-77-(). Approximate weight is 800 pounds.

ASSOCIATED EQUIPMENT: Radio Set SCR-527-A.
Equipment function - tracking.

MISCELLANEOUS: No more units are to be procured after 4 Jan. 1946. AN-92-(*) represents AN-92 and AN-92-A.

COGNIZANT AGENCY: WL-45-C-170.

MANUFACTURER: General Electric Co., contract W-2279-sc-50, order 81-SCRL-42.

STOCK NUMBER: Probably Signal Corps 2A292().

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-94-(*)

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Rod.

DESCRIPTION: The antenna is a J-type antenna with a long radiating section and a short matching section mounted in a base for connection to Antenna Mast MA-7-A. The long and short sections of the antenna are telescopic for adjusting to the proper length for the transmitting frequency.

TUNING/MATCHING DEVICES: The antenna has a short, adjustable, right-angle matching section at the feed end of the radiating element.

INSTALLATION: Ground, air transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-624-() and Radio Set SCR-695. Equipment function - communications.

MISCELLANEOUS: AN-94 is obsolete according to reference 1) below. AN-94-(*) represents AN-94, AN-94-A, AN-94-B, and AN-94-C.

COGNIZANT AGENCY: ARL.

MANUFACTURER: Bendix Aviation Corp., Radio Div., orders 12070-WF-43 and 349-DAY-44.

STOCK NUMBERS: Federal Stock Numbers 5820-556-0511 (AN-94); 5820-219-7855 (AN-94-A); 5825-295-7712 (AN-94-B); 5820-219-7856 (AN-94-C).

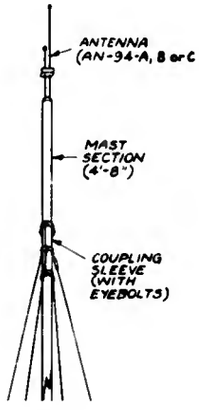
REFERENCES:

1) Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (March 14, 1957). UNCLASSIFIED.

2) U. S. Air Force, Radio Set SCR-624-A and SCR-624-B, Handbook Maintenance Instructions, T.O. 31R2-3SCR624-2, (June 30, 1945 - revised Jan. 14, 1957). UNCLASSIFIED.

3) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

4) U. S. Department of Defense Nomenclature Card.



AN-94 Mounted on MA-7-A (Only top section shown)

ANTENNA AN-95-A, modified

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna has a single vertical element with four L-shaped elements projecting downward. The center conductor of the coaxial feed is connected to the upward-projecting rod. The outer conductor is grounded to the plate at the base of the antenna rod.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Beacon Transmitter-Receiver AN/TPN-3. Equipment function - navigation, surface reference.

MISCELLANEOUS: This antenna is an AN-95-A aircraft rod antenna modified by the addition of ground-plane rods so that it can be used in ground installations.

STOCK NUMBER: Federal Stock Number 5895-263-0963A.

REFERENCE:

U. S. War and Navy Departments and the Air Council of the United Kingdom, Beacon Transmitter Receiver AN/TPN-3, Operating Instructions, AN-16-10-190, (July 6, 1943 - revised April 15, 1945). UNCLASSIFIED.



AN-95-A, modified

ANTENNA ASSEMBLY AN-101-(*)

See AT-672/G

ANTENNA ASSEMBLY AN-102

TYPE: An array of Yagi antennas.

DESCRIPTION: The assembly consists of four horizontal Yagi antennas arranged in pairs, one above the other, on collapsible, umbrella-like structures. These structures are mounted on a central vertical steel tube 2 inches in diameter. When assembled and ready for operation, the entire array is 7 feet by 7 feet by 7 feet. It weighs 135 pounds.

BEAM DATA:
Polarization - Horizontal.

SCAN DATA: The entire array can be continuously rotated in azimuth either by a small motor or by a hand wheel.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-602.

COGNIZANT AGENCY: SCRL-378.

STOCK NUMBER: Probably Signal Corps 2A275-102.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-103-(*)

DESCRIPTION: The antenna is of the telescoping type, 8 5/16 inches long when collapsed and 33 1/2 inches long when fully extended. A cap is provided on the top to prevent the entrance of rain when the antenna is not extended.

ASSOCIATED EQUIPMENT: Oscillator Test Equipment RC-93-() Radio Transmitter BC-655-A, Equipment function - test.

MISCELLANEOUS: AN-103-(*) represents AN-103 and AN-103-A.

COGNIZANT AGENCY: MPD.

MANUFACTURER: Noblitt Sparks, orders No. 115 70-SCGDL-43, PP 43-1028, 2183-MPD-44, PP 44-4355.

STOCK NUMBERS: Signal Corps 2A275-103() and Federal Stock Numbers 5825-219-7857 and 6625-155-8310.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-105-( )

FREQUENCY: HF and VHF bands, 18 - 65 mc.

TYPE: Adcock antenna.

DESCRIPTION: The antenna consists of a manually rotated H-type adcock and vertical sensing element.

BEAM DATA: Figure of eight or cardioid.

INSTALLATION: Ground, semiportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-555-A.
Equipment function - direction finding.

MISCELLANEOUS: Radio Set SCR-555-A is obsolete and is replaced by AN/TRD-10 which uses Antenna System AS-681()/TRD-10.

COGNIZANT AGENCY: Radio Set SCR-555-A was developed by ESL, Hazeltine, and Magnavox Corp.

STOCK NUMBER: Probably Signal Corps 2A275-105().

REFERENCE:
Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

ANTENNA ASSEMBLY AN-106-( )

DESCRIPTION: The antenna is a three-section tubular telescoping unit approximately 8 1/2 inches long when collapsed and 20 inches long when extended. It is approximately 3/8 inch in diameter.

ASSOCIATED EQUIPMENT: Frequency Meter BC-906-( ).
Equipment function - test.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

STOCK NUMBER: Probably Signal Corps 2A275-108( ).

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ANTENNA ASSEMBLY AN-111-( )

See RC-211-( )

ANTENNA ASSEMBLY AN-118

See Antenna Equipment A-81

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ANTENNA ASSEMBLY AN-123-(*)

FREQUENCY: HF band, 3.9 - 5.9 mc.

TYPE: Long wire.

DESCRIPTION: The antenna consists of a 125-foot length of 1/4-inch bronze tape wound on a reel. The tape is calibrated in megacycles. The reel is provided with a handle for rewinding the tape.

ASSOCIATED EQUIPMENT: Radio Set SCR-694-AW, BW.

MISCELLANEOUS: AN-123-(*) represents AN-123, AN-123-A, and AN-123-B. AN-123-B was cancelled on 8 Jan 1945 (Nomenclature card). AN-123-B and AN-123-A are identical.

COGNIZANT AGENCY: MPD; SPSAD.

MANUFACTURER: Rawland, order 538-MPD-43.

STOCK NUMBER: Signal Corps 2A275-123.

REFERENCES:
1) U. S. Army, Radio Set SCR-694-AW, BW, Signal Supply Catalog, Higher Echelon Spare Parts, T.O. 31R1-3SCR694-4, (Oct. 20, 1944). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AN-124-(*)

TYPE: Monopole.

DESCRIPTION: AN-124-(*) is a tubular telescoping antenna 13.5 feet long when extended and 16 inches long when collapsed. The binding post and insulating sleeve are located at the bottom of the antenna.

ASSOCIATED EQUIPMENT: Radio Set SCR-694-AW, BW.

MISCELLANEOUS: AN-124-(*) represents AN-124, AN-124-A, and AN-124-B. AN-124-B was cancelled on 8 Jan 1945 (Nomenclature card). AN-124-B and AN-124-A are identical.

COGNIZANT AGENCY: MPD; SPSAD.

MANUFACTURER: Rawland, order 538-MPD-43.

STOCK NUMBER: Signal Corps 2A275-124( ).

REFERENCES:
1) U. S. Army, Radio Set SCR 694-AW, BW, Signal Supply Catalog, Higher Echelon Spare Parts, T.O. 31R1-3SCR694-4, (Oct. 20, 1944). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AN-125-( )

TYPE: Parasitic array with two driven elements.

DESCRIPTION: The antenna consists of two radiating elements and a reflecting screen of six elements. It is all metal and demountable. It weighs approximately 55 pounds and has a pair of pipes which extend two feet below the antenna and are fastened with clamps. Dimensions are approximately 47 inches wide by 46 inches high by 18 inches deep.

BEAM DATA:
Polarization - Vertical.

ASSOCIATED EQUIPMENT: Radio Equipment RC-150-( ) and Radio Set SCR-270-( ).

COGNIZANT AGENCY: SCRL-663.

STOCK NUMBER: Probably Signal Corps 2A275-125( ).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-126

TYPE: Mattress-type antenna with two driven elements.

DESCRIPTION: The antenna consists of two radiating dipoles and a reflecting screen of six elements. It is all metal and demountable. It is approximately 47 inches wide, 46 inches high, and 18 inches deep. It weighs approximately 55 pounds.

BEAM DATA:
Polarization - Vertical.

ASSOCIATED EQUIPMENT: Radio Equipment RC-151 and Radio Set SCR-271.

COGNIZANT AGENCY: SCRL-670.

STOCK NUMBER: Probably Signal Corps 2A275-126.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-127-A

TYPE: Stub antenna.

DESCRIPTION: The antenna is a stub, 11 inches long with a Jones connector, S 101-1/4, at one end.

ASSOCIATED EQUIPMENT: RC-57.

MISCELLANEOUS: The antenna is obsolete according to Reference 1).

REFERENCES:
1) Private Correspondence.
2) Government Drawing No. SC-D-6153.

ANTENNA ASSEMBLY AN-128

FREQUENCY: VHF band, 157 - 187 mc.

TYPE: Mattress-type antenna with two driven elements.

DESCRIPTION: The antenna consists of two dipoles, approximately 0.4 wavelengths apart. They are supported by baluns in front of a flat screen reflector composed of 6 rods. Each dipole is fed by a Y-shaped impedance-matching network. The antenna mounts on top of Radio Transmitter BC-407.

BEAM DATA:
Polarization - Vertical.

ASSOCIATED EQUIPMENT: Radio Equipment RC-148. Equipment function - IFF.

COGNIZANT AGENCY: SCRL-239.

MANUFACTURER: Belmont Radio Corp., contract W-2279-sc-1.

STOCK NUMBER: Probably Signal Corps 2A275-128.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-129

FREQUENCY: VHF band, 73 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a collapsible whip 48 inches long.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRW-1, Equipment function - remote control.

MISCELLANEOUS: AN-129 is obsolete according to the reference cited below.

REFERENCE:
Private Correspondence.

ANTENNA AN-130-( )

FREQUENCY: VHF band, 40 - 48 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of two sections, one 17 inches long and one 16 inches long, permanently linked by stainless-steel wire with sufficient slack to permit folding the antenna for carrying. The lower section includes a flexible 6-inch gooseneck which permits tilting to a maximum of 90° in any direction. The bakelite base includes a matching circuit, and a 3/8 - 24 stud extends below the base for mounting. The length is 33 inches when extended.

BEAM DATA:
Beam type - Omnidirectional.

Polarization - Vertical.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Receiver and Transmitter BC-1000(), Radio Set SCR-300-A and Radio Set AN/VRC-3. Equipment function - communication.

MISCELLANEOUS: AN-130-( ) denotes two models, AN-130-A and AN-130-B, which are interchangable. The two models are identical except for the addition of a reinforcing spring in AN-130-B.

COGNIZANT AGENCY: SCL-8855.

MANUFACTURER: AN-130-A ... Signal Corps Order 15025-Ph-43; AN-130-B ... Walker-Turner Company.

STOCK NUMBERS: AN-130-A ... Navy N5985-249-4373 and Signal Corps 2A275-130A.

REFERENCES:

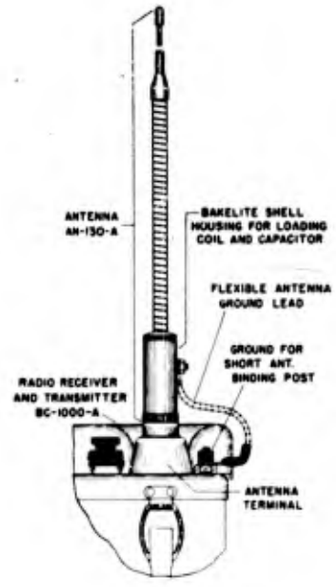
1) War Department, Radio Set AN/VRC-3, Technical Manual, TM 11-637, (October 16, 1944). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) War Department, Radio Set SCR-300-A, Technical Manual, TM 11-242, (also T.O. 16-40 SCR 300-5), (Feb. 1945). UNCLASSIFIED.

4) Signal Corps Drawing SC-D-6619.

5) U. S. Department of Defense Nomenclature Card.



AN-130-A

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ANTENNA AN-131-A

FREQUENCY: VHF band, 40 - 48 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of eight sections, each 17 inches long, permanently linked by stainless-steel wire with sufficient slack to permit folding the antenna for carrying. The sections are joined by a slide fit of male and female brass ferrules. The wire is under spring tension when the antenna is assembled. The antenna is 17 inches long folded and 128 inches long extended with a maximum diameter of 21/32 inch. It mounts by a 3/8 - 24 inch threaded bushing 3/8 inch long.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-300, Equipment function - communications.

COGNIZANT AGENCY: SCL-8856 and QCD.

MANUFACTURER: Galvin Manufacturing Corporation, order 15025-Phila-43.

STOCK NUMBER: Federal Stock Number N5985-249-4375, Signal Corps 2A275-131A.

REFERENCES:

1) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A, TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.

2) War Department, Radio Set SCR-300-A, Technical Manual, TM 11-242 (also T.O. 16-40 SCR 300-5), (Feb. 1945). UNCLASSIFIED.

3) Signal Corps Drawing Numbers SC-D-6616 and SC-D-6617.

4) Government Specification 71-1601.

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ANTENNA AN-132

FREQUENCY: LF and MF bands, 0.2 - 0.4 mc.

TYPE: Probably loop antenna.

DESCRIPTION: The antenna is a triangle, 51 inches by 37 inches by 37 inches with eight radial counterpoise elements. The overall height is 132 inches.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Homing Beacon AN/GRN-1. Equipment function - navigation, surface reference.

MISCELLANEOUS: The reference listed below states that this antenna is obsolete.

NOTE: Two antennas are numbered AN-132. This one is probably wrong.

REFERENCE:
Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (March 14, 1957). UNCLASSIFIED.

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ANTENNA AN-135

Cancelled per R&W SPSRB-2, 8 Apr. 43. See AS-8/TPS-1.

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ANTENNA AN-136

TYPE: Dipole.

DESCRIPTION: The antenna consists of a pair of dipoles used to feed dual corner reflector AN-156. The equipment includes an antenna coupling unit.

ASSOCIATED EQUIPMENT: Radio Equipment RC-188 and Radio Set SCR-588-B.

COGNIZANT AGENCY: CESL-1006.

STOCK NUMBER: Probably Signal Corps 2A275-136.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AN-137-( )

TYPE: Array.

DESCRIPTION: The antenna consists of 10 box-like structures each approximately 15 feet long by 5 feet high by 2 feet deep. These structures are mounted with two boxes end to end five pairs in height. The two center boxes contain the antenna phasing network, electronic switching, and duplexing units. Concentric transmission lines carry power from these two center boxes to the transmitter and receiver section of the antenna. Each of the four boxes mounted above and below the two center boxes has 48 antenna elements. Approximate weight, exclusive of pedestal, is 3,000 pounds.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-627-().

COGNIZANT AGENCY: CESL-827.

STOCK NUMBER: Probably Signal Corps 2A275-137().

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AN-138-(*)

TYPE: Mattress antenna.

DESCRIPTION: The antenna is an all-metal array, eight dipoles high and four dipoles wide, and is mounted in front of a screen reflector. Its overall size is 36 feet 9 inches by 18 feet 10-1/2 inches. It is designed to withstand a 125-mile-per-hour wind and one inch radial ice coating. The antenna is mounted on Tower TR-20-A.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-271-D. Equipment function - search, air.

MISCELLANEOUS: AN-138-(*) denotes AN-138 and AN-138-A. AN-161-(*) supercedes AN-138.

COGNIZANT AGENCY: SCRL-696 and CESL.

MANUFACTURER: Radio Corp. of America, Contract W-2279-sc774 (file 6602-SCRL-43).

STOCK NUMBER: Probably Signal Corps 2A275-138-(*).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AN-139

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna consists of a fixed array of six vertical dipoles, each approximately 30 inches long. The dipoles are stacked one above the other in a vertical line and are fed in phase by six branch feeders connected to three junction points spaced one wavelength apart along the main feed line. The array mounts on Tower TR-38.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Equipment RC-188 and Radio Set SCR-588-B.

COGNIZANT AGENCY: CESL-1004 and CESL-1347.

MANUFACTURER: Research Enterprises, Ltd., Toronto, Canada; order 3571-SCRL-43.

STOCK NUMBER: Probably Signal Corps 2A275-139.

REFERENCES:
1) REL Drawing Number 3922-3908.
2) U. S. Department of Defense Nomenclature Card.

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COGNIZANT AGENCY: CESL.

MANUFACTURER: Chrysler Corp., Contract W-2279-sc-62 (file 115-SCRL-42) DP42-S-95.

STOCK NUMBER: Signal Corps 2A2704-61B/R1.

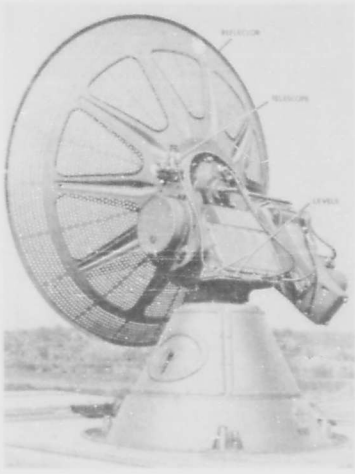
REFERENCES:

1) Department of the Army, Ground Radar and Recognition Equipment, Directory of Signal Corps Equipments, TM 11-487C, (Jan. 1951). CONFIDENTIAL, MODIFIED HANDLING.

2) War Department, Radio Sets SCR-584-A and SCR-584-B Technical Operation Manual, General Description, Operating Instructions, and Equipment Performance Log, TM 11-1324, (April 1946). UNCLASSIFIED.

3) Department of the Army, Radio Set SCR-784, Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide, T.O. 31R2-3SCR784-4, (October 20, 1955). UNCLASSIFIED.

4) U. S. Department of Defense Nomenclature Card.



AN-141-(*)

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junction box, and a matching section are mounted on the back of the reflector. The antenna weighs approximately 40 pounds.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Additional information is available in the confidential document listed below as Reference 1.

ASSOCIATED EQUIPMENT: Radio Equipments RC-184 and RC-145-A, and Radio Sets SCR-545-A and SCR-584. See Reference 1.

COGNIZANT AGENCY: CESL-1031.

STOCK NUMBER: Probably Signal Corps 2A275-154.

REFERENCES:
1) Department of the Army, Ground Radar and Recognition Equipment, Directory of Signal Corps Equipments, TM 11-487C, (Jan. 1951). CONFIDENTIAL, MODIFIED HANDLING.
2) U. S. Department of Defense Nomenclature Card.





AN-154-A

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ANTENNA AN-156

TYPE: Dual corner reflector.

DESCRIPTION: The antenna is a reflector consisting of a 5-foot by 5-foot flat screen with a 5-foot by 4-foot screen mounted at right angles at its center. It is constructed of welded tubing and screening and weighs approximately 300 pounds. The antenna is normally used with two AN-136 dipoles and mounted on antenna drive MC-468.

ASSOCIATED EQUIPMENT: Radio Equipment RC-188 and Radio Set SCR-588-B.

COGNIZANT AGENCY: CESL.

STOCK NUMBER: Probably Signal Corps 2A275-156.

REFERENCES:
1) Manufacturer's Drawing Number REL 18276.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-158

TYPE: Tower antenna.

DESCRIPTION: The antenna is a 200-foot steel tower of constant triangular cross section one foot on each side. It is composed of 12-foot sections made of steel rods in a truss formation. The equipment weighs 3900 pounds. When disassembled, it can be loaded in a standard 2-1/2-ton 6X6 cargo truck.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-698.

COGNIZANT AGENCY: SPSGD-1.

STOCK NUMBER: Probably Signal Corps 2A275-158.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-159-(*)

FREQUENCY: UHF band, 397 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna is an array of 32 dipoles arranged in four bays and mounted on a rectangular reflecting screen. The dipoles are spaced 1/2 wavelength apart. The overall antenna is 7-1/2 feet by 7-1/2 feet by 5 inches. The antenna mounts on Support FT-478. Antenna Switch Assembly SW-231 is used to provide lobe switching.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, air transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-658. Additional information is available in the confidential document listed below as Reference 1.

MISCELLANEOUS: AN-159-(*) denotes AN-159 and AN-159-A.

COGNIZANT AGENCY: ESL-3020.

MANUFACTURER: Farnsworth, order 2912-MPD-44.

STOCK NUMBER: Federal Stock Number 5985-280-3150, Signal Corps 2A-275-159.

REFERENCES:

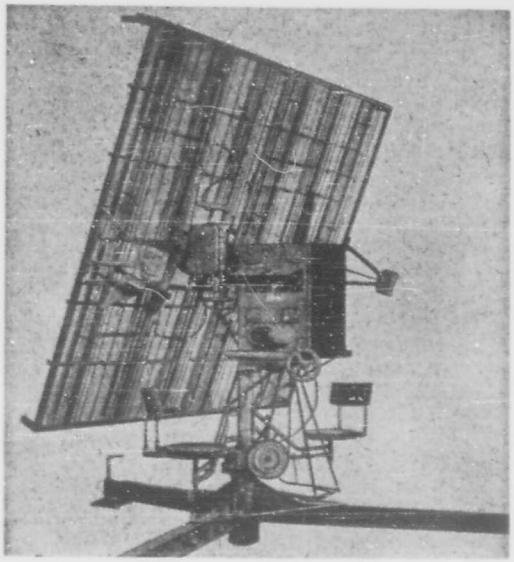
1) Department of the Army, Meteorological Equipment, Directory of Signal Corps Equipments, TM 11-487C, (April 1951). CONFIDENTIAL.

2) Department of the Army and Air Force, Antenna AN-159, Organizational Maintenance Allowances and Field and Depot

3) Signal Corps Specification 271-3101.

4) TM 11-1158A.

5) Farnsworth part drawing number 97-5001.



AN-159-(*)

ANTENNA AN-160

FREQUENCY: MF and HF bands, 1.9 - 6.5 mc.

TYPE: Long wire.

DESCRIPTION: The antenna consists of 125 feet of No. 14 AWG copper stranded or braided wire with six insulators spaced along the length of the wire. Jumpers are provided for shorting across the insulators to obtain antennas of various lengths.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-694. Equipment function - communications.

MANUFACTURER: Crosley Radio Corporation.

STOCK NUMBER: Federal Stock Number N5985-249-4385, Signal Corps 2A275-160.

REFERENCES:

1) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.

2) War Department, Organizational and Higher Echelon Spare Parts for Radio Set SCR-694-C, Supply Catalog, TO 31R1-3SCR694-14 (March 1947). UNCLASSIFIED.

3) Crosley Drawing D 226196.

4) Signal Corps Specification 71-1606.

5) TM 11-487A.

ANTENNA ASSEMBLY AN-161-(*)

FREQUENCY: VHF band, 102-112 mc.

TYPE: Rectangular array of dipoles.

DESCRIPTION: The antenna is an all-metal directive array 8 dipoles wide and 4 dipoles high. Each element of the 32 dipoles is 18-1/4 inches long. Overall the array is approximately 37 feet 4-1/2 inches wide and 21 feet high. It is designed to withstand a 125-mile-per-hour wind and one inch of ice. The antenna mounts on Tower TR-20-B.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-271-L.

MISCELLANEOUS: Antenna AN-161-(*) supercedes Antenna AN-138. However, Antenna AN-161-(*) will not be procured after 4 Jan. 1946. Antenna AN-161-(*) denotes AN-161 and AN-161-A. Antenna AN-161-A has dipoles made of 2-inch-square rods, while AN-161 has dipoles made of 2-inch-diameter cylindrical rods.

COGNIZANT AGENCY: CESL and WL-45-C177.

MANUFACTURER: International Stacy Corp., Contract W-28-004-sc-34, order 367-MPD-44.

STOCK NUMBER: Probably Signal Corps 2A275-161-().

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-164

FREQUENCY: VHF and UHF bands, 264-312 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna is a vertical wide-band receiving antenna operating against a ground plane which is part of the antenna assembly. The overall antenna is 13 inches long and 10-1/4 inches wide at the ground plane. Socket SO-239 connects the antenna to a 50-ohm transmission line.

INSTALLATION: Probably ground and aircraft.

ASSOCIATED EQUIPMENT: Radio Set SCR-550-B. Equipment function - television.

MISCELLANEOUS: The description of this antenna given in Reference 4) below indicates that it is probably a modification of AN-162 for use on ground installations and under conditions where the skin of the aircraft cannot be used as a ground plane. Reference 1) below states that Antenna AN-164 is obsolete.

COGNIZANT AGENCY: ARL-2598.

MANUFACTURER: Radio Corp. of America, order 3749-ARL-42.

STOCK NUMBERS: Probably Signal Corps 2A275-164 and Federal Stock Number 5821-155-8281.

REFERENCES:
1) U. S. Air Force, Radio Sets SCR-549-A, SCR-550-A, and SCR-550-B, Interim Instructions, (September 20, 1944). UNCLASSIFIED.
2) RCA Drawing P-255 340-502.
3) Government Drawing SC-D-10373.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-165

FREQUENCY: UHF band, 324-372 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna is a vertical wide-band receiving antenna operating against a ground plane which is part of the antenna assembly. The overall antenna is 12 inches long and 8-1/2 inches wide at the ground plane. Socket SO-239 connects the antenna to a 50-ohm transmission line.

INSTALLATION: Probably ground and aircraft.

ASSOCIATED EQUIPMENT: Radio Set SCR-550-B. Equipment function - television.

MISCELLANEOUS: The description of this antenna given in Reference 4) below indicates that it is probably a modification of AN-163 for use on ground installations and under conditions where the skin of the aircraft cannot be used as a ground plane. Reference 1) below states that Antenna AN-165 is obsolete.

COGNIZANT AGENCY: ARL-2599.

MANUFACTURER: Radio Corp. of America, Order 3749-ARL-42.

STOCK NUMBER: Probably Signal Corps 2A275-165.

REFERENCES:
1) U. S. Air Force, Radio Sets SCR-549-A, SCR-550-A, and SCR-550-B, Interim Instructions, T. O. 1256-3SCR550-1, (September 20, 1944). UNCLASSIFIED.
2) RCA Drawing P-255340-504.
3) Government Drawing SC-D-10373.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-168

TYPE: Long wire.

DESCRIPTION: The antenna consists of 125 feet of No. 14 AWG phosphor-bronze wire with an Insulator IN-86, spaced 75 feet from one end. This end is terminated in another Insulator IN-86. The other end of the antenna is attached to Mast Base MP-47-A. A Fahenstock clip and pigtail for shorting across the first insulator is provided so that all 125 feet can be used.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Sets SCR-299, SCR-399, and SCR-499.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

STOCK NUMBER: Probably Signal Corps 2A-275-168

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ANTENNA ASSEMBLY AN-169

See RC-281.

ANTENNA ASSEMBLY AN-170

See RC-281.

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ANTENNA ASSEMBLY AN-186

FREQUENCY: SHF band, X-band.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a 3-foot-diameter aluminum paraboloid with a focal length of 27-1/2 inches. The reflector is mounted on an aluminum spider. The total weight of the spider and reflector is 500 pounds. The antenna mounts on Antenna Mount MP-88.

BEAM DATA:
Gain - Approximately 34.8 db, (feed unknown).

COGNIZANT AGENCY: CESL-1888.

MANUFACTURER: Westinghouse Electric Co., Order 650-SCRL-42.

STOCK NUMBER: Probably Signal Corps 2A275-186.

REFERENCES:
1) Westinghouse Drawing 7613118.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AN-187

MAJOR COMPONENTS: 4 AN-191 antenna elements (2 spares) and 1 MA-11 mast section.

FREQUENCY: VHF band, 75 mc.

TYPE: Dipole.

DESCRIPTION: Antenna AN-187 is a half-wave dipole, made up of two antenna elements, AN-191, mounted on stand-off insulators. Each antenna element, AN-191, consists of Duralumin tubing 37-1/8 inches long and 0.278 inch in diameter. The antenna mounts on a vertical, hollow, square steel mast with four folding aluminum legs. The mast contains a monitoring circuit and tube located about one-third of the distance from the bottom. The entire assembly folds into a compact, canvas-covered roll. The collapsed dimensions are 46 inches by 6 inches by 6 inches. The erected height is 48 inches, and the base area is 56 inches by 56 inches. The weight is 13 pounds.

BEAM DATA:
Beam type - The radiation pattern is a cone radiated in an upward direction. This vertical cone has an elliptical horizontal cross section, the major axis of which is twice the minor axis.
Polarization - Horizontal.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Marker Beacon Set AN/MRN-3. Equipment function - approach control.

COGNIZANT AGENCY: ARC.

MANUFACTURER: Radio Receptor Corp., Order 10-DAY-45.

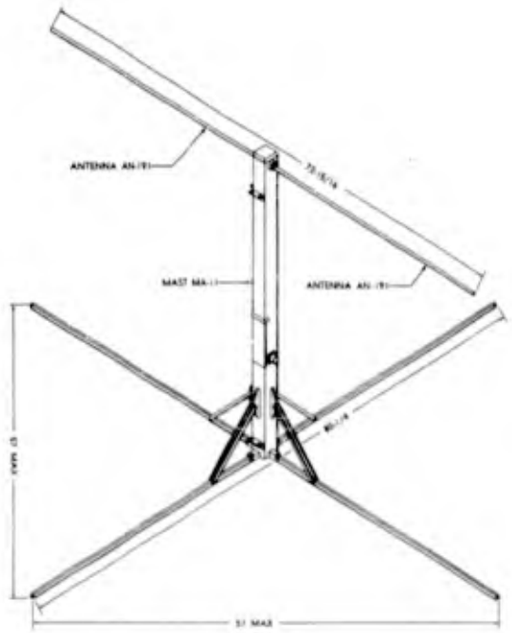
STOCK NUMBERS: AN-187. . .Signal Corps 2A275-187; AN-191. . .Signal Corps 2A275-191 and Federal Stock Numbers 5820-263-0946; 2825-546-4962.

REFERENCES:
1) U. S. Air Force, Marker Beacon Set AN/MRN-3 and Marker Beacon Set AN/MRN-3A, Handbook Operating Instructions, T.O. 31R4-2MRN3-11, (August 20, 1945 - revised November, 1955). UNCLASSIFIED.

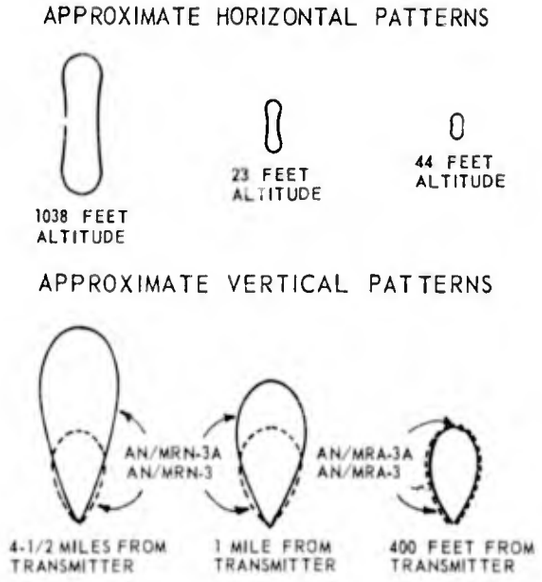
2) U. S. Air Force, Instrument Low Approach System (SCS-51) Facility, Handbook Standard Installation Instructions, T. O. 31R4-2-147, (Feb. 21, 1955). UNCLASSIFIED.

3) U. S. Air Force, Marker Beacon Transmitting Equipment RC-115-B, Technical Manual Field Maintenance, T.O. 31R4-2MRN3-2, (June 1, 1945 - revised Feb. 28, 1959). UNCLASSIFIED.

4) U. S. Air Force, Marker Beacon Transmitting Equipment RC-115-A, Handbook Maintenance Instructions, T.O. 31R4-2MRN3-12, (Nov. 15, 1955). UNCLASSIFIED.



AN-187



AN-187 Installation and Radiation Patterns

ANTENNA AN-188

FREQUENCY: VHF band, 100-156 mc.

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical radiator and a ground plane. The vertical radiator is a rod, 1/4 inch in diameter and 13 inches in length. The ground plane is composed of 6 radial rods positioned equiangularly at an angle of 45° below the horizontal.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

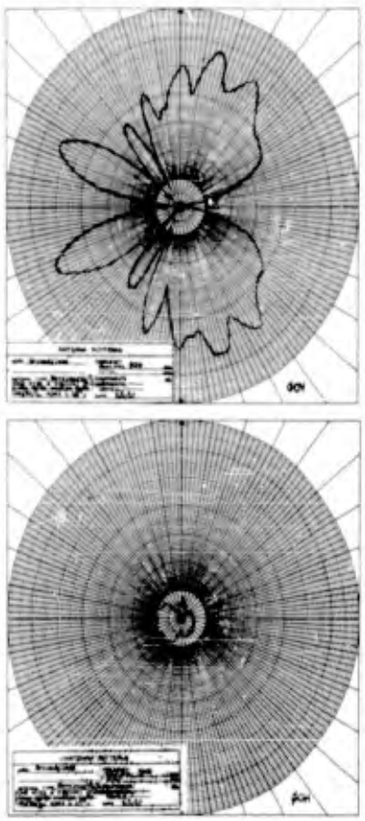
TUNING/MATCHING DEVICES: The antenna is matched to a 50-ohm coaxial cable by a matching section. This section consists of a grounded sleeve 3 inches in diameter and 20 inches long.

INSTALLATION: Ground, transportable.

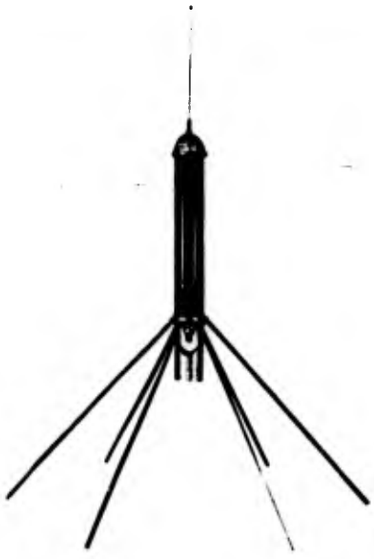
ASSOCIATED EQUIPMENT: Radio Set SCR-624 and Transmitter RC-625-AM. Equipment function - communication.

COGNIZANT AGENCY: ARL, Wright Air Development Center.

MANUFACTURER: Corvey Engineering Company, orders 349-DAY-44 and 952-DAY-44.



AN-188 Radiation Patterns; Vertical above, Horizontal below.



AN-188

STOCK NUMBERS: Signal Corps 2A275-188, Air Force 1700-202470560 and Federal Stock Number 5820-263-0946.

REFERENCES:

1) U. S. Air Force, Aircraft Antenna Design Summary, (Dec. 3, 1951). SECRET.

2) U. S. Air Force, Control Tower Facility, Handbook Standard Installation Instructions, TO 31R2-1-137 (April 20, 1956). UNCLASSIFIED.

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ANTENNA ASSEMBLY AN-189

FREQUENCY: VHF band, 157-187 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna is a stainless-steel, sectionalized, directional antenna which mounts on Tower TR-29. It is approximately 12 feet wide, 3 feet high, and 14 inches deep. Four folded dipoles spaced 2/3 wavelength apart, are located 1/4 wavelength in front of the plane of the parasitic reflectors. The weight is approximately 25 pounds.

BEAM DATA:
Half-power beam width - Approximately 33° (both planes).

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Antenna Tower Kit MX-418/TPX which is used with Radio Equipment RC-384. Equipment function - probably IFF.

COGNIZANT AGENCY: ESL-3116 and CESL.

MANUFACTURER: Belmont Radio Corporation, order 2491-MPD-45, contract W-28-003-sc-913 (3857-CEGSA-44).

STOCK NUMBER: Signal Corps 2A275-189.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AN-190

FREQUENCY: HF band, 3.5 - 6 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a diamond-shaped loop consisting of five turns of insulated wire mounted on four radial wooden struts hinged at the center. The bottom strut is extended beyond the loop to form a handle. A sense button is mounted on the panel front directly above the handle. The operator's body serves as a vertical sense antenna when he touches the sense button. The antenna has a permanently attached 38-inch transmission line, CO-130, with a connector, AN-3106-10SL-3S, for connecting the antenna to the coupling unit. The overall dimensions of the antenna when extended are approximately 21-1/8 inches long by 27-1/4 inches high.

BEAM DATA:
Beam type -
Without sense - figure-of-eight.
With sense - cardioid.

TUNING/MATCHING DEVICES: A trimmer capacitor for tuning the loop is located in the handle.

INSTALLATION: Ground, hand-carried.

ASSOCIATED EQUIPMENT: Homing Modification Kit MC-619 for Radio Set SCR-536. Equipment function - direction finding.

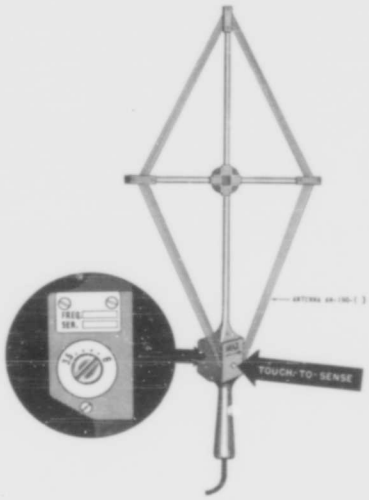
COGNIZANT AGENCY: SCL and SPSRB.

MANUFACTURER: Purchase Requisition 45-1920.

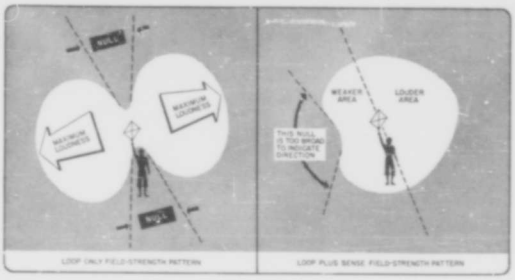
STOCK NUMBER: Signal Corps 2A275-190.

REFERENCES:
1) War Department, Radio Sets SCR/536-A,-B, -C,-D,-E, and -F, Technical Manual, TM 11-235 (also TO 16-40 SCR 536-5), (May 1945). UNCLASSIFIED.

2) Government Specification 271-3199.



AN-190-()



Horizontal Radiation Pattern for AN-190

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ANTENNA AN-191

See AN-187.

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ANTENNA AN-192

DESCRIPTION: The antenna is a search antenna designed to have a very narrow beam in azimuth with wide elevation coverage. The dimensions are 5 feet by 14 feet. No other information is available.

INSTALLATION: Ground, probably truck-mounted.

ASSOCIATED EQUIPMENT: Radio Set SCR-584. Equipment function - anti-aircraft fire control.

COGNIZANT AGENCY: SPSRD-1.

STOCK NUMBER: Probably Signal Corps 2A275-192.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AN-193 and AN-194

FREQUENCY: SHF band, 8500 - 9000 mc. (AN-193) and 9000 - 9600 mc (AN-194).

TYPE: Slot antenna.

ASSOCIATED EQUIPMENT: Transmitter-Receiver Modification Kit MC-607 used to modify Radio Set SCR-584-(*). Equipment function - fire control.

MISCELLANEOUS: AN-193 is similar to AN-205; AN-194, to AN-206. However, they are not interchangeable due to a 90° difference in keyway mounting. See AN-205 and AN-206 for illustrations, description, beam data, scan data, and information concerning tuning/ratching devices. These items are the same for all four antenna assemblies.

COGNIZANT AGENCY: CESL-2894.

MANUFACTURER: General Electric Company, order 2149-MPD-45.

STOCK NUMBER: Signal Corps 2A288A-50 (AN-193) and 2A288A-51 (AN-194).

REFERENCES:
1) Department of the Army, Ground Radar and Recognition Equipment, Directory of Signal Corps Equipments, TM 11-487C, (Jan. 1951). CONFIDENTIAL, MODIFIED HANDLING.

2) Department of the Army, Radio Sets SCR-584-A and SCR-584-B with Transmitter-Receiver Modification Kit MC-607 or MC-607-A, Technical and Serivce Manuals, TM 11-1563 (March 4, 1949). UNCLASSIFIED.

3) War Department, Radar Sets AN/MPG-2 and AN/MPG-2A, Service Manual, TM 11-1563 (June 1946). UNCLASSIFIED.

4) Signal Corps Specification 371-2346.

5) U. S. Department of Defense Nomenclature Card.

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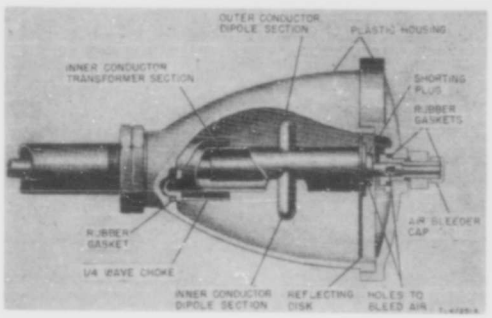
ANTENNA AN-195-( )

DESCRIPTION: Antenna AN-195-() is the same as Antenna AN-196-() except for the length of the mounting arm and the method of offsetting the electrical center of the dipole. The electrical center of the AN-195-() dipole is offset by a suitably positioned quarter-wave choke, while the AN-196-() dipole is physically offset. The overall length of the antenna, including the mounting arm, is 23 inches. Antenna AN-195-() is used to feed Reflector AT-118/MP, which is an eight-foot paraboloid. See also Antenna AN-196-().

STOCK NUMBERS: Signal Corps 2A275-195() and Federal Stock Number 5840-296-2319.

REFERENCES:
1) LHT part #C-789-110.

2) See References for AN-196-() except for Reference 2).



AN-195

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ANTENNA AN-196-( )

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Parasitic array of a driven dipole and a small circular disk reflector.

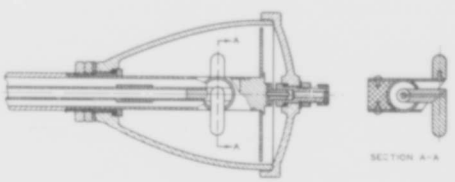
DESCRIPTION: The antenna consists of a gold-plated brass dipole and a small circular reflecting disk sealed in a polystyrene housing. A length of rigid coaxial transmission line is included as part of the antenna. The dipole is off-set from the axis of rotation of the antenna feed assembly. The antenna has a maximum diameter of 4-1/2 inches, and is 16 inches long. The antenna has a characteristic impedance of 46 ohms and is used to feed a six-foot paraboloidal reflector.

BEAM DATA:
Half-power beamwidth - Vertical - 4°.
Horizontal - 4°.
Beam type - Pencil.
Polarization - Linear, constantly changing due to rotation of the dipole.

SCAN DATA: The center of rotation of the antenna feed coincides with the reflector axis. The radiating dipole is offset from this center so that the beam describes a cone about the reflector axis. This cone makes an angle of 2° with the reflector axis. In addition to the usual searching and tracking functions of Radio Set SCR-584-(), the modification kit, of which this antenna feed is a part, provides for searching an azimuth sector variable in width from 20° to 80° at a constant elevation, and searching with a continuous (360°) scan in either direction in azimuth with no change in elevation angle.

INSTALLATION: Ground, truck mounted.

ASSOCIATED EQUIPMENT: Modification Kit MC-627, used to modify Radio Set SCR-584-(). Equipment function - tracking, ground-based radar used to map the position of friendly aircraft on close-support bombing missions. Range - up to 100 miles when in conjunction with airborne responder beacons AN/APN-21, AN/APN-29, or AN/APN-19.



AN-196-()

MISCELLANEOUS: AN-196-() is similar to AT-672/G except that a different method of off-setting the beam is used. They are mechanically interchangeable but have different electrical properties. See also AN-195-().

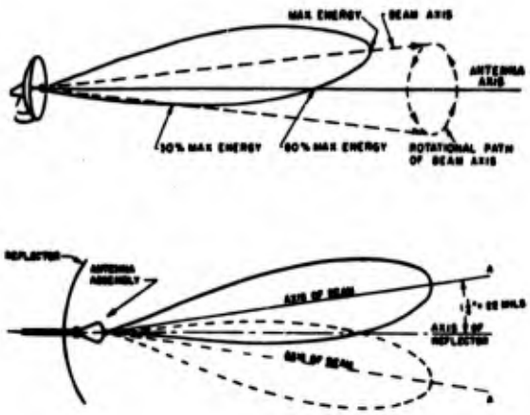
COGNIZANT AGENCY: Navy and WL.

MANUFACTURER: L. H. Terpening, contract NOrd-9851 and Westinghouse, order 5025 DAY-45.

STOCK NUMBERS: Signal Corps 2A275-196() and Federal Stock Number 5840-296-2320.

REFERENCES:

1) U. S. Air Force, Modification Kit MC-627, Handbook of Maintenance Instructions, CO-16-40MC627-3 (October 5, 1945). UNCLASSIFIED.
2) LHT part #C-574-10.
3) AF Specification C-7438.
4) U. S. Department of Defense Nomenclature Card.



AN-196 RADIATION PATTERNS

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ANTENNA AN-197

See RC-307.

ANTENNA AN-198

See RC-307.

ANTENNA AN-199

See AN-200 and AN-201.

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ANTENNA ASSEMBLY AN-200 and AN-201

MAJOR COMPONENTS:

AN-200...1 AN-199 loop antenna and 1 MP-91 antenna base.
AN-201...1 AN-199 loop antenna and 1 MP-92 antenna base.

TYPE: Loop antenna.

DESCRIPTION: Antenna AN-199 is a sectionalized loop antenna of tubular steel with 0.001-inch copper plating and 0.001-inch silver plating. Its dimensions are 1 meter square when erected and approximately 53 inches long and 3/8 inch in diameter when collapsed. The bottom contains three 3/8-inch plugs for mounting on antenna base MP-91 or MP-92.

ASSOCIATED EQUIPMENT:

AN-200...Radio Receiver BC-973-A and BC-973-B.
AN-201...Radio Receiver BC-1003-A and BC-1003-B.

COGNIZANT AGENCY: ESL-3079, ESL-3084, and ESL-3085.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AN-202

See RC-301.

ANTENNA ASSEMBLY AN-203

See RC-301.

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ANTENNA AN-204

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a sectionalized aluminum paraboloidal reflector 8 feet in diameter. It mounts on Pedestal MP-61-B. Four outer segments of the reflector can be folded back under the center segment for stowage.

INSTALLATION: Ground, probably truck-mounted.

ASSOCIATED EQUIPMENT: Modification Kit MX-1056/MP for Radio Set SCR-584.

COGNIZANT AGENCY: SCL-8606.

STOCK NUMBER: Probably Signal Corps 2A275-204.

REFERENCES:

1) Signal Corps Drawing SC-D-30089.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AN-205 and AN-206

FREQUENCY: SHF band, 8500 - 9000 mc (AN-205) and 9000 - 9600 mc (AN-206).

TYPE: Slot antenna.

DESCRIPTION: The following description refers to either AN-205 or AN-206. The antennas are the same except for small differences in dimensions described in the section on tuning/matching devices.

Each antenna is a feed assembly normally used with a paraboloidal reflector. The feed consists of a cylindrical, stainless-steel cavity approximately 1-3/8 inches in diameter and 5/16 inch in depth, outside dimensions. The cavity is fed at the center of one face of the cavity by a section of X-band wave guide. Two radiating slots are located in this face of the cavity, one above and one below the wave-guide feed. The waveguide feed section has a slight inward taper in the narrow dimension at the end that connects to the cavity. An r-f choke section and suitable coupling nut are at the other end of the wave-guide section. The choke-section face is beveled slightly and is a duplicate of the choke built into the scan mechanism. The two chokes form a "wobble joint" and permit nutation of the antenna feed assembly. The overall length is 13-3/4 inches and the weight is 1-1/2 pounds.

BEAM DATA: (When used with the proper SCR-584 reflector)

Half-power beamwidth - Vertical - 1.4°.
Horizontal - 1.4°.

Beam type - Pencil.

Polarization - Vertical.

SCAN DATA:

Searching - The antenna feed section is nutated at 30 cycles per second. The beam axis is at an angle of 3-3/4° from the reflector axis, and the beam describes a hollow cone about the reflector axis. The equipment with which this antenna feed assembly is used is equipped to search by continuous azimuth scanning, helical scanning of a 20° elevation sector, and manual scanning.

Tracking - The antenna feed section is nutated at 30 cycles per second. The beam axis is at an angle of 0.4° from the reflector axis and describes a solid cone of 2.2° about the reflector axis. At the center of the cone the beam has a power level 80% of the maximum. The equipment of which this antenna feed assembly is a part is equipped for either manual or automatic tracking in azimuth and elevation and either manual or aided range tracking.

TUNING/MATCHING DEVICES: The size and depth of the cavity, the depth of the slots and the thickness of the mica covering the slots are of the proper dimensions to match the impedance of the waveguide to that of free space at the frequency band associated with the antenna feed.

INSTALLATION: Ground, truck-mounted.

ASSOCIATED EQUIPMENT: Transmitter-Receiver Modification Kit MC-607-A as used to modify Radio Set SCR-584-(). Equipment function - fire control.

MISCELLANEOUS: AN-205 and AN-206 are similar and interchangeable except for frequencies covered. AN-205 is similar to AN-193 and AN-206 to AN-194, but they are not interchangeable due to mechanical differences.

COGNIZANT AGENCY: ESL-3546.

MANUFACTURERS: General Electric Co., order 2149-MPD-45, and American Machine and Foundry Co.

STOCK NUMBERS: Signal Corps 2A275-205() (AN-205) and 2A275-206() (AN-206).

REFERENCES:

1) Department of the Army, Radio Sets SCR-584-A and SCR-584-B with Transmitter-Receiver Modification Kit MC-607-A, TM 11-1363, (Oct. 1950). UNCLASSIFIED.

2) Department of the Army, Radio Sets SCR-584-A and SCR-584-B with Transmitter-Receiver Modification Kit MC-607 or MC-607-A, Technical and Service Manual, TM 11-1563, (Mar. 4, 1949). UNCLASSIFIED.

3) War Department, Radar Sets AN/MPG-2 and AN-MPG-2A Service Manual, Theory, Trouble Shooting and Repair, TM 11-1563 and TO 16-40 SCR 584-35, (June 1946). UNCLASSIFIED.

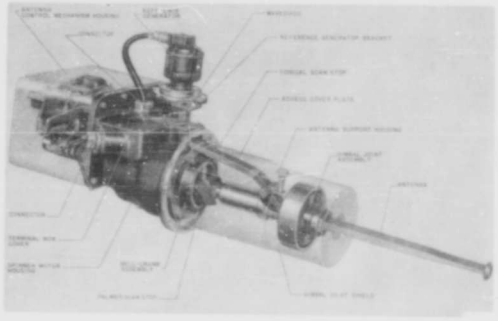
4) Department of the Army, Ground Radar and Recognition Equipment, Directory of Signal Corps Equipments, TM 11-487C, (Jan. 1951). CONFIDENTIAL.

5) American Machine and Foundry Drawing 59-118-143500 (AN-205).

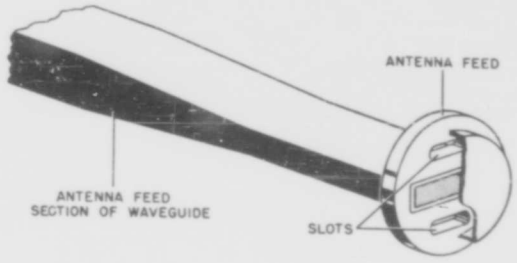
6) American Machine and Foundry Drawing 59-118-143600 (AN-206).

7) Signal Corps Specification 371-2346.

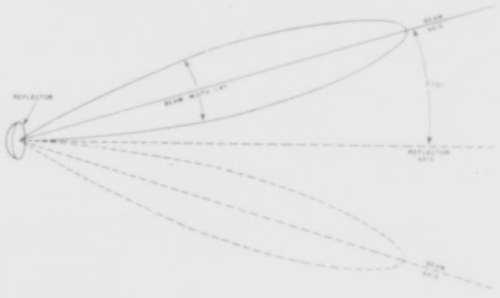
8) U. S. Department of Defense Nomenclature Card.



AN-205 and AN-206



AN-205 and AN-206



AN-205 and AN-206 Search Pattern



AN-205 and AN-206 Tracking Pattern

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for guided missile control. Range - 250 miles (1000 miles if modified by circular polarization).

MISCELLANEOUS: The antenna is normally polarized vertically, but it may be modified for circular polarization.

REFERENCE:
U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA GROUP AN/FRA-21&()

MAJOR COMPONENTS: Antenna Reflector AS-859/FRA-21, Waveguide Horn AT-738/FRA-21, Waveguide Tower AB-512/FRA-21, Antenna Deicing Group OA-1349/FRA-21.

FREQUENCY: UHF band, 755 - 985 mc; VSWR < 1.2 over 752 - 952 mc band.

TYPE: Cut paraboloidal reflector with horn feed.

DESCRIPTION:

A) Antenna Reflector AS-859/FRA-21 - The reflector has a cut-paraboloidal reflecting surface made of rectangular steel plates which are riveted to the front face of the supporting structure. Overall dimensions of the reflecting surface are approximately 60 feet wide by 60 feet high. The supporting structure is approximately 60 feet wide by 37 feet deep at the base and tapers to 60 feet wide by 8 feet at its maximum height of 65 feet. A corrugated, protected metal sheeting completely encloses the back, bottom, sides, and top of the structure. (See photographs.) The reflector face is deiced by three oil-fired space heaters located inside the enclosure. Antenna Reflector AS-859/FRA-21 may be modified to support auxiliary antennas and obstruction lights if required.

B) Waveguide Horn AT-738/FRA-21 - The waveguide horn unit consists of a waveguide section having inside dimensions of 9.75 inches by 4.875 inches, terminating at one end in a flange and connecting to a horn section at the other end. All mechanical seams and joints in the AT-738/FRA-21 are sealed to withstand an internal air pressure of 0.5 pounds per square inch. The assembly will withstand ice-loading conditions of 100 pounds per square foot. Electric heaters are used to deice the horn aperture. The 10 db beamwidth of the horn is 106 degrees in the vertical and horizontal planes (over 752 - 952 mc band).

C) Waveguide Tower AB-512/FRA-21 - The supporting tower for the waveguide horn and its waveguide feed is a tapered, four-sided, lattice-type steel structure 33 feet high and is installed approximately 30 feet in front of the reflector. Adjustment shoes are mounted in anchor plates which allow horizontal movement (±16 inches) parallel to the face of the reflector.

BEAM DATA:
Gain - 40 db.
Beam type - Pencil.
Polarization - Horizontal.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-45(V).
Equipment function - communications.

COGNIZANT AGENCY: WL.

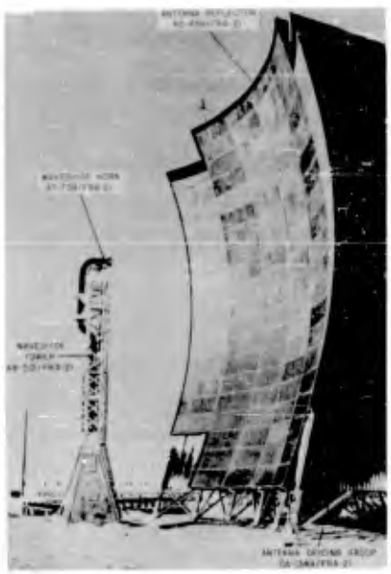
MANUFACTURER: Western Electric Company, procurement contract AF 33(600)-29717.

REFERENCES:

1) U. S. Air Force, Antenna Group AN/FRA-21, Handbook Service Instructions, TO 31R1-2FRA21-2, (July 1, 1957). UNCLASSIFIED.

2) Department of the Army, Radio Compass AN/ARN-6, Technical Manual, TM 11-5125, (Sept., 1956). UNCLASSIFIED.

3) Specification: BTL GS 18170.



AN/FRA-21

ANTENNA GROUP AN/FRA-25 & ()

MAJOR COMPONENTS: Antenna mast, insulators, ground systems, anchor rods, guy anchors, and link bars.

TYPE: Tower antenna.

DESCRIPTION: AN/FRA-25 & () is a fixed 805-foot mast antenna and ground system; it is designed to withstand winds up to 109 knots with approximately one inch of ice. It is composed of 40 sections 20 feet long and 15 feet on each side of the triangular cross section. It rests on a 5-foot-high base insulator. The mast includes ladder and suitable lifting jacks for the antenna.

INSTALLATION: Ground.

COGNIZANT AGENCY: WL-56-2423.

STOCK NUMBER: Federal Stock Number 5825-572-8669.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP AN/FRA-26

MAJOR COMPONENTS: Antenna Reflector AT-751/FRA-26 & (), Waveguide Horn AT-752/FRA-26 & (), or Waveguide Horn AT-766/FRA & () Antenna Support AB-528/FRA-26 & (), and associated structures, deicing equipment, and waveguide assemblies.

FREQUENCY: UHF band, 755 - 985 mc.

TYPE: Paraboloidal reflector with dual horn-type feed.

DESCRIPTION:

A) Antenna Reflector AT-751/FRA-26 & () is a paraboloidal reflector, 30 feet in diameter and 6-1/4 feet deep, with a focal length of 9 feet. It is constructed of 20 steel reflector sections supported by 20 fabricated radial ribs spaced 18° apart. The reflector mounts on the antenna support by means of the center ring, which is 5-1/2 feet in diameter, and the 22-foot-diameter outer ring beam.

B) Waveguide Horn AT-752/FRA-26 & () consists of a dual horn-type feed mounted on an aluminum waveguide 12 feet long. The waveguide, including two hot-air passages for deicing purposes, tapers abruptly near the feed (where the deicing passages terminate) from cross-sectional dimensions of 9 inches by 10-1/2 inches to 4 inches by 10-1/2 inches. The waveguide is supported by a waveguide carriage, part of Antenna Support AB-528/FRA-26. This carriage is mounted on wheels, passes through the center ring of the reflector, and can be rolled to the rear of the tower to gain access to the waveguide horn. Provisions are made for the use of either 3-1/8-inch-diameter Styroflex, or waveguide transmission lines, or a combination of both. The waveguide may be positioned for either vertical or horizontal polarization. The dual horn covers the frequency range 755 - 930 mc; a similar horn, AT-766/FRA & (), covers the frequency range 790-985 mc. The feed is located near the focal point of the reflector and is fed through a power splitter by a single waveguide.

C) Antenna Support AB-528/FRA-26 & () consists of a lattice-type steel structure used to support the antenna reflector and waveguide and to house the deicing heaters, blowers, etc. The support provides means of varying the azimuth and vertical tilt of the antenna to a maximum of 3 degrees from normal.

BEAM DATA:
Gain - 35 db.
Beam type - Pencil.
Polarization - Vertical or horizontal, depending on the feed position.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Western Electric Project AF 18(600)-572 (Dewline). Equipment function - communications.

MISCELLANEOUS: A suffix -1 on the antenna nomenclature indicates the antenna covers the frequency range 755 - 930 mc and, therefore, comes with AT-752 horn. A suffix -2 indicates the antenna covers the frequency range 790 - 985 mc and, therefore, comes with AT-766 horn.

COGNIZANT AGENCY: WL-57-R-1461.

MANUFACTURER: Prime contractor, Western Electric Co.; Subcontractor, Bell Telephone Laboratories, procurement contract order AF 18(600)-572.

STOCK NUMBER: Federal Stock Number 5820-581-5010.

REFERENCES:

1) U. S. Air Force, Antenna Group AN/FRA-26, Handbook Service Instructions, T.O. 31R1-2FRA26-2, (July 1, 1957). UNCLASSIFIED.

2) U. S. Air Force, Antenna Group AN/FRA-26, Illustrated Parts Breakdown, T.O. 31R1-2FRA26-4, (May 1, 1957 - revised April 15, 1958). UNCLASSIFIED.

3) BTL Specification GS-18129.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA DIFFERENCES FOR AN/GLA-3(XE-1) UNITS

	Antenna AT-605(XE-1)/GL	Antenna AT-608(XE-1)/GL	Antenna AT-606(XE-1)/GL	Antenna AT-607(XE-1)/GL
Width, Inches	104	65	36	24
Height, Inches	72	45	36	20
Depth, Inches	40	22	15	12
Weight, Pounds	75	50	30	15
Packaged Weight, Pounds	240	145	121	65
Packaged Volume, Cubic Feet	45	18	18	5.5
Antenna Support No.	AB-425(XE-1)/GL	AB-425(XE-1)/GL	AB-426(XE-1)/GL	AB-426(XE-1)/GL

BEAM DATA:
Gain - Approximate gain with respect to a half-wave dipole is given for each unit: AT-605(XE-1)/GL - 6db at 90 mc; AT-608(XE-1)/GL - 8db at 220 mc; AT-606(XE-1)GL - 8.5db at 400 mc; AT-607(XE-1)/GL - 9db at 750 mc.
Half-power beamwidth - See field patterns.
Beam type - Unidirectional for each antenna.
Polarization - Each antenna may be manually adjusted for any linear polarization.

TUNING/MATCHING DEVICES: Each antenna has an integral bifilar balun.

INSTALLATION: Ground, fixed.

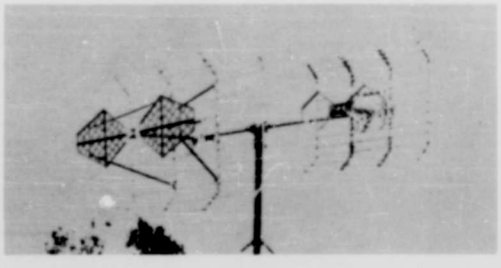
ASSOCIATED EQUIPMENT: Equipment function - countermeasures, jamming.

MISCELLANEOUS: Similar to AN/GLA-3(XE-2). Antenna Group AN/GLA-3(XE-1) is indicated as being obsolete in Reference 2).

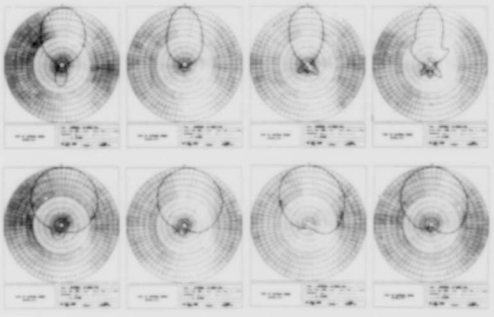
COGNIZANT AGENCY: SCLE, contract DA36-039sc52-661.

MANUFACTURERS: Telrex, Inc.

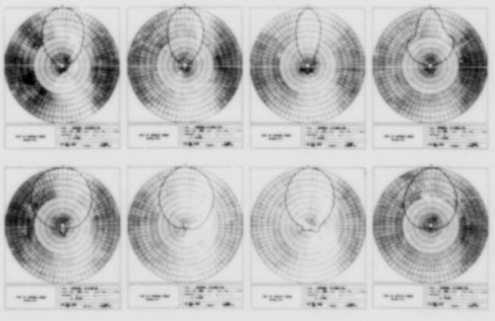
REFERENCES:
1) Department of the Army, Engineering Report on Antenna Group AN/GLA-3(XE-1), Memorandum Report, (Aug. 15, 1955). UNCLASSIFIED.
2) Private Correspondence.
3) Military Specification: SCL-2745.



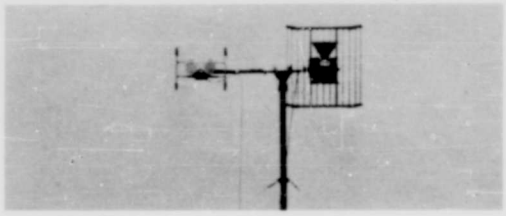
AN/GLA-3(XE-1), AT-605/GL (left) and AT-608/GL (right) Mounted



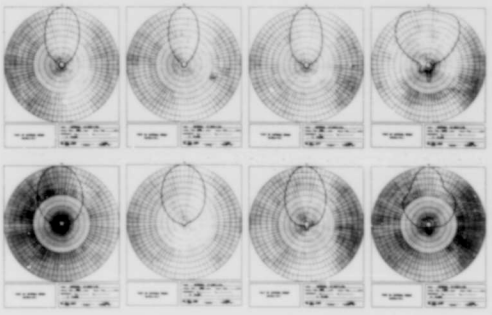
AT-605()/GL Field Patterns, E-plane (top) and H-plane (bottom) for 60, 90, 120, and 150 mc. VSWR Plotted from 10 to 40 for 60 to 150 mc.



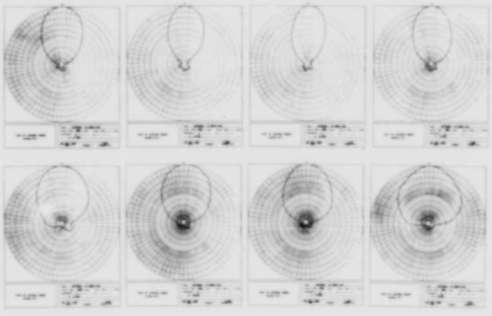
AT-608()/GL Field Patterns, E-plane (top) and H-plane (bottom) for 140, 200, 250, and 300 mc. VSWR Plotted from 10 to 30 for 120 - 500 mc.



AN/GLA-3(XE-1), AT-606/GL (left) and AT 607/GL (right) Mounted



AT-607()/GL Field Patterns, E-plane (top) and H-plane (lower) for 500, 650, 850, and 1050 mc. VSWR Plotted from 10 to 30 for 500 - 1060 mc.



AT-606()/GL Field Patterns, E-plane (top) and H-plane (bottom) for 280, 360, 420, and 500 mc. VSWR Plotted from 10 to 30 for 240 - 500 mc.

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ANTENNA GROUP AN/FRA-28 & ()

MAJOR COMPONENTS: 2 reflectors, 2 waveguide horns, 1 r-f cable assembly, and 1 antenna support.

FREQUENCY: UHF band, 755 - 985 mc.

INSTALLATION: Ground, fixed.

COGNIZANT AGENCY: WL-57-1081.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA for AN/FRC-34 and AN/FRC-35

FREQUENCY: UHF band, 1700 - 1850 mc; VSWR < 1.35.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The antenna used with these equipments consists of a 6-foot-diameter paraboloidal reflector with a dipole feed. The feed is covered by a cup that is heated by a 150-watt spotlight for deicing. Rigid 7/8-inch and 1-5/8-inch transmission lines are used. The antenna may be adjusted 10° in either plane for initial positioning.

BEAM DATA:
Gain - 29 db.
Half-power beamwidth - E-plane - 5.5°.
H-plane - 4°.
Beam type - Pencil.
Polarization - Vertical or horizontal depending on mounting position.

INSTALLATION: Ground, fixed.

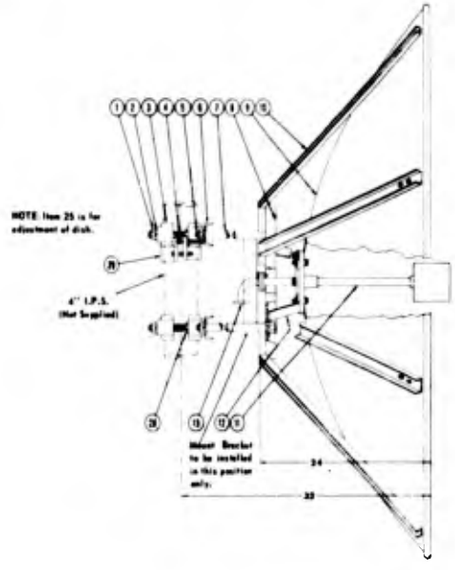
ASSOCIATED EQUIPMENT: Radio Repeater Set AN/FRC-34 and Radio Set AN/FRC-35. Equipment function - communications.

MISCELLANEOUS: This antenna is similar to AS-610/G&(). This antenna is used with both the AN/FRC-34 repeater set and the AN/FRC-35 terminal set.

COGNIZANT AGENCY: U. S. Army.

MANUFACTURER: Andrew Corporation, part number N-14519.

REFERENCES:
Department of the Army, Radio Repeater Set AN/FRC-34 and Radio Set AN/FRC-35, Technical Manual, TM 11-222B, (June, 1956). UNCLASSIFIED.



Antenna for AN/FRC-34 and AN/FRC-35

ANTENNA GROUP AN/GLA-3(XE-1)

MAJOR COMPONENTS: Antenna AT-605(XE-1)/GL, Antenna AT-608(XE-1)/GL, Antenna AT-606(XE-1)/GL, Antenna AT-607(XE-1)/GL, 2 AB-275(XE-1)/U masts, Antenna Support AB-425(XE-1)/GL, Antenna Support AB-426(XE-1)/GL, 2 AB-417 (XE-1)/U antenna supports.

FREQUENCY: VHF and UHF bands, 60-1050 mc; AT-605(XE-1)/GL, 60-150 mc; AT-608(XE-1)/GL, 140-300 mc; AT-606(XE-1)/GL, 280 - 520 mc; AT-607 (XE-1)/GL, 500 - 1050 mc.
With 50-ohm cable, the VSWR is less than 3.5 to 1 for the 60- to 65- mc band of AT-605(XE-1)/GL and less than 3.2 to 1 for the 260 - to 280 - mc band of AT-608(XE-1)/GL. All other units have a VSWR less than 3 to 1 over the frequency band covered.

TYPE: Four modified bow-tie antennas in front of modified screen reflectors.

DESCRIPTION: This antenna group consists of four broad-band, medium-gain, lightweight, modified bow-tie antennas in front of modified screen reflectors. The combined frequency range of the group is 60 to 1050 mc. Each antenna is matched to a 50-ohm coaxial transmission line by an integral bifilar balun. Two of the antennas are mounted on crossarms on each of two masts. The power-handling capacity is 100 watts (average). Physical differences of individual units are given in the table.

TUNING/MATCHING DEVICES: Each antenna has an integral bifilar balun.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Equipment function - countermeasures, jamming.

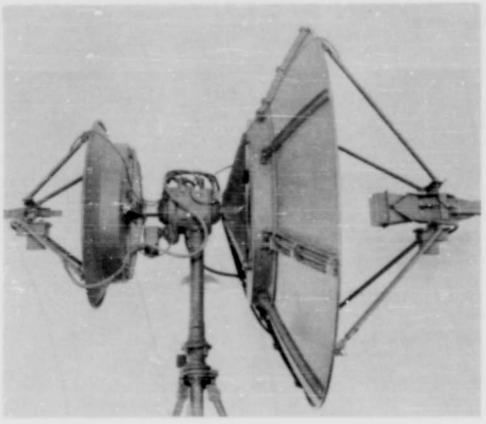
MISCELLANEOUS: Similar to AN/GLA-3(XE-1). See AN/GLA-3(XE-1) for illustrations.

COGNIZANT AGENCY: Evans Signal Laboratories.

REFERENCES:
Private Correspondence.

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SCAN DATA: Remote azimuth rotation at 2 revolutions per minute or manual rotation. Linear polarizations are selectable by remote operation in 45° steps.



AN/GLA-4(*), AS-811/GL (right), AS-812/GL (left)

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: The AN/GLA-4(*) antenna system was designed for use with ELINT equipment. Equipment function - countermeasures, search; and countermeasures, direction finding.

MISCELLANEOUS: The AN/GLA-4(*) represents the AN/GLA(XE-1) and the AN/GLA(XE-2). The only known difference between models is that the AN/GLA-4(XE-2) has a modified mount and is manufactured by a different company.

COGNIZANT AGENCY: Signal Corps.

MANUFACTURERS: AN/GLA-4(XE-1) - ITE Circuit Breaker Company, contract DA-36-039-SC-36606. AN/GLA-4(XE-2) - J & H Smith Mfg. Co., contract DA-36-039-SC-66463.

STOCK NUMBER: Federal Stock Number 5895-622-8194B.

REFERENCE:
Private Correspondence.

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ANTENNA SET AN/GLA-90

MAJOR COMPONENTS: AT-938()/GL, AT-939()/GL, AT-940()/GL and AT-941()/GL.

DESCRIPTION: See individual antennas.

INSTALLATION: Ground.

COGNIZANT AGENCY: Signal Corps.

MANUFACTURER: American Electronic Laboratories, Inc.

REFERENCES:
U. S. Department of Defense Nomenclature Cards.

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ANTENNA GROUP AN/GLA-13

MAJOR COMPONENTS: The antenna group includes mast sections, cross spars, telescoping elements, impedance-matching elements, baluns, cables, and all couplings and clamps needed for the assembly of the antennas. The group also includes adapters to mount the antennas on AB-275/U masts. For a detailed list of components see pages 5 thru 15 of the reference listed below.

FREQUENCY: HF, VHF, and UHF bands, 24 - 1030 mc.

TYPE: Yagi arrays.

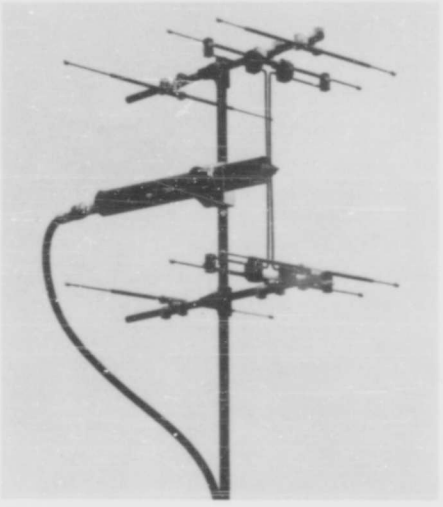
DESCRIPTION: The AN/GLA-13, which was formerly designated as the Tinkertoy Antenna Group, is an easily transportable kit of inexpensive, lightweight antenna components capable of simple field assembly for the reception of signals throughout the frequency range of 24 to 1030 mc.

The components of the Tinkertoy Antenna Group can be used to construct two general types of Yagi arrays: (1) 3-element Yagi arrays for frequencies from 24 to 54 mc and (2) stacked pairs of 3-element Yagi arrays for frequencies from 54 to 1030 mc. The entire frequency interval from 24 to 1030 mc can be covered with ten mechanical arrangements of the elements in this antenna group. The variable impedance-match of the array can be adjusted readily to produce a VSWR < 2 for a single 3-element array and VSWR < 3 for a stacked pair of 3-element arrays. A set of assembly drawings for the antennas to be used for optimum performance is supplied with the handbook for the antenna group.

BEAM DATA:
Front-to-back ratio - 15 db.
Gain - The single 3-element arrays will provide a gain over a half-wave dipole of at least 4 db. The stacked pairs of 3-element arrays provide gains in excess of 5 db. Higher gains can be obtained by very careful adjustment of antenna elements.
Polarization - A Yagi array can be assembled for horizontal polarization at any frequency

in the entire frequency range. An array for either horizontal or vertical polarization can be assembled for the range from 54 to 1030 mc.

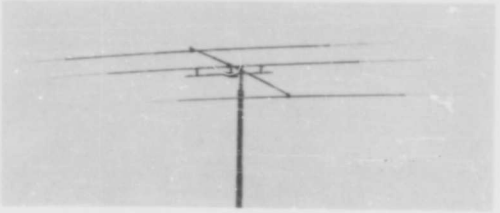
SCAN DATA: Azimuth rotation thru 360° may be manually controlled or remotely controlled by OA-714/TLR.



AN/GLA-13 Arranged for 400 to 640 mc

TUNING/MATCHING DEVICES: Matching transformers of the T-match and balun types.

INSTALLATION: Ground, transportable.



AN/GLA-13 Arranged for 27 to 30 mc

ASSOCIATED EQUIPMENT: Used with countermeasures equipments.

COGNIZANT AGENCY: Signal Corps.

MANUFACTURER: Developed and manufactured by Servo Corporation of America, contract DA-36-039-SC-64689.

REFERENCE:

Operating and Maintenance Data for Tinkertoy Antenna Group AN/GLA-13. New Hyde Park, L. I., New York: Servo Corporation of America. (May 1957). UNCLASSIFIED.

ANTENNA GROUP AN/GLA-14(XE-1)

MAJOR COMPONENTS: One 8-foot monopole antenna, one 33-foot monopole antenna, one half-rhombic antenna (including tower), and crossover networks.

FREQUENCY: HF and VHF bands, 6 - 60 mc: 8-foot monopole, 19 to 60 mc; 33-foot monopole, 6 to 19 mc; half rhombic, 19 to 60 mc.

TYPE: Two monopole antennas and one half-rhombic antenna.

DESCRIPTION: This antenna group is designed for efficient, rapid erection and easy transportation. It is composed of a half-rhombic antenna mounted on a 40-foot inflatable tower and two inflatable, self-supporting units: an 8-foot monopole and a 33-foot monopole. The monopoles but not the 40-foot tower have a conductive coating. The 40-foot tower will withstand winds up to 40 miles per hour without guys and 87 miles per hour with three guys and anchors.

The units are made of fabric that will withstand a pressure of two pounds per square inch. The two larger units are pressurized by blowers powered by motors rated at 1-1/2 horsepower and can be inflated or deflated in four minutes. The smallest unit is pressurized by a blower powered by a 1/2-horsepower motor and can be inflated or deflated in 17 seconds. Each unit has internal pressure controls that may be operated manually or automatically. Stand-by power keeps the units inflated, but under normal conditions, 15 seconds of blower operation every three hours is sufficient.

The nominal impedance of the system is 93 ohms, but it can be changed by plug-in units in the matching networks. A crossover network allows simultaneous operation on the 8-foot monopole and either of the other antennas for complete coverage of frequencies from 6 to 60 mc. Power-handling capability is 250 watts.

BEAM DATA:

Gain - 12 to 18 db for the half-rhombic antenna. The monopoles are omnidirectional in azimuth.

Side-lobe attenuation - 12 db or better for the half-rhombic antenna.

Front-to-back ratio - 14 to 28 db for the half-rhombic antenna.

Polarization - Vertical for monopoles; vertical in the preferred direction for the half-rhombic antenna.

TUNING/MATCHING DEVICES: An impedance matching network is furnished for each antenna.

INSTALLATION: Ground, mobile.



AN/GLA-14, 8 Foot Inflatable Monopole for 19 to 60 mc

MISCELLANEOUS: There is some confusion in the information concerning frequency. It is possible that the 8-foot monopole covers a range of 16 to 90 mc instead of the band given above.

Three models of this system are undergoing engineering tests (17 September 1958).

COGNIZANT AGENCY: Signal Corps, USAEL-SIGFM/EL-RCD.

MANUFACTURER: Developed and manufactured by American Electronics Laboratories, Inc., contract DA 36 039 SC 72797.

REFERENCE:
Private Correspondence.



AN/GLA-14, Low Frequency Inflatable Monopole for 6 to 19 mc

ANTENNA GROUP AN/GPA-24A

MAJOR COMPONENTS:
Antenna AT-352/UPA-22, Antenna Pedestal AB-447/UP, Test Prod MX 1263/UPA, Electronic Control Amplifier AM-1369/UP, Mast AB-278/GPA, Low-Pass Filter F-153/UP.

FREQUENCY: UHF band, 1010 - 1110 mc; VSWR less than 1.5.

TYPE: Slot Antenna, broadside array.

DESCRIPTION: The antenna group includes a broadside array of 12 full-wave slot radiators, a reflector, a feeder system, and a mounting box. The basic radiator is constructed as a boxed-in slot. The slot is fed by a probe located near the back of the box. Parasitic radiators are added to improve the impedance characteristics. A center strip effectively divides the slot into two half-wave slots, and aids in maintaining vertical polarization by suppressing radiation from higher order modes excited in the box cavity. The complete antenna of 12 full-wave slot radiators is approximately 10 feet long.

Feeder System - The slots are fed by aluminum-strip lines. The input impedance is 51 ohms.

BEAM DATA:
Half-power beamwidth - Horizontal - less than 7°.

Beam type - Fan.
Polarization - Vertical.

SCAN DATA: Rotates in synchronism with parent radar antenna.

TUNING/MATCHING DEVICES: A T-junction filter passes the IFF band with low losses but highly attenuates signals in the band between 3000 and 10,000 mc. The filter also acts as an impedance transformer.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: The antenna AT-352/UPA-22 is associated with Interrogator Sets AN/TPX-20, AN/TPX-22, AN/TPX-23, and with the AN/UPX-1 IFF equipments. This antenna is apparently also used with other IFF equipments. The available references indicate that the supplementary equipment (for example: the electronic control amplifier, etc.) may vary from one IFF set to another. Apparently these variations in supplementary components may or may not change the antenna-group nomenclature. Equipment function - IFF. Maximum reliable range - line of sight, 190 miles.

MISCELLANEOUS: Antenna Group AN/GPA-24A is similar to the Antenna Group AN/UPA-22.
Antenna AT-353/UPA-22 is similar to Antenna AT-352/UPA-22 but has 6 full-wave slot radiators instead of the 12 in the AT-352/UPA-22.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Hazeltine Electronics Corp., procurement contract NObsr-59595.

STOCK NUMBER: AT-352/UPA-22, F16-A-52014-6835.

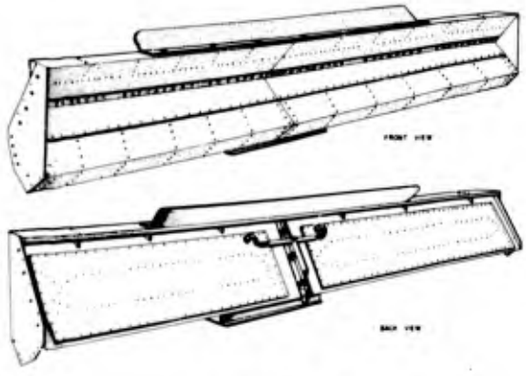
REFERENCES:

1) Departments of the Army and the Air Force, Interrogator Set AN/TPX-20, Technical Manual and Technical Order, TM 11-119, TO 16-30TPX20-5, (Aug. 1954). UNCLASSIFIED.

2) Department of the Army, Interrogator Set AN/TPX-22, Technical Manual, TM 11-1193, (May 1955). UNCLASSIFIED.

3) Department of the Army, Interrogator Set, AN/TPX-23, Technical Manual, TM 11-1166, (April 1955). UNCLASSIFIED.

4) Military Specification MIL-A-15673A.



AT-352/UPA-22

ANTENNA GROUP AN/GPA-66(*)

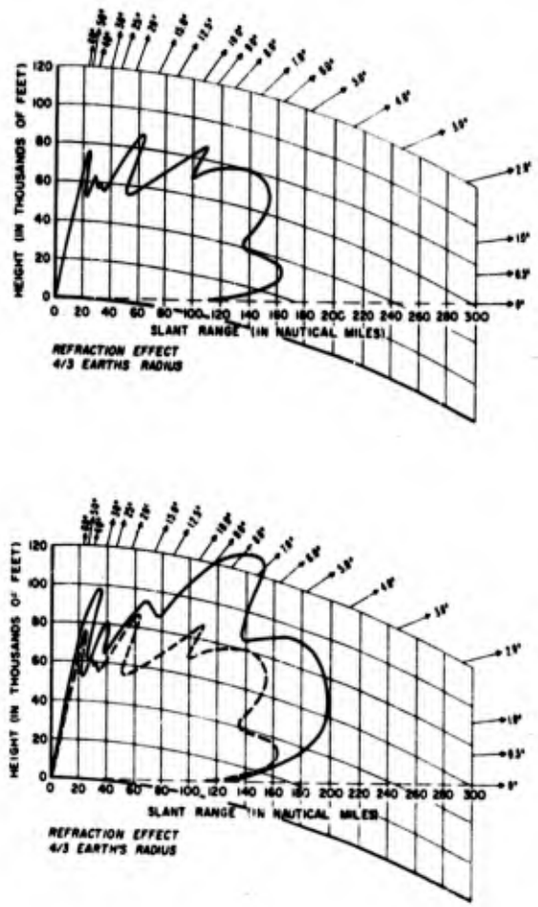
MAJOR COMPONENTS: 1 air-supported spherical radome, 1 air-supported paraboloidal reflector, 1 antenna pedestal, 1 reflector feed-horn assembly, and necessary auxiliary equipment.

FREQUENCY: UHF band, Radar ... 1250 - 1350 mc; < VSWR 1.5, IFF ... 990 - 1130 mc; VSWR < 1.6.

TYPE: Cut paraboloidal reflector, paraballoon type.

DESCRIPTION: The antenna consists of a paraballoon reflector with a horn feed assembly. The reflector assembly is composed of two fiberglass-fabric paraboloids, a high-pressure support tube, and a sectionalized, structural magnesium base. The paraboloids are fabricated of wedge-shaped sections permanently cemented together and truncated for attachment to the reflector base. The paraboloids are joined to the support tube and to the reflector base by zippers, forming an envelope. The paraboloidal curvature is formed by a nominal air pressure differential, equivalent to 0.5 inch of water, between the reflector envelope and the radome in which the reflector is enclosed. The air pressure is developed by the antenna inflation blower which is mounted on the antenna base. A separate compressor unit located on the antenna base maintains an average of 10 pounds per square inch gage pressure in the support tube. A thin powdered-silver-on-plastic film laminated to the entire outer surface of one of the paraboloids serves as the reflecting surface. The diameter of the reflector is approximately 50 feet. The reflector base is 44 feet long and approximately elliptical in shape. The reflector feed-horn assembly consists of a vertical array of six horns which are used for both radar and IFF signals. The feed assembly includes a filter for separation of radar and IFF signals, a power divider, and a phasing network. The feed-assembly input is designed to use either standard, rectangular, L-band waveguide or flexible coaxial cable.

BEAM DATA:	Radar	IFF
Gain -	33.5 db	--
Half-power beamwidth -		
Vertical -	6°± 1°	9°
Horizontal -	1.3°±0.5°	2°



Vertical Radiation Pattern for AN/GPA-66(*), AN/MPS-11 Radar Equipment at 1240 mc (top) and IFF Equipment at 1060 mc (bottom)

	Radar	IFF
Side-lobe attenuation -	23 db	20 db
Front-to-back ratio -	35 db	35 db
Beam type -	csc^2 in elevation from 6° to 30°	csc^2 in elevation
Polarization -	vertical	vertical

SCAN DATA: The antenna probably rotates in azimuth through 360° at a rate of 6 revolutions per minute. A manual tilt mechanism may be incorporated for changing the aperture plane of the antenna over a range of 7° in elevation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPS-11, AN/MPS-11A, AN/TPS-1D, and AN/UPS-1. Equipment function - search.

MISCELLANEOUS: AN/GPA-66(*) denotes AN/GPA-66 (XW-1) and AN/GPA-66(XW-2). The two models use different motor generators and radome blower motors. These are experimental models of an antenna which may replace the antennas of the associated equipments. See OA-1323 (XW-1)/GPS for picture of reflector and radome.

MANUFACTURER: Westinghouse Electric Corp.

REFERENCE:

Handbook of Operating and Maintenance Instructions for Antenna Group OA-1323(XW-1)/GPS, Antenna Group AN/GPS-66(XW-1) and Antenna Group AN/GPA-66(XW-2), Baltimore 3, Maryland: Westinghouse Electric Corporation. (Dec. 1, 1958). UNCLASSIFIED.

ANTENNA GROUP AN/GRA-4

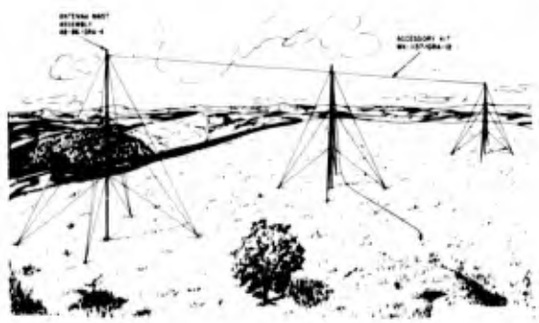
See Antenna Group OA-497/TLR-1.

ANTENNA GROUP AN/GRA-12

FREQUENCY: MF and HF bands, 1.5 - 20 mc.

TYPE: Dipole.

DESCRIPTION: The group consists of three AB-86/GRA-4 antenna mast assemblies, three 150-foot reels of wire, and a 75-foot length of RG-8A/U cable. The group, when erected, forms a center-fed, half-wave dipole supported by the three masts. The correct length of wire is unreeled as required by the operating frequency and the remaining wire is left on the reel which is erected along with the wire. Each end of the wire is equipped with a mating termination so that additional wires can be added to make up longer antennas. The input impedance is 52 ohms, and the weight of the assembly is 229 pounds.



AN/GRA-12

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-19. Equipment function - communications.

REFERENCE:
Department of the Army, Antenna Groups AN/GRA-4 and AN/GRA-12, Technical Manual, TM 11-2651, (Nov. 1, 1956). UNCLASSIFIED.

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TRANSMITTING ANTENNA for AN/MRC-2C and AN/MRC-2D

FREQUENCY: MF and HF bands, 2 - 18 mc.

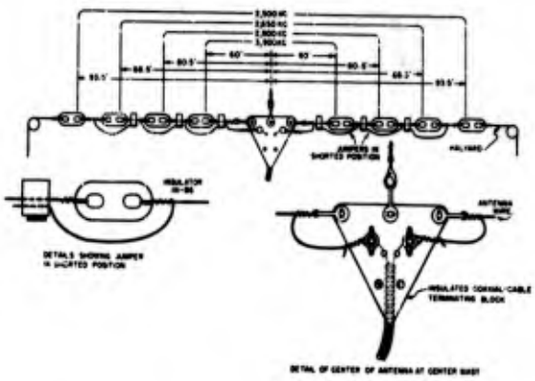
TYPE: Dipole.

DESCRIPTION: The antenna is a kit containing four 50-foot masts, AB-38B/CR, and the necessary wire, insulators, connectors, and coaxial feed line for constructing a doublet transmitting antenna. Three masts are used to support the antenna, with the fourth mast maintained as a spare. The antenna wire with the kit is to be cut to the proper lengths to make up a doublet antenna that can be operated at several frequencies. This is accomplished by separating the sections of wire with insulators and providing jumpers to connect the sections as desired.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Sets AN/MRC-2C and AN/MRC-2D. Equipment function - communications. Range - 1000 miles.

REFERENCE:
Departments of the Army and the Air Force, Radio Sets AN/MRC-2C and AN/MRC-2D, Technical Manual, TM 11-624A and TO 31R2-2MRC2-11, (September 1955). UNCLASSIFIED.



Transmitting Antenna for AN/MRC-2C and AN/MRC-2D

RECEIVING ANTENNA for AN/MRC-2C and AN/MRC-2D

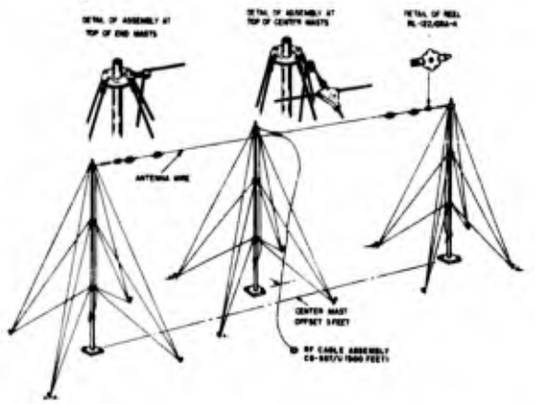
FREQUENCY: MF and HF bands, 2 - 18 mc.

TYPE: Dipole.

DESCRIPTION: The antenna consists of 2 RL-122/GRA-2 reel assemblies, 3 AB-155A/U sectionalized masts, and the necessary insulators, and other items for erecting a doublet receiving antenna.

ASSOCIATED EQUIPMENT: Radio Sets AN/MRC-2C and AN/MRC-2D. Equipment function - communications. Range - 1000 miles.

REFERENCE:
Departments of the Army and the Air Force, Radio Sets AN/MRC-2C and AN/MRC-2D, Technical Manual, TM 11-624A and TO 31R2-2MRC-11, (September 1955). UNCLASSIFIED.



Receiving Antenna for AN/MRC-2C and AN/MRC-2D

HF ANTENNA for AN/MRC-20

MAJOR COMPONENTS: 1 MS-49 mast section, 1 MS-50 mast section, 1 MS-51 mast section, 1 MS-52 mast section, 1 MS-53 mast section, and 1 MP-57 spring-loaded bracket.

FREQUENCY: MF and HF bands, 1.5 - 18 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 5-section whip fed by a length of PFGL-10 wire, W-120.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MRC-20. Equipment function - communications.

REFERENCE:
U. S. Army, Radio Set AN/MRC-20, Technical Manual, TM 11-692, (March 1954). UNCLASSIFIED.

ANTENNA for AN/MRW-6

FREQUENCY: UHF band, 400 - 500 mc.

TYPE: Discone.

DESCRIPTION: The antenna consists of a solid brass disc, 3/32 inch thick and 7-1/4 inches in diameter, and eight sections of 3/16-inch brass tubing 9 inches long, which form the cone. The antenna is designed for use with RG-14A/U coaxial cable.

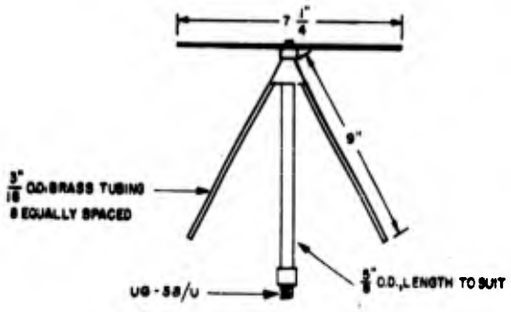
BEAM DATA:
Polarization - Horizontal.

INSTALLATION: Ground, fixed or mobile.

ASSOCIATED EQUIPMENT: Radio Equipment AN/MRW-6 AN/ARW-55, and AN/URW-14. Equipment function - communications.

REFERENCES:
1) U. S. Navy, Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Bureau of Ships drawing RE 66C632.



Antenna for AN/MRW-6

ANTENNA GROUP AN/PRA-2(XE-1)

FREQUENCY: HF and VHF bands, 20 - 54 mc.

TYPE: Loop.

DESCRIPTION: This is a tripod-mounted loop antenna weighing approximately 44 pounds.

BEAM DATA:
Beam type - Figure of eight in the horizontal plane.
Polarization - Vertical.

SCAN DATA: Manual azimuth rotation.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/PRC-8, AN/PRC-9, and AN/PRC-10. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: The reference below lists this antenna group as obsolete.

COGNIZANT AGENCY: Signal Corps.

MANUFACTURER: Developed and manufactured by Melpar, Inc., contract DA-36-039-SC-42675.

REFERENCE:
Private Correspondence.

ANTENNA GROUP AN/PRA-3(XE-1)

MAJOR COMPONENTS: 1 antenna loop assembly, 1 antenna mast, 1 antenna drive unit, and 1 tripod antenna base.

FREQUENCY: HF and VHF bands, 20 to 54 mc.

TYPE: Loop antenna.

DESCRIPTION: This is a tripod-mounted loop antenna weighing approximately 114 pounds. The antenna is fed by a coaxial cable.

BEAM DATA:
Beam type - Figure of eight in the horizontal plane.
Polarization - Vertical.

SCAN DATA: The motor-driven antenna rotates in azimuth at 10 degrees per second.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/PRC-8, AN/PRC-9, and AN/PRC-10. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: The reference below states that this antenna group is obsolete.

COGNIZANT AGENCY: Signal Corps.

MANUFACTURER: Developed and manufactured by Melpar, Inc., contract DA-36-039-SC-42675.

REFERENCE:
Private Correspondence.

ANTENNA GROUP AN/TLA-2()

MAJOR COMPONENTS: 2 antenna pedestals, 2 antenna drives, 2 antenna assemblies, 2 radomes, 2 indicator controls, 1 azimuth indicator, miscellaneous cable assemblies.

FREQUENCY: UHF and SHF bands, 500 - 18,000 mc.

ASSOCIATED EQUIPMENT: Various equipments. Equipment function - countermeasures (passive).

COGNIZANT AGENCY: SCLE-9887.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP AN/TLA-7

MAJOR COMPONENTS: Two logarithmic periodic antennas and two tower-type antenna mounts.

FREQUENCY: HF, VHF, and UHF bands; 14 - 1100 mc; VSWR less than 2. One antenna covers the frequency band from 14 to 225 mc; another, the band from 50 to 1100 mc.

TYPE: Two logarithmic periodic structures.

BEAM DATA:
Half-power beamwidth -
Horizontal - 50° to 75°.
Side-lobe attenuation - 10 db.
Polarization - Vertical, horizontal, left circular or right circular.

SCAN DATA: The antenna rotates through 360° in azimuth in either direction at a rate of 1/2 revolution per minute.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Various receiving sets. Equipment function - countermeasures.

MISCELLANEOUS: Formerly designated OA-463(XE-2)/TLR.

COGNIZANT AGENCY: ESL.

MANUFACTURER: Collins Radio Co., contract DA-36-039-sc-78104.

REFERENCE:
Private Correspondence.

ANTENNA GROUP for AN/TLR-15

FREQUENCY: SHF and EHF bands, 8200 - 41,000 mc in four bands.

DESCRIPTION: As it was published during the early stages of development, the information available on this group is limited. It probably will consist of four antennas for use in a countermeasures receiving system which will operate in the following frequency ranges: 8200 to 12,400 mc; 12,000 to 18,000 mc; 18,000 to 27,000 mc; and 26,500 to 41,000 mc. The antennas are high-gain search antennas with remotely controlled beamwidths variable from 2 to 40 degrees in azimuth. The weight is 250 pounds.

BEAM DATA:
Half-power beamwidth - H plane - 2° to 40°, remotely controlled.

SCAN DATA: Rotation is listed as from 1 to 300 rpm (sic) either automatically or manually.

ASSOCIATED EQUIPMENT: AN/TLR-15. Equipment function - probably countermeasures, monitoring; and countermeasures, direction finding.

MISCELLANEOUS: Development contract began in June 1958 to run for 18 months.

MANUFACTURERS: General Electronic Laboratories contract (for the two upper bands) DA-36-039 sc-78015.

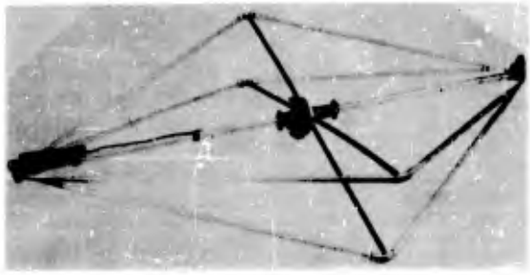
REFERENCE:
Private Correspondence.

ANTENNA for AN/TRC-24

FREQUENCY: UHF band, 400 - 600 mc; VSWR < 1.5.

TYPE: Double rhombic.

DESCRIPTION: The antenna consists of two rhombic antennas having a common axis with an angle of 60° between their respective planes. Overall dimensions are 10 feet in length and 5 feet in width. Each leg is 5.75 feet long, or 2.9 wavelengths at 500 mc. A quarter-wave matching section is used at the antenna input for matching the 50-ohm coaxial cable to the 300-ohm input impedance and a matching section is also used at the termination to enable use of a commercially available 50-ohm terminating resistor. Approximately 5 per cent of the input power is dissipated in this resistor.



Antenna for AN/TRC-24

BEAM DATA:
Gain - 12 db.
Half-power beamwidth - Horizontal - 15° for horizontal polarization.
Side-lobe attenuation - 10 db.
Beam type - Unidirectional.
Polarization - Vertical or horizontal.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Designed for possible use with Radio Set AN/TRC-24. Equipment function - communications.

REFERENCE:
Frank J. Triolo, A Novel Antenna for Mobile Radio Relay Operation in the UHF Range, Tech-Memorandum NR. M-1924. Fort Monmouth, New Jersey: U.S. Army Signal Engineering Laboratories. (Nov. 1957). UNCLASSIFIED.

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ANTENNA GROUP AN/UPA-22(*)

MAJOR COMPONENTS: 1 AT-352/UPA-22(*) antenna, 1 AB-447/UP antenna pedestal, 1 AM-1369/UP electronic control, 1 MX-1263/UPA test probe, 1 PU-343/U motor-generator, 1 F-300/UPA-22(*) low-pass filter, and 1 F-301/UPA-22(*) low-pass filter.

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Array of slots.

DESCRIPTION: Antenna AT-352/UPA-22(*) consists of an array of twelve slot radiators. It is 9-1/4 inches long and 2-57/64 inches wide. The antenna is made of aluminum and is enclosed in a watertight case and is mounted by means of four 3/8-inch, 24-thread holes on 6-1/2-inch by 2-1/8-inch mounting centers. It is used with a 52-ohm coaxial transmission line.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Various radar sets. Equipment function - IFF.

MISCELLANEOUS: AN/UPA-22(*) denotes AN/UPA-22 and AN/UPA-22A. The two models are interchangeable. AN/UPA-22A rotates at a higher speed than AN/UPA-22. AT-352/UPA-22 is also part of Antenna Group AN/GPA-8.

COGNIZANT AGENCY: U. S. Navy, code 820 and 823.

MANUFACTURER: AN/UPA-22 ... Hazeltine Electronics Corp., contract NObsr 59595; AT-352/UPA-22 ... Memco, contracts NObsr 49188 and NObsr 52331.

REFERENCES:
1) Memco Drawing Number AE1489J (AT-352/UPA-22).
2) Bureau of Ships Specification MIL-A-15673-A (AN/UPA-22).
3) Bureau of Ships Specification A-46 (AT-352/UPA-22).
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP AN/UPA-23(*)

MAJOR COMPONENTS: 1 AT-353(*)/UPA-23 antenna, 1 AB-447/UP antenna pedestal, 1 AM-1369/UP electronic control, 1 MX-1263/UPA test probe, 1 PU-343/U motor-generator, 1 F-299/UPA-23(*) filter and 1 F-301/UP filter.

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Array of slots.

DESCRIPTION: Antenna AT-353(*)/UPA-23 consists of an array of six slot radiators. It is 9-1/4 inches long and 2-57/64 inches wide. The antenna is made of aluminum and is enclosed in a watertight case. It is mounted by means of four 3/8-inch, 24-thread holes on 6-1/2-inch by 2-1/8-inch mounting centers. A 52-ohm coaxial line provides the feed.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

ASSOCIATED EQUIPMENT: Various radar sets. Equipment function - IFF.

MISCELLANEOUS: AN/UPA-23(*) denotes AN/UPA-23 and AN/UPA-23A. The two models are interchangeable. AN/UPA-23A rotates at a higher speed than AN/UPA-23.

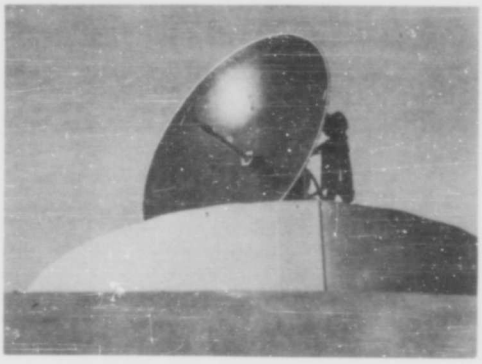
COGNIZANT AGENCY: U. S. Navy, code 820.

MANUFACTURER: AN/UPA-23 ... Hazeltine Electronics Corp., contract NObsr-59595; AT-353/UPA-23 ... Memco, contracts NObsr-49188 and NObsr-52331.

REFERENCES:
1) Memco Drawing Number AE1488E (AT-353/UPA-23).
2) Bureau of Ships Specification MIL-A-15673-A (AN/UPA-23).
3) Bureau of Ships Specification A-46 (AT-353/UPA-23).
4) U. S. Department of Defense Nomenclature Card.

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an automatic azimuth sector scan, the width of which is adjustable from 15° to 180°.



Antenna for Modified ASC-1.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Modified Radar Set ASC-1. Equipment function - test of countermeasures equipment.

MANUFACTURER: Harvard University Radio Research Laboratory.

REFERENCE:

D. R. Scheuch, Modification of ASC-1 for Dual-Polarization Operation, 411-141. Boston, Massachusetts: Radio Research Laboratory, Harvard University. (Dec. 21, 1944). UNCLASSIFIED.

ANTENNA AS-2/CRN-2

MAJOR COMPONENTS: Antenna AT-33/CRN-2, Antenna AT-34/CRN-2, Antenna AT-35/CRN-2, Guy Section AB-10/CRN-2, Guy Section AB-11/CRN-2, Mast Section AB-12/CRN-2, Mast Section AB-13/CRN-2, Mast Section AB-14/CRN-2, and Obstruction Light Unit MX-42/CRN-2.

FREQUENCY: UHF band, 329 - 335 mc.

TYPE: V-dipoles and a half-loop with a flat-screen reflector.

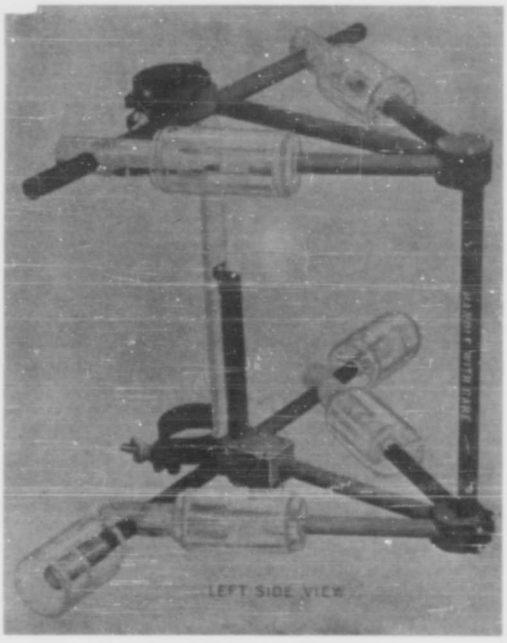
DESCRIPTION: The AS-2/CRN-2 antenna assembly includes upper and lower antennas of a glide-slope system.



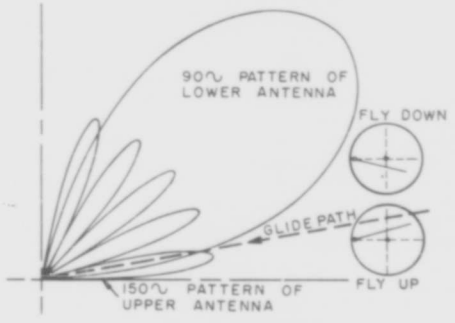
AT-35/CRN-2 Reflector

Antenna AT-33/CRN-2 is the lower of the two antennas in the AS-2/CRN-2 assembly. It consists of a broadband, half-loop antenna mounted on the AT-35/CRN-2 flat-screen reflector. The radiation from AT-33/CRN-2, when combined with that from AT-34/CRN-2 (the upper antenna), produces the glide slope. AT-33/CRN-2 is fed by a 90-cps modulated signal. It is mounted a distance above the ground corresponding to the desired glide slope angle (from 77-1/2 inches for a 2-degree slope to 30 inches for a 5-degree slope). Antenna Cover CW-100/CRN-2 is provided for protection from the weather.

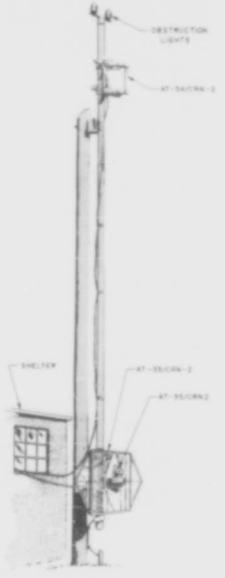
Antenna AT-34/CRN-2 is the upper of the two antennas in the AS-2/CRN-2 assembly. It consists of a twofold stack of end-fed V-dipoles with parasitic reflectors. AT-34/CRN-2 is fed by a 150-cps modulated signal. The antenna is mounted a distance above the ground corresponding to the desired glide slope angle (from 308 inches for a 2-degree slope to 125.5 inches for a 5-degree slope). Antenna Covers CW-101/CRN-2 and CW-103/CRN-2 are provided for protection from the weather.



AT-34/CRN-2 Antenna



AB-2/CRN-2



AS-2/CRN-2 Assembled

BEAM DATA:
Polarization - Primarily horizontal.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: AN/CRN-2. Equipment function - approach control (ILS).

COGNIZANT AGENCY: U. S. Air Force, ARL.

MANUFACTURER: Federal Telephone and Radio Corp., order 10332-WF-43 and 21-DAY-44.

REFERENCE:
U. S. Air Force, Instrument Low Approach System (SCS-51) Facility, Handbook Standard Installation Instructions, TO 31R4-2-147, (Feb. 21, 1955). UNCLASSIFIED.

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ANTENNA ASSEMBLY AS-3/CPN-1

MAJOR COMPONENTS: 1 Antenna Assembly AS-6/CPN-1, 1 Mast Section MS-111-(), 1 masthead, 1 weatherproof housing.

TYPE: Dipole array.

DESCRIPTION: Antenna Assembly AS-6/CPN-1 is a six-element stacked dipole array enclosed in a weatherproof housing. It is mounted on a mast and is fed by a coaxial cable.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Sets AN/CPN-1, AN/CPN-3. Equipment function - navigation.

MISCELLANEOUS: Nomenclature AS-3/CPB-1 has been changed to AS-3/CPN-1.

COGNIZANT AGENCY: ARL, AFDMA-2F/1.

MANUFACTURER: Philco Corp., procurement contract order 10120-WF-44.

STOCK NUMBER: Current stock number lists indicate that this item is not stocked by the U. S. Air Force.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-4(*)/GR

MAJOR COMPONENTS: Antenna AT-75/GR, Antenna AT-76/GR, Antenna AT-77/GR, Antenna AT-78/GR, Antenna Mount AB-79/GR, and Control Box C-117/GR.

FREQUENCY: AS-4(*)/GR - MF and HF bands, 1.2 - 20 mc: AT-75/GR - MF band, 1.2 - 2.5 mc; AT-76/GR - MF and HF bands, 2.5 - 5.0 mc; AT-77/GR - HF band, 5.0 - 10.0 mc; AT-78/GR - HF band, 10.0 - 20.0 mc.

TYPE: Loop.

DESCRIPTION: The antenna assembly consists of four interchangeable loop antennas. Each of these consists of several turns of copper wire completely enclosed in a molded polystyrene annular sheel approximately 9 inches in outside diameter and 1-1/2 inches in diameter of the cross section. The two ends of the winding are brought out to annular slip rings at the base of the loop. The slip rings are of silver and are mounted on an insulating plastic base in a collar of silver-plated brass. The collar carries a loose hand nut threaded to screw onto the sleeve of the loop-rotating mechanism of Control Box C-117/GR. Antennas AT-75/GR through AT-78/GR have, respectively, 16, 8, 4, and 2 turns of copper wire. Each antenna has a stud at the top for attaching Antenna AN-45-H. The stud connects to a shielded lead which runs down through the center of the loop and terminates at the center of the inner slip ring.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Receiver BC-312() and similar receivers. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: The designation AS-4(*)/GR indicates models AS-4/GR and AS 4()/GR. No information is available on lettered models. It appears that prior to 1944 this assembly was designated AS-4/GR and consisted of Antennas AT-27/GR through AT-30/GR. These antennas seem to be identical with the antennas already described except for frequency range. The frequency coverage of this assembly can be extended to 0.10 mc by means of Loop Antenna Kit AS-169()/GR. This kit consists of four loop antennas identical to those already described except for frequency range.

COGNIZANT AGENCY: MPD, SCL C-191A, and SCL C-191 for AS-4()/GR; SCL 4920 for AT-75/GR; SCL 4921 for AT-76/GR; SCL 4922 for AT-77/GR; SCL 4923 for AT-78/GR.

MANUFACTURERS: Harvey Wells, order 2117-MPD-45.

STOCK NUMBERS: Signal Corps 2A-1991-4 for AS-4()/GR; 2A-1990-75 for AT-75/GR; 2A-1990-76 for AT-76/GR; 2A-1990-77 for AT-77/GR; 2A-1990-78 for AT-78/GR.

REFERENCES:
1) Specification number 271-3151.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-8/TPS-1

FREQUENCY: UHF band, 1053 - 1107 mc.

TYPE: Cut paraboloidal reflector with probe-excited pillbox feed.

DESCRIPTION: The main reflector is a cut paraboloid, 15 feet wide by 4 feet high and is constructed of 1/2-inch wire mesh. The feed for this reflector consists of a probe-excited pillbox. The pillbox is a sheet-steel, parabolic cylinder, 30 inches wide by 5 inches high and has the ends enclosed. The antenna can be readily dismantled and packed in three transit cases for transport. The weight of each case and its contents does not exceed 150 pounds.

BEAM DATA:
Gain - 27.3 db.
Half-power beamwidth - Vertical - 12.6°.
Horizontal - 4.4°.
Polarization - Horizontal.

SCAN DATA: Additional information is available in the secret document listed below as Reference 1).

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TPS-1 and AN/TPS-1A. Equipment function - search, air.

MISCELLANEOUS: AN/TPS-1 and AN/TPS-1A were replaced by AN/TPS-1B and AN/TPS-1C. See OA-1227/TPS for a list of antennas used with AN/TPS(*).

COGNIZANT AGENCY: CESL.

MANUFACTURER: Western Electric Co., contract W-2279-sc-298, order 903-SCRL-43.

STOCK NUMBER: Current stock number lists indicate that this item is not stocked by the U. S. Air Force.

REFERENCES:

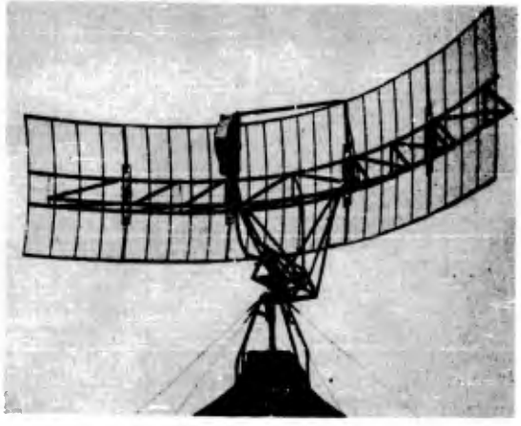
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) H. T. Friis and W. D. Lewis, The Bell System Technical Journal, Volume 26, No. 2. New York: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.

3) Bell Laboratories ES-8-25178.

4) DP 43-S-85.

5) U. S. Department of Defense Nomenclature Card.



AS-8/TPS-1

ANTENNA ASSEMBLY AS-9/CPN-3

MAJOR COMPONENTS: Two 6-element dipole arrays.

FREQUENCY: SHF band, 3267 - 3333 mc.

TYPE: Dipole array.

DESCRIPTION: AS-9/CPN-3 consists of two 6-element dipole arrays mounted in a common housing. One array is used for transmitting and one for receiving. The unit is mast mounted on Antenna Support AB-2/CPN-3. Coaxial cable is used to feed the antenna.

BEAM DATA:
Polarization - Horizontal.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/CPN-3. Equipment function - navigation.

COGNIZANT AGENCY: ARL.

MANUFACTURER: Philco Corporation.

STOCK NUMBER: Federal Stock Number N5985-369-5454.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-10/PPN-1

MAJOR COMPONENTS: Adjustable whip, support, transmission line.

FREQUENCY: VHF band, 214 - 234 mc.

TYPE: Whip.

DESCRIPTION: AS-10/PPN-1 is an adjustable whip antenna used for transmitting and receiving. It is approximately 8-1/2 feet long when extended and 16-1/2 inches long when collapsed and weighs approximately two pounds. The antenna is fed by a coaxial cable.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radar Set AN/PPN-1. Equipment function - navigation.

MISCELLANEOUS: AS-83/PPN-1A is similar to AS-10/PPN-1 but is designed for a 50-ohm cable.

COGNIZANT AGENCY: CESL.

MANUFACTURER: Hazeltine Electronic Corp., procurement contract W-2279-sc-951.

STOCK NUMBER: Signal Corps 2A249-10. Current stock number lists indicate that this item is not stocked by the U. S. Air Force.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-11(*)/FMQ-1

FREQUENCY: VHF band, 56 - 85 mc.

TYPE: Coaxial dipole antenna.

DESCRIPTION: AS-11(*)/FMQ-1 consists of a tapered steel rod, copper coated for better conductivity, and a brass tubular skirt or sleeve. It is fed by coaxial cable (RG-11/U).
The antenna is 135 inches high and 5 inches in diameter. Packed for export, it occupies 3.8 cubic feet and weighs 65 pounds; for domestic use, 2.8 cubic feet and 30 pounds.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radiosonde Receptors AN/FMQ-1, AN/FMQ-1A. Equipment function - meteorological measurement.

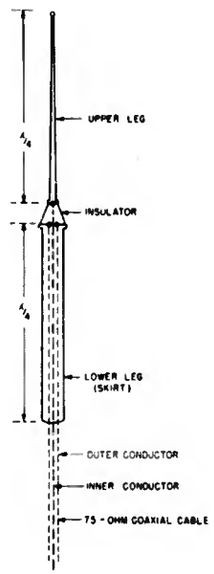
MISCELLANEOUS: AS-11(*)/FMQ-1 represents AS-11/FMQ-1 and AS-11A/FMQ-1.

COGNIZANT AGENCY: SPSCE.

MANUFACTURER: Bendix Aviation Corp., Friez Instrument Div., procurement contract NObsr-30082.

STOCK NUMBERS: AS-11/FMQ-1, AS-11A/FMQ-1... Signal Corps 7A1326/A1; AS-11A/FMQ-1...Signal Corps 2A264-11A. Current stock number lists indicate that this item is not stocked by the U. S. Air Force.

REFERENCES:
1) Departments of the Army and the Air Force, Radiosonde Receptors AN/FMQ-1 and AN/FMQ-1A, TM 11-2403 and AFM 100-55, (July 1948). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.



AS-11(*)/FMQ-1

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ANTENNA ASSEMBLY AS-16/CRN-7

Cancelled 10 Sept. 1945.

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ANTENNA ASSEMBLY AS-19(*)/TRC-1

MAJOR COMPONENTS: 1 Antenna Assembly AS-20(*)/TRC-1, 1 Antenna Support AB-33(*)/TRC-1.

FREQUENCY: VHF band, 70 - 99.9 mc.

TYPE: Yagi (3-element).

DESCRIPTION: Antenna Assembly AS-20(*)/TRC-1 is a directional array (Yagi) consisting of one driven half-wave dipole, one director, and one reflector. The spacing between elements is 0.13 wavelength for the director and 0.17 wavelength for the reflector. All linear dimensions are readily adjustable (without tools) to tune the antenna. All models of the array are horizontally polarized except the late AS-19F/TRC-1 model, which may be positioned for either horizontal or vertical polarization.

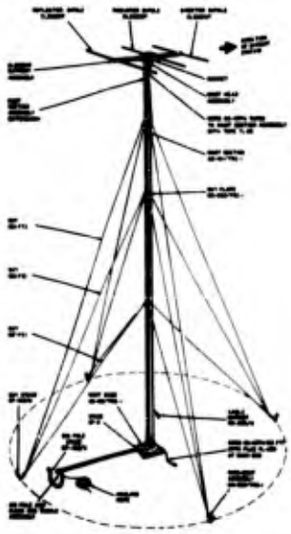
Antenna Support AB-33(*)/TRC-1 is used with AS-20(*)/TRC-1 to form AS-19(*)/TRC-1. The unlettered and A models of the antenna support are 40 feet high; these supports can be extended to 50 feet by the addition of Antenna Extension Kit MX-141/TRC-1. The later models of the support (i.e., B, C, D, etc.) are approximately 50 feet high.

BEAM DATA:
Gain - 6 db when properly adjusted.
Polarization - Horizontal for all models except model F. Model F may be positioned for horizontal or vertical polarization.

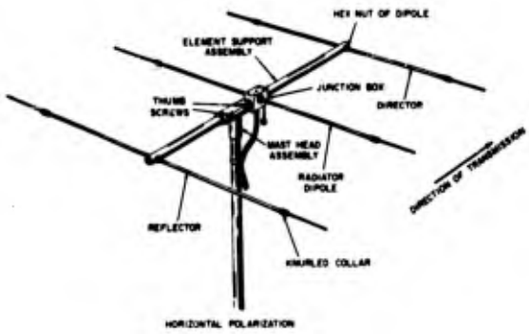
SCAN DATA: Manual azimuth rotation.

TUNING/MATCHING DEVICES: Element lengths and spacing between elements are adjustable for tuning.

INSTALLATION: Ground, fixed.



AS-19(*)/TRC-1 and AS-20()/TRC-1



AS-19(*)/TRC-1 and AS-20()/TRC-1

Nomenclature	Federal Stock Number	Signal Corps Stock Number	*Differences	Specification
AS-19/TRC-1	5985-223-1425	2A264-19		SCL-795
AS-19A/TRC-1	5985-223-1425	2A264-19A	minor changes	271-3010
AS-19B/TRC-1	5985-223-1425	2A264-19B	overall system strengthened	271-3010
AS-19C/TRC-1	5985-223-1425	2A264-19C	stainless steel guys used in place of nylon guys	71-3010
AS-19D/TRC-1	5985-243-0433	2A264-19D	50-ft. mast rather than 40-ft. one	271-3010
AS-19E/TRC-1	5985-221-9002	2A264-19E	packaged differently	271-3010
AS-19F/TRC-1	5985-221-9002	2A264-19F	adjustable for horizontal or vertical polarization	71-3010
AS-20D/TRC-1 & AS-20F/TRC-1	5820-230-5441			

*Difference listed for a given model is difference between that model and the model listed immediately above.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-1(*), AN/TRC-3(*), AN/TRC-4(*). Equipment function - communications.

MISCELLANEOUS: AS-19(*)/TRC-1 represents AS-19/TRC-1, AS-19A/TRC-1, AS-19B/TRC-1, AS-19C/TRC-1, AS-19D/TRC-1, AS-19E/TRC-1, and AS-19F/TRC-1; corresponding models of AS-20/TRC-1 are represented by AS-20(*)/TRC-1. The director and reflector may be removed and the dipole used independently.

COGNIZANT AGENCY: SCL.

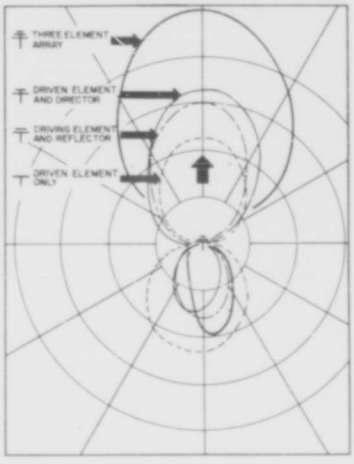
MANUFACTURERS: Link, Rauland, and Lear are typical manufacturers.

STOCK NUMBERS: AS-19D/TRC-1 - Federal Stock Number 5820-243-0433; AS-19/TRC-1 - Federal Stock Number 5820-223-1425.

REFERENCES:

1) Department of the Army, Radio Terminal Set AN/TRC-3H and Radio Relay Set AN/TRC-4H, TM 11-2601A, (July 1956). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Radio Sets AN/TRC-1, etc.; Radio Terminal Sets AN/TRC-3, etc.; Radio Relay Sets AN/TRC-4, etc.; and Amplifier Equipments AN/TRA-1, etc., TM 11-2601 and TO 16-30TRC-5, (Dec. 1951). UNCLASSIFIED.



AS-20F/TRC-1 Radiation Pattern

ANTENNA AS-20( )/TRC-1

See AS-19( )/TRC-1.

ANTENNA ASSEMBLY AS-23/AP

MAJOR COMPONENTS: Dipole, parasitic reflector, connector, and mounting bracket.

FREQUENCY: UHF, SHF bands; 1550 - 5200 mc; VSWR < 5 from 2400 to 3400 mc on 51-ohm coaxial cable.

TYPE: Dipole, parasitic array.

DESCRIPTION: The array consists of a dipole, parasitic reflector, connector, and mounting bracket. The connector fits Navy Type 49266 r-f plug. The dipole is 1/2 wavelength long and has an input impedance of 51 ohms. Overall dimensions are approximately 3-13/16 inches by 2-3/16 inches by 1-1/8 inches.

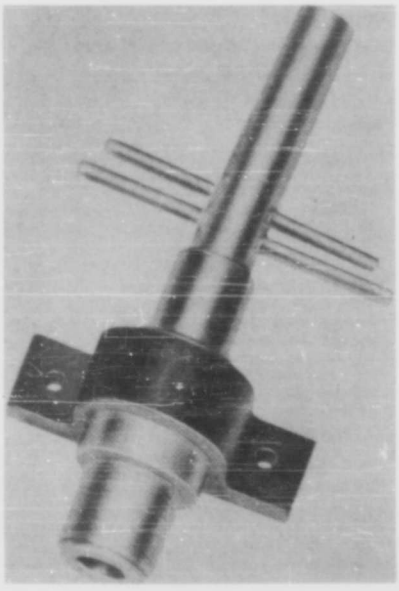
BEAM DATA:
Polarization - Same as that of radar set under test (linear).

ASSOCIATED EQUIPMENT: Phantom Target TS-48/AP, Detector Amplifier Assembly AN/UPA-1A, Wavemeter Test Set TS-117/GP. Equipment function - test.

MISCELLANEOUS: Status - obsolete.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Marathon Co., procurement contract NXsa-2589; Hazeltine Electronics



Corp., procurement contract NOsr-39332.

STOCK NUMBER: Federal Stock Number 5985-093-5619.

REFERENCES:
1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.
2) Hazeltine Drawing A-4369.
3) MIT Specification and Drawing B-2657A.

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ANTENNA ASSEMBLY AS-30/CPA-1&( )

MAJOR COMPONENTS: Quarter-wave stub, seven-section corner reflector, transmission line, and connectors.

FREQUENCY: VHF band, 214 - 234 mc.

TYPE: Corner reflector fed by quarter-wave stub.

DESCRIPTION: The reflector is a collapsible, seven-section corner reflector constructed of copper wire and mounted on three adjustable legs. The feed is a quarter-wave stub antenna.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set (Beacon) AN/CPA-1. Equipment function - navigation, direction finding.

MISCELLANEOUS: Reference 1) below states that this antenna is obsolete.

COGNIZANT AGENCY: ARL.

MANUFACTURER: American Aircraft Mfg. Co., procurement contract 2114-ARL-44.

STOCK NUMBER: Current stock number lists indicate that this item is not stocked by the U. S. Air Force.

REFERENCES:
1) Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (Mar. 14, 1957). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-38(*)/MPN-1

MAJOR COMPONENTS: 1 AS-39/MPN-1 antenna and 1 AT-19/MPN-1 reflector.

FREQUENCY: UHF band, 2780 - 2820 mc.

TYPE: Parabolic-cylinder reflector with dipole-array feed.

DESCRIPTION: Antenna Reflector AT-19/MPN-1 is a parabolic cylinder constructed of wood covered with "Metal-Glow" aluminized fabric. It is 8-1/2 feet high and 4 feet wide with a focal length of 13 inches. The reflector weighs 125 pounds and is mounted so its focal line is vertical.

Antenna Feed AS-39/MPN-1 is a vertical array of 33 shaped dipoles mounted on rectangular wave guide and placed along the focal line of the reflector. The dimensions are 8 feet high, 4 inches wide and 3 inches deep.

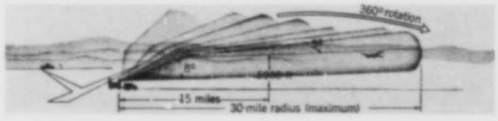
BEAM DATA:
Half-power beamwidth - Horizontal - 5°.
Beam type - $\csc^2$ from 2° to 10° in elevation.

SCAN DATA: The antenna rotates in azimuth through 360° at a rate of 30 revolutions per minute.

INSTALLATION: Ground, truck mounted.

ASSOCIATED EQUIPMENT: Radio Sets AN/MPN-1 and AN/MPN-1C. Equipment function - approach control.

MISCELLANEOUS: AS-38A/MPN-1 consists of a paraboloidal reflector and a 2-dipole-array feed. It serves the same purpose as AS-38/MPN-1 and is interchangeable with it as a unit. Reference 1) below states that AS-38()/MPN-1 is obsolete and replaced by AS-457/MPN-1 AS-77()/MPN-1A is similar to AS-39/MPN-1 but is not interchangeable because of mechanical differences.



AS-38/MPN-1 Search-antenna beam coverage

COGNIZANT AGENCY: WL-50-R2244, WL-45-715 Watson Laboratories.

MANUFACTURER: Gilfillan Bros., order 173-MPD-43.

STOCK NUMBERS: AS-19/MPN-1...Federal Stock Number 5840-155-8138. AS-38/MPN-1...Current stock number lists indicate that this item is not stocked by the U. S. Air Force. AS-39/MPN-1...Federal Stock Number 5840-147-5651.

REFERENCES:
1) U. S. Air Force, Handbook Operating Instructions for Radio Set AN/MPN-1, TO 31P5-2MPN1-1, (June 1, 1956). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) John S. Hall, Radar Aids To Navigation. Cambridge, Mass.: Massachusetts Institute of Technology Radiation Laboratory. (1947) UNCLASSIFIED.

4) Gilfillan Bros. drawing SEO0-4133.

5) Gilfillan Bros. E-16237.

6) Gilfillan Bros. D-16711.

7) Gilfillan Bros. D-16238.

8) Gilfillan Bros. D-16712.

9) Signal Corps Specification 71-2100.

10) U. S. Department of Defense Nomenclature Card.

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3) U. S. Air Force, Illustrated Parts Breakdown for Radio Set AN/MPN-1, TO 31P5-2MPN1-4, (Sept. 15, 1956 - revised June 15, 1957). UNCLASSIFIED.

4) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

5) Gilfillan Bros. Drawing E00-4105.

6) Signal Corps Specification 471-2100.

7) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-41( )/MPN-1

See AS-40(*)/MPN-1.

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ANTENNA ASSEMBLY AS-42(*)/MPN-1

MAJOR COMPONENTS: 1 AT-21()/MPN-1 reflector, 1 AS-43()/MPN-1 dipole-array feed. Cosecanting plates MX-1008/MPN-1 are furnished only with AS-42B/MPN-1.

FREQUENCY: SHF band, 9098 - 10,000 mc.

TYPE: Parabolic-cylinder reflector with dipole-array feed.

DESCRIPTION: Antenna Reflector AT-21(*)/MPN-1 is a parabolic cylinder used to collimate the beam in the horizontal plane. It is 14 feet high, 3 feet wide, and 1-1/2 feet deep and weighs 175 pounds. Reflector AT-21A/MPN-1 used with Antenna Assembly AS-42B/MPN-1 has provision for mounting Antenna Subassembly MX-1008/MPN-1, which consists of five cosecanting plates used to shape the beam in the horizontal plane.

Antenna Feed AS-43(*)/MPN-1 is a multiple-dipole array mounted on and fed by variable-width wave guide. AS-43/MPN-1 and AS-43A/MPN-1 have 180 dipoles while AS-43B/MPN-1 has 168 dipoles. The overall dimensions are 14 feet long, 8 inches wide, and 4 inches deep.

BEAM DATA:
Half-power beamwidth - Vertical - 0.55°.
Horizontal - 3.5°.
Beam type - Beavertail; AS-42B/MPN-1 has $\csc^2$ distribution in the horizontal plane.

SCAN DATA: The antenna is manually rotatable in azimuth through 20°. It has electromechanical scan effected by mechanically varying the width of the waveguide feed. This in turn varies the phase of the energy fed to the individual dipoles. The variation of the phase difference between dipoles causes the beam to move. The resulting vertical scan is 7° wide and has a scan rate of one scan per second.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MPN-1 and AN/MPN-1C. Equipment function - approach control. Range - 10 miles.

MISCELLANEOUS: AS-42(*)/MPN-1 includes models through AS-42B/MPN-1. AS-42/MPN-1 and AS-42A/MPN-1 are obsolete according to reference 2) below and are replaced by AS-42B/MPN-1. The three models are interchangeable as units. See AS-40(*)/MPN-1 for illustration. AS-76()/MPN-1A is similar to AS-43()/MPN-1A but is not interchangeable because of mechanical differences.

COGNIZANT AGENCY: Watson Laboratories, WL-45-1414; CESL-1284, CESL-2236.

MANUFACTURERS: Gilfillan Bros., order 173-MPD-43, contract W-3435-sc-109, contract W-33-038-ac-21179; Federal Telephone and Radio Co., order 2152-MPD-44, contract W-28-044-sc-503.

STOCK NUMBERS: AS-42/MPN-1...Federal Stock Number 5985-155-8262; AS-42A/MPN-1...Federal Stock Number 5840-156-4542; AS-43/MPN-1... Current stock number lists indicate that this item is not stocked by the U. S. Air Force; AT-21/MPN-1...Federal Stock Number 5840-155-8136; MX-1008/MPN-1...Federal Stock Number 5840-538-6602.

REFERENCES:

1) John S. Hall, Radar Aids To Navigation. Cambridge, Mass.: Massachusetts Institute of Technology Radiation Laboratory. (1947). UNCLASSIFIED.

2) U. S. Air Force, Handbook Operating Instructions for Radio Set AN/MPN-1, TO 31P5-2MPN1-1, (June 1, 1956). UNCLASSIFIED.

3) U. S. Air Force, Illustrated Parts Breakdown for Radio Set AN/MPN-1, TO 31P5-2MPN1-4, (Sept. 15, 1956 - revised 15 June 1957). UNCLASSIFIED.

4) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

5) Gilfillan Bros. Drawing SE00-4429.

6) Gilfillan Bros. Drawing E-35555.

7) Signal Corps Specification 471-2100.

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ANTENNA AS-43( )/MPN-1

See AS-42( )/MPN-1.

ANTENNA ASSEMBLY AS-48/CPN-7&( )

FREQUENCY: VHF band, 170 - 180 mc.

TYPE: Corner reflector fed by two quarter-wave stubs.

DESCRIPTION: AS-48/CPN-7&( ) is a 90° corner reflector each side of which is approximately 90 inches long and 30 inches high. It is fed by two quarter-wave stubs mounted vertically in front of the reflector.

SCAN DATA: The antenna is fixed but has horizontal lobe switching.

INSTALLATION: Ground portable.

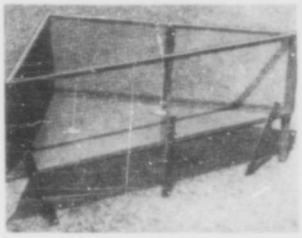
ASSOCIATED EQUIPMENT: Radar Set AN/CPN-7.
Equipment function - approach control.

MISCELLANEOUS: Status - obsolete.

COGNIZANT AGENCY: ARL.

STOCK NUMBER: U. S. Air Force 1800-202048740.

REFERENCE:
U. S. Department of Defense Nomenclature Card.



AS-48/CPN-7

ANTENNA AS-48/FRC

FREQUENCY: HF band, 10 - 30 mc.

TYPE: Yagi array.

DESCRIPTION: The antenna is a directive array made up of dipoles, reflectors, and directors. The r-f input impedance varies from 126 to 600 ohms.

BEAM DATA:
Polarization - Horizontal or vertical, depending upon mounting.

SCAN DATA: The antenna has motor-driven rotation and tilt mechanisms.

TUNING/MATCHING DEVICES: The antenna is remotely tunable over the frequency band.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various radio sets.
Equipment function - communications.

COGNIZANT AGENCY: SIGGC-R.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

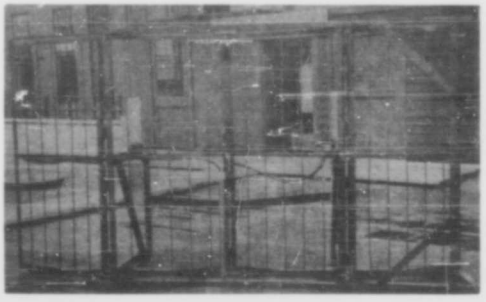
ANTENNA ASSEMBLY AS-49/TPT-1

FREQUENCY: VHF band, 90 - 150 mc; VSWR < 2 on 50-ohm coaxial cable.

TYPE: Dual corner reflector fed by a pair of cylindrical dipoles.

DESCRIPTION: The antenna is a dual corner reflecting W-shaped screen fed by two cylindrical dipoles. The dipoles may be moved with respect to the screen and clamped rigidly in any desired position. The overall reflector is approximately 72 inches high, 134 inches long, and 50 inches deep. The antenna weighs 208 pounds.

BEAM DATA:
Gain - 10 to 12 db over a half-wave dipole.
Half-power beamwidth - See beam patterns.
Beam type - Unidirectional.
Polarization - Vertical or horizontal depending on the mounting position.



AS-49/TPT-1

TUNING/MATCHING DEVICES: A balun is used for impedance matching.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: AN/TPT-1, AN/APT-1, AN/APT-3, and AN/ART-3. Equipment function - countermeasures, jamming; or communications.

MISCELLANEOUS: AS-49/TPT-1 is similar to AS-50/TPT-1.

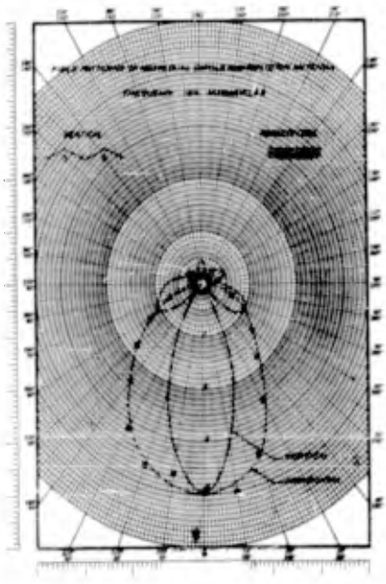
COGNIZANT AGENCY: RRL, Harvard University.

MANUFACTURER: American Moninger, procurement contract 493-MPD-45.

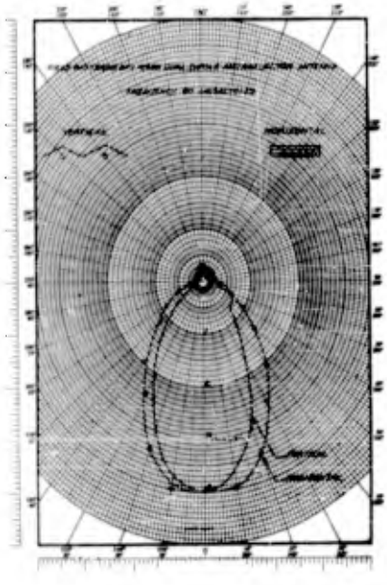
REFERENCES:

1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AS-49/TPT-1 Field Patterns at 150 mc



AS-49/TPT-1 Field Patterns at 90 mc

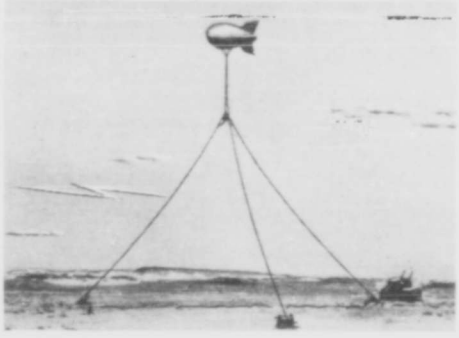
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with binding posts for a 500-ohm transmission line. The base of the other leg is attached to Resistance Box MX-105/MRQ-2, which contains a 500-ohm, non-inductive terminating resistor. Counterpoise AT-55/MRQ-2 is a 1612-foot length of No. 14, 6-strand, phosphor-bronze, wire counterpoise which serves as a ground return for the half-rhombic antenna.

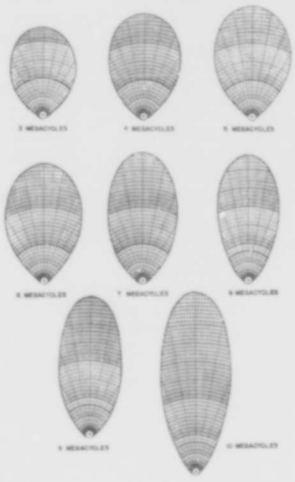
The high-frequency antenna (3 to 18 mc) is composed of Antenna Assembly AS-91/MRQ-2 and Counterpoise AT-56/MRQ-2. Antenna Assembly AS-91/MRQ-2 is a half-rhombic antenna similar to AS-92/MRQ-2 but it has 392-foot legs. Counterpoise AT-56/MRQ-2 is a 625-foot counterpoise which serves as a ground return for the half-rhombic antenna.

BEAM DATA:
Gain - High-frequency antenna - 5 to 16 db depending on frequency.
Low-frequency antenna - 4 to 17 db depending on frequency.
Half-power beamwidth - Horizontal -
High-frequency antenna - 22° to 76° depending on frequency.
Low-frequency antenna - 46° to 90° depending on frequency.
Polarization - Vertical.

INSTALLATION: Ground.



AS-51/MRQ-2 showing AS-91/MRQ-2



Horizontal Radiation Pattern for AS-51/MRQ-2. Antenna A (AS-92/MRQ-2) (left) and Antenna B (AS-91/MRQ-2) (right)

ASSOCIATED EQUIPMENT: Radio Set AN/MRQ-2. Equipment function - communications.

COGNIZANT AGENCY: SCL-3954, SCL-3455, SCL-3953.

REFERENCES:
1) War Department, Antenna Assembly AS-51/MRQ-2 and Auxiliary Antenna Assembly AS-93/MRQ-2, Technical Manual, TM 11-2610, (July 15, 1944). UNCLASSIFIED.

2) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A, TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-52( )/TRC-8

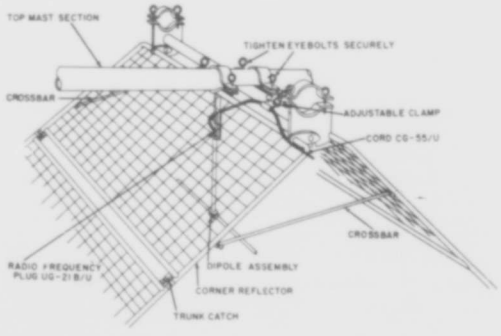
FREQUENCY: VHF band, 230 - 250 mc.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna consists of a 90° corner reflector of wire mesh construction and a dipole feed made of brass. The total weight is 35-1/2 pounds. The antenna has clamps for mounting on mast AB-48/TRC-8.

BEAM DATA:
Half-power beamwidth - 40° (probably both planes).
Polarization - Horizontal or vertical, depending upon mounting position.

INSTALLATION: Ground, transportable.



AS-52( )/TRC-8

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-8(), AN/TRC-11(), and AN/TRC-12(). Equipment function - communications. Range - 25 to 100 miles.

COGNIZANT AGENCY: SCL-10485.

MANUFACTURER: Espey Manufacturing Co.

STOCK NUMBER: Federal Stock Number 5985-248-4277.

REFERENCES:

1) U. S. Air Force and Department of the Army, Radio Sets AN/TRC-8, -8A, and -8B, Radio Terminal Sets AN/TRC-11, -11A, -11B, Radio Relay Sets AN/TRC-12, 12A, and -12B, and Amplifier-Power Supply Group AN/TRA-19, TO 31R2-2TRC8-11, TM 11-618A, (June 10 1954). UNCLASSIFIED.

2) Department of the Army, FSC Group 59, Electrical and Electronic Equipment Components, Supply Manual, SM 11-1-5985, 90, (Nov. 13, 1957). UNCLASSIFIED.

3) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A, TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.

4) Military Specification MIL-R-12887.

5) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-56/SPR-1

FREQUENCY: VHF band, 75 - 300 mc; VSWR < 5 on 50-ohm line.

TYPE: Dipole.

DESCRIPTION: The antenna consists of two sheet-metal cylinders, separated electrically but joined mechanically by a wooden cylinder and clamped to a wooden block. The antenna is supported by a one-inch steel tube about 28 inches high. A balun conversion unit is used to match the balanced antenna to a 50-ohm unbalanced line. The antenna is 66 inches wide and 33-3/4 inches high. The diameter of the dipole elements is 4 inches. The assembly weighs 31 pounds.

BEAM DATA:
Polarization - Horizontal.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-1, AN/APR-4, SCR-587 or similar equipment. Equipment function - probably countermeasures, search.

COGNIZANT AGENCY: U. S. Navy.

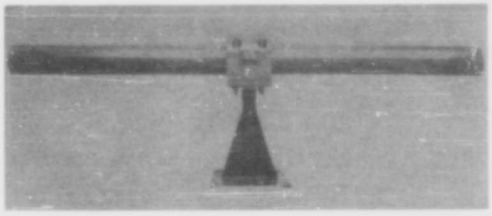
MANUFACTURERS: Galvin Manufacturing Company, Navy contract number NXsa-27923 and NXsa-31230.

STOCK NUMBER: Federal Stock Number N5985-254-7128.

REFERENCES:

1) Andrew W. Alford, Antennas For RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AS-56/SPR-1

ANTENNA ASSEMBLY AS-57/SPR-1

FREQUENCY: VHF and UHF bands, 225 - 1000 mc; VSWR < 5 on 50-ohm line.

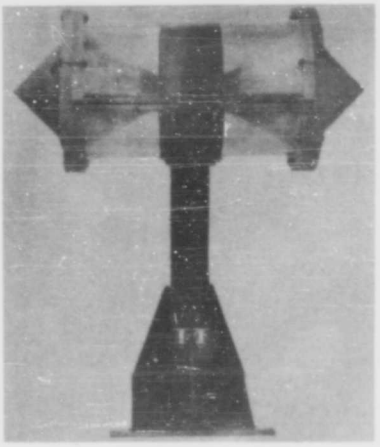
TYPE: Dipole.

DESCRIPTION: The antenna is a balanced-dipole receiving antenna. Each element of the dipole is in the form of two cones which are joined at their bases and the dipole is fed at the center (at the junction of two apexes). The elements are made of sheet metal and are held in place by a cylindrical plexiglass nacelle. The dipole is supported by a two-inch steel tube which is attached to a flat plate. A balun conversion unit is used to match the balanced antenna to a 50-ohm unbalanced line. The antenna is 20-7/8 inches high and 18 inches wide; it weighs 22-1/4 pounds.

BEAM DATA:
Beam type - Similar to typical dipole pattern.
Polarization - Linear, depends on orientation of antenna.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radar Set AN/SPR-1, AN/APR-4, SCR-587, or similar equipment. Equipment function - probably countermeasures, search.



AS-57/SPR-1

MISCELLANEOUS: AS-239/TPQ-1 is the same as AS-57/SPR-1 except for the mounting.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Galvin Manufacturing Company, Navy contract number NXsa-27923 and NXsa-31230.

REFERENCES:

1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-64/PPN-2

FREQUENCY: VHF band, 214 - 234 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a quarter-wavelength vertical radiator and three quarter-wavelength rods which form a counterpoise. The assembly plugs into the top section of Antenna Mast AB-17/PPN-2.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Beacon Transmitter-Receiver AN/PPN-2. Equipment function - navigation, ground reference.

MISCELLANEOUS: Antenna AS-64/PPN-2 is probably part of Antenna Assembly AS-73/PPN-2.

COGNIZANT AGENCY: CESL-1497.

MANUFACTURER: Galvin Manufacturing Co., contract W-3434-sc-329, order 1645-CEGSS-43.

REFERENCES:

1) Departments of the Army and the Air Force, Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide for Transmitter, Radio T-339/UR, Supply Manual, SIG 7 & 8 T-339/UR, TO 31R1-2UR-4, (Aug. 14, 1956). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-71/SPT-2

FREQUENCY: UHF band, 450 - 720 mc; VSWR<2 on 50-ohm line.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The assembly consists of an adjustable-length dipole mounted in a corner reflector. The reflector is made of a number of parallel rods whose axes are parallel to the axis of the dipole. The dipole is fed by a balun to match the balanced antenna to an unbalanced line. The antenna is terminated in a type N connector. It is approximately 19 inches high, 23 inches long, and 25 inches deep. It weighs 15-1/2 pounds.

BEAM DATA:
Gain - 10 db above a half-wave dipole.
Polarization - linear, depends on mounting position.

SCAN DATA: Does not scan but can be oriented so that the axis of dipole is vertical, horizontal, or at an angle of 45°. The antenna can be adjusted through 360° in the plane perpendicular to the dipole.

TUNING/MATCHING DEVICES: The lengths of the dipole elements are adjustable, and a balun is included.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Transmitters AN/SPT-5, AN/APT-3, and AN/APT-9. Equipment function - communications. Transmitting Equipment 52 ADN(OCY-1). Equipment function - test.

MISCELLANEOUS: The antenna may be safely used with the transmitters mentioned as they have rated outputs of 5 to 20 watts. The antenna

should not be used with CFXR, TDY, or AN/APT-4 equipment, which have rated powers of 150 watts.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Marine Radio Company and Radio Research Laboratory.

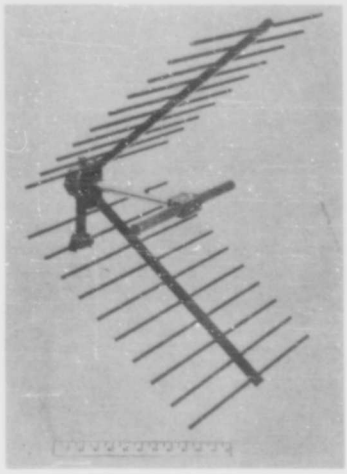
STOCK NUMBERS: Federal Stock Number N 5985-369-5394.

REFERENCES:

1) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratories, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.



AS-71/SPT-2

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ANTENNA ASSEMBLY AS-72( )/CPN-8

FREQUENCY: SHF band, 3267 - 3333 mc.

TYPE: Two stacked arrays of dipoles.

DESCRIPTION: The antenna has separate receiver and transmitter sections. The receiver section is mounted on top of the transmitter section. Each section is composed of 14 stacked tri-dipole elements. A tri-dipole is formed by connecting 3 bent dipoles in the form of a loop. This arrangement gives a radiation pattern similar to that of a loop antenna. These tri-dipole elements are fed by probes which are capacitatively coupled to a coaxial feed line by passing them through holes in the outer conductor. The antenna is enclosed in a cylinder of Laminac-impregnated cotton fabric. The overall dimensions are approximately 5 feet long by 3-1/2 inches in diameter.

BEAM DATA:
Gain - 10.8 db.
Half-power beamwidth - Vertical - 7.8°.
Side-lobe attenuation - At least 15.2 db.
Beam type - Omnidirectional in the horizontal plane.
Polarization - Horizontal.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/CPN-8.
Equipment function - navigation, ground reference.

COGNIZANT AGENCY: ARL-3015.

MANUFACTURER: Galvin Manufacturing Co., order 329-DAY-44.

STOCK NUMBER: Federal Stock Number F5985-369-5452.

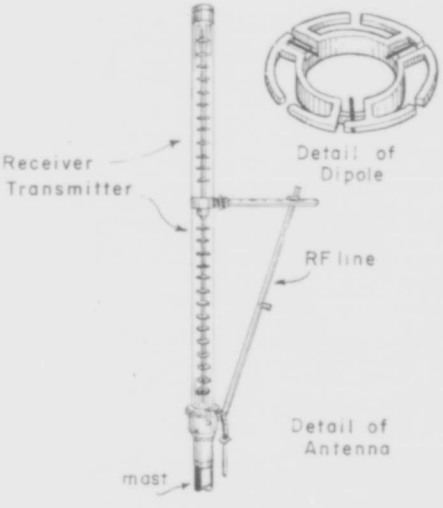
REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Antenna Catalog, Report No. 1330. Cambridge, Mass.: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

3) Military Specification 471-1788.

4) U. S. Department of Defense Nomenclature Card.



AS-72/CPN-8

ANTENNA SYSTEM AS-73( )/MPN-2

MAJOR COMPONENTS: 1 ground-plane antenna, 1 sectionalized mast, 1 fifty-ohm transmission line, also guys and stakes.

FREQUENCY: VHF band, 214 - 234 mc.

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna is a ground-plane antenna consisting of a quarter-wavelength vertical radiator and three quarter-wavelength ground rods mounted approximately 45° below the horizontal and equally spaced radially.

The 8-section mast included in the system is held together by a steel cable which runs the entire length (10-1/2 feet) and is kept under tension by a spring. The mast is approximately 14-1/2 inches long when collapsed. The antenna is fed by a 9-1/2-foot section of RG-58/U 50-ohm coaxial cable.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Beacon Transmitter-Receiver AN/PPN-2. Equipment function - navigation, ground reference.

COGNIZANT AGENCY: CESL-1540.

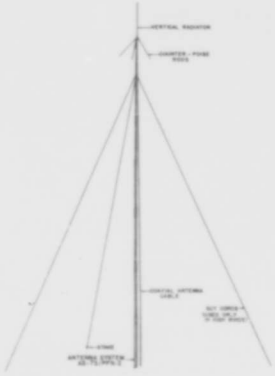
MANUFACTURER: Galvin Manufacturing Co., contract W-3434-sc-329, order 1645-CEGSS-43 and contract W-28-004-sc-167, order 760-MSCPD-44.

STOCK NUMBER: Federal Stock Number 5825-249-4403.

REFERENCES:

1) War Department, Beacon Transmitter-Receiver AN/PPN-2, Technical Manual, TM 11-1145, TO 16-30PPN2-5, (Aug. 19, 1944). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AS-73/MPN-2

ANTENNA AS-74( )/TPS-3

FREQUENCY: Additional information is available in the secret document listed below as Reference 1) of this catalog series.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector 10 feet in diameter and constructed of plywood sections and covered with wire mesh. The feed is probably a dipole array.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1) of this catalog series.

SCAN DATA: Additional information is available in the secret document listed below as Reference 1) of this catalog series.

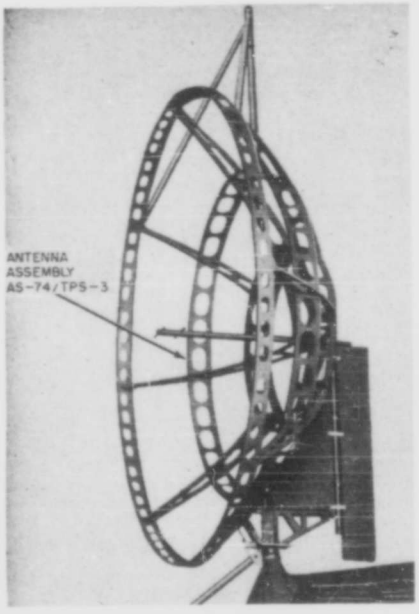
INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-3. Equipment function - search, air.

MISCELLANEOUS: AS-74A/TPS-3 includes AS-175( )/TPS-3 reflector.

COGNIZANT AGENCY: CESL-1548.

MANUFACTURER: Zenith Radio Corp., procurement contract orders W-3435-sc-329(593-MPD-43) and W-28-004-sc-99(602-MPD-44).



AS-74/TPS-3

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.
2) Department of the Army, Ground Radar and Recognition Equipment, Directory of Signal Corps Equipments, TM 11-487C, (Jan. 1951). CONFIDENTIAL, MODIFIED HANDLING.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-75( )/MPN-1A

FREQUENCY: SHF band, 10,000 mc.

TYPE: Dipole array.

DESCRIPTION: The antenna is the feed system for an azimuth-scanning antenna consisting of reflector AT-44( )/MPN-1A and feed AS-75( )/MPN-1A. The feed consists of an array of dipoles fed by a variable-width waveguide. Overall dimensions are 8-1/2 feet by 8 inches by 6 inches.

BEAM DATA: Additional information is available in the secret document listed below as Reference 2) of this catalog series.

SCAN DATA: Additional information is available in the secret document listed below as Reference 2) of this catalog series.

INSTALLATION: Ground, truck mounted.

ASSOCIATED EQUIPMENT: Radio Set AN/MPN-1A. Equipment function - approach control.

MISCELLANEOUS: AS-75( )/MPN-1A is similar to AS-41( )/MPN-1, but is not interchangeable due to mechanical differences.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Div., contract NXss-29812.

STOCK NUMBER: Federal Stock Number F5985-254-7170.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.
3) Bendix Drawing AR-96241-1.
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-76( )/MPN-1A

FREQUENCY: SHF band, 10,000 mc.

TYPE: Dipole array.

DESCRIPTION: The antenna is the feed system for an elevation-scanning antenna consisting of reflector AT-45( )/MPN-1A and feed AS-76( )/MPN-1A. The feed consists of an array of 165 dipoles fed by a variable-width waveguide. Overall dimensions are 14 feet by 8 inches by 6 inches. Total weight is 101 pounds.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1).

SCAN DATA: Additional information is available in the secret document listed below as Reference 1).

INSTALLATION: Ground, truck mounted.

ASSOCIATED EQUIPMENT: Radio Set AN/MPN-1A. Equipment function - approach control.

MISCELLANEOUS: AS-76( )/MPN-1A is similar to AS-43( )/MPN-1A, but is not interchangeable because of mechanical differences.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio, contract NXss-29812.

STOCK NUMBER: Federal Stock Number F5985-099-9524.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) Bendix Drawing AR-96244-1.
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-77( )/MPN-1A

FREQUENCY: UHF band, 3000 mc.

TYPE: Dipole array.

DESCRIPTION: The antenna is the feed system for a search antenna consisting of reflector AT-46( )/MPN-1A and feed AS-77( )/MPN-1A. The feed consists of an array of 35 dipoles enclosed in a weatherproof housing with pick-up probes extending into a section of rectangular waveguide which is terminated in a resistive load. Overall dimensions are 110 inches by 18 inches by 4 inches. Total weight is 75 pounds.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1).

SCAN DATA: Additional information is available in the secret document listed below as Reference 1).

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MPN-1A. Equipment function - approach control.

MISCELLANEOUS: AS-77( )/MPN-1A is similar to AS-39/MPN-1 but is not interchangeable due to mechanical differences.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio, contract NXss-29812.

STOCK NUMBER: Federal Stock Number F5820-090-2650.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Bendix Drawing AR-96345-1.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-78( )/MPN-1A

FREQUENCY: HF band.

TYPE: Whip.

DESCRIPTION: The antenna is a 5-section whip with a mounting bracket and insulator. The sections are made of steel tubing threaded on the ends so that they screw together. The antenna has an overall height of 18 feet.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set SCR-274-N and Radio Equipment AN/ARC-5. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio, contract NXss-29812.

STOCK NUMBER: Federal Stock Number F5985-249-4343.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Air Force, Handbook Operating Instructions for Radio Set SCR-274-N, TO 12R2-3SCR274-1, (Oct. 4, 1944 - revised July 25, 1956). UNCLASSIFIED.

3) Handbook of Maintenance Instructions for Model AN/ARC-5 Aircraft Radio Equipment, Volume 1.

4) Bendix Drawing C-62432.

5) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-79( )/MPN-1A

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Stub antenna.

DESCRIPTION: The antenna is a 22-inch stub with mounting bracket and insulator.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio SCR-522-A (part of Radio Set AN/MPN-1A). Equipment function - communications. Range - communication with aircraft at 1000 feet (altitute), 30 miles; at 5000 feet, 80 miles.

MISCELLANEOUS: AS-79( )/MPN-1A is similar to but because of mechanical differences is not interchangeable with AT-22( )/MPN-1.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio, contract NXss-29812.

STOCK NUMBER: Federal Stock Number F5985-249-4331

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Air Force and Navy Department, Handbook of Operating Instructions for Radio Sets SCR-522-A and SCR-542-A, TO 12R2-3SCR522-1, (Dec. 30, 1944). UNCLASSIFIED.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-80( )/CPN-8

FREQUENCY: SHF band, 3267 - 3333 mc.

TYPE: Two collinear arrays of dipoles.

DESCRIPTION: The antenna has separate receiver and transmitter sections with the receiver section mounted on top of the transmitter section. Each section is composed of 14 stacked elements (7 dipoles). The individual elements are cylinders approximately one-half wavelength long (1.8 inches) and 2 inches in diameter mounted coaxially with the coaxial feed section. Each dipole element is fed by three probes spaced 120° apart and capacitively coupled to a coaxial feed line by passing them through holes in the outer conductor. The inner conductor of the lower section of the antenna is the outer conductor of the upper section, so that the feed line in the lower section is made up of three concentric cylinders instead of the usual two. The antenna is enclosed in a cylinder of Laminac-impregnated cotton fabric. The overall dimensions are approximately 64 inches long by 5-1/2 inches in diameter.

BEAM DATA:
Half-power beamwidth - Vertical - 9°.
Side-lobe attenuation - 8.9 db.
Beam type - Omnidirectional in horizontal plane.
Polarization - Vertical.

INSTALLATION: Ground, portable.

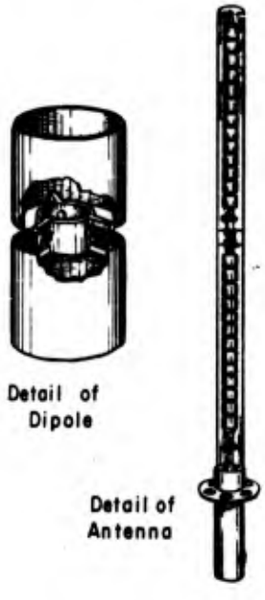
ASSOCIATED EQUIPMENT: Radio Set AN/CPN-8. Equipment function - navigation, ground reference.

COGNIZANT AGENCY: ARL-3081.

MANUFACTURER: Galvin Manufacturing Corp., order 329-DAY-44.

STOCK NUMBERS: Federal Stock Number F5985-249-4331 and Federal Stock Number 5825-369-5453.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Antenna Catalog, Report No. 1330. Cambridge, Massachusetts: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.
3) Military Specification 471-1788.
4) U. S. Department of Defense Nomenclature Card.



AS-80/CPN-8&( )

ANTENNA SYSTEM AS-81/GR

TYPE: Loop.

DESCRIPTION: The antenna is a modification of Loop Assembly AS-4/GR. It consists of an antenna mount, a control box, three loops, and a case.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Various radio sets in the correct frequency range. Equipment function - communications.

MISCELLANEOUS: The antenna can be used for antijamming.

COGNIZANT AGENCY: ESL and SPSGD-1.

MANUFACTURER: North American Phillips, order 1371-MPD-44.

STOCK NUMBER: Federal Stock Number 5985-228-8063.

REFERENCES:
1) Department of the Army, FSC Group 59, Electrical and Electronic Equipment Components, Supply Manual, SM 11-1-5985, 90, (Nov. 13, 1957). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA SYSTEM AS-83/PPN-1A

FREQUENCY: VHF band, 214 - 234 mc.

TYPE: Whip.

DESCRIPTION: The antenna system consists of an antenna, a sectionalized mast, and a transmission line. The antenna is approximately 16-1/2 inches long when collapsed and 8-1/2 feet long when extended. It weighs approximately 2 pounds.

BEAM DATA:
Beam type - Omnidirectional in azimuth plane.
Polarization - Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Beacon Transmitter Receiver AN/PPN-1A. Equipment function - navigation.

MISCELLANEOUS: AS-83/PPN-1A is similar to AS-10/PPN-1 but is designed for a 50-ohm cable.

COGNIZANT AGENCY: CESL-1587.

MANUFACTURER: Hazeltine Electric Corp., order 759-MSCPD-44, contract W-28-004-sc-166.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-84/APA-24

See Antenna Assembly AN/APA-24(*).

ANTENNA ASSEMBLY AS-85/CRN-4

FREQUENCY: MF band, 1.45 - 1.70 mc.

TYPE: Flat-top antenna.

DESCRIPTION: The antenna assembly consists of a center-fed flat-top antenna, two 25-foot, telescopic aluminum masts, and a radial ribbon counterpoise. The flat-top antenna is made up of three 50-foot wires connected in parallel. It is fed with a downlead. The masts collapse to a length of 28 inches, and the antenna system is packed into three cylinders for transport. The total weight of the assembly is 11 pounds.

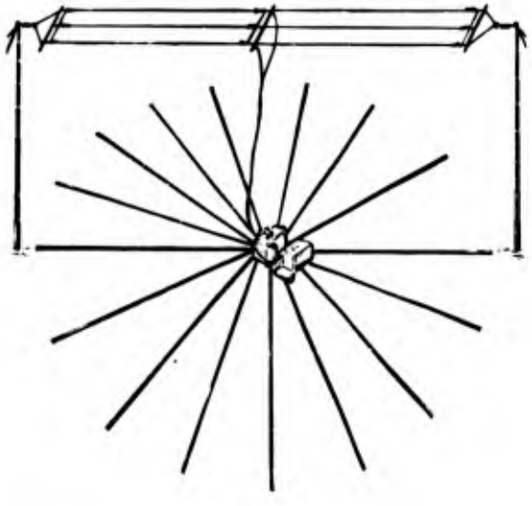
BEAM DATA:
Beam type - Nondirectional in azimuth.

INSTALLATION: Ground, air transportable.

ASSOCIATED EQUIPMENT: Radio Transmitting Equipment AN/CRN-4. Equipment function - navigation, direction finding.

COGNIZANT AGENCY: ARL-3203.

MANUFACTURER: Wells-Gardner Co., order 12-DAY-44.



AS-85/CRN-4

STOCK NUMBER: Federal Stock Number 5825-243-0419.

REFERENCES:

1) U. S. Air Force and Bureau of Aeronautics, Handbook Maintenance Instructions for Radio Transmitting Equipment AN/CRN-4, TO 31R4-2CRN4-2, (Sept. 12, 1944). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ASSOCIATED EQUIPMENT: Radio Set AN/MRC-1.
Equipment function - communications.

COGNIZANT AGENCY: SCL-5152 and SCL-4018.

MANUFACTURER: Camp Coles Signal Laboratory, B and W, order 1299-MPD-45.

STOCK NUMBER: Signal Corps 2A249-94.

REFERENCES:
1) Signal Corps Specification 71-3114.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA SYSTEM AS-95/MRC-1

FREQUENCY: MF and HF bands, 2 - 12.5 mc.

TYPE: Dipole or doublet antenna.

DESCRIPTION: The antenna system consists of two doublet antennas, each approximately 200 feet long. By using properly spaced insulators and jumpers, each doublet can be used for as many as 8 operating frequencies. Each doublet uses three 50-foot, tubular, plywood masts AB-38/CR and 100 feet of RG-34/U coaxial cable.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/MRC-1.
Equipment function - communications.

COGNIZANT AGENCY: SCL-5153 and SCL-4017.

MANUFACTURER: Camp Coles Signal Laboratory, B and W, order 1244-MPD-44.

STOCK NUMBER: Signal Corps 2A249-95.

REFERENCES:
1) Signal Corps Specification 71-3114.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-99( )/TRC-1

FREQUENCY: VHF band, 70 - 100 mc.

TYPE: Stub sleeve antenna.

DESCRIPTION: The antenna is a stub sleeve or folded-skirt dipole. The stub and sleeve are both adjustable to a quarter wavelength at any frequency in the band covered. Connection to the antenna is made through a permanently attached length of CL-800 cable terminating at the center of the antenna, where the shield connects to the top of the sleeve and the center conductor connects to the bottom of the rod. The other end of the cable is terminated in a plug PL-258. The antenna has a steel pipe projecting below the sleeve. This pipe has clamps suitable for attaching the antenna to masts of various diameters.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-1( ).
Equipment function - communications.

COGNIZANT AGENCY: SCL-4085.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-101/APA-24

See Antenna Assembly AS/APA-24(*).

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ANTENNA SYSTEM AS-102/CRN-11

FREQUENCY: LF and MF bands, 0.2-0.4 mc.

TYPE: Two crossed loops.

DESCRIPTION: The antenna system consists of two separate triangular loop antennas and a mast AB-30/CRN-11. Each loop has a base length of 200 feet and a height of 54 feet.

BEAM DATA:
Beam type - Two figure-of-eights in quadrature.

INSTALLATION: Ground, air-transportable.

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/CRN-11, Equipment function - navigation, ground reference and communication.

COGNIZANT AGENCY: WL-45-C243, USAF, and Sig. C(RCEN).

MANUFACTURER: Radio Receptor Co., Order 18295-P-44.

STOCK NUMBER: Federal Stock Number 5825-538-5677.

REFERENCES:
1) U. S. Air Force, Fixed Communication and Meteorological Equipment Directory, Volume III, Navigational Aid Equipment, TO 31R4-1-1, (June 16, 1958). UNCLASSIFIED.
2) Air Force Specifications WLENG-2049.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-103/APM-40

FREQUENCY: SHF band, 9335 - 9415 mc.

TYPE: Paraboloidal reflector fed by a horn.

DESCRIPTION: This is an X-band antenna consisting of an antenna feed, a wave-guide section, and a paraboloidal reflector with suitable support.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Test Assembly AN/APM-40. Equipment function - bench tests for radar sets.

MISCELLANEOUS: The reference below indicates this antenna is obsolete.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Westinghouse Electric Corporation, procurement contract NXsa-49664.

STOCK NUMBER: U. S. Navy R16A4932-505.

REFERENCE:
Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

ANTENNA SYSTEM AS-104/CPS-1

FREQUENCY: UHF band, 2700-2900 mc.

TYPE: Modified parabolic-cylinder reflector with dipole-array feed.

DESCRIPTION: The reflector is a modified parabolic-cylinder, 25 feet long by 5 feet high. It has a focal length of 30 inches.
The feed is a linear array of 106 dipoles spaced 160 electrical degrees apart (at center frequency) on a section of rectangular waveguide fed at one end. A graphite-coated-sand termination at the end of the waveguide absorbs between 4% and 15% of the power. A half cylinder of plexiglass covers the dipoles.

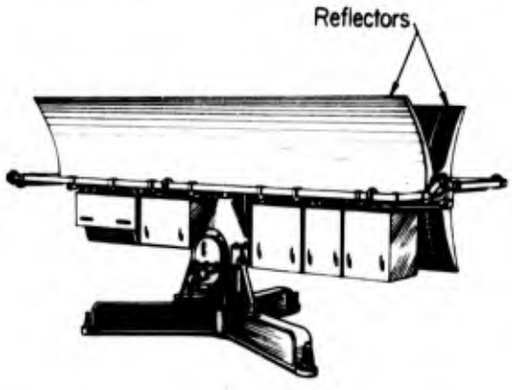
BEAM DATA:
Gain - 30.8 db.
Half-power beamwidth - Horizontal - 0.9°.
Beam type - $\csc^2$ from 2.5° to 25°.
Polarization - Horizontal.

SCAN DATA: The antenna can be rotated in azimuth through 360° at a rate of 1, 2, or 4 revolutions per minute. The antenna is normally fixed in elevation at +3-1/2°, but can be adjusted between 0° and +4° by use of spacers.

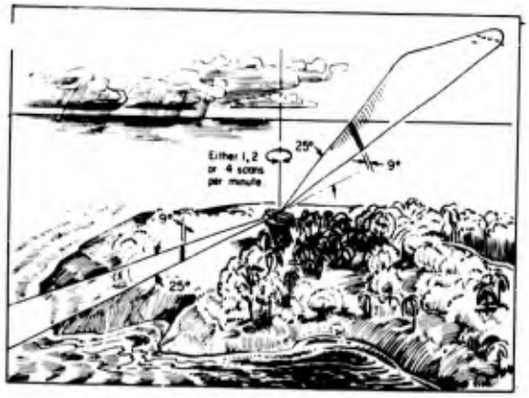
INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/CPS-1 and Radar Set AN/MPS-5; Equipment function - search, air; Range - 266 miles maximum, 1/2 mile minimum.

MISCELLANEOUS: Reference 4 states that the feed has 105 dipoles and the antenna has a horizontal half-power beamwidth of 1.5°. This is in disagreement with other sources of information. AS 104/CPS-1 forms the upper beam of the radar system when used in conjunction with AS-105/CPS-1.



AS-104/CPS-1 (front antenna) and AS-105/CPS-1 (back antenna)



AS-104/CPS-1 (Upper beam) and AS-105/CPS-1 (Lower beam)

COGNIZANT AGENCY: WL-50-R2286.

MANUFACTURER: General Electric, Contract AF33-(038)-11399.

STOCK NUMBER: Federal Stock Number 5840-149-1454.

REFERENCES:

1) Antenna Catalog, Report No. 1330. Cambridge, Massachusetts: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

2) John E. Cruichshank and Reuben O. Schlegelmilch, Ground Radar Sets, Systems and Related Components, RADC 52-22. Rome, New York: Rome Air Development Center, (Nov. 1, 1952). AD-128. SECRET.

3) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

4) U. S. Air Force, Radio Sets AN/CPS-1 and AN/MPS-5, Service Instructions, TO 31P6-2 CPS1-32, Volume 1, (Jan. 1, 1953 - revised Dec. 20, 1954). UNCLASSIFIED.

5) U. S. Air Force, Electronic Equipment Handboook, 54WC11-494, (Jan. 1954). SECRET.

6) U. S. Air Force, Fixed and Mobile Radar and Auxiliary Equipment Directory, TO-31P-1-17, (July 18, 1955 - revised Mar. 30, 1956). SECRET.

7) U. S. Air Force, Radio Set AN/CPS-1, Operating Instructions, TO 16-30CPS1-2, (Feb. 1, 1946 - revised May 1, 1953). UNCLASSIFIED.

8) Air Force Specifications WLENG-2080.

9) U. S. Department of Defense Nomenclature Card.

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6) U. S. Air Force, Fixed and Mobile Radar and Auxiliary Equipment Directory, TO-31P-1-17, (July 18, 1955 - revised Mar. 30, 1956). SECRET.

7) U. S. Air Force, Radio Set AN/CPS-1, Operating Instructions, TO 16-30CPS1-2, (Feb. 1, 1946 - revised May 1, 1953). UNCLASSIFIED.

8) Air Force Specifications WLENG-2080.

9) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-106/AP

FREQUENCY: SHF band, 9200 - 9530 mc; VSWR < 5 on 50-ohm coaxial line.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION: This is a small paraboloidal reflector 4-1/16 inches in diameter fed by a plexiglass-covered dipole. It is equipped with two suction cups for mounting to a smooth surface and a 24-inch length of RG-8/U coaxial cable. The antenna weighs 0.5 pounds.

BEAM DATA:
Polarization - Linear (adjustable).

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Set TS-62/AP.
Equipment function - test.

MISCELLANEOUS: Similar to AS-15/AP.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: Western Electric Company, procurement order No. 801-DAY-45-RA, 768-DAY-45-RA, 870-DAY-45-RA, and 937-DAY-44.

STOCK NUMBERS: U. S. Navy R16AN-AS106AP and Federal Stock Number 5985-093-5620.

REFERENCE:
Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

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ANTENNA AS-107/AP

FREQUENCY: SHF band, 3140 - 3460 mc; VSWR < 5 on 50-ohm coaxial line.

TYPE: Dipole.

DESCRIPTION: The antenna consists of a half-wave dipole attached to a 24-inch length of RG-9/U cable which terminates in a UG-26/U connector. The assembly is equipped with a bracket having 1-1/2 inch rubber suction cups at each end. The overall assembly is 4-1/2 inches wide, and 27-7/8 inches long. It weights 0.5 pounds.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Set TS-61/AP.
Equipment function - test.

MISCELLANEOUS: Similar to AS-14A/AP.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: Western Electric Company, procurement order 959-DAY-44, 82-DAY-45-RA, and 797-DAY-45-RA.

STOCK NUMBER: U. S. Navy R16AN-AS107AP.

REFERENCE:
Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

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ANTENNA ASSEMBLY AS-109/TP

See AS-134/TPX

ANTENNA ASSEMBLY AS-110/TRC-7 AND AS-110A/TRC-7

See OA-314 ( )/GRC

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ANTENNA ASSEMBLY: AS-111/CRM-3

FREQUENCY: VHF band, 108.3 - 110.3 mc.

TYPE: Dipole (V-type).

DESCRIPTION: The antenna assembly consists of a dipole of tubular construction and a guyed mast, 15 feet high. The dipole elements are

mounted in such a way that they form a 90° angle. The dipole leads are connected to a socket SO-264.

BEAM DATA:
Polarization - Horizontal.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Monitoring Set AN/CRM-3, Equipment function - test; Range - 2 miles.

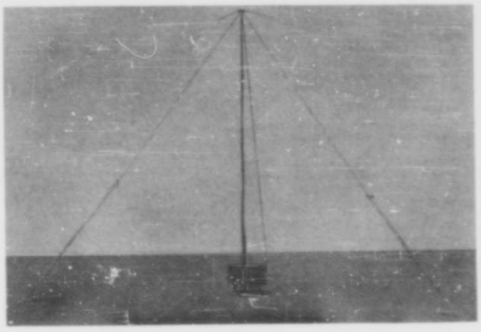
COGNIZANT AGENCY: ARL-3524 and ARL-3507.

MANUFACTURER: Mallory Co., orders 56-DAY-45SE and 952-DAY-45SE.

STOCK NUMBERS: Federal Stock Number 5825-043-0418.

REFERENCES:
1) War Department and the U. S. Navy, Radio Monitoring Set AN/CRM-3 and Rectifier Power Supplies PP-94/CRm-3 and PP-94A/CRM-3, Maintenance Instructions, TO 31R2-2CRM3-3, (June 19, 1946 - revised Jan. 27, 1947). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AS-111/CRM-3

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ANTENNA ASSEMBLY AS-112/TRC-7

See OA-314 ( )/GRC

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ANTENNA ASSEMBLY AS-113/TPL-1

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The reflector is a solid metal paraboloid, 48 inches in diameter, fed by a rotating dipole. The total weight of the antenna assembly is 65 pounds.

SCAN DATA: The dipole feed is slightly offset from the axis of the reflector and rotates at a rate of 100 revolutions per second.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/TPL-1, Equipment function - search.

MISCELLANEOUS: Additional information is available in the confidential and secret documents listed below as References 1 and 2, respectively, and in Volume VI of this catalog series.

COGNIZANT AGENCY: CESL-1737.

MANUFACTURER: Sperry Gyroscope, Order 1510-MPD-44.

REFERENCES:
1) Department of the Army, Ground Radar and Recognition Equipment, Directory of Signal Corps Equipments, TM 11-487C, (Jan. 1951). CONFIDENTIAL, MODIFIED HANDLING.

2) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY: AS-119/CPN-6

FREQUENCY: SHF band, 9310 mc (transmitting antenna) and 9320 - 9430 mc (receiving antenna).

TYPE: Two stacked arrays of slots.

DESCRIPTION: The antenna has separate receiver and transmitter sections. The receiver section is mounted on top of the transmitter section. Each section is composed of 12 rows of slots. Each row has 7 probe-fed slots uniformly spaced around a cylindrical wave-guide section. Each array is enclosed in a cylindrical plastic housing. The overall dimensions of the assembly are 45-1/2 inches long by 5-1/2 inches in diameter. It is mounted by a 12-thread female

coupling 2-1/4 inches long at the bottom of the antenna.

BEAM DATA:
Gain - 13 db.
Half-power beamwidth - Vertical - 5°.
Beam type - Omnidirectional in azimuth.
Polarization - Horizontal.

TUNING/MATCHING DEVICES: A stub transformer located in the base of each antenna matches the cylindrical wave guide of the antenna to the rectangular wave-guide feed.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/CPN-6. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Galvin, contract NXss-32854.

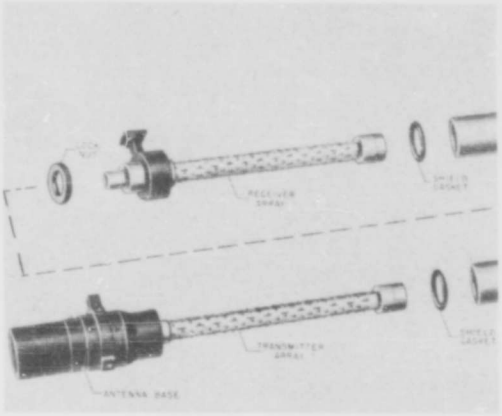
STOCK NUMBER: Federal Stock Number F5985-369-5557.

REFERENCES:
1) Departments of the Air Force and the Bureau of Aeronautics, Radio Set AN/CPN-6, Handbook Operation and Service Instructions, T.O. 31P5-2CPN6-1, (October 1, 1952). UNCLASSIFIED.

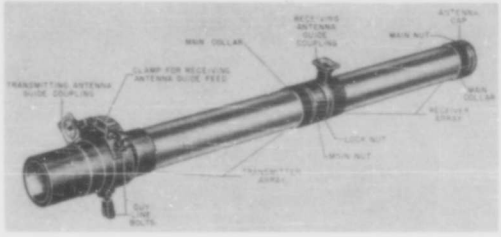
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Galvin Drawing Number 1X109780.

4) U. S. Department of Defense Nomenclature Card.



AS-119/CPN-6



AS-119/CPN-6

ANTENNA ASSEMBLY AS-120(*)/TPS-1B

FREQUENCY: UHF band, 1220-1280 mc.

TYPE: Cut paraboloidal reflector with a probe-excited pillbox feed.

DESCRIPTION: The reflector is a cut paraboloid constructed of steel tubing and wire mesh, 4 feet high by 15 feet wide. The feed is a probe-excited pillbox constructed of sheet metal.

BEAM DATA:
Gain - 27.5 db.
Half-power beamwidth - Vertical - 11°
Horizontal - 3°
Polarization - Horizontal.

SCAN DATA: The antenna is fixed in elevation and rotates through 360° in azimuth either clockwise or counterclockwise. The pedestal of Radar Set AN/TPS-1B has provision for rotating the antenna at 6 revolutions per minute. The pedestal of Radar Set AN/TPS-1C has provision for rotating the antenna at any speed between 0 and 15 revolutions per minute.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Sets AN/TPS-1B and AN/TPS-1C, Equipment function - search, air.

MISCELLANEOUS: AS-120(*)/TPS-1B denotes models AS-120/TPS-1B and AS-120A/TPS-1B. The models are interchangeable as a unit. Radar Sets AN/TPS-1B and AN/TPS-1C have not been in production since 1952 and are replaced by AN/TPS-1D. See OA-1227/TPS for a list of antennas used with AN/TPS-1(*).

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Western Electric Co., Contract NXsr-38866.

STOCK NUMBERS: Federal Stock Numbers F5985-249-4404 and 5840-284-6534.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) John E. Cruichshank and Reuben O. Schlegelmilch, Ground Radar Sets, Systems and Related Components, RADC 52-22. Rome, New York: Rome Air Development Center, (Nov. 1, 1952). ASTIA Report No. AD-128. SECRET.

3) Western Electric Co. part number X-66171-P.

4) Western Electric Co. drawing number BO-418-495.

5) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-126/CR

MAJOR COMPONENTS: 5 AN-22-A antennas, 1 AN-23-A antenna, 1 AN-25 antenna, 2 AN-26 antennas, 1 AN-27 antenna, and 15 IN-86 insulators.

FREQUENCY: MF and HF bands, 1.5 - 12.5 mc.

TYPE: Inverted L antenna.

DESCRIPTION: AN-22-A, AN-23-A, AN-25, AN-26 and AN-27 are single wires with snap hook ends. AN-22-A is 20 feet long; AN-23-A, 35 feet long; AN-25, 5 feet long; AN-26, 25 feet long; AN-27, 10 feet long. The wires are combined and mounted on 2 masts AB-38/CR to form an inverted L antenna and counterpoise. By opening and closing the electrical connections between the wires, the antenna assembly can be made resonant at different frequencies in the band above.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-188-A, Equipment function - communications.

COGNIZANT AGENCY: SCLC-8006.

MANUFACTURER: Crest Electronics Corp., Contract 41380-Phila-52-29 (61).

STOCK NUMBERS: Federal Stock Numbers 5985-404-1912 (AS-126/CR), 5985-224-4459 (AN-22-A), 5985-230-5457 (AN-23-A), 5985-230-5456 (AN-25), 5985-223-1422 (AN-26), and 5985-223-1421 (AN-27).

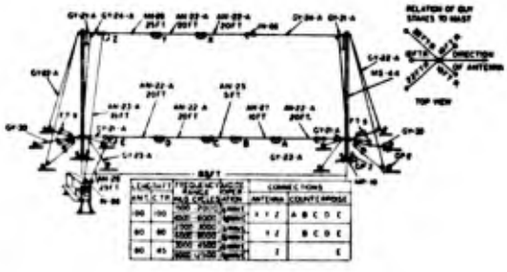
REFERENCES:

1) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A, TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.

2) War Department, Radio Set SCR-188-A, Technical Manual, TO 31R2-3SCR188-1, TM 11-233, (Mar. 31, 1942). UNCLASSIFIED.

3) Departments of the Army and Air Force, Antenna Assembly AS-126/CR, Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide, SIG 7 & 8 AS-126/CR, TO 31R2-2CR-104, (Jan. 18, 1956 - revised June 8, 1956). UNCLASSIFIED.

4) U.S. Department of Defense Nomenclature Card.



AS-126/CR

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ANTENNA ASSEMBLY AS-127/MRT-1

TYPE: Rhombic antenna.

DESCRIPTION: The antenna assembly is a rhombic antenna supported by two 50-foot masts and one 72-foot mast. It is constructed of #10 wire. One end is terminated by a dissipating line which takes the place of a termination resistor. The other end is fed by a 500-ohm transmission line. The approximate weight is 1000 pounds.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MRT-1, Equipment function - communications.

COGNIZANT AGENCY: SCL-4154.

REFERENCE:
U.S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-128/UXR-2

TYPE: Corner reflector.

DESCRIPTION: This receiving antenna assembly consists of a 1/4-wavelength rod above a ground plane with a corner reflector 1/2-wavelength high. Each leg of the corner reflector is 7/8-wavelength. Output impedance is 50-ohms.

ASSOCIATED EQUIPMENT: Radio Set AN/URR-2, Equipment function - communications.

COGNIZANT AGENCY: Navy, Bureau of Aeronautics.

MANUFACTURER: RCA, Contract NXss-20596.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-129/AP

FREQUENCY: HF, VHF, and UHF bands; 15 - 1000 mc; VSWR < 5 on 50-ohm coaxial line.

TYPE: Probe (Stub-type).

DESCRIPTION: The antenna consists of a 6-foot length of RG-8/U cable attached to a 4-inch probe. The cable is terminated in a UG-21/U plug.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Set TS-53/AP. Equipment function - test.

MISCELLANEOUS: Identical with probe antenna AS-122/AP, except that r-f plug UG-21/U is used instead of PL-259.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: James Millen Manufacturing Company, procurement order 346-DAY-44.

STOCK NUMBERS: Signal Corps 3F3034-129.

REFERENCE:
Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

ANTENNA ASSEMBLY AS-130/CPN

FREQUENCY: Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

TYPE: Probably longwire.

DESCRIPTION: The antenna assembly consists of 230 feet of #16, 7-strand copper wire; antenna strain insulators; and a lead-in bowl assembly.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/CPN-11(*) and AN/CPN-12(*), Equipment function - Navigation. Additional information is available in the secret document listed below as Reference 2 and in Volume VI of this catalog series.

COGNIZANT AGENCY: ARL-3607.

MANUFACTURER: Purchase plans 44-4018 and 44-4642.

STOCK NUMBER: Signal Corps 2A264-130.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) Haller, Raymond & Brown, Inc., Electronic Equipment Electromagnetic Radiation Data, Project No. 20020. State College, Pennsylvania: (Jan 15, 1952), ASTIA Report No. ATI-136456. SECRET.

3) U.S. Department of Defense Nomenclature Card.

ANTENNA SYSTEM AS-131/CPS-5( )

MAJOR COMPONENTS: 1 Cut paraboloidal reflector, 1 Waveguide horn, and 1 Waveguide feed system.

FREQUENCY: UHF band, 1280-1350 mc.

TYPE: Cut paraboloidal reflector with flared waveguide feed horn.

DESCRIPTION: The reflector is made of sections of expanded metal. It is approximately 25 feet wide overall and 14 feet high at the center, tapering symmetrically to a height of 7 feet at the ends.

The feed assembly consists of one piece of shaped waveguide running from the rotating joint to the focal point of the reflector. It flares into a waveguide horn near the focal point.

The overall antenna assembly is 168 inches high by 300 inches wide by 132 inches deep and weighs 1,000 pounds. When the antenna is installed, the beam may be tilted in elevation for minimum ground reflections or tilted below the horizon for maximum range.

BEAM DATA:
Gain - Additional information is available in the secret document listed below as Reference 2 and in Volume VI of this catalog series.
Half-power beamwidth - Vertical - 7°
Horizontal - 2.5°
Beam type - Fan. Maximum range coverage is obtained with the antenna boresight axis tilted slightly below the horizontal, but energy reflected from the ground causes the vertical radiation pattern to be multilobed. Tilting the boresight axis slightly above the horizontal reduces the maximum range coverage but gives a single-lobed vertical radiation pattern.

Polarization - Horizontal.

SCAN DATA: Antenna is fixed in elevation and is rotatable through 360° in azimuth. It may be positioned manually or automatically rotated with manual control of speed from 0 to 6 rpm.

INSTALLATION: Ground, air-transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/CPS-5(), Equipment function - Search, air and Fire Control (ground control intercept), Range - 160 nautical miles when positioned for early warning, 60 miles when positioned for solid search.

COGNIZANT AGENCY: CESL-1787.

MANUFACTURER: General Electric Co., Order 660-MPD-44.

REFERENCES:

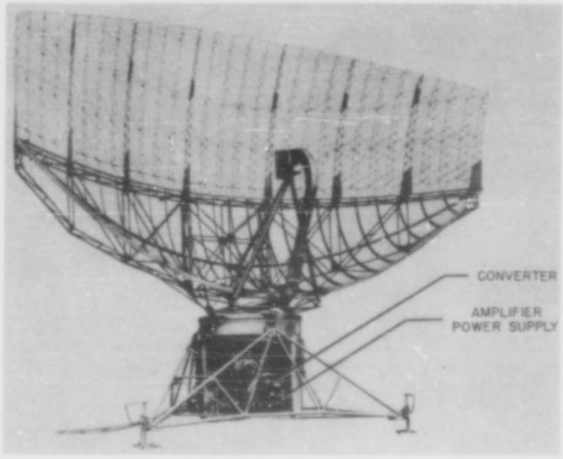
1) U.S. Air Force, Radar Set AN/CPS-5, Operating Instructions, TO 31P6-2CPS5-1, (May 3, 1946 - revised Aug. 31, 1957). UNCLASSIFIED.

2) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

3) U. S. Air Force, USAF Electronic Equipment Handbook, 54WC1194, No. 827, (Jan. 1954). SECRET.

4) U. S. Air Force, Fixed and Mobile Radar and Auxiliary Equipment Directory, TO 31P-1-17, (July 18, 1955 - revised Mar. 30, 1956). SECRET.

5) Bell Laboratories KS-10200.



AS-131/CPS-5

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ANTENNA KIT AS-134/TPX

MAJOR COMPONENTS: 1 Antenna Assembly AS-109()/TP, 1 Tower TR-29-(), 1 Remote Antenna Drive RM-55-() and 1 Transmit-Receive Box SA-43/TPX.

FREQUENCY: VHF band, 157-187 mc.

TYPE: Parasitic array with two folded dipoles and six reflector rods.

DESCRIPTION: The kit consists of a lightweight antenna array mounted on a portable, rotatable mast with provision for positioning the antenna from a remote location. It has a duplexing unit to permit transmitting and receiving by the same antenna elements.

The antenna assembly consists of two vertical folded dipoles 42 inches apart. Each dipole has three vertical reflector rods 39-3/8 inches long and spaced 8-3/4 inches apart. They are located in a plane which is 13-1/2 inches behind the associated dipole. The two dipoles are fed by two cables of RG-8/U which, in turn, are fed through a J section by a single cable of RG-8/U. The overall dimensions of the antenna are 5 feet wide by 3 feet high by 14 inches deep and the weight is 19 pounds.

BEAM DATA:

Half-power beamwidth - 50°.

Polarization - Vertical.

INSTALLATION: Ground, portable.

MISCELLANEOUS: The Navy version of this antenna is nomenclatured AS/330/TPX and is used with Navy BN/2 Equipment.

ASSOCIATED EQUIPMENT: Radar Set AN/TPX-4() and Radio Equipment RC-384-(). Equipment function-IFF.

COGNIZANT AGENCY: MSCPD.

MANUFACTURER: E. F. Caldwell, Inc., Contract W-28-004-sc-945 and Order 954-MPD-45.

REFERENCES:

1) Department of the Army, Ground Radar and Recognition Equipment, Directory of Signal Corps Equipments, TM 11-487C, (Jan. 1951). CONFIDENTIAL, MODIFIED HANDLING.

2) Signal Corps Specifications 371-2256.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-142/AP

FREQUENCY: HF, VHF, and UHF bands; 15 - 500 mc; VSWR < 5 on 50-ohm coaxial line.

TYPE: Loop.

DESCRIPTION: The antenna consists of a 6-foot length of RG-8/U cable with an insulated two-turn loop, 1/2-inch in diameter on one end with Plug PL-259 on the other end. The overall weight is 0.75 pounds.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Amplifier Alignment Unit TS-92/AP. Equipment function - test.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: Hudson American Corporation, procurement order No. 668-DAY-44.

STOCK NUMBERS: U. S. Navy R16A4988-500 and Federal Stock Number 6625-194-4824.

REFERENCES:

1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-145( )/SPT-6

FREQUENCY: UHF band, 625 - 1250 mc; VSWR < 2.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna consists of a corner reflector composed of 21 spaced rods approximately 19 inches long fed by an adjustable half-wave dipole. The dipole support includes a quarter-wave balun for matching 50-ohm coaxial cable. Nomenclature card states that the antenna is 23 inches long and 25 inches deep. The antenna may be positioned vertically, horizontally, or at 45°.

BEAM DATA:
Gain - 12 db.
Polarization - Vertical, horizontal, or 45°.

TUNING/MATCHING DEVICES: Dipole is adjustable to following element lengths: 3.25 inches for 650 - 750 mc, 3.0 inches for 750 - 850 mc, and 2.75 inches for frequencies above 850 mc.

INSTALLATION: Shipboard, ground, mobile or fixed.

ASSOCIATED EQUIPMENT: Radar Transmitters AN/SPT-6, AN/APT-2, and AN/APT-5. Equipment function - countermeasures, jamming.

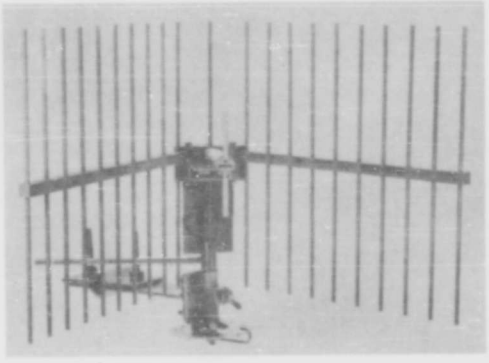
COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBERS: Signal Corps 2A264-145.

REFERENCES:

1) Andrew W. Alford, Antennas for RCM, 411-100. Cambridge, Massachusetts: Radio Research Laboratory, Harvard University, (November 1, 1944). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AS-145/SPT-6

ANTENNA AS-147/AP

FREQUENCY: UHF band, 400 - 430 mc; VSWR < 5 on 50-ohm coaxial line.

TYPE: Probe (Stub-type).

DESCRIPTION: The antenna consists of a quarter-wave stub 5-1/8 inches long mounted on one end of a cast aluminum handle. An indicator lamp and receptacle are mounted on the other end. The antenna body is 4-5/8 inches by 2-11/16 inches by 1-5/8 inches.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Set TS-184A/AP. Equipment function - test.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: Radio Corporation of America, Victor Division of RCA, procurement order No. 738-DAY-44.

STOCK NUMBERS: Signal Corps 3F4043-147 and Federal Stock Number 5985-220-9784.

REFERENCE:
Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

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ANTENNA ASSEMBLY AS-149/TRT-1

MAJOR COMPONENTS: 1 MS-49 antenna mast section, 1 MS-50 antenna mast section, 1 MS-51 antenna mast section, 1 MS-52 antenna mast section, 1 MP-37 mast base, and 1 MP-50 mast bracket.

FREQUENCY: HF and VHF bands, 29.5-32 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a four-section whip 13-1/2 feet long, and weighs 16 pounds.

BEAM DATA:
Beam type - Omnidirectional in azimuth plane.
Polarization - Vertical.

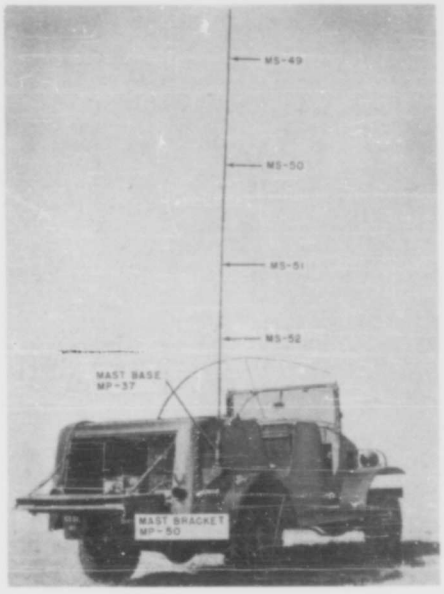
INSTALLATION: Ground, vehicular; Airborne; or Shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/TRT-1, Equipment function - remote control of AN/TRR-2 for detonating mines. Range - when used with AN/TRR-2 - up to 8 miles for ground location, 12 to 20 miles for shipboard location, up to 40 miles for airborne location (5,000 feet altitude).

COGNIZANT AGENCY: CESL.

STOCK NUMBER: Signal Corps 2A264-149.

REFERENCES:
1) Department of the Army, Radio Sets AN/TRT-1 and AN/TRR-2, Technical Manual, TM 11-269, (Oct. 1949). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.



AS-149/TRT-1

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ANTENNA ASSEMBLY AS-152( )/PRC-3

MAJOR COMPONENTS: 1 case (18-1/2 inches in diameter by 12-1/4 inches wide), 1 compass, 1 dipole, 1 reflector, and dipole feed lines.

FREQUENCY: UHF band, 2200-2400 mc.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The paraboloidal reflector is 18 inches in diameter by 3-1/4 inches deep.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-3(). Equipment function - communications.

COGNIZANT AGENCY: SCL-4437A.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-155( )/CRN-10

See AS-156( )/CRN-10.

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ANTENNA SYSTEM AS-156( )/CRN-10

MAJOR COMPONENTS: 8 AS-155/CRN-10 antenna assemblies (includes one spare), 7 antenna masts, 1 MT-289/CRN-10 mounting frame, 7 CG-525/U cable assemblies, 1 antenna tuning unit TN-71/CRN-10.

FREQUENCY: VHF band, 108.3-110.3 mc.

TYPE: Seven phased parasitic arrays each consisting of one folded dipole and one parasitic director.

DESCRIPTION: Each Antenna Assembly AS-155/CRN-10 consists of a folded dipole and a parasitic rod director. Both the dipole and director are bent at their midpoint to form "V"s with an angle of 60° between the sides of the "V"s.

The antenna system AS-156/CRN-10 consists of seven AS-155/CRN-10 mounted in a horizontal line on a common frame. Antenna Tuning Unit TN-71/CRN-10 feeds each antenna assembly R-F energy of such an amplitude and phase to produce the localizer radiation pattern. Overall dimensions of system are approximately 41 feet by 11 feet by 7 feet.

BEAM DATA: (see picture of radiation pattern) Polarization - Horizontal.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/CRN-10. Equipment function - transmitting localizer for approach control. Range - 40 miles at 2,500 feet, 60 miles at 6,000 feet, and 75 miles at 10,000 feet.

COGNIZANT AGENCY: ARL-3763, ARL-3764.

MANUFACTURER: Federal Telephone and Radio Corp. Order 734-DAY-44.

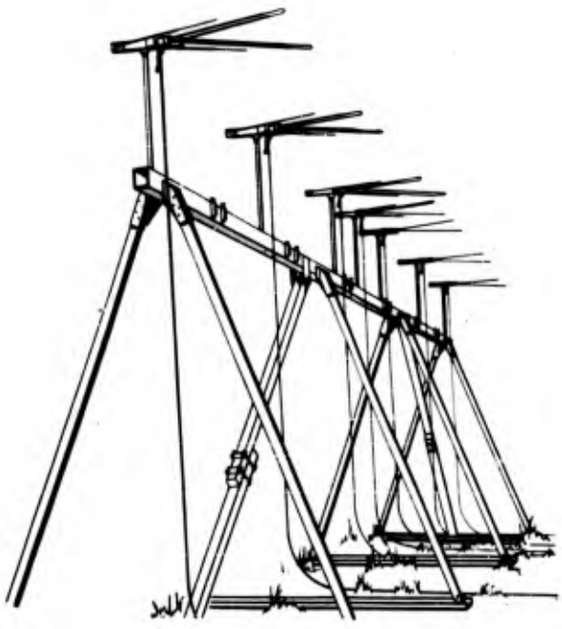
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REFERENCES:

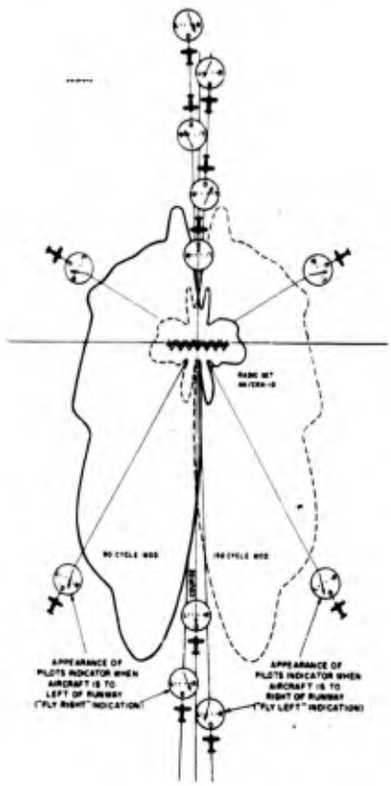
1) U. S. Air Force, Instrument Low Approach System (SCS-51) Facility, Standard Installation Instructions, TO 31R4-2-147, (Feb. 21, 1955). UNCLASSIFIED.

2) Government specifications 271-5050.

3) U. S. Department of Defense Nomenclature Card.



AS-156( )/CRN-10



Horizontal Radiation Pattern for AS-156( )/CRN-10

ANTENNA ASSEMBLY AS-157/CRA-1

FREQUENCY: VHF band, 100-156 mc.

TYPE: Adcock antenna.

DESCRIPTION: The antenna assembly consists of four spaced dipoles connected to form a crossed Adcock antenna. It includes an elec-

tronic balanced modulator at the center point and a central quarter-wave stub as a sense antenna. It is fed by a 72-ohm coaxial feed line.

INSTALLATION: Ground, air-transportable.

ASSOCIATED EQUIPMENT: Direction Finding Assembly AN/CRA-1 used to modify Direction Finders SCR-534, -564, -565, -566, -575, and -645, Equipment function - direction finding.

COGNIZANT AGENCY: WL-45-C203, WL-45-1941.

MANUFACTURER: Federal Telecommunications Laboratories, Contract W-28-099-ac-3.

REFERENCES:
1) U. S. Air Force, Electronic Equipment Handbook, 54WC11-494, (Jan. 1954). SECRET.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA: AS-158/APA-24

See Antenna Assembly AS/APA-24(*).

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ANTENNA AS-159/AP

FREQUENCY: UHF band, 2400-2700 mc; VSWR < 5 on 50-ohm coaxial line.

TYPE: Dipole.

DESCRIPTION: The antenna is a half-wave dipole connected to a 24-inch length of RG-9/U cable which terminates in a UG-26/U r-f connector. It is equipped with a bracket having a rubber suction cup 1-1/2 inches in diameter at each end. The overall width is 4-1/2 inches, and the overall length is 27-7/8 inches. The assembly weighs 0.50 pounds.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Set TS-110/AP. Equipment function - test.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: Western Electric Company, procurement order No. 2189-ARL-44.

STOCK NUMBERS: U. S. Navy R16AN-AS159AP and Federal Stock Number 5985-220-9788.

REFERENCE:
Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

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ANTENNA ASSEMBLY AS-160/TPN-2

FREQUENCY: VHF band, 214-234 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a quarter-wave aluminum rod, approximately 12 inches long by 1/4 inch in diameter, and a ground plane made of four rods, each 12 inches long by 3/16 inch in diameter. It is mounted on a 21-foot mast which has a tripod base. The antenna and mast are made of aluminum. The antenna is fed by coaxial cable.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, air-transportable.

ASSOCIATED EQUIPMENT: Beacon Transmitter-Receiver AN/TPN-2(), Equipment Function - IFF and navigation, direction finding; Range - 90 miles.

MISCELLANEOUS: The beacon is used by parachute supply missions to provide a homing signal for supply aircraft.

COGNIZANT AGENCY: CESL-1954.

MANUFACTURER: Fada Radio and Electric Co., Contract W-28-004-sc-208, Order 884-MPD-44.

STOCK NUMBER: Sig. C. 2A264-160, A.F. 1800-202152460.

REFERENCES:
1) U. S. Air Force, Beacon Transmitter Receiver AN/TPN-2, Spare Parts List, TO 16-55-306, (Mar. 25, 1948 - revised Dec. 9, 1949) UNCLASSIFIED.
2) U. S. Air Force, Electronic Equipment Handbook, 54WC11-494, (Jan. 1954). SECRET.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA KIT AS-169/GR

MAJOR COMPONENTS: 1 AT-71/GR loop, 1 AT-72/GR or 1 AT-69/GR loop, 1 AT-73/GR loop, 1 AT-74/GR loop, and 1 CY-243/GR case.

FREQUENCY: LF and MF bands, 0.075 - 0.15 mc. for AT-71/GR, 0.15 - 0.30 mc. for AT-69/GR and AT-72/GR, 0.30 - 0.60 mc. for AT-73/GR, 0.60 - 1.20 mc. for AT-74/GR.

TYPE: Loop antenna.

DESCRIPTION: The antenna kit consists of four interchangeable loop antennas, each made of several turns of copper wire wholly enclosed in a molded polystyrene annular shell which is approximately 9 inches outside diameter by 1-1/2 inches diameter of cross section. The two ends of the winding are brought out to annular slip rings at the base of the loop. The slip rings are of silver andare mounted on an insulating plastic base which is centered in a collar of silver-plated brass. The collar carries a loose handnut threaded to screw onto the sleeve of the loop rotating mechanism of Control Box C-117()/GR. AT-71/GR has 250 turns of copper wire; AT-72/GR, 132 turns; AT-73/GR, 64 turns and AT-74/GR, 32 turns. Each loop antenna has a stud at the top for attaching Antenna AN-45-H. The stud connects to a shielded lead which runs down through the center of the loop and terminates at the center of the inner slip ring. Case CY-243/GR is included for storing the loops when they are not in use.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Receiver BC-312-() and similar receivers, Equipment function - countermeasures, direction finding.

MISCELLANEOUS: AT-73/GR replaces AT-25/GR and AT-74/GR replaces AT-26/GR.

COGNIZANT AGENCY: MPD, SCL.

MANUFACTURER: Harvey Wells, Order 2117-MPD-45.

STOCK NUMBERS: Signal Corps 2A1575-169 for AS-169/GR, 2A1990-71 for AT-71/GR, 2A1990-72 for AT-72/GR, 2A1990-73 for AT-73/GR, 2A1990-74 for AT-74/GR, and 2A1990-69 for AT-69/GR.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-170( )/VRC-4

TYPE: Whip.

DESCRIPTION: The antenna assembly consists of two sections of steel tubing, approximately 90 inches long, a spring base with insulator, a lanyard, and a strain insulator. It has a weight of 10 pounds.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-4, Equipment function - communication.

MISCELLANEOUS: Radio Set AN/VRC-4 is probably considered obsolete by the Air Force.

COGNIZANT AGENCY: PEA, SPSLP-28.

MANUFACTURER: Fisher Research Laboratory, Order 24351-Phila-43.

STOCK NUMBERS: Signal Corps 2A264-170 and Federal Stock Number 5820-284-9507.

REFERENCES:
1) Fisher Research Laboratory Model 21.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-171( )/UP

FREQUENCY: SHF band, receiving section - 3267 - 3333 mc, transmitting section - 3256 mc.

TYPE: Two stacked arrays of dipoles.

DESCRIPTION: The antenna has separate receiver and transmitter sections. The receiver section is mounted on top of the transmitter section. Each section is composed of six stacked tri-dipole elements. A tri-dipole is formed by connecting 3 bent dipoles in the form of a loop, and its radiation pattern is essentially that of a loop antenna. These elements are fed with probes which are capacitively coupled to the coaxial feed line by passing them through holes in the outer conductor. The inner conductor of the lower section of the antenna is the outer conductor of the upper section, so that the feed line at the bottom of the antenna is made up of three concentric cylinders instead of the usual two. The antenna is enclosed in a pressurized lucite cylinder with end seals of rubber grommets. It is mounted on tripod stand AB-49/UP. Overall dimensions are 34-1/2 inches long by 3 inches outside diameter, and the weight is 17 pounds.

BEAM DATA:
Gain - 5.5 db.
Half-power beamwidth - Vertical - 20°.
Beam type - Omnidirectional in the horizon-

tal plane, tilted at +1° in the vertical plane.
Polarization - Horizontal.

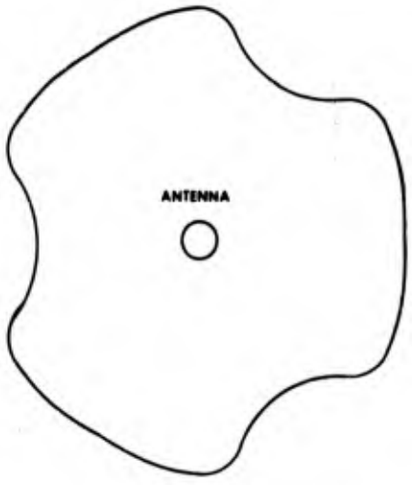
INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radar Beacons AN/UPN-1 and AN/UPN-2. Equipment function - IFF and navigation, surface reference.

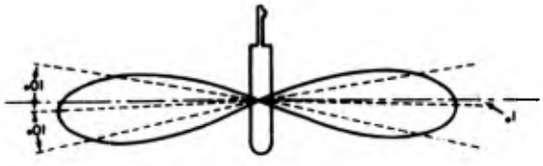
MISCELLANEOUS: This antenna is supplied in three models by the Hallicrafter Company. The models differ only in the frequency band covered. The bands covered are S_A (normally furnished with AN/UPN-1), S_G, and S_S.

COGNIZANT AGENCY: ARL-3888.

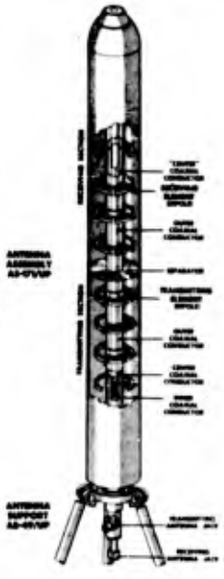
MANUFACTURER: The Hallicrafter Company, order 1242-DAY-44.



AS-171/UP Theoretical Horizontal Radiation Pattern



AS-171/UP Theoretical Vertical Radiation Pattern



AS-171/UP

REFERENCES:
1) Antenna Catalog, Report No. 1330. Cambridge, Massachusetts: Radiation Laboratory, Massachusetts Institute of Techno logy, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

2) U. S. War and Navy Departments and the Air Council of the United Kingdom, Radar Beacon AN/UPN-1, Handbook of Maintenance Instructions, T.O. 31P5-2UPN1-2, (July 1, 1945). UNCLASSIFIED.

3) U. S. War and Navy Departments and the Air Council of the United Kingdom, Radar Beacon AN/UPN-2, Handbook of Operating Instructions, AN 08-30UPN2-2, (Nov. 9, 1944 - revised April 20, 1945). UNCLASSIFIED.

4) Hallicrafters 57D001 (S_A band).

5) Hallicrafters 57D002 (S_G band).

6) Hallicrafters 57D003 (S_S band).

ANTENNA ASSEMBLY AS-173/MPG-1

MAJOR COMPONENTS: 1 reflector, 1 Schwarzschild feed, and 1 four-way waveguide rotary switch with feed arms.

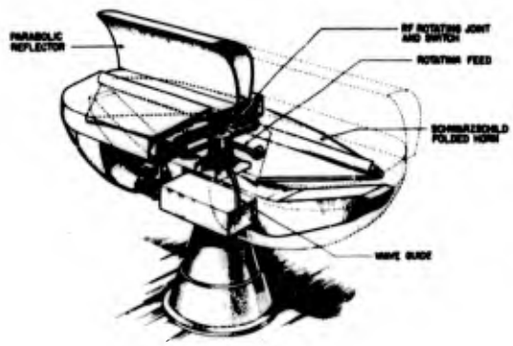
FREQUENCY: SHF band, 9375 mc.

TYPE: Parabolic-cylinder reflector with Schwarzschild feed.

DESCRIPTION: The reflector is a parabolic cylinder curved in the vertical plane. It is 2 feet high by 12 feet long and has a focal length of 1 foot.

The feed, which is analogous with the Schwarzschild telescope, consists of parallel-plate waveguide with appropriate bends to give a cylindrical output wave when fed by a small waveguide horn. The feed is equivalent to a cylindrical lens. Waveguide horns, which are on the ends of the arms of the four-way waveguide rotary switch, feed the system.

BEAM DATA:
Gain - 40.8 db.
Half-power beamwidth - Vertical - 3°
Horizontal - 0.6°
Beam type - Fan.
Polarization - Vertical.



AS-173/MPG-1

SCAN DATA: Antenna scans any 10° sector in azimuth at a rate of 16 scans per second.

TUNING/MATCHING DEVICES: An adjustable tuner is provided so that the antenna system will have a VSWR of less than 1.69 over a 6% band.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets SCR-598, AN/FPG-1, AN/MPG-1, and AN/TPG-1, Equipment function - Fire control for use against motor torpedo boats.

MISCELLANEOUS: Antenna Assembly AS-173/MPG-1 has been replaced by Antenna Assembly AS-344/MPG-1.

COGNIZANT AGENCY: CESL-2038.

MANUFACTURER: Bendix Radio, Order 2612-MPD-44.

REFERENCES:
1) Antenna Catalog, Report No. 1330. Cambridge, Massachusetts: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-175( )/TPS-3

FREQUENCY: Additional information is available in the secret document listed below as Reference 1.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a paraboloidal reflector designed for use with AS-202( )/TPS-3 feed. The reflector is constructed of aluminum tubing covered with wire mesh. The nomenclature card states a dipole feed is included, but the modification kit implementing the AS-175( )/TPS-3 does not include a feed. The reflector is 10 feet in diameter.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1.

SCAN DATA: Additional information is available in the secret document listed below as Reference 1.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-3. Equipment function - search, air.

MISCELLANEOUS: AS-175( )/TPS-3 is part of MX-371/TPS-3 modification kit used with AS-202( )/TPS-3 antenna feed. It replaces the reflector used with AS-74( )/TPS-3 antenna assembly.

COGNIZANT AGENCY: CESL-2115.

MANUFACTURER: Zenith Radio Corporation, procurement contract orders 593-MPD-43 and 602-MPD-44.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-176( )/UPX

FREQUENCY: Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

TYPE: Dipole array with rectangular reflector.

DESCRIPTION: Antenna assembly consists of two in-phase sets (two dipoles each) of vertically polarized end-to-end dipoles, with a common feed. The sets are mounted on opposite sides of a common rectangular reflector. The re-

flector is hollow so that it can contain the transmission lines.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground and shipboard.

ASSOCIATED EQUIPMENT: Radar Sets AN/SPX-1 and AN/SPX-2, Radar Beacon AN/UPN-5, and Beacon Transmitter Receiver AN/TPN-4, Equipment function - IFF.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: Sig. C. 2A264-176.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-178( )/TMR

FREQUENCY: VHF band, 72 mc.

TYPE: Stub sleeve antenna.

DESCRIPTION: The antenna consists of a quarter-wavelength rod and a quarter-wavelength skirt. A 200-foot length of RG-11/U cable is connected at the base of the antenna and a plug, PL-259, is connected to the other end. The antenna and spares are contained in a weatherproof carrying case approximately 92 inches long by 9 inches wide by 11 inches deep. The total weight is approximately 75 pounds.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radiosonde Receptor AN/TMR-1( ), Equipment function - meteorological measurement.

COGNIZANT AGENCY: SPSAR-7.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-184(*)/TPS-10

MAJOR COMPONENTS: 1 parabolic reflector and 1 flared waveguide horn.

FREQUENCY: SHF band, 9375 mc.

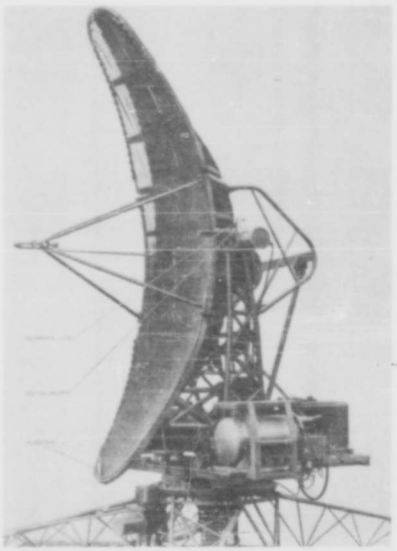
TYPE: Elliptical cut paraboloidal reflector with a horn feed.

DESCRIPTION: The reflector is a cut paraboloid of elliptical form, 10 feet high and 3 feet wide with a focal length of 36.8 inches. It has a framework of 1/16-inch steel ribs spaced 14 inches apart. The outside edge of the reflector is framed with a 3/32-inch strip of 1/4- by 1/4-inch angle iron. To this strip, 1/4-inch steel tubes, spaced 1/2 inch apart, are fastened along the longer dimension of the reflector.

The feed is a flared waveguide horn. In the H-plane, it has an aperture of 2.5 inches and a 60° flare angle; in the E-plane, an aperture of 0.65 inches and a 10° flare angle.

The antenna weighs approximately 100 pounds.

BEAM DATA:
Gain - 42.3 db.
Half-power beamwidth -
Vertical - 0.7°.
Horizontal - 2.2°.
Side lobe attenuation -
Vertical - at least 22 db.
Horizontal - at least 20 db.
Beam type - Beavertail.
Polarization - Vertical.



AS-184/TPS-10&( )

SCAN DATA:
Search mode - Antenna mechanically scans a 30° sector in elevation at a rate of 60 scans per minute while turning through 360° in azimuth at a rate of 1/3 revolution per minute. Sector-scan mode - Antenna mechanically scans a 30° sector in elevation at a rate of 60 scans per minute. Azimuth position is manually adjustable through 360°.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-10(). Equipment function - fire control, search, and air and height finding.

MISCELLANEOUS: AS-184/TPS-10 and AS-184A/TPS-10 are interchangeable except for parts.

COGNIZANT AGENCY: CESL-2182.

MANUFACTURERS: Radiation Laboratories (MIT) order 199-MPD-45, and Zenith Radio Corporation order 5000-DAY-45-GR.

STOCK NUMBER: Signal Corps 2A264-184().

REFERENCES:

1) Antenna Catalog, Report No. 1330. Cambridge, Massachusetts: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

2) V. G. Bruce, et al., Radar Scanners and Radomes, Cambridge, Massachusetts: Massachusetts Institute of Technology Radiation Laboratory. (1948). UNCLASSIFIED.

3) U. S. Air Force, Radar Sets AN/TPS-10 & AN/TPS-10A, Handbook of Operating Instructions, T.O. 31P3-2TPS10-1, (Nov. 15, 1946). UNCLASSIFIED.

4) C. S. Pao, Electrical Design of the AN/TPS-10 Antenna, Report No. 648. Cambridge, Massachusetts: Radiation Laboratory Massachusetts Institute of Technology. (Dec. 28, 1944). ASTIA Report No. ATI-13867. UNCLASSIFIED.

ANTENNA AS-202( )/TPS-3

FREQUENCY: Additional information is available in the secret and confidential documents listed below as References 1 and 2.

TYPE: Dipole array.

DESCRIPTION: The antenna consists of a multiple-dipole feed for use with a paraboloidal reflector. Three 2-element dipole arrays are attached to a common mount. Presumably the arrays are stacked vertically and are 1/8 wavelength apart. Elements of each array are spaced 1/4 wavelength. Means are included for changing the excitation from either the center dipole array or the two outside arrays. Switching the excitation changes the angle of elevation of the lobe.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1.

SCAN DATA: Additional information is available in the secret document listed below as Reference 1.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-3. Equipment function - search, air.

MISCELLANEOUS: AS-202()/TPS-3 is part of MX-348/TPS-3 modification kit used with AS-175()/TPS-3 reflector. It replaces the dipole feed used with AS-74()/TPS-3 antenna assembly.

COGNIZANT AGENCY: CESL-2291.

MANUFACTURERS: Zenith Radio Corporation, procurement order 593-MPD-43.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) Department of the Army, Ground Radar and Recognition Equipment, Directory of Signal Corps Equipments, TM-11-487C, (Jan. 1951). CONFIDENTIAL, MODIFIED HANDLING.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-203/VRC

MAJOR COMPONENTS: 2 MS-49 mast sections (includes 1 spare), 2 MS-50 mast sections (includes 1 spare), 2 MS-51 mast sections (includes 1 spare), 2 MS-52 mast sections (includes 1 spare), 2 MS-53 mast sections (includes 1 spare), 1 MP-57 mast base, 1 BG-67 cover, and 1 BG-56A roll.

FREQUENCY: MF and HF bands, 1.5-18 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a sectional whip approximately 15-1/2 feet long with canvas roll, canvas cover, mounting base and brackets.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set SCR-193 which is the HF section of Radio Set AN/VRC-1, Equipment function - communication, Range - up to 60 miles depending on type of transmission.

MISCELLANEOUS: Antenna Assembly AS-203/VRC is the same as Navy Model 66086 except that the Navy model does not use Mast Base MP-57.

COGNIZANT AGENCY: U. S. Marine Corps.

STOCK NUMBERS: Signal Corps 2A264-203 and Federal Stock Number 5820-548-8781.

REFERENCES:
1) War Department, Radio Set AN/VRC-1, Technical Manual, TM 11-277, (June 17, 1944). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-204/CRD-3

MAJOR COMPONENTS: 1 AB-65/CRD-3 mast section, 1 AB-66/CRD-3 mast section, 1 AB-67/CRD-3 mast section, 1 AB-68/CRD-3 mast section, 1 AB-69/CRD-3 mast section, 1 AB-70/CRD-3 mast section, 3 MS-54 mast sections, 1 AB-57/CRD-3 mast base, and necessary guys and stakes.

FREQUENCY: LF and MF band, 0.25-1.5 mc.

TYPE: Monopole, Adcock.

DESCRIPTION: Antenna AS-204/CRD is a monopole approximately 70 feet high. Four of these monopoles are usually used to make up two U-type Adcock antennas. The two Adcock antennas are mounted at right angles so that the diagonal spacing between monopoles is 180 feet. The two antennas are to be connected to a two-section receiver.

BEAM DATA:
Beam Type - When the monopoles are used as planned (as two crossed Adcock antennas), each Adcock antenna has a figure-of-eight pattern.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/CRD-3, Equipment function - direction finding.

MISCELLANEOUS: Radio Set AN/CRD-3, of which AS-204/CRD-3 is a part, is considered obsolete and has been replaced by Radio Set AN/TRD-3 which uses AS-595/GRD.

COGNIZANT AGENCY: SCL, Evans Laboratories.

MANUFACTURER: Federal Telephone and Radio Co., Order 1905-MPD-45.

STOCK NUMBER: Sig. C. 2A264-204.

REFERENCES:
1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-208/TPS-9

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector may be collapsed like an umbrella for easy transportion. It is 10 feet in diameter when opened and 89 inches by 18 inches when collapsed. Total weight is 72 pounds.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TPS-9.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Westinghouse Electric Co., Contract NXsr-42145.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-2100/CPX

MAJOR COMPONENTS: 5 dipoles, 1 reflector screen, screened separators, and 1 lobe switch.

FREQUENCY: Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

TYPE: Broadside array of dipoles.

DESCRIPTION: A lobe-switched antenna consist-

ing of five center-fed dipoles located one quarter-wave length in front of a reflecting screen, 18 feet wide by 4 feet high. There are screened separators, 4 feed wide by 26 inches high, installed perpendicular to the reflecting screen on either side of each dipole. A feed system consisting of transformers, coaxial cables and a lobe switch is mounted on the back of the antenna. Antenna is all metal and weighs about 175 pounds.

BEAM DATA:
Half-power beamwidth - Horizontal - 22°.
Side-lobe attenuation - at least 10 db.
Polarization - Vertical.

SCAN DATA: Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

INSTALLATION: Ground, air-transportable.

ASSOCIATED EQUIPMENT: Radar Sets AN/CPS-1() and AN/CPX-2(); Equipment function - additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

COGNIZANT AGENCY: CESL-2302.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA SYSTEM AS-212(*)/CPS-4

MAJOR COMPONENTS: 1 parabolic reflector, 1 waveguide horn, and waveguide feed system.

FREQUENCY: UHF band, 2700-2900 mc.

TYPE: Elliptical cut paraboloidal reflector with a horn feed.

DESCRIPTION: The reflector is a paraboloid of elliptical form, 20 feet high and 5 feet wide with a focal length of 5 feet. The feed is a flared waveguide horn. The antenna with the associated pedestal weighs 5200 pounds.

BEAM DATA:
Gain - 35.5 db.
Half-power beamwidth - Vertical - 1.3°
Horizontal - 4.7°
Beam type - Beavertail.
Polarization - Vertical.

SCAN DATA: The antenna can be rotated 360° in azimuth. It mechanically scans an elevation sector from -2° to +32° at a rate of 30 scans per minute.

INSTALLATION: Ground, air transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/CPS-4, Equipment function - height finding and fire control.

MISCELLANEOUS: This description includes model AS-212A/CPS-4. AS-212/CPS-4 is similar to AS-184/TPS-10, but is designed for a different frequency range. They are not interchangeable.

COGNIZANT AGENCY: CESL-2322, WL-51-1714.

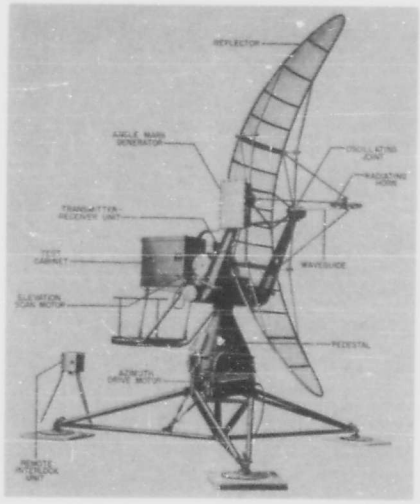
MANUFACTURER: General Electric Co., Order 944-MPD-44; Christensen, Contract AF33(038)-11397.

STOCK NUMBER: Federal Stock Number 5840-149-1455.

REFERENCES:
1) U. S. Air Force, Radar Set AN/CPS-4, Operating Instructions, TO 31P3-2CPS4-1, (May 26, 1945 - revised May 1, 1953). UNCLASSIFIED.

2) U. S. Air Force, Radar Set AN/CPS-4, Maintenance Instructions, TO 31P3-2CPS4-2, (May 26, 1945 - revised May 1, 1953). UNCLASSIFIED.

3) John E. Cruichshank and Reuben O. Schlegelmilch, Ground Radar Sets, Systems and Related Components, RADC 52-22. Rome, New York: Rome Air Development Center, (Nov. 1, 1952). AD-128. SECRET.



AS-212/CPS-4.

4) C. S. Pao, The Beavertail (AN/CPS-4) Antenna, Report No. 1027. Cambridge Massachusetts: Radiation Laboratory, (Apr. 9, 1946). ASTIA Report No. A.T.I. 6084. UNCLASSIFIED.

5) General Electric Co. drawing number ML-7351821G1.

6) U. S. Air Force Specifications WLENG-1165.

7) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-213()/TRC-5

FREQUENCY: UHF band, 1350-1850 mc.

TYPE: Paraboloidal reflector fed by two dipoles and a disc reflector.

DESCRIPTION: The parabolic reflector, which is constructed of steel mesh, is made up of four sections. The overall diameter is 5 feet. The antenna is rotatable and mounts on a 50-foot mast.

The feed consists of two dipoles with disc reflector mounted near the focal point of the parabolic reflector. The dipoles are fed by a 50-ohm coaxial cable.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-5(), AN/TRC-26(), and AN/TRQ-3(), Equipment function - communications.

COGNIZANT AGENCY: SCL-7732.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-216/AP

FREQUENCY: UHF band, 1000 - 3000 mc; VSWR < 5 on 50-ohm coaxial line.

TYPE: Conical.

DESCRIPTION: This is a double-cone-type antenna consisting of an inverted cone surmounted by an upright cone (i.e., inverted and upright cones have a common base). The double-cone radiating element is mounted on a metal box approximately 4-3/8 inches by 6-1/8 inches by 6 inches. The box is provided with a handle. The approximate overall dimensions are 6-1/8 inches by 6 inches by 8 inches.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Oscillator TS-252/AP. Equipment function - test.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: Procurement plan No. 45-133.

STOCK NUMBERS: Signal Corps 2A264-216.

REFERENCE:
Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

ANTENNA ASSEMBLY AS-218/CPS-6&()

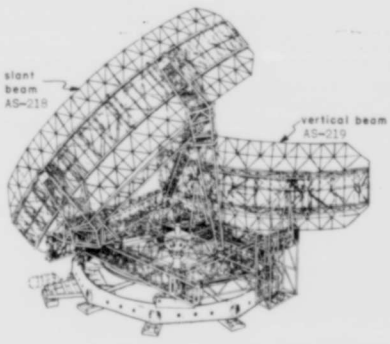
MAJOR COMPONENTS: Antenna Assembly AS-218/CPS-6&() and Antenna Mount AB-79()/CPS-6.

FREQUENCY: UHF and SHF bands, 2703-3064 mc, VSWR less than 1.12.

TYPE: Cut paraboloidal reflector.

DESCRIPTION: The reflector, measuring 10 feet high by 25 feet wide, is mounted with its axis horizontal on Antenna Mount AB-79()/CPS-6. This reflector is fed by three feeds in such a manner as to produce a composite vertical $\csc^2$-type beam consisting of three overlapping vertical beams.

The lower and center vertical beams are each fed by their respective waveguide horns, and the upper vertical beam is fed by an eight-dipole array. All three feeds are lo-



AS-218/CPS-6 and AS-219/CPS-6

cated near the focal point of the reflector and are adjustable to control the relative position of their respective beams. The half-power beamwidths of the individual beams are as follows: lower beam - 2-1/4°, middle beam - 4-3/4°, upper beam - 21°.

BEAM DATA:
Half-power beamwidth - Horizontal - 0.9°.
Beam type - csc^2 from 7° to 30°.
Polarization - Vertical.

SCAN DATA: 360° mechanical azimuth rotation at 6 rpm.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/CPS-6(), Equipment function - air search, and height finding when used with Antenna System AS-219/CPS-6&() to produce a V-beam.

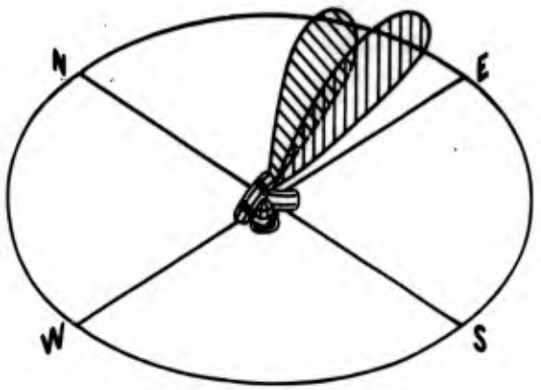
MISCELLANEOUS: Usually used with AS-219/CPS-6&().

COGNIZANT AGENCY: CESL-2404.

MANUFACTURERS: Radiation Laboratory 704-MPD-45, General Electric Co.

REFERENCES:
1) Antenna Catalog, Report No. 1330. Cambridge, Massachusetts: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

2) John S. Hall, Radar Aids To Navigation. Cambridge, Mass.: Massachusetts Institute of Technology Radiation Laboratory. (1947). UNCLASSIFIED.



Typical Radiation Patterns, AS-218/CPS-6&() and AS-219/CPS-6&().

ANTENNA ASSEMBLY AS-219/CPS-6&()

MAJOR COMPONENTS: Antenna Assembly AS-219/CPS-6&() and Antenna Mount AB-79()/CPS-6.

FREQUENCY: UHF band, 2694-2893 mc, VSWR less than 1.12.

TYPE: Cut paraboloidal reflector fed by dipoles and a horn.

DESCRIPTION: The reflector, measures 10 feet high by 32 feet wide. It is mounted so that the long dimension makes an angle of 45 degrees with the horizontal. The axis still points to the horizon. The reflector mounts on Antenna Mount AB-79()/CPS-6. This reflector is fed in such a manner as to produce a composite slanted csc^2-type beam consisting of two overlapping slanted beams.

The lower beam is fed by a horn and the upper beam is fed by a 6-element dipole array. Both feeds are located near the focal point of the slant-beam reflector and are constructed so that their respective beams may be adjusted in space. The half-power beamwidths of the individual beams are 7° for the lower beam and 18° for the upper beam.

BEAM DATA:
Half-power beamwidth - Horizontal - 0.7°.
Beam type - Csc^2 from 7° to 30°.
Polarization - Vertical.

SCAN DATA: 360° mechanical azimuth rotation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/CPS-6(), Equipment function - height finding when used with AS-218/CPS-6&().

MISCELLANEOUS: Usually used with AS-218/CPS-6&(). See A-218/CPS-6 for illustration of antenna.

COGNIZANT AGENCY: CESL 2405.

MANUFACTURERS: Radiation Laboratory 704-MPD-45, General Electric Co.

REFERENCES:
1) Antenna Catalog, Report No. 1330. Cambridge, Massachusetts: Radiation Laboratory, Massachusetts Institute of Technology, (Oct. 8, 1945). MIT 45-10. UNCLASSIFIED.

2) Radiation Laboratory Series, Vol. 26.

ANTENNA ASSEMBLY AS-221/CPN-17

FREQUENCY: S-band. Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

TYPE: Stacked array of dipoles.

DESCRIPTION: Antenna is a stacked dipole array enclosed in a weatherproof pressurized housing. There are 3 bays of radiating elements, each of which is probably several bent dipoles mounted to form a ring or loop and fed in phase. It mounts on either Mast Assembly AB-90/CPN-17 (ground) or Yardarm Antenna Mounting AB-112/CPN-17 (ship).

BEAM DATA:
Gain - Additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.
Half-power beamwidth - Vertical - 30° to 40°.
Beam type - Omnidirectional in horizontal plane.
Polarization - Horizontal.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radar Beacon AN/CPN-17. Equipment function - additional information is available in the secret document listed below as Reference 1 and in Volume VI of this catalog series.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Galvin Manufacturing Co., Contract NXsr-53341.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-223()/GMQ-5

MAJOR COMPONENTS: 12 AT-85/GMQ-5 antennas and a mounting structure of aluminum tubing.

FREQUENCY: VHF band, 111 mc.

TYPE: Parasitic array of three driven dipoles and three parasitic reflecting rods.

DESCRIPTION: Antenna AT-85/GMQ-5 is a quarter-wave stub. These stubs are used in pairs to form the driven dipoles and the rod reflectors of Antenna Assembly AS-223()/GMQ. The three excited dipoles and three parasitic rods are attached to a structure of aluminum tubing arranged normal to the vertical mast. The array connects to the radio receiver by a 70-ohm coaxial line. (Dipole and reflector spacing and orientation not available).

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Wind Sounding Set AN/GMQ-5, Equipment function - meteorological measurement.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Link, Contract NXsr-51572.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-235()/UPN-4

FREQUENCY: SHF band, X-band. Additional information is available in the secret document listed below as Reference 1.

TYPE: Stacked Array of slots.

DESCRIPTION: The antenna has separate receiving and transmitting sections mounted one above the other. Each section consists of 10 sets of vertical half-wave slots cut in a rigid cylindrical transmission line. A pin extends into the transmission line beside each slot. The sets of slots are vertically spaced a half-wave length apart with phase reversal on alternate rows. The antenna is enclosed in a cylindrical pressurized housing. It has two standard waveguide connections at the base of the antenna, one for the transmitter and one for the receiver. The overall height is approximately 24 inches and the weight is 3-1/2 pounds.

BEAM DATA:
Gain - 10 db.
Half-power beamwidth - Vertical - 10°.
Beam type - Omnidirectional in horizontal plane.
Polarization - Horizontal.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radar Beacon AN/UPN-4, Equipment function - navigation, ground reference, Range - 30 to 50 nautical miles with AN/APN-10.

COGNIZANT AGENCY: ARL-4279.

MANUFACTURER: Gilfillan Bros., Inc., Order 741-DAY-45.

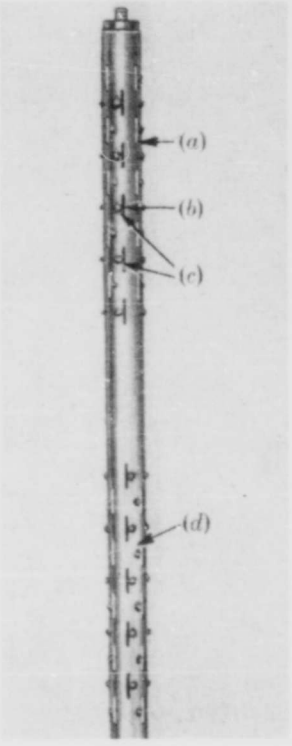
STOCK NUMBER: Federal Stock Number 5895-038-1556B.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) Army Air Forces and Bureau of Aeronautics, Radar Beacon AN/UPN-4, Operating Instructions, AN 16-30UPN4-2, (June 14, 1946). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.



AS-235()/UPN-4
(By permission from Radiation Beacons, by Arthur Roberts. Copyright, 1947. McGraw-Hill Book Co., Inc.)

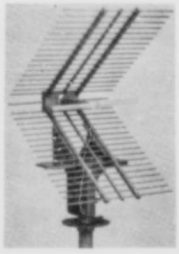
ANTENNA ASSEMBLY AS-236(*)/SPT

FREQUENCY: UHF band, 350-1500 mc, VSWR less than 2 on a 50-ohm line.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The AS-236(*)/SPT is a broad-band, medium-gain transmitting or receiving antenna. It consists of a half-wave, adjustable dipole connected to a balun and mounted in a 75-degree, fixed-angle corner reflector. Two adjustable dipole-balun assemblies are used to cover the frequency range of the antenna, but only one is used at any one time. The antenna assembly mounts on a support shaft which is 53 inches high. This mount allows the antenna to be oriented horizontally, vertically, or at an intermediate position and also allows the assembly to be rotated to any position in azimuth. The dimensions of each side of the reflector are 18 by 20 inches. The reflector consists of a number of rods which lie in planes parallel to the plane of the dipole. The maximum length of the low-frequency dipole is 15-3/4 inches and the maximum length of the high-frequency dipole is 5 inches. The dipoles are fed by 50-ohm coaxial cable. The total weight of the assembly, including support shaft, is approximately 85 pounds.

BEAM DATA:
Gain - 10 db.
Half-power beamwidth - Plane parallel to dipole - 30° to 80°. Plane perpendicular to dipole - 30° to 60°.



AS-236(*)/SPT

Polarization - Horizontal, vertical, or diagonal (45°) according to antenna orientation.

SCAN DATA: Does not scan, but can be manually positioned to any azimuth angle.

TUNING/MATCHING DEVICES: Dipole length is adjustable.

INSTALLATION: Ground or shipboard, fixed or mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/SPT-6() and AN/SPT-7(), Equipment function - countermeasures, jamming.

MISCELLANEOUS: AS-236(*)/SPT denotes models AS-236()/SPT and AS-236/SPT. No data is available on differences, if any, between models.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Marine Radio Company, Navy Contract NXsr-65335.

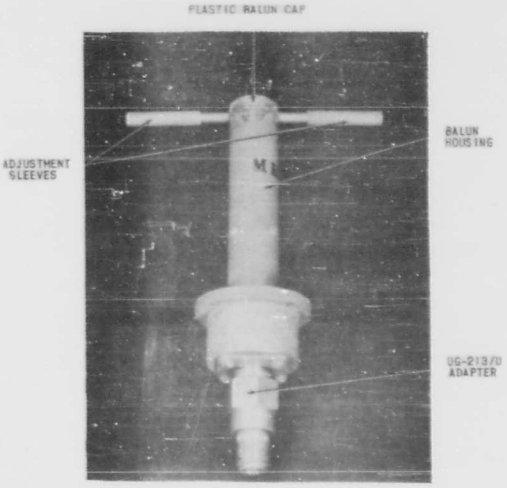
STOCK NUMBER: Federal Stock Number, N5985-369-5393.

REFERENCES:

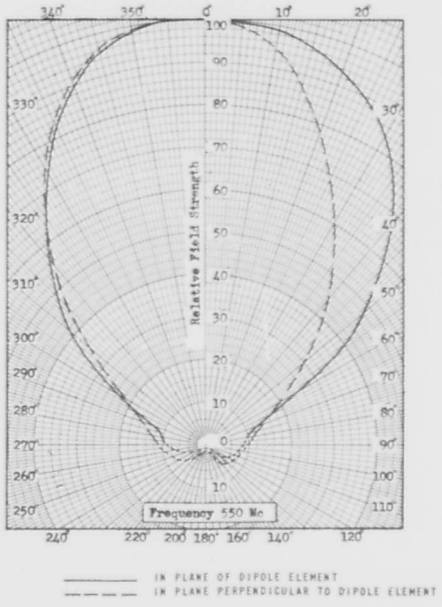
1) Preliminary Handbook of Maintenance Instructions for the F4700 Antenna (AS-236/SPT), Report No. 411-1B-85. Cambridge, Massachusetts: Radio Research Laboratory, Harvard University, (Aug. 7, 1945). UNCLASSIFIED.

2) Andrew W. Alford, Antennas for RCM, Report No. 411-100A. Cambridge, Massachusetts: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

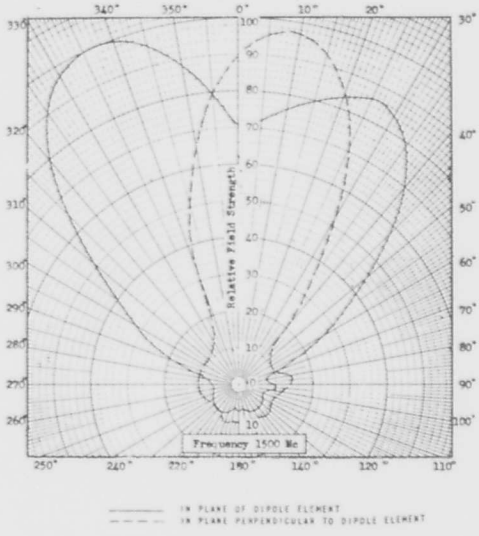
3) U. S. Department of Defense Nomenclature Card.



AS-236(*)/SPT Feed.



AS-236(*)/SPT Field Pattern at 550 mc, Low Frequency Dipole.



AS-236(*)/SPT Field Pattern at 1500 mc, High Frequency Dipole.

ANTENNA ASSEMBLY AS-239/TPQ-1

This antenna is the same as AS-57/SPR-1 except that the mounting has been modified to fit the crossarm of Mast Assembly AB-58()/TPQ-1. It is part of Radar Search Central AN/TPQ-1. See AS-57/SPR-1.

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MANUFACTURER: General Electric Co., Order 428-DAY-45-RA.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-243()/CRN-4A

TYPE: Top-loaded rod antenna.

DESCRIPTION: The antenna consists of a 25-foot telescopic aluminum mast mounted on a support insulator with three antenna wires approximately 35 feet long attached at the top of the mast and fastened to the ground by guy assemblies. The antenna is probably fed at the base of the mast. Total weight of the antenna is 7 pounds.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Transmitting Equipment AN/CRN-4A.

COGNIZANT AGENCY: ARL-4388.

MANUFACTURER: Wells-Gardner Co., Order 170-DAY-45-SE.

STOCK NUMBER: Sig. C. 2A264-243.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-244()/GRA-4

See Antenna Group OA-497()/TLR-1.

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ANTENNA ASSEMBLY AS-252()/GRW-1

MAJOR COMPONENTS: Seven feet of 335-ohm open balanced line, 300 feet of #12 bare tinned copper wire, 1 seven-foot bazooka, 1 terminating resistor, 50 feet RG-8/U cable, 6 type IN-88 insulators, 4 MA-7-A masts, 1200 feet of 3/8-inch rope, 500 feet of 1/4-inch rope, 25 guy rope bars, and 6 pulleys.

FREQUENCY: VHF band, 33-38 mc.

TYPE: Rhombic antenna.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRW-1, Equipment function - remote control.

COGNIZANT AGENCY: ARL-4437.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-253/GPX-1

FREQUENCY: VHF band, 176 mc.

TYPE: One rod and two 3-element Yagi antennas.

DESCRIPTION: The antenna consists of an AN-147-A antenna and two modified AN-148-A antennas mounted on a reflecting screen. AN-147-A and AN-148-A are normally aircraft antennas and are described in Volume IV of this catalog series. The reflecting screen is used to replace the skin of the aircraft which normally functions as a ground plane for these antennas. The AN-148-A antennas, which consist of a dipole and a director, have been modified by adding a reflector and extending the support arm to 2 feet; thus forming 3-element Yagi antennas. The AN-147-A antenna is a 15-1/4-inch rod. The reflecting screen consists of a 40-inch by 54-inch wooden frame covered with copper screen. The antenna assembly is mounted on a mast, 2 inches in diameter and 14 feet high. This mast is mounted on a wooden base, 2-1/2 feet high.

SCAN DATA: The antenna can be rotated in azimuth through 420° by means of a handwheel.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/GPX-1, Equipment function - test of airborne IFF.

COGNIZANT AGENCY: ARL-4450.

MANUFACTURER: Two hundred fifty of these antennas were assembled in the field from parts in stock.

STOCK NUMBER: Federal Stock Number 5895-338-4127.

REFERENCE:
1) Signal Corps Drawing Number ES-D-52468.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-255/CRN-12 & ()

MAJOR COMPONENTS: 1 Monopole and 1 Counterpoise.

FREQUENCY: HF band, 3.5 to 6 mc.

TYPE: Whip antenna.

DESCRIPTION: The antenna is of the Marconi type. It is telescopic, and measures 30-5/8 inches when telescoped and 35 feet when extended. Connection is made to the associated transmitter through a ball joint at the base of the antenna. A three-wire guying system and a counterpoise of 16 metallic ribbons, each ribbon measuring 25 feet long, is provided with each antenna.

BEAM DATA:
Beam type - Omnidirectional (in the azimuth plane).
Polarization - Vertical.

INSTALLATION: Ground, fixed.

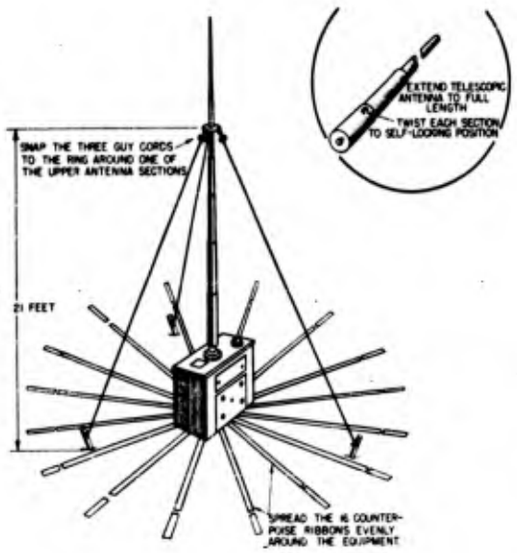
ASSOCIATED EQUIPMENT: Homing Beacon AN/CRN-12-(), Equipment function - navigation, ground reference, Range - 8 miles.

COGNIZANT AGENCY: ARL-4467.

MANUFACTURERS: Wells-Gardner and Co.; Procurement Plan 45-87, Order 938-DAY-45-3E.

STOCK NUMBER: Signal Corps 2A264-255.

REFERENCE:
Department of the Army, Homing Beacon AN/CRN-12(), Technical Manual, TM 11-5046, (April 1951). UNCLASSIFIED.



AS-255/CRN-12&()

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ANTENNA ASSEMBLY AS-257( )/GPX-2

MAJOR COMPONENTS: 1 AN-147-A antenna, 2 AN-148-A antennas, and a rectangular screen.

FREQUENCY: VHF band, 176 mc.

TYPE: Rod, Yagi, corner reflector, flat screen reflector.

DESCRIPTION: The antenna assembly consists of a transmitting antenna, and two receiving antennas on a fixed mount. The transmitting antenna is a single AN-147-A mounted vertically. Each receiving antenna is a single AN-148-A mounted with the elements vertical. Each receiving antenna has a rectangular reflector so arranged that it may be mounted flat against a wall or mounted to form a corner reflector.

BEAM DATA:
Beam type - Transmitting antenna - omnidirectional in horizontal plane.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/GPX-2(), Equipment function - IFF.

MISCELLANEOUS: Similar to AS-253()/GPX-1 except that AS-257()/GPX-2 uses unmodified AN-148-A and does not rotate.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Majestic Radio and TV Division, Contract NOas-4516.

STOCK NUMBER: Signal Corps 2A264 257

REFERENCES:
1) Government Specifications EN-102.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-258( )/CPN

MAJOR COMPONENTS: 1 MX-437/CPN lead-in assembly, 1 MX-438/CPN lead-in assembly, 2 CU-94A/CPN antenna coupling units, 2 CU-93/CPN antenna coupling units, 4 porcelain strain insulators, 5 antenna insulators, 250 feet of 7-strand #16 hard-drawn copper wire, 60 beverage antenna-support poles, 60 Hemingray #9 telephone insulators, 60 Ranier wood insulator pins, 8 guy stakes, 1 Osh Kosh post-hole digger, and 1 drive pipe with cap.

FREQUENCY: Transmitting - MF band, 1.72-1.98 mc., receiving - MF band, 1.7-2.5 mc.

TYPE: One long-wire and one inverted-L antenna.

DESCRIPTION: The antenna assembly consists of a receiving antenna and a transmitting antenna. The receiving antenna is a wave- or Beverage-type antenna, 1500 feet long and the transmitting antenna is a quarter-wave inverted-L type antenna, 115 feet overall length. The transmitting antenna is mounted on two masts, AB-89/CPN.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/CPN-11( ) and AN/CPN-12( ), Equipment function - navigation, surface reference (Loran).

COGNIZANT AGENCY: ARL-45-R791.

MANUFACTURER: Bendix Radio, Order 245-DAY-45.

STOCK NUMBER: Federal Stock Number 5825-255 6247

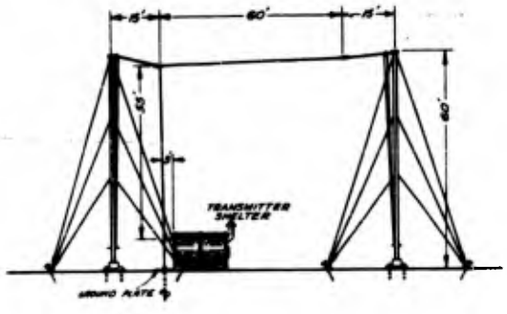
REFERENCES:

1) U. S. War and Navy Departments, Radar Sets AN/CPN-11B and AN/CPN-12B, Operating Instructions, TO 31P5-2CPN11-1, (Jan. 29, 1946). UNCLASSIFIED.

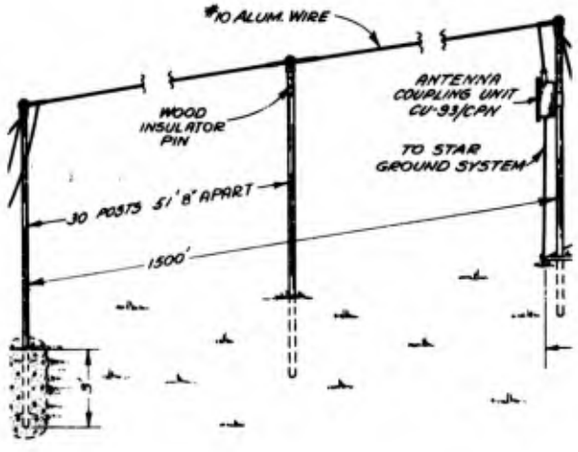
2) U. S. Air Force and Bureau of Aeronautics, Navigational Aid Equipment, Fixed Communication and Meteorological Equipment Directory, TO 31R4-1-1, Volume III, (June 16, 1958). UNCLASSIFIED.

3) U. S. Air Force Specifications C-7011.

4) U. S. Department of Defense Nomenclature Card.



AS-258( )/CPN Transmitting Antenna



AS-258( )/CPN Receiving Antenna

ANTENNA ASSEMBLY AS-263/UPT

FREQUENCY: VHF and UHF bands, 175 - 550 mc; VSWR < 2 on 50-ohm line.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The antenna consists of a half-wave, adjustable dipole connected to a balun and mounted in a 75-degree, fixed-angle corner reflector. The reflector is constructed of a number of metal rods which are parallel to the axis of the dipole. The assembly is mounted on a pedestal which permits the antenna to be oriented for the transmission of signals of either horizontal or vertical polarization. The pedestal also provides for rotation of the antenna about a vertical axis so that the signal may be beamed in any azimuth direction. The assembly has the following dimensions: reflector, 40 by 43 inches (each side); dipole and balun, 32 by 24 by 2 inches (overall); mounting pedestal, 49 by 10 by 8 inches (overall). The entire assembly weighs about 140 pounds.

BEAM DATA:
Gain - 14 db.
Half-power beamwidth -
In the plane of the dipole - 50°.
In a plane perpendicular to the dipole - 40°.
Polarization - Either vertical or horizontal depending on mounting.

SCAN DATA: This antenna does not scan, but it can be rotated manually through 360° in azimuth.

TUNING/MATCHING DEVICES: In order to obtain satisfactory performance of the antenna over its entire frequency range, it is necessary to adjust the dipole length, the balun length, and the dipole-to-reflector distance.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/SPT-4(), and AN/SPT-6, Transmitting Equipment AN/APQ-2, AN/APT-2, and AN/APT-5, and Radar Training Set AN/UPT-T4. Equipment function - countermeasures, jamming. Transmitting Equipment 52ADN(OCY-1). Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Development by Radio Research Laboratory, Harvard University.

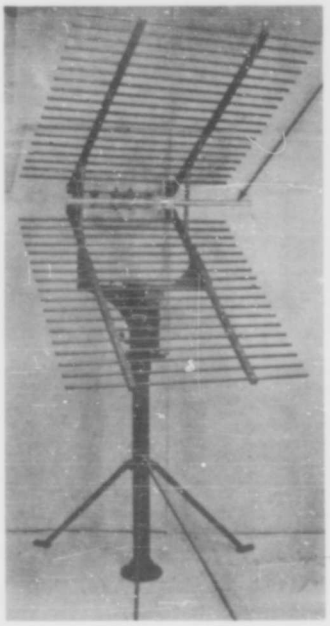
STOCK NUMBERS: Signal Corps 2A264-263.

REFERENCES:

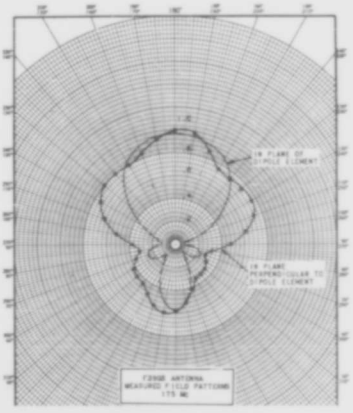
1) Preliminary Instructions for F3903 Antenna (AS-263/UPT), 411-IB-70. Radio Research Laboratory, Harvard University. (March 7, 1945). UNCLASSIFIED.

2) Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Massachusetts: Radio Research Laboratory, Harvard University, (December 3, 1945). UNCLASSIFIED.

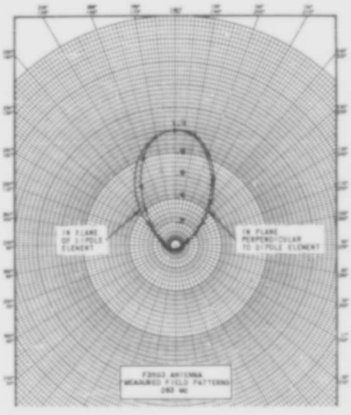
3) U. S. Department of Defense Nomenclature Card.



AS-263/UPT Set for Horizontal Polarization



AS-263/UPT Antenna Patterns at 175 mc.



AS-263/UPT Antenna Patterns at 283 mc.

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AN/CRM-6. Equipment function - test.

COGNIZANT AGENCY: WADC (ARL).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-268( )/UPT-T3

TYPE: Horn antenna.

DESCRIPTION: The horn is 8 inches long with a mouth that is 5 inches square. The assembly includes associated cable and mounting flange.

BEAM DATA:
Gain - 12 db.
Half-power beamwidth - Vertical - 20°
Horizontal - 20°

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radar Training Set AN/UPT-T3, Equipment function - training.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-274/MRQ-1&( )

MAJOR COMPONENTS: 1 MX-484/MRQ-1 counterpoise assembly, 1 RL-120( )/MRQ-1 winch with 1500 feet of No. 12 AWG solid copperweld wire, 1 MX-93/MRQ-2 balloon.

FREQUENCY: LF, MF and HF bands, 0.2 - 5.0 mc.

TYPE: Monopole.

DESCRIPTION: The antenna consists of 1500 feet of wire wound on a winch. The free end is supported by a balloon. The length of the wire can be adjusted between 50 and 1350 feet.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Sets AN/MRQ-1 and AN/MRQ-4.

COGNIZANT AGENCY: MSCPD, SCL-5180.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY: AS-275( )/MRQ-1

TYPE: Long wire.

DESCRIPTION: The antenna assembly consists of a double line of poles, each pole carrying 2 wires supported by insulators and halyards. The 4 wires are probably connected in parallel to form a Beverage antenna. The system may be either 1200 or 2400 feet long. The poles are of tubular plywood construction and are 23 feet high. The assembly includes a counterpoise, a dissipating resistor, and necessary guy plates, base plates, guys, and stakes. Wire reels are furnished for storage and transportation of the wire.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Sets AN/MRQ-1 and AN/MRQ-4.

COGNIZANT AGENCY: SCL-5182, SCEL.

MANUFACTURER: Monmouth Electric Company, order 2889-MPD-45.

STOCK NUMBER: Signal Corps 2A249-275.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-286( )/U

FREQUENCY: LF, MF and HF bands, 0.22 - 3.5 mc.

TYPE: Loop antenna.

DESCRIPTION: The antenna is used for localization of sources of weak noise radiation. It consists of a multi-turn unshielded loop, 3 inches in diameter, on the end of a hollow 9-inch bakelite handle containing impedance-matching transformers.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Noise-Field Strength Meter TS-432/U. Equipment function - test.

COGNIZANT AGENCY: Navy.

MANUFACTURER: Ferris Instrument Company.

REFERENCES:
1) Bureau of Aeronautics Spcl A/B.
2) CFC Drawing 32-XA6.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-293( )/TRC-8

MAJOR COMPONENTS: 4 folded dipoles, 12 half-wave parasitic elements.

FREQUENCY: VHF band, 230 - 250 mc.

TYPE: Four Yagi arrays each using a folded dipole as the active element.

DESCRIPTION: The antenna assembly is a directional array consisting of four Yagi antennas. Each Yagi unit consists of a folded dipole and three half-wave parasitic elements. The overall assembly is 9 feet long, 24 inches high, and 20 inches wide. The assembly mounts on top of antenna support AB-33/TRC-1. A 50-ohm coaxial harness is used to feed the folded dipoles.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-8( ).

COGNIZANT AGENCY: SCL-5604.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-294

No information available.

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ANTENNA ASSEMBLY AS-295(*)/UP

FREQUENCY: UHF band, 950 - 1150 mc.

TYPE: Broadside array, slot antennas.

DESCRIPTION: The antenna is an array of 24 slots arranged in four sections of 6 slots each. It is constructed of aluminum and mounts either to the parent radar antenna by suitable brackets and fixtures or to a pedestal. Feed is by coaxial transmission line into an input impedance of 51 ohms. Overall length is 220 inches, which is divided equally among the four sections.

BEAM DATA:
Beam type - Fan.
Polarization - Vertical.

SCAN DATA: Capable of 360° mechanical azimuth rotation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Identification Set AN/GPX-6A. Interrogator Set AN/MPX-7, Radar Identification Set AN/GPX-20A. Equipment function - IFF.

MISCELLANEOUS: Antenna Assembly AS-295/UP is interchangeable with AS-295A/UP, which incorporates minor modifications. AS-295/UP and AS-295A/UP are similar to but not interchangeable with Antennas AT-309/GPX&( ) and AN/GPA-24A.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Hughes Aircraft Company, Bureau of Ships contract NObsr-43418; Maryland Electronic Manufacturing Corporation, procurement contract NObsr-57600 and NObsr-63291.

STOCK NUMBERS: AS-295B-UP, Federal Stock Numbers F5985-669-9312 and F5985-513-3398 (with spares).

REFERENCES:
1) U. S. Air Force, Handbook Operation Instructions for Radar Identification Set AN/GPX-6A, TO 31P4-2GPX6-31, (Aug. 15, 1958). UNCLASSIFIED.

2) Drawing Number RD 29F 100F.

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ANTENNA ASSEMBLY AS-297( )/TPX

TYPE: Mattress antenna with 3 dipoles.

DESCRIPTION: The assembly consists of three vertical dipoles. They are mounted 36 inches apart in a horizontal line and are 18 inches in front of a reflector 90 inches wide by 40 inches high. The reflector is a tubular framework with vertical wires spaced 2-1/2 inches apart. Attached to the back of the reflector are interconnecting cables, a lobe switch, and a junction box. The total weight is about 10 pounds.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Antenna-Tower Kit MX-528/TPX which is used with Radar Set AN/TPX-6( ). Equipment function - IFF.

COGNIZANT AGENCY: CESL.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-299/AP

MAJOR COMPONENTS: 1 paraboloidal reflector, 1 dipole, and 1 director disc.

FREQUENCY: SHF band, 8500 - 9000 mc.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The assembly consists of a paraboloidal reflector and a feed made up of a dipole and a disc enclosed in a small plastic case. The plastic case is 1-7/8 inches in diameter and 5-7/8 inches long. The diameter of the paraboloidal reflector is 4-1/2 inches.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Echo Box TS-311/UP. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Western Electric Company, contract NXsr-51503.

STOCK NUMBER: Signal Corps 2A264-299; Federal Stock Number N5985-408-8616.

REFERENCES:

1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-300/CPS-1 & ()

MAJOR COMPONENTS: 1 Cut paraboloidal reflector, 1 sectoral feed horn and waveguide assembly, 1 A-frame supporting structure, 1 reflector mounting bracket.

FREQUENCY: UHF band, 2,912.6 mc, VSWR is 1.41.

TYPE: Cut paraboloidal reflector with horn feed.

DESCRIPTION: The reflector is a smooth-surfaced cut paraboloid with a focal length of 27.5 inches. It is 96 inches wide and 48 inches high. The reflector is basically an eight-foot dish asymmetrically cut to 48 inches in the vertical plane with 30 inches lying below the vertex and 18 inches above.

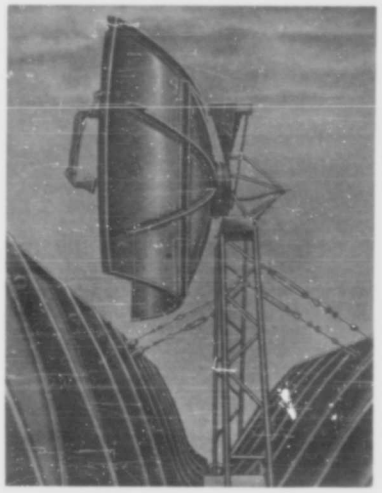
The feed is a sectoral horn flared to 4 inches in the E-plane. The horn points into the reflector at an angle of 10° below the horizontal. At the end of the feed waveguide is a Type-N connector to which the lead-in cable attaches.

BEAM DATA:
Gain - 32 db.
Beamwidths - Azimuth - 3°.
Elevation - 6°.
Side-lobe Attenuation - At least 13 db; largest side lobes occur 9° in azimuth on either side of the main lobe.
Beam Type - Fan.
Polarization - Vertical.

SCAN DATA: The antenna has provisions for 360° mechanical azimuth rotation, motor driven at speeds of 1, 2, or 4 revolutions per minute, and manual operation. It is capable of vertical adjustment so that the main lobe can be tilted from 0° to 5° above horizontal.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Beacon Modification Kit MX-533/CPS-1. Equipment function - Beacon



AS-300/CPS-1&( ) Mounted

receiving antenna used for tracking friendly aircraft. Radar Set AN/CPS-1. Equipment function - Air Search for either early warning or GCA purposes.

COGNIZANT AGENCY: USAF (RADC). WL 45-223, project group AFDRE 2F/1. USA WL-52-R1255, project group AFDRD-EL-4.

MANUFACTURER: Radiation Laboratory, procurement order 5032-DAY-45; General Electric (Syracuse), procurement contract AF33(038)-11399.

STOCK NUMBER: Federal Stock Number 5840-026-8778.

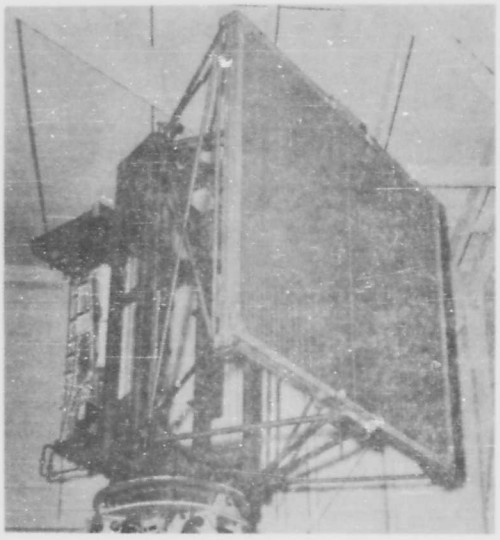
REFERENCES:

1) U. S. Air Force and the Bureau of Aero-

nautics, Radio Set AN/CPS-1 and Radar Set AN/MPS-5, Volume 1, Handbook Service Instructions, T.O. 31P6-2CPS1-32, (Jan. 1, 1953 - revised Dec. 20, 1954). UNCLASSIFIED.

2) USAF Exhibit WLENG-2080.

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AS-309/TPQ-2&( )

lindrical dielectric lens which collimates energy in the azimuth plane. The radiation pattern from the horn is 20° wide in azimuth. It is vertically polarized with a cylindrical wavefront. The two scanners in the AT-107/TPQ-2 form the energy into two such beams separated by 1.9° in elevation and 0° in azimuth.

Energy from the scanners is beamed toward the beam-focusing unit AT-108/TPQ-2, which is a metallic lens with a focal length of 48 inches. This lens is a cylindrical, concave, stepped lens which collimates energy in the vertical plane. It is constructed of stamped steel plates spaced 0.30 inches apart and is held in place by metal cross supports that form a rigid, cellular construction approximately 60 inches high, 48 inches wide, and 2 inches thick. It is composed of two identical sections, each 30 inches high and 48 inches wide, with folding braces fastening to the mount.

BEAM DATA:
Gain (Each beam) - 45.4 db.
Half-power beamwidths (Each beam) - Azimuth - 0.9°. Elevation - 0.6°.
Side-lobe attenuation (Each beam) - greater than 15 db.
Beam type - Two pencil beams separated by 1.9° in elevation and 0° in azimuth.
Polarization - vertical.

SCAN DATA: The electromechanical scan is over a 20° azimuth sector at a rate of 27 times per second for each beam; scanning action of the two beams is synchronized.

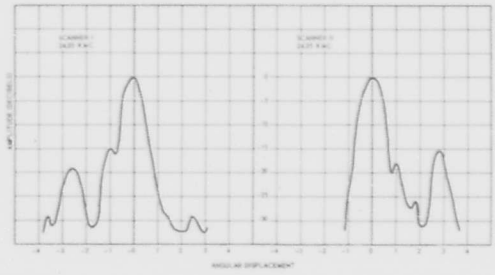
INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/TPQ-2. Equipment function - search surface, mortar location.

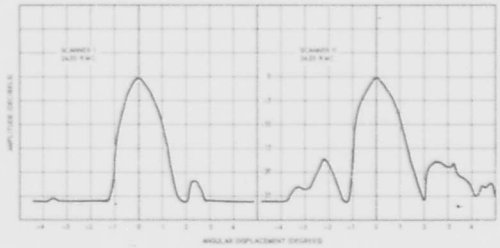
COGNIZANT AGENCY: ESL- (Evans Signal Laboratory), project group SIGGE.

MANUFACTURER: Western Electric Co., procurement order (Signal Corps): 2019-CEGSA-45.

REFERENCES:
1) Bell Telephone Laboratories, Inc. Drawing No. ESR-996206.
2) A. H. Schaufelberger, M. W. Long, R. E. Honer, Measurement of Losses in the AN/TPQ-2 Scanner, Final Report, Contract DA 36-039-sc-5469. ASTIA No. ATI 153189. UNCLASSIFIED.



Vertical Radiation Pattern for AS-309/TPQ-2



Horizontal Radiation Pattern for AS-309/TPQ-2

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MANUFACTURER: Globe Industries, Inc., procurement order 2605-DAY-45-AR.

STOCK NUMBERS: Signal Corps 2A1515-310, Federal Stock Number 6625-504-2959.

REFERENCE:
Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

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in diameter and 6 inches long. Total weight of the antenna assembly is 7 pounds.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Transmitter T-151/CRT-5, Radio Set AN/CRT-5. Equipment function - voice communications up to 15 miles in range.

MISCELLANEOUS: The AS-326/CRT-5 is a basic unit which can be modified to meet the requirements of the site.

COGNIZANT AGENCY: WL-45-428, project group AFDMA-2F/3.

REFERENCE:
U. S. Air Force, Radio Set AN/CRT-5, Handbook Operating Instructions, T.O. 31R2-2CRT5-1, (June 27, 1949). UNCLASSIFIED.

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12 to 15 feet above the earth. Each antenna end pole rises from the center of a radial ground system consisting of 100-foot wires spaced every 20°. These wires are normally buried 18 inches below the surface. The surge impedance of the AS-334/FRT antenna is approximately 300 ohms. The physical length of the antenna may be as great as five wavelengths. The electrical length varies from a fraction of a wavelength to several wavelengths. The antenna and the transmission-line wires are 40% conductance, three-strand No. 12 AWG copperweld wire, which is not included in any of the kits comprising the AS-334/FRT but must be requisitioned separately.

BEAM DATA:
Beamwidth - Horizontal - Approximately 40° for two-wavelength antenna. Approximately 60° for one-wavelength antenna.
Beam type - Unidirectional.
Polarization - Linear.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Equipment function - communications.

COGNIZANT AGENCY: PEA (now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.); Development Unit: SPSLP.

STOCK NUMBERS:
AS-334/FRT...Not stocked as unit:
MX-598/FRT...Signal Corps 2A1591-598;
MX-599/FRT...Signal Corps 2A1591-599;
MX-600/FRT...Signal Corps 2Z5731-600;
MX-601/FRT...Signal Corps 2Z5731-601;
MX-602/FRT...Signal Corps 2A1592-602.
No. 12 AWG copperweld wire (not included in any of the above kits)...1A807.12.

REFERENCES:
U. S. Army, Antenna Assembly AS-334/FRT, Technical Manual, TM 11-5005, (October 1951). UNCLASSIFIED.

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ANTENNA ASSEMBLY AS-338/GPN-2 & ()

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna is a modified ground-plane antenna consisting of a vertical radiating tube, 3 inches in diameter, with 6 radial ground-plane rods pointing downward at an angle of 45°. Overall, it is 40 inches high and 3 feet in diameter. It is constructed of aluminum and is mounted by a plug which screws into the end of a pipe.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/GPN-2. Equipment function - communications associated with GCA systems.

MISCELLANEOUS: AS-338/GPN-2 is the same as AS-394/U except that AS-338/GPN-2 has a 3-3/4-inch--12 thread for mounting and AS-394/U has a standard 1-1/2-inch thread.
The Nomenclature Card states that Antenna Assembly AS-338/GPN-2 consists of a 3-inch-diameter tube assembly with 6 dipoles spaced equally around the tube at a 45° angle to the vertical. This is believed to be incorrect.

COGNIZANT AGENCY: U. S. Navy, Code 939.

MANUFACTURER: Bendix, procurement contracts N5sr-752 and N5sr-10576.

STOCK NUMBER: Federal Stock Number F5985-408-8685.

REFERENCES:
1) Department of the Navy, Major Electronic Units Section, (August, 1958). UNCLASSIFIED.
2) Bendix Radio Part/Drawing L-200001-2.
3) Bendix Radio Specifications BM-692.
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-341/GR

MAJOR COMPONENTS: 6 MS-116A mast sections, 2 MS-117A mast sections, 2 MS-118A mast sections, 32 AB-85/GRA-4 mast sections.

FREQUENCY: MF and HF bands, 1.5 - 20 mc.

TYPE: Monopole or dipole (center, off-center, or end fed) or inverted L-type antenna.

DESCRIPTION: AS-341/GR may be made into 5 different types of antennas by using various combinations of the components supplied:
(a) two vertical monopoles up to 55 feet high,
(b) slanting-wire antenna up to 100 feet in length, (c) off-center-fed half-wave dipole, (d) center-fed half-wave dipole, (e) inverted L-type antenna. Which of these constructions is chosen depends on the surrounding terrain, whether ground-wave or sky-wave transmission is desired, and whether directional or omnidirectional coverage is desired. Input impedance varies between 50 and 75 ohms.

BEAM DATA:
Beam type - Directional or omnidirectional depending on type of antenna built.
Polarization - Horizontal or vertical, depending on which antenna is constructed.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Intercept Group OA-596/TTQ-3. Equipment function - communications.

MISCELLANEOUS: This antenna is similar to Antenna Group AN/GRA-4.

COGNIZANT AGENCY: U. S. Army, SCLE-4306.

MANUFACTURER: Ward Products Corp., Cleveland, Ohio, procurement 18587-PHILA-51-14.

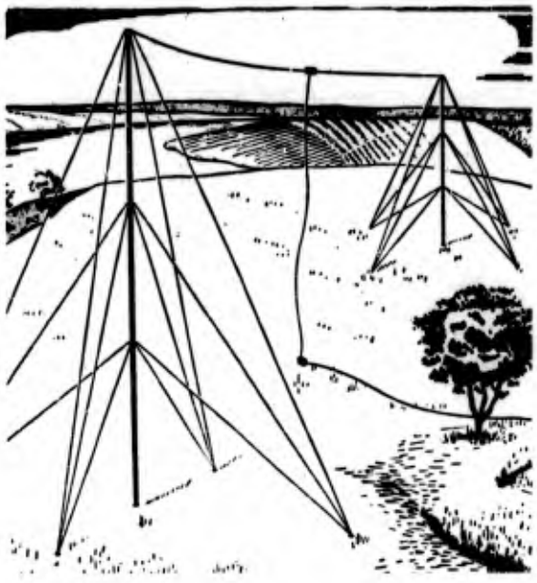
STOCK NUMBER: Federal Stock Number...5985-399-7123; Signal Corps...2A290A-4.

REFERENCES:

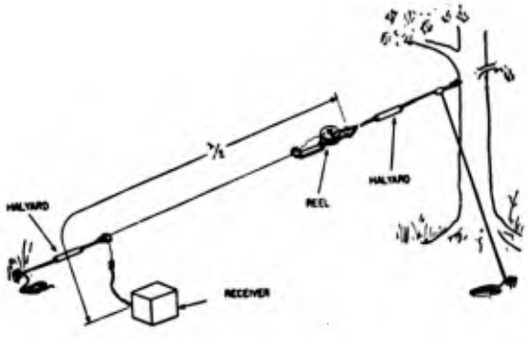
1) Departments of the Army and the Air Force, Antenna Assembly AS-341/GR, Technical Manual and Technical Order, TM11-2680 and TO16-35AS341-6, (November 1953). UNCLASSIFIED.

2) Specification MIL-A-10764.

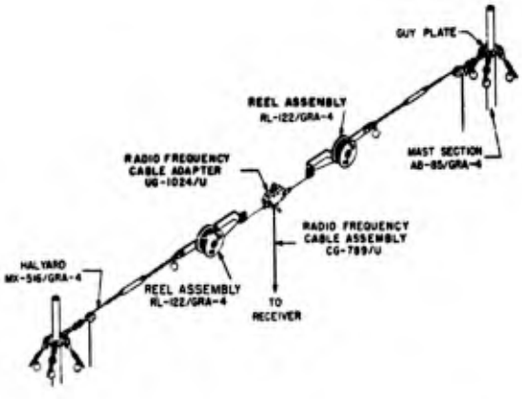
3) Signal Corps Drawing SC-B-34863.



AS-341/GR as Half-wave Antenna



AS-341/GR as Slanting-wire Antenna



AS-341/GR as Center-fed Hertz Antenna

ANTENNA ASSEMBLY AS-342/CRD-1

FREQUENCY: UHF band, 1660 - 1700 mc.

TYPE: Paraboloidal reflector with a feed consisting of a dipole and an eccentric reflecting cup.

DESCRIPTION: The antenna assembly, which mounts on Antenna Support AB-110/CRD-1, consists of an aluminum paraboloidal reflector with an AT-135/CRD-1 nutating feed. The reflector is made in three sections to facilitate shipping. When assembled, the reflector is 7 feet in diameter and 42 inches deep. The AT-135/CRD-1 feed consists of a stationary dipole and a rotating eccentric cup. The dipole is mounted on the axis of the reflector near the focal point. The reflecting cup, which is mounted off-center, rotates about the reflector axis to produce conical scanning. The cup, seven inches in diameter, is made of 20-gage aluminum.

SCAN DATA: A conical scan is generated by spinning the eccentric auxiliary reflector. The whole antenna can be rotated in azimuth and tilted in elevation.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/CRD-1. Equipment function - tracking of Radiosonde AN/AMT-4 for meteorological measurement.

MISCELLANEOUS: The Nomenclature Card for AT-135/CRD-1 indicates that it may consist only of the eccentric hemispherical cup and not the complete feed assembly.

COGNIZANT AGENCY: ESL-3199 (AS-342/CRD-1) and ESL-3222 (AT-135/CRD-1).

MANUFACTURER: General Electric Co., order 3099-CEGSA-45.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-343()/URR

FREQUENCY: LF, MF, and HF bands, 0.1 - 20 mc.

TYPE: Vertical monopole.

DESCRIPTION: The AS-343()/URR is a sectionalized mast of tubular aluminum and steel. It is 65 feet high and 3-3/4 inches in diameter. The mast consists of six 9-foot sections and three mast sections MS-116-(). The assembly has two additional 9-foot sections in the gin pole. It mounts on an insulated one-foot-cube steel base which is anchored to the ground by four ground stakes GP-2.

The AS-343()/URR is a lightweight, general-purpose receiving antenna for use with intercept receivers in the frequency range of 100 kc to 20 mc. It may also be used as one of the monopole elements in a crossed-U Adcock antenna system in the frequency range of 100 kc to 3 mc. For receiving purposes, the three sets of four guys are so sectionalized and insulated from the mast and ground that they may be used as inclined dipole antennas in the following frequency ranges: 4 to 6 mc, 6 to 9 mc, 9 to 13.6 mc, and 13.6 to 20 mc.

BEAM DATA:
Beam Pattern - Omnidirectional in horizontal plane.
Polarization - Vertical.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRD-3(), Radio Intercept Central TC-8, Radio Direction Finder Central TC-9. Equipment function - direction finding.

MISCELLANEOUS: The AS-343()/URR is a replacement for Antenna AN-78 and Antenna Assembly AS-204/CRD-3.

COGNIZANT AGENCY: ESL-3223, Project Group SPSRL.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ASSEMBLY ASSEMBLY AS-344/MPG-1

FREQUENCY: SHF band, 9375 mc.

TYPE: Parabolic-cylinder reflector with a Schwartzchild feed.

DESCRIPTION: The reflector is a parabolic cylinder curved in the vertical plane. It is 5 feet high and 12 feet long. The feed, which is analogous with the Schwartzchild telescope, consists of a parallel-plate waveguide with appropriate bends to give a cylindrical output wavefront when fed by a point-source type feed. The Schwartzchild horn is equivalent to a cylindrical lens. Rotating waveguide horns are used to feed the parallel-plate system.

BEAM DATA:
Polarization - Vertical.

SCAN DATA: The antenna is an electromechanical scanning device. Scan in azimuth is accomplished by moving a waveguide horn across the feed arc of the parallel-plate system.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPG-1, AN/FPG-2, and AN/MPG-1. Equipment function - fire control.

MISCELLANEOUS: Antenna AS-344/MPG-1 is designed to replace AS-173/MPG-1.

COGNIZANT AGENCY: ESL-3321.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-345(*)/TPG-2

MAJOR COMPONENTS: 1 Antenna AT-136(*)/TPG-2 and 1 paraboloidal reflector.

FREQUENCY: Additional information is available in the secret document listed below as Reference 1 of this catalog series.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION:
A) The reflector is a cadmium-plated steel paraboloid 68 inches in diameter and 22-1/2 inches in depth.
B) Antenna AT-136(*)/TPG-2 is a rotating dipole attached to the center of the paraboloidal reflector. The antenna is constructed of cadmium-plated brass and polystyrene. The overall dimensions of the feed assembly are 24 inches in length and 8 inches in diameter.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1 of this catalog series.

SCAN DATA: Additional information is available

in the secret document listed below as Reference 1 of this catalog series.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/TPG-2(). Equipment function - fire control.

MISCELLANEOUS: AS-345(*)/TPG-2 deno ; two models as does AT-136(*)/TPG-2. No data are available on differences, if any, between models.

COGNIZANT AGENCY: ESL-3299 for AS-345(*)/TPG-2 and ESL-3302 for AT-136(*)/TPG-2.

MANUFACTURER: Sperry Gyroscope Company, ordnance contract number W-30-069-3019 for AS-345(*)/TPG-2 and AT-136(*)/TPG-2.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) Sperry Part/Drawing 660481 for AT-136(*)/TPG-2.

3) Sperry Part/Drawing 657586 for AS-345(*)/TPG-2.

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ANTENNA ASSEMBLY AS-346()/CRN-15

Cancelled 8 May 1947 by WL-45-C219; development discontinued.

MAST ANTENNA AS-347()/CRN-15

Cancelled 8 May 1947 by WL-45-C219; development discontinued.

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SEARCH ANTENNA AS-348/MPN-3 & ()

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Two dipoles.

DESCRIPTION: The antenna consists of two aluminum dipoles, each 4-1/2 inches by 4 inches by 2 inches (SIC), inserted into a length of rectangular brass waveguide. It weighs 14 pounds. Search Antenna AS-348/MPN-3 is rigidly attached in front of Antenna Reflector AT-109/UPN on Antenna Mount AB-121/MPN-3 and serves as the feed assembly for this reflector in the AN/MPN-3 radar system.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-3. Equipment function - approach control (GCA); air search radar.

COGNIZANT AGENCY: Navy, Code 916.

MANUFACTURER: Gilfillan Bros., Inc., procurement contract NXsr-93195 (Navy).

REFERENCES:

1) Gilfillan Bros., Inc., Drawing No. 17030

2) Gilfillan Bros., Inc., Specification 66-1693.

3) U. S. Department of Defense Nomenclature Card.

4) Signal Corps Specification Number 471-2397.

5) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-349()/URC-1

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Whip.

DESCRIPTION: The AS-349()/URC-1 is a shunt-fed, full-wavelength whip antenna. It is telescopic with an extended length of 10 feet, a collapsed length of 9 feet, and an outer diameter of one-half inch. The antenna is made of silver-plated magnesium. It mounts on vehicles with a tilting antenna mount and is fed by a 50-ohm coaxial transmission line.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/URC-1(). Equipment function - communications.

COGNIZANT AGENCY: WL-45-670, Project Group AFDRE-2F/3.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-350()/FR

FREQUENCY: MF and HF bands, 1.5 - 30 mc.

DESCRIPTION: This is a transmitting antenna with a balanced feed.

INSTALLATION: Ground, fixed.

COGNIZANT AGENCY: PEA-118; Project Group SPSCC. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-351()/FR

FREQUENCY: MF and HF bands, 1.5 - 30 mc.

DESCRIPTION: This is a broadband receiving antenna which will receive either nondirectional or bidirectional signals. It has a balanced feed.

COGNIZANT AGENCY: PEA-122; Project Group SPSCC. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-352/UR & ()

TYPE: Whip.

DESCRIPTION: This antenna is a two-piece tilting whip made of steel tubing. Its overall length is 23.5 feet of which 5 feet is the mast base section and 18.5 feet is the whip assembly. The mast base section consists of a self-aligning base insulator assembly supported by a stand-off insulator assembly. It is mounted with four 5/16- by 4-inch bolts with 18 threads per inch.

INSTALLATION: Ground, mobile and small boats.

ASSOCIATED EQUIPMENT: Equipment function - communications.

MISCELLANEOUS: The AS-352/UR & () is similar to Coast Guard type MR-162.

COGNIZANT AGENCY: PEA-125; Project Group SPSCC. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

MANUFACTURER: Birnback Radio Company, type CG-RE-815-1-1; Snyder Manufacturing Company, procurement order, Signal Corps 23584-PH-43.

STOCK NUMBER: Signal Corps 2A295.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-353/FR & ()

FREQUENCY: MF and HF bands, 1.7 - 14.4 mc.

TYPE: Telescopic whip.

DESCRIPTION: The antenna is a three-section telescopic whip made of seamless, drawn aluminum tubing. The whip is 6-1/2 feet long when collapsed and 18-1/4 feet long when fully extended. Its maximum diameter is 3/4 of an inch. The antenna mounting is a cast-iron housing 8 inches long, 8 inches wide, and 8 inches high. Within this housing are the coil and capacitor which provide efficient coupling for the frequency band used. The antenna mounting bracket is an L-shaped steel bracket, each leg of which is 8-1/4 inches long and 6 inches wide. The total weight of an assembled AS-353/FR is approximately 40 pounds.

TUNING/MATCHING DEVICE: The antenna coupling device consists of any of four interchangeable plug-in coils and a variable capacitor.

INSTALLATION: Ground, fixed; Ground, mobile; small boats.

ASSOCIATED EQUIPMENT: Radio Receivers BC-779-A, BC-779-B; BC-794-A, BC-794-B; BC-1004-B, BC-1004-C, BC-1004-D. Equipment function - communications, receiving.

COGNIZANT AGENCY: SCL-6909.

MANUFACTURER: A. H. Quist, Jr., part No. AS-7903, Signal Corps procurement order 7797-PHILA-48-77.

STOCK NUMBER: Signal Corps 2A298-1; Federal Stock Number, 5985-223-4646.

REFERENCES:
1) U. S. Army, Antenna Assembly AS-353/FR, Technical Manual, TM11-5013, (January 1949). UNCLASSIFIED.
2) Signal Corps Drawing Number SC-D-51096.
3) Signal Corps Drawing Number ES-D-348E.

ANTENNA ASSEMBLY AS-354/MPN-1A

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Dipole array.

DESCRIPTION: The antenna is the feed system for a search antenna consisting of reflector AT-109()/UPN and feed AS-354/MPN-1A. The feed is a 2-dipole array mounted on and fed by a rectangular RG-48/U waveguide. The overall dimensions of the feed assembly are 60 inches high by 5 inches wide by 12 inches deep. It weighs 50 pounds.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MPN-1A. Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio, contract NObsr-39133.

STOCK NUMBER: Federal Stock Number F5985-240-0432.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Bendix Radio Drawing R200019-4.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-355/MPN-3

FREQUENCY: Probably UHF band, 2700-2900 mc.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is the feed assembly for the azimuth-scanning antenna of Radar Set AN/MPN-3 and is used with Antenna AT-140/MPN-3. It consists of a collinear array of dipoles which are mounted on and are probe fed by a section of variable-width waveguide. The overall dimensions of the feed assembly are 8-1/2 feet long by 5 inches wide by 4-1/2 inches high. It weighs 90 pounds.

SCAN DATA: The antenna has electromechanical scanning in azimuth.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-3. Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Gilfillan Bros., contract NXsr-93195.

REFERENCES:

1) Gilfillan Bros. Inc., Drawing No. 17003.

2) Gilfillan Bros. Inc., Specification 66-16963.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-356/MPN-3

FREQUENCY: UHF band, 2700-2900 mc.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is the feed assembly for the elevation-scanning antenna of Radar Set AN/MPN-3 and is used with Antenna AT-144/MPN-3. The feed consists of a collinear array of dipoles which are mounted on and are probe fed by a section of variable-width waveguide. The overall dimensions of the feed assembly are 14 feet by 5 inches by 4-1/2 inches. It weighs 135 pounds.

SCAN DATA: The antenna has electromechanical scanning in elevation.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-3. Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Gilfillan Bros., contract NXsr-93195.

REFERENCES:

1) Gilfillan Bros., Inc., Drawing No. 17013.

2) Gilfillan Bros., Inc., Specification 66-16963.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-357/FRC

FREQUENCY: VHF band, 30 - 40 mc.

TYPE: Probably whip.

DESCRIPTION: The antenna has brass elements and a chrome-plated steel support tube. It is of one-piece telescopic construction. The extended length is 19 feet 7-7/8 inches and the collapsed length is 17 feet 2-3/8 inches. It mounts with two clamps to a pole or a building. The antenna is furnished with 100 feet of r-f cable RG-8/U with fittings.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-13, SCR-298-A, Link 50-UFS, Kaar PTS-22X, Kaar PRS-9X. Equipment function - communications.

COGNIZANT AGENCY: PEA-149. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-358/MPN-3

MAJOR COMPONENTS: 4 MS-54 mast sections, 1 MS-53 mast section, 1 MS-52 mast section, 1 MS-51 mast section, 1 MS-50 mast section, 1 MS-49 mast section, and 1 4-section telescopic mast support.

FREQUENCY: HF band.

TYPE: Whip.

DESCRIPTION: The antenna is a 27-foot whip made of the nine mast sections listed above. The equipment includes a Plymold mast support made of four 4-foot telescoping sections.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-3. Equipment function - communication.

COGNIZANT AGENCY: Navy.

MANUFACTURER: Gilfillan Bros., contract NXsr-93195.

REFERENCES:
1) Gilfillan Bros., Inc., Drawing No. D-17160.

2) Gilfillan Bros. Inc., Specification 66-16963.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA KIT AS-359/MRD-8 & ()

MAJOR COMPONENTS: 3 guy-rope assemblies, Bendix part/drawing L-201363-1; 3 guy-rope stakes, Bendix style number 15A; 1 counterpoise assembly, Bendix part/drawing L-201017-1; 1 mast and ground spike, Bendix part/drawing C-222548; 1 clamp, Bendix part/drawing L-201024-1; 2 whip antennas, Bendix part/drawing C-201344-1; 4 mast sections, Bendix part/drawing C-201066-1.

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Whip.

DESCRIPTION: The AS-359/MRD-8 consists of all the parts necessary for a complete antenna installation. The whips associated with it are made of steel and have sectionalized construction. Each whip is approximately 44 inches long.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Transmitter-Receiver RT-18/ARC-1, Radio Set AN/MRD-8, and Navy Model MAX. Equipment function - direction finding and communications.

COGNIZANT AGENCY: U. S. Marine Corps.

MANUFACTURER: Bendix Radio, procurement contract NXsr-86345.

STOCK NUMBER: N 5985-409-0989.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Bendix Radio Drawing N-201911.

3) U. S. Navy Specification RE-16T28.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-362/FRC & ()

FREQUENCY: MF band, 1.7 - 3.0 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a tubular-steel, sectionalized whip 35 feet long including the base. It consists of four sections, each 8-1/2 feet long, with outer diameters of 1-1/2 inches, 7/8 inch, 3/4 inch, and 5/8 inch. The whip has a pivoting base mounting supported on a three-insulator fixed-base anchorage.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set SCR-281-(*). Equipment function - communications.

COGNIZANT AGENCY: PEA - 170, Project Group SPSCC. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

MANUFACTURER: Birnbach Radio Co., type sc-35-2.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-363/VRC & ()

FREQUENCY: HF and VHF bands, 10 - 60 mc.

TYPE: Telescopic whip.

DESCRIPTION: The AS-363/VRC is a telescopic whip designed for use on vehicles or in semi-permanent installations. It is made of cadmium-plated, copper-nickel steel tubing. It consists of four six-foot sections (of diameters 1/2, 21/32, 7/8, and 1-1/16 inches respectively) which are fitted together to make one vertical radiator of adjustable height. The length is 22-3/4 feet when extended and 6-1/4 feet when collapsed. The antenna mounts on a tripod base and is held erect by four guy wires. Two porcelain bowls insulate the whip from the metal frame of the base which has three holes by which the assembly is mounted. The total weight of the assembly is approximately 18 pounds. The whip may be used as a quarter-wave radiator in the frequency range of 10 - 30 mc or as a half-wave radiator in the range of 20 - 60 mc.

INSTALLATION: Ground, mobile or fixed.

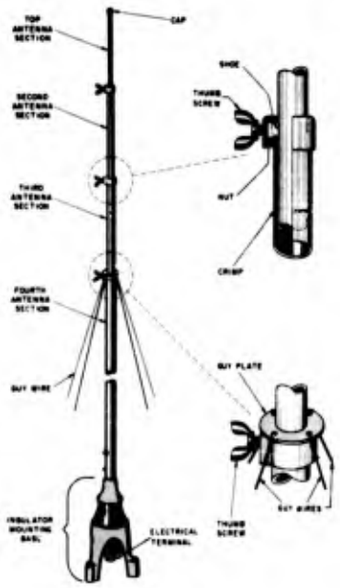
ASSOCIATED EQUIPMENT: Radio Receiving Set AN/VRR-4() and Galvin-Motorola set FMT-25 VW. Equipment function - communications.

COGNIZANT AGENCY: PEA - 174; Project Group SPSCC. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

MANUFACTURER: Premax Products Division of Chisholm Ryder Company, Inc.

STOCK NUMBERS: Federal Stock Number 5985-254-7186, Signal Corps 2A298-5.

REFERENCE:
Departments of the Army and the Air Force, Antenna Assembly AS-363/VRC, Department of the Army Technical Manual and Department of the Air Force Technical Order, TM 11-2690, TO 16-35AS363-5, (May 1952). UNCLASSIFIED.



AS-363/VRC

ANTENNA ASSEMBLY AS-364/FRC & ()

FREQUENCY: VHF band, 110 - 150 mc.

TYPE: Rod antenna; ground-plane antenna.

DESCRIPTION: This antenna consists of a vertical brass rod with four brass ground rods and 50 feet of coaxial line. It operates as a quarter-wave radiator and is designed to match a 70-ohm transmission line. The antenna mounts by clamping to a two-inch pipe.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-8(). Equipment function - communications.

COGNIZANT AGENCY: PEA - 180, Project Group SIGCC. (Pea is SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

MANUFACTURER: Wilcox Electric Co., type No. 614A modified.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-365/FRC & ()

FREQUENCY: VHF band, 70 - 100 mc.

TYPE: Whip.

DESCRIPTION: This antenna is a coaxial whip with a skirt. Both whip and skirt are made of brass tubing and are telescopic. At 70 mc the proper length of the whip is 40.1 inches, and the length of the skirt is 41.4 inches. At 100 mc the whip is 28.1 inches long, and the skirt is 29.3 inches long. The antenna has a vertical mounting which clamps to wooden supports by two mounting clamps. The antenna is fed by a concentric line of 50- to 100-ohm impedance.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Link Radio Transmitter-Receiver type 1505. Equipment function - communications.

COGNIZANT AGENCY: PEA - 185; project group SIGCC. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

MANUFACTURER: Link Radio Corporation, type 1509.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-374()/FR

FREQUENCY: MF and HF bands, 2.5 - 12.5 mc.

TYPE: Double cage dipole.

DESCRIPTION: The AS-374()/FR consists of two cage dipoles. One of them covers the frequency range from 2.5 to 7 mc, and the other covers the range from 7 to 12.5 mc. The assembly is current fed and has a nominal input impedance of 30 to 500 ohms, depending on and varying with the frequency used.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Transmitters BC-315, BC-401, BC-460, HT-4, and Collins 32RA. Equipment function - communications transmission.

COGNIZANT AGENCY: PEA - 501, project group SIGGC-R. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall Station, Va.).

MANUFACTURER: Locke Insulator Corporation.

REFERENCES:
1) Signal Corps Drawing ES-E-337-B.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-377/U & ()

FREQUENCY: MF band, 1.55 - 2.50 mc.

TYPE: Loop.

DESCRIPTION: This assembly consists of the loop proper and its pedestal, which plugs into a receptacle provided on the associated field-intensity meter. The loop mounts on the pedestal by means of two spring fasteners. The unit is 12 inches wide, 28-1/4 inches high, and 1-3/16 inches deep. Input leads are shielded, and the input inductance is 33 microhenries.

SCAN DATA: 360° manual azimuth rotation.

ASSOCIATED EQUIPMENT: Field Intensity Meter - TS-318()/UP. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy, Code 935.

MANUFACTURER: Washington Institute of Technology, Navy procurement contract NXsr-88850.

STOCK NUMBER: Federal Stock Number N5985-090-2624.

REFERENCES:
1) Bureau of Ships Specification RE-13A-1031-A.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-379/FPN-1

FREQUENCY: SHF band, X-band.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is the feed assembly for the elevation-scanning antenna of Radar Set AN/FPN-1 and is used with Reflector AT-

45/MPN-1A. The feed consists of a collinear array of dipoles which are mounted on and are probe fed by a section of variable-width waveguide. The overall feed assembly is 173 inches long, 8-1/2 inches high, and 11 inches deep.

SCAN DATA: The antenna has electromechanical scanning in elevation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-1. Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy, code 947.

MANUFACTURER: Bendix Radio, contract NXsr-71330.

REFERENCES:

1) Bendix Radio Drawing No. OAR-96212-3.
2) Navy Specification CS-590.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-380/FPN-1

FREQUENCY: SHF band, X-band.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is the feed assembly for the azimuth-scanning antenna of Radar Set AN/FPN-1 and is used with Reflector AT-44/MPN-1A. The feed consists of a collinear array of dipoles which are mounted on and are probe fed by a section of variable-width waveguide. The overall feed assembly is 100 inches by 8-1/2 inches by 6-1/2 inches.

SCAN DATA: The antenna has electromechanical scanning through 20° in azimuth.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-1. Equipment function - approach control.

COGNIZANT AGENCY: Navy, code 947.

MANUFACTURER: Bendix Radio, contract NXsr-71330.

REFERENCES:

1) Bendix Drawing Number OAR-96264-3.
2) Navy Specification CS-590.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-381/FPN-1

FREQUENCY: SHF band, X-band.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is the feed assembly for the height-finding antenna of Radar Set AN/FPN-1 and is used with Reflector AT-45/MPN-1A. The feed consists of a collinear array of 199 dipoles which are mounted on and are probe fed by a section of variable-width waveguide. The overall feed assembly is 173 inches by 8-1/2 inches by 11 inches. It is constructed of anodized aluminum.

SCAN DATA: The antenna has electromechanical scanning in elevation from -0.5° to +19.5°. When used with its associated reflector and pedestal, it also rotates in azimuth at a rate of 5 revolutions per minute.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-1. Equipment function - approach control.

COGNIZANT AGENCY: Navy, code 947.

MANUFACTURER: Bendix Radio, contract NXsr-71330.

REFERENCES:

1) Bendix Drawing Number OR200195-1.
2) Navy Specification CS-590.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-383/MRA-3 & ()

FREQUENCY: VHF band, 108.3 - 110.3 mc.

TYPE: Yagi array.

DESCRIPTION: This antenna is a three-element Yagi array consisting of a driven half-wave dipole, one parasitic reflector, and one parasitic director. It is mounted on Antenna Mast AB-140/MRA-3. The elements are copper and are supported by bakelite bases on aluminum tubing. Overall dimensions are 50 inches by 68 inches, and the weight is approximately 10

pounds. The antenna is fed by 95-ohm, twin-conductor transmission line.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Course Centering Assembly AN/MRA-3. Equipment function - approach control, used to correct the shifts in course produced by localizer transmitters of Radio Navigation Sets AN/CRN-3, AN/CRN-10 and AN/MRN-1.

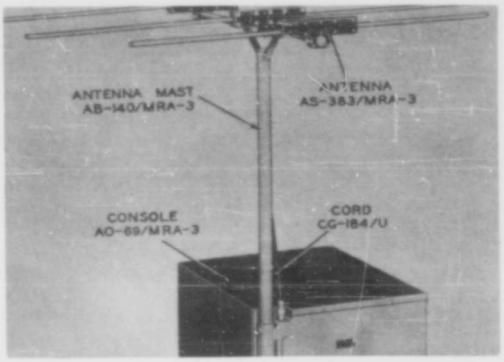
COGNIZANT AGENCY: AAF, ARL-47-49 (WADC), project group AFDRE - 2F/3.

STOCK NUMBER: Air Force 1700-206081750.

REFERENCES:
1) U. S. Air Force, Instrument Low Approach System (SCS-51) Facility, Handbook Standard Installation Instructions, T.O. 31R4-2-147, (Feb. 21, 1955). UNCLASSIFIED.

2) AAF Drawing No. X47G41576.

3) U. S. Department of Defense Nomenclature Card.



AS-383/MRA-3

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ANTENNA AS-385/U & ()

FREQUENCY: HF and VHF bands, 28 - 125 mc.

TYPE: Dipole.

DESCRIPTION: The antenna consists of an adjustable half-wave dipole assembly mounted by means of captive thumb screws to a two-section wooden mast, each section of which is approximately 2-1/2 feet high. The mast is designed to mount on a Navy type CADY 10545 tripod. The dipole assembly is constructed of six telescoping metal sections per side, with a total length of 3-1/4 feet to 17-1/3 feet. The antenna is rotatable and provision is made for tilting the dipole at any angle from 0° to 90°. An Amphenol type SO-264 connector is mounted on the mast head for connection to a shielded, 25-ohm, balanced, transmission line. When mounted on the type CADY 10545 tripod, the antenna height is approximately 10 feet.

BEAM DATA:
Beam type - Figure of eight.
Polarization - Linear, horizontal to vertical depending on mounting position.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Noise-Field Intensity Meter TS-587/U. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy, Code 911.

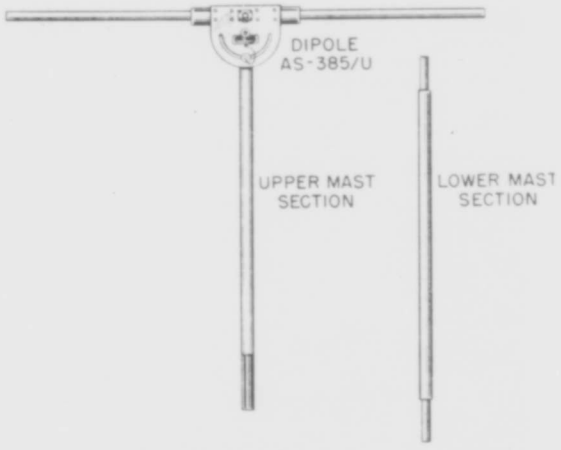
MANUFACTURERS: Stoddart Aircraft and Radio Co., procurement contract NObsr-30140 (Navy).

STOCK NUMBERS: Navy N5985-254-7127.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) NAVSHIPS 900,990.

3) U. S. Department of Defense Nomenclature Card.



AS-385/U

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ANTENNA ASSEMBLY AS-389/FMQ-2

FREQUENCY: UHF band, 390 - 410 mc.

TYPE: Stub-sleeve antenna.

DESCRIPTION: The antenna assembly consists of a stub-sleeve antenna (18 inches long) and a 100-foot cable of RG-8/U with a UG-21/BU connector. The stub is a silver-plated brass rod 5-37/64 inches long and 1/2 inch in diameter. The sleeve is a silver-plated brass tube 6-3/4 inches long and 2-1/2 inches in diameter. The antenna is mounted by a pipe-cap support with a stand-off insulator.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground or shipboard.

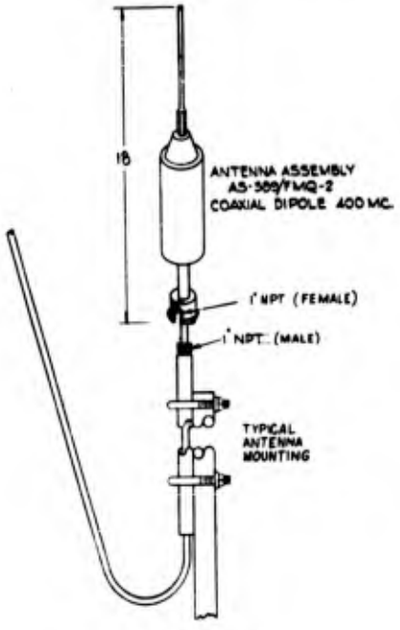
ASSOCIATED EQUIPMENT: Radiosonde Receptors AN/FMQ-2 and AN/FMQ-2A. Equipment function - meteorological measurement.

COGNIZANT AGENCY: U. S. Navy, code 851.

MANUFACTURER: National Co., Inc., contract NObsr-57468.

STOCK NUMBER: U. S. Navy R16AN-AS389FMQ2.

REFERENCES:
1) U. S. Navy, Radiosonde Receptor AN/FMQ-2A, Instruction Book, NAVAER 16-30FMQ2-501, NAVSHIPS 91667, (July 7, 1952). UNCLASSIFIED.
2) Bendix-Freiz Drawing Number 515083-B.
3) U. S. Navy Specification MIL-R-15312.



AS-389/FMQ-2

ANTENNA ASSEMBLY AS-394 (*) /U

FREQUENCY: VHF band, 100-156 mc.

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna is a modified ground-plane antenna consisting of a vertical radiating tube 3 inches in diameter and 6 radial ground-plane rods pointing downward at an angle of 45°. Overall, it is 40 inches high and 3 feet in diameter. It is constructed of aluminum and is mounted by a plug inserted into the end of a tube with 1-1/2-inch standard internal pipe thread. AS-394/U is the same as AS-338/GPN-2 except for the mounting thread, which is 3-3/4-inch-12 thread for AS-338/GPN-2.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communication.

MISCELLANEOUS: AS-394(*)/U denotes AS-394/U and AS-394A/U. AS-394A/U uses bayonet-type connectors on the ground-plane rods in place of the threaded ends used in AS-394/U.

COGNIZANT AGENCY: U. S. Navy, code 939 and code 823.

MANUFACTURER: Bendix Radio, contract NObsr-39229 for AS-394/U and contract NObsr-43011 for AS-394A/U.

STOCK NUMBER: Federal Stock Number F5985-349-5338 for AS-394/U and F5985-369-5458 for AS-394A/U.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Bendix Radio Drawing No. L200272.
3) Navy Specification CS-972.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-395()/TRC-16

FREQUENCY: SHF band, 8000 - 8500 mc.

TYPE: Cut paraboloidal reflector with waveguide feed.

DESCRIPTION: The antenna consists of an offset waveguide horn feed and a circular section of a cut paraboloidal reflector. The offset feed is used to minimize the side lobes. The

assembly includes a 3-inch-diameter, sectionalized steel mast and gin-pole base, and is approximately 50 feet high when erected. Provision is made for rotating the antenna through 180° and tilting through 15°. The waveguide utilizes a "magic T" for transmit-receive isolation.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-16(). Equipment function - communication.

COGNIZANT AGENCY: SCL-6507.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-396/CRC-6

Cancelled 2 September 1948
(Nomenclature Card).
AS-396/CRC-6 is replaced by AS-450/GR.

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ANTENNA ASSEMBLY AS-398()/PRC-14

FREQUENCY RANGE: VHF and UHF bands, 225 - 400 mc.

TYPE: Dipole with corner reflector.

DESCRIPTION: The antenna assembly consists of a corner reflector fed by a dipole, a matching section, and accessories. It is constructed of brass and aluminum. The reflector is in two sections, each 30 inches high and 40 inches wide, connected at one edge to form a 90° angle. No adjustments are required to cover the frequency range.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - 30° to 45° in plane perpendicular to dipole.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-14(). Equipment function - communication.

MISCELLANEOUS: Similar to, but not interchangeable with, AS-397()/GRC-16.

COGNIZANT AGENCY: WL-45-901.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-399()/FRN-11

FREQUENCY: Probably LF and MF bands, 0.200 - 0.400 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of a whip, a tuning unit, an antenna base, and 1000 feet of 52-ohm coaxial cable. The whip is constructed of one-piece metal and is 11 feet high when erected.

BEAM DATA:
Beam type - Omnidirectional in azimuth.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Control-Monitor Set AN/FRN-11(). Equipment function - remote control.

MISCELLANEOUS: Frequency range of antenna is not available; however, range of AN/FRN-11() is 200 - 400 kc.

COGNIZANT AGENCY: WL-45-904.

MANUFACTURER: Radio Receptor Co., procurement contract order W-28-099-ac-58.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-400/UP&()

FREQUENCY: LF band, 0.11 - 0.22 mc.

TYPE: Loop.

DESCRIPTION: The antenna assembly consists of a loop antenna mounted by means of spring fasteners to a pedestal. The assembly is designed to plug into a receptacle provided on Field Intensity Meter TS-635()/UP. The antenna is rotatable and has an inductance of 110 microhenries. Dimensions are 12 inches wide, 28-1/4 inches high, and 1-3/16 inch deep.

SCAN DATA: 360° azimuth rotation.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Field Intensity Meter TS-635()/UP. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Washington Institute of Technology, procurement contract order NXsr-88850 (Navy).

STOCK NUMBER: Navy N5985-254-7137.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, Volume I, (Feb. 1958). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-403(*)/MPS-4

MAJOR COMPONENTS: 1 reflector, 1 feed horn, and 1 pedestal.

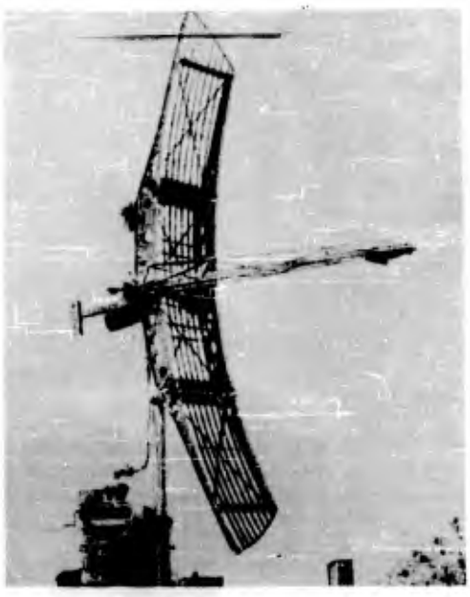
FREQUENCY: SHF band, 6275 - 6575 mc.

TYPE: Parabolic-cylinder reflector with horn feed.

DESCRIPTION: The reflector is a slatted parabolic cylinder made of aluminum tubing. The reflector is 165 inches high by 61 inches wide. It folds for storage. The feed is a waveguide horn with a dielectric lens. The overall antenna is 165 inches high, 61 inches wide, and 126-1/2 inches deep in the operating position and 75 inches high, 61 inches wide, and 92 inches deep when folded in the stowed position.

BEAM DATA:
Half-power beam width -
Vertical - 0.8°
Horizontal - 4.0°
Beam type - Fan.
Polarization - Horizontal.

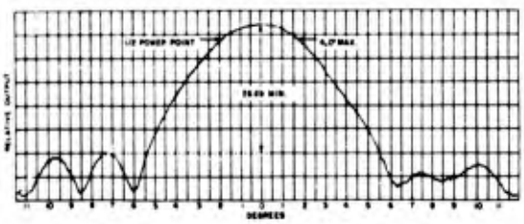
SCAN DATA: The feed horn, with respect to the reflector, moves through 10° in the vertical plane at a rate of about one scan per second. In addition, the whole antenna can be tilted from -2° to +20° in elevation and rotated through 360° in either direction in azimuth at a rate that is variable between 0 and 7 revolutions per minute.



INSTALLATION: Ground, tower or trailer.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPS-4(*) and AN/FPS-5. Equipment function - height finding. Range - 80 miles for bombers and 37 miles for jet fighters.

MISCELLANEOUS: AS-403(*)/MPS-4 denotes AS-403/MPS-4 and AS-403A/MPS-4. The models are electrically and mechanically interchangeable. AS-403A/MPS has an interlock on the oscillator motor and a mechanical lock on the waggler-arm gear-train drive that AS-403/MPS-4 does not have.

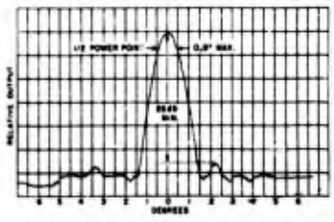


Horizontal Radiation Pattern for AS-403(*)/MPS

COGNIZANT AGENCY: U. S. Navy, Bureau of Ships.

MANUFACTURERS: Raytheon Elec. Company, Hazeltine Electric Company, and American Machine and Foundry Company, contract numbers NObsr-42428 and NObsr-63481.

STOCK NUMBERS: Federal Stock Numbers N 5985-644-0212 and 5840-556-9165.



Vertical Radiation Pattern for AS-403(*)/MPS

REFERENCES:
1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D.C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

2) John E. Cruichshank and Reuben O. Schlegelmilch, Ground Radar Sets, Systems and Related Components, RADC 52-22. Rome, New York: Rome Air Development Center, (Nov. 1, 1952). AD-128. SECRET.

3) U. S. Air Force, Radar Sets AN/MPS-4 and AN/FPS-5, Instruction Book, T.O.31P3-2FPS-5-2, (May 1, 1952 - revised Nov. 15, 1954) UNCLASSIFIED.

4) AMF Part Drawing Number 59-124-R-7500.

5) Navy Specification BuShips CS-968 (AS-403/MPS-4).

6) Navy Specification SHIPS-R-1176 (AS-403A/MPS-4)

7) Raytheon Part Specification RX-1796.

8) Raytheon Drawing Number A-105A-X2.

9) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-406/URQ-2

FREQUENCY: VHF band, 140.58 mc.

TYPE: Dipole array.

DESCRIPTION: The antenna is made of cadmium-plated copper tubing. The overall dimensions are 42 inches by 42 inches by 28 inches in the operating position and 11 inches by 10 inches by 2 inches in the stowed position. The antenna is provided with a band for mounting on the head of the operator. It has an input impedance of 37 ohms and is fed by a 75-ohm coaxial cable which is 1/2-wavelength long.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/URQ-2. Equipment function - communication.

COGNIZANT AGENCY: ARL-47-370.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-408/U

FREQUENCY: VHF and UHF bands, 225 - 390 mc.

TYPE: Conical antenna or discone.

DESCRIPTION: The antenna consists of a sheet-metal disc and a cone, consisting of rods below the disc. The discone is fed by a coaxial cable coming up through the axis of the cone. The disc is 10-1/2 inches in diameter, and the cone has a maximum diameter of 16-1/2 inches. The antenna is 16-1/2 inches long. When the disc is removed and the rods that make up the cone are collapsed for storage, the antenna is 20-1/2 inches long and 2-5/16 inches in diameter. The antenna can be mounted in a number of ways. A ring on the top is provided for hanging the antenna from a tree. The base is threaded for mounting on a standard vehicular mount. A spike is also provided for mounting the antenna upright on the ground. If none of these mounting methods is practical, the cone of the antenna can be set on the ground or other surface.

BEAM DATA:
Beam type - Omnidirectional in azimuth; the vertical pattern is suitable for communication with both ground and aircraft equipments.
Polarization - Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Portable Radio Transmitting and Receiving Equipment Navy Model MAY-1. Equipment function - communication.

COGNIZANT AGENCY: U. S. Navy.



AS-408/U

MANUFACTURER: Raytheon Manufacturing Company, contracts NXsr-77839 and NObsr-30037.

STOCK NUMBER: Navy F16-A-51870-1721 and Signal Corps 2A264-408.

REFERENCES:
1) U. S. Air Force, Portable Radio Transmitting and Receiving Equipment Navy Model May-1, Instruction Book, T.O. 31R2-4-99-1, NAVSHIPS 91792, (July 2, 1956). UNCLASSIFIED.
2) Raytheon Part Specification RX-2125.
3) Navy Specification RE13A1071A.
4) Raytheon Drawing A-99N-X1
5) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-410(*)/URD-2

FREQUENCY: VHF band, 100-156 mc.

TYPE: Crossed Adcock with sense monopole.

DESCRIPTION: The antenna is a crossed Adcock made up of four vertical dipoles located at the corners of a square with a sense monopole located in the center. The assembly includes a goniometer with a crossarm bracket on top. The crossarm bracket is used for mounting the antenna elements.

BEAM DATA:
Beam type - Figure of eight.
Polarization - Vertical; however, the antenna is capable of receiving signals which are polarized as far as 45° from vertical.

SCAN DATA: Electromechanical scan of 360° in azimuth is accomplished by a capacitive goniometer.

TUNING/MATCHING DEVICES: A bazooka type of balance-to-unbalance transformer connects the balanced goniometer to the unbalanced coaxial cable which connects the antenna to the receiver.

INSTALLATION: Ground and shipboard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/URD-2. Equipment function - direction finding and communication reception.

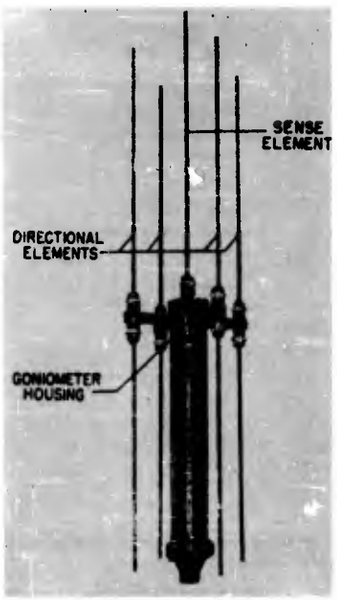
MISCELLANEOUS: AS/410(*)/URD-2 denotes models AS-410/URD-2 and AS/410A/URD-2.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Corp., contract NObsr-39237.

STOCK NUMBER: Federal Stock Number 5825-244-5401.

REFERENCES:
1) U. S. Air Force, Direction Finder Set AN/URD-2A, Instruction Book, T.O. 31R4-2URD2-21, (Aug. 31, 1951). UNCLASSIFIED.
2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania; Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.
3) Bendix Radio Drawing Number OR 200318-1.
4) Navy Spec. CS-571A.
5) U. S. Department of Defense Nomenclature Card.



AS-410(*)/URD-2

ANTENNA ASSEMBLY AS-411()/U

MAJOR COMPONENTS: Antenna reflector AT-175()/U, Antenna Support Mast AB-149/T, and waveguide-fed dipole assembly.

FREQUENCY: SHF band, 4800 - 5200 mc.

TYPE: Paraboloidal reflector, fed by a waveguide double dipole.

DESCRIPTION:
A) Antenna Reflector AT-175()/U is an aluminum

sectionalized paraboloid. It consists of two half-paraboloids which are joined to form a full paraboloid. It has a diameter of 40 inches, a focal length of 11.8 inches, and weighs 15 pounds.

B) Antenna Support Mast AB-149/T supports Antenna Assembly AS-411()/U. The feed assembly consists of a section of tapered waveguide which extends through the vertex of the reflector and lies along its axis. Attached to the end of the waveguide (near the focal point) are two parasitic dipoles to direct the r-f energy from the waveguide toward the surface of the reflector.

BEAM DATA:
Half-power beamwidth -
Vertical - 40.
Horizontal - 40.
Beam type - Fan.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/TXR-1() and AN/TXT-1(). Equipment function - probably television.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Blaw Knox Company, contractor - Sperry Gyroscope Company, Navy contract number NObsr-30106.

STOCK NUMBERS: Federal Stock Number F5985-250-8617, for AT-175()/U.

REFERENCE:
Navy Specification Number CS-378.

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FREQUENCY: LF band, 0.18 mc.

TYPE: Tower with counterpoise.

DESCRIPTION: The antenna has a 625-foot tower and 40,000 square feet of copper ground screen. Twelve top-loading capacity elements are used to broaden the response characteristics of the antenna.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-7 and AN/FPN-8. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: WL-45-1116.

MANUFACTURER: Lehigh Structural Steel Company, contract W-28-099-ac-219.

STOCK NUMBERS: Federal Stock Numbers F5985-505-2395 and F5985-669-7373 (with spares).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP AS-415/FPN

MAJOR COMPONENTS: Fifty 24-foot tower sections, one base insulator, a ground system, and necessary accessaries and hardware.

FREQUENCY: LF band, 0.1 mc.

TYPE: Tower with counterpoise.

DESCRIPTION: The antenna has a 1200-foot tower and 40,000 square feet of copper ground screen.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-15. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: WL-45-1115.

MANUFACTURER: Truscon Steel Company, contract W-28-099-ac-321.

REFERENCES:
1) Air Force Specification WLENG-1007-A.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-432()/UL

FREQUENCY: VHF and UHF band, 150 - 450 mc; VSWR < 2:1.

TYPE: Corner reflector with discone feed.

DESCRIPTION: The reflector has a corner angle of 135° and is constructed of metal rods. It has an aperture of 60 inches by 106 inches. The discone which is mounted by dielectric brackets, is spaced 0.14 wavelength, at 150 mc, from the apex of the reflector. The antenna is fed by a 50-ohm cable, RG-8/U. The total weight is approximately 35 pounds.

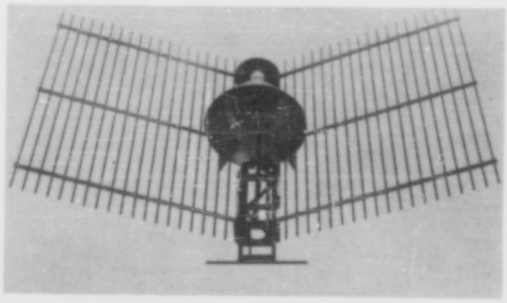
BEAM DATA:
Gain - 8 to 10 db.
Half-power beamwidth -
Electrical plane - 65° at center frequency.
Magnetic plane - 75° at center frequency.
Beam type - Pencil.
Polarization - Can be mounted for either horizontal or vertical polarization.

TUNING/MATCHING DEVICES: The matching element consists of a series capacitance determined by the thickness of a dielectric disc placed between the radiator top plate and a conical button connected to the inner conductor of the feed line. This compensates for the positive reactance appearing at the discone terminals between 140 and 200 mc.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - countermeasures.

COGNIZANT AGENCY: ESL-3620, Signal Corps Project Number 441-4, Department of the Army Project Number 3-30-01-013.

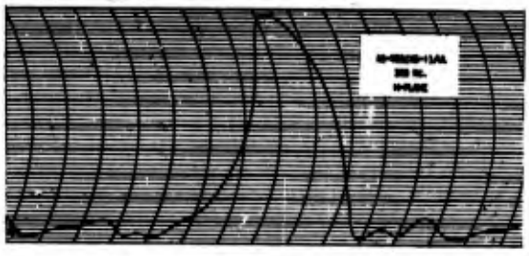
REFERENCES:
1) Department of the Army, Wide Band Directive Antenna System, Antennas AS-432()/UL and AS-433()/UL, Technical Memorandum, A.T.I. 152021, (Nov. 15, 1948). UNCLASSIFIED.

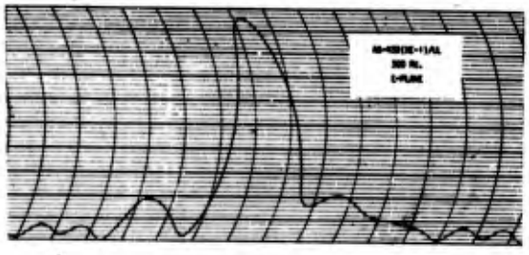


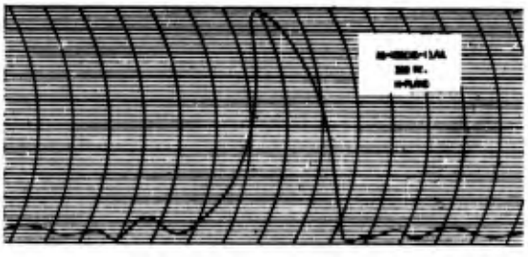
AS-432()/UL

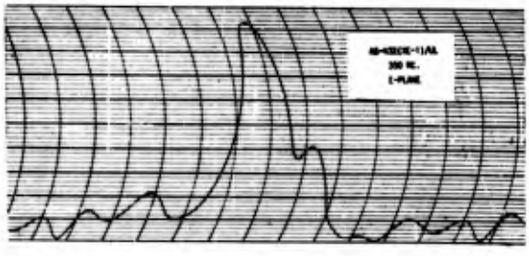
2) Government Drawings ES-D-82558, ES-D-82559, ES-D-82560, ES-D-82561, ES-D-82562, ES-C-82563, ES-C-82564, ES-C-82565, ES-C-82566, ES-A-82567 and ES-A-82568.

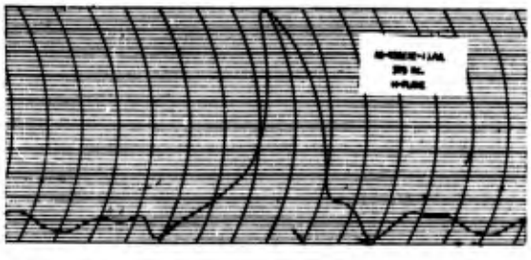
3) U. S. Department of Defense Nomenclature Card.

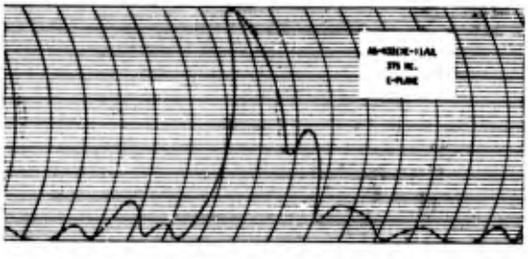












Radiation Patterns for AS-432(XE-1)/UL

Radiation Patterns for AS-432(XE-1)/UL

ANTENNA AS-433()/UL

FREQUENCY: UHF band, 400-850 mc; VSWR < 2:1.

TYPE: Corner reflector with discone feed.

DESCRIPTION: The reflector has a corner angle of 135° and is constructed of metal rods. It has an aperture 22 inches by 45 inches. The discone is mounted, by a metalic tube, about 0.15 wave lengths, at 400 mc, from the apex of the reflector. The antenna is fed by a 50-ohm cable, RG-8/U. The total weight is approximately 13 pounds.

BEAM DATA:
Gain - 8 to 10 db.
Half-power beamwidth -
Electrical plane - 68° at center frequency.
Magnetic plane - 55° at center frequency.
Beam type - Pencil.
Polarization - Can be mounted for either horizontal or vertical polarization.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - countermeasures.



AS-433()/UL

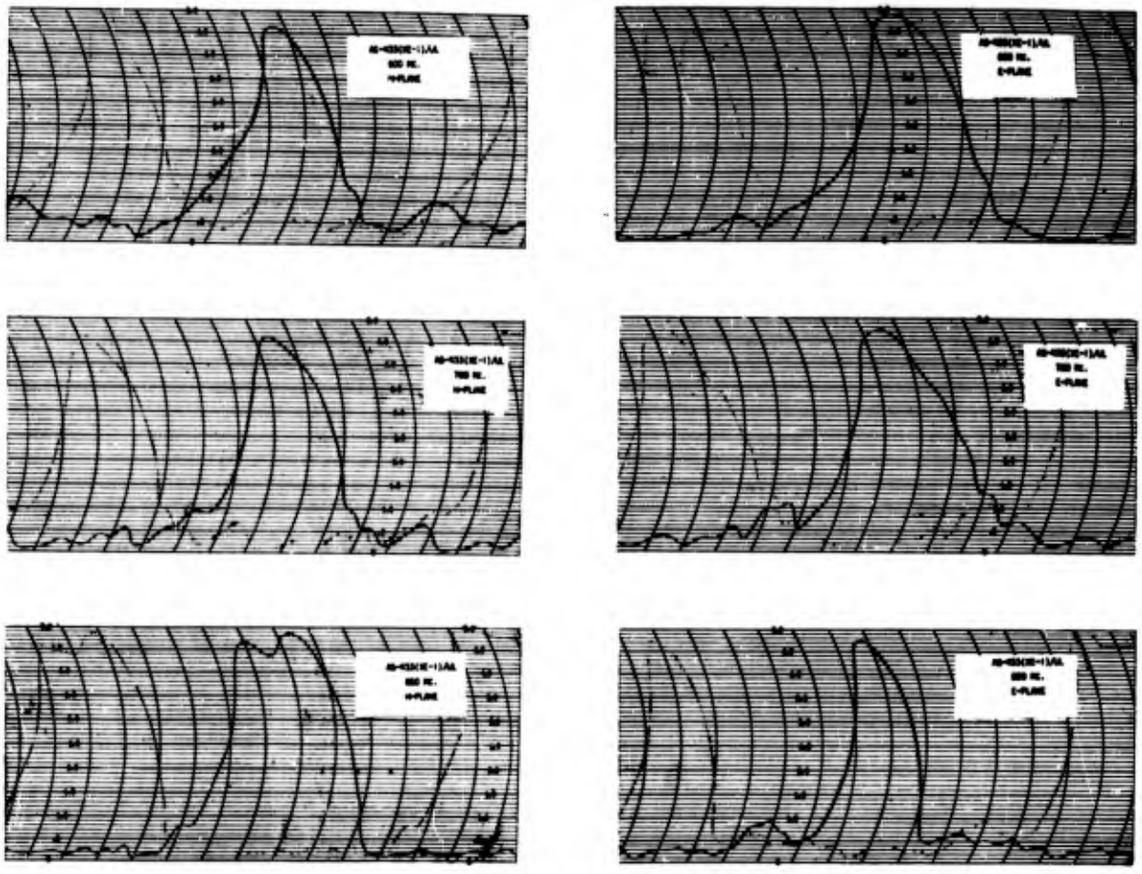
COGNIZANT AGENCY: ESL-3621, Signal Corps Project Number 441-4, Department of the Army Project Number 3-30-01-013.

REFERENCES:

1) Department of the Army, Wide Band Directive Antenna System, Antennas AS-432()/UL and AS-433()/UL, Technical Memorandum, A.T.I. 152021, (Nov. 15, 1948). UNCLASSIFIED.

2) Government Drawing Numbers AD-83, AD-84, AD-85, AD-64, AD-65, and AD-66.

3) U. S. Department of Defense Nomenclature Card.



Radiation Patterns for AS-433(XE-1)/UL

Radiation Patterns for AS-433(XE-1)/UL

ANTENNA AS-437()/CPN-4

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Adcock-type antenna of four dipoles.

DESCRIPTION: The antenna is a crossed-H Adcock made up of 4 vertical dipoles and a goniometer. The overall antenna is 25 inches long, 25 inches wide, and 39 inches high. It mounts on a 2-1/2-inch mast and is fed by a 50-ohm coaxial cable.

BEAM DATA:
Beam type - Cardioid.
Polarization - Vertical.

SCAN DATA: The antenna scans electromechanically in azimuth by means of a goniometer with a 400-cycle a-c motor. The scan rate is 1800 revolutions per minute.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Direction Finder Group AN/GPA-3. Equipment function - navigation, direction finding. AN/GPA-3 is auxilary equipment for Ground Approach Control Equip- AN/CPN-4. Equipment function - approach control.

MISCELLANEOUS: AS-437()/CPN-4 is similar to AS-439/GRD but is not interchangeable due to difference in goniometer motor.

COGNIZANT AGENCY: WL-45-1150.

MANUFACTURER: Federal Telecommunications, AF contract W-28-099-ac-27.

REFERENCES:
1) U. S. Air Force, Electronic Equipment Handbook, 54WC11-494, (Jan. 1954). SECRET.
2) U. S. Department of Defense Nomenclature Card.

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3) U. S. Air Force, Direction Finder Set AN/TRD-9, Handbook Operation and Service Instructions, T.O. No. 16-30TRD9-1, (June 18, 1954). UNCLASSIFIED.

4) Departments of the Air Force and the Bureau of Aeronautics, Direction-Finding Kit MX-536/GRD, Handbook Operation Instructions, AN 16-35MX536-21, (October 10, 1952). UNCLASSIFIED.

5) Departments of the Air Force and the Bureau of Aeronautics, Antenna AS-439/GRD, Overhaul Instructions with Parts Breakdown, AN 16-35AS439-3, (November 11, 1954). UNCLASSIFIED.

6) Raytheon Part Drawing Number R-205-54262.

7) Air Force Specification WLENG-208A.

8) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP AS-440/GRD

MAJOR COMPONENTS: 5 AS-338/GRD antennas, 5 CP-19 counterpoises, 4 MC-411A phase inverters, 1 MC-413A phase inverter, 3 junction boxes, and necessary connecting cables.

FREQUENCY: HF band, 3 - 9 mc.

TYPE: Crossed Adcock antenna with sense monopole.

DESCRIPTION: The antenna system is a crossed U-Adcock consisting of five AS-438/GRD monopoles. A monopole is located at each corner of a square whose diagonals are 36 feet long. The fifth monopole, the sense antenna, is located at the center of the square. Each monopole consists of two 12-foot sections joined end to end and mounted on a 3-foot base assembly. Six nylon guy ropes are attached to each monopole for vertical support. Counterpoise CP-19, a 9-foot-square metal mat, is used under each monopole to insure a uniform ground. It is woven of tinned strips of copper braiding in a pattern of 6-inch squares with a one-foot-square section cut from the center of the mat.

BEAM DATA:
Beam type - Cardioid.
Polarization - Vertical.

SCAN DATA: The antenna scans through 360° in azimuth by means of a goniometer. The scan rate is 1800 revolutions per minute.

TUNING/MATCHING DEVICES: A phase inverter, which mounts on the base assembly of each monopole, matches the high impedance of the monopole to the low impedance of the connecting cable.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Direction Finding Groups AN/GRA-7, AN/FRA-8, AN/FRA-9, and Direction Finding Kit MX-536/GRD. Equipment function - direction finding.

COGNIZANT AGENCY:
AS-440/GRD - - - WL-51-R2150;
AS-438/GRD - - - WL-45-R2179.

MANUFACTURER: Federal Telecommunications Laboratories, Inc., contract W33-038-ac-21373.

STOCK NUMBERS
AS-438/GRD - - - Signal Corps 2A264-438;
AS-440/GRD - - - Air Force 1800 - 202 161 488.

REFERENCES:
1) Departments of the Air Force and the Bureau of Aeronautics, Antenna Group AS-440/GRD and Receiver Group OA-94/GRD, Parts Breakdown, AN 16-35AS440-4, (June 15, 1953). UNCLASSIFIED.

2) Departments of the Air Force and the Bureau of Aeronautics, HF Direction-Finding System AS-440/GRD and OA-94/GRD, Handbook Overhaul Instructions, AN 16-35AS440-3, (December 5, 1952). UNCLASSIFIED.

3) Departments of the Air Force and the Bureau of Aeronautics, HF Direction-Finding System AS-440/GRD and OA 94/GRD, Handbook Service Instructions, AN 16-35AS440-2, (Dec. 15, 1952). UNCLASSIFIED.

4) Departments of the Air Force and the Bureau of Aeronautics, HF Direction-Finding System AS-440/GRD and OA-94/GRD, Handbook Operation Instructions, AN 16-35AS440-1, (Nov. 25, 1952). UNCLASSIFIED.

5) Air Force Specification WLENG-208.

6) Federal Telephone and Radio Corporation, Drawing Number NL-67265-12 and Part Number NVS-1436 (AS-438/GRD).

7) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP AS-441/CRT-3

MAJOR COMPONENTS: 2 reels with 306 feet of W-147 wire, 2 AB-152/CRT-3 antenna support

masts, 6 GP-107/CRT-3 guy stakes, 2 MX-881/CRT-3 guy-wire insulator assemblies, and 2 CW-184/CRT-3 canvas bags.

FREQUENCY: MF and HF bands, 0.5 - 8.28 mc.

TYPE: Long wire with counterpoise.

DESCRIPTION: The antenna is a 306-foot wire antenna mounted between two 25-foot, anodized-aluminum, sectionalized masts. It has a single wire counterpoise. The counterpoise and antenna are made of cadmium-copper wire. The components are packed in two duck-cotton canvas bags 32 inches long, 5 inches wide, and 4-1/2 inches deep.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/CRT-3. Equipment function - communication.

COGNIZANT AGENCY: AEL-50-R259.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-445()/GRC

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Dipole array.

DESCRIPTION: The antenna is a sectionalized, aluminum dipole array mounted on a metal flange. It is fed by 100 feet of 52-ohm coaxial cable, CG-497/U.

BEAM DATA: The nomenclature card states that the array is circularly polarized and omni-directional.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communication.

COGNIZANT AGENCY: WL-45-1250.

MANUFACTURER: Melpar, Inc., contract W-28-099-ac-440.

REFERENCES:
1) Air Force Specification WLENG-166.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP AS-447/FPN

FREQUENCY: LF band, 0.17 - 0.19 mc.

TYPE: Long wire.

DESCRIPTION: The antenna consists of 1300 feet of No. 10 AWG copperweld wire supported at one end by an Army M1 VLA balloon. The other end is attached to a gasoline-driven Army M1 winch.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPN-7 and AN/FPN-8. Equipment function - navigation, surface reference.

MISCELLANEOUS: AS-447/FPN is a stand-by antenna for use if AS-414/FPN fails.

COGNIZANT AGENCY: WL-45-1279.

MANUFACTURER: Harvey Radio Laboratories, Inc., contract W-28-038-ac-76.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-449(*)/GRD

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Amplitude modulating direction finding antenna.

DESCRIPTION: The antenna consists of a vertical brass dipole, 2 feet long, surrounded by a rotating cylinder containing a reflecting element. The antenna is mounted on a mast and is fed by a coaxial cable. The input impedance varies between 50 and 200 ohms depending on frequency.

BEAM DATA:
Polarization - Vertical.

SCAN DATA: The reflecting element rotates at 1800 revolutions per minute and causes the antenna to scan through 360° in azimuth.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Direction Finder AN/CRD-6, Direction Finder Set AN/FRD-2, and Direction Finder Group AN/GRD-9. Equipment function - direction finding.

MISCELLANEOUS: AS-449(*)/GRD denotes AS-449/GRD and AS-449A/GRD. The models are functionally interchangeable.

COGNIZANT AGENCY: WL-53-R-1928 and WL-55-1356.

MANUFACTURER: Raytheon Manufacturing Company, contracts AF-33(038)-30605 and W28-099-ac-117.

REFERENCES:

1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. Section III, State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) U. S. Air Force, AACS Communications Electronics Equipment, (July 15, 1958). UNCLASSIFIED.

3) Departments of the Air Force and the Bureau of Aeronautics, Overhaul Instructions with Parts Breakdown for Antenna AS-439/GRD, AN 16-35AS439-3, (Nov. 11, 1954). UNCLASSIFIED.

4) Air Force WLENG-211C.

5) Raytheon Part Drawing R-205-60126.

6) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-450/GR

See OA-238/GR.

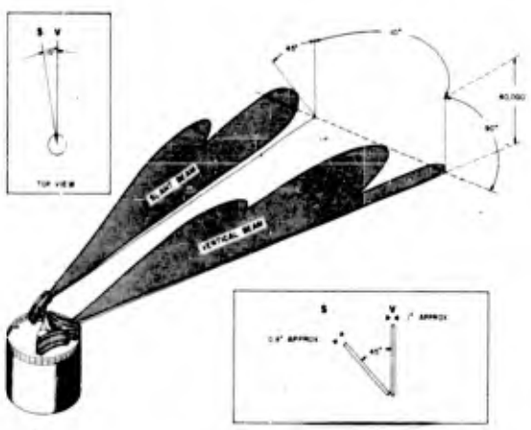
ANTENNA ASSEMBLY AS-451/CPS-6B&()

MAJOR COMPONENTS: • 1 Antenna Reflector AT-198/CPS-6B, 1 Antenna Assembly AS-452/CPS-6B, 2 AT-199/CPS-6B antenna reflectors, 1 Antenna Assembly AS-453/CPS-6B, 1 Antenna Horn AS-591/CPS-6B.

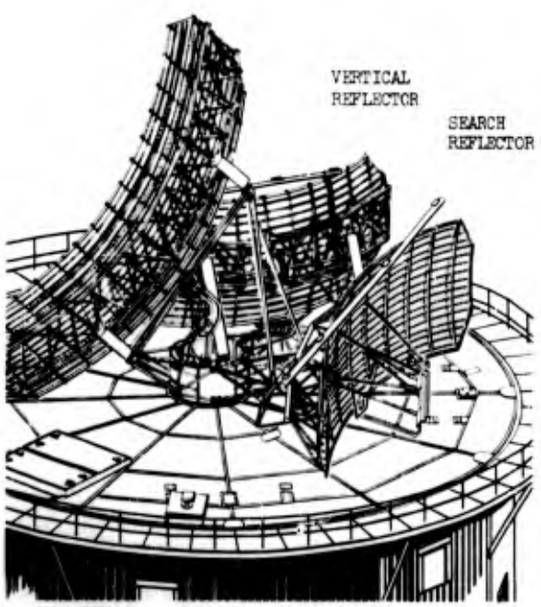
FREQUENCY: UHF and SHF bands, 2700 - 3019 mc.

TYPE: Cut Paraboloid reflectors.

DESCRIPTION: The antenna system produces 3 separate beams for use in an early-warning, height-finding, and tracking system. It uses a V-beam to determine height. The system is mounted on a rotating platform and is covered with a non-rigid, pressurized radome.



V-beam of AS-451/CPS-6B



AS-451/CPS-6B

A) AT-198/CPS-6B is a cut-paraboloidal reflector 32 feet long, 10 feet high, and 47 inches deep. It is mounted at a 45° angle to the vertical.

B) AT-199/CPS-6B is a cut-paraboloidal reflector 25 feet long, 10 feet high, and 47 inches deep. It is mounted horizontally and may be tilted upward.

C) AS-452/CPS-6B is a dipole array consisting of two sections. The upper section contains 6 dipoles, and the lower section contains 13 dipoles. It is 3 inches wide, 80 inches high, and 15 inches deep. Used as the feed for AT-198/CPS-6B reflector, it produces a $\csc^2$ radiation pattern lying in a 45° plane and composed of two overlapping beams. The beamwidth at right angles to the plane is 0.8°; in the plane of the beam, the width of the upper beam

is 24°, and the width of the lower beam is 7.7°.

D) AS-453/CPS-6B consists of an array of 8 dipoles and 3 horn feeds. These units are arranged in a space 3 inches wide, 80 inches high, and 15 inches deep. Used with reflector AT-199/CPS-6B, it produces a $\csc^2$ pattern composed of 3 overlapping beams in a vertical plane. The beam width in the horizontal plane is 1.0°. The upper beam is 21° in elevation; the center beam, 4.2°; and the lower beam, 2.2°.

The beam from AS-452/CPS-6B lags the beam of AS-453/CPS-6B by 10° in azimuth, but they form a V-beam in a plane at right angles to the direction of transmission. This V-beam is used to indicate target heights; the higher the target, the longer the elapsed time will be between the echoes from the vertical and slant beams.

E) AT-591/CPS-6B is a horn feed which is 1.84 inches by 3.34 inches at the throat and 4.654 inches by 5.10 inches at the mouth. It is used with the second AT-199/CPS-6B reflector (mounted horizontally) to produce a fan-shaped beam for early-warning search. The axis of this beam is 146.5° ahead of the vertical beam.

BEAM DATA:
Half-power beamwidth --

Antenna	Horizontal Beamwidth	Vertical
Vertical beam	1.0°	--
Slant beam	0.8°	--
Early warning	1.0°	2.2°

Beam type -
Early warning - Fan type.
Vertical beam - $\csc^2$ type.
Slant beam - $\csc^2$ type.
Polarization -
Early-warning Beam - Vertical,
Vertical Beam - Vertical,
Slant Beam - Vertical.

SCAN DATA: 360° mechanical azimuth rotation at rates from 0 to 15 revolutions per minute.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Sets AN/CPS-6B and AN/FPS-10. Equipment function - search, air; fire control; and navigation. Range - up to 265 nautical miles.

MISCELLANEOUS: The mountings used with this system allow the antennas to be tilted upward. The vertical beam may be tilted upward as much as 30° to permit search of high-flying targets. The vertical beam and slant beam can be tilted 11° as a unit. The early-warning beam can be tilted 5° upward by a hand mechanism.

AS-451/CPS-6B originally seems to have had only the vertical and slant beams. In 1952, however, General Electric developed a modification kit which added the early-warning system. The modified system was designated AS-451A/CPS-6B, but manuals list Antenna Assembly AS-451/CPS-6B and describe the modified system.

COGNIZANT AGENCY: WL-45-1288.

MANUFACTURERS: Goodyear Aircraft Company and General Electric Company.

REFERENCES:

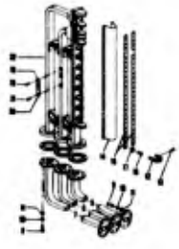
1) U. S. Air Force, Radar Set AN/CPS-6B and Radar Set AN/FPS-10, Handbook Operating Instructions, TO 31P6-2CPS6-11, (Oct. 18, 1949 - revised Jan. 15, 1957). UNCLASSIFIED.

2) U. S. Air Force, Antenna System Components for Radar Set AN/CPS-6B and Radar Set AN/FPS-10, Parts Catalog, TO 31P6-2CPS6-34, (July 28, 1950 - revised March 1, 1958). UNCLASSIFIED.

3) Military Specifications USAF Exhibit WLENG-103A.



AS-452/CPS-6B



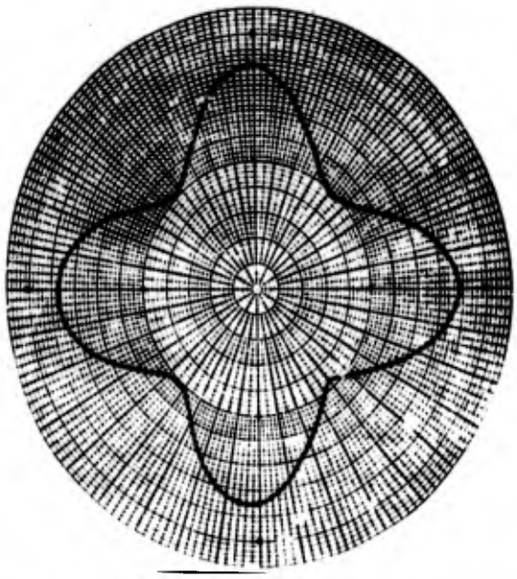
AS-453/CPS-6B

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ANTENNA AS-453/CPS-6B&()

See AS-451/CPS-6B.

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AS-454(XW-1)/FPN-13 Typical Horizontal Radiation Pattern

2) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

3) Webster-Chicago part drawing number 11025-74-1.

4) Air Force Specification ENG-2161A.

5) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-457()/MPN-1

MAJOR COMPONENTS: Antenna AT-314/MPN, Antenna Reflector AT-313/MPN.

FREQUENCY: UHF band, 2780 - 2820 mc.

TYPE: Cut paraboloidal reflector fed by a dipole array.

DESCRIPTION: Antenna Assembly AS-457()/MPN-1 consists of a cut paraboloidal reflector fed by a dipole array. The dipole array is designed so that when properly positioned and fed, it illuminates the reflector in a manner that results in a $\csc^2$ type secondary beam.

A) Antenna Reflector AT-313/MPN is a slatted cut paraboloidal reflector 5 feet wide, 8 feet high, and 27-5/8 inches deep.

B) Antenna AT-314/MPN is a dipole array which consists of two dipole mounted in front of and probe-excited from a rectangular waveguide. The section of waveguide is fed by a 75-ohm coaxial cable. The array is positioned below the focal point of the reflector.

BEAM DATA:
Gain - 31.5 db.
Half-power beamwidth - Horizontal - 5°.
Beam type - $\csc^2$ in the vertical plane from 2° to 10°.
Polarization - Horizontal.

SCAN DATA: The assembly has mechanical scan thru 360° in azimuth at 30 revolutions per minute. It can be manually tilted in elevation.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPN-1 and AN/MPN-1C. Equipment function - approach control.

COGNIZANT AGENCY: Watson Laboratories.

MANUFACTURER: Gilfillan Brothers, procurement contract W33-038ac-21179.

STOCK NUMBER: Air Force 1800-202161850.

REFERENCES:

1) U. S. Air Force, Radio Set AN/MPN-1, Handbook Operating Instructions, TO 31P5-2MPN1-1, (June 1, 1956). UNCLASSIFIED.

2) U. S. Air Force, Radio Set AN/MPN-1, Illustrated Parts Breakdown, TO 31P5-2MPN1-4, (Sept. 15, 1956, revised June 15, 1957). UNCLASSIFIED.

3) Departments of the Air Force and the Bureau of Aeronautics, Fixed Communication and Meteorological Equipment Directory - Volume III Navigational Aid Equipment, TO 31R4-1-1, (June 16, 1958). UNCLASSIFIED.

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ANTENNA SYSTEM AS-458/FPN

MAJOR COMPONENTS: 1 Antenna AB-46/C and 1 ground system.

FREQUENCY: LF band, 0.173 - 0.188 mc.

TYPE: Monopole.

DESCRIPTION: The antenna is a 60-foot guyed mast with a radial ground system or counterpoise. The mast is made of steel. The ground system is made up of 350 copperweld ground rods, 4 anchor rods, 500 feet of 6-inch by 1/32-inch copper strip and 100,000 feet of No. 8 AWG copperweld wire.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPN-7 and AN/FPN-8. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: WL-45-1410.

REFERENCES:

1) U. S. Air Force, USAF Electronic Equipment Handbook, 54WC11494, (Jan. 1954). SECRET.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-462(*)/GMD-1

MAJOR COMPONENTS: 1 paraboloidal reflector, 1 antenna scanner assembly, 1 receiver-mixer assembly, and 1 telescope assembly.

FREQUENCY: UHF band, 1660 - 1700 mc.

TYPE: Paraboloidal reflector with a feed consisting of a dipole and eccentric reflecting cup.

DESCRIPTION: The paraboloidal reflector is made of spun aluminum and is perforated to reduce wind resistance. It is made in three sections to facilitate shipping. The center section is approximately 7 feet long by 44-1/4 inches wide, and the side sections are approximately 6 feet long by 19-1/2 inches wide. The feed consists of a stationary dipole and a rotating eccentric cup. The dipole is mounted on the axis of the reflector near the focal point. The reflecting cup, which is mounted off-center, rotates about the reflector axis to produce conical scanning. The exact mechanical arrangement of the antenna scanner assembly differs in the various models.

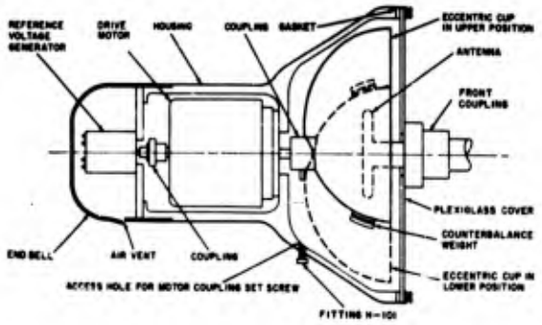
BEAM DATA:

Half-power beamwidth -
Vertical - About 6°.
Horizontal - About 6°.
Beam type - Pencil.
Polarization - Vertical.

SCAN DATA: The eccentric hemispherical reflecting cup rotates at slightly less 1800 revolutions per minute for AS-462/GMD-1 and at 2040 revolutions per minute for AS-462A/GMD-1. This off-center rotation causes the beam to rotate about the axis of the paraboloidal reflector and form a solid cone. The center of the cone has a constant power level of 80% of the maximum power level of the beam. The whole antenna can be rotated through 360° in azimuth and tilted through 90° in elevation. The system has provision for automatic tracking and local or remote manual tracking.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Rawin Set AN/GMD-1(). Equipment function - tracking of Radiosonde AN/AMT-4 for meteorological measurement.



AS-462/QMD-1&() Spinner Assembly

MISCELLANEOUS: AS-462(*)/GMD-1 denotes AS-462/GMD-1, AS-462A/GMD-1, AS-462B/GMD-1, and AS-462C/GMD-1. These models are interchangeable. However, due to differences in the mechanical arrangement, shape and location of parts, the component parts of the different models are not interchangeable.

COGNIZANT AGENCY: SCLE-4596(AS-462/GMD-1); SCLE-4613(AS-462A/GMD-1); SCLE-4614(AS-462B/GMD-1); and SCLM-7581(AS-462C/GMD-1).

MANUFACTURER: Allen D. Cardwell, orders 11383-Phila-47-77 (AS-462/GMD-1), 16815-PH-51-05 (AS-462A/GMD-1) and 15903-PH-55-53(3) (AS-462C/GMD-1); General Electric Company, order 3136-PH-51-05 (AS-462B/GMD-1).

STOCK NUMBERS: AS-462/GMD-1 antenna --- Signal Corps 2A264-462; AS-462A,B/GMD-1 antenna --- Signal Corps 2A288A-144, Navy V16AN-AS462A-GMDICDN, and Air Force 2600-200599450.

REFERENCES:

1) Department of the Army, Rawin Set AN/GMD-1, Technical Manual, TM 11-271, (December 1950). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Rawin Set AN/GMD-1A, Technical Manual and Technical Order, TM 11-271A and TO 16-30 GMD1-5, (August 1954). UNCLASSIFIED.

3) Cardwell Drawing Number 500100(AS-462/GMD-1).

4) Cardwell Drawing Number 202734(AS-462A/GMD-1.

5) General Electric Part Drawing Number G-202734 (AS-462B/GMD-1).

6) Cardwell Drawing Number 203727(AS-462C/GMD-1).

7) Signal Corps Specification MIL-R-0010159.

8) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-465/GR

MAJOR COMPONENTS: 1 sectionalized ground-plane antenna and 1 sectionalized mast with guys.

FREQUENCY: HF and VHF bands, 20 - 55 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna is an elevated whip with a ground plane. A total of twenty four 23-1/2-inch-long sections are used to make up the vertical antenna and ground plane. Probably 6 sections are used for the vertical element and 6 sections for each of three ground-plane elements. The antenna is mounted on a guyed mast made up of twelve 33-inch sections. The antenna has an impedance of 95 ohms and is fed by a coaxial cable. When disassembled and packed for transit, the overall dimensions are 35 inches long and 36 inches in circumference.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Receiver-Transmitters RT-66/GRC, RT-67/GRC, and RT-68/GRC and Radio Receivers R-108/GRC, R-109/GRC, and R-110/GRC. Equipment function - communication.

MISCELLANEOUS: The nomenclature card is the only available source of information. It is incomplete and contradictory. It states that the erected height is 30 feet.

COGNIZANT AGENCY: SCL-6949.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-467/CPS-10

FREQUENCY: SHF band, 9003 - 9168 mc.

TYPE: Paraboloidal reflector probably fed with a waveguide double-dipole feed.

DESCRIPTION: The antenna is an aluminum paraboloid probably fed by a waveguide double-dipole feed. The reflector is sectionalized so that the center protion (a smaller paraboloid) and the feed can be extended beyond the remaining portion of the reflector. When the feed and center section of the reflector are extended, the resulting beam is relatively wide and is used for search. When the large paraboloidal reflector is used, the beam is narrow and is used for tracking. For both conditions, the feed is nutated to produce a conical scan.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1.

SCAN DATA: The nutating feed produces a conical scan. A wide beam is provided for search and a narrow beam is provided for automatic tracking. Two motors, controlled either manually or by a servo system, are used to provide rotation and tilt of the antenna.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/CPS-10. Equipment function - search and tracking.

COGNIZANT AGENCY: ESL-3696.

MANUFACTURER: Radio Corporation of America, order 15883-PH-46-91.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) RCA Part Drawing Number 626822-501 Sub 0.

3) SCEL Specification SCL-2051.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-470/FRN-12 and AS-471/FRN-12

FREQUENCY: VHF band, 112.1 - 115 mc (AS-470/FRN-12); and 115 - 117.9 mc (AS-471/FRN-12.

TYPE: Arrays composed of five Alford loops.

DESCRIPTION: Both AS-470/FRN-12 and AS-471/FRN-12 are antenna arrays consisting of five horizontal loop antennas of the Alford type. Four of these loops are placed symmetrically in the corners and the fifth loop in the center of a square. Each array is 39 inches high, 3 feet wide, and 3 feet deep. It weighs 322 pounds.

BEAM DATA:
Beam type - Rotating figure of eight (produced by corner Alford loops) and amplitude - modulated, omnidirectional (produced by center Alford loops).
Polarization - Horizontal.

TUNING/MATCHING DEVICES: CU-230/FRN-12, CU-241/FRN-12, and CN-98/FRN-12 contain line stretchers and shorting stubs which are used to obtain the proper phasing and impedance matching between the antennas and the transmitter. In addition, a half-wavelength balancing section and a quarter-wavelength matching transformer are located in the pedestal of each loop.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/FRN-12. Equipment function - navigation, surface reference.

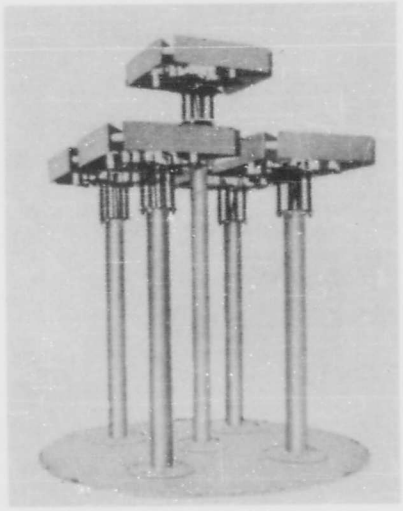
MISCELLANEOUS: When Antenna Assembly AS-470/FRN-12 or AS-471/FRN-12 is used in conjunction with the other equipment furnished with AN/FRN-12, it radiates the beam patterns described in the Beam Data section. The pulsed omnidirectional pattern is the result of amplitude modulating the energy to the center Alford loop at 30 cycles per second. The figure-of-eight pattern is rotated by a goniometer at 30 cycles per second. The two radiated signals are phased so that the 30 cycle modulation of the signals is in phase in the direction of magnetic north.

COGNIZANT AGENCY: WL-45-1584.

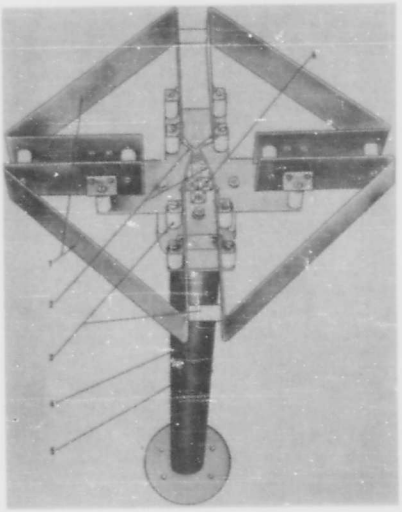
MANUFACTURER: Lavoie Laboratories, Inc., contract W-33-038-ac-21665.

REFERENCES:
1) Departments of the Air Force, Radio Beacon AN/CRN-16, Handbook Operating Instructions, AN 16-30CRN16-8, (March 8, 1949). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AS-470/FRN-12 or AS-471/FRN-12



Loop antenna for AS-470/FRN-12 or AS-471/FRN-12

ANTENNA AS-472/GP

FREQUENCY: UHF band, 469 - 525 mc.

TYPE: Probably a mattress antenna.

DESCRIPTION: The antenna consists of a sectionalized aluminum screen and eight brass dipoles. The screen is made up of three sections. The center section is 42 inches long and the two side sections, which have rounded outer edges, are 33 inches long. The overall dimensions of the screen are 9 feet long, 2 feet wide, and 3/4 inch deep. The dipoles are each 7-3/8 inches long and 3/4 inch in diameter. The antenna is fed by a 52-ohm coaxial cable. It mounts on Pedestal AB-162/GP by means of eight screws.

SCAN DATA: The antenna has a lobing motor with a rotary switch. The antenna is also rotated by means of a servo system controlled by the operator of Radio Receiving Set AN/ARR-27.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AEW(ACC) ground terminal equipment. Equipment function - fire control.

COGNIZANT AGENCY: WL-45-1490.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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HORN ANTENNA AS-474/APG

FREQUENCY: SHF band, 9190 - 9300 mc; VSWR < 2.

TYPE: Horn.

DESCRIPTION: The antenna consists of a horn with an attached parallax target which may be adjusted in rotation about each of its three intersecting axes. The target is marked to permit boresighting and harmonization of Antenna Assembly AS-409/APG-27 and the 50-caliber, remote-controlled, type B-3 machine gun turret. The antenna weighs 15 pounds and is approximately 19 inches by 17 inches by 9 inches.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Equipment for Radar Set AN/APG-27. Equipment function - test.

COGNIZANT AGENCY: AEL-48-618.

MANUFACTURERS: Emerson Electric Manufacturing Company, order W33-038-ac-15070.

REFERENCES:
1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-476/SMD

FREQUENCY: UHF band, 1660 - 1700 mc.

TYPE: Paraboloidal reflector with a feed consisting of a dipole and eccentric reflecting cup.

DESCRIPTION: The antenna is a 6-foot paraboloidal reflector with a feed consisting of a stationary dipole, mounted on the axis and near the focus of the reflector. A reflecting cup is designed to rotate off-center about the axis of the reflector to produce conical scanning. The antenna is fed by RG-59/U waveguide. It has a total weight of 1585 pounds.

SCAN DATA: The pedestal, which is part of the antenna assembly, permits movement of the antenna in three planes: cross level at a rate of 4 revolutions per minute, vertical from -32° to +87° at a rate of 5 revolutions per minute, and azimuth through 360° at a rate of 4 revolutions per minute. The eccentric hemispherical reflecting cup rotates at a rate of 30 revolutions per second. This off-center rotation causes the beam to rotate about the axis of the paraboloidal reflector and form a solid cone.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radiosonde Receptor AN/SMD-1. Equipment function - meteorological measurement.

MISCELLANEOUS: AS-476/SMD is similar to but not interchangeable with AS-462/GMD-1.

COGNIZANT AGENCY: U. S. Navy.

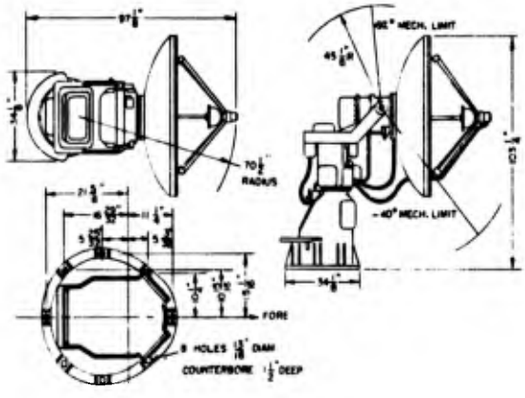
MANUFACTURER: General Electric Company, contract N5sr-11814.

REFERENCES:
1) Department of the Navy and the Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) General Electric Drawing W-9078478G1.

3) Navy Specification CS-89.

4) U. S. Department of Defense Nomenclature Card.



AS-476/SMD

ANTENNA AS-478/GRC-15

FREQUENCY: SHF band, 4400 - 5000 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is a paraboloid, 4 feet in diameter. The type of feed is not known, but the complete antenna is fed by a 50-ohm coaxial cable. The reflector mounts by a cap clamp on top of a 6-3/8-inch-diameter mast.

SCAN DATA: The antenna can be rotated in azimuth and tilted in elevation. It is motor driven.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-15.
Equipment function - communication.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Melpar, Inc., contract NObsr-39174.

STOCK NUMBER: Federal Stock Number F5985-295-9028.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, Volume III, (Feb. 1958). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-479/GRC-15

Cancelled 20 July 1953 per nomenclature card.

ANTENNA ASSEMBLY AS-483/GR

FREQUENCY: VHF and UHF band, 225 - 400 mc.

TYPE: Stacked array of dipoles.

DESCRIPTION: The antenna consists of four bays of dipoles mounted one on top of the other. Each bay consists of four vertical dipoles arranged 90° apart around a central mast. The bays are stacked in such a way that the dipoles of each bay are spaced 45° from the corresponding dipole of the adjacent bays. The overall array is 10 feet long and 14 inches wide. The array mounts on top of mast AB-158/GR. The dipoles of the array are all fed in phase by 52-ohm coaxial cable.

BEAM DATA:
Gain - Approximately 5 db (center frequency).
Half-power beamwidth - Vertical 30°.
Beam type - Approximately omnidirectional in azimuth.
Polarization - Vertical.

MATCHING/TUNING DEVICES: There are impedance transformers between the individual dipoles and the coaxial transmission line.

INSTALLATION: Ground.

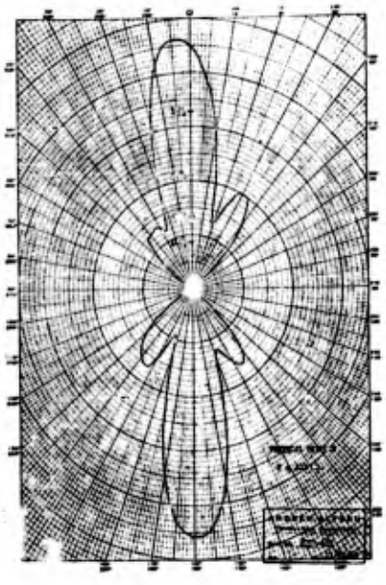
ASSOCIATED EQUIPMENT: Various radio sets.
Equipment function - communication.

MISCELLANEOUS: Antenna AS-483/GR is similar to but not interchangeable with AS-768/GR and AS-992/GR.

COGNIZANT AGENCY: WL-45-2036.

MANUFACTURER: Andrew Alford Laboratory, contract AF-28-(099)-77.

REFERENCES:
1) U. S. Air Force, Final Engineering Report on the Development of the AS-483(XW-2)/GR Antenna, A.T.I. 78390, (Feb. 4, 1950). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.



Vertical Radiation Pattern for AS-483/GR

ANTENNA AS-488/FPS-3

FREQUENCY: UHF band, 1215 - 1365 mc; VSWR < 1.28.

TYPE: Vertical array of flared waveguide horns.

DESCRIPTION: Antenna AS-488/FPS-3 is normally used to feed cut paraboloidal reflector AT-251/FPS-3 or AT-392/MPS-7. It consists of two horn assemblies. One horn assembly is made up of three horns with a common waveguide feed mounted in a vertical line slightly below the axis of the reflector. This assembly produces the upper beam of the system. The other horn assembly consists of a single horn located on the axis of the reflector. This horn produces the lower beam of the system. Each of the two horn assemblies is connected to a separate transmitter and receiver.

TUNING/MATCHING DEVICES: The phase relationship and power of the horns are factory adjusted by polystyrene inserts.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPS-3, AN/FPS-3A, and AN/MPS-7. Equipment function - search, air. Range - 325 nautical miles.

COGNIZANT AGENCY: WL-45-2269.

MANUFACTURERS: Goodyear Aircraft Corporation and Bendix Radio Corporation, contract W-33-038-ac-21187.

STOCK NUMBER: Air Force 1800 - 203556663.

REFERENCES:

1) U. S. Air Force, Radar Set AN/FPS-3, Radar Set AN/MPS-7, Antenna Equipment, Handbook Maintenance Instructions, T.O. 31P6-2FPS3-92, (July 1, 1955). UNCLASSIFIED.

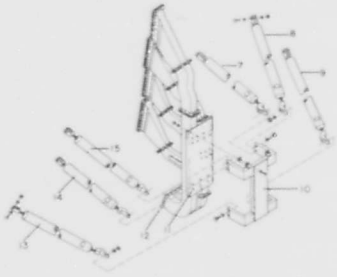
2) U. S. Air Force and the Bureau of Aeronautics, Radar Set AN/MPS-7, Handbook Operating Instructions, T.O. 31P6-2MPS7-1, (May 11, 1953 - revised June 15, 1955). UNCLASSIFIED.

3) U. S. Air Force, Radar Set AN/FPS-3, Handbook Operation and Service Instructions, T.O. 31P6-2FPS3-1, (Feb. 5, 1951 - revised March 15, 1955). UNCLASSIFIED.

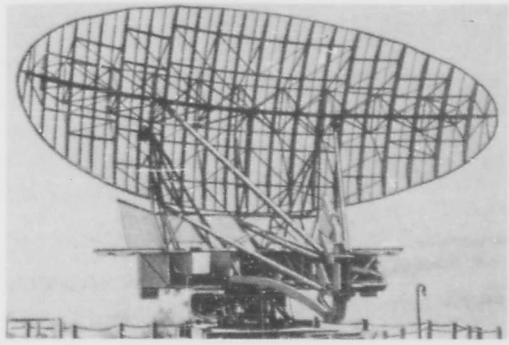
4) Bendix Specification BP-515.

5) Bendix Drawing Numbers 185N-1, 185N-2, 185N-851.

6) Air Force Specification ENG-2119.



AS-488/FPS-3



AS-488/FPS-3 Mounted

ANTENNA ASSEMBLY AS-490/TRD-7

FREQUENCY: VHF band, 90 - 150 mc.

TYPE: Crossed-Adcock antenna with sense antenna.

DESCRIPTION: The antenna consists of a crossed-Adcock antenna with a sense antenna mounted approximately 7 feet above the Adcock. The Adcock antenna has a 95-ohm balanced feed and the sense antenna has a 50-ohm unbalanced feed. The antenna is constructed of aluminum and is mast-mounted.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/TRD-7. Equipment function - direction finding.

COGNIZANT AGENCY: ESL-3831.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

ANTENNA AS-491/PPN-13

FREQUENCY: UHF band, 420 - 460 mc.

TYPE: Corner reflector.

DESCRIPTION: The antenna is a folding aluminum corner reflector weighing 7 pounds. It mounts on a portable mast by means of a pin and socket. The feed is probably a dipole fed by a 50-ohm cable.

BEAM DATA:
Half-power beamwidth -
Vertical - 61°.
Horizontal - 65°.
Polarization - Horizontal.

SCAN DATA: The antenna can be rotated manually.

TUNING/MATCHING DEVICES: The antenna is matched to a 50-ohm cable.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radar Set AN/PPN-13. Equipment function - navigation.

COGNIZANT AGENCY: ESL-3835.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-492/FMQ-2

FREQUENCY: UHF band, 400 - 406 mc.

TYPE: Stub-sleeve antenna.

DESCRIPTION: The antenna is a stub-sleeve antenna with a 3/4-wavelength stub and a 1/4-wavelength sleeve or skirt. It is constructed of aluminum and weighs approximately 4 pounds. It is mounted either against the side of a vehicle or on a mast and is fed by a coaxial cable.

BEAM DATA:
Half-power beamwidth - Vertical - 35°.
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

TUNING/MATCHING DEVICES: The antenna is matched to a 70-ohm cable by means of a built-in 1/4-wavelength transformer.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radiosonde Receptor AN/FMQ-2. Equipment function - meteorological measurement.

COGNIZANT AGENCY: ESL-3834.

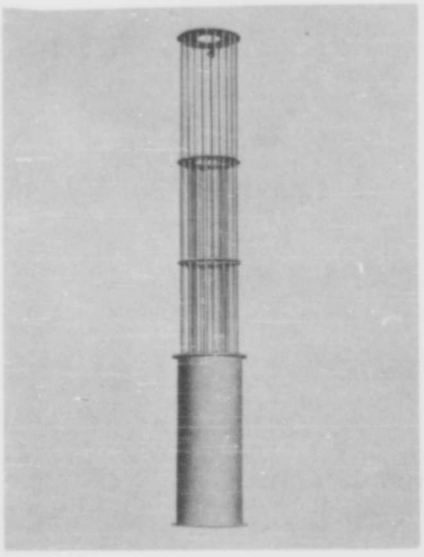
REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-494/FRN-12A

MAJOR COMPONENTS: A circular ground-plane Antenna AT-372/FRN-12A and a tone wheel and drive motor.

FREQUENCY: VHF band, 112 - 118 mc.

DESCRIPTION: The antenna assembly AT-494/FRN-12A consists of two cage assemblies mounted on a ground plane and a tone wheel and drive motor. The two cage assemblies make up antenna AT-372/FRN-12A which is composed of a lower cage, Antenna Section AT-384/FRN-12A, and an upper cage, Antenna Section AT-381/FRN-12A. AT-384/FRN-12A has two active radiating elements. One element is a flat metal disc with 4 radial slots located 90° apart. These slots are fed at the outer edge of the disc by four radial, coaxial feed lines. The resulting radiation from this disk is the same as that of a loop but the input impedance is different. The other element is a 0.1-wavelength, horizontal folded dipole which is rotated by the drive motor. The loop disc is mounted horizontally above the horizontal dipole, and both are mounted inside the lower cage. This cage is constructed of two concentric rings of vertical rods. The rods filter and attenuate most of the vertically polarized



AS-494/FRN-12A Antenna Assembly

components of the radiation. The cage is enclosed in a fiberglass radome and covered by a shorting plate which separates it from the upper cage. The upper cage AT-381/FRN-12A, which contains no radiating elements, also consists of two concentric rings of vertical rods. Its function is to filter out any remaining vertically polarized components of the radiation. The total weight of the assembly is 315 pounds.

BEAM DATA:
Beam type - Rotating figure-of-eight (produced by the folded dipole) and an amplitude-modulated, omnidirectional beam produced by the loop disc. The radiation pattern has a vertical cone-of-silence of 20°.
Polarization - Horizontal.

SCAN DATA: The folded dipole is rotated at 30 revolutions per second. The radio-frequency energy fed to the loop disc is amplitude modulated at 30 cycles per second. The two are phased so the 30-cycle modulation of the two signals is in phase in the direction of magnetic north.

TUNING/MATCHING DEVICES: Four matching stubs located on the top of the loop disc provide a partial impedance match at the input of this antenna. An r-f tuner assembly located at the base of the antenna assembly provides additional matching for the loop-disc antenna.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Transmitting Sets AN/FRN-12A, AN/MRN-10. Equipment function - navigation, surface reference.

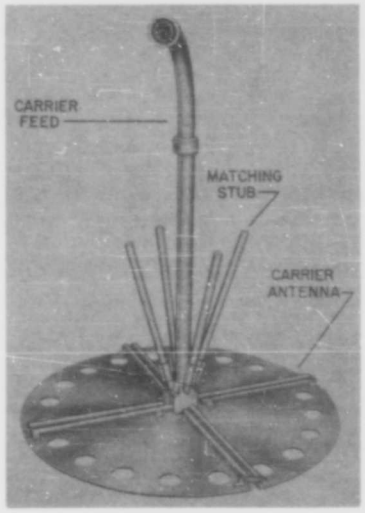
COGNIZANT AGENCY: WL-50-R1268.

MANUFACTURER: Federal Telecommunications Laboratories, contract W-28-099-ac-470; and Sterling Precision Corporation.

STOCK NUMBERS: AS-494/FRN-124 ... Federal Stock Numbers F 5985-295-8482, 5825-219-7854; AT-372/FRN-12A ... Federal Stock Number 5825-567-4530.

REFERENCES:
1) U. S. Air Force, Radio Transmitting Sets AN/FRN-12, AN/MRN-10 and AN/FRN-12A, Handbook Operating Instructions, TO 31R4-2FRN12-1, (Oct. 29, 1951). UNCLASSIFIED.

2) U. S. Air Force, VHF Omnidirectional Range Antenna Assembly AS-494/FRN-12A, Handbook Operation and Service Instructions, TO 31R4-2FRN12-11, (Feb. 1, 1952). UNCLASSIFIED.



AS-494/FRN-12A Carrier Antenna

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ANTENNA AS-497/MPN-5

FREQUENCY: SHF band, 9003 - 9168 mc.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is designed to feed a cut paraboloidal reflector and produce a csc^2 secondary pattern. This feed consists of 165 probe-fed dipoles mounted on a section of variable-width waveguide. The overall feed assembly is 173 inches long, 8-1/2 inches high, and 11 inches deep. It mounts by means of a bracket to Reflector AT-263/MPN-5.

SCAN DATA: The antenna scans a sector by mechanically varying the width of the waveguide. The antenna can be rotated through $\pm$ 20°.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-5. Equipment function - approach control (GCA).

MISCELLANEOUS: A letter from Bendix Radio dated 27 February 1959 states that Antenna AS-497/MPN-5 was not used.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio, contract NObsr-43011.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, Volume III, (Feb. 1958). UNCLASSIFIED.
2) Bendix Part Drawing Number OR200538-1.
3) Navy Specification CS-972.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-499/UPN

FREQUENCY: SHF band, 8900 - 9400 mc.

TYPE: Horn antenna.

DESCRIPTION: The antenna is a horn constructed of brass and teflon. The overall dimensions are 7 inches high, 5 inches wide, and 4 inches deep. It is fed by RG-52/" rectangular waveguide.

BEAM DATA:
Beam type - Approximately hemispherical.
Polarization - Circular.

ASSOCIATED EQUIPMENT: Radar Beacons AN/UPN-8 and ~~AN/~~UPN-11. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Andrew Alford, Inc.

REFERENCES:
1) Andrew Alford type 1211 (div).
2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-502/TPN & ( )

MAJOR COMPONENTS: 1 Antenna AT-538/TPN, 1 Antenna AT-539/TPN.

FREQUENCY: SHF band, 8900 to 9400 mc.

TYPE: Horn antenna.

DESCRIPTION:
A) AT-538/TPN is a horn-type antenna which is fed by a rectangular waveguide. The input impedance is 50 ohms. It is pedestal mounted.

B) AT-539/TPN is also a horn-type antenna with a rectangular waveguide feed, but it has an input impedance of 380 ohms. Both antennas are mounted on the same ground sheet.

BEAM DATA:
Polarization - Circular (AT-539/TPN).

ASSOCIATED EQUIPMENT: Radar Beacon AN/UPN-8. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Andrew Alford, Consulting Engineers, procurement contract NObsr 52245.

STOCK NUMBERS: Federal Stock Number F 5840-285-0511.

REFERENCES:
1) Andrew Alford Drawings number D-24211 - 60-002 A, B-24211 - 60-000A, B-24211 - 60-001 A.
2) Military Specification MIL-A-15295.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-503()/FPN

FREQUENCY: VLF band, 0.1 mc.

TYPE: Tower antenna.

DESCRIPTION: The antenna is a 90-foot, sectionalized, aluminum mast. It consists of 9 sections. One section is 10 feet long, the other eight sections are each 11 feet long. The tower is guyed and mounted on a base insulator. A radial ground system is provided.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-15(), Radar Receiving Set AN/FPN-19(). Equipment function - navigation.

COGNIZANT AGENCY: WL-50-1061.

MANUFACTURERS: Federal Telephone and Radio Company, procurement contract W28-099-ac-475.

REFERENCES:
1) Federal Telephone and Radio Company drawing FRL-23171-1.
2) USAF Exhibit WLENG - 1100.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-504()/FPN

FREQUENCY: VLF band, 0.1 mc.

TYPE: Long wire (Beverage type).

DESCRIPTION: AS-504()/FPN is a single-wire antenna constructed of 9842 feet of No. 8 AWG copperweld wire. It is supported every 120 feet by wooden poles. The end of the antenna away from the receiver is terminated by an adjustable resistance of 750 ohms nominal resistance. This resistance device also serves as a gas-type lightning protector. At the same end there is buried a radial ground system consisting of 10 radial elements each 100 feet long. At the receiver end the buried ground system has 6 radial elements each 100 feet long. It is by open-wire transmission line with an input impedance of 600 ohms.

BEAM DATA:
Polarization - Horizontal.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Receiving Set AN/FPN-19(). Equipment function - navigation.

COGNIZANT AGENCY: WL-50-1063.

MANUFACTURERS: Federal Telephone and Radio Company, procurement contract W28-099-ac-475.

REFERENCES:
1) Federal Telephone and Radio drawing FRL-23170-1.
2) USAF Exhibit WLENG-1100.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-505(*)/GR

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Collinear array of dipoles.

DESCRIPTION: The antenna is an array of 4 vertically stacked vertical squirrel-cage dipole antennas. Each squirrel-cage dipole is 18 inches in diameter and 14 inches long. Overall, the array is 18 inches in diameter and 12 feet in length. The array consists of 4 aluminum sections which mount either to Mast AB-157/GR & () or to a class-2 telephone pole. The antenna is fed by a 52-ohm coaxial transmission line. Shipping weight is 85 pounds.

BEAM DATA:
Gain - 6 db.
Beam type - Omnidirectional in azimuth plane.
Polarization - Vertical.

ASSOCIATED EQUIPMENT: Various UHF sets. Equipment function - communications.

MISCELLANEOUS: Antenna AS-505A/GR differs from AS-505/GR in that AS-505A/GR has a 4-1/2-foot mounting extension instead of the 3-foot one for AS-505/GR. Antenna AS-505B/GR is the only one of this series whose cognizant agency is RCAF 485; otherwise, it is similar to AS-505/GR. Antenna AS-505C/GR differs from AS-505/GR only in mechanical design.

COGNIZANT AGENCY: AS-505/GR ... WL-50-1093; AS-505A/GR ... WL-52-1894; AS-505B/GR ... RCAF 485; AS-505C/GR ... WL-58-1336.



AS-505(*)/GR

MANUFACTURERS: Collins Radio Co., procurement contract AF 33(038)-6135.

REFERENCES:
1) U. S. Air Force, Radio Set AN/GRC-27, Illustrated Parts Breakdown, T.O. 31R2-2GRC27-4, (April 1, 1958). UNCLASSIFIED.
2) USAF Exhibit ENG-240
3) Government Specification MIL-A-4852A.

STOCK NUMBERS: AS-505/GR ... F 5985-217-1601; AS-505A/GR ... F 5985-317-2518 and 5985-217-0505.

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COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Designers for Industry, Inc., procurement contract NObsr-42284.

STOCK NUMBERS: Federal Stock Number N5820-321-6865.

REFERENCES:
1) Designers for Industry, Inc., Drawing C1969X140.
2) U. S. Navy Specification C5879.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-512/MR&()

FREQUENCY: HF band, 3 - 5 mc.

TYPE: Adjustable whip.

DESCRIPTION: The antenna is an adjustable, telescopic whip of chrome-plated, monel-metal tubing. When extended, the antenna is 25 feet long, and when telescoped it is 68 inches long. The overall diameter is 7/8 inch. The antenna consists of 5 sections each 5 feet long. It is end fed.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-5. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Bendix Radio Division, procurement contract NObsr-43011.

STOCK NUMBERS: Federal Stock Number N5985-240-4350.

REFERENCES:
1) Bendix Radio Division Drawing N200600-1.
2) U. S. Navy Specification CS-972.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-513/GPN

See OA-373/GPN.

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ANTENNA AS-514/URD-4&()

FREQUENCY: VHF and UHF bands, 225.0 - 399.9 mc.

TYPE: Adcock antenna.

DESCRIPTION: AS-514/URD&() is a rotating, twin-dipole, Adcock antenna array. Sense information is obtained by shifting the phase of a portion of the incoming signal before combining voltages from the antenna elements. The antenna system is designed for use with vertically polarized signals. Accurate direction-finding information is provided, however, from signals polarized as much as 45 degrees from vertical. Input impedance is 52 ohms.

BEAM DATA:
Beam type - figure of eight or bent figure of eight in azimuth.
Polarization - Vertical.

SCAN DATA: 360° mechanical azimuth rotation at 825 revolutions per minute.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/URD-4. Equipment function - navigation, direction finding; and countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy.



AS-514/URD-4

MANUFACTURERS: Bendix Radio Division, procurement contracts NObsr-52513 and NObsr-57098.

STOCK NUMBER: Federal Stock Number F5985-285-0795.

REFERENCES:

1) Bendix Radio Division Drawing OR650001-1.

2) U. S. Military Specification MIL-D-16252.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-516()/GRC-19

Calcelled 3 September 1952.

ANTENNA ASSEMBLY AS-519/GPN&()

See OA-234/GPN.

ANTENNA ASSEMBLY AS-520/GPN&()

See OA-235/GPN&().

ANTENNA ASSEMBLY AS-529/GP&()

See OA-464/GP.

ANTENNA ASSEMBLY AS-530/GP&()

See OA-464/GP.

ANTENNA ASSEMBLY AS-531/GP&()

See OA-464/GP.

. . . . . .

ANTENNA ASSEMBLY AS-532/GP&()

See OA-464/GP.

ANTENNA AS-533/GR

MAJOR COMPONENTS: 1 AT-445/GR antenna section, 1 AT-444/GR antenna section, 1 AT-443/GR antenna section, 1 AT-442/GR antenna section, 1 MX-1168/GR antenna loading disk, 1 MT-865/GR antenna base, and necessary stakes and guys.

FREQUENCY: MF and HF band, 0.54 - 10 mc and 8 - 30 mc.

TYPE: Monopole, four of which are normally used to form an Adcock antenna.

DESCRIPTION: The antenna is a four-section monopole made up of the following components:

A) Antenna Section AT-445/GR, which is a steel tube 3/4 inch in diameter and approximately 75 inches long.

B) Antenna Section AT-444/GR, which is a steel tube 7/8 inch in diameter and approximately 100 inches long.

C) Antenna Section AT-443/GR, which is a steel tube 1-1/16 inch in diameter and approximately 100 inches long.

D) Antenna Section AT-442/GR, which is a steel tube 1-1/4 inches in diameter and approximately 100 inches long. This section has a mast insulator near the bottom, and a ball at the lower end attaches in the socket of the mast base.

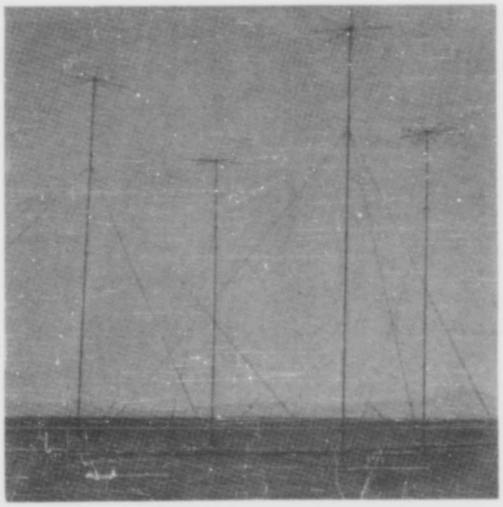
E) Antenna Loading Disk MX-1168/GR, which consists of eight 2-3/4-foot hairpin radials equally spaced in a circle around the top of Antenna Section AT-445/GR and which is collapsable for storage.

F) Antenna Base MT-865/GR, which is a square wooden platform with a socket for the mast ball of AT-442/GR.

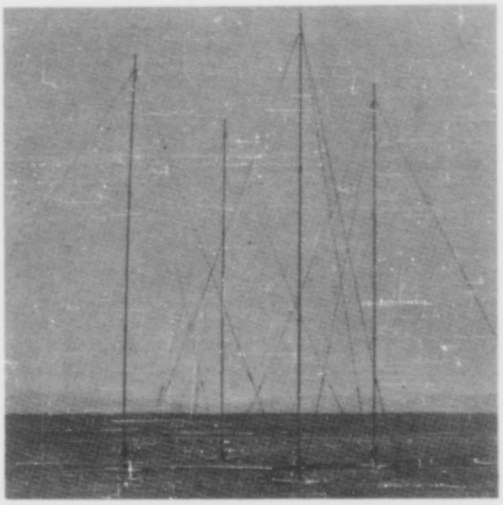
Four AS-533/GR monopole antennas are normally erected in a square array centred over a square, wire-mesh, counterpoise MX-1169/GRD to form an Adcock antenna system. To cover the frequency range of 0.54 to 10 mc, the Adcock antenna system is erected with a monopole height of 29 feet with loading disks and is spaced 33 feet between pairs. To cover the frequency range of 8 to 30 mc, a height of 22 feet 4 inches without loading disks and a spacing of 18 feet 10 inches are used.

BEAM DATA:
Beam type -
Monopole - Omnidirectional in azimuth.
Adcock - Figure of eight.
Polarization - Vertical.

INSTALLATION: Ground, transportable.



AS-533/GR&() (low-frequency installation)



AS-533/GR&() (high-frequency installation)

ASSOCIATED EQUIPMENT: Direction Finder Sets AN/TRD-4 and AN/TRD-4A. Equipment function - direction finding.

COGNIZANT AGENCY: SCLE-4462.

MANUFACTURER: Servo Corporation of America, contract 14189-PH-51-93.

STOCK NUMBER: Federal Stock Number 5985-284-4208.

REFERENCES:
1) Department of the Army, Direction Finder Set AN/TRD-4A, Technical Manual, TM 11-688, (June 1955). UNCLASSIFIED.
2) U. S. Government Specification MIL-R-10637.
3) U. S. Signal Corps Drawing SM-D-131821.

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ANTENNA AS-534/FRC&()

FREQUENCY: VLF band, 0.01744 mc.

TYPE: Flat-top antenna.

DESCRIPTION: The antenna is a multiple-wire, tower-supported, flat-top antenna. It is 1756 meters long, 1300 meters wide, and 252 meters high. It uses a multiple downlead feed. The total capacity is 0.055 microfarad, and the total resistance is 1.16 to 1.2 ohms. The antenna is supported by 8 towers located in 2 parallel lines of 4 towers each. Copperweld wires are used.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Alexanderson alternator.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Radio Corporation of America.

REFERENCES:
1) Radio Corporation of America Specification 224 RCA.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-536/PRD-1&()

FREQUENCY: VLF, LF, MF, and HF bands, 0.1 to 30 mc.

TYPE: Loop antenna and rod antenna.

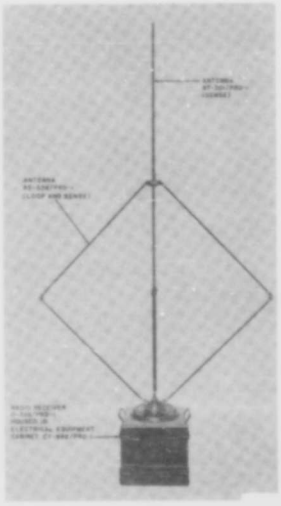
DESCRIPTION: The antenna system is a combined square-loop antenna and sense antenna. The arms of the square loop are fabricated of steel tubes, copper and silver plated, and are hinged at the top and corners so that the unit can be collapsed and folded for packing. The vertical diagonal of the loop is the sense antenna and is made of a stainless steel, telescoping rod and tube. When necessary, Antenna AT-301/PRD-1&() is used as an extension to the sense antenna. When opened, the loop antenna is approximately 1 meter on each side, and the sense antenna is approximately 52 inches long. When closed, the loop antenna is approximately 40 inches long, 3-5/16 inches wide, and 1-3/4 inches thick.

BEAM DATA:
Beam type - Cardioid.
Polarization - Vertical.

SCAN DATA: 360° manual azimuth rotation.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/PRD-1. Equipment function - countermeasures, direction finding.



AS-536/PRD-1&() and AT-301/PRD-1

MISCELLANEOUS: Antenna AT-301/PRD-1 is used with Antenna AS-536/PRD-1&().

COGNIZANT AGENCY: SCLE-4250.

MANUFACTURERS: Andrea Radio Corporation procurement contract 14180-PH-51-93.

REFERENCES:
1) Department of the Army, Direction Finder Set AN/PRD-1, Technical Manual, TM 11-677, (Oct. 1955). UNCLASSIFIED.
2) U. S. Military Specification MIL-R-10599(Signal Corps).

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ANTENNA ASSEMBLY AS-541(*)/U

See OA-497/TLR-1&().

ANTENNA ASSEMBLY AS-542(*)/TLR-1&()

See OA-497/TLR-1&().

ANTENNA ASSEMBLY AS-543/U&()

See OA-497/TLR-1&().

ANTENNA ASSEMBLY AS-544(*)/U

See OA-497/TLR-1&().

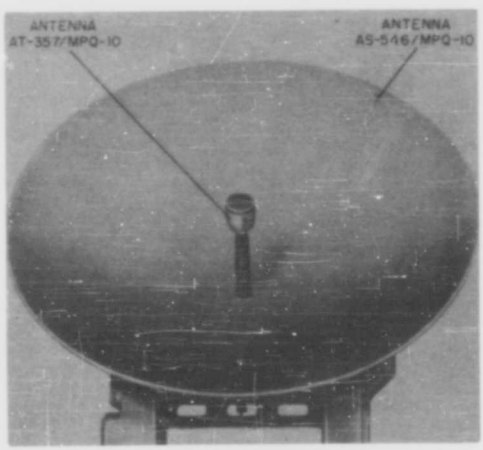
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ANTENNA AS-546/MPQ-10

FREQUENCY: UHF band, 2700 - 2950 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a paraboloidal reflector normally used with a dipole feed, AT-357/MPQ-10, to make up the antenna system for Radar Set AN/MPQ-10. The reflector is a dish, 68-3/4 inches in diameter, supported by a three-pronged spider.



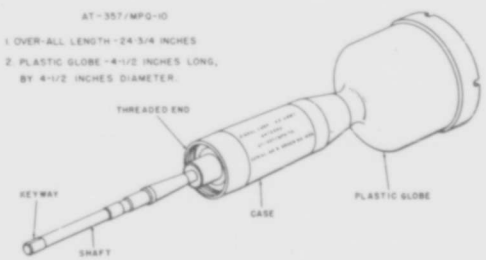
AS-546/MPQ-10 with AT-357/MPQ-10 Feed

BEAM DATA: (When used with AT-357/MPQ-10)
Half-power beamwidth - Vertical - 5°.
Horizontal - 5°.
Beam type - Pencil.

SCAN DATA: When the AS-546/MPQ-10 reflector and the AT-357/MPQ-10 feed are used together as the antenna system for Radar Set AN/MPQ-10, the antenna has two modes of operation, search and tracking.

In the search mode, the feed does not nutate and the entire antenna can be turned manually or set to oscillate in azimuth through a variable sector from 200 to 800 mils. In addition, the elevation of the antenna can be adjusted from -125 mils to +1540 mils.

In the tracking mode, the feed, offset 1-1/2° from the reflector axis, nutates at a rate of 60 cycles per second. The entire antenna can be rotated and tilted either manually or automatically. The manual tracking limits are 850 mils per second in azimuth and 650 mils per second in elevation; the automatic tracking limits are 350 mils per second in azimuth and 250 mils per second in elevation.



AT-357/TPQ-10

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-10.
Equipment function - search, surface; and tracking (mortar location).

COGNIZANT AGENCY: SCL-10751.

MANUFACTURER: Sperry Gyroscope Company.

REFERENCES:
1) Department of the Army, Radar Sets AN/MPQ-10 and AN/MPQ-10A Repair Manual, TM11-1503 (May 1954). UNCLASSIFIED.
2) Departments of the Army and the Air Force, Radar Sets AN/MPQ-10 and AN/MPQ-10A Installation and Operation, TM 11-1303, TO 16-30MPQ10-6 (June 1954). UNCLASSIFIED.
3) Government Specification Number MIL-R-10608.

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ANTENNA AS-547()/FPN-10

FREQUENCY: SHF band, 9310 mc.

TYPE: Array of slots in a circular waveguide.

DESCRIPTION: The antenna is a linear array of slots cut in a circular, one-piece, waveguide made of cadmium-plated brass. It is housed in a waterproof, fiberglass cover. It is, overall, 28 inches in height and 7-3/8 inches in diameter. This antenna is designed for use with a beacon transmitter and is probably similar to the transmitting sections of the AS-118/CPN-6 and AS-119/CPN-6 antennas.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Beacon AN/FPN-10. Equipment function - navigation.

MISCELLANEOUS: Beam characteristics are similar to those of AS-118/CPN-6 and AS-119/CPN-6.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURTERS: Raytheon Manufacturing Company, type 1608, procurement contract NObsr-42082.

REFERENCES:
1) Raytheon Manufacturing Company Drawing E-101110-44.
2) U. S. Military Specification Bureau of Ships CS-808.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-548/TPS-1D

FREQUENCY: UHF band, 1120 - 1350 mc (radar section) and 950 - 1150 mc (IFF section).

TYPE: Cut paraboloidal reflector with dual feed.

DESCRIPTION: The antenna assembly consists of a reflector with two feeds, one for the radar system and one for the IFF system. The reflector is a cut paraboloid constructed of wire mesh on a metal rod frame. It has an overall height of 47 inches and an overall width of approximately 15 feet. It is made up of 5 sections.

The dual feed is attached at the focal point to the center section of the reflector and is fed by a rigid coaxial cable consisting of three concentric conductors. The outer and intermediate conductors feed a waveguide horn used for the radar; the intermediate and inner conductors feed a dipole with a corner reflector made up of nine vertical rods. This dipole and reflector make up the feed for the IFF system and are mounted in the mouth of the radar horn. The entire antenna system weighs approximately 180 pounds and is approximately 7 feet high.

BEAM DATA:
Gain - 27.5 db.
Half-power beamwidth For radar (IFF is about the same) -
Vertical - $12^{\circ} + 1\text{-}1/2^{\circ}$.
Horizontal - $4^{\circ} \pm 0.5^{\circ}$.
Polarization - Horizontal for radar system and vertical for IFF system.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate that can be varied between 0 and 15 revolutions per minute. It is normally fixed in elevation.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Surveilance Central AN/GSS-1, Radar Set AN/TPS-1D, Interrogator Set AN/TPX-19, Radar Identification Set AN/GPX-17. Equipment function - search, air; and IFF.

MISCELLANEOUS: Radar Set AN/TPS-1D replaces previous models. See OA-1227/TPS for a list of antennas used with AN/TPS-1(*).

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Raytheon Manufacturing Company, type 1592, contracts NObsr-43457 and NObsr-49254.

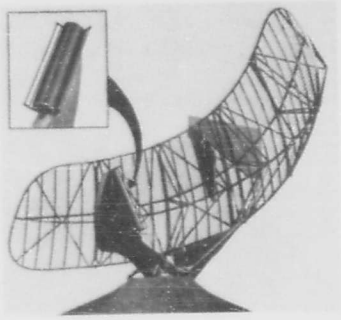
STOCK NUMBER: Federal Stock Number F5985-285-0792.

REFERENCES:
1) John E. Cruickshank, Supplement #1 to Ground Radar Sets, Systems, and Related Components, RADC-TR-56 103. Griffiss Air

Force Base, New York: Rome Air Development Center, (Feb. 1957). ASTIA Report No. AD-97768. SECRET.

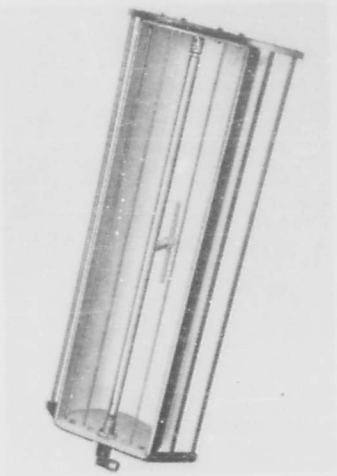
2) Department of the Army, Operator's Manual Radio Set AN/TPS-1D, TM 11-1167-10, (Mar. 1958). UNCLASSIFIED.

3) John E. Cruichshank and Reuben O. Schlegelmilch, Ground Radar Sets, Systems and Related Components, RADC 52-22. Rome, New York: Rome Air Development Center, (Nov. 1, 1952). AD-128. SECRET.



AS-548/TPS-1D

4) Department of the Army, Radar Surveillance Central AN/GSS-1, Technical Manual, TM 11-1162, (Feb. 1955). UNCLASSIFIED.



Feed for AS-548/TPS-1D

5) U. S. Government Specification MIL-R-15895.

6) Bureau of Ships Specification CS-1241A.

7) SHIPS-R-81.

ANTENNA ASSEMBLY AS-550()/TRC-24

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Parasitic array.

DESCRIPTION: The antenna is an array of 4 telescoping adjustable elements including a straight dipole. The antenna is fed by a 50-ohm coaxial transmission line, and is mounted on a 50-foot mast which is 2-1/2 inches in diameter.

TUNING/MATCHING DEVICES: Each element length is adjustable.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-24(). Equipment function - communications.

COGNIZANT AGENCY: SCL-9582.

REFERENCES:

1) NME Specification MIL-R-10516(Sig).

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-511()/TRC-24

FREQUENCY: VHF band, 100 - 225 mc.

TYPE: Parasitic array.

DESCRIPTION: The antenna is a 4-element array including a straight dipole. Telescopic aluminum components are constructed so that each element is adjustable. Coaxial transmission-line feed is used with an input impedance of 50 ohms. The antenna mounts on a 50-foot, 2-1/2-inch-diameter mast.

TUNING/MATCHING DEVICE: Each element is adjustable in length.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-24. Equipment function - communications.

COGNIZANT AGENCY: SCL-9588.

REFERENCES:

1) NME Specification MIL-R-10616(Signal Corps).

2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-552()/T

MAJOR COMPONENTS: 1 corner reflector and 2 discones.

FREQUENCY: VHF band, 70 - 300 mc.

TYPE: Corner reflector fed by discone antennas.

DESCRIPTION: The antenna is a corner reflector using one of two interchangeable discones for the feed. One discone covers 70 to 150 mc; the other, 125 to 300 mc. The discone is fed by a 50-ohm coaxial transmission line. The antenna can be rotated and tilted, but information as to what extent or by what means these operations are performed was not available.

INSTALLATION: Ground, transportable.

COGNIZANT AGENCY: SCL-9905C.

MANUFACTURER: Airborne Instruments Laboratory.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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Phila-51-06(63); AS-544A/TRC-29 . . . Radio Receptor Company, Inc., procurement contract-31238-Ph-55-55.

REFERENCES:

1) Departments of the Army and the Air Force, Radio Set AN/TRC-29 and Radio Repeater Set AN/TRC-39, Technical Manual, Technical Order, TM 11-689, TO 31R2-2TRC-151, (April 1956). UNCLASSIFIED.

2) U. S. Military Specification MIL-R-10615.

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ANTENNA AS-557/CPS-1 & ()

FREQUENCY: UHF band, 2700 - 2940 mc.

TYPE: Modified cut paraboloidal reflector.

DESCRIPTION: The antenna reflector is made in 3 sections and is constructed of open grids of 1/2-inch aluminum. The middle section measures 5 feet by 4 feet, and both end sections measure 5 feet by 5 feet. The antenna is fed by a hornwhich is energized by a 7/8-inch coaxial transmission line. The input impedance to the antenna is 50 ohms.

BEAM DATA:

Beam type - $\csc^2$ (up to 20 degrees in elevation).

INSTALLATION: Ground, air transportable.

ASSOCIATED EQUIPMENT: Part of Modification Kit MX-533A/CPS-1.

COGNIZANT AGENCY: WL-50-2264.

MANUFACTURER: Airborne Instruments Laboratory, Mineola, New York, procurement contract AF-28(099)-314.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-558()/TRC

See OA-299()/TRC.

ANTENNA ASSEMBLY AS-559()/TRC

See OA-299()/TRC.

ANTENNA AS-566/FRC-33 & ()

Cancelled 25 October 1954

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ANTENNA ASSEMBLY AS-574/URR & ()

MAJOR COMPONENTS: 1 dipole antenna, 1 monopole antenna, 4 AT-503/URR antenna elements, and 8 AB-21/GR mast sections.

FREQUENCY: HF and VHF bands, 20 - 230 mc with VSWR less than 3:1.

TYPE: Dipole antenna and monopole.

DESCRIPTION: The antenna assembly is a mast-mounted dipole. The mast does not have a nomenclature number of its own, but it is insulated from ground and can be used (without the dipole) as a monopole antenna. It consists of five interlocking sections. The upper four sections are each 5-1/2 feet long, 1.621 inches in diameter at the base, and 1.355 inches in diameter at the top. The bottom section is similar to the top sections but has an integral insulating piece to insulate it from ground. It is fed at this insulator by a 52-ohm coaxial cable.

Each half of the dipole consists of two elements arranged in a "V." The lengths of the elements are adjustable in three steps so that the dipole will operate in the frequency ranges from 20 to 50 mc, from 45 to 90 mc, and from 85 to 230 mc. The AT-503/URR&() antenna elements are simply small rods used with Mast Sections AB-21/GR, also small rods, as extensions for the dipole arms to permit adjusting of the dipole length. The AT-503/URR elements are each 7-3/8 inches long and 3/8 inch in diameter. The AB-21/GR sections are each 24 inches long and 3/8 inch in diameter. The dipole antenna is about 13-1/2 feet long for the lowest frequency range, 7-1/2 feet long for the center-frequency range, and 4-1/4 feet long for the highest frequency range. The dipole is fed by 95-ohm twin-lead transmission line. When packed for domestic shipment, the assembly weighs 94 pounds. It weighs 135 pounds packed for export.

BEAM DATA:
Beam type -
Monopole antenna - Omnidirectional in azimuth.
Dipole antenna - Figure of eight in azimuth when mounted horizontally.
Polarization -
Monopole antenna - Vertical.
Dipole antenna - Horizontal, vertical, or slanted at 45° depending on mounting position.

SCAN DATA: The dipole antenna can be manually rotated through 360° in azimuth.

TUNING/MATCHING DEVICE: The dipole element lengths are adjustable in three steps.

INSTALLATION: Ground.

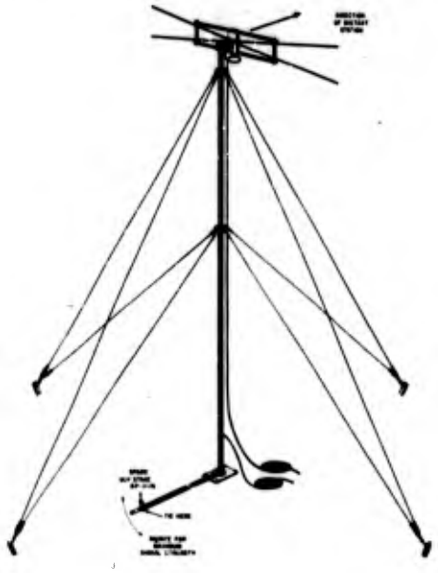
ASSOCIATED EQUIPMENT: Radio Receiving Set AN/URR-29. Equipment function - communications.

COGNIZANT AGENCY: SCLE-4694.

MANUFACTURER: American Phenolic Corporation, Chicago, Illinois, procurement contract 116-Phila-52-93.

STOCK NUMBER: Federal Stock Number 5985-264-7527.

REFERENCES:
1) Departments of the Army and Air Force, Antenna Assembly AS-574/URR, Technical Manual, Technical Order, TM 11-5016, TO 16-35AS574-5, (Nov. 1954). UNCLASSIFIED.
2) Instruction Book for Antenna Assembly AS-574/URR, Chicago, Ill.: Motorola, Inc. (Jan. 22, 1954), Order No. 116-Phila-52-93. UNCLASSIFIED.



AS-574/URR

3) American Phenolic Corporation Drawing 161-135.
4) U. S. Military Specification MIL-A-11557.

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ANTENNA AS-575/GRD-5&()

FREQUENCY: VHF band, 120 to 156 mc.

TYPE: Crossed-H Adcock Antenna.

DESCRIPTION: AS-575/GRD-5&() is a crossed-H Adcock antenna using 8 aluminum elements mounted in a weatherproof housing. It is fed by 52-ohm coaxial cable.

SCAN DATA: 360° mechanical azimuth rotation at 1800 revolutions per minute.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/GRD-5. Equipment function - direction finding.

MISCELLANEOUS: AS-575A/GRD-5 was cancelled 10 July 1957.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Federal Telecommunications Laboratories, procurement contract NObsr-49016.

STOCK NUMBER: Federal Stock Number F5985-369-5316.

REFERENCES:
1) Federal Telecommunications Laboratories Drawing NLA-69811-27A.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-576/FRC&()

FREQUENCY: VHF band, 132 - 156 mc, with VSWR < 1.5.

TYPE: Corner reflector antenna fed by a dipole.

DESCRIPTION: The antenna is a corner reflector fed by a stainless-steel dipole radiator. The reflector is constructed of 11 aluminum rods and is 54 inches long, 50 inches high, and 12 inches wide when collapsed; it is 54 inches long, 53 inches high, and 75 inches wide when extended. The antenna has a nominal input impedance of 52 ohms and is fed by coaxial transmission line. The maximum power-handling capability is 50 watts. The antenna is capable of withstanding 100-mile-per-hour winds and will support ice 1/2 inch thick.

BEAM DATA:
Gain - 8 db over dipole.
Polarization - Horizontal or vertical depending on mounting position.

TUNING/MATCHING DEVICES: The length of the dipole radiator is adjustable.

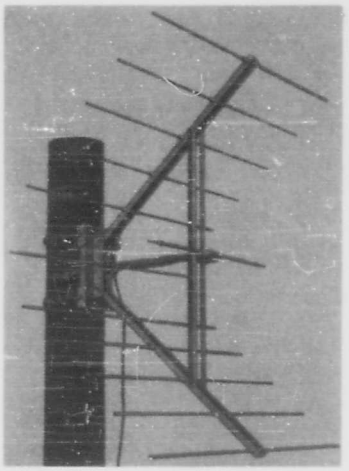
INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-7() and AN/FRC-17(). Equipment function - communications.

REFERENCES:
1) Departments of the Army and the Air Force, Radio Sets AN/FRC-7A and AN/FRC-17A, TM 11-292, TO 16-30FRC7-S, (April, 1952). UNCLASSIFIED.

2) Manufacturing Drawing N-1406.

COGNIZANT AGENCY: SCL-10840.



AS-576/FRC&()

MANUFACTURER: Andrew Corporation.

STOCK NUMBERS: Federal Stock Number 5985-284-4211; Signal Corps 2A288A-134.

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ANTENNA ASSEMBLY AS-581()/U

See OA-321()/U.

ANTENNA ASSEMBLY AS-582()/U

See OA-321()/U.

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ANTENNA AS-583()/U

MAJOR COMPONENTS: 1 corner reflector, 1 discone radiator.

FREQUENCY: UHF band, 950 - 2000 mc.

TYPE: Corner reflector fed by a discone.

DESCRIPTION: The corner reflector is constructed of sheet metal and is 6 inches deep, 10 inches wide, and 8 inches high. The discone radiator is also constructed of sheet metal and is fed by a 50-ohm coaxial transmission line. The discone can be used for transmitting or receiving.

BEAM DATA:
Gain - 9.5 db at 1340 mc.
Polarization - Normally horizontal, but can be manually adjusted for any polarization.

SCAN DATA: Can be rotated and tilted manually.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Countermeasures Receiving Set AN/TLR-1. Equipment function - countermeasures.

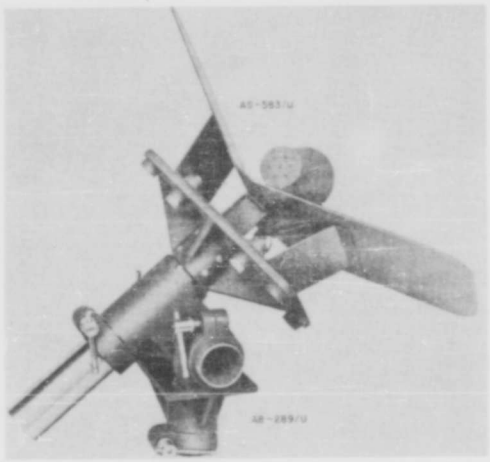
MISCELLANEOUS: This antenna is obsolete and was replaced by AT-428/U.

COGNIZANT AGENCY: SCL-11405.

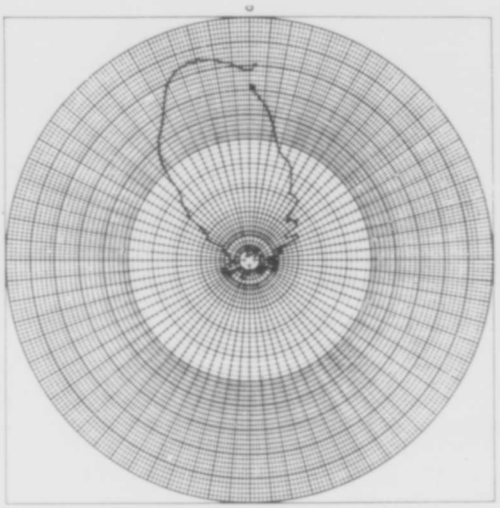
REFERENCES:

1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) Department of the Army, Instructions for Antenna Group OA-497(XE-1)/TLR-1, TB SIG 244, (Mar. 16, 1953). UNCLASSIFIED.



AS-583/U



Typical Horizontal Radiation Pattern for AS-583/U, E-plane at 1600 mc.

ANTENNA AS-584()/U

MAJOR COMPONENTS: 1 corner reflector, 1 discone radiator.

FREQUENCY: UHF and SHF bands, 2000 - 4500 mc.

TYPE: Corner reflector fed by discone.

DESCRIPTION: The sectionalized corner reflector is 5 inches deep, 7 inches wide, and 4 inches high. It is designed to mount on a mast for horizontal or vertical polarization. The discone is fed by a 50-ohm coaxial transmission line and can be used for either transmitting or receiving.

BEAM DATA:
Polarization - Horizontal or vertical depending on mounting position.

INSTALLATION: Ground, fixed.

COGNIZANT AGENCY: SCL-11406.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-585()/U

MAJOR COMPONENTS: 1 paraboloidal reflector, 1 horn.

FREQUENCY: UHF and SHF bands, 2000 - 4500 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The sectionalized paraboloidal reflector is 8 feet in diameter and mounts on Mast AB-246()/U. It is fed by a waveguide horn which is 10 inches long, 9 inches wide, and 7 inches high. The antenna can be used for receiving or transmitting. It can also be rotated and tilted.

INSTALLATION: Ground.

COGNIZANT AGENCY: SCL-11407.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-586()/U

MAJOR COMPONENTS: 1 reflector, 1 horn.

FREQUENCY: SHF band, 4500 - 8500 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The sectionalized paraboloidal reflector measures 4 feet in diameter. It is fed by a waveguide horn which is 5 inches long, 4-1/2 inches wide, and 3-1/2 inches high. The antenna mounts on Mast AB-246()/U and can be rotated and tilted. It is used for transmitting and receiving.

INSTALLATION: Ground.

COGNIZANT AGENCY: SCL-11408.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-587()/U

MAJOR COMPONENTS: 1 reflector and 1 horn.

FREQUENCY: SHF band, 8500 - 12,100 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The sectionalized paraboloidal reflector measures 2 feet in diameter. It is fed by a waveguide horn which is 2-1/2 inches long, 2-1/4 inches wide, and 1-3/4 inches high. The antenna mounts on Mast AB-246()/U and can be rotated and tilted. It is used for transmitting and receiving.

INSTALLATION: Ground.

COGNIZANT AGENCY: SCL-11400.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-588()/U

Cancelled 16 June 1954. Replaced by AT-551/U.

ANTENNA ASSEMBLY AS-589()/U

Cancelled 16 June 1954. Replaced by AT-552/U.

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ANTENNA AS-590()/U

FREQUENCY: SHF band, 8500 - 12,100 mc.

TYPE: Horn antenna.

DESCRIPTION: The horn antenna is 1 inch long (sic), 3/4 inch wide, and 3/8 inch high at the throat. At the mouth, it is 1-1/4 inches long (sic), 2 inches wide, and 1-1/2 inches high. The overall length is 2-1/4 inches. It is constructed of silver-plated brass and is supported by its feed waveguide.

INSTALLATION: Ground.

COGNIZANT AGENCY: SCL-11415.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-591/CPS-6B&()

FREQUENCY: UHF band, 2860 - 2900 mc.

TYPE: Horn antenna.

DESCRIPTION: The antenna consists of a horn brazed to a section of Transmission Line RG-75/U. Waveguide Flange UG-585/U is brazed to the other end of the transmission-line section. The entire assembly is 53 inches long. The outside of the throat is 1.84 inches by 3.34 inches; the outside of the mouth is 4.654 inches by 5.10 inches. The inside of the horn is 1.505 inches by 3.005 inches at the throat and 4.153 inches by 3.005 inches at the mouth. The assembly is constructed of aluminum alloy.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set Group OA-347/CPS-6B&(). Equipment function - search. Range - 265 nautical miles.

COGNIZANT AGENCY: WL-53-R-1364.

MANUFACTURER: Goodyear Aircraft Corporation, procurement contract AF 33(038)-15062.

REFERENCES:
1) Goodyear Aircraft Corporation Part/Drawing 167N-2425.
2) U. S. Air Force Exhibit WLENG-2156A.
3) U. S. Department of Defense Nomenclature Card.

* *

ANTENNA AS-592()/GPM-14

TYPE: Horn antenna.

DESCRIPTION: The antenna consists of a horn mounted with an optical system on a mechanical jig. This entire system is used for calibrating the deviation of the optical axis of a radar antenna from the axis of maximum electromagnetic radiation. The horn is constructed of gold-plated brass and is approximately 26 inches wide, 8.125 inches high, and 14.5 inches deep. It is used for receiving only.

BEAM DATA:
Polarization - Adjustable for either vertical or horizontal polarization.

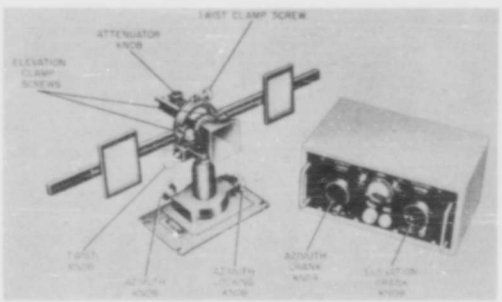
SCAN DATA: Can be rotated and tilted manually to any desired position.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Antenna Test Set AN/GPM-14(). Equipment function - test.

COGNIZANT AGENCY: AEL-51-313.

REFERENCES:
1) U. S. Air Force, Handbook Overhaul Instructions for Antenna Assembly Part Numbers 7504943P1, 7513397P1, and 7513397P9, TO 11F5-16-3, (Nov. 1, 1958). CONFIDENTIAL.
2) U. S. Air Force Exhibit MCREXG-311.
3) U. S. Air Force Drawing S51D 4512.



AS-592()/GPM-14

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ANTENNA AS-595/GR&()

MAJOR COMPONENTS: 1 Mast Section AB-252()/GR, 1 Mast Section AB-253()/GR, 1 Mast Section AB-254()/GR, 1 Mast Section AB-255()/GR, 1 Mast Section AB-256()/GR, 1 Mast Section AB-257()/GR, and 3 MS-116-A mast sections.

FREQUENCY: LF and MF bands, 0.095 - 2.05 mc.

TYPE: Four monopoles used in an Adcock antenna.

DESCRIPTION: The antenna is a sectionalized, guyed mast 64 feet high when assembled. The sections of the mast are as follows:

No. Rqd.	Nomenclature	Diameter (inches)	Length (feet)
1	AB-252()/GR	3	9-1/2
1	AB-253()/GR	3	9-1/2
1	AB-254()/GR	2-1/4	9-1/2
1	AB-255()/GR	2-1/4	9-1/2
1	AB-256()/GR	2	9-1/2
1	AB-257()/GR	2	9
3	MS-116A	3/8	3

Four AS-595/GR&( ) antennas are used to form a crossed-U Adcock array which does not have a nomenclature number. Each antenna mounts on Antenna Base AB-398( )/GR. MX-1317/GR, a 32-foot-square counterpoise of 5/8-inch copper braid, is used with each monopole.

BEAM DATA:
Beam type - Figure of eight for search and cardioid for sensing.
Polarization - Vertical.

SCAN DATA: 360° electromechanical azimuth rotation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/TRD-3. Equipment function - countermeasures, direction finding.

COGNIZANT AGENCY: SCLE-9673.

MANUFACTURER: Raytheon Manufacturing Company.

REFERENCE:
1) Department of the Army, Directory of U. S. Army Signal Equipments Radio Direction Finding Equipment, TM 11-487D, (Mar. 1958). UNCLASSIFIED.

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ANTENNA ASSEMBLY AS-608 ()/TRN-6

FREQUENCY: UHF, 962 - 1213 mc.

TYPE: Amplitude modulating antenna.

DESCRIPTION: AS-608 ()/TRN-6 consists of a fixed radiator around which rotate two concentric, physically connected drums containing reflectors. The inner drum contains one parasitic element, and the outer drum contains 9 parasitic elements.

BEAM DATA:
Beam type - Scalloped cardioid.
Polarization - Vertical.

SCAN DATA: 360° mechanical azimuth scan.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/TRN-6. Equipment function - navigation, surface reference. Range - 200 miles.

COGNIZANT AGENCY: USAF WL-54-R-1754.

REFERENCES:
1) U. S. Air Force, AACS Communications Electronics Equipment, (July 15, 1958). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-610/G & ()

MAJOR COMPONENTS: 1 Reflector, 1 Dipole.

FREQUENCY: UHF band, 1700 - 1850 mc, VSWR< 1.30:1.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION: The antenna consists of a paraboloidal reflector with its dipole mounted in a weather-resistant cup. The reflector is 6 feet in diameter and 3 feet deep. The antenna is designed to mount on a vertical pipe 4 1/2-inches in outside diameter. The antenna has an input impedance of 50 ohms and is normally fed by 7/8-inch rigid coaxial line, but with proper adapters a 1-5/8-inch line can be used. The size of the feed line affects noise and attenuation of the signal. The manufacturer recommends pressurizing the lines, which use air as the dielectric. Provisions for deicing are made for installations in cold climates.

BEAM DATA:
Gain - 27.5 db minimum.
Half-power beamwidth - 6.5°.
Side-lobe attenuation - 20 db.
Beam type - Pencil.

SCAN DATA: 360° manual azimuth rotation and ± 10° vertical tilting are provided for adjustment only.

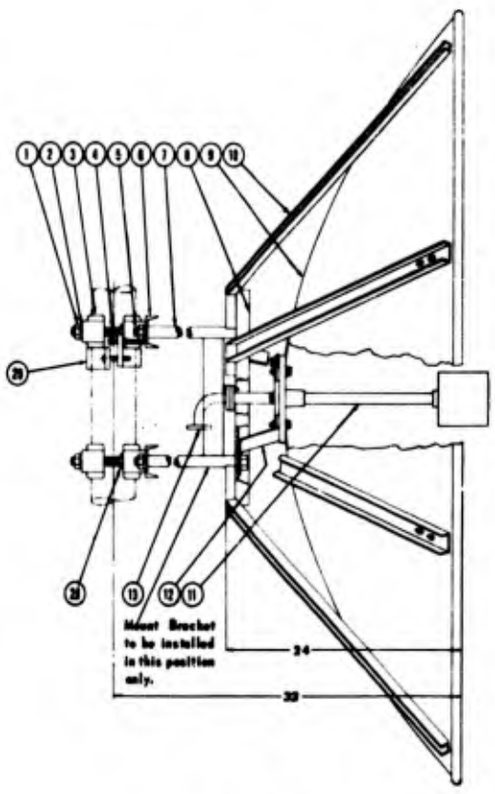
INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio-telephone Terminal Set AN/FRC-23() and Radio Repeater Set AN/FRC-26(). Equipment function - communications and teletype.

COGNIZANT AGENCY: USA SCL-11778.

MANUFACTURERS: General Electric Co., Syracuse, New York, Type No. UY-2-A.

REFERENCE:
Departments of the Army and the Air Force, Radio Telephone Terminal Set AN/FRC-23 and Radio Repeater Set AN/FRC-26, Operation and Maintenance, T.O. 31R2-2FRC-221, (May 28, 1956). UNCLASSIFIED.



AS-610/G

ANTENNA ASSEMBLY AS-611()/FPN-29

MAJOR COMPONENTS: 1 reflector, 1 horn.

FREQUENCY: SHF band, 3020 - 3120 mc.

TYPE: Parabolic cylinder reflector fed by a horn.

DESCRIPTION: The antenna consists of a sectionalized aluminum reflector fed by a horn antenna. The reflector is a slatted surface constructed in three sections and supported by a tubular frame. Each section is approximately 13.65 feet wide and 8 feet high. The assembled reflector is 41 feet wide and 8 feet high.

BEAM DATA:
Additional information is available in the secret document listed below as Reference 1.

SCAN DATA: The antenna rotates through 360° in azimuth. See reference 1.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-29(). Equipment function - navigation.

COGNIZANT AGENCY: U. S. NAVY.

MANUFACTURER: Raytheon Manufacturing Co., procurement contract NObsr-52543.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

3) Manufacturing Specifications HRC-5 Code 820.

4) U. S. Department of Defense Nomenclature Card.

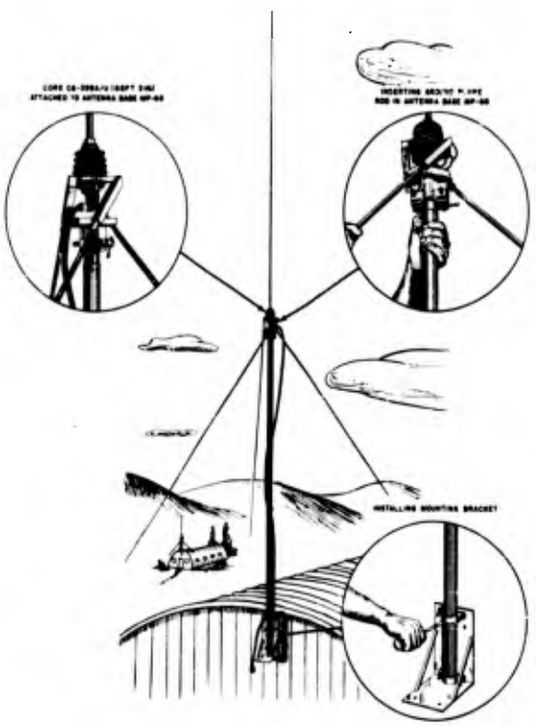
ANTENNA ASSEMBLY AS-612(*)/U

MAJOR COMPONENTS: 1 Mast Section AB-21/GR, 1 Mast Section AB-22/GR, 1 Mast Section AB-23/GR, 1 Mast Section AB-24/GR, 1 Mast Section AB-35/TRC-7, 1 Antenna Base MP-68.

FREQUENCY: HF and VHF bands, 25-50 mc.

TYPE: Whip with modified ground plane.

DESCRIPTION: The sectionalized whip portion of this antenna is mounted vertically on Antenna Base MP-68 which is mounted on Mast Section AB-35/TRC-7. At the base of the whip is a ground plane composed of three rods fastened to the same base as the whip but insulated from the whip. These rods are equally spaced in azimuth and slant downward at an angle of 142° from the vertical. These rods are made up of various combinations of Mast Sections AB-21/GR, AB-22/GR, AB-23/GR, and AB-24/GR, which are similar to each other. Each section measures approximately 1/3 inch in diameter and 23-1/2 inches in length. The lengths of the antenna and ground-plane rods can be varied between 6 and 9 feet by choosing the proper combinations of the mast sections. The length used depends on the frequency used. Mast Section AB-35/TRC-7 is made of aluminum tubing and measures 1-1/2 inches in diameter and 33 inches in length. The antenna has an input impedance of 50 ohms and is fed through 68 feet of coaxial cable RG-8A/U. The antenna weighs 10 pounds. When packaged for domestic use, it weighs 30 pounds and occupies 1.93 cubic feet. When packaged for export, it weighs 30 pounds and occupies 2.5 cubic feet.



AS-612(*)/U

BEAM DATA:
Beam type - Omnidirectional in azimuth with a small vertical angle of radiation.
Polarization - Vertical.

TUNING/MATCHING DEVICES: The element lengths can be varied to tune the antenna to the proper frequency within the range specified.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Sets AN/FRC-15(), AN/TRC-22(), and AN/FRR-44, Radio Transmitter T-208()/U, Radio Receiver R-257()/U. Equipment function - communications. Range - line of sight.

MISCELLANEOUS: AS-612/U & () is interchangeable with AS-612 ()/U.

COGNIZANT AGENCY: AS-612/U & () ... USA SCLC-5857; AS-612()/U ... USA SCLC-5064.

MANUFACTURER: Motorola, Inc., Chicago, Ill., procurement contract 11661-PH-52-93.

REFERENCES:
1) Department of the Army, Radio Set AN/TRC-22, Technical Manual, TM 11-691, (Aug., 1955). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Radio Set AN/FRC-15, Department of the Army Technical Manual and Department of the Air Force Technical Order, TM 11-282, TO 31R2-2FRC15-1, (June, 1955). UNCLASSIFIED.

3) Mil. Specification MIL-N-11539.

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ANTENNA ASSEMBLY AS-613/TR & ()

MAJOR COMPONENTS: 2 paraboloidal reflectors, 2 dipole-disc feeds.

FREQUENCY: UHF band, 1350 - 1850 mc.

TYPE: Two paraboloidal reflectors fed by dipoles with disc reflecting plates.

DESCRIPTION: The antenna has two paraboloidal reflectors mounted side by side on a common support frame. Each antenna is fed by a dipole-disc radiator with an input impedance of 50 ohms. Coaxial line is used to feed the antenna. The assembled unit is 10 feet wide, 5 feet 4 inches high, and 1 foot 4 inches deep (outside measurements). The antenna is mounted on a 50-foot mast and is used for both transmitting and receiving.

SCAN DATA: The antenna can be rotated and tilted but remains fixed during operation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-26() and Radio Set AN/TRQ-3. Equipment function - communications.

COGNIZANT AGENCY: USA SCLC-5097.

REFERENCES:
1) Mil. Specification MIL-R-10109.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-615/SPS-10[illegible]()

FREQUENCY: IFF ... UHF band, 1001.5 - 1038.5 mc. and 1081.5 - 1118.5 mc.; Radar ... SHF band, 5450 - 5825 mc.

TYPE: Parabolic-cylinder reflector with modified hoghorn radar feed and monopole IFF feed.

DESCRIPTION: The radar section of the antenna consists of a horizontally slatted parabolic cylinder fed by a hoghorn. The reflecting barrier of the hoghorn is a modified parabolic surface which produces a beam with $\csc^2$ distribution in the vertical plane. The reflector is 120 inches wide by 30 inches high and has a focal length of 35-1/2 inches.

The IFF section of the antenna consists of a parabolic-cylinder reflector with a feed made up of a radiating element and six parasitic elements. The parabolic-cylinder reflector for the IFF section is made up of vertical rods located just behind the horizontal slats of the radar reflector. The IFF feed consists of an end-fed, full-wavelength radiating rod located in front of the mouth of the hoghorn. A corner reflector made up of six vertical rods, located three on each side of the hoghorn, directs the IFF energy to the parabolic-cylinder reflector. The total weight of the antenna is 313 pounds.

BEAM DATA:

	Radar	IFF
Gain -	30 db	16.75 db
Half-power beamwidth		
Vertical -	12° to 16°	22°
Horizontal -	1.5°	6°
Beam type -	$\csc^2$ from +7° to 22°	fan
Polarization -	horizontal	vertical

SCAN DATA: The antenna rotates through 360° in azimuth at 16 revolutions per minute.

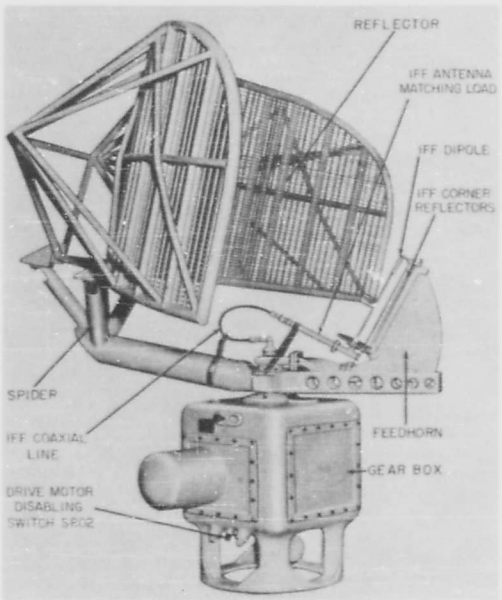
TUNING/MATCHING DEVICES: The IFF feed of the antenna has a matching section.

INSTALLATION: Usually shipboard, sometimes ground.

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-10. Equipment function - search, surface, and IFF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Sylvania Electric Products, Inc., Contracts NObsr49015, NObsr52166, and NObsr-52321.



AS-615/SPS-10

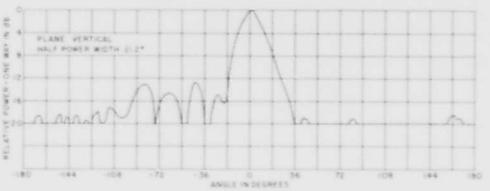
STOCK NUMBER: Federal Stock Number F5985-328-7962.

REFERENCES:

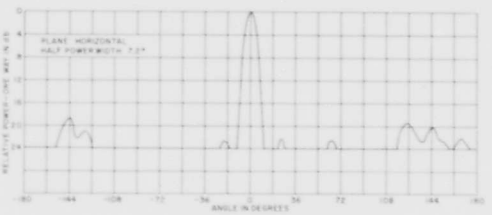
1) Department of the Navy, Radar Set AN/SPS-10, Instruction Book, May 4, 1953. UNCLASSIFIED.

2) Sylvania Drawing 89-82700-1.

3) Signal Corps Specification MIL-R-10109.



IFF Vertical Radiation Pattern for AS-615/SPS-10



IFF Horizontal Radiation Pattern for AS-615/SPS-10

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ANTENNA ASSEMBLY AS-620/GRC-10&()

See OA-249/GRC-10 & ().

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ANTENNA AS-623/UP

FREQUENCY: SHF band, 9800-10,000 mc; VSWR<1.3.

TYPE: Paraboloidal reflector with Cutler feed.

DESCRIPTION: The antenna consists of an 18-inch paraboloidal reflector with a focal length of 5.66 inches and a Cutler-type feed. The antenna mounts on a tripod by means of a clamp. The antenna is designed for an RG-67/U waveguide.

COGNIZANT AGENCY: SCLE-4156.

STOCK NUMBER: Navy R-16-PH-358-4324 for the reflector only.

REFERENCES:

1) Signal Corps Drawing ES-C-118135 for Cutler feed only.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-631(XE-3)/U

FREQUENCY: HF and VHF band, 20 - 62 mc, 60 - 120 mc.

TYPE: Conical antenna of discone type.

DESCRIPTION: The antenna consists of two interchangeable discs of mesh construction and a cone composed of adjustable rods. Two conical antennas can be made from the

parts furnished: a low-frequency antenna to cover the 20- to 62-mc range and a high-frequency antenna to cover the 60- to 120-mc range. The low-frequency antenna uses a 72-inch-diameter disc and the high-frequency antenna uses a 24-inch-diameter disc. Both high- and low-frequency antennas use the same cone rods. However, the rods are adjusted to the proper length in each case. The discone is mounted on a telescoping mast. For low-frequency operation the mast is lowered until the rods of the cone almost rest on the ground. The overall height of the low-frequency antenna is approximately 12 feet. For high-frequency operation, the mast is raised until it is 24 feet high.

BEAM DATA:
Gain - Approximately 2 db over dipole.

Beam type - Omnidirectional in azimuth and figure of eight in elevation.
Polarization - Vertical.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Countermeasures Receiving Set AN/TLR-1. Equipment function - countermeasures, monitoring.

COGNIZANT AGENCY: SCLE-4177.

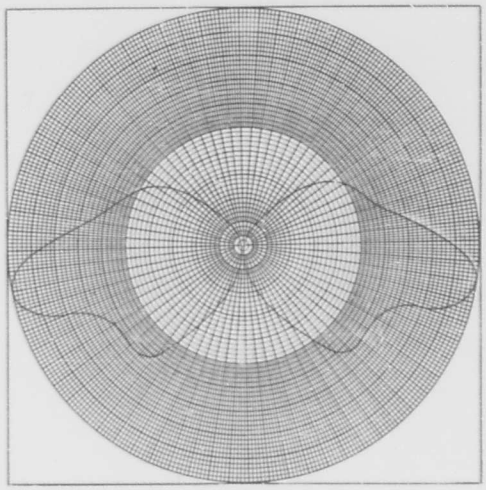
MANUFACTURER: American Electronics Laboratories, Inc., contract DA-36-039-sc-64679.

REFERENCES:
1) Department of the Army, Antenna AS-631(XE-3)/U, Engineering Report NR. E-1226. Fort Monmouth, N. J.: U. S. Army Signal Engineering Laboratories. (Jan. 7, 1958). UNCLASSIFIED.

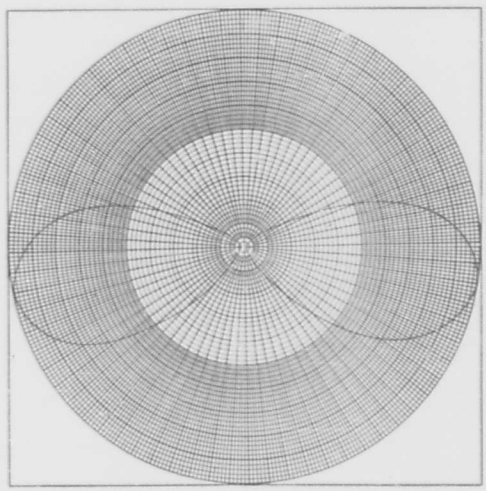
2) U. S. Department of Defense Nomenclature Card.



AS-631(XE-3)/U for Low Frequency Operation



Vertical Radiation Pattern for AS-631(XE-3)/U at 40 mc



Vertical Radiation Pattern for AS-631(XE-3)/U at 100 mc

ANTENNA ASSEMBLY AS-632/TRC-32&()

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

DESCRIPTION: According to the nomenclature card, this antenna consists of two omnidirectional antennas which are mounted on a common vertical axis and utilized as separate-frequency radiators with a minimum isolation of 50 db between radiators. A more informative description of this antenna was not available.

BEAM DATA:
Beam type - Omnidirectional in azimuth.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-32.
Equipment function - communications.

COGNIZANT AGENCY: WL-52-1493.

MANUFACTURERS: Collins Radio, procurement contract AF 33(038)-19512.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-633()/CPN-4

MAJOR COMPONENTS: 1 reflector and 1 horn.

FREQUENCY: S-band.

TYPE: Modified cut paraboloidal reflector fed by a horn.

DESCRIPTION: The nomenclature card for this antenna describes it as a dish antenna. The reflector is constructed as a solid surface supported by a honeycomb-sandwich structure. It is apparently of sectionalized construction since it has removable left and right wings.

The nomenclature card describes the feed as a coaxial horn. This is probably a horn fed by coaxial cable. A polarization switch is operated by a solenoid.

BEAM DATA:
Beam type - csc^2.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/CPN-4.
Equipment function - navigation.

COGNIZANT AGENCY: WL-52-1299.

MANUFACTURERS: Glenn L. Martin Company, procurement contract AF 28(099)-59.

REFERENCES:
1) U. S. Air Force Exhibit WLENG-1192.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-636()/U

MAJOR COMPONENTS: 1 discone, and 1 corner reflector.

FREQUENCY: VHF and UHF bands, 170 - 500 mc.

TYPE: Corner reflector antenna fed by discone.

DESCRIPTION: The antenna is a corner reflector fed by a discone radiator. The discone is made up of 12 telescopic rods and 2 disks. It is fed by coaxial cable and has an input impedance of 50 ohms. The antenna can be mounted on masts with diameters from 1-1/2 inches to 2-1/2 inches.

BEAM DATA:
Polarization - Either vertical or horizontal depending on mounting position.

INSTALLATION: Ground, fixed.

COGNIZANT AGENCY: SCLE-4178.

MANUFACTURER: Workshops Associates.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-637/GPX&()

FREQUENCY: UHF band, 950 - 1150 mc.

TYPE: Broadside array of slot antennas.

DESCRIPTION: The antenna is a broadside, linear array of full-wave radiating slots. It is constructed in three sections, each of which measures 5 feet long by less than 2 feet high by less than 16 inches deep. One section is used as a central section, and the other two are mounted so that the center-to-center spacing with respect to the central section is 55-1/2 inches. The antenna has a 52-ohm input impedance and is fed through coaxial cable.

BEAM DATA:
Half-power beamwidth - Horizontal - 5°.
Side-lobe attenuation - 28 db.
Polarization - Vertical.

SCAN DATA: The antenna can be rotated, presumably in the azimuth plane. Information as to the extent or the means by which rotation is accomplished was not available.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Interrogator Set AN/MPX-6. Equipment function - IFF.

COGNIZANT AGENCY: WL-52-1643.

REFERENCES:
1) U. S. Air Force Exhibit ENG-2180.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-639()/TRC

See OA-1393/GRC & ().

ANTENNA ASSEMBLY AS-640()/TRC

See OA-1395/GRC.

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ANTENNA AS-642()/GRC

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Stacked array.

DESCRIPTION: This antenna is a vertically stacked array to be mounted on a mast. It is fed by a 52-ohm coaxial transmission line.

BEAM DATA:
Gain - 9.5 db.
Beam type - Omnidirectional in azimuth, approximately $\csc^2$ in elevation.
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various UHF receiving-transmitting equipment. Equipment function - communications.

COGNIZANT AGENCY: WL-52-1780.

MANUFACTURER: Procurement contract AF 30(602)-280.

REFERENCES:
1) U. S. Air Force Exhibit ENG-1448.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-643()/GRC

MAJOR COMPONENTS: 1 reflector, and 1 discone.

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a paraboloidal reflector 28-1/2 feet in diameter and is fed by a discone 18 inches long and 18 inches in maximum diameter. The antenna is fed by a 52-ohm coaxial feed. The antenna is pedestal mounted and has a motor-driven mechanism for rotation and tilt.

BEAM DATA:
Gain - 20 db.
Beam type - Pencil.

SCAN DATA: The antenna has 360° mechanical azimuth rotation and can be tilted in the vertical plane.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various UHF equipment. Equipment function - communications; and countermeasures to aid in combatting jamming.

COGNIZANT AGENCY: WL-52-1795.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-644/MRN-8 & ()

See OA-491/MRN-8.

ANTENNA ASSEMBLY AS-645/MRN-8 & ()

See OA-491/MRN-8.

ANTENNA ASSEMBLY AS-646/MRN-8 & ()

See OA-491/MRN-8.

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ANTENNA ASSEMBLY AS-648()/TRD

MAJOR COMPONENTS: 1 crossed U-Adcock antenna, 1 monopole.

FREQUENCY: MF and HF bands, 1.5 - 7.5 mc.

TYPE: Crossed U-Adcock antenna.

DESCRIPTION: AS-648()/GRC is a crossed U-Adcock antenna with a sense monopole. Each of the five aluminum units is constructed of two telescopic sections. The upper section is 11 feet long and 2-1/2 inches in diameter. The lower section is 17 feet long by 3-1/2 inches in diameter and has a tripod base. Each unit is mounted on 3 base plates with anchor spikes and screw ground anchors. The system is fed by twin-coaxial transmission line, and the input impedance varies with frequency from 50 to 450 ohms.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: CXRN Radio Direction Finder Equipment. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Pickard and Burns, Inc., procurement contract NObsr-52724.

REFERENCES:
1) U. S. Navy Specification SHIPS-A-464.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-649()/TRD

FREQUENCY: HF band, 7.5 - 30 mc.

TYPE: Crossed U-Adcock antenna.

DESCRIPTION: The antenna is a crossed U-Adcock with a monopole antenna for a sense element. Each element measures 3-1/2 inches in diameter by 17 feet high and has a tripod-type supporting base mounted on the ground with 3 base plates, anchor spikes, and ground screws. The input impedance ranges from 50 to 200 ohms over the frequency band. A twin-coaxial transmission line is used.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: CXRO Radio Direction Finder Equipment. Equipment function - direction finding.

MISCELLANEOUS: AS-649()/TRD is apparently AS-648()/TRD operated without the top sections.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Pickard and Burns, Inc., procurement contract NObsr-52724.

REFERENCES:
1) U. S. Navy Specification SHIPS-A-464.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-650/GPN-6[illegible]()

MAJOR COMPONENTS: 1 reflector and 2 horns.

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Modified paraboloidal reflector fed by two horns.

DESCRIPTION: The antenna is a modified paraboloidal reflector. The feed is either a horizontally polarized horn or a vertically polarized horn, or both together. The reflector is 12 feet long by 4 feet wide by 8 feet high (sic). The horizontally polarized horn is 9.5 inches long, 3.06 inches wide, and 8.12 inches high. The vertically polarized horn is 9.5 inches long, 3 inches wide, and 4.92 inches high. The antenna is made of irridite-finished aluminum and is constructed so as to be easily assembled and disassembled. It mounts on top of a trailer by means of an antenna mount.

BEAM DATA:
Gain - 33.7 db.
Half-power beamwidth - Horizontal - 1.9°.
Beam type - Csc^2 in the vertical plane from 4° to 29°.
Polarization - Horizontal or vertical, or both depending on feeds used.

SCAN DATA: The antenna rotates 360° in azimuth and can be tilted in the vertical plane.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/GPN-6. Equipment function - search, air.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: D. S. Kennedy Company, procurement contract NObsr-52693.

REFERENCES:
1) Private Correspondence.
2) U. S. Navy Specification MIL-R-16087 (SHIPS).
3) Manufacturer's Assembly Drawing Number 298-1.
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-660/FRC

MAJOR COMPONENTS: 1 reflector and 1 dipole.

FREQUENCY: UHF band, 1700 - 1850 mc.

TYPE: Paraboloidal reflector antenna fed by a dipole.

DESCRIPTION: The antenna is a spun-aluminum parabolic reflector fed by a dipole and can be used for receiving or transmitting. The reflector is a single section 6 feet in diameter and 17-7/16 inches in depth. The input impedance is 50 ohms.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Model UQ Radio Relay Link Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Federal Telephone and Radio Corporation, procurement contract NObsr-52473.

STOCK NUMBERS: Federal Stock Number F5815-090-2656.

REFERENCES:
1) Federal Telephone and Radio Corporation Drawing B 1021597.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-661/FRC

MAJOR COMPONENTS: 1 reflector and 1 dipole.

FREQUENCY: UHF band, 1700 - 1850 mc.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION: The antenna is an expanded aluminum-mesh parabolic reflector fed by a dipole radiator. The reflector is 6 feet in diameter and 21 inches in depth. The input impedance is 50 ohms.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Model UQ Radio Relay Link Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Federal Telephone and Radio Corporation procurement contract NObsr-52473.

STOCK NUMBERS: Federal Stock Number F5820-090-2658.

REFERENCES:
1) Federal Telephone and Radio Corporation Drawing B 1021596.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-662/FRC

MAJOR COMPONENTS: 1 reflector and 1 dipole.

FREQUENCY: UHF band, 1700 - 1850 mc.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION: The antenna is a solid spun-aluminum paraboloidal reflector fed by a dipole radiator. The reflector is 10 feet 4-1/2 inches in diameter and 30-3/8 inches in depth and is constructed in two sections. The antenna has an input impedance of 50 ohms and is used for transmitting and receiving.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Model UQ Radio Relay Link Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Federal Telephone and Radio Corporation, procurement contract NObsr-52473.

STOCK NUMBERS: Federal Stock Number F5820-090-2657.

REFERENCES:
1) Federal Telephone and Radio Corporation Drawing B 1021595.

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ANTENNA AS-663/FRC

MAJOR COMPONENTS: 1 reflector and 1 dipole.

FREQUENCY: UHF band, 1700 - 1850 mc.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION: The antenna is an expanded-aluminum-mesh paraboloidal reflector fed by a dipole radiator. The reflector is 10 feet in diameter by 33-3/8 inches in depth, and is made in two sections. The input impedance is 50 ohms.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Model UQ Radio Relay Link Equipment. Equipment function - communications.

MISCELLANEOUS: AS-663/FRC is similar to AS-662/FRC.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Federal Telephone and Radio Corporation procurement contract NObsr-52473.

STOCK NUMBERS: Federal Stock Number F 5985-296-1043.

REFERENCES:
1) Federal Telephone and Radio Corporation Drawing B 1021594.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-664/MRN-9

FREQUENCY: VHF band, 112 - 118 mc.

TYPE: Array of slot antennas.

DESCRIPTION: The antenna is an array of four slot radiators cut in aluminum sheet metal. Each radiator is protected by a fiberglass radome. Deicing heaters are provided. The antenna is 47 inches long. Hermetically sealed 52-ohm coaxial transmission lines are used to feed the slots.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/MRN-9. Equipment function - navigation.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Andrew Alford, procurement contract NObsr-52692.

REFERENCES:
1) U. S. Military Specification MIL-R-16127(SHIPS)

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ANTENNA AS-666/TRT-2C&()

FREQUENCY: HF and VHF bands, 15 - 100 mc.

TYPE: Half-rhombic antenna.

DESCRIPTION: This transmitting antenna is a half-rhombic type using a 600-ohm load resistor. It is mounted on Antenna Support AB-271()/MRC-2.

BEAM DATA:
Polarization - Vertical.

TUNING/MATCHING DEVICES: A matching transformer is provided.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRT-2C. Equipment function - communications.

COGNIZANT AGENCY: SCLE-9270.

MANUFACTURER: L. H. Terpening Company, procurement contract 38693-PH-53.

STOCK NUMBER: Federal Stock Number 5985-295-7114.

REFERENCES:
1) Department of the Army, FSC Group 59, Electrical and Electronic Equipment Components, Supply Manual, SM 11-1-5985, 90, (Nov. 13, 1957). UNCLASSIFIED.
2) U. S. Military Specification MIL-R-12450.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-673/TPS-1E

FREQUENCY: UHF band, 1250-1350 mc.

TYPE: Modified cut paraboloidal reflector with dual feed.

DESCRIPTION: The reflector is a modified cut paraboloid with a tubular-aluminum frame and a reflecting surface of expanded metal. The reflector is sectionalized for ease in transporting. It is 6 feet high by 15.75 feet long. The dual feed assembly consists of a waveguide horn for the radar system and a dipole feed assembly for the IFF system. The feed assembly is 47-19/64 inches high, 9-5/8 inches wide, and 12-3/8 inches deep.

BEAM DATA:
Gain - 27 db.
Half-power beamwidth - Horizontal - 3.7°.
Beam type - $\csc^2$ in elevation.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate that can be varied from 0 to 15 revolutions per minute. It is normally fixed in elevation.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-1D, which becomes Radar Set AN/TPS-1E when used with this antenna, and Radar Set AN/TPS-1G. Equipment function - search, air; and IFF.

MISCELLANEOUS: See OA-1227/TPS for a list of antennas used with AN/TPS-1(*).

COGNIZANT AGENCY: U. S. Navy, Bureau of Ships code 827.

MANUFACTURERS: Hazeltine Electronics, code 27876; Radio Corporation of America; Westinghouse Electric Corporation; and Microlambda, Rome, Italy. Contracts NObsr-49201, NObsr-63283, NObsr-64221, and NObsr-64764.

REFERENCES:
1) O. D. Stewart, Technical Evaluation of AS-673(XN-1)/TPS-1E Antenna, Prob. No. 50-11C (827), Serial 17. Patuxent River, Maryland: Naval Air Test Center. (May 6, 1954). ASTIA Report No. AD 69792. CONFIDENTIAL.
2) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.
3) U. S. Bureau of Ships Specification SHIPS-A-1511.
4) U. S. Supplementary Design Data Serial 823-366.
5) U. S. Military Specification MIL-R-0015895D(SHIPS).
6) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-674/FPS-13&()

TYPE: Mattress antenna.

DESCRIPTION: The antenna is a mattress array of dipoles constructed in 2 rows of 25 bays. One row is placed above the other. Each bay consists of 6 horizontal dipoles placed one above the other in an area 13 feet high by 2 feet 10-1/4 inches wide. The array is 71 feet long and 26 feet high. Each of the 50 bays is fed by a separate RG/17U cable. The antenna can handle 4 megawatts peak or 12 kilowatts average power. The antenna weighs 9250 pounds exclusive of supports.

BEAM DATA:
Gain - 27 db.
Half-power beamwidth -
Horizontal - Probably 5°.
Vertical - Probably 12°.
Polarization - Horizontal.

SCAN DATA: The antenna has electromechanical scan through ± 30 degrees horizontally.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-13&(). Equipment function - search.

COGNIZANT AGENCY: CRC-53-21.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-681/TRD-10&()

MAJOR COMPONENTS: 16 AT-464()/TRD-10 antenna elements, 1 Antenna Element AT-465()/TRD-10, 1 Antenna Support Base AB-355()/TRD-10, 1 Antenna Coupler CU-367()/TRD-10, 1 Mast Section AB-352()/TRD-10, 1 Mast Section AB-353()/TRD-10, 1 Mast Section AB-354()TRD-10, 1 Antenna Support AB-357()/TRD-10, 1 Gin Pole Derrick MX-1535()/TRD-10.

FREQUENCY: HF and VHF bands, 20 - 160 mc.

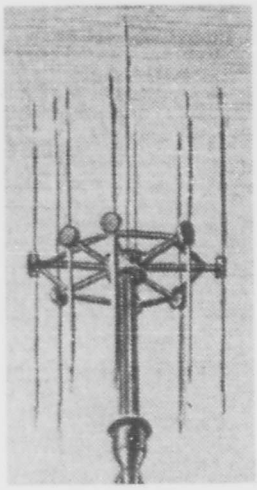
TYPE: Eight-element Adcock antenna with a sense monopole.

DESCRIPTION: The antenna is an 8-element (crossed H-Adcock) array with a central sense monopole. Each element of the Adcock array uses two AT-464()TRD-10 monopoles to form an adjustable dipole. Each half of the dipole is 2 feet 2 inches long when closed and 6 feet 4-1/2 inches long when extended. The AT-465()/TRD-10 is used as an adjustable sense monopole and is 2 feet 11-1/2 inches long when closed and 8 feet 3-3/4 inches long when extended. Each of the dipoles and the monopole is 1 inch in diameter. These elements fasten to Antenna Support AB-351()/TRD-10, which has a 9-inch diameter hub to which eight 18-inch spokes are mounted. At the end of each spoke are two insulated mounting studs for the dipole elements. The antenna is mounted on a 27-foot sectionalized aluminum mast 3 inches in diameter. The antenna weighs approximately 20 pounds. The input impedance is 50 ohms. Coaxial transmission lines are used to feed the antenna.

BEAM DATA:
Beam type - figure of eight for search, cardioid for sense.
Polarization - Vertical.

SCAN DATA: The antenna has 360° electromechanical azimuth scan at 30 revolutions per second.

TUNING/MATCHING DEVICES: The elements of the antenna are adjustable in length to tune the antenna to the desired frequency range.



AS-681/TRD-10&()

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/TRD-10(). Equipment function - direction finding.

COGNIZANT AGENCY: SCIE-4633.

MANUFACTURERS: Laboratory for Electronics, Inc., procurement contract 97-Phila-52-93.

REFERENCES:
1) Departments of the Army and the Air Force, Direction Finder Set AN/TRD-10, Technical Manual, Technical Order, TM 11-296, TO 31R4-2TRD10-1, (Oct. 1955). UNCLASSIFIED.
2) U. S. Military Specification MIL-R-11113.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-682/TRC-27

See OA-1378/GRC.

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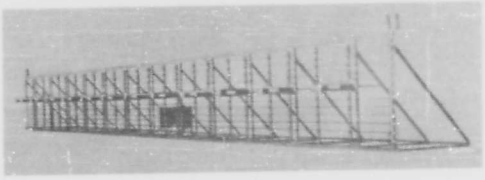
ANTENNA ASSEMBLY AS-683/MRN-7&()

MAJOR COMPONENTS: 12 AT-471/MRN-7 antennas and necessary reflector wire and hardware.

FREQUENCY: VHF band, 108 - 112 mc.

TYPE: Mattress antenna.

DESCRIPTION: AS-683/MRN-7&() consists of 12 horizontally polarized dipole radiators (AT-471/MRN-7) mounted in a horizontal line on the vertical face of a metal framework 85 feet long, 7 feet high and 9 feet 4 inches deep. The frame has 12 lengths of No. 12 AWG bare copper wire stretched horizontally to reflect the radiated energy in the direction of the approaching aircraft. Each dipole is fed by an individual 52-ohm transmission line and is protected from the weather by a snow cover.



AS-683/MRN-7

BEAM DATA:
Beam width - Energy is concentrated in an 18° sector.
Polarization - Horizontal.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/MRN-7. Equipment function - navigation.

COGNIZANT AGENCY: AS-683/MRN-7&() . . . U. S. AEL-53-189; AT-471/MRN-7&() . . . U. S. AEL-53-305.

MANUFACTURERS: Federal Telephone and Radio Corporation, procurement contract AF 33(038)-19230.

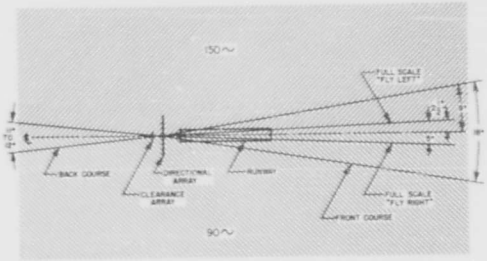
REFERENCES:
1) U. S. Air Force, Handbook Operation Instructions for Radio Transmitting Set AN/MRN-7, TO 31R4-2MRN7-1, (June 20, 1955 - revised Mar. 13, 1959). UNCLASSIFIED.

2) U. S. Air Force, Illustrated Parts Breakdown for Transmitting Set, Radio AN/MRN-7, TO 31R4-2MRN7-4, (Aug. 15, 1955 - revised Mar. 13, 1959). UNCLASSIFIED.

3) U. S. Military Specification MIL-R-4140 (USAF).

4) U. S. Department of Defense Nomenclature Card for AS-683/MRN-7&C.

5) U. S. Department of Defense Nomenclature Card for AT-471/MRN-7.



AS-683/MRN-7&() Localizer Signal Zones

ANTENNA ASSEMBLY AS-684/MRN-7&()

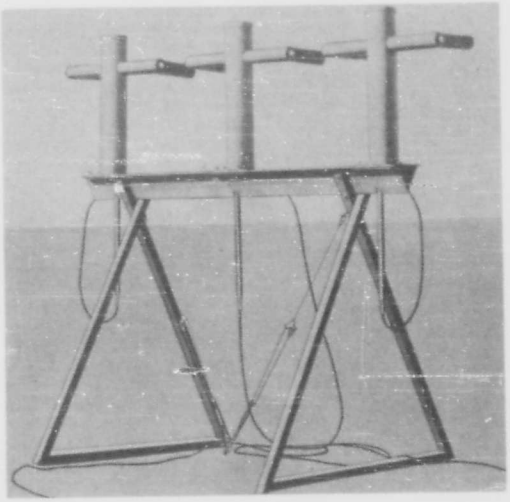
MAJOR COMPONENTS: 3 AT-472/MRN-7 antennas.

FREQUENCY: VHF band, 108 - 112 mc.

TYPE: Three swept-back dipoles forming an array.

DESCRIPTION: Antenna AS-684/MRN-7 is made up of three AT-472/MRN-7 modified dipoles arranged in a broadside array. The overall array is 9 feet 5 inches by 7 feet 11-3/4 inches by 4 feet 10-3/4 inches. Each dipole in the array is fed by a separate 52-ohm coaxial cable. The AT-472/MRN-7 is a dipole antenna made of 3-inch-outside-diameter tubing. Each half of each antenna is formed by welding two 14-inch pieces of tubing into a right-angled "L." Each dipole is assembled so that the ends of the right-angle pieces are parallel to each other, perpendicular to the axis of the array, and parallel to the ground. A snow cover on each dipole gives weather protection.

INSTALLATION: Ground, mobile.



AS-684/MRN-7

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/MRN-7. Equipment function - navigation. Range - 100 miles.

COGNIZANT AGENCY:
AS-684/MRN-7&(). . .U. S. AEL-53-130;
AT-472/MRN-7&(). . .U. S. AEL-53-304.

MANUFACTURERS: Federal Telephone and Radio Corporation, procurement contract AF 33(038)-19230.

REFERENCES:
1) U. S. Air Force, Handbook Operating Instructions for Radio Transmitting Set AN/MRN-7, TO 31R4-2MRN7-1, (June 20, 1955). UNCLASSIFIED.
2) U. S. Air Force, Illustrated Parts Breakdown for Transmitting Set, Radio AN/MRN-7, TO 31R4 2MRN7-4, (Aug. 15, 1955 - revised Mar. 13, 1959). UNCLASSIFIED.
3) U. S. Military Specification MIL-R-4140(USAF).
4) U. S. Department of Defense Nomenclature Card for AS-684/MRN-7&().
5) U. S. Department of Defense Nomenclature Card for AT-472/MRN-7&().

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ANTENNA AS-685/URN-3

Part of Antenna Group OA-592/URN-3 & ().

ANTENNA AS-686/URN-3&()

Part of Antenna Group OA-592/URN-3 & ().

ANTENNA AS-689/FRC-33 A & ()

Cancelled 25 October 1954.

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ANTENNA AS-693()/MPS

MAJOR COMPONENTS: 1 reflector and 1 dual feed horn.

FREQUENCY: UHF band, 990 - 1350 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a paraboloidal reflector fed by a dual horn. The horn is fed by a dual waveguide. The antenna is a very light-weight, highly mobile, air-transportable radar antenna that can be dropped from aircraft.

SCAN DATA: The antenna can be rotated mechanically. It also has a tilt adjustment.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPS-11 and various other mobile radar sets. Equipment function - search, air.

COGNIZANT AGENCY: U. S. WL-53-R-2057.

MANUFACTURERS: Procurement contract 339445.

REFERENCES:
1) U. S. Air Force Exhibit RADC-1615.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-699()/TLR

MAJOR COMPONENTS: 1 reflector and 2 slot-type antennas.

FREQUENCY: UHF and SHF bands, 2000 - 4500 mc.

TYPE: Paraboloidal reflector fed by a slot-type antenna.

DESCRIPTION: The antenna is a 48-inch paraboloidal reflector fed by one of two cavity-backed slot radiators. One slot radiator covers the range from 2000 to 3000 mc, while the other slot radiator covers the range from 3000 to 4500 mc. Each of the cavities behind the slots is 6-1/2 inches long, 3-3/4 inches wide, and 1-1/2 inches deep. The antenna is used for receiving, and is fed by 50-ohm coaxial cable.

SCAN DATA: The antenna can be rotated and tilted.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Countermeasures Receiving Set AN/TLR-1() and others.

Equipment function - countermeasures.

COGNIZANT AGENCY: SCLE-4829.

REFERENCES:
1) U. S. Signal Corps Drawing ES-DL-11000a.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-701/MPQ-10B

MAJOR COMPONENTS: 1 reflector and 1 dipole.

FREQUENCY: UHF band, 2700 - 2950 mc.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION: The antenna is a paraboloidal reflector fed by Antenna AT-499/MPQ-10B which is a 2-1/16-inch dipole and reflector feed assembly housed in a weatherproof enclosure. A 50-ohm coaxial transmission line is used to feed the assembly.

BEAM DATA:
Beam type - Probably pencil.

SCAN DATA: The antenna has a conical scan using a nutating feed.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-10B. Equipment function - search, air; and tracking.

MISCELLANEOUS: This antenna is apparently similar to AS-546/MPQ-10.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Ultrasonic Corporation, procurement contract NOas 52-1075.

REFERENCES:
1) Military Specification MIL-R-10608.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-702( )/APM-77

FREQUENCY: UHF band, 1600 - 1660 mc.

TYPE: Probably dipole.

DESCRIPTION: This test antenna is designed to be placed as a temporary cap over AS-665/APN-42 radar altimeter antenna. The antenna is constructed of aluminum and consists of two dipoles mounted in a dual chamber and connected together with a 336-foot length of RG-55/U coaxial cable, which serves as a delay line. Overall, the antenna is 14 inches wide, 10 inches high, and 8 inches deep. It mounts flush over the AS-665/APN-42 antenna with snap-slide fasteners.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Test Set AN/APM-77 &( ). Equipment function - test.

COGNIZANT AGENCY: AEL-53-105.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-711/MKR-7&( )

Cancelled 14 January 1957.

ANTENNA AS-717( )/GL

Cancelled 12 October 1954. Replaced by Antenna AS-736( )/GL.

ANTENNA AS-718( )/GL

Cancelled 4 November 1954. Replaced by Antenna AS-738( )/GL.

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ANTENNA AS-722/URM-42

MAJOR COMPONENTS: 1 dipole and 1 reflector.

FREQUENCY: VHF and UHF bands, 1550 - 5200 mc.

TYPE: Dipole antenna.

DESCRIPTION: The antenna is probably a dipole type with a reflector. It is 2-5/32 inches wide and 3-25/32 inches high. A 52-ohm coaxial transmission line is used to feed the dipole.

SCAN DATA: The antenna may be rotated.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-42. Equipment function - test.

MISCELLANEOUS: The antenna is electrically but not mechanically interchangeable with Antenna AS-23/AP.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Stoddart Aircraft Company, procurement contract NObsr-63341.

REFERENCES:
1) Stoddart Aircraft Company Part No. 91025-1.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-733()/U

FREQUENCY: SHF band, 8800 - 9600 mc.

TYPE: Lens.

DESCRIPTION: The antenna is a beacon antenna used for transmitting and receiving. It features wide-angle coverage obtained by use of a divergent lucite lens. The antenna is fed by RG-52/U waveguide.

BEAM DATA:
Polarization - Circular.

ASSOCIATED EQUIPMENT: The antenna is used primarily with guidance equipment. Equipment function - beacon.

COGNIZANT AGENCY: SCLE-9244.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-736()/GL

Part of Antenna Group OA-713()/G.

ANTENNA AS-737()/GL

Part of Antenna Group OA-713()/G.

ANTENNA AS-738()/GL

Part of Antenna Group OA-713()/G.

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ANTENNA AS-743/UPM-52

FREQUENCY: SHF band, X-band.

TYPE: Horn.

DESCRIPTION: This antenna is a movable (rotating and tilting) test horn terminated for waveguide. The assembly includes an alignment sight and rods for aligning the test antenna to the antenna being tested. The horn mounts by two integral clamps.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Set AN/UPM-52. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Western Electric Company, procurement contract NOrd-11805.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-749/FRN&()

FREQUENCY: LF band, 0.09 - 0.11 mc.

TYPE: Tower antenna.

DESCRIPTION: The antenna is a 625-foot tower built in 34 sections: 1 base section 12 feet long, 29 sections 20 feet long, 1 section 18 feet long, and 3 sections 5 feet long. A horizontal cross section of the tower is an equilateral triangle 63-1/2 inches on each side. The tower uses a guy-wire system that also serves as an electrical top-loading device. The antenna is fed by a coaxial cable. The tower can withstand 100-mile-per-hour winds.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Used with various radio sets. Equipment function - navigation.

COGNIZANT AGENCY: WL-54-R-1995.

MANUFACTURERS: Wind Turbine Company, procurement contract AF 30(602)-1233.

REFERENCES:
1) Exhibit RADC-1672.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-755/GRC&()

See OA-1397()/GRC&().

ANTENNA ASSEMBLY AS-756()/TRC

See OA-1391/GRC&().

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ANTENNA AS-759/FRC-36

MAJOR COMPONENTS: 1 monopole and 4 ground rods.

FREQUENCY: VHF band, 30 - 44 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna is a folded vertical element mounted above 4 radial ground rods. The vertical element is 103 inches long, and the ground rods are each 95 inches long. The antenna is supported by a 2-3/8-inch-diameter aluminum tube which extends 3 feet below the ground-plane rods. The antenna is fed by a 70-ohm coaxial transmission line.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

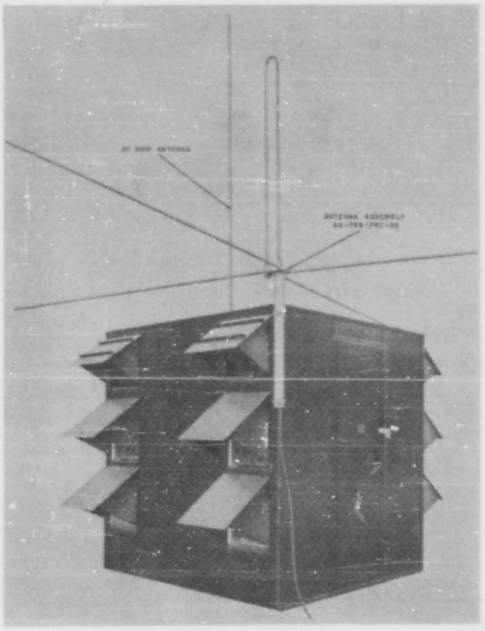
INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-36 or Radio Set AN/FRC-42. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Motorola Communications and Electronics, Inc., procurement contract NObsr-64859.

REFERENCES:
1) U. S. Navy Bureau of Ships, Technical Manual for Air Traffic Control Group AN/TSA-12, NAVSHIPS 92950, (April 1, 1957). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.



AS-759/FRC-36

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ANTENNA AS-762/MPN-5

MAJOR COMPONENTS: 1 Antenna Reflector AT-262/MPN-5&() and 1 Antenna Horn AT-409/MPN-5.

FREQUENCY: SHF band, 9000 - 9130 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION:
A) Antenna Reflector AT-262/MPN-5&() is a cut paraboloid 96 inches wide, 37 inches high, and 24 inches deep. The antenna is of one-piece construction using laminated glass cloth with a wire-screen reflecting surface.

B) Antenna Horn AT-409/MPN-5 is used to feed the above reflector. The inside of the horn is 0.900 inch square at the throat and 1.050 inches long by 0.866 inch wide at the mouth. The horn is fed by a waveguide.

BEAM DATA:
Half-power beamwidth - 0.95° in azimuth.
Beam type - Modified beavertail, 4° in elevation.
Polarization - The antenna can be manually set for either linear or circular polarization.

SCAN DATA: The scanning range is plus or minus 10 degrees in azimuth.

TUNING/MATCHING DEVICES: A manually operated waveguide polarizing unit permits either linear or circular polarization. Components are matched at electrical tests to insure proper realignment if disassembled.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPN-5 and AN/FPN-28. Equipment function - approach control, used to beam azimuth signal.

MISCELLANEOUS: Apparently the only difference between models of this antenna is that the early models had to have the feed matched to the reflector, whereas later models did not have to be matched.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Corporation, procurement contract NObsr-43011 and NObsr-64729.

STOCK NUMBERS: AS-762/MPN-5 . . . Federal Stock Number F 5985-636-3077; AT-262/MPN-5&( ) . . . Federal Stock Number F 5840-284-7103.

REFERENCES:
1) Private Correspondence.
2) Military Specification CS-972.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-763/MPN-5

MAJOR COMPONENTS: Antenna Reflector AT-263/MPN-5&( ) and Antenna Horn AT-410/MPN-5&( ).

FREQUENCY: SHF band, 9000 - 9180 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION:
A) Antenna Reflector AT-263/MPN-5&( ) is a cut paraboloid 126 inches high, 36.96 inches wide, and 29 inches deep. It is constructed of two wing sections and a center section. Prior to 1957, the antenna reflector was constructed of laminated glass cloth with a wire-screen reflecting surface. After 1957, it was constructed of sheet metal, and used removable sheet-metal beam-shaping plates.

B) Antenna Horn AT-410/MPN-5&( ) is used to feed the AT-263/MPN-5 reflector. The outside of the horn is 1 inch long by 0.5 inch wide at the throat and 3.35 inches long by 0.855 inch wide at the mouth. The inside of the horn is 0.9 inch long by 0.4 inch wide at the throat and 3.25 inches long by 0.755 inch wide at the mouth. Prior to 1957, the horn and reflector had to be matched; after 1957, matching was no longer required.

BEAM DATA:
Half-power beamwidth - 0.55° in the vertical plane.
Beam type - $\csc^2$ in azimuth plane.
Polarization - Either linear or circular, depending on the polarizing-unit setting.

SCAN DATA: The antenna nods 7° in elevation.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPN-5&( ) and AN/MPN-28&( ). Equipment function - approach control, used to beam elevation signal.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Bendix Radio, procurement contracts NObsr-43011, NObsr-64729, and NObsr-63427.

STOCK NUMBERS: AS-763/MPN-5. . .Federal Stock Number F 5985-636-3078; AT-263/MPN-5&( ). . .Federal Stock Number F 5985-369-5645; AT-410/MPN-5. . . Federal Stock Number F 5985-538-7089.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Private Correspondence.
3) Military Specifications:
AS-763/MPN-5. . .CS-972
AT-263/MPN-5&( ). . .CS-972D
R-1081A
AT-410/MPN-5. . .CS-972D
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-764/MPN-5

MAJOR COMPONENTS: 1 Antenna Reflector AT-265/MPN-5 and 1 Antenna Horn AT-268/MPN-5.

FREQUENCY: UHF band, 2740 - 2900 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION:

A) Antenna Reflector AT-265/MPN-5&() is a cut paraboloid 5.58 feet deep, 9.53 feet wide, and 10.25 feet high. It is constructed of aluminum mesh with a tubular-aluminum supporting structure. The horn feed must be matched to the reflector. When used with Radar Set AN/FPN-28, this reflector will mount to Antenna Pedestal AB-392/FPN-28; however, when it is used with Radar Set AN/MPN-5, it will mount to Pedestal AB-184/MPN-5.

B) Antenna Horn AT-268/MPN-5&() is 3.34 inches long by 1.5 inches wide at the throat and 4.4 inches long by 3.55 inches wide at the mouth. The inside of the horn is 2.84 inches long by 1.34 inches wide at the throat and 3.9 inches long by 3.39 inches wide at the mouth. The overall length of the horn assembly is 57.88 inches. The horn is constructed of aluminum alloy and is fed by a waveguide.

BEAM DATA:

Half-power beamwidth - 2.2° in azimuth plane.
Beam type - $\csc^2$ from about 2° to 25° in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna scans through 360° in azimuth.

TUNING/MATCHING DEVICES: The horn has 3 soldered tuning cores.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPN-28 and AN/MPN-5. Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Bendix Radio, procurement contract NObsr-63427 and NObsr-43011.

STOCK NUMBER: AT-265/MPN-5 . . . Federal Stock Number N 5985-296-2395; AT-268/MPN-5 . . . Federal Stock Number F 5985-369-5465.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Private Correspondence.

3) Military Specification Numbers
AS-764/MPN-5 . . . CS-972
AS-265/MPN-5&() . . . R-1081A
AS-268/MPN-5&() . . . R-1081A

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-768/GR

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Stacked array of dipoles.

DESCRIPTION: The antenna consists of four bays of dipoles mounted one on top of the other. Each bay consists of four vertical dipoles arranged 90° apart around a central mast. The bays are stacked in such a way that the dipoles of each bay are spaced 45° from the corresponding dipole of adjacent bays. The antenna is flange mounted by eight 9/16-inch holes on a 6-1/2-inch bolt circle. It is designed for use with a 50-ohm coaxial line, UG-154/U.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communications.

MISCELLANEOUS: Antenna AS-768/GR is similar to but not interchangeable with AS-483/GR and AS-992/GR.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Prodelin, Inc., Kearny, New Jersey.

STOCK NUMBER: Federal Stock Number F 5985-296-1715.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-769/TRN&()

FREQUENCY: MF band, 1.5 - 2.5 mc.

TYPE: Tower antenna.

DESCRIPTION: The antenna is a guyed-tower radiator 102 feet high. It is constructed of 17 prefabricated aluminum sections each measuring 6 feet long. A horizontal cross section of the tower is an equilateral triangle measuring 11 inches on each side. The tower rests on a base plate and insulator.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: AN/TRN-2 and AN/TRN-3. Equipment function - navigation.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Seismograph Service Corporation, procurement contract NObsr-64609.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-770()/URM-16

FREQUENCY: UHF band, 380 - 1130 mc.

TYPE: Yagi (2-element).

DESCRIPTION: This is a two-element parasitic array having a straight dipole as its driven element. The two elements are of telescopic construction. The driven element is 3-1/4 inches minimum length, 7-19/64 inches maximum length and has a diameter of 3/16 inches. The parasitic element is 3-3/8 inches minimum length, 8-63/64 inches maximum length and is 9/16 inches in diameter. The array is fed by a coaxial cable.

TUNING/MATCHING DEVICES: An adjustable shorting bar is used to match the antenna to the coaxial feedline. Telescopic elements are adjustable for frequency.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Antenna Pattern Analyzer Group AN/URM-16(). Equipment function - test.

COGNIZANT AGENCY: Watson Laboratories. (RADC).

MANUFACTURER: F-R Machine Works, Inc., procurement contract AF30(602)-218.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-771()/URM-16

FREQUENCY: UHF and SHF bands, 1120 - 3400 mc.

TYPE: Yagi (2-element).

DESCRIPTION: This is a two-element parasitic array having a dipole as its driven element. The two elements are of telescopic construction. The driven element is 1-7/64 inches minimum length, 2-3/32 inches maximum length, and 1/4 inch in diameter. The parasitic element is 1-13/64 inches minimum length, 2-13/32 inches maximum length, and 1/4 inches in diameter. The array is fed by a coaxial cable.

TUNING/MATCHING DEVICES: An adjustable shorting bar is used to match the antenna to the coaxial feedline. Telescopic elements are adjustable for frequency.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Antenna Pattern Analyzer Group AN/URM-16(). Equipment function - test.

MISCELLANEOUS: AS-771/URM-16 is similar to AS-770/UPM-16.

COGNIZANT AGENCY: Watson Laboratories. (RADC)

MANUFACTURER: F-R Machine Works, Inc., procurement contract AF30(602)-218.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-772()/URM-16

FREQUENCY: SHF band, 3400 - 10,000 mc.

TYPE: Yagi (2-element).

DESCRIPTION: This is a two-element parasitic array having a dipole as its driven element. The two elements are of telescopic construction. The driven element is 1/2 inch minimum length, 25/32 inch maximum length, and 1/4 inch in diameter. The parasitic element is 23/64 inch minimum length, 3/4 inch maximum length, and 1/4 inch in diameter. The array is fed by a coaxial cable.

TUNING/MATCHING DEVICES: An adjustable shorting bar is used to match the antenna to the coaxial feedline. Telescopic elements are adjustable for frequency.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Antenna Pattern Analyzer Group AN/URM-16(). Equipment function - test.

MISCELLANEOUS: AS-772()/URM-16 is similar to AS-771()/URM-16.

COGNIZANT AGENCY: Watson Laboratories (RADC).

MANUFACTURER: F-R Machine Works, Inc., procurement contract AF30(602)-218.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-778/FRC&()

FREQUENCY: LF and MF bands, 0.2 - 0.4 mc.

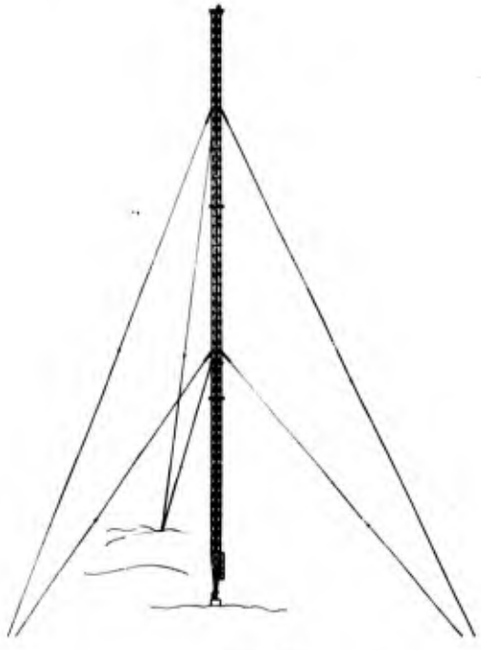
TYPE: Tower antenna.

DESCRIPTION: The antenna is a guyed-tower radiator 300 feet high. It consists of 15 sections, each 20 feet long. The bottom section is tapered to mount on a base insulator. A horizontal cross section of the tower is a triangle which measures 70 inches on each side. The tower weighs a total of 24,285 pounds. Each section weighs between 1287 pounds and 2532 pounds. The tower is designed for transmitting and will handle 2 kilowatts of power. It will withstand 100-knot winds.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Wilcox Electric Company part number 96-200 transmitter. Equipment function - communications. Range - 100 to 150 miles.



AS-778/FRC

COGNIZANT AGENCY: WL-55-1121.

MANUFACTURERS: Tower Construction Company.

REFERENCES:
1) U. S. Air Force, Illustrated Parts Breakdown for Radio Antenna AS-778/FRC, TO 31R2-2FRC-314, (July 1, 1956). UNCLASSIFIED.
2) U. S. Air Force, Handbook Installation Instructions for Radio Antenna AS-778/FRC, TO 31R2-2FRC-315, (July 1, 1956). UNCLASSIFIED.
3) Exhibit RADC-2403.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-784/TRN

FREQUENCY: MF band, 1.5 - 2.5 mc.

TYPE: Tower antenna.

DESCRIPTION: The antenna is a 100-foot tower supported by guy wires with insulators spaced at 15 feet. The tower is constructed of prefabricated aluminum sections which are 10 feet long and have a triangular cross section 12 inches on each side. Ten sections are required for the tower, and three sections are required for the boom used during erection of the tower. The antenna rests on a base insulator.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

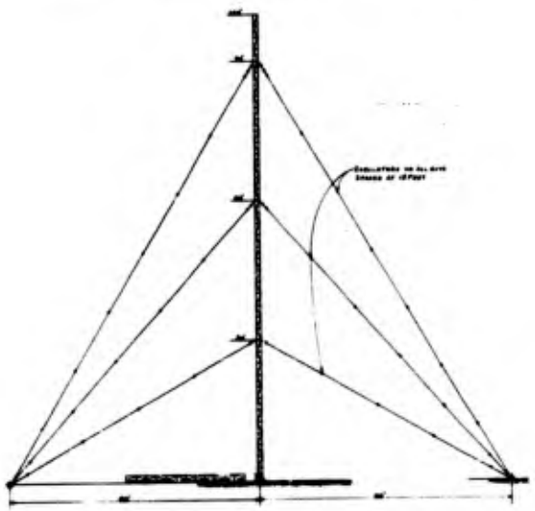
INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: AN/TRN-2, AN/TRA-3, and AN/TPN-10. Equipment function - navigation.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Wind Turbine Company, procurement contract NObsr-64687, manufacturer's type No. 1245-A.

REFERENCE:
U. S. Department of Defense Nomenclature Card.



AS-784/TRN

ANTENNA AS-787/GR

See Antenna Group AN/GRA-29.

ANTENNA ASSEMBLY AS-791()/TLR-8

MAJOR COMPONENTS: 3 helices and 2 horns.

TYPE: Three helical antennas and two horn antennas.

DESCRIPTION: The antenna consists of 3 helices and 2 horns enclosed by a radome.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Countermeasures Receiving Set AN/TLR-8(). Equipment function - countermeasures.

MISCELLANEOUS: Production type nomenclature cancelled.

COGNIZANT AGENCY: SCLE-9912.

MANUFACTURERS: American Electronics Laboratories, Inc., procurement contract 170-PHILA-5493.

REFERENCES:
1) Signal Corps Technical Requisition SCL-2817.
2) Manufacturer's Drawing Numbers SK-5420211, SK-5420212, SK-5420213, SK-5420214, SK-5420215.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-792/GRD4()

FREQUENCY: VHF and UHF bands, 225 - 400 mc; VSWR < 3.8.

TYPE: Amplitude modulating DF antenna; conical antenna.

DESCRIPTION: The antenna is an array of two discones with a reflector. The two discones are mounted one above the other and are placed so that the axes of the cones are collinear. The reflector (43-3/8 inches high)is embedded in a 90-degree portion of a rotating cylinder 15-1/4 inches in diameter. The reflector is mounted so that the axis of the partial cylinder coincides with the axes of the discones. This reflector is mechanically rotated about the discones at about 1750 revolutions per minute. The two discones are similar and are about 10 inches in diameter and 19 inches long. They are so phased that errors due to fade out and ground reflections are minimized. A fiberglass cylinder is used as a radome for the antenna.

BEAM DATA:

Gain - Over the frequency range covered, the gain with respect to a half-wave dipole varies between 0.9 and 3.8 db.

Beam type - Cardioid.

Polarization - Vertical.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at about 1750 revolutions per minute.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/CRD-6 and other UHF direction-finding equipment. Equipment function - direction finding.

COGNIZANT AGENCY: WL-56-1027.

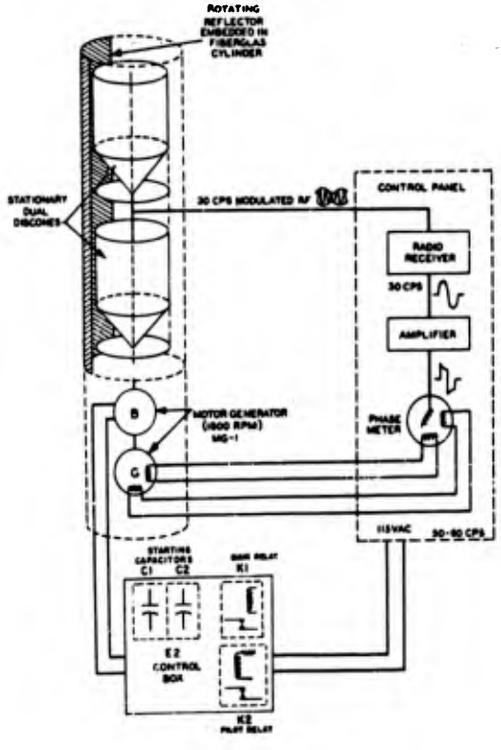
MANUFACTURER: The Gabriel Company, procurement contract AF 30(635)-6811.

REFERENCES:

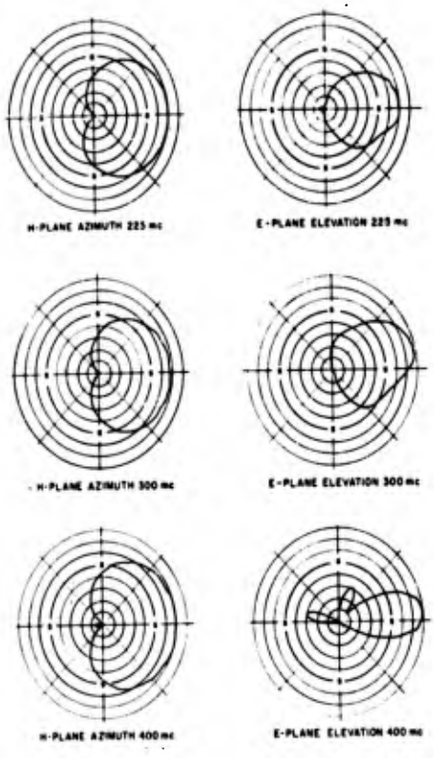
1) Charles Lindberg, Edward Prohaska, Final Engineering Report on AS-792(XW-1)/GRD UHF Direction Finder Antenna, Report No. 43-230-1. Needham Heights, Mass.: Gabriel Electronics Division, Gabriel Company. (Dec. 1958). UNCLASSIFIED.

2) Military Specification RADC-2483.

3) U. S. Department of Defense Nomenclature Card.



AS-792(XW-1)/GRD Block Diagram



AS-792(XW-1)/GRD Typical Patterns

ANTENNA AS-793()/MRN-13

FREQUENCY: LF and MF bands, 0.2 - 0.4 mc.

TYPE: Flat-top.

DESCRIPTION: The antenna consists of a flat-top antenna which is supported by two AB-86/GRA-4 antenna masts, and a counterpoise consisting of eight 100-foot lengths of No. 14 AWG bare copper wire. The flat-top antenna consists of a 200-foot single-wire flat-top and a vertical downlead approximately 40 feet long.

BEAM DATA:
Beam type - Approximately omnidirectional in azimuth.
Polarization - Predominately vertical.

TUNING/MATCHING DEVICES: Antenna Coupler CU-317/URN-5 is used with this antenna.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Beacon AN/MRN-13. Equipment function - navigation, surface reference; and communication.

COGNIZANT AGENCY: USAF WL-55-2035.

MANUFACTURERS: Craig Systems, Inc.

REFERENCES:
1) U. S. Air Force, Beacon, Radio AN/MRN-13 Part No. 72R70, Handbook Operating Instructions, T.O. 31R4-2MRN13-1, (Jan. 1, 1957). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-794()/MRT

Probably same as AS-795()/MRT.

ANTENNA SYSTEM AS-795()/MRT

MAJOR COMPONENTS: 3 each MS-116-A, MS-117-A, and MS-118-A mast sections; and 3 AB-86-4 mast section kits.

FREQUENCY: MF and HF bands, 2.2 - 20 mc.

TYPE: Monopole.

DESCRIPTION: The antenna system consists of three vertical antennas. Each antenna consists of a 40-foot mast and a 15-foot whip. The whip is made of the MS-116, MS-117, and MS-118 sections, and mounts on top of the AB-86 mast by means of an MX-857/GRA-4 adapter. The AB-86/GRA-4 mast is insulated above ground by means of a MX-384/GRA-4 insulator. At frequencies below 10 megacycles, the whip is not used. The three antennas are used separately with three transmitters.

BEAM DATA:
Beam type - Omnidirectional.
Polarization - Vertical.

TUNING/MATCHING DEVICES: The Model TAC antenna tuning unit is used with this antenna system.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Transmitting Sets AN/MRT-6 and AN/MRT-7. Equipment function - communications.

MISCELLANEOUS: This antenna system is probably very similar to the AS-794/MRT system.

COGNIZANT AGENCY: U. S. Air Force WL-55-2037.

MANUFACTURER: Craig Systems, Inc.

REFERENCE:
U. S. Air Force, Transmitting Set, Radio AN/MRT-6 Part No. 76R30, Handbook Operating Instructions, T.O. 31R2-2MRT6-1, (Aug. 1, 1957). UNCLASSIFIED.

ANTENNA ASSEMBLY AS-798/FLR-2

MAJOR COMPONENTS: 24 Yagi arrays.

FREQUENCY: VHF band, 54 - 231 mc.

TYPE: Yagi array.

DESCRIPTION: The antenna assembly consists of 24 Yagi arrays each containing a reflector, a director, and a driven dipole. The frequency range listed above is divided into 7 bands which are listed in the table below. The 24 Yagi arrays are divided into groups of from 2 to 4 antennas, and each group is used to cover a portion of the frequency range as follows:

Band No.	Freq. Range (mc)	No. of Arrays Furnished
3	54-66	2
4	64.8-79.2	3
5	81-99	3
6	99-121	4
8	126-154	4
9	154-187	4
10	189-231	4

The antennas for the desired band are mounted one above the other on a common 24-foot-high mast and are positioned so that their main lobes are separated by a small angle. Bearing data can be obtained by rotating the mast manually until the signal is received equally by both antennas. The mast is capable of holding enough antennas to cover two bands so that monitoring of one band may be carried out while bearing information is being obtained on another band.

BEAM DATA:
Polarization - Either horizontal or vertical, depending on mounting and units used.

SCAN DATA: The antenna can be manually rotated 360° in azimuth.

TUNING/MATCHING DEVICES: Each array has a balun on the driven dipole to change the balanced signal on the antenna to an unbalanced signal for the coaxial feed.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Countermeasures Receiving Set AN/FLR-2. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: The nomenclature card disagrees with the manufacturer's manual as to band numbers.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Nems-Clarke Company.

REFERENCES:

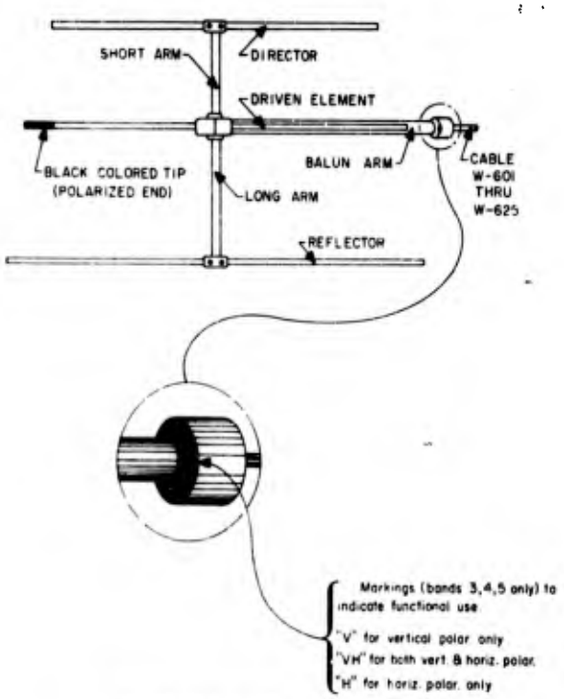
1) Nems-Clarke Company Instruction Book for Receiving Set, Countermeasures, AN/FLR-2.

2) Nems-Clarke Company Part/Drawing Number F-15, 195.

3) Military Specification SHIPS-R-1860.

4) U. S. Navy Research Laboratories Drawing 5430-252/54.

5) U. S. Department of Defense Nomenclature Card.



AS-798/FLR-2, Typical Yagi Array

ANTENNA AS-800()/TRD-11

MAJOR COMPONENTS: An Adcock antenna, a reflector, and an antenna mast AB-452/TRD-11.

FREQUENCY: VHF band, 30 - 60 mc.

TYPE: Adcock antenna with reflector.

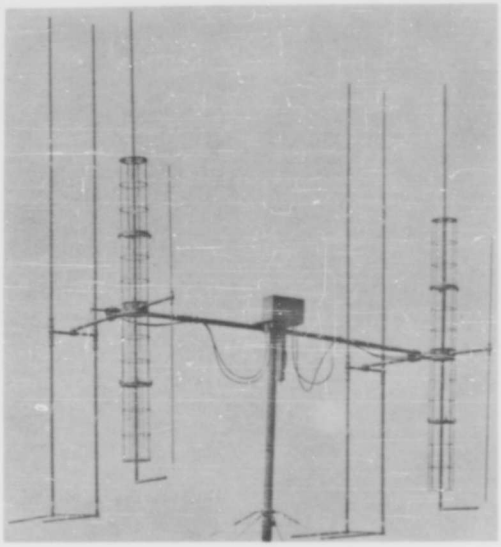
DESCRIPTION: The antenna is mounted on mast AB-452()/TRD-11 which is hand rotatable in azimuth. The antenna has provisions for additive or differential beam patterns for use in search and direction-finding operations respectively. The nominal bearing accuracy is 2°.

BEAM DATA:
Beam type - Twin lobe.
Polarization - Designed for vertical; usually operated horizontally.

SCAN DATA: The mast is hand rotatable in azimuth. Additive or differential beam patterns are available.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Direction Finder Set AN/TRD-11(). Equipment function - direction finding.



AS-800(XE-1)/TRD-11

MISCELLANEOUS: The antenna is used with Antenna Assembly AS-801()/TRD-11. It provides the lowest frequency range for the group.

COGNIZANT AGENCY: U S A SCLE-9631, development contract DA 36-039-sc-15452.

MANUFACTURER: Raytheon Mfg. Co., code number 81483.

REFERENCES:

1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) Signal Corps Technical Requirements SCL-2466.

3) U. S. Department of Defense Nomenclature Card.

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TYPE: Probably an array of dipoles.

DESCRIPTION: The antenna is tripod mounted and consists of six fixed dipole elements and two telescoping dipole elements on an antenna mounting head. No information is available about the meaning of "dipole element", but it is assumed to mean one half of one dipole.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Field Strength Meter AN/URM-91(). Equipment function - test.

MISCELLANEOUS: The antenna is a receiving antenna designed to pick up r-f signals from 18 to 125 mc and feed them into the measuring portion of the field-strength meter.

COGNIZANT AGENCY: U S A SCLM-1252.

MANUFACTURER: Telectro Industries, Inc., code number 82680, part number TA-696.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-805/MSQ-4

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Collinear array of cage dipole antennas.

DESCRIPTION: The antenna is a four-bay, stacked vertical array consisting of four cage-dipole antennas mounted on a vertical column three inches in diameter. The bays are mounted on the column by metallic supports which serve as insulators due to the configuration of the antennas and the electrical length of the supports. Each cage is 15 inches in diameter, 18 inches long, and is made of aluminum. The antenna mounts on the top of the mast by means of two bolts.

BEAM DATA:
Beamwidth - Omnidirectional in horizontal plane.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-27. Equipment function - communications.

MISCELLANEOUS: AS-805/MSQ-4 is Antenna AS-505/GR modified by removing the transformer and connector and adding cables (per Adler Communications Laboratories drawing No. B-2352-835) to obtain four separate antennas.

COGNIZANT AGENCY: U. S. Navy, 1771.

MANUFACTURER: Adler Communications Laboratories, contract NObsr-57396.

REFERENCES:
1) Private Correspondence.
2) Adler Communications Laboratories drawings A-2352-930 and B-2352-835.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-807()/GPS

FREQUENCY: UHF band, 990 - 1350 mc: 990 - 1130 mc (IFF), 1280 - 1350 mc (Radar).

TYPE: Probably cut paraboloidal reflector fed by a horn.

DESCRIPTION: This is a lightweight antenna. It mounts on a pedestal and produces a rotating $\csc^2$ radiation pattern.

INSTALLATION: Ground, transportable in an M-35 Truck, a C-119C Plane, or a H-21C Helicopter.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPS-8, AN/MPS-11. Equipment function - search and IFF.

COGNIZANT AGENCY: WL-55-2744.

MANUFACTURER: General Electric Company, procurement contract AF 30(635)-4508.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP AS-808()/FRN

FREQUENCY: SHF band; Transmitting 16,272 - 16,288 mc; Receiving 16,400 - 16,600 mc.

TYPE: Slot.

DESCRIPTION: The antenna consists of two sections of slotted waveguide stacked vertically to permit mounting on a common axis with a gimbal joint for gravity gimballing. The antenna is omnidirectional and horizontally polarized. It has separate transmitting and receiving sections. The receiving section receives the interrogation from the K_u-band radar, and the transmitting section radiates the beacon reply to the interrogator.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Horizontal.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: AN/FRN-19() or various sets in the K_u band. Equipment function - navigation.

COGNIZANT AGENCY: WL-55-2695.

MANUFACTURER: Bomac Laboratories, Inc.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-810()/GPR

FREQUENCY: UHF and SHF bands, 940 - 12,100 mc.

TYPE: Paraboloidal reflector fed by a horn.

DESCRIPTION: This is a high-gain, broad-band antenna, consisting of a paraboloidal reflector fed by one of a set of horns designed to cover the frequency range. The antenna is pedestal mounted.

SCAN DATA: The antenna is designed for azimuth rotation and for tilting in elevation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various receivers. Equipment function - tracking of airborne targets; and monitoring signals from missiles and other airborne targets.

COGNIZANT AGENCY: Signal Corps.

REFERENCES:
1) Signal Corps Technical Requirements SCL-2940.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-813/TRC-47&()

MAJOR COMPONENTS: 1 radiator assembly, 1 base plate, and 16 reflector rods.

FREQUENCY: VHF band, 132 - 150 mc.

TYPE: Corner reflector fed by a vertical radiator assembly.

DESCRIPTION: The antenna is a corner reflector, fed by a ground-plane antenna with 50-ohms input impedance. The single driven element is vertically mounted in the center of a triangularly shaped base that serves as the ground plane. The base is a perforated aluminum plate supported by an aluminum framework. The triangular base is 65 inches on two sides and 89 inches on the third side (or front). The driven element is adjustable in length (from 17 to 21-3/4 inches) and position. The radiator is fed at the bottom by a 50-ohm coaxial line. The two sides of the corner reflector are formed by 16 vertically mounted, 3/8-inch-diameter rods each of which is 42 inches long. The entire unit can be mounted on a pole or mast by two chain-type pole clamps (spaced approximately 40 inches on the pole) and two supporting legs. Total weight of the antenna is 48 pounds.

BEAM DATA:
Beam type - Unidirectional.
Front-to-back ratio - 20 db.
Polarization - Vertical.

TUNING/MATCHING DEVICES: The driver element is adjustable in length and position.

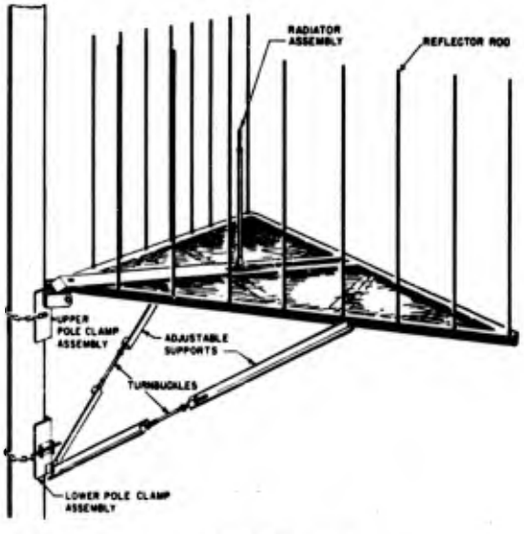
INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-47. Equipment function - communications. The antenna is primarily used as part of a three-mile, single-channel radio link in a two-wire telephone system.

COGNIZANT AGENCY: SCIM-7666.

MANUFACTURER: Varo Manufacturing Company, Inc., Code number 83003, model number S165A.

STOCK NUMBER: Federal Stock Number 5820-511-4249.



AS-813/TRC-47

REFERENCES:
1) Department of the Army, Operators Manual for Radio Set AN/TRC-47, TM 11-212-10, (April 1958). UNCLASSIFIED.
2) Department of the Army, Radio Set AN/TRC-42, TM 11-221, (March 1956). UNCLASSIFIED.

ANTENNA ASSEMBLY AS-817()/GL

See OA-716()/GL.

ANTENNA AS-830()/GRA-33

FREQUENCY: SHF band, 7100 - 8100 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a 6-foot-diameter reflector fed by a slotted waveguide section with a reflecting end plate. It is mounted by three 5/8-inch-diameter bolts spaced 120° apart on a 15-5/16-inch-radius circle. This antenna provides facilities for receiving and transmitting microwave signals.

BEAM DATA:
Gain - 41 db.

INSTALLATION: Ground, fixed.

MISCELLANEOUS: AS-830()/GRA-33 is part of Antenna Group AN/GRA-33.

COGNIZANT AGENCY: WL-56-1462.

MANUFACTURER: Motorola, Inc.

REFERENCES:
1) Motorola Drawing Number X-1249.
2) U. S. Air Force, Radio Equipment, Ground Communications, Electronic and Meteorological Equipment Directory, T.O. 31R-1-8, (June 15, 1959). UNCLASSIFIED.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-831/TX

MAJOR COMPONENTS: Paraboloidal reflector, worm screw assembly, indicator crank assembly, cable assembly.

FREQUENCY: SHF band, 4600 - 5000 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a solid paraboloidal reflector mounted by two pivot studs, one on each side. The assembly is mechanically tilted in elevation by means of Andrew Corporation worm-screw assembly, part number JB-164; indicator crank assembly, part number JB-180; and mechanical cable assembly, part number JB-181. The antenna support and tilt mechanism is clamped to the top of the antenna tower.

SCAN DATA: The antenna has hand-operated mechanical tilt in the vertical plane.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/TXT-1 and Radio Set AN/TXR-1. Equipment function - television.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Andrew Corporation, part number JB-191.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-835/MPQ-4A&()

See OA-1258/MPQ-4A&().

ANTENNA AS-837()/G

FREQUENCY: MF band, 0.55 - 1.7 mc.

TYPE: Tower.

DESCRIPTION: The assembly consists of two towers antennas on ground-mounted base plates

BEAM DATA:
Beam type - Cardioid.

INSTALLATION: Ground, movable.

ASSOCIATED EQUIPMENT: Transmitting Set AN/MRT-5. Equipment function - communications.

COGNIZANT AGENCY: SCLC-10904.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP AS-840()/FRN

MAJOR COMPONENTS: Two modified channel-guide slot antennas.

FREQUENCY: SHF band, 9307 - 9435 mc; Transmitting antenna 9307 - 9313 mc, Receiving antenna 9315 - 9435 mc.

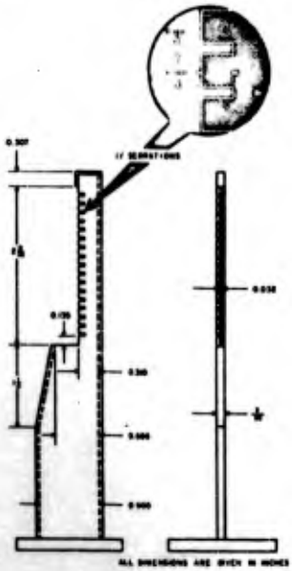
TYPE: Slot antenna.

DESCRIPTION: The assembly consists of two modified channel guides, each having a slot with serrated edges. The two antennas are stacked vertically to permit mounting on parallel axes with provisions for gravity gimballing. The top antenna is used for receiving, and the bottom antenna is used for transmitting. The two antennas are oriented so that the slots are back to back with a 6-inch vertical spacing between apertures resulting in an isolation of better than 60 db.

BEAM DATA:
Half-power beamwidth -
Vertical - 30°.
Beam type - Approximately omnidirectional.
Side-lobe attenuation - -8 db.
Polarization - Horizontal.

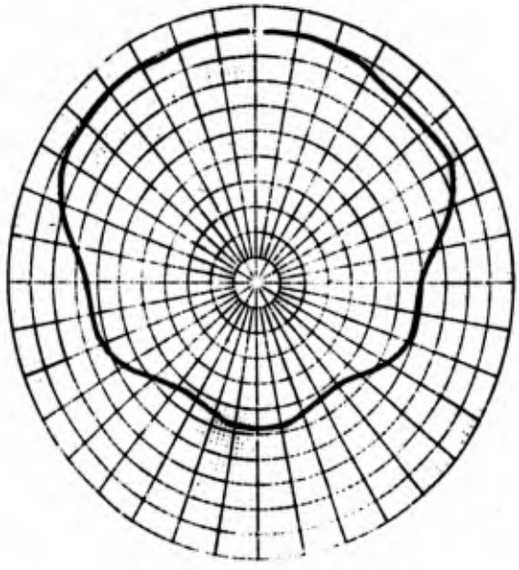
TUNING/MATCHING DEVICES: The receiving antenna has an inductive iris for matching, and the transmitting antenna has an inductive iris and a capacitive screw.

INSTALLATION: Ground, fixed.

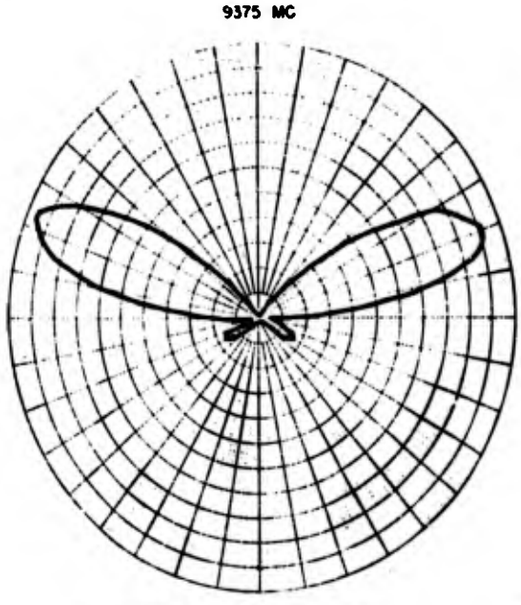


AS-840()/FRN

ASSOCIATED EQUIPMENT: Various X-band beacons. Equipment function - navigation, probably ground reference.



Horizontal Radiation Pattern for AS-840()/FRN



Vertical Radiation Pattern for AS-840()/FRN

COGNIZANT AGENCY: WL-56-1748.

MANUFACTURER: Airborne Instruments Laboratory, Inc., procurement contract AF 30(635)-2818.

REFERENCES:
1) L. K. DeSize and L. J. Kuskowski, Final Engineering Report on Development of Antenna Assembly AS-840(XW-1)/FRN (X-Band Beacon Antenna), Report No. 3003-1. Mineola, New York: Airborne Instruments Laboratory, Inc. (Dec. 1956). ASTIA Report No. AD 114282. UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-841()/GL

See OA-715()/GL.

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ANTENNA AS-842/FRC

FREQUENCY: MF and HF bands, 2 - 30 mc.

TYPE: Tower.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: General use. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Washington Aluminum Co., Inc., Code number 89016.

REFERENCES:
1) Washington Aluminum Co. drawing number B-5027.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-845()/GPX

FREQUENCY: UHF band, 950 - 1150 mc.

TYPE: Slot array.

DESCRIPTION: The antenna is an array of 32 slots arranged in four sections and is fed through a T-junction by coaxial cables. The assembly is about 328 inches long, 20 inches wide and 20 inches high. It is mounted on either a tower or a pedestal.

BEAM DATA:
Half-power beamwidth - Horizontal - 2.5°.
Side-lobe attenuation - 26 db.
Beam type - Fan.
Polarization - Vertical.

SCAN DATA: The antenna has motor-driven rotation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Probably Interrogator Set AN/GPX-19. Equipment function - IFF.

MISCELLANEOUS: AS-845()/GPX is similar to but not interchangeable with Antenna AT-309/GPX.

COGNIZANT AGENCY: WL-56-1810.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-846()/GL

See OA-715()/GL.

ANTENNA AS-847/FPS

See OA-1124/FPS.

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ANTENNA AS-857()/GR

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

BEAM DATA:
Beam type - Omnidirectional in azimuth.

INSTALLATION: Ground, fixed.

COGNIZANT AGENCY: WL-56-2092.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-858()/FRC

FREQUENCY: UHF band, 755 - 2400 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna reflector is either ground or tower mounted. It is a 30-foot paraboloid made of fibrous reinforced plastic.

INSTALLATION: Ground, fixed.

MISCELLANEOUS: The original nomenclature card dated 16 October 1956 describes AS-858()/FRC as an antenna with a frequency range of 755 - 8500 mc. The nomenclature card was amended 22 March 1957 and describes AS-858()/FRC as an antenna reflector with two operating frequency ranges, 755 - 985 mc and 1700 - 2400 mc. The reflector is for general purpose use.

COGNIZANT AGENCY: WL-56-2095 and WL-57-R-1125.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA REFLECTOR AS-859/FRA-21

See AN/FRA-21&().

ANTENNA ASSEMBLY AS-861()/FRC-44

See OA-1364()/FRC-44.

ANTENNA ASSEMBLY AS-861/FRR-52&()

See OA-1364/FRR-52&().

ANTENNA ASSEMBLY AS-862()/FRC-44

See OA-1365()/FRC-44.

ANTENNA ASSEMBLY AS-862/GRT-5&()

See OA-1365/GRT-5&().

ANTENNA ASSEMBLY AS-863()/FRC-44

See OA-1365()/FRC-44.

ANTENNA ASSEMBLY AS-863/GRT-5&()

See OA-1365/GRT-5&().

ANTENNA ASSEMBLY AS-864()/FRC-44

Cancelled 3 September 1957. See OA-1364()/FRC-44 and OA-1365()/FRC-44.

ANTENNA ASSEMBLY AS-864/GRT-5&()

See OA-1365/GRT-5&().

ANTENNA ASSEMBLY AS-865()/FRC-44

See OA-1364()/FRC-44 and OA-1365()/FRC-44.

ANTENNA ASSEMBLY AS-865/GRC&()

See OA-1364/FRR-52&() and OA-1365/GRT-5&().

ANTENNA ASSEMBLY AS-866/FPN-33&()

See OA-1368/FPN-33.

ANTENNA ASSEMBLY AS-867/FPN-33&()

See OA-1368/FPN-33.

ANTENNA AS-870()/FRC

FREQUENCY: UHF band, 1700 - 2400 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is a 30-foot collapsible balloon-type paraboloid mounted on a pedestal and housed in a radome. It is adjustable from -2° to +5° in elevation and from -20° to +20° in azimuth. For description of a typical paraballoon see AS-871/GPS.

BEAM DATA:
Gain - 40 db minimum.
Beam type - Pencil.

SCAN DATA: The antenna is adjustable from -2° to +5° in elevation and from -20° to +20° in azimuth.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: For general purpose use. Equipment function - communications.

COGNIZANT AGENCY: WL-57-R-1473.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-873()/MRD-14

FREQUENCY: VHF band, 120 - 156 mc.

TYPE: Adcock antenna.

DESCRIPTION: The antenna is a crossed H-Adcock type of aluminum construction. The goniometer, alternator, and motor are enclosed in a weatherproof center housing. The assembly is 25-3/8 inches in diameter and 57-3/16 inches long.

SCAN DATA: The beam is rotated in azimuth by a goniometer at 1800 revolutions per minute.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Direction Finding Set AN/MRD-14. Equipment function - direction finding.

MISCELLANEOUS: AS-873()/MRD-14 is similar to but not interchangeable with AS-575/GRD-5 & ().

COGNIZANT AGENCY: WL-56-2524.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-876/FRC-44&()

See OA-1364()/FRC-44 and OA-1365()/FRC-44.

ANTENNA ASSEMBLY AS-876/FRR-52&()

See OA-1364/FRR-52&().

ANTENNA AS-876/GRC

See OA-1365/GRT-5.

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ANTENNA ASSEMBLY AS-880()/TPQ-11

FREQUENCY: EHF band; 34,512 - 35,028 mc.

TYPE: Probably paraboloidal antenna.

DESCRIPTION: The assembly consists of two antennas, one for transmitting and one for receiving. It transmits energy in a narrow vertical beam and receives energy reflected from clouds or precipitation. The assembly is probably fixed except for 1° of tilt adjustment.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: AN/TPQ-11. Equipment function - meteorological measurement.

MISCELLANEOUS: The nomenclature card contains an apparent error in that it describes the assembly as fixed and motor driven.

COGNIZANT AGENCY: CRC-57-26.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-882()/G

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Probably a stacked array.

DESCRIPTION: The antenna assembly is a vertically stacked array of 7 bays of radiating elements. No information is available on the individual bays. It is a fixed-type antenna and is mounted on a mast. The antenna is designed for CW and pulse transmission and reception.

BEAM DATA:
Beam type - Omnidirectional in azimuth.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: AN/GRT-3, AN/FRR-7, AN/GRC-27, AN/GKA-4. Equipment function - communications; and telemetering.

COGNIZANT AGENCY: CRC-57-55.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-883/GPX&()

FREQUENCY: UHF band, 990-1120 mc.

TYPE: Probably dipole array.

DESCRIPTION: This antenna is an IFF feed designed to mount on a primary radar feed so the radar reflector is used with both radar and IFF feeds.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Equipment function - IFF.

COGNIZANT AGENCY: WL-56-2798.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-884()/G

FREQUENCY: UHF and SHF bands, 2300 - 4000 mc.

TYPE: Two paraboloidal reflectors each fed by a horn.

DESCRIPTION: The antenna is a pair of paraboloidal reflectors, each fed by a horn. One unit is used for transmitting and the other for receiving. Each antenna is mounted on a pedestal and has a motor drive for a rotating and tilting movement pattern. It is of lightweight, weatherproof construction.

SCAN DATA: The antenna has motor driven rotating and tilting movements.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Various countermeasures sets. Equipment function - countermeasures.

COGNIZANT AGENCY: SCEL-12135. Evans Signal Laboratories.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

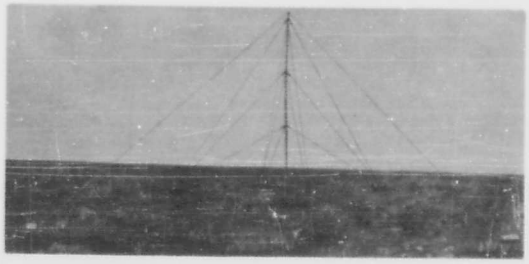
ANTENNA ASSEMBLY AS-887(XE-1)/GLT

FREQUENCY: VHF and UHF bands, 20 - 70 mc.

TYPE: Half-rhombic antenna.

DESCRIPTION: This half-rhombic antenna is used primarily as a transmitting antenna. It weighs 80 pounds and has a maximum allowable wind velocity of 87 miles per hour. Mast Section AB-85/GRA-4 is used in constructing the half rhombic. A type "C" connector is used. The antenna is capable of handling 400 watts of power.

BEAM DATA:
Gain - 12 to 18 db.
Half-power beamwidth -
Vertical - 74° at low frequency.
25° at high frequency.
Horizontal - 74° at low frequency.
25° at high frequency.
Side-lobe attenuation - 10 db or better.
Front-to-back ratio - 14 to 19 db.
Polarization - Vertical.



AS-887(XE-1)/GLT

SCAN DATA: The antenna may be manually rotated in azimuth.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Equipment function - countermeasures, jamming.

MISCELLANEOUS: Ten of these antenna units have been internally built by Evans Signal Laboratories. A contract is to be let for additional models (as of September 1958).

COGNIZANT AGENCY: Evans Signal Laboratories.

REFERENCES:
1) Private Correspondence.
2) Drawing ES-DL-165850.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-888()/TPS-27

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Paraboloidal reflector (paraballoon).

DESCRIPTION: The antenna reflector is an air-supported paraboloid (paraballoon), and is mounted on a fixed pedestal.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: AN/TPS-27 & (). Equipment function - search.

MISCELLANEOUS: The original nomenclature card listed the antenna as AS-888()/MPS-20 and the nomenclature card as amended 24 July 1957 lists it as AS-888()/TPS-27.

COGNIZANT AGENCY: WL-57-R-1500.

MANUFACTURER: Westinghouse Electric Corporation, Baltimore, Maryland.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-891/URN

See Antenna Group OA-1547/URN.

ANTENNA AS-892/URN

See Antenna Group OA-1548/URN.

ANTENNA AS-895/MPS-16

See OA-1196/MPS-16 & ().

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ANTENNA AS-897/UPS-1

FREQUENCY: UHF band, 1220 - 1350 mc.

TYPE: Modified cut paraboloidal reflector with horn and dipole feeds.

DESCRIPTION: The antenna consists of a modified cut paraboloidal reflector constructed of expanded metal, a horn radar feed, and dipole IFF feed. Additional information is available in the secret document listed below as Reference 1 or in Volume V of this catalog series.

BEAM DATA: See Reference 1 or Volume V.

SCAN DATA: See Reference 1 or Volume V.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/UPS-1(). Equipment function - search, air.

COGNIZANT AGENCY: USN-57-T-623.

MANUFACTURER: D. S. Kennedy & Company, procurement contract NObsr-71069.

REFERENCES:
1) John E. Cruickshank, Supplement #1 to Ground Radar Sets, Systems, and Related Components, Report No. RADC-TR-56-103. Griffiss Air Force Base, New York: Rome Air Development Center. (Feb. 1957). ASTIA Report No. AD97768. SECRET.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA – TARGET AS-902()/MLQ-7

MAJOR COMPONENTS: 2 optical targets and 1 waveguide horn antenna.

TYPE: Horn antenna.

DESCRIPTION: The antenna-target is a waveguide horn mounted with 2 optical targets on a single crossarm. The overall dimensions are 23 inches by 31-1/2 inches by 133-7/8 inches. The target is used for alignment of countermeasures antennas. Optical targets are calibrated to provide means of determining the amount of correction required to align the antennas with an accuracy of 0.1 mil.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: OA-1602()/MLQ-7.
Equipment function - test.

COGNIZANT AGENCY: SCEL-57-1338.

MANUFACTURERS: Gilfillan Bros. Inc., procurement contract 22840-PH-54-93.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-903/FPS-16

FREQUENCY: SHF band, 3900 - 6200 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna consists of a paraboloidal reflector of open-grating construction and a horn feed. It is mounted on a pedestal and can be disassembled into five transportable sections.

BEAM DATA:
Polarization - Vertical.

SCAN DATA: The antenna rotates and tilts mechanically.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-16.
Equipment function - tracking.

MISCELLANEOUS: AS-903/FPS-16 is the same as AS-912/FPS-16X except that the AS-912/FPS-16X has a circularly-polarized feed. They are not functionally interchangeable.

COGNIZANT AGENCY: N7-854.

MANUFACTURERS: RCA, procurement contract NOas 56-1026d.

REFERENCES:
1) RCA Drawing No. 362300-502.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-904()/UPX

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Modified, folded pill-box antenna.

DESCRIPTION: The antenna is a modified, folded pill-box 60 inches wide, 27 inches deep, and 18 inches high. The antenna weighs 26 pounds and the input impedance is 51 ohms. Coaxial transmission line is used. The antenna is used for transmitting and receiving Mark-X IFF signals in conjunction with any ground or shipboard-based IFF interrogator.

BEAM DATA:
Gain - 7 db.

SCAN DATA: The antenna has 360° mechanical azimuth rotation.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Various IFF equipment.
Equipment function - IFF.

COGNIZANT AGENCY: USN-57-b-946.

MANUFACTURERS: U. S. Naval Electronics Laboratory, procurement contract NE 041215-23.

REFERENCES:
1) Manufacturer Drawing No. RAA66F-43179.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-905/UPX

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Folded pillbox antenna.

DESCRIPTION: The antenna is a Fox-type, modified folded pillbox. The overall dimensions are 180 inches wide, 58 inches deep, and 23

inches high. It is designed for a 51-ohm coaxial transmission line. The total weight is 165 pounds.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Additional information is available in the confidential document listed below as Reference 1.
Polarization - Vertical.

SCAN DATA: The antenna is normally mounted on a motor-driven pedestal which rotates through 360° in azimuth.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Any Mark-X Interrogator Equipment. Equipment function - IFF.

COGNIZANT AGENCY: USN-57-b-947.

MANUFACTURER: U. S. Naval Electronic Laboratory, contract NEO 41215-23.1.

REFERENCES:
1) U. S. Navy, Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-910/GP&()

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Probably a paraboloid.

DESCRIPTION: This antenna is a highly mobile, light-weight, tilting antenna which uses the paraballoon technique to form a reflector. The purpose of this antenna is to evaluate the application of a fabric reflector as applied to a tilting antenna.

SCAN DATA: The antenna tilts and rotates mechanically.

INSTALLATION: Ground, fixed.

COGNIZANT AGENCY: WL-57-1557.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-912/FPS-16X

FREQUENCY: SHF band, 3900 - 6200 mc.

TYPE: Paraboloidal reflector fed by a horn assembly.

DESCRIPTION: The antenna consists of a paraboloidal reflector of open-grating construction and a horn feed. It is mounted on a pedestal and can be disassembled into five transportable sections.

BEAM DATA:
Polarization - circular.

SCAN DATA: The antenna rotates and tilts mechanically.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-16X. Equipment function - tracking.

MISCELLANEOUS: AS-912/FPS-16X is the same as AS-903/FPS-16 except that the AS-912/FPS-16X has a circularly-polarized feed. They are not functionally interchangeable.

COGNIZANT AGENCY: USN-58-Q-316.

MANUFACTURERS: Radio Corp. of America, procurement contract NOas-55-869c, Mfr. Code CRV or 49671.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA ASSEMBLY AS-916/GPQ-T1A&()

FREQUENCY: UHF and SHF bands, 2700 - 3100 mc and 8500 - 9600 mc.

TYPE: Probably two modified cut paraboloidal reflectors, each fed by a horn.

DESCRIPTION: The antenna is probably two modified cut paraboloidal reflectors fed by horn radiators. One reflector and horn covers the frequency range from 2700 to 3100 mc and the other covers the range from 8500 to 9600 mc. Both reflectors utilize laminated fiberglass construction with honeycomb filler and a sprayed aluminum surface below the first fiberglass lamination. Fiberglass windows are provided for each horn. Waveguide is used for the feed.

BEAM DATA:
Beam type - $\csc^2$ in elevation to about 45°.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set MK-381/GPQ-T1-& (). Equipment function - countermeasures.

COGNIZANT AGENCY: AEL-57-691.

MANUFACTURER: Gilfillan Bros., Inc., procurement contract AF 33(600)-31908.

REFERENCES:
1) Manufacturing Part/Drawing No. 76682.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-920/URM-7&()

MAJOR COMPONENTS: 2 Antenna Elements AT-848/URM-7, 1 Transmission Line Coupler CU-683/URM-7, and Mast Section AB-21/GR.

FREQUENCY: HF and VHF bands, 20 - 200 mc.

TYPE: Dipole antenna.

DESCRIPTION: The antenna assembly consists of a dipole mounted on Transmission Line Coupler CU-683/URM-7. Each half of the dipole is a telescopic rod antenna element AT-848/URM-7, which is adjustable from 12-1/4 inches to 42-1/8 inches to cover the frequency range of from 70 to 200 mc. In order to cover the range from 20 to 70 mc, it is necessary to add portions of Mast Section AB-21/GR to each side of the dipole. Mast Section AB-21/GR consists of 14 interconnecting, threaded rods. A steel tape that is graduated directly in megacycles is used so that the correct dipole length can be obtained using the appropriate number of fixed rods from Mast Section AB-21/GR in conjunction with the adjustable rods listed above. Mast Section AB-21/GR and the steel tape apparently are supplied with the associated equipment rather than with the antenna itself. The transmission line coupler contains a balun for matching the dipole to a 50-ohm coaxial cable. The entire antenna is mounted to Antenna Tripod MT-1947/URM-7.

BEAM DATA:
Polarization - Horizontal.

SCAN DATA: The antenna has 360° manual rotation.

TUNING/MATCHING DEVICES: A balun is supplied to match the dipole to a coaxial cable. The dipole length is adjustable.

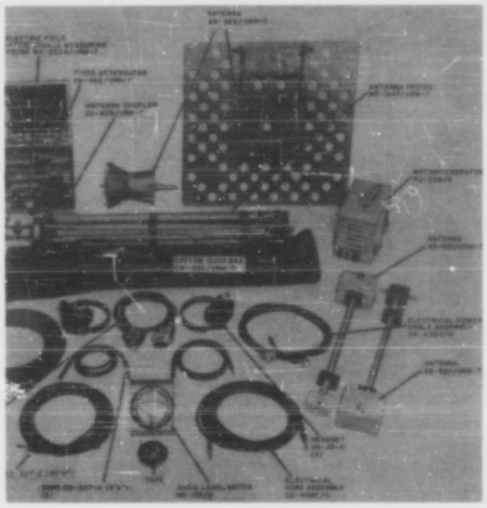
INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-7. Equipment function - test.

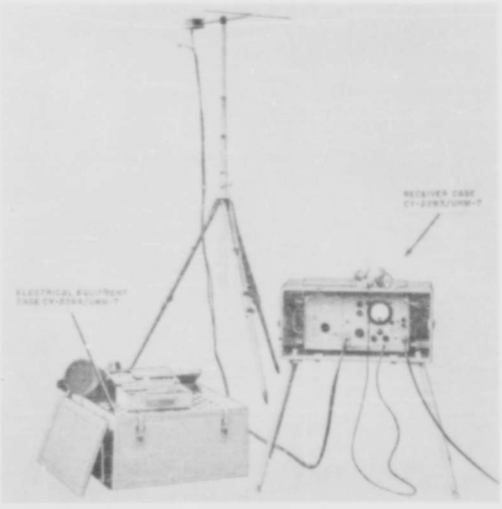
COGNIZANT AGENCY: SESA-57-1177.

MANUFACTURERS: Molded Insulation Co., procurement contract 21512-PHILA-56, Part No. 1011-62.

REFERENCES:
1) Department of the Army, Radio Interference Measuring Set AN/URM-7, TM 11-5544-15, (May 1958). UNCLASSIFIED.
2) Military Specification MIL-R-11197.
3) U. S. Department of Defense Nomenclature Card.



AS-920/URM-7, AS-921/URM-7, and AS-922/URM-7



AS-920/URM-7 and AS-921/URM-7

ANTENNA AS-921/URM-7&()

MAJOR COMPONENTS: 2 AT-849/URM-7 antenna elements and 1 Transmission Line Coupler CU-684/URM-7.

FREQUENCY: VHF and UHF bands, 200 - 400 mc.

TYPE: Dipole antenna.

DESCRIPTION: The antenna assembly consists of a dipole mounted to the Transmission Line Coupler CU-683/URM-7. Each half of the dipole is a telescopic rod, antenna element AT-849/URM-7, which is adjustable in length from 6-1/8 inches to 14-7/8 inches. An adapter block on the transmission-line coupler is used to mount the antenna on Antenna Tripod MT-1947/URM-7. The transmission-line coupler contains a balun for matching the dipole to a 50-ohm coaxial cable.

BEAM DATA:
Polarization - Horizontal.

SCAN DATA: The antenna has 360° manual rotation.

TUNING/MATCHING DEVICES: A balun is provided to match the dipole to a 50-ohm coaxial cable. The dipole length is adjustable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-7. Equipment function - test.

MISCELLANEOUS: See AN-920/URM-7 for illustrations.

COGNIZANT AGENCY: SESA-57-1178 and SESA-58-2098.

MANUFACTURER: Molded Insulation Co., procurement contract No. 21512-PHILA-56, Part No. 1011-63.

REFERENCES:
1) Department of the Army, Radio Interference Measuring Set AN/URM-7, TM 11-5544-15, (May 1958). UNCLASSIFIED.
2) Military Specification MIL-R-11197.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-922/URM-7&()

MAJOR COMPONENTS: 1 Antenna AT-850/URM-7, 1 Antenna Reflector AT-851/URM-7, and Mast Sections AB-21/GR.

FREQUENCY: HF, VHF, and UHF bands, 20 - 1000 mc.

TYPE: Flat screen reflector and a modified conical antenna.

DESCRIPTION: The antenna consists of a modified, inverted cone that is mounted on a flat reflector. Each part has its own nomenclature number. The conical-type part of the assembly is Antenna AT-850/URM-7, which is an inverted cone to the top part of which may be fastened combinations of Mast Sections AB-21/GR (threaded rods) so that the radiator may cover a large frequency range. This cone mounts on Antenna Reflector AT-851/URM-7 which is a flat perforated sheet 2 feet square. The reflector is mounted to Antenna Tripod MT-1947/URM-7 in such a manner that it may be tilted.

BEAM DATA:
Polarization - Linear, vertical when the antenna is vertical.

SCAN DATA: The antenna may be manually tilted and rotated.

TUNING/MATCHING DEVICES: The rods which are fastened to the inverted cone may be adjusted in length by adding or removing sections.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-7. Equipment function - test.

MISCELLANEOUS: See AS-920/URM-7 for illustration of component parts.

COGNIZANT AGENCY: SESA-57-1179.

MANUFACTURERS: Molded Insulation Co., procurement contract 21512-PHILA-56.

REFERENCES:
1) Department of the Army, Radio Interference Measuring Set AN/URM-7, TM 11-5544-15, (May 1958). UNCLASSIFIED.
2) Military Specification MIL-R-11197.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-927(XN-1)/MSQ-3

See AT-857/U.

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ANTENNA ASSEMBLY AS-936/SPS-10B

FREQUENCY: IFF ... UHF band, 1001.5 - 1038.5 mc and 1081.5 - 1118.5 mc; Radar ... SHF band, 5450 - 5825 mc.

TYPE: Parabolic-cylinder reflector with modified hoghorn radar feed and monopole IFF feed.

DESCRIPTION: The radar section of the antenna consists of a horizontally slatted parabolic cylinder fed by a hoghorn. The reflecting barrier of the hoghorn is a modified parabolic surface which produces a beam with $\csc^2$ distribution in the vertical plane. The reflector is 120 inches wide by 30 inches high and has a focal length of 35-1/2 inches.

The IFF section of the antenna consists of a parabolic-cylinder reflector with a feed made up of a radiating element and six parasitic elements. The parabolic-cylinder reflector for the IFF section is made up of vertical rods located just behind the horizontal slats of the radar reflector. The IFF feed consists of an end-fed, full-wavelength radiating rod located in front of the mouth of the hoghorn. A corner reflector made up of six vertical rods, located three on each side of the hoghorn, directs the IFF energy to the parabolic cylinder reflector. The total weight of the antenna is 313 pounds.

BEAM DATA:

	Radar	IFF
Gain -	30 db	16.75 db
Half-power beamwidth -		
Vertical -	12° to 16°	22°
Horizontal -	1.5°	6°
Beam type -	$\csc^2$ from +7° to 22°	fan
Polarization -	horizontal	vertical

SCAN DATA: The antenna rotates through 360° in azimuth at 16 revolutions per minute.

TUNING/MATCHING DEVICES: The IFF feed of the antenna has a matching section.

INSTALLATION: Usually shipboard, sometimes ground (shore).

ASSOCIATED EQUIPMENT: Radar Set AN/SPS-10B. Equipment function - search, surface; and IFF.

MISCELLANEOUS: Antenna AS-936/SPS-10B is a modified Antenna AS-615/SPS-10. The original antenna pedestal is replaced by Antenna Pedestal AB-561/SPS-10B, and a mast switch is added.

COGNIZANT AGENCY: USN-58-b-168.

MANUFACTURER: Sylvania Electric Co., contract NObsr 71817.

REFERENCES:
1) Sylvania Drawing 89-82700-1.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-937()/GP

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Modified, folded pillbox antenna.

DESCRIPTION: The antenna is a "fox" or modified, folded pillbox 36 feet wide, 3 feet high, and 10 feet deep. It is mounted on a pedestal and used for transmitting and receiving Mark-X IFF signals in conjunction with any ground-based IFF interrogator. The input is fed by 51-ohm coaxial transmission line.

SCAN DATA: The antenna has 360° mechanical azimuth rotation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various IFF equipments. Equipment function - IFF.

COGNIZANT AGENCY: USN-58-b-177.

MANUFACTURERS: U. S. Navy Electronics Laboratory, procurement contract NEO 41215-823-1.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-948/GR&()

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Tridipole array.

DESCRIPTION: The antenna is a mast-mounted, vertically stacked array of tridipoles. It is used for transmitting and can handle powers up to 15 kilowatts.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Horizontal.

INSTALLATION: Ground.

MISCELLANEOUS: AS-948/GR&() is used with but is not part of OA-751/GRC&().

COGNIZANT AGENCY: WL-58-1180.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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DESCRIPTION: The upper portion of the antenna consists of two 72-inch vertical whips, which are mounted in AB-15/GR mast bases. The lower portion of the antenna is a rigid cylinder 6 inches outside diameter and 22-1/4 inches long. The antenna is mounted on top of a vehicle.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Antenna Coupler CU-699()/VRC.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: International Electronics Eng., Inc., procurement contract NObsr-75010.

REFERENCES:
1) Naval Research Laboratories Drawing No. RA 66 D478.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-964/GPN&()

See OA-373A/GPN.

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ANTENNA AS-965/GRA-48

FREQUENCY: UHF band, 960 - 1025 mc.

DESCRIPTION: According to the nomenclature card, the antenna is a pedestal-mounted, four-element array used to produce azimuth information in the airborne AN/ARN-21 equipment.

SCAN DATA: The antenna produces a 360° azimuth scan.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRN-9. Equipment function - navigation.

MISCELLANEOUS: AS-965/GRA-48 is part of Antenna Group AN/GRA-48.

COGNIZANT AGENCY: N-58-b-1341.

MANUFACTURERS: I.T.E. Circuit Breaker Co., procurement contract NObsr-75128.

REFERENCES:
1) Military Specification SHIPS-A-2492.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-966/GRA-47

FREQUENCY: UHF band, 1150 - 1215 mc.

DESCRIPTION: According to the nomenclature card, the antenna is a pedestal-mounted, four-element array used to produce azimuth information in the airborne AN/ARN-21 equipment.

SCAN DATA: The antenna produces a 360° azimuth scan.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRN-9. Equipment function - navigation.

MISCELLANEOUS: AS-966/GRA-47 is part of Antenna Group AN/GRA-47.

COGNIZANT AGENCY: N-58-b-1342.

MANUFACTURERS: I.T.E. Circuit Breaker Co., procurement contract NObsr-75128.

REFERENCES:
1) Military Specification SHIPS-A-2492.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-969/TPW-1&()

FREQUENCY: SHF band, 9200 - 9400 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: AS-969/TPW-1&() is a paraboloidal reflector mounted through the roof of a trailer. It is rotated in azimuth, and has a conical scan that can be tilted in elevation.

BEAM DATA:
Beam type - Pencil.

SCAN DATA: The antenna has a conical scan produced by a nutating feed. It rotates 360° in azimuth at 6 revolutions per minute and may be tilted from 0 to +87 degrees in elevation.

INSTALLATION: Ground.

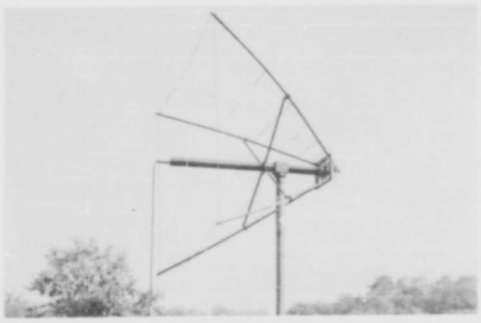
ASSOCIATED EQUIPMENT: Radar Set AN/TPW-1. Equipment function - remote control.

COGNIZANT AGENCY: WL-58-1665.

MANUFACTURER: Sperry Gyroscope Co., procurement contract AF 33(600)-28107.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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AS-989/ML

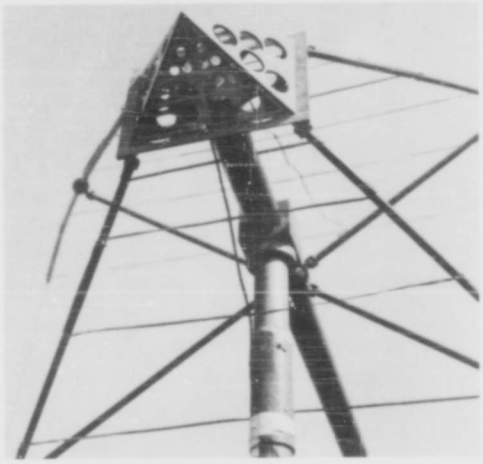
SCAN DATA: Manual azimuth rotation.

INSTALLATION: Ground or vehicular.

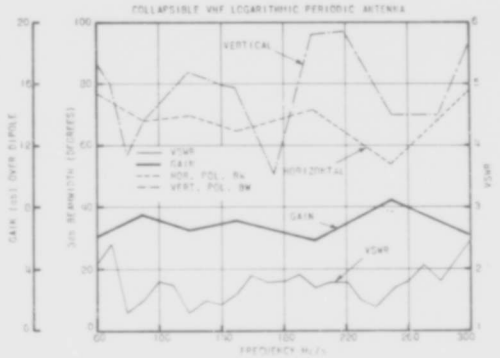
MISCELLANEOUS: AS-989/ML is similar to AS-1013/ML. AS-989/ML will withstand wind velocities less than 87 miles per hour.

COGNIZANT AGENCY: Signal Corps, Evans Area.

REFERENCES:
1) Private Correspondence.
2) Instruction Book for Antenna AS-989/ML and AS-1013/ML, U. S. Army Signal R&D Laboratory, Evans Area, Belmar, N. J.



AS-989/ML Feed Point



AS-989/ML Characteristics

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DESCRIPTION: The AS-991/URS-1 antenna is a sequentially lobed, 3-element dipole array, which mounts in front of a vertical-rod screen reflector. The parts of the assembly (i.e. the lobe switch, r-f head, etc.) are weatherproofed and mounted on a fabricated aluminum pedestal. An accessory guy ring may be clamped to the pedestal to allow guying for greater rigidity. When used with Radio Receiver R-925/URS-1, Target Plotting Board PT-444/URS-1, Interconnecting Box J-1015/URS-1, and Control Indicator C-2748/URS-1, this antenna forms the surface portion of an air-to-surface radio tracking link. Transmitting Set AN/DRT-1 forms the air portion of the tracking link. The overall antenna is 60 inches by 48-1/2 inches by 14-1/2 inches; approximate weight is 55-1/4 pounds. The antenna has a 50-ohm nominal input impedance and is coaxially fed.

BEAM DATA:
Half-power beamwidth - Horizontal - approximately 40°. (See beam patterns.)
Polarization - Vertical.

SCAN DATA: The antenna has continuous azimuth rotation through 360° with a lobing angle of approximately ±30°. The azimuth tracking error is less than ±3°.

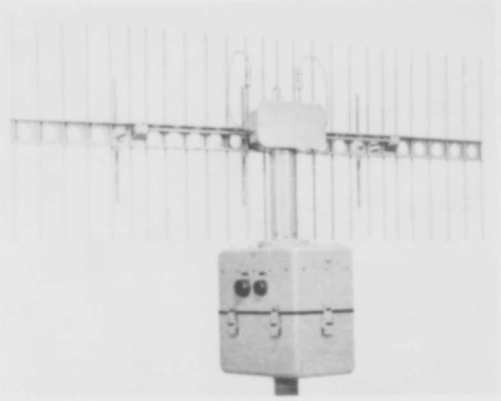
INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/USQ-10(XN-1), AN/URS-1
Equipment function - tracking.

COGNIZANT AGENCY: U. S. Navy (BuAer).

MANUFACTURER: Motorola, Inc., part number 201-6725, contract NOas 58-731.

REFERENCES:
1) Military Specification MIL-T-22099 (Aer).
2) Request for nomenclature card.



AS-991/URS-1

ANTENNA AS-992/GR&()

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Vertically stacked array of dipoles.

DESCRIPTION: The antenna is a vertically stacked array of dipoles used for transmitting and receiving. There are 4 bays with 4 dipoles in each bay. The dipoles are mounted vertically at 90 degree intervals around circular antenna plates. Each bay of dipoles is alternately displaced 45° in order to give complete coverage of 360° in azimuth. The bays are fed in such a manner as to produce a progressive phase difference between bays so that the beam is tilted a nominal 5-1/2 degrees upward from the horizontal. The bays are mounted on a 3-inch-diameter mast that extends 35-1/2 inches below the lower radiating elements.

BEAM DATA:
Beam type - Omnidirectional in azimuth with a nominal 5-1/2-degree upward tilt in elevation.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: General purpose use.
Equipment function - communications.

MISCELLANEOUS: AS-992/GR&() is similar to but not interchangeable with Antenna AS-768/GR and AS-483/GR.

COGNIZANT AGENCY: WL-58-2190.

MANUFACTURERS: Western Electric Co., procurement contract AF 18(600)-572.

REFERENCES:
1) Manufacturer's Specification GA-10747.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-998()/FPN

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Cut paraboloidal reflector.

DESCRIPTION: The antenna is a pedestal-mounted, cut paraboloidal reflector with a dual feed system.

BEAM DATA:
Gain - 38 db.
Half-power beamwidth - Vertical - 1.2°.
Horizontal - 3.5°.
Beam type - Pencil.
Polarization - Linear or circular.

SCAN DATA: AS-998/FPN, according to the nomenclature card, has a tilting movement pattern and is motor driven.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-33(). Equipment function - navigation.

MISCELLANEOUS: This antenna replaces the AS-867/FPN-33 on Radar Set AN/FPN-33() when the set is modified to improve the angular resolution of the elevation display. This antenna is neither mechanically nor electrically interchangeable with the AS-867/FPN-33.

COGNIZANT AGENCY: SEL-58-1384.

MANUFACTURERS: Gilfillan Bros., Inc., procurement contract DA 36-039-sc-78028, File No. 0317-PM-58, Code No. 24930.

REFERENCES:
1) Manufacturers Part/Drawing No. 85321.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1001/TPN-12

See OA-2231/TPN-12.

ANTENNA AS-1003/ML

FREQUENCY: VHF band, 80 - 300 mc.

TYPE: Periodic structure.

DESCRIPTION: The antenna is a mobile log-periodic structure designed for countermeasures use.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Equipment function - countermeasures.

COGNIZANT AGENCY: USASRIL.

REFERENCE:
1) Private Correspondence.

ANTENNA ASSEMBLY AS-1005/TPQ-14

Nomenclature cancelled (ORDXR-72-59) 11 May 1959.

ANTENNA AS-1006/MPQ-29

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Paraboloidal reflector fed by a horn.

DESCRIPTION: The antenna consists of a paraboloidal reflector with a nutating horn feed. It is mounted on a rotatable and tiltably pedestal.

SCAN DATA: The antenna has a nutating feed and produces a conical scan. Its motor-driven pedestal rotates and tilts.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Tracking Group OA-2291/MPQ-29. Equipment function - tracking.

COGNIZANT AGENCY: SESA-59-1354.

MANUFACTURER: Sperry Utah Engineering Laboratory, contract 682-PM-58-93-93.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1007/TLR

See OA-463/TLR-1.

ANTENNA AS-1008/TLR

See OA-463/TLR-1.

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ANTENNA AS-1009/GR

FREQUENCY: VHF and UHF bands, 225 - 490 mc.

TYPE: Stacked array of dipoles.

DESCRIPTION: The antenna consists of a vertically stacked array of tridipole rings. The antenna mounts on a tower.

BEAM DATA:
Gain - 6 db.
Beam type - Omnidirectional in azimuth.
Polarization - Horizontal.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various high-power radio sets. Equipment function - communications.

COGNIZANT AGENCY: WL-59-1318.

REFERENCE:
Request for Nomenclature Sheet.

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ANTENNA AS-1013/ML

FREQUENCY: VHF band, 80 - 300 mc, VSWR < 2.5.

TYPE: Log periodic structure.

DESCRIPTION: AS-1013/ML is very similar to AS-989/ML. See AS-989/ML for physical and electrical characteristics and an illustration. The only difference in the two antennas that is noted in the literature is the accepted operating frequency range.

INSTALLATION: Ground or vehicular.

COGNIZANT AGENCY: Signal Corps, Evans Area.

REFERENCE:
Instruction Book for Antenna AS-989/ML and AS-1013/ML, U. S. Army Signal R&D Laboratory, Evans Area, Belmar, N. J.

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ANTENNA AS-1018()/URC

FREQUENCY: VHF and UHF bands, 225-400 mc; VSWR < 2 on 50-ohm coaxial cable.

TYPE: Stacked array of vertical, cylindrical dipoles.

DESCRIPTION: The antenna is a mast-mounted stacked array of vertical, cylindrical dipoles fed by 50-ohm coaxial cable. The entire antenna structure is enclosed in a rugged fiberglass tube providing weather protection under adverse conditions. The structure has negligible deflection under winds as high as 120 miles per hour. A d-c ground system is provided for lightning protection. The overall antenna with the fiberglass tube in place is 7 feet high and 9 inches in diameter. The approximate weight is 100 pounds. Maximum power handling capability is 2 kilowatts.

BEAM DATA:
Beam Type - Approximately omnidirectional in azimuth.
Half-power beamwidth - Vertical 32° - 36°.
Polarization - Vertical.

INSTALLATION: Shipboard or ground.

COGNIZANT AGENCY: U. S. Navy (USN-59-1824).

MANUFACTURER: CHU Associates, contract NI 23(953)22448A.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1019/TRD

FREQUENCY: VHF and UHF bands, 50 - 120 mc.

TYPE: Periodic structure.

DESCRIPTION: The antenna is a log-periodic structure mounted on a 22-foot, 4-section mast. The total weight is approximately 150 pounds.

SCAN DATA: The antenna has a motor-driven pedestal that rotates in azimuth.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Electronic Equipment Modification Kit MR-383/TRD and Direction Finder Group OA-1034/TRD. Equipment function - direction finding.

MISCELLANEOUS: The antenna is capable of receiving both vertically and horizontally polarized radiowaves.

COGNIZANT AGENCY: SEL-59-1244.

REFERENCES:
1) Signal Corps Technical Requirements SCL-5682.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1021/UPM-52A

FREQUENCY: SHF band, 9200 - 9600 mc.

TYPE: Horn.

DESCRIPTION: Antenna AS-1021/UPM-52A is described as two feed horns for the capture and guidance radar beams of the AN/MSG-3A guided missile fire control system. The horns are mast mounted. Horizontal and vertical sighting rods are provided to assist in alignment of the antenna assembly when it is erected.

BEAM DATA:
Half-power beamwidth (each horn) -
Vertical - 11.2°.
Horizontal - 73°.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: AN/MSG-3A. Equipment function - guidance.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bell Telephone Laboratories, Inc., contract NOrd-17784.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1024()/TRD

FREQUENCY: UHF and SHF bands, 500-4500 mc.

TYPE: Heart-shaped antenna.

DESCRIPTION: AS-1024()/TRD is a heart shaped, pedestal mounted, target transmitting antenna.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Modification Kit MK-383()/TRD.

COGNIZANT AGENCY: SEL-58-1401.

MANUFACTURER: Litton Industries, Maryland Division, contract DA 36-039-SC-74901.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1025/TPN-12

See OA-2232/TPN-12.

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ANTENNA AS-1027/TPS-27

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Paraballoon-type paraboloidal reflector.

DESCRIPTION: AS-1027/TPS-27 provides facilities for the reflection and reception of electromagnetic energy. The antenna has a rotating movement pattern.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-27.

COGNIZANT AGENCY: WL-59-1513.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1052()/FPS

FREQUENCY: UHF band, 435 mc (radar), UHF band, 1010 - 1110 mc (IFF).

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: Antenna AS-1052()/FPS consists of a parabolic-cylinder reflector with a radar frequency feed system and an integral IFF frequency feed. The reflector is 40 feet wide, 8 feet high, and 10 feet deep. The antenna is pedestal mounted and is fed by 50-ohm coaxial cable. The power handling capability is 40 kilowatts CW and 1 megawatt peak-power output.

BEAM DATA:
Half-power beamwidth - Radar 4.25° in azimuth. 16° in elevation. IFF - 1.6° in azimuth. 9° in elevation.
Beam type - Fan.
Polarization - Radar - Horizontal. IFF - Vertical.

SCAN DATA: The antenna has a motor-driven azimuth scan through 360° at 15 revolutions per minute.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Experimental NEL radar system. Equipment function - long range air search and IFF.

MISCELLANEOUS: This equipment utilizes portions of the AS-611()/FPN-29 antenna and pedestal. One unit has been constructed. No additional production is planned.

COGNIZANT AGENCY: U. S. Navy (USN-59-b-1989) Developed by Navy Electronics Laboratory, Radio Branch, Electromagnetics Division, Contract NE 050500-821.16.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1053/FRC-37

FREQUENCY: UHF band, 1700 - 2400 mc; VSWR < 5.

TYPE: Paraboloidal reflector.

DESCRIPTION: Antenna AS-1053/FRC-37 is a paraboloidal reflector with an associated feed designed to be capable of transmitting and receiving vertically and horizontally polarized signals simultaneously. The antenna is tower mounted. The reflector is made of aluminum mesh and is 10 feet in diameter.

BEAM DATA:
Gain -> 31 db.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-37.

COGNIZANT AGENCY: U. S. Navy, N-59-Y-1978.

MANUFACTURER: Andrews Corporation, contract NObsr - 75740.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY AS-1054()/URC

FREQUENCY: HF band, 4 - 30 mc.

TYPE: Discone/cage antenna assembly.

DESCRIPTION: This discone/cage antenna assembly is a general purpose transmitting or receiving antenna. Two broadband antennas are combined in one physical structure 36 feet high. This assembly is then installed on a pedestal 7 feet high. The antenna provides two inputs, one for the 4- to 12-mc band and the other for the 12- to 30-mc band. Both sections may be used simultaneously. The antenna is fed by coaxial cable.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground.

COGNIZANT AGENCY: U. S. Navy (USN-59-X-2096), contract NEO 90600-1.1 (NEL B1-26).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1057()/ULT-T2

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: Antenna AS-1057()/ULT-T2 is a paraboloidal reflector with an associated feed system. The antenna may be tripod mounted.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Trainer AN/ULT-T2(). Equipment function - training.

COGNIZANT AGENCY: SESA-59-2465.

MANUFACTURER: Polarad Electronics Corporation.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1061()/GRC-104

FREQUENCY: UHF band, 1704 - 1846 mc; VSWR < 2 on 52-ohm coaxial cable.

TYPE: Mattress antenna.

BEAM DATA:
Gain - 12 to 15 db.

SCAN DATA: The antenna may be manually rotated in azimuth and tilted in elevation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-104(). Equipment function - communications.

COGNIZANT AGENCY: SESA-59-2524.

MANUFACTURER: Adler Electronics, Inc., contract 19138-PM-58-93-93.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1062/FPS&()

FREQUENCY: UHF and SHF bands, 1550 - 5200 mc.

DESCRIPTION: The reference listed below indicates that AS-1062/FPS&() is an array-type antenna. It is tower mounted, electronically steerable and has applicability to search and tracking radars.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Search and tracking radars. Equipment function - search and tracking.

MISCELLANEOUS: The unclassified nomenclature care indicates that the security classification of the equipment is confidential. Information given here is unclassified.

COGNIZANT AGENCY: WL-59-2009.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1063/FPS-30

TYPE: Modified cut paraboloidal reflector.

DESCRIPTION: Antenna AS-1063/FPS-30 is a cut paraboloidal reflector modified to yield a $\csc^2$-type beam. The reflector is 337 inches high, 720 inches long and 238.5 inches deep. The assembly includes a mechanism for tilting the reflector manually.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-30. Equipment function - probably search and IFF.

COGNIZANT AGENCY: CRC-59-308.

MANUFACTURER: ITE Circuit Breaker Co., contract AF 30(635)-11141.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1069()/GR

FREQUENCY: UHF band, 1704 - 1846; VSWR < 1.3 on 52-ohm coaxial cable.

TYPE: Paraboloidal reflector.

DESCRIPTION: Antenna AS-1069()/GR is a paraboloidal reflector with an associated feed. The antenna is mast mounted.

BEAM DATA:
Gain - 25 db.
Half-power beamwidth - Vertical 7-1/2°.
Horizontal 7-1/2°
Beam type - Pencil.

SCAN DATA: The antenna produces an oscillating and tilting movement pattern.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-104(). Equipment function - communications.

COGNIZANT AGENCY: SESA-59-2660.

MANUFACTURER: Adler Electronics, Inc.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1074/MSQ-37

MAJOR COMPONENTS: 1 UHF command-DL antenna, 1 IFF-TACAN antenna, 1 glide-slope antenna, 1 localizer antenna, and 1 mast.

FREQUENCY: VHF and UHF bands, 108 - 1213 mc.

DESCRIPTION: Antenna AS-1074/MSQ-37 consists of a UHF command-DL antenna, an IFF-TACAN antenna, a glide-slope antenna, and a localizer antenna mounted on a single, adjustable mast with a maximum height of 35 feet. One of the antennas operates in the 225- to 400-mc band, one in the 962- to 1213-mc band, one in the 108- to 112-mc band, and one in the 329- to 335-mc band. The antenna assembly is mounted on a van trailer. The system provides for the reception and transmission of UHF, tone, voice, simulated ILS and TACAN signals to perform a complete communication-identification-navigation equipment check for F-105 aircraft.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/MSQ-37. Equipment function - test.

COGNIZANT AGENCY: WADC, AEL-59-1217.

MANUFACTURER: Litton Industries, Inc., contract AF 33(600)-32216.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1076()/FRC

FREQUENCY: HF band, 9-27 mc.

TYPE: Equiangular spiral.

DESCRIPTION: Antenna AS-1076()/FRC is a high-gain, equiangular spiral antenna approximately 110 feet high and 90 feet wide. Power handling capability is 50 kilowatts. The antenna is fed by 50-ohm transmission line.

BEAM DATA:
Polarization - Right or left circular.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various equipment. Equipment function - communications.

COGNIZANT AGENCY: N-60-Y-117.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1077()/MPS-34

FREQUENCY: SHF band, 9230 - 9404 mc.

TYPE: Paraboloidal reflector fed by a waveguide horn.

DESCRIPTION: Antenna AS-1077()/MPS-34 consists of a sectionalized paraboloidal reflector fed by a waveguide horn. The transmission system is pressurized and dehumidified.

SCAN DATA: The antenna has a rotating and tilting movement pattern.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/MPS-34. Equipment function - probably search.

COGNIZANT AGENCY: SEL-60-123.

MANUFACTURER: Raytheon Mfg. Co., contract 0322-PH-58-91.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1079/FPN-40

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Modified cut paraboloidal reflector fed by a waveguide horn.

DESCRIPTION: Antenna AS-1079/FPN-40 is a modified cut paraboloidal reflector mounted on a pedestal and fed by a waveguide horn. The reflector is of honeycomb construction with a reflecting surface of sprayed aluminum on fiberglass. An electromechanical actuator is provided as part of the waveguide horn assembly so that circular or linear polarization may be remotely selected from the operating position as well as by manual selection at the antenna.

BEAM DATA:
Gain - 37 db.
Half-power beamwidth - Vertical - 3.5°.
Horizontal - 0.95°.
Beam type - Csc^2 in the vertical plane from 0° to 30°.
Polarization - Linear or circular.

SCAN DATA: The antenna has a 360° azimuth surveillance scan and an azimuth sector scan. In addition, the antenna may be positioned to any azimuth angle.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FPN-40. Equipment function - approach control; and search, air.

MISCELLANEOUS: AS-1079/FPN-40 is similar to and replaces AS-866/FPN-33 in Radar Set AN/FPN-40.

COGNIZANT AGENCY: SESA-60-1353.

MANUFACTURER: Gilfillan Brothers, Inc., contract 3810-PP-59-A2-41.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1080/FPN-40

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Cut paraboloidal reflector fed by a waveguide horn.

DESCRIPTION: Antenna AS-1080/FPN-40 is a cut paraboloidal reflector mounted on a pedestal and fed by a waveguide horn. The reflector is of honeycomb construction with a reflecting surface of sprayed aluminum on fiberglass. An electromechanical actuator is provided as part of the waveguide horn assembly so that circular or linear polarization may be remotely selected from the operating position as well as by manual selection at the antenna.

BEAM DATA:
Gain - 39 db.
Half-power beamwidth - Vertical - 0.85°.
Horizontal - 2.5°.
Polarization - Linear or circular.

SCAN DATA: The antenna can be positioned to any azimuth angle. It also has a fixed azimuth-elevation sector scan; it uses elevation scans of 7° during the precision approach operation and scans of 31° during a height-finding operation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FPN-40. Equipment function - approach control; and height finding.

MISCELLANEOUS: AS-1080/FPN-40 is similar to and replaces AS-867/FPN-33 in Radar Set AN/FPN-40.

COGNIZANT AGENCY: SESA-60-1354.

MANUFACTURER: Gilfillan Brothers, Inc., contract 3810-PP-59-A2-41.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1082/TRA-25

FREQUENCY: UHF band, 790.5 - 964.5 mc.

DESCRIPTION: The reference listed below states that AS-1082/TRA-25 consists of 2 mast-mounted fixed antennas that operate in the 790.5 to 964.5-mc frequency range. The antennas are used for transmitting and receiving.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set Group AN/TRA-25.

COGNIZANT AGENCY: SESA-60-2121.

MANUFACTURER: Adler Electronics, Inc., contract 4120-PP-60-A1-A1.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1083/TRA-25

FREQUENCY: UHF band, 790.5 - 964.5 mc.

DESCRIPTION: The reference listed below indicates that AS-1083/TRA-25 is bracket mounted and serves as the spare antenna section for AS-1082/TRA-25.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set Group AN/TRA-25.

COGNIZANT AGENCY: SESA-60-2122.

MANUFACTURER: Adler Electronics, Inc., contract 4120-PP-60-A1-A1.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1086/FPS-50(V)

TYPE: Parabolic torus.

DESCRIPTION: The reference listed below states that Antenna AS-1086/FPS-50(V) is a reflector of parabolic-torus-type configuration. The reflector is made of steel and has overall dimensions of 400 feet long by 165 feet high. The radius of curvature is 345 feet, and the focal length of the parabola is 165 feet. The reflector was designed for use at BMEWS Site I.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-50(V). Equipment Function - search, air.

COGNIZANT AGENCY: WL-60-1230.

MANUFACTURER: D. S. Kennedy & Co., Inc., contract AF 04(647)-179.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1088/TRN

FREQUENCY: MF band, 1.8 - 2.0 mc.

TYPE: Tower.

DESCRIPTION: Antenna AS-1088/TRN is a tower antenna designed to be assembled on the ground and erected by using a gin pole. The tower has a uniform, equilateral-triangular cross section with each side of the triangle 24 inches long. The height of the tower may be varied from 117 feet to 127 feet in increments of 2-1/2 feet. The antenna is made of light-weight aluminum alloy and is designed to withstand wind velocities of 135 miles per hour with no icing and 95 miles per hour with 2 inches of ice. The tower has a single base insulator that is designed to withstand an r-f potential of 20,000 volts (rms).

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Loran Transmitter T-325/FPN. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: N-60-ac-609.

MANUFACTURER: All Products Company, contract Tcg - 41263(CG-47,046A).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1089()/ML

FREQUENCY: VHF and UHF bands, 275 - 1000 mc.

TYPE: Log periodic structure.

DESCRIPTION: Antenna AS-1089()/ML is a log periodic antenna that is mast mounted on a truck. The mast has two hinged support arms and a pyramidal cap, all made of fiberglass. A collar slides up and down the mast and is retained in place by a track on the mast when the supporting arms are collapsed. The elements are fabricated from 1/16-inch copper plate and are silver plated. The elements are connected by 1/4-inch copper braid at the hinged joints. The antenna weighs approximately 8 pounds. It is designed for power handling capability of about 1000 watts.

INSTALLATION: Ground, truck mounted.

COGNIZANT AGENCY: SEL-60-266.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AS-1097/GR&()

FREQUENCY: VHF and UHF bands, 225 - 400 mc; VSWR < 2 on 50-ohm coaxial cable.

TYPE: Probably stacked array.

DESCRIPTION: The reference below states that Antenna AS-1097/GR&() is designed for use as a transmitting and receiving antenna for use with a ground radio transmitter and receiver for communication with aircraft. The overall antenna is 102.5 inches long and 6.125 inches in diameter. It is equipped with a fiberglass radome.

INSTALLATION: Ground.

MISCELLANEOUS: AS-1097/GR&() is similar to but not interchangeable with AS-505A/GR, AS-505B/GR and AS-505C/GR.

COGNIZANT AGENCY: RADC, WL-60-2629.

MANUFACTURER: Aero-Geo-Astro Corp., contract AF 30(635)-13553.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-1099/FPS-50(V)

TYPE: Parabolic torus.

DESCRIPTION: Antenna AS-1099/FPS-50(V) is described as a reflector having a parabolic torus configuration. The overall reflector is 400 feet long by 165 feet high with a 165-foot focal length for the parabola and a 345-foot radius of curvature. It mounts on two rows of concrete footings. This reflector was specially constructed for use at BMEWS Site II.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FPS-50(V). Equipment function - search, air.

COGNIZANT AGENCY: WL-60-2596.

MANUFACTURER: D. S. Kennedy & Co., Inc., contract AF 04(647)-179.

REFERENCE:
Request for Nomenclature Card.

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ANTENNA AS-5001/FPS-501

MAJOR COMPONENTS: 1 waveguide section with slot radiators and 1 antenna rotating mechanism.

FREQUENCY: SHF band, 9345 - 9404 mc.

TYPE: Stacked array of slots.

DESCRIPTION: The antenna is an 11-foot section of X-band waveguide with 126 slots. It is fed by X-band waveguide. A box-like structure, 132 inches by 8-15/16 inches by 8-15/16 inches, protects the radiating unit. The antenna is mounted so the long dimension of the radiating section is horizontal.

BEAM DATA:
Beam type - Fan.
Polarization - Probably vertical.

SCAN DATA: The antenna rotates in azimuth at a rate which is variable from 2 to 12 revolutions per minute.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-501. Equipment function - search.

COGNIZANT AGENCY: Canada, CA-11.

MANUFACTURER: Canadian Arsenals, Ltd.

REFERENCES:
1) Canadian Arsenals Part Number LP9019.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5002(*)/MPS-501

FREQUENCY: UHF band, 2790 - 2810 mc.

TYPE: Rectangular array of slots.

DESCRIPTION: The antenna consists of nine 13-foot sections of S-band waveguide having slot radiators. These sections are probably mounted horizontally with the sections stacked one on top of the other. The array is fed by S-band waveguide.

SCAN DATA: The antenna includes a motor-driven rotating mechanism which rotates the array in azimuth.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-501. Equipment function - search.

MISCELLANEOUS: AS-5002(*)/MPS-501 denotes AS-5002/MPS-501 and AS-5002A/MPS-501. The models are interchangeable.

COGNIZANT AGENCY: Canada.

MANUFACTURER: Canadian Arsenal, Ltd.

STOCK NUMBER: Federal Stock Numbers 5985-305-8566(AS-5002/MPS-501), and 5985-505-7025(AS-5002A/MPS-501).

REFERENCE:
U. S. Air Force, Beacon, Radio AN/MRN-13, Handbook Operating Instructions, TO 31R4-2MRN13-1, (Jan. 1, 1957). UNCLASSIFIED.

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ANTENNA AS-5003/U

FREQUENCY: VHF band, 100 - 156 mc; VSWR < 1.25.

TYPE: Modified ground-plane antenna.

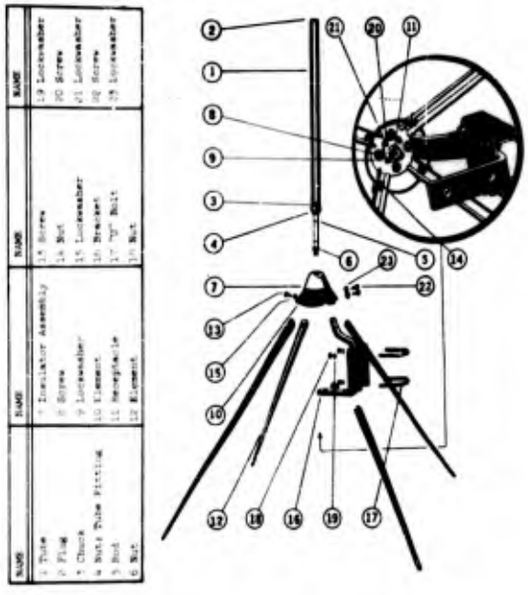
DESCRIPTION: The antenna is a modified ground-plane antenna with a telescopic vertical element and four ground-plane elements. The vertical element, which is calibrated from 100 to 150 mc in 5-mc steps, has an outside diameter of 5/8 inch, a minimum length of 15-1/2 inches, and a maximum length of 29 inches. The ground-plane elements are of stamped brass channel stock tapered from 1/2 inch to 1/4 inch and are 21 inches long. The antenna is terminated for use with an RG-8/U coaxial cable. A universal bracket for mounting the antenna on either a vertical or horizontal surface is included. The antenna will withstand winds up to 75 miles per hour with 1/2-inch ice loading.

INSTALLATION: Ground.

COGNIZANT AGENCY: Canada, RCAF-28.

MANUFACTURER: Millard Electric Ltd., order CD519693.

REFERENCES:
1) Private Correspondence.
2) U. S. Department of Defense Nomenclature Card.



AS-5003/U Exploded View

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ANTENNA AS-5005/TPS-502

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a sectionalized paraboloidal reflector fed by some type of waveguide feed. Information concerning the type of reflector feed was not available. The antenna includes a rotating waveguide joint terminated for RG-52/U waveguide. It mounts by 2 sets of six, 3/8-inch holes spaced 60° apart on a 4-1/4-inch-diameter circle.

SCAN DATA: The antenna has a motor-driven tilting and rotating mechanism.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-502. Equipment function - search.

COGNIZANT AGENCY: Canada, RCAF-163.

MANUFACTURER: RCA Victor Company, Ltd.

REFERENCES:
1) RCA Drawing Number E-125317-501.
2) RCAF Specification RAD 70-40.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5006/MPS-501B

FREQUENCY: UHF band, 2700 - 2885 mc.

TYPE: Probably parabolic-cylinder reflector with a line source of waveguide slots.

DESCRIPTION: The antenna consists of a parabolic-cylinder reflector with a line source of slots in a rectangular waveguide. The feed consists of a slotted section of S-band waveguide, 7 feet 2 inches long.

SCAN DATA: The antenna has a motor-driven tilting and rotating mechanism. Provision is included for changing the basic tilt of the antenna to allow for variances in terrain.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPS-501B. Equipment function - search.

COGNIZANT AGENCY: Canada, CA-100.

MANUFACTURER: Canadian Arsenals, Ltd.

REFERENCES:
1) Canadian Arsenals Part Number 9546.
2) Canadian Army Part Number 3Z1005215.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5011/UR

FREQUENCY: VHF band, 115 - 156 mc; VSWR < 3.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a 1/4-wavelength radiating element (enclosed in a dielectric radome) and 4 aluminum-tube ground rods mounted on a cast aluminum base. The antenna is terminated with a UG-680/U connector for use with a 50-ohm transmission line.

INSTALLATION: Probably ground and shipboard.

ASSOCIATED EQUIPMENT: Radio Equipment AN/URT-7, AN/URR-21A, TDQ, and RCK. Equipment function - communications.

COGNIZANT AGENCY: Canada, 99.

MANUFACTURER: Sinclair Radio Laboratories, Ltd.

REFERENCES:
1) Sinclair Type Numbers D.AD-138 and AL-138.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5012()/UP

FREQUENCY: UHF band, 990 - 1130 mc.

TYPE: Array of slots.

DESCRIPTION: Antenna AS-5012()/UP consists of two nonresonant slotted waveguide arrays for use with land-based radar recognition sets. The antenna is approximately 30 feet long and is designed to be mounted on an existing radar antenna by suitable brackets. A high-pass coaxial type filter is included as an integral part of the receiving array.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various land-based radar equipment. Equipment function - IFF.

MISCELLANEOUS: AS-5012()/UP is similar to AS-295/UP.

COGNIZANT AGENCY: Canada.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5014/GR

FREQUENCY: VHF band, 99.5 - 108.5 mc.

TYPE: Yagi.

DESCRIPTION: The antenna is a 12-element Yagi constructed of aluminum and steel. The overall dimensions are 118.2 inches by 122.5 inches by 56.9 inches. It is mounted with two malleable iron clamps and a 1/2-inch bolt.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Equipment AN/GRT-501 and AN/GRT-502, part of the Mid-Canada Line. Equipment function - communications.

COGNIZANT AGENCY: Canada, RCAF - 597.

MANUFACTURER: Sinclair Radio Laboratories, Ltd.

REFERENCES:
1) Sinclair Part Number 107-S.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5017/FPS-503

FREQUENCY: UHF band, 470 - 500 mc.

TYPE: Modified paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna consists of a modified paraboloidal reflector and a horn feed. The reflector is made of anodized aluminum. The horn is terminated for a 52-ohm coaxial cable. The antenna is mounted by three trailer couplings 55-1/8 inches apart in a U-shaped mounting frame. A monitoring probe used to sample the radiated energy is located in the horn.

BEAM DATA:
Beam type - Narrow beam in azimuth and approximately $\csc^2$ in elevation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-503. Equipment function - search.

COGNIZANT AGENCY: Canada, RCAF-562.

MANUFACTURERS: Bell Telephone Company of Canada and RCA Victor Company, Ltd.

REFERENCES:
1) Bell Specification 7000-225.
2) RCA Drawing Number MI-25717.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5022/GR

FREQUENCY: UHF band, 1790 - 2260 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: Antenna AS-5022/GR is a paraboloidal reflector with a diameter of 10 feet. It is designed to be used with Antennas AS-5023/GR and AS-5024/GR.

INSTALLATION: Ground.

COGNIZANT AGENCY: RCAF-1075.

MANUFACTURER: Andrew Antenna Corp.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5023/GR

FREQUENCY: UHF band, 2040 - 2260 mc; VSWR < 1.1.

TYPE: Waveguide horn.

DESCRIPTION: Antenna AS-5023/GR is a waveguide horn made of brass with overall dimensions of 43 inches in length and 4-1/8 inches in diameter. It is used with Antenna AS-5022/GR.

INSTALLATION: Ground.

COGNIZANT AGENCY: RCAF-1076.

MANUFACTURER: Andrew Antenna Corp.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5024/GR

FREQUENCY: UHF band, 1790 - 2010 mc; VSWR < 1.1.

TYPE: Waveguide horn.

DESCRIPTION: Antenna AS-5024/GR is a waveguide horn made of brass with overall dimensions of 43 inches in length and 4-1/8 inches in diameter. It is used with Antenna AS-5022/GR.

INSTALLATION: Ground.

COGNIZANT AGENCY: RCAF-1077.

MANUFACTURER: Andrew Antenna Corp.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AS-5028/MRC-505

TYPE: Probably paraboloidal reflector.

DESCRIPTION: Reference 1) states that Antenna AS-5028/MRC-505 consists of two reflectors and two waveguide horns. The system provides facilities for dual, triple, or quadruple diversity. The antenna is electrically heated.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/MRC-505. Equipment function - communications.

COGNIZANT AGENCY: RCAF-1199.

MANUFACTURER: Canadian Westinghouse Co., contract CD 865402.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-6/VRW-1

FREQUENCY: VHF band, 73 mc.

TYPE: Probably a stub-sleeve antenna.

DESCRIPTION: The antenna is a vertical, steel dipole with the upper portion consisting of a quarter-wave rod and the lower section a concentric portion enclosing a steel pipe for mounting. The overall length including mounting portion is 97 inches. The input connector is an SO-239.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Receiving Equipment AN/VRW-1 and Radio Receiver AN/ARW-8. Equipment function - remote control.

MISCELLANEOUS: This antenna is obsolete as of 14 March 1957.

COGNIZANT AGENCY: AFDMA-2F/2.

STOCK NUMBERS: 2A203-6.

REFERENCES:
1) Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (March 14, 1957). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-7/CRN-5

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Probably a type of dipole.

DESCRIPTION: This antenna has a tubular support with two half-wave radiators mounted outside and concentric to the support. The radiators are adjustable to operate efficiently at any frequency between 100 and 156 mc. The antenna is 156 inches long and 1/2 inch in diameter.

TUNING/MATCHING DEVICES: The radiators are adjustable for frequencies between 100 and 156 mc.

ASSOCIATED EQUIPMENT: Radio Sets AN/CRN-5 and AN/MRN-2. Equipment function - navigation, ground reference.

MISCELLANEOUS: This antenna is obsolete.

COGNIZANT AGENCY: ARL-2220.

STOCK NUMBER: Federal Stock Number 5825-217-1596.

REFERENCES:
1) Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (March 14, 1957). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-10/CPN-2

Identical to Antenna AT-14/APN-3. Cancelled 20 March 1944.

ANTENNA AT-11/CPN-2

Identical to AT-13/APN-3. Cancelled 7 March 1944.

ANTENNA AT-12/TRC-1

Replaced by Antenna AS-201()/TRC-1(). Cancelled 8 August 1943.

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ANTENNA AT-16/TPN-1

TYPE: Probably a ground-plane antenna.

DESCRIPTION: The antenna is a quarter-wavelength stub 12-1/2 inches long and has a phenolic base plate 3 inches in diameter and a brass base plate 4-1/8 inches in diameter. Brass L-shaped elements (3 by 9 inches) are used as a reflecting surface. The connector for this antenna is an SO-239.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Beacon transmitter - Receiver AN/TPN-1 and AN/TPN-2. Equipment

function - navigation, surface reference.

MISCELLANEOUS: This antenna uses the same base as Antenna AN-95-A. It is obsolete as of 14 March 1957.

COGNIZANT AGENCY: ARL

STOCK NUMBERS: Signal Corps 2A203-16 and Federal Stock Number 5825-149-0874.

REFERENCES:
1) Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (March 14, 1957). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-18/CRC-1

TYPE: J-matched dipole.

DESCRIPTION: The antenna is an end-fed dipole through a "J" matching section. The long section (radiator) and the short section (matching section) are both telescopic permitting adjustment of length according to transmitting frequency. Overall diameter is 4 inches and length, contracted, is 20-1/2 inches. A steel bracket is fastened to the base by machine screws and is equipped with a steel sleeve to fit on Antenna Support AB-5/CRC-1.

TUNING/MATCHING DEVICES: Radiating and matching elements are adjustable in length.

ASSOCIATED EQUIPMENT: Radio Set AN/CRC-1. Equipment function - communications.

MISCELLANEOUS: When the steel bracket is removed, the antenna becomes Antenna AN-94-A, and may be so used.

COGNIZANT AGENCY: ARL-2561 and possibly ARL-3231.

MANUFACTURERS: W. W. Boes Company, order number 719-ARL-44.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-19()/MPN-1

See AS-38()/MPN-1.

ANTENNA AT-20()/MPN-1

See AS-40()/MPN-1.

ANTENNA AT-21()/MPN-1

See AS-42()/MPN-1.

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ANTENNA AT-22/MPN-1

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Stub antenna.

DESCRIPTION: The antenna is a 22-inch-long stub with a mounting bracket.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set SCR-522-(), which is a communications section of AN/MPN-1 and AN/MPN-1C. Equipment function - communications. Range - 30 miles at 1000 feet altitude; 80 miles at 5000 feet.

MANUFACTURER: Gilfillan Bros., Inc., contract W-3435-sc-109, order 173-MPD-43.

STOCK NUMBER: Federal Stock Number 5840-144-3583.

REFERENCES:
1) U. S. War and Navy Departments and the Air Council of the United Kingdom, Radio Sets SCR-522-A and SCR-542-A, Handbook of Operating Instructions, T.O. 12R2-3SCR522-1, (December 30, 1944). UNCLASSIFIED.
2) U. S. Air Force, Radio Set AN/MPN-1, Handbook Operating Instructions, T.O. 31R5-2-MPN1-1, (June 1, 1956). UNCLASSIFIED.
3) Departments of the Air Force and the Bureau of Aeronautics, Fixed Communication and Meteorological Equipment Directory - Volume III Navigational Aid Equipment, T.O. 31R4-1-1, (June 16, 1958). UNCLASSIFIED.
4) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

5) Gilfillan Bros, Inc., Drawing C00-5202.

6) Signal Corps Specification 471-2100.

7) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-25/GR

Replaced by loop AT-73/GR. Cancelled 12 January 1945.

ANTENNA AT-26/GR

Replaced by loop AT-74/GR. Cancelled 17 January 1945.

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ANTENNA AT-27/GR

FREQUENCY: MF band, 1.5 - 3.0 mc.

TYPE: Loop.

DESCRIPTION: See miscellaneous section of AS-4(*)/GR.

ASSOCIATED EQUIPMENT: Receiver BC-312() and similar receivers. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: It seems that after 1944 antennas AT-27/GR through AT-30/GR, which are similar except for frequency range, were replaced by antennas AT-75/GR through AT-78/GR.

COGNIZANT AGENCY: SCL-3298.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-28/GR

FREQUENCY: HF band, 3.0 - 6.0 mc.

TYPE: Loop.

DESCRIPTION: See miscellaneous section of AS-4(*)/GR.

ASSOCIATED EQUIPMENT: Receiver BC-312() and similar receivers. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: It seems that after 1944 antennas AT-27/GR through AT-30/GR, which are similar except for frequency range, were replaced by antennas AT-75/GR through AT-78/GR.

COGNIZANT AGENCY: SCL-3401.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-29/GR

FREQUENCY: HF band, 6.0 - 12.0 mc.

TYPE: Loop.

DESCRIPTION: See miscellaneous section of AS-4(*)/GR.

ASSOCIATED EQUIPMENT: Receiver BC-312() and similar receivers. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: It seems that after 1944 antennas AT-27/GR through AT-30/GR, which are similar except for frequency range, were replaced by antennas AT-75/GR through AT-78/GR.

COGNIZANT AGENCY: SCL-3402.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-30/GR

FREQUENCY: HF band, 12.0 - 20.0 mc.

TYPE: Loop.

DESCRIPTION: See miscellaneous section of AS-4(*)/GR.

ASSOCIATED EQUIPMENT: Receiver BC-312() and similar receivers. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: It seems that after 1944 antennas AT-27/GR through AT-30/GR, which are simi-

lar except for frequency range, were replaced by antennas AT-75/GR through AT-78/GR.

COGNIZANT AGENCY: SCL-3403.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-31()/CPN-7

FREQUENCY: VHF band, 170 - 180 mc.

TYPE: Dipole.

DESCRIPTION: This antenna is probably a half-wave dipole 36 inches in length and 1/2inch in diameter. Its connector is an SO-239.

BEAM DATA:
Beam type - Omnidirectional in elevation.
Polarization - Horizontal.

ASSOCIATED EQUIPMENT: Radio Set AN/CPN-7. Equipment function - probably navigation, ground reference.

MISCELLANEOUS: The antenna mounts on Antenna Mast AB-3/TPN-1. This antenna is obsolete as of 14 March 1957.

COGNIZANT AGENCY: ARL-2699, procurement plan 44-155.

REFERENCES:
1) Partial List of Obsolete Antennas, Wright Air Development Division, WCLRS-6, (Mar. 14, 1957). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-32/CRN-7

Not required and never used. Cancelled 10 September 1945.

ANTENNA AT-33/CRN-2

See Antenna System AS-2/CRN-2.

ANTENNA AT-34/CRN-2

See Antenna System AS-2/CRN-2.

ANTENNA AT-35/CRN-2

See Antenna System AS-2/CRN-2.

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ANTENNA AT-39/AP

FREQUENCY: SHF band, 8700 - 9500 mc; VSWR < 2:1.

TYPE: Horn.

DESCRIPTION: This antenna is constructed of 0.032-inch sheet brass and is fitted with a choke-type flange. The horn is approximately 3 inches long, and the opening is 3-9/16 by 3-3/32 inches. All fittings are for standard 1-1/4- by 5/8-inch waveguide. The antenna weighs 1/2 pound.

BEAM DATA:
Polarization - Linear, same as the antenna of the source under test.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Signal Generator TS-35/AP and Power Meter TS-36/AP. Equipment function - test.

MISCELLANEOUS: AT-39/AP was formerly designated AT-39/APM-32.

COGNIZANT AGENCY: ARL-3148.

MANUFACTURERS: Western Electric Company, orders 768-DAY-RA, 2118-DAY-RA, 870-DAY-RA, 1428-DAY-RA, 1839, 44-3050, 44-1381, and 44-2276.

STOCK NUMBERS: Signal Corps 2A203-39 and Federal Stock Number 5985-112-9045.

REFERENCES:
1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-44()/MPN-1A

MAJOR COMPONENTS: 1 reflector AT-44()/MPN-1 and 1 feed AS-75()/MPN-1A.

FREQUENCY: SHF band, 10,000 mc.

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: The antenna is the reflector for an azimuth-scanning antenna consisting of reflector AT-44()/MPN-1A and feed AS-75()/MPN-1A. The reflector is a parabolic cylinder of skin-stressed-aluminum construction. The dimensions are 8-1/2 feet by 40 inches by 24 inches. Total weight is 150 pounds.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1.

SCAN DATA: See Reference 1.

INSTALLATION: Ground, truck mounted.

ASSOCIATED EQUIPMENT: Radio Set AN/MPN-1A. Equipment function - approach control.

MISCELLANEOUS: AT-44()/MPN-1A is similar to AT-20()/MPN-1, but is not interchangeable due to mechanical differences.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Division, contract NXss-29812.

STOCK NUMBER: Federal Stock Number F5985-250-8633.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Reprot No. AD-150674. SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, Volume 3, (Feb. 1958). UNCLASSIFIED.

3) Bendix Radio Drawing AR-96245-1.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-45()/MPN-1A

MAJOR COMPONENTS: 1 reflector AT-45()/MPN-1A and 1 feed AS-76()/MPN-1A.

FREQUENCY: SHF band, 10,000 mc.

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: The antenna is the reflector for an elevation-scanning antenna consisting of reflector AT-45()/MPN-1A and feed AS-76()/MPN-1A. The reflector is a parabolic cylinder of skin-stressed-aluminum construction. The dimensions are 14 feet by 30 inches by 12 inches.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1.

SCAN DATA: See Reference 1.

INSTALLATION: Ground, truck mounted.

ASSOCIATED EQUIPMENT: Radio Set AN/MPN-1A. Equipment function - approach control.

MISCELLANEOUS: AT-45()/MPN-1A is similar to AT-21()/MPN-1 but is not interchangeable due to mechanical differences.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Division, contract NXss-29812.

STOCK NUMBER: Federal Stock Number F5985-250-8634.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, Volume 3, (Feb. 1958). UNCLASSIFIED.

3) Bendix Radio Drawings AR-96263-1 and AR-96261.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-46()/MPN-1A

FREQUENCY: UHF band, 3000 mc.

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: The antenna is the reflector for a search antenna consisting of reflector AT-46()/MPN-1A and feed AS-77()/MPN-1A. The reflector is a parabolic cylinder constructed of sheet aluminum. Overall dimensions are 104 inches by 48 inches by 30 inches. Total weight is 135 pounds.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1.

SCAN DATA: See Reference 1.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MPN-1A. Equipment function - approach control.

MISCELLANEOUS: AT-46()/MPN-1A is similar to AT-19()/MPN-1 but is not interchangeable due to mechanical differences.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Division, contract NXss-29812.

STOCK NUMBERS: Federal Stock Number F5985-250-8631; Signal Corps 2A3166-46.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, Volume 1, (Feb. 1958). UNCLASSIFIED.

3) Bendix Radio Drawing AR-91803-1.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-48/UP

FREQUENCY: SHF band, 5000 - 11,000 mc.

TYPE: Horn.

DESCRIPTION: AT-48/UP is a portable, horn-type, general-purpose antenna capable of receiving or transmitting r-f energy in the X-band. The horn, which utilizes a type N connector, is a means of coupling test sets to X-band radars. It is constructed of sheet brass and weighs one-half pound. It is 2-1/2 inches wide, 2 inches high, and 5-1/2 inches long.

SCAN DATA: The antenna does not scan but may be mounted in a vertical or horizontal position.

ASSOCIATED EQUIPMENT: Radio Frequency Test Set TS-13/AP and Detector-Amplifier Assembly AN/VPA-1A. Equipment function - test.

MISCELLANEOUS: The antenna has no support other than the type N connector.

COGNIZANT AGENCY: U. S. Navy, contract NObsr 39332.

MANUFACTURERS: General Electronic Industries, Model 710, and Hazeltine Electronics Corporation.

STOCK NUMBERS: Federal Stock Numbers 5841-524-4553; 5985-038-3462; Navy Stock Number (ASO) R1648150.

REFERENCES:

1) Department of the Navy, AT-48/UP Test Antenna, NAVAER 20-55A1-4, (January 1, 1958). UNCLASSIFIED.

2) NavAer 08-55-78.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-49(*)/APR-4

FREQUENCY: VHF, UHF, and SHF bands, 200 - 3300 mc; VSWR < 5 from 200 to 3000 mc on 50-ohm coaxial cable.

TYPE: Conical.

DESCRIPTION: The cone of this conical antenna is the flared extension of the inner conductor of a tapered section of coaxial line. The outer conductor of the tapered section becomes the base plate upon which the antenna is mounted. The cone is current-fed; it has a curved top plate and is fitted with a type UG-58/U chasis connector. The mounting flange attaches to the skin of the aircraft. A UG-21/U r-f plug and RG-8/U r-f cable are required. The cone is 6 inches high and 7 inches in diameter; it extends 7-1/2 inches outside the skin of the aircraft. The overall antenna is 10-1/2 inches high and 8 inches in diameter with the mounting flange. The apex angle is 60 degrees, and the weight is 2.3 pounds. The antenna should be mounted on the underside of the aircraft so that the axis of the cone makes an angle of 45 degrees with and below the horizontal. When two of these antennas are used, they are mounted as described on opposite sides of the aircraft. Antenna Cover CW-46/APR-4 or CW-33/APR-4 is used with the antenna.

BEAM DATA:

Half-power beamwidth - The radiation pattern is typical of a quarter-wavelength stub against a ground plane.

Polarization - Linear, mounted at 45° angle and will receive either vertically or horizontally polarized waves.

TUNING/MATCHING DEVICES: A matching section is built into the base and terminates in a connector assembly as shown on drawing number SC-C-10691-A.

INSTALLATION: Airborne and ground.

ASSOCIATED EQUIPMENT: Receiving Equipment AN/APR-4. Equipment function - countermeasures, search; Transmitter AN/APT-5() and AN/APT-9. Equipment function - countermeasures, jamming: Radio Interference Measuring Set AN/URM-42. Equipment function - countermeasures, monitoring.

MISCELLANEOUS: AT-49(*)/APR-4 denotes the unlettered, the A, and the B models of this antenna. The A model differs from the unlettered model in that it has a 6-inch instead of 8-inch diameter. The B model is identical to the A model but is moisture proofed per Technical Order 01-1-391. The three models are electrically interchangeable and are also interchangeable with Antenna AS-115/APR.

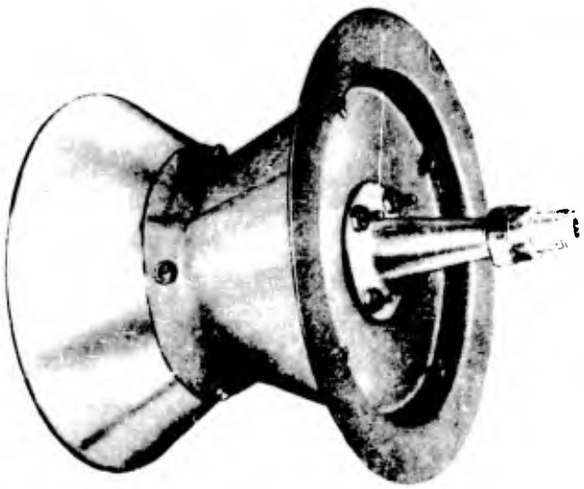
COGNIZANT AGENCY:
AT-49/APR-4 and ()...ARL-48-R203, AFMRD-SA/3;
AT-49A/APR-4 ...ARL-48-R232, AFMRD-SA/3;
AT-49B/APR-4 ...AEL-50-630, AFDRD-EL-4.

MANUFACTURERS: Crosley Radio Corporation, type CAGW, procurement contract 344-DAY-44.

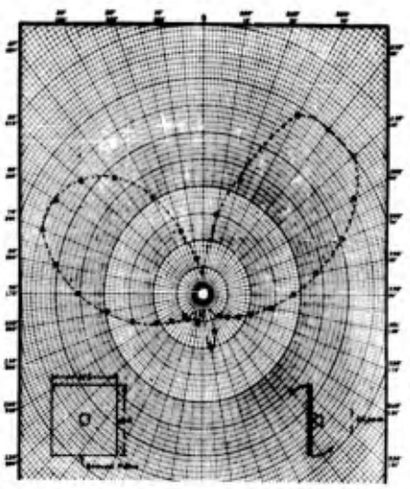
STOCK NUMBERS: AT-49A/APR-4. . .Federal Stock Number 5895-180-3131A and AT-49B/APR-4. . .Federal Stock Number 5895-030-2436A.

REFERENCES:
1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

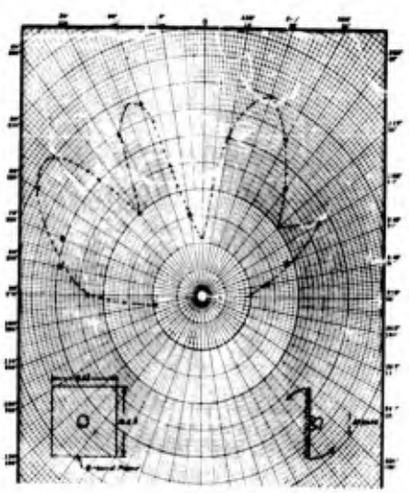
2) U. S. Department of Defense Nomenclature Card.



Antenna Assembly AT-49/APR-4



AT-49(*)/APR-4 Field Pattern 300 mc



AT-49(*)/APR-4 Field Pattern 2720 mc

ANTENNA AT-50/U

FREQUENCY: VHF band, 170 - 180 mc; VSWR < 2.0.

TYPE: Dipole.

DESCRIPTION: The antenna is a brass, half-wave dipole 32-1/2 inches long. It mounts at right angles to a steel tube 20-3/4 inches long. Provisions are made for mounting the tube either on a flat surface or on a rail. The support tube houses the concentric-line section which matches the radiator to the transmission line. A 50-ohm coaxial-cable feed is required at the input to the matching section.. The antenna transmits an r-f signal to a YJ

radar beecon or similar equipment and receives the response signal.

INSTALLATION: Ground, fixed, or shipboard.

ASSOCIATED EQUIPMENT: Radar Maintenance Equipment AN/UPM-1A and AN/UPM-1B. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

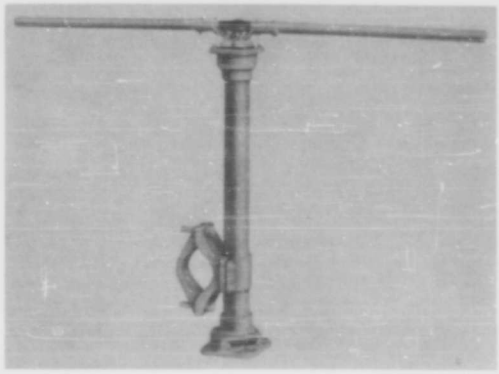
MANUFACTURERS: Hamilton Radio Corporation.

STOCK NUMBERS: Federal Stock Numbers N5985-156-6642 and 5985-284-9506.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, Volume 1, (Feb. 1958). UNCLASSIFIED.

2) Departments of the Air Force and the Bureau of Aeronautics, Radar Maintenance Equipment AN/UPM-1, AN/UPM-1A, and AN/UPM-1B, Handbook Maintenance Instructions, AN 16-30UPM1-3, (February 15, 1946 - revised November 1949). UNCLASSIFIED.



AT-50/U

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ANTENNA AT-55/MRQ-2

See AS-51/MRQ-2.

ANTENNA AT-56/MRQ-2

See AS-51/MRQ-2.

ANTENNA AT-57/MRQ-2

See Antenna Assembly AS-93/MRQ-2.

ANTENNA AT-58/MRQ-2

See Antenna Assembly AS-93/MRQ-2.

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ANTENNA AT-59/TRC-7

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Whip.

DESCRIPTION: The antenna is an adjustable whip whose length can be adjusted between 17.5 and 29 inches for most efficient use at any frequency in its range. It terminates in Plug PL-259 for connection to the socket on Antenna Base AB-37/TRC-7.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

TUNING/MATCHING DEVICES: The antenna is adjustable in length.

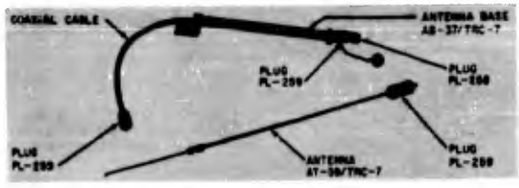
INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-7( ) and AN/PRC-2( ). Equipment function - communications.

COGNIZANT AGENCY: SCL-4129.

STOCK NUMBERS: Signal Corps 2A203-59 and Federal Stock Number 5820-244-5399.

REFERENCES:
1) U. S. Air Force, Handbook Operation and Service Instructions for Radio Sets AN/TRC-7B, TO 31R2-2TRC7-11, (July 7, 1952 - revised Nov. 1, 1954). UNCLASSIFIED.
2) Military Specification 271-3103.
3) U. S. Department of Defense Nomenclature Card.



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ANTENNA AT-60/U

TYPE: Rod.

DESCRIPTION: This antenna is a non-flexible, adjustable rod with a spring-type plug-in connector (banana plug) on one end and a metal ball, approximately 3/16 inch in diameter, on the other end. The approximate length of the antenna is 6 inches collapsed and 8 inches extended.

TUNING/MATCHING DEVICES: Length is adjustable from 6 to 8 inches.

ASSOCIATED EQUIPMENT: Frequency Meter TS-175( )/U. Equipment function - test.

COGNIZANT AGENCY: ARL-3576.

STOCK NUMBER: 2A203-60.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-63/UPM-2

FREQUENCY: VHF and UHF bands, 80 - 1220 mc.

TYPE: Rod.

DESCRIPTION: This rod-type receiving antenna is 5-5/16 inches long and 11/16 inch in diameter and weighs 1-1/2 ounces. It is connected to a wavemeter by a knurled, threaded collar.

ASSOCIATED EQUIPMENT: Wavemeter Test Set AN/UPM-2(). Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Kalert Company, procurement contract NXsr-53379.

STOCK NUMBER: Federal Stock Number N5985-285-0788.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, Volume 1, (Feb. 1958). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-64/U

TYPE: Probe.

DESCRIPTION: The probe assembly is constructed to fit a type N plug at one end and fits into the slotted coaxial line of Radio Set SCR-582-(). The probe is used to feed r-f energy from Radio Set SCR-582-() to Power Meter TS-125/AP. The silver-plated brass assembly is 1-1/4 inches in length and 1-1/4 inches in diameter.

ASSOCIATED EQUIPMENT: Test Set AN/MPM-5. Equipment function - test.

COGNIZANT AGENCY: CESL-1936.

STOCK NUMBERS: 3F3988-64 and Air Force 1800-327305600.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-65/UP

FREQUENCY: SHF band, X-band.

TYPE: Horn.

DESCRIPTION: This antenna consists of a horn to which is attached a length of waveguide (1/2 by 1 inch in outside diameter) with a special flange at one end.

BEAM DATA:
Gain - Approximately 15 db.

ASSOCIATED EQUIPMENT: Test Kit TS-76/APM-3. Equipment function - test.

MISCELLANEOUS: AT-65/UP is also used by the Signal Corps.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Western Electric Company, contract NXsa-32197.

STOCK NUMBER: 3F3988-65.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-66(*)/U

FREQUENCY: VHF and UHF bands, 100 - 1000 mc.

TYPE: Probe.

DESCRIPTION: The probe antenna consists of approximately 10 inches of r-f cable with an r-f connector attached to one end. The other end has the metal braid and jacket removed for a distance of 6 inches with the dielectric left in place to form an insulated probe.

ASSOCIATED EQUIPMENT: Frequency Meters TS-175/U and TS-175C/U. Equipment function - test.

MISCELLANEOUS: AT-66(*)/U denotes the unlettered, the A, and the B models of this antenna. The three models are interchangeable, and the differences between models are summarized below.

Differences in AT-66(*)/U

Antenna	Type of Cable	Type of Connector
AT-66/U	RG-8/U	UG-23/U
AT-66A/U	RG-8A/U	UG-23C/U
AT-66B/U	RG-8A	UG-23B/U

COGNIZANT AGENCY:
AT-66/U . . . ARL;
AT-66A/U . . . AEL-50-120;
AT-66B/U . . . USA SCLM-1205.

MANUFACTURERS: Allen D. Cardwell, procurement - 10634-Phila-54, order number 1210-DAY-44.

STOCK NUMBER: Federal Stock Number 5985-028-4275.

REFERENCES:
1) War and Navy Departments, Frequency Meter TS-175/U, Handbook of Maintenance Instructions, AN 16-35TS175-2, (April 15, 1945). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

* *

ANTENNA AT-68/UP

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Horn.

DESCRIPTION: This is a small directional horn antenna assembly consisting of a tapered section of waveguide terminated by a probe coupling to a coaxial fitting. It is designed to be used with test equipment as either a radiating or pickup antenna. It terminates in a type N fitting which will mate with RF Plug UG-24/U. It is 2.3 by 4.5 by 6.8 inches and weighs 0.3 pounds.

BEAM DATA:
Gain - 9.5 db.

INSTALLATION: Ground.

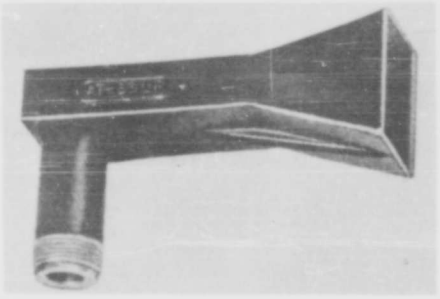
ASSOCIATED EQUIPMENT: Test Set TS-146/UP, TS-147/UP, Spectrum Analyzer TS-148/UP, and Radar Test Sets AN/UPM-10 and AN/UPM-10B. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy, AFDRE-2F/1, SPSGE-R.

MANUFACTURER: Sperry Gyroscope Company, contract NXsa-51553.

STOCK NUMBER: Federal Stock Number 5985-241-6701.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.



AT-68/UP.

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ANTENNA AT-69/GR

See AS-169/GR.

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ANTENNA AT-70/U

TYPE: Probe.

DESCRIPTION: The probe assembly is constructed to fit a type N plug at one end and to fit into the slotted coaxial line of Radar Set AN/TPL-1. It is used to couple r-f energy from Radar Set AN/TPL-1 to Power Meter TS-125/AP. The silver-plated brass assembly, is 1-3/4 inches in length and 1-1/2 inches in diameter.

ASSOCIATED EQUIPMENT: Test Set AN/MPM-7. Equipment function - test.

MISCELLANEOUS: AT-70/U is similar to Antenna AT-64/U except for dimensions. AT-70/U can be used in place of AT-64/U but the converse is not true.

COGNIZANT AGENCY: CESL-2294.

STOCK NUMBER: 3F3988-70.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-71/GR

See AS-169/GR.

ANTENNA AT-72/GR

See AS-169/GR.

ANTENNA AT-73/GR

Replaces AT-25/GR. See AS-169/GR.

ANTENNA AT-74/GR

Replaces AT-26/GR. See AS-169/GR.

ANTENNA AT-75/GR

See AS-4()/GR.

ANTENNA AT-76/GR

See AS-4()/GR.

ANTENNA AT-77/GR

See AS-4()/GR.

ANTENNA AT-78/GR

See AS-4()/GR.

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ANTENNA AT-82/UP

TYPE: Whip.

DESCRIPTION: The antenna provides pickup of radiated r-f energy to operate Wavemeter TS-247()/APM-48. The length is adjustable from 9 to 15 inches, and the diameter is 1/4 inch.

TUNING/MATCHING DEVICES: The length is adjustable from 9 to 15 inches.

ASSOCIATED EQUIPMENT: Wavemeter TS-247()/APM-48. Equipment function - test.

COGNIZANT AGENCY: ARL-4781.

MANUFACTURER: Harvey Radio Laboratories, Inc., Plan 45-795.

STOCK NUMBERS: Signal Corps 2A203-82 and Federal Stock Number 5985-217-1596.

REFERENCES:
1) Mil. Specification 371-5087.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-84/GMQ-5

FREQUENCY: HF band, 27.75 mc.

TYPE: Stub sleeve.

DESCRIPTION: AT-84/GMQ-5 is a half-wave coaxial type antenna fed by a 50-ohm coaxial cable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Wind Sounding Set AN/GMQ-5(). Equipment function - meteorological measurement.

COGNIZANT AGENCY: U. S. Navy, SDSGG-M.

MANUFACTURER: Link, contract NXsr-51572.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-85/GMQ-5

See AS-225()/GMQ-5.

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ANTENNA AT-88/U

FREQUENCY: UHF and SHF bands, S-band.

TYPE: Probe.

DESCRIPTION: AT-88/U is a probe assembly used with slotted S-band waveguide (1-1/2 by 3 inches) to measure voltage standing wave ratios. The assembly is 4-1/2 inches long, 1-3/4 inches wide, and 3-1/2 inches high. The probe extends into the waveguide a maximum of 0.230 inches. The assembly is terminated in a type N female connector which will mate with Plug UG-18/U or similar types.

ASSOCIATED EQUIPMENT: Test Set AN/MPM-10, Test Line Assembly MC-569, and Power Meter TS-125/AP. Equipment function - test.

COGNIZANT AGENCY: CESL-2601.

STOCK NUMBER: 3F3988-88.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-101(*)/GRC-9

FREQUENCY: HF band, 4.3 - 12.0 mc.

TYPE: Long wire.

DESCRIPTION: The overall length of this antenna is 107.5 feet. It is divided into eight unequal lengths by insulators and mounted between two masts. Jumper wires are provided for shorting the insulators so that the length of the radiating element can be adjusted to the frequency used. The lengths of the eight sections are 4.5, 5.5, 7, 7.5, 10.5, 12, 14.5, and 46 feet. The antenna weighs 2-1/4 pounds. A ring on one end attaches to Antenna AT-102-()/GRC-9 to extend the frequency range of AT-101()/GRC-9 to 2.0 mc.

TUNING/MATCHING DEVICES: The shorting jumpers make the length adjustable in steps.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-9() and AN/GRC-13. Equipment function - communications.

MISCELLANEOUS: AT-101(*)/GRC-9 denotes two models, the unlettered model and the A model. The designation AT-101A/GRC-9 has been changed (26 July 1949) to AT-237/GRC-13 as it is not interchangeable with AT-101/GRC-9 due to a permanently attached calibration chart.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: RCA.

STOCK NUMBERS: Federal Stock Number 5985-243-0432.

REFERENCES:
1) Departments of the Army and the Air Force, Radio Set AN/GRC-9, AN/GRC-9A, AN/GRC-9X, Supply Manual and Technical Order of Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide, T.O. 31R2-2GRC9-4, (Nov. 30, 1956). UNCLASSIFIED.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
3) RCA Drawing 735285-501.
4) Signal Corps Spec. Number 271-3213.
5) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-102(*)/GRC-9

FREQUENCY: MF and HF bands, 2.0 - 12.0 mc (when used with AT-101()/GRC-9).

TYPE: Long wire.

DESCRIPTION: The overall length of this antenna is 137.0 feet. It is divided into 9 unequal lengths by insulators. Jumper wires are provided for shorting the insulators so that the length of the radiating element can be adjusted according to frequency. The lengths of the nine sections are 11.5, 12.5, 14.5, 14.5, 15.5, 16.5, 17, 17, and 18 feet. The antenna weighs 2-1/2 pounds and is mounted between two masts. This antenna is used with Antenna AT-101()/GR to extend the frequency range of the latter to 2 mc. The frequency range listed is the range covered when the two antennas are used together. The two antennas are joined physically by a ring and boat snap and electrically by a banana plug and jack.

TUNING/MATCHING DEVICES: The length is adjustable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-9() and AN/GRC-13. Equipment function - communications.

MISCELLANEOUS: AT-102(*)/GRC-9 denotes two models, the unlettered and the A model. The two

models are interchangeable and differ only in the type of insulators used.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: RCA, Navy procurement contract NObsr-42227.

STOCK NUMBERS: Federal Stock Numbers 5985-223-1413 and N5985-249-4384.

REFERENCES:

1) Departments of the Army and the Air Force, Radio Set AN/GRC-9, AN/GRC-9A, AN/GRC-9X, Supply Manual and Technical Order of Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide, T.O.31R2-2GRC9-4, (Nov. 30, 1956). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Signal Corps Spec. Number 271-3213.

4) Navy Spec. Number CS-1260.

5) RCA Drawing 8888130-502, sub 2 and 735285-502.

6) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-106/UR

TYPE: Whip.

DESCRIPTION: The antenna is a chrome-plated whip, 5/16 inch in diameter and adjustable between 7-1/2 and 17-1/2 inches in length.

TUNING/MATCHING DEVICES: The length is adjustable.

ASSOCIATED EQUIPMENT: Frequency Meter TS-323/UR. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Radiart Corporation, Part Number 15885-A, modified, and Hoffman Radio Corporation, Part Number 38-A00A073.

STOCK NUMBERS: Signal Corps 2A203-106 and Federal Stock Number 5985-237-7888.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-107/TPQ-2

See AS-309/TPQ-2 & ().

ANTENNA AT-108/TPQ-2

See AS-309/TPQ-2 & ().

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ANTENNA AT-109()/UPN

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Modified cut paraboloidal reflector.

DESCRIPTION: Antenna AT-109()/UPN is a reflector designed for use as a search antenna when fed by AS-317()/GPN-2 which is a two-dipole feed. The reflector is a modified cut paraboloid constructed of stainless-steel ribs. It is 8-1/2 feet high, 5 feet wide, and 26 inches deep and weighs 200 pounds.

BEAM DATA: (With feed AS-317()/GPN-2)
Gain - 31 db.
Half-power beamwidth -
Vertical - 3°.
Horizontal - 5°.
Side-lobe attenuation - 15 db.
Beam type - $\csc^2$ from 3° to 10° in elevation.

SCAN DATA: The antenna rotates through 360° in azimuth at 30 revolutions per minute. It can also be manually adjusted in elevation between 2° and 10°.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/GPN-2, AN/MPN-1A, and AN/MPN-3. Equipment function - search, air and approach control. Range - 30 miles.

MISCELLANEOUS: AT-109()/UPN is also used as the reflector for several other antennas using slightly different feeds. It is the reflector for an antenna made up of reflector AT-109()/UPN and feed AS-354/MPN-1A. This antenna is the search antenna for Radio Set AN/MPN-1A. It is also the reflector for an antenna made up of reflector AT-109()/UPN and feed AS-348/MPN-3. This antenna is the search antenna for Radar Set AN/MPN-3. Reference 1) states that AN/GPN-2 has been replaced by AN/GPN-6.

COGNIZANT AGENCY: U. S. Navy, BuShips code 822.

MANUFACTURER: Bendix Radio Div., contract N5sr-752.

STOCK NUMBER: Federal Stock Number F5985-250-8611.

REFERENCES:

1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Private Correspondence, Bureau of Ships.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-110/U

See AS-267()/U.

ANTENNA AT-112/TPN-4

Cancelled 3 April 1947. Replaced by Antenna AT-105/AP. See Volume IV.

ANTENNA AT-113/UP

TYPE: Horn.

DESCRIPTION: The antenna is made of sheet copper approximately 0.031 inches thick. The outside is 5 inches long, 3 by 2-1/2 inches at the wide end, and 1/2 by 1/4 inch at the narrow end. It weighs about 1/2 pound.

ASSOCIATED EQUIPMENT: Radar Test Set AN/TPM-4 and Echo Box TS-408()/UP. Equipment function - test.

COGNIZANT AGENCY: CESL-2916, SPSGE.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

ANTENNA AT-114(*)/GRD-1A

FREQUENCY: VLF band, 0.007 - 0.011 mc.

TYPE: Two loop antennas.

DESCRIPTION: Two identical loop antennas, mounted at right angles to each other, are used to detect and locate atmospheric electrical discharges. The following description refers to each loop.

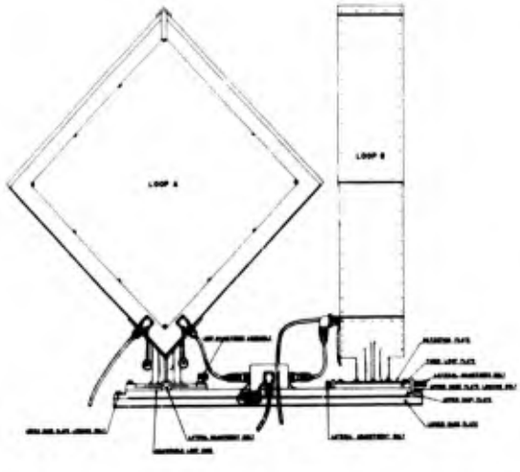
The loop antenna is a square loop, approximately 32-1/2 inches on a side and 10 inches deep. It weighs about 75 pounds. Attached to one corner is a pedestal with a 10-inch-square base for mounting. The antenna consists of two 32-inch square coils each having 200 turns of No. 18 AWG wire wound to give uniformly distributed capacity and a coincidental electrical and mechanical center. The loop has an inductance of 600 millihenries and a Q of 50 at 0.01 mc. It is electrostatically shielded, and the center tap is connected to ground through two one-ohm, precision resistors. The two coils are inclosed in a dustproof and verminproof cover and are fed by a coaxial cable.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Static Direction Finder AN/GRD-1A. Equipment function - meteorological measurement. Range - greater than 2000 miles.

MISCELLANEOUS: AT-114(*)/GRD-1A denotes models AT-114()/GRD-1A and AT-114/GRD-1A.

COGNIZANT AGENCY: CESL-2847.



AT-114(*)/GRD-1A

MANUFACTURER: Airplane and Marine Instrument Company, order 106-EGSA-45.

STOCK NUMBERS: Signal Corps 2A203-114 and 7A-99-114 and Federal Stock Number 6660-243-0427.

REFERENCES:
1) War Department, Static Direction Finder AN/GRD-1A, Technical Manual, TM 11-2693, (Sept. 28, 1945). UNCLASSIFIED.
2) Spec. Number ESL-2110.
3) U. S. Department of Defense Nomenclature Card.

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AT-129(*)/VR Differences

Antenna	AT-129()/VR	AT-129/VR	AT-129A/VR	AT-129B/VR	AT-129C/VR
Frequency	30 - 44 mc	30 - 40 mc	30 - 40 mc	30 - 40 mc	25 - 40 mc
Input impedance	70 ohms	72 ohms	72 ohms	70 ohms	52 ohms
Adjustable	No	Yes	Probably	Yes	Probably not
Overall length	82.5 inches	78 inches	78 inches	90 inches	89 inches
Mounting	disc-type baseplate	threaded stud	threaded stud	disc-type baseplate	threaded stud
Interchangeable with	(No data)	AT-129A/VR	AT-129/VR	(No data)	(No data)

Procurement Data

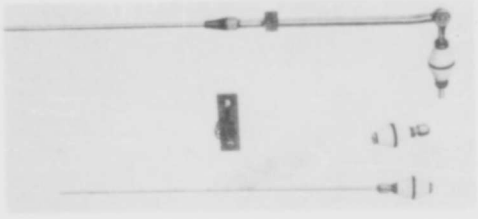
	AT-129()/VR	AT-129/VR	AT-129A/VR	AT-129B/VR	AT-129C/VR
Cognizant Agency:	SCLC-5363	SCLM-7501	SCLM-7502	SCLM-7503	SCLM-7504 SCLM-6937
Manufacturers:		Motorola, Navy contract NObsr-52082, Signal Corps contract 29040-PHILA-45.	Espey, Signal Corps contract 12732-PHILA-47.	Utility Electronics Corporation	Motorola, Signal Corps contract 1902-PHILA-51.
Stock Numbers:		Federal Stock numbers 5820-243-0430 5985-243-0430 5820-284-9082 and Signal Corps 2A292-6	Federal Stock numbers 5820-243-0430 and 5985-243-0430 and Signal Corps 2A292-6	Federal Stock number 5985-665-0438 and Signal Corps 2A292-6B	Federal Stock number 5820-264-7494

TUNING/MATCHING DEVICES: The length of some models is adjustable.

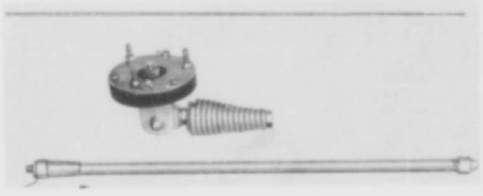
INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Sets AN/VRC-2() and AN/VRC-23(). Equipment function - communications.

MISCELLANEOUS: AT-129(*)/VR denotes all the models listed under the description plus AT-129D/VR. As AT-129D/VR is not interchangeable with the previous models; the designation AT-129D/VR was cancelled 18 May 1954, and the antenna was redesignated AT-532()/VR.



AT-129/VR



AT-129B/VR

REFERENCES:

1) Departments of the Army and Air Force, Antenna AT-129/VR; AT-129A, B, C/VR, Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide, TO 31R2-2VR-104, (April 15, 1957). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Departments of the Army and the Air Force, Radio Sets AN/VRC-2 and AN/VRC-2X, Technical Manual and Technical Order, TM 11-607, TO 16-30VRC2-5, (June 1953). UNCLASSIFIED.

4) Departments of the Army and Air Force, Radio Sets AN/VRC-6, -6X, and -6Y, Technical Manual and Technical Order, TM 11-283, TO 16-30VRC6-5, (July 1954). UNCLASSIFIED.

5) U. S. Navy Drawing RE66F619A.

6) Utility Electronics Corporation Drawing PC-1425.

7) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-133()/CRC-6

Cancelled 2 Sept 1948. Replaced by AT-197()/GR. See OA-237/GR, OA-306/GRC & (), and OA-797/MRC-45.

ANTENNA AT-135/CRD-1

See AS-342/CRD 1.

ANTENNA AT-136(*)/TPG-2

See Antenna Assembly: AS-345(*)/TPG-2.

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ANTENNA AT-137(*)/MRC-2

FREQUENCY: HF band, 2 - 18 mc.

TYPE: Probe.

DESCRIPTION: AT-137(*)/MRC-2 is made from a 5-1/4-foot section of RG-8/U coaxial cable. The insulation is removed from one end to form 2-inch leads. A ground clamp is soldered to the braided shield 3 inches from the end. Insulation is removed from the other end for a distance of 1-3/4 inches, and a 1-1/2-inch length of No. 14 AWG bus bar is wrapped around the braided shield. The antenna samples the transmitted r-f energy and feeds it to a frequency meter so that transmitter frequency can be set as desired.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Frequency meter used with Radio Set AN/MRC-2(). Equipment function - test.

MISCELLANEOUS: The designation AT-137(*)/MRC-2 denotes two models -- the unlettered and the A model. Differences between the two models, if any, are unknown.

COGNIZANT AGENCY: CENS and SCL-7579.

REFERENCES:

1) Departments of the Army and the Air Force, Radio Sets AN/MRC-2, AN/MRC-2A and AN/MRC-2B, Technical Manual and Technical Order, T.O. 31R2-2MRC2-1, (Dec. 18, 1953). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA REFLECTOR AT-140/MPN-3

FREQUENCY: Additional information is available in the secret document listed below as Reference 1.

TYPE: Probably a parabolic-cylinder reflector.

DESCRIPTION: This reflector is the azimuth reflector of Radar Set AN/MPN-3 and is used to collimate the energy from an array of dipoles AS-355/MPN-3, which are probe fed from a waveguide. Azimuth scanning is probably accomplished by varying the physical dimensions of the waveguide feed which changes the relative phase of the signal at the dipoles and thus shifts the beam in azimuth. It is constructed of aluminum, weighs 98 pounds, and is 4 feet high, 8-1/2 feet wide, and 3 feet deep.

SCAN DATA: In addition to the electromechanical scanning mentioned above, the reflector can be rotated on a horizontal axis through 6° in elevation in order to keep approaching aircraft in the beam.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-3(). Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Gilfillan Brothers, Navy contract NXsr-93195.

STOCK NUMBER: Federal Stock Numbers N5985-250-8632.

REFERENCES:
1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.
2) Gilfillan Bros. Drawing 17005.
3) Gilfillan Bros. Spec. 66-16963.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-142/MPN-3

Cancelled 4 April 1946. Never used. Replaced by Antenna AT-109()/UPN.

ANTENNA AT-143/MPN-3

TYPE: Whip.

DESCRIPTION: The antenna is made of stainless steel and is not adjustable. It is 6 feet long and weighs one pound.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-3, Radio Receiver R-23/ARC-5. Equipment function - communications for approach control Radar Set AN/MPN-3.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Gilfillan Bros., Inc., procurement contract NXsr-93195.

REFERENCES:
1) Gilfillan Bros. Spec. 66-16963.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA REFLECTOR AT-144/MPN-3

FREQUENCY: Additional information is available in the secret document listed below as Reference 3 and in Volume VI of this catalog series.

TYPE: Probably a parabolic-cylinder reflector.

DESCRIPTION: This reflector is the elevation reflector of Radar Set AN/MPN-3 and is used to collimate the energy from an array of dipoles, AS-356/MPN-3, which are probe fed from a waveguide. Elevation scanning is probably accomplished by varying the physical dimensions of the waveguide feed which changes the relative phase of the signal at the dipoles and thus shifts the beam in elevation. It is constructed of aluminum, weighs 127 pounds, and is 14 feet high, 3 feet wide, and 1-1/2 feet deep. The lower portion of the reflector is shock mounted to the roof and the floor of a trailer, and the upper portion is mounted outside the trailer.

BEAM DATA: Additional information is available in the secret document listed below as Reference 3 and in Volume VI of this catalog series.

SCAN DATA: In addition to the electromechanical scanning mentioned above, the reflector can be rotated on a vertical axis through 20° in azimuth in order to keep approaching aircraft in the beam.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-3(). Equipment function - approach control.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Gilfillan Brothers, Inc., Navy contract NXsr-93195.

STOCK NUMBER: Federal Stock Number N5985-250-8635.

REFERENCES:
1) Gilfillan Specification 66-16963.
2) Gilfillan Drawing 17015.
3) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-151/UPT

FREQUENCY: SHF band, 3800 - 5000 mc.

TYPE: Horn.

DESCRIPTION: The antenna is brass plated and painted on the outside. The horn is of one-piece construction and has a detachable mounting bracket of cast aluminum which is anodized and painted. The overall dimensions are 7 inches long, 4 inches wide, and 6-3/8 inches high. The antenna weighs approximately 2 pounds and is fed by a 50-ohm coaxial cable.

BEAM DATA:
Gain - 6 db.
Half-power beamwidth - 60° (probably in both planes).
Polarization - Linear, manually adjustable in three steps.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Target Transmitter Set AN/SPM-1, which is used to calibrate Direction Finder DBM-1. Equipment function - test.

MISCELLANEOUS: AS-151/UPT is Submarine Signal Company type 1412, drawing number 61233.

COGNIZANT AGENCY: U. S. Navy, code 837.

MANUFACTURERS: Submarine Signal Company, U. S. Navy contract NObsr-42417.

STOCK NUMBERS: Federal Stock Number F5985-369-5400.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Navy Specification Number CS-873.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-152/U

FREQUENCY: UHF and SHF bands, 2600 - 3950 mc.

TYPE: Horn.

DESCRIPTION: The antenna is constructed of brass and aluminum with a silver-plated finish. It is 14 inches long, 6 inches wide, and 4 inches high. It is used with 3- by 1-1/2-inch waveguide and is hermetically sealed with a dielectric cover over the horn opening. It is used as a test antenna for radio and radar equipment in the UHF and SHF bands.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: General radio and radar test equipment. Equipment function - test.

MISCELLANEOUS: The antenna mounts with Cover UG-53/U.

COGNIZANT AGENCY: WL-45-2524 and RCSG.

MANUFACTURERS: Sperry Gyroscope Company.

REFERENCES:
1) Military Specification 56A56094.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-153(*)/U

FREQUENCY: SHF band, 3900 - 6000 mc; VSWR < 2:1.

TYPE: Horn.

DESCRIPTION: The antenna is constructed of brass and aluminum with a silver-plated finish. It is 10 inches long, 5 inches wide, and 3 inches high and weighs 8-1/2 pounds. It is used with 2- by 1-inch waveguide and is hermetically sealed with a dielectric cover over the horn opening. It is used as a test antenna for radio and radar equipment in the SHF band. A 50-ohm transmission line feeds this waveguide horn.

BEAM DATA:
Gain - 19 db at 6000 mc.
Half-power beamwidth - Vertical - 21°.
Horizontal - 21°.
Front-to-back ratio - 10:1.
Polarization - Linear, depends on orientation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: General radio and radar test equipment. Equipment function - test.

MISCELLANEOUS: The designation AT-153(*)/U indicates models AT-153/U and AT-153(XE-3)/U. Antenna AT-153(XE-3)/U was used with Antenna System OA-497(XE-1)/U in a countermeasures receiving system and has been declared obsolete. The only apparent difference between models is mounting details. AT-153/U mounts with Cover Plate UG-149A/U. See OA-497(XE-1)/U for illustration.

COGNIZANT AGENCY: WL-45-2525 and RCSG.

MANUFACTURERS: Sperry Gyroscope Company, contract DA-36-039 SC 36580 for AT-153(XE-3)/U.

STOCK NUMBERS: Federal Stock Number 6625-586-5699.

REFERENCES:
1) Department of the Army, Instructions for Antenna Group OA-497(XE-1)/TLR-1, TB SIG 244, (Mar. 16, 1953). UNCLASSIFIED.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

3) Military Specification 56A56094.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-154(*)/U

FREQUENCY: SHF band, 5800 - 8500 mc; VSWR < 2:1.

TYPE: Horn.

DESCRIPTION: The antenna is constructed of brass and aluminum with a silver-plated finish. It is 8 inches long, 4 inches wide, and 2-1/2 inches high and weighs 5-1/2 pounds. It is used with 3/4- by 1/2-inch waveguide and is hermetically sealed with a dielectric cover over the horn opening. It is used as a test antenna for radio and radar equipment in the SHF band. A 50-ohm transmission line feeds this waveguide horn.

BEAM DATA:
Gain - 19 db at 8500 mc.
Half-power beamwidth - Vertical - 21°.
Horizontal - 21°.
Front-to-back ratio - 10:1.
Polarization - Linear, depends on orientation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: General radio and radar test equipment. Equipment function - test.

MISCELLANEOUS: The designation AT-154(*)/U indicates models AT-154/U and AT-154(XE-3)/U. Antenna AT-154(XE-3)/U was used with Antenna System OA-497(XE-1)/U in a countermeasures receiving system and has been declared obsolete. The only apparent difference between models is mounting details. AT-154/U mounts with Flange UG-344/U.

COGNIZANT AGENCY: WL-45-2526 and RCSG.

MANUFACTURERS: Sperry Gyroscope Company, contract, for AT-154(XE-3)/U, W-28-099-AC-177, DA-36-039 SC-36580.

REFERENCES:
1) Department of ArmyArmy, Instructions for Antenna Group OA-497(XE-1)/TLR-1, TB SIG 244, (Mar. 16, 1953). UNCLASSIFIED.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

3) Military Specification 56A56094.

4) Sperry Drawing D-R652766.

5) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-155/U

FREQUENCY: SHF band, 7050 - 10,000 mc; VSWR < 1.2.

TYPE: Horn.

DESCRIPTION: The antenna is constructed of brass and aluminum with a silver-plated finish. It is 7 inches long, 3-1/2 inches wide, and 2 inches high and is used with 1-1/4- by 5/8-inch waveguide as a test antenna for radio and radar equipment in the SHF band. It is hermetically sealed with a dielectric cover over the horn opening and weighs one pound.

BEAM DATA:
Gain - 15 db.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: General radio and radar test equipment. Equipment function - test.

MISCELLANEOUS: The antenna mounts with RF Plug UG-15/U. It is similar to Sperry's model 329 antenna.

COGNIZANT AGENCY: WL-45-2527, RCSG, and RADC.

MANUFACTURERS: Sperry Gyroscope Company, Air Force contract AF 33(604)12162.

STOCK NUMBERS: Federal Stock Number 6625-586-5698.

REFERENCES:
1) U. S. Air Force, Status of U. S. Air Force Equipment, (October 1958). UNCLASSIFIED.

2) U. S. Navy, Test Antenna AT-155/U, NAVAER 20-55A1-2, (Jan. 1, 1958). UNCLASSIFIED.

3) Sperry Drawing D-R652767.

4) U. S. Air Force Descriptive Data Sheet, 7 February 1956.

5) Military Specification 56A56094.

6) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-156(*)/U

FREQUENCY: SHF band, 8100 - 12,100 mc; VSWR < 2:1.

TYPE: Horn.

DESCRIPTION: The antenna is constructed of brass and aluminum with a silver-plated finish. It is 7 inches long, 3 inches wide, and 2 inches high and weighs 2-1/2 pounds. It is used with 1- by 1/2-inch waveguide and is hermetically sealed with a dielectric cover over the horn opening. It is used as a test antenna for radio and radar equipment in the SHF band. A 50-ohm transmission line feeds this waveguide horn.

BEAM DATA:
Gain - 19 db at 12,000 mc.
Half-power beamwidth - Vertical - 21°.
Horizontal - 21°.
Front-to-back ratio - 10:1.
Polarization - Linear, depends on orientation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: General radio and radar test equipment. Equipment function - test.

MISCELLANEOUS: The designation AT-156(*)/U indicates models AT-156/U and AT-156(XE-3)/U. Antenna AT-156(XE-3)/U was used with Antenna System OA-497(XE-1)/U in a countermeasures receiving system and has been declared obsolete. The only apparent difference between models is mounting details.

COGNIZANT AGENCY: WL-45-2528 and RCSG.

MANUFACTURERS: Sperry Gyroscope Company, contract, for AT-156(XE-3)/U, W-28-099-AC-177, DA-36-039-SC-36580.

REFERENCES:
1) Department of the Army, Instructions for Antenna Group OA-497(XE-1)/TLR-1, TB SIG 244, (Mar. 16, 1953). UNCLASSIFIED.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

3) Sperry Drawing D-R652768.

4) Military Specification 56A56094.

5) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-157/U

FREQUENCY: SHF band, 12,400 - 18,000 mc.

TYPE: Horn.

DESCRIPTION: The antenna is constructed of brass and aluminum with a silver-plated finish. It is 6 inches long, 3 inches wide, and 2 inches high. It is used with 0.622- by 0.311-inch inside diameter waveguide and is hermetically sealed with a dielectric cover over the horn opening. It is used as a test antenna for radio and radar equipment in the SHF band.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: General radio and radar test equipment. Equipment function - test.

MISCELLANEOUS: The antenna mounts with Waveguide Flange UG-419/U.

COGNIZANT AGENCY: WL 45-2529 and RCSG.

MANUFACTURERS: Sperry Gyroscope Company.

REFERENCES:
1) U. S. Air Force, Status of U. S. Air Force Equipment, (October 1958). UNCLASSIFIED.

2) Sperry Drawing D-R652769.

3) Military Specification 56A56094.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-158/U

FREQUENCY: SHF band, 18,000 - 26,500 mc.

TYPE: Horn.

DESCRIPTION: The antenna is constructed of brass and aluminum with a silver-plated finish. It is 5 inches long, 2-1/2 inches wide, and 2-1/2 inches high. It is used with 1/2- by 1/4-inch waveguide and is hermetically sealed with a dielectric cover over the horn

opening. It is used as a test antenna for radio and radar equipment in the SHF band.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: General radio and radar test equipment. Equipment function - test.

MISCELLANEOUS: The antenna mounts with Waveguide Flange UG-425/U.

COGNIZANT AGENCY: WL-45-2530 and RCSG.

MANUFACTURERS: Sperry Gyroscope Company.

REFERENCES:
1) U. S. Air Force, Status of U. S. Air Force Equipment, (October 1958). UNCLASSIFIED.
2) Sperry Drawing D-R652770.
3) Military Specification 56A56094.
4) U. S. Department of Defense Nomenclature Card.

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is 53 inches in diameter and 27 inches in depth and weighs 48.5 pounds. The antenna mounts on a mast with the axis of the helix horizontal. The antenna is fed by a 52-ohm coaxial cable.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - Vertical - 70°.
Horizontal - 70°.
Front-to-back ratio - 15 db.
Polarization - Right-hand circular.

INSTALLATION: Ground, fixed or shipboard.

ASSOCIATED EQUIPMENT: Telemeter Receiving Set AN/UKR-5(). Equipment function - telemetering.

MISCELLANEOUS: AT-165(*)/UKR denotes models AT-165/UKR and AT-165()/UKR. The nomenclature card indicates that AT-165()/UKR has a frequency range of 215 - 222 mc and a gain of 6 db. Otherwise, they seem to be identical.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Tele-Dynamics Incorporated (formerly Raymond Rosen Engineering Products), Navy procurement contract NOa(s)-10225 (for AT-165/UKR). Melpar Incorporated, Navy procurement contract NOa(s)-9139 (for AT-165()/UKR).

REFERENCES:

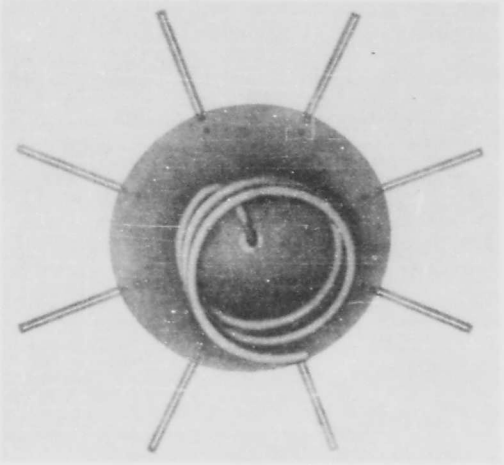
1) U. S. Air Force, AN/UKR-5 and AN/UKR-5A Telemeter Receiving Set, Handbook Maintenance Instructions, AN 16-30UKR5-7, (Mar. 1, 1954). Revised April 15, 1955. UNCLASSIFIED.

2) U. S. Air Force, AN/UKR-5B Telemeter Receiving Set, Handbook Maintenance Instructions, AN 16-30UKR5-7, (July 1, 1954). (Supplement to Reference 1.) UNCLASSIFIED.

3) Private Correspondence.

4) Military Specification R-16R103(Aer) for AT-165/UKR and XEL-12(BuAer) for AT-165()/UKR.

5) U. S. Department of Defense Nomenclature Card.



AT-165/UKR-5 with Arms Extended

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BEAM DATA:
Polarization - Horizontal.

TUNING/MATCHING DEVICES: The length of the whip is adjustable for different frequencies.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Signal Generator SG-13/ARN. Equipment function - test.

COGNIZANT AGENCY: ARL-47-75.

MANUFACTURERS: Cosmos Industries, Incorporated, contract AF 33(604)10960.

STOCK NUMBERS: Federal Stock Number 5825-373-1885.

REFERENCES:
1) U. S. Navy, AT-170/ARN Transmitting, Antenna, NAVAER 20-55A1-3, (Jan. 1, 1958). UNCLASSIFIED.
2) Bureau of Aeronautics, Handbook Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-173(*)/CPS-9

FREQUENCY: SHF band, 9230 - 9404 mc.

TYPE: Paraboloidal reflector fed by a horn.

DESCRIPTION: The reflector is constructed of spun aluminum and finished with gray enamel. Overall, it is 93 inches wide and 50 inches deep (including the horn mounting). The feed horn is supported by four struts which are attached to the front surface of the antenna. The horn is fed by a piece of waveguide which protrudes through the front surface of the antenna; it is bent so that the horn opening faces the reflector.

BEAM DATA:
Half-power beamwidth - 1° (vertical and horizontal).
Side-lobe attenuation - 20 db.
Beam type - Pencil.

SCAN DATA: The azimuth scan has three modes of operation: a continuous 360° rotation at 5 revolutions per minute, 0- to 50°-sector scan, and manual positioning. In elevation the antenna will scan a 0°- to 50°-sector, or it can be manually positioned. The full coverage in elevation is 5° below and 90° above the horizontal.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/CPS-9(). Equipment function - meteorological measurement. Range - 1/2 to 250 miles.

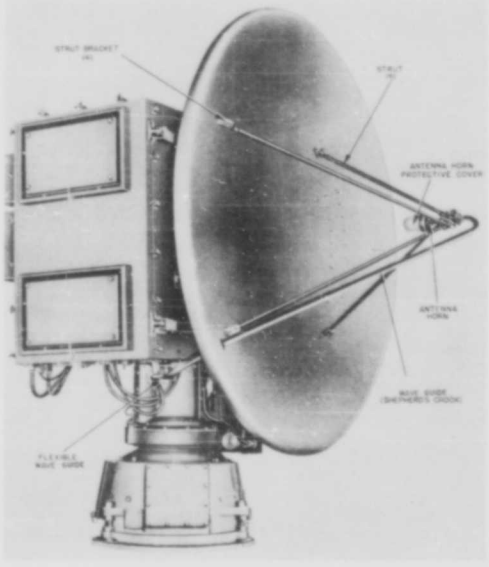
MISCELLANEOUS: AT-173(*)/CPS-9 denotes two models, AT-173()/CPS-9 and AT-173/CPS-9. No data are available on differences, if any, between models.

COGNIZANT AGENCY: SCLE-4208.

MANUFACTURERS: Raytheon, procurement contract 14175-PH-51-93.

STOCK NUMBER: Federal Stock Number 5840-264-7476.

REFERENCES:
1) Departments of the Army and the Air Force, Radar Set AN/CPS-9, Installation and Operation, TM 11-1304, TO 31P6-2CPS9-1, (April 1955). UNCLASSIFIED.
2) Departments of the Army and the Air Force, Radar Set AN/CPS-9, Field Maintenance, TM 11-1504, TO 31P6-2CPS9-2, (June 1956). UNCLASSIFIED.
3) U. S. Department of Defense Nomenclature Card.



AT-173(*)/CPS-9

ANTENNA AT-174/CRN-16 and AT-174()/CRN-16

Cancelled 28 Feb. 1949. Never procured, stocked, or issued.

ANTENNA AT-175()/U

See Antenna Assembly AS-411()/U.

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ANTENNA AT-176(*)/AP

FREQUENCY: VHF and UHF bands, 190 - 400 mc; VSWR < 2.

TYPE: Blade.

DESCRIPTION: The antenna is a streamlined aluminum stub and is used for transmitting or receiving. It mounts on Antenna Base AB-109. The antenna terminates in a type HN connector and has an impedance of 50 ohms. The elliptical base section is 2.7 inches long, 1.14 inches wide, and 4 inches tall. The antenna weighs about 2-1/4 pounds; the height of the radiating element is 9 inches. The antenna is capable of radiating 200-kilowatts peak power (pulses) at altitudes of 50,000 feet.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground or airborne.

ASSOCIATED EQUIPMENT: Radio Sets AN/APN-3 and AN/CPN-2A. Equipment function - navigation, surface reference.

MISCELLANEOUS: This antenna is similar to but not interchangeable with AT-126/AP. They differ in the type of connector used. AT-176(*)/AP denotes two models, AT-176/AP and AT-176A/AP. AT-176A/AP is stronger and more resistant to corrosion, but the two antennas are interchangeable.

COGNIZANT AGENCY: AEL-50-408.

MANUFACTURER: Phoastron Company, contract AF 33(038)-2190.

STOCK NUMBER: Federal Stock Number N5985-249-4336.

REFERENCES:
1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.
2) U. S. Air Force, Handbook Operating Instructions for Radio Set AN/CPN-2A, TO 31P5-2CPN2-41, (Aug. 25, 1950 - revised Oct. 30, 1953). UNCLASSIFIED.
3) U. S. Air Force and Bureau of Aeronatics, Navigational Aid Equipment, Volume III, Fixed Communication and Meteorological Equipment Directory, TO 31R4-1-1, (June 16, 1958). UNCLASSIFIED.

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ANTENNA AT-188(*)/U

FREQUENCY: VHF band, 50 - 100 mc.

TYPE: Probe.

DESCRIPTION: This antenna consists of a 12-inch length of r-f cable (RG-58A/U) which has 10 inches of shielding removed. The shielded end is terminated in a modified RF Jack UG-90/U. The input impedance is approximately 53.5 ohms.

ASSOCIATED EQUIPMENT: Test Oscillator TS-326/U. Equipment function - test.

MISCELLANEOUS: The designation AT-188(*)/U represents AT-188/U and AT-188()/U.

COGNIZANT AGENCY: U. S. Air Force ARL-48-319.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-193(*)/U

FREQUENCY: VHF band, 80 - 170 mc.

TYPE: Dipole, with flat-screen reflector.

DESCRIPTION: The antenna is constructed of brass and finished with gray enamel. The dipole is used with a two-piece, adjustable, reflector screen. The dipole and housing are 52 inches long and 6 inches in diameter. The 2-piece, adjustable reflector is 72 inches long and 11-3/4 inches wide and is probably constructed of 3/4-inch tubing. The dipole is fed by a 50-ohm coaxial cable. When used with the antenna support of AS-

236/SPT, the antenna can be tilted and rotated.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radar Target Transmitter OCY-1 and Radar Transmitter 52ADW. Equipment function - direction finding and training.

MISCELLANEOUS: AT-193(*)/U denotes models AT-193()/U and AT-193/U. No data are available on differences, if any, between models. AT-193(*)/U is similar to 66AKJ. Reference 1 gives the length of the dipole and housing as 52 inches; the nomenclature card gives 30 inches.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: International Industrial Development Company, contract NObsr-42503.

STOCK NUMBERS: Federal Stock Numbers N5985-249-4395.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Navy Specifications CS-1045.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-197/GR

See OA-237/GR, OA-306/GRC&(), and OA-797/MRC-45.

ANTENNA AT-198/CPS-6B

See AS-451/CPS-6B.

ANTENNA AT-199/CPS-6B

See AS-451/CPS-6B.

ANTENNA AT-199A/CPS-6B

Cancelled 28 January 1952.

ANTENNA AT-201()/MPN-1

This antenna is a reflector AT-21B/MPN-1 with a set of cosecanting plates MX-1008/MPN-1. See AS-42()/MPN-1.

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ANTENNA AT-203(*)/URM-6

FREQUENCY: VLF and LF bands, 0.014 - 0.250 mc.

TYPE: Whip.

DESCRIPTION: The antenna is constructed of chrome-alloy, steel tubing with a satin-chrome finish. It consists of three tapered sections which screw into each other. The assembled antenna has an overall length of 51 inches; its diameter tapers from 3/8 to 1/8 inch. The antenna terminates in a special connector which is similar to UG-544/J. It is fed by coaxial cable and has a high input impedance.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-6. Equipment function - test, field-strength measurements.

MISCELLANEOUS: AT-203(*)/URM-6 denotes two models, AT-203/URM-6 and AT-203()/URM-6. No data are available on differences, if any, between models.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Stoddart Aircraft Radio Company and Eltron Incorporated, U. S. Navy contracts NObsr-39263 and NObsr-43433.

STOCK NUMBER: Federal Stock Number N5985-254-7148.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Private correspondence.

3) Stoddart Aircraft Radio Company Drawing 90076-1.

4) Eltron Drawing 1182.

5) U. S. Navy Specification CS-779 and CS-1189.

6) U. S. Department of Defense Nomenclature Card.

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tronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Private Correspondence.

3) Eltron Drawing 1185.

4) Stoddart Aircraft Radio Company Drawing 90114-1.

5) U. S. Navy Specification CS-779 and CS-1189.

6) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-206(*)/URM-6

FREQUENCY: VLF and LF bands, 0.014 - 0.25 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a shielded loop for use in field-strength measurements. The loop is a solenoidal winding on a plastic form and consists of 11 turns of No. 30-40 litz wire. The shield is constructed of chrome-plated tubular brass and has a mean diameter of 30 inches. The base is 4 inches wide and has a threaded hole for mounting on tripod MT-674/U. Contained in the base is a small magnetic compass for determination of received signal bearing. The antenna terminates in RF Receptacle UG-103/U and has a low input impedance.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-6. Equipment function - test, field-strength measurements.

MISCELLANEOUS: AT-206(*)/URM-6 denotes two models, AT-206/URM-6 and AT-206()/URM-6. No data are available on differences, if any, between models.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Stoddart Aircraft Radio Company and Eltron Incorporated, U. S. Navy contracts NObsr-39263 and NObsr-43433.

STOCK NUMBER: Federal Stock Number N5985-254-7135.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Private Correspondence.

3) Eltron Drawing 1189.

4) Stoddart Aircraft Radio Company Drawing 90117-1.

5) U. S. Navy Specification CS-779 and CS-1189.

6) U. S. Department of Defense Nomenclature Card.



AT-206/URM-6

ANTENNA AT-207(*)/URM-6

FREQUENCY: VLF and LF bands, 0.014 - 0.25 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a hand-held loop for use in field-strength measurements. The loop is a universal winding with an effective diameter of 1/2 inch and consists of 400 turns of 3-41SNE litz wire. The loop is enclosed in a machined phenolic case and can be rotated on its base to utilize the directional characteristics of the loop. The loop is terminated in RF Receptacle UG-103/U and has a low input impedance.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-6. Equipment function - test, field strength measurements.

MISCELLANEOUS: AT-207(*)/URM-6 denotes three models, AT-207/URM-6, AT-207()/URM-6, and AT-207A/URM-6. The three models are interchangeable and are identical except for general shape and dimensions. AT-207A/URM-6 is 1 inch in diameter and 2 inches long. The other two models are 3/4 inch in diameter and 2 inches long.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Stoddart Aircraft Radio Company and Eltron Incorporated, U. S. Navy contracts NObsr-39263 and NObsr-43433.

STOCK NUMBER: Federal Stock Number N5985-093-5752.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Private Correspondence.

3) Eltron Drawing 11812.

4) Stoddart Aircraft Radio Company Drawing 90185-1.

5) U. S. Navy Specification CS-779 and CS-1189.

6) U. S. Department of Defense Nomenclature Card.



AT-207(*)/URM-6

ANTENNA AT-208(*)/URC-5

FREQUENCY: VHF and UHF bands, 100 - 400 mc.

TYPE: Conical.

DESCRIPTION: The antenna consists of a 14-1/2-inch disk with 6 removable rods which are arranged to form a cone. The rods are 29 inches long and 1/4 inch in diameter. The assembly is constructed of aluminum and mounts by clamping on a mast. The antenna is fed by RG-8/U r-f cable.

BEAM DATA:

Beam type - Omnidirectional in the plane perpendicular to the axis of the cone.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/URC-5. Equipment function - communications.

MISCELLANEOUS: AT-208(*)/URC-5 denotes two models, AT-208/URC-5 and AT-208()/URC-5. No data are available on differences, if any, between models.

COGNIZANT AGENCY: WL-45-1541.

MANUFACTURERS: Lavoie Labs, procurement contract W-28-099-ac-77.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

ANTENNA AT-211(*)/PRM-1

FREQUENCY: LF, MF, and HF bands, 0.15 - 25 mc.

TYPE: Probe, loop.

DESCRIPTION: The antenna is a hand-held, loop-type probe for use in field-strength measurements. The loop is a universal winding with an effective diameter of 1/2 inch. It consists of 13 turns of No. 44-15 wire and is 2 inches long. The loop is enclosed in a machined phenolic case and can be rotated on its base to utilize the directional characteristics of the loop.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Test Set AN/PRM-1. Equipment function - test, field-strength measurements.

MISCELLANEOUS: The frequency range listed was taken from the Navy Stock List of the Electronics Supply Office dated August 1958 and seems unusually wide in bandwidth for this antenna. Probably the frequency range listed pertains to the associated test set, and this antenna may cover only a portion of the range. AT-211(*)PRM-1 denotes two models, AT-211/PRM-1 and AT-211()/PRM-1. No data are available on differences, if any, between models.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stoddart Aircraft Radio Company, Navy contract NObsr-39262.

STOCK NUMBER: Federal Stock Number N5985-254-7138.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Private Correspondence.
3) Stoddart Aircraft Radio Company Drawing 90185-2.
4) U. S. Navy Specification CS-804.
5) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-212(*)/PRM-1

FREQUENCY: LF, MF, and HF bands, 0.15 - 25 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a shielded loop for use in field-strength measurements. The loop is a solenoidal winding and consists of 2 turns of No. 36 AWG wire. The shield is constructed of chrome-plated tubular brass which is rectangular in shape and is 8-3/16 inches high and 7-3/8 inches wide. Contained in the base is a small magnetic compass for determination of received signal bearing.

SCAN DATA: The antenna does not scan but can be rotated through 360°.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Test Set AN/PRM-1, AN/PRM-1A, and AN/PRM-1B. Equipment function - test, field-strength measurements.

MISCELLANEOUS: The frequency range listed was taken from the Navy Stock List of the Electronics Supply Office, dated August 1958, and seems unusually wide in bandwidth for this antenna. Probably the frequency range listed pertains to the associated test set, and this antenna may cover only a portion of the range. AT-212(*)/PRM-1 denotes two models, AT-212/PRM-1 and AT-212()/PRM-1. No data are available on differences, if any, between models.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stoddart Aircraft Radio Company and Espey Manufacturing Company, contracts NObsr-39260, NObsr-39262, NObsr-43370, NObsr-52629, NObsr-57211, NObsr-63340, NObsr-64077, and NObsr-49217.

STOCK NUMBERS: Federal Stock Numbers N5985-254-7139 and 6625-284-9847.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Private Correspondence.
3) Stoddart Aircraft Radio Company Drawing 90291-1.
4) U. S. Navy Specification CS-804.
5) U. S. Department of Defense Nomenclature Card.



AT-212(*)/PRM-1

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ANTENNA AT-213(*)/PRM-1

FREQUENCY: LF, MF, and HF bands, 0.15 - 25 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a chrome-plated, brass, telescopic whip. It is 43-1/4 inches long extended and 14-1/2 inches long collapsed; its maximum diameter is 7/8 inch.

TUNING/MATCHING DEVICES: The length is adjustable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Test Set AN/PRM-1, AN/PRM-1A, and AN/PRM-1B. Equipment function - test, field-strength measurements.

MISCELLANEOUS: The frequency range listed was taken from the Navy Stock List of the Electronics Supply Office, dated August 1958, and seems unusually wide in bandwidth for this antenna. Probably the frequency range listed pertains to the associated test set, and this antenna may cover only a portion of the range. AT-213(*)/PRM-1 denotes two models, AT-213/PRM-1 and AT-213()/PRM-1. No data are available on differences, if any, between models.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Stoddart Aircraft Radio Company and Espey Manufacturing Company, Navy contracts NObsr-39260, NObsr-39262, NObsr-43370, NObsr-52629, NObsr-57211, NObsr-49217, NObsr-63340, and NObsr-64077.

STOCK NUMBERS: Federal Stock Numbers N5985-254-7150 and 6625-284-742.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Private Correspondence.
3) U. S. Navy Specification CS-804.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-222( )/VRC-2

FREQUENCY: VHF band, 30 - 40 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a stainless-steel whip used for transmitting and receiving. It is constructed in two pieces and is adjustable. The overall assembly is 90 inches long and 3/8 inch in diameter. It is mounted by three screws through holes in a base plate. The antenna is fed by a 72-ohm coaxial cable.

TUNING/MATCHING DEVICES: The length is adjustable.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-2(). Equipment function - communications.

COGNIZANT AGENCY: SCL-7342.

MANUFACTURER: Motorola Incorporated (type P-7253).

REFERENCES:
1) Military Specification 71-3290.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-226/PRM-2

FREQUENCY: LF band, 0.13 - 0.23 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a chrome-plated, brass, telescopic whip. It is 1/2 inch in diameter and 119 inches long extended and 36-3/16 inches long collapsed. The antenna is fed by a 50-ohm coaxial cable and is mounted by a 1/2-20 threaded stud 5/8 inch long.

TUNING/MATCHING DEVICES: The length is adjustable.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Field Strength Measuring Set AN/PRM-2. Equipment function - test.

MISCELLANEOUS: This antenna is used for the measurement of weak signals in locations where Antenna AT-227/PRM-2 does not have sufficient sensitivity.

COGNIZANT AGENCY: WL-45-1884.

MANUFACTURERS: Philson Manufacturing (Part Number 4120W) and Harvey Radio Laboratories, Inc. (Part Number 20813-ZC2), Air Force Contract W-28-099-ac-76.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-227/PRM-2

FREQUENCY: LF band, 0.13 - 0.23 mc.

TYPE: Loop.

DESCRIPTION: The antenna consists of 50 turns of No. 34 AWG wire encased in an aluminum housing. It is 19-1/2 inches long, 11-5/8 inches wide, and 1-5/16 inches thick. It is fed by 50-ohm coaxial cable and is mounted by means of a 1-1/8-18 threaded stud 5/8 inch long.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Field Strength Measuring Set AN/PRM-2. Equipment function - test.

COGNIZANT AGENCY: WL-45-1885.

MANUFACTURERS: Harvey Radio Laboratories, Inc. (Part Number20813-ZC1), Air Force contract W-28-099-ac-76.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-228( )/VRC-11

FREQUENCY: VHF band, 152 - 162 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a spring-steel whip approximately 64 inches in length. It is mounted by means of two U-bolts and a backing bracket. It is terminated in RF Plug UG-88/U and is fed by RG-58C/U r-f cable.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-11() and AN/FRC-16(). Equipment function - communications.

COGNIZANT AGENCY: SCL-7366A.

REFERENCES:
1) U. S. Army Specification 71-3429.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-236( )/GRD

FREQUENCY: VHF band, 40 - 48 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a diamond-shaped wooden frame carrying two parallel conductors spaced 1/8 inch apart. The antenna is collapsible and measures 22-3/4 by 17-5/8 by 3 inches extended and 15 by 6 by 5 inches collapsed. A switch and capacitor in the base of the loop provide for sensing and tuning. A matching transformer, and attenuator (mounted on the antenna posts of the radio set), and a connecting cable are supplied. The antenna can be rotated on its base.

INSTALLATION: Ground or shipboard, portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-300-(). Equipment function - navigation, direction finding.

COGNIZANT AGENCY: SCL-7394.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-237/GRC-13

FREQUENCY: MF and HF bands, 2 - 12 mc.

TYPE: Long wire.

DESCRIPTION: The antenna consists of 107.5 feet of silicon bronze wire. The wire is divided into nine unequal sections which are connected by insulators. The insulators can be shorted to adjust the antenna length according to frequency used. The sections are 8 (lead-in section), 38, 7, 4.5, 5.5, 10.5, 12, 7.5, and 19.5 feet long. The wire is mounted by 13/16-inch rings on the end sections of the antenna. The lead-in wire has a permanently attached calibration chart.

TUNING/MATCHING DEVICES: Length is adjustable in steps.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-13. Equipment function - communications.

MISCELLANEOUS: AT-237/GRC-13 is similar to Antenna AT-101/GRC-9, but it has different insulators and calibration chart. It was formerly (before 26 July 1949) designated AT-101A/GRC-9.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Radio Corporation of America, Navy contract NObsr-42227.

STOCK NUMBER: Federal Stock Number N5985-401-0952.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Radio Corporation of America Drawing 8888130-501, sub 2.

3) U. S. Navy Specification CS-1260.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-238( )/GPQ

FREQUENCY: UHF band, 493.5 mc.

TYPE: Modified turnstile over a ground plane.

DESCRIPTION: The antenna consists of a circular ground plane with four detachable dipole elements. The dipole elements form two V-shaped dipoles whose planes are perpendicular to each other and to the ground plane. The two dipoles are fed 90° out of phase to provide circular polarization. The antenna is made of aluminum and is (overall) 32 inches in height and 26 inches in diameter. It has an input impedance of 50 ohms, is fed by coaxial cable, and is enclosed in a radome.

BEAM DATA:
Half-power beamwidth -
Vertical - 90°.
Horizontal - 180°.
Polarization - Circular.

INSTALLATION: Ground, semipermanent.

ASSOCIATED EQUIPMENT: Radar-Receptor Set AN/FPQ-1( ) and Radar Set AN/GPW-2( ). Equipment function - probably guidance, quasi-active homing.

MISCELLANEOUS: AT-238( )/GPQ is identical to Antennas AT-239( )/GPQ and AT-241( )/FPQ-1 except for frequencies.

COGNIZANT AGENCY: AEL-50-R578.

MANUFACTURER: Workshop Associates Incorporated, Newton Highland, Massachusetts, Air Force contract W33-038-ac-21415.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-239( )/GPQ

FREQUENCY: UHF band, 580 mc.

TYPE: Modified turnstile over a ground plane.

DESCRIPTION: The antenna consists of a circular ground plane with four detachable dipole elements. The dipole elements form two V-shaped dipoles whose planes are perpendicular to each other and to the ground plane. The two dipoles are fed 90° out of phase to provide circular polarization. The antenna is made of aluminum and is (overall) 32 inches in height and 26 inches in diameter. It has an input impedance of 50 ohms, is fed by coaxial cable, and is enclosed in a radome.

BEAM DATA:
Half-power beamwidth -
Vertical - 90°.
Horizontal - 180°.
Polarization - Circular.

INSTALLATION: Ground, semipermanent.

ASSOCIATED EQUIPMENT: Radar-Receptor Set AN/FPQ-1( ) and Radar Set AN/GPQ-2( ). Equipment function - probably guidance, quasi-active homing.

MISCELLANEOUS: AT-239( )/GPW is identical to Antennas AT-238( )/GPQ and AT-241( )/FPQ-1 except for frequency.

COGNIZANT AGENCY: AEL-50-R579.

MANUFACTURER: Workshop Associates, Incorporated, Newton Highlands, Massachusetts, Air Force contract W33-038-ac-21415.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-240( )/GPQ

FREQUENCY: UHF band, 505 - 680 mc.

TYPE: Rhombic.

DESCRIPTION: AT-240( )/GPQ is a rhombic antenna with each of the four sides 8 feet long. The antenna probably consists of four aluminum rods connected to form the rhombus. It is fed by coaxial cable and has an input impedance of 50 ohms. It is enclosed in a radome.

INSTALLATION: Ground, semipermanent.

ASSOCIATED EQUIPMENT: Radio Receptor Set AN/FPQ-1( ) and Radar Set AN/GPQ-2( ). Equipment function - probably guidance, quasi-active homing.

COGNIZANT AGENCY: AEL-50-R580.

MANUFACTURER: Fabricated at Air Material Command Headquarters, Air Force development contract W33-038-ac-21415.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-241()/FPQ-1

FREQUENCY: UHF band, 600 mc.

TYPE: Modified turnstile over a ground plane.

DESCRIPTION: The antenna consists of a circular ground plane with four detachable dipole elements. The dipole elements form two V-shaped dipoles whose planes are perpendicular to each other and to the ground plane. The two dipoles are fed 90° out of phase to provide circular polarization. The antenna is made of aluminum and is (overall) 32 inches in height and 26 inches in diameter. It has an input impedance of 50 ohms, is fed by coaxial cable, and is enclosed in a radome.

BEAM DATA:
Half-power bandwidth -
Vertical - 90°.
Horizontal - 180°.
Polarization - Circular.

INSTALLATION: Ground, semipermanent.

ASSOCIATED EQUIPMENT: Radar Receptor Set AN/FPQ-1(). Equipment function - probably guidance, quasi-active homing.

MISCELLANEOUS: AT-241()/FPQ-1 is identical to Antennas AT-238()/GPQ and AT-239()/GPQ except for frequency.

COGNIZANT AGENCY: AEL-50-R581.

MANUFACTURER: Workshop Associates, Incorporated, Newton Highland, Massachusetts, Air Force contract W33-038-ac-21415.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-243/U

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: AT-243/U is a cadmium-plated, steel, whip antenna used for transmitting and receiving. It mounts by screws through a cylindrical base. It is fed by RG-8/U coaxial cable and has a nominal input impedance of 35 ohms.

ASSOCIATED EQUIPMENT: General radio equipment. Equipment function - communications.

MISCELLANEOUS: AT-243/U is similar to AT-281/VRC, which has a spring-loaded base.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: General Electric Company, U. S. Navy contract NObsr-44727.

STOCK NUMBER: Federal Stock Number N5985-665-0881.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) General Electric Company Catalog 240x37.
3) General Electric Company Drawings P7767318 and ML-4AM35A1.
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-248/TPQ-1A

FREQUENCY: UHF and SHF bands, 1000 - 6000 mc.

TYPE: Conical.

DESCRIPTION: AT-248/TPQ-1A is a half-wave discone antenna used for receiving. It is a one-piece, silver-plated, brass unit and clamps to the horizontal shaft of Mast Assembly AB-58()/TPQ-1.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Search Central AN/TPQ-1A Equipment function - probably search, air.

COGNIZANT AGENCY: ESL-3801.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-249/GRD

FREQUENCY: VHF band, 47 - 55.4 mc.

TYPE: Loop.

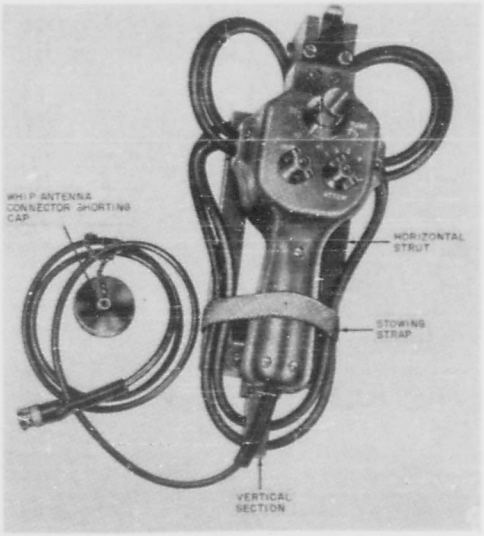
DESCRIPTION: The antenna is an unshielded hand-held loop used for homing. It consists of two parallel-connected, insulated conductors

spaced 1/8 inch apart on a phenolic frame. The collapsible frame is attached to a hand grip which also houses the tuning, attenuation, and sense controls. A coupling transformer is connected across the terminals of the loop and provides inductive coupling between the loop and the transmission line. The antenna has an impedance of 50 ohms and has a 4-foot section of coaxial cable terminated in a plug used to connect to the receiver input. The overall antenna is 20-1/4 inches high, 14-1/2 inches wide, and 3-1/2 inches deep when extended and 12 by 3-3/4 by 4-1/2 inches when collapsed. The antenna weighs 2 pounds.

TUNING/MATCHING DEVICES: A variable capacitor is provided in the output of the coupling transformer.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-6(). Equipment function - communications; and navigation, direction finding. Range - about 1 mile.



AT-249/GRD, collapsed

MISCELLANEOUS: AT-249/GRD is similar to AT-339/PRC and AT-340/PRC and is interchangeable with AT-339/PRC.

COGNIZANT AGENCY: SCL-11633.

MANUFACTURER: Raytheon Manufacturing Company, Waltham, Massachusetts, Signal Corps contract 3106-PH-51-01.

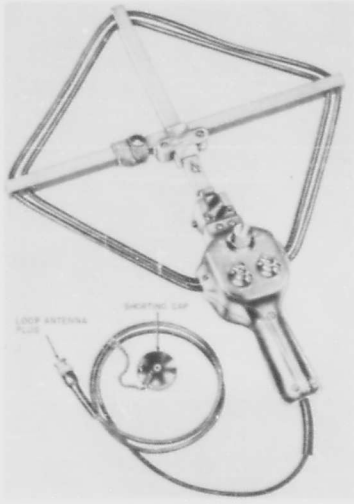
STOCK NUMBERS: Federal Stock Number N5985-264-7493; Signal Corps 2A203-249.

REFERENCES:

1) Department of the Army, Radio Set AN/PRC-6, Operation and Organizational Maintenance, TM 11-296, (Sept. 1955). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Antenna AT-249/GRD, Technical Manual and Technical Order, TM 11-5058 and TO 31R4-2GRD-111, (May 1955). UNCLASSIFIED.

3) Signal Corps Specification MIL-A-10253.



AT-249/GRD

ANTENNA AT-250/UPA-T1

FREQUENCY: MF band, 1.7 - 2.0 mc.

TYPE: Whip.

DESCRIPTION: AT-250/UPA-T1 is a three-section telescopic whip 16-1/2 inches long. It is made of chromium-plated brass and mounts with an AN3102-168-3P male chassis connector and adaptor. It is a general-purpose antenna.

TUNING/MATCHING DEVICES: The length is adjustable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Loran Trainer Group AN/UPA-T1, and AN/UPA-T1A. Equipment function - training.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Starrett Television Corporation, New York, N. Y.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-251/FPS-3

FREQUENCY: UHF band, 1215 -1365 mc; VSWR < 1.28.

TYPE: Cut paraboloidal reflector.

DESCRIPTION: The antenna is an elliptical-shaped cut paraboloid 40 feet wide, 16 feet high, and 13 feet deep with a focal length of 14 feet. It is made up of 18 sections constructed of aluminum mesh and ribbing and mounts on pedestal AB-180/FPS-3. It can be operated in wind velocities up to 52 knots and will withstand ice loads up to two inches. This reflector is normally used with antenna horn AS-488/FPS-3, a multiple-horn feed which produces two beams.

BEAM DATA: (When used with AS-488/FPS-3)
Gain - 36 db.
Half-power beamwidth -
Lower beam: Vertical - 3°.
Horizontal - 1.3°.
Upper beam: Vertical - 12°.
Horizontal - 1.3°.
Beam type -
Lower beam - Pencil.
Upper beam - Approximately $\csc^2$.
Side-lobe attenuation - 20 db.
Polarization - Horizontal.

SCAN DATA: The antenna can be tilted at a rate of 7 degrees per second to point the lower beam at any elevation angle between -0.5° and +6.5°. The antenna rotates in a clockwise direction through 360° in azimuth at a rate of 3.3, 5, 6.6 or 10 revolutions per minute.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-3 and AN/FPS-3A. Equipment function - search, air. Range - 325 nautical miles.

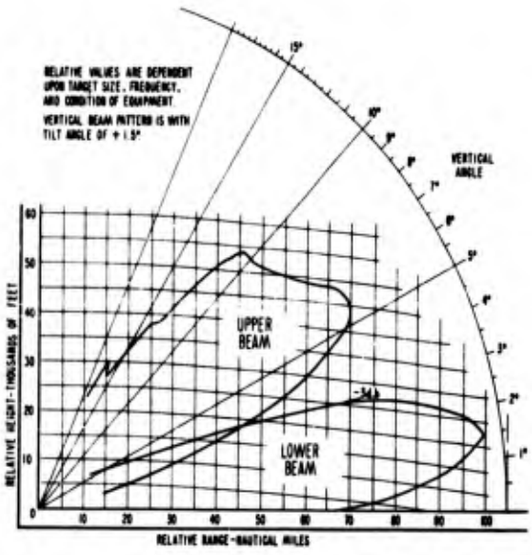
MISCELLANEOUS: AT-251/FPS-3 is similar to AT-392/MPS-7. The two reflectors have identical beam-shaping characteristics but different mounting provisions.

COGNIZANT AGENCY: WL-55-R-1452.

MANUFACTURERS: Goodyear Aircraft Corporation and Bendix Radio Corporation, contract W-33-038-ac-21187.

STOCK NUMBER: Air Force 1800-204-199972.

REFERENCES:
1) U. S. Air Force, Radar Set AN/FPS-3, Radar Set AN/MPS-7 Antenna Equipment, Handbook Maintenance Instructions, TO 31P6-2FPS3-92, (July 1, 1955). UNCLASSIFIED.
2) U. S. Air Force and Bureau of Aeronautics, Radar Set AN/MPS-7, Handbook Operating Instructions, TO 31P6-2MPS7-1, (May 11, 1953 - revised June 15, 1955). UNCLASSIFIED.
3) U. S. Air Force, Radar Set AN/FPS-3, Handbook Operation and Service Instructions, TO 31P6-2FPS3-1, (Feb. 5, 1951 - revised Mar. 15, 1955). UNCLASSIFIED.
4) Bendix Specification BP-515.
5) Bendix Radio Corporation Drawing Numbers 185N-1, 185N-700, and 185N-900.
6) U. S. Air Force Specification WLENG-154.



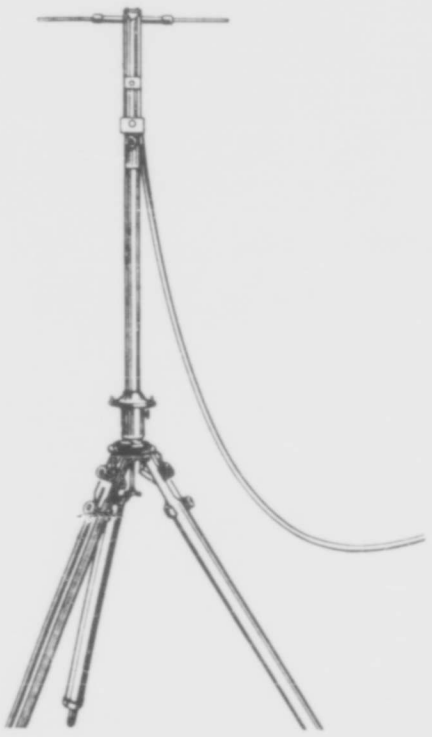
Vertical Radiation Pattern for AT-251/FPS-3

ANTENNA AT-255/URM-17

FREQUENCY: UHF band, 350-1000 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a satin-finished brass dipole. The antenna is supplied with three pairs of dipole radiating elements for



AT-255/URM-17

full coverage of the frequency range. Six-inch elements are used for frequencies between 375 and 460 mc, four-inch elements from 450 to 650 mc, and two-inch elements from 650 to 1000 mc. The two arms are fitted with chucks to mount the selected dipole elements. The maximum and minimum lengths of the antenna are 16 and 5-1/2 inches respectively. The antenna includes a balun transformer and is fed by 52-ohm coaxial cable. The unit mounts on Antenna Mast AB-189/URM-17 and has provisions for tilting and rotating.

TUNING/MATCHING DEVICES: Detachable elements of various sizes are provided for tuning.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-17. Equipment function - test, radio-interference and field-strength measurements.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Stoddart Aircraft Radio Company, Navy contract NObsr-42430.

STOCK NUMBERS: Federal Stock Number N5985-254-7131.

REFERENCES:

1) Private Correspondence.

2) U. S. Department of Defense Nomenclature Card.

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ASSOCIATED EQUIPMENT: Radio Sets AN/ARC-33, AN/ARC-27, and ARC-19. Equipment function - communications; Telemetric Data Sets AN/AKT-7 and AN/UKR-2. Equipment function - telemetering.

MISCELLANEOUS: AT-256(*)/ARC denotes two models, AT-256/ARC and AT-256A/ARC. The two models differ slightly in weight, dimensions, and methods of manufacture but are interchangeable. The development model of this antenna was AT-(XA-124)/ARC.

COGNIZANT AGENCY: U. S. Air Force, AEL-49-512.

MANUFACTURERS: Andrew Alford Company, Air Force contract W33-038-ac-17549; Technical Appliance Corporation.

STOCK NUMBERS: U. S. Navy ASO R16AN-AT256ARC.

REFERENCES:

1) U. S. Air Force, Aircraft Antenna Design Summary, (Dec. 3, 1951). SECRET.

2) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 16-1-517, (July 1, 1953). CONFIDENTIAL.

3) U. S. Air Force, Telemetric Data Transmitting Set AN/AKT-7, Handbook Field Maintenance Instructions, TO 12S7-2AKT7-2, (Oct. 1, 1957 - revised April 1, 1959). UNCLASSIFIED.

4) U. S. Air Force, Telemetric Data Receiving Set AN/UKR-2, Handbook Field Maintenance Instructions, TO 12S7-2UKR2-2, (Dec. 31, 1958). UNCLASSIFIED.

5) Radiation Pattern Study of an AT-256 Blade Antenna on Top of C-130B Fuselage, Report No. ER-2774. Marietta, Georgia: Lockheed Aircraft Corporation, Georgia Division. (Oct. 9, 1957). UNCLASSIFIED.

ANTENNA REFLECTOR: AT-260(*)/CPN-18

FREQUENCY: VHF band, 2700 - 2900 mc.

TYPE: Modified cut paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna consists of 5 fabricated reflector sections with a supporting framework which includes supports for Antenna Horn AT-261/CPN-18. The reflecting surface is made of stainless steel mesh, and the framework is made of aluminum. The reflector, a modified cut paraboloid, is 20 feet long and 8 feet high and has a $\csc^2$ beam. The reflector can withstand 60-mile-per-hour winds or 1/2 inch of ice while operating and 100-mile-per-hour winds or 1 inch of ice while stationary. It is supported by Antenna Pedestal AB-181/CPN-18.

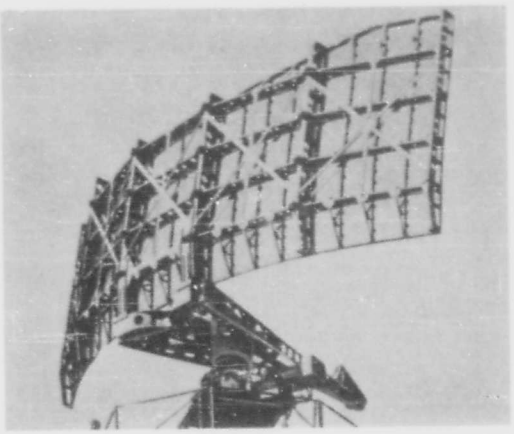
BEAM DATA:
Gain - 35 db.
Half-power beamwidth -
Vertical - 6°.
Horizontal - $\frac{1}{2}$°.
Beam type - $\csc^2$ from 5° to 23° above horizontal.

SCAN DATA: The antenna has 360° continuous rotation in azimuth at 10 revolutions per minute; provision is made for tilting, probably manually.

INSTALLATION: Ground, air transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/CPN-18(). Equipment function - approach control. Range - 27 to 53 miles depending on type of aircraft.

MISCELLANEOUS: AT-260(*)/CPN-18 denotes three models: AT-260/CPN-18, AT-260A/CPN-18, and AT-260B/CPN-18. The mesh used for AT-260/CPN-18 is 3/8 inch by 2 inches; it is 3/8 inch square for the other two models. AT-260B/CPN-18 differs in mounting details from the other two models, but all models are interchangeable. Modifications were made on some of the antennas to increase horizontal beamwidth to 2° and to increase the speed of rotation to 18.7 revolutions per minute.



AT-260(*)/CPN-18

COGNIZANT AGENCY: WL-51-1789.

MANUFACTURERS: I-T-E Circuit Breaker Company, contractor - Bendix Radio Company, Air Force contract W-33-038-ac-21317.

REFERENCES:

1) U. S. Air Force and Bureau of Aeronautics, Navigational Aid Equipment, Volume III, Fixed Communication and Meteorological

Equipment Directory, TO 31R4-1-1, (June 16, 1958). UNCLASSIFIED.

2) U. S. Air Force, Radar Sets AN/CPN 18 and AN/CPN-18A, Handbook Operating Instructions, TO 31P5-2CPN18-1, (Aug. 1, 1953 - revised Mar. 21, 1958). UNCLASSIFIED.

3) Bendix Radio Company Specification BP-365.

4) U. S. Air Force Specification WLENG-113A.

5) U. S. Department of Defense Nomenclature Card.

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ANTENNA HORN AT-261/CPN-18

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Horn.

DESCRIPTION: AT-261/CPN-18 is a single horn which feeds power to Antenna Reflector AT-260/CPN-18. It consists of a length of S-band waveguide with a 160-degree bend at one end which flares to form the horn opening with inside dimensions 2.84 by 8 inches. The horn aperture is sealed by a plexiglass cover. The other end of the waveguide is fitted with a choke-joint flange with a mounting plate. The assembly mounts to the supports of Antenna Reflector AT-260/CPN-18 by two mounting holes in the choke flange and by a mounting bracket welded to each side of the horn. The overall antenna is 20-1/4 inches high, 5-5/16 inches wide, and 21 inches long.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/CPN-18(). Equipment function - approach control. Maximum range - 27 to 53 miles depending on type of aircraft.

COGNIZANT AGENCY: WL-45-2376.

MANUFACTURERS: Bendix Radio Division, U. S. Air Force contract W-33-038-ac-21317.

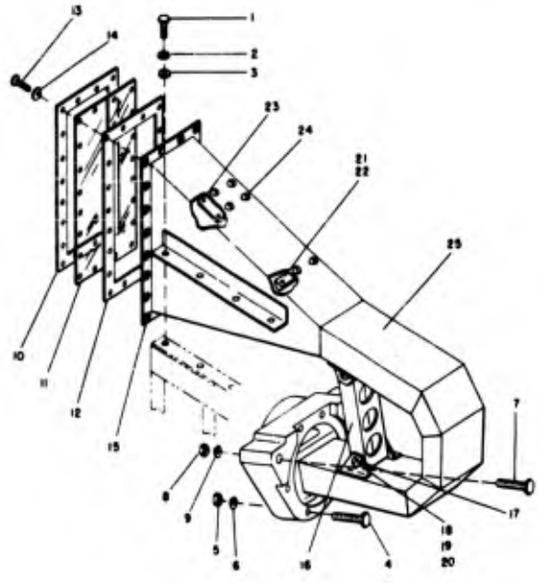
REFERENCES:

1) U. S. Air Force, Radar Sets AN/CPN-18 and AN/CPN-18A, Handbook Operating Instructions, T.O. 31P5-2CPN18-1, (August 1, 1953 - revised March 21, 1958). UNCLASSIFIED.

2) U. S. Air Force, Radar Set AN/CPN-18 and Radar Set AN/CPN-18A Antenna Equipment, Illustrated Parts Breakdown, T.O. 31P5-2CPN18-4, (Oct. 15, 1951 - revised Dec. 22, 1958). UNCLASSIFIED.

3) U. S. Air Force Specification WLENG-113A.

4) U. S. Department of Defense Nomenclature Card.



AT-261/CPN-18

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ANTENNA REFLECTOR AT-262/MPN-5&( )

See Antenna AS-762/MPN-5.

ANTENNA REFLECTOR AT-263/MPN-5&( )

See Antenna AS-763/MPN-5.

ANTENNA REFLECTOR AT-265/MPN-5&( )

Part of Antenna AS-764/MPN-5.

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ANTENNA HORN AT-266( )/TPQ-6

FREQUENCY: EHF band, 34,885 mc.

TYPE: Horn.

DESCRIPTION: This horn is the feed for a lens, Antenna Section AT-267()/TPQ-6. It consists of a length of RG-96/U waveguide terminated at one end in a horn which flares to 1.182 by 0.788 inches inside. It is constructed of silver-plated brass, and the outside surface is usually painted olive drab. The overall antenna is 12 inches long, 1.190 inches wide, and 0.796 inches thick. It mounts by means of a bracket welded to the side of the horn and waveguide flange. The end of the waveguide opposite the horn mates with a UG-281/U jack.

BEAM DATA: Additional information is available in the secret document listed below as Reference 2.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/TPQ-6(). Equipment function - meteorological measurement.

COGNIZANT AGENCY: ESL-3888.

MANUFACTURER: Bendix Radio Division, Signal Corps development order 6876-Ph-48-91.

REFERENCES:

1) Private Correspondence.

2) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

3) Signal Corps Specification SCL-2141.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA SECTION AT-267( )/TPQ-6

FREQUENCY: EHF band, 34,885 mc.

TYPE: Lens, metal plate.

DESCRIPTION: AT-267()/TPQ-6 is a disc-shaped, parallel-plate refractive lens. The lens transforms the spherical wave front emerging from Antenna Horn AT-266()/TPQ-6 into a flat wave front at the aperture of the lens. Focusing is accomplished by increasing the phase velocity of the wave front at the outer edges of the lens with respect to the velocity at the center of the lens. The lens has an index of refraction of 0.7 and a focal length of 12 feet. The lens consists of a magnesium frame with magnesium slats forming parallel chords to the inner circumference of the frame around the periphery of the lens. The overall inside diameter is 85 inches; outside diameter, 93 inches; and depth, 4-7/8 inches. It weighs approximately 300 pounds and is mounted by means of three holes spaced equally around the frame.

BEAM DATA: Additional information is available in the secret document listed below as Reference 2.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/TPQ-6(). Equipment function - meteorological measurement.

COGNIZANT AGENCY: ESL-3887.

MANUFACTURERS: Bendix Radio Division, Signal Corps development order 6876-Ph-48-91.

REFERENCES:

1) Private Correspondence.

2) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

3) Signal Corps Specification SCL-2141.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA HORN AT-268/MPN-5&( )

See Antenna AS-764/MPN-5 and Antenna AS-765/MPN-5.

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ANTENNA AT-271(*)/PRC

FREQUENCY: HF and VHF bands, 20 - 55 mc.

TYPE: Whip.

DESCRIPTION: The antenna is made up of seven seamless-steel-tubing sections (each about 17 inches long) with male and female ferrules on the ends to permit adjustment of length. A retaining wire or cord, under spring tension, runs through the center of the sections keeping them together in the extended position. The antenna is about ten feet long extended and about 14 inches long collapsed. The an-

tenna has a threaded, 3/8-24 stud on the bottom section for mounting.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/PRC-8(), AN/PRC-9(), AN/PRC-10(), and AN/PRC-28. Equipment function - communications.

MISCELLANEOUS: AT-271(*)/PRC denotes the unlettered, the A, and the B models. The models are interchangeable and differ only in minor details. AT-271B/PRC uses a stainless steel retaining wire while the other models use a nylon cord. There is some difference in maintenance parts for different models.

COGNIZANT AGENCY:
AT-271/PRC . . . SCL-10089;
AT-271()/PRC . . . SCL-8412;
AT-271A/PRC . . . SCLM-7412;
AT-271B/PRC . . . Canada 292.

MANUFACTURERS: Peter A. Petroff Company, New York, N. Y., Signal Corps contracts 1758-PHILA-51-01 and 15178-PH-52-55; Addison Industries Ltd., Toronto, Ontario.

STOCK NUMBER: Federal Stock Number N-5820-090-2675.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Private Correspondence.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-272(*)/PRC

FREQUENCY: HF and VHF bands, 20 - 58 mc.

TYPE: Whip.

DESCRIPTION: AT-272(*)/PRC is a flexible-steel, collapsible whip antenna. It is 37 inches long when extended and 9 inches long when folded. The antenna has a threaded stud at the base for mounting.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/PRC-8(), AN/PRC-9(), AN/PRC-10(), and AN/PRC-28. Equipment function - communications.

MISCELLANEOUS: AT-272(*)/PRC denotes the unlettered and the A models. All models are interchangeable and differ only in maintenance parts.

COGNIZANT AGENCY:
AT-272/PRC . . . SCL-10090;
AT-272()/PRC . . . SCL-8413;
AT-272A/PRC . . . SCLM-7413.

MANUFACTURER: Radio Corporation of America, Victor Division, Camden, N. J., Signal Corps contracts 1758-PHILA-51-01 and 15178-PH-52-55.

STOCK NUMBER: Federal Stock Number N5985-090-2676.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-273(*)/UPM

FREQUENCY: SHF band, 8600 - 9600 mc.

TYPE: Horn.

DESCRIPTION: This antenna is used with test equipment for the calibration and boresighting of radar sets. It is constructed of aluminum alloy and is attached to and supported by a length of waveguide. A sheet of dielectric fits over the horn opening for weatherproofing.

BEAM DATA:
Half-power beamwidth -
AT-273()/UPM - 10°,
AT-273A/UPM - 20°.
Polarization - Horizontal.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Range Calibrator Set AN/UPM-11, and AN/UPM-11A. Equipment function - test.

MISCELLANEOUS: AT-273(*)/UPM denotes the unlettered and A models which are interchangeable except for maintenance parts. The two models differ primarily in dimensions. AT-273()/UPM is 5.5 inches long, 2.875 inches wide, and 3.75 inches high. AT-273A/UPM is 8-7/16 inches long, 3-5/16 inches wide, and 5-3/32 inches high.

COGNIZANT AGENCY:
AT-273()/UPM . . . AEL-50-62;
AT-273A/UPM . . . SCLM-7446.

MANUFACTURERS: Sperry Gyroscope Company (AT-273()/UPM), Capehart-Farnsworth Corp-

oration, Fort Wayne, Indiana, (AT-273A/UPM). Procurement data - MIPR R-54-24-SC-21, contract AF33(604)-7955.

REFERENCES:
1) Capehart-Farnsworth Drawing 801268.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-275/URM-28

FREQUENCY: VHF and UHF bands, 80 - 1000 mc.

TYPE: An array of two dipoles.

DESCRIPTION: This receiving antenna probably consists of a pair of dipoles located at opposite ends of a supporting tube. The dipole elements are removable, and three pairs are furnished to provide coverage of the frequency range required. The antenna is constructed of silver-plated brass and steel tubing. The spacing between dipoles is 45 inches. The antenna is mounted on Antenna Stand AB-190/URM-28 and is terminated in a UG-58/U r-f receptacle. It is fed by 50-ohm transmission line.

TUNING/MATCHING DEVICES: Three sets of dipole elements (6, 12-3/4, and 23-1/2 inches long) are supplied. Each dipole uses two elements.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: RF Interference Test Set AN/URM-28. Equipment function - test.

COGNIZANT AGENCY: WL-50-1263.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-278/UR

FREQUENCY: LF and MF bands, 0.2 - 0.5 mc.

TYPE: End-fed wire antenna.

DESCRIPTION: The antenna is a single end-fed wire for transmitting and receiving. The wire is stranded copper 24 feet in length. It is mounted on supports which are part of Trailer V-43/MPN-5.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-5(). Equipment function - GCA communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Division, Navy contract NObsr-43011.

REFERENCES:
1) U. S. Navy Specification CS-972.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-279/UR

TYPE: End-fed wire antenna.

DESCRIPTION: The antenna is a single end-fed wire for transmitting and receiving. The wire is stranded copper 60 feet in length. It mounts between masts AB-192/M and AB-193/M. A weight is included for holding the wire taught between the masts.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-5(). Equipment function - GCA communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bendix Radio Division, U. S. Navy contract NObsr-43011.

REFERENCES:
1) U. S. Navy Specification CS-972.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-281/VRC

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: AT-281/VRC is a one-piece, stainless steel whip antenna for transmitting and receiving. The antenna is spring mounted to

a bakelite base, which has three holes (1/4-20 by 1-1/4 inches) for mounting to vehicles. A swivel joint at the base allows vertical mounting of the whip against sloping surfaces. The antenna has an overall length of 89-11/32 inches and a maximum diameter at the mounting base of 3-1/2 inches. It is fed by RG-8/U coaxial cable.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: General radio equipment. Equipment function - communications.

MISCELLANEOUS: AT-281/VRC is similar to Antenna AT-243/V except for the spring-loaded base.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Ace Machine Company, U. S. Navy contract NObsr-52056.

STOCK NUMBER: Federal Stock Number F5985-249-4368.

REFERENCES:

1) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-282/GPN

FREQUENCY: LF and MF bands.

TYPE: Rod.

DESCRIPTION: The antenna is constructed of steel tubing and phenolic materials, and is usually finished with olive-drab paint. It is 78 inches long and tapers in diameter from 5 inches at the bottom to 3/16 inch at the top. Attached to the bottom is an 8-inch-diameter mast base for mounting to the roof of a trailer. The antenna is fed by a 17-ohm coaxial cable. It is used to monitor control-tower communications at GCA installations.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Receiver BC-453-B, which is used with Radar Sets AN/CPN-4() and AN/FPN-16. Equipment function - communications.

COGNIZANT AGENCY: WL-50-1365.

MANUFACTURER: Gilfillan Brothers, U. S. Air Force contract W33-038-ac-20653.

STOCK NUMBER: Federal Stock Number 5840-249-4400.

REFERENCES:

1) U. S. Air Force, Illustrated Parts Breakdown for Radar Set AN/CPN-4(), Landing Control Set AN/MPN-11(), TO 31P5-2CPN4-4, (April 1, 1956 - revised July 15, 1959). UNCLASSIFIED.

2) Gilfillan Brothers Drawing 33503.

3) U. S. Air Force Specification Numbers R7437 and R7511.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-283/GPN

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Rod.

DESCRIPTION: The antenna is constructed of steel tubing and phenolic materials and is usually finished with olive-drab paint. It is constructed in one piece 22 inches long and 1 inch in diameter. A 4-inch base permits mounting on the roof of a trailer. The antenna is fed by 75-ohm coaxial cable. It is used to monitor control tower communications at GCA installations.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Receiver R-77/ARC-3 which is used with Radar Sets AN/CPN-4() and AN/FPN-16. Equipment function - communications.

COGNIZANT AGENCY: WL-50-1366.

MANUFACTURER: Gilfillan Brothers, U. S. Air Force contract W33-038-ac-20653.

STOCK NUMBERS: Federal Stock Number 5840-249-4401.

REFERENCES:

1) U. S. Air Force, Illustrated Parts Breakdown for Radar Set AN/CPN-4(), Landing Control Set AN/MPN-11(), TO 31P5-2CPN4-4, (April 1, 1956 - revised July 15, 1959). UNCLASSIFIED.

2) Gilfillan Drawing 33503.

3) U. S. Air Force Specification R-7437-A and R-7511.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-284/GPN&()

See OA-373/GPN.

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ANTENNA AT-285/GPN

FREQUENCY: MF and HF bands, 2 - 18 mc.

TYPE: Whip.

DESCRIPTION: The antenna is constructed of steel tubing and phenolic materials and is usually finished with olive-drab paint. The overall length is 28 feet, which includes a 12-1/2-foot mast housing and five 37-inch rods. The diameter is 4 inches at the base and 1/4 inch at the tip. The mast is braced by four 2-1/2-foot braces spaced equally around the mast. The antenna is fed by 75-ohm coaxial cable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/CPN-4. Equipment function - GCA communications.

MISCELLANEOUS: The antenna includes one each of Signal Corps mast sections MS-49 through MS-53 and three sections of MS-54.

COGNIZANT AGENCY: WL-50-1457.

MANUFACTURER: Gilfillan Brothers, U. S. Air Force contract W33-038-ac-20653.

REFERENCES:

1) Gilfillan Drawing 33497.

2) U. S. Air Force Specification R-7437.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-286()/GRC

FREQUENCY: HF band, 20 - 27.9 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a diamond-shaped loop for receiving and homing. The loop is 5 turns of Signal Corps wire W-63-A wound on a collapsible wooden frame 24 inches on a side. The collapsible loop is 41 inches high and 36 inches wide extended, and 23-1/2 by 6 inches when collapsed. A housing and handle attached to the base of the loop contains controls for tuning and sensing. Connected to the antenna by a 10-foot length of cable (Signal Corps CO-129) is an aluminum container 2 inches on each side. The container houses an attenuator and mounts directly to the antenna post of the radio set.

TUNING/MATCHING DEVICES: A variable capacitor for frequency tuning is located in the handle of the loop.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Receiver - Transmitter RT-66()/GRC. Equipment function - direction finding.

COGNIZANT AGENCY: SCL-8742.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-287()/GRC

FREQUENCY: HF and VHF bands, 27.0 - 38.9 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a diamond-shaped loop for receiving and homing. The loop is 5 turns of Signal Corps Wire W-63-A wound on a collapsible wooden frame 24 inches on a side. The collapsible loop is 41 inches high and 36 inches wide extended, and 23-1/2 by 6 inches when collapsed. A housing and handle attached to the base of the loop contains controls for tuning and sensing. Connected to the antenna by a 10-foot length of cable (Signal Corps CO-129) is an aluminum container 2 inches on each side. The container houses an attenuator and mounts directly to the antenna post of the radio set.

TUNING/MATCHING DEVICES: A variable capacitor for frequency tuning is located in the handle of the loop.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Receiver-Transmitter RT-67()/GRC. Equipment function - direction finding.

COGNIZANT AGENCY: SCL-8743.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-288()/GRC

FREQUENCY: VHF band, 38.0 - 54.9.

TYPE: Loop.

DESCRIPTION: The antenna is a diamond-shaped loop for receiving and homing. The loop is 5 turns of Signal Corps Wire W-63-A wound on a collapsible wooden frame 24 inches hidh and 36 inches wide extended, and 23-1/2 by 6 inches when collapsed. A housing and handle attached to the base of the loop contains controls for tuning and sensing. Connected to the antenna by a 10-foot length of cable (Signal Corps CO-129) is an aluminum container 2 inches on each side. The container houses an attenuator and mounts directly to the antenna post of the radio set.

TUNING/MATCHING DEVICES: A variable capacitor for frequency tuning is located in the handle of the loop.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Receiver-Transmitter RT-68()/GRC. Equipment function - direction finding.

COGNIZANT AGENCY: SCL-8744.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-290/GPN

See OA-234/GPN.

ANTENNA AT-291/GPN&()

See OA-235/GPN&().

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ANTENNA AT-292()/URM-29

FREQUENCY: HF, VHF, and UHF bands, 20 - 1000 mc.

TYPE: Conical, with ground plane (discone).

DESCRIPTION: AT-292()/URM-29 is a discone antenna and is used for broad-band interference measurements. It consists of a tin-plated, copper cone and a 20-inch aluminum disc. The height of the cone above the disc is about 7-1/2 inches; a connector and matching section extend about 3-1/2 inches below the disc. The antenna covers the 20- to 1000-mc frequency range in 4 steps when used with six AB-21/GR mast sections, which are cylindrical rods about 24 inches long. The cone has four sockets on its rim so that the mast sections can be inserted to extend the effective size of the cone. The antenna mounts on Tripod MT-348/CRD-3, which has provisions for tilting. The antenna has an input impedance of 50 ohms and is fed by coaxial cable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: RF Interference Test Set AN/URM-29(). Equipment function - test.

COGNIZANT AGENCY: SC 3983.

REFERENCE:
U. S. Department of Defense Nomenlcature Card.

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ANTENNA AT-293/URM-30

FREQUENCY: VHF band, 120 - 260 mc.

TYPE: Rod.

DESCRIPTION: AT-293/URM-30 is a rod antenna which radiates a modulated r-f signal for testing. It is a stainless steel rod 1/4 inch in diameter by 6 inches long and weighs 2 ounces. It mounts to the panel of Analyzer TS-684/URM-30 by a pin insert.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-30. Equipment function - test.

COGNIZANT AGENCY: AEL-50-401.

MANUFACTURER: Hoffman Radio Corporation, U. S. Air Force contract AF 33(038)-5603.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-296()/TRD-4

Cancelled 4 April 1958; nomenclature never used.

ANTENNA AT-297/TRD-4

FREQUENCY: MF and HF bands, 0.54 - 30 mc.

TYPE: Crossed loop.

DESCRIPTION: AT-297/TRD-4 is a crossed-loop antenna which consists of two diamond-shaped, single-loop antennas at right angles to each other. The antenna can be manually rotated or virtual rotation can be accomplished by using the two fixed loops in combination with a rotating goniometer. A sense signal is obtained by adding a portion of the voltage from each loop leg in a manner which produces an omnidirectional response pattern. The omnidirectional pattern is combined with the rotating figure-of-eight pattern produced by the virtual rotation of the crossed loop to produce a rotating cardioid pattern. Either of the individual loops of this antenna can be used alone by removing the other. For single-loop operation, the supporting rod at the center of the antenna is used as a sense antenna. Each arm of the loops is 37-1/2 inches long, and the vertical sense antenna is 54-1/2 inches long. The overall antenna is 54-1/2 inches high, 54-1/2 inches wide, and 54-1/2 inches deep. It weighs 10-1/2 pounds and is stud mounted. The input impedance, 1 to 20 ohms, varies with frequency.

BEAM DATA:
Polarization - Vertical.

SCAN DATA: The antenna permits manual rotation or virtual scanning using a goniometer.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/TRD-4(). Equipment function - direction finding.

MISCELLANEOUS: The antenna may be collapsed for storage.

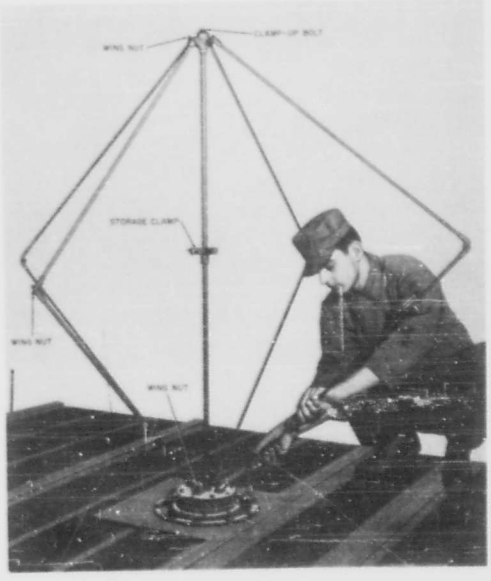
COGNIZANT AGENCY: SCLE-4476.

MANUFACTURER: Servo Corporation of America, New Hyde Park, Long Island, N. Y., Signal Corps contract 14189-Ph-51-93.

STOCK NUMBER: Federal Stock Number 5985-669-9904.

REFERENCES:
1) Department of the Army, Direction Finder Set AN/TRD-4A, Technical Manual, TM 11-668, (June 1955). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AT-297/TRD-4

ANTENNA AT-298()/GRC-10

Cancelled 2 April 1952; redesignated Antenna AS-620()/GRC-10.

ANTENNA AT-301()/PRD-1

FREQUENCY: HF band, 12 - 30 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 3-foot, copper- and silver-plated, stainless steel rod used to extend the sense antenna portion of Antenna AS-536/PRD-1 for operation in the 12- to 30-mc band. The rod is 1/2 inch in diameter and threaded on one end to fit into the screw fitting on AS-536/PRD-1.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Direction Finder Set AN/PRD-1(). Equipment function - direction finding.

MISCELLANEOUS: See AS-536/PRD-31 for illustration.

COGNIZANT AGENCY: SCLE-4249.

MANUFACTURER: Andrea Radio Corporation, Long Island City 1, New York, Andrea part number ANT-109A.

REFERENCES:
1) Department of the Army, Direction Finder Set AN/PRD-1, TM 11-677, (Oct. 1955). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-308()/GRC

TYPE: Probably dipole.

DESCRIPTION: No information is available on this antenna except for reference to a horizontally polarized doublet antenna on page 30 of TM 11-263, the instruction book on associated equipment AN/GRC-9&().

ASSOCIATED EQUIPMENT: Radio Set SCR-506-() and Radio Set AN/GRC-9(). Equipment function - communications.

COGNIZANT AGENCY: SIGGC-R.

REFERENCES:
1) Departments of the Army and the Air Force, Radio Sets AN/GRC-9, AN/GRC-9A, AN/GRC-9X, and AN/GRC-9Y, TM 11-263 and TO 31R2-2GRC-9-1, (June 1956).
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-309/GPX&()

FREQUENCY: UHF band, 950 - 1150 mc.

TYPE: Broadside array of slot antennas.

DESCRIPTION: The antenna is an array of 32 slots arranged in four sections. It is mounted on either a pedestal or a tower. Overall, it is 328-1/16 inches long, 20-1/2 inches wide, and 20-1/2 inches high.

BEAM DATA:
Half-power beamwidth - Horizontal - 2.5°.
Side-lobe attenuation - 26 db.
Beam type - Fan.
Polarization - Vertical.

SCAN DATA: The antenna has 360° mechanical azimuth rotation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Interrogator Set AN/GPX-19. Equipment function - IFF.

MISCELLANEOUS: Antenna AT-309/GPX&() is similar to Antenna Assembly AS-295/UP&(). However, Antenna AT-309/GPX&() has more slots and is capable of greater angular resolution.

COGNIZANT AGENCY: U. S. WL-55-R-1317.

MANUFACTURER: Maryland Electronic Manufacturing Corporation, College Park, Md., procurement contract AF 30(635)-707.

STOCK NUMBER: Federal Stock Number 5895-347-7390B.

REFERENCES:
1) Maryland Electronic Manufacturing Corporation Drawing 40058.
2) Military Specification RADC Exhibit ENG-2146A.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-310()/GPN

MAJOR COMPONENTS: 1 Mast Section MS-116-A, 1 Mast Section MS-117-A, and 1 Mast Base MP-65-A.

FREQUENCY: HF band, 20 - 27.9 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a whip composed of two sections and a base. Each section is 39-1/2 inches long. The diameter at the base is 5 inches, and the diameter at the tip is 1/4 inch. The antenna base attaches with a collar nut to a support plate on the roof of the AN/CPN-4 trailer. The entire assembly is usually painted with an olive drab finish. The antenna is fed by a 75-ohm coaxial transmission line.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/CPN-4. Equipment function - communications for GCA.

COGNIZANT AGENCY: WL-50-1800.

MANUFACTURER: Gilfillan Brothers, Inc., Gilfillan part/drawing 33499.

STOCK NUMBER: Federal Stock Number 5840-538-0516.

REFERENCES:
1) U. S. Air Force and Bureau of Aeronautics, Navigational Aid Equipment, Volume III, Fixed Communication and Meteorological Equipment Directory, TO 31R4-1-1, (June 16 1958). UNCLASSIFIED.
2) Gilfillan Drawing 33499.
3) U. S. Air Force Specification R-7437-A.
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-316()/U

FREQUENCY: UHF band, 1120 - 1700 mc.

TYPE: Horn.

DESCRIPTION: The antenna is a waveguide horn with waveguide feed. The waveguide is attached to the horn with Waveguide Flange UG-418/U and is probably fed in turn by a 50-ohm coaxial cable. The horn is 37 inches long, 21-1/4 inches high, and 15-7/8 inches wide and is constructed of anodized aluminum.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: General purpose use. Equipment function - test.

MISCELLANEOUS: AT-316()/U is similar to AT-315/U except for frequency range.

COGNIZANT AGENCY: WL-50-1885.

MANUFACTURER: Philip H. Buehrie and Son, Inc.

REFERENCES:
1) U. S. Air Force Drawing X49D56929.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-318/GL

FREQUENCY: VHF band, 60 - 300 mc.

TYPE: Conical (discone) antenna.

DESCRIPTION: This is a lightweight discone antenna used for jamming. The antenna is mounted on a 1/4-ton truck and should be at least 7 feet above ground when in its operating position. The antenna will withstand wind velocities up to 35 miles per hour. The overall antenna is 4-1/2 feet in diameter and 5-1/2 feet high. The approximate total weight is 19 pounds. The unit uses a type C connector and is capable of handling 1 kilowatt of power.

BEAM DATA:
Beam type - Omnidirectional in azimuth when the discone is vertical.
Polarization - Vertical or 45°.

INSTALLATION: Ground, mobile.

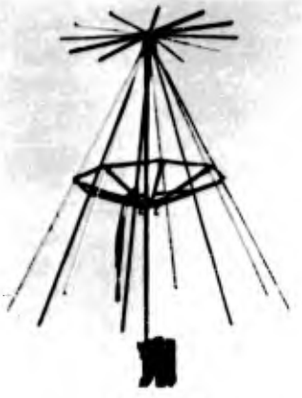
ASSOCIATED EQUIPMENT: The antenna is primarily used with countermeasures, jamming, equipment.

MISCELLANEOUS: The AT-318/GL antenna is a modified AS-631/U antenna. There is also a discone receiving antenna which has as its nomenclature number AT-318/TLR.

COGNIZANT AGENCY: Evans Signal Laboratories.

STOCK NUMBER: AT-318/TLR ... Federal Stock Number 5985-396-3037.

REFERENCE:
Private Correspondence.



AT-318/GL

ANTENNA AT-318/TLR

FREQUENCY: VHF band, 60 - 300 mc.

TYPE: Conical (discone) antenna.

DESCRIPTION: AT-318/TLR is a discone antenna constructed of rods which are hinged so that for shipment the antenna can be collapsed like an umbrella. The cone is approximately 56 inches long. The antenna is fed by 50-ohm coaxial line.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: General use. Equipment function - countermeasures, monitoring.

MISCELLANEOUS: Antenna AT-318/GL is a discone antenna designed to be mounted on a truck. This antenna is used for countermeasures, jamming.

COGNIZANT AGENCY: SCLE-9276.

MANUFACTURER: Motorola Research Laboratories, Inc., Phoenix, Arizona, code 94990.

STOCK NUMBERS: Federal Stock Number 5985-396-3037.

REFERENCES:
1) Department of the Army, Countermeasures Receiving Set AN/TLR-9(C), Technical Manual, TM 11-236, (Oct. 1955). CONFIDENTIAL.

2) Department of the Army, FSC Group 59 Electrical and Electronic Equipment Components, Supply Manual, SM 11-1-5985, 90, (Nov. 13, 1957). UNCLASSIFIED.

3) Private Correspondence.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-319()/TLR

FREQUENCY: UHF band, 300 - 1050 mc.

TYPE: Conical (discone) antenna.

DESCRIPTION: The antenna is a discone antenna mounted by means of a clamp on Antenna Support AB-376()/G. The cone is approximately 14 inches long. The antenna is fed by a 50-ohm coaxial line.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: General use. Equipment function - countermeasures, monitoring.

COGNIZANT AGENCY: SCLE 9277.

MANUFACTURER: Motorola Research Laboratories, Inc., Phoenix, Arizona, code 94990.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-320()/FRC-20

FREQUENCY: VHF band, 30 - 44 mc.

TYPE: Probably stub-sleeve antenna.

DESCRIPTION: AT-320()/FRC-20 is a vertical coaxial antenna, probably a stub-sleeve. It is of one-piece construction 20 feet 4 inches long and is made of white cadmium-plated steel. It is designed to be mounted on a pole in a fixed location.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-20(). Equipment function - communications.

COGNIZANT AGENCY: SCL-9549.

MANUFACTURER: Motorola Research Laboratories, Inc., Phoenix, Arizona, part number 1X802929.

STOCK NUMBER: Federal Stock Number 5985-240-8132.

REFERENCES:
1) Department of the Army, FSC Group 59 Electrical and Electronic Equipment Components, Supply Manual, SM 11-1-5985, 90, (Nov. 13, 1957). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA HORN AT-327( )/TPQ-6

FREQUENCY: EHF band; 33,000 - 36,000 mc.

TYPE: Horn.

DESCRIPTION: This horn feed is constructed of silver-plated copper. It is 2.352 inches long and the mouth is 0.3386 inches by 0.2747 inches. It mounts to the waveguide by means of a UG-381/U flange. The mouth of the horn is covered by a plexiglass window.

BEAM DATA: See Antenna Reflector AT-328()/TPQ-6.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPQ-6(). Equipment function - meteorological measurement.

MISCELLANEOUS: The horn is used to feed Antenna Reflector AT-328()/TPQ-6.

COGNIZANT AGENCY: SCL-9791.

MANUFACTURER: Bendix Radio Division, Baltimore, Maryland.

REFERENCES:
1) Signal Corps Specification SCL-2141.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA REFLECTOR AT-328()/TPQ-6

FREQUENCY: EHF band, 33,000 - 36,000 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is a paraboloid 87 inches in diameter and 13-59/64 inches deep. It is constructed of aluminum and weighs approximately 400 pounds. There are eight mounting holes (probably on a spider on the back of the reflector) equally spaced in pairs on a circle with a 23.87-inch radius. Center-to-center distance between holes in each pair is 4.950 inches. Each hole is at least 1-1/2 inches deep and threaded for 5/8-11 bolts.

BEAM DATA: (When fed by Horn AT-327/TPQ-6). Half-power beamwidth - Approximately 0.3° in both azimuth and elevation.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPQ-6(). Equipment function - meteorological measurement.

MISCELLANEOUS: The reflector is fed by Antenna Horn AT-327/TPQ-6.

COGNIZANT AGENCY: SCL-9790.

MANUFACTURER: Bendix Radio Division, Baltimore, Maryland.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-330()/U

FREQUENCY: VHF band, 122 - 146 mc.

TYPE: Dipole antenna.

DESCRIPTION: The antenna is a dipole made of aluminum with a lusterless olive drab paint finish. Each element is adjustable from 23 to 24 inches in length and is 1/2 inch in diameter. The dipole has a threaded plug, an integral part of the dipole, which screws into an H-frame of the associated antenna equipment.

TUNING/MATCHING DEVICES: Each dipole element is adjustable in length from 23 to 24 inches. The matching stub is adjustable in length from 1 to 1-1/4 inches.

ASSOCIATED EQUIPMENT: Antenna Equipment RC-8, RC-83, and RC-153.

COGNIZANT AGENCY: WL-50-2167.

MANUFACTURER: Not identified. Purchase request 128857.

STOCK NUMBER: Federal Stock Number 5985-026-8700.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-331( )/UMP-13

FREQUENCY: UHF band, 1215 - 1365 mc.

TYPE: Dipole.

DESCRIPTION: The dipole is of one-piece construction. It is 1/2 inch in diameter, 4 inches in length, and is made of silver-plated brass. It is mounted by means of an adjustable, etched-aluminum mounting bracket with two 3/16-inch-diameter holes on a 49/64-inch mounting circle.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Test Set AN/UMP-13. Equipment function - test.

MISCELLANEOUS: The antenna is normally stored in Radar Set Control C-797/FPS-3.

COGNIZANT AGENCY: WL-51-1035.

MANUFACTURER: Bendix Radio Division, U. S. Air Force contract W33-038ac-21187.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-332/GRC-30&()

See OA-291/GRC-30&().

ANTENNA AT-333/GRC-30&()

See OA-291/GRC-30&().

ANTENNA AT-334/GRC-30&()

See OA-291/GRC-30&().

ANTENNA AT-336()/TRC

See OA-299()/TRC.

ANTENNA AT-337()/TRC

See OA-299()/TRC.

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by a plug UG-88/U. A bag CW-258/PRC is included to carry the collapsed antenna, and a clip is provided for attaching the handset of the radio equipment to the operator's helmet. The antenna weighs 2.5 pounds.

TUNING/MATCHING DEVICES: A variable capacitor for tuning the loop and a coupling transformer are housed in the handle.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/PRC-8(), AN/PRC-9(), AN/GRC-3 through -6. Equipment function - communications; and navigation, direction finding.

MISCELLANEOUS: One part of Reference 1 refers to transmission with Antenna AT-340/PRC, while another part warns against transmitting with this antenna since it will burn out the attenuator or part of the tuning circuit. AT-340()/PRC is similar to AT-249/GRD and AT-339/PRC. See AT-339/PRC for illustration.

COGNIZANT AGENCY: SCLC-8785.

MANUFACTURER: Typical Manufacturer - Phoenix Electronics, Inc., Lawrence, Massachusetts.

STOCK NUMBER: Federal Stock Number 5820-697-9660.

REFERENCES:

1) Departments of the Army and the Air Force, Antenna AT-249/GRD, Technical Manual and Technical Order, TM 11-5058, TO 31R4-2-GRD-111, (May 1955). UNCLASSIFIED.

2) Military Specification MIL-A-11194.

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ANTENNA AT-343()/URC

FREQUENCY: MF and HF bands, 2 - 26 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a motor-driven, retractable whip for general purpose use. It consists of one fixed section 9 feet long and 4 telescoping sections, each 5 feet long. Each section is made of a copper-wire radiator inside a piece of plastic tubing. The antenna is equipped with a 1/4-horsepower, reversible 110-volt a-c motor. The assembly mounts to a flat plate 12 inches by 16 inches. The antenna forms a pressure seal in the retracted position and is drip-proof in the erected position.

INSTALLATION: Ground, fixed or vehicular; or shipboard (submarine).

ASSOCIATED EQUIPMENT: General purpose use. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Bergen Engineering and Development Corporation, Bramus, New Jersey, contract NObsr-43103.

REFERENCES:

1) Department of the Navy and the Bureau of Ships, Instruction Book for Automatic Retractable Antenna AT-343(XN-1)/URC, NAVSHIPS-91494. UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-344/TPX-21&()

FREQUENCY: UHF band, 950 - 1150 mc.

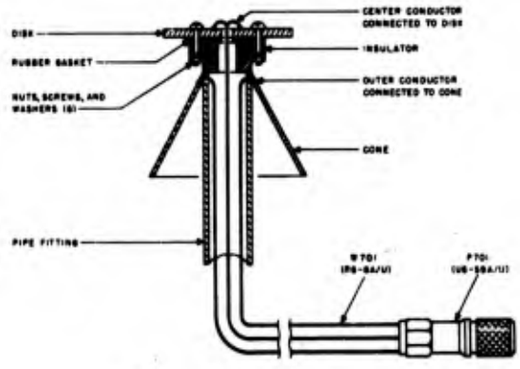
TYPE: Conical antenna (discone).

DESCRIPTION: The antenna is a discone attached to a pipe fitting and fed by a 50-ohm coaxial cable. An 18-foot length of RG-8A/U coaxial line is permanently attached to the antenna and is terminated at the other end by a plug UG-59A/U.

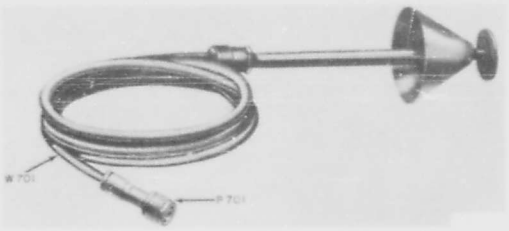
INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Interrogator Set AN/TPX-21. Equipment function - IFF.

COGNIZANT AGENCY: SCLE-4303.



AT-344/TPX-21, Cross Section



AT-344/TPX-21

MANUFACTURER: Typical Manufacturer - Radio Receptor Company, Brooklyn, New York, code 77633.

REFERENCE:
1) Departments of the Army and the Air Force, Interrogator Set AN/TPX-21, Technical Manual, Technical Order, TM 11-1192, TO 16-30TPX21-5, (Jan. 1955). UNCLASSIFIED.

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ANTENNA REFLECTOR AT-345()/CPS-1

Cancelled per Nomenclature Card 8 August 1951. Agency, WL-51-C1941.

ANTENNA REFLECTOR AT-346()/CPS-1

Cancelled per Nomenclature Card 8 August 1951. Agency, WL-51-C1946.

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ANTENNA AT-348()/PRC

FREQUENCY: HF and VHF bands, 25 - 50 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a one-piece whip with a loading coil at the base. It is 43 inches long and is constructed of chrome-plated spring steel. It plugs into a receptacle on the radio set.

TUNING/MATCHING DEVICES: A loading coil is in the base of the antenna.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/PRC-23() and AN/PRC-24(). Equipment function - communications.

COGNIZANT AGENCY: SCL-10037.

MANUFACTURER: Motorola, Inc., Chicago, Ill., manufacturer's Model P-8653.

STOCK NUMBER: Federal Stock Number 5985-221-9042.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA REFLECTOR AT-351()/CPN-18

Cancelled per Nomenclature Card 1 May 1951. Agency, WL-51-C1344.

ANTENNA AT-352/UPA-22&()

See AN/UPA-22(*).

ANTENNA AT-353(*)/UPA-23

See AN/UPA-23(*).

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ANTENNA AT-357/MPQ-10

FREQUENCY: UHF band, 2700 - 2950 mc.

TYPE: Dipole feed assembly.

DESCRIPTION: The antenna is a dipole spinner feed assembly normally used with paraboloidal reflector AS-546/MPQ-10 to make up the an-

tenna system for Radar Set AN/MPQ-10. The spinner feed assembly consists of a dipole fed by a length of rigid coaxial line. The assembly is 24-3/4 inches long and has a plastic cover 4-1/2 inches long and 4-1/2 inches in diameter enclosing the dipole. The feed assembly is supported by two high-speed ball bearings within a case, which is screwed to a stud in the center of the AS-546/MPQ-10 reflector. A key on the spinner motor shaft mates with a slot in the feed assembly and transmits the motor rotation to the feed.

SCAN DATA: When the AS-546/MPQ-10 reflector and the AT-357/MPQ-10 feed are used together as the antenna system for Radar Set AN/MPQ-10, the antenna has two modes of operation, search and tracking.

In the search mode, the feed does not nutate and the entire antenna can be turned manually or set to oscillate in azimuth through a sector which can be adjusted between 200 mils and 800 mils. In addition, the elevation of the antenna can be adjusted from -125 mils to +1540 mils.

In the tracking mode, the feed, which is offset 1-1/2° from the reflector axis, nutates at a rate of 60 cycles per second. The entire antenna can be rotated and tilted either manually or automatically. The manual tracking limits are 850 mils per second in azimuth and 650 mils per second in elevation; the automatic tracking limits are 350 mils per second in azimuth and 250 mils per second in elevation.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-10. Equipment function - search, surface; and tracking (mortar location).

COGNIZANT AGENCY: SCL-10751.

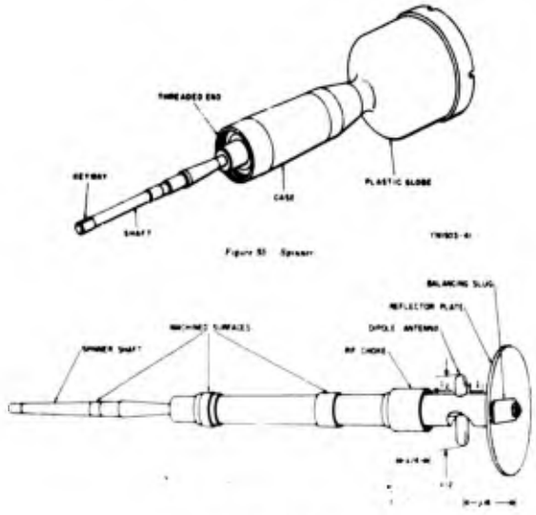
MANUFACTURER: Sperry Gyroscope Company.

REFERENCES:

1) Department of the Army, Radar Sets AN/MPQ-10 and AN/MPQ-10A, Repair Manual, TM 11-1503, (May 1954). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Radar Sets AN/MPQ-10 and AN/MPQ-10A, Installation and Operation, TM 11-1303, TO 16-30MPQ10-6, (June 1954). UNCLASSIFIED.

3) Government Specifications MIL-R-10608.



AT-357/MPQ-10

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a length of S-band waveguide with a 160-degree bend at one end which flares into a horn having inside dimensions 5.91 inches by 8 inches. The horn aperture is sealed by a plexiglass cover. The other end of the waveguide is fitted with a choke-joint flange with a mounting plate. The assembly mounts to the supports of Antenna Reflector AT-260/CPN-18 by two mounting holes in the choke flange and by a mounting bracket welded to each side of the horn. The overall dimensions of the feed assembly are 20-1/4 inches high, 9-1/2 inches wide and 21 inches long.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/CPN-18(). Equipment function - approach control.

MISCELLANEOUS: AT-364/CPN-18 is mechanically interchangeable with AT-261/CPN-18 and is used to obtain a 2-degree beamwidth when used as a feed for Antenna Reflector AT-260/CPN-18. When this arrangement is used, the end sections of the reflector are removed. See the illustration for AT-261/CPN-18.

COGNIZANT AGENCY: WL-51-1790.

MANUFACTURER: Bendix Radio Division, Baltimore, Maryland, U. S. Air Force contract W33-038ac-21317.

STOCK NUMBER: U. S. Air Force part number R 200786-1.

REFERENCES:
1) U. S. Air Force, Radar Sets AN/CPN-18 and AN/CPN-18A, Handbook Operating Instructions, T.O.31P5-2CPN18-1, (Aug. 1, 1953 - revised March 21, 1958). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-367()/FRN

FREQUENCY: LF band, 0.18 mc.

TYPE: Loop (shielded).

DESCRIPTION: The antenna is a loop consisting of 64 turns of No. 36 AWG wire spaced 1/2 inch between turns on an insulating screen. The loop is shielded by an aluminum alloy shield. It is fed by a coaxial feed line. The loop is 36 inches high, 36 inches wide and 6 inches deep. It is unpainted but weatherized at all joints. The assembly is mounted on a 3/4-inch plywood base supported by rollers for hand rotation. The base is also hinged for manual tilting or flat storage, for transit.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Sets AN/FRN-13() and AN/FRN-14(). Equipment function - navigation.

COGNIZANT AGENCY: WL-51-1993.

MANUFACTURER: Sylvania Electric Products, Inc., Bayside, New York, U. S. Air Force contract W 28-099ac-465.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-368()/CRD-6

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Stub-sleeve antenna.

DESCRIPTION: The antenna is a stub-sleeve or coaxial-type dipole fed by a 52-ohm coaxial line. It is 2 inches in diameter and 28-3/8 inches long and mounts on Mast AB-277/CRD-6. The antenna is designed to operate in all weather conditions. It is used as a target antenna for calibration of the associated direction-finding equipment.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Direction Finder Set AN/CRD-6. Equipment function - direction finding, but antenna is used for test.

COGNIZANT AGENCY: WL-51-1992.



AT-368()/GRD-6

MANUFACTURER: Federal Telephone and Radio Corporation, Clifton, New Jersey, U. S. Air Force contract AF 33(038)-14532.

REFERENCES:

1) U. S. Air Force, Radio Direction Finder AN/CRD-6, Handbook Operation and Service Instructions, T.O. 31R4-2CRD6-1, (July 15, 1955). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-372()/FRN-12A

See Antenna Assembly AS-494/FRN-12A.

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ANTENNA AT-373/UKR

MAJOR COMPONENTS: 1 helix, 1 ground plane.

FREQUENCY: VHF band, 215 - 230 mc; VSWR < 1.3.

TYPE: Helical antenna.

DESCRIPTION: The antenna consists of a helix enclosed in a radome and a flat-plate ground plane with radial rod extensions. The helix is made of copper tubing and is 20 inches in diameter with 3 turns in a 17-inch length. The ground plane consists of a 30-inch-diameter plate with eight radial, aluminum channel extensions. The overall diameter of the ground plane is 53 inches. The antenna mounts by six 5/8-inch bolts on pedestal AB-238/UPA at the base of IFF antenna AN/UPA-22 or AN/UPA-23. The antenna is designed for connection to a 52-ohm coaxial cable, RG-14/U or RG-74/U.

BEAM DATA:

Polarization - Circular.

ASSOCIATED EQUIPMENT: Telemetric Data Receiving Set AN/UKR-8. Equipment function - telemetering.

COGNIZANT AGENCY: U. S. Navy, BuOrd.

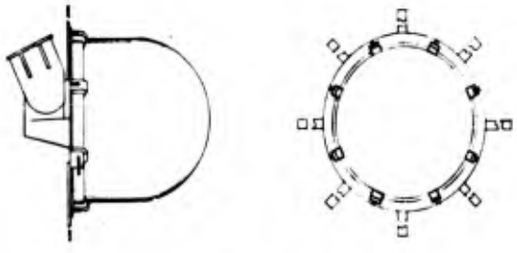
MANUFACTURER: J. P. Seeburg Corporation, Chicago, Illinois, contract NOrd-11878.

REFERENCES:

1) J. P. Seeburg Corporation Drawings 9250-1701 and 9250-134.

2) U. S. Navy Specification KLX-PE-2A.

3) U. S. Department of Defense Nomenclature Card.



AT-373/UKR

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ANTENNA AT-374/FPS-6

See OA-389/FPS-6.

ANTENNA AT-375/FPS-6&()

See OA-389/FPS-6.

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ANTENNA REFLECTOR AT-380()/TRC

TYPE: Flat screen reflector.

DESCRIPTION: The reflector consists of a sheet of plywood sandwiched between two sheets of aluminum. It is 5 feet 9 inches long, 3 feet 9 inches wide, and 8 inches thick. It clamps to a support pipe 4 inches in diameter and 5 feet long.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-30. Equipment function - communications.

MISCELLANEOUS: The nomenclature AT-380/GR&() was cancelled 25 October 1954.

COGNIZANT AGENCY: RADC.

MANUFACTURER: Philco Corporation, Philadelphia, Pennsylvania, U. S. Air Force contract AF 33(038)-17133, Philco part/drawing number 756-7203.

REFERENCE: U. S. Department of Defense Nomenclature Card.

STOCK NUMBER: Air Force 1700-018788020.

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ANTENNA SECTION AT-381()/FRN-12A

See Antenna Assembly AS-494/FRN-12A.

ANTENNA SECTION AT-384()/FRN-12A

See Antenna Assembly AS-494/FRN-12A.

ANTENNA AT-386/FPS-8

See OA-405/FPS-8&().

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ANTENNA AT-387()/PRC-14

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Modified ground-plane antenna.

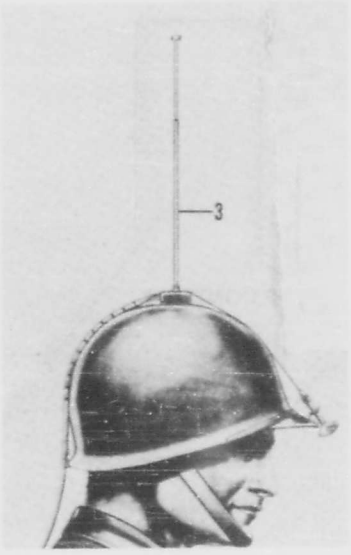
DESCRIPTION: The antenna is a telescoping whip consisting of 2 sections, each 7 inches long. The lower section is pressed into a cast-zinc block which in turn is attached to the mounting strap. The strap, which is adjustable, mounts the antenna to the top of the operator's helmet (see illustration) and the helmet acts as the ground plane for the antenna. The antenna is fed by a 50-ohm coaxial feed line.

TUNING/MATCHING DEVICES: The antenna is tuned to 1/4 wavelength at the operating frequency by pulling out the upper section according to a scale inscribed on the transmitter-receiver case.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-14. Equipment function - communications.

COGNIZANT AGENCY: WL-52-1015.



AT-387/PRC-14 In Use

MANUFACTURER: Electronic Communications, Inc., U. S. Air Force contract AF 33(038)-19624.

STOCK NUMBERS: Federal Stock Numbers 5985-355-7494; 5820-538-6603.

REFERENCE:
U. S. Air Force and the Bureau of Aeronautics, Radio Set AN/PRC-14, Handbook Operating Instructions, TO 31R2-2PRC14-1, (Dec. 15, 1953). UNCLASSIFIED.

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MISCELLANEOUS: AT-392/MPS-7 is similar to AT-251/FPS-3. The two reflectors have identical beam-shaping characteristics but different mounting provisions.

COGNIZANT AGENCY: WL-52-1175.

MANUFACTURERS: Goodyear Aircraft Corporation, Akron, Ohio, and Bendix Radio Corporation, Baltimore, Maryland, contract W-33-038-ac-21187.

STOCK NUMBER: Federal Stock Number 5840-028-4121

REFERENCES:

1) U. S. Air Force, Handbook Maintenance Instructions for Radar Set AN/FPS-3, Radar Set AN/MPS-7 Antenna Equipment, TO 31P6-2FPS3-92, (July 1, 1955). UNCLASSIFIED.

2) Departments of the Air Force and the Bureau of Aeronautics, Handbook Operating Instructions for Radar Set AN/MPS-7, TO 31P6-2MPS7-1, (May 11, 1953 - revised June 15, 1955). UNCLASSIFIED.

3) U. S. Air Force, Handbook Operation and Service Instructions for Radar Set AN/FPS-3, TO 31P6-2FPS3-1, (Feb. 5, 1951 - revised Mar. 15, 1955). UNCLASSIFIED.

4) Bendix Radio Corporation Specification BP-515.

5) Bendix Radio Corporation Drawings 185N-2 and 185N-1300.

6) U. S. Air Force Specification WLENG-154.

ANTENNA AT-396/FPS-8

See OA-405/FPS-8&().

ANTENNA AT-397/UPM-19B

FREQUENCY: UHF band, 2650 - 2950 mc.

DESCRIPTION: The antenna is a hat-shaped structure designed to fit over Antenna HT-246/U for testing. It introduces 12 db attenuation in both transmitted and received signals. It permits interference-free, closed-loop, pre-flight checks of Radar Set AN/APW-11. The antenna is made of aluminum and mounts by bolts through a flange. The antenna has an input impedance of 52 ohms and is fed by transmission line.

INSTALLATION: Ground, test.

ASSOCIATED EQUIPMENT: Radar Test Sets AN/UPM-19B and AN/UPM-19C, and Radar Set AN/APW-11(). Equipment function - test.

COGNIZANT AGENCY: AEL-52-415.

STOCK NUMBER: Federal Stock Number 6625-896-4748.

REFERENCE:

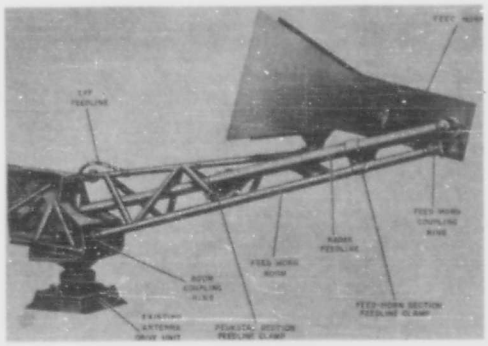
U. S. Department of Defense Nomenclature Card.

ANTENNA HORN AT-398()/GPX-11

FREQUENCY: UHF band, 950 - 1280 mc.

TYPE: Horn.

DESCRIPTION: The horn is designed to radiate radar and IFF signals simultaneously. The inside dimensions of the throat are 6-1/2 inches by 3-3/8 inches by 16 inches and the inside dimensions of the mouth are 17-23/32 inches by 7-7/8 inches. The horn is mounted by three brackets, one on each side of the throat at the rear of the horn and one under the flared part of the horn. The horn transmits horizontally polarized radar signals in the frequency range from 1220 to 1280 mc and vertically polarized IFF signals in the frequency range from 950 to 1150 mc. The IFF energy is fed into the horn by a probe attached to a UG-59A/U plug and a special adapter, Hazeltine number SM4112.



AT-398/GPX-11

BEAM DATA:
Polarization - Horizontal for radar and vertical for IFF.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Identification Set AN/GPX-11&(). Equipment function - IFF.

MISCELLANEOUS: AT-398()/GPX-11 is part of Antenna Modification Kit MX-1234/GPX-11&(). The modification kit is part of Radar Identification Set AN/GPX-11, which provides IFF facilities for modified Radar Equipment AN/TPS-1B.

COGNIZANT AGENCY: WL-54-R-1346.

MANUFACTURER: Hazeltine Electronics Corporation, Little Neck, New York, part/drawing number A-9398.

STOCK NUMBER: Federal Stock Number 5895-090-0089B.

REFERENCES:
1) U. S. Air Force, Handbook Operation and Service Instructions for Radar Identification Set AN/GPX-11, TO 31P4-2GPX11-1, (June 30, 1954). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-399(*)/GPX-11

FREQUENCY: UHF band, 950 - 1150 mc.

TYPE: Parasitic dipole array.

DESCRIPTION: The antenna is a two-element parasitic dipole array used in conjunction with other parasitic dipoles (AT-400(*)/GPX-11) to modify the contour (for vertically polarized signals) of the reflector for the AS-120/TPS-1B antenna. The array consists of two dipoles mounted approximately 6 inches apart and 2 inches above a mounting bracket (attached to the reflector). Each dipole is approximately 7 inches long. Two AT-399(*)/GPX-11 arrays and two AT-400(*)/GPX-11 dipoles are required for each system.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Identification Set AN/GPX-11. Equipment function - IFF.

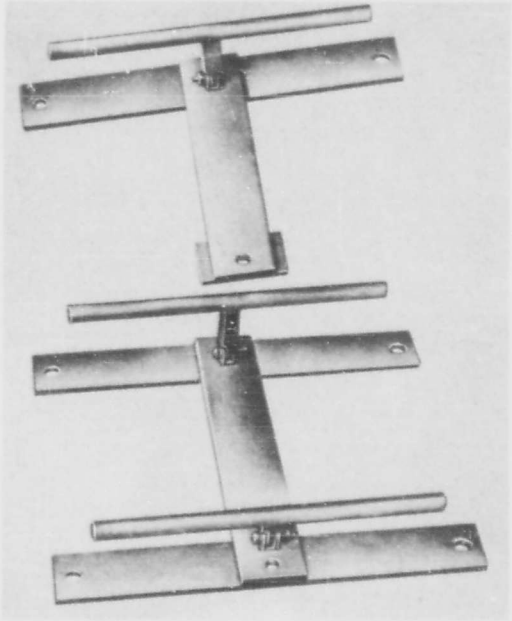
MISCELLANEOUS: AT-399/GPX-11 is of one-piece construction and AT-399A/GPX-11 is collapsible. The dipoles fold down (for transit only). AT-399(*)/GPX-11 is part of Antenna Modification Kit MX-1234/GPX-11&(). The modification kit is part of Radar Identification Set AN/GPX-11, which provides IFF facilities for modified Radar Equipment AN/TPS-1B.

COGNIZANT AGENCY: WL-52-1385.

MANUFACTURER: Hazeltine Electronics Corporation, Little Neck, New York, part/drawing number A-9386.

STOCK NUMBER: Federal Stock Number 5895-028-4122B.

REFERENCE:
U. S. Air Force, Handbook Operation and Service Instructions for Radar Identification Set AN/GPX-11, to 31P4-2GPX11-1, (June 30, 1954). UNCLASSIFIED.



AT-399(*)/GPX-11 Supplied on Contract AF33(600)-19509 only. Similar One-piece Units were Supplied on Contract AF(038)-15107.

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ANTENNA AT-400(*)/GPX-11

FREQUENCY: UHF band, 950 - 1150 mc.

TYPE: Parasitic dipole.

DESCRIPTION: The antenna is a parasitic dipole used in conjunction with the AT-399/GPX-11 parasitic dipole array to modify (for vertically polarized signals) the contour of the reflector for the AS-120/TPS-1B antenna. The dipole is mounted approximately 2 inches above a mounting plate (attached to the reflector) and is approximately 7 inches long. Two AT-399(*)/GPX-11 arrays and two AT-400(*)/GPX-11 dipoles are required for each system.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Identification Set AN/GPX-11. Equipment function - IFF.

MISCELLANEOUS: AT-400/GPX-11 is of one-piece construction and AT-400A/GPX-11 is collapsible (for transit only). AT-400(*)/GPX-11 is part of Antenna Modification Kit MX-1234/GPX-11 & (). The modification kit is part of Radar Identification Set AN/GPX-11, which provides IFF facilities for modified Radar Equipment AN/TPS-1B.

COGNIZANT AGENCY: WL-52-1386.

MANUFACTURER: Hazeltine Electronics Corp., part/drawing number A-9379.

REFERENCES:
U. S. Air Force, Radar Identification Set AN/GPX-11 (Title Unclassified), Handbook Operation and Service Instructions, T.O. 31P4-2-GPX11-1, (June 30, 1954). UNCLASSIFIED.

STOCK NUMBER: Federal Stock Number 5895-028-4123B.

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ANTENNA AT-408/UPM-46

FREQUENCY: SHF band, 3000 - 11,000 mc.

TYPE: Probe.

DESCRIPTION: The antenna is a flat, spear-shaped probe attached to the center conductor of a short length of coaxial cable. The cable is terminated in an r-f connector for mounting to the panel of Test Oscillator AN/UPM-46. The antenna radiates energy for testing receivers in the same frequency band. The brass, silver-plated probe element is about 1 inch long, and the entire assembly is about four inches long. The antenna connector has an impedance of 52 ohms and is fed with coaxial cable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Oscillator TS-508/U. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Seaboard Electric Company, Navy contract NOas-51-1113.

STOCK NUMBERS: Federal Stock Number N5985-665-0442.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Departments of the Air Force and the Bureau of Aeronautics, Test Oscillator AN/UPM-46, Handbook Operating Instructions, AN 16-30UPM46-1, (Oct. 1, 1953 - revised Aug. 15, 1957). UNCLASSIFIED.

3) Seaboard Drawing 118006 A.

4) Military Specification MIL-T-7144 BuAer.

5) U. S. Department of Defense Nomenclature Card.

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ANTENNA HORN AT-409/MPN-4

See Antenna AS-762/MPN-5.

ANTENNA HORN AT-410/MPN-5 & ()

See Antenna AS-763/MPN-5.

ANTENNA HORN AT-411/MPN-5 & ()

See Antenna AS-765/MPN-5.

ANTENNA AT-412()/TRC

See OA-1393/GRC & ().

ANTENNA AT-413O/TRC

See OA-1395/GRC.

ANTENNA AT-4140/TRC

See OA-1389/GRC & ().

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ANTENNA REFLECTOR AT-415/MPQ

FREQUENCY: UHF band, 2700 - 2930 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is a steel paraboloid finished with lusterless, olive-drab paint. Its overall dimensions are 10 feet in diameter and 2-1/2 feet in depth. It mounts by means of eight 5/8-inch mounting holes spaced 45° apart on a 6-1/4-inch radius.

BEAM DATA: Additional information is available in the secret document listed below as Reference 1.

SCAN DATA: See Reference 1).

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-12() and AN/MPQ-18().

COGNIZANT AGENCY: SCLE-4341.

MANUFACTURER: Reeves Instrument Corporation, New York, New York, Signal Corps contract 14227-PHILA-51-95.

REFERENCES:

1) E. B. Soltwedel, A Radar Directory, Project RAND Research Memorandum RM-2000. Santa Monica, California: The RAND Corporation, (Aug. 13, 1957), ASTIA Report No. AD-150674. SECRET.

2) Reeves Drawing 107938.

3) Signal Corps Specification MIL-R-11120 A.

4) U. S. Department of Defense Nomenclature Card.

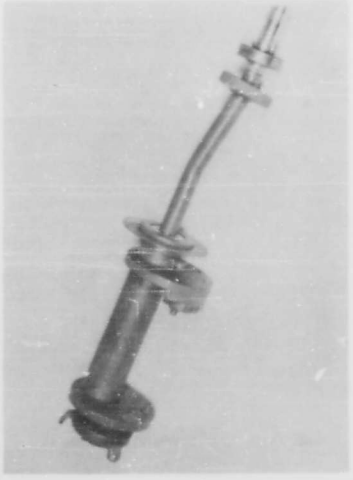
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ANTENNA AT-416/MPQ

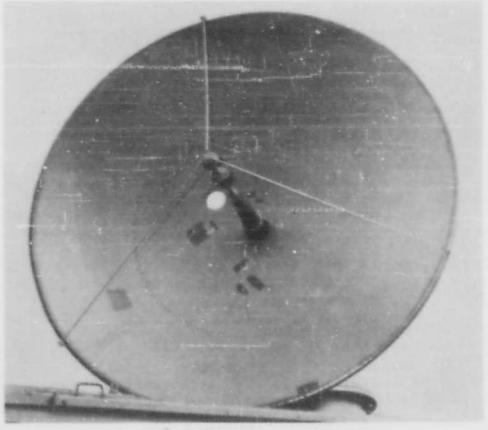
FREQUENCY: UHF band, 2850 - 2930 mc.

TYPE: Slot-type feed for paraboloidal reflector.

DESCRIPTION: AT-416/MPQ is used as a feed for Radar Sets AN/MPQ-12 and AN/MPQ-18. It is a slot-type feed which produces circularly polarized radiation. The AT-416/MPQ performs this function by feeding a circular waveguide from a slotted, rigid coaxial line. The linearly polarized wave is split into two perpendicular components which travel along the waveguide. The outer end of the waveguide is terminated by a susceptance plug so that the wave is reflected back toward the



AT-416/MPQ (Courtesy, Reeves Instrument Corp.)



AT-416/MPQ and Reflector (Courtesy, Reeves Instrument Corp.)

feed end of the waveguide. Susceptance plugs are screwed into the walls of the waveguide and are adjusted so that one of the perpendicular components is delayed by 90 degrees with respect to the other component. Surrounding the coaxial feed line is a Teflon window or annular slot. The two components (90 degrees apart in both time and space phase) pass through the window toward the paraboloidal reflector and are radiated into space. A circular ground plane behind the annular slot increases the directivity and reduces the side-lobe level. The rigid coaxial feed line is offset from the axis of rotation so that when the feed is rotated, conical scanning is produced. The feed is 30 inches long and 6 inches in maximum diameter.

BEAM DATA: (When used as a feed for a paraboloid reflector).
Side-lobe attenuation - 20 db.
Polarization - Right-hand circular.

SCAN DATA: The feed is rotated at 1800 revolutions per minute to produce conical scanning.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPQ-12 and AN/MPQ-18. Equipment function - probably tracking.

COGNIZANT AGENCY: SCLE-4343.

MANUFACTURER: Reeves Instrument Corporation, New York, New York, Code 50222, drawing 1077-51, contract 14227-PHILA-51-93.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-417/MPQ

FREQUENCY: UHF band, 2850 - 2930 mc.

TYPE: Rotating dipole feed for paraboloidal reflector.

DESCRIPTION: The antenna is a small dipole which is located at or near the focal point of a paraboloidal reflector. It is enclosed in a dome-shaped, dielectric housing and is rotated by a drive mechanism which is a part of the reflector with which the antenna is used.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/MPQ-12 and AN/MPQ-18. Equipment function - probably tracking.

MISCELLANEOUS: AT-417/MPQ is similar to Antenna AN-101.

COGNIZANT AGENCY: SCLE-4344.

MANUFACTURER: Reeves Instrument Corporation, New York, New York, code 50222, drawing 1077-50, contract 14227-PHILA-51-93.

REFERENCE:
Private Correspondence.



AT-417/MPQ (Courtesy, Reeves Instrument Corp.)

ANTENNA AT-4210/UPM-47

FREQUENCY: SHF band, 8600 - 9600 mc.

TYPE: Paraboloidal reflector with a Cutler feed.

DESCRIPTION: This antenna is designed to be attached to the radome of aircraft equipped with conical-scan, radar fire-control systems to act as the antenna for Radar Test Set AN/UPM-47. The antenna is 6 inches in diameter, is made of aluminum, and is painted gray. The antenna mounts to the radome by shock cords which are fastened to the fuselage of the aircraft. It has an impedance of 52 ohms and is fed by coaxial cable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Test Set AN/UPM-47. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Aircraft Armaments Incorporated, Navy contract NOas-52-098.

REFERENCES:
1) Manufacturer's Drawing 36-04-0040.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-422()/URD-1X & ()

FREQUENCY: LF and MF bands, 0.225 - 0.550 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a rotatable loop consisting of 18 turns of 14 AWG wire. It has a mean diameter of 28-1/2 inches and is enclosed by a metal loop cover. It is designed to use shielded transmission line.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Radio Set AN/URD-1()X. Equipment function - direction finding.

COGNIZANT AGENCY: SCIE-4315.

MANUFACTURER: Mackay Radio & Telegraph Co., procurement contract 2936-PHILA-52.

REFERENCES:
1) Manufacturer's Drawing No. F-4308-14.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-426/U

FREQUENCY: HF, VHF, and UHF bands, 20 - 400 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a small circular loop used to determine the bearing and signal strength of received signals. The loop is enclosed in a silver-plated brass shield 3-1/8 inches wide by 6-7/8 inches high. The antenna can be used as a hand-held probe or mounted on an antenna mast using Antenna Base AB-374/URM-47. It has an impedance of 50 ohms and is fed by coaxial cable.

SCAN DATA: The antenna has 360° manual rotation in azimuth.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-47(). Equipment function - direction finding; and countermeasures, DF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stoddart Aircraft Radio Company.

STOCK NUMBERS: Federal Stock Numbers N5985-090-2622 and 5985-295-7101.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Private Correspondence.
3) Stoddart Drawing Number 90799-1.
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-427/FRC-31

FREQUENCY: VHF band, 162 - 174 mc; VSWR < 2.1.

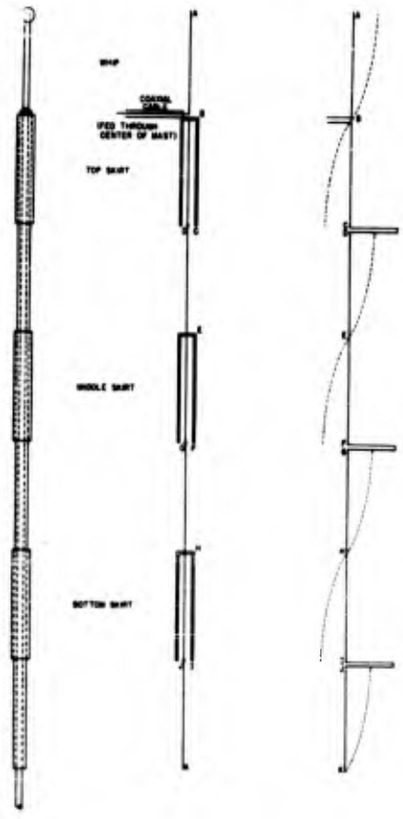
TYPE: Collinear, stacked array of coaxial dipoles.

DESCRIPTION: The antenna is a collinear array of one driven element and two parasitic elements. It consists of a quarter-wave rod, a support pipe 1-1/2 wavelengths long, and three cylindrical, quarter-wave skirts. The rod is mounted atop and insulated from the support pipe. The top of one of the skirts is welded to the top of the support pipe. The other two skirts are welded to the support pipe and are spaced a quarter wavelength apart. The antenna is fed by an air-dielectric transmission line which runs through the center of the support pipe. One of the line connects to the vertical rod and the other side connects to the junction of the support pipe and the upper skirt. Thus the vertical rod and the upper skirt form a driven half-wave radiator. The spacing of the skirts on the support pipe causes the lower portion of the antenna to act as two parasitic elements which are in phase with the driven elements. The input impedance is from 52 to 72 ohms. The antenna is designed to be fastened to a vertical pipe or pole by means of two bolt-held mounting clamps. Its overall dimensions are 164 inches long by 3 inches in diameter, and it weighs 73 pounds.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-31. Equipment function - communications.

COGNIZANT AGENCY: SCLC-5733.



AT-427/FRC-31. Outline (A), Schematic (B), and Standing-wave Patterns (C).

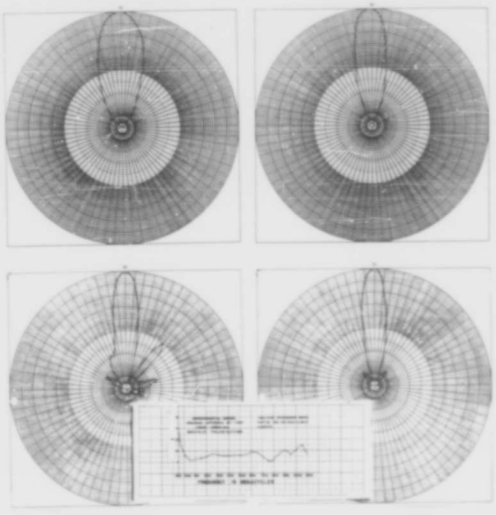
MANUFACTURER: Motorola Incorporated, Signal Corps contract 3500-PH-52.

REFERENCES:

1) Department of the Army, Radio Set AN/FRC-31, Technical Manual, TM 11-234, (Oct. 1955). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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Radiation Patterns for AT-429(*)/U. Top: E-plane at 1000 mc and 1500 mc; Bottom: H-plane (left) and E-plane at 2000 mc and Standing Wave Ratio.

REFERENCES:
1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 65.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-431/URM-37

TYPE: Whip.

DESCRIPTION: The antenna is a nickel-plated, brass telescopic whip. It consists of three sections, each approximately 16 inches long, and is 45-3/8 inches long extended and 17-1/2 inches long collapsed. The outside diameter is 0.284 inches. It mounts by means of a UG-21/U connector and attaches to a receiver.

TUNING/MATCHING DEVICES: The length is adjustable.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/UPM-37(). Equipment function - probably countermeasures, monitoring and countermeasures, DF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Measurements Corporation, Navy contract NOas-52-004 (BuAer).

REFERENCES:
1) Military Specification XEL-190 (probably Navy).

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-432/URM-37

TYPE: Loop.

DESCRIPTION: The antenna is a plastic-encased, metal, shielded loop with a handle attached for carrying. The loop is 3 inches in diameter and consists of a one-turn conductor. The antenna is fed by coaxial cable to which it attaches by a UG-89/U connector.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measurements Set AN/UPM-37(). Equipment function - probably countermeasures, monitoring; and countermeasures, DF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Measurements Corporation, Navy contract NOas-52-004 (BuAer).

REFERENCES:
1) Military Specification XEL-190 (probably Navy).

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-433/URM-37

TYPE: Loop.

DESCRIPTION: The antenna is a plastic-encased, metal, shielded loop with a handle attached for carrying. The loop is 3 inches in diameter and consists of a two-turn conductor. The antenna is fed by coaxial cable to which it attaches by a UG-89/U connector.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measurements Set AN/UPM-37(). Equipment function - probably countermeasures monitoring; and countermeasures, DF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Measurements Corporation, Navy contract NOas-52-004 (BuAer).

REFERENCES:
1) Military Specification XEL-190 (probably Navy).
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-434/URM-37

TYPE: Loop.

DESCRIPTION: The antenna is a plastic-encased, metal, shielded loop with a handle attached for carrying. The loop is 3 inches in diameter and consists of six turns of a conductor. The antenna is fed by coaxial cable to which it attaches by a UG-89/U connector.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measurements Set AN/UPM-37(). Equipment function - probably countermeasures, monitoring; and countermeasures, DF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Measurements Corporation, Navy contract NOas-52-004 (BuAer).

REFERENCES:
1) Military Specification XEL-190 (probably Navy).
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-435/URM-37

TYPE: Loop.

DESCRIPTION: The antenna is a plastic-encased, metal, shielded loop with a handle attached for carrying. The loop is 3 inches in diameter and consists of 20 turns of a conductor. The antenna is fed by coaxial cable to which it attaches by a UG-89/U connector.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measurements Set AN/UPM-37(). Equipment function - probably countermeasures, monitoring and countermeasures, DF.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Measurements Corporation, Navy contract NOas-52-004 (BuAer).

REFERENCES:
1) Military Specification XEL-190 (probably Navy).
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-438/GR

FREQUENCY: VHF band, 152 - 174 mc; VSWR < 2:1.

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna consists of a quarter-wave rod folded into an inverted "U" with a ground plane consisting of four 30-inch, horizontal rods at its base. This is often called a folded monopole antenna. The antenna is matched to a 50-ohm transmission line (RG-8/U) by a two-turn inductance in series with the center conductor of the cable and one terminal of the antenna. The antenna is equipped with a mounting bracket for mounting on a 1-1/2-inch mast.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-28, AN/TRC-34, AN/FRC-27, AN/FRR-36, and AN/URR-7. Equipment function - communications.

MISCELLANEOUS: Conflicting data concerning the dimensions of the antenna exist, but the dimensions (overall) seem to be 21 inches high, 57-1/2 inches deep, and 57-1/4 inches long. It weighs about 10 pounds.

COGNIZANT AGENCY: SCLC-5860.

MANUFACTURER: Andrew Corporation, Signal Corps contract 11661-PH-52-93.

STOCK NUMBERS: Federal Stock Number 5985-264-7498.

REFERENCES:

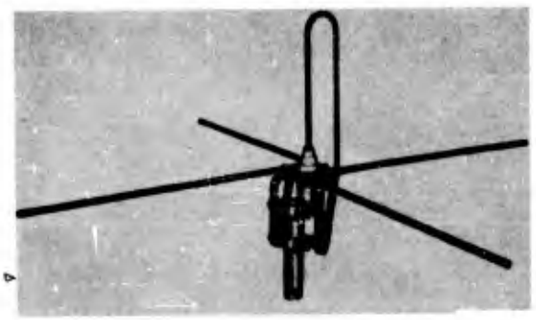
1) Departments of the Army and the Air Force, Radio Sets AN/FRC-27 and AN/TRC-34, Technical Manual and Technical Order, TM 11-226, TO 16-30FRC27-5, (July 1954). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Radio Receiving Sets AN/FRR-36 and AN/VRR-7, Technical Manual and Technical Order, TM 11-229, TO 31R2-2FRR-161, (Dec. 1954). UNCLASSIFIED.

3) Departments of the Army and the Air Force, Radio Set AN/TRC-28, Technical Manual and Technical Order, TM 11-252, TO 16-30TRC28-5, (Aug. 1954). UNCLASSIFIED.

4) Signal Corps Specification MIL-N-11539.

5) U. S. Department of Defense Nomenclature Card.



AT-438/GR

ANTENNA AT-441/MRC

TYPE: Whip.

DESCRIPTION: The antenna is a stainless-steel, telescopic whip for receiving and transmitting. It consists of six sections, each approximately 6 feet long. The antenna is mounted by means of four holes for 1/4-inch bolts near the bottom end of the antenna.

TUNING/MATCHING DEVICES: The antenna length is adjustable.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/MRC-23. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Promax Products Division of Chisholm-Ryder Company, Navy contract Nobsr-52703.

STOCK NUMBERS: Federal Stock Number N5820-049-8326.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA SECTION AT-442/GR

See AS-533/GR.

ANTENNA SECTION AT-443/GR

See AS-533/GR.

ANTENNA SECTION AT-444/GR

See AS-533/GR.

ANTENNA SECTION AT-445/GR

See AS-533/GR.

ANTENNA AT-459()/ARM-9

FREQUENCY: VHF and UHF bands, 200 - 400 mc.

TYPE: Probe.

DESCRIPTION: This is a stub-type probe antenna 5 inches long. The stub is permanently soldered to a length of RG-58/U cable. The antenna weighs 1 pound.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Bench Cable Set AN/URM-9(). Equipment function - test.

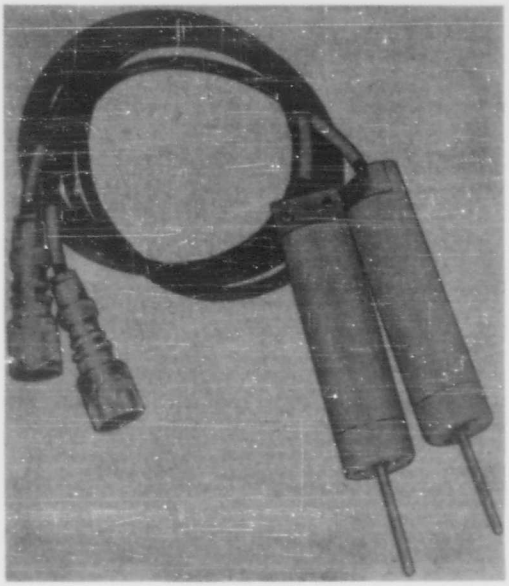
COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Collins Radio Company.

REFERENCES:

1) Departments of the Air Force and the Bureau of Aeronautics, Test Bench Cable Set AN/ARM-9, Handbook Operation and Service Instructions, AN 16-30ARM9-2, (July 1, 1955 - revised Nov. 15, 1956). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.



AT-459 ()/ARM-9

ANTENNA AT-460/MRN-9

FREQUENCY: VHF band, 112 - 118 mc.

TYPE: Dipole.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MRN-9.

COGNIZANT AGENCY: U. S. Navy, contract NObsr-52692.

MANUFACTURER: Lavoie Laboratories.

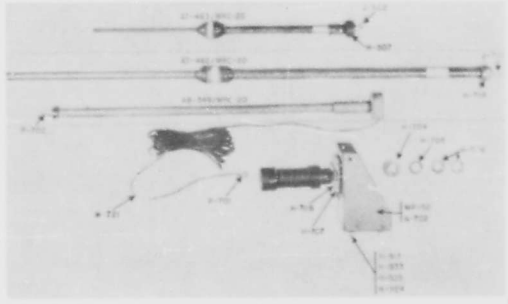
REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-462/MRC-20

FREQUENCY: VHF band, 100 - 156 mc; VSWR<2.5 on RG-58C/U.

TYPE: Stub-sleeve antenna.

DESCRIPTION: The antenna is a form of coaxial antenna, vertically mounted on a tubular supporting mast. It consists of two sections insulated from each other each of the sections is about 22 inches long; the upper section is 3/4 inch in diameter, and the lower section is 1 inch in diameter. The antenna is fed by 50-ohm coaxial cable (RG-58C/U), which passes through the center of the mast section and the lower section of the antenna. The center conductor of the cable connects to the upper radiator and the outer conductor connects to the lower radiator. The antenna mounts to Mast AB-349/MRC-20 and is used for both transmitting and receiving. The overall dimensions of the antenna are 53 inches in height and 1-3/4 inches in width and depth. It weighs 3 pounds.



AT-462/MRC-20 and AT-463/MRC-20

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MRC-23 and Radio Set AN/ARC-3. Equipment function - communications.

COGNIZANT AGENCY: WL-54-R-1015.

MANUFACTURER: Northeastern Engineering, Inc., Manchester, N. H., Air Force contract AF 33-(038)-30550.

STOCK NUMBER: Air Force 1700-015087370.

REFERENCES:

1) Department of the Army, Radio Set AN/MRC-20, Technical Manual, TM 11-692, (March 1954). UNCLASSIFIED.

2) U. S. Air Force, Radio Set AN/MRC-20, Handbook Operation and Service Instructions, T. O. 31R2-2MRC20-1, (Dec. 1, 1953 - revised Nov. 15, 1955). UNCLASSIFIED.

3) Air Force Specification ENG-278A.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-463/MRC-20

FREQUENCY: UHF band, 325 - 400 mc.

TYPE: Stub-sleeve antenna.

DESCRIPTION: The antenna is a form of coaxial antenna, vertically mounted on a telescopic, tubular supporting mast. It consists of two sections insulated from each other. The upper section is about 10-1/2 inches long by 1/4 inch in diameter, and the lower section is about 9-1/2 inches long by 3/4 inch in diameter. The antenna is fed by 50-ohm coaxial cable (RG-58C/U) which passes through the center of the mast section and the lower section of the antenna. The center conductor of the cable connects to the upper radiator, and the outer conductor connects to the lower radiator. The antenna mounts to Mast AB-348/MRC-20 and is used for both transmitting and receiving. The overall dimensions of the antenna are 29-1/4 inches in height and 1-3/4 inches in width and depth. It weighs 2 pounds.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Sets AN/MRC-23 and AN/ARC-27. Equipment function - communications.

MISCELLANEOUS: See AT-462/MRC-20 for illustration of AT-463/MRC-20.

COGNIZANT AGENCY: WL-54-R-1016.

MANUFACTURER: Northeastern Engineering, Inc., Manchester, N. H.

STOCK NUMBER: U. S. Air Force 1700-015087380; Federal Stock Number 5820-217-0504.

REFERENCES:

1) Department of the Army, Radio Set AN/MRC-20, Technical Manual, TM 11-692, (Mar. 1954). UNCLASSIFIED.

2) U. S. Air Force, Handbook Operation and Service Instructions for Radio Set AN/MRC-20, TO 31R2-2MRC20-1, (Dec. 1, 1953 - revised Nov. 15, 1955). UNCLASSIFIED.

3) U. S. Air Force Specification ENG-278A.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-464/TRD-10

See Antenna Assembly AS-681/TRD-10.

ANTENNA AT-465/TRD-10

See Antenna Assembly AS-681/TRD-10.

ANTENNA AT-469(*)/GR

FREQUENCY: UHF band, 500 - 1000 mc VSWR < 2.5:1.

TYPE: Helical.

DESCRIPTION: The antenna is a helical coil mounted vertically on a solid, disc-shaped ground plane. The coil is 16 inches high and is 5 inches in diameter. The ground plane is 18 inches in diameter and is 3/4 inch thick. The antenna is table mounted. It has an impedance of 130 ohms and is terminated for coaxial leadin. The antenna is intended for general purpose use. It is an efficient receiving antenna over the entire frequency range, but as a transmitting antenna, it is limited to the middle portion of the frequency range.

BEAM DATA:
Gain 4.5 db at 950 mc.
Half-power beamwidth - E and H planes - 45° at 750 mc.
Front-to-back ratio - 10:1.
Polarization - Circular.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/TLR-8 (probably Countermeasures Receiving Set). Equipment function - probably countermeasures, monitoring.

MISCELLANEOUS: AT-469(*)/GR denotes two models, AT-469(XE-1)/U and AT-469/GR. All available data indicate the models are identical.

COGNIZANT AGENCY: SCLE-4697, development contract DA-36-039-sc-63098.

REFERENCES:
1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-470()/GR

FREQUENCY: SHF band, 12,000 - 18,000 mc.

TYPE: Horn.

DESCRIPTION: AT-470()/GR is a small, general purpose antenna for transmitting and receiving. It is constructed of silver-plated brass and is designed to connect to a waveguide, probably by means of a choke flange. It has an overall length of 3-1/2 inches, and the horn opening is 1-1/2 inches square. It is table mounted.

INSTALLATION: Ground.

COGNIZANT AGENCY: SCLE.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-471/MRN-7 & ()

See Antenna Assembly AS-683/MRN-7 & ().

ANTENNA AT-472/MRN-7

See Antenna Assembly AS-684/MRN-7.

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ANTENNA AT-473()/VRC

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

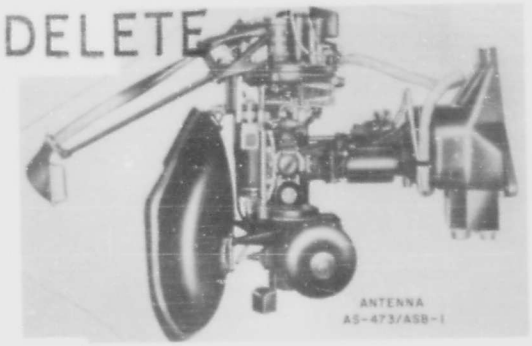
DESCRIPTION: The nomenclature card describes this antenna as a broad-band, omnidirectional vehicular antenna for air-ground communications and lists the following information: "... 52 ohms input impedance, terminated for coaxial leading element data--fixed type; for vehicular mounting; ..."

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-24() and similar sets. Equipment function - communications.

COGNIZANT AGENCY: SCLC-8426.

REFERENCE:
U. S. Department of Defense Nomenclature Card.



AT-473(*)/ASB-1

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ANTENNA REFLECTOR AT-476/GR

Cancelled 25 October 1954.

BEAM DATA:
Gain 4.5 db at 950 mc.
Half-power beamwidth - E and H planes - 45° at 750 mc.
Front-to-back ratio - 10:1.
Polarization - Circular.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/TLR-8 (probably Countermeasures Receiving Set). Equipment function - probably countermeasures, monitoring.

MISCELLANEOUS: AT-469(*)/GR denotes two models, AT-469(XE-1)/U and AT-469/GR. All available data indicate the models are identical.

COGNIZANT AGENCY: SCLE-4697, development contract DA-36-039-sc-63098.

REFERENCES:
1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-470()/GR

FREQUENCY: SHF band, 12,000 - 18,000 mc.

TYPE: Horn.

DESCRIPTION: AT-470()/GR is a small, general purpose antenna for transmitting and receiving. It is constructed of silver-plated brass and is designed to connect to a waveguide, probably by means of a choke flange. It has an overall length of 3-1/2 inches, and the horn opening is 1-1/2 inches square. It is table mounted.

INSTALLATION: Ground.

COGNIZANT AGENCY: SCLE.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-471/MRN-7 & ()

See Antenna Assembly AS-683/MRN-7 & ().

ANTENNA AT-472/MRN-7

See Antenna Assembly AS-684/MRN-7.

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ANTENNA AT-473()/VRC

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

DESCRIPTION: The nomenclature card describes this antenna as a broad-band, omnidirectional vehicular antenna for air-ground communications and lists the following information: "... 52 ohms input impedance, terminated for coaxial leading element data--fixed type; for vehicular mounting; ..."

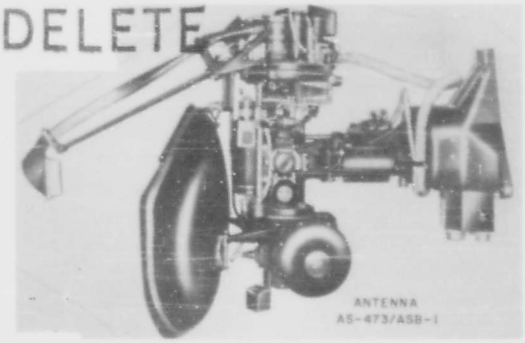
INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-24() and similar sets. Equipment function - communications.

COGNIZANT AGENCY: SCLC-8486.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

DELETE



AT-473(*)/ASB-1

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ANTENNA REFLECTOR AT-476/GR

Cancelled 25 October 1954.

ANTENNA AT-477/U

FREQUENCY: HF and VHF bands, 20 - 88 mc.

TYPE: Dipole.

DESCRIPTION: The antenna consists of a dipole head and 14 dipole elements which can be used in various combinations to cover the 20- to 88- mc frequency range. A variable inductance is incorporated in the antenna to permit tuning to the operating frequency. The antenna has an input impedance of 50 ohms and is fed by coaxial cable. A 20-inch wooden mast is provided for mounting, probably to Antenna Mast AB-363/U. The antenna may be tilted. It is finished with fungicidal varnish.

TUNING/MATCHING DEVICES: The antenna has adjustable-length dipole elements and a variable inductance for tuning.

INSTALLATION: Ground or shipboard.

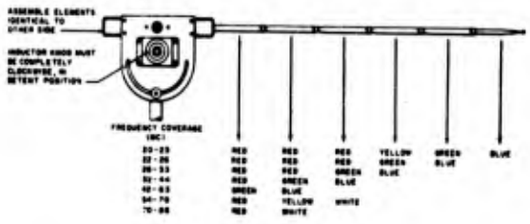
ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-47(). Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stoddart Aircraft Radio Company.

STOCK NUMBER: Federal Stock Number 5985-295-7102.

REFERENCES:
1) NAVSHIPS 93147.
2) Private Correspondence.
3) U. S. Department of Defense Nomenclature Card.



AT-477/U

ANTENNA AT-478/U

Cancelled 14 September 1953, Nomenclature incorrectly identified; the unit has been redesignated Mast AB-371/U.

ANTENNA AT-482/MPQ

FREQUENCY: UHF band, 2850 - 2930 mc.

TYPE: Slot.

DESCRIPTION: From the limited data available it appears that this antenna may be similar to either AT-416/MPQ or AT-417/MPQ. The reference indicates that it is a rotating slot-type antenna which is terminated for coaxial leadin. The antenna is 30 inches long and 6 inches in diameter.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-18. Equipment function - probably tracking.

COGNIZANT AGENCY: SCLE-4795.

MANUFACTURER: Reeves Instrument Corporation, New York, New York, code 50222, drawing 107-359, contract 14227-PHILA-51-93.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-486/G

FREQUENCY: VHF band, 152 - 174 mc.

TYPE: Whip.

DESCRIPTION: Antenna AT-486/G is a vertical quarter-wave antenna constructed of 17-1/2 inches of spring-steel wire and with an r-f connector on one end. When used with Radio Set AN/PRC-21, the antenna connects to a right-angle jack on the front panel of the radio set and is held upright by a nylon spacer at the top of the front panel. The overall length of the antenna is 18 inches, and it has a maximum diameter of 1/2 inch. It weighs about 1/8 pound.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-21 and RT-209()/PRC. Equipment function - communications.

MISCELLANEOUS: This antenna is listed as Motorola part number 385C16104-1, Code number 80211.

COGNIZANT AGENCY: SCLM-6957.

MANUFACTURER: Motorola Incorporated, Signal Corps contract 08709-PHILA-55-93.

REFERENCES:

1) Departments of the Army and the Air Force, Radio Set AN/PRS-21, Operation and Organizational Maintenance, TM 11-610, TO 31R2-2PRC21-11, (Feb. 1957). UNCLASSIFIED.

2) Signal Corps Specification MIL-R-14028.

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ANTENNA REFLECTOR AT-489/MPQ-18

FREQUENCY: UHF band, 2700 - 2930 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is a paraboloid 10 feet in diameter and constructed of aluminum and steel. The reflector may be adjusted to shift the main lobe of the radiated beam through plus or minus two degrees in elevation or azimuth. The reflector mounts by means of eight 5/8-inch mounting holes spaced equally around a circle 6-1/4 inches in radius.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-18. Equipment function - probably tracking.

COGNIZANT AGENCY: SCLE-4787.

MANUFACTURER: Reeves Instrument Corporation, code 50222, contract 14227-PH-51.

REFERENCES:

1) Government Specification MIL-R-11602 (Signal Corps).

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-496(*)/G

FREQUENCY: VHF band, 157 - 162 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a one-piece whip for mounting on hard-top vehicles such as sedans and ambulances. It has an input impedance of 53.5 ohms and is terminated for coaxial leadin. The antenna is 17.3 inches long and is 0.065 inch in diameter.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Sets AN/VRC-19() and AN/VRR-7(). Equipment function - communications.

MISCELLANEOUS: AT-496(*)/G denotes two models, AT-496/G and AT-496A/G. The frequency given for AT-496/G is 162 mc; for AT-496A/G it is 157 mc. The two models are interchangeable except for maintenance parts.

COGNIZANT AGENCY: AT-496/G ... SCLM-7273; AT-496A/G ... SESA-57-1850.

MANUFACTURERS: AT-496/G ... Master Mobile Mounts, Signal Corps contract 35915-PH-53; AT-496A/G ... Atomic Engineering Corporation, Signal Corps contract 30868-PHILA-57-55.

STOCK NUMBER: Federal Stock Number 5820-284-9083.

REFERENCES:

1) Departments of the Army and the Air Force, Radio Receiving Sets AN/FRR-36 and AN/VRR-7, Technical Manual and Technical Order, TM 11-229, TO 31R2-2FRR-161, (Dec. 1954). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-499/MPQ-10B

See Antenna AS-701/MPQ-10B.

ANTENNA ELEMENT AT-503/URR & ( )

See Antenna Assembly AS-574 ( )/URR.

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ANTENNA HORN AT-507/CPN-18 & ( )

FREQUENCY: UHF band, 2700-2900 mc.

TYPE: Horn antenna.

DESCRIPTION: The radiator is a waveguide-fed aluminum horn. The overall length of the waveguide with the mounting flange is 14-41/64 inches and the mouth of the horn is 3 inches square.

ASSOCIATED EQUIPMENT: OA-1182/CPN-18 & ( ) Equipment function - navigation.

COGNIZANT AGENCY: WL-56-1267.

MANUFACTURER: I.T.E. Circuit Breaker Co., Philadelphia, Pa., procurement contract AF 30(635)-4716, Code 30086.

REFERENCES:
1) Drawing No. RADC-2407.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-508/MPQ-25

TYPE: Dipole.

DESCRIPTION: This is one of the antennas used for aligning the antenna of radar set AN/MPQ-25.

INSTALLATION: Ground, bracket mounted.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-25. Equipment function - test.

COGNIZANT AGENCY: ORDTU-206.

MANUFACTURER: L. H. Terpening Co., procurement contract DA-04-495-ORD-350.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-514/URM-6C

FREQUENCY: LF band, probably 0.132-0.25 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a whip made up of 3 sections. Its overall length is 53-1/8 inches, and its diameter tapers from 3/8 inch at the bottom to 1/8 inch at the top. It is constructed of chrome-alloy steel tubing with satin chrome-plate finish. The ends of the sections are color-coded to facilitate assembly. The antenna mounts by a connector receptacle similar to UG-421/U.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-6C Equipment function-test.

MISCELLANEOUS: The nomenclature card states that this antenna has a frequency range of 0.014-0.25 mc. This is the same as the frequency range of the associated equipment which uses two whip antennas of different lengths. This antenna probably covers only the upper portion of the frequency band indicated. Antenna AT-514/URM-6C is similar to but not interchangeable with AT-203/URM-6.

COGNIZANT AGENCY: U. S. Navy, Bu Ships.

MANUFACTURER: Espey Mfg. Co., Inc., New York, N.Y., part number 5.054, contract NObsr-49240.

REFERENCES:
1) Government Specification SHIPS-T-172.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-515/URM-6C

FREQUENCY: VLF and LF bands, probably 0.014-0.132 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a whip made of 4 sections. Its overall length is 86-7/16 inches and its diameter tapers from 3/8 inch at the bottom to 1/8 inch at the top. It is constructed of chrome-alloy steel tubing with satin chrome-plate finish. The ends of the sections are color-coded to facilitate assembly. The antenna mounts by a connector receptacle similar to UG-421/U.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-6c Equipment function-test.

MISCELLANEOUS: The nomenclature card states that this antenna has a frequency range of 0.014-0.25 mc. This is the same as the frequency range of the associated equipment which uses two whip antennas of different lengths. This antenna probably covers only the lower

portion of the frequency band indicated. Antenna AT-515/URM-6C is similar to but not interchangeable with AT-204/URM-6.

COGNIZANT AGENCY: U. S. Navy, Bu Ships.

MANUFACTURER: Espey Mfg. Co., New York, N. Y., part number 5.053, contract NObsr-49240.

REFERENCES:
1) Government Specification SHIPS-T-172.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-516/URM-6C

FREQUENCY: Probably LF band.

TYPE: Loop.

DESCRIPTION: The antenna is a shielded loop with a mean diameter of 5-1/4 inches. The antenna is made of litz wire wound on a plastic form. The loop has a brass shield. A magnetic compass is installed in the base to determine the bearing of the received signal.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-6c Equipment function-test and direction finding.

MISCELLANEOUS: Antenna AT-516/URM-6c is similar to but not interchangeable with AT-205/URM-6.

COGNIZANT AGENCY: U. S. Navy, Bu Ships.

MANUFACTURER: Espey Mfg. Co., Inc., New York, N. Y., part number 5.056, contract NObsr-49240.

REFERENCES:
1) Government Specification SHIPS-T-172.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-517/URM-6C

FREQUENCY: Probably VLF band

TYPE: Loop.

DESCRIPTION: The antenna is a shielded loop with a mean diameter of 30 inches. The antenna is made of litz wire wound on a plastic form. The loop has a brass shield and mounts on a tripod. A magnetic compass is installed in the base of the antenna to determine the bearing of the received signal.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-6c Equipment function-test and direction finding.

MISCELLANEOUS: Antenna AT-517/URM-6C is similar to but not interchangeable with AT-206/URM-6.

COGNIZANT AGENCY: U. S. Navy, Bu Ships.

MANUFACTURER: Espey Mfg. Co., Inc., New York, N.Y., part number 5.055, contract NObsr-49240.

REFERENCES:
1) Government Specification SHIPS-T-172.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-521/URM-42

FREQUENCY: SHF band, 5200-11,000 mc.

TYPE: Horn antenna.

DESCRIPTION: The antenna is a flared waveguide horn. The antenna is 5-17/32 inches long and 2 inches high without the mounting bracket. The horn is 3-29/32 inches high overall including the bracket. The horn is terminated with a type N connector for connection to a 52-ohm coaxial cable. The antenna is mounted on a mast by means of a bracket 1-7/8 inches long by 7/8 inch in diameter. The horn can be rotated.

INSTALLATION: Ground, shipboard, or airborne.

ASSOCIATED EQUIPMENT: Radio Interference Monitoring Set AN/URM-42. Equipment function-test.

MISCELLANEOUS: The antenna is an AT-48/UP modified by adding a mounting bracket.

COGNIZANT AGENCY: U. S. Navy

MANUFACTURER: Stoddart Aircraft Radio Co., Inc., Hollywood, California, part number 91026-1, contract NObsr-63341.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-522/URM-42

FREQUENCY: UHF and SHF bands, 300 - 4000 mc.

TYPE: Conical antenna, discone type.

DESCRIPTION: The antenna is a discone which is connected to a 52-ohm coaxial cable. The dimensions are 7-1/2 inches high without the mounting bracket and connector, 10-13/16 inches high overall, 12 inches maximum diameter, and 6-15/16 inches minimum diameter. The antenna mounts on a mast by means of a mounting bracket 1-7/8 inches long by 7/8 inch in diameter.

INSTALLATION: Ground, shipboard, or airborne.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-42. Equipment function-test.

MISCELLANEOUS: The antenna is an AT-49A/APR-4 modified by adding a mounting bracket.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stoddart Aircraft Radio Co., Inc., Hollywood, California, order NObsr-63341.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-530/GR

FREQUENCY: MF and HF bands, 1.5-6 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 12-section telescopic whip.

BEAM DATA:
Beam Type - Omnidirectional in azimuth.
Polarization-Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-9. Equipment function - communication.

COGNIZANT AGENCY: SCLC-8896

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA HORN AT-531/UPM & ( )

FREQUENCY: SHF band, 12,800-18,000 mc.

TYPE: Horn antenna.

DESCRIPTION: The horn antenna is 0.702 inch wide by 1.25 inches high overall at the mouth. It is 3-1/4 inches long overall. The horn is made of silver-plated brass. Waveguide feed is used.

ASSOCIATED EQUIPMENT: Spectrum Analyzer AN/UPM-58 & ( ) and Radar Test Set AN/UPM-60 & ( ). Equipment function - test.

COGNIZANT AGENCY: SCLE-9231.

MANUFACTURER: Polarad Electronics Corp., Brooklyn, New York, procurement contract 13620-PH-53-93, Code 32199.

REFERENCES:
1) Polarad Drawing No. AP16432.
2) Signal Corps Technical Requirements SCL-2228, 2229.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-532/VR & ( )

FREQUENCY: HF and VHF bands, 25-50 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a two-piece adjustable whip. The bottom section is 1/2 inch in diameter and is 20 inches in length. The top section is 6 feet long and tapers from 1/4 inch in diameter at the base to 1/8 inch in diameter at the top. The nominal input impedance is 70 ohms. The whip is fed by coaxial transmission line and is used for transmitting and receiving.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-2, AN/VRC-2X, AN/VRC-6( ), AN/VRC-6X, and AN/VRC-6Y. Equipment function-communications.

MISCELLANEOUS: AT-532/VR & ( ) is similar to Antenna AT-129( )/VR but has a wider frequency coverage and different mounting facilities.

COGNIZANT AGENCY: SCLC-10337.

MANUFACTURER: Snyder Mfg. Co., Philadelphia, Pa., procurement contract 38210-PH-55, Code 77987.

STOCK NUMBER: Federal Stock Number 5985-284-4849.

REFERENCES:

1) Departments of the Army and the Air Force, Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide for Antenna AT-532/VR, SIG 7 & 8 AT-532/VR and TO 31R2-2VR-114, (June 21, 1957). UNCLASSIFIED.

2) Snyder Mfg. Co. Drawing SC-DL-90737.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-534(XN-1)/GRC

FREQUENCY: SHF band, 4400 - 5000 mc.

TYPE: Stacked array of slots.

DESCRIPTION: Antenna AT-534(XN-1)/GRC is a stacked array of 20 slots, 10 cut in each of the wide sides of a waveguide section which is fed by a 50-ohm coaxial cable. The slots are one-half the free-space wavelength long and are spaced, from center to center, one-half the guide wavelength apart. The assembly is covered with waterproof silicone glass tape to provide protection from the weather. The overall dimensions are 34-5/8 inches long by 10-inches in diameter. The antenna weighs 30 pounds.

BEAM DATA:

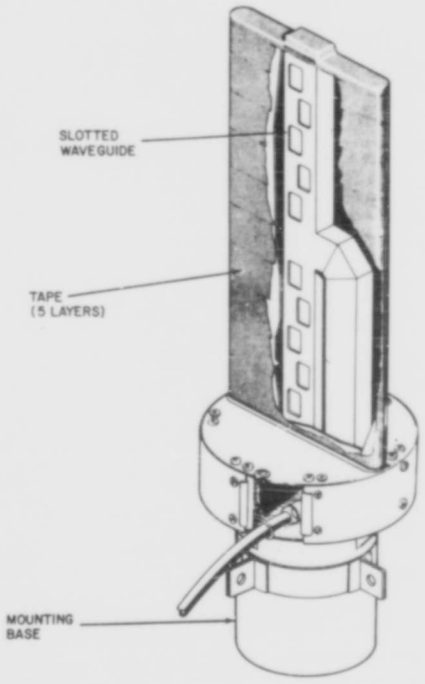
Gain - 10 db.

Half-power beamwidth - Vertical - 8°.

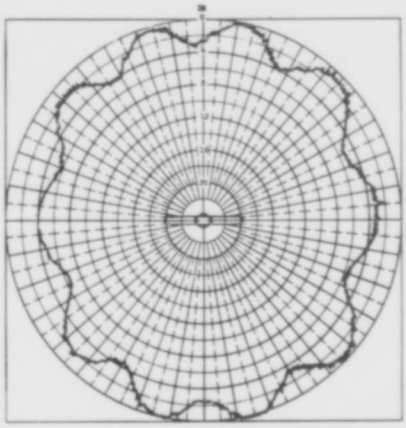
Beam type - Approximately omnidirectional in azimuth.

Polarization - Horizontal.

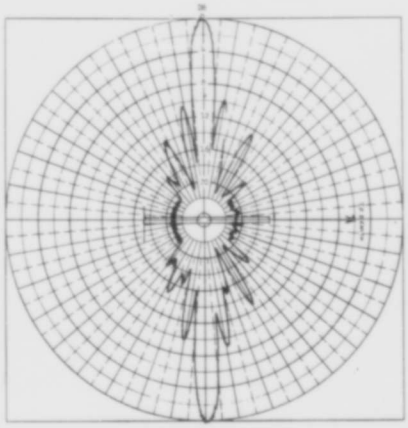
INSTALLATION: Ground.



AT-534(XN-1)/GRC



AT-534(XN-1)/GRC Antenna Azimuth Pattern for 4700 mc



AT-534(XN-1)/GRC Antenna Elevation Pattern for 4700 mc

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-15(XN-2). Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Melpar Inc., contract NObsr-39174.

REFERENCES:
1) U. S. Navy Bureau of Ships, Instruction Book for Antenna AT-534(XN-1)/GRC, NAVSHIPS 92291, (July 30, 1954). UNCLASSIFIED.
2) Melpar part drawing D-2618.

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MANUFACTURER: Gilfillan Brothers, Inc., order AF 33(600)-22444.

REFERENCES:
1) Gilfillan Bros. Drawing Number 60305.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-545/GPQ-T1

FREQUENCY: VHF band, 150-250 mc.

TYPE: Stub.

DESCRIPTION: The antenna is a stub of tubular construction. It is 12-1/2 inches high by 3-1/2 inches in diameter and mounts on antenna base AB-404/GRQ-T1.

BEAM DATA:
Beam type-Omnidirectional in azimuth.
Polarization-Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Training Set AN/GPQ-T1. Equipment function-training.

COGNIZANT AGENCY: AEL-54-408.

MANUFACTURER: Gilfillan Brothers, Inc., order AF 33(600)-22444.

REFERENCES:
1) Gilfillan Bros. Drawing Number 53167.
2) Gilfillan Bros. Specification 52390.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-551/U

See OA-497/TLR-1.

ANTENNA AT-552/U

See OA-497/TLR-1.

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ANTENNA AT-552/URM-42

FREQUENCY: MF and HF bands, 1.5 - 6 mc.

TYPE: Whip antenna.

DESCRIPTION: The antenna is a 12-section, telescopic whip.

BEAM DATA:
Beam Type-Omnidirectional in azimuth.
Polarization-Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-9( ). Equipment function-communications.

COGNIZANT AGENCY: SCLC-8856.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-553/U

See OA-497/TLR-1.

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ANTENNA AT-554/APD-4

FREQUENCY: UHF band, 1650-1900 mc.

TYPE: Dipole

DESCRIPTION: The nomenclature card states that Antenna AT-554/APD-4 is a half-wave dipole with a quarter-wave matching slot antenna. It is fed by a 50-ohm coaxial cable, and is used to calibrate antenna AT-423/APD-4 during bench and preflight test.

BEAM DATA:
Polarization - Vertical or horizontal.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Direction finder Set AN/APD-4. Equipment function-test.

COGNIZANT AGENCY: WADC, AEL-58-R-435.

MANUFACTURER: Federal Telecommunications Laboratory.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-555/APD-4

FREQUENCY: SHF band, 3900-4550 mc.

TYPE: Modified half-wave dipole.

DESCRIPTION: The reference indicates that the antenna is an aluminum dipole with a quarter-wave matching slot. It is fed by a coaxial cable of 50 ohms characteristic impedance.

INSTALLATION: Ground.

MISCELLANEOUS: The antenna is used for bench and preflight testing of Antenna AT-424/APD-4.

COGNIZANT AGENCY: WADC, AEL-58-R-436.

MANUFACTURER: Federal Telecommunications Laboratory, procurement contract AF 33(600)-23388.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-558/URM-3 & ( )

FREQUENCY: LF, MF, HF, and VHF bands, 0.15-0.40 mc and 1.6-42 mc.

TYPE: Whip.

DESCRIPTION: The whip antenna is composed of five sections of chrome-plated steel rod that are screwed together. The overall length is 8-1/2 feet. The bottom section has a 1/4x20 threaded brass plug for screwing into the socket in the lead-in insulator of mounting bracket MT-195/U. Coaxial transmission-line feed is used.

BEAM DATA:
Beam Type-Omnidirectional in azimuth.
Polarization-Vertical.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-3. Equipment function - test.

COGNIZANT AGENCY: SCLC-8909.

MANUFACTURER: Dynamic Electronics-New York, Inc., Glendale, New York, part number 10582, procurement contract 3336-PH-52-04(61).

REFERENCES:
1) Departments of the Army and the Air Force, Radio Interference Measuring Set AN/URM-3, Technical Manual, Technical Order, TM 11-5084, TO 33A1-14-2-11, (Feb. 1956). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-564/U & ( )

FREQUENCY: LF, MF, HF, VHF, and UHF bands, 0.125-1000 mc.

TYPE: Probe.

DESCRIPTION: The antenna is a 12-inch length of r-f Cable RG-58C/U with r-f Jack UG-89B/U on one end. Six inches of shield is removed from the free end of the cable. It provides coupling of the associated equipment to the equipment under test.

ASSOCIATED EQUIPMENT: Frequency Meter AN/URM-32 & ( ). Equipment function-test.

COGNIZANT AGENCY: SCLH-11543.

MANUFACTURER: Radio Frequency Labs, Inc., Boonton, New York, orders DA-36-039-SC-15385 and 32256-PHILA-56-56 (5U).

REFERENCES:
1) Military Specification MIL-F-13569.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-566/GRC

See OA-1397/GRC

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ANTENNA AT-567/GPS

FREQUENCY: UHF band, 1250-1350 mc.

TYPE: Stacked array of slots and a waveguide horn.

DESCRIPTION: The antenna is a feed assembly normally used with a cut paraboloidal reflector, AT-572/FPS-20 or AT-641/GPS-4. It consists of a slotted feed line and a waveguide horn.

BEAM DATA:
Gain-Approximately 35 db when used with AT-572/FPS-20.
Polarization-Horizontal.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/GPS-4, AN/FPS-20, and AN/FPS-20A. Equipment function-search, air.

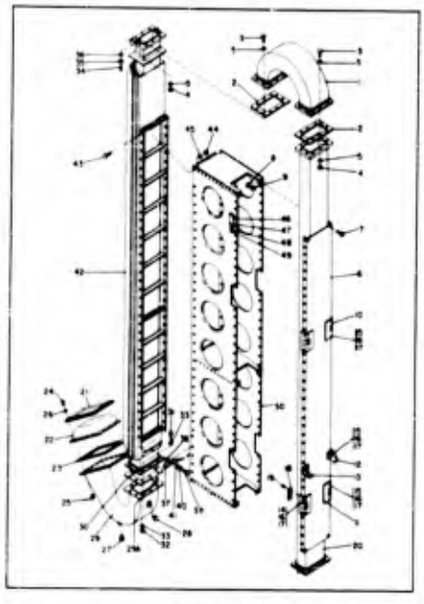
MISCELLANEOUS: Additional information is available in the Confidential document listed below as reference 6 and volume 5 of this catalog series.

COGNIZANT AGENCY: WL-54-1641.

MANUFACTURER: Goodyear Aircraft Corp. and Bendix Radio Div., order AF 30(602)-108.

STOCK NUMBER: Air Force 1800-022201030.

REFERENCES:
1) U. S. Air Force, Illustrated Parts Breakdown for Radar Set AN/FPS-20, Radar Set AN/FPS-20A, TO 31P6 2FPS20-4, (Oct. 31, 1957). UNCLASSIFIED.
2) U. S. Air Force, Handbook Operating Instructions for Radar Set AN/GPS-4, TO 31P6-2GPS4-1, (Feb. 15, 1957 - revised April 15, 1958). UNCLASSIFIED.
3) U. S. Air Force, Illustrated Parts Breakdown for Radar Set AN/GPS-4, TO 31P6-2GPS4-4, (Aug. 29, 1958). UNCLASSIFIED.
4) U. S. Air Force, Handbook Operating Instructions for Radar Set AN/FPS-20, Radar Set AN/FPS-20A, TO 31P6-2FPS20-1, (April 15, 1958 - revised Oct. 15, 1958). UNCLASSIFIED.
5) U. S. Air Force, Handbook Installation Instructions for Radar Set Groups AN/GPA-27 and AN/GPA-27A, AN/GPA-57 and AN/GPA-57A, AN/GPA 58 and AN/GPA-58A, TO 31P6-2GPA27-15, (Mar. 13, 1959). UNCLASSIFIED.
6) U. S. Air Force, Radar Set AN/FPS-20 and Radar Set AN/FPS-20A, Service Instructions, T.O. 31P6-2FPS20-2A, (Apr. 11, 1958 - revised Dec. 31, 1958). CONFIDENTIAL.
7) Government Specification ENG-1440.



AT-567/GPS

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ANTENNA AT-570/URM-42

FREQUENCY: UHF and SHF bands, 1000-10,000 mc.

TYPE: Conical antenna.

DESCRIPTION: The antenna is a discone 6 inches in diameter by 4-3/32 inches in depth. It is mounted by a 1-inch-diameter threaded base. The assembly includes a shield to protect the antenna when it is not in use. It is attached to the antenna by two thumb screws.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/URM-42. Equipment function-test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stoddart Aircraft Radio Co.,Inc. Hollywood, California, order NObsr-63341.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). CONFIDENTIAL.
2) Stoddart Drawing 90794-1.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-572/FPS-20

MAJOR COMPONENTS: 18 reflector sections, 4 truss sections, 6 tubular, fiberglass feed supports, and 1 feed-support frame.

FREQUENCY: UHF band, 1250-1350 mc.

TYPE: Cut paraboloidal reflector.

DESCRIPTION: The antenna is a sectionalized, cut paraboloid constructed of aluminum mesh and ribbing. The overall dimensions are 40 feet wide by 19 feet 2 inches high by 22 feet deep. It mounts on Antenna Support AB-415/FPS-20. It is normally used with antenna feed AT-567/GPS.

BEAM DATA: (When used with AT-567/GPS)
Gain-Approximately 35 db.
Polarization-Horizontal.

SCAN DATA: Antenna Pedestal AB-414/FPS-20 with its associated equipment is used with the reflector. Changes in the elevation of the radiated antenna pattern are made by tilting the reflector and feed as a unit. The tilt adjustment is manual and is made at the time of installation. The antenna is rotated in azimuth at a rate of 10, 6.6, 5, or 3.3 revolutions per minute.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPS-20 and AN/FPS-20A. Equipment function-search, air.

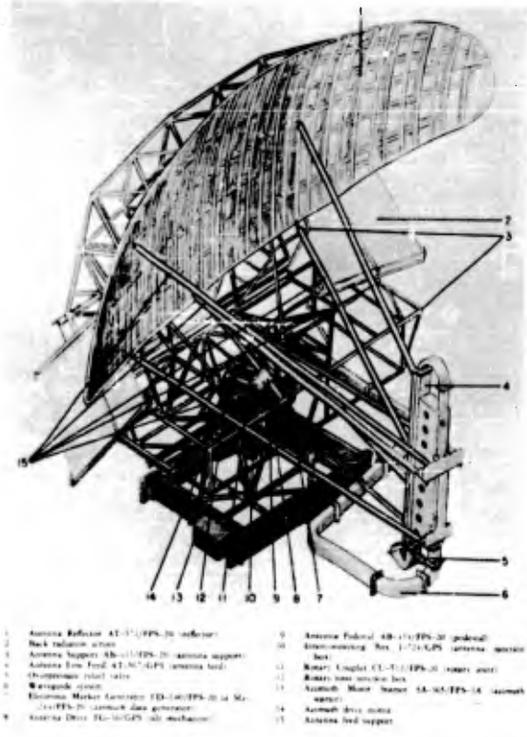
MISCELLANEOUS: AT-572/FPS is similar to AT-251/FPS-3 and AT-392/MPS-7 but is not interchangeable with either due to several differences in the feed support. AT-572/FPS is similar to and interchangeable with AT-641/GPS-4. They differ in difficulty of assembling the reflector sections.

COGNIZANT AGENCY: WL-56-1630.

MANUFACTURER: Bendix Radio Div., Towson, Maryland, order AF 30(635)-4052.

STOCK NUMBER: Air Force 1800-205199972.

REFERENCES:
1) U. S. Air Force, Radar Set AN/FPS-20, Radar Set AN/FPS-20A, Illustrated Parts Breakdown, T.O. 31P6-2FPS20-4, (Oct. 31, 1957). UNCLASSIFIED.
2) U. S. Air Force, Radar Set Groups AN/GPA-27 and AN/GPS-27A, AN/GPA-57 and AN/GPA-57A, AN/GPA-58 and AN/GPA-58A, T.O. 31P6-2GPA27-15, (March 13, 1959). UNCLASSIFIED.
3) U. S. Air Force, Radar Set AN/FPS-20, Radar Set AN/FPS-20A, Handbook Operating Instructions, T.O. 31P6-2FPS20-1, (April 15, 1958 - revised Oct. 15, 1958). UNCLASSIFIED.
4) John E. Cruickshank, Supplement #1 to Ground Radar Sets, Systems, and Related Components, Report No. RADC-TR-56-103. Griffis Air Force Base, New York: Rome Air Development Center, ARDC, USAF. (Feb. 1957). ASTIA Report No. AD97768. SECRET.
5) Government Specification RADC 2417.
6) U. S. Department of Defense Nomenclature Card.



AT-572/FPS

ANTENNA AT-588/TRC-42

FREQUENCY: VHF band, 116 - 132 mc.

TYPE: Coaxial dipole antenna.

DESCRIPTION: The antenna is a vertical coaxial dipole center-fed by a 52-ohm coaxial cable. Both the dipole elements are detachable to facilitate installation. It is normally mounted on a 3/4-inch pipe with American standard pipe thread.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-42. Equipment function - communication. Range - 100 miles.

MISCELLANEOUS: Reference 1, which describes an antenna referred to as AT-558/TRC-42, and the nomenclature card for Antenna AT-588/TRC-42 both describe the same antenna, a coaxial dipole. The nomenclature card for AT-558/URM-3 shows it to be a whip so Reference 1 is undoubtedly incorrect and should refer to AT-588/TRC-42 instead of AT-558/TRC-42.

MANUFACTURER: Schuttig and Company, College Park, Maryland, order 7531-Phila-54-55(31).

REFERENCES:
1) Department of the Army, Radio Set AN/TRC-42, Technical Manual, TM 11-221, (Mar. 1956). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-592/URN-3

FREQUENCY: UHF band, 960-1250 mc; VSWR<2.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna is a vertical stub, 4-1/4 inches long with a horizontal, plate-type ground plane, 12-1/2 inches square and 1/8 inch thick. The stub is made of silver-plated brass, and the ground plane of anodized aluminum. The antenna is designed for a 50-ohm coaxial cable with a type N connector. The antenna has spraytight construction with a rexolite cover for the vertical stub. The antenna weighs 2-1/2 pounds.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Frequency Monitor MX-1627/URN-3. Equipment function-test.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Federal Telecommunications Laboratory, Belleville, New Jersey, and Olympic Radio and Television Inc., Long Island City, New York, contract NObsr 64743.

REFERENCES:
1) Federal Telecommunications drawing number CBX-336947.
2) Olympic drawing numbers MS15292, SA15293 and AS15324
3) Technical Manual for Radio Frequency Monitor MX-1627?URN-3.



AT-592/URN-3

ANTENNA REFLECTOR AT-596/MPS-19 & ( )

FREQUENCY: UHF band, 2700-2900 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is made of magnesium and is 96 inches in diameter and 22 inches deep. It can be disassembled into 4 sections.

BEAM DATA: See AT-597/MPS-19 for beam data when this reflector is fed by AT-597/MPS-19.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPS-19. Equipment function-search.

COGNIZANT AGENCY: USA WL-54-2131.

MANUFACTURERS: Canoga Corp., Van Nuys, California and Reeves Instrument Corp., New York, New York (contractor), procurement contract AF 33(600)-18601.

REFERENCES:
1) U. S. Air Force and Bureau of Aeronautics, Handbook Operating Instructions and Radar Set AN/MPS-19, TO 31P2-2MPS19-1, (Aug. 1, 1956). CONFIDENTIAL.
2) Canogn Part/Drawing No. 142892.
3) Military Specification RADC-2292.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-597/MPS-19

FREQUENCY: UHF band, 2700-2900 mc.

TYPE: Two waveguide double-dipole feeds.

DESCRIPTION: The antenna consists of two interchangeable feeds normally used with an 8-foot paraboloidal reflector, AT-596/MPS-19. One feed furnishes vertical polarization, and the other, horizontal polarization. Each feed consists of a section of waveguide, 27-1/2 inches long, terminating in two dipoles. One dipole is 2-1/16 inches long and the other 1-3/4 inches long.

BEAM DATA: (When used with Reflector AT-596/MPS-19)
Half-power beamwidth-
Vertical - 3°
Horizontal-3°
Polarization-Either vertical or horizontal depending on feed used.

SCAN DATA: The feed nutates causing the beam tc generate a solid cone. The variation of the return from a target off the center of the cone is used for automatic tracking.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPS-19. Equipment function-tracking.

COGNIZANT AGENCY: WL-54-2132.

MANUFACTURER: Canoga Corp., Van Nuys, California, and Reeves Instrument Corp., New York, New York, order AF 33(600)-18601.

REFERENCES:
1) U. S. Air Force and Bureau of Aeronautics, Handbook Operating Instructions and Radar Set AN/MPS-19, TO 31P2-2MPS19-1, (Aug. 1, 1956). CONFIDENTIAL.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-601()/TRN

FREQUENCY: VHF band, 75 mc.

TYPE: Dipole.

DESCRIPTION: The nomenclature card lists the AT-601()/TRN as a straight dipole antenna which radiates a fixed, fan-shaped beam for air navigation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Beacon AN/TRN-9() and Radio Transmitter T-567()/TRN. Equipment function - navigation, ground reference.

COGNIZANT AGENCY: SCLC-10261.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA ELEMENT AT-602()/TRN

FREQUENCY: VHF band, 75 mc.

DESCRIPTION: The nomenclature card lists this element as an enamel-finished, cylindrical radiator for AT-601()/TRN at a frequency of 75 mc. Probably two of the radiators are used to form one AT-601/TRN dipole.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Beacon AN/TRN-9() and Radio Transmitter T-567()/TRN. Equipment function - navigation, ground reference.

COGNIZANT AGENCY: SCLC-10260.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-603/FPS-14

This nomenclature was replaced by AT-623/FPS-14. See OA-897 (*)/FPS-14.

ANTENNA AT-604/FPS-14&()

See OA-897(*)/FPS-14.

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ANTENNA AT-605()/GL

See AN/GLA-3(XE-1).

ANTENNA AT-606()/GL

See AN/GLA-3(XE-1).

ANTENNA AT-607()/GL

See AN/GLA-3(XE-1).

ANTENNA AT-608/GL

See AN/GLA-3(XE-1).

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ANTENNA AT-621/FRN

FREQUENCY: VHF band, 108 - 118 mc.

TYPE: Slot.

DESCRIPTION: The nomenclature card lists this antenna as a transmitting antenna which mounts on a shelter and includes an obstruction light.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/FRN-20 and similar sets. Equipment function - probably navigation, ground reference.

MISCELLANEOUS: Wilcox type 468A or 468B, code 65597.

COGNIZANT AGENCY: SCLE-9527.

MANUFACTURER: Wilcox Electric Company, Inc., Kansas City, Missouri, Signal Corps contract 24782-Phila-54-55(51).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-622()/GRN

FREQUENCY: VHF band, 30 - 40 mc.

TYPE: Whip.

DESCRIPTION: The nomenclature card lists this antenna as a self-erecting whip for receiving and transmitting. No other information is available.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/GRN-8 and Receiver-Transmitter RT-391()/GRN.

COGNIZANT AGENCY: SCLE-11571.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-623/FPS-14

See OA-897(*)/FPS-14.

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ANTENNA AT-631/FPA-6

TYPE: Waveguide horn.

DESCRIPTION: The antenna is a waveguide horn fed by coaxial cable which terminates in a probe at the waveguide. The antenna can be pressurized to a maximum pressure of 1/4 pound. It contains an integral radome with a built-in deicing system. It mounts on a truss support assembly. The antenna is constructed of stainless steel and finished with semigloss enamel. The approximate overall dimensions (in inches) are 22-1/8 long, 21 wide, and 8-3/4 deep. This horn is probably used as a feed for a parabolic cylinder consisting of AT-717/FPA-6, AT-718/FPA-6, and AT-719/FPA-6.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FPA-6.

COGNIZANT AGENCY: WL-56-1479.

MANUFACTURER: I-T-E Circuit Breaker Company, part number A94002-901, contract DP 120C, AF 18(600)-572.

REFERENCES:
1) Bell Telephone Laboratories engineering requirements G-525656, model 18123.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-632/FPA-6

TYPE: Waveguide horn.

DESCRIPTION: The antenna is a waveguide horn fed by a coaxial cable which terminates in a probe at the waveguide. The antenna can be pressurized to a maximum pressure of 1/4 pound. It contains an integral radome with a built-in deicing system. It mounts on a horn support assembly. The antenna is constructed of stainless steel and has an enamel finish. The overall length of the antenna is 80-17/64 inches. This horn is probably used as a feed for a parabolic cylinder consisting of AT-717/FPA-6, AT-718/FPA-6, and AT-719/FPA-6.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FPA-6.

COGNIZANT AGENCY: WL-56-1480.

MANUFACTURER: I-T-E Circuit Breaker Company part number 494016-901, procurement contract AF 18(600)-572.

REFERENCE:
1). Bell Telephone Laboratories engineering requirements G-525656, model 18123.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-633()/TRC

FREQUENCY: MF and HF bands, 1.7 - 15 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a receiving and transmitting dipole which mounts to natural supports such as trees, etc.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-62(), AN/TRC-63(), AN/TRC-64(), and AN/TRC-65. Equipment function - communications.

COGNIZANT AGENCY: SCLC-10915.

REFERENCES:
1) Technical Requirements SCL-1433.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-634/MPQ-4A&()

See OA-1258/MPQ-4A&().

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ANTENNA AT-639()/URH-2

FREQUENCY: Probably HF band, 14 - 30 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of 3 mast sections; the base section includes an impedance-matching network and housing. It is tripod mounted, has an input impedance of 50 ohms, and terminates in a type N connector.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: AN/URH-2.

MISCELLANEOUS: The nomenclature card lists the frequency range as 14 kc to 30 mc. Both frequencies probably should be in the same units (i.e., kc or mc) but no data are available to determine which is correct. The type N connector is usually used only at high frequencies, so the frequency is probably 14 to 30 mc.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Pickard and Burns, Incorporated, Needham, Massachusetts, U. S. Navy contract NObsr-57442.

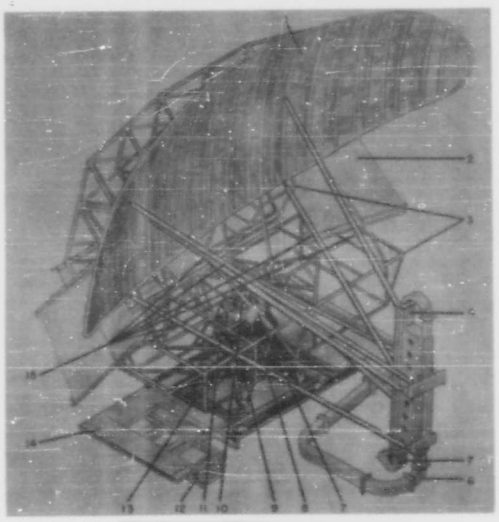
REFERENCES:
1) Military Specification MIL-E-16132 (Ships).
2) U. S. Department of Defense Nomenclature Card.

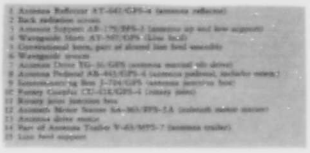
ANTENNA AT-641/GPS-4

FREQUENCY: UHF band, 1250 - 1350 mc.

TYPE: Cut paraboloidal reflector.

SCAN DATA: The antenna rotates in azimuth at a rate of 5 revolutions per minute.





AT-641/GPS-4

INSTALLATION: Ground, semimobile.

ASSOCIATED EQUIPMENT: Radar Set AN/GPS-4. Equipment function - search, air.

MISCELLANEOUS: AT-641/GPS-4 is similar to and interchangeable with AT-572/FPS-20. See AT-572/FPS-20 for major components, description, and beam data.

COGNIZANT AGENCY: WL-56-1536.

MANUFACTURER: Bendix Radio Division, Towson, Maryland, order AF 30(635)-4706.

STOCK NUMBER: Air Force 1800-023907510.

REFERENCES:
1) U. S. Air Force, Handbook Operating Instructions for Radar Set AN/GPS-4, TO 31P6-2GPS4-1, (Feb. 15, 1957 - revised April 15, 1958). UNCLASSIFIED.
2) U. S. Air Force, Illustrated Parts Breakdown for Radar Set AN/GPS-4, TO 31P6-2CPS4-4, (Aug. 29, 1958). UNCLASSIFIED.
3) John E. Cruickshank, Supplement #1 to Ground Radar Sets, Systems, and Related Components, RADC-TR-56-105. Griffiss Air Force Base, New York: Rome Air Development Center, (Feb. 1957). ASTIA Report No. AD-97768. SECRET.
4) U. S. Air Force Specification RADC-2395.
5) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-642/FR

FREQUENCY: LF, MF, and HF bands, 0.15 - 20 mc.

TYPE: Long wire.

DESCRIPTION: AT-642/FR is a single-wire antenna for receiving and transmitting. It is pole or tower mounted.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Transmitters BC-365-() and BC-329-F, and Radio Receiver BC-779-(). Equipment function - communications.

MISCELLANEOUS: This antenna replaced Antenna MX-764/FR, which has been cancelled.

COGNIZANT AGENCY: SCLC-10443.

MANUFACTURER: Victor Bernard Industries, Inc., Philadelphia, Pennsylvania, Signal Corps contract 25777-Phila-54-59(31).

STOCK NUMBERS: Signal Corps 2A204A-642, and Federal Stock Number 5985-503-0580.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-643/ARM-19

FREQUENCY: UHF band, 406 - 420 mc.

TYPE: Probably rod.

DESCRIPTION: The antenna consists of a silver-plated brass rod designed to mount to the top of AN/ARM-19 signal generator by means of two 6-32 captive screws. The case of the signal generator serves as the ground plane.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Signal Generator AN/ARM-19. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Babcock Radio Engineering, Inc., Van Nuys, California, (part number 2094), procurement contract NOas 54-784.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA REFLECTOR AT-644()/GR

TYPE: Corner reflector.

DESCRIPTION: The reflector is used to beam microwave signals. It is made of a laminated material whose outer surface is magnesium. Its overall dimensions are 4 feet long, 3 feet wide, and 6 feet high. The reflector mounts by means of four 13/32 inch mounting holes and can be adjusted in elevation and azimuth from the ground by means of halyards. No information is available on the feed for this reflector.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRT-4(), AN/TRR-9(), AN/TRQ-13(), AN/TRQ-11(), AN/TRQ-12(), and AN/TRC-44. Equipment function - communications.

COGNIZANT AGENCY: WL-55-1739.

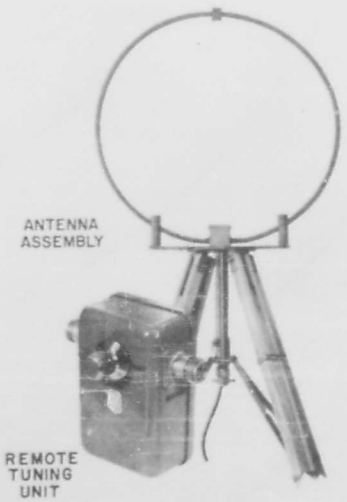
MANUFACTURER: Motorola, Inc., Chicago, Ill., U. S. Air Force contract AF 30(602)-783.

REFERENCES:
1) U. S. Air Force Specification RADC-1568.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-648(*)/TRN-3

FREQUENCY: MF band, 1.7 - 2.5 mc.



AT-648(*)/TRN-3
(Courtesy of Seiscor Manufacturing Company)

TYPE: Loop.

DESCRIPTION: AT-648/TRN-3 is a loop-type receiving antenna designed for use at the reference station of a LORAC Radio-Positioning System. A number of turns (see MISCELLANEOUS) of copper wire are threaded through a piece of conduit bent into a 3-foot circle to form a loop surrounded by an electrostatic shield. The loop is mounted on a base plate which can be rotated on a tripod for finding nulls. The base plate can be locked in any azimuth position. The antenna is terminated for 52-ohm coaxial cable feed. The assembled antenna and tripod has an overall height of 110 inches. The spread at the tripod base is 73 inches. The assembly weighs approximately 99 pounds.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: AN/TRN-3 and AN/TRN-3X. Equipment function - probably navigation, direction finding.

MISCELLANEOUS: AT-648(*)/TRN-3 denotes two models: AT-648/TRN-3 and AT-648A/TRN-3. The principle changes are in the use of all-welded construction of the conduit forming the loop of AT-648A/TRN-3 and in the con-

ductors forming the loop. Twelve turns of plastic insulated No. 18 AWG stranded copper wire form the loop of AT-648/TRN-3. Four turns of No. 18 AWG solid copper wire form the loop of AT-648A/TRN-3. The changes cause AT-468/TRN-3 to have greater sensitivity than AT-468/TRN-3.

COGNIZANT AGENCY: AT-648/TRN-3 . . . USN-57-b-960 and USN-57-b-1031; AT-648A/TRN-3 . . . USN-57-b-1026.

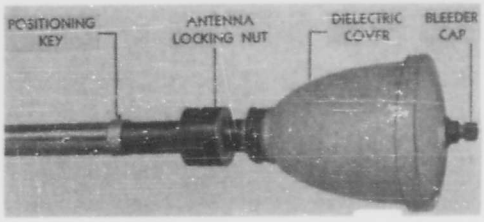
MANUFACTURER: Seiscor Manufacturing Company (Div. of Seismograph Service Corporation), Tulsa, Oklahoma, Navy contracts AT-648/TRN-3 . . . NObsr-71572 and NObsr-64651; AT-648A/TRN-3 . . . NObsr-71572.

STOCK NUMBERS: AT-648/TRN-3 . . . Federal Stock Number F 5985-642-7375; AT-648A/TRN-3 . . . Federal Stock Number F 5985-556-1160.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Private Correspondence.
3) U. S. Department of Defense Nomenclature Card.

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data give no indication that a nomenclature number exists for the reflectors. The reflectors are probably considered a part of Pedestal MP-61-().



AT-672/G

SCAN DATA: When used with Radio Set SCR-584(), provision is made for the following types of scanning.

A) Continuous azimuth scanning - The antenna rotates through 360° in azimuth at 6 revolutions per minute. The elevation angle is manually preset and remains constant.

B) Helical scanning - The elevation angle increases at a constant rate during 6-1/2 revolutions in azimuth and then returns to its original value in 1/2 cycle. The total elevation sector scanned is 20° and the appropriate sector is set by the operator with an elevation handwheel.

C) Manual scanning - The azimuth and elevation handwheels may be used to search a limited sector in azimuth and elevation.

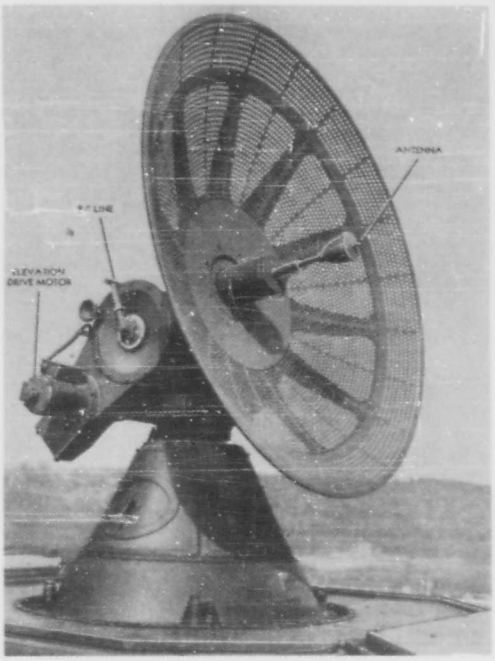
D) Tracking - The SCR-584-() is equipped for both manual and automatic tracking in azimuth and elevation, for manual range tracking, for aided range tracking, and for remote operation.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set SCR-584-(). Equipment function - search, air; and tracking. Range - 70,000 yards in search and 32,000 yards in tracking.
Radio Set SCR-784-(). Equipment function - probably search, air; and tracking.

MISCELLANEOUS: This antenna is also referred to in some publications as AN-101-AB.

COGNIZANT AGENCY: SCIM-7613.



AT-672/G Installed

MANUFACTURER: Molded Insulation Company, Philadelphia, Pennsylvania, Signal Corps contracts 21243-PHILA-54 and 32107-PHILA-55.

STOCK NUMBERS: AT-672/G ... Federal Stock Number 5985-665-2683; AN-101-A ... Federal Stock Number 5895-697-0679B.

REFERENCES:
1) War Department, Radio Sets SCR-584-A and SCR-584-B Technical Operation Manual, General Description, Operating Instructions, and Equipment Performance Log, Technical Manual, TM 11-1324, (April 1946). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Antenna AT-672/G (Includes AN-101-A, B) Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide, SIG 7 & 8 AT-672/G, TO 31R1-2G-254, (May 10, 1957). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-673/PRC-33

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a quarter-wave, base-loaded whip for transmitting and receiving. It has an input impedance of 8 ohms and is terminated for a coaxial cable feed. The antenna is made of steel and mounts to an r-f connector. It is 0.10 inch

in diameter and has an overall length of 39-1/2 inches.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-33. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Industrial Radio Corporation, Chicago, Illinois, U. S. Navy contract NObsr-64749.

STOCK NUMBER: Federal Stock Number N5985-644-0214.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Private Correspondence.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-674()/U

FREQUENCY: SHF band, 5400-5900 mc.

TYPE: Turnstile.

BEAM DATA:
Half-power beamwidth - E- and H-planes - 70° to 90°.
Beam type - Wide conical beam.
Polarization - Circular on an axis perpendicular to the plane of the elements.

INSTALLATION: Ground or airborne (missile).

MISCELLANEOUS: AT-674()/U is similar to AT-358/U.

COGNIZANT AGENCY: SCLE-9689.

MANUFACTURER: Evans Signal Laboratory, Belmar, N. J.

REFERENCES:

1) J. B. Chown, Research Investigation of Beacon-Tracking Antenna Problems at White Sands Missile Range, Report No. II. Menlo Park, California: Stanford Research Institute. (July 1958). ASTIA Report No. AD 209 515. UNCLASSIFIED.

2) U. S. Signal Corps, Status of Signal Corps Beacon Antennas, (July 1, 1957). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-675()/U

FREQUENCY: SHF band, 5400 - 5900 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is probably a pair of crossed dipoles similar in appearance to a turnstile antenna but fed in phase.

BEAM DATA:
Half-power beamwidth - 70 to 90°.
Beam type - Wide conical beam.
Polarization - Linear.

INSTALLATION: Ground or airborne (missile).

MISCELLANEOUS: AT-675()/U is similar to AT-347()/UPN.

COGNIZANT AGENCY: SCLE-9690.

MANUFACTURER: Evans Signal Laboratory, Belmar, N. J.

REFERENCES:

1) J. B. Chown, Research Investigation of Beacon-Tracking Antenna Problems at White Sands Missile Range, Report No. II. Menlo Park, California: Stanford Research Institute. (July 1958). ASTIA Report No. AD 209 515. UNCLASSIFIED.

2) U. S. Signal Corps, Status of Signal Corps Beacon Antennas, (July 1, 1957). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-676/PRM-21

FREQUENCY: MF and HF bands, 1.7 - 4.0 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a loop and is used for making field-strength measurements. Provision is made for manual rotation of the loop. It is mounted on a special recessed receptacle at the top of Field Strength Meter AN/PRM-21.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Field Strength Meter AN/PRM-21. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Industrial Television, Inc., Clifton, N. J., procurement contract USCG TCG-39771.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-677()/VR

FREQUENCY: VHF band, 152 - 174 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a whip for vehicular mounting. It mounts by three 17/64-inch holes spaced 2-3/4 inches apart and is enclosed by fiberglass.

INSTALLATION: Ground, vehicular.

COGNIZANT AGENCY: SCLC-10545.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-678/TRM-6

FREQUENCY: UHF and SHF bands, 950 - 10,000 mc.

TYPE: Conical (discone).

DESCRIPTION: AT-678/TRM-6 is a broadband, omnidirectional discone antenna. It is tripod mounted and is 9-3/16 inches in diameter by 10-5/16 inches long. Its input impedance is 50 ohms, and it terminates in a type N connector.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-6(). Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: USAF AEL-55-616.

MANUFACTURER: Polarad Electronics Corporation, U. S. Air Force contract AF 33(600)-28123.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-679/TRM-6

FREQUENCY: UHF band, 950 - 2240 mc.

TYPE: Horn.

DESCRIPTION: The antenna is probably a waveguide horn which terminates in a 50-ohm type N connector. It is tripod mounted and is 13-3/4 inches wide, 9-7/16 inches high, and 7-7/8 inches long.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-6(). Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: USAF AEL-55-617.

MANUFACTURER: Polarad Electronics Corporation, U. S. Air Force contract AF 33(600)-28123.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-680/TRM-6

FREQUENCY: UHF and SHF band, 2140 - 4340 mc.

TYPE: Horn.

DESCRIPTION: The antenna is probably a waveguide horn which terminates in a 50-ohm type N connector. It is tripod mounted and is 13-29/32 inches wide, 10-1/2 inches high, and 17-11/16 inches long.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-6(). Equipment function probably countermeasures, monitoring.

COGNIZANT AGENCY: USAF AEL-55-618.

MANUFACTURER: Polarad Electronics Corporation, U. S. Air Force contract AF 33(600)-28123.

REFERENCE: U. S. Department of Defense Nomenclature Card.

ANTENNA AT-681/TRM-6

FREQUENCY: SHF band, 4190 - 7740 mc.

TYPE: Horn.

DESCRIPTION: The antenna is probably a waveguide horn and was designed for use with Antenna Reflector AT-683/TRM-6. The combination of the two comprises a directive antenna operating in the listed frequency range. The antenna terminates in a 50-ohm type N connector. It is 2-1/4 inches wide, 1-15/16 inches high, and 3-3/16 inches long. In use, it mounts to Antenna Reflector AT-683/TRM-6.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-6(). Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: USAF AEL-55-619.

MANUFACTURER: Polarad Electronics Corporation, U. S. Air Force contract AF 33(600)-28123.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-682/TRM-6

FREQUENCY: SHF band, 7360 - 10,000 mc.

TYPE: Horn.

DESCRIPTION: The antenna is probably a waveguide horn and was designed for use with Antenna Reflector AT-683/TRM-6. The combination of the two comprises a directive antenna operating in the listed frequency range. The antenna terminates in a 50-ohm type N connector. It is 1-5/8 inches wide, 1-1/2 inches high, and 3 inches long. In use, it mounts to Antenna Reflector AT-683/TRM-6.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-6(). Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: USAF AEL-55-620

MANUFACTURER: Polarad Electronics Corporation, U. S. Air Force contract AF 33(600)-28123.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA REFLECTOR AT-683/TRM-6

FREQUENCY: SHF band, 4190 - 10,000 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The reflector is an 18-inch paraboloidal reflector designed for use with Antenna AT-681/TRM-6 or Antenna AT-682/TRM-6. It is constructed of aluminum and finished with gray enamel. The reflector is tripod mounted and is 18 inches in overall diameter and 9-7/8 inches in overall depth.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-6(). Equipment function - probably countermeasurers, monitoring.

COGNIZANT AGENCY: USAF AEL-55-621.

MANUFACTURER: Polarad Electronics Corporation, U. S. Air Force contract AF 33(600)-28123.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-684/CPN-4C&()

Cancelled 29 March 1957. See OA-1075/CPN-4C&().

ANTENNA AT-685/CPN-4C&()

Cancelled 22 March 1957. See OA-1075/CPN-4C&().

ANTENNA AT-686/TRM-4

FREQUENCY: VHF and UHF band, 200 - 1000 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a hand-held electrostatically shielded loop antenna which is used to detect r-f leakage from r-f sources, cables, shields, etc. The loop is 1-1/4 inches in diameter, and the overall length, including the handle, is 6-11/16 inches. It is terminated for coaxial leadin.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-4. Equipment function-test.

COGNIZANT AGNECY: USAF AEL-55-748.

MANUFACTURER: Measurements Corporation, part number H-5479, U. S. Air Force contract AF 33(038)-9009.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-687/TRM-4

FREQUENCY: VHF band, 150 - 250 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a hand-held electrostatically shielded loop antenna which is used to detect r-f leakage from r-f sources, cables, shields, etc. The loop is 3-3/8 inches in diameter, and the overall length, including the handle, is 8-11/16 inches. It is terminated for coaxial leadin.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-4. Equipment function - test.

COGNIZANT AGENCY: USAF AEL-55-749.

MANUFACTURER: Measurements Corporation, part number H-5480, U. S. Air Force contract AF 33(038)-9009.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-688/TRM-4

FREQUENCY: UHF band, 450 - 1000 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a dipole with two pairs of interchangeable, telescopic dipole elements. One pair of elements, whose lengths are 6-1/16 inches retracted and 8-11/16 inches extended, covers the frequencies between 720 and 1000 mc. The other pair of elements, whose lengths are 8-9/16 inches retracted and 13-5/16 inches extended, covers the frequencies between 450 and 720 mc. The sliding members have calibrated markings so that they can be adjusted to any frequency within the range covered. The antenna mounts on Antenna Stand AB-457/TRM-4 and is adjustable in position. The antenna contains a matching transformer to match the antenna to a 50-ohm feed.

TUNING/MATCHING DEVICES: Two pairs of telescopic elements are supplied to cover the 450-to 1000-mc frequency range. A matching transformer matches the antenna to a 50-ohm feed.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-4. Equipment function - test.

COGNIZANT AGENCY: USAF AEL-55-750.

MANUFACTURER: Measurements Corporation, part number H-5481, U. S. Air Force contract AF 33(038)-9009.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-689/TRM-4

FREQUENCY: VHF and UHF bands, 150 - 460 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a dipole with two pairs of interchangeable, telescopic dipole elements. One pair of elements, whose lengths are 12-7/16 inches retracted and 21-7/16 inches extended, covers the frequencies between 270 and 460 mc. The other pair of elements, whose lengths are 21-7/16 inches retracted and 38-3/16 inches extended, covers the frequencies between 150 and 270 mc. The sliding members have calibrated markings so that they can be adjusted to any frequency within the range covered. The antenna mounts on Antenna Stand AB-457/TRM-4 and is adjustable in position. The antenna contains a matching transformer to match the antenna to a 50-ohm feed line.

TUNING/MATCHING DEVICES: Two pairs of telescopic dipole elements are supplied to cover the 150- to 460-mc frequency range. A matching transformer matches the antenna to a 50-ohm feed.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-4. Equipment function - test.

COGNIZANT AGENCY: USAF AEL-55-751.

MANUFACTURER: Measurements Corporation, part number H-5482, U. S. Air Force contract AF 33(038)-9009.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-703()/URH-2

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Dipole.

DESCRIPTION: Antenna is an adjustable, resonant dipole designed to mount on a tripod. It is motor driven and adjustable in both azimuth and polarization. Input impedance is 50 ohms, and the antenna is equipped with a type N connector.

INSTALLATION: Ground portable.

ASSOCIATED EQUIPMENT: Electromagnetic Energy Recorder Set AN/URH-2. Equipment function - test.

MISCELLANEOUS: Antenna AT-704()/URH is similar to AT-703()/VRH-2 but covers the frequency range from 400 to 1000 mc.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Pickard and Burns, Inc., Needham, Mass.

REFERENCES:
1) Pickard and Burns, Inc., Drawing C-10215-P1.
2) Military Specification MIL-E-16132.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-704()/URH-2

FREQUENCY: UHF band, 400 - 1000 mc.

TYPE: Dipole.

DESCRIPTION: Antenna is an adjustable, resonant dipole designed to mount on a tripod. It is motor driven and adjustable in both azimuth and polarization. Input impedance is 50 ohms, and the antenna is equipped with a type N connector.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Electromagnetic Energy Recorder Set AN/URH-2. Equipment function - test.

MISCELLANEOUS: Antenna AT-703()/URH is similar to AT-704()/URH-2 but covers the frequency range from 225 to 400 mc.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Pickard and Burns, Inc., Needham, Mass.

REFERENCES:
1) Pickard and Burns, Inc., Drawing C-10215-P2.
2) Military Specification MIL-E-16132.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-709/URM-41

FREQUENCY: VLF band.

TYPE: Dipole.

DESCRIPTION: The nomenclature card states that the frequency range of this antenna is 15 cycles per second to 15 kc. However, the dipole length is only 15-1/8 inches and the diameter is 1/4 inch. The dipole is constructed in two sections designed to mount by means of two banana-type plugs on 3/4 inch centers.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: AN/URM-41. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Stoddart Aircraft Radio Co., Hollywood, California, procurement contract NObsr-71168.

REFERENCES:
1) Stoddart Aircraft Radio Co. drawing 91299-1.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-713/MPS-16

See OA-1196/MPS-16.

ANTENNA AT-714/MPS-16

See OA-1196/MPS-16.

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ANTENNA AT-715/ARW-66

FREQUENCY: UHF band, 406 - 420 mc.

TYPE: Quarter-wave stub mounted over a ground plane.

DESCRIPTION: The reference cited below indicates that Antenna AT-715/ARW-66 consists of a quarter-wave radiating element, fed by a 52-ohm coaxial cable, and mounted vertically over a 0.064-inch aluminum alloy ground plane which is 6-3/4 inches high, 14-1/16 inches in diameter and which has a slope of 30°. The single radiating element is constructed of silver-plated brass and is 6-3/8 inches long. The antenna mounts on a mast.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/ARW-66.
Equipment function - remote control.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Babcock Radio Engineering, Inc., Van Nuys, California.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-716()/GRD

TYPE: Loop.

DESCRIPTION: The antenna is formed by two untuned loops mounted at right angles to form a cross-loop antenna. The antenna is base mounted.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Static Direction Finder AN/GRD-1(), and Sferics Set AN/FMD-1().

Equipment function - meteorological measurement.

MISCELLANEOUS: AT-716()/GRD is a replacement for Loop Antenna AT-114()/GRD-1A.

COGNIZANT AGENCY: SCLE-9905.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA REFLECTOR SECTIONS AT-717/FPA-6, AT-718/FPA-6, and AT-719/FPA-6

TYPE: Parabolic-cylinder reflector.

DESCRIPTION: The three reflector sections form a single parabolic-cylinder reflector which is probably fed by AT-631/FPA-6 or AT-632/FPA-6 (waveguide horns). The sections are made of steel and are finished with semi-gloss enamel. Each of the sections is 72-9/16 inches high and 76-11/16 inches deep. The lengths are tabulated below.

AT-717/FPA-6 (end section) ... 257-5/64 inches long
AT-718/FPA-6 (end section) ... 257-5/64 inches long
AT-719/FPA-6 (center section) ... 110 inches long.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FPA-6.

COGNIZANT AGENCY: WL-56-1484, WL-56-1485, and WL-56-1486.

MANUFACTURER: I-T-E Circuit Breaker Company, Inc., Philadelphia, Pa., part numbers 494001-904, 494001-903, and 494001-901, contract AF-18(600)-572.

REFERENCES:
1) Bell Telephone Laboratories engineering requirements G-525656, model GS-18123.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-723()/VR

FREQUENCY: VHF band, 47 - 59 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a plastic-covered whip designed for vehicular use.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-3() thru-8(). Equipment function - communications.

COGNIZANT AGENCY: SCLC-10948.

REFERENCES:
1) Military Specification SCL-1729.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-724()/VR

FREQUENCY: VHF band, 38 - 55 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a plastic-covered whip designed for vehicular use.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-3() thru-8(). Equipment function - communications.

COGNIZANT AGENCY: SCLC-10949.

REFERENCES:
1) Military Specification SCL-1729.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-725()/VR

FREQUENCY: HF and VHF bands, 20 - 39 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a plastic-covered whip designed for vehicular use.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-3() thru -8(). Equipment function - communications.

COGNIZANT AGENCY: SCLC-10950.

REFERENCES:
1) Military Specification SCL-1729.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-726()/VR

FREQUENCY: HF and VHF bands, 25 - 50 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a plastic-covered whip designed for vehicular use.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-6(). Equipment function - communications.

COGNIZANT AGENCY: SCLC-10951.

REFERENCES:
1) Military Specification SCL-1729.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-727()/VR

FREQUENCY: VHF and UHF bands, 220 - 400 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a fixed-length, plastic-covered dipole designed for vehicular use.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-24(). Equipment function - communications.

COGNIZANT AGENCY: SCLC-10952.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-729()/G

FREQUENCY: VHF band, 132 - 152 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: AT-729()/G is designed as a vertical, mast-mounted antenna with a ground plane consisting of four elements.

BEAM DATA:
Beam type - Omnidirectional or cardioid (see MISCELLANEOUS).
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-48(). Equipment function - communications.

MISCELLANEOUS: The nomenclature card states that a cardioid-type pattern may be obtained; however, an additional element would be required for such a pattern.

COGNIZANT AGENCY: SCLC-10979.

REFERENCES:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-730/UR & ()

FREQUENCY: LF and MF bands, 0.2 - 0.8 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of a sectionalized aluminum whip with an impedance-matching transformer mounted in a weather-resistant, cast-aluminum-alloy housing. The transformer is so constructed that the antenna response is flat within 3 db throughout the range. The assembly is designed to match 75-ohm coaxial transmission line.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

COGNIZANT AGENCY: WL-56-1876.

REFERENCES:
1) Military Specification MIL-A-9597.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-731/G

FREQUENCY: VHF band, 132 - 152 mc.

TYPE: Ground plane.

DESCRIPTION: AT-731/G is a mast-mounted, omnidirectional antenna.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-49. Equipment function - communications.

COGNIZANT AGENCY: SCLC-10980.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-737/GPQ-T & ()

FREQUENCY: UHF and SHF bands, 1000 - 5000 mc.

TYPE: Probably a cut-paraboloidal reflector.

DESCRIPTION: The antenna consists of a reflector, probably a cut-paraboloid, and an associated feed. No information is available on the type of feed used. The overall antenna is 10 inches high, 12 inches deep, and 18 inches long. The input impedance is 50 ohms, and coaxial transmission line is used. Three Type 130 Polytechnic Research and Development attenuators (3, 6, and 10 db) are furnished with this antenna as auxiliary equipment.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Countermeasures Transmitter Training Signal T-613/GPQ-T4 and Countermeasures Transmitter Training Signal T-614/GPQ-T5. Equipment function - training.

COGNIZANT AGENCY: AEL-1038.

MANUFACTURER: Hallicrafter Co., procurement contract AF 33(604)-12400.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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WAVEGUIDE HORN AT-738/FRA-21

See AN/FRA-21 & ().

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ANTENNA AT-739/U

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of a half-wave whip, voltage fed at the lower end by a quarter-wave, shorted J-stub. The whip is constructed of flexible steel, and the stub of cadmium-plated steel tubing. The antenna is designed to match 52-ohm coaxial line but may be adjusted for other input impedances. The dimensions of the matching section are adjustable over the specified frequency range. Total height of the antenna is 16-1/4 feet to 21-2/3 feet. The antenna is furnished with two U-clamps for mounting to a 2-3/8-inch mast.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Sets AN/FRC-52, AN/FRC-52A. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Communications Company, Inc., Coral Gables, Florida, type 396-P VHF ACRO-MATCH, procurement contract NObsr-71359.

REFERENCES:
1) Private Correspondence.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-742/FPS-8 & ()

TYPE: Cut-paraboloidal reflector.

DESCRIPTION: The reflector is a cut-paraboloid with overall dimensions of 25 feet by 6-3/4 feet, by 15 feet. Reinforced plastic is used in the construction, and the reflector mounts on a steel supporting framework.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-8. Equipment function - search, air.

COGNIZANT AGENCY: WL-56-2294.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-745()/GRN

FREQUENCY: MF band, 1.4 - 1.75 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a fixed whip and is screw mounted to Radio Frequency Coil CU-587-()/GRN.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/GRN-11().

MISCELLANEOUS: Cancelled 28 March 1958.

COGNIZANT AGENCY: SCEL-57-107.

MANUFACTURER: Stromberg Carlson Co., Rochester, N. Y., code 58189, part number PB1003D-ED-1.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-746()/GRN

Cancelled 28 March 1958 - Never used.

ANTENNA AT-747/FRC & () and AT-747A/FRC & ()

See OA-1460/FRC & (), OA-1622/FRC-39 & (), and OA-1623/FRC & ().

ANTENNA AT-748/VRC

FREQUENCY: VHF and UHF bands, 220 - 400 mc.

TYPE: Stub.

DESCRIPTION: The antenna is a broadband stub designed for connection to coaxial transmission cable. It is constructed of zinc chromate and is 9-5/8 inches long and 2-1/4 inches in diameter.

INSTALLATION: Airborne; and ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/ARC-27. Equipment function - communications.

MISCELLANEOUS: AT-248/VRC is the same as AS-390A/SRC less the counterpoise element.

COGNIZANT AGENCY: USN-57-122.

MANUFACTURER: Kings Electronics Company, Tuckahoe, New York, procurement contract NO-bsr-71603.

STOCK NUMBER: Federal Stock Number F5985-546-0906.

REFERENCES:
1) Bureau of Ships drawings RE66F5858, and RE66F585F.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-751/FRA-26 & ()

See AN/FRA-26().

ANTENNA AT-752/FRA-26 & ()

See AN/FRA-26().

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ANTENNA AT-754/FRD-8&()

FREQUENCY: MF and HF bands, 2 - 32 mc.

TYPE: Crossed loop.

BEAM DATA:
Beam type - Probably double figure of eight.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Direction Finding Set AN/FRD-8. Equipment function - direction finding.

COGNIZANT AGENCY: WL-57-1075.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-757 ( )/PRN

FREQUENCY: VHF band, 45 - 60 mc.

TYPE: Probably whip.

DESCRIPTION: The antenna consists of a self-inflatable conical tube containing a single-wire radiating element. The dimensions of the cone when inflated are 1-5/16-inch diameter at the top, 2-5/16 inches at the bottom, and 67-1/2 inches in length. The nomenclature card states that the antenna is designed to inflate and extend automatically when dropped by parachute. This probably means that the antenna is extended upon contact with the ground. The nomenclature also states that the antenna is capacitively top loaded, a statement that is doubtful due to the length and top-diameter dimensions.

BEAM DATA:
Beam type - Probably omnidirectional in azimuth.
Polarization - Probably vertical.

INSTALLATION: Probably ground, portable.

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/PRN-2(). Equipment function - probably navigation, surface reference.

COGNIZANT AGENCY: SCEL-57-131.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-758/FRC-39 & ()

FREQUENCY: UHF band, 755 - 985 mc.

TYPE: Horn.

DESCRIPTION: This feed antenna is an aluminum waveguide horn with an E-plane flare. Overall dimensions are 28.375 inches long by 12.125 inches wide by 10.25 inches high. The inside of the mouth is 5.79 inches deep by 9.75 inches wide by 8 inches high. The horn is equipped with a heating element for deicing purposes.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-39.
Equipment function - communications.

MISCELLANEOUS: The antenna is probably used to feed Reflector AT-747/FRC & ().

COGNIZANT AGENCY: WL-57-R-1570.

MANUFACTURER: D. S. Kennedy & Co., Cohasset, Mass.; prime contractor, RCA, procurement contract AF 30(635)-6242.

REFERENCES:
1) Military Specification RADC-2425A.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-766()/FRA

See AN/FRA-26()

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ANTENNA AT-770/PRC-22 & ()

FREQUENCY: VHF and UHF bands, 225 - 399.9 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a telescopic whip 1/4 inch in diameter by 1.5 feet long when fully extended. The base is fitted with a BNC-type coaxial connector. Nominal input impedance is 50 ohms. The length is adjustable with ten detented positions for various frequencies.

BEAM DATA:
Beam type - Omnidirectional.
Polarization - Probably vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-22.
Equipment function - communications.

MISCELLANEOUS: AT-770/PRC-22 & () is similar to AT-771/PRC-22 & () without the ground-plane.

COGNIZANT AGENCY: USN-57-T-581.

MANUFACTURER: Lewyt Manufacturing Corporation, Long Island City, N. Y., procurement contract NObsr-71140.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-771/PRC-22 & ()

FREQUENCY: VHF and UHF bands, 225 - 399.9 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a quarter-wave adjustable whip, a ground plane consisting of three adjustable quarter-wave horizontal elements, and a ground stake 5 inches long by 3/8 inch in diameter. The vertical element is adjustable from 7-1/4 inches to 14 inches in length and is 1/4 inch in diameter. The ground-plane elements are adjustable from 7 1/4 inches to 14 inches in length and are 3/16 inch in diameter. The antenna is fitted with a BNC-type connector and includes 20 feet of RG-58/U coaxial cable. The element lengths are adjustable in 10 detented positions for various frequencies.

BEAM DATA:
Beam type - Omnidirectional:
Polarization - Vertical.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-22.
Equipment function - communications.

MISCELLANEOUS: AT-771-PRC & () is similar to AT-770/PRC-22 & () with addition of a ground-plane.

COGNIZANT AGENCY: USN-57-T-582.

MANUFACTURER: Lewyt Manufacturing Corp., Long Island City, N. Y., procurement contract NObsr-71140.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-776/FPN-28

FREQUENCY: SHF band, 9000 - 9180 mc.

TYPE: Horn.

DESCRIPTION: The antenna assembly consists of a nickel waveguide horn and includes an aluminum polarizing unit which permits either circular or linear polarization. The inside of the throat is 0.900 inches square, and the mouth is 2.050 inches wide and 0.866 inch high. Overall dimensions are 12.594 inches long by 5.896 inches wide by 7.548 inches high.

BEAM DATA:
Polarization - Circular or linear.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-28 and AN/FPN-28A. Equipment function - approach control.

MISCELLANEOUS: AT-776/FPN-28 replaces waveguide horn AT-409/MPN-5. (See AS-762/MPN-5.)

COGNIZANT AGENCY: USN-57-b-759.

MANUFACTURER: Bendix Radio Div., Towson, Md., procurement contract NObsr-63427.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-777/FPN-28

FREQUENCY: SHF band, 9000 - 9180 mc.

TYPE: Horn.

DESCRIPTION: The antenna assembly consists of a nickel waveguide horn and includes an aluminum polarizing unit which permits either circular or linear polarization. The inside of the throat is 0.900 inches square, and the mouth is 3.672 inches wide by 0.755 inch high. Overall dimensions are 12.466 inches by 5.896 inches wide by 7.548 inches high.

BEAM DATA:
Polarization - Circular or linear.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPN-28 and AN/FPN-28A. Equipment function - approach control.

MISCELLANEOUS: AT-777/FPN-28 replaces waveguide horn AT-410/MPN-5. (See AS-763/MPN-5.)

COGNIZANT AGENCY: USN-57-b-760.

MANUFACTURER: Bendix Radio Div., Towson, Md., procurement contract NObsr-63427.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-778/FRC-56 & ()

FREQUENCY: UHF band, 1700 - 2400 mc.

TYPE: Horn.

DESCRIPTION: This feed antenna is an aluminum-alloy waveguide horn with an E-plane flare. Overall dimensions are 25.875 inches long by 7 inches high by 6.5 inches wide. The inside of the mouth is 3.74 inches wide by 4.3 inches high by 2.125 inches deep. The horn contains a heater element for deicing.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-56(v). Equipment function - communications.

MISCELLANEOUS: AT-778/FRC-56 is used to feed AT-747()/FRC reflector.

COGNIZANT AGENCY: WL-57-1571.

MANUFACTURERS: D. S. Kennedy & Co., Cuhasset, Mass.; prime contractor, RCA procurement contract AF 30(635)-6242.

REFERENCES:
1) Military Specification RADC-2425A.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-781/U

FREQUENCY: UHF band, 406 - 549 mc; VSWR < 1.8.

TYPE: Stacked array.

DESCRIPTION: The antenna is a stacked array consisting of three bays of inclined dipoles equally spaced along the vertical supporting mast and a turnstile section placed between the top and center bays to increase overhead coverage. Each bay consists of four stub-

sleeve dipoles positioned 90° about the mast, inclined 45°, and fed in phase. The bays are vertically phased to tilt the beam 10° upward. The turnstile provides coverage at high angles of radiation. The resultant pattern is omnidirectional in azimuth. The pattern in the vertical plane is not omnidirectional, but some energy is radiated at all angles. A dividing network is used to distribute power equally to all bays and turnstile. The antenna is 80 inches high, and the overall diameter is 25-1/2 inches. The antenna is designed to use 50-ohm coaxial transmission cable.

BEAM DATA:
Gain - 5 db.
Beam type - Omnidirectional in azimuth.
Polarization - Circular in most directions.

INSTALLATION: Ground, fixed; and possibly shipboard.

ASSOCIATED EQUIPMENT: Radio Sets AN/FRW-2, AN/ARW-55, and AN/ARW-66. Equipment function - guidance; and telemetering.

COGNIZANT AGENCY: USN-57-Q-948.

MANUFACTURER: Gabriel Electronics, Needham, Mass., procurement contract NOas57-404f.

REFERENCES:
1) Gabriel Electronics Specification S185.
2) Gabriel Electronics Drawing No. D10288.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-785()/UPM-88

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Horn.

DESCRIPTION: The antenna is a weatherproof, waveguide horn designed to mount on AB-551()/ UPM-88 by means of two 1/2-24 tapped holes two inches apart.

BEAM DATA:
Polarization - Vertical or horizontal.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPM-88. Equipment function - test.

COGNIZANT AGENCY: SCEL-57-1422.

MANUFACTURER: General Communication Co., Boston, Mass., procurement contract 287-PH 55-91.

REFERENCES:
1) General Communications drawing TMP-5008.
2) Military Specification SCL-5017.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-786()/UPM-88

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Horn.

DESCRIPTION: The antenna is a weatherproof, waveguide horn designed to mount on AB-551()/ UPM-88 by means of two 1/2-24 tapped holes two inches apart.

BEAM DATA:
Polarization - Circular, right-hand or left-hand.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPM-88. Equipment function - test.

REFERENCES:
1) General Communications drawing TMP-5009.
2) Military Specification SCL-5017.
3) U. S. Department of Defense Nomenclature Card.

COGNIZANT AGENCY: SCEL-57-1423.

MANUFACTURER: General Communications Co., Boston, Mass., procurement contract 287-PH-55-91.

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ANTENNA AT-787()/UPM-88

FREQUENCY: SHF band, 5400 - 5900 mc.

TYPE: Horn.

DESCRIPTION: The antenna is a weatherproof, waveguide horn designed to mount on AB-551()/ UPM-88 by means of two 1/2-24 tapped holes two inches apart.

BEAM DATA:
Polarization - Vertical or horizontal.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPM-88. Equipment function - test.

COGNIZANT AGENCY: SCEL-57-1424.

MANUFACTURER: General Communication Co., Boston, Mass., procurement contract 287-PH-55-91.

REFERENCES:
1) General Communications drawing TMP-5010.
2) Military Specification SCL-5017.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-788()/UPM-88

FREQUENCY: SHF band, 5400 - 5900 mc.

TYPE: Horn.

DESCRIPTION: The antenna is a weatherproof, waveguide horn designed to mount on AB-551()/ UPM-88 by means of two 1/2-24 tapped holes two inches apart.

BEAM DATA:
Polarization - Circular, right-hand or left-hand.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPM-88. Equipment function - test.

COGNIZANT AGENCY: SCEL-57-1425.

MANUFACTURER: General Communication Co., Boston, Mass., procurement contract 287-PH-55-91.

REFERENCES:
1) General Communications drawing TMP-5011.
2) Military Specification SCL-5017.
3) U. S. Department of Defense Nomenclature Card.

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REFERENCES:
1) Military Specification SCL-1825.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-792/URM-17A

FREQUENCY: UHF band, 375 - 1000 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is an adjustable dipole with three pairs of dipole elements to cover the frequency range. A quarter-wave shorting stub is provided on the assembly. The antenna can be rotated through 360° and tilted through 90°. Element lengths are 5-5/8 inches, 3-7/8 inches, and 2-5/32 inches. The elements are chuck-mounted to the stub and head assembly. Dipole length, when assembled, varies from 5-1/2 inches to 16 inches. The assembly is designed for tripod mounting. Coaxial cable is used to feed the antenna.

BEAM DATA:
Beam type - figure of eight.
Polarization - Linear from horizontal to vertical depending on mounting position.

SCAN DATA: The antenna is adjustable through 360° in azimuth and 90° in elevation.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Test Set AN/URM-17-A. Equipment function - test.

MISCELLANEOUS: AT-792/URM-17A is identical to AT-255/URM-17 except for the redesigned base and frequency scale.

COGNIZANT AGENCY: USN-57-X-1091.

MANUFACTURER: Stoddart Aircraft Radio Co., Inc., Hollywood, California, part number 90330-4, procurement contract NObsr-71806.

REFERENCES:
1) Private Correspondence.
2) Navy Specification SHIPS-I-2714.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-795/FPS-33 & ()

See OA-1650/FPS-33 and OA-2331/FPS-37.

ANTENNA AT-796/FPS-33 & ()

See OA-1650/FPS-33.

ANTENNA REFLECTOR AT-797/FRC-39 & ()

See OA-1706/FRC-39 & ().

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ANTENNA HORN AT-802/UPM-9A

FREQUENCY: SHF band, 5100 - 5900 mc.

TYPE: Horn antenna.

DESCRIPTION: The horn is constructed of aluminum and is 7-3/8 inches long, 6-15/32 inches high, and 4-7/8 inches wide. It is fed by a 50-ohm coaxial cable.

ASSOCIATED EQUIPMENT: Radar Test Set AN/UPM-9A. Equipment function - test.

COGNIZANT AGENCY: USN-57-Q-1380.

MANUFACTURER: Polytechnic Research & Development Co., Inc., procurement contract N-393-45239 A.



WAVEGUIDE HORN
AT-802/UPM-9A

AT-802/UPM-9A

REFERENCES:
1) Bureau of Aeronautics, Handbook Operation Instructions for Radar Test Sets AN/UPM-9 and AN/UPM-9A, NAVAER 16-30UPM9-501, (May 1, 1956 - revised Jan. 1, 1958). UNCLASSIFIED.
2) Military Specification MIL-T-8560 (AER).
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-803()/VR

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Coaxial dipole.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-24. Equipment function - communications.

COGNIZANT AGENCY: SCEL-57-349.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-804/PRC

FREQUENCY: VHF band, 30 - 76 mc.

DESCRIPTION: The antenna, including a mast and carrying case, weighs approximately 20 pounds. It is used as a supplementary antenna to extend the range of forward-area, FM radio sets.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/PRC-25, AN/PRC-35, and AN/VRC-12. Equipment function - communications.

MISCELLANEOUS: The only source of information available on this antenna was a nomenclature card, which gives neither physical nor electrical description of the antenna.

COGNIZANT AGENCY: SCEL-57-321.

REFERENCES:
1) Government Specification SCL-1883.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA HORN AT-806/FRC-39&()

See OA-1706/FRC-39&().

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ANTENNA AT-807/URM-94

FREQUENCY: HF and VHF band, 25 - 174 mc.

TYPE: Probably a whip.

DESCRIPTION: The antenna is probably a whip. It is constructed of three sections which telescope into each other.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

ASSOCIATED EQUIPMENT: AN/URM-94. Equipment function - test.

COGNIZANT AGENCY: SESA-57-1223.

MANUFACTURER: Peerless Products Industries, Chicago, Ill., procurement contract 50633-PH-57-56.

REFERENCES:
1) Motorola Drawing number C-3040-B-136.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-808/TPS-21

FREQUENCY: Additional information which is confidential is available in the secret document listed below as Reference 1 and in Volume V of this catalog series.

TYPE: Cutler feed.

DESCRIPTION: The antenna is a Cutler feed normally used with a cut paraboloidal reflector, AT-809/TPS-21. The feed assembly is 12-7/8 inches long, 3-3/32 inches wide, and 2-5/16 inches high.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-21. Equipment function - search.

COGNIZANT AGENCY: USN-57-T-1991.

MANUFACTURER: Admiral Corp., Chicago, Ill., order NObsr 71883.

REFERENCES:
1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.
2) Admiral Drawing number 597C98.
3) Bureau of Ships Specification MIL-R-19837.
4) U. S. Department of Defense Nomenclature Card.

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COGNIZANT AGENCY: WL-58-1032.

MANUFACTURERS: D. S. Kennedy & Co., Cohasset, Mass., Code No. 91297, part number 727-11-G1; Radio Corporation of America (contractor), procurement contract AF 30(635)-6242.

REFERENCES:
1) Military Specification (Exhibit) RADC-2425A.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA HORN AT-827/FRC-56&()

FREQUENCY: UHF band, 1700 - 2400 mc.

TYPE: Horn antenna.

DESCRIPTION: The horn is constructed of aluminum alloy and is approximately 23.84 inches long, 8 inches wide, and 12-1/2 inches high. The horn is fed by a waveguide.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-39(V). Equipment function - communications.

MISCELLANEOUS: AT-827/FRC-56&() is similar to but not interchangeable with Waveguide Horn AT-821/FRC-56&().

COGNIZANT AGENCY: WL-58-1033.

MANUFACTURERS: D. S. Kennedy Co., Cohasset, Mass., code No. 91297, part number 727-11-G2; Radio Corporation of America, Camden, New Jersey, (contractor), procurement contract AF 30(635)-6242.

REFERENCES:
1) Military Specification (Exhibit) RADC-2425A.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-837/TRC

FREQUENCY: MF and HF bands, 2 - 30 mc.

TYPE: Probably a shunt-fed monopole.

DESCRIPTION: The antenna is a ground-mounted, telescopic mast. It is lightweight and quickly erectable. It can withstand winds up to 60 miles per hour without guys and winds up to 125 miles per hour with guys.

BEAM DATA: The beam in the vertical plane is controlled, by adjusting the height, to optimize operation over short-, intermediate-, and long-distance sky paths. The azimuth pattern is somewhat directional.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communications.

COGNIZANT AGENCY: WL-58-1043.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-838/GPA-68&()

FREQUENCY: UHF band, 1070 - 1130 mc.

TYPE: Probably a cut paraboloidal reflector.

DESCRIPTION: The antenna is probably a cut paraboloidal reflector. It measures 45 inches by 22 inches by 20 inches and is pedestal mounted.

BEAM DATA:
Gain - 22 db.
Half-power beamwidth - Vertical - 10°.
Horizontal - 25°.
Polarization - Vertical.

SCAN DATA: Does not scan.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Receiver Group AN/GPA-68&().

COGNIZANT AGENCY: AEL-58-92.

MANUFACTURER: Stewart-Warner Corp., Chicago, Ill., code 98738, part number 85X202359, procurement contract AF 30(635)-8994.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-841/VRC

FREQUENCY: VHF band, 132 - 152 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a whip 1/16 inch in diameter and 20-25/32 inches in length. It is fed by a 50-ohm coaxial line and is used for receiving and transmitting.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Set AN/VRC-37.
Equipment function - communications.

COGNIZANT AGENCY: USN-58-T-617.

MANUFACTURER: Motorola, Inc., Chicago, Ill., Model TU-316N, procurement contract NObsr-71897.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-842/FRC-58

MAJOR COMPONENTS: 1 folded monopole, 1 ground-rod assembly, and 1 insulator assembly.

FREQUENCY: VHF band, 30 - 44 mc.

TYPE: Folded monopole.

DESCRIPTION: The antenna is a folded monopole over a ground plane. The folded monopole is constructed of two whips probably joined at the top. The whip which is connected to the feed line is 5/8 inch in diameter and 96 inches in length. The whip which is connected to the ground plane is 1/2 inch in diameter and 98-13/16 inches in length. The ground plane consists of four equispaced, radial rods. Each ground-plane rod tapers from 3/4 inch in diameter to 3/8 inch in diameter and is 96 inches long. The antenna is fed by a 50-ohm coaxial line. It is used for both receiving and transmitting.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-58.
Equipment function - communications.

COGNIZANT AGENCY: N-58-T-629.

MANUFACTURERS: Andrew Co. and Motorola, Inc., Chicago, Ill., model DS-9663, procurement contract NObsr-71897.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-843/GRN

FREQUENCY: LF and MF bands, 0.25 - 0.35 mc.

TYPE: Whip.

DESCRIPTION: The antenna is an adjustable whip fed by a 50-ohm coaxial line.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Alarm Monitor BZ-49/GRN.
Equipment function - navigation.

COGNIZANT AGENCY: N-58-ac-682.

MANUFACTURERS: Inland Electronics, Aurora, Ill., code 02572, part number D-295-108, procurement contract Tcg-40530 (CG-40,142-A).

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-844/URC-33&()

MAJOR COMPONENTS: 1 whip antenna and 4 ground radials.

FREQUENCY: HF band, 3 - 26 mc.

TYPE: Whip.

DESCRIPTION: The antenna consists of a telescopic whip with four 40-foot ground radials. The whip is 15 feet 9 inches extended and 1 foot collapsed. It is 1 inch in diameter and weighs 1 pound.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

ASSOCIATED EQUIPMENT: Radio Set AN/URC-33&().
Equipment function - communications.

COGNIZANT AGENCY: AEL-58-152.

MANUFACTURER: Ramo-Wooldridge Corp., procurement contract AF 33(600)-32683.

REFERENCES:
1) Military Specification (Exhibit) WCLN-1385.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-846/FRA-39 and AT-847/FRA-39

FREQUENCY: UHF band, 752 - 916 mc for AT-846/FRA-39; 794 - 952 mc for AT-847/FRA-39.

TYPE: Horn.

DESCRIPTION: Both antennas are aluminum horns which connect to a coaxial transmission-line feed by means of a coaxial-to-waveguide adapter. Their approximate overall dimensions are 36-1/2 inches long by 19-1/2 inches wide by 16 inches high.

INSTALLATION: Ground.

MISCELLANEOUS: AT-846/FRA-39 and AT-847/FRA-39 are part of Antennas AN/FRA-39 and AS-859/FRA-21.

COGNIZANT AGENCY: WADC.

REFERENCE:
Requests for Nomenclature Cards.

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ANTENNA ELEMENT AT-848/URM-7

See Antenna AS-920/URM-7&().

ANTENNA ELEMENT AT-849/URM-7

See Antenna AS-921/URM-7&().

ANTENNA AT-850/URM-7

See Antenna AS-922/URM-7&().

ANTENNA REFLECTOR AT-851/URM-7

See Antenna AS-922/URM-7&().

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ANTENNA AT-853/FRC-59

MAJOR COMPONENTS: 1 folded monopole and 1 ground-rod assembly.

FREQUENCY: VHF band, 132 - 152 mc.

TYPE: Folded monopole.

DESCRIPTION: The antenna is a vertical folded monopole over a ground plane. The folded monopole is made of two whips, probably joined at the top, with the bottom of one grounded while the bottom of the other is fed by a coaxial line. The whip which is fed is 0.625 inch in diameter and is adjustable from 10 to 14 inches in length. The grounded whip is 1/2 inch in diameter and is adjustable from 12-1/3 to 16-1/3 inches in length. The ground plane consists of four equispaced radial rods each of which is 31 inches in length and 0.625 inch in diameter.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set AN/FRC-59.
Equipment function - communications.

COGNIZANT AGENCY: N-58-T-950.

MANUFACTURERS: Andrew Co. and Motorola, Inc., Chicago, Ill., part numbers 80771-1, K-19585-4, L-10666-4, and K-19585-4, procurement contract NObsr-71897.

REFERENCES:
1) Motorola drawing number 85D85851.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-854/FRC-47

See OA-1657/FRC-47.

ANTENNA AT-857/U

FREQUENCY: UHF band, 2815 - 2910 mc.

TYPE: Stub.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: AN/MSQ-3.

MISCELLANEOUS: Antenna AT-857/U is part of Antenna Assembly AS-927(XN-1)/MSQ-3. No additional information was available.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Barlow Electrical Manufacturing Co., Inc. and Hazeltine Electronics, contract NObsr-71663.

REFERENCES:
Request for Nomenclature Card.

REFLECTOR AT-858/TPS

See OA-1227/TPS.

ANTENNA AT-859/TPG-4

FREQUENCY: SHF band, 8500 - 9000 mc.

TYPE: Waveguide horn.

DESCRIPTION: Antenna AT-859/TPG-4 is a waveguide horn designed to be used with a paraboloidal reflector in a fire-control system. Apparently the horn assembly nutates when used in the AN/TPG-4 fire-control system. The horn is spring gimbal mounted.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/TPG-4. Equipment function - fire control.

COGNIZANT AGENCY: ORDBA-0168, contract DA-36-038-ORD-20155.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-860/TPG-4

FREQUENCY: SHF band, 9000 - 9600 mc.

TYPE: Waveguide horn.

DESCRIPTION: Antenna AT-860/TPG-4 is a waveguide horn designed for use with a paraboloidal reflector in a fire-control system. Apparently the horn assembly nutates when used in the AN/TPG-4 fire-control system. The horn is spring gimbal mounted.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/TPG-4. Equipment function - fire control.

COGNIZANT AGENCY: ORDBA-0169, contract DA-36-038-ORD-20155.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

HORN AT-862/TPS

See OA-1227/TPS.

ANTENNA AT-864/FPS-20

FREQUENCY: UHF band, 1250 - 1350 mc.

TYPE: Collinear array of slots and horn antenna.

DESCRIPTION: The antenna consists of a section of waveguide having a series of slot radiators and terminating in a flared waveguide horn. Its overall dimensions are 50 inches long by

5.375 inches wide by 17.375 inches high. It is designed to be connected by a flange to a waveguide feed.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPS-20 and AN/FPS-20A. Equipment function - search, air.

COGNIZANT AGENCY: WL-58-R-1974.

MANUFACTURER: Bendix Radio Div., Baltimore, Maryland, part number R650633-2, order number AF 30(635)-4052.

STOCK NUMBER: Federal Stock Number 5840-681-0478.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-865/GRT

FREQUENCY: MF and HF band, 2 - 30 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 2-section whip normally used for transmitting. One section is 3/4 inch in diameter by 7 feet long. The other is 8 feet long, and its diameter tapers from 3/8 inch at the base to 1/8 inch at the tip. The antenna mounts by a 1/2-13 stud.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/GSC-6 and S-101. Equipment function - communications.

COGNIZANT AGENCY: USN-58-T-1136.

MANUFACTURER: Eldico Electronics, Long Island City, New York.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-866/GRR

FREQUENCY: MF and HF band, 2 - 30 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 2-section whip normally used for receiving. One section is 7 feet long by 3/4 inch in diameter. The other section is 8 feet long, and its diameter tapers from 3/8 inch at the base to 1/8 inch at the tip. The antenna mounts by a 1/2-13 stud.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/GSC-6 and S-101. Equipment function - communications.

COGNIZANT AGENCY: USN-58-T-1135.

MANUFACTURER: Eldico Electronics, Long Island City, New York.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-867/GPN&()

See OA-373A/GPN.

ANTENNA AT-868/GPN&()

See OA-373A/GPN.

ANTENNA AT-869()/G

See Antenna Group OA-2021()/GRC.

ANTENNA AT-870()/G

See Antenna Group OA-2021()/GRC.

ANTENNA AT-873/FPS-6B

See OA-2040/FPS-6B.

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ANTENNA REFLECTOR AT-876/FPN-34&()

FREQUENCY: UHF band, 1280 - 1350 mc.

TYPE: Modified cut paraboloidal reflector.

DESCRIPTION: The reflector is shaped to produce a csc^2-type pattern when fed by Antenna Horn AT-877/FPN-34&(). The aluminum reflector is 576 inches long, 203 inches high, and 337 inches deep.

BEAM DATA:
Beam type - csc^2.
Polarization - Either linear or circular.

SCAN DATA: The reflector tilts from -2° to +5° in elevation.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-34. Equipment function - navigation.

MISCELLANEOUS: AT-876/FPN-34&() is usually supplied with Antenna Horn AT-877/FPN-34&() as a matched system.

COGNIZANT AGENCY: WL-58-1946.

MANUFACTURER: Bendix Radio Div., Towson, Maryland, code 06845, part number N650768-1, procurement contract AF 30(635)-7625.

REFERENCES:
1) Military Specification (Exhibit) RADC-2475A.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA HORN AT-877/FPN-34&()

FREQUENCY: UHF band, 1280 - 1350 mc.

TYPE: Horn antenna.

DESCRIPTION: This antenna assembly includes a radar horn and three Mark-X IFF horns all mounted as a unit. The radar horn has a rectangular-to-circular waveguide transition, a circular waveguide section which includes a motor-driven circular polarizer, and a circular-to-square waveguide transition. No information is available on the IFF horns. The overall antenna is 80 by 26.63 by 23 inches. This antenna is used to feed reflector AT-876/FPN-34&().

BEAM DATA:
Polarization - Either linear or circular.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-34. Equipment function - navigation.

MISCELLANEOUS: AT-877/FPN-34&() is usually used with Antenna Reflector AT-876/FPN-34&() as a matched system.

COGNIZANT AGENCY: WL-58-1947.

MANUFACTURER: Bendix Radio Div., Towson, Maryland, code 06845, part number R650769-1, procurement contract AF 30(635)-7625.

REFERENCES:
1) Military Specification (Exhibit) RADC-2475A.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-880()/U

FREQUENCY: VHF and UHF bands, 225 - 600 mc.

TYPE: Corner-reflector antenna fed by a dipole.

DESCRIPTION: The antenna is a mast-mounted, dipole-fed corner reflector. It is adjustable to cover the above frequency range in two steps: 225 to 420 mc and 350 to 600 mc. It is used for receiving and transmitting.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-24(). Equipment function - communications.

COGNIZANT AGENCY: SEL-58-306.

MANUFACTURERS: Telrex, Inc., Asbury Park, New Jersey, code 92162, model XCR-210-620.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-885/TRM-7&()

FREQUENCY: LF, MF, and HF bands, 0.15 - 25 mc.

TYPE: Loop antenna.

DESCRIPTION: The antenna is a rubber-covered, hand-held, circular loop 3-1/2 inches in diameter. A brass handle is attached to

the loop and increases the length of the device to 8-3/4 inches.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-7&(). Equipment function - test.

COGNIZANT AGENCY: AEL-58-597.

MANUFACTURERS: Empire Device Product Corp.; Polarad Electronics Corp. (contractor); model MP-105, procurement contract AF 33(600)-33023.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-886/TRM-7&()

FREQUENCY: LF, MF, and HF bands, 0.15 - 25 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a three-section, telescopic whip 17-3/8 inches long when closed and 41 inches long when fully extended. It is mounted on a tripod base.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measuring Set AN/TRM-7&(). Equipment function - test.

COGNIZANT AGENCY: AEL-58-598.

MANUFACTURER: Polarad Electronics Corp., part number C116479, procurement contract AF 33(600)-33023.

REFERENCES:
1) Military Specification (Exhibit) WCLN-1277.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-887/TRM-7&()

FREQUENCY: LF, MF, and HF bands, 0.15 - 25 mc.

TYPE: Loop antenna.

DESCRIPTION: The antenna is an enclosed, tripod-mounted loop. An integral frequency-selector switch covers the frequency range in five steps: 0.15 to 0.35 mc, 0.35 to 0.83 mc, 0.83 to 1.95 mc, 1.95 to 4.60 mc, and 4.60 to 25.0 mc.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Interference Measurement Set AN/TRM-7&(). Equipment function - test.

COGNIZANT AGENCY: AEL-58-599.

MANUFACTURER: Polarad Electronics Corp., part number E117137, procurement contract AF 33-(600)-33023.

REFERENCES:
1) Military Specification (Exhibit) WCLN-1277.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-888/TLQ-11

Cancelled 1 June 1959. This item is an integral part of Antenna AS-988/TLQ-11 and will never be procured, stocked, or issued as a separate item.

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ANTENNA AT-892/PRC

FREQUENCY: VHF band, 30.00 - 75.95 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a stainless-steel, flexible-tape whip 3 feet long. It has a screw-type mounting.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set AN/PRC-25. Equipment function - communications.

COGNIZANT AGENCY: SEL-59-114.

REFERENCES:
1) Signal Corps Technical Requirements SCL-1478.
2) U. S. Department of Defense Nomenclature Card.

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DESCRIPTION: The antenna is a flat reflector, 12 inches square, made of laminated copper. It is used as a passive reflector for reradiating received energy back in the direction of arrival.

COGNIZANT AGENCY: WL-59-1020.

REFERENCE:
Request for Nomenclature Sheet.

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ANTENNA AT-901/U

FREQUENCY: SHF band, 9080 mc.

TYPE: Flat-screen reflector.

DESCRIPTION: The antenna is a flat reflector, 5 inches square, made of laminated copper. It is used as a passive reflector for reradiating received energy back in the direction of arrival.

COGNIZANT AGENCY: WL-59-1021.

REFERENCE:
Request for Nomenclature Sheet.

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ANTENNA AT-903/G

FREQUENCY: UHF band, 600 - 1850 mc.

TYPE: Horn.

DESCRIPTION: The antenna is a flared, rectangular, waveguide horn designed to be mounted on a mast.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Antenna Group OA-2285/GRC. Equipment function - communications.

MISCELLANEOUS: No additional information was available on Antenna Group OA-2285/GRC.

COGNIZANT AGENCY: SEL-59-126.

REFERENCES:
1) Signal Corps Technical Requirements SCL-1573.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-904/GR

FREQUENCY: HF and VHF bands, 20 - 100 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a sectionalized whip consisting of one short and one long mast section and one whip section. The maximum erected length is 10 feet. The antenna length should be preset to give optimum performance at the desired frequency. Equipment includes mounting components for both vehicular and ground mounting and weighs 26 pounds.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, vehicular or fixed.

ASSOCIATED EQUIPMENT: Direction Finder Sets AN/PRD-5, AN/PRD-6, and AN/PRD-7. Equipment function - communications.

COGNIZANT AGENCY: SEL-59-1243.

MANUFACTURER: Antenna Specialists Co., Cleveland, Ohio.

REFERENCES:
1) Signal Corps Technical Requirements SCL-5534.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-905/FPS-37

See OA-2331/FPS-37.

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ANTENNA AT-906/U

FREQUENCY: VHF band, 100 - 156 mc; VSWR < 2.2.

TYPE: Dipole.

DESCRIPTION: The antenna consists of a dipole and a balun. It is a T-shaped assembly with overall dimensions of 40-3/4 by 5-5/16 by 48-

7/8 inches. It is nonadjustable and can be mounted either vertically or horizontally. The antenna is designed for a 50-ohm coaxial feed with a UG-483/U plug connector.

BEAM DATA:
Polarization - Horizontal or vertical depending on mounting position.

TUNING/MATCHING DEVICES: A balun located between the dipole and the coaxial transmission line matches the unbalanced cable to the balanced dipole.

COGNIZANT AGENCY: USN-59-T-1199.

MANUFACTURER: MATLAB, New York Naval Shipyard, BuShips allotment number 171.

REFERENCES:
1) MATLAB drawing number SKN-1419.
2) Request for Nomenclature Sheet.

ANTENNA AT-908/TRC-66

TYPE: Paraboloidal reflector of paraballoon construction.

DESCRIPTION: The antenna is a paraboloidal reflector, 14 feet in diameter. It is constructed of two layers of vinyl-coated fiberglass supported at the periphery by a metal ring. When it is inflated, one surface, which is impregnated with silver flake, forms a paraboloidal reflecting surface.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-66.
Equipment function - communications.

MISCELLANEOUS: Antenna AT-908/TRC-66 is part of Antenna Group OA-2379/TRC-66.

COGNIZANT AGENCY: WL-59-1480.

MANUFACTURER: Westinghouse Electric Corporation, part number 480 D 849001, contract AF 30(635)-10575.

REFERENCES:
1) Request for Nomenclature Sheet.
2) Government Specification RADC-2451A.

ANTENNA AT-909/TRC-66

FREQUENCY: SHF band, 4400 - 5000 mc.

TYPE: Horn antenna.

DESCRIPTION: The antenna is a flared, aluminum, waveguide horn. Its overall dimensions are 15 inches long by 10 inches in diameter. The inside of the mouth is 1.872 inches square. The horn connects to a waveguide transmission line.

BEAM DATA:
Polarization - dual. The horn will accept both horizontal and vertical polarization simultaneously.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-66.
Equipment function - communications.

MISCELLANEOUS: Antenna AT-909/TRC-66 is part of Antenna Group OA-2379/TRC-66.

COGNIZANT AGENCY: WL-59-1461.

MANUFACTURER: Westinghouse Electric Corporation, part number 715 D 345001, contract AF 30(635)-10575.

REFERENCES:
1) Request for Nomenclature Sheet.
2) Government Specification RADC-2541A.

ANTENNA AT-910/TPN-12

See OA-2232/TPN-12.

ANTENNA AT-911/USD-1

FREQUENCY: UHF band, 406 - 420 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a collapsible vertical radiator, 39 inches long when collapsed, and a disc ground plane. The antenna mounts on a mast.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Flight Control Group OA-2381/USD-1. Equipment function - remote control.

COGNIZANT AGENCY: SESA-59-2301.

MANUFACTURER: Radio Plane, Van Nuys, California, order 653-PM-58-93-41.

REFERENCES:
1) Radioplane drawing number 57984.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-912/VR

MAJOR COMPONENTS: 1 MS-116 mast section, 1 MS-117 mast section, 1 MS-118 mast section, 1 AB-15/GR mast base and 1 MX-2799/VR antenna matching unit.

FREQUENCY: VHF band, 30 - 70 mc.

TYPE: Whip.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION DATA: Ground, vehicular.

ASSOCIATED EQUIPMENT: Radio Sets AN/VRC-12, AN/VRC-43, AN/VRC-44 and AN/VRC-45. Equipment function - communications.

COGNIZANT AGENCY: SEL-59-29.

REFERENCES:
1) Signal Corps Technical Requirements SCL-1655.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-914/UPX-4

FREQUENCY: UHF band, 1010 - 1110 mc; VSWR < 1.3.

TYPE: Monopole.

DESCRIPTION: The antenna consists of an end-fed half-wavelength radiator, a matching section, a mounting base, and a streamlined laminated-resin housing. The antenna is designed for a 51-ohm coaxial feed.

ASSOCIATED EQUIPMENT: Interrogator Set AN/UPX-14. Equipment function - IFF.

COGNIZANT AGENCY: WL-59-1611.

REFERENCE:
Request for Nomenclature Sheet.

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ANTENNA AT-915/TPQ-11

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna assembly consists of a spun-aluminum reflector, 7 feet in diameter, and a support. No information is available on the feed for this reflector.

SCAN DATA: Antenna is hinged at the base for a tilt mechanism.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Cloud Detecting Group OA-2455/TPQ-11. Equipment function - meteorological measurement.

COGNIZANT AGENCY: CRC-59-200.

MANUFACTURER: Olympic Radio and Television Co., Long Island City, New York, contract AF 30-(635)-10721.

REFERENCES:
1) Olympic drawing number SA-18116.
2) Request for Nomenclature Sheet.

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ANTENNA AT-916/TPQ-11

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna is a spun-aluminum reflector. No information is available on the feed.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Cloud Detecting Set Group OA-2455/TPQ-11. Equipment function - meteorological measurement.

COGNIZANT AGENCY: CRC-59-201.

MANUFACTURER: Olympic Radio and Television Co., Long Island City, New York, contract AF 30-(635)-10721.

REFERENCES:
1) Olympic drawing number SA-18115.
2) Request for Nomenclature Sheet.

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num alloy paraboloidal reflector 1008 inches in diameter by 254.36 inches deep overall. The antenna is pedestal mounted and weighs about 12,000 pounds.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-49 & (). Equipment function - search, air.

COGNIZANT AGENCY: WL-59-2022.

MANUFACTURER: Goodyear Aircraft Corp., contract AF 04(647)-179.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-938()/GL

FREQUENCY: VHF and UHF bands, 50 - 600 mc.

TYPE: 60-degree, conical-pyramidal antenna.

DESCRIPTION: The reference listed below states that Antenna AT-938()/GL is a 60-degree, conical-pyramidal antenna which is constructed to open and close like an umbrella.

BEAM DATA:
Polarization - Circular.

INSTALLATION: Ground.

MISCELLANEOUS: AT-938()/GL is a part of Antenna Set AN/GLA-9().

COGNIZANT AGENCY: SEL-59-278.

MANUFACTURER: American Electronic Laboratories, Inc.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-939()/GL

FREQUENCY: VHF and UHF bands, 90 - 1100 mc.

TYPE: 60-degree, conical-pyramidal antenna.

DESCRIPTION: The reference listed below states that Antenna AT-939()/GL is a 60-degree, conical-pyramidal antenna which is constructed to open and close like an umbrella.

BEAM DATA:
Polarization - Circular.

INSTALLATION: Ground.

MISCELLANEOUS: AT-939()/GL is a part of Antenna Set AN/GLA-9().

COGNIZANT AGENCY: SEL-59-279.

MANUFACTURER: American Electronic Laboratories, Inc.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-940()/GL

FREQUENCY: VHF and UHF bands, 160 - 1100 mc.

TYPE: 60-degree conical antenna.

DESCRIPTION: The reference listed below states that Antenna AT-940()/GL is a 60-degree conical antenna designed for mast mounting.

BEAM DATA:
Polarization - Circular.

INSTALLATION: Ground.

MISCELLANEOUS: AT-940()/GL is a part of Antenna Set AN/GLA-9().

COGNIZANT AGENCY: SEL-59-280.

MANUFACTURER: American Electronic Laboratories, Inc.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-941()/GL

FREQUENCY: UHF and SHF bands, 1000 - 4700 mc.

TYPE: 45-degree conical antenna.

DESCRIPTION: The reference listed below states that Antenna AT-941()/GL is a 45-degree conical antenna designed for mast mounting.

BEAM DATA:
Polarization - Circular.

INSTALLATION: Ground.

MISCELLANEOUS: AT-941()/GL is a part of Antenna Set AN/GLA-9().

COGNIZANT AGENCY: SEL-59-281.

MANUFACTURER: American Electronic Laboratories, Inc.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-944()/PR

FREQUENCY: VHF band, 30 - 76 mc.

TYPE: Whip.

DESCRIPTION: Antenna AT-944()/PR is a 3-foot, stainless-steel or aluminum whip antenna made of beads. The antenna can be collapsed and rolled up for storage.

COGNIZANT AGENCY: SEL-59-357.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-948/U

FREQUENCY: UHF band, 400 - 500 mc.

TYPE: Collinear array of dipoles.

DESCRIPTION: Antenna AT-948/U is a vertical collinear array of dipoles enclosed in a fiberglass cylinder 4 feet long by 5 inches in diameter. Apparently some provision is also made for zenith coverage. The antenna is fed by RG-17/U cable. The BuShips testing laboratory indicates that the antenna is suitable for shipboard use under all weather conditions including wind and ice.

BEAM DATA:
Beam type - Approximately omnidirectional in azimuth.
Half-power beamwidth - Vertical 20° to 40°.
Polarization - Vertical.

INSTALLATION: Ground or shipboard.

COGNIZANT AGENCY: N-60-Q-108.

MANUFACTURER: Chu Associates.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-950/U

FREQUENCY: LF band, 0.1 mc.

TYPE: Whip.

DESCRIPTION: Antenna AT-950/U is a whip antenna mounted on a base insulator.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Timer-Synchronizer Set AN/FPN-41.

COGNIZANT AGENCY: N-60-ac-159.

MANUFACTURER: Sperry Gyroscope Co., contract USCG TCG-41012.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-954/FRC-47

See OA-1657/FRC-47.

ANTENNA AT-957/FPS-26

See OA-2691/FPS-26.

ANTENNA AT-958/FPS-26

See OA-2691/FPS-26.

ANTENNA AT-959/FPS-26

See OA-2691/FPS-26.

ANTENNA AT-961/UPS-1

TYPE: Paraboloidal reflector.

DESCRIPTION: AT-961/UPS-1 is the center section of a paraboloidal reflector. Two other sections are required to complete the reflector. Their nomenclatures are AT-965/UPS-1 and AT-966/UPS-1. The overall dimensions of AT-961/UPS-1 are 28 inches by 62 inches by 77 inches. The section is made of aluminum.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPS-1. Equipment function - search, air.

COGNIZANT AGENCY: N-60-T-445 (Navy).

MANUFACTURER: Radio Corporation of America, contract Nobsr-75577.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-963/VRC

FREQUENCY: VHF band, 132 - 152 mc.

TYPE: Whip.

DESCRIPTION: AT-963/VRC is a bracket-mounted whip antenna.

INSTALLATION: Ground, vehicular.

ASSOCIATED EQUIPMENT: AN/VRC-50. Equipment function - communications.

COGNIZANT AGENCY: USN-60-T-526 (Navy).

MANUFACTURER: Ward Products Corporation, contract NObsr 75942.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-964/FRC

FREQUENCY: VHF band, 132 - 152 mc.

TYPE: Ground-plane antenna.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FRC-72. Equipment function - communications.

COGNIZANT AGENCY: USN-60-T-533 (Navy).

MANUFACTURER: Antenna Specialist Co., contract NObsr-75942.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-965/UPS-1

TYPE: Paraboloidal reflector.

DESCRIPTION: AT-965/UPS-1 is the left section of a paraboloidal reflector. Two other sections are required to complete the reflector. Their nomenclatures are AT-961/UPS-1 and AT-966/UPS-1. The overall dimensions of AT-965/UPS-1 are 28 inches by 62 inches by 56 inches. The section is made of aluminum.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPS-1. Equipment function - search, air.

COGNIZANT AGENCY: N-60-T-569 (Navy).

MANUFACTURER: Radio Corporation of America, contract NObsr-75577.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-966/UPS-1

TYPE: Paraboloidal reflector.

DESCRIPTION: AT-966/UPS-1 is the right section of a paraboloidal reflector. Two other sections are required to complete the reflector. Their nomenclatures are AT-961/UPS-1 and AT-

965/UPS-1. The overall dimensions of AT-966/UPS-1 are 28 inches by 62 inches by 56 inches.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPS-1. Equipment function - search, air.

COGNIZANT AGENCY: N-60-T-570 (Navy).

MANUFACTURER: Radio Corporation of America, contract NObsr-75577.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-967/UPS-1A

TYPE: Modified paraboloidal reflector.

DESCRIPTION: AT-967/UPS-1A is the center section of a modified paraboloidal reflector. Two other sections are required to complete the reflector. Their nomenclatures are AT-968/UPS-1A and AT-969/UPS-1A. The overall dimensions of AT-967/UPS-1A are 36 inches by 49 inches by 72 inches. The section is made of aluminum.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPS-1A. Equipment function - search, air.

COGNIZANT AGENCY: N-60-T-571 (Navy).

MANUFACTURER: Radio Corporation of America, contract NObsr-75577.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-968/UPS-1A

TYPE: Modified paraboloidal reflector.

DESCRIPTION: AT-968/UPS-1A is the left section of a modified paraboloidal reflector. Two other sections are required to complete the reflector. Their nomenclatures are AT-967/UPS-1A and AT-969/UPS-1A. The overall dimensions of AT-968/UPS-1A are 58 inches by 72 inches by 97 inches. The section is made of aluminum.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPS-1A. Equipment function - search, air.

COGNIZANT AGENCY: N-60-T-572 (Navy).

MANUFACTURER: Radio Corporation of America, contract NObsr-75577.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-969/UPS-1A

TYPE: Modified paraboloidal reflector.

DESCRIPTION: AT-969/UPS-1A is the right section of a modified paraboloidal reflector. Two other sections are required to complete the reflector. Their nomenclatures are AT-967/UPS-1A and AT-968/UPS-1A. The overall dimensions of AT-969/UPS-1A are 58 inches by 72 inches by 97 inches. The section is made of aluminum.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/UPS-1A. Equipment function - search, air.

COGNIZANT AGENCY: N-60-T-618 (Navy).

MANUFACTURER: Radio Corporation of America, contract NObsr-75577.

REFERENCE: U. S. Department of Defense Nomenclature Card.

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ANTENNA AT-970/TRC-66

See OA-2799/TRC-66.

ANTENNA AT-976/TRC-66

See OA-2799/TRC-66.

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ANTENNA AT-977/FPS-24

TYPE: Csc^2 disk-type reflector.

DESCRIPTION: Antenna AT-977/FPS-24 is described as a Csc^2 disk-type reflector made of aluminum with steel back-up sections. The overall dimensions are 120 feet long by 35 feet wide by 36 feet high.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FPS-24.

COGNIZANT AGENCY: WL-60-2441 (RADC).

MANUFACTURER: D. S. Kennedy and Co., Inc., contract AF 30(635)-13713.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-978/URM-129

FREQUENCY: VHF band, 162.25 - 173.5 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Signal Generator SG-384/URM-129. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: The Magnavox Company, contract NOas 58-826.

REFERENCE:
Request for Nomenclature Card.

ANTENNA AT-5001/PRC

FREQUENCY: VHF band, 50 - 55 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a whip made up of 4 mast sections each 10-1/4 inches long and a base section 9-1/4 inches long. The whip diameter decreases from 0.219 inch at the bottom mast section to 0.108 inch at the top mast section. The antenna is mounted by means of a bayonet-type connector and, normally, is mounted on the top of Radio Set CPRC-26.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Canadian Radio Set CPRC-26 and several other pack-portable radio sets. Equipment function - communications.

COGNIZANT AGENCY: Canada, CA-74.

MANUFACTURER: Rogers Majestic Limited.

STOCK NUMBER: Canadian Army 1Z1002571.

REFERENCES:
1) Rogers drawing number CS-RM130D143.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-5004/TRC

MAJOR COMPONENTS: 1 horizontal-wire aerial, 2 telescopic masts, 2 aerial bases, 2 antenna-mast base plates, 1 connector, 1 antenna counterpoise, 2 chests, and 8 antenna guy stakes.

FREQUENCY: MF and HF bands, 2 - 8 mc.

TYPE: Modified inverted "L" antenna.

DESCRIPTION: The antenna consists of a 100-foot horizontal wire and two 22-foot duraluminum masts mounted on insulating bases. The horizontal wire and both masts form the radiating element, which is fed at the base of one of the masts. It has a counterpoise, which is probably made of copper screen with meshes 6 feet by 3 feet.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various radio sets. Equipment function - communications.

MISCELLANEOUS: The antenna is packed in two rugged, reinforced cases and can be air dropped.

COGNIZANT AGENCY: Canada, CA-17.

MANUFACTURER: Canadian Signals Research and Development Establishment, type 3610-48-1-N.

STOCK NUMBER: Canadian Army 1Z1005625.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA AT-5005/G

MAJOR COMPONENTS: 1 antenna installation kit, 23 antenna mast sections, 1 mesh ground plate, 1 ground connector assembly, 6 carrying bags, and 1 antenna kite.

FREQUENCY: LF and MF band, 0.07 - 0.55 mc.

TYPE: Long wire.

DESCRIPTION: The antenna consists of a 300-foot length of braided bronze wire usually supported between two 50-foot guyed masts. Each mast is made up of ten 5-foot mast sections. If a good water ground is available, a grounding plate is submerged in the water. If one is not available, a 100-foot by 3-foot bronze screen counterpoise is used. Under suitable conditions, the antenna may be supported from one end by the nylon kite (furnished with the antenna) instead of between the two masts.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Various transportable radio sets. Equipment function - communications.

MISCELLANEOUS: A letter from the Canadian Department of Defense dated 17 March 1959 states that AT-5005/G supersedes AT-5005/TRC.

COGNIZANT AGENCY: Canada, CA-120.

MANUFACTURER: Canadian Signals Research and Development Establishment.

STOCK NUMBER: Canadian Army 1Z1001663.

REFERENCES:

1) Private Correspondence.

2) Canadian Signals drawing number CS21A008.

3) U. S. Department of Defense Nomenclature Card.

ANTENNA AT-5019/GR

FREQUENCY: VHF band, 161 - 175 mc.

TYPE: Corner reflector.

DESCRIPTION: The antenna is a corner reflector 60 by 120 by 72 inches constructed of steel and aluminum. It mounts by four 3/4-inch mounting bolts with 10 threads per inch.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Transmitters AN/GRT-501 and AN/GRT-502. Equipment function - communications.

COGNIZANT AGENCY: Canada, RCAF-596.

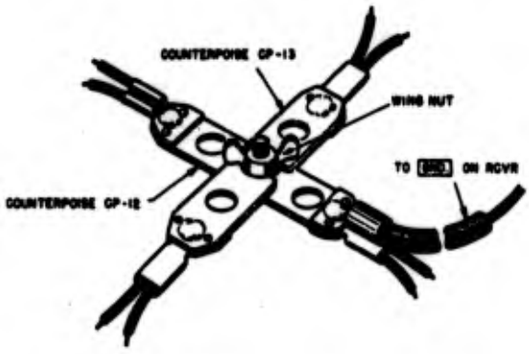
MANUFACTURER: Sinclair Radio Laboratories, Ltd, part number 207.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

COUNTERPOISE CP-12 and CP-13

MAJOR COMPONENTS: 1 CU-12 counterpoise and 1 CU-13 counterpoise.



Counterpoise CP-12 and CP-13

TYPE: Counterpoise.

DESCRIPTION: The counterpoise assembly consists of a counterpoise element CP-12 and a counterpoise element CP-13. The two elements clamp together at the center to form an 8-wire radial counterpoise. Both of the counterpoise elements CP-12 and CP-13 are made up of a brass junction strip with four 25-foot No. 19 AWG conductors; two conductors attached to each end of the junction strip. Also, CP-12 has a four-foot No. 14 AWG ground wire attached to one end of its junction strip. The two junction strips are bolted together at right angles by a wing nut.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-9, AN/GRC-9A, AN/GRC-9X, AN/GRC-9Y, SCR-163A and SCR-178. Equipment function - communications.

STOCK NUMBERS: Federal Stock Numbers CP-12... F5820-296-5100 and CP-13...F5840-296-0630.

REFERENCE:
Departments of the Army and the Air Force, Radio Sets AN/GRC-9, AN/GRC-9A, AN/GRC-9X, and AN/GRC-9Y, TM 11-263 and TO 31R2-2CRC9-1, (June 1956). UNCLASSIFIED.

COUNTERPOISE CP-17-A

TYPE: Counterpoise.

DESCRIPTION: The counterpoise is composed of two 4- by 9-foot sections of 20-mesh copper screening. The 4-foot ends of the screen are reinforced by 4-1/2-foot wooden end rails. The two sections are spread 1 foot apart beneath each antenna, usually RC-223-A, to form a 9-foot by 9-foot counterpoise.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-291-A. Equipment function - direction finding.

REFERENCE:
Department of the Army, Radio Set CSR-291-A, TM 11-243, (Sept. 1949). UNCLASSIFIED.

ANTENNA ASSEMBLY EV-1

See Antenna Assembly EV-2.

ANTENNA ASSEMBLY EV-2

FREQUENCY: VHF and UHF bands, 130 - 1100 mc in four bands: 130 - 220 mc, 220 - 380 mc, 380 - 650 mc, and 650 - 1100 mc; VSWR < 3.

TYPE: Four helical antennas.

DESCRIPTION: The antenna assembly consists of four helical antennas, each covering one of the frequency bands listed above. A coaxial relay switch is used to select the desired antenna. The assembly terminates with a type N connector to mate with a UG-21/U connector on a 50-ohm coaxial cable.

BEAM DATA:
Gain - 3 to 6 db.
Beam shape - Unidirectional beam giving about 80° coverage.
Polarization - Circular.

SCAN DATA: The antenna can be rotated in azimuth at a rate of 1 revolution per minute.

INSTALLATION: Ground.

MISCELLANEOUS: Antenna EV-2 is similar to antenna EV-1, but EV-2 has a rotational device and a tower, and EV-1 does not.

COGNIZANT AGENCY: Air Force.

MANUFACTURER: All Products Co.

REFERENCE:
Private Correspondence.

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RADAR ANTENNA Mark 21 Mod 1, Unit 1A

See Antenna Group for Radar Equipment Mark 25 Mod 6A.

RADAR ANTENNA Mark 22, Mod 0, Unit 1D

See Antenna Group for Radar Equipment Mark 25 Mod 6A.

RADAR ANTENNA Mark 23 Mod 0, Unit 1G

See Antenna Group for Radar Equipment Mark 25 Mod 6A.

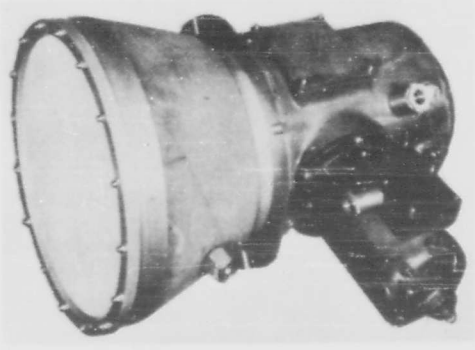
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ANTENNA GROUP for Radar Equipment Mark 25 Mod 6A

MAJOR COMPONENTS: Radar Antenna Mark 21 Mod 1, Unit 1A; Radar Antenna Mark 22 Mod 0, Unit 1D; Radar Antenna Mark 23 Mod 0, Unit 1G.

FREQUENCY:
Radar Antenna Mark 21, Mod 1, Unit 1A
SHF band, 8500 - 9600 mc.
Radar Antenna Mark 22, Mod 0, Unit 1D
SHF band, 9200 - 9400 mc.
Radar Antenna Mark 23, Mod 0, Unit 1G
SHF band, 8500 - 9600 mc.

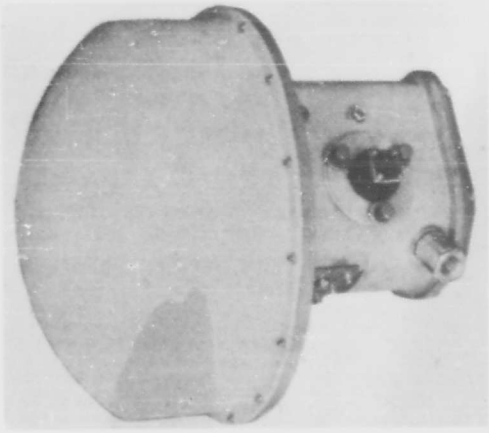
TYPE:
Radar Antenna Mark 21, Mod 1, Unit 1A
Nutating horn.
Radar Antenna Mark 22, Mod 0, Unit 1D
Metal-plate lens.
Radar Antenna Mark 23, Mod 0, Unit 1G
Parabolic reflector.



Main Scanner Mark 21, Mod 1, Unit 1A

DESCRIPTION: Radar equipment Mark 25 Mod 6A is a missile-guidance and gunfire-control radar system. It consists of two essentially self-contained transmission systems: a primary radar and a capture radar. The primary radar tracks the target and guides the beam-riding missile towards it; the capture radar guides the missile into the primary radar beam at the beginning of its flight.

A) Radar Antenna Mark 21, Mod 1, Unit 1A - This horn antenna radiates the primary beam which is focused by the lens antenna Mark 22, Mod 0, Unit 1D. The horn has a nutating pattern which can be controlled to produce either conical scanning or spiral scanning. A housing with a dielectric front cover completely encloses the antenna and the equipment which produces the nutating movement.



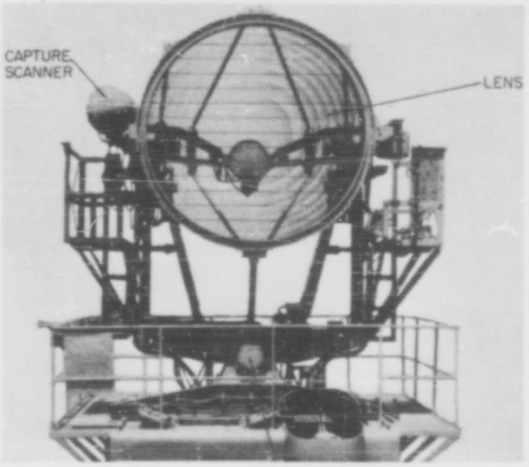
Capture Scanner Mark 22, Mod 0, Unit 1D

B) Radar Antenna Mark 22, Mod 0, Unit 1D - This antenna is a stepped or zoned metal-plate lens. It is 7-1/2 feet in diameter and is mounted in front of the horn antenna. It focuses the energy radiated by the horn into a narrow beam.

C) Radar Antenna Mark 23, Mod 0, Unit 1G- This antenna is a paraboloidal reflector 18 inches in diameter. It is fed by a stationary feed (probably a waveguide horn) near the focal point of the reflector. The reflector is set at an angle with respect to the feed and is rotated to produce conical scanning. The antenna produces the capture beam which illuminates the missile during the early part

of its flight. It is enclosed by a radome of dielectric material and is mounted at the side of the metal-plate lens.

The three antennas described are mounted on a metal platform which has the nomenclature, Gun Director Mark 37.



Mark 25, Mod 6A Antennas

BEAM DATA:
Gain - 39 db for primary beam,
20 db for capture beam.
Half-power beamwidth - E and H planes - 1° for primary beam, 5° for capture beam.
Side-lobe attenuation - 25 db for primary beam.
Beam type - Pencil (both beams).
Polarization - Vertical (both beams).

SCAN DATA:
Primary beam - conical scanning at 30 cycles per second; spiral scanning, 14 minutes to 3 degrees at 2.4 cycles per second.
Capture beam - conical scanning, adjustable between 0° and 3°, at 30 cycles per second.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radar Equipment Mark 25 Mod 6A. Equipment function - search, air; fire control; and guidance, beamrider.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Reeves Instrument Corporation.

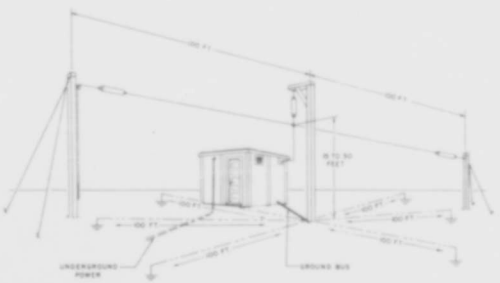
REFERENCE:
U. S. Navy, Bureau of Naval Weapons, Radar Equipment Mark 25, Model 6A, Description, Operation & Maintenance Manual, OD 9381, (July 1954). UNCLASSIFIED.

ANTENNA KIT MK-89/URN-5

FREQUENCY: MF band, 0.2 - 0.8 mc.

TYPE: Single-wire flat-top antenna.

DESCRIPTION: The antenna kit contains the equipment necessary to construct a flat-top antenna with a single-wire flat top and a vertical down-lead between 15 and 50 feet high. The kit does not include supporting masts.



MK-89/URN-5

BEAM DATA:
Beam type - Approximately omnidirectional in azimuth.
Polarization - Primarily vertical.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Beacon AN/URN-5. Equipment function - navigation, surface reference; and communications.

MANUFACTURER: Gates Radio Co.

STOCK NUMBERS: U. S. Navy F17-W-350001-108 and Air Force 1700-015088405.

REFERENCES:
1) U. S. Air Force and Bureau of Ships, Radio Beacon Communication Set AN/URN-5, Handbook Operation and Service Instructions with Parts Lists, TO 31R4-2URN5-11 and NAVSHIPS 91766, (Mar. 30, 1955). UNCLASSIFIED.

2) Department of the Army, Radio Beacon AN/URN-5, TM 11-5075, (April 1958). UNCLASSIFIED.

ANTENNA MK-98/FRN-17

FREQUENCY: VHF band, 75 mc.

TYPE: Dipole.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Beacon AN/FRN-17.

STOCK NUMBER: Federal Stock Number F5825-090-2630.

REFERENCES:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA KIT MK-264/U

MAJOR COMPONENTS: 1500 feet of 3-conductor, No. 12 AWG copperweld wire; 270 feet of 1A115 cable; and necessary insulators, connectors, angle iron and hardware.

FREQUENCY: MF and HF bands, 2 - 30 mc.

TYPE: Turnstile antenna.

BEAM DATA:
Beam type - Omnidirectional in azimuth.

ASSOCIATED EQUIPMENT: Various high-power transmitters. Equipment function - communications.

MISCELLANEOUS: The antenna is fed by a 600-ohm transmission line.

COGNIZANT AGENCY: WL-55-1322.

REFERENCES:
1) U. S. Air Force drawings number 54-GCD13-1, 54-GCD13-2, and 54-GCD13-3.

2) U. S. Department of Defense Nomenclature Card.

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MODIFICATION KIT MK-269/GPX-8

FREQUENCY: UHF band, 950 - 1150 mc.

DESCRIPTION: The modification kit contains the components necessary to add IFF antenna facilities to Antenna Group OA-373/GPN of Radar SetAN/CPN-4. This modification is accomplished by replacing the rotating joint, adding vertical slats to the reflector and dipoles to the radar feed horn.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Identification Set AN/GPX-8. Equipment function - IFF.

MANUFACTURER: Hazeltine Electronics.

REFERENCE:
U. S. Air Force, Radar Identification Set AN/GPX-8, Handbook Operating Instructions, TO 31P4-2GPX8-1, (Sept. 15, 1955). UNCLASSIFIED.

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MODIFICATION KIT MK-271/GPX-9

FREQUENCY: UHF band, 1010 - 1110 mc.

DESCRIPTION: The modificaton kit contains the components necessary to add IFF antenna facilities to the antenna of Radar Set AN/CPN-18A. The modification is accomplished by replacing the old rotating joint and feed system with the dual system.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Identification Set AN/GPX-9. Equipment function - IFF.

MANUFACTURER: Hazeltine Electronics.

REFERENCE:
U. S. Air Force, Radar Identification Set AN/GPX-9, Handbook Operating Instructions, TO 31P4-2GPX9-1, (Dec. 30, 1955). UNCLASSIFIED

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ANTENNA for Navy Model MN-4

FREQUENCY: VHF band, 30 - 42 mc.

DESCRIPTION: The antenna is probably a whip weighing 2 pounds.

INSTALLATION: Ground, shipboard, and airborne.

ASSOCIATED EQUIPMENT: Navy Model MN-4 FM Radio Transmitting and Receiving Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, Bureau of Ships.

MANUFACTURER: Fred M. Link, contract NXso-32191.

REFERENCES:
1) NAVSHIPS 95142: Instruction Book for Navy Model MN-4 Radio Transmitting and Receiving Equipment.
2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA MP-13

FREQUENCY: MF and HF bands, 2.4 - 3.7 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Radio Set SCR-178.

STOCK NUMBER: Federal Stock Number N5985-249-4346.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA MS-49, MS-50, MS-51, MS-52, and MS-53

FREQUENCY: MF and HF bands, 1.5 - 18 mc.

TYPE: Whip.

DESCRIPTION: MS-49 through MS-53 are sections of 1/2-inch-diameter steel rod which combine to form a whip antenna. With the exception of MS-49, the top section, each has a male thread on the lower end and a female thread on the upper end. The length of the assembled antenna is 15 feet. The whip is designed to mount on MP-57 spring-loaded bracket.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-26(), Radio Set AN/MRC-20. Equipment function - communications.

MISCELLANEOUS: See AN/MRC-20 for illustrations.

STOCK NUMBERS: Signal Corps:
MS-49 . . . 2A2349
MS-50 . . . 2A2350
MS-51 . . . 2A2351
MS-52 . . . 2A2352
MS-53 . . . 2A2353

REFERENCES:
1) Department of the Army, Radio Set AN/MRC-20, Technical Manual, TM 11-692, (March 1954). UNCLASSIFIED.
2) Departments of the Army and the Air Force, Radio Set AN/GRC-26A, AN/GRC-26B, and AN/GRC-26C, Technical Manual and Technical Order, TM 11-264A, TO 31R2-2GRC26-11, (April 26, 1956). UNCLASSIFIED.

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MAST SECTION MS-54

TYPE: Whip.

DESCRIPTION: The MS-54 mast section is designed to be used with the MS-49, MS-50, MS-51, MS-52, and MS-53 mast sections to form a whip. The mast section is constructed of steel, and is approximately 39 inches long. See AS-149/TRT-1 and MS-49 for descriptions of the other mast sections.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set SCR-506-A. Equipment function - communications.

REFERENCES:
War Department, Radio Set SCR-506-A, Technical Manual, TM 11-630, (Nov. 1944). UNCLASSIFIED.

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MAST SECTIONS MS-116-(), MS-117-(), MS-118-()

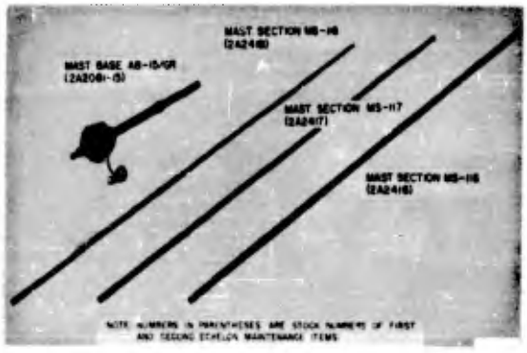
MAST SECTIONS MS-116-(), MS-117-(), MS-118-()

TYPE: Either dipole element or whip section.

DESCRIPTION: The mast sections are copper-plated chrome-molybdenum tubes. MS-116 is 39-1/2 inches long by 0.393 inch in diameter with a threaded male section on one end and a threaded female section on the other end. MS-117 is 39-1/2 inches long by 0.373 inch in

diameter with a threaded male section on one end and a threaded female section on the other end. MS-118 is 39-1/2 inches long by 0.246 inch in diameter with a threaded male section on one end and a steel ball on the other end.

INSTALLATION: Normally ground.



Mast Base AB-15GR and Mast Sections MS-116, MS-117, and MS-118

ASSOCIATED EQUIPMENT: The mast sections are used in various combinations to form whip or dipole antennas with the following equipment: Radio Receiving Set AN/URR-29; Radio Sets AN/GRC-3,-4,-5,-6, -7, -8, -13, -19, -26D; Direction Finder Set AN/TRD-4A; Radio Sets AN/VRC-3, -6(), -20, -21, -22; Radio Sets AN/MRC-2(); Radio Sets SCR-608-(), -609-(), -610-(), -628-(); Radio Set AN/GRC-26(); and Radio Set SCR-543-(). Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy code 826.

MANUFACTURER: Radio Corporation of America, contract NObsr-42227.

STOCK NUMBER: Signal Corps 2A2416 (MS-116), 2A2417 (MS-117), 2A2418 (MS-118).

REFERENCES:

1) War Department, Radio Sets SCR-609-A and -B and SCR-610-A and -B, Technical Manual, TM 11-615, (April 1945). UNCLASSIFIED.

2) RCA drawings number 618162-6(MS-116), 618162-5(MS-117), and 618162-4(MS-118).

3) Navy Specification CS-1260.

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COUNTERPOISE MX-313/CRD-2

TYPE: Counterpoise.

DESCRIPTION: MX-313/CRD-2 is a wire-mesh counterpoise approximately 75 feet square. It consists of 108 pieces of No. 12 AWG stranded, tinned copper wire approximately 75 feet long soldered together to form 18-inch-square mesh. The equipment includes 36 counterpoise clamps and a grounding terminal positioned to conform with the grounding terminal of Antenna System AS-87()/CRD-2. The counterpoise provides a uniform ground for AS-87()/CRD-2.

INSTALLATION: Ground, air transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/CRD-2().

MISCELLANEOUS: Counterpoise MX-313/CRD-2 is used with Antenna Assembly AS-87/CRD-2.

COGNIZANT AGENCY: ESL-3911.

MANUFACTURER: RCA, order 8969-Ph-46-02.

STOCK NUMBER: Signal Corps 2A722-313.

REFERENCES:

1) RCA drawing number 309005-1.

2) Government Specification 71-3174.

3) U. S. Department of Defense Nomenclature Card.

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COUNTERPOISE MX-318/CRD-3

MAJOR COMPONENTS: 18 CX-460/CRD-3 cords, 4 CX-461/CRD-3 ground conductors, 4 CX-462/CRD-3 ground conductors, and 1 DR-10/() reel.

TYPE: Counterpoise.

DESCRIPTION: The counterpoise is a 36-foot-square wire mesh. When assembled, a set of nine CX-460/CRD-3 cords are laid parallel to each other, 4 feet apart, and the other nine CX-460/CRD-3 cords are laid 4 feet apart at right angles to the first set of cords. The two sets are snapped together by "Dot" fasteners and form a 36-foot-square screen with a 4-foot mesh. The four center 4-foot-squares are reduced to a mesh of 2-foot-squares by means of the four CX-461/CRD-3 ground conductors. The four center 2-foot squares are further reduced to 1-foot meshes by means of the four CX-462/CRD-3 ground conductors. In transit, the counterpoise is unbuttoned and rolled on Reel DR-10/(). MX-318/CRD-3 is the counterpoise for AS-204()/CRD-3.

INSTALLATION: Ground, air transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/CRD-3.

COGNIZANT AGENCY: SCL-4577.

STOCK NUMBER: Signal Corps 2A722-318.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA-TOWER KIT MX-418/TPX

MAJOR COMPONENTS: 1 AN-189 antenna, 1 TR-29 tower, 1 RM-55 remote antenna drive, 1 CG-282/TPX cord, 1 CD-1381 cord and carrying cases.

FREQUENCY: VHF band, 157 - 187 mc.

TYPE: Mattress antenna.

DESCRIPTION: Antenna AN-189 is a stainless-steel sectionalized mattress antenna, approximately 12 feet wide, 3 feet high, and 14 inches deep. It consists of four folded dipoles spaced 2/3 wavelength apart and mounted 1/4 wavelength in front of a plane of parasitic reflectors. The antenna weighs approximately 25 pounds.

BEAM DATA:
Half-power beamwidth - Approximately 33° in both planes.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Equipment RC-384. Equipment function - probably IFF.

COGNIZANT AGENCY: ESL-3116 and CESL-2718.

MANUFACTURER: Belmont Radio Corporation, order 2491-MPD-45, contract W-28-003-sc-913 (3957-CEGSA-44).

STOCK NUMBER: Signal Corps 2A275-189.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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COUNTERPOISE ASSEMBLY MX-484/MRQ-1

TYPE: Counterpoise.

DESCRIPTION: This assembly consists of a counterpoise reel with twelve 25-foot counterpoise cables secured to the winding drum and one 20-foot length of braid 7/16 inch wide secured in place as a leadin, a wire reel with twelve counterpoise extensions wound in place, two reel covers, and one counterpoise stake. MX-484/MRQ-1 is part of AS-274()/MRQ-1 and AS-275()/MRQ-1.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Sets AN/MRQ-1() and AN/MRQ-4().

COGNIZANT AGENCY: SCL-5183.

STOCK NUMBER: Signal Corps 2A725-484.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA-TOWER KIT MX-528/TPX

MAJOR COMPONENTS: 1 AS-297/TPX antenna, 1 AB-96/TPX tower, and 1 C-256/TPX azimuth control.

TYPE: Mattress antenna.

DESCRIPTION: Antenna AS-297/TPX is a mattress consisting of three vertical dipoles spaced 36 inches apart and mounted in a horizontal line 18 inches in front of a 90-by 40-inch flat reflector. The reflector consists of a tubular framework with vertical wires spaced 2-1/2 inches apart. Interconnecting cables, a lobe switch, and a junction box are mounted on the back of the reflector. The total weight is about 10 pounds.

BEAM DATA:
Polarization - Vertical.

SCAN DATA: The antenna has horizontal lobe switching.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/TPX-6. Equipment function - IFF.

COGNIZANT AGENCY: CESL.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA KIT MX-658/FRR

FREQUENCY: HF band, 4 - 22 mc.

TYPE: Rhombic antenna.

DESCRIPTION: The kit contains No. 12 AWG copper-clad wire, insulators, hardware, an 800-ohm terminating resistor, and instructions necessary for constructing a rhombic antenna. The input impedance is 650 ohms, and is reduced to 200 ohms with an exponential downlead. Leg length is from 225 to 375 feet.

BEAM DATA:
Gain - 15 db.
Polarization - Horizontal.

INSTALLATION: Ground, fixed.

MISCELLANEOUS: MX-658/FRR is used with Transmission Line Kit MX-657/FRR.

COGNIZANT AGENCY: SPSLP-28.

MANUFACTURERS: Victor Bernard Industries; and Lad, Inc., procurement contract 12856-Ph-44.

STOCK NUMBERS: Signal Corps 2A1622-1, Air Force Force 1760-203600262, and Federal Stock Number 5985-404-2569.

REFERENCES:
1) U. S. Air Force, Radio Equipment, Ground Communications, Electronic and Meteorological Equipment Directory, T.O. 31R-1-8 (June 15, 1959). UNCLASSIFIED.
2) Signal Corps drawing ES-E-386-F.
3) Technical Manual TM 11-2511.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA MODIFICATION KIT MX-696/TPS-1B

FREQUENCY: UHF band, 1240 mc.

DESCRIPTION: The modification kit consists of four sets of sheet-metal vanes and necessary supporting parts to be assembled in the field and mounted on the lower part of the reflector of Antenna Assembly AS-120/TPS-1B.

BEAM DATA: MX-696/TPS-1B is used with AS-120/TPS-1B to broaden the radiation pattern in the vertical plane.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPS-1B. Equipment function - search.

MISCELLANEOUS: Radar Set AN/TPS-1B is listed as obsolete in reference 1) and substandard in reference 2).

COGNIZANT AGENCY: U. S. Navy USMC.

MANUFACTURER: Procurement contracts N5sr-118-40, and N5sr-10559 (Dev).

REFERENCES:
1) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.
2) U. S. Air Force, Electronic Equipment Handbook, 54WC11-494, (Jan. 1954). SECRET.
3) Military Specification CS-184.
4) Government Drawing B-4711900.
5) U. S. Department of Defense Nomenclature Card.

ANTENNA KIT MX-741()/FR

MAJOR COMPONENTS: 275 feet of 7-strand, No. 12 AWG copperweld, 40%-conductivity high-strength wire; 2 twelve-inch strain insulators; 3 twelve-inch spreader insulators; 6 three-bolt medium GI guy clamps; 4 galvanized steel thimbles for use on 5/16-inch rope; and 4 wire connectors, with bar spacers.

FREQUENCY: MF and HF bands, 2 - 16 mc.

TYPE: Dipole.

DESCRIPTION: The antenna kit contains wire and hardware for constructing a doublet antenna.

TUNING/MATCHING DEVICES: The antenna has a delta-matching transformer to match the antenna impedance to a 600-ohm balanced transmission line.

INSTALLATION: Ground, fixed.

MISCELLANEOUS: Antenna Kit MX-741()/FR is normally used with Transmission Line Kit MX-737()/FR, two Pole Guy Kits MX-745/FR, and suitable antenna and transmission-line poles for complete installation.

COGNIZANT AGENCY: PEA-128 (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall, Va.).

MANUFACTURER: Procurement contract 10183-PHILA-45-33.

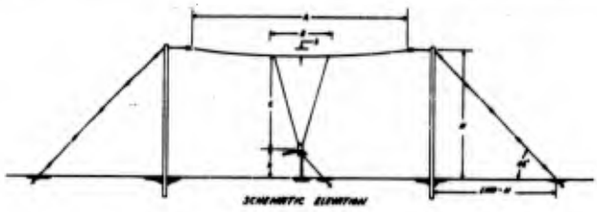
STOCK NUMBER: Signal Corps 2A-1617-1.

REFERENCES:

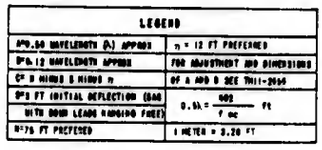
1) War Department, Antenna Kit for Doublet Transmitting Antenna (Drawing ES-E-252-F), Technical Manual, TM 11-2656, (Jan. 1, 1945). UNCLASSIFIED.

2) Government Drawing: ES-E-252-F.

3) U. S. Department of Defense Nomenclature Card.



SCHEMATIC ELEVATION



LEGEND	
APX.50 WAVELENGTH (λ) APPROX	n = 12 FT PREFERRED
APX.12 WAVELENGTH APPROX	FOR ADJUSTMENT AND DIMENSIONS
C= D MINUS E MINUS n	SEE A AND B SEE TM11-2656
APX FT INITIAL DEFLECTION (SAG WITH BOOM LEADS HANGING FREE)	D.L.= 002 / T sec FT
0.75 FT PREFERED	1 METER = 3.28 FT

MX-741()/FR

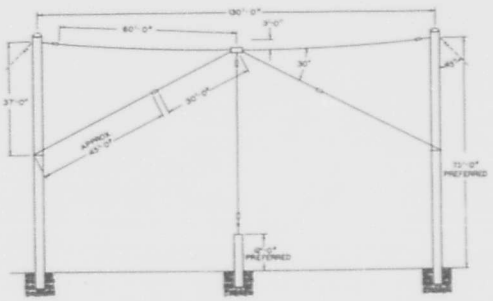
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INSTALLATION: Ground, fixed.

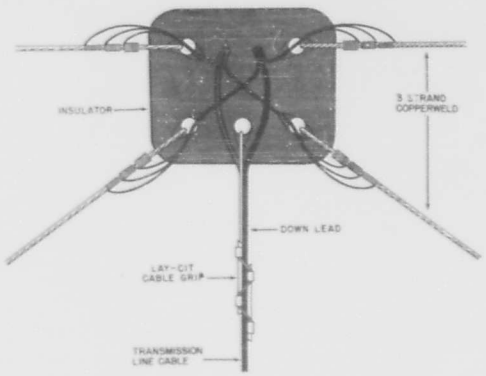
ASSOCIATED EQUIPMENT: High-Frequency receiving equipment function - communications.

STOCK NUMBER: Signal Corps 2A1625.

REFERENCE:
War Department, Antenna Kit for Double-Doublet Receiving Antenna (Drawing ES-E-276-F), Technical Manual, TM 11-2629, (Nov. 25, 1944). UNCLASSIFIED.



MX-743/FRR



MX-743/FRR Cross-Connect Insulator Tie and Splice Detail

ANTENNA KIT MX-765/FR

MAJOR COMPONENTS: 2700 feet of antenna wire, 500 feet of guy wire, 7500 feet of ground wire, 3 spreaders, 15 rectangular strain insulators, 1 entrance-bowl insulator, 2 stand-off insulators, 12 guy-wire insulators, 4 eight-inch anchors, 4 anchor rods, 38 thimbles, and necessary rope, bolts, clamps, ground rods, and other hardware.

FREQUENCY: LF and MF bands, 0.15 - 0.55 mc.

TYPE: Inverted-L antenna.

DESCRIPTION: The antenna kit contains the material necessary to construct an inverted-L antenna of five parallel, horizontal wires 250 to 400 feet long with a vertical downlead at one end. The material for a radial-wire ground system is included. The height of the antenna and the length of the downlead depend on the poles used. The effective resistance of the antenna is between 8 and 12 ohms and the effective capacitance is between 750 and 3000 mmf.

BEAM DATA:
Beam type - more or less nondirectional with a slight increase in gain off the end of the antenna where the downlead is located.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Transmitter T-171-C/FR. Equipment function - communications. Range - 1000 miles.
Radio Transmitters BC-365 and T-5/FRC.

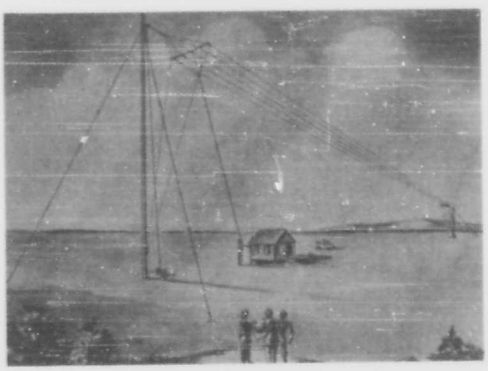
COGNIZANT AGENCY: PEA-175 (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall, Va.).

STOCK NUMBER: Signal Corps 2A264A-765.

REFERENCES:
1) Department of the Army, Antenna Kit MX-765/FR, Technical Manual, TM 11-5010, (March 1948). UNCLASSIFIED.

2) U. S. Air Force, Radio Equipment, Ground Communications, Electronic and Meteorological Equipment Directory, T.O. 31R-1-8, (June 15, 1959). UNCLASSIFIED.

3) Signal Corps drawing ES-D-335-C.



MX-765/FR

ANTENNA MX-821/U

FREQUENCY: VHF and UHF bands, 100 - 400 mc.

TYPE: Loop.

DESCRIPTION: This antenna is an enclosed loop designed to be held by the operator.

INSTALLATION: Portable.

ASSOCIATED EQUIPMENT: Noise Field Intensity Meter TS-587/U. Equipment function - test.

STOCK NUMBER: Federal Stock Number F5985-254-7146.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA MX-822/U

FREQUENCY: HF and VHF bands, 15 to 125 mc.

TYPE: Loop.

DESCRIPTION: Antenna MX-822/U is an enclosed loop.

INSTALLATION: Portable.

ASSOCIATED EQUIPMENT: Noise Field Intensity Meter TS-587/U. Equipment function - test.

STOCK NUMBER: Federal Stock Number F5985-254-7144.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA KIT MX-852()/MRC-2

MAJOR COMPONENTS: 3000 feet of Signal Corps No. 1A816.14 wire, 100 spreader insulators, 2 bowl-type feed-through insulators, 1 terminating resistor assembly.

FREQUENCY: MF and HF bands, 2 - 18 mc.

TYPE: Rhombic antenna.

DESCRIPTION: This kit contains the material needed to construct a rhombic transmitting antenna. The terminating resistor assembly consists of twelve 250-ohm resistors in a series-parallel connection to give a resistance of 750 ohms.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Sets AN/MRC-2C and AN/MRC-2D. Equipment function - communications.

MANUFACTURER: GFE.

REFERENCES:
1) Departments of the Army and the Air Force, Radio Sets AN/MRC-2C and AN/MRC-2D, Technical Manual and Technical Order, TM 11-624A, TO 31R2-2MRC2-11, (Sept. 1955). UNCLASSIFIED.
2) Signal Corps drawing SC-DL-47953.
3) U. S. Department of Defense Nomenclature Card.

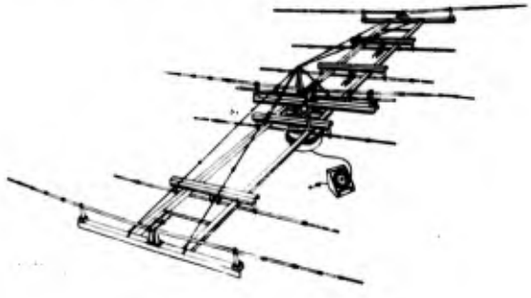
ANTENNA KIT MX-854(*)/FR

MAJOR COMPONENTS: 1 antenna rotator, 1 azimuth indicator and control unit, 1 antenna boom support, 6 low-frequency antenna elements, and 8 high-frequency antenna elements.

FREQUENCY: HF and VHF bands, 12 - 50 mc (low-frequency antenna), 26 - 50 mc (high-frequency antenna).

TYPE: Two Yagi arrays.

DESCRIPTION: The antenna kit consists of two parasitic arrays mounted on a common antenna-boom support. The low-frequency array consists of three elements (one driven dipole, one reflector, and one director). Each half of each element is made up of five 5-foot sections of telescoping aluminum alloy tubing (1-1/8, 1, 7/8, 3/4, and 5/8-inch outside diameters) with sleeve lock nuts. The high-frequency array consists of four elements (one



Antenna Kit MX-854(*)/FR

driven dipole, one reflector, and two directors). Each half of each element is made up of two 5-foot sections of telescoping aluminum alloy tubing (1 and 7/8-inch outside diameter) with sleeve lock nuts. The total packaged volume is 15.16 cubic feet, and the total packaged weight is 339 pounds.

BEAM DATA:
A) Low-frequency antenna -
Gain - 7 db over a half-wave dipole at 14 mc.
Front-to-back ratio - 25 db.
B) High-frequency antenna -
Gain - 9 db over a half-wave dipole at 28 mc.
Front-to-back ratio - 30 db.

SCAN DATA: The antenna assembly is operated by remote control and will rotate continuously in either direction at 3/4 revolution per minute.

TUNING/MATCHING DEVICES: The low-frequency driven element is fed by 52- to 600-ohm transmission line using direct feed-through collector rings to a T-matching section. The high-frequency driven element is center fed by 52- to 600-ohm transmission line using Roto-Link inductive coupling. The electrical length of an element can be varied either by changing the physical length by telescoping the element sections or by adjusting the shorting bar on the tuning stub.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Various communications equipment.

MISCELLANEOUS: MX-854(*)/FR denotes MX-854/FR and MX-854A/FR. Models are interchangeable.

COGNIZANT AGENCY: SCL-C-465, SCL-9610, and PEA. (PEA is now SEA: U. S. Army Signal Engineering Agency, Arlington Hall, Va.).

MANUFACTURER: Wind Turbine, part number RB-1250A, order 18046-PHILA-50; Gordon Specialties Co., model 2474.

STOCK NUMBERS: Federal Stock Number 5985-497-8680, Air Force 1760-203560943.

REFERENCES:
1) Department of the Army, Antenna Kit MX-854/FR, Technical Manual, TM 11-5027, (March 1949). UNCLASSIFIED.
2) U. S. Air Force, Radio Equipment, Ground Communications, Electronic and Meteorological Equipment Directory, T.O.31R-1-8, (June 15, 1959). UNCLASSIFIED.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA SUBASSEMBLY MX-1008/MPN-1

See AS-42()/MPN-1.

COUNTERPOISE MX-1103/FR

TYPE: Counterpoise.

DESCRIPTION: MX-1103/FR is an elevated mesh-type counterpoise, 30 feet in diameter and 15 feet high, mounted on top of Shelter S-62/FR by structural steel girders.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Transmitting Sets AN/FRN-12 and AN/FRN-12A. Equipment function - navigation.

COGNIZANT AGENCY: WL-50-1243.

STOCK NUMBER: Federal Stock Number 5985-280-[illegible].

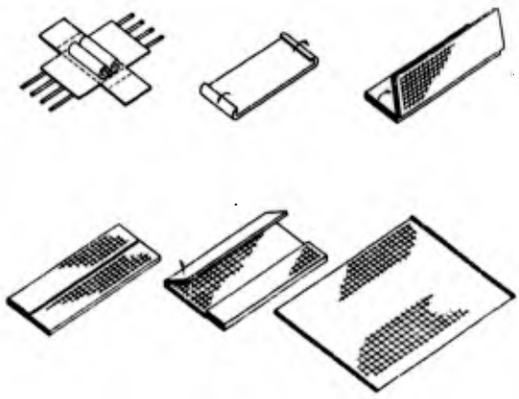
REFERENCE:
U. S. Department of Defense Nomenclature Card.

COUNTERPOISE MX-1169/GRD

TYPE: Counterpoise.

DESCRIPTION: The counterpoise consists of nine 75-foot by 8-foot sections of 18-inch mesh of 12-gage, stranded, tinned copper wire. Each section has an 8-foot wooden piece at each end. The nine sections are joined to each other by strips of 1/4-inch tinned, copper braid. The counterpoise is anchored to the ground by 42 metal clamps that fit over the wooden end pieces. Four ground stakes ground the corners of the counterpoise.

INSTALLATION: Ground, transportable.



Counterpoise MX-1169/GRD

ASSOCIATED EQUIPMENT: Direction Finder Sets AN/TRD-4 and AN/TRD-4A. Equipment function - direction finding.

REFERENCE:
Department of the Army, Direction Finder Set AN/TRD-4A, Technical Manual, TM 11-688, (June 1955). UNCLASSIFIED.

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COUNTERPOISE MX-1248/FRN-12A

TYPE: Counterpoise.

DESCRIPTION: MX-1248/FRN-12A is a solid copper sheet, 40 feet in diameter, mounted on Shelter S-62/FR by 15-foot structural steel girders. It is used as an elevated counterpoise for Antenna AS-494/FRN-12A.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Transmitting Set AN/FRN-12A. Equipment function - navigation.

COGNIZANT AGENCY: WL-50-2245.

MANUFACTURER: Craig Machine, Inc., contract AF-33(038)-6061.

REFERENCES:
1) Government Specification ENG-287.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA MX-1263/UPA

FREQUENCY: UHF band, 1010 - 1110 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Radar Set AN/UPA-22.

MANUFACTURER: Maryland Electronics Manufacturing Corporation.

STOCK NUMBER: Federal Stock Number F5985-296-1716.

REFERENCES:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA MX-1317/GR

See AS-595/GR.

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COUNTERPOISE MX-1438/MRN-10

TYPE: Counterpoise.

DESCRIPTION: MX-1438/MRN-10 is a perforated aluminum counterpoise 24 feet in diameter. It serves as the roof of Prefabricated Building S-84/MRN-10 and as an elevated ground plane for Antenna AS-494/FRN-12A.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/MRN-10. Equipment function - navigation.

COGNIZANT AGENCY: WL-53-R-1721.

MANUFACTURER: Wendell Body Works, Irvington, N. J., and Lavoie Laboratory, Morganville, N. J., contract AF 33(038)-26122.

STOCK NUMBER: Federal Stock Number 5825-026-8698.

REFERENCES:
1) U. S. Air Force Specification ENG-408.
2) U. S. Department of Defense Nomenclature Card.

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COUNTERPOISE MX-1687/G

MAJOR COMPONENTS: 8 twenty-five-foot sections of No. 20 AWG wire, 1 thirty-inch section of No. 20 AWG wire, and braided insulation.

TYPE: Counterpoise.

DESCRIPTION: MX-1687/G is a multiple-wire counterpoise used with Antenna AT-530/GR.

INSTALLATION: Ground.

COGNIZANT AGENCY: SCLC-8859.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA MX-2533/G and MX-2534/G

TYPE: Whip.

DESCRIPTION: MX-2533/G and MX-2534/G are tapered copper rods used to form a 15-foot whip antenna. MX-2533/G, the top section of the whip, is 7-1/2 feet long and tapers from 5/8 to 3/16 inch in diameter. MX-2534/G, the bottom section of the whip, is 7-1/2 feet long and tapers from 1 to 5/8 inch in diameter.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-3, AN/GRC-4, AN/GRC-5, AN/GRC-6, AN/GRC-7, and AN/GRC-8. Equipment function - communications.

COGNIZANT AGENCY: SEL-58-198.

REFERENCES:
1) Signal Corps Technical Requirements SCL-1729.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA MX-2435/G, MX-2436/G, MX-2437/G, MX-2438/G, and MX-2439/G

TYPE: Whip.

DESCRIPTION: MX-2435/G, MX-2436/G, MX-2437/G, MX-2438/G, and MX-2439/G are tapered copper rods. MX-2438/G and MX-2439/G are used to form a 2-section whip approximately 7-1/3 feet long. MX-2437/G is added to the 2-section whip to form a 3-section whip approximately 9 feet long. MX-2436/G is added to the 3-section whip to form a 4-section whip approximately 11 feet long. MX-2435/G is added to the 4-section whip to form a 5-section whip approximately 13-1/3 feet long.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-3, AN/GRC-4, AN/GRC-5, AN/GRC-6, AN/GRC-7, and AN/GRC-8. Equipment function - communications.

COGNIZANT AGENCY: SEL-58-224 through-228.

REFERENCES:
1) Signal Corps Technical Requirements SCL-1729.
2) U. S. Department of Defense Nomenclature Card.

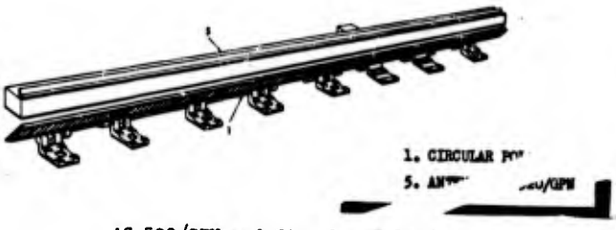
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ANTENNA GROUP OA-234/GPN&()

MAJOR COMPONENTS: Antenna AS-519/GPN, Antenna AT-290/GPN, Antenna Drive TG-12/GPN, Signal Data Converter CV-142/GPN, Sensitive Switch SA-232/GPN, and Servo Control C-813/GPN.

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Parabolic-cylinder reflector fed by a dipole array.



AS-520/GPN and Circular Polarizer

DESCRIPTION:

A) Reflector - Antenna AT-290/GPN&() is a parabolic-cylinder reflector made of aluminum. The reflector weighs 100 pounds and overall is 102 inches wide by 45 inches high by 25 inches deep. The reflector is cradle mounted by support arms that are centered on the bottom of the reflector assembly, 13 inches from each end.

B) Feed - Antenna AS-519/GPN&() is a dipole array consisting of 128 dipoles mounted on and fed by a motor-driven variable-width waveguide. The assembly includes retractable circular-polarization gratings. The feed assembly is mounted by means of brackets to the azimuth reflector. All antennas AS-519/GPN have been modified by inclusion of circular polarization equipment.

BEAM DATA:
Gain - 39 db.
Half-power beamwidths - Horizontal - 0.85°.
Vertical - 2.5°.
Beam type - Fan.
Polarization - Linear or circular.

SCAN DATA: The antenna has an electromechanical azimuth scan at 2 scans per second through 20°. A servo actuator is used for positioning through an elevation angle of 7°.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/CPN-4, AN/CPN-4A, AN/CPN-4B, and AN/FPN-16. Equipment function - approach control (GCA).

MISCELLANEOUS: OA-234/GPN is similar to OA-280/GPN and OA-643/GPN.

COGNIZANT AGENCY: WL-50-1516; AFDEN-2D.

MANUFACTURER: Gilfillan Brothers, Inc., procurement contracts W33-038-ac-20653 (1950), AF 30(635)-3312 (1955).

STOCK NUMBERS: AT-290/GPN . . . Federal Stock Number F5840-025-7399 and Federal Stock Number N5985-038-2368; AS-519/GPN . . . Federal Stock Number F5840-295-9210.

REFERENCES:

1) U. S. Air Force, Radar Set AN/FPN-16, Illustrated Parts Breakdown, TO 31P5-2FPN-16-4, (July 1, 1957). UNCLASSIFIED.

2) U. S. Air Force, Radar Set AN/CPN-4(), Landing Control Set AN/MPN-11(), Handbook Operation and Service Instructions, TO 31-P5-2CPN4-1, (Dec. 15, 1955 - revised March 1, 1959). UNCLASSIFIED.

3) Gilfillan Brothers Part/Drawing Numbers 38701 (AT-290/GPN) and 75371 (AS-519/GPN).

4) U. S. Air Force Specification R-7437-A and R-7511.

ANTENNA GROUP OA-235/GPN&()

MAJOR COMPONENTS: Antenna AS-520/GPN, Antenna Reflector AT-291/GPN, Signal Data Converter CV-142/GPN, Sensitive Switch SA-232/GPN, Servo Control C-813/GPN.

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Modified parabolic-cylinder reflector fed by a dipole array.

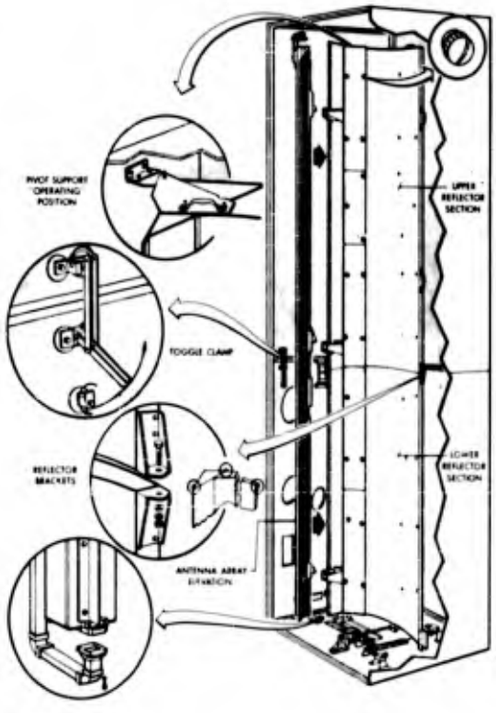
DESCRIPTION: Antenna Group OA-235/GPN&() consists of a modified parabolic-cylinder reflector fed by a dipole array. This antenna group is the elevation antenna array for the precision radar system of the associated equipment.

A) Antenna AT-291/GPN&() is a parabolic-cylinder reflector modified by 5 plates to produce a $\csc^2$-type beam when fed by Antenna AS-520/GPN&(). The reflector is made of aluminum and overall is 168 inches high, 28 inches wide, and 16 inches deep. The reflector assembly is bracket mounted to a cabinet that is an integral part of the equipment trailer.

B) Antenna AS-520/GPN&() is a dipole array consisting of 168 dipoles mounted on and fed by a motor-driven, variable-width waveguide. The assembly includes retractable circular polarization gratings. The feed assembly is bracket mounted to the

elevation reflector. All antennas AS-520/GPN have been modified by inclusion of circular polarization equipment.

BEAM DATA:
Gain - 40.8 db.
Half-power beamwidths - Horizontal - 3.5°.
Vertical - 0.55°.
Beam type - Csc^2.
Polarization - Linear or circular.



OA-235/GPN Assembly

SCAN DATA: The antenna system provides electromechanical scan in elevation at 2 scans per second through 7°. A servo actuator is used for positioning the beam through a 20° azimuth angle.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Sets AN/CPN-4, AN/CPN-4A, AN/CPN-4B and AN/FPN-16. Equipment function - approach control (GCA).

MISCELLANEOUS: OA-235/GPN&() is similar to OA-281/GPN and OA-642/MPN-11.

COGNIZANT AGENCY: WL-50-R-2177.

MANUFACTURER: Gilfillan Brothers, Inc., procurement contracts W33-038-ac-20653 (1951) and AF 30(635)-3312 (1955).

STOCK NUMBERS: AT-291/GPN&() ... Federal Stock Numbers F 5985-038-2438, 5840-217-0517 and AS-520/GPN&() ... Federal Stock Number N5840-295-8981.

REFERENCES:
1) U. S. Air Force, Radar Set AN/FPN-16, Illustrated Parts Breakdown, TO 31P5-2FPN16-4, (July 1, 1957). UNCLASSIFIED.

2) U. S. Air Force, Radar Set AN/CPN-4(), Landing Control Set AN/MPN-11(), Handbook Operation and Service Instructions, TO 31P5-2CPN4-1, (Dec. 15, 1955 - revised March 1, 1959). UNCLASSIFIED.

3) Gilfillan Brothers Drawing Numbers 44827 (AT-291/GPN) and 75372 (AS-520/GPN).

4) U. S. Air Force Specification R-7437-A and R-7511.

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ANTENNA GROUP OA-237/GR&()

MAJOR COMPONENTS: Antenna AT-197/GR, RF Cable Assembly CG-597/U.

FREQUENCY: VHF and UHF bands, 225 - 400 mc; VSWR < 1.6.

TYPE: Conical antenna (rod-type discone).

DESCRIPTION: This antenna is a discone made from radially extending spokes which are easily detached for minimum shipping space. There are 12 rods oriented at 30° to each other and at 30° with respect to the vertical plane. The discone weighs 6 pounds and is 27 inches long with a maximum diameter of 19 inches. The input impedance is 50 ohms, and the average power rating is 1000 watts. The antenna mounts to Mast AB-158/GR or to a telephone pole by means of a special cast-aluminum bracket which is furnished.

BEAM DATA: The azimuth radiation pattern is circular within 1/2 db. Polarization is vertical.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-27&(), AN/GRC-29&(), AN/GRC-32, AN/GRC-32A, AN/GRC-32B, AN/GRR-7, AN/GRT-3, AN/URR-13, AN/URR-35, AN/TRC-32, and AN/TRC-38. Equipment function - communications.

COGNIZANT AGENCY: WL-50-1551 and WL-57-R-1745.

MANUFACTURER: Collins Radio Company, and R. Wurlitzer Company, procurement contracts

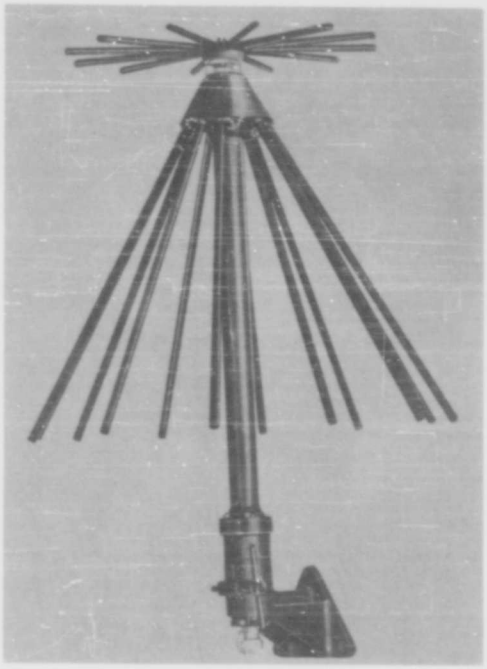
AF 33(038)-6135, AF 30(635)-7917, AF 30(635)-8647, and AF 30(635)-7056.

STOCK NUMBERS: AT-197/GR U. S. Air Force 1700-201020803; Federal Stock Numbers F 5820-519-8284 and 5985-219-7454.

REFERENCES:
1) U. S. Air Force, Radio Set AN/GRC-27, Illustrated Parts Breakdown, TO 31R2-2GRC27-4, (April 1, 1958). UNCLASSIFIED.

2) U. S. Air Force, Antenna Assembly AT-197/G, Instructions and Parts Breakdown, TO 31R1-2GR-161, (Sept. 1, 1957). UNCLASSIFIED.

3) U. S. Air Force, Radio Equipment, Ground Communications, Electronic and Meteorological Equipment Directory, TO 31R-1-8, (June 15, 1959). UNCLASSIFIED.



AT-197/GR of Antenna Group OA-237/GR & ()

ANTENNA GROUP OA-238/GR&()

MAJOR COMPONENTS: Antenna AS-450/GR, RF Cable Assembly CG-597/U, and Special Purpose Cable Assembly CX-1187/U.

FREQUENCY: VHF and UHF bands, 225 - 400 mc; VSWR < 2.3.

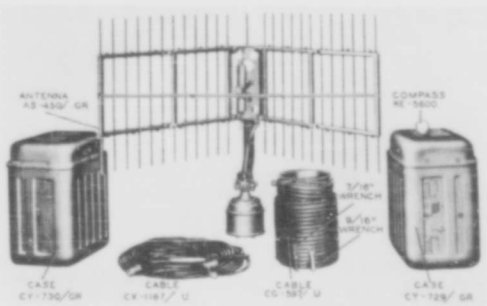
TYPE: Corner reflector with dipole feed.

DESCRIPTION: Antenna AS-450/GR&() consists of a 90°, sectionalized corner reflector constructed of aluminum tubing and fed by a dipole. The dipole is fed by RG-17/U cable through a balun. The dipole-feed assembly bolts to the reflector and the reflector is flange mounted to Mast AB-158/GR.

BEAM DATA:
Gain - Approximately 9 db over a dipole.
Half-power beamwidths -
Horizontal - 45° at 225 mc,
- 30° at 400 mc.
Front-to-back ratio - 25 db or more.
Polarization - Normally vertical, but may be changed to horizontal.

SCAN DATA: The antenna is capable of continuous rotation in azimuth either clockwise or counterclockwise at 2 revolutions per minute.

INSTALLATION: Ground.



Antenna Group OA-238/GR

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-29. Equipment function - communications.

COGNIZANT AGENCY: WL-50-1554.

MANUFACTURER: Collins Radio Company, procurement contract AF 33(038)-6135.

STOCK NUMBER: AS-450/GR ... Federal Stock Number 5985-033-5472.

REFERENCES:
1) U. S. Air Force, Antenna AS-450/GR, Handbook Maintenance Instructions, TO 31R2-

2GRC29-12, (June 25, 1951 - revised March 16, 1959). UNCLASSIFIED.

2) U. S. Air Force Exhibit WLENG-230.

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ANTENNA GROUP OA-249/GRC-10

MAJOR COMPONENTS: 2 antennas AS-620/GRC-10, 1 antenna support AB-381/U, and 2 antenna masts AB-301/G.

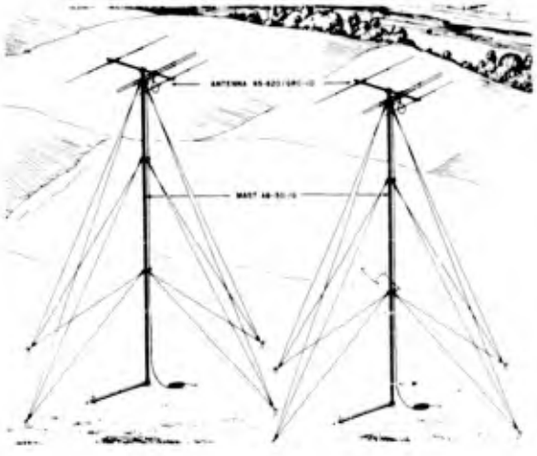
FREQUENCY: VHF band, 54 - 71 mc.

TYPE: A 3-element Yagi antenna or a modified ground-plane antenna.

DESCRIPTION: The antenna group consists of the components necessary to construct either two identical 3-element, mast-mounted Yagi antennas or one 3-element, mast-mounted Yagi antenna and one mast-mounted, modified ground-plane antenna. Each antenna mounts on a mast AB-301/G and is fed by 50-ohm coaxial cable.

Each 3-element Yagi array has one folded dipole, one director, and one reflector. The three elements are sectionalized and adjustable in length. The director is adjustable from 79 to 103 inches; the folded dipole, from 81 to 106 inches; and the reflector, from 90 to 117 inches.

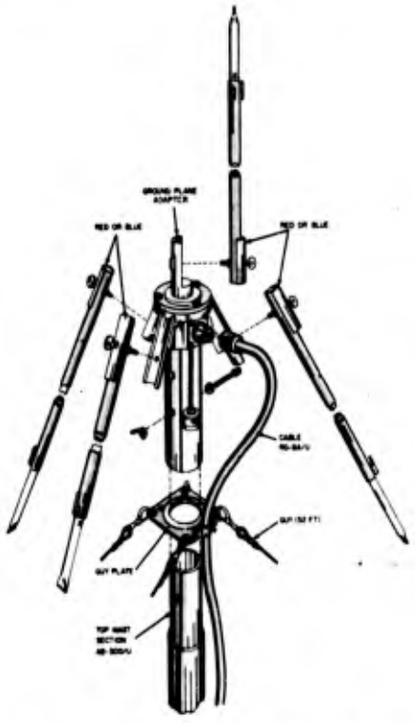
The modified ground-plane antenna consists of a vertical radiator and three equally spaced ground-plane rods which make angles of about 135° with the vertical radiator. It is composed of antenna support AB-381/U and the antenna elements that are also used in making up the reflector and director for the Yagi array.



Antenna Group OA-249/GRC

BEAM DATA:
Polarization -
Yagi array - Horizontal.
Ground-plane antenna - Vertical.

INSTALLATION: Ground.



Ground-plane Antenna of OA-249/GRC

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-10. Equipment function - communications.

COGNIZANT AGENCY: SCLC-8306.

MANUFACTURER: American Phenolic Corporation, Chicago, Illinois, contract 11675-PH-52-93.

STOCK NUMBER: Federal Stock Numbers 5985-174-0514 (for OA-249/GRC-10), 5985-264-7495 (for AS-620/GRC-10), and 5985-264-7468 (for AB-301/G).

REFERENCES:

1) Departments of the Army and the Air Force, Radio Set AN/GRC-10, Radio Terminal Set AN/GRC-39, Radio Repeater Set AN/GRC-40, Technical Manual, Technical Order, TM 11-614, TO 31R2-2GRC-161, (Nov. 1954). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Antenna Group OA-249/GRC-10, Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide, SIG 7 & 8 OA-249/GRC-10, TO 31R2-2GRC-10-14, (Aug. 18, 1955). UNCLASSIFIED.

3) Government Specification MIL-A-11892.

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ANTENNA GROUP OA-280/GPN&()

See OA-234/GPN&().

MISCELLANEOUS: Apparently the only difference in the OA-280/GPN&() and the OA-234/GPN&() and the OA-643/GPN&() is in the method of mounting. The OA-280/GPN&() evidently bolts into its trailer.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-16
Equipment function - approach control (GCA).

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ANTENNA GROUP OA-281/GPN&()

See OA-235/GPN&().

MISCELLANEOUS: Apparently the only difference in the OA-281/GPN&() and the OA-235/GPN&() and the OA-642/MPN-11&() is in the method of mounting. The OA-281/GPN&() is bolted into its trailer.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-16.
Equipment function - approach control (GCA).

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ANTENNA GROUP OA-288()/TRC-29

MAJOR COMPONENTS: 2 paraboloidal reflectors, 2 dipole feeds with coaxial cables.

FREQUENCY: UHF band, 1700 - 2400 mc.

TYPE: Paraboloidal reflector fed by a dipole.

DESCRIPTION: Each of the antennas consists of an aluminum paraboloidal reflector 60 inches in diameter and a dipole feed enclosed in polystyrene. The unit is mounted on a 65-foot steel mast and is fed by coaxial transmission line.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-29().
Equipment function - communications.

MISCELLANEOUS: Reference 1 indicates that AS-554/TRC-29 is a part of AN/TRC-29(). Possibly the OA-288()/TRC-29 is made up of Antennas AS-554/TRC-29.

COGNIZANT AGENCY: SCL-9567.

REFERENCES:

1) Departments of the Army and the Air Force, Radio Set AN/TRC-29 and Radio Repeater Set AN/TRC-39, Technical Manual, Technical Order, TM 11-689, TO 31R2-2TRC-151, (April, 1956). UNCLASSIFIED.

2) Military Specification MIL-R-10615.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-291/GRC-30&()

MAJOR COMPONENTS: 1 Antenna AT-332/GRC-30&(), 1 Antenna AT-333/GRC-30&(), 1 Antenna AT-334/GRC-30&(), 1 Mast AB-230/GRC-30&().

FREQUENCY: VHF and UHF bands, 100 - 400 mc:
AT-332/GRC-30&() ... VHF, 100 - 200 mc.
AT-333/GRC-30&() ... VHF and UHF, 200-400 mc.
AT-334/GRC-30&() ... VHF and UHF, 100-400 mc.

TYPE: Conical antennas (discones).

DESCRIPTION: Each of the antennas below is a fixed sleeve-mounted discone constructed of aluminum and steel. Pertinent dimensions and other facts are listed in tabular form.

Discone Dimensions

Nomenclature	Diameter of disk (inches)	Number of rods	Length of rods (inches)
AT-332/GRC-30	23	8	28-7/8
AT-333/GRL-30	14-1/8	6	17-7/8
		6	29-5/8
AT-334/GRL-30	16	6	29-1/8

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-30.
Equipment function - communications.

COGNIZANT AGENCY: WL-53-R-2026.

MANUFACTURER: Lavoie Laboratories, Inc., procurement contracts AF 33(038)-9875 and AF 30(635)-257.

REFERENCES:

1) Bureau of Aeronautics, Handbook of Airborne Antenna Data, CO 15-1-517, (July 1, 1953). CONFIDENTIAL.

2) U. S. Air Force, Radio Set AN/GRC-30, Handbook Operation and Service Instructions, TO 31R2-2GRC30-1, (Oct. 1, 1952 - revised Oct. 15, 1956). UNCLASSIFIED.

3) Lavoie Laboratories Drawing 13753500.

4) U. S. Air Force Specification ENG-364B.

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ANTENNA GROUP OA-298/TRC

MAJOR COMPONENTS: 2 AS-52/TRC-8 antennas, connecting cables, and guys.

FREQUENCY: VHF band, 230 - 250 mc.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: OA-298/TRC is a modification kit to be used with the antenna equipment normally supplied with Radio Set AN/TRC-8(), Radio Terminal Set AN/TRC-11(), and Radio Relay Set AN/TRC-12. One kit is needed for each two antennas supplied with the equipment.

After OA-298/TRC is installed, each antenna assembly consists of two AS-52/TRC-8 antennas connected in parallel and mounted on an AB-48/TRC-8 mast. This arrangement gives a 3-db gain over that of a single AS-52/TRC-8 antenna.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-8(), AN/TRC-11(), and AN/TRC-12(). Equipment function - communications.

MISCELLANEOUS: See AS-52/TRC-8 for a description of the AS-52/TRC-8 antenna.

COGNIZANT AGENCY: SCL-10058.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-299()/TRC

MAJOR COMPONENTS: 1 Antenna AS-558()/TRC (2 Antennas AT-336()/TRC), 1 Antenna AS-559()/TRC (2 Antennas AT-337()/TRC).

FREQUENCY: VHF band:
AS-559()/TRC . . . 50 - 90 mc.
AS-558()/TRC . . . 92 - 170 mc.

TYPE: Yagi antennas in stacked array.

DESCRIPTION: Antenna Group OA-299()/TRC consists of one AS-558()/TRC antenna and one AS-559()/TRC antenna. Antenna AS-558()/TRC consists of two AT-336()/TRC antennas in a vertical stack, and Antenna AS-559()/TRC consists of two AT-337()/TRC antennas in a vertical stack.

A) Antenna AT-336()/TRC is a 3-element Yagi array made up of adjustable sectionalized elements. The antenna is fed by a 50-ohm coaxial cable.

B) Antenna AT-337()/TRC is similar to Antenna AT-336()/TRC but designed to operate in a lower frequency range.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/TRC-31&(). Equipment function - communications.

COGNIZANT AGENCY: SCL-11658.

REFERENCES:
1) Military Specification SCL-1303.

2) U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-306/GRC&()

See OA-237/GR&().

OA-306/GRC is apparently the same as Antenna Group OA-237/GR&() except for connecting cables. OA-237/GR&() has cable assembly CG-597/U, and OA-306/GRC&() has cable assembly CG-595/U.

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ANTENNA GROUP OA-314/GRC

MAJOR COMPONENTS: 1 MP-65 mast base, 1 MP-50 mounting bracket, 4 MS-116 mast sections, 1 MS-117 mast section, 1 MS-118 mast section, 1 AS-110/TRC-7 antenna, and 1 CY-1089/GRC case.

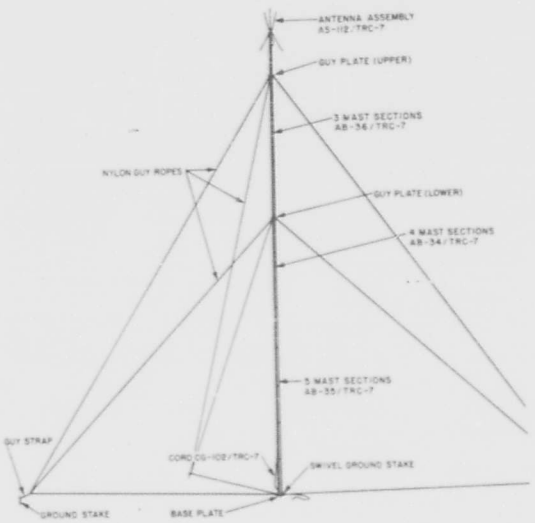
FREQUENCY: AS-110/TRC and AS-112/TRC - VHF band, 100 - 156 mc.

TYPE: A conical ground-plane antenna and a whip antenna.

DESCRIPTION: The antenna group consists of a conical ground-plane antenna (AS-110/TRC-7) and a whip antenna, approximately 18 feet long, made up of mast sections MS-116, MS-117, and MS-118, and mast base MP-65.

Antenna AS-110/TRC-7 consists of an AS-112/TRC-7 antenna and a 30-foot supporting mast. AS-112/TRC-7 is a modified ground-plane antenna. The radiating section consists of three AB-78/TRC-7 mast sections mounted 120° apart at an angle of 75° upward

from horizontal. The ground-plane section consists of three AB-78/TRC-7 mast section mounted 120° apart at an angle of 60° downward from the horizontal. The radiating section of AS-112/TRC-7 is fed by a CG-102/TRC-7 coaxial cable.



AS-110/TRC-7 of OA-314/GRC

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT:
OA-314/GRC - Radio Set AN/GRC-36.
AS-110/TRC-7 and AS-112/TRC-7 - Radio Sets AN/TRC-7, AN/TRC-7B, AN/GRC-36, AN/GRC-47, and other communication sets in this frequency range. Equipment function - communications.

COGNIZANT AGENCY: OA-314/GRC, WL-51-1302; AS-110/TRC-7, PPD; and AS-112/TRC-7, SCL-4130.

MANUFACTURER: Andrea Radio Corporation.

STOCK NUMBERS:

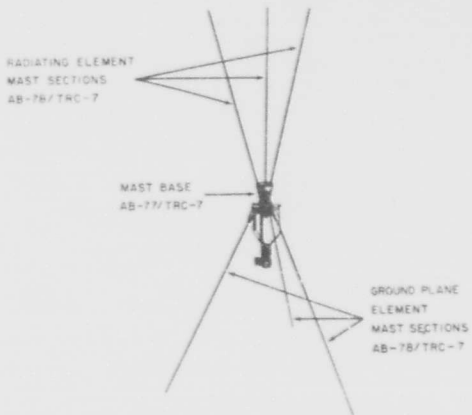
	Federal Stock Number	Signal Corps.
AS-110/TRC-7	N5985-699-9091	2A264-110
AS-112/TRC-7	F 5985-090-2652	2A264-112
MS-116		2A2416
MS-117		2A2417
MS-118		2A2418

REFERENCES:
1) U. S. Air Force, Radio Sets AN/TRC-7B, Handbook Operation and Service Instructions, TO 31R2-2TRC7-11, (July 7, 1952 - revised Nov. 1, 1954). UNCLASSIFIED.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) Military Specification 271-3103.

4) U. S. Department of Defense Nomenclature Card.





Whip Antenna of OA-314/GRC

ANTENNA GROUP OA-321()/U

MAJOR COMPONENTS: 1 Antenna AS-581()/U, 1 Antenna AS-582()/U, 1 Tower AB-245()/U, 1 Antenna Control C-994()/U.

FREQUENCY: HF and VHF bands:
AS-581()/U ... HF band, 9.5-26 mc; VSWR < 2.
AS-582()/U ... HF and VHF bands, 24-62 mc; VSWR < 2.

TYPE: Mattress antenna.

DESCRIPTION: Antenna Group OA-321()/U consists of one AS-581()/U and one AS-582()/U antenna mounted on a common tower, AB-245()/U.

A) Antenna AS-581()/U is a mattress antenna consisting of a dipole array mounted in front of a bedspring-type reflector. The dipole array is fed by 50-ohm coaxial cable. Overall dimensions of the reflector are 30 feet long by 30 feet high.

B) Antenna AS-582()/U is a mattress antenna consisting of a dipole array mounted in front of a bedspring-type reflector. The dipole array is fed by a 50-ohm coaxial cable. Overall dimensions of the reflector are 15 feet long by 12 feet high.

BEAM DATA:
Half-power beamwidths - AS-581()/U and AS-582()/U at mid-frequency -
Horizontal - 80°.
Vertical - 80°.

SCAN DATA: The antennas have mechanical azimuth rotation.

INSTALLATION: Ground.

COGNIZANT AGENCY: SCL-11400.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-373/GPN&()

Similar to Antenna Group OA-373A/GPN&(), except for circular polarization facilities which are not present in OA-373/GPN&().

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ANTENNA GROUP OA-373A/GPN

MAJOR COMPONENTS: Antenna AS-964/GPN&(), Antenna Base AB-195/GPN&(), Transmission Line CG-169A/U, Waveguide Assembly CG-764/U&(), RF Cable Assembly CG-1701/U, Cable Assemblies CX-4520/U and CX-4519/U.

FREQUENCY: UHF band:
IFF . . . 1010 - 1110 mc,
Search . . . 2780 - 2820 mc.

TYPE: Modified paraboloidal reflector fed by an unsymmetrical, modified, diamond-shaped waveguide horn.

DESCRIPTION: The antenna group includes AS-964/GRN&(), which is composed of reflector AT-867/GPN&() and feed AT-868/GPN&().

A) Reflector - Antenna AT-867/GPN&() is a modified paraboloidal reflector made of fiberglass honeycomb with a woven metal-fabric reflecting surface. Overall dimensions are 74-1/2 inches high by 120 inches wide by 33-1/4 inches deep. The antenna mounts on two 1-9/32-inch diameter horizontal pins by means of pillow blocks located on 38-inch mounting centers; a 3/8-inch-diameter clevis-pin hole is provided on the support structure for attaching the tilt actuator which forms the third support for the reflector.

B) Feed - Antenna AT-868/GPN is a waveguide horn. Overall dimensions of the horn assembly are 40 inches long by 12 inches wide by 16 inches deep. The throat is 2.62 inches square and the mouth is 6.00 inches long by 3.06 inches wide. The horn is unsymmetrical with a modified diamond-shaped cross section. The assembly contains a motor-actuated vector rotating section which enables S-band circular or linear polarization to be selected from the operator's position.

This is a modified version of the AT-868/GPN which incorporates the IFF feed into the main unit.

BEAM DATA: (For radar)
Half-power beamwidth - Horizontal - 2.5°.
Beam type - Csc^2.
Polarization - Search ... Linear or circular.
IFF ... Vertical.

SCAN DATA: The antenna assembly scans 360° in azimuth.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/CPN-4(*); AN/MPN-11(*). Equipment function - search, air (for GCA system). Maximum reliable range - 40 nautical miles. Vertical surveillance coverage - up to altitudes of 20,000 feet.

MISCELLANEOUS: OA-373A/GPN is similar to OA-373/GPN&(). The only difference is that OA-373A/GPN&() has facilities for circular polarization added.

COGNIZANT AGENCY: WL-58-1558.

MANUFACTURER: Gilfillan Brothers, Inc.

STOCK NUMBERS: AS-964/GPN . . . Federal Stock Number 5840-660-9975, AT-867/GPN . . . Federal Stock Number 5840-660-9972.

REFERENCES:
1) TO 31P5-2CPN4-548.
2) U. S. Department of Defense Nomenclature Cards for AS-964/GPN&(), AT-867/GPN&(), AT-868/GPN&(), and OA-373()/GPN.

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ANTENNA GROUP OA-375/TPS-10D&()

MAJOR COMPONENTS: Antenna AT-311/TPS-10D, Antenna AT-312/TPS-10D, Directional Coupler CU-263/TPS-10D, Transmission Line Rotary Coupler UG-663/TPS-10D, Standing Wave Indicator IM-65/TPS-10D and Waveguide Assemblies.

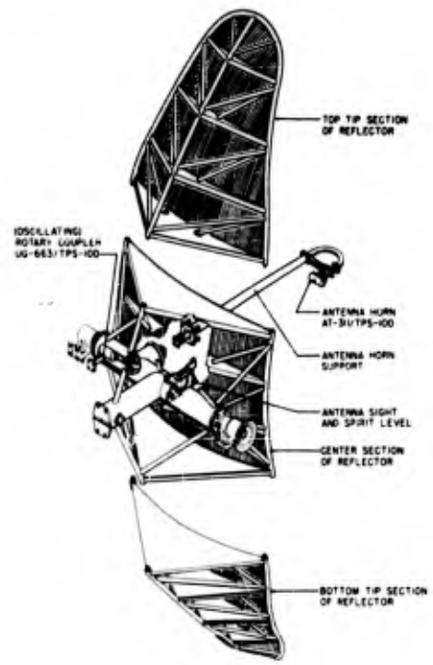
FREQUENCY: SHF band, 8500-9600 mc.

TYPE: Cut paraboloidal reflector fed by a horn.

DESCRIPTION: Antenna Group OA-375/TPS-10D & ( ) consists of a cut paraboloidal reflector fed by a waveguide horn.

A. Antenna AT-312/TPS-10D is a cut paraboloidal reflector made of vertical tubes. The overall reflector is 45-1/8 inches wide, 63 inches deep, and 121-1/8 inches high. The focal length is 35-1/2 inches. The reflector mounts on Antenna Pedestal AB-226/TPS-10D.

B. Antenna AT-311/TPS-10D is a waveguide horn used as the feed for the AT-312/TPS-10D reflector. The horn has a fiberglass laminate pressure cover and is 6-7/8 inches by 3-35/100 inches wide by 1 inch high overall. The waveguide feed for the horn attaches directly to the reflector assembly.



OA-375/TPS-10D

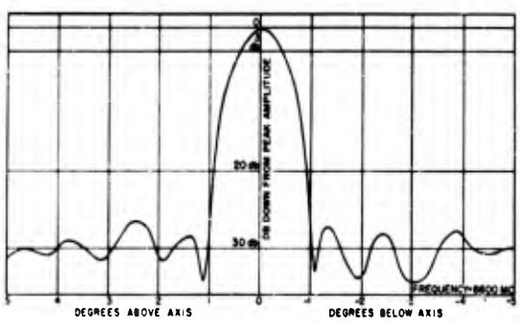
BEAM DATA:
Half-power beamwidth - Azimuth - 2.05°.
Elevation - 0.8°.
Beam type - Fan.
Polarization - Vertical.

SCAN DATA:
Azimuth scan - The antenna has automatic scan through 360° in azimuth at 1/3 revolution per minute and manual scan through 360° in azimuth at 0-6 revolutions per minute.
Elevation scan - Elevation scanning is from -2° to +23° at 60 cycles per minute automatically or from 0 to 30 cycles per minute manually.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/TPS-10D, AN/FPS-4, and AN/MPS-8. Equipment function-height finding. Maximum range-120 miles. Elevation coverage from 5000 feet to 60,000 feet.

COGNIZANT AGENCY: WL-55-R-224.



Vertical Radiation Pattern for OA-375/TPS-10D and AN/TPS-10D

MANUFACTURER: RCA, procurement contracts AF 33(038)-9838 and AF 30(635)-2039.

STOCK NUMBERS: AT-311/TPS-10D... Federal Stock Number 5840-090-0090; AT-312/TPS-10D...Federal Stock Number 5840-217-0518.

REFERENCES:

1) U. S. Air Force, Radar Set AN/TPS-10D, AN/FPS-4, AN/MPS-8, Operation and Service Instructions, T.O. 31P3-2FPS4-1, (Oct. 24, 1951 - revised Apr. 30, 1955). UNCLASSIFIED.

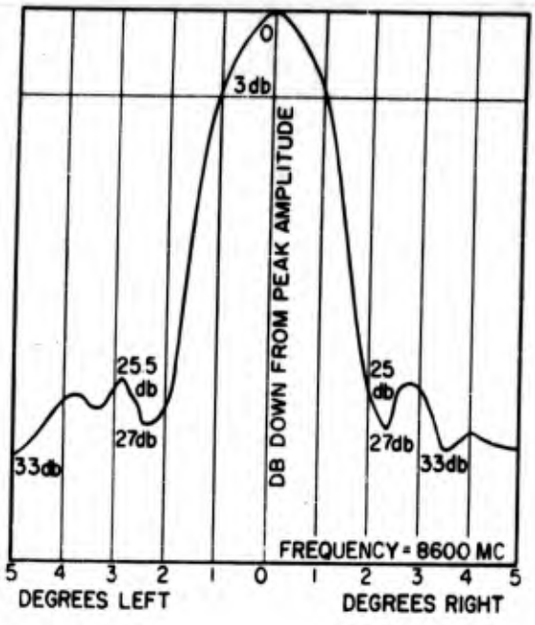
2) U. S. Air Force and Bureau of Aeronautics, Fixed and Mobile Radar and Auxiliary Equipment Directory, T. O. 31P-1-17 (July 18, 1955 - revised March 30, 1956). SECRET.

3) John E. Cruichshank and Reuben O. Schlegelmilch, Ground Radar Sets, Systems and Related Components, RADC 52-22. Rome, New York: Rome Air Development Center, (Nov. 1, 1952). AD-128. SECRET.

4) John E. Cruickshank, Supplement No. 1 to Ground Radar Sets, Systems, and Related Components, RADC-TR-56-103. Griffiss Air Force Base, New York: Rome Air Development Center, (Feb. 1957). ASTIA Report No. AD-97768. SECRET.

5) Military Specification WLENG-178.

6) U. S. Department of Defense Nomenclature Cards for AT-311/TPS-10D, AT-312/TPS-10D, and OA-375/TPS-10D.



Horizontal Radiation Pattern for OA-375/TPS-10D and AN/TPS-10D

ANTENNA GROUP OA-389/FPS-6

MAJOR COMPONENTS: 1 Antenna Reflector AT-374/FPS-6, 1 antenna horn AT-375/FPS-6, Antenna Base AB-285/FPS-6, and necessary supports and waveguide assemblies.

FREQUENCY: UHF band, 2700-2900 mc.

TYPE: Cut paraboloidal reflector with horn feed.

DESCRIPTION:

A. Reflector-AT-374/FPS-6 is a cut paraboloidal reflector 30 feet high, 7-1/2 feet wide and 3 feet deep. It consists of a perforated sheet-aluminum reflecting surface supported by a framework. It is made up of 3 sections: an upper, a center, and a lower section.

B. Horn-AT/375/FPS-6 is a flared, waveguide-horn antenna made of aluminum with an overall length of 33-1/2 inches. The horn is fed by S-band waveguide. The inside of the mouth is 3.6 inches by 3.8 inches. The mouth is covered by a fiberglass radome.

BEAM DATA:

Half-power beamwidth - Vertical - 0.85° ± 0.05°.
Horizontal - 3.2°.
Polarization - Vertical.

SCAN DATA: The antenna scans a sector in elevation from -2° to +32° at a rate of either 20 cycles per minute or 30 cycles per minute.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Sets AN/FPS-6 and AN/MPS-14. Equipment function-height finding.

MISCELLANEOUS: OA-389/FPS-6 is the same as OA-2035/FPS-6A except for a different reflector support. OA-389/FPS-6 is also similar to OA-2040/FPS-6B, which uses a different reflector support, antenna base and reflector center section.

COGNIZANT AGENCY: WL-58-R-1722 (OA-389/FPS-6); WL-51-1704 and WL-56-R-2077 (AT-374/FPS-6); and WL-51-2267 (AT-375/FPS-6).

MANUFACTURER: Goodyear Aircraft Corp. and General Electric Co; order AF 33(038)-13265 for OA-389/FPS-6, AT-374/FPS-6, and AT-375/FPS-6; order AF 30(635)-5688 for OA-389/FPS-6, and AT-374/FPS-6; orders AF 30(635)-2119 and AF 30(635)-4377 for OA-389/FPS-6 .

STOCK NUMBER: Federal Stock Numbers 5840-295-7201 (AT-375/FPS-6), probably 5840-519-8376 (AT-374/FPS-6), and 5840-284-7440 (OA-389/FPS-6).

REFERENCES:

1) U. S. Air Force, Illustrated Parts Breakdown for Radar Sets AN/FPS-6, AN/FPS-6A, AN/FPS-6B, and AN/MPS-14, TO 31P3-2FPS6-4, (July 15, 1959). UNCLASSIFIED.

2) U. S. Air Force, Bureau of Aeronautics, Handbook Operating Instructions for Radar Sets AN/FPS-6, AN/FPS-6A, and AN/MPS-14, TO 31P3-2FPS6-1, (Feb. 1, 1958). UNCLASSIFIED.

3) U. S. Air Force, Handbook Service Instructions for Radar Sets AN/FPS-5, AN/FPS-6A, and AN/MPS-14, TO 31P3-2FPS6-2, (June 5, 1958). UNCLASSIFIED.

4) GE drawings 519E433G2 (OA-389/FPS-6), PL 7032731G3 (AT-374/FPS-6) and 145C897G1 (AT-375/FPS-6).

5) Military Specification MIL-R-26838A and WLENG-249.

ANTENNA GROUP OA-405/FPS-8

MAJOR COMPONENTS: Antenna AT-386/FPS-8, Antenna AT-396/FPS-8, Antenna Support AB-292/FPS-8, Antenna Support AB-293/FPS-8, Antenna Pedestal AB-294/FPS-8.

FREQUENCY: UHF band: Search frequency 1280-1350 mc, IFF frequency 990-1130 mc.

TYPE: Modified cut paraboloidal reflector fed by a dual horn.

DESCRIPTION:

Antenna Reflector AT-386/FPS-8-This is a a modified cut paraboloidal reflector constructed of aluminum and stainless steel with a wire-mesh reflecting surface. The reflector is made up of 10 sections. Overall dimensions are 300 inches wide by 200 inches high by 72 inches deep; approximate weight is 758 pounds. The reflector mounts on Antenna Support AB-292/FPS-8, which is then mounted on Antenna Pedestal AB-294/FPS-8.

Antenna Horn AT-396/FPS-8-This is a dual-horn unit that independently radiates and receives both the search radar and IFF signals. The search radar section of the horn is waveguide fed and is horizontally polarized; the IFF section is probe excited by a coaxial cable and is vertically polarized. The horn is 40.17 inches in overall length.

BEAM DATA:

Gain-30.6 db (for search radar).

Half-power beamwidth-

Horizontal-2.5° (for search radar).

Beam type - $\csc^2$ from 9° to 30° (for search radar).

Polarization-Horizontal (for search radar), Vertical (for IFF).

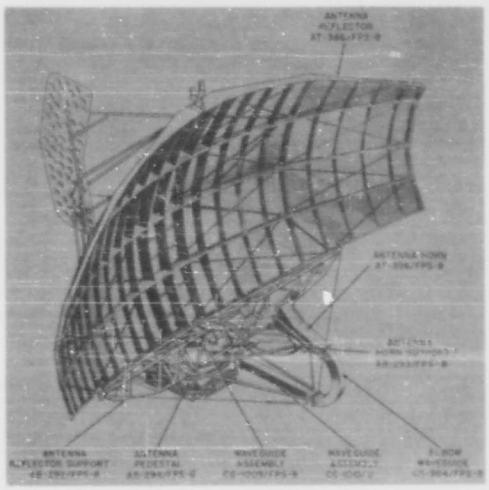
SCAN DATA: The antenna scans through 360° in azimuth at speeds variable from 0 revolutions per minute to 10 revolutions per minute. The reflector may be manually tilted from -2 to +5 degrees in elevation.

INSTALLATION: Ground

ASSOCIATED EQUIPMENT: AN/FPS-8 Ground, Fixed Radar, AN/MPS-11, -11A Ground, Mobile Radar, AN/GPS-3 Ground, Fixed Radar. Equipment function - search, air.

MISCELLANEOUS: Where rapid assembly and disassembly and light weight are desirable, paraballoon techniques are utilized. Two paraballoon reflectors which have evidently been used are the AS-807( )/GPS and the AS-871( )/GPS.

COGNIZANT AGENCY: WL-51-2450, AFDRD-EL-4.



OA-405/FPS-8

MANUFACTURER: General Electric, procurement contract AF 33(038)-19573 and AF 33(038)-13876.

STOCK NUMBERS: OA-405/FPS-8 --- Federal Stock Number F5985-636-4237, AT-386/FPS-8...Federal Stock Number F5985-038-2377 and 5840-090-0093. AT-396/FPS-8...Federal Stock Numbers N5985-548-3303 and 5840-296-2329.

REFERENCES:

1) U. S. Air Force, Handbook Installation Instructions for Back-Up Radar Set AN/GPS-3, TO 31P6-2GPS3-15, (Nov. 1, 1957). UNCLASSIFIED.

2) U. S. Air Force and Bureau of Aeronautics, Instruction Book for Radar Set AN/MPS-11A, TO 31P6-2MPS11-1, (June 30, 1955). UNCLASSIFIED.

3) U. S. Air Force, Handbook Operating Instructions for Radar Set AN/FPS-8 and Radar Set AN/MPS-11, TO 31P6-2FPS8-1, (Dec. 30, 1954). UNCLASSIFIED.

4) John E. Cruichshank and Reuben O. Schlegelmilch, Ground Radar Sets, Systems and Related Components, RADC 52-22. Rome, New York: Rome Air Development Center, (Nov. 1, 1952). AD-128. SECRET.

5) U. S. Air Force Specification ENG-271.

ANTENNA GROUP OA-436/TLR-1

See OA-463(XE-1)/TLR-1.

ANTENNA GROUP OA-463(XE-1)/TLR-1

MAJOR COMPONENTS:

Bands	Type of Antenna
1	AS-1007/TLR Sloping "V", Horizontal Polarization Inverted "V", Vertical polarization
2	AS-1008/TLR Sloping "V", Horizontal polarization Inverted "V", Vertical polarization
3	Corner reflector fed by sleeve dipole
4	Corner reflector fed by sleeve dipole
5	Corner reflector fed by sleeve dipole
6	Corner reflector fed by sleeve dipole
7	Pyramidal horn
8	Pyramidal horn
9	Pyramidal horn
10	Pyramidal horn

FREQUENCY: OA-463(XE-1)/TLR-1 - HF, VHF, UHF, SHF bands, 9.5 - 12,000 mc:

DESCRIPTION:

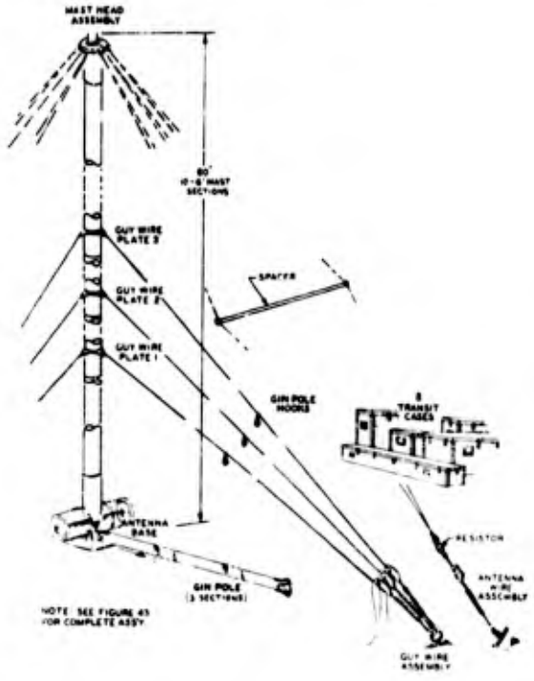
A) Band 1 Antennas.

1) Sloping "V" antenna array - AS-1007/TLR is an array of 18 half-wave, horizontally polarized, sloping "V" antennas mounted on a ten-section, 60-ft, fiberglass mast in a maypole arrangement. Each of the 18 sloping "V's" is terminated in a resistor that is connected to a spring and clamp assembly. The complete array has a motorized, azimuth-rotating, multipole switch, which feeds the sloping "V" antennas and rotates the beam clockwise over 360° in 18 equal steps of 20°. The switch is controlled by the control console. The erected antenna occupies a circular area with a diameter of approximately 330 feet. The array is portable. The beamwidth in the E-plane between first order nulls is from 35° to 90° over the bandwidth. Nominal input impedance is 50 ohms. The array is fed by RG-17A/U coaxial cable.

2) Inverted "V" antenna - This is a long-wire, inverted-"V", vertically polarized antenna. The supporting mast consists of ten 6-foot, fiberglass sections. The antenna is terminated in its characteristic impedance that is connected to a spring and clamp assembly. At the input end, a transformer assembly is inserted between the spring and the ground stake. A 4-by-3-foot aluminum mesh screen is anchored to the ground in the approximate position of the ground stake at the input. To change the direction of the beam, the antenna wires must be relocated. Beamwidth in H-plane between first order nulls is

Bands	Band Designation	Frequency Range (Mc)	VSWR (less than)
1 - (AS-1007/TLR) Horizontal Polarization	HF	9.5-25.5	2
1 - Vertical Polarization	HF	9.5-25.5	2.2
2 - (AS-1008/TLR) Horizontal Polarization	HF, VHF	24-62	2
2 - Vertical Polarization	HF, VHF	24-62	2.8
3 - Corner reflector	VHF	61-119	2.1
4 - Corner reflector	VHF	118-245	2.3
5 - Corner reflector	VHF, UHF	240-510	2
6 - Corner reflector	UHF	490-1,030	2
7 - Pyramidal horn	UHF	940-2,020	1.9
8 - Pyramidal horn	UHF, SHF	1,980-4,500	1.9
9 - Pyramidal horn	SHF	4,460-8,500	2.0
10 - Pyramidal horn	SHF	8,460-12,000	2.0

from 25° to 135° over the bandwidth. Nominal input impedance is 50 ohms. The antenna is fed by RG-9B/U coaxial cable.



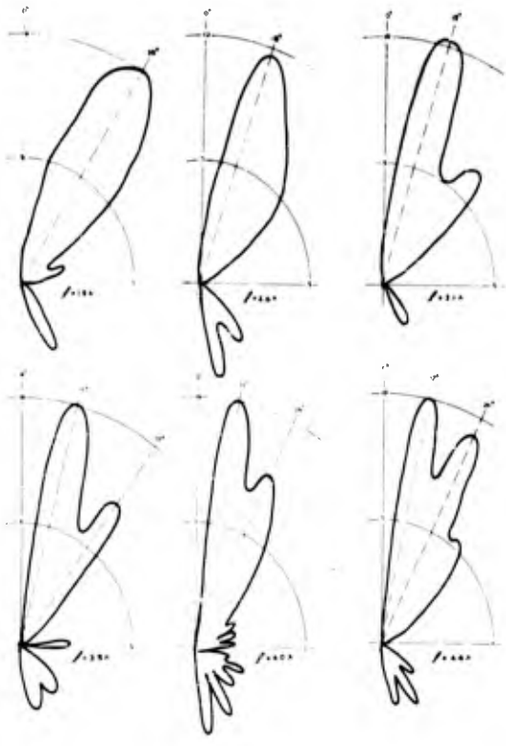
Band 1 Sloping-V Antenna of OA-463(XE-1)/TLR-1

B) Band 2 Antennas.

1) Sloping "V" antenna array - AS-1008/TLR is a 24-foot high, maypole arrangement of 18 sloping "V's" similar to the one used on Band 1; the principal difference is smaller physical size. The erected array occupies a circular area approximately 132 feet in diameter. The array is portable. The H- and E-plane beamwidths between first order nulls are from 35° to 90° over the bandwidth.

2) Inverted "V" antenna - This antenna is similar to the inverted "V" antenna used on Band 1. It has a 4-section, 24-foot, fiberglass mast and spans 43 feet in diameter. The antenna is portable. The H-plane beamwidth between first order nulls is from 25° to 135° over bandwidth.

C) Band 3 Antenna. Band 3 is covered by a broad-band, high-gain, 135° corner reflector fed by a sleeve dipole. The reflector and feed combination assembly is motor driven for changing the polarization. A motor drive provides azimuth scan through 360° in a clockwise or counterclockwise direction. A motor-driven elevation scan is provided from -10° to +90°. The assembly is mounted approximately 17 feet above ground on a tripod-supported mast. Rotation may be remotely controlled by electrical means, or the assembly may be manually rotated in azimuth, elevation, and polarization. The assembly is portable. The E- and H-plane beamwidths are from 45° to 90° over the bandwidth. Nominal input impedance is 50 ohms. The antenna is fed by RG-9B/U coaxial cable.

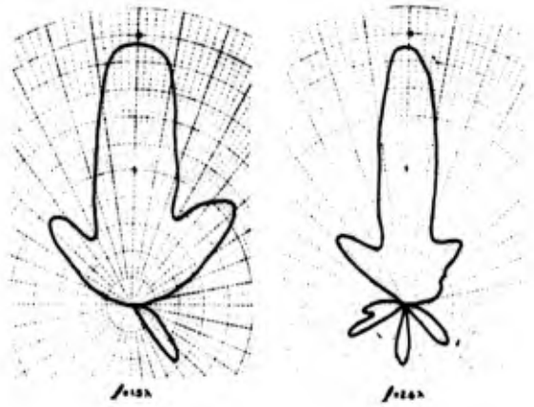


Vertical Plane Pattern for Sloping-V Antenna

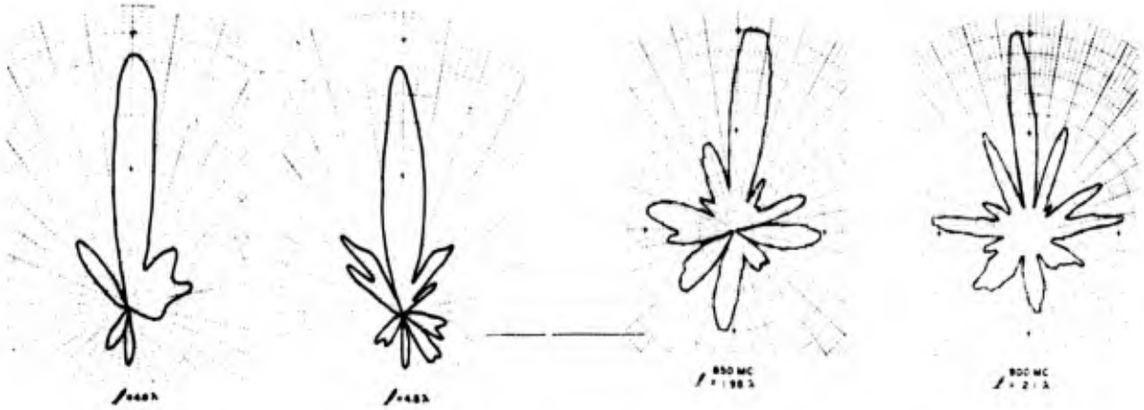
D) Bands 4, 5, and 6 Antennas. The antenna for each of the Bands 4, 5, and 6 is a corner reflector and sleeve-dipole assembly similar to the one used for Band 3. The three assemblies are mounted approximately 17 feet above ground on a common mast and tripod assembly. Apparently the only difference between each of the corner-reflector assemblies for Bands 3, 4, 5, and 6 is physical size.

E) Bands 7, 8, 9, and 10 Antennas. Pyramidal horn antennas are used for bands 7, 8, 9, and 10. The 4 horns are mounted about 18 feet above ground on a common mast and tripod assembly. Each of the horns is designed to efficiently receive signals in its respective frequency range. Polarization is linear, and polarization adjustments are made by a motor drive which rotates the 4 horns as a single unit. A motor-drive provides azimuth scan through 360° and elevation scan through -10° to 90°. The E- and H-plane beamwidths are from 40° to 90° over the bandwidths. Each antenna is fed by RG-9B/U coaxial cable.

ASSOCIATED EQUIPMENT: Countermeasures Receiving Set AN/TLR-1. Equipment function - countermeasures, search.



Horizontal Radiation Pattern for Sloping-V Antenna



Vertical Plane Patterns for Inverted-V Antenna

INSTALLATION: Ground.

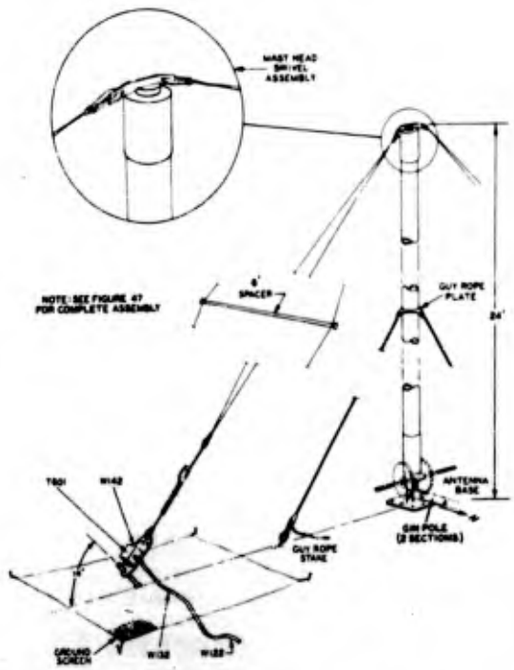
COGNIZANT AGENCY: SCLE-4179.

MANUFACTURER: Gabriel Laboratories, contracts DA-36-039-sc-4260A and DA 3-30-08-222.

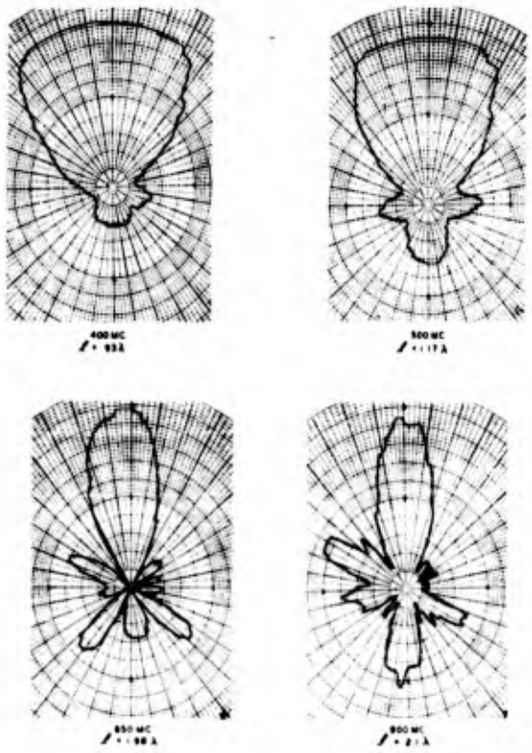
MISCELLANEOUS: For the first two years, Gabriel Laboratories designated this system as OA-436. According to private correspondence OA-463(XE-1)TLR-1 is obsolete. The OA-463(XE-1)/TLR-1 is a broadly directional antenna group under development to replace the OA-497/TLR-1.

REFERENCE:

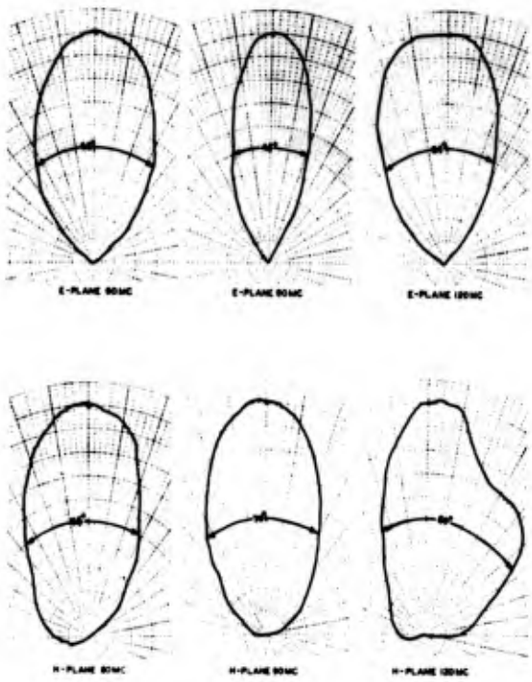
Instruction Book for Antenna Group OA-463 (XE-1)/TLR-1. Needham Heights, Mass.: Gabriel Laboratories, Division of the Gabriel Company. UNCLASSIFIED.



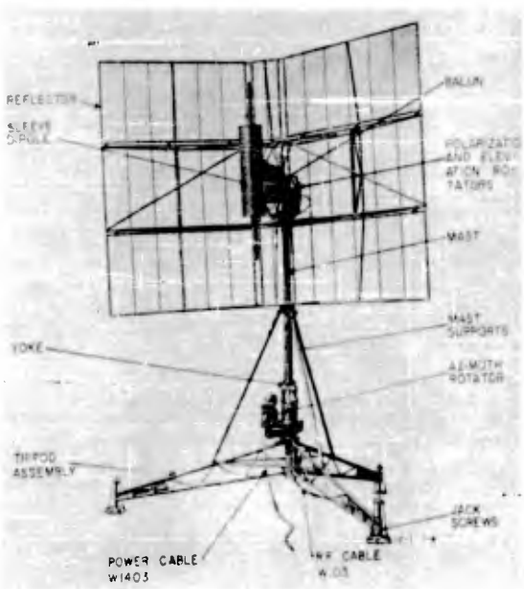
Band 2 Inverted-V Antenna of OA-463(XE-1)/TLR-1



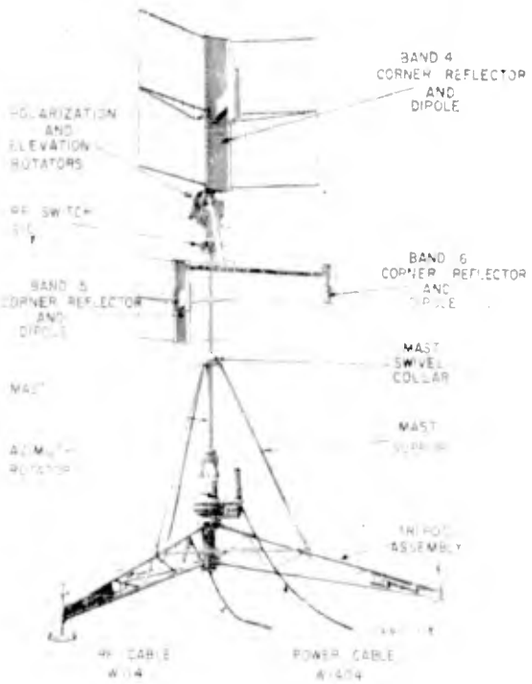
Horizontal Radiation Pattern for Inverted-V Antenna



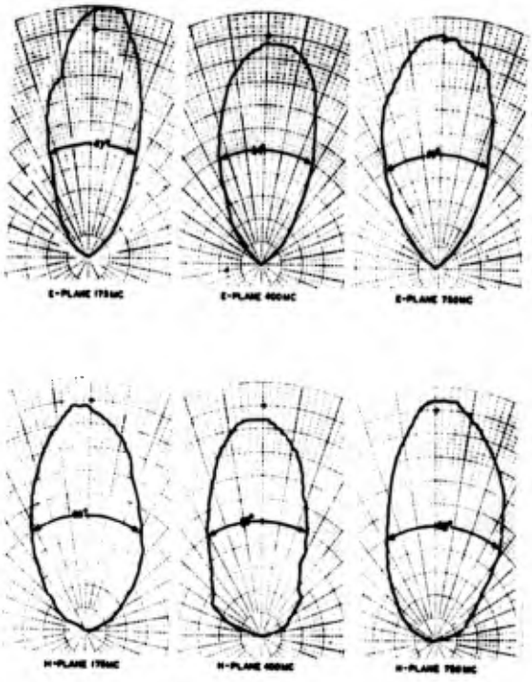
Patterns for Band 3 Antenna



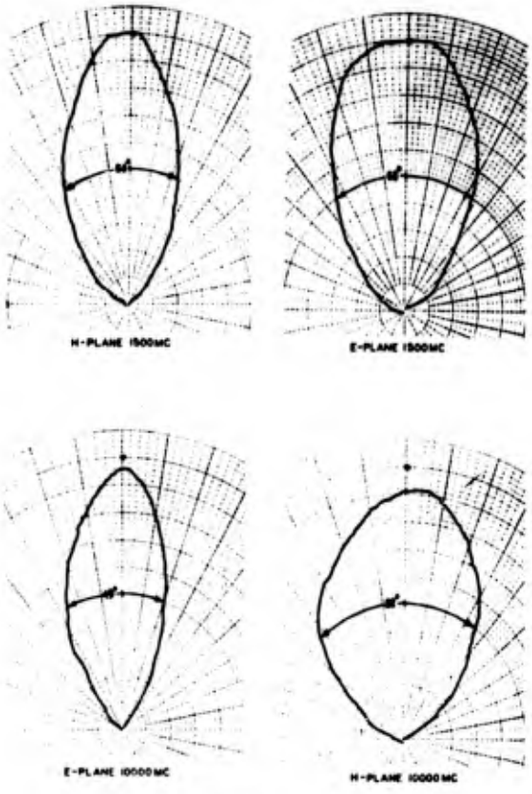
Band 3 Antenna for OA-463(XE-1)/TLR-1



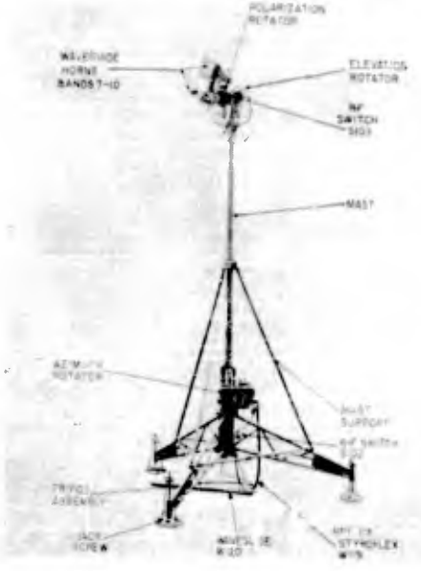
Antennas for Bands 4, 5, and 6 of OA-463(XE-1)/TLR-1



Patterns for Antennas for Bands 4, 5, and 6

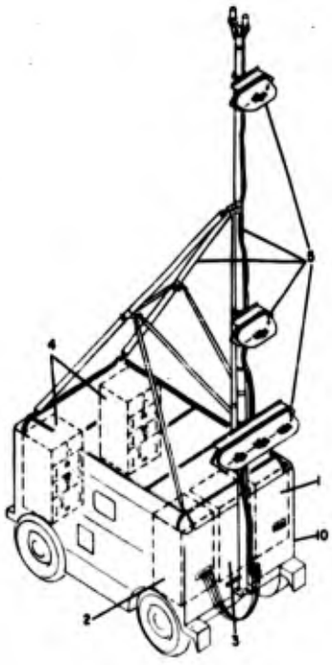


Patterns for Horn Antennas

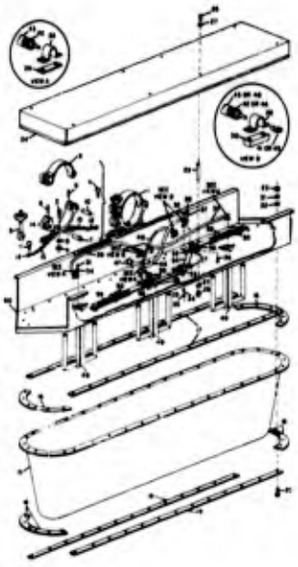


Horn Antennas for OA-463(XE-1)/TLR-1

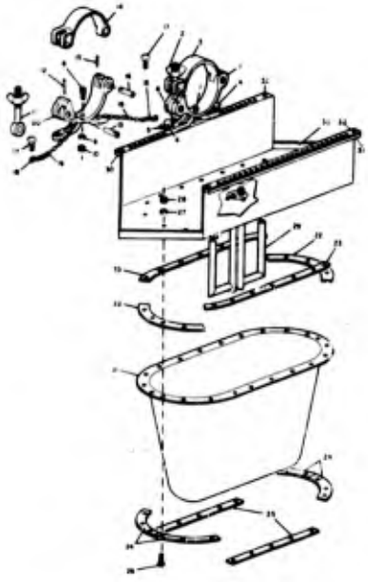
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OA-491/MRN-8



AS-644/MRN-8 of OA-491/MRN-8



AS-645/MRN-8 and AS-646/MRN-8 of OA-491/MRN-8

FREQUENCY: UHF band, 329-335 mc.

TYPE: Each antenna consists of one or more dipole elements mounted over a reflector screen.

DESCRIPTION: The three antennas are mounted on one mast which stands on a support platform on the rear of the trailer for the AN/MRN-8, and is braced by a framework anchored to the trailer roof.

A. Antenna AS-644/MRN-8, referred to as the modifier antenna, is the bottom antenna on the mast. The antenna consists of three horizontal dipole radiators mounted in a horizontal line on a flat reflector. The radiators are protected by a transparent plastic cover. The assembly clamps to the mast. Coaxial cable is used to feed the antenna.

B. Antenna AS-645/MRN-8, referred to as the null antenna, is the top dipole antenna on the mast. The antenna consists of a single radiator horizontally positioned on a flat reflector and protected by a plastic cover. The assembly clamps to the mast. Coaxial cable is used to feed the antenna.

C. Antenna AS-646/MRN-8, referred to as the reference antenna, is the center antenna on the mast. It is identical to AS-645/MRN-8 but has a different mounting clamp.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MRN-8. Equipment function - approach control.

COGNIZANT AGENCY: AEL-52-606.

MANUFACTURER: Federal Telephone and Radio Corp., procurement contract AF 33(038)-19230.

STOCK NUMBERS: AS-644/MRN-8...Federal Stock Number 5825-284-9943; AS-645/MRN-8...Federal Stock Number 5825-546-4947; AS-646/MRN-8... Federal Stock Number 5825-538-0565.

REFERENCES:

1) U. S. Air Force, Illustrated Parts Breakdown for Transmitting Set, Radio AN/MRN-8, TO 31R4-2MRN8-4, (Aug. 15, 1955 - revised June 2, 1958). UNCLASSIFIED.

2) U. S. Air Force, Bureau of Aeronautics, Handbook Operating Instructions for Radio Transmitting Set AN/MRN-8, TO 31R4-2MRN8-1, (May 15, 1955 - revised Jan. 31, 1957). UNCLASSIFIED.

3) Military Specification MIL-R-4146.

4) U. S. Department of Defense Nomenclature Card for AS-644/MRN-8, AS-645/MRN-8, AS-646/MRN-8, and OA-491/MRN-8.

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ANTENNA GROUP OA-497(*)/TLR-1

FREQUENCY: MF, HF, VHF, UHF, and SHF bands, 1.5 - 12,100 mc.

COMPONENTS AND CHARACTERISTICS OF OA-497(*)/TLR-1

Nomenclature of Major Components	Frequency (mc)	Frequency Band	VSWR Less than	Type	Federal Stock Numbers
AN/GRA-4	1.5-18	MF and HF	-	Long wire	5820-244-5147
AS-541(*)/U	61-119	VHF	2	Corner reflector fed by a discone.	5895-264-7512
AS-542(*)/U	118-300	VHF	2	Corner reflector fed by a discone.	5985-264-7488
AS-543(*)/U	200-510	VHF and UHF	2	Corner reflector fed by a discone.	5985-264-7504
AS-544(*)/U	480-1200	UHF	2	Corner reflector fed by a discone.	5895-264-7534
AS-583/U	950-2000	UHF	2.3	Corner reflector fed by a discone.	
AT-428/U	1000-2000	UHF	2.5	Horn	5895-284-9092
AT-551/U	1980-4500	UHF and SHF	2	Horn	5985-296-1934
AT-552/U	4460-8500	SHF	2	Horn	5895-284-9091
AT-553(*)/U	8460-12100	SHF	2	Horn	5985-284-9090
AS-588/U	1900-4500	UHF and SHF	-	Horn	
AT-153(XE-3)/U	3900-6000	SHF	2	Horn (test antenna)	
AT-154(XE-3)/U	5800-8500	SHF	2	Horn (test antenna)	
AT-156(XE-3)/U	8100-12100	SHF	2	Horn (test antenna)	
AB-286/U	-	-	-	Antenna Support	
AB-275/U	-	-	-	Antenna Support	
AB-237/U	-	-	-	Antenna Support	

DESCRIPTION:

A) Antenna AN/GRA-4. The AN/GRA-4 is an antenna kit which may be used to construct any one of several types of long-wire antennas. Sample types might be doublet, slanting wire, or inverted "L." A transmission line is selected to match the input impedance of the antenna used. When used as a part of OA-497/TLR-1&(), an antenna is selected which will adequately cover the frequency band from 1.5 to 18 mc. The AN/GRA-4 is similar to the AS-341/GR. For more detailed information see AS-341/GR.

B) Antennas AS-541(*)/U, AS-542(*)/U, AS-543(*)/U, AS-544(*)/U, AS-583/U. Each antenna is a corner reflector fed by a discone. All of the corner reflectors except the reflector for AS-583/U are constructed of welded aluminum tubing. The reflector for AS-583/U is constructed of sheet metal. Sheet-aluminum discone radiators are used for the AS-543(*)/U, the AS-544(*)/U, and the AS-583/U. The discone for the AS-542(*)/U is constructed of perforated sheet aluminum and the one for the AS-541(*)/U is constructed of aluminum mesh. The antennas are fed by coaxial cables

An undesirable beam tilt, which is a function of frequency, occurs in operation of the unit. See TB Sig 244 for beam-tilt correction data. Azimuth rotation is controlled by Antenna Control Group OA-714/TLR. Each of the antennas uses a type C input connector. AS-541(*)/U through AS-544(*)/U represent AS-541/U through AS-544/U or AS-541A/U through AS-544A/U.

DISCONE ELECTRICAL DATA

Nomenclature Number	Gain (db)	Half-power beamwidths (in degrees)						Polarization	Side lobe Attenuation	Front-to-back ratio	Overall Dimensions (feet)	Approximate weight (lbs.)
		Low frequency		Mid frequency		High frequency						
		E-Plane	H-Plane	E-Plane	H-Plane	E-Plane	H-Plane					
AS-541(*)/U	8-10	67	63	45	43	31	40	Linear (selectable)	3 db or greater	20:1	12x20x6-1/2	225
AS-542(*)/U	8-10	61	52	45	44	32	37			20:1	6x11x3-1/2	115
AS-543(*)/U	8-10	61	53	47	45	33	40			20:1	4x7x2	35
AS-544(*)/U	8-10	58	51	43	47	37	45			20:1	1-1/2x3x1	10
AS-583/U	8-10	See beam patterns								10:1		27

C) Antennas AT-428/U AT-551/U, AT-552/U, and AT-553(*)/U. Each of the four antennas is a horn. In the Antenna Group OA-497/TLR-1&(), these four horns are used to cover the frequency range from 2000 to 12,100 mc. The horns are sometimes mounted on a common antenna plate or perhaps directly on Tower TR-29. Coaxial-to-rectangular-waveguide transitional couplers are provided. Azimuth rotation of the horn group is controlled by OA-714/TLR. The horns use a type N connector. AT-553(*)/U represents AT-553/U or AT-553(XE-1)/U.

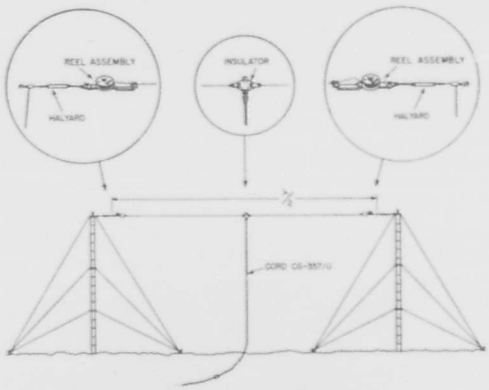
HORN DATA

Nomenclature Number	Gain (db)	Mid-band half-power beamwidths in degrees		Polarization	Front-to-back ratio	Overall dimensions (inches)			Weight (pounds)	Replaces (or supercedes)
		E-plane	H-plane			Height	Width	Depth		
AT-428/U	12	25	20	Linear selectable	10:1	11-1/2	12-15/16	17-3/4	15	AS-583/U
AT-551/U	12	40	40			6	6-7/8	9-1/8	8.5	AS-588/U
AT-552/U	12	40	40			2-3/4	3-3/4	5	5.5	AS-589()/U
AT-553(*)/U	14	35	35			3-3/8	2-3/4	6-3/4	2.5	--

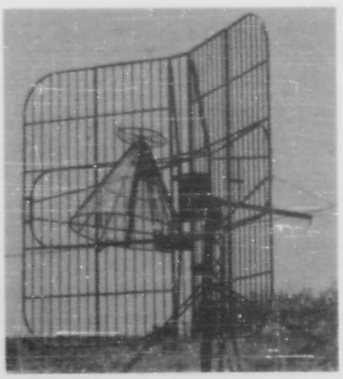
D) Antennas AS-588()/U, AT-153(XE-3)/U, AT-154(XE-3)/U, and AT-156(XE-3)/U. Each of these antennas is a pyramidal horn. Each one uses a type N connector. See AT-153/U for illustrations.

TEST HORN DATA

Nomenclature Number	Overall dimensions (inches) Height	Width	Depth	Mid-band half-power beamwidth in degrees E-plane	H-plane	Gain (db)	Polarization	Front-to-back ratio	Weight (pounds)
AT-153/U	5	10	3	21	21	19	Linear (selectable)	10:1	8.5
AT-154/U	4	8	2.5	21	21	19			5.5
AT-156/U	2	3	7	21	21	19			2.5
AS-588/U	-	-	-	40	40	-			25



AN/GRA-4 as a Doublet



AS-541/U

SCAN DATA: Azimuth rotation of OA-497/TLR-1 is controlled by Antenna Control Group OA-714/TLR, which provides reverse speed and forward speed through 360° at 3 revolutions per minute. Adapter kits for modifying OA-497 (XE-1)/TLR-1 for use with OA-714/TLR are being made by ESL.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Countermeasures Receiving Set AN/TLR-1. Equipment function - countermeasures, search.

MISCELLANEOUS: Antenna Group OA-463(XE-1)/TLR-1 is under development to replace Antenna Group OA-497(*)/TLR-1. Reference 3 indicates that Antenna Group OA-497(*)/TLR-1 is obsolete.

OA-497(*)/TLR-1 represents OA-497(XE-1)/TLR-1 and OA-497/TLR-1. OA-497(XE-1)/TLR-1 consists of Antennas AN/GRA-4, AS-541/U, AS-542/U, AS-543/U, AS-544/U or AS-583/U, AS-588/U, AT-153(XE-3)/U, AT-154(XE-3)/U, and AT-156(XE-3)/U. OA-497/TLR-1 consists of Antennas AN/GRA-4, AS-541A/U, AS-542A/U, AS-543A/U, AS-544A/U, AT-428/U, AT-551/U, AT-552/U, and AT-553/U or AT-553(XE-3)/U.

Antennas AS-541A/U through AS-544A/U are electrically and mechanically interchangeable with AS-541/U through AS-544/U respectively.

COGNIZANT AGENCY: ESL DA36-039-SC-36580.

MANUFACTURERS: J. & H. Smith Manufacturing Company, New York, N. Y.

REFERENCES:

1) Department of the Army, Instructions for Antenna Group OA-497(XE-1)/TLR-1, TB SIG 244, (Mar. 16, 1953). UNCLASSIFIED.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

3) Private Correspondence.

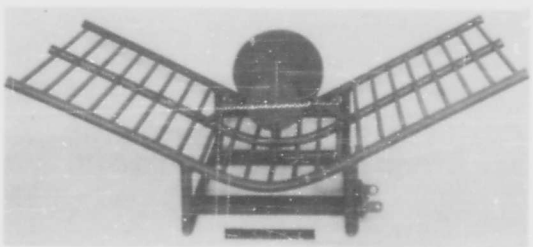
4) Military Specification MIL-A-12431 (Sig C), (OA-497/TLR-1).



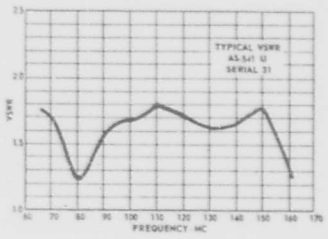
AS-542/U

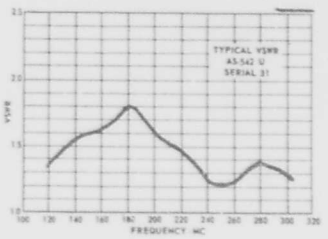


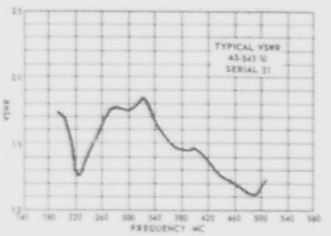
AS-543/U

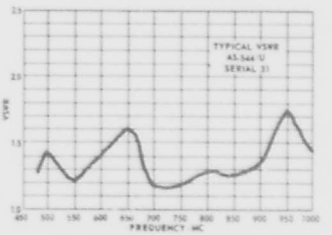


AS-544/U Top View

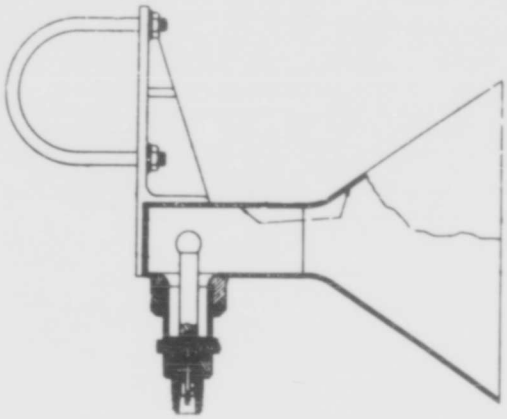




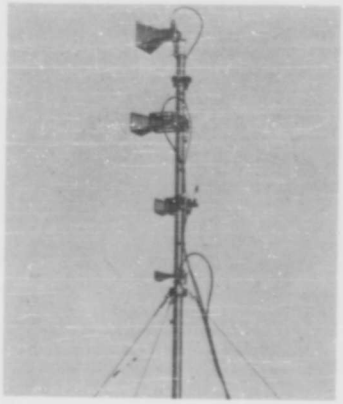




Typical VSWR Plots for Antennas AS-541/U, AS-542/U, AS-543/U, and AS-544/U.



AS-588(XE-1)/U



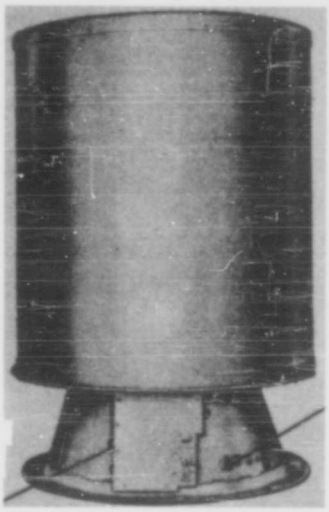
OA-497(XE-1)/TLR-1 Horn Installation

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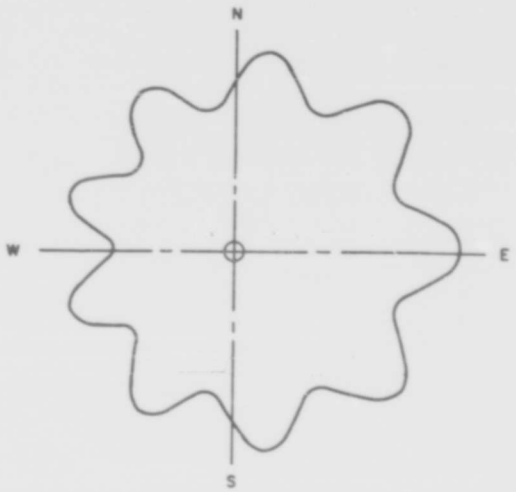
2) Department of the Navy and the Bureau of Ships, Radio Set AN/URN-3 Associated Antenna Groups and Accessories, Instruction Book, NAVSHIPS 92348(A), T.O. 31R4-2URN3-11, (June 8, 1955). UNCLASSIFIED.

3) Federal Telecommunication Laboratories drawing number C-2152422-1.

4) Military Specification MIL-R-15223B (SHIPS).



OA-591/URN-3 or OA-592/URN-3



Horizontal Radiation Pattern for AS-685/URN-3 or AS-686/URN-3.

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REFERENCES:

1) Department of the Navy and the Bureau of Ships, Radio Set AN/URN-3 Associated Antenna Groups and Accessories, Instruction Book, Volume 2, NAVSHIPS 92348(A), T.O. 31R4-2URN3-11, (June 8, 1955). UNCLASSIFIED.

2) Military Specification MIL-R-15223 B (SHIPS).

ANTENNA GROUP OA-642/MPN-11&()

See OA-235/GPN&(). Apparently the only difference in the OA-642/MPN-11&() and the OA-235/GPN&() and the OA-281/GPN&() is in the method of mounting. The OA-642/MPN-11&() is riveted to its trailer.

ASSOCIATED EQUIPMENT: Radar Set AN/MPN-11, AN/MPN-11A, and AN/MPN-11B. Equipment function - approach control (GCA).

ANTENNA GROUP OA-643/MPN-11&()

See OA-234/GPN & ().

Apparently the only difference in the OA-643/MPN-11 & () and the OA-234/GPN & () and the OA-280/GPN & () is in the method of mounting. The OA-643/MPN-11 & () is riveted to its trailer.

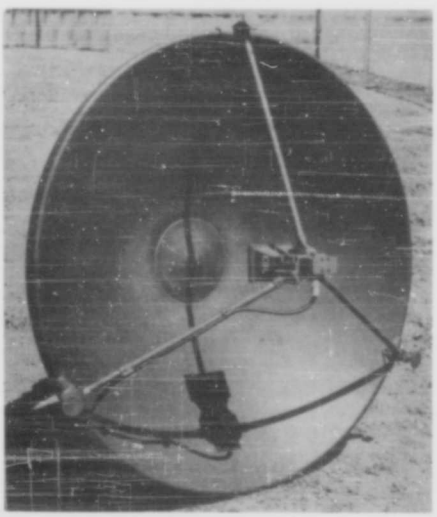
ASSOCIATED EQUIPMENT: Radar Set AN/MPN-11, AN/MPN-11A, and AN/MPN-11B. Equipment function - approach control (GCA).

ANTENNA GROUP OA-713()/GL

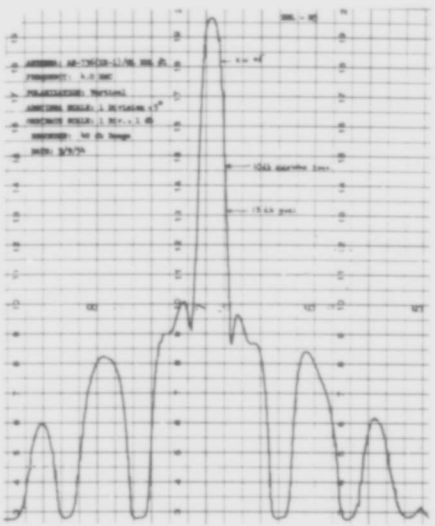
MAJOR COMPONENTS: 1 Antenna AS-736()/GL, 1 Antenna AS-737()/GL, 1 Antenna AS-738()/GL, and necessary r-f cables and accessories.

FREQUENCY: UHF and SHF bands, 2000 - 12,100 mc: AS-736()/GL ... UHF and SHF bands, 2000 - 4500 mc; VSWR < 2. AS-737()/GL ... SHF band, 4500 - 8500 mc; VSWR < 1.9. AS-738()/GL ... SHF band, 8400 - 12,100 mc; VSWR < 1.86.

TYPE: Three paraboloidal reflectors.



AS-736(XE-1)/GL with Ridge-Type Feed Horn



Horizontal Radiation Pattern for AS-736(XE-1)/GL with Vertical Polarization

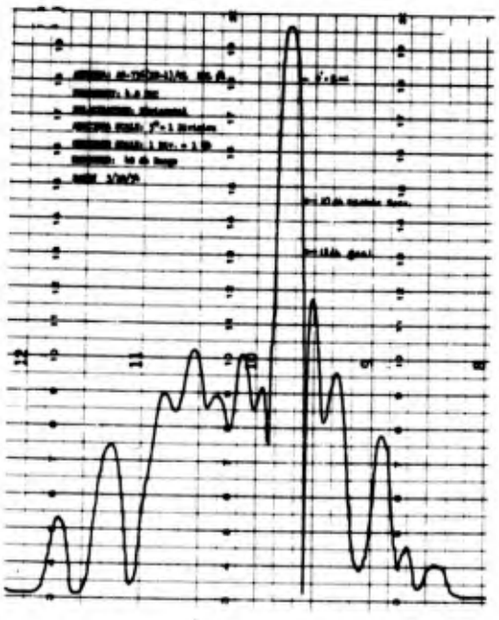
DESCRIPTION:

A) Antenna AS-736()/GL - The antenna is a paraboloidal reflector fed by a horn. Prior to July 1955, one of two interchangeable horns was used as the primary radiator. One horn covered the 2000- to 3000-mc range; the other covered the 3000- to 4500-mc range. After July 1955, a single, wide-band, ridge-type horn was used. The reflector has a 48-inch diameter and is 19 inches deep. The

ridge-type horn is 8 inches long, 3-1/2 inches high, and 5 inches wide. Total weight of the antenna is 75 pounds.

B) Antenna AS-737()/GL - This antenna uses an aluminum paraboloidal reflector fed by a horn. The reflector has a 30-inch diameter and is 22 inches deep. The horn is fed by a 50-ohm coaxial line. Total weight of this antenna is 35 pounds.

C) Antenna AS-738()/GL - This antenna uses an aluminum paraboloidal reflector fed by what is probably a slot-type feed. The reflector has a 30-inch diameter and is 20 inches deep.



Horizontal Radiation Pattern for AS-736(XE-1)/GL with Horizontal Polarization



AS-737(XE-1)/GL

BEAM DATA:

Gain - All three antennas of this group have a gain of about 30 db.

Half-power beamwidth - The figures given below are approximate and apply to both horizontal and vertical beamwidths for any linear polarization.

Antenna	Beamwidth
AS-736()/GL	6°
AS-737()/GL	5°
AS-738()/GL	6°

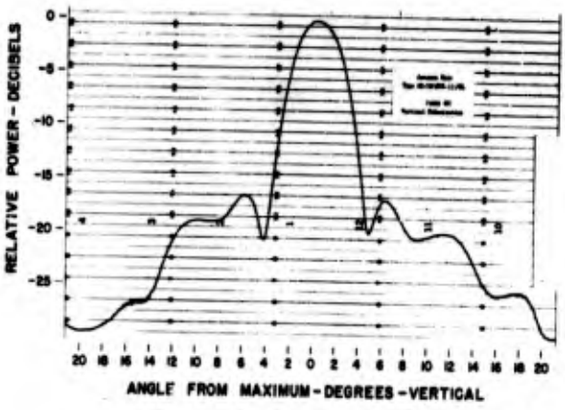
Side-lobe attenuation - Approximately 25 db.

Beam type - Pencil.

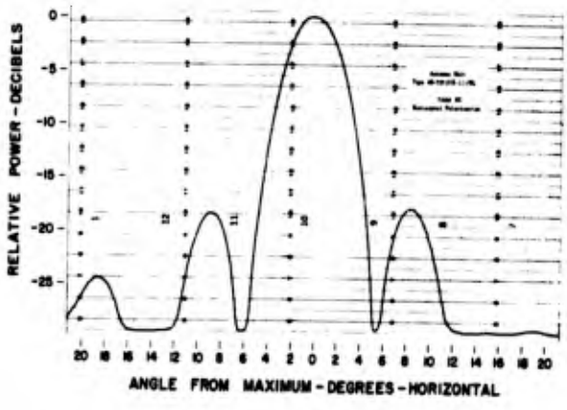
Polarization - Any linear polarization depending on mounting position.

SCAN DATA: The antenna can be manually rotated.

INSTALLATION: Ground.



AS-737(XE-1)/GL Vertically Polarized Power Pattern



AS-737(XE-1)/GL Horizontally Polarized Power Pattern

ASSOCIATED EQUIPMENT: Countermeasures Receiving Set AN/TLR-1(). Equipment function - countermeasures, monitoring.

COGNIZANT AGENCY: OA-713()/GL, SCLE-9142 and SCLE-9434; AS-736()/GL, SCLE-9414; AS-737()/GL, SCLE-9415; AS-738()/GL, SCLM-6600.

MANUFACTURERS: Electronic Defense Laboratory.

REFERENCES:

1) High Gain Microwave Antenna Unit, Type AS-738(XE-1)/GL, EDL-B3. Mountain View, California: Electronic Defense Laboratory, (Oct. 20, 1954). UNCLASSIFIED.

2) Modification Kit for Antenna AS-736(XE-1)/GL High Gain Microwave Antenna Unit, EDL-B7. Mountain View, California: Electronic Defense Laboratory, (July 15, 1955). UNCLASSIFIED.

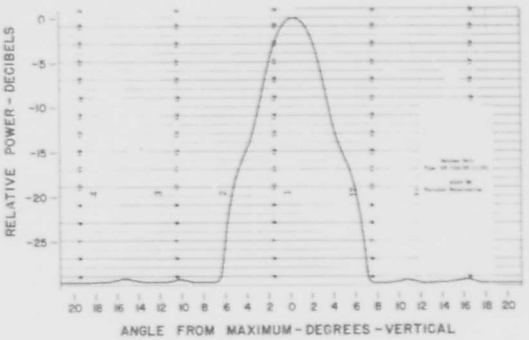
3) Harvey L. Dixon, Engineering Test Report,

High Gain Microwave Antenna Unit, Type AS-736(XE-1)/GL, EDL-M5. Mountain View, California: Electronic Defense Laboratory, (June 23, 1954). UNCLASSIFIED.

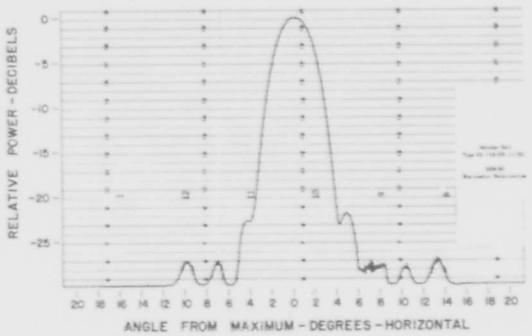
4) High Gain Microwave Antenna Unit, Type AS-737(XE-1)/GL, EDL-B2. Mountain View, California: Electronic Defense Laboratory, (Sept. 28, 1954). UNCLASSIFIED.



AS-738(XE-1)/GL, Front View



AS-738(XE-1)/GL Vertically Polarized Power Pattern



AS-738(XE-1)/GL Horizontally Polarized Power Pattern

ANTENNA GROUP OA-715()/GL

MAJOR COMPONENTS: Antenna AS-846()/GL, Antenna AS-841()/GL, Control Indicator C-2048()/GL, Antenna Pedestal AB-489()/GL.

FREQUENCY: UHF and SHF bands, 940 - 12,100 mc: AS-846()/GL - UHF and SHF bands, 940 - 2020 mc and 1980 - 4500 mc; VSWR < 2. AS-841()/GL - SHF band, 4460 - 8500 mc and 8460 - 12,100 mc; VSWR < 2.

TYPE: Paraboloidal reflectors and horns. The horns may be used separately or as feeds for the reflectors.

DESCRIPTION: OA-715()/GL is a group of antennas that have wide beams for search and narrow beams for direction finding.

The group consists of one 8-foot and one 4-foot paraboloidal dish each of which is horn fed. The operator may select as the mode of operation either horn used with either reflector or either horn used alone. The reflectors are yoke mounted to the top of the AB-489()/GL antenna pedestal. The horns are fed by WR-90 and WR-159 waveguides.

BEAM DATA:

Gain - (for reflector-horn combination at mid-band)

1000 to 2000 mc .... 29 db
2000 to 4500 mc .... 36 db
4500 to 8500 mc .... 36 db
8500 to 12,100 mc... 40 db

Beamwidths of major lobe -

Frequency range	Horns alone
1000 to 2000 mc	92° to 43° by 110° to 51°
2000 to 4500 mc	95° to 42° by 110° to 50°
4500 to 8500 mc	75° to 39° by 100° to 53°
8500 to 12,100 mc	70° to 49° by 86° to 60°

Frequency range	Reflectors fed by horns
1000 to 2000 mc	9° to 4° by 9° to 4°
2000 to 4500 mc	4° to 2° by 4° to 2°
4500 to 8500 mc	4° to 2° by 4° to 2°
8500 to 12,100 mc	2° to 1.5° by 2° to 1.5°

Side-lobe attentuation - 10 db.
Polarization - Linear, selectable.

SCAN DATA: The antenna may be manually rotated.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Various countermeasures sets. Equipment function - countermeasures, direction finding and countermeasures, search.

COGNIZANT AGENCY: SCLE-9992, development contract DA-36-039-sc-63130.

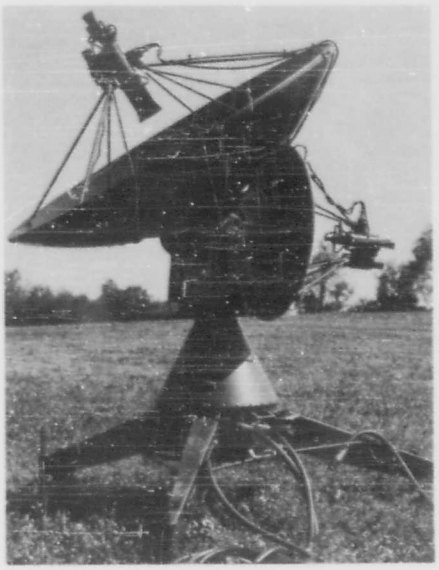
MANUFACTURER: Eclipse-Pioneer Division of Bendix Aviation Corporation, Teterboro, New Jersey.

REFERENCES:

1) Albert E. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) Private Correspondence.

3) Military Specification SCL-2830.



OA-715/GL

ANTENNA GROUP OA-716(*)/GL

MAJOR COMPONENTS: Antenna AS-817()/GL, Control Indicator C-1925()/GL, Mast AB-470()/GL, Pedestal AB-469()/GL, Electronic Control Amplifier AB-1636()/GL.

FREQUENCY: SHF band, 12,000 - 18,000 mc; VSWR < 1.5.

TYPE: Horn for wide beam operation; horn-fed cut paraboloidal reflector for narrow beam operation.

DESCRIPTION: Antenna Group OA-716(*)/GL consists of a 4 foot by 1.5 foot cut paraboloidal reflector and a horn. The horn is waveguide fed. The horn may be used alone for wide-beam operation, or the horn may be used to feed the reflector for narrow-beam operation. The assembly is mast mounted.

BEAM DATA:

Gain - 32 db for narrow beam,
23 db for wide beam.

Front-to-back ratio - 15 db.

Half-power beamwidth - 15° by 15° for wide beam, 1.5° by 15° for narrow beam.

Polarization - Circular.

SCAN DATA: The antenna can be rotated in azimuth at a speed variable from 1 to 10 revolutions per minute.

INSTALLATION: Ground.

MISCELLANEOUS: OA-716(*)/GL represents OA-716(XE-1)/GL and OA-716(XE-2)/GL. The OA-716(XE-2)/GL differs from the OA-716(XE-1)/GL in the addition of a memo-scope display in the control indicator.

COGNIZANT AGENCY: Signal Corps. Development contracts, OA-716(XE-1)/GL, DA-36-039-sc-64491; OA-716(XE-2)/GL, DA-36-039-sc-66505.

MANUFACTURER: Andrew Alford Consulting Engineers.

REFERENCES:

1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) Private Correspondence.

ANTENNA GROUP OA-739/MSW-1&0

MAJOR COMPONENTS: Mast, feedhorn, and optical targets.

TYPE: Horn (test antenna).

DESCRIPTION: The antenna and mast group is positioned 600 to 700 feet from the Nike-Ajax target- and missile-track antenna receiver-transmitter groups. The antenna includes a

60-foot, tapered aluminum mast which is held in position by a system of four guy wires and anchors. The feed horn and optical targets are mounted on crossarms at the top of the mast.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Test Set TS-847A/MSW-1. Equipment function - test.

COGNIZANT AGENCY: ORDDW-206-54.

MANUFACTURER: Western Electric Co., Burlington, N. C., procurement contract DA-30-069-ORD-125.

REFERENCES:
1) Bell Telephone Laboratories Specification GS-15699.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-796()/MRC-45

MAJOR COMPONENTS: 2 RC-81-C dipole antennas, 1 AB-411/MRC-45 mast, and 1 Reeves 137821 cable assembly.

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Dipole.

DESCRIPTION: The antenna group consists of two RC-81-C dipoles mounted on an AB-411/MRC-45 mast. See also RC-81-C.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set AN/MRC-45. Equipment function - communications.

COGNIZANT AGENCY: WL-54-1533.

MANUFACTURER: Reeves Instrument Corp., New York, N. Y., procurement contract AF 33(038)-18601.

REFERENCES:
1) Reeves drawing number 137802.
2) U. S. Air Force Specification RADC-2292.
3) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-797/MRC-45

MAJOR COMPONENTS: Antenna AT-197/GR, Mast AB-411/MRC-45, and a cable assembly.

MISCELLANEOUS: See OA-237/GR & (). The only apparent difference between the OA-797/MRC-45 and the OA-237/GR & () is that the OA-797/MRC-45 includes a mast and is used with the AN/MRC-45.

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ANTENNA GROUP OA-897(*)/FPS-14

MAJOR COMPONENTS: Antenna Reflector AT-604(*)/FPS-14, Waveguide Horn AT-623/FPS-14 in Radar Set AN/FPS-14 or Waveguide Horn AT-783/FPS-18 in Radar Set AN/FPS-18, Antenna Pedestal AB-421/FPS-14, Radio-Frequency Rotary Coupler CU-458/FPS-14, and various pieces of waveguide assembly.

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Cut paraboloid (modified) with horn feed.

DESCRIPTION:

A) Reflector: The AT-604(*)/FPS-14 is a doubly-curved cut "paraboloid" constructed of tubular aluminum alloy with a mesh surface. The reflector has two different curvatures in the vertical plane -- one for the upper half and another for the lower (SIC). It is approximately 11 feet long and 17 feet wide and is supported by Antenna Pedestal AB-421/FPS-14. The difference between the AT-604/FPS-14 and AT-604/FPS-14 is that the former is made in 3 sections while the latter is a one-piece construction.

B) Feed: The AT-623/FPS-14 and the AT-783/FPS-18 are both waveguide horns that fasten to the waveguide by a choke flange Both may provide either vertically or circularly polarized radiation. Both may be pressurized up to one atmosphere. Both are made of aluminum with a painted finish.

Dimensions: The throat is 42 inches long and the inside is 3 inches square for either feed. The mouth for either feed is 6 inches long, 4 inches wide, and 6.2 inches high (inside dimensions). The AT-783/FPS-18 differs from the AT-623/FPS-14 in the method of calibration and in the use of a fiberglass radome instead of a plexiglass one. The two horns are not interchangeable.

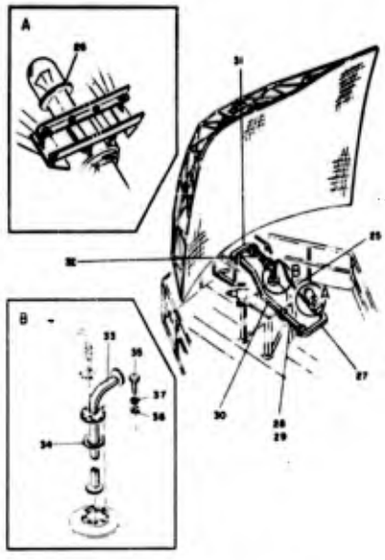
BEAM DATA:

Half-power Beamwidth - Horizontal - 1.4°.

Beam type - 0.5 to 30° $\csc^2$ pattern in the vertical plane.

Polarization - Vertical or circular.

SCAN DATA: The antenna rotates at about 5.33 revolutions per minute, but it has provisions for operation at 10 to 11 revolutions per minute. A mechanical adjustment permits the antenna to be tilted as much as 6 degrees above or below horizontal.



OA-897(*)/FPS-14 with Antenna Feed AT-783/FPS-18

INSTALLATION: Ground, fixed (tower mounted).

ASSOCIATED EQUIPMENT: Radar Sets AN/FPS-14, AN/FPS-18, and AN/FPS-18A. Equipment function - air, search (AEW Gap Filler Radar).

COGNIZANT AGENCY: U. S. Air Force CRC-56-482.

MANUFACTURER: Bendix Radio Div., Towson, Md., procurement contracts AF 30(635)-2619 and AF 30(635)-4224.

STOCK NUMBERS: OA-897A/FPS-14 ... U. S. Air Force, 1800-020220201. AT-783/FPS-18 ... Federal Stock Number 5840-557-8258.

REFERENCES:

1) U. S. Air Force, Radar Set AN/FPS-14, Handbook Operating Instructions, TO 31P6-2FPS14-11, (June 1, 1956 - revised (July 31, 1958). UNCLASSIFIED.

2) U. S. Air Force, Radar Set AN/FPS-18, Handbook Operating Instructions, T.O. 31-P6-2FPS18-1, (Feb. 28, 1958). UNCLASSIFIED.

3) U. S. Air Force and the Bureau of Aeronautics, Fixed and Mobile Radar and Auxiliary Equipment Directory, T.O. 31P-1-17, (July 18, 1955 - revised March 30, 1956). UNCLASSIFIED.

4) Military Exhibits AFCRC-6, AFCRC-54-19.

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curement contract AF 30(635)-382.

REFERENCES:
1) Military Specification RADC-2440 (Exhibit).
2) U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-1075/CPN-4C&()

MAJOR COMPONENTS: Antenna Reflector AT-684/CPN-4C & (), Waveguide Horn AT-685/CPN-4C & (), Antenna Mast Plate AB-455/CPN-4C & (), Antenna Coupler CU-499/CPN-4C & (), Transmission Line CG-169A/U, RF Cable Assembly CG-553/U, Actuator Motor (Gilfillan Brothers part/drawing No. 47752), supporting struts, and hardware.

ASSOCIATED EQUIPMENT: Radar Set AN/CPN-4C.

MISCELLANEOUS: Antenna Group OA-1075/CPN-4C & () is similar to, but not interchangeable with, Antenna Group OA-373/GPN. The former group has provisions for accepting IFF equipment; the latter does not.

Both the AT-684/CPN-4C and the AT-685/CPN-4C were cancelled in March 1957. Neither was ever procured, stored, or issued. The same fate undoubtedly befell the OA-1075/CPN-4C & (), although our information did not so state.

COGNIZANT AGENCY: U. S. Air Force WL-55-2448.

REFERENCES:
1) U. S. Department of Defense Nomenclature Card for AT 684/CPN-4C.
2) U. S. Department of Defense Nomenclature Card for AT-685/CPN-4C.
3) U. S. Department of Defense Nomenclature Card for OA-1075/CPN-4C & ().

ANTENNA GROUP OA-1112/FPN&()

This item has never been procured, stored, or issued; superseded by Antenna Group AN/FRA-25 & (); Cancelled 8 March 1957.

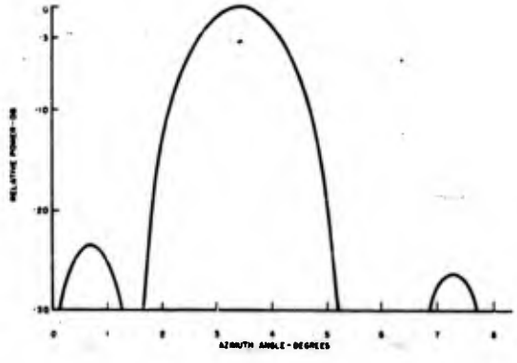
COGNIZANT AGENCY: WL-56-C-2422.

ANTENNA GROUP OA-1124/FPS

MAJOR COMPONENTS: 1 Antenna AS-847/FPS, 1 Antenna Pedestal AB-465/FPS, 1 Waveguide Assembly CG-1512/U, 1 Power Cable Assembly CX-3909/U, and 1 Antenna Control C-1894/FPS.

FREQUENCY: UHF band, 1250 - 1350 mc (radar system), 1000 - 1040 and 1080 - 1120 mc (IFF system).

TYPE: Modified cut paraboloidal reflector with dual feed.



OA-1124()/FPS Azimuth Power Characteristic

DESCRIPTION: The antenna consists of a reflector with two feeds, one for the radar system and one for the IFF system. The reflector is a modified cut paraboloid constructed of wire mesh on a tubular aluminum frame. It is made up of 7 sections.

The dual feed consists of a waveguide-fed horn for the radar system and a coaxially-fed dipole feed assembly for the IFF system. The overall antenna is 194 inches high, 205 inches deep, and 480 inches long. Its total weight is 1322 pounds.

BEAM DATA:
Gain - 34 db.
Half-power beamwidth -
Vertical - 6.2° ± 0.5° for both systems.
Horizontal - 1.4° ± 0.2° for the radar system and 1.6 ± 0.3° for the IFF system.
Beam type - $\csc^2$ in elevation.
Polarization - Horizontal for the radar system and vertical for the IFF system.

SCAN DATA: The antenna rotates clockwise at 6±1 revolutions per minute. It is fixed in elevation with the beam pointed 2-1/2 above the horizon.

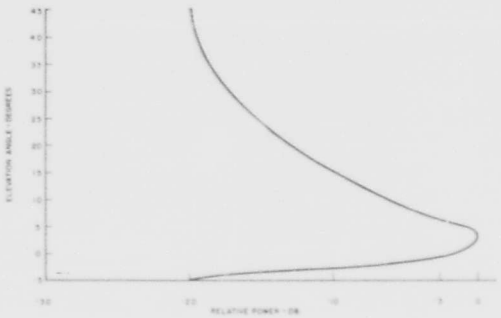
INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-36 which is Radio Set AN/TPS-1D modified by use of Electronic Modification Kit MK-304/TPS-1D and Antenna Group OA-1124/FPS. Equipment function - search, air; and IFF.

MISCELLANEOUS: See OA-1227/TPS for a list of antennas used with AN/TPS-1(*).

COGNIZANT AGENCY: SCLE-9775 and SCLE-12007.

MANUFACTURER: Raytheon Manufacturing Co., Waltham, Mass., type 2630, part number JP104, code 49956, contract 21763-PHILA-56-55(31).



OA-1124()/FPS Elevation Power Characteristic

REFERENCES:

1) Department of the Army, Antenna Group OA-1124/FPS, Technical Manual, TM 11-5047, (April 1957). UNCLASSIFIED.

2) Government Technical Requirements SCL-5209.

3) U. S. Department of Defense Nomenclature Cards for AS-847()/FPS and OS-1144()/FPS.



OA-1124()/FPS

ANTENNA GROUP OA-1196/MPS-16&()

MAJOR COMPONENTS: Antenna AS-895/MPS-16 (which consists of Antenna Reflector AT-713/MPS-16 and Waveguide Horn AT-714/MPS-16), Antenna Pedestal AB-478/MPS-16, Radio Frequency Rotary Coupler CU-524/MPS-16, Signal Data Converter CV-454/MPS-16, Radio Frequency Rotary Coupler CU-525/MPS-16, various supporting structures, and waveguide assemblies.

FREQUENCY: SHF band, 5250 - 5310 mc.

TYPE: Cut paraboloid with horn feed.

DESCRIPTION:

A) Antenna Reflector AT-713/MPS-16 - The reflector is a cut paraboloid 21.6 feet high and 5.7 feet wide. It has a focal length of 6.6 feet. The reflector surface is made up of vertical rods.

B) Waveguide Horn AT-714/MPS-16 - The feed consists of a horn which has a gradual flare in the H-plane and a short flare in the E-plane. The aperture of the horn is covered by a Glasweld radome which acts as a pressure seal. A rod across the mouth of the horn reduces the radome impedance mismatch, and a short strip of Teflon properly positioned in the horn ensures that the phase centers of the radiated waves occur at the mouth of the horn.



OA-1196/MPS-16 & ()

BEAM DATA:
Gain - 43 db.
Beamwidths -
Azimuth - 2.4° ± 0.1°.
Elevation - 0.6° ± 0.05°.
Side-lobe attentuation - At least 26 db.
Beam type - Fan.
Polarization - Vertical.

SCAN DATA: The vertical scan is a mechanical nutation at 20 ± 3 cycles per minute through either -2° to +8° or -2° to +32°. The azimuth scan is mechanical rotation through 360° at 1/8 revolution per minute. The antenna may also be slewed at a rate of 180° in 3.5 seconds.

TUNING/MATCHING DEVICES: Waveguide Tuner TN-299/MPS-16.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set AN/MPS-16 and AN/MPS-16B. Equipment function - height finding.

COGNIZANT AGENCY: RADC.

MANUFACTURER: Crosley Division of AVCO Manufacturing Corp., procurement contracts: AF 30(635)-382 (for AN/MPS-16) and AF 30(635)-8572 (for AN/MPS-16B).

STOCK NUMBERS: OA-1196/MPS-16 ... Air Force 1800-020219500, AT-713/MPS-16 ... Air Force 1800-020386602, and Federal Stock Number 5840-547-3903, AT-714/MPS-16 ... Air Force 1800-022201026, and Federal Stock Number 5840-538-5171.

REFERENCES:
1) U. S. Air Force and the Bureau of Aeronautics, Radar Set AN/MPS-16 and AN/MPS-16B, Handbook Operating Instructions, T.O. 31P3-2MPS16-1, (July 25, 1958 - revised March 2, 1959). UNCLASSIFIED.

2) U. S. Air Force and the Bureau of Aeronautics, Radar Set AN/MPS-16 and AN/MPS-16B, Handbook Service Instructions, T.O. 31P3-2MPS16-2, (July 25, 1958). UNCLASSIFIED.

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ANTENNA GROUP OA-1227/TPS

MAJOR COMPONENTS: 1 Antenna Reflector AT 858/TPS, 1 Waveguide Horn AT-862/TPS, 1 Antenna Control C-2581/TPS, 1 Antenna Pedestal AB-574/TPS, and necessary power cables, reels, and cases.

FREQUENCY: UHF band, 1250 - 1350 mc.

TYPE: Modified cut paraboloidal reflector with dual feed.

DESCRIPTION:
A) Antenna reflector-AT-858/TPS is a modified cut paraboloid made of aluminum. It has quick-disconnect fasteners to facilitate assembly. The overall dimensions are 40 feet long by 11 feet high. The approximate weight is 520 pounds. It is designed to withstand winds of 60 miles per hour when rotating and 90 miles per hour when stationary.
B) Waveguide Horn-AT-862/TPS is a dual feed consisting of a flared waveguide horn for the radar system and probably of a dipole feed assembly (similar to that of the AS-548/TPS-1D) for the IFF system. It is constructed of anodized aluminum. The feed is 24 inches long by 9.5 inches wide by 21.5 inches high overall.

BEAM DATA:
Gain - Greater than 34 db.
Beam type - Modified $\csc^2$ in elevation.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Surveillance System AN/GSS-1. Equipment function - search, air; and IFF.

MISCELLANEOUS: OA-1227/TPS is a transportable version of OA-1124/TPS. The following antennas have been used with AN/TPS-1(*): AS-8/TPS-1, AS-120(*)/TPS-1B, AS-548/TPS-1D, AS-673/TPS-1E, OA-1124/FPS and OA-1227/TPS.

COGNIZANT AGENCY: SCLE-9920 and SEL-58-1303.

MANUFACTURERS: Raytheon Manufacturing Co., Waltham, Mass., code 49956; and Hazeltine Electronics Corp., Little Neck, N. Y., code 27876, contract DA 36-039-sc-74866.

REFERENCES:
1) Government Technical Requirements SCL-5296.

2) U. S. Department of Defense Nomenclature Card.

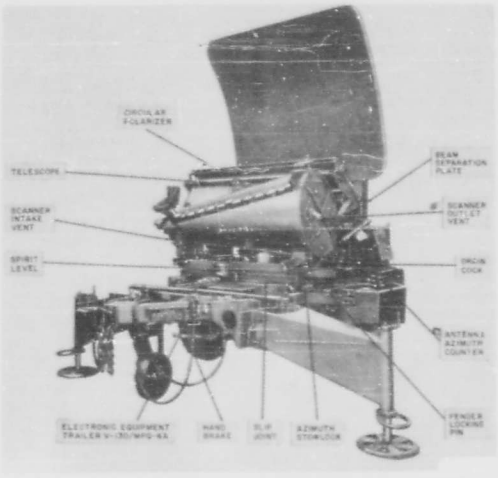
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ANTENNA GROUP OA-1258/MPQ-(*)

MAJOR COMPONENTS: 1 V-130/MPQ electronic equipment trailer, 1 AB-486/MPQ antenna pedestal, 1 FR-111/MPQ tuned cavity, 1 AT-634/MPQ antenna reflector, and 1 AS-835/MPQ antenna.

FREQUENCY: SHF band, 16,000 mc.

TYPE: Parabolic cylinder reflector fed by a Foster scanner.



OA-1258/MPQ-4A

DESCRIPTION:

A) Reflector AT-634/MPQ is a parabolic cylinder, 90.53 inches wide and 66.5 inches high with a total weight of 283 pounds. It is a formed honeycomb structure covered with sheet aluminum. The reflector is mounted on two supporting beams fastened to the antenna support structure.

B) Antenna AS-835/MPQ is a dual-beam Foster scanner with a diameter of 34 inches at the large end and 15 inches at the small end. It is 66 inches long and weighs 1109 pounds. The scanner is fed by rectangular waveguide and is attached to the upper surface of the antenna support structure.

BEAM DATA:

Half-power beamwidth - Horizontal - 17.8 mils.
Vertical - 14.25 mils.

Beam type - Two pencil beams located in the same vertical plane and separated by 36 mils in elevation.

Polarization - Circular.

SCAN DATA: The Foster scanner has an azimuth scan sector of 450 mils. In addition, the entire antenna can be rotated in azimuth at a rate of 1 to 2 revolutions per minute.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Mortar Locator AN/MPQ-4 and AN/MPQ-4A.

MISCELLANEOUS: OA-1258/MPQ-(*) denotes OA-1258/MPQ and OA-1258/MPQ-4A. OA-1258/MPQ-4A seems to be a special shipment of OA-1258/MPQ for use with AN/MPQ-4A.

COGNIZANT AGENCY: SCLE-9947 and SCLE-12086 for OA-1258/MPQ, SCLE-9946 for AS-835/MPQ, SCLE-9945 for AT-634/MPQ, SCEL-57-1235 for OA-1258/MPQ-4A, SCEL-57-1238 for AS-835/MPQ-4A, and SESA-58-2051 for AT-634/MPQ-4A.

MANUFACTURER: General Electric Company, Pittsfield, Massachusetts, contract 13604-PHILA-53-93 for OA-1258/MPQ and 16-PHILA-56-93 for OA-1258/MPQ-4A.

REFERENCES:

1) Department of the Army, Operator's and Organizational Maintenance for Radar Set AN/MPQ-4A, TM 11-1507, (April 1958). UNCLASSIFIED.

2) GE Drawings PL519E355G1, PL1770509G1, and PL521E365G2.

3) Military Specification MIL-R-11906.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-1315()/GL

MAJOR COMPONENTS: 2 antennas, 6 antenna couplers, 4 antenna controls, 1 dynamotor, cable assemblies.

FREQUENCY: VLF, LF, MF, and HF bands, 0.008 to 3.5 mc.

DESCRIPTION: The assembly contains 2 high-efficiency, ferro-magnetic antennas.

ASSOCIATED EQUIPMENT: Various countermeasures receiving sets. Equipment function - countermeasures.

COGNIZANT AGENCY: SCLE-12039.

REFERENCES:

1) Military Specification Technical Requirements SCL-5314.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-1323(XW-1)/GPS

MAJOR COMPONENTS: 1 air-supported spherical radome, 1 air-supported paraboloidal reflector, 1 reflector feed-horn assembly, 1 antenna pedestal, and necessary auxiliary equipment.

FREQUENCY: Radar ... VHF band, 195 - 225 mc; VSWR < 1.5. IFF ... UHF band, 990 - 1130 mc; VSWR < 2.

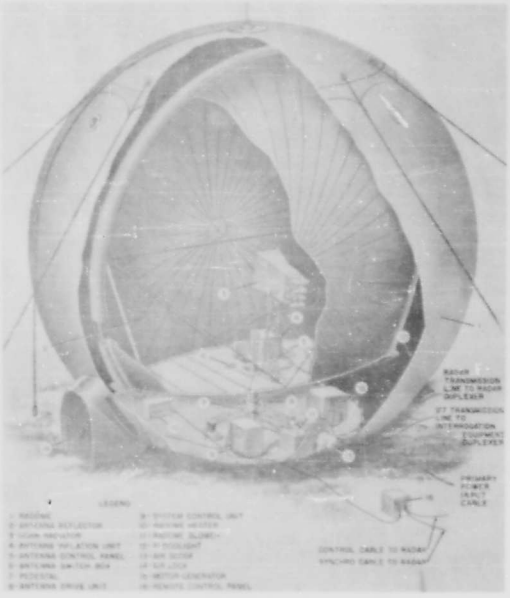
TYPE: Cut paraboloidal reflector of paraballoon type.

DESCRIPTION: The antenna consists of a paraballoon reflector with a horn feed assembly. The reflector assembly is composed of two fiberglass fabric paraboloids, a high-pressure support tube, and a sectionalized, structural-magnesium base. The paraboloids are fabricated of wedge-shaped sections permanently cemented together and truncated for attachment to the reflector base. The paraboloids are joined to the support tube and the reflector base by zippers, forming an envelope. The paraboloidal curvature is formed by nominal air-pressure differential (equivalent to 0.5 inch of water) between the reflector envelope and the radome in which the reflector is enclosed. The air pressure is developed by the antenna inflation blower which is mounted on the antenna base. A separate compressor unit, also located on the antenna base, maintains an average pressure of 8 pounds per square inch (gauge) in the support tube. A thin powdered-silver-on-plastic film laminated to the entire outer surface of one of the paraboloids serves as the reflecting surface. The diameter of the reflector is approximately 50 feet. The reflector base is 44 feet long and approximately elliptical in shape.

The reflector feed horn assembly consists of a rectangular waveguide horn flared in both planes. Radar signals are coupled to this horn by a probe. IFF signals are coupled to the same horn by four vertically stacked horns having identical apertures and electrical characteristics. These IFF horns are located just behind and are connected to the reflector feed horn. The reflector feed horn has an array of vertically oriented rods on both sides of its throat. These rods have no effect on the radar signals, but they change the taper dimensions of the horn for IFF signals.

BEAM DATA:	Radar	IFF
Gain -	28 db	29 db
Half-power beamwidth		
Vertical -	8.8° ± 0.5°	10°
Horizontal -	7.2°	3° ± 0.5°
Side-lobe attenuation -	22 db	18.5 db
Polarization -	horizontal	vertical

SCAN DATA: The antenna rotates in azimuth at a rate of 6 revolutions per minute. A manual tilt mechanism is incorporated in the supporting structure for changing the antenna aperture plane over a range of 7° in elevation.



OA-1323(XW-1)/GPS Installation

INSTALLATION: Ground.

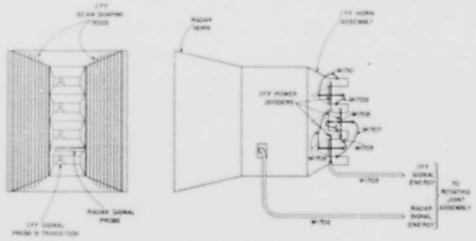
ASSOCIATED EQUIPMENT: Radar Equipment SK-1M. Equipment function - search and IFF.

MISCELLANEOUS: OA-1323(XW-1)/GPS is an experimental model of an antenna which may replace the original antenna used with Radar Equipment SK-1M.

MANUFACTURER: Westinghouse Electric Corporation.

REFERENCE:

Handbook of Operating and Maintenance Instructions for Antenna Groups OA-1323(XW-1)/GPS, AN/GPS-66(XW-1), and AN/GPS-66(XW-2). Baltimore, Maryland: Westinghouse Electric Corporation. (Dec. 1, 1958). UNCLASSIFIED.



OA-1323(XW-1)/GPS Horn Radiator

ANTENNA GROUP OA-1333/MSW-2

MAJOR COMPONENTS: 1 OA-1334/MSW-2 antenna group, 1 J-805/MSW-2 interconnecting box, 2 H-81/U headsets, 1 antenna pedestal platform, 1 radome, 1 multiple-leg sling, 1 MX-2129/MSW-2 telephone set subassembly and 1 four-wheel antenna-mount trailer.

DESCRIPTION: No description of the antennas that are part of OA-1333/MSW-2 and OA-1334/MSW-2 is available.

BEAM DATA:
Polarization - Fixed, linear.

SCAN DATA: The antenna has fixed polarization, a conical scan system, and an electromechanical lock which automatically orients the azimuth pedestal to a preset target line.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Course Directing Central AN/MSW-2. Equipment function - guidance, command.

COGNIZANT AGENCY: ORDXR-20-58.

MANUFACTURER: Contract DA-04-495-ORD-468.

REFERENCES:
1) Drawing Number 8132001.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-1334/MSW-2

See OA-1333/MSW-2.

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ANTENNA SETS OA-1364()/FRC-44, OA-1364/FRR-52&(), OA-1365()/FRC-44 and OA-1365/GRT-5&()

MAJOR COMPONENTS:

OA-1364()/FRC-44 -	Antenna AS-861()/FRC-44 Antenna AS-864()/FRC-44 Antenna AS-865()/FRC-44 Antenna AS-876()/FRC-44
OA-1364/FRR-52&()-	Antenna AS-861/FRR-52&() Antenna AS-865/GRC&() Antenna AS-876/FRR-52&()
OA-1365()/FRC-44 -	Antenna AS-862()/FRC-44 Antenna AS-863()/FRC-44 Antenna AS-864()/FRC-44 Antenna AS-865()/FRC-44 Antenna AS-876()/FRC-44
OA-1365/GRT-5&() -	Antenna AS-862/GRT-5&() Antenna AS-863/GRT-5&() Antenna AS-864/GRT-5&() Antenna AS-865/GRC&() Antenna AS-876/GRC&()

FREQUENCY:

OA-1364()/FRC-44 OA-1364/FRR-52&() OA-1365()/FRC-44 OA-1365/GRT-5&()	MF and HF bands, 2 - 30 mc
AS-861()/FRC-44 AS-861/FRR-52&()	HF band, 4 - 30 mc
AS-862()/FRC-44 AS-862/GRT-5&()	HF band, 4 - 14 mc; VSWR < 2
AS-863()/FRC-44 AS-863/GRT-5&()	HF band, 14 - 30 mc; VSWR < 2
AS-864()/FRC-44	MF and HF bands, 2 - 4 mc; VSWR < 2
AS-864/GRT-5&()	HF band, 11 - 30 mc; VSWR < 2
AS-865()/FRC-44	HF band, 4 - 11 mc; VSWR <2
AS-865/GRC&()	MF and HF bands, 2 - 11 mc; VSWR < 2
AS-876/FRC-44&() AS-876/FRR-52&() AS-876/GRC&()	HF band, 11 - 30 mc; VSWR <2

TYPE:

Antenna	Type
AS-861()/FRC-44	Wullenweber array
AS-861/FRR-52&()	Wullenweber array
AS-862()/FRC-44	Wullenweber array
AS-862/GRT-5&()	Wullenweber array
AS-863()/FRC-44	Wullenweber array
AS-863/GRT-5&()	Wullenweber array
AS-864()/FRC-44	Tower antenna
AS-864/GRT-5&()	Conical antenna
AS-865()/FRC-44	Conical antenna
AS-865/GRC&()	Conical antenna
AS-876/FRC-44&()	Conical antenna
AS-876/FRR-52&()	Conical antenna
AS-876/GRC&()	Conical antenna

DESCRIPTION:

A) Antennas AS-861()/FRC-44 and AS-861/FRR-52&() - These antennas are circular arrays constructed of 36 radiator panels and two reflector screens. Each antenna assembly is mounted on eighteen 130-foot guyed towers equally spaced around a circle 288 feet in diameter; an additional 130-foot tower is in the center. The beams are electrically steerable in 200 (SIC) steps

and probably have a minimum half-power beamwidth of 200 mils. The radiation is vertically polarized in the 4- to 11-mc range and horizontally polarized in the

11- to 30-mc range. Gain is comparable to that of a class-A rhombic antenna.

B) Antennas AS-862()/FRC-44 and AS-862/GRT-5&() - These antennas are circular arrays constructed of 18 radiator panels and two reflector screens. Each assembly is mounted on nine 200-foot guyed towers equally spaced around a 210-foot-diameter circle, with an additional 200-foot center tower. The beams are electrically steerable in 40-degree steps and have a minimum half-power beamwidth of 40 degrees. The radiation is vertically polarized in the 4- to 7-mc range and horizontally polarized in the 7- to 14-mc range. Gain is comparable to that of a class-A rhombic antenna.

C) Antennas AS-863()/FRC-44 and AS-863/GRT-5&() - These two antennas are circular arrays constructed of nine radiator panels and one reflector screen. Each array is mounted on nine 180-foot guyed towers equally spaced around a 60-foot-diameter circle, with an additional 180-foot center tower. The beams are electrically steerable in 40-degree steps and have a minimum half-power beamwidth of 40 degrees. The radiation is horizontally polarized. Gain is comparable to that of a class-A rhombic antenna.

D) Antenna AS-864()/FRC-44 - This antenna consists of a tower surrounded by a concentric wire cylinder. The antenna is insulated from ground and supported by guy wires. Its radiation pattern is omnidirectional in the azimuth plane.
Antenna AS-864()/FRC-44 was cancelled 3 September 1957. It was never procured, stocked, or issued.

E) Antenna AS-864/GRT-5&() - This antenna consists of a discone radiating element, a 150-foot steel tower, a set of antenna supporting guys, and an obstruction-light kit. The discone is mounted on the tower, which is supported by guys anchored on a 173-foot-diameter circle. The radiation pattern of this antenna is omnidirectional in the azimuth plane, and its signal is vertically polarized.

F) Antenna AS-865()/FRC-44 - This antenna is a discone mounted on a 170-foot guyed tower. The guys require a 173-foot-diameter circle for anchoring. The radiation pattern is omnidirectional in the azimuth plane.

G) Antenna AS-865/GRC&() - This antenna is an inverted discone 209 feet in diameter and 100 feet high. It is mounted by 102-foot guyed wooden poles, requiring a circle 209 feet in diameter for the guys. The radiation is vertically polarized, and the pattern is omnidirectional in the azimuth plane.

H) Antennas AS-876/FRC-44&(), AS-876/FRR-52 &(), and AS-876/GRC&() - These antennas are discones supported by 150-foot guyed towers. A circle 173 feet in diameter is required for anchoring the guys. The radiation is vertically polarized, and the patterns are omnidirectional in the azimuth plane. These antennas are similar to, but not interchangeable with, Antenna AS-864/GRT-5&(). The only difference is in their terminations.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: AN/FRC-44(), AN/FRR-52 &(), and AN/GRT-5&().

COGNIZANT AGENCY: RADC.

MANUFACTURER: Collins Radio, Cedar Rapids, Iowa, (Code 13499), contract AF 30(635)-4504.

REFERENCES:
1) RADC Exhibits 1800 and 1800A.
2) Collins Drawings No. 2979D402 and 2979D-403.
3) U. S. Department of Defense Nomenclature Cards.

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Polarization - Circular.
AS-867/FPN-33:
Gain - 39 db.
Half-power beamwidth - Horizontal - 2.5°.
Vertical - 0.85°.
Beam type - Fan.
Polarization - Circular.

SCAN DATA: The antenna group has six scan modes. See illustration for details of each mode.

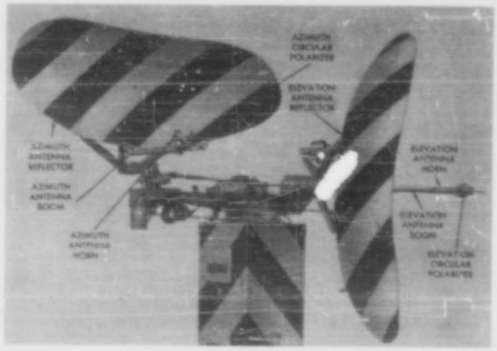
INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-33. Equipment function - search, air; height finding; and approach control.

COGNIZANT AGENCY: SCLE-12075.

MANUFACTURER: Gilfillan Bros., Inc., code 24930, contract 38713-PHILA-56-55.

REFERENCES:
1) Departments of the Army and the Air Force, Radar Set AN/FPN-33, Operator's Manual, TM 11-1338, TO 31P5-2FPN33-1, (May, 1957). UNCLASSIFIED.
2) U. S. Department of Defense Nomenclature Card.



OA-1368/FPN-33



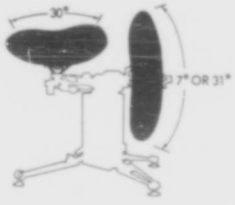
ACTION DURING SEARCH OPERATION:
AZIMUTH ANTENNA ROTATES 360° AT 15 RPM.
ELEVATION ANTENNA STATIONARY.



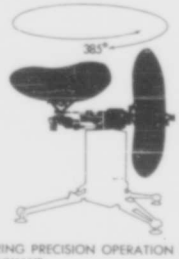
ACTION DURING HEIGHT FINDING OPERATION:
AZIMUTH ANTENNA SCANS A 30° HORIZONTAL SECTOR.
ELEVATION ANTENNA SCANS A 7° OR 31° VERTICAL SECTOR.



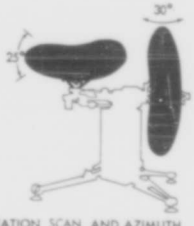
ACTION DURING AIRPORT TAXI OPERATION:
AZIMUTH ANTENNA ROTATES 360° AT 15 RPM.
ELEVATION ANTENNA STATIONARY.



ACTION DURING PRECISION OPERATION:
AZIMUTH ANTENNA SCANS A 30° HORIZONTAL SECTOR.
ELEVATION ANTENNA SCANS A 7° OR 31° VERTICAL SECTOR.
ELEVATION ANTENNA ALSO CONTROLLED TO MOVE LEFT AND RIGHT DURING SCAN.



ACTION DURING PRECISION OPERATION TO CHANGE RUNWAYS:
AS AN AIRCRAFT HEIGHT FINDING SYSTEM TO TRACK IN AZIMUTH.
ANTENNA MOUNT ROTATES THROUGH 385° IN EITHER DIRECTION AT 12° PER SECOND.



ELEVATION SCAN AND AZIMUTH TILT ACTION:
AZIMUTH ANTENNA TILTS FROM 0° TO 25°
ELEVATION ANTENNA SCANS 15° EITHER SIDE OF AZIMUTH CENTER LINE.

OA 1368/FPN-33 Scan Modes

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azimuth and ±25° in elevation. The reflector feed has a 50-ohm feed line and is capable of transmitting horizontally and vertically polarized waves simultaneously. The two signals thus radiated have a 50-db isolation.

BEAM DATA:
Half-power beamwidth - 6° in both planes.
Beam type - Pencil.
Polarization - Horizontal and vertical polarization simultaneously.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/TRC-27, AN/MRC-59, AN/MRC-60. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Raytheon Manufacturing Co., Waltham, Mass., contract NObsr-71035.

REFERENCES:
1) Military Specification SHIPS-R-1947.
2) U. S. Department of Defense Nomenclature Cards for OA-1378/GRC and AS-682/TRC-27.

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MANUFACTURER: Western Electric Co. (GS-5516).

STOCK NUMBER: Federal Stock Number 5985-264-7477 (for AT-414/TRC).

REFERENCES:

1) Department of the Army and Department of the Air Force, Radio Set AN/TRC-24, Radio Terminal Set AN/TRC-35, and Radio Relay Set AN/TRC-36, Technical Manual and Technical Order, TM 11-687, TO 31R2-2TRC24-11, (Sept. 1955). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Radio Set AN/TRC-24, Radio Terminal Set AN/TRC-35, and Radio Relay Set AN/TRC-36, Technical Manual and Technical Order, TM 11-687, TO 31R2-2TRC24-11, (May 23, 1956). UNCLASSIFIED.

3) Military Specification MIL-R-10616.

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ANTENNA GROUP OA-1391/GRC&()

MAJOR COMPONENTS: 1 A-band antenna mast stand, Antenna AS-756/GRC, 1 Filter Kit MK-236/TRC, and accessories.

FREQUENCY: VHF band, 50 - 100 mc.

TYPE: Two three-element Yagi arrays

DESCRIPTION: OA-1391/GRC is composed of Antenna AS-756()/GRC, filter kit, and adapters and connectors for AN/GRC-75, AN/GRC-76, or AN/GRC-77.

AS-756()/GRC contains three antenna booms, a spacer bar and other necessary parts to construct stacked Yagi arrays. When used with OA-1391()/GRC, the array consists of two Yagi antennas. Each Yagi antenna is composed of one driven dipole with a reflector and director. The lengths of the elements may be adjusted for frequency by using long or short dipole inserts provided with the antenna. The antennas may be used separately (one for receiving and the other for transmitting) or they may be double stacked for higher gain.

BEAM DATA:

Polarization - Either horizontal or vertical depending on mounting position.

TUNING/MATCHING DEVICES: A matching transformer is built into the antenna boom. Dipole elements may be adjusted for different frequencies.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/GRC-75, AN/GRC-76, AN/GRC-77. Equipment function - communications.

COGNIZANT AGENCY: SESA-13704.

MANUFACTURER: Bell Telephone Laboratories, Inc.

REFERENCES: -

1) Departments of the Army and the Air Force, Radio Set AN/TRC-24, Radio Terminal Set AN/TRC-35, and Radio Relay Set AN/TRC-36, Technical Manual and Technical Order, TM 11-687, TO 31R2-2TRC24-11, (May 23, 1956). UNCLASSIFIED.

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA-FILTER GROUP OA-1393/GRC&()

MAJOR COMPONENTS: Antenna Case CY-1371/TRC; 2 Antennas AS-639/TRC, each consisting of 2 Antenna Dipoles AT-412/TRC and one spare; 2 Radio Frequency Cable Assemblies CG-1042/U (each 40 inches long); 2 Adapters UG-643/U; Filter Kit MK-123/TRC; Accessories Case CY-1344/TRC.

FREQUENCY: VHF band, 100 - 225 mc.

TYPE: Dipole (V-type).

DESCRIPTION: The radiating portion of this group is a pair of double-V-type adjustable dipoles of telescopic construction. The antenna is terminated for coaxial cable and has a characteristic input impedance of 50 ohms Each dipole leg has a diameter of 0.75 inches.

The equipment furnished in OA-1393/GRC&() plus OA-1389/GRC&() makes up two complete antennas -- one for transmitting and one for receiving. Spacing between each dipole and its associated reflector may be varied for more effective coverage of the frequency band. The dipoles themselves are comparatively broadband; only three adjustments are necessary to cover the 100- to 225-mc range.

BEAM DATA: See OA-1389/GRC&().

TUNING/MATCHING DEVICES: A set of 6 tuneable band-pass filters is supplied with the group. The length of the elements and the distance to the reflector may be varied to increase effectiveness of coverage at different frequencies.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-24, AN/TRC-35, AN/TRC-36, AN/GRC-78, AN/GRC-79, AN/GRC-80. Equipment function - communications.

COGNIZANT AGENCY: SESA-13706 and SESA-58-1419.

MANUFACTURER: Western Electric, procurement 16811-PH-51 (GS-55445).

STOCK NUMBER: Federal Stock Number 5985-264-7502 for AS-639/TRC, Federal Stock Number 5985-284-7092 for AT-412/TRC.

REFERENCES:

1) Departments of the Army and the Air Force, Radio Set AN/TRC-24, Radio Terminal Set AN/TRC-35, and Radio Relay Set AN/TRC-36, Technical Manual and Technical Order, TM 11-687, TO 31R2-2TRC24-11, (Sept. 1955). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Radio Set AN/TRC-24, Radio Terminal Set AN/TRC-35, and Radio Relay Set AN/TRC-36, Technical Manual and Technical Order, TM 11-687,.TO 31R2-2TRC24-11, (May 23, 1956). UNCLASSIFIED.

3) Military Specification MIL-R-10616.

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ANTENNA-FILTER GROUP OA-1395/GRC&()

MAJOR COMPONENTS: Antenna Case CY-1370/TRC, 2 Antennas AS-640/TRC (each consisting of 2 Antenna Dipoles AT-413/TRC and one spare), 2 Radio Frequency Cable Assemblies CG-1042/U (each 40 inches long), 2 Adapter Connectors UG-643/U, Filter Kit MK-124/TRC, Accessories Case CY-1344/TRC.

FREQUENCY: VHF and UHF bands, 225 - 400 mc.

TYPE: Dipole.

DESCRIPTION: The radiating portion of this group is a pair of straight, rod-type, adjustable dipoles of telescopic construction. The antenna is terminated for coaxial cable and has a characteristic input impedance of 50 ohms. Each leg of the dipoles has a diameter of 0.75 inches.

The equipment furnished in OA-1395/GRC&() plus OA-1389/GRC&() makes up two complete antennas -- one for transmitting and one for receiving. Spacing between each dipole and its associated reflector may be varied for more effective coverage of the frequency band. The dipoles themselves are comparatively broadband; only two adjustments are necessary to cover the 225- to 400-mc range.

BEAM DATA: See OA-1389/GRC&()

TUNING/MATCHING DEVICES: A set of 6 tuneable band-pass filters is supplied with the group. The length of the elements and the distance to the reflector may be varied to increase effectiveness of coverage at different frequencies.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Sets AN/TRC-24, AN/TRC-35, AN/TRC-36, AN/GRC-81, AN/GRC-82, AN/GRC-83. Equipment function - communications.

COGNIZANT AGENCY: SESA-13708 and SESA-58-1420.

MANUFACTURER: Western Electric Company, (GS-55446), procurement 16811-PH-51.

STOCK NUMBER: Federal Stock Number 5985-284-7364 (for AT-413/TRC), Federal Stock Number 5985-501-2279 (for AS-640/TRC).

REFERENCES:

1) Departments of the Army and the Air Force, Radio Set AN/TRC-24, Radio Terminal Set AN/TRC-35, and Radio Relay Set AN/TRC-36, Technical Manual and Technical Order, TM 11-687, TO 31R2-2TRC24-11, (Sept. 1955). UNCLASSIFIED.

2) Departments of the Army and the Air Force, Radio Set AN/TRC-24, Radio Terminal Set AN/TRC-35, and Radio Relay Set AN/TRC-36, Technical Manual and Technical Order, TM 11-687, TO 31R2-2TRC24-11, (May 23, 1956). UNCLASSIFIED.

3) Military Specification MIL-R-10616.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA-FILTER GROUP OA-1397/GRC&()

MAJOR COMPONENTS: Antenna Case CY-1761/GRC, 2 Antennas AS-755/GRC & () (each consisting of 4 Antenna Elements AT-566/GRC & () and 2 spares), 6 Radio Frequency Cable Assemblies CG-1370/U (40 inches long), 4 Radio Frequency Cable Assemblies CG-1544/U (26 inches long), 4 Adapters UG-643/U, Filter Kit MK-228/GRC, Accessories Case CY-1344/TRC.

FREQUENCY: UHF band, 400 - 600 mc.

TYPE: Dipole array.

DESCRIPTION: The radiating portion of this group consists of two pairs of parallel dipoles made of chrome-plated brass tubing. Each dipole is 3-3/8 inches wide, 9-1/2 inches long with the dipole inserts retracted, and 11-1/2 inches long with the dipole inserts extended. The dipoles mount to the AT-414/TRC reflectors by 4 captive screws. Each pair of dipoles is connected together by a 9-1/16-inch length of r-f cable which is terminated with a UG-571/U jack. Nominal input impedance of the assembly is 50 ohms.

The equipment furnished in OA-1397/GRC & () plus OA-1389/GRC & () makes up two complete antenna assemblies -- one for transmitting and one for receiving. Spacing between each dipole and its associated reflector and the lengths of the dipoles remain fixed over the entire frequency range of 400 to 600 mc.

BEAM DATA: See OA-1389/GRC & ().

TUNING/MATCHING DEVICE: A set of 4 tuneable band-pass filters is supplied with the group.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Sets AN/GRC-78, AN/GRC-79, AN/GRC-80. Equipment function - communications.

COGNIZANT AGENCY: SESA-13710 and SESA-58-1421.

MANUFACTURER: Western Electric Co., procurement contract 08720-PH-55.

REFERENCES:

1) Departments of the Army and the Air Force, Radio Set AN/TRC-24, Radio Terminal Set AN/TRC-35, and Radio Relay Set AN/TRC-36, Technical Manual and Technical Order, TM 11-687, TO 31R2-2TRC24-11, (May 23, 1956). UNCLASSIFIED.

2) Military Specification SC-A-46387A.

3) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-1528()/TRD-3

MAJOR COMPONENTS: 1 Antenna (Loop type), 1 Antenna (Whip type), 1 Antenna base support, 1 Antenna control, 1 Radome, and miscellaneous cable assemblies.

FREQUENCY: VLF and LF bands, 0.015 to 0.3 mc.

TYPE: Loop, whip.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Receiver R-389()/URR and Azimuth Indicator IP-137()/GRD (components of AN/TRD-3). Equipment function - direction finding.

MISCELLANEOUS: This equipment, when substituted for the crossed-Adcock antenna and signal goniometer normally used with Direction Finder Set AN/TRD-3() is capable of providing instantaneous visual and aural-null direction finding in the 15- to 300-kc frequency range. Equipment supplied provides mounting and support for the antenna that will stand wind loads up to 90-mile-per-hour winds.

COGNIZANT AGENCY: SEL-58-1370.

REFERENCES:
1) Military Specification SCL-5376A.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-1547/URN

MAJOR COMPONENTS: AS-891/URN, AB-541/URN, and AM-1720/URN.

FREQUENCY: UHF band, 962 - 1024 mc.

TYPE: Amplitude-modulating antenna.

DESCRIPTION: This antenna consists of a vertical stack of biconical dipoles that remain stationary with respect to the antenna mount and two concentrically mounted parasitic arrays, which rotate in unison about the dipoles at a rate of 15 cycles per second. The inner parasitic array, which amplitude modulates the radiation pattern at 15 cycles per second, consists of one parasitic element embedded in a dielectric cylinder. The outer parasitic array, which amplitude modulates the radiation pattern at 135 cycles per second, consists of nine parasitic elements embedded in a dielectric cylinder. The parasitic arrays mount concentrically on a common hub, which contains pins of soft iron to generate pulses. True north can be identified at the receiving equipment since the transmitting antenna is positioned so that a coded pulse train is generated as the major peak of the cardioid radiation pattern is pointing at true north. The antenna is motor driven and pedestal mounted.

BEAM DATA:
Beam type - Rotating scalloped cardioid.
Polarization - Vertical.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/GRN-9 & 9A. Equipment function - navigation, surface reference.

MISCELLANEOUS: AS-891/URN is probably the same as AS-889/SRN-6. It is similar to AS-890/SRN-6 and AS-892/URN except for frequency range and is similar to AS-677/URN-3, AS-678/URN-3, and AS-777/URN-3 except for the number of dipoles.

COGNIZANT AGENCY: U. S. Navy, USN-416.

MANUFACTURERS: Federal Telephone and Radio Corp., procurement contract NObsr-71385.

REFERENCES:
1) Federal Telephone and Radio Corporation outline drawing B2061557-1.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-1548/URN

MAJOR COMPONENTS: AS-892/URN, AB-541/URN, and AM-1720/URN.

FREQUENCY: UHF band, 1151 - 1213 mc.

TYPE: Amplitude-modulating antenna.

DESCRIPTION: This antenna consists of a vertical stack of biconical dipoles that remain stationary with respect to the antenna mount and two concentrically mounted parasitic arrays, which rotate in unison about the dipoles at a rate of 15 cycles per second. The inner parasitic array, which amplitude modulates the radiation pattern at 15 cycles per second, consists of one parasitic element embedded in a dielectric cylinder. The outer parasitic array, which amplitude modulates the radiation pattern at 135 cycles per second, consists of nine parasitic elements embedded in a dielectric cylinder. The parasitic arrays mount concentrically on a common hub, which contains pins of soft iron to generate pulses. True north can be identified at the receiving

equipment since the transmitting antenna is positioned so that a coded pulse train is generated as the major peak of the cardioid radiation pattern is pointing at true north. The antenna is motor driven and pedestal mounted.

BEAM DATA:
Beam type - Rotating scalloped cardioid.
Polarization - Vertical.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radio Set AN/GRN-9. Equipment function - navigation, surface reference.

MISCELLANEOUS: AS-892/URN is probably the same as AS-890/SRN-6. It is similar to AS-889/SRN-6 and AS-891/URN except for frequency and is similar to AS-677/URN-3, AS-678/URN-3, and AS-777/URN-3 except for number of dipoles.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURERS: Federal Telephone and Radio Corp., procurement contract NObsr 71385.

STOCK NUMBER: AS-892/URN ... Federal Stock Number 5825-626-8932.

REFERENCES:
1) Federal Telephone and Radio Corporation outline drawing B2061557-2.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-1582/TLR-11&()

MAJOR COMPONENTS: 1 Radome (air inflatable, commonly know as diaplardome), 2 sets of circularly disposed flexible radiators, 1 air inflation group, 3 commutators, 1 indicator group, and interconnecting cable assemblies.

FREQUENCY: VHF and UHF bands, 100 - 1000 mc.

DESCRIPTION: The OA-1582/TLR-11 & () is an air-ground transportable antenna group which provides facilities for receiving signals from 100 to 1000 mc. The antenna used to receive in the 100- to 225- mc frequency range is an integral part of the radome. Two other arrays are suspended inside the radome from the top. These two arrays are used in the frequency range from 225 mc to 1000 mc. No information is available as to what type of arrays are used or their nomenclature.

ASSOCIATED EQUIPMENT: AN/TLR-11 & (). Equipment function - probably countermeasures.

COGNIZANT AGENCY: WL-57-1194.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-1622/FRC-39&()

See Antenna Group OA-1460/FRC & ().

ANTENNA GROUP OA-1623/FRC-39&()

See Antenna Group OA-1460/FRC & ().

ANTENNA GROUP OA-1624/FRC-56

See OA-1460/FRC.

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ANTENNA GROUP OA-1650/FPS-33&()

MAJOR COMPONENTS: 1 Antenna Reflector AT-795/FPS-33, 1 Waveguide horn AT-796/FPS-33, 1 Antenna Pedestal AB-553/FPS-33, 1 Waveguide Assembly CG-1635/FPS-33, 3 Waveguide Assemblies CG-1636/FPS-33, 1 Waveguide Assembly CG-1637/FPS-33, 1 Waveguide Assembly CG-1638/FPS-33, 1 Waveguide Assembly CG-1009/FPS-8.

FREQUENCY: UHF band, 1240 - 1360 mc.

TYPE: Cut paraboloid.

DESCRIPTION:
A) Antenna Reflector AT-795/FPS-33 & () - The reflector is a cut-paraboloid constructed of aluminum. Overall, it is 43 feet long, 10 feet deep, and 20.8 feet high and is mounted by four mounting bolts on 80-inch by 56.80-inch mounting centers.

B) Antenna Feed AT-796/FPS-33 & () - The feed horn is constructed of aluminum and is 50.72 inches long, 11 inches wide, and 21.3 inches high, overall. The horn is

mounted and supported by the waveguide assembly.

ASSOCIATED EQUIPMENT: AN/FPS-33 Radar.

COGNIZANT AGENCY: SESA-13104 and SESA-13403.

MANUFACTURER: General Electric Co., Syracuse, N. Y., procurement contract 387-PHILA-55,

REFERENCES:
1) General Electric Part Drawing PL7305679G1.

2) U. S. Department of Defense Nomenclature Card.

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Camden, N. J.

REFERENCES:
1) Air Force T.O. 31R5-2FRC39-101.
2) U. S. Department of Defense Nomenclature Card.

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COGNIZANT AGENCY: WL 58-1062.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-1927/FPS-16X

MAJOR COMPONENTS: Radar Antenna AS-912/FPS-16X, Antenna Pedestal AB-547/FPS-16, and television equipment.

DESCRIPTION: See Antenna AS-912/FPS-16X for description and characteristics of the antenna.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-16.
Equipment function - search, tracking.

COGNIZANT AGENCY: USN-58-Q-711.

MANUFACTURERS: Radio Corporation of America, Navy contract NOas-55-869.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-1967/MPM-25

FREQUENCY: SHF band, 12,400 - 18,000 mc.

TYPE: Paraboloidal reflector.

DESCRIPTION: The group is probably a tripod-mounted, paraboloidal reflector with an r-f feed assembly. It is used for boresighting Radar Set AN/MPQ-4.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/MPQ-4.
Equipment function - test.

COGNIZANT AGENCY: SESA 58-156.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-2021()/GRC

MAJOR COMPONENTS: 2 AT-869()/G antennas and 2 AT-870()/G antennas.

FREQUENCY: VHF band, 50 - 150 mc: AT-869()/G ... VHF band, 50 - 70 mc, AT-870()/G ... VHF band, 70 - 150 mc.

TYPE: Yagi.

DESCRIPTION: The group consists of 2 of each of the following antennas.

A) Antenna AT-869()/G - AT-869()/G is a 4-element Yagi array that is used for receiving and transmitting. It is mast mounted.

B) Antenna AT-870()/G - AT-870()/G is a 5-element Yagi array that is used for receiving and transmitting. It is mast mounted.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set AN/GRC-53(), Radio Terminal Set AN/GRC-54(), and Radio Repeater Set AN/GRC-55(). Equipment function - communications.

COGNIZANT AGENCY:
OA-2021()/GRC SEL-58-267
AT-869()/G SEL-58-265
AT-870()/G SEL-58-266

REFERENCE:
U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-2035/FPS-6A

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Cut paraboloidal reflector fed by a flared waveguide horn.

SCAN DATA: The antenna scans a sector in elevation from -2° to +32° at a rate of either 20 or 30 cycles per minute. This model may include provision for varying both the width and the center of the scan sector. The width may be varied from 1° to 34°.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-6A.
Equipment function - height finding.

MISCELLANEOUS: OA-2035/FPS-6A is the same as OA-389/FPS-6 except that it uses a different reflector support. See OA-389/FPS-6 for major components, description, beam data, and illustrations.

COGNIZANT AGENCY: WL-58-1780.

MANUFACTURERS: Goodyear Aircraft Corp. and General Electric Co., order AF 30(635)-5688.

STOCK NUMBER: Federal Stock Number 5840-284-7440.

REFERENCES:

1) U. S. Air Force, Radar Sets AN/FPS-6, AN/FPS-6A, AN/FPS-6B, and AN/MPS-14, Illustrated Parts Breakdown, T.O. 31P3-2FPS6-4, (July 15, 1959). UNCLASSIFIED.

2) U. S. Air Force and the Bureau of Aeronautics, Radar Sets AN/FPS-6, AN/FPS-6A, and AN/MPS-14, Handbook Operating Instructions, T.O. 31P3-2FPS6-1, (Feb. 1, 1958). UNCLASSIFIED.

3) General Electric Drawing 519E433G3.

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-2040/FPS-6B

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Cut paraboloidal reflector fed by a flared waveguide horn.

SCAN DATA: The antenna scans a sector in elevation from -2° to +32° at a rate of either 20 or 30 cycles per minute. Provision is made for varying both the width and the center of the scan sector. The width can be varied from 1° to 34°.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-6B. Equipment function - height finding.

MISCELLANEOUS: OA-2040/FPS-6B is similar to OA-389/FPS-6 and OA-2035/FPS-6A. However, it uses reflector AT-873/FPS-6B instead of AT-374/FPS-6. The upper and lower sections of AT-873/FPS-6B are identical with the upper and lower sections of AT/374/FPS-6. However, the center section of AT-873/FPS-6B seems to have a somewhat different supporting framework. OA-2040/FPS-6B, also, has a different reflector support and antenna base. See OA-389/FPS-6 for description, beam data, and illustrations.

COGNIZANT AGENCY: WL-58-1818 (OA-2040/FPS-6B) and WL-58-1819 (AT-873/FPS-6B).

MANUFACTURERS: Goodyear Aircraft Corp. and General Electric Co., order AF 30(635)-7650.

STOCK NUMBER: Federal Stock Number 5840-647-1220 and probably 5840-519-8375 (AT-873/FPS-6B).

REFERENCES:

1) U. S. Air Force, Radar Sets AN/FPS-6, AN/FPS-6A, AN/FPS-6B, and AN/MPS-14, Illustrated Parts Breakdown, T.O. 31P3-2FPS6-4, (July 15, 1959). UNCLASSIFIED.

2) U. S. Air Force, Bureau of Aeronautics, Radar Sets AN/FPS-6, AN/FPS-6A, and AN/MPS-14, Handbook Operating Instructions, T.O. 31P3-2FPS6-1, (Feb. 1, 1958). UNCLASSIFIED.

3) General Electric drawings number 519E433 (OA-2040/FPS-6B) and 7032731G9 (AT-873/FPS-6B).

4) U. S. Department of Defense Nomenclature Card.

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ANTENNA GROUP OA-2231/TPN-12

MAJOR COMPONENTS: 1 AS-1001/TPN-12 antenna reflector, 1 AT-899/TPN-12 waveguide horn, 1 AB-593/TPN-12 antenna pedestal, 1 horn support assembly, and 3 MX-2704/TPN-12 electrical equipment legs.

FREQUENCY: SHF band, 9000 - 9160 mc.

TYPE: Parabolic-cylinder reflector with horn feed.

DESCRIPTION: The antenna group makes up the azimuth antenna for Radar Set AN/TPN-12.

A) Reflector - AS-1001/TPN-12 is an aluminum, parabolic cylinder. Its overall dimensions are 83 inches by 120 inches by 40-1/2 inches.

B) Horn - AT-899/TPN-12 is an aluminum horn which serves as a line-source feed for the reflector. It is probably of the pillbox or hoghorn type. The overall dimensions are 25 inches long by 4-1/2 inches wide by 44 inches high. The feed connects to a waveguide.

SCAN DATA: The antenna has an oscillating, tilting, and rotating movement. It scans and searches in azimuth.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPN-12. Equipment function - navigation.

COGNIZANT AGENCY: WL-58-2447, WL-58-2450, and WL-59-1139.

MANUFACTURERS: ITE Circuit Breaker Co., Philadephia, Pa., and Laboratory for Electronics, Boston, Mass., contract AF 30(635)-9527,

REFERENCES:
1) ITE drawing number 498715-901 (OA-2231/TPN-12).
2) ITE drawing number 498715-501 (AS-1001/TPN-12).
3) Air Force Specification MIL-R-9616.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-2232/TPN-12

MAJOR COMPONENTS: 1 AS-1025/TPN-12 antenna reflector, 1 AT-910/TPN-12 waveguide horn, 1 antenna pedestal, and horn supports.

FREQUENCY: Probably SHF band, 9000 - 9160 mc.

TYPE: Parabolic-cylinder reflector with horn feed.

DESCRIPTION: The antenna group makes up the elevation antenna for Radar Set AN/TPN-12.

A) Reflector - AS-1025/TPN-12 is an aluminum parabolic cylinder. Its overall dimensions are 83 inches by 120 inches by 40-1/2 inches.

B) Horn - AT-910/TPN-12 is an aluminum horn which serves as a line-source feed for the reflector. It is probably of the pillbox or hoghorn type.

SCAN DATA: The antenna has an oscillating and tilting movement. It scans and searches in elevation.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radar Set AN/TPN-12. Equipment function - navigation.

MISCELLANEOUS: The request for nomenclature sheet for Antenna Horn AT-899/TPN-12 states that this horn is part of Antenna Group OA-2232/TPN-12 as well as part of Antenna Group OA-2231/TPN-12. The nomenclature card for OA-2232/TPN-12 does not list AT-899/TPN-12 as a component.

COGNIZANT AGENCY: WL-59-R-1506 and WL-59-1585.

MANUFACTURERS: ITE Circuit Breaker Co., Philadelphia, Pa., and Laboratory for Electronics, Boston, Mass., contract AF 30(635)-9537.

REFERENCES:
1) ITE drawing number 498715-903 (OA-2232/TPN-12).
2) ITE drawing number 498765-903- (AS-1025/TPN-12).
3) Air Force Specification MIL-R-9616.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-2285/GRC

See AT-903/G.

ANTENNA GROUP OA-2331/FPS-37

MAJOR COMPONENTS: 1 AT-795/FPS-33 antenna reflector, 1 AT-905/FPS-37 waveguide horn, 1 AB-604/FPS-37 antenna pedestal, 1 UG-985A/FPS-8 rotary transmission-line coupler, 1 CG-1765/FPS-37 waveguide assembly, 1 CG-1698/U waveguide assembly, 1 CG 1009/FPS-8 waveguide assembly, and 2 CG-1637/FPS-33 waveguide assemblies.

FREQUENCY: UHF band, 1280 - 1350 mc.

TYPE: Cut paraboloidal reflector with a horn feed.

DESCRIPTION: The antenna is made up of a cut paraboloidal reflector, AT-795/FPS-33, and a dual feed horn, AT-905/FPS-37. The reflector is constructed of aluminum and is 43 feet long, 10 feet deep, and 20.8 feet high overall. The horn serves as a dual feed for both radar and IFF. It is 65 inches long, 20 inches wide, and 36 inches high overall. The inside of the mouth is 8.572 inches by 18.872 inches. The feed is designed to connect by a flange to a waveguide.

BEAM DATA:
Polarization - Radar, either horizontal or circular. IFF, vertical.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radar Set AN/FPS-37. Equipment function - search.

MISCELLANEOUS: OA-2331/FPS-37 is similar to, but not interchangeable with, OA-1650/FPS-33.

COGNIZANT AGENCY: WL-59-1413, WL-59-1411, and SESA-13164.

MANUFACTURER: General Electric Co., Syracuse, N. Y., contract AF 30(635)-10622.

STOCK NUMBER: AT-905/FPS-37 ... Federal Stock Number 5840-685-8675, OA-2331/FPS-37 ... Federal Stock Number 5840-685-8676.

REFERENCES:

1) General Electric drawing number 7617949G1 (AT-905/FPS-37).
2) Government Specification MIL-R-9569A (OA-2331/FPS-37).
3) Government Specification MIL-R-9383A (AT-905/FPS-37).
4) Bureau of Ships Technical Requirements SER 822B-097 (OA-2331/FPS-37).
5) U. S. Department of Defense Nomenclature Card.

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DESCRIPTION:

A) Antenna AT-931/FPN-31 is a cut paraboloidal reflector made of aluminum alloy. Overall it is 144 inches long by 46.5 inches high. It is mounted on Antenna Pedestal AB-626/FPN-31.

B) Antenna AT-930/FPN-31 is a waveguide horn made of aluminum alloy. Overall it is 11 inches by 6 inches by 6 inches. The horn assembly attaches to the AT-931/FPN-31 reflector.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radar Set AN/FPN-31.

COGNIZANT AGENCY: AEL-59-842.

MANUFACTURER: Goodyear Aircraft Corp., contract AF 30(635)-11224.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

BEAM DATA:
Polarization - Linear or circular.

ANTENNA GROUP OA-2566/FPS-49

MAJOR COMPONENTS: 1 Antenna Pedestal AB-628/FPS-49, 1 Antenna Support Base AB-629/FPS-49, 1 Antenna Reflector AT-937/FPS-49. See Antenna AT-937/FPS-49.

ANTENNA GROUP OA-2614/FPN-34

MAJOR COMPONENTS: 1 Antenna Pedestal AB-635/FPN-34, 1 Antenna AT-795/FPS-33, 1 Antenna AT-905/FPS-37, 1 Coupler UG-985A/FPS-8, 1 each of Waveguide Assemblies CG-1765/FPS-37, CG-1698/U, CG-1009/FPS-8, and 2 each of Waveguide Assemblies CG-1638/FPS-33, CG-1766/U. See Antenna AT-795/FPS-33, and Antenna AT-905/FPS-37.

ANTENNA GROUP OA-2662/MPS-34

MAJOR COMPONENTS: 1 Antenna AS-1077/MPS-34, 1 Antenna Drive MX-2998/MPS-34, 1 Gearcase-Motor PD-36/CPS-9, 1 Pedestal AB-641/MPS-34. See Antenna AS-1077/MPS-34.

ANTENNA GROUP OA-2666/FPN-40

MAJOR COMPONENTS: 1 Antenna AS-1079/FPN-40, 1 Antenna AS-1080/FPN-40, 1 Antenna Pedestal Subassembly AB-642/FPN-40, 1 Antenna Pedestal Subassembly AB-643/FPN-40, and 1 Antenna Pedestal Subassembly AB-644/FPN-40.

DESCRIPTION: Antenna Group OA-2666/FPN-40 is made up of the antenna assemblies for the AN/FPN-40 approach-control radar set. See AS-1079/FPN-40 and AS-1080/FPN-40 for descriptions of the antennas.

MISCELLANEOUS: OA-2666/FPN-40 is similar to and replaces OA-1368/FPN-33 in Radar Set AN/FPN-40.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA GROUP OA-2691/FPS-26

MAJOR COMPONENTS: Antenna Element AT-957/FPS-26, Antenna Subassembly MX-3010/FPS-26, Antenna Pedestal AB-650/FPS-26, Antenna Reflector Section AT-958/FPS-26, Antenna Reflector Section AT-959/FPS-26, Waveguide Assembly CG-1867/FPS-26, Waveguide Assembly CG-1866/FPS-26, and Crosley Division Radome part number 741814.

DESCRIPTION:

A) Antenna AT-957/FPS-26 is described as a rectangular-shaped antenna element 6-7/16 inches long by 1-3/4 inches wide by 3-1/4 inches deep. It is a replaceable part of the antenna that provides coupling from the vertically polarized reflector to the waveguide section.

B) Antenna AT-958/FPS-26 is described as a rectangular-shaped reflector section 31-1/64 inches long by 28-1/2 inches wide by 9-1/8 inches deep. It is used with the vertically polarized channel of the countermeasures equipment.

C) Antenna AT-959/FPS-26 is described as a rectangular-shaped reflector section 28-1/2 inches long by 21-7/16 inches wide by 11-1/8 inches deep. It is used with the horizontally polarized channel of the countermeasures equipment.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: AN/FPS-26. Equipment function - countermeasures.

COGNIZANT AGENCY: WL-59-2179 (RADC).

MANUFACTURER: AVCO Manufacturing Corporation, Crosley Div., contract AF 30(635)-12186.

REFERENCES:
U. S. Department of Defense Nomenclature Cards for OA-2691/FPS-26, AT-957/FPS-26, AT-958/FPS-26, AT-959/FPS-26.

ANTENNA GROUP OA-2713/FPS-7C

MAJOR COMPONENTS: 1 Antenna AT-753/FPS-7, 1 Antenna AS-894/FPS-7, 1 Pedestal AB-601/FPS-7B, 1 Coupler CU-745/FPS-7B, 1 Platform MT-2175/FPS-7B, 1 Base AB-654/FPS-7C. See Antenna AT-753/FPS-7, and Antenna AS-894/FPS-7.

ANTENNA GROUP OA-2799/TRC-66

MAJOR COMPONENTS: Antenna AT-970/TRC-66, Antenna AT-976/TRC-66, and an antenna support.

FREQUENCY: SHF band, 4400 - 5000 mc.

TYPE: Paraboloidal reflector fed by a waveguide horn.

DESCRIPTION: Antenna Group OA-2799/TRC-66 consists of the AT-970/TRC-66 waveguide horn and the AT-976/TRC-66 paraboloidal reflector.

A) Antenna AT-976/TRC-66 is a paraballoon type paraboloidal reflector made of vinyl-coated fiberglass with a silver-flake-pigmented vinyl reflecting surface. The overall dimensions are 14 feet in diameter and 1 foot in depth. The fabric is supported at its periphery by a metal ring. The proper contour is maintained by inflating with a blower.

B) Antenna AT-970/TRC-66 is a dual-polarized waveguide horn. The horn is made of aluminum and (overall) is 15 inches long and 10 inches in diameter. The throat is 1.872 inches wide by 0.872 inches high, and the mouth is 7 inches long by 1.872 inches square. The horn is equipped with a transparent cover.

INSTALLATION: Ground, transportable.

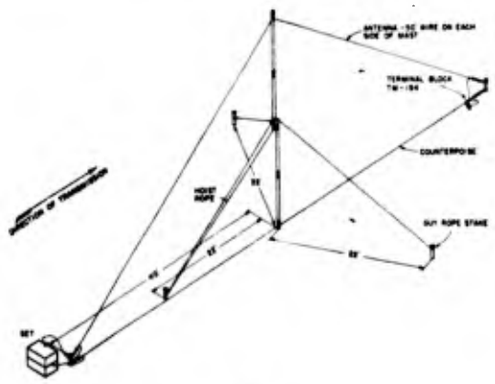
COGNIZANT AGENCY: WL-60-1952 (RADC).

MANUFACTURER: Westinghouse Electric Corp., contract AF 30(635)-12332.

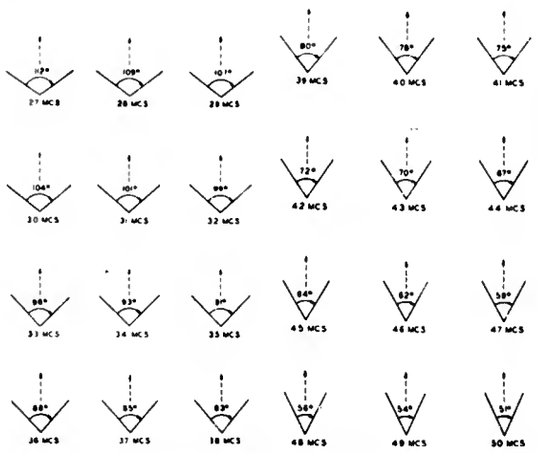
REFERENCES:
U. S. Department of Defense Nomenclature Cards for OA-2799/TRC-66, AT-970/TRC-66, and AT-976/TRC-66.

ANTENNA EQUIPMENT RC-63

MAJOR COMPONENTS: 1 Antenna AN-36, 1 Antenna AN-37, 1 thirty-foot sectionalized mast, and necessary guys, stakes, etc.



RC-63



Beam Angles for RC-63.

FREQUENCY: HF and VHF bands, 27 - 66 mc.

TYPE: Half rhombic antenna.

DESCRIPTION: The antenna consists of a 100-foot antenna wire (AN-36) erected over a single 30-foot mast, and an 85-foot counterpoise wire (AN-37) laid along the ground. The antenna and counterpoise are terminated in a 500-ohm resistor. The mast is made up of four 8-foot sections of 1-19/32-inch wooden rods with metal ferrules. Antenna Equipment RC-63, when dismantled and packed in Bag BG-93 for shipment, occupies a space 8 feet by 1 foot by 8 inches and weighs 51 pounds.

BEAM DATA:
Half-power beamwidth - Horizontal - 51° to 112° depending on frequency.
Polarization - Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Sets SCR-194-(), SCR-195-(), SCR-300-(), SCR-508-(), SCR-528-(), SCR-538-(), SCR-608-(), SCR-609-(), SCR-610-(), SCR-628-(), SCR-808-(), and SCR-828-(). Equipment function - communications.

REFERENCES:
War Department, Antenna Equipment RC-63, Technical Manual, TM 11-2616, (Oct. 17, 1944). UNCLASSIFIED.

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STOCK NUMBER: Signal Corps 2A289-81A for RC-81-A, 2A-1001-3 for 23-13/32-inch dipole, 2A-1001-2 for 20-13/32-inch dipole, 2A-1001-1 for 17-21/32-inch dipole.

REFERENCES:

1) Department of the Air Force and the Bureau of Aeronautics, Antenna Equipments RC-81-A, RC-81-C and Associated Coaxial Cable Equipment, Handbook Maintenance Instructions, T.O. 31R1-3RC81-12, (Dec. 1, 1943 - revised May 30, 1956). UNCLASSIFIED.

2) U. S. War and Navy Departments, Radio Receiving Equipment RC-256-A and Radio Transmitting Equipment RC-257-A, Handbook of Maintenance Instructions, T.O. 31R2-3RC-102, (May 31, 1944 - revised Aug. 15, 1947). UNCLASSIFIED.

3) Government Specification 271-1085.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA RC-81-C

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Dipole.

DESCRIPTION: The antenna is a center-fed dipole composed of two 1/4-wavelength rods, 17-3/8 inches long by 2 inches diameter, and a stub, 29-3/8 inches long by 3 inches diameter. The stub, which is used to match an unbalanced coaxial line, RC-11/U, to the balanced antenna, is enclosed in a bakelite housing. The dipole rods are mounted at one end of and at right angles to the bakelite housing. The total weight of the antenna is 6-3/4 pounds.

BEAM DATA:
Gain - 1.64 db.
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

TUNING/MATCHING DEVICES: The matching system consists of a folded half-wave length line ... which forms a quarter-wavelength stub.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set Group OA-542/TRD-9, which is a component of Direction Finder Set AN/TRD-9; Radio Receiving Set AN/TRR-7, Radio Transmitting Set AN/TRT-3; Radio Receiver BC-639, Radio Transmitter BC-640-D; Radio Receiving Equipment RC-256-C, Radio Transmitting Equipment RC-257-C; and Radio Sets AN/CRC-2, AN/CRC-4, SCR-562, SCR-563, SCR-567, SCR-573, SCR-574, SCR-632, SCR-633, SCR-637, SCR-643, and SCR-644. Equipment function - communications.

MISCELLANEOUS: RC-81-C replaces RC-81-A on procurements after 19 May 1945. RC-81-A and RC-81-C are electrically and mechanically interchangeable. RC-81-A uses three sets of dipole rods, but RC-81-C uses one set of broadband rods.

COGNIZANT AGENCY: WL.

MANUFACTURERS: Bendix Aviation Corporation, Hazeltine Electronics Corp., J and H Smith, and York Band Instrument Corporation.

STOCK NUMBER: Air Force 1700-20263400, Federal Stock Number 5820-246-3875.



1. Dipoles 3. Plug
2. Matching stub 4. Plug cover

RC-81-C

REFERENCES:

1) U. S. Air Force, Radio Receiving Set AN/TRR-7, Handbook Operation and Service Instructions, T.O. 31R2-2TRR7-1, (March 5, 1954). UNCLASSIFIED.

2) U. S. Air Force, Radio Transmitting Set AN/TRT-3, Handbook Operation and Service Instructions, T.O. 16-30TRT3-1, (Jan. 19, 1954). UNCLASSIFIED.

3) Departments of the Army and the Air Force, Radio Receiver BC-1421, Handbook Maintenance Instructions, T.O. 31R2-3BC1421-2, (May 17, 1949). UNCLASSIFIED.

4) U. S. Air Force, Radio Receiving Equipment RC-256-C and Radio Transmitting Equipment RC-257-C, Handbook Operating Instructions, T.O. 31R2-3RC-101, (Jan. 20, 1949 - revised April 1, 1955). UNCLASSIFIED.

5) U. S. Air Force, Direction Finder Set AN/TRD-9, Handbook Operation and Service Instructions, T.O. 16-30TRD9-1, (June 18, 1954). UNCLASSIFIED.

6) U. S. Air Force, Control Tower Facility, Airport Control Tower Console AN/FRC-19B; Radio Set AN/GRC-32B; Radio Transmitters BC-625-AM, BC-640-D, T-282/GR, T-217A/GR; Radio Receivers R-278B/GR, R-361/GR, BC-639, BC-624-C, Handbook Standard Installation Instructions, T.O. 31R2-1-137, (April 20, 1956 - revised Nov. 1, 1957). UNCLASSIFIED.

7) Department of the Air Force and the Bureau of Aeronautics, Antenna Equipments RC-81-A, RC-81-C and Associated Coaxial Cable Equipment, Handbook Maintenance Instructions, T.O. 31R1-3RC81-12, (Dec. 1, 1943 - revised May 30, 1956). UNCLASSIFIED.

8) U. S. Air Force, Radio Equipment, Ground Communications Electronic and Meteorological Equipment Directory, TO 31R-1-8, (June 15, 1959). UNCLASSIFIED.

9) Government Specification 271-1085.

10) U. S. Department of Defense Nomenclature Card.

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ANTENNA RC-124-()

MAJOR COMPONENTS: 1 paraboloidal reflector 9 inches in diameter, 1 half-wave dipole, and 1 plexiglass cover.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: This is a test antenna of the parabolic-reflector type and is fed by a half-wave dipole. A plexiglass cover protects the dipole and inner surface of the reflector. The antenna is supported on Stand M-30-() and connects to Test Unit SC-920-() by means of Cord CD-616-().

ASSOCIATED EQUIPMENT: Test Equipment IE-30-A, IE-57-A & -B. Equipment function - test.

MANUFACTURER: Western Electric Co., contracts 1123-PHILA-42, 1122-PHILA-42, 1349-WF-42, 239-WF-42, 8662-WF-43, and 11766-WF-43.

STOCK NUMBER: Signal Corps 2A289-124A.

REFERENCES:

1) Manufacturer's Drawings D-150348(WE Co.), D-150335 (BTL).

2) U. S. Department of Defense Nomenclature Card.

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ANTENNA EQUIPMENT RC-153-(*)

MAJOR COMPONENTS: 1 central shaft (2-inch diameter), 1 H-frame, 1 H-frame cover cap (compensator), 1 dial index (cursor), 1 handwheel, 1 switch for meter cable, 1 azimuth scale, 1 sense-control disc and pin, 1 coupling unit with swivel-arm assembly, 1 output-level meter with pilot light, 1 antenna brake mechanism, 1 lower cone and bearing assembly, 8 28-inch dipole rods, 8 23-inch dipole rods, 8 21-inch dipole rods, 1 14-inch coaxial cable, 1 antenna tripod support assembly, and 1 telescope, compass, and level assembly.

FREQUENCY: VHF band, 100 - 124 mc, 122 - 146 mc, and 132 - 156 mc.

TYPE: Parasitic array, an Adcock antenna with two parasitic elements added.

DESCRIPTION: Antenna Equipment RC-153-() consists of an antenna array complete with a supporting mast, necessary operating equipment, a transmission line, and a tuned coupling unit. The antenna mast extends from the inside and through the roof of the van-body or prefabricated building which houses the radio set. It is supported above the roof by a tripod assembly. All the control equipment for the system is located inside the van or building. The antenna proper consists of 4 vertical elements located at the corners of a horizontal rectangle which is 0.5 by 0.15 wave - lengths. Two of the elements are active and two are passive. The two active elements are dipoles at the "front" of the rectangle and alone form an Adcock antenna. The two passive elements are reflectors and are at the "back" corners of the rectangle. The elements are mounted on the 4 ends of the H-frame support.



RC-153-(*)

BEAM DATA: The antenna has two azimuth radiation patterns. With the parasitic elements electrically opened by a switch, the pattern

is approximately a balanced figure of eight having nulls perpendicular to the 0.5 wavelength dimension of the array; i.e., in the "front" and "back" direction. (See description). The other pattern, a modified figure of eight with nulls coinciding with the first pattern, is produced by electrically closing the switch between the two parasitic elements. The balanced-figure-of-eight pattern has maxima approximately 90° from the nulls or perpendicular to the 0.15-wavelength dimension of the array, but the modified pattern has its maxima about 50° on each side of the "front" of the array. Thus, by moving the antenna about 20 degrees away from a pattern null, the signal strengths received with the two antenna patterns will differ appreciably. This information together with bearing information obtained with the figure-of-eight pattern can be used to ascertain the bearing of a signal source.

SCAN DATA: The antenna shaft, H-frame, dipoles and reflectors as a unit are hand-rotatable through 360° in azimuth.

TUNING/MATCHING DEVICES: A tuned coupling unit is located at the base of the antenna shaft.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: RC-153-A is used with SCR-575-(). Equipment function - direction finding and communication.
RC-153-B is used with SCR-634-A. Equipment function - direction finding.

MISCELLANEOUS: RC-153-(*) represents RC-153, RC-153-A, and RC-153-B. RC-153-A is designed for use with Radio Set SCR-575-(), which is a truck-mounted, mobile radio station. RC-153-B is designed for use with Radio Set SCR-634-A, which is an air-transportable, semifixed radio direction-finding station.

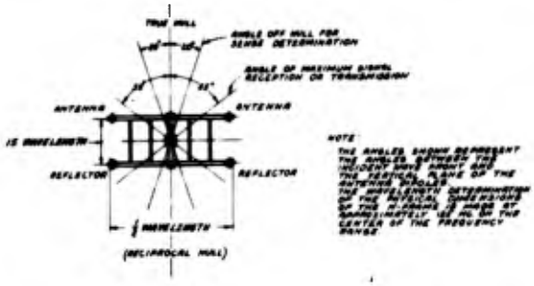
MANUFACTURER: Bendix Radio Corp., orders 2406-42, 11960-SCGDL-42, 1660-SCGDL-42, 11761-SCGDL-43, and 46-MPD-43.

REFERENCES:

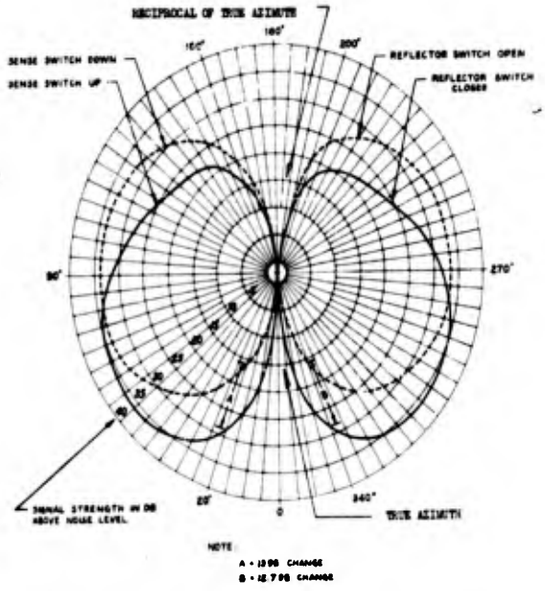
1) Department of the Air Force and the Bureau of Aeronautics, Volume III Navigational Aid Equipment, Fixed Communication and Meteorological Equipment Directory, T.O. 31R4-1-1, (June 16, 1958). UNCLASSIFIED.

2) U. S. Air Force, Bureau of Aeronautics, Antenna Equipment RC-153-A and RC-153-B, Handbook Maintenance Instructions, AN 16-40RC153-2, (March 22, 1944 - revised Sept. 6, 1951). UNCLASSIFIED.

3) U. S. Department of Defense Nomenclature Card.



RC-153-(*), Directional Characteristics



Horizontal Radiation Pattern for RC-153-(*)

ANTENNA EQUIPMENT RC-154-(*)

MAJOR COMPONENTS: (For RC-154-B) 1 directivity selector and 8 dipole elements for each of 3 tiers, 1 antenna mast, 1 Control Bob BC-1278-(), and necessary cables and mountings.

FREQUENCY: HF and VHF bands, 27 - 145 mc. Tier 1, 81 - 145 mc; Tier 2, 45 - 84 mc; Tier 3, 27 - 46 mc.

TYPE: Dipole array.

DESCRIPTION: Each antenna tier is made up of two dipole antennas, with V-shaped elements, installed at right angles to each other. Either of the dipoles of each tier may be used individually or together by setting the selector switch in the proper position. Each tier operates independently of the other tiers. By switching from one dipole of a tier to the other dipole of that tier, the general direction of the intercepted signal can be obtained

BEAM DATA:
Beam type - Omnidirectional or figure eight depending on the control box selector-switch setting.

INSTALLATION: Ground, semi-portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-607, Radio Set SCR-575-A, and Radio Set SCR-634-A. Equipment function - countermeasures, monitoring.

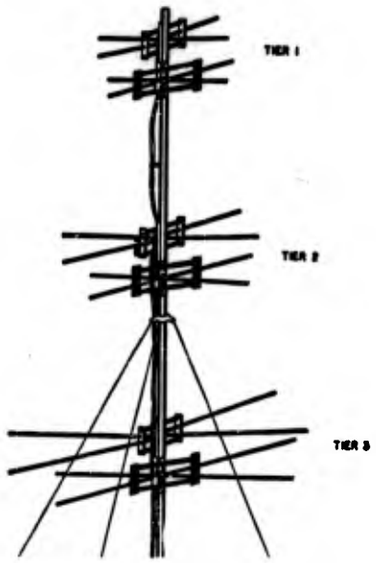
MISCELLANEOUS: RC-154-(*) represents RC-154, RC-154-A, and RC-154-B. RC-154-A and RC-154-B are electrically interchangeable. They are mechanically interchangeable except for maintenance parts which differ because the antennas are not made by the same company.

COGNIZANT AGENCY: SCL-10170, group SIGGC-R.

MANUFACTURER: RC-154-A . . . Bendix Radio Div., contracts 2406-SCL-42, 11960-SCGDL-42, 1660-SCGDL-42, 11761-SCGDL-43, and 46-MPD-43. RC-154-B . . . Amphenol, contract 21686-PHILA-51-01-C.

STOCK NUMBER: Signal Corps 2A289-154().

REFERENCES:
1) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A, TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.
2) U. S. War Department, Antenna Equipment RC-154-A, Technical Manual, TM 11-2631, (Oct. 9, 1944). UNCLASSIFIED.
3) Amphenol Drawing 161-125.
4) Signal Corps Specification MIL-R-10235.



RC-154-(*)

ANTENNA EQUIPMENT RC-211-()

MAJOR COMPONENTS: 1 rod antenna AN-111-(), 1 mast head MP-81-(), 2 mast sections, and 1 coaxial cable.

TYPE: Rod antenna.

DESCRIPTION: The antenna consists of a metal rod (AN-111) 15-1/2 inches long by 1/4 inch in diameter mounted on a 2-section mast. The antenna rod forms a right angle with the mast. See Miscellaneous section below.

BEAM DATA:
Beam type - Circular pattern in azimuth. See Miscellaneous section below.
Polarization - Horizontal.

INSTALLATION: Ground, mobile (truck).

ASSOCIATED EQUIPMENT: Radio Set SCR-621-().

MISCELLANEOUS: Nomenclature cards are the only available source of information. This information is incomplete and conflicting.

COGNIZANT AGENCY: ARL-1652.

MANUFACTURER: Philco.

REFERENCES:
1) Philco Drawing No. 258-2961.
2) Government Specification 471-1182.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT RC-223-(*)

MAJOR COMPONENTS: 1 three-section monopole, 1 supporting bracket, and 1 tripod with adjustable footings.

FREQUENCY: MF and HF bands, 2 - 10 mc, (normal direction finding); 2 - 20 mc, (special direction finding); 1.5 - 30 mc, (monitoring).

TYPE: Monopole which is part of an Adcock antenna.

DESCRIPTION: Antenna RC-223-(*) consists of a single-wire vertical antenna and a supporting tripod. The vertical wire is supported within a 24-foot, 3-section, telescoping mast of

plywood tubing. The vertical mast is mounted on a tripod formed of three plywood, 8-foot leg pieces.

Usually, five of these antennas are used together to make a direction-finding antenna of the Adcock type. A monopole is placed at each corner of a 25-foot square, and the fifth monopole is positioned at the intersection of the diagonals of the square. The four corner monopoles make up a crossed-U adcock direction-finding antenna, and the fifth monopole is the sense antenna.

A turnbuckle arrangement on each tripod is used to adjust the height of the tripod above ground. A cork-screw type anchor and chains are used to secure the antenna. The weight of the antenna is 100 pounds.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Sets SCR-291-() and SCR-502-(). Equipment function - countermeasures, direction finding; and countermeasures, monitoring.

MISCELLANEOUS: RC-223-(*) denotes RC-223 and RC-223-A.

COGNIZANT AGENCY: SCL-8686.

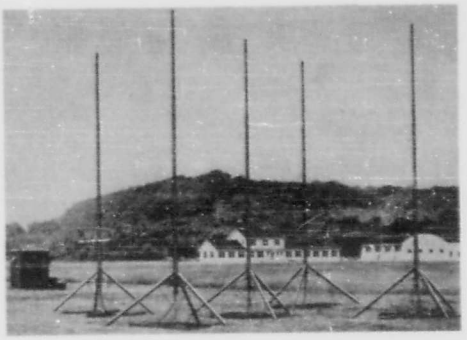
MANUFACTURER: Federal Telephone Radio Co.

REFERENCES:

1) Department of the Army, Radio Set SCR-291-A, Technical Manual, TM 11-243, (Sept. 1949). UNCLASSIFIED.

2) Signal Corps Specification 71-1612.

3) U. S. Department of Defense Nomenclature Card.



RC-223-(*)

ANTENNA SYSTEM RC-248-(*)

TYPE: Paraboloidal reflector.

DESCRIPTION: The antenna system consists of a paraboloidal reflector of either 6-foot diameter (RC-248-A) or 8-foot diameter (RC-248-B). No information is available on the feed. The system includes the pedestal on which are mounted the elevation and azimuth drive mechanisms.

SCAN DATA: The antenna has elevation and azimuth drive.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-615-A.

MISCELLANEOUS: RC-248-(*) denotes RC-248, RC-248-A, and RC-248-B. RC-248-A has a 6-foot reflector and an aluminum spider. RC-248-B has an 8-foot reflector and a wood and steel spider.

COGNIZANT AGENCY: CESL.

MANUFACTURER: Westinghouse Electric Co., contract W-2279-sc-120, order 650-SCRL-42.

REFERENCE:

U. S. Department of Defense Nomenclature Card.

ANTENNA SYSTEM RC-254-(*)

MAJOR COMPONENTS: 1 antenna AS-112/TRC-7, 1 fifty-foot cord CG-373/U, 1 socket SO-239, and a mast adapter for 1-1/2-inch pipe.

FREQUENCY: VHF band, 100 - 156 mc.

TYPE: Conical antenna.

DESCRIPTION: Antenna AS-112/TRC-7 consists of three radiating elements spaced 120° apart at an angle of 15° from the vertical pointing upward and three elements spaced 120° apart at an angle of 30° from the vertical pointing downward. The antenna is approximately 3-1/2 feet high by 15 inches diameter.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-641-A and RC-254-B. The models are similar and interchangeable as a unit.

MISCELLANEOUS: RC-254-(*) represents RC-254-A and RC-254-B. The models are similar and interchangeable as a unit.

COGNIZANT AGENCY: WL-45-1245.

REFERENCES:
1) U. S. Air Force, Radio Sets AN/TRC-7B, Handbook Operation and Service Instructions, TO 31R2-2TRC7-11, (July 7, 1952 - revised Nov. 1, 1954). UNCLASSIFIED.

2) Air Force Specification WLENG-2046 (Exhibit)

3) Air Force Drawing 48C57739.

4) U. S. Department of Defense Nomenclature Card.

ANTENNA SYSTEM RC-272-(*)

MAJOR COMPONENTS: Wooden tripod, steel mast, wooden crossarm, dipoles, and counterpoise.

TYPE: Ground-plane antenna.

DESCRIPTION: Two identical ground-plane antennas are mounted on the ends of a wooden crossarm. The crossarm is supported by a steel-pipe mast which is in turn supported by a wooden tripod. Each ground-plane antenna has one vertical quarter-wave radiating element and a ground plane made of 4 quarter-wave length radial rods pointing 60° below the horizontal plane. The total height of the assembled mast is 15 feet.

BEAM DATA:
Polarization - Vertical.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Equipment RC-192-A.

MISCELLANEOUS: RC-272-(*) denotes RC-272 and RC-272-A.

COGNIZANT AGENCY: CESL-1198, group AFDRE-2F/1.

MANUFACTURER: Philco Corp., contract W-3435-sc-13, order 19-MPD-43.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT RC-281-()

MAJOR COMPONENTS: 1 Mast Section MS-122, 1 Mast Section MS-123, 1 Mast Section MS-124, 1 Mast Section MS-125, 1 Mast Base MP-66, 1 Crossarm M-412, 1 Antenna AN-169, 1 Antenna AN-170, and 1 Chest CH-269.

FREQUENCY: VHF and UHF bands, 140 - 600 mc.

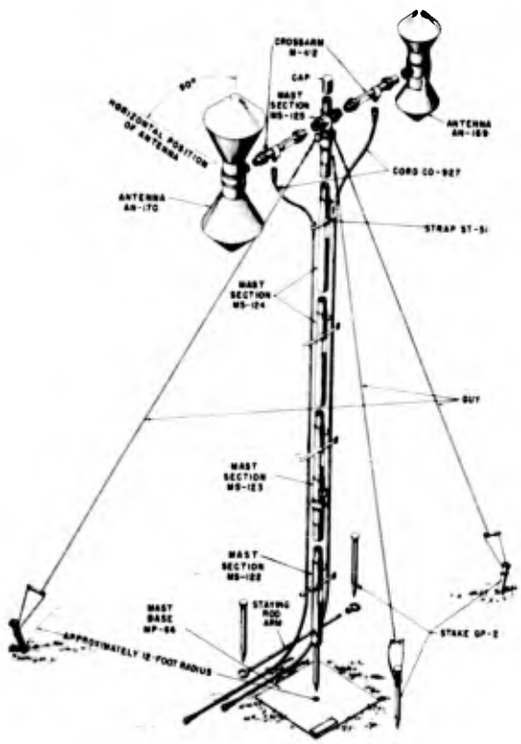
TYPE: Two conical antennas.

DESCRIPTION: Antenna AN-169 is the high-frequency antenna, and Antenna AN-170 is the low-frequency antenna. Both are center-fed biconical antennas. The mast is assembled to form a T-type structure with antennas mounted on the ends of the cross arm. The antennas can be positioned in either a vertical or a horizontal position. The mast is supported by three guy ropes, but it can be rotated through a full 360 degrees in azimuth. When the antenna mast is turned to the desired position, it can be fixed by driving stakes through the eyes of the staying-rod arm.

BEAM DATA:
Beam type - Figure of eight when horizontally polarized; omnidirectional when vertically polarized.

TUNING/MATCHING DEVICES: No matching is necessary. The antennas have an input impedance of approximately 95 ohms over the band and are fed by 95-ohm shielded twin-lead transmission line.

INSTALLATION: Ground, transportable.



RC-281

ASSOCIATED EQUIPMENT: Radio Set SCR-616 and Receiver R-593/GRR. Equipment function - countermeasures, monitoring.

COGNIZANT AGENCY: SCL.

MANUFACTURER: Hammerlund Manufacturing Co., order 46-MPD-45.

REFERENCES:
1) Departments of the Army and the Air Force, Radio Set SCR-616, Technical Manual, Technical Order, TM 11-260, TO 31R2-3SCR616-1, (Dec. 1955). UNCLASSIFIED.
2) Department of the Army, Directory of Signal Corps Equipment - Radio Communication Equipment, Technical Manual, TM 11-487A, TO 16-1A-2, (Aug. 1950). CONFIDENTIAL, MODIFIED HANDLING.
3) Signal Corps Specification 71-3049.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT RC-287-()

MAJOR COMPONENTS: 170 feet of wire, 12 Brach Type 4425 mast sections, 1 Antenna Insulator IN-129-(), 1 Antenna Adaptor FT-503, 3 Mast Sections MS-117-A, 1 Mast Section MS-118-A, 1 Counterpoise CP-12, 1 Counterpoise CP-13, and guys, guy plates, mast base insulators and ground stakes.

FREQUENCY: LF, MF, and HF bands, 0.2 - 1.5 mc and 2.0 - 18.1 mc.

TYPE: Long wire.

DESCRIPTION: RC-287-() is a long-wire antenna 170 feet long. It is supported by two vertical masts, one 45 feet high and the other 30 feet high.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-237-().

COGNIZANT AGENCY: SCL.

REFERENCES:
1) Government Specification 271-1648.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT RC-291-()

MAJOR COMPONENTS: 5 AB-22/GR mast sections, 5 AB-23/GR mast sections, 5 AB-24/GR mast sections, 1 MP-73-() mast base, and 2 CD-800 fifty-foot cords.

FREQUENCY: VHF band, 40 - 48 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a 5-foot vertical whip with four 5-foot radial sections connected to a mast base. The mast base has Socket SO-239 to connect to Plug PL-259 on Cord CD-800. The antenna has a nominal input impedance of 50 ohms.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Radio Set SCR-300-().

COGNIZANT AGENCY: SCL.

MANUFACTURER: Procurement order 28428-PHILA-44-53.

STOCK NUMBERS: Federal Stock Number 5985-244-5412, Signal Corps 2A289-291.

REFERENCES:
1) Departments of the Army and the Air Force, Antenna Equipment RC-291, Organizational Maintenance Allowances and Field and Depot Maintenance Stockage Guide, TO 31R3-3RC291-4, (May 9, 1957). UNCLASSIFIED.
2) Signal Corps Specification 271-3100.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT RC-292-()

MAJOR COMPONENTS: 12 AB-21/GR mast sections, 4 AB-22/GR mast sections, 4 AB-23/GR mast sections, 4 AB-24/GR mast sections, 1 MP-68 antenna base, 12 AB-35/TRC-7 mast sections, 1 swivel ground stake, 1 base plate, guys, guy plates, etc.

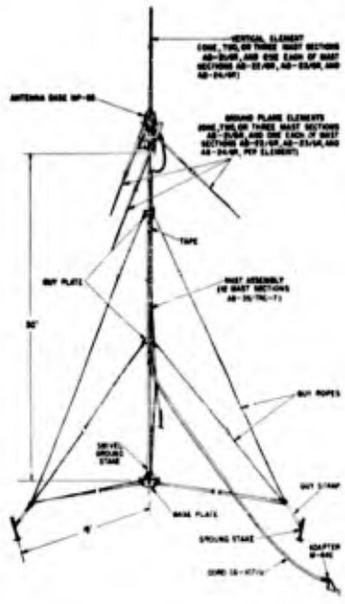
FREQUENCY: HF and VHF bands, 20 - 25.5 mc, 25.5 - 30.5 mc, 30.5 - 38.9 mc.

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna consists of one vertical rod and a ground plane made of three rods which make a downward angle of 142° with the vertical. The lengths of the rods can be preadjusted for best performance at one of the three frequency ranges given above. The antenna is elevated on a 30-foot sectional mast

which in turn is held erect by guy ropes and ground stakes. The equipment is designed for hand and vehicular transportation, and when disassembled, it is packed in a canvas roll 35 inches long and 36 inches in circumference.

BEAM DATA:
Beam type - Omnidirectional in a horizontal plane.
Polarization - Vertical.



RC-292-()

TUNING/MATCHING DEVICES: Cord CG-107/U is a 50-ohm coaxial cable used for matching purposes. The length of the cord, 68 feet, is critical as it provides optimum flatness of the impedance characteristic over the frequency band covered by the antenna.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-508, Radio Set SCR-528, Radio Set SCR-608, and Radio Set SCR-628. Equipment function - communications. Range - 20 to 36 miles.

COGNIZANT AGENCY: SCL-7656.

MANUFACTURER: Henry Products Co., order 20561-PHILA-49-7.

STOCK NUMBER: Signal Corps 2A289-292.

REFERENCES:
1) Department of the Army, Antenna Equipment RC-292, Technical Manual, TM 11-5020, (May 1950). UNCLASSIFIED.
2) Departments of the Army and the Air Force, Radio Sets AN/VRC-20, -21, and -22, Technical Manual and Technical Order, TM 11-642, TO 16-30URC20-5, (July 1952). UNCLASSIFIED.
3) Henry Products Co. Drawing RC-292.
4) U. S. Department of Defense Nomenclature Card.

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ANTENNA ASSEMBLY RC-293-()

MAJOR COMPONENTS: 300 feet of wire W-148, 2 masts, 2 guy assemblies with stakes and insulators, 1 measuring tape, and 1 BG-193 bag.

FREQUENCY: MF and HF bands, 2 - 18 mc.

TYPE: Long wire.

DESCRIPTION: This is a phosphor-bronze, end-fed, single-wire antenna mounted on two telescoping aluminum masts 25 feet high. The antenna is part of Installation Kit MC-549.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-499-().

COGNIZANT AGENCY: SCL-6867-A.

REFERENCES:
1) Government Specification 71-3345.
2) U. S. Department of Defense Nomenclature Card.

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ANTENNA EQUIPMENT RC-296-(*)

MAJOR COMPONENTS: 6 AB-22/GR mast sections (2 spares), 6 AB-23/GR mast sections (2 spares), 6 AB-24/GR mast sections (2 spares), 1 MP-68 antenna base, 1 CG-102/TRC-7 cord, 4 AB-34/GR mast sections, 5 AB-35/GR mast sections, 5 AB-36/GR mast sections, 5 RL-28 reels, 2 TB-217 terminal boxes, and 1 CW-50/TRC-7 roll.

TYPE: Modified ground-plane antenna.

DESCRIPTION: The antenna equipment consists of a vertical rod and a ground plane made of three rods which make a downward angle of 142° with the vertical. The antenna is elevated on a 30-foot sectional mast. The equipment is designed for hand and vehicular transportation.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Vertical.

INSTALLATION: Ground, portable.

ASSOCIATED EQUIPMENT: Radio Set SCR-300-().

MISCELLANEOUS: RC-296-(*) denotes RC-296 and RC-296-A. It is similar to RC-292-(). The elements of RC-296-() are shorter than those of RC-292-(), indicating that RC-296-() operates at a higher frequency. RC-296-A is interchangeable with RC-296.

COGNIZANT AGENCY: SCL and SCPA.

MANUFACTURER: Henry Products Co., orders 13471-PHILA-48 and 11960-PHILA-49-2.

REFERENCE:
U. S. Department of Defense Nomenclature Card.

HOMING ATTACHMENT RC-300

TYPE: Whip.

DESCRIPTION: This attachment consists of an anodized-aluminum telescopic whip with cable, junction box, and azimuth indicator. The maximum diameter of the whip is 1/2 inch and the length is 72 inches extended and 19 inches collapsed. It mounts in the antenna socket of Radio Set SCR-300-().

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-300-().
Equipment function - direction finding.

COGNIZANT AGENCY: SCL-7240.

MANUFACTURER: Michel Manufacturing Co., part 48300A.

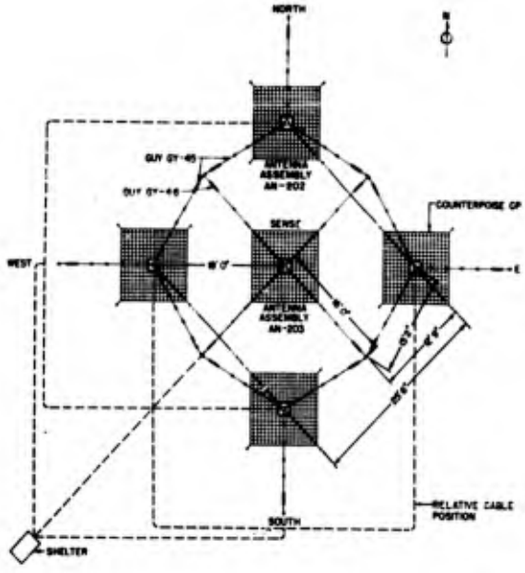
REFERENCES:
1) Army Specification 71-2501.
2) U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT RC-301

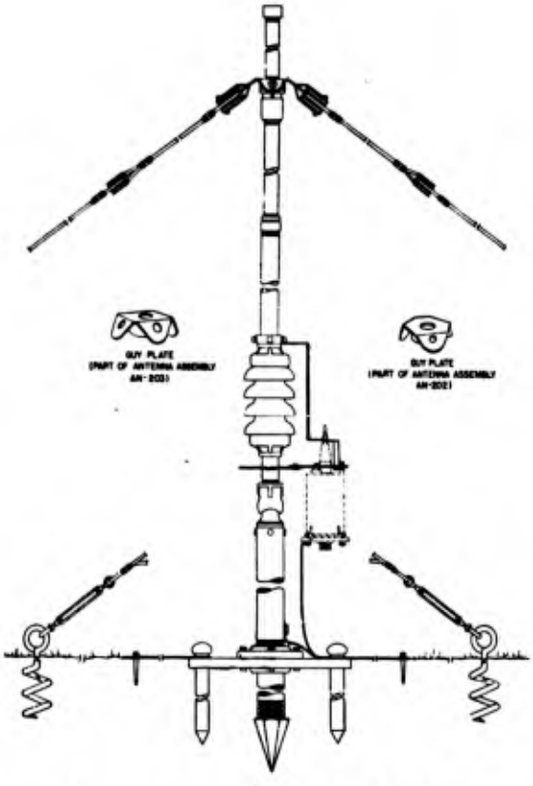
MAJOR COMPONENTS: 5 AN-202 antenna assemblies (1 spare) and 2 AN-203 antenna assemblies (1 spare).

FREQUENCY: MF and HF bands, 1.5 - 30 mc when used for monitoring or 2 - 20 mc when used for direction finding.

TYPE: Adcock antenna with a sense monopole.



Layout for Fixed Antenna Equipment RC-301



Antenna Assemblies AN-202 and AN-203

DESCRIPTION: Antennas AN-202 and AN-203 are 28-foot monopoles made up of three sections of galvanized steel tubing. These antennas are identical except that they have different guy plates and guys. AN-203, which is used as the sense antenna, has a 4-hole guy plate and 4 guys; AN-202 antennas, which make up the Adcock assembly, have 3-hole guy plates and 3 guys each. Each monopole is supported on a pedestal assembly, the bottom section of which is imbedded in the earth for semi-permanent installation or set in concrete for permanent installation. Each monopole is insulated at the base by a porcelain insulator. A CP-19 counterpoise is used with each monopole. This counterpoise is a 9-foot square of crisscrossed, heavy copper braid soldered at each intersection.

The four AN-202 antennas are positioned at the corners of a 25-1/2-foot square. These antennas form a crossed-U Adcock antenna. The AN-203 sense antenna is located at the intersection of the diagonals of the square.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Set SCR-291-A. Equipment function - countermeasures, monitoring; and countermeasures, direction finding.

MISCELLANEOUS: RC-301 is interchangeable with RC-223.

COGNIZANT AGENCY: SPSRL, SCPD, SCL-6513, ESL-3089, and ESL-3090.

MANUFACTURER: Brach Manufacturing Co., order 8970-PHILA-46-51.

STOCK NUMBERS: AN-202 ... Signal Corps 2A275-202, AN-203 ... Signal Corps 2A275-203.

REFERENCES:

1) Department of the Army, Radio Set SCR-291-A, Technical Manual, TM 11-243, (Sept. 1949). UNCLASSIFIED.
2) Government Drawing SC-D-15640.
3) Signal Corps Specification 71-2461.
4) U. S. Department of Defense Nomenclature Card.

ANTENNA EQUIPMENT RC-307

MAJOR COMPONENTS: 1 AN-197 antenna, 1 AN-198 antenna, 1 FT-517 antenna mount, 1 M-131 mast head, 1 M-417 crossarm, 1 MS-116-A mast section, 1 AB-33A/TRC-1 antenna support, 1 RL-57 reel and 1 CS-159 carrying case.

FREQUENCY: AN-197 ... VHF band, 88 - 156 mc; AN-198 ... HF and VHF bands, 18 - 88 mc.

TYPE: Two dipoles.

DESCRIPTION: Antennas AN-197 and AN-198 are telescopic dipoles made of steel tubing. Both antennas have an outside diameter of 3/8 inch. The length of AN-197 is 33 inches extended and 18 inches collapsed, and that of AN-198 is 61 inches extended and 33 inches collapsed. The two antennas are mounted on a common mast.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Radio Set SCR-613.

COGNIZANT AGENCY: ESL-3064, ESL-3066, and ESL-3067.

REFERENCES:

1) Signal Corps Specification 271-2444.
2) U. S. Department of Defense Nomenclature Card.

RADIO-FREQUENCY DETECTOR RF-56()/MRN-10

FREQUENCY: VHF band, 112 - 118 mc.

TYPE: Dipole.

DESCRIPTION: The radio-frequency detector consists of a dipole antenna and a diode vacuum-tube detector in a single unit. Overall, the assembly is 48 inches long, 15 inches deep, and 8 inches high. It is tripod mounted. A constant-tension latch is mounted to Antenna Support AB-312/MRN-10. The dipole is made of stainless steel and is 24-1/2 inches long and 2 inches in diameter.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radio Set AN/MRN-10. Equipment function - test, (used to monitor the signal from AN/MRN-10).

MISCELLANEOUS: RF-56()/MRN-10 is similar but not interchangeable with Antenna-Detector Stage DT-45/FEN-12.

COGNIZANT AGENCY: USA WL-52-1473 and WL-53-1431.

MANUFACTURER: Lavoie Laboratories, Inc., Morganville, N. J., contract AF 33(038)-26122.

REFERENCES:

1) Lavoie Laboratories drawing 14122900.
2) U. S. Air Force Exhibit MCREE-956 and ENG-408.
3) U. S. Department of Defense Nomenclature Card.

ANTENNA SA-38-2321A

FREQUENCY: VHF band, 150 - 240 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Test Equipment OAA-2. Equipment function - test.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Gilfillan Brothers, Inc.

STOCK NUMBER: Navy N6625-665-2438.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA GROUP for SCR-545

MAJOR COMPONENTS: 1 search antenna and 1 tracking antenna.

FREQUENCY: Search antenna . . . VHF band, 200 mc; Tracking antenna . . . UHF band, 3000 mc.

TYPE: Search antenna . . . Mattress antenna, Tracking antenna . . Paraboloidal reflector.

DESCRIPTION: The antenna group for Radar Set SCR-545 consists of a search antenna and a tracking antenna integrated into a single structure. The radar axes of the two antennas coincide.

The search antenna is composed of an array of 16 quarter-wave dipoles spaced 0.1 wavelength in front of a flat perforated-metal reflector. The array is divided into four quarters and each section is fed from a lobe-switching mechanism.

The tracking antenna consists of a paraboloidal reflector, 57 inches in diameter, fed by round waveguide. This waveguide is filled with a specially shaped, weatherproof, polystyrene core that controls the illumination of the reflector. The reflector feed includes a nutating mechanism.

The two antennas have a common coaxial transmission-line feed with a coaxial transmission-line filter which separates the power for each antenna.

BEAM DATA:	Search	Tracking
Gain	14.5 db	30 db
Half-power beamwidth		
Vertical	25.5°	5°
Horizontal	23.5°	5°
Polarization	Horizontal	Vertical

SCAN DATA: The search antenna has a lobe-switching scan with four lobes, and the tracking antenna has a conical scan produced by a nutating feed. The angle between lobe positions is 10° for the search antenna and 3° for the tracking antenna. A common motor drives the synchronized lobing mechanisms of the two antennas at 60 cycles per second.

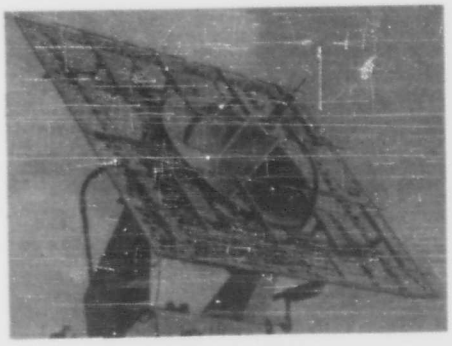
INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Radar Set SCR-545. Equipment function - search, air; and tracking. (anti-aircraft)

COGNIZANT AGENCY: U. S. Army.

MANUFACTURER: Bell Laboratories and Western Electric Company.

REFERENCE:
H. T. Friis, W. D. Lewis, Radar Antennas, Bell System Technical Journal, Vol. 26, No. 2. New York, New York: American Telephone and Telegraph Company. (April 1947). UNCLASSIFIED.



Antennas for SCR-545

ANTENNA 66ABL

FREQUENCY: UHF band, 680 - 720 mc.

TYPE: Dipole.

DESCRIPTION: The antenna consists of a probe dipole connected to a coaxial cable. It mounts between the radar dipoles and reflector by four 0.164-32 screws with 1/2-inch by 2-inch mounting centers.

ASSOCIATED EQUIPMENT: Navy Model LW Radar Test Equipment. Equipment function - test.

MANUFACTURER: Western Electric Co., part number D-150565.

STOCK NUMBER: Federal Stock Number F5985-257-3206.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66ABP

FREQUENCY: VHF band, 175 - 225 mc.

TYPE: Dipole.

DESCRIPTION: The antenna assembly is a Navy monitor antenna assembly consisting of a dipole antenna and a vacuum thermocouple. Its overall dimensions are 29-13/16 inches long by 6-3/8 inches high by 2-31/32 inches wide. The antenna is mounted on a box containing the thermocouple unit.

ASSOCIATED EQUIPMENT: Test equipment for Navy Models SA and SA-1 Radar Equipment. Equipment function - test.

MANUFACTURER: Radio Corporation of America, part number P-720953-501.

STOCK NUMBER: Federal Stock Number F5985-257-3208.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) RCA drawing W-422421 sub 0.

ANTENNA 66ABS

FREQUENCY: VHF band, 170 - 180 mc.

TYPE: Dipole (U-type).

DESCRIPTION: The antenna is a sweptback or U-type, copper dipole fed by a 50-ohm coaxial cable. The overall dimensions are approximately 30-3/4 inches long by 15 inches wide. The equipment furnished includes a 20-foot mast made in 5 sections.

BEAM DATA:
Beam type - Approximately omnidirectional in azimuth.
Polarization - Horizontal.

ASSOCIATED EQUIPMENT: Navy Model YH Navigation Equipment. Equipment function - radar beacon.

MANUFACTURER: Howard Radio.

STOCK NUMBER: Federal Stock Number F5985-249-4350.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66ABU

FREQUENCY: S-band.

TYPE: Cut paraboloidal reflector.

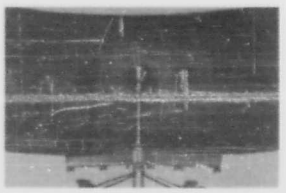
DESCRIPTION: The antenna is a cut paraboloidal reflector, 24 inches high by 48 inches wide, fed by a half-wave radiator. The primary radiator is fed by a 50-ohm coaxial cable. The antenna weighs 175 pounds.

BEAM DATA:
Polarization - Vertical.

SCAN DATA: The antenna rotates in azimuth at a rate of 24 revolutions per minute. There is provision for either manual or motor-driven rotation.

INSTALLATION: Ground or shipboard, landing barges and beachheads.

ASSOCIATED EQUIPMENT: Navy Model SN Radar Equipment. Equipment function - surface search. Range - 300 yards to 25 nautical miles.



66ABU

MISCELLANEOUS: Navy Model SN Radar Equipment has been replaced by Navy Model SQ Radar Equipment.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: General Electric Co., contract NXss-4753.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) SHIPS 257: Instruction Book for Navy Models SN and CXBR Radar Equipment.

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ANTENNA 66ABW

FREQUENCY: VHF band, 150 - 240 mc.

TYPE: Rod.

DESCRIPTION: The antenna is a rod that is 3/8 wavelength long at 200 mc. It is designed to be fed by a 70-ohm coaxial cable.

ASSOCIATED EQUIPMENT: Navy Model OAA Test Equipment. Equipment function - test.

MANUFACTURER: Liebel-Flarsheim Co. and Radio Corporation of America.

STOCK NUMBER: Federal Stock Number N5985-669-8812.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) RCA drawing P-721426 sub 0.

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ANTENNA 66ABX

FREQUENCY: VHF band, 135 mc.

TYPE: Coaxial dipole.

DESCRIPTION: The antenna is a coaxial dipole approximately 92-25/32 inches high by 2 inches in diameter. It mounts by a standard 1/2-inch threaded stud and connects to a 50-ohm coaxial cable. The equipment includes a bracket for mounting the dipole to a mast or yardarm and a 200-foot coaxial cable.

INSTALLATION: Ground or shipboard.

MANUFACTURER: Philco Corporation.

STOCK NUMBER: Federal Stock Number F5985-369-5327.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Philco drawing EAP-2255 rev 0.

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ANTENNA 66ABZ

FREQUENCY: VHF band, 150 - 240 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model OAA-1 Radar Test Equipment. Equipment function - test.

STOCK NUMBER: Federal Stock Number N5985-254-7175.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66ACL

FREQUENCY: VHF band, 150 - 240 mc.

TYPE: Rod.

DESCRIPTION: The antenna is a rod that can be adjusted in length from 15 to 23 inches.

ASSOCIATED EQUIPMENT: Navy Model OAA Radar Test Equipment. Equipment function - test.

MANUFACTURER: Liebel-Flarsheim Co. and Radio Corporation of America.

STOCK NUMBER: Federal Stock Number N5985-090-2666.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) RCA drawing K-876138 sub 0.

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ANTENNA 66ACX

FREQUENCY: UHF band, 2700 - 2900 mc.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The antenna consists of a paraboloidal reflector 9 inches in diameter, a dipole feed, and a plexiglass cover. It is designed to be fed by a 72-ohm transmission line and to be mounted on an NT 10AAY antenna tripod.

ASSOCIATED EQUIPMENT: Navy Model LZ Radar Test Equipment. Equipment function - test.

MANUFACTURER: Western Electric Co.

STOCK NUMBER: Federal Stock Number N5985-424-8946.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66ACZ

INSTALLATION: Aircraft.

ASSOCIATED EQUIPMENT: Radar Sets AN/APS-2B, AN/APS-2C, AN/APS-2D, and AN/APS-2E, Navy Models ASG and ASG-1 Radar Equipment, and Navy Model OAK Radar Test Equipment. Equipment function - search and test.

REFERENCE:
U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ADC

ASSOCIATED EQUIPMENT: Navy Model SD-3(2) Radar Equipment. Equipment function - search.
Navy Model OAF Equipment. Equipment function - probably training.

REFERENCE:
U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66ADF

FREQUENCY: VHF band, 150 - 240 mc.

TYPE: Rod.

DESCRIPTION: The radiating portion of the antenna is a stainless steel rod with an overall length of 25-3/4 inches. It is fed by RG-10/U coaxial cable.

ASSOCIATED EQUIPMENT: Navy Model OAA-2 Radar Test Equipment. Equipment function - test.

MANUFACTURER: Gilfillan Bros., Inc.

STOCK NUMBER: Federal Stock Number N5985-249-4386.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Gilfillan drawing SDCO-5142.

ANTENNA 66AEY-(*)

FREQUENCY: Transponder A...VHF band, receiving - 175.5 - 176.5 mc, transmitting - 177 - 177.5 mc. Transponder B...UHF band, receiving - 515 mc, transmitting - 520 mc.

TYPE: Half-loops.

DESCRIPTION: The antenna is 15 inches by 18-3/4 inches by 67-3/4 inches overall and weighs 230 pounds.

BEAM DATA:
Beam type - Omnidirectional in azimuth.
Polarization - Horizontal.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Navy Models YJ and YJ-1 Radio Equipment. Equipment function - radar beacon.

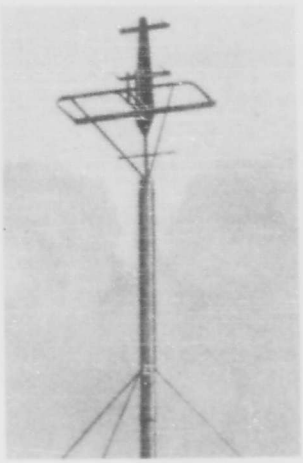
MISCELLANEOUS: 66AEY-(*) denotes 66AEY and 66AEY-1.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Hazeltine Electronics Corp., contract NXss 21704.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) SHIPS 241: Technical Manual for Navy Models YJ and YJ-1 Radio Equipment.



66AEY

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ANTENNA 66AGV

FREQUENCY: UHF band, 2800 mc.

TYPE: Paraboloidal reflector with waveguide feed.

DESCRIPTION: The antenna consists of an 8-foot paraboloidal reflector, a nutating waveguide feed of constant polarity, and an IFF dipole and reflector. The overall assembly is 106 inches high, 97 inches wide, and 88-1/2 inches deep. The antenna has four adjustable mounting pads.

BEAM DATA: (For radar signal)
Half-power beamwidth - Vertical - 3°.
Horizontal - 3°.
Polarization - Horizontal.

SCAN DATA: In addition to the conical scan produced by the nutating feed, the antenna rotates in azimuth through 360° at a rate of 6 revolutions per minute.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Navy Model SP-1M Radar Equipment. Equipment function - search.

MISCELLANEOUS: This antenna is similar to 66AMM, which does not have the nutating feed.

MANUFACTURER: General Electric Co., contract NXss-29462.

STOCK NUMBER: Federal Stock Number F5985-369-5561.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) NavShips 900,560: Instruction Book for Navy Model SP-1M Radar Equipment.
3) GE drawing WW-8677500 rev 1.

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ANTENNA 66AHV

FREQUENCY: UHF and SHF bands, 2900 - 3100 mc.

TYPE: Dipole.

DESCRIPTION: The antenna assembly consists of a half-wavelength dipole, a length of RG-8/U coaxial cable, a NT-49298 jack, and a mounting clamp. The assembly is 43 inches long including the cable and is 2-1/2 inches wide.

ASSOCIATED EQUIPMENT: Navy Models OBU-1 and OBU-2 Test Equipment. Equipment function - test.

MANUFACTURER: Maguire Industries, Inc.

STOCK NUMBER: Federal Stock Number N5985-408-8680.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Maguire drawing D-287-A.
3) Navy drawing RE13A8578.

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ANTENNA 66AJD

FREQUENCY: SHF band, 10,000 mc.

TYPE: Probably cut paraboloidal reflector with waveguide horn feed.

DESCRIPTION: The antenna consists of a reflector of the paraboloidal type and a "nozzle" type radiator, mounted on a pedestal containing two synchro units and a drive motor. The antenna is mounted by eight 3/4 x 10 bolts each 2-1/4 inches long and is fed by a rectangular waveguide.

SCAN DATA: The antenna has a motor-driven rotating mechanism.

INSTALLATION: Ground, mobile (truck-mounted).

ASSOCIATED EQUIPMENT: Navy Models SO-12M and SO-12N Radar Equipment. Equipment function - search.

MISCELLANEOUS: The 66AJD is the same as the 66AGG but is for X-band frequencies.

MANUFACTURER: Plymouth Machine and Burner Corp.

STOCK NUMBERS: Federal Stock Number F5985-665-0433, Signal Corps 2A272-18.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Plymouth Machine drawing M-36A-W1 sub A.

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ANTENNA 66AJG

TYPE: Dipole.

DESCRIPTION: The antenna is a dipole. The overall dimensions are 2-7/16 inches high by 1-3/16 inches wide by 2-7/8 inches long.

ASSOCIATED EQUIPMENT: Navy Model OBU-3 Test Equipment. Equipment function - test.

MANUFACTURER: Johnson Serv.

STOCK NUMBER: Federal Stock Number N5985-285-0796.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Johnson Serv. drawing 16507.
3) Navy drawing RE13A857B.

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ANTENNA 66AJY

FREQUENCY: UHF band, 500 - 850 mc; VSWR < 2.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna consists of a corner reflector with a dipole feed. The dipole is fed by RG-18/U coaxial cable through a balun. The overall antenna is 28 inches high, 24 inches wide, and 18-1/8 inches deep. The reflector vertex angle probably is 135°.

BEAM DATA:
Beam type - Unidirectional.
Polarization - Horizontal, vertical, or 45° depending on antenna orientation.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 4 revolutions per minute.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: 66AKL, 66AKJ, 66AKM, and 66AJY antennas are similar except for frequency range and dimensions and are all used with TDY equipment. The 10AFJ antenna pedestal is designed to mount two of these antennas back-to-back.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: U. S. Navy 16-A-48599-4201.

REFERENCE:
U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AKJ

FREQUENCY: VHF band, 90 - 175 mc.

TYPE: Flat-screen reflector fed by dipole.

DESCRIPTION: The antenna consists of a flat reflector with a dipole feed. The dipole is fed through a type III balun by RG-18/U coaxial cable. The overall antenna is 12 inches high, 72 inches wide and 36-1/2 inches deep.

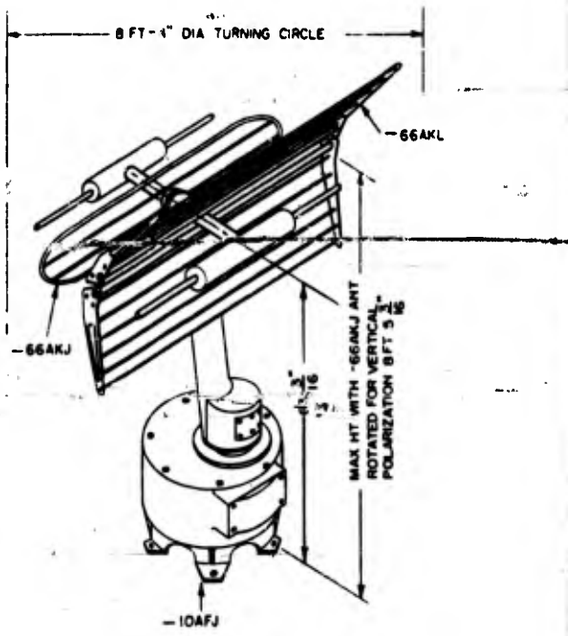
BEAM DATA:
Half-power beamwidth - E-plane - 55°.
H-plane - 180°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 4 revolutions per minute.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: 66AKL, 66AKJ, 66AKM, and 66AJY antennas are similar except for frequency range and dimensions and are all used with



66AKJ

TDY equipment. The 10AFJ antenna pedestal is designed to mount two of these antennas back-to-back.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: U. S. Navy 16-A-48584-9201.

REFERENCE:
U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

ANTENNA 66AKL

FREQUENCY: VHF band, 146 - 275 mc; VSWR < 2.2.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The antenna consists of a corner reflector with a dipole feed. The dipole is fed by RG-18/U coaxial cable through a type III balun. The reflector is constructed in two sections, with seven metal rods per section forming the reflecting surface. The two sections of the reflector form an angle of 135°. Each reflector section is 59 inches high and 25 inches wide, and the dipole is 34 inches long. Overall dimensions are 56 inches high, 58-1/2 inches wide, and 28-1/4 inches deep.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°.
H-plane - 70° to 90°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

SCAN DATA: The antenna has 360° mechanical azimuth rotation at 4 revolutions per minute.

INSTALLATION: Shipboard or ground.

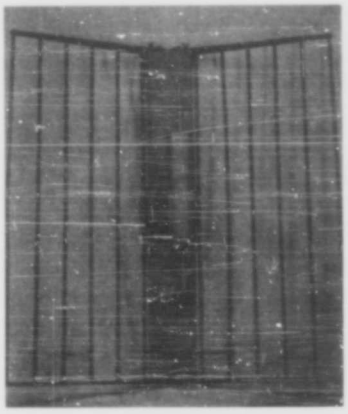
ASSOCIATED EQUIPMENT: Navy Model TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: 66AKL, 66AKJ, 66AKM, and 66AJY antennas are similar except for frequency range and dimensions and are all used with TDY equipment. The 10AFJ antenna pedestal is designed to mount two of these antennas back-to-back. The 66AKL is the same as Harvard RRL antenna number M2906.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: U. S. Navy 16-A-48587-5621.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.



66AKL

ANTENNA 66AKM

FREQUENCY: VHF and UHF bands, 265 - 530 mc; VSWR < 2.

TYPE: Corner reflector fed by a dipole.

DESCRIPTION: The antenna consists of a corner reflector and a dipole feed. The dipole is fed by an air-dielectric coaxial line through a type III balun. The reflector is constructed in two sections, with seven metal rods per section forming the reflecting surface. The two sections of the reflector form an angle of 135°. Each reflector section is 40 inches high and 33 inches wide, and the dipole is 18-1/2 inches long. Overall dimensions are 35 inches high, 33 inches wide, and 17-3/4 inches deep.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°.
H-plane - 60° to 80°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-1 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: 66AKL, 66AKJ, 66AKM, and 66AJY antennas are similar except for frequency

range and dimensions and are all used with TDY equipment. The 10AFJ antenna pedestal is designed to mount two of these antennas back-to-back. The 66AKM is the same as Harvard RRL number M2907, type I.

COGNIZANT AGENCY: U. S. Navy.

STOCK NUMBER: U. S. Navy 16-A-48591-8371.

REFERENCE:

Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.



66AKM

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MISCELLANEOUS: The 66ALQ antenna is the same as the Harvard M2924 antenna.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A.

Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

ANTENNA 66ALT

FREQUENCY: UHF band, 445 - 820 mc.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna is a corner reflector with a dipole feed. The dipole is fed by RG-18/U coaxial cable through what is probably a type II balun. The reflector is constructed in two sections with about nine rods per section forming the reflecting surface. The two sections of the reflector form an angle of 135°. Each reflector section is 20 inches by 24 inches, and the dipole is 11 inches long.

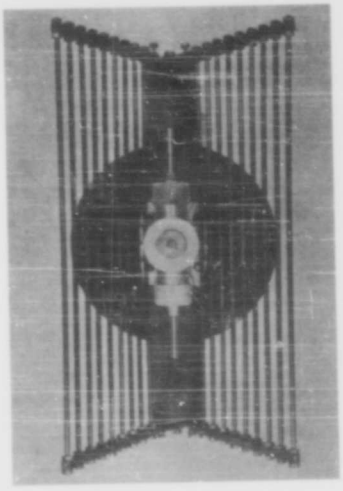
BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°.
H-plane - 65° to 80°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Model TDY-2 Radio Transmitting Equipment. Equipment function - countermeasures, jamming.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A.

Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.



66ALT

ANTENNA 66ALU

FREQUENCY: UHF band, 810 - 1385 mc.

TYPE: Corner reflector with dipole feed.

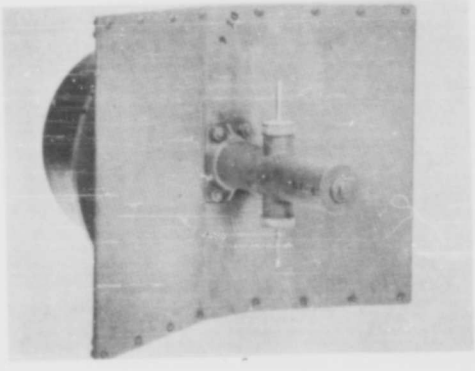
DESCRIPTION: The antenna consists of a corner reflector fed by a dipole. The reflector is constructed of sheet metal, and each side is 6 inches wide and 11 inches high. The two sections form an angle of 135°. The dipole is fed by RG-18/U coaxial cable through a type II balun and is 6-11/16 inches long.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°, depending on frequency.
H-plane - 65° to 80°.
Beam type - Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: TDY-2 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: This antenna is identical to Harvard RRL type M2910 antenna except for mounting provisions.



66ALU

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA 66AMM

FREQUENCY: UHF band, 2800 mc.

TYPE: Paraboloidal reflector with dipole feed.

DESCRIPTION: The antenna is a paraboloidal reflector, 8 feet in diameter, with a dipole feed. The overall antenna is approximately 9 feet high, 8 feet wide, and 7-1/2 feet deep.

BEAM DATA:
Half-power beamwidth - Vertical - 3°.
Horizontal - 3°.
Polarization - Horizontal.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 6 revolutions per minute. It also has a manual amplidyne tilt control.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Navy Model SP-1M Radar Equipment. Equipment function - fire control.

MISCELLANEOUS: The 66AGV is the same as 66AMM but has a nutating feed.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

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ANTENNA 66AMX

FREQUENCY: UHF and SHF bands, 2200 - 3800 mc.

TYPE: Horn antenna.

DESCRIPTION: The antenna is a horn with a section of waveguide attached. The waveguide is fed by a 50-ohm coaxial cable. The overall antenna is 14-1/2 inches high, 11-1/2 inches wide, and 11-1/2 inches deep. It includes a mounting bracket with two 17/32-inch holes on 1-11/16-inch mounting centers.

ASSOCIATED EQUIPMENT: Navy Model OCY Radar Direction Finder Target Transmitting Equipment. Equipment function - test.

MANUFACTURER: Designers for Industry, Inc.

STOCK NUMBER: Federal Stock Number F5985-369-5464.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 66ANB

FREQUENCY: UHF band, 1400 - 2500 mc.

TYPE: Horn antenna.

DESCRIPTION: The antenna is a waveguide-fed horn, 22.35 inches long by 8.22 inches by 8.22 inches. It is designed to mount on the same pedestal as antennas AS-236/SPT and AS-263/UPT.

ASSOCIATED EQUIPMENT: Navy Model OCY Radar Direction Finder Target Transmitting Equipment. Equipment function - test.

MANUFACTURER: Midwest Engineering Development Co.

STOCK NUMBER: Federal Stock Number N5985-254-7157.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Midwest drawing C-100098.

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ANTENNA 66AWG

FREQUENCY: VHF band, 200 mc.

TYPE: Two Yagi-type antennas, each made up of two elements.

DESCRIPTION: The antenna is apparently the feed system to be used with a paraboloidal reflector to form the antenna system for Navy Model SK-1M Radar Equipment. It consists of two

Yagi-type antennas, one for radar and the other for IFF. Each of the antennas consists of a dipole and a rod reflector. The antennas are mounted at right angles to each other with the IFF dipole in a vertical position and the radar dipole in a horizontal position. The overall antennas are 75 inches long, 41-1/2 inches wide, and 25-1/2 inches high.

BEAM DATA:
Polarization - Radar - Horizontal.
IFF - Vertical.

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: Navy Model SK-1M Radar Equipment. Equipment function - search, air; and IFF.

COGNIZANT AGENCY: Marine Corps, U. S. Navy, BuShips.

MANUFACTURER: General Electric Co.

STOCK NUMBER: Federal Stock Number F5985-408-8730.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) Edward Ornstein, U. S. Navy Radar Systems Survey, NRL Report 4963. Washington, D. C.: Naval Research Laboratory (Nov. 22, 1957). ASTIA Report No. AD-153211. SECRET.

3) G.E. Drawing P-7766456.

ANTENNA 66010

FREQUENCY: MF and HF bands, 2.0 - 3.5 mc.

TYPE: Rod.

BEAM DATA:
Polarization - Vertical.

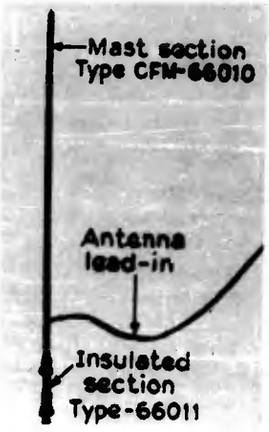
INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Navy Models TBO and TBO-1 Radio Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: General Electric Co., contracts NOs-43256 and NOs-51710.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.



Antenna 66010

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ANTENNA 66036

FREQUENCY: VHF band, 200 - 250 mc.

TYPE: Parabolic-cylinder reflector with a ground-plane feed.

DESCRIPTION: The antenna consists of a parabolic-cylinder reflector, a feed assembly consisting of a vertical radiator and four horizontal radial ground rods, an antenna drive unit, and an antenna drive shaft. The reflector assembly weighs 105 pounds.

BEAM DATA:
Half-power beamwidth - Horizontal - 30°.
Polarization - Vertical.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 2 revolutions per minute.

INSTALLATION: Shipboard or ground, normally aircraft carrier.

ASSOCIATED EQUIPMENT: Navy Models YE-1, YE-2, and YE-3 Radio Homing Beacon Equipment. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Radio Corporation of America, Victor Division, Camden, N. J., contracts NOs-93372, NXss-15437, NXsr-38316.

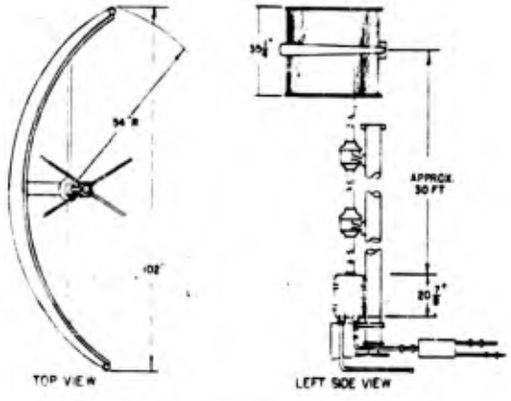
STOCK NUMBER: Federal Stock Number F5985-284-8810.

REFERENCES:
1) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 95361: Instruction Book for Navy Model YE-1 Homing Beacon Equipment.

4) NAVSHIPS 900,502: Instruction Book for Navy Models YE-2 and YE-3 Homing Beacon Equipment.



Antenna 66036

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ANTENNA ASSEMBLY 66037

FREQUENCY: VHF band, 241 - 251 mc.

TYPE: Mattress antenna.

DESCRIPTION: The antenna consists of a flat reflector, approximately 4 feet square, two vertically-mounted dipoles, and a pedestal.

The reflector is made up of 15 vertical steel rods welded to a steel frame.

BEAM DATA:
Half-power beamwidth - Horizontal - 45°.
Polarization - Vertical.

SCAN DATA: The antenna rotates through 360° in azimuth at a rate of 2 revolutions per minute.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: Navy Models YG, YG-1, and YG-2 Radio Homing Beacon Equipment. Equipment function - navigation, surface reference.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Radio Corporation of America, Victor Division, Camden, N. J., contracts NXss-33086, NXs-820, and NXsr-42143. Stewart-Warner Corp., Chicago, Ill., contracts NXss-19219 and NXsr-60004.

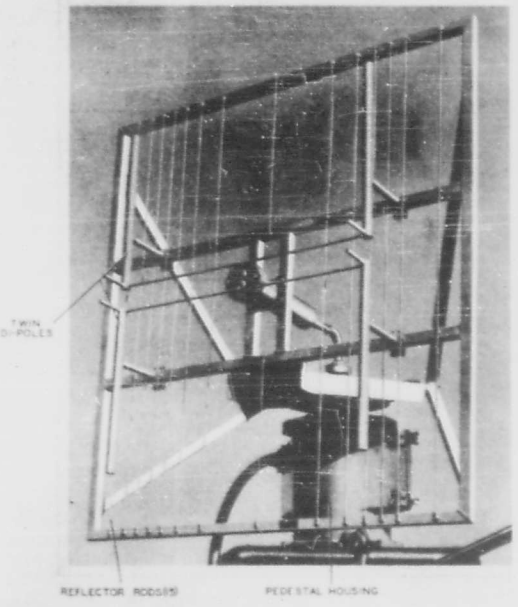
STOCK NUMBER: Federal Stock Number F5985-369-5388.

REFERENCES:

1) U. S. Navy and Bureau of Ships, Instruction Book for Homing Beacon Equipment Models YG-1 and YG-2 with Radio Frequency Monitor CWS-60047 and True Bearing Control Unit CAIH-23406, NAVSHIPS 900,252-IB, (July 21, 1944). UNCLASSIFIED.

2) U. S. Navy and Bureau of Ships, Instruction Book for Homing Beacon Equipment Navy Model YG and Radio Frequency Monitor Navy Type CRV-60047, NAVSHIPS 900,510, (Mar. 28, 1945). UNCLASSIFIED.

3) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



ANTENNA 66037

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MANUFACTURER: Fred M. Link, contracts NXs-3834, NXss-14291, NXss-20219, NXss-30781, NXss-32191, NXsr-41011, and NXsr-48343.

STOCK NUMBERS:

66044....Federal Stock Number N5985-249-4365; Navy Stock Number F16-A-54466-6141.
66044A...Federal Stock Number N5985-249-4364; Navy Stock Number F16-A-54466-6121.

REFERENCES:

1) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66050

FREQUENCY: VHF band, 56 - 85 mc.

TYPE: Dipole.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Navy Model RAU-2 Radiosonde Receiving Equipment. Equipment function - meteorological measurement.

MANUFACTURER: Friez Instrument Division, Bendix Aviation Corp., Baltimore, Md., contract NOs-81206.

REFERENCE:

U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66054

FREQUENCY: MF and HF bands, 1.6 - 18.2 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a telescoping whip, 57 inches long extended and 14-1/2 inches long collapsed. The upper section is made of stainless steel, and the lower section is made of nickel-plated, chrome-finished, brass tubing. The antenna mounts by a CAG 674P jumbo plug into a socket on the top of the DAG series receiver and is used as a sense antenna.

ASSOCIATED EQUIPMENT: Navy Models DAG, DAG-1, and DAG-2 Portable Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

COGNIZANT AGENCY: U. S. Navy, BuShips.

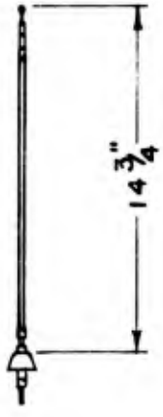
MANUFACTURER: Airplane and Marine Instruments, Inc., Clearfield, Pa., contracts NOs-98284, NXss-19775, and NXss-31234.

STOCK NUMBER: Federal Stock Number N5985-642-8405.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66054

ANTENNA 66056

FREQUENCY: LF and MF bands, 0.25 - 1.5 mc.

TYPE: Adcock array with sense element.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Navy Model DAH Radio Direction Finder Equipment. Equipment function - direction finding.

STOCK NUMBER: Federal Stock Number F5985-254-7147.

REFERENCE:

U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA ASSEMBLY 66080

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a six-section telescopic whip. Its extended length is 83 inches, and its collapsed length is 18 inches. It weighs 0.5 pound. The base of the antenna is terminated with a fitting which mates with the antenna base mounted on the case of the associated equipment.

INSTALLATION: Ground, shipboard, and aircraft.

ASSOCIATED EQUIPMENT: Navy Models MN-1, MN-2 and MN-3 Radio Transmitting and Receiving Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Fred M. Link, contracts NXss-14291, NXss-20219 and NXss-30781.

STOCK NUMBER: Federal Stock Number N5985-249-4366.

REFERENCES:

1) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) NAVSHIPS 95139, 95140 and 95141: Instruction Books for Navy Models MN-1, MN-2, and MN-3 Radio Transmitting and Receiving Equipment.

ANTENNA 66081-(*)

FREQUENCY: MF and HF bands, 2.3 - 4.5 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a telescopic whip, 85 inches long extended and 15-1/8 inches long collapsed. It weighs 1 pound.

ASSOCIATED EQUIPMENT: Navy Models MAB-1 and DAV-2 Equipment. Equipment function - communications.

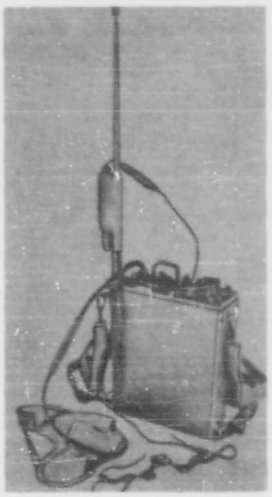
MISCELLANEOUS: The nomenclature 66081-(*) denotes 66081 and 66081-A. The 66081-A has a frequency range from 2.15 to 4.95 mc and consquently may have slightly different dimensions from those given above.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Communications Co., Inc., Coral Gables, Fla., contract NXsr-59061.

STOCK NUMBERS: Federal Stock Number N5985-249-4345 (66081), Federal Stock Number N5985-249-4344 (66081-A).

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.



Antenna 66081-(*)

ANTENNA 66082

FREQUENCY: LF and MF bands, 0.2 - 2.0 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model OAN Test Oscillator Equipment. Equipment function - test.

STOCK NUMBER: Federal Stock Number N6625-296-5107.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66084

FREQUENCY: VHF band, 60 - 100 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a slender vertical radiator and an octal, wheel-type ground plane mounted on a 10-foot pipe. This assembly is mounted on a 100-foot tower. The overall antenna assembly is 152 inches high, and 72 inches in diameter; the total weight is 34 pounds.

INSTALLATION: Ground, fixed.

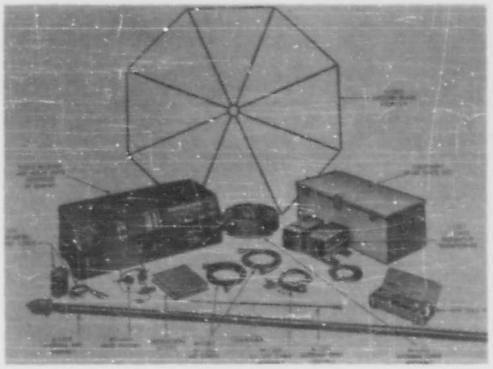
ASSOCIATED EQUIPMENT: Navy Model RBF-3 Radio Receiving Equipment. Equipment function - countermeasures, monitoring (receives signals from sonobuoy transmitters).

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Wells-Gardner and Co., Chicago, Ill., contract NXss-19175.

STOCK NUMBER: Federal Stock Number F5985-538-2835.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.



Antenna 66084

ANTENNA 66086

FREQUENCY: MF and HF bands, 1.5 - 30 mc.

TYPE: Whip.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: Navy Models TDV and MZ Radio Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4339.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy and Bureau of Ships, Installation and Calibration of Direction Finders, Shipboard Antenna Details, Chapter 7, NAVSHIPS 900121(A), (Jan. 1, 1959). UNCLASSIFIED.

ANTENNA 66087

FREQUENCY: HF and VHF bands, 28 - 80 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model TBY-6 Ultra Portable Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number N5985-249-4361.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66091

FREQUENCY: VHF band, 115 - 156 mc.

TYPE: Ground-plane antenna.

DESCRIPTION: The antenna consists of a vertical telescoping rod and a ground plane made up of four equally-spaced radial rods. The length of the vertical element can be adjusted and locked in position for optimum performance at a given frequency. The antenna is fed by a 50-ohm coaxial cable.

ASSOCIATED EQUIPMENT: Navy Models TDT and TDQ Radio Transmitting Equipment and Radio Set AN/ARC-1.

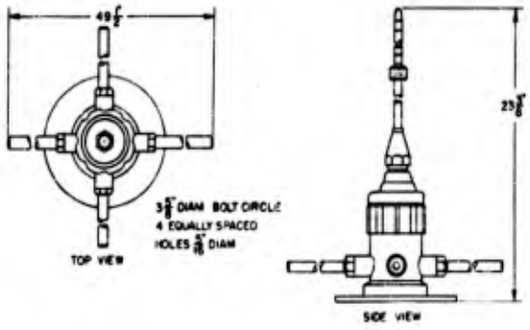
COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Aircraft Accessories Corp., Kansas City, Mo., contract NXss-30269.

STOCK NUMBER: Federal Stock Number N5985-090-2634.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.



Antenna 66091

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ANTENNA 66102

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Navy Model MAH Radio Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Western Electric Co., New York, N. Y., contract NXsr-65292.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) NAVSHIPS 900420-1B: Technical Manual for Radio Transmitting and Receiving Equipment Model MAH.

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ANTENNA ASSEMBLY 66109, 66110, 66111, 66112, 66113, and 66114

FREQUENCY: VHF band, 90 - 300 mc (66111 and 66112), UHF band, 300 - 1000 mc (66109 and 66110), UHF band, 1000 - 3000 mc (66113 and 66114).

TYPE: Probably a cut paraboloidal reflector fed by two dipoles.

DESCRIPTION: Each antenna consists of two dipoles mounted in front of a reflector.

BEAM DATA:
Beam type - Two main lobes with a null point between them.
Polarization - Horizontal (66109, 66111, and 66113).
Vertical (66110, 66112, and 66114).

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: Navy Model DBB Portable Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

MANUFACTURER: Federal Telephone and Radio Corporation, contract NXsr-53339.

STOCK NUMBERS: Federal Stock Numbers F5985-408-8723 (66112) and F5985-408-8725 (66114).

REFERENCES:
1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA ASSEMBLY 66115, 66116, and 66117

FREQUENCY: VHF band, 90 - 300 mc (66115), UHF band, 300 - 1000 mc (66116), UHF band, 1000 - 3000 mc (66117).

TYPE: Probably cut paraboloidal reflector fed by two dipoles.

DESCRIPTION: Each antenna consists of two dipoles mounted in front of a reflector.

BEAM DATA:
Beam type - Two main lobes with a null point between them.
Polarization - Horizontal, vertical, or any angle between.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: Navy Model DBB-1 Portable Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

MANUFACTURER: Federal Telephone and Radio Corporation, contract NXsr-53339.

REFERENCE:
Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

ANTENNA 66118

FREQUENCY: MF and HF bands, 1.5 - 12 mc.

TYPE: Whip.

ASSOCIATED EQUIPMENT: Navy Model MZ-2 Mobile Radio Transmitting and Receiving Equipment.

STOCK NUMBER: Federal Stock Number F5985-090-2668.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66119

FREQUENCY: VHF band, 30 - 42 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 75-inch whip weighing 3 pounds.

INSTALLATION: Ground, shipboard, and airborne.

ASSOCIATED EQUIPMENT: Navy Model MN-5 Radio Transmitting and Receiving Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Fred M. Link, New York, N. Y., contracts NXsr-41011 and NXsr-48343.

STOCK NUMBER: Federal Stock Number N5985-249-4363.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66120

FREQUENCY: VHF band, 30 - 40 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a 78-inch whip weighing 3-1/3 pounds.

INSTALLATION: Ground, shipboard, and airborne.

ASSOCIATED EQUIPMENT: Navy Model MN-5 Radio Transmitting and Receiving Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Fred M. Link, New York, N. Y., contracts NXsr-41011 and NXsr-48343.

STOCK NUMBER: Federal Stock Number N5985-249-4362.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 66148(*)

FREQUENCY: VHF band, 100 - 150 mc.

TYPE: Crossed Adcock antenna with sense element

DESCRIPTION: The antenna consists of two pairs of fixed, crossed, half-wave Adcock antennas, an open-ended vertical sense antenna, and a

goniometer assembly. The antenna elements are aluminum. The entire assembly weighs 30 pounds.

BEAM DATA:
Beam type - Without sense, double figure eight; with sense, cardioid.
Polarization - Vertical.

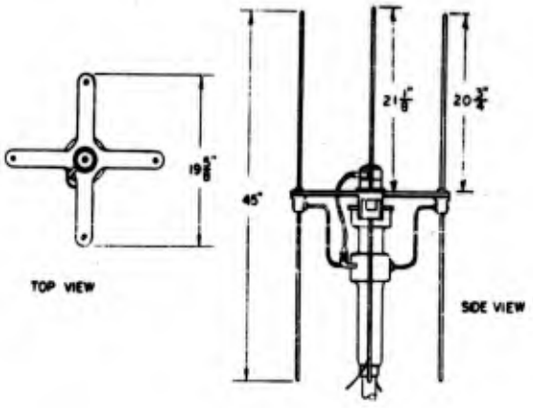
INSTALLATION: Ground and shipboard.

ASSOCIATED EQUIPMENT: Navy Models DHF-1 (66148) and DAZ (66148A) Radio Direction Finding Equipment. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: The nomenclature 66148(*) denotes 66148 and 66148A. The 66148A is used with jeep-mounted, mobile equipment.

STOCK NUMBER: U. S. Navy F16-A-55186-2387.

REFERENCES:
1) U. S. Navy and Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.
2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.
3) NAVSHIPS 900,959.



Antenna 66148(*)

ANTENNA 66150

FREQUENCY: VHF band, 115 - 156 mc.

TYPE: Whip.

INSTALLATION: Ground, transportable; also airborne.

ASSOCIATED EQUIPMENT: Navy Model MAW Radio Equipment. Equipment function - communications.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Howard Radio Co., Chicago, Ill., contract NXsr-77870.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) NAVSHIPS 900734: Instruction Book for Portable Radio Transmitting and Receiving Equipment Navy Model MAW.

ANTENNA 66151A

FREQUENCY: VHF and UHF bands, 100 - 400 mc.

TYPE: Dipole.

ASSOCIATED EQUIPMENT: Noise Field Intensity Meter TS-587/S. Equipment function - test.

MANUFACTURER: Stoddart Aircraft Radio Co.

STOCK NUMBER: Federal Stock Number N5985-254-7129.

REFERENCES:
1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.
2) Stoddart drawing 9550.

ANTENNA 69001

FREQUENCY: LF and MF bands, 0.2 - 1.5 mc.

TYPE: Loop.

SCAN DATA: The antenna can be rotated in azimuth.

STOCK NUMBER: Federal Stock Number N5985-369-5356.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

ANTENNA 69006-A

FREQUENCY: LF and MF bands, 0.1 - 1.5 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a pancake-wound loop which mounts on a pedestal.

SCAN DATA: The antenna can be rotated in azimuth.

ASSOCIATED EQUIPMENT: Navy Model DP-4 Radio Direction Finding Equipment. Equipment function - direction finding.

MANUFACTURER: RCA Victor Division of Radio Corporation of America.

STOCK NUMBER: Federal Stock Number N5985-254-7136.

REFERENCES:

1) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

2) RCA drawing T-601567-501.

ANTENNA 69046

FREQUENCY: LF and MF bands, 0.1 - 1.5 mc.

TYPE: Loop.

DESCRIPTION: The antenna is a loop, with a copper-wire winding, 22-1/2 inches in diameter enclosed in an oval-shaped housing.

BEAM DATA:
Beam type - Figure eight (without sense antenna) or cardioid (with sense antenna).

SCAN DATA: The antenna can be rotated manually in azimuth.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: Navy Models DP-9, DP-12, DP-13, DP-18, and DP-19 Direction Finder Equipment. Equipment function - countermeasures, direction finding.

MISCELLANEOUS: Reference 1) states that Navy Models DP-12, DP-13, DP-18, and DP-19 are obsolete and are replaced by AN/SRD-6.

COGNIZANT AGENCY: U. S. Navy, BuShips.

MANUFACTURER: Radio Corporation of America, contract NOs-70837.

STOCK NUMBER: Federal Stock Number N5985-408-8621.

REFERENCES:

1) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31, 1956). SECRET.

2) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

3) NAVSHIPS 95086: Instructions for Models DP-12 and DP-13 Radio Direction Finder Equipment.

ANTENNA 69077

FREQUENCY: MF and HF bands, 1.5 - 18.2 mc.

TYPE: Loop.

DESCRIPTION: The antenna consists of a one-piece copper loop enclosed in 5/8-inch diameter aluminum tubing. It mounts by three banana plugs to a socket on top of the equipment receiver case.

BEAM DATA:
Beam type - Figure eight (cardioid when used with Antenna 66054).

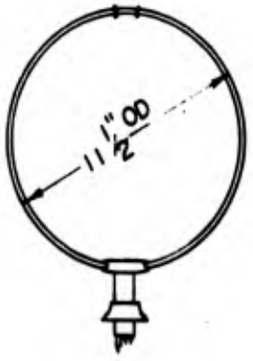
SCAN DATA: The antenna can be rotated in azimuth.

INSTALLATION: Shipboard and ground, portable.

ASSOCIATED EQUIPMENT: Navy Models DAG, DAG-1, and DAG-2 Radio Direction Finding Equipment. Equipment function - direction finding.

COGNIZANT AGENCY: U. S. Navy.

MANUFACTURER: Airplane and Marine Instruments



Antenna 69077

Corporation, Clearfield, Pa., contracts NOs-98284, NXss-19755, and NObsr-44558.

STOCK NUMBER: Federal Stock Number N5985-665-0432.

REFERENCES:

1) U. S. Navy Bureau of Ships, Antenna Data Sheets, Shipboard Antenna Details, Chapter 5, NAVSHIPS 900121(A), (Jan. 1, 1959). CONFIDENTIAL.

2) Albert F. Lopez, Robert C. Moore, Directory of Intercept and Analysis Equipment, Report No. 63.6-F. State College, Pennsylvania: Haller, Raymond and Brown, Inc., (Oct. 31. 1956). SECRET.

3) U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

4) NAVSHIPS 95075: Instruction Book for Model DAG Portable Direction Finder Equipment.

5) NAVSHIPS 95076: Instruction Book for Models DAG-1 and DAG-2 Portable Direction Finder Equipment.

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ANTENNA 7604171 (probably Army identifying number)

Antenna 7604171 and Antenna 7621595 are identical except for mounting details. Antenna 7664171 is used with Fine Control Systems M33C and M33D.

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ANTENNA 7621595 (probably Army identifying number)

MAJOR COMPONENTS: 7621762 azimuth drive, 7621755 elevation drive, 7621690 lens, 7605827 antenna pedestal, and 7620591 scanner.

FREQUENCY: SHF band, 8500 - 9600 mc.

TYPE: Stepped metal-plate lens with scanning feed.

DESCRIPTION: The antenna consists of a metal-plate, circular lens with a nutating feed. The lens is 6-3/4 feet in diameter, 11 inches deep, and uses stepped plates.

BEAM DATA:
Gain - 39 db.
Half-power beamwidth - Vertical - 1.1°.
Horizontal - 1.1°.
Beam Type - Pencil.
Polarization - Vertical.

SCAN DATA: The antenna has a conical scan of ±0.5° at a variable rate, azimuth slew at a maximum rate of 39° per second, and elevation slew at a maximum rate of 28° per second from -10° to +85°.

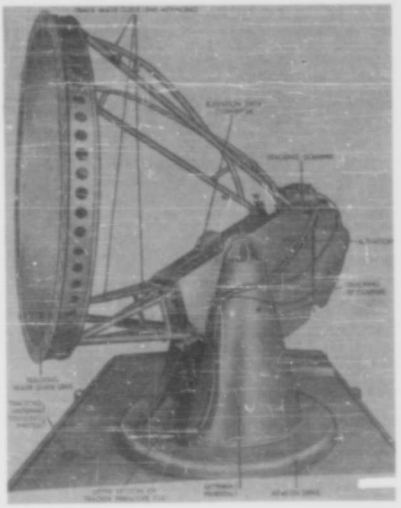
INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Tracking radar, Anti-aircraft Fire Control Systems T33C and T33D. Equipment function - fire control. Range - 100,000 yards.

MISCELLANEOUS: This antenna is identical with 7604171 except for mounting details.

COGNIZANT AGENCY: U. S. Army.

REFERENCE:
Department of the Army, Antiaircraft Fire Control Systems T33C, T33D, M33C and M33D, TM9-6092-1, (Sept. 1953). UNCLASSIFIED.



Antenna 7621595

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ANTENNA ASSEMBLY 7621808 (probably Army identifying number)

MAJOR COMPONENTS: 7622168 lens, 7621654 scanner, 7622154 antenna drive, 7621560 modulator, and waveguide and mounting assemblies.

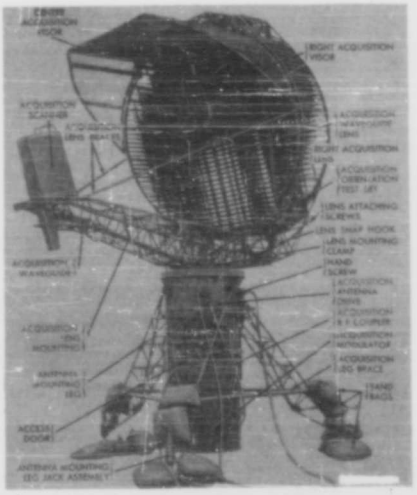
FREQUENCY: SHF band, 3100 - 3500 mc.

TYPE: Stepped metal-plate lens with scanning horn feed.

DESCRIPTION: The antenna consists essentially of a scanning horn feeding a metal-plate lens. The lens consists of a number of equally spaced, stepped, horizontal plates. The plates are shaped to give $\csc^2$ coverage in the vertical plane. The lens is equipped with a hood or visor to insure that no radiation passes over the reflector. The feed consists of a horn that is moved vertically (17-inch-travel) to shift the beam up or down 10°.

BEAM DATA:
Gain - 29 db.
Beam type - $\csc^2$ in elevation.
Polarization - Horizontal.

SCAN DATA: The antenna has a 360° mechanical azimuth rotation at 20, 40, or 60 revolutions per minute, and probably 10° elevation scan of the $\csc^2$-type pattern.



Antenna 7621808.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: Antiaircraft Fire Control Systems T33C and T33D, serial numbers 1 through 69. Equipment function - fire control. Range - 90,000 yards.

MISCELLANEOUS: T33C and T33D, serial numbers 70 through 131 use the 7604021 scanner, which results in increased range at the lower beam angles. This antenna was replaced by antenna 8005306. This is the acquisition radar antenna for the T33C and T33D systems.

COGNIZANT AGENCY: U. S. Army.

REFERENCE:
Department of the Army, Antiaircraft Fire Control Systems T33C, T33D, M33C and M33D, TM9-6092-1, (Sept. 1953). UNCLASSIFIED.

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BEAM DATA:
Side-lobe attenuation - 15 to 20 db.
Beam type - Pencil.

SCAN DATA: The Airtenna has 360° azimuth rotation at a maximum speed of 5 revolutions per minute. It probably has manual elevation control.

INSTALLATION: Ground, transportable.

REFERENCE:
Private Correspondence.

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ASSOCIATED EQUIPMENT: Radio Receiving Equipment Western Electric Company Model D-150420.

MANUFACTURER: Western Electric Company.

REFERENCE:
Department of the Army, Radio Receiving Equipment, Fixed Plant Maintenance List, SIG 10-328, (Oct. 1945). UNCLASSIFIED.

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ANTENNA 5026 (Sylvania Electronics Defense Laboratory)

FREQUENCY: VHF band, 130 - 200 mc.

TYPE: Corner reflector fed by dipole.

BEAM DATA:
Polarization - Linear (adjustable).

INSTALLATION: Ground, mobile.

ASSOCIATED EQUIPMENT: AN/MLQ-8(XL-2). Equipment function - countermeasures, jamming.

MANUFACTURER: Electronics Defense Laboratory (Sylvania).

REFERENCES:
1) Private Correspondence.

2) Manual EDL-B15.



Sylvania Electronics Defense Laboratory Antenna 5026.

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ANTENNA 5073 (Sylvania Electronics Defense Laboratory)

FREQUENCY: VHF band, 130 - 200 mc; VSWR < 1.5.

TYPE: Corner reflector.

DESCRIPTION: The antenna is a corner reflector with a folded dipole feed. It is designed for a 50-ohm RG-9/U cable. The equipment includes a wooden base. The total weight is 102 pounds. The antenna can be manually adjusted through 360° in azimuth and from -10° to +80° in elevation.

BEAM DATA:
Polarization - Polarization can be adjusted to any angle from vertical to horizontal.

COGNIZANT AGENCY: Signal Corps Engineering Laboratories.

MANUFACTURER: Sylvania Electric Products Inc., contract DA-36-039-sc-71053 Mod. 4, Task Number 18.

REFERENCE:
Private Correspondence.

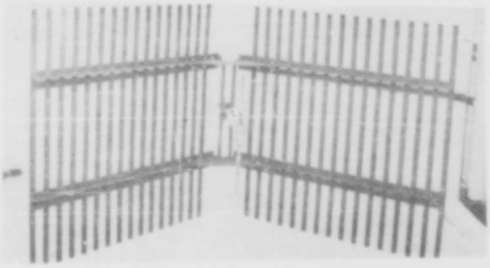
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ANTENNA F3903 (Harvard University)

FREQUENCY: VHF and UHF bands, 175 - 550 mc; VSWR < 2.

TYPE: Corner reflector.

DESCRIPTION: The antenna consists of a corner reflector with a dipole radiator and a balun. The aperture of the reflector is 40 inches high and 48 inches wide. The antenna is 32 inches deep and weighs 80 pounds. The dipole length, balun, and distance of the dipole from the vertex of the reflector are adjustable in steps to cover the frequency range.



Harvard University Radio Research Laboratory Antenna F3903.

BEAM DATA:
Gain - 12 db above a dipole.
Polarization - Vertical or horizontal depending on mounting position.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: Radar Sets AN/APQ-2 and AN/SPT-4.

MANUFACTURER: Havard University Radio Research Laboratory.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100. Cambridge, Mass: Radio Research Laboratory, Harvard University, (Nov. 1, 1944). UNCLASSIFIED.

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ANTENNA GROUP GS-18170 (Bell Telephone Laboratories)

See AN/FRA-21. This antenna is the same as AN/FRA-21 but does not include Antenna Deicing Group OA-1349/FRA-21.

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KU Band Variable Polarization Antenna

FREQUENCY: SHF band, 15,840 - 16,160 mc.

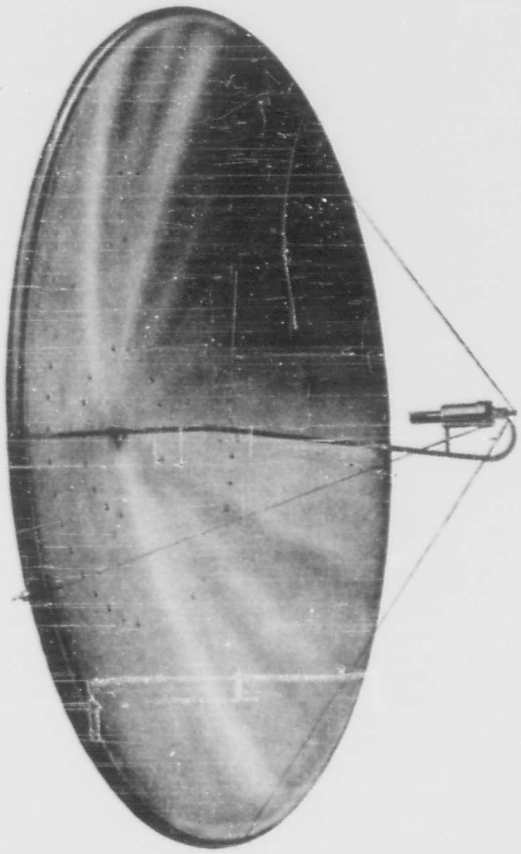
TYPE: Paraboloidal reflector fed by a conical horn.

DESCRIPTION: The paraboloidal reflector is 6 feet in diameter.

BEAM DATA:
Gain - 45 db.
Half-power beamwidth - 0.7°.
Side-lobe attenuation - At least 24 db.
Beam type - Pencil.
Polarization - Linear, plane of polarization can be rotated.

MANUFACTURER: Diamond Antenna and Microwave Corporation.

REFERENCES:
Private Correspondence.



KU Band Variable Polarization Antenna

MILORD Mine-Watch Radar Antenna

MAJOR COMPONENTS: 4 radomes, 4 reflectors, 4 hoghorn feeds, 1 dual ring switch, and 1 chopper switch.

FREQUENCY: SHF band, 9375 mc.

TYPE: Parabolic-cylinder reflector with a hoghorn feed.

DESCRIPTION: The antenna assembly consists of four identical offset parabolic-cylinder reflectors of aluminum mounted back-to-back on a common hub. Each has a line-source primary feed of the hoghorn type (a pillbox type). Each reflector consists of a parabolic reflecting barrier between closely spaced aluminum plates with a sectoral horn feed at the focal point of the parabola. The apertures of the reflectors are enclosed with fiberglass honeycomb radomes; the tops and bottoms of the parabolic reflectors are enclosed with aluminum honeycomb panels. This construction transforms the antenna assembly into a smooth, right-circular cylinder. The resulting cylinder is 14 feet in diameter and 32 inches in height and weighs 5600 pounds. A special switching arrangement energizes the individual antennas sequentially.

BEAM DATA:
Gain - 40 db.
Half-power beamwidth - Vertical - 3.5°.
Horizontal - 0.75°.
Side-lobe attenuation - 20 db.
Beam type - Pencil.
Polarization - Horizontal.

SCAN DATA: The antenna is fixed in the vertical plane and rotates in the horizontal plane at 60, 120, or 240 revolutions per

minute. This rotation of the four sections results in a scan sector of 85° and a scan rate of 4, 8, or 16 scans per second.

INSTALLATION: Ground, transportable.

ASSOCIATED EQUIPMENT: MILORD Mine-Watch Radar. Equipment function - search, surface, to detect and locate the splashes from air-laid mines.

COGNIZANT AGENCY: Developed by Georgia Institute of Technology Engineering Experiment Station under Department of the Navy contract NObsr 64055.

REFERENCE:
Equipment Characteristics of the MILORD Mine-Watch Radar, Report A-129/T4. Atlanta, Georgia: Georgia Institute of Technology, Engineering Experiment Station, (Sept. 30, 1955). CONFIDENTIAL.

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ANTENNA M2414 (Harvard Radio Research Laboratory)

FREQUENCY: UHF band, 870 - 3000 mc; VSWR < 5.

TYPE: Biconical antenna.

DESCRIPTION: This is a biconical antenna with the two 60° sheet-metal cones held in place by a plexiglass cylinder. The antenna is supported by a two-foot-long steel tube that mounts on a terminal box. The antenna is 5-5/8 inches long and is normally used for receiving. The supporting tube contains a balun.

BEAM DATA:
Gain - 2 db.
Beam type - Omnidirectional in one plane, figure of eight in one plane.
Polarization - Vertical or horizontal depending on antenna position.

INSTALLATION: Shipboard or ground.

ASSOCIATED EQUIPMENT: AN/SPR-1, AN/APR-1, AN/APR-4, and AN/APR-5 receivers. Equipment function - probably countermeasures, monitoring.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.



Harvard Radio Research Laboratory Antenna M2414

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ANTENNA M2508 (Harvard Radio Research Laboratory)

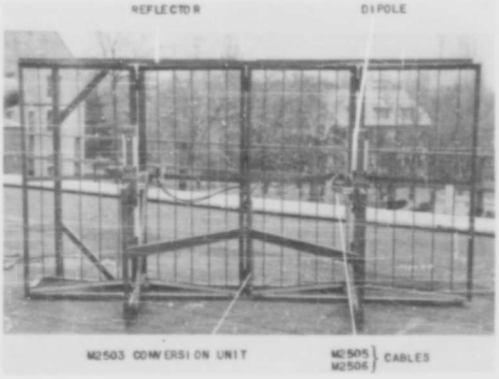
FREQUENCY: VHF band, 90 - 150 mc.

TYPE: Double corner reflector.

DESCRIPTION: The antenna has two corner reflectors fastened together at angles of 135° to form a W-shaped reflector. Each of the four sections is made of a metal framework with seven vertical rod elements. The radiators are broadband dipoles which are adjustable along the axes of the reflector. The assembly is equipped with wooden trusses, an angle-iron framework for initial adjusting purposes, and coaxial cables.

BEAM DATA:
Gain - 6.9 db at 90 mc, 13.8 db at 140 mc.
Beam type - Unidirectional.
Polarization - Vertical or horizontal depending on antenna orientation.

INSTALLATION: Ground.

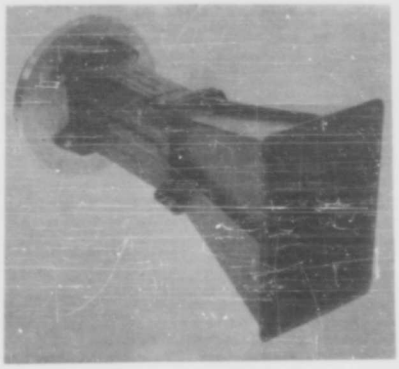


Harvard Radio Research Laboratory Antenna M2508

MANUFACTURERS: Radio Research Laboratory, Harvard University.

REFERENCE:
C. Milton Daniell, Assembly and Operating Instructions for the M2508 Antenna, Report No. 411-IB-13. Cambridge, Mass: Radio Research Laboratory, Harvard University. (Jan. 27, 1944). UNCLASSIFIED.

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Harvard Radio Research Laboratory Antenna M2912.

ASSOCIATED EQUIPMENT: AN/APT-9 (AN/SPT-7) jamming transmitter. Equipment function - countermeasures, jamming.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA M2913 (Harvard Radio Research Laboratory)

FREQUENCY: UHF band, 810 - 1385 mc.

TYPE: Corner reflector with dipole feed.

DESCRIPTION: The antenna consists of a corner reflector fed by a dipole. The reflector is constructed of sheet metal, and each side is 6 inches wide and 11 inches high. The two sections form an angle of 135°. The dipole is fed by RG-18/U coaxial cable through a type II balun and is 6-11/16 inches long.

BEAM DATA:
Gain - 9 db.
Half-power beamwidth - E-plane - 60° to 70°, depending on frequency.
H-plane - 65° to 80°.
Beam typee- Unidirectional.
Polarization - Vertical, horizontal, or 45° depending on antenna orientation.

INSTALLATION: Shipboard and ground.

ASSOCIATED EQUIPMENT: AN/APT-9 (Navy AN/SPT-7) jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: This antenna is the same as 66AIU antenna except for mounting provisions.

COGNIZANT AGENCY: U. S. Navy.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass.: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

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ANTENNA M2915 (Harvard Radio Research Laboratory)

FREQUENCY: UHF band, 1375 - 2440 mc; VSWR < 2.

TYPE: Horn.

DESCRIPTION: The antenna consists of a horn fed by a short section of rectangular waveguide which in turn is fed by RG-14/U coaxial cable. The horn has an overall length of 22 inches, and the aperture is 7-1/4 inches by 10-1/2 inches.

BEAM DATA:
Gain - 11.9 db at 1400 mc, 16.9 db at 2500 mc.
Half-power beamwidth (at 1800 mc.)
E-plane - About 45°.
H-plane - About 40°.
Beam type - Unidirectional.
Polarization - Vertical or horizontal depending on orientation of the antenna.

INSTALLATION: Ground or shipboard.

ASSOCIATED EQUIPMENT: TDY-2 shipboard jamming transmitter. Equipment function - countermeasures, jamming.

MISCELLANEOUS: This antenna is the same as M2912 antenna except for mounting provisions.

REFERENCE:
Andrew W. Alford, Antennas for RCM, 411-100A. Cambridge, Mass: Radio Research Laboratory, Harvard University, (Dec. 3, 1945). UNCLASSIFIED.

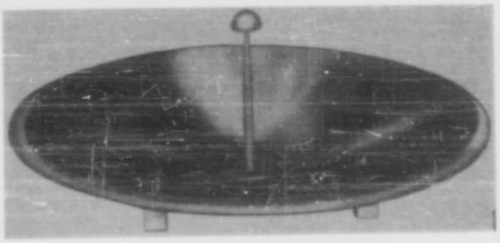
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ANTENNA MW 4-Foot (*) Band (Philco)

FREQUENCY: SHF band, 6125 - 6425, 6575 - 6875, 7125 - 7425, 7425 - 7750, and 7750 - 8075 mc.

TYPE: Paraboloidal reflector with Cutler-type feed.

DESCRIPTION: The antenna consists of a 4-foot-diameter paraboloidal reflector with a Cutler-type feed. One of five different feeds (as shown in Miscellaneous below) is used, depending on the particular frequency range covered. A plastic radome is available when icing is encountered.



MW 4 Foot (*) Band

BEAM DATA:
Gain - 35 db (frequency not known).
Beam type - Pencil.
Polarization - Vertical or horizontal, depending on antenna orientation.

INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Microwave Radio Relay Equipment CLR-6 and CLR-7. Equipment function - communications.

MISCELLANEOUS: MW 4-Foot (*) Band designates five models. The only differences between models are waveguide and feed dimensions. Models and respective frequency bands are as follows:

Common - Carrier (CC)	6125-6425 mc
Industrial (Ind).	6575-6875 mc
Government, Low (GL).	7125-7425 mc
Government, Low-Intermediate (LM) . . .	7425-7750 mc
Government, High-Intermediate (HM). . .	7750-8075 mc

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: Philco Corporation.

STOCK NUMBERS:

Band	Federal Stock Number
CC.	5820-295-7051
Ind	5820-295-8983
GL	5820-295-7050
LM	5820-538-0712
HM	5820-538-0713

REFERENCES:
U. S. Air Force, Radio Equipment, Ground Communications, Electronic and Meteorological Equipment Directory, TO 31R-1-8, (June 15, 1959). UNCLASSIFIED.

ANTENNA MW 6-Foot (*) Band (Philco)

FREQUENCY: SHF band, 6125-6425, 6575-6875, 7125-7425, 7425-7750, and 7750-8075 mc.

TYPE: Paraboloidal reflector with Cutler-type feed.

DESCRIPTION: The antenna consists of a 6-foot-diameter paraboloidal reflector with a Cutler-type feed. One of five different feeds (as shown in Miscellaneous below) is used, depending on the particular frequency range covered. A plastic radome is available when icing is encountered.

BEAM DATA:
Gain - 40 db (frequency not known).
Beam type - Pencil.
Polarization - Vertical or horizontal depending on antenna orientation.

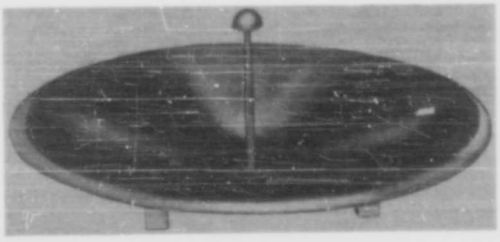
INSTALLATION: Ground.

ASSOCIATED EQUIPMENT: Microwave Radio Relay Equipment CLR-6 and CLR-7. Equipment function - communications.

MISCELLANEOUS: MW 6-Foot (*) Band designates five models. The only differences between models are waveguide and feed dimensions. Models and respective frequency bands are as follows:

Common-Carrier (CC).	6125-6425 mc
Industrial (Ind)	6575-6875 mc
Government, Low (GL)	7125-7425 mc
Government, Low-Intermediate (LM). . . .	7425-7750 mc
Government, High-Intermediate (HM) . . .	7750-8075 mc

COGNIZANT AGENCY: U. S. Air Force.



MW 6 Foot (*) Band

MANUFACTURERS: Philco Corporation.

STOCK NUMBERS:

Band	Federal Stock Number
CC	5820-295-7049
Ind.	5820-295-7048
GL	5820-295-8977
LM	5820-538-0711
HM	5820-538-5378

REFERENCE:
U. S. Air Force, Radio Equipment, Ground Communications, Electronic and Meteorological Equipment Directory, TO 31R-1-8, (June 15, 1959). UNCLASSIFIED.

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ANTENNA MW 8-Foot GL Band (Philco)

FREQUENCY: SHF band, 7125 - 7425 mc.

TYPE: Paraboloidal reflector with Cutler-type feed.

DESCRIPTION: The antenna consists of an 8-foot-diameter paraboloidal reflector with a Cutler-type feed. The feed has three guys attached to the rim of the reflector for additional support. A plastic radome is available when icing is encountered.

BEAM DATA:
Gain - 42 db.
Beam type - Pencil.
Polarization - Vertical or horizontal depending on antenna orientation.

INSTALLATION: Ground.

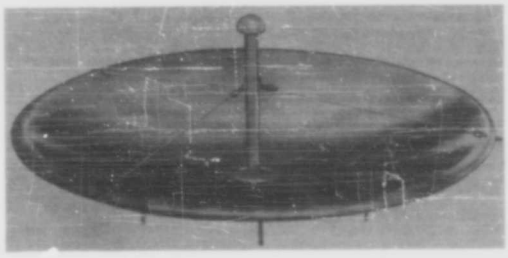
ASSOCIATED EQUIPMENT: Microwave Radio Relay Equipment CLR-6 and CLR-7. Equipment function - communications.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURERS: Philco Corporation

STOCK NUMBER: Federal Stock Number 5820-538-0667.

REFERENCE:
U. S. Air Force, Radio Equipment, Ground Communications, Electronic and Meteorological Equipment Directory, TO 31R-1-8, (June 15, 1959). UNCLASSIFIED.



MW 8 Foot GL Band

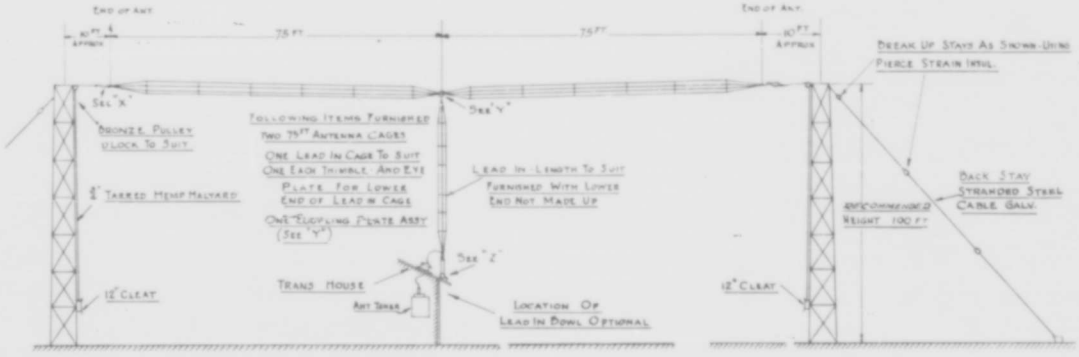
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ANTENNA R-66-A (Pan American Airways)

MAJOR COMPONENTS: 2 75-foot antenna cages, 1 lead-in cage with lower end unfinished, 1 eye plate, and 1 coupling plate assembly.

FREQUENCY: LF and MF bands, 0.260 - 0.525 mc and 1.6 - 1.75 mc.

TYPE: Flat-top antenna.



Pan American Airways Antenna R-66-A

DESCRIPTION: The antenna is a top-loaded, T-shaped antenna. It consists of two 75-foot cages mounted horizontally between two supporting towers and a vertical down-lead cage. The length of the down-lead cage is adjusted during installation to the proper length to fit the tower height. The recommended height of the supporting towers is 100 feet.

TUNING/MATCHING DEVICES: Antenna Tuner ATU-12 is used to tune the antenna to any frequency in the above bands.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: Radio Transmitter, Pan American model number 12 GLX-2. Equipment function - communications.

COGNIZANT AGENCY: U. S. Air Force.

MANUFACTURER: Pan American Airways, Inc., order 6014-PHILA-43.

REFERENCE:
U. S. Air Force, Radio Transmitter 12GLX-2 and Associated Equipment, Instruction Book, TO 31R2-4-24-1, (Aug. 11, 1942). UNCLASSIFIED.

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modification as those given for the original system.

COGNIZANT AGENCY: Developed by Georgia Institute of Technology Engineering Experiment Station under Department of the Army contract DA-36-039-sc-42707.

REFERENCES:

1) R. M. Goodman, et al., A Two-Beam 16,000-Mc Modified Luneberg Lens Scanning System, Final Report No. 234-200. Atlanta, Georgia: Georgia Institute of Technology, Engineering Experiment Station, (June 15, 1955). UNCLASSIFIED.

2) U. S. Army Signal Corps, Mortar Location (U), (April 1, 1956). CONFIDENTIAL.

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ANTENNA UHF Dual Fan Marker (Federal Telephone and Radio Corporation)

FREQUENCY: VHF band, 75 mc.

TYPE: Collinear array with a counterpoise.

DESCRIPTION: The antenna consists of a horizontal collinear array with four half-wave radiating sections constructed of 3/4-inch copper tubing and supported 1/4 wavelength above a counterpoise. The elements are phased by means of 1/4-wavelength line sections inserted between each end section and the adjacent center section. The counterpoise consists of a screen of No. 12 AWG wire with 3-inch mesh and supported by a frame 40 feet long and 20 feet wide. An adjustable quarter-wave shorted stub is used for impedance-matching. The antenna is designed for use with a balanced, open-wire transmission line.

BEAM DATA:
Polarization - Horizontal.

TUNING/MATCHING DEVICES: An adjustable quarter-wave shorted stub is used at the antenna feed point.

INSTALLATION: Ground, fixed.

ASSOCIATED EQUIPMENT: UHF Dual Fan Marker Transmitter and Associated Equipment (CAA Type). Equipment function - navigation, surface reference.

MANUFACTURER. Federal Telephone and Radio Corporation.

REFERENCE:

U. S. Air Force, Ultra-High Frequency Dual Fan Marker Transmitter and Associated Equipment (CAA Type), Handbook of Maintenance Instructions, TO 16-1 37, (March 10, 1945), UNCLASSIFIED.

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ANTENNA 1-2028

FREQUENCY: HF and VHF bands, 4 and 75 mc.

TYPE: Probably dipole array.

ASSOCIATED EQUIPMENT: Navy Model TZU Dual Ultra High Frequency Fan Marker Equipment. Equipment function - navigation, surface reference.

MANUFACTURER: Wilcox-Gay Corporation.

STOCK NUMBER: Federal Stock Number F5985-295-8992.

REFERENCE:

U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 1X34050 (Galvin Manufacturing Corp.)

TYPE: Whip.

DESCRIPTION: The antenna is a telescopic whip made up of seven sections. It is 8 feet long when extended, and 17-1/2 inches long when collapsed.

ASSOCIATED EQUIPMENT: SCR-509 and SCR-510.

MANUFACTURER: Galvin Manufacturing Corporation.

STOCK NUMBER: Federal Stock Number N5985-318-6836.

REFERENCE:

U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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ANTENNA 51C28682 (Gavin)

FREQUENCY: HF band, 3.5 - 6.0 mc.

TYPE: Whip.

DESCRIPTION: The antenna is a stud-mounted, telescopic whip.

ASSOCIATED EQUIPMENT: Radio Set SCR-536A.

MANUFACTURER: Galvin Manufacturing Corporation.

STOCK NUMBER: Federal Stock Number N5820-295-9158.

REFERENCE:
U. S. Navy, Navy Stock List of the Electronics Supply Office, (Feb. 1958). UNCLASSIFIED.

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INDEX

Nomenclatures and stock numbers are ordered in a left-justified alpha-numeric arrangement as explained in the preface. In addition, certain keys are employed to aid identification. An asterisk preceding an antenna nomenclature denotes a manufacturer's designation. A single dot denotes an unnomenclatured antenna that has been named, either by the developing agency or by one of the catalogers. Sometimes these names were too long to fit in the space allotted on the IBM cards. In these cases, the names were abbreviated and do not exactly correspond to the names appearing in the text. However, no difficulty in matching should be encountered. Two dots preceding a nomenclature indicate that it applies to the associated equipment rather than the antenna. In the indexes antenna designations containing these keys are listed ahead of the JAN antenna nomenclatures.

ANTENNA TYPE INDEX

Adcock

AN-105-( )....HF,VHF
AS-157/CRA-1....VHF
AS-204/CRD-3....LF,MF
AS-265( )/G....
AS-307( )/CRN....LF,MF
AS-410(*)/URD-2....VHF
AS-437( )/CPN-4....VHF
AS-439/GRD....VHF
AS-440/GRD....HF
AS-490/TRD-7....VHF
AS-514/URD-4+( )....VHF,UHF
AS-533/GR....MF,HF
AS-575/GRD-5+( )....VHF
AS-595/GR+( )....LF,MF
AS-648( )/TRD....MF,HF
AS-649( )/TRD....HF
AS-681/TRD-10+( )....HF,VHF
AS-800( )/TRD-11....VHF
AS-801( )/TRD-11....VHF
AS-873( )/MRD-14....VHF
RC-153-(*)....VHF
RC-223-(*)....MF,HF
RC-301....MF,HF
66056....LF,MF
66148(*)....VHF

Amplitude Modulating

AS-449(*)/GRD....VHF,UHF
AS-608( )/TRN-6....UHF
AS-685/URN-3....UHF
AS-686/URN-3....UHF
AS-792/GRD+( )....VHF,UHF
AS-891/URN....UHF
AS-892/URN....UHF
OA-1883/URN-3....UHF
OA-591/URN-3+( )....UHF
OA-592/URN-3....UHF

Blade

AT-176(*)/AP....VHF,UHF
AT-256(*)/ARC....VHF,UHF

Bow Tie (or butterfly antenna)

AN/GLA-3(XE-1)....VHF,UHF
AN/GLA-3(XE-2)....VHF
AT-605(XE-1)/GL....VHF
AT-605(XE-2)/GL....VHF
AT-606(XE-1)/GL....VHF,UHF
AT-607(XE-1)/GL....UHF
AT-608(XE-1)/GL....VHF
AT-608(XE-2)/GL....VHF

Broadside Array

AN/GPA-24A....UHF
AS-210( )/CPX....VHF
AS-295(*)/UP....UHF
AS-637/GPX+( )....UHF
AT-309/GPX+( )....UHF
AT-352/UPA-22....UHF
OA-1816/MRN-8....UHF
OA-1817/MRN-8....UHF

Cage Dipole

AS-374( )/FR....MF,HF
AS-805/MSQ-4....UHF

Circular Array

•HF STEERABLE ANTENNA....HF,VHF

Collinear Array

•UHF DUAL FAN MARKER....VHF
AN-139....
AS-355/MPN-3....UHF
AS-356/MPN-3....UHF
AS-379/FPN-1....SHF
AS-380/FPN-1....SHF
AS-381/FPN-1....SHF
AS-496/MPN-5....SHF

Collinear Array (continued)

AS-497/MPN-5....SHF
AS-505(*)/GR....VHF,UHF
AS-80( )/CPN-8....SHF
AS)805/MSQ-4....VHF
AT-427/FRC-31....VHF
AT-864/FPS-20....UHF
AT-948/U....UHF

Conical

••AN/MRW-6....UHF
*M2414....UHF
AN-169....
AN-170....
AS-1054( )/URC....HF
AS-110/TRC-7....VHF
AS-112/TRC-7....VHF
AS-216/AP....UHF
AS-408/U....VHF,UHF
AS-509( )/PRR-2....UHF
AS-631(XE-3)/U....HF,VHF
AS-792/GRD+( )....VHF,UHF
AS-864/GRT-5+( )....HF
AS-865/GRC+( )....MF,HF
AS-865( )/FRC-44....HF
AS-876/FRC-44+( )....HF
AS-876/FRR-52+( )....HF
AS-876/GRC+( )....HF
AS-922/URM-7+( )....HF,VHF,UHF
AT-197/GR....VHF,UHF
AT-208(*)/URC-5....VHF,UHF
AT-248/TPQ-1A....UHF,SHF
AT-292( )/URM-29....HF,VHF,UHF
AT-318/GL....VHF
AT-318( )/TLR....VHF
AT-319( )/TLR....UHF
AT-332/GRC-30+( )....VHF
AT-333/GRC-30+( )....VHF,UHF
AT-334/GRC-30+( )....VHF,UHF
AT-344/TPX-21+( )....UHF
AT-49(*)/APR-4....VHF,UHF,SHF
AT-522/URM-42....UHF
AT-570/URM-42....UHF,SHF
AT-678/TRM-6....UHF,SHF
AT-850/URM-7....HF,VHF,UHF
AT-938( )/GL....VHF,UHF
AT-939( )/GL....VHF,UHF
AT-940( )/GL....VHF,UHF
AT-941( )/GL....UHF,SHF
OA-1364/FRR-52+( )....MF,HF
OA-1364( )/FRC-44....MF,HF
OA-1365/GRT-5+( )....MF,HF
OA-1365( )/FRC-44....MF,HF
OA-237/GR+( )....VHF,UHF
OA-291/GRC-30+( )....VHF,UHF
OA-314/GRC....VHF
RC-254-(*)....VHF
RC-266....SHF
RC-281-( )....VHF,UHF

Corner Reflector

••IS-101....VHF
*F3903....VHF,UHF
*M2508....VHF
*5026....VHF
*5073....VHF
AN-156....
AS-128/UXR-2....
AS-145( )/SPT-6....UHF
AS-236(*)/SPT....UHF
AS-257( )/GPX-2....VHF
AS-263/UPT....VHF,UHF
AS-30/CPA-1+( )....VHF
AS-398( )/PRC-14....VHF,UHF
AS-432( )/UL....VHF,UHF
AS-433( )/UL....UHF
AS-450/GR+( )....VHF,UHF
AS-48/CPN-7+( )....VHF
AS-49/TPT-1....VHF
AS-491/PPN-13....UHF
AS-52( )/TRC-8....VHF
AS-541(*)/U....VHF
AS-542(*)/U....VHF
AS-543(*)/U....VHF,UHF

ANTENNA TYPE INDEX (continued)

Corner Reflector (continued)

AS-544(*)/U.....UHF
AS-552()/T.....VHF
AS-576/FRC+().....VHF
AS-583/U.....UHF
AS-583()/U.....UHF
AS-584()/U.....UHF,SHF
AS-636()/U.....VHF,UHF
AS-71/SPT-2.....UHF
AS-813/TRC-47+().....VHF
AT-5019/GR.....VHF
AT-644()/GR.....
AT-880()/U.....VHF,UHF
OA-238/GR+().....VHF,UHF
OA-298/TRC.....VHF
OA-463(XE-1)/TLR-1.....HF,VHF,UHF,SHF
OA-497(*)/TLR-1.....MF,HF,VHF,UHF,SHF
66AJY.....UHF
66AKL.....VHF
66AKM.....VHF,UHF
66ALR.....VHF,UHF
66ALS.....VHF,UHF
66ALT.....UHF
66ALU.....UHF

Counterpoise

AN-37.....HF,VHF
AT-55/MRQ-2.....MF,HF
AT-56/MRQ-2.....HF
AT-58/MRQ-2.....MF,HF
CP-12.....
CP-13.....
CP-17-A.....
CP-19.....HF
MX-1103/FR.....
MX-1169/GRD.....
MX-1240/FRN-12A.....
MX-1438/MRN-10.....
MX-1687/G.....
MX-313/CRD-2.....
MX-318/CRD-3.....
MX-484/MRQ-1.....

Cut Paraboloidal Reflector

*GS-18129.....UHF
AN/FRA-21+().....UHF
AN/GPA-66(*).....UHF
AS-1063/FPS-30.....
AS-1079/FPN-40.....SHF
AS-1080/FPN-40.....SHF
AS-120(*)/TPS-18.....UHF
AS-131/CPS-5().....UHF
AS-184(*)/TPS-10.....SHF
AS-212(*)/CPS-4.....UHF
AS-218/CPS-6+().....UHF,SHF
AS-219/CPS-6+().....UHF
AS-300/CPS-1+().....UHF
AS-395()/TRC-16.....SHF
AS-451/CPS-6B+().....UHF,SHF
AS-457()/MPN-1.....,UHF
AS-548/TPS-1D.....UHF
AS-557/CPS-1+().....UHF
AS-633()/CPN-4.....
AS-673/TPS-1E.....UHF
AS-762/MPN-5.....SHF
AS-763/MPN-5.....SHF
AS-764/MPN-5.....UHF
AS-765/MPN-5.....UHF
AS-8/TPS-1.....UHF
AS-807()/GPS.....UHF
AS-817()/GL.....SHF
AS-847/FPS.....UHF
AS-859/FRA-21.....UHF
AS-866/FPN-33.....SHF
AS-867/FPN-33.....SHF
AS-895/MPS-16.....SHF
AS-897/UPS-1.....UHF
AS-916/GPQ-T1A+().....UHF,SHF
AS-981/TPS-25+().....SHF
AS-998()/FPN.....SHF
AT-109/UPN.....UHF
AT-198/CPS-6B.....UHF,SHF
AT-199/CPS-6B.....UHF,SHF
AT-251/FPS-3.....UHF
AT-260(*)/CPN-18.....UHF

Cut Paraboloidal Reflector (continued)

AT-262/MPN-5+().....SHF
AT-263/MPN-5+().....SHF
AT-265/MPN-5+().....UHF
AT-312/TPS-10D.....SHF
AT-319/MPN.....UHF
AT-374/FPS-6.....UHF
AT-386/FPS-8.....UHF
AT-392/MPS-7.....UHF
AT-572/FPS-20.....UHF
AT-604(*)/FPS-14.....UHF
AT-641/GPS-4.....UHF
AT-713/MPS-16.....SHF
AT-737/GPQ-T+().....UHF,SHF
AT-742/FPS-8+().....
AT-795/FPS-33+().....UHF
AT-809/TPS-21.....
AT-838/GPA-68+().....UHF
AT-854/FRC-47.....UHF
AT-858/TPS.....UHF
AT-873/FPS-6B.....UHF
AT-876/FPN-34+().....UHF
AT-931/FPN-31.....SHF
OA-1124/FPS.....UHF
OA-1196/MPS-16+().....SHF
OA-1227/TPS.....UHF
OA-1329(XW-1)/GPS.....VHF,UHF
OA-1368/FPN-33.....SHF
OA-1650/FPS-33+().....UHF
OA-1657/FRC-47.....UHF
OA-2035/FPS-6A.....UHF
OA-2040/FPS-6B.....UHF
OA-2331/FPS-37.....UHF
OA-2512/FPN-31.....SHF
OA-2666/FPN-40.....SHF
OA-375/TPS-10D+().....SHF
OA-389/FPS-6.....UHF
OA-405/FPS-8.....UHF
OA-716(*)/GL.....SHF
OA-897(*)/FPS-14.....UHF
66ABU.....
66AGC.....SHF
66AGG.....SHF
66AJD.....SHF
66109.....UHF
66110.....UHF
66111.....VHF
66112.....VHF
66113.....UHF
66114.....UHF
66115.....VHF
66116.....UHF
66117.....UHF

Cutler

AT-808/TPS-21.....

Dipole

..AN/MRC-2C.....MF,HF
..AN/MRC-2D.....MF,HF
..AN/URC-4.....VHF
*1-2028.....HF,VHF
AB-371/U.....VHF,UHF
AN/GRA-12.....MF,HF
AN-136.....
AN-139.....
AN-140.....VHF
AN-161-(*).....VHF
AN-187.....VHF
AN-195-().....UHF
AN-196-().....UHF
AN-197.....VHF
AN-198.....HF,VHF
AN-59.....
AN-62-().....
AN-76-(*).....
AN-81-(*).....
AN-82-(*).....
AS-1009/GR.....VHF,UHF
AS-1018()/URC.....VHF,UHF
AS-107/AP.....SHF
AS-11(*)/FMQ-1.....VHF
AS-111/CRM-3.....VHF
AS-159/AP.....UHF
AS-171()/UP.....SHF

ANTENNA TYPE INDEX (continued)

Dipole (continued)

AS-2/CRN-2 ..... UHF
AS-202( )/TPS-9 .....
AS-210( )/CPX ..... VHF
AS-221/CPN-17 ..... SHF
AS-223( )/GMQ-5 ..... VHF
AS-23/AP ..... UHF, SHF
AS-264/CRM-6 .....
AS-265( )/G .....
AS-267( )/U ..... VHF
AS-3/CPN-1 .....
AS-317/GPN-2+( ) ..... UHF
AS-341/GR ..... MF, HF
AS-348/MPN-3+( ) ..... UHF
AS-354/MPN-1A ..... UHF
AS-355/MPN-3 ..... UHF
AS-366/MPN-3 ..... UHF
AS-379/FPN-1 ..... SHF
AS-380/FPN-1 ..... SHF
AS-381/FPN-1 ..... SHF
AS-385/U+( ) ..... HF, VHF
AS-39/MPN-1 ..... UHF
AS-406/URQ-2 ..... VHF
AS-41( )/MPN-1 ..... SHF
AS-43(*)/MPN-1 ..... SHF
AS-445( )/GRC ..... VHF, UHF
AS-452/CPS-6B ..... UHF, SHF
AS-453/CPS-6B ..... UHF, SHF
AS-483/GR ..... VHF, UHF
AS-496/MPN-5 ..... SHF
AS-497/MPN-5 ..... SHF
AS-505(*)/GR ..... VHF, UHF
AS-506/MRN-8+( ) ..... UHF
AS-519/GPN+( ) ..... SHF
AS-520/GPN+( ) ..... SHF
AS-56/SPR-1 ..... VHF
AS-57/SPR-1 ..... VHF, UHF
AS-574/URR+( ) ..... HF, VHF
AS-6/CPN-1 .....
AS-639/TRC ..... VHF
AS-640/TRC ..... VHF, UHF
AS-644/MRN-8 ..... UHF
AS-645/MRN-8 ..... UHF
AS-646/MRN-8 ..... UHF
AS-684/MRN-7+( ) ..... VHF
AS-702( )/APM-77 ..... UHF
AS-721( )/CPN-8 ..... SHF
AS-722/URM-42 ..... UHF, SHF
AS-726(*)/GRC ..... VHF, UHF
AS-727/GRC+( ) ..... VHF
AS-75( )/MPN-1A ..... SHF
AS-755/GRC+( ) ..... UHF
AS-76( )/MPN-1A ..... SHF
AS-768/GR ..... VHF, UHF
AS-77( )/MPN-1A ..... UHF
AS-80( )/CPN-8 ..... SHF
AS-802( )/URM-91 ..... HF, VHF
AS-883/GPX+( ) ..... UHF
AS-9/CPN-3 .....
AS-920/URM-7+( ) ..... SHF
AS-921/URM-7+( ) ..... HF, VHF
AS-948/GR+( ) ..... VHF, UHF
AS-95/MRC-1 ..... MF, HF
AS-992/GR+( ) ..... VHF, UHF
AT-117/UR .....
AT-136(*)/TPG-2 .....
AT-166(*)/GRR-1 ..... VHF
AT-18/CRC-1 .....
AT-193(*)/U ..... VHF
AT-255/URM-17 ..... UHF
AT-275/URM-28 ..... VHF, UHF
AT-308( )/GRC .....
AT-31( )/CPN-7 ..... VHF
AT-314/MPN ..... UHF
AT-330( )/U ..... VHF
AT-331( )/UMP-13 ..... UHF
AT-34/CRN-2 ..... UHF
AT-357/MPQ-10 ..... UHF
AT-389( )/FRN-17 ..... VHF
AT-399(*)/GPX-11 ..... UHF
AT-400(*)/GPX-11 ..... UHF
AT-412/TRC ..... VHF
AT-413/TRC ..... VHF, UHF
AT-417/MPQ .....
AT-460/MRN-9 ..... VHF
AT-472/MRN-7 ..... VHF
AT-477/U ..... HF, VHF

Dipole (continued)

AT-499/MPQ-10B ..... UHF
AT-50/U ..... VHF
AT-508/MPQ-25 .....
AT-51/U ..... UHF
AT-594/APD-4 ..... UHF
AT-595/APD-4 ..... SHF
AT-596/GRC+( ) ..... UHF
AT-598/TRC-42 ..... VHF
AT-597/MPS-19 ..... UHF
AT-601( )/TRN ..... VHF
AT-633( )/TRC ..... MF, HF
AT-672/G ..... UHF
AT-675( )/U ..... SHF
AT-688/TRM-4 ..... UHF
AT-689/TRM-4 ..... VHF, UHF
AT-699/ARM-30+( ) ..... UHF
AT-7/CRN-5 ..... VHF
AT-703( )/URM ..... VHF, UHF
AT-704( )/URM-2 ..... UHF
AT-709/URM-41 ..... VLF
AT-727( )/VR ..... VHF, UHF
AT-792/URM-17A ..... UHF
AT-803( )/VR ..... VHF, UHF
AT-906/U ..... VHF
AT-948/U ..... UHF
MK-98/FRN-17 ..... VHF
MS-116-( ) .....
MS-117-( ) .....
MS-118-( ) .....
MX-741( )/FR ..... MF, HF
MX-743/FRR ..... MF, HF
OA-1393/GRC+( ) ..... VHF
OA-1395/GRC+( ) ..... VHF, UHF
OA-1397/GRC+( ) ..... UHF
OA-491/MRN-8+( ) ..... UHF
OA-796( )/MRC-45 ..... VHF
RC-154-(*) ..... HF, VHF
RC-307 ..... HF, VHF
RC-81-A ..... VHF
RC-81-C ..... VHF
RF-56( )/MRN-10 ..... VHF
664BL ..... UHF
664BP ..... VHF
664BS ..... VHF
664BX ..... VHF
664MV ..... UHF, SHF
664JG .....
66050 ..... VHF
66151-A ..... VHF, UHF
66151A ..... VHF, UHF

Flat-Screen Reflector

AS-2/CRN-2 ..... UHF
AS-257( )/GPX-2 ..... VHF
AS-922/URM-7+( ) ..... HF, VHF, UHF
AT-193(*)/U ..... VHF
AT-35/CRN-2 ..... UHF
AT-380( )/TRC .....
AT-414/TRC ..... VHF, UHF
AT-851/URM-7 ..... HF, VHF, UHF
AT-900/U ..... UHF
AT-901/U ..... SHF
OA-1389/GRC+( ) ..... VHF, UHF
66AKJ ..... VHF

Flat Top

*R-66-A ..... LF, MF
AS-534/FRC+( ) ..... VLF
AS-793( )/MRN-13 ..... LF, MF
AS-85/CRN-4 ..... MF
MK-89/URN-5 ..... MF

Folded Dipole

AS-134/TPX ..... VHF
AS-156( )/CRN-10 ..... VHF
AS-266(*)/TRT-2 ..... VHF
AS-325/AR ..... UHF

Ground Plane

*614A ..... UHF
AN-164 ..... VHF, UHF
AN-165 ..... UHF

ANTENNA TYPE INDEX (continued)

Ground Plane (continued)

AN-188 ..... VHF
AN-95-A .....
AS-110/TRC-7 ..... VHF
AS-112/TRC-7 ..... VHF
AS-160/TPN-2 ..... VHF
AS-338/GPN-2+( ) ..... VHF
AS-364/FRC+( ) ..... VHF
AS-394(*)/U ..... VHF
AS-412/FRC-6 ..... VHF
AS-465/GR ..... HF, VHF
AS-5003/U ..... VHF
AS-5011/UR ..... VHF
AS-620/GRC-10 ..... VHF
AS-64/PPN-2 ..... VHF
AS-73( )/MPN-2 ..... VHF
AS-759/FRC-96 ..... VHF
AT-16/TPN-1 .....
AT-238( )/GPQ ..... UHF
AT-239( )/GPQ ..... UHF
AT-241( )/FPQ-1 ..... UHF
AT-387( )/PRC-14 ..... VHF, UHF
AT-438/GR ..... VHF
AT-592/URN-3 ..... UHF
AT-715/ARW-66 ..... UHF
AT-729( )/G ..... VHF
AT-791/G ..... VHF
AT-771/PRC-22+( ) ..... VHF, UHF
AT-911/USD-1 ..... UHF
AT-964/FRC ..... VHF
OA-249/GRC-10 ..... VHF
OA-314/GRC ..... VHF
RC-272-(*) .....
RC-291-( ) ..... VHF
RC-292-( ) ..... HF, VHF
RC-296-(*) .....
66084 ..... VHF
66091 ..... VHF

Half Rhombic

AN/GLA-14(XE-1) ..... HF, VHF
AS-51/MRQ-2 ..... MF, HF
AS-666/TRT-2C+( ) ..... HF, VHF
AS-887(XE-1)/GLT ..... HF, VHF
AS-91/MRQ-2 ..... MF
AS-92/MRQ-2 ..... MF, HF
OA-469(XE-1)/TLR-1 ..... HF, VHF, UHF, SHF
RC-63 ..... HF, VHF

Helical

AS-726(*)/GRC ..... VHF, UHF
AS-791( )/TLR-8 .....
AT-(XA-138)/UKR-1 ..... UHF
AT-165(*)/UKR ..... VHF
AT-373/UKR ..... VHF
AT-429(*)/U ..... UHF
AT-469(*)/GR ..... UHF
EV-2 ..... VHF, UHF

Horn

•GAIN STANDARD HORNS ..... UHF, SHF, EHF
••MARK 25, MOD 6A ..... SHF
*M2909 ..... UHF
*M2912 ..... UHF
*MZ915 ..... UHF
AS-1021/UPM-52A ..... SHF
AS-268( )/UPT-T3 .....
AS-310/APM-58 ..... UHF
AS-453/CPS-6B ..... UHF, SHF
AS-474/APG ..... SHF
AS-488/FPS-3 ..... UHF
AS-499/UPN ..... SHF
AS-502/TPN+( ) ..... SHF
AS-5023/GR ..... UHF
AS-5024/GR ..... UHF
AS-5029/MRC-505 ..... SHF
AS-588/U ..... UHF, SHF
AS-590( )/U ..... SHF
AS-591/CPS-6B+( ) ..... UHF
AS-592( )/GPM-14 .....
AS-726(*)/GRC ..... VHF, UHF
AS-743/UPM-52 ..... SHF
AS-791( )/TLR-8 .....
AS-817( )/GL ..... SHF

Horn (continued)

AS-841( )/GL ..... SHF
AS-846( )/GL ..... UHF, SHF
AS-902( )/MLQ-7 .....
AS-954/FRC-47 ..... UHF
AT-119/UP .....
AT-124/UP ..... SHF
AT-151/UPT ..... SHF
AT-152/U ..... UHF, SHF
AT-153(*)/U ..... SHF
AT-153(XE-3)/U ..... SHF
AT-154(*)/U ..... SHF
AT-154(XE-3)/U ..... SHF
AT-155/U ..... SHF
AT-156(*)/U ..... SHF
AT-156(XE-3)/U ..... SHF
AT-157/U ..... SHF
AT-158/U ..... SHF
AT-159/U ..... SHF, EHF
AT-261/CPN-18 ..... UHF
AT-266( )/TPQ-6 ..... EHF
AT-268/MPN-5+( ) ..... UHF
AT-273(*)/UPM ..... SHF
AT-311/TPS-10D ..... SHF
AT-315( )/U ..... UHF
AT-316( )/U ..... UHF
AT-327( )/TPQ-6 ..... EHF
AT-364( )/CPN-18 ..... UHF
AT-375/FPS-6 ..... UHF
AT-39/AP ..... SHF
AT-396/FPS-8 ..... UHF
AT-398( )/GPX-11 ..... UHF
AT-409/MPN-5 ..... SHF
AT-410/MPN-5+( ) ..... SHF
AT-411/MPN-5+( ) ..... UHF
AT-428/U ..... UHF
AT-470( )/GR ..... SHF
AT-48/UP ..... SHF
AT-507/CPN-18+( ) ..... UHF
AT-521/URM-42 ..... SHF
AT-531/UPM+( ) ..... SHF
AT-538/TPN ..... SHF
AT-539/TPN ..... SHF
AT-551/U ..... UHF, SHF
AT-552/U ..... SHF
AT-553(*)/U ..... SHF
AT-567/GPS ..... UHF
AT-591/CPS-6B ..... UHF, SHF
AT-623/FPS-14 ..... UHF
AT-631/FPA-6 .....
AT-632/FPA-6 .....
AT-65/UP ..... SHF
AT-679/TRM-6 ..... UHF
AT-68/UP ..... SHF
AT-680/TRM-6 ..... UHF, SHF
AT-681/TRM-6 ..... SHF
AT-682/TRM-6 ..... SHF
AT-714/MPS-16 ..... SHF
AT-738/FRA-21 ..... UHF
AT-752/FRA-26+( ) ..... UHF
AT-758/FRC-39+( ) ..... UHF
AT-776/FPN-28 ..... SHF
AT-777/FPN-28 ..... SHF
AT-778/FRC-56+( ) ..... UHF
AT-783/FPS-18 ..... UHF
AT-785( )/UPM-88 ..... SHF
AT-786( )/UPM-88 ..... SHF
AT-787( )/UPM-88 ..... SHF
AT-788( )/UPM-88 ..... SHF
AT-789( )/UPM-88 ..... UHF, SHF
AT-790( )/UPM-88 ..... UHF, SHF
AT-796/FPS-33+( ) ..... UHF
AT-802/UPM-9A ..... SHF
AT-806/FRC-39 ..... UHF
AT-821/FRC-56+( ) ..... UHF
AT-827/FRC-56+( ) ..... UHF
AT-846/FRA-39 ..... UHF
AT-847/FRA-39 ..... UHF
AT-859/TPG-4 ..... SHF
AT-860/TPG-4 ..... SHF
AT-862/TPS ..... UHF
AT-864/FPS-20 ..... UHF
AT-868/GPN ..... UHF
AT-877/FPN-34+( ) ..... UHF
AT-899/TPN-12 ..... SHF
AT-903/G ..... UHF
AT-905/FPS-37 ..... UHF

ANTENNA TYPE INDEX (continued)

Horn (continued)

AT-909/TRC-66 ..... SHF
AT-910/TPN-12 ..... SHF
AT-930/FPN-31 ..... SHF
AT-932/FPS-30 ..... UHF
AT-970/TRC-66 ..... SHF
MARK 21•MOD 1•UNIT 1A ..... SHF
OA-463(XE-1)/TLR-1 ..... HF•VHF•UHF•SHF
OA-497(*)/TLR-1 ..... MF•HF•VHF•UHF•SHF
OA-715()/GL ..... UHF•SHF
OA-716(*)/GL ..... SHF
OA-739/MSW-1+() .....
OA-959()/CPS-5D ..... UHF
66AMX ..... UHF•SHF
66ANB ..... UHF

Inverted "L"

AS-126/CR ..... MF•HF
AS-258()/CPN ..... MF
AS-341/GR ..... MF•HF
AT-5004/TRC ..... MF•HF
MX-765/FR ..... LF•MF

Lens

•TWO-BEAM SCANNER ..... SHF
••MARK 25• MOD 6A ..... SHF
AS-309/TPQ-2+() ..... SHF
AS-733()/U ..... SHF
AT-107/TPQ-2 ..... SHF
AT-108/TPQ-2 ..... SHF
AT-267()/TPQ-6 ..... SHF
MARK 22•MOD 0•UNIT 1D ..... SHF
7621595 ..... SHF
7621808 ..... SHF
7622168 ..... SHF

Long Wire

AN/GRA-4 ..... MF•HF
AN-123-(*) ..... MF
AN-160 ..... MF•HF
AN-168 .....
AN-24-(*) .....
AN-31 ..... MF•HF
AN-36 .....
AS-130/CPN ..... HF•VHF
AS-258()/CPN ..... MF
AS-275()/MRQ-1 ..... MF
AS-926/CRT-5+() .....
AS-934/FRT+() ..... LF•MF
AS-941/CRT-3 ..... LF•MF
AS-947/FPN ..... MF•HF
AS-5041()/FPN ..... LF
AS-93/MRQ-2 ..... LF
AS-94/MRC-1 ..... MF•HF
AT-101(*)/GRC-9 ..... MF•HF
AT-102(*)/GRC-9 ..... MF•HF
AT-237/GRC-13 ..... MF•HF
AT-5005/G ..... MF•HF
AT-57/MRQ-2 ..... LF•MF
AT-642/FR ..... MF•HF
AT-692/URC-19 ..... LF•MF
AT-898/G ..... MF•HF
OA-497(*)/TLR-1 ..... HF•VHF•UHF•SHF
RC-287-() ..... LF•MF•HF
RC-293-() ..... MF•HF

Loop

AN/PRA-2(XE-1) ..... HF•VHF
AN/PRA-3(XE-1) ..... HF•VHF
AN-132 ..... LF•MF
AN-190 ..... HF
AN-199 .....
AN-200 .....
AN-201 .....
AN-33 .....
AN-34 ..... LF•MF
AS-102/CRN-11 ..... LF•MF
AS-142/AP ..... HF•VHF•UHF
AS-169/GR ..... LF•MF
AS-2/CRN-2 ..... UHF
AS-286()/U ..... LF•MF•HF
AS-308()/CRN ..... LF•MF

Loop (continued)

AS-377/U+() ..... MF
AS-4(*)/GR ..... MF•HF
AS-400/UP+() .....
AS-470/FRN-12 ..... LF
AS-471/FRN-12 ..... VHF
AS-536/PRD-1+() ..... VHF
AS-81/GR ..... LF•MF•HF
AT-114(*)/GRD-1A .....
AT-205(*)/URM-6 ..... VLF
AT-206(*)/URM-6 ..... VLF•LF
AT-207(*)/URM-6 ..... VLF•LF
AT-211(*)/PRN-1 ..... VLF•LF
AT-212(*)/PRM-1 ..... MF•HF
AT-227/PRM-2 ..... LF•MF•HF
AT-236()/GRD ..... LF
AT-249/GRD ..... VHF
AT-27/GR ..... VHF
AT-28/GR ..... MF
AT-286()/GRC ..... HF
AT-297()/GRC ..... HF
AT-298()/GRC ..... HF•VHF
AT-29/GR ..... VHF
AT-297/TRD-4 ..... HF
AT-30/GR ..... MF•HF
AT-33/CRN-2 ..... HF
AT-339()/PRC ..... UHF
AT-340()/PRC ..... VHF
AT-367()/FRN ..... HF•VHF
AT-422()/URD-1X+() ..... LF
AT-426/U ..... LF•MF
AT-432/URM-37 ..... HF•VHF•UHF
AT-433/URM-37 .....
AT-434/URM-37 .....
AT-435/URM-37 .....
AT-516/URM-6C .....
AT-517/URM-6C ..... LF
AT-648(*)/TRN-3 ..... VLF
AT-676/PRM-21 ..... MF
AT-686/TRM-4 ..... MF•HF
AT-687/TRM-4 ..... VHF•UHF
AT-69/GR ..... VHF
AT-71/GR ..... LF
AT-716/GRD+() ..... LF
AT-72/GR .....
AT-73/GR ..... LF
AT-74/GR ..... MF
AT-75/GR ..... MF
AT-754/FRD-8+() ..... MF
AT-76/GR ..... MF•HF
AT-77/GR ..... MF
AT-78/GR ..... HF
AT-784()/PRC ..... HF
AT-885/TPM-7+() ..... VHF
AT-887/TRM-7+() ..... LF•MF•HF
LP-19-A ..... LF•MF•HF
LP-24-A ..... VHF•UHF
MX-821/U ..... VHF
MX-822/U ..... VHF
OA-1452()/PRD ..... HF•VHF
OA-1528()/TRD-3 ..... HF•VHF
69001 ..... VLF•LF
69006-A ..... LF•MF
69046 ..... LF•MF
69077 ..... LF•MF

Mattress

••SCR-545 ..... MF•HF
A-88-B ..... VHF•UHF
AN-126 .....
AN-128 .....
AN-138-(*) ..... VHF
AN-154 .....
AN-159-(*) .....
AN-189 ..... UHF
AN-88-() ..... VHF
AN-89-(*) .....
AS-1061()/GRC-104 .....
AS-297/TPX ..... UHF
AS-297()/TPX .....
AS-472/GP .....
AS-581()/U ..... UHF
AS-582()/U ..... MF
AS-674/FPS-13+() ..... HF•VHF
AS-683/MRN-7+() .....

ANTENNA TYPE INDEX (continued)

Mattress (continued)

AS-991/URS-1 ..... UHF
MX-418/TPX ..... VHF
MX-528/TPX .....
OA-321( )/U ..... HF, VHF
66037 ..... VHF

Monopole

AN/GLA-14(XE-1) ..... HF, VHF
AN-124-(*) .....
AN-202 ..... MF, HF
AN-203 ..... MF, HF
AS-204/CRD-3 ..... LF, MF
AS-274/MRQ-1+( ) ..... LF, MF, HF
AS-341/GR ..... MF, HF
AS-343( )/URR ..... LF, MF, HF
AS-438/GRD ..... HF
AS-458/FPN ..... LF
AS-533/GR ..... MF, HF
AS-574/URR+( ) ..... HF, VHF
AS-595/GR+( ) ..... LF, MF
AS-795/MRT ..... MF, HF
AT-464( )TRD-10 ..... HF, VHF
AT-465( )/TRD-10 ..... HF, VHF
AT-837/TRC ..... MF, HF
AT-842/FRC-58 ..... VHF
AT-853/FRC-59 ..... VHF
AT-914/UPX-4 ..... UHF
RC-223-(*) ..... MF, HF

Parabolic-Cylinder Reflector

•MILORD ANTENNA ..... SHF
•TWO-BEAM SCANNER ..... SHF
AS-1001/TPN-12 ..... SHF
AS-1025/TPN-12 ..... SHF
AS-104/CPS-1 ..... UHF
AS-105/CPS-1 ..... UHF
AS-1052( )/FPS ..... UHF
AS-173/MPG-1 ..... SHF
AS-344/MPG-1 ..... SHF
AS-38(*)/MPN-1 ..... UHF
AS-40(*)/MPN-1 ..... SHF
AS-403(*)/MPS-4 ..... SHF
AS-42(*)/MPN-1 ..... SHF
AS-5006/MPS-501B ..... UHF
AS-611( )/FPN-29 ..... SHF
AS-615/SPS-10 ..... UHF, SHF
AS-936/SPS-10B ..... UHF, SHF
AT-140/MPN-3 .....
AT-144/MPN-3 ..... UHF
AT-19/MPN-1 ..... UHF
AT-20( )/MPN-1 ..... SHF
AT-21(*)/MPN-1 ..... SHF
AT-290/GPN+( ) ..... SHF
AT-291/GPN+( ) ..... SHF
AT-44( )/MPN-1A ..... SHF
AT-45( )/MPN-1A ..... SHF
AT-46( )/MPN-1A ..... UHF
AT-634/MPQ ..... SHF
AT-717/FPA-6 .....
AT-718/FPA-6 .....
AT-719/FPA-6 .....
AT-918/TPQ-10 .....
OA-1258/MPQ-(*) ..... SHF
OA-2231/TPN-12 ..... SHF
OA-2232/TPN-12 ..... SHF
OA-234/GPN+( ) ..... SHF
OA-235/GPN+( ) ..... SHF
66036 ..... VHF
76B2310 ..... SHF
8005306 ..... SHF

Paraboloidal Reflector

•AIRTENNA ..... UHF, SHF
•KU BAND ANTENNA ..... SHF
•MW 4-FOOT (*) BAND ..... SHF
•MW 6-FOOT (*) BAND ..... SHF
•MW 8-FOOT GL BAND ..... SHF
••AN/FPS-16(XN-2) ..... SHF
••AN/FRC-34 ..... UHF
••ASC-1 ..... SHF
••MARK 25, MOD 6A ..... SHF
••SCR-545 ..... VHF, UHF

Paraboloidal Reflector (continued)

A-500 ..... UHF
AN/FRA-26 ..... UHF
AN/GLA-4(*) ..... UHF, SHF
AN/GRA-29 ..... SHF
AN-141-(*) ..... UHF
AN-186 ..... SHF
AN-204 .....
AS-1006/MPQ-29 ..... SHF
AS-1027/TPS-27 ..... UHF
AS-103/APM-40 ..... SHF
AS-1053/FRC-37 ..... UHF
AS-1057( )/ULT-T2 ..... SHF
AS-106/AP ..... SHF
AS-1069( )/GR ..... UHF
AS-1077( )/MPS-34 ..... SHF
AS-113/TPL-1 ..... UHF
AS-152( )/PRC-3 ..... UHF
AS-175( )/TPS-3 .....
AS-208/TPS-9 .....
AS-213( )/TRC-5 ..... UHF
AS-299/AP ..... SHF
AS-342( )/CRD-1 ..... UHF
AS-345(*)/TPG-2 .....
AS-411( )/U ..... SHF
AS-462(*)/GMD-1 ..... UHF
AS-467/CPS-10 ..... SHF
AS-476/SMD ..... UHF
AS-478/GRC-15 ..... SHF
AS-5005/TPS-502 ..... SHF
AS-5017/FPS-503 ..... UHF
AS-5022/GR ..... UHF
AS-5028/MRC-505 .....
AS-546/MPQ-10 ..... UHF
AS-554(*)/TRC-29 ..... UHF
AS-585( )/U ..... UHF, SHF
AS-586( )/U ..... SHF
AS-587( )/U ..... SHF
AS-600/MPQ-10-T1( ) ..... UHF
AS-610/G+( ) ..... UHF
AS-613/TR+( ) ..... UHF
AS-623/UP ..... SHF
AS-643( )/GRC ..... VHF, UHF
AS-650/GPN-6+( ) ..... UHF
AS-660/FRC ..... UHF
AS-661/FRC ..... UHF
AS-662/FRC ..... UHF
AS-663/FRC ..... UHF
AS-682/TRC-27 ..... SHF
AS-699( )/MPS ..... UHF
AS-699( )/TLR ..... UHF, SHF
AS-701/MPQ-10B ..... UHF
AS-736( )/GL ..... UHF, SHF
AS-737( )/GL ..... SHF
AS-738( )/GL ..... SHF
AS-74( )/TPS-3 .....
AS-787/GR ..... SHF
AS-810( )/GPR ..... UHF, SHF
AS-811(*)/GL ..... UHF, SHF
AS-812(*)/GL ..... SHF
AS-830( )/GRA-33 ..... SHF
AS-831/TX ..... SHF
AS-941( )/GL ..... SHF
AS-846( )/GL ..... UHF, SHF
AS-958( )/FRC ..... UHF
AS-870( )/FRC ..... UHF
AS-880( )/TPQ-11 ..... SHF
AS-884( )/G ..... UHF, SHF
AS-888( )/TPS-27 ..... UHF
AS-903/FPS-16 ..... SHF
AS-910/GP+( ) ..... UHF
AS-912/FPS-16X ..... SHF
AS-950/TPS-27+( ) ..... UHF
AS-964/GPN-+( ) ..... UHF
AS-969/TPW-1+( ) ..... SHF
AS-970( )/G ..... UHF
AT-173(*)/CPS-9 ..... SHF
AT-175( )/U ..... SHF
AT-328( )/TPQ-6 ..... SHF
AT-415/MPQ ..... UHF
AT-421( )/UPM-47 ..... SHF
AT-489/MPQ-18 ..... UHF
AT-596/MPS-19+( ) ..... UHF
AT-683/TRM-6 ..... SHF
AT-747/FRC+( ) ..... UHF
AT-751/FRA-26+( ) ..... UHF

ANTENNA TYPE INDEX (continued)

Paraboloidal Reflector (continued)

AT-797/FRC-39 ..... UHF
AT-867/GPN+( ) ..... UHF
AT-908/TRC-66 .....
AT-915/TPQ-11 .....
AT-916/TPQ-11 .....
AT-937/FPS-49 .....
AT-961/UPS-1 .....
AT-965/UPS-1 .....
AT-966/UPS-1 .....
AT-967/UPS-1A .....
AT-968/UPS-1A .....
AT-969/UPS-1A .....
AT-976/TRC-66 ..... SHF
MARK 23,MOD 0,UNIT 1G ..... SHF
OA-1378/GRC ..... SHF
OA-1460/FRC+( ) ..... UHF
OA-1706/FRC-39 ..... UHF
OA-1967/MPM-25 ..... SHF
OA-2799/TRC-66 ..... SHF
OA-288( )/TRC-29 ..... UHF
OA-373A/GPN ..... UHF
OA-713( )/GL ..... UHF , SHF
OA-715( )/GL ..... UHF , SHF
RC-124-( ) .....
RC-248-(*) .....
6AMM ..... UHF
66ACX .....
66AGV ..... UHF
66AKV-(*) ..... UHF

Parasitic Array

AN-125-( ) .....
AN-195-( ) ..... UHF
AN-196-( ) ..... UHF
AS-134/TPX ..... VHF
AS-156( )/CRN-10 ..... VHF
AS-223( )/GMQ-5 ..... VHF
AS-23/AP ..... UHF , SHF
AS-550( )/TRC-24 ..... VHF , UHF
AS-551( )/TRC-24 ..... VHF
AT-427/FRC-31 ..... VHF
RC-153-(*) ..... VHF

Periodic Structure

AN/TLA-7 ..... HF , VHF , UHF
AS-1009/ML ..... VHF
AS-1013/ML ..... VHF
AS-1019/TRD ..... VHF
AS-1089( )/ML ..... VHF , UHF
AS-989(*) ..... VHF
AS-990( )/VL ..... VHF

Pillbox

AS-904( )/UPX ..... UHF
AS-905/UPX ..... UHF
AS-937( )/GP ..... UHF

Probe

AS-122/AP ..... HF , VHF , UHF
AS-129/AP ..... UHF
AS-129/AP ..... HF , VHF , UHF
AS-147/AP ..... UHF
AT-197(*)/MRC-2 ..... MF , HF
AT-163/U ..... UHF , SHF
AT-188(*)/U ..... VHF
AT-211(*)/PRM-1 ..... LF
AT-408/UPM-46 ..... SHF
AT-459( )/ARM-9 ..... VHF , UHF
AT-564/U+( ) ..... LF , MF , HF , VHF , UHF
AT-64/U .....
AT-66(*)/U ..... VHF , UHF
AT-70/U .....
AT-88/U ..... UHF , SHF

Rectangular Array

AN-140 ..... VHF
AN-161-(*) ..... VHF
AS-5002(*)/MPS-501 ..... UHF

Rhombic

,,AN/TRC-24 ..... UHF
AS-127/MRT-1 .....
AS-252( )/GRW-1 ..... VHF
AT-240( )/GPQ ..... UHF
MX-658/FRR ..... HF
MX-852( )/MRC-2 ..... MF , HF

Rhombic, Multiwire

MX-742/FR ..... HF

Rod

AN-147-(*) ..... VHF
AN-35-(*) .....
AN-94-(*) ..... VHF
AN-97-A ..... VHF , UHF
AS-243( )/CRN-4A .....
AS-253/GPX-1 ..... VHF
AS-257( )/GPX-2 ..... VHF
AS-364/FRC+( ) ..... VHF
AS-536/PRD-1+( ) ..... LF , MF , HF
AT-110/U ..... VHF
AT-122/U ..... VHF
AT-282/GPN ..... LF , MF
AT-283/GPN ..... VHF
AT-299/URM-30 ..... VHF
AT-543/GPQ-T1 .....
AT-60/U .....
AT-69/UPM-2 ..... VHF , UHF
AT-643/ARM-19 ..... UHF
RC-211-( ) .....
66ABW ..... VHF
66ACL ..... VHF
66ADF .....
66010 ..... MF , HF

Sleeve Dipole

66AJY ..... UHF
66ALQ ..... VHF

Slot

,ANNULAR SLOT, DF ..... UHF
AN/GPA-24A ..... UHF
AN/UPA-22(*) ..... UHF
AN/UPA-23(*) ..... UHF
AN-193 ..... SHF
AN-194 ..... SHF
AN-205 ..... SHF
AN-206 ..... SHF
AS-119/CPN-6 ..... SHF
AS-235( )/UPM-4 ..... SHF
AS-241( )/UPN-3 ..... SHF
AS-295(*)/UP ..... UHF
AS-454/FPN-13 ..... SHF
AS-5001/FPS-501 ..... SHF
AS-5002(*)/MPS-501 ..... UHF
AS-5012( )/UP ..... UHF
AS-547( )/FPN-10 ..... SHF
AS-637/GPX+( ) ..... UHF
AS-664/MRN-9 ..... VHF
AS-808( )/FRN ..... SHF
AS-840( )/FRN ..... SHF
AS-845( )/GPX ..... UHF
AT-309/GPX+( ) ..... UHF
AT-352/UPA-22 ..... UHF
AT-352/UPA-22(*) ..... UHF
AT-353(*)/UPA-23 ..... UHF
AT-416/MPQ ..... UHF
AT-482/MPQ ..... UHF
AT-534(XN-1)/GRC ..... SHF
AT-567/GPS ..... UHF
AT-621/FRN ..... VHF
AT-669/FRN-22 ..... VHF
AT-864/FPS-20 ..... UHF

Spiral

AS-1076( )/FRC ..... HF

ANTENNA TYPE INDEX (continued)

Stacked Array

#D-151625 ..... VHF
AS-1009/GR ..... VHF, UHF
AS-1018( )/URC ..... VHF, UHF
AS-1097/GR+( ) ..... VHF, UHF
AS-119/CPN-6 ..... SHF
AS-171( )/UP ..... SHF
AS-221/CPN-17 ..... SHF
AS-235( )/UPN-4 ..... SHF
AS-241( )/UPN-3 ..... SHF
AS-454/FPN-13 ..... SHF
AS-483/GR ..... VHF, UHF
AS-5001/FPS-501 ..... SHF
AS-642( )/GRC ..... VHF, UHF
AS-727/GRC+( ) ..... VHF
AS-768/GR ..... VHF, UHF
AS-882( )/G ..... VHF, UHF
AS-992/GR+( ) ..... VHF, UHF
AT-534(XN-1)/GRC ..... SHF
AT-567/GPS ..... UHF
AT-669/FRN-22 ..... VHF
AT-781/U ..... UHF
AT-782/U ..... UHF
OA-299( )/TRC ..... VHF

Stub

AN-127-A .....
AN-132 ..... LF, MF
AS-79( )/MPN-1A ..... VHF
AT-22/MPN-1 ..... VHF
AT-545/GPQ-T1 ..... VHF
AT-715/ARW-66 ..... UHF
AT-748/VRC ..... VHF, UHF
AT-85/GMQ-5 ..... VHF
AT-857/U ..... UHF

Stub Sleeve

AS-178( )/TMR ..... VHF
AS-389/FMQ-2 ..... UHF
AS-492/FMQ-2 ..... UHF
AS-99( )/TRC-1 ..... VHF
AT-320( )/FRC-20 ..... VHF
AT-368( )/GRD-6 ..... VHF, UHF
AT-462/MRC-20 ..... VHF
AT-463/MRC-20 ..... UHF
AT-6/VRW-1 ..... VHF
AT-791( )/G ..... VHF
AT-84/GMQ-5 ..... HF

Tower

AB-127(*)/FR ..... MF
AN/FRA-25+( ) .....
AN/GRA-24+( ) .....
AN-158 .....
AS-1088/TRN ..... MF
AS-329(*)/FRN-5 ..... LF
AS-414/FPN ..... LF
AS-415/FPN ..... LF
AS-503( )/FPN ..... LF
AS-749/FRN+( ) ..... LF
AS-769/TRN+( ) ..... MF
AS-778/FRC+( ) ..... LF, MF
AS-784/TRN ..... MF
AS-837( )/G ..... MF
AS-842/FRC ..... MF, HF
AS-864( )/FRC-44 ..... MF, HF
AS-951/TRN ..... MF
OA-1364( )/FRC-44 ..... MF, HF
OA-1365( )/FRC-44 ..... MF, HF

Turnstile

AT-149(*)/UPN ..... UHF
AT-238( )/GPQ ..... UHF
AT-239( )/GPQ ..... UHF
AT-241( )/FPQ-1 ..... UHF
AT-358( )/U ..... UHF
AT-674( )/U ..... SHF
MK-264/U ..... MF, HF

"V"

AS-1007/TLR ..... HF

"V" (continued)

AS-1008/TLR ..... HF, VHF
OA-463(XE-1)/TLR-1 ..... HF, VHF, UHF, SHF

Whip

**AN/MRC-20 ..... MF, HF
**AN/URC-11 ..... VHF
*1X34050 .....
*51C28682 ..... HF
AN/GRA-40(XN-1) ..... MF
AN-129 ..... VHF
AN-130-(*) ..... VHF
AN-131-A ..... VHF
AN-29-(*) ..... HF, VHF
AN-30-B .....
AN-44-A ..... MF
AN-45-(*) ..... LF, MF, HF, VHF
AN-75-(*) ..... MF, HF
AN-78-A ..... LF, MF
AS-10/PPN-1 ..... VHF
AS-149/TRT-1 ..... HF, VHF
AS-170( )/VRC-4 .....
AS-203/VRC ..... MF, HF
AS-240/TRR-2 ..... HF, VHF
AS-255/CRN-12+( ) ..... HF
AS-349( )/URC-1 ..... VHF
AS-352/UR+( ) .....
AS-353/FR+( ) ..... MF, HF
AS-357/FRC ..... VHF
AS-358/MPN-3 ..... HF
AS-359/MRD-8+( ) ..... VHF
AS-362/FRC+( ) ..... MF
AS-363/VRC+( ) ..... MF, VHF
AS-365/FRC+( ) ..... VHF
AS-399( )/FRN-11 ..... LF, MF
AS-512/MR+( ) ..... HF
AS-607/MPN-18+( ) ..... LF, MF, HF
AS-612(*)/U ..... HF, VHF
AS-78( )/MPN-1A ..... HF
AS-83/PPN-1A ..... VHF
AS-961( )/VRC ..... HF, VHF
AT-104/UR .....
AT-129(*)/VR ..... HF, VHF
AT-143/MPN-3 .....
AT-170/ARN ..... VHF, UHF
AT-203(*)/URM-6 ..... VLF, LF
AT-204(*)/URM-6 ..... VLF, LF
AT-213(*)/PRM-1 ..... LF, MF, HF
AT-222( )/VRC-2 ..... VHF
AT-226/PRM-2 ..... LF
AT-228( )/VRC-11 ..... VHF
AT-243/U ..... VHF
AT-250/UPA-T1 ..... MF
AT-271(*)/PRC ..... HF, VHF
AT-272(*)/PRC ..... HF, VHF
AT-281/VRC ..... VHF
AT-285/GPN ..... MF, HF
AT-301( )/PRD-1 ..... HF
AT-310( )/GPN ..... HF
AT-343( )/URC ..... MF, HF
AT-348( )/PRC ..... HF, VHF
AT-431/URM-37 .....
AT-441/MRC .....
AT-486/G ..... VHF
AT-496(*)/G ..... VHF
AT-5001/PRC ..... VHF
AT-514/URM-6C ..... LF
AT-515/URM-6C ..... VLF, LF
AT-530/GR ..... MF, HF
AT-532/VR+( ) ..... HF, VHF
AT-542/GPQ-T1 .....
AT-544/GPQ-T1 .....
AT-552/URM-42 ..... MF, HF
AT-558/URM-3+( ) ..... LF, MF, HF, VHF
AT-59/TRC-7 ..... VHF
AT-622( )/GRN ..... VHF
AT-639( )/URM-2 ..... HF
AT-671/VRC-32 ..... VHF
AT-673/PRC-33 ..... VHF
AT-677( )/VR ..... VHF
AT-691/URC-19 ..... HF
AT-723( )/VR ..... VHF
AT-724( )/VR ..... VHF
AT-725( )/VR ..... HF, VHF
AT-726( )/VR ..... HF, VHF

ANTENNA TYPE INDEX (continued)

Whip (continued)

AT-730/UR+( )....LF,MF
AT-739/U....VHF
AT-745( )/GRN....MF
AT-757( )/PRN....VHF
AT-770/PRC-22+( )....VHF,UHF
AT-807/URM-94....HF,VHF
AT-816/VRC....VHF
AT-82/UP....
AT-841/VRC....VHF
AT-843/GRN....LF,MF
AT-844/URC-33+( )....HF
AT-865/GRT....MF,HF
AT-866/GRR....MF,HF
AT-886/TRM-7+( )....LF,MF,HF
AT-892/PRC....VHF
AT-893/GRN....VHF,UHF
AT-894/URM-117....VHF
AT-904/GR....HF,VHF
AT-912/VR....VHF
AT-934/VRC....VHF
AT-944( )/PR....VHF
AT-950/U....LF
AT-963/VRC....VHF
AT-978/URM-129....VHF
MP-13....MF
MS-116-( )....
MS-117-( )....
MS-118-( )....
MS-49....MF,HF
MS-5 ....MF,HF
MS-51....MF,HF
MS-52....MF,HF
MS-53....MF,HF
MS-54....
MX-1269/UPA....UHF
MX-2435/G....
MX-2436/G....
MX-2437/G....
MX-2438/G....
MX-2439/G....
MX-2533/G....
MX-2534/G....
OA-1528( )/TRD-3....VLF,LF
OA-314/GRC....VHF
RC-300....
SA-38-2321A....VHF
66ABZ....VHF
66044(*)....VHF
66044-(*)....VHF
66054....MF,HF
66080....VHF
66081-(*)....MF,HF
66082....LF,MF
66086....MF,HF
66087....HF,VHF

Whip (continued)

66118....MF,HF
66119....VHF
66120....VHF
66150....VHF

Wullenweber Array

AS-861/FRR-52+( )....HF
AS-861( )/FRC-44....HF
AS-862/GRT-5+( )....HF
AS-862( )/FRC-44....HF
AS-863/GRT-5+( )....HF
AS-863( )/FRC-44....HF
OA-1364/FRR-52+( )....MF,HF
OA-1364( )/FRC-44....MF,HF
OA-1365/GRT-5+( )....MF,HF
OA-1365( )/FRC-44....MF,HF

Yagi

*C-355A....VHF
*D-151625....VHF
AN/GLA-13....HF,VHF,UHF
AN-102....
AN-62-( )....
AN-85....
AN-87....
AS-19(*)/TRC-1....VHF
AS-20(*)/TRC-1....VHF
AS-253/GPX-1....VHF
AS-257( )/GPX-2....VHF
AS-293( )/TRC-8....VHF
AS-383/MRA-3+( )....VHF
AS-48/FRC....HF
AS-5014/GR....VHF
AS-558( )/TRC....VHF
AS-559( )/TRC....VHF
AS-620/GRC-10....VHF
AS-756( )/GRC....VHF
AS-770( )/URM-16....UHF
AS-771( )/URM-16....UHF,SHF
AS-772( )/URM-16....SHF
AS-798/FLR-2....VHF
AT-336( )/TRC....VHF
AT-337( )/TRC....VHF
AT-791( )/G....VHF
AT-869( )/G....VHF
AT-870( )/G....VHF
MX-854(*)/FR....HF,VHF
OA-1391/GRC+( )....VHF
OA-2021( )/GRC....VHF
OA-249/GRC-10....VHF
OA-299( )/TRC....VHF
66AWG....VHF

ASSOCIATED EQUIPMENT INDEX

AM-18/APT....AS-50/TPT-1
AN/AKT-7....AT-256(*)/ARC
AN/APD-4....AT-554/APD-4
AN/APG-27....AS-474/APG
AN/APM-40....AS-103/APM-40
AN/APM-58....AS-310/APM-58
AN/APM-77+( )....AS-702( )/APM-77
AN/APN-3....AT-176(*)/AP
AN/APN-59( )....AT-149(*)/UPN
AN/APQ-2....*F3909
AN/APQ-2....AS-263/UPT
AN/APR-1....*M2414
AN/APR-4....*M2414
AN/APR-4....AS-265( )/G
AN/APR-4....AS-56/SPR-1
AN/APR-4....AS-57/SPR-1
AN/APR-4....AT-49(*)/APR-4
AN/APR-5....*M2414
AN/APS-2B....66ACZ
AN/APS-2C....66ACZ
AN/APS-2D....66ACZ
AN/APS-2E....66ACZ
AN/APT-1....AS-49/TPT-1
AN/APT-1....AS-50/TPT-1
AN/APT-2....AS-145( )/SPT-6
AN/APT-2....AS-263/UPT
AN/APT-3....AS-49/TPT-1
AN/APT-5....AS-145( )/SPT-6
AN/APT-5....AS-263/UPT
AN/APT-5....AS-71/SPT-2
AN/APT-5( )....AT-49(*)/APR-4
AN/APT-9....*M2912
AN/APT-9....*M2913
AN/APT-9....AS-71/SPT-2
AN/APT-9....AT-49(*)/APR-4
AN/APW-11( )....AT-397/UPM-198
AN/ARC-1....66091
AN/ARC-19....AT-256(*)/ARC
AN/ARC-27....AT-256(*)/ARC
AN/ARC-27....AT-463/MRC-20
AN/ARC-27....AT-748/VRC
AN/ARC-3....AT-462/MRC-20
AN/ARC-33....AT-256(*)/ARC
AN/ARC-5....AS-78( )/MPN-1A
AN/ARM-19....AT-643/ARM-19
AN/ARM-30+( )....AT-699/ARM-30+( )
AN/ART-3....AS-49/TPT-1
AN/ART-4( )....AT-166(*)/GRR-1

ASSOCIATED EQUIPMENT INDEX (continued)

AN/ARW-55.....AN/ARW-6
AN/ARW-55.....AT-781/U
AN/ARW-55.....AT-782/U
AN/ARW-66.....AT-719/ARW-66
AN/ARW-66.....AT-781/U
AN/ARW-66.....AT-782/U
AN/ARW-8.....AT-6/VRW-1
AN/CPA-1.....AS-90/CPA-1+()
AN/CPN-1.....AS-3/CPN-1
AN/CPN-1.....AS-6/CPN-1
AN/CPN-11().....AS-258()/CPN
AN/CPN-11(*).....AS-190/CPN
AN/CPN-12().....AS-258()/CPN
AN/CPN-12(*).....AS-190/CPN
AN/CPN-17.....AS-221/CPN-17
AN/CPN-18().....AT-260(*)/CPN-18
AN/CPN-18().....AT-261/CPN-18
AN/CPN-18().....AT-964()/CPN-18
AN/CPN-2A.....AT-176(*)/AP
AN/CPN-3.....AS-3/CPN-1
AN/CPN-3.....AS-6/CPN-1
AN/CPN-3.....AS-9/CPN-3
AN/CPN-4.....AS-497()/CPN-4
AN/CPN-4.....AS-519/GPN+()
AN/CPN-4.....AS-520/GPN+()
AN/CPN-4.....AS-633()/CPN-4
AN/CPN-4.....AT-285/GPN
AN/CPN-4.....AT-290/GPN+()
AN/CPN-4.....AT-291/GPN+()
AN/CPN-4.....AT-310()/GPN
AN/CPN-4.....OA-234/GPN+()
AN/CPN-4.....OA-235/GPN+()
AN/CPN-4().....AT-282/GPN
AN/CPN-4().....AT-283/GPN
AN/CPN-4(*).....AS-964/GPN-+()
AN/CPN-4(*).....AT-867/GPN+()
AN/CPN-4(*).....AT-868/GPN
AN/CPN-4(*).....OA-373A/GPN
AN/CPN-4A.....AS-519/GPN+()
AN/CPN-4A.....AS-520/GPN+()
AN/CPN-4A.....AT-290/GPN+()
AN/CPN-4A.....AT-291/GPN+()
AN/CPN-4A.....OA-234/GPN+()
AN/CPN-4A.....OA-235/GPN+()
AN/CPN-4B.....AS-519/GPN+()
AN/CPN-4B.....AS-520/GPN+()
AN/CPN-4B.....AT-290/GPN+()
AN/CPN-4B.....AT-291/GPN+()
AN/CPN-4B.....OA-234/GPN+()
AN/CPN-4B.....OA-235/GPN+()
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AN/CPN-4C.....AT-685/CPN-4C+()
AN/CPN-4C.....OA-1075/CPN-4C+()
AN/CPN-6.....AS-119/CPN-6
AN/CPN-7.....AS-48/CPN-7+()
AN/CPN-7.....AT-31()/CPN-7
AN/CPN-8.....AS-72()/CPN-8
AN/CPN-8.....AS-80()/CPN-8
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AN/CPS-1.....AS-105/CPS-1
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AN/CPS-6().....AS-219/CPS-6+()
AN/CPS-6B.....AS-451/CPS-6B+()
AN/CPS-6B.....AS-452/CPS-6B
AN/CPS-6B.....AS-453/CPS-6B
AN/CPS-6B.....AT-198/CPS-6B
AN/CPS-6B.....AT-199/CPS-6B
AN/CPS-6B.....AT-591/CPS-6B
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AN/CRD-3.....MX-318/CRD-3
AN/CRD-4.....AS-439/GRD
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AN/CRD-6.....AS-792/GRD+()
AN/CRD-6.....AT-368()/GRD-6
AN/CRM-3.....AS-111/CRM-3
AN/CRM-6.....AS-264/CRM-6
AN/CRM-10.....AS-156()/CRM-10
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AN/CRM-15().....AS-307()/CRM
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AN/CRM-2.....AT-34/CRM-2
AN/CRM-2.....AT-35/CRM-2
AN/CRM-3.....LP-24-A
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AN/CRM-4A.....AS-243()/CRM-4A
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AN/FMQ-2.....AS-492/FMQ-2
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AN/FPN-16.....AS-520/GPN+()
AN/FPN-16.....AT-282/GPN
AN/FPN-16.....AT-283/GPN
AN/FPN-16.....AT-290/GPN+()
AN/FPN-16.....AT-291/GPN+()
AN/FPN-16.....OA-234/GPN+()
AN/FPN-16.....OA-235/GPN+()
AN/FPN-16.....OA-280/GPN+()
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AN/FPN-34.....AT-877/FPN-34+()
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AN/FRC-44( )....AS-876/FRR-52+( )
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AN/GRC-4....MX-2534/G
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AN/GRC-4(1)....AT-725(1)/VR
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AN/GRC-53(1)....AT-870(1)/G
AN/GRC-53(1)....OA-2021(1)/GRC
AN/GRC-54(1)....AT-869(1)/G
AN/GRC-54(1)....AT-870(1)/G
AN/GRC-54(1)....OA-2021(1)/GRC
AN/GRC-55(1)....AT-869(1)/G
AN/GRC-55(1)....AT-870(1)/G
AN/GRC-55(1)....OA-2021(1)/GRC
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AN/GRC-6....MS-117-(1)
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AN/GRC-6....MX-2435/G
AN/GRC-6....MX-2436/G
AN/GRC-6....MX-2437/G
AN/GRC-6....MX-2438/G
AN/GRC-6....MX-2439/G
AN/GRC-6....MX-2533/G
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AN/GRC-6(1)....AT-724(1)/VR
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AN/GRC-77.....AS-756()/GRC
AN/GRC-77.....OA-1391/GRC+()
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AN/GRC-78.....OA-1389/GRC+()
AN/GRC-78.....OA-1393/GRC+()
AN/GRC-78.....OA-1397/GRC+()
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AN/GRC-79.....AT-412/TRC
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AN/GRC-79.....AT-566/GRC+()
AN/GRC-79.....OA-1389/GRC+()
AN/GRC-79.....OA-1393/GRC+()
AN/GRC-79.....OA-1397/GRC+()
AN/GRC-8.....MS-116-()
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AN/GRC-8.....MX-2437/G
AN/GRC-8.....MX-2438/G
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AN/GRC-8.....MX-2533/G
AN/GRC-8.....MX-2534/G
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AN/GRC-8()....AT-724()/VR
AN/GRC-8()....AT-725()/VR
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AN/GRC-80.....AT-412/TRC
AN/GRC-80.....AT-414/TRC
AN/GRC-80.....AT-566/GRC+()
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AN/GRC-80.....OA-1393/GRC+()
AN/GRC-80.....OA-1397/GRC+()
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AN/GRC-81.....AT-413/TRC
AN/GRC-81.....AT-414/TRC
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AN/GRC-81.....OA-1395/GRC+()
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AN/GRC-82.....AT-413/TRC
AN/GRC-82.....AT-414/TRC
AN/GRC-82.....OA-1389/GRC+()
AN/GRC-82.....OA-1395/GRC+()
AN/GRC-83.....AS-640/TRC
AN/GRC-83.....AT-413/TRC
AN/GRC-83.....AT-414/TRC
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AN/GRT-5+()....AS-865()/FRC-44
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AN/GRT-5+()....AS-876/FRR-52+()
AN/GRT-5+()....AS-876/GRC+()
AN/GRT-5+()....OA-1364/FRR-52+()
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AN/GRT-501.....AT-5019/GR
AN/GRT-502.....AS-5014/GR
AN/GRT-502.....AT-5019/GR
AN/GRW-1.....AS-252()/GRW-1
AN/GSC-6.....AT-865/GRT
AN/GSC-6.....AT-866/GRR
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AN/GSS-1.....AT-858/TPS
AN/GSS-1.....AT-862/TPS
AN/GSS-1.....OA-1227/TPS
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AN/MPG-1.....AS-944/MPG-1
AN/MPM-10.....AT-88/U
AN/MPM-5.....AT-64/U
AN/MPM-7.....AT-70/U
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AN/MPN-1.....AS-40(*)/MPN-1
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AN/MPN-1.....AT-21(*)/MPN-1
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AN/MPN-1.....AT-314/MPN
AN/MPN-1A.....AS-354/MPN-1A
AN/MPN-1A.....AS-75()/MPN-1A
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AN/MPN-1C.....AS-38(*)/MPN-1
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AN/MPN-1C.....AS-40(*)/MPN-1
AN/MPN-1C.....AS-41()/MPN-1
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AN/MPN-5....AT-411/MPN-5+(1)
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AN/MPQ-10....AT-357/MPQ-10
AN/MPQ-10-T1+(1)....AS-600/MPQ-10-T1+(1)
AN/MPQ-10B....AS-701/MPQ-10B
AN/MPQ-10B....AT-499/MPQ-10B
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AN/MPS-19....AT-597/MPS-19
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AN/MRQ-2....AS-93/MRQ-2
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AN/PRC-9.....AN/PRA-2(XE-1)
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AN/PRD-1().....AT-301()/PRD-1
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AN/TLR-1().....OA-713()/GL
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AS-5029/MRC-505 ..... SHF
AS-505(*)/GR ..... VHF , UHF
AS-509( )/PRR-2 ..... UHF
AS-51/MRQ-2 ..... MF , HF
AS-512/MR+( ) ..... HF
AS-52( )/TRC-8 ..... VHF
AS-550( )/TRC-24 ..... VHF , UHF
AS-551( )/TRC-24 ..... VHF
AS-554(*)/TRC-29 ..... UHF
AS-558( )/TRC ..... VHF
AS-559( )/TRC ..... VHF
AS-574/URR+( ) ..... HF , VHF
AS-576/FRC+( ) ..... VHF
AS-610/G+( ) ..... UHF
AS-612(*)/U ..... HF , VHF
AS-613/TR+( ) ..... UHF
AS-620/GRC-10 ..... VHF
AS-632/TRC-32+( ) ..... VHF , UHF
AS-640/TRC ..... VHF , UHF
AS-642( )/GRC ..... VHF , UHF
AS-643( )/GRC ..... VHF , UHF
AS-660/FRC ..... UHF
AS-661/FRC ..... UHF
AS-662/FRC ..... UHF
AS-663/FRC ..... UHF
AS-666/TRT-2C+( ) ..... HF , VHF
AS-682/TRC-27 ..... SHF
AS-71/SPT-2 ..... UHF
AS-726(*)/GRC ..... VHF , UHF
AS-727/GRC+( ) ..... VHF
AS-755/GRC+( ) ..... UHF
AS-756( )/GRC ..... VHF
AS-759/FRC-36 ..... VHF
AS-768/GR ..... VHF , UHF
AS-778/FRC+( ) ..... LF , MF
AS-78( )/MPN-1A ..... HF
AS-787/GR ..... SHF
AS-79( )/MPN-1A ..... VHF
AS-793( )/MRN-13 ..... LF , MF
AS-795/MRT ..... MF , HF
AS-805/MSQ-4 ..... VHF
AS-81/GR .....
AS-813/TRC-47+( ) ..... VHF
AS-837( )/G ..... MF
AS-842/FRC ..... MF , HF

Communications (continued)

AS-859/FRA-21 ..... UHF
AS-870( )/FRC ..... UHF
AS-882( )/G ..... VHF , UHF
AS-91/MRQ-2 ..... HF
AS-92/MRQ-2 ..... MF , HF
AS-93/MRQ-2 ..... MF , HF
AS-94/MRC-1 ..... MF , HF
AS-95/MRC-1 ..... MF , HF
AS-954/FRC-47 ..... UHF
AS-970( )/G ..... UHF
AS-99( )/TRC-1 ..... VHF
AS-992/GR+( ) ..... VHF , UHF
AT-101(*)/GRC-9 ..... HF
AT-102(*)/GRC-9 ..... MF , HF
AT-129(*)/VR ..... HF , VHF
AT-143/MPN-3 .....
AT-166(*)/GRR-1 ..... VHF
AT-18/CRC-1 .....
AT-197/GR ..... VHF , UHF
AT-208(*)/URC-5 ..... VHF , UHF
AT-22/MPN-1 ..... VHF
AT-222( )/VRC-2 ..... VHF
AT-228( )/VRC-11 ..... VHF
AT-237/GRC-13 ..... MF , HF
AT-243/U ..... VHF
AT-249/GRD ..... VHF
AT-256(*)/ARC ..... VHF , UHF
AT-271(*)/PRC ..... HF , VHF
AT-272(*)/PRC ..... HF , VHF
AT-278/UR ..... LF , MF
AT-279/UR .....
AT-281/VRC ..... VHF
AT-282/GPN ..... LF , MF
AT-283/GPN ..... VHF
AT-285/GPN ..... MF , HF
AT-308( )/GRC .....
AT-310( )/GPN ..... HF
AT-320( )/FRC-20 ..... VHF
AT-332/GRC-30+( ) ..... VHF
AT-333/GRC-30+( ) ..... VHF , UHF
AT-334/GRC-30+( ) ..... VHF , UHF
AT-336( )/TRC ..... VHF
AT-337( )/TRC ..... VHF
AT-339( )/PRC ..... VHF
AT-340( )/PRC ..... HF , VHF
AT-343( )/URC ..... MF , HF
AT-348( )/PRC ..... HF , VHF
AT-380( )/TRC .....
AT-387( )/PRC-14 ..... VHF , UHF
AT-412/TRC ..... VHF
AT-413/TRC ..... VHF , UHF
AT-414/TRC ..... VHF , UHF
AT-427/FRC-31 ..... VHF
AT-438/GR ..... VHF
AT-441/MRC .....
AT-462/MRC-20 ..... VHF
AT-463/MRC-20 ..... UHF
AT-479( )/VRC ..... VHF , UHF
AT-486/G ..... VHF
AT-496(*)/G ..... VHF
AT-5001/PRC ..... VHF
AT-5004/TRC ..... MF , HF
AT-5005/G ..... LF , MF
AT-5019/GR ..... VHF
AT-503/URR+( ) ..... HF , VHF
AT-530/GR ..... MF , HF
AT-532/VR+( ) ..... HF , VHF
AT-534(XN-1)/GRC ..... SHF
AT-55/MRQ-2 ..... MF , HF
AT-552/URM-42 ..... MF , HF
AT-56/MRQ-2 ..... HF
AT-566/GRC+( ) ..... UHF
AT-57/MRQ-2 ..... MF , HF
AT-58/MRQ-2 ..... MF , HF
AT-588/TRC-42 ..... VHF
AT-59/TRC-7 ..... VHF
AT-633( )/TRC ..... MF , HF
AT-642/FR ..... LF , MF
AT-644( )/GR .....
AT-671/VRC-32 ..... VHF
AT-673/PRC-33 ..... VHF
AT-691/URC-19 ..... HF
AT-692/URC-19 ..... HF
AT-723( )/VR ..... VHF
AT-724( )/VR ..... VHF

EQUIPMENT FUNCTION INDEX (continued)

Communications (continued)

AT-725( )/VR.....HF,VHF
AT-726( )/VR.....HF,VHF
AT-727( )/VR.....VHF,UHF
AT-729( )/G.....VHF
AT-731/G.....VHF
AT-738/FRA-21.....UHF
AT-739/U.....VHF
AT-747/FRC+( ).....UHF
AT-748/VRC.....VHF,UHF
AT-751/FRA-26+( ).....UHF
AT-752/FRA-26+( ).....UHF
AT-758/FRC-39+( ).....UHF
AT-770/PRC-22+( ).....VHF,UHF
AT-771/PRC-22+( ).....VHF,UHF
AT-778/FRC-56+( ).....UHF
AT-791( )/G.....VHF
AT-797/FRC-39.....UHF
AT-803( )/VR.....VHF,UHF
AT-804/PRC.....VHF
AT-806/FRC-39.....UHF
AT-816/VRC.....VHF
AT-821/FRC-56+( ).....UHF
AT-827/FRC-56+( ).....UHF
AT-837/TRC.....MF,HF
AT-841/VRC.....VHF
AT-842/FRC-58.....VHF
AT-844/URC-33+( ).....HF
AT-853/FRC-59.....VHF
AT-854/FRC-47.....UHF
AT-865/GRT.....MF,HF
AT-866/GRR.....MF,HF
AT-869( )/G.....VHF
AT-870( )/G.....VHF
AT-880( )/U.....VHF,UHF
AT-892/PRC.....VHF
AT-898/G.....MF,HF
AT-903/G.....UHF
AT-904/GR.....HF,VHF
AT-908/TRC-66.....
AT-909/TRC-66.....SHF
AT-912/VR.....VHF
AT-934/VRC.....VHF
AT-963/VRC.....VHF
AT-964/FRC.....VHF
CP-12.....
CP-13.....
MK-264/U.....MF,HF
MK-89/URN-5.....MF
MS-116-( ).....
MS-117-( ).....
MS-118-( ).....
MS-49.....MF,HF
MS-50.....MF,HF
MS-51.....MF,HF
MS-52.....MF,HF
MS-53.....MF,HF
MS-54.....
MX-2435/G.....
MX-2436/G.....
MX-2437/G.....
MX-2438/G.....
MX-2439/G.....
MX-2533/G.....
MX-2534/G.....
MX-749/FRR.....MF,HF
MX-765/FR.....LF,MF
MX-852( )/MRC-2.....MF,HF
MX-854(*)/FR.....HF,VHF
OA-1378/GRC.....SHF
OA-1389/GRC+( ).....VHF,UHF
OA-1391/GRC+( ).....VHF
OA-1393/GRC+( ).....VHF
OA-1395/GRC+( ).....VHF,UHF
OA-1397/GRC+( ).....UHF
OA-1460/FRC+( ).....UHF
OA-1657/FRC-47.....UHF
OA-1706/FRC-39.....UHF
OA-1885/FRC-62.....VHF
OA-2021( )/GRC.....VHF
OA-237/GR+( ).....VHF,UHF
OA-238/GR+( ).....VHF,UHF
OA-249/GRC-10.....VHF
OA-288( )/TRC-29.....UHF
OA-291/GRC-30+( ).....VHF,UHF
OA-298/TRC.....VHF

Communications (continued)

OA-299( )/TRC.....VHF
OA-314/GRC.....VHF
OA-796( )/MRC-45.....VHF
RC-153-(*).....VHF
RC-292-( ).....HF,VHF
RC-63.....HF,VHF
RC-81-A.....VHF
RC-81-C.....VHF
66010.....MF,HF
66044(*).....VHF
66044-(*).....VHF
66080.....VHF
66081-(*).....MF,HF
66102.....
66119.....VHF
66120.....VHF
66150.....VHF

Countermeasure

AN/GLA-13.....HF,VHF,UHF
AN/GLA-3(XE-1).....VHF,UHF
AN/TLA-2( ).....UHF,SHF
AN/TLA-7.....HF,VHF,UHF
AS-1003/ML.....VHF
AS-121/GR.....HF,VHF,UHF
AS-432( )/UL.....VHF,UHF
AS-433( )/UL.....UHF
AS-583( )/U.....UHF
AS-64( )/GRC.....VHF,UHF
AS-695( )/TLR.....UHF,SHF
AS-791( )/TLR-8.....
AS-884( )/G.....UHF,SHF
AS-916/GPO-T1A+( ).....UHF,SHF
AT-605(XE-1)/GL.....VHF
AT-606(XE-1)/GL.....VHF,UHF
AT-607(XE-1)/GL.....UHF
AT-608(XE-1)/GL.....VHF
AT-957/FPS-26.....
AT-958/FPS-26.....
AT-959/FPS-26.....
OA-1315( )/GL.....VLF,LF,MF,HF
OA-1582/TLR-11+( ).....VHF,UHF
OA-2691/FPS-26.....

Countermeasures, Direction Finding

..AN/TLR-15.....SHF,EHF
AN/GLA-4(*).....UHF,SHF
AN/PRA-2(XE-1).....HF,VHF
AN/PRA-3(XE-1).....HF,VHF
AN-202.....MF,HF
AN-203.....MF,HF
AS-169/GR.....LF,MF
AS-4(*)/GR.....MF,HF
AS-514/URD-4+( ).....VHF,UHF
AS-536/PRD-1+( ).....LF,MF,HF
AS-595/GR+( ).....LF,MF
AS-798/FLR-2.....VHF
AS-811(*)/GL.....UHF,SHF
AS-812(*)/GL.....SHF
AS-841( )/GL.....SHF
AS-846( )/GL.....UHF,SHF
AT-27/GR.....MF
AT-28/GR.....HF
AT-29/GR.....HF
AT-30/GR.....HF
AT-426/U.....HF,VHF,UHF
AT-431/URM-37.....
AT-432/URM-37.....
AT-433/URM-37.....
AT-434/URM-37.....
AT-435/URM-37.....
AT-69/GR.....LF
AT-71/GR.....LF
AT-72/GR.....LF
AT-73/GR.....MF
AT-74/GR.....MF
AT-75/GR.....MF
AT-76/GR.....MF,HF
AT-77/GR.....HF
AT-78/GR.....HF
AT-784( )/PRC.....VHF
OA-715( )/GL.....UHF,SHF
RC-223-(*).....MF,HF

EQUIPMENT FUNCTION INDEX (continued)

Countermeasures, Direction Finding (continued)

RC-301 ..... MF, HF
66054 ..... MF, HF
66109 ..... UHF
66110 ..... UHF
66111 ..... VHF
66112 ..... VHF
66113 ..... UHF
66114 ..... UHF
66115 ..... VHF
66116 ..... UHF
66117 ..... UHF
66148(*) ..... VHF
69046 ..... LF, MF

Countermeasures, Jamming

*M2909 ..... UHF
*M2912 ..... UHF
*M2913 .....
*M2915 ..... UHF
*5026 ..... VHF
AN/GLA-3(XE-2) ..... VHF
AS-145( )/SPT-6 ..... UHF
AS-236(*)/SPT ..... UHF
AS-263/UPT ..... VHF, UHF
AS-49/TPT-1 ..... VHF
AS-50/TPT-1 ..... VHF
AS-887(XE-1)/GLT ..... HF, VHF
AS-93/MRQ-2 ..... MF, HF
AT-318/GL ..... VHF
AT-49(*)/APR-4 ..... VHF, UHF, SHF
AT-57/MRQ-2 ..... MF, HF
AT-58/MRQ-2 ..... MF, HF
AT-605(XE-2)/GL ..... VHF
AT-608(XE-2)/GL ..... VHF
66AJY ..... UHF
66AKJ ..... VHF
66AKL ..... VHF
66AKM ..... VHF, UHF
66ALD ..... VHF
66ALR ..... VHF, UHF
66ALS ..... VHF, UHF
66ALT ..... UHF
66ALU ..... UHF

Countermeasures, Monitoring

**AN/TLR-15 ..... SHF, EHF
*M2414 ..... UHF
AN-169 .....
AN-170 .....
AN-202 ..... MF, HF
AN-203 ..... MF, HF
AN-45-(*) ..... LF, MF, HF, VHF
AN-76-A ..... LF, MF
AS-631(XE-3)/U ..... HF, VHF
AS-736( )/GL ..... UHF, SHF
AS-737( )/GL ..... SHF
AS-738( )/GL ..... SHF
AT-318( )/TLR ..... VHF
AT-319( )/TLR ..... UHF
AT-429(*)/U ..... UHF
AT-431/URM-37 .....
AT-432/URM-37 .....
AT-433/URM-37 .....
AT-434/URM-37 .....
AT-435/URM-37 .....
AT-469(*)/GR ..... UHF
AT-477/U ..... HF, VHF
AT-49(*)/APR-4 ..... VHF, UHF, SHF
AT-678/TRM-6 ..... UHF, SHF
AT-679/TRM-6 ..... UHF
AT-680/TRM-6 ..... UHF, SHF
AT-681/TRM-6 ..... SHF
AT-682/TRM-6 ..... SHF
AT-683/TRM-6 ..... SHF
OA-713( )/GL ..... UHF, SHF
RC-154-(*) ..... HF, VHF
RC-223-(*) ..... MF, HF
RC-281-( ) ..... VHF, UHF
RC-301 ..... MF, HF
66084 ..... VHF

Countermeasures, Search

AN/GLA-4(*) ..... UHF, SHF
AN/GRA-4 ..... MF, HF
AS-1007/TLR ..... HF
AS-1008/TLR ..... HF, VHF
AS-541(*)/U ..... VHF
AS-542(*)/U ..... VHF
AS-543(*)/U ..... VHF, UHF
AS-544(*)/U ..... UHF
AS-56/SPR-1 ..... VHF
AS-57/SPR-1 ..... VHF, UHF
AS-583/U ..... UHF
AS-588/U ..... UHF, SHF
AS-811(*)/GL ..... UHF, SHF
AS-812(*)/GL ..... SHF
AS-841( )/GL ..... SHF
AS-846( )/GL ..... UHF, SHF
AT-153(XE-3)/U ..... SHF
AT-154(XE-3)/U ..... SHF
AT-156(XE-3)/U ..... SHF
AT-428/U ..... UHF
AT-49(*)/APR-4 ..... VHF, UHF, SHF
AT-551/U ..... UHF, SHF
AT-552/U ..... SHF
AT-553(*)/U ..... SHF
OA-463(XE-1)/TLR-1 ..... HF, VHF, UHF, SHF
OA-497(*)/TLR-1 ..... MF, HF, VHF, UHF, SHF
OA-715( )/GL ..... UHF, SHF

Direction Finding

ANNULAR SLOT DF ..... UHF
AN-105-( ) ..... HF, VHF
AN-190 ..... HF
AN-[illegible]-(*) .....
AN-[illegible]-(*) ..... LF, MF, HF, VHF
AS-1019/TRD ..... VHF
AS-157/CRA-1 ..... VHF
AS-204/CRD-3 ..... LF, MF
AS-343( )/URR ..... LF, MF, HF
AS-359/MKD-8+( ) ..... VHF
AS-410(*)/URD-2 ..... VHF
AS-438/GRD ..... HF
AS-439/GRD ..... VHF
AS-440/GRD ..... HF
AS-449(*)/GRD ..... VHF, UHF
AS-490/TRD-7 ..... VHF
AS-533/GR ..... MF, HF
AS-575/GRD-5+( ) ..... VHF
AS-648( )/TRD ..... MF, HF
AS-649( )/TRD ..... HF
AS-681/TRD-10+( ) ..... HF, VHF
AS-792/GRD+( ) ..... VHF, UHF
AS-800( )/TRD-11 ..... VHF
AS-801( )/TRD-11 ..... VHF
AS-873( )/MRD-14 ..... VHF
AT-193(*)/U ..... VHF
AT-286( )/GRC ..... HF
AT-287( )/GRC ..... HF, VHF
AT-288( )/GRC ..... VHF
AT-297/TRD-4 ..... MF, HF
AT-301( )/PRD-1 ..... HF
AT-422( )/URD-1X+( ) ..... LF, MF
AT-426/U ..... HF, VHF, UHF
AT-464( )TRD-10 ..... HF, VHF
AT-465( )/TRD-10 ..... HF, VHF
AT-516/URM-6C ..... LF
AT-517/URM-6C ..... VLF
AT-754/FRD-8+( ) ..... MF, HF
CP-17-A .....
CP-19 ..... HF
LP-19-A ..... VHF, UHF
MX-1169/GRD .....
OA-1452( )/PRD ..... HF, VHF
OA-1528( )/TRD-3 ..... VLF, LF
RC-153-(*) ..... VHF
RC-300 .....
66056 ..... LF, MF
69006-A ..... LF, MF
69077 ..... MF, HF

EQUIPMENT FUNCTION INDEX (continued)

Fire Control

- MARK 25, MOD 6A ..... SHF
- AN-141-(*) ..... UHF
- AN-192 .....
- AN-193 ..... SHF
- AN-194 ..... SHF
- AN-205 ..... SHF
- AN-206 ..... SHF
- AS-131/CPS-5( ) ..... UHF
- AS-173/MPG-1 ..... SHF
- AS-184(*)/TPS-10 ..... SHF
- AS-212(*)/CPS-4 ..... UHF
- AS-344/MPG-1 ..... SHF
- AS-345(*)/TPG-2 .....
- AS-451/CPS-6B+( ) ..... UHF, SHF
- AS-452/CPS-6B ..... UHF, SHF
- AS-453/CPS-6B ..... UHF, SHF
- AS-472/GP ..... UHF
- AT-136(*)/TPG-2 .....
- AT-198/CPS-6B ..... UHF, SHF
- AT-199/CPS-6B ..... UHF, SHF
- AT-591/CPS-6B ..... UHF, SHF
- AT-859/TPG-4 ..... SHF
- AT-860/TPG-4 ..... SHF
- MARK 21, MOD 1, UNIT 1A ..... SHF
- MARK 22, MOD 0, UNIT 1D ..... SHF
- MARK 23, MOD 0, UNIT 1G ..... SHF
- 66AMM ..... UHF
- 7682310 ..... SHF
- 7621595 ..... SHF
- 7621808 ..... SHF
- 7622168 ..... SHF
- 8005306 ..... SHF

Guidance

- AS-1021/UPM-52A ..... SHF
- AT-781/U ..... UHF
- AT-782/U ..... UHF

Guidance, Beamrider

- MARK 25, MOD 6A ..... SHF
- MARK 21, MOD 1, UNIT 1A ..... SHF
- MARK 22, MOD 0, UNIT 1D ..... SHF
- MARK 23, MOD 0, UNIT 1G ..... SHF

Guidance, Command

- OA-1333/MSW-2 .....
- OA-1334/MSW-2 .....

Guidance, Quasi-Active Homing

- AT-238( )/GPQ ..... UHF
- AT-239( )/GPQ ..... UHF
- AT-240( )/GPQ ..... UHF
- AT-241( )/FPQ-1 ..... UHF

Guidance, Surface Reference

- AT-149(*)/UPN ..... UHF

Height Finding

- AS-1080/FPN-40 ..... SHF
- AS-184(*)/TPS-10 ..... SHF
- AS-212(*)/CPS-4 ..... UHF
- AS-218/CPS-6+( ) ..... UHF, SHF
- AS-219/CPS-6+( ) ..... UHF
- AS-403(*)/MPS-4 ..... SHF
- AS-866/FPN-33 ..... SHF
- AS-867/FPN-33 ..... SHF
- AS-895/MPS-16 ..... SHF
- AT-311/TPS-10D ..... SHF
- AT-312/TPS-10D ..... SHF
- AT-374/FPS-6 ..... UHF
- AT-375/FPS-6 ..... UHF
- AT-713/MPS-16 ..... SHF
- AT-714/MPS-16 ..... SHF
- AT-873/FPS-6B ..... UHF
- OA-1196/MPS-16+( ) ..... SHF
- OA-1368/FPN-33 ..... SHF
- OA-2035/FPS-6A ..... UHF
- OA-2040/FPS-6B ..... UHF
- OA-2666/FPN-40 ..... SHF

Height Finding (continued)

- OA-375/TPS-10D+( ) ..... SHF
- OA-389/FPS-6 ..... UHF
- OA-984/MPS-16+( ) .....

IFF ("Identification, friend or foe")

- AN/GPA-24A ..... UHF
- AN/GPA-66(*) ..... UHF
- AN/UPA-22(*) ..... UHF
- AN/UPA-23(*) ..... UHF
- AN-128 ..... VHF
- AN-147-(*) ..... VHF
- AN-189 ..... VHF
- AS-1052( )/FPS ..... UHF
- AS-1063/FPS-30 .....
- AS-134/TPX ..... VHF
- AS-160/TPN-2 ..... VHF
- AS-171( )/UP ..... SHF
- AS-210( )/CPX ..... VHF
- AS-257( )/GPX-2 ..... VHF
- AS-295(*)/UP ..... UHF
- AS-297/TPX .....
- AS-297( )/TPX .....
- AS-5012( )/UP ..... UHF
- AS-548/TPS-1D ..... UHF
- AS-619/SPS-10 ..... UHF, SHF
- AS-637/GPX+( ) ..... UHF
- AS-673/TPS-1E ..... UHF
- AS-807( )/GPS ..... UHF
- AS-845( )/GPX ..... UHF
- AS-847/FPS ..... UHF
- AS-883/GPX+( ) ..... UHF
- AS-904( )/UPX ..... UHF
- AS-905/UPX ..... UHF
- AS-936/SPS-10B ..... UHF, SHF
- AS-937( )/GP ..... UHF
- AS-964/GPN-*( ) ..... UHF
- AT-309/GPX+( ) ..... UHF
- AT-344/TPX-21+( ) ..... UHF
- AT-352/UPA-22 ..... UHF
- AT-352/UPA-22(*) ..... UHF
- AT-353(*)/UPA-23 ..... UHF
- AT-398( )/GPX-11 ..... UHF
- AT-399(*)/GPX-11 ..... UHF
- AT-400(*)/GPX-11 ..... UHF
- AT-858/TPS ..... UHF
- AT-862/TPS ..... UHF
- AT-867/GPN+( ) ..... UHF
- AT-868/GPN ..... UHF
- AT-914/UPX-4 ..... UHF
- MK-269/GPX-8 ..... UHF
- MK-271/GPX-9 ..... UHF
- MX-418/TPX ..... VHF
- MX-528/TPX .....
- OA-1124/FPS ..... UHF
- OA-1227/TPS ..... UHF
- OA-1323(XW-1)/GPS ..... VHF, UHF
- OA-373A/GPN ..... UHF
- 66AWG ..... VHF

Meteorological Measurement

- AN-32 .....
- AS-11(*)/FMQ-1 ..... VHF
- AS-178( )/TMR ..... VHF
- AS-223( )/GMQ-5 ..... VHF
- AS-342( )/CRD-1 ..... UHF
- AS-389/FMQ-2 ..... UHF
- AS-462(*)/GMD-1 ..... UHF
- AS-476/SMD ..... UHF
- AS-492/FMQ-2 ..... UHF
- AS-880( )/TPQ-11 ..... EHF
- AT-114(*)/GRD-1A ..... VLF
- AT-135(*)/CRD-1 .....
- AT-173(*)/CPS-9 ..... SHF
- AT-266( )/TPQ-6 ..... EHF
- AT-267( )/TPQ-6 ..... EHF
- AT-327( )/TPQ-6 ..... EHF
- AT-328( )/TPQ-6 ..... EHF
- AT-716/GRD+( ) .....
- AT-84/GMQ-5 ..... HF
- AT-85/GMQ-5 ..... VHF
- AT-915/TPQ-11 .....
- AT-916/TPQ-11 .....

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AS-1001/TPN-12 ..... SHF
AS-1025/TPN-12 ..... SHF
AS-130/CPN ..... MF
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AS-452/CPS-6B ..... UHF, SHF
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AS-504( )/FPN ..... LF
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AS-633( )/CPN-4 .....
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AS-683/MRN-7+( ) ..... VHF
AS-684/MRN-7+( ) ..... VHF
AS-749/FRN+( ) ..... LF
AS-769/TRN+( ) ..... MF
AS-784/TRN ..... MF
AS-808( )/FRN ..... SHF
AS-83/PPN-1A ..... VHF
AS-9/CPN-3 ..... SHF
AS-951/TRN ..... MF
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AS-966/GRA-47 ..... UHF
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AT-199/CPS-6B ..... UHF, SHF
AT-367( )/FRN ..... LF
AT-389( )/FRN-17 ..... VHF
AT-472/MRN-7 ..... VHF
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AT-591/CPS-6B ..... UHF, SHF
AT-843/GRN ..... LF, MF
AT-876/FPN-34+( ) ..... UHF
AT-877/FPN-34+( ) ..... UHF
AT-899/TPN-12 ..... SHF
AT-910/TPN-12 ..... SHF
MX-1103/FR .....
MX-1248/FRN-12A .....
MX-1438/MRN-10 .....
OA-2231/TPN-12 ..... SHF
OA-2232/TPN-12 ..... SHF

Navigation, Direction Finding

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AS-160/TPN-2 ..... VHF
AS-30/CPA-1+( ) ..... VHF
AS-437( )/CPN-4 ..... VHF
AS-514/URD-4+( ) ..... VHF, UHF
AS-85/CRN-4 ..... MF
AT-236( )/GRD ..... VHF
AT-249/GRD ..... VHF
AT-339( )/PRC ..... VHF
AT-340( )/PRC ..... HF, VHF
AT-648(*)/TRN-3 ..... MF
OA-1883/URN-3 ..... UHF

Navigation, Surface Reference

*UHF DUAL FAN MARKER ..... VHF
*1-2028 ..... HF, VHF
AN/GRA-40(XN-1) ..... MF
AN-132 ..... LF, MF
AN-33 ..... LF, MF
AN-34 ..... LF, MF
AN-95-A .....
AS-102/CRN-11 ..... LF, MF
AS-1088/TRN ..... MF
AS-119/CPN-6 ..... SHF
AS-171( )/UP ..... SHF
AS-235( )/UPN-4 ..... SHF
AS-241( )/UPN-3 ..... SHF
AS-255/CRN-12+( ) ..... MF

Navigation, Surface Reference (continued)

AS-258( )/CPN ..... MF
AS-329(*)/FRN-5 ..... LF
AS-414/FPN ..... LF
AS-415/FPN ..... LF
AS-447/FPN ..... LF
AS-454/FPN-13 ..... SHF
AS-458/FPN ..... LF
AS-470/FRN-12 ..... VHF
AS-471/FRN-12 ..... VHF
AS-494/FRN-12A ..... VHF
AS-499/UPN ..... SHF
AS-502/TPN+( ) ..... SHF
AS-608( )/TRN-6 ..... UHF
AS-64/PPN-2 ..... VHF
AS-685/URN-3 ..... UHF
AS-686/URN-3 ..... UHF
AS-72( )/CPN-8 ..... SHF
AS-73( )/MPN-2 ..... VHF
AS-793( )/MRN-13 ..... LF, MF
AS-80( )/CPN-8 ..... SHF
AS-840( )/FRN ..... SHF
AS-891/URN ..... UHF
AS-892/URN ..... UHF
AT-16/TPN-1 .....
AT-176(*)/AP ..... VHF, UHF
AT-31( )/CPN-7 ..... VHF
AT-372/FRN-12A ..... VHF
AT-381/FRN-12A ..... VHF
AT-384/FRN-12A ..... VHF
AT-538/TPN ..... SHF
AT-539/TPN ..... SHF
AT-601( )/TRN ..... VHF
AT-602( )/TRN ..... VHF
AT-621/FRN ..... VHF
AT-7/CRN-5 ..... VHF
AT-757( )/PRN ..... VHF
HK-89/URN-5 ..... MF
OA-591/URN-3+( ) ..... UHF
OA-592/URN-3 ..... UHF
66036 ..... VHF
66037 ..... VHF

Radar Beacon

AT-149(*)/UPN ..... UHF
AT-358( )/U ..... UHF
66ABS ..... VHF
66AEY-(*) ..... VHF, UHF

Remote Control

AN-129 ..... VHF
AS-149/TRT-1 ..... HF, VHF
AS-240/TRR-2 ..... HF, VHF
AS-252( )/GRW-1 ..... VHF
AS-399( )/FRN-11 ..... LF, MF
AS-969/TPW-1+( ) ..... SHF
AT-6/VRW-1 ..... VHF
AT-715/ARW-66 ..... UHF
AT-893/GRN ..... VHF, UHF
AT-911/USD-1 ..... UHF

Search

AN/GPA-66(*) ..... UHF
AS-1062/FPS+( ) ..... UHF, SHF
AS-1063/FPS-30 .....
AS-1077( )/MPS-34 ..... SHF
AS-113/TPL-1 ..... UHF
AS-467/CPS-10 ..... SHF
AS-5001/FPS-501 ..... SHF
AS-5002(*)/MPS-501 ..... UHF
AS-5005/TPS-502 ..... SHF
AS-5006/MPS-501B ..... UHF
AS-5017/FPS-503 ..... UHF
AS-591/CPS-6B+( ) ..... UHF
AS-674/FPS-13+( ) .....
AS-807( )/GPS ..... UHF
AS-888( )/TPS-27 ..... UHF
AS-981/TPS-25+( ) ..... SHF
AT-596/MPS-19+( ) ..... UHF
AT-795/FPS-33+( ) ..... UHF
AT-808/TPS-21 .....
AT-809/TPS-21 .....
AT-905/FPS-37 ..... UHF

EQUIPMENT FUNCTION INDEX (continued)

Search (continued)

MX-696/TPS-1B•••••••••••••••••••••••••••••••••••••••UHF
OA-1323(XW-1)/GPS•••••••••••••••••••••••••••••VHF,UHF
OA-1927/FPS-16X•••••••••••••••••••••••••••••••••••••
OA-2331/FPS-37•••••••••••••••••••••••••••••••••••••UHF
66ACZ•••
66ADC•••
66AGC•••SHF
66AGG•••SHF
66AGV•••UHF
66AJD•••SHF
66AKV-(*)•••UHF

Search, Air

••AN/FPS-16(XN-2)•••••••••••••••••••••••••••••••••SHF
••MARK 29, MOD 6A•••••••••••••••••••••••••••••••••SHF
••SCR-545•••••••••••••••••••••••••••••••VHF,UHF
AN-138-(*)•••
AN-141-(*)•••••••••••••••••••••••••••••••••••••UHF
AS-104/CPS-1•••••••••••••••••••••••••••••••••••••UHF
AS-105/CPS-1•••••••••••••••••••••••••••••••••••••UHF
AS-1052()/FPS•••••••••••••••••••••••••••••••••••••UHF
AS-1079/FPN-40•••••••••••••••••••••••••••••••••••SHF
AS-1086/FPS-50(V)•••••••••••••••••••••••••••••••••
AS-1099/FPS-50(V)•••••••••••••••••••••••••••••••••
AS-113/TPL-1•••••••••••••••••••••••••••••••••••••UHF
AS-120(*)/TPS-1B•••••••••••••••••••••••••••••••••UHF
AS-131/CPS-5()•••••••••••••••••••••••••••••••••••UHF
AS-175()/TPS-3•••••••••••••••••••••••••••••••••••••
AS-184(*)/TPS-10••••••••••••••••••••••••••••••••SHF
AS-202()/TPS-3•••••••••••••••••••••••••••••••••••••
AS-218/CPS-6+()•••••••••••••••••••••••••••••UHF,SHF
AS-300/CPS-1+()•••••••••••••••••••••••••••••••••UHF
AS-317/GPN-2+()•••••••••••••••••••••••••••••••••UHF
AS-348/MPN-3+()•••••••••••••••••••••••••••••••••UHF
AS-451/CPS-6B+()••••••••••••••••••••••••••••UHF,SHF
AS-452/CPS-6B•••••••••••••••••••••••••••••UHF,SHF
AS-453/CPS-6B•••••••••••••••••••••••••••••UHF,SHF
AS-488/FPS-3•••••••••••••••••••••••••••••••••••UHF
AS-548/TPS-1D••••••••••••••••••••••••••••••••••UHF
AS-607/MPN-1B+()•••••••••••••••••••••••••LF,MF,HF
AS-650/GPN-6+()•••••••••••••••••••••••••••••••••UHF
AS-673/TPS-1E•••••••••••••••••••••••••••••••••••UHF
AS-693()/MPS•••••••••••••••••••••••••••••••••••UHF
AS-701/MPQ-10B••••••••••••••••••••••••••••••••UHF
AS-74()/TPS-3•••••••••••••••••••••••••••••••••••••
AS-8/TPS-1•••••••••••••••••••••••••••••••••••••UHF
AS-847/FPS•••••••••••••••••••••••••••••••••••••UHF
AS-866/FPN-33•••••••••••••••••••••••••••••••••SHF
AS-867/FPN-33•••••••••••••••••••••••••••••••••SHF
AS-897/UPS-1•••••••••••••••••••••••••••••••••••UHF
AS-964/GPN-4()•••••••••••••••••••••••••••••••••UHF
AT-109/UPN•••••••••••••••••••••••••••••••••••••UHF
AT-198/CPS-6B•••••••••••••••••••••••••••••UHF,SHF
AT-199/CPS-6B•••••••••••••••••••••••••••••UHF,SHF
AT-248/TPQ-1A•••••••••••••••••••••••••••••UHF,SHF
AT-251/FPS-3•••••••••••••••••••••••••••••••••••UHF
AT-386/FPS-8•••••••••••••••••••••••••••••••••••UHF
AT-392/MPS-7•••••••••••••••••••••••••••••••••••UHF
AT-396/FPS-8•••••••••••••••••••••••••••••••••••UHF
AT-499/MPQ-10B••••••••••••••••••••••••••••••••UHF
AT-567/GPS•••••••••••••••••••••••••••••••••••••UHF
AT-572/FPS-20•••••••••••••••••••••••••••••••••UHF
AT-591/CPS-6B•••••••••••••••••••••••••••••UHF,SHF
AT-604(*)/FPS-14••••••••••••••••••••••••••••••UHF
AT-623/FPS-14•••••••••••••••••••••••••••••••••UHF
AT-641/GPS-4•••••••••••••••••••••••••••••••••••UHF
AT-672/G•••••••••••••••••••••••••••••••••••••••UHF
AT-742/FPS-8+()•••••••••••••••••••••••••••••••••••
AT-783/FPS-18•••••••••••••••••••••••••••••••••UHF
AT-858/TPS•••••••••••••••••••••••••••••••••••••UHF
AT-862/TPS•••••••••••••••••••••••••••••••••••••UHF
AT-864/FPS-20•••••••••••••••••••••••••••••••••UHF
AT-867/GPN+()•••••••••••••••••••••••••••••••••UHF
AT-868/GPN•••••••••••••••••••••••••••••••••••••UHF
AT-937/FPS-49•••••••••••••••••••••••••••••••••••••
AT-961/UPS-1•••••••••••••••••••••••••••••••••••••
AT-965/UPS-1•••••••••••••••••••••••••••••••••••••
AT-966/UPS-1•••••••••••••••••••••••••••••••••••••
AT-967/UPS-1A••••••••••••••••••••••••••••••••••••
AT-968/UPS-1A••••••••••••••••••••••••••••••••••••
AT-969/UPS-1A••••••••••••••••••••••••••••••••••••
MARK 21,MOD 1,UNIT 1A••••••••••••••••••••••••SHF
MARK 22,MOD 0,UNIT 1D••••••••••••••••••••••••SHF
MARK 23,MOD 0,UNIT 1G••••••••••••••••••••••••SHF
OA-1124/FPS•••••••••••••••••••••••••••••••••••UHF

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OA-1227/TPS•••••••••••••••••••••••••••••••••••••UHF
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OA-2666/FPN-40•••••••••••••••••••••••••••••••••SHF
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OA-897(*)/FPS-14••••••••••••••••••••••••••••••••UHF
OA-959()/CPS-5D••••••••••••••••••••••••••••••••UHF
66AWG•••VHF

Search, Surface

•MILORD ANTENNA•••••••••••••••••••••••••••••••••SHF
AN-141-(*)•••••••••••••••••••••••••••••••••••••UHF
AS-309/TPQ-2+()•••••••••••••••••••••••••••••••••SHF
AS-546/MPQ-10•••••••••••••••••••••••••••••••••••UHF
AS-615/SPS-10•••••••••••••••••••••••••••••••UHF,SHF
AS-835/MPQ•••••••••••••••••••••••••••••••••••••SHF
AS-936/SPS-10B••••••••••••••••••••••••••••••UHF,SHF
AT-107/TPQ-2•••••••••••••••••••••••••••••••••••SHF
AT-108/TPQ-2•••••••••••••••••••••••••••••••••••SHF
AT-357/MPQ-10•••••••••••••••••••••••••••••••••UHF
AT-634/MPQ•••••••••••••••••••••••••••••••••••••SHF
OA-1258/MPQ-(*)•••••••••••••••••••••••••••••••••SHF
66ABU•••

Telemetering

AN/GRA-29•••••••••••••••••••••••••••••••••••••••SHF
AS-787/GR•••••••••••••••••••••••••••••••••••••••SHF
AS-882()/G•••••••••••••••••••••••••••••••VHF,UHF
AT-165(*)/UKR•••••••••••••••••••••••••••••••••VHF
AT-256(*)/ARC•••••••••••••••••••••••••••••VHF,UHF
AT-373/UKR•••••••••••••••••••••••••••••••••••••VHF
AT-781/U•••••••••••••••••••••••••••••••••••••••UHF
AT-782/U•••••••••••••••••••••••••••••••••••••••UHF

Television

AN-164•••••••••••••••••••••••••••••••••••VHF,UHF
AN-165•••UHF
AS-411()/U•••••••••••••••••••••••••••••••••••••SHF
AS-831/TK•••••••••••••••••••••••••••••••••••••SHF
AT-175()/U•••••••••••••••••••••••••••••••••••••SHF

Test

•GAIN STANDARD HORNS•••••••••••••••••••UHF,SHF,EHF
••ASC-1•••••••••••••••••••••••••••••••••••••••SHF
AB-371/U•••••••••••••••••••••••••••••••••••VHF,UHF
AN-103-(*)•••••••••••••••••••••••••••••••••••••••
AN-108-()•••••••••••••••••••••••••••••••••••••••
AN-147-(*)•••••••••••••••••••••••••••••••••••••VHF
AS-103/APM-40•••••••••••••••••••••••••••••••••SHF
AS-106/AP•••••••••••••••••••••••••••••••••••••SHF
AS-107/AP•••••••••••••••••••••••••••••••••••••SHF
AS-1074/MSQ-37•••••••••••••••••••••••••••VHF,UHF
AS-111/CRM-3•••••••••••••••••••••••••••••••••VHF
AS-122/AP•••••••••••••••••••••••••••••HF,VHF,UHF
AS-123/AP•••••••••••••••••••••••••••••••••••UHF
AS-129/AP•••••••••••••••••••••••••••••HF,VHF,UHF
AS-142/AP•••••••••••••••••••••••••••••HF,VHF,UHF
AS-147/AP•••••••••••••••••••••••••••••••••••UHF
AS-159/AP•••••••••••••••••••••••••••••••••••UHF
AS-216/AP•••••••••••••••••••••••••••••••••••UHF
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AS-253/GPX-1•••••••••••••••••••••••••••••••••VHF
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AS-385/U+()•••••••••••••••••••••••••••••HF,VHF
AS-400/UP+()•••••••••••••••••••••••••••••••••••LF
AS-474/APG•••••••••••••••••••••••••••••••••••SHF
AS-592()/GPM-14•••••••••••••••••••••••••••••••••
AS-702()/APM-77•••••••••••••••••••••••••••••••UHF
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AS-743/URM-52•••••••••••••••••••••••••••••••••SHF
AS-770()/URM-16•••••••••••••••••••••••••••••••UHF
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AS-802()/URM-91•••••••••••••••••••••••••••HF,VHF

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AS-921/URM-7+( ) ..... VHF, UHF
AS-922/URM-7+( ) ..... HF, VHF, UHF
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AT-110/U ..... VHF
AT-113/UP
AT-117/UR
AT-122/U ..... VHF
AT-137(*)/MRC-2 ..... MF, HF
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AT-152/U ..... UHF, SHF
AT-153(*)/U ..... SHF
AT-154(*)/U ..... SHF
AT-155/U ..... SHF
AT-156(*)/U ..... SHF
AT-157/U ..... SHF
AT-158/U ..... SHF
AT-159/U ..... SHF, EHF
AT-163/U ..... UHF, SHF
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AT-188(*)/U ..... VHF
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AT-204(*)/URM-6 ..... VLF, LF
AT-205(*)/URM-6 ..... VLF, LF
AT-206(*)/URM-6 ..... VLF, LF
AT-207(*)/URM-6 ..... VLF, LF
AT-211(*)/PRM-1 ..... LF
AT-212(*)/PRM-1 ..... LF, MF, HF
AT-213(*)/PRM-1 ..... LF, MF, HF
AT-226/PRM-2 ..... LF
AT-227/PRM-2 ..... LF
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AT-273(*)/UPM ..... SHF
AT-275/URM-28 ..... VHF, UHF
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AT-293/URM-30 ..... VHF
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AT-316( )/U ..... UHF
AT-331( )/UMP-13 ..... UHF
AT-368( )/GRD-6 ..... VHF, UHF
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AT-397/UPM-19B ..... UHF
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AT-421( )/UPM-47 ..... SHF
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AT-51/U ..... UHF
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AT-515/URM-6C ..... VLF, LF
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AT-521/URM-42 ..... SHF
AT-522/URM-42 ..... UHF
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AT-60/U
AT-63/UPM-2 ..... VHF, UHF
AT-64/U
AT-643/ARM-19 ..... UHF
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AT-66(*)/U ..... VHF, UHF
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AT-686/TRM-4 ..... VHF, UHF
AT-687/TRM-4 ..... VHF
AT-688/TRM-4 ..... UHF
AT-689/TRM-4 ..... VHF, UHF
AT-699/ARM-30+( ) ..... UHF
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AT-703( )/URH ..... VHF, UHF
AT-704( )/URM-2 ..... UHF
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AT-785( )/UPM-88 ..... SHF
AT-786( )/UPM-88 ..... SHF
AT-787( )/UPM-88 ..... SHF
AT-788( )/UPM-88 ..... SHF

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AT-848/URM-7 ..... HF, VHF
AT-849/URM-7 ..... VHF
AT-850/URM-7 ..... HF, VHF, UHF
AT-851/URM-7 ..... HF, VHF, UHF
AT-88/U ..... UHF, SHF
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AT-886/TRM-7+( ) ..... LF, MF, HF
AT-887/TRM-7+( ) ..... LF, MF, HF
AT-894/URM-117 ..... VHF
AT-978/URM-129 ..... VHF
MX-821/U ..... VHF
MX-822/U ..... HF, VHF
OA-1967/MPM-25 ..... SHF
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66ABP ..... VHF
66ABW ..... VHF
66ABZ ..... VHF
66ACL ..... VHF
66ACX
66ACZ
66ADF
66AHV ..... UHF, SHF
66AJG
66AMX ..... UHF, SHF
66ANB ..... UHF
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66151A ..... VHF, UHF

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AN-92-(*)
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AS-1062/FPS+( ) ..... UHF, SHF
AS-467/CPS-10 ..... SHF
AS-546/MPQ-10 ..... UHF
AS-701/MPQ-10B ..... UHF
AS-810( )/GPR ..... UHF, SHF
AS-903/FPS-16 ..... SHF
AS-912/FPS-16X ..... SHF
AS-991/URS-1 ..... UHF
AT-357/MPQ-10 ..... UHF
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AT-489/MPQ-10 ..... UHF
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AS-263/UPT ..... VHF, UHF
AS-268( )/UPT-T3
AS-300/CPS-1+( ) ..... UHF
AS-600/MPQ-10-T1+( ) ..... UHF
AT-193(*)/U ..... VHF
AT-250/UPA-T1 ..... MF
AT-542/GPQ-T1
AT-543/GPQ-T1
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13-600 ..... AS-121/GR
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14-30 ..... AS-863( )/FRC-44
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20-27.9 ..... AT-910( )/GPN
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20-39 ..... AT-725( )/VR
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20-55 ..... AT-271(*)/PRC
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20-70 ..... AS-887(XE-1)/GLT
20-88 ..... AT-477/U
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20-230 ..... AS-574/URR+( )
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20-400 ..... AT-426/U
20-1000 ..... AS-922/URM-7+( )
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25-44 ..... AT-129(*)/VR
25-50 ..... AS-612(*)/U
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25-50 ..... AT-726( )/VR
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275-1000.....AS-1089()/ML
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15-1000.....AS-129/AP
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20-1000.....AS-922/URM-7+()
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90-1100.....AT-939()/GL
100-400.....AT-208(*)/URC-9
100-400.....AT-334/GRC-30+()
100-400.....MX-821/U
100-400.....OA-291/GRC-30+()
100-400.....661918
100-600.....AT-414/TRC
100-600.....OA-1389/GRC+()
100-950.....AN-97-A
100-1000.....AT-66(*)/U
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175-550.....AS-263/UPT
190-400.....AT-176(*)/AP
200-400.....AS-921/URM-7+()
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225-400 ..... AS-805/MSQ-4
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225-490 ..... AS-1009/GR
225-600 ..... AT-880( )/U
225-1000 ..... AS-57/SPR-1
264-312 ..... AN-164
265-390 ..... 66AKM
265-930 ..... 66ALS
275-1000 ..... AS-1089( )/ML
280-920 ..... AT-606(XE-1)/GL
285-925 ..... AT-893/GRN
300- ..... AS-509( )/PRR-2
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329-335 ..... AT-35/CRN-2
329-335 ..... OA-1016/MRN-8
329-335 ..... OA-1017/MRN-8
329-335 ..... OA-491/MRN-8+( )
350-450 ..... AS-954/FRC-47
350-450 ..... AT-854/FRC-47
350-450 ..... OA-1657/FRC-47
350-1000 ..... AT-255/URM-17
350-1500 ..... AS-236(*)/SPT
375-1000 ..... AT-792/URM-17A
380-1130 ..... AS-770( )/URM-16
390-410 ..... AS-389/FMQ-2
397- ..... AN-199-(*)
400- ..... ANNULAR SLOT, DF
400-406 ..... AS-492/FMQ-2
400-430 ..... AS-123/AP
400-430 ..... AS-147/AP
400-500 ..... AN/MRA-6
400-500 ..... AT-782/U
400-500 ..... AT-948/U
400-600 ..... AN/TRC-24
400-600 ..... AS-759/GRC+( )
400-600 ..... AT-566/GRC+( )
400-600 ..... OA-1397/GRC+( )
400-850 ..... AS-433( )/UL

UHF (continued)

400-1000 ..... AT-704( )/URH-2
403- OA-2470/GMM-3
406-420 ..... AT-715/ARW-66
406-420 ..... AT-911/USD-1
406-549 ..... AT-643/ARM-19
420-460 ..... AT-781/U
435- AS-491/PPN-19
449-820 ..... AS-1092( )/FPS
450-460 ..... 66ALT
450-720 ..... AS-991/URS-1
450-1000 ..... AS-71/SPT-2
469-525 ..... AT-688/TRM-4
470-500 ..... AS-472/GP
480-500 ..... AS-5017/FPS-503
480-1200 ..... A-500
499.9- ..... AS-544(*)/U
500-920 ..... AT-238( )/GPQ
500-850 ..... AT-51/U
500-1000 ..... 66AJY
500-1050 ..... AT-469(*)/GR
500-4500 ..... AT-607(XE-1)/GL
500-1800 ..... AS-1024( )/TRD
505-680 ..... AN/TLA-2( )
515-920 ..... AT-240( )/GPQ
570-630 ..... 66AEY-(*)
580- AT-932/FPS-30
600- ..... AT-229( )/GPQ
600- ..... AT-241( )/FPQ-1
600-1050 ..... AT-903/G
625-1250 ..... AS-145( )/SPT-6
680-720 ..... 66ABL
792-916 ..... AT-846/FRA-39
795-985 ..... *GS-18129
795-985 ..... AN/FRA-21+( )
795-985 ..... AN/FRA-26
795-985 ..... AN/FRA-28+( )
795-985 ..... AS-859/FRA-21
795-985 ..... AT-738/FRA-21
795-985 ..... AT-747/FRC+( )
795-985 ..... AT-751/FRA-26+( )
795-985 ..... AT-752/FRA-26+( )
795-985 ..... AT-758/FRC-39+( )
795-985 ..... AT-797/FRC-39
795-985 ..... AT-806/FRC-39
795-985 ..... OA-1460/FRC+( )
795-985 ..... OA-1706/FRC-39
795-2400 ..... AS-858( )/FRC
790-1420 ..... *M2909
790.5-964.5 ..... AS-1082/TRA-25
790.5-964.5 ..... AS-1083/TRA-25
794-952 ..... AT-847/FRA-39
810-1385 ..... 66ALU
870-3000 ..... *M2414
930-40000 ..... GAIN STANDARD HORNS
940-2020 ..... AS-846( )/GL
940-12100 ..... AS-810( )/GPR
940-12100 ..... OA-715( )/GL
950-1150 ..... AS-295(*)/UP
950-1150 ..... AS-325/AR
950-1150 ..... AS-548/TPS-1D
950-1150 ..... AS-637/GPX+( )
950-1150 ..... AS-845( )/GPX
950-1150 ..... AT-309/GPX+( )
950-1150 ..... AT-344/TPX-21+( )
950-1150 ..... AT-399(*)/GPX-11
950-1150 ..... AT-400(*)/GPX-11
950-1150 ..... MK-269/GPX-8
950-1280 ..... AT-398( )/GPX-11
950-1350 ..... AS-548/TPS-1D
950-2000 ..... AS-583( )/U
950-2000 ..... AT-429(*)/U
950-2240 ..... AT-679/TRM-6
950-10000 ..... AT-678/TRM-6
960-1025 ..... AS-965/GRA-48
960-1250 ..... AT-592/URN-3
961.5-1213.5 ..... OA-1883/URN-3
962-1024 ..... AS-891/URN
962-1087 ..... AS-685/URN-3
962-1087 ..... OA-592/URN-3
962-1213 ..... AS-608( )/TRN-6
990-1120 ..... AS-883/GPX+( )
990-1130 ..... AS-5012( )/UP
990-1130 ..... OA-1323(XW-1)/GPS
990-1350 ..... AN/GPA-66(*)
990-1350 ..... AS-693( )/MPS

FREQUENCY INDEX (continued)

UHF (continued)

990-1990 ..... AS-807(*)/GPS
990-1990 ..... AT-386/FPS-8
990-1990 ..... AT-396/FPS-8
990-1990 ..... OA-405/FPS-8
1000- ..... AT-699/ARM-30+(*)
1000-1990 ..... AS-847/FPS
1000-1990 ..... OA-1124/FPS
1000-2000 ..... AT-428/U
1000-9000 ..... AS-216/AP
1000-9000 66113
1000-9000 66114
1000-9000 66117
1000-9000 ..... AS-811(*)/CL
1000-9700 ..... AT-941(*)/GL
1000-9000 ..... AT-737/GPQ-T+(*)
1000-6000 ..... AT-240/TPQ-1A
1000-10000 ..... AT-570/URM-42
1000-12100 ..... AN/GLA-4(*)
1001.9-1038.9 ..... AS-619/SPS-10
1001.9-1038.9 ..... AS-936/SPS-10B
1010-1110 ..... AN/GPA-24A
1010-1110 ..... AN/UPA-22(*)
1010-1110 ..... AN/UPA-23(*)
1010-1110 ..... AS-1052(*)/FPS
1010-1110 ..... AS-904(*)/UPX
1010-1110 ..... AS-905/UPX
1010-1110 ..... AS-937(*)/GP
1010-1110 ..... AS-964/GPN-4(*)
1010-1110 ..... AT-352/UPA-22
1010-1110 ..... AT-352/UPA-22(*)
1010-1110 ..... AT-353(*)/UPA-23
1010-1110 ..... AT-867/GPN+(*)
1010-1110 ..... AT-868/GPN
1010-1110 ..... AT-914/UPX-4
1010-1110 ..... MK-271/GPX-9
1010-1110 ..... MX-1261/UPA
1010-1110 ..... OA-379A/GPN
1059-1107 ..... AS-8/TPS-1
1070-1130 ..... AT-838/GPA-68+(*)
1001.9-1118.9 ..... AS-619/SPS-10
1001.9-1118.9 ..... AS-936/SPS-10B
1007.9-1213.9 ..... AS-686/URN-3
1007.9-1213.9 ..... OA-591/URN-3+(*)
1120-1990 ..... AS-548/TPS-1D
1120-1700 ..... AT-316(*)/U
1120-9400 ..... AS-771(*)/URN-16
1190-1219 ..... AS-966/GRA-47
1191-1213 ..... AS-892/URN
1215-1365 ..... AS-488/FPS-3
1215-1365 ..... AT-291/FPS-3
1219-1365 ..... AT-331(*)/UMP-13
1219-1365 ..... AT-392/MPS-7
1220-1280 ..... AS-120(*)/TPS-1B
1220-1950 ..... AS-897/UPS-1
1240- MX-596/TPS-1B
1240-1960 ..... AT-795/FPS-33+(*)
1240-1960 ..... AT-796/FPS-33+(*)
1240-19[illegible] ..... OA-1050/FPS-33+(*)
1250-1350 ..... AS-673/TPS-1E
1250-1350 ..... AT-967/GPS
1250-1350 ..... AT-972/FPS-20
1250-1350 ..... AT-641/GPS-4
1250-1350 ..... AT-858/TPS
1250-1350 ..... AT-862/TPS
1250-1350 ..... AT-864/FPS-20
1250-1350 ..... OA-1227/TPS
1280-1350 ..... AS-131/CPS-5(*)
1280-1350 ..... AT-876/FPN-34+(*)
1280-1350 ..... AT-877/FPN-34+(*)
1280-1350 ..... AT-905/FPS-37
1280-1350 ..... OA-2331/FPS-37
1290-1350 ..... OA-959(*)/CPS-5D
1950-1850 ..... AS-213(*)/TRC-5
1950-1850 ..... AS-619/TR+(*)
1979-2440 ..... *M2912
1979-2440 ..... *M2915
1400-2900 ..... 66ANB
1950-9200 ..... AS-1062/FPS+(*)
1950-9200 ..... AS-23/AP
1950-9200 ..... AS-722/URM-42
1600-1660 ..... AS-702(*)/APM-77
1600-9000 ..... AT-(XA-138)/UKR-1
1650-1900 ..... AT-596/APD-4
1650-9200 ..... AT-169/U
1660-1700 ..... AS-342(*)/CRD-1

UHF (continued)

1660-1700 ..... AS-462(*)/GMD-1
1660-1700 ..... AS-476/GMD
1680- OA-2470/GMM-3
1700-1850 ..... AM/FRC-94
1700-1850 ..... AS-610/G+(*)
1700-1850 ..... AS-660/FRC
1700-1850 ..... AS-661/FRC
1700-1950 ..... AS-662/FRC
1700-1850 ..... AS-663/FRC
1700-2400 ..... AS-1053/FRC-37
1700-2400 ..... AS-954(*)/FRC-29
1700-2400 ..... AS-970(*)/FRC
1700-2400 ..... AS-970(*)/G
1700-2400 ..... AT-747/FRC+(*)
1700-2400 ..... AT-778/FRC-56+(*)
1700-2400 ..... AT-821/FRC-56+(*)
1700-2400 ..... AT-827/FRC-56+(*)
1700-2400 ..... OA-1460/FRC+(*)
1700-2400 ..... OA-2881(*)/FRC-29
1700-2000 ..... AT-315(*)/U
1704-1846 ..... AS-1061(*)/GRC-104
1704-1846 ..... AS-1069(*)/GR
1790-2010 ..... AS-5024/GR
1790-2260 ..... AS-5022/GR
1900-4500 ..... AS-586/U
1980-4500 ..... AS-846(*)/GL
1980-4500 ..... AT-551/U
2000-4500 ..... AS-584(*)/U
2000-4500 ..... AS-589(*)/U
2000-4500 ..... AS-699(*)/TLR
2000-4500 ..... AS-796(*)/GL
2000-12100 ..... OA-719(*)/GL
2040-2260 ..... AS-5023/GR
2140-4340 ..... AT-600/TRM-6
2200-2300 ..... AT-(XA-163)/UKR-1
2300-2600 ..... AS-152(*)/PRC-3
2300-9800 ..... 66AMX
2300-4000 ..... AS-884(*)/G
2400-2700 ..... AS-199/AP
2500-2600 ..... AS-910/APM-90
2600-2990 ..... AT-152/U
2650-2990 ..... AT-397/UPM-199
2680-2940 ..... AT-149(*)/UPM
2694-2893 ..... AS-219/CPS-6+(*)
2700-2885 ..... AS-9006/MPS-9018
2700-2900 ..... AN-141-(*)
2700-2900 ..... AM-195-(*)
2700-2900 ..... AN-196-(*)
2700-2900 ..... AS-1027/TPS-27
2700-2900 ..... AS-104/CPS-1
2700-2900 ..... AS-105/CPS-1
2700-2900 ..... AS-212(*)/CPS-4
2700-2900 ..... AS-348/MPM-3+(*)
2700-2900 ..... AS-354/MPN-1A
2700-2900 ..... AS-355/MPN-3
2700-2900 ..... AS-356/MPN-3
2700-2900 ..... AS-650/GPN-4+(*)
2700-2900 ..... AS-888(*)/TPS-27
2700-2900 ..... AS-910/GP+(*)
2700-2900 ..... AS-950/TPS-27+(*)
2700-2900 ..... AT-109/UPN
2700-2900 ..... AT-260(*)/CPN-18
2700-2900 ..... AT-261/CPN-18
2700-2900 ..... AT-364(*)/CPN-18
2700-2900 ..... AT-374/FPS-6
2700-2900 ..... AT-375/FPS-6
2700-2900 ..... AT-507/CPN-18+(*)
2700-2900 ..... AT-596/MPS-19+(*)
2700-2900 ..... AT-597/MPS-19
2700-2900 ..... AT-604(*)/FPS-14
2700-2900 ..... AT-623/FPS-14
2700-2900 ..... AT-672/G
2700-2900 ..... AT-783/FPS-18
2700-2900 ..... AT-873/FPS-68
2700-2900 ..... OA-2035/FPS-6A
2700-2900 ..... OA-2060/FPS-68
2700-2900 ..... OA-389/FPS-6
2700-2900 ..... OA-397(*)/FPS-14
2700-2930 ..... AT-413/MPQ
2700-2930 ..... AT-489/MPQ-10
2700-2940 ..... AS-557/CPS-1+(*)
2700-2950 ..... AS-946/MPQ-10
2700-2950 ..... AS-600/MPQ-10-T1+(*)
2700-2950 ..... AS-701/MPQ-10B
2700-2950 ..... AT-357/MPQ-10

UHF (continued)

2700-2990 AT-499/MPQ-108
2700-3019 AS-451/CPS-6B+( )
2700-3019 AS-452/CPS-6B
2700-3019 AS-453/CPS-6B
2700-3019 AT-198/CPS-6B
2700-3019 AT-199/CPS-6B
2700-3019 AT-591/CPS-6B
2700-3100 AS-916/GPQ-T1A+( )
2700-3300 AT-789( )/UPM-88
2700-3300 AT-790( )/UPM-88
2703-3064 AS-218/CPS-6+( )
2740-2900 AS-764/MPN-5
2740-2900 AS-765/MPN-5
2740-2900 AT-265/MPN-5+( )
2740-2900 AT-268/MPN-5+( )
2740-2900 AT-411/MPN-5+( )
2780-2820 AS-38(*)/MPN-1
2780-2820 AS-39/MPN-1
2780-2820 AS-457( )/MPN-1
2780-2820 AS-964/GPN-9( )
2780-2820 AT-19/MPN-1
2780-2820 AT-313/MPN
2780-2820 AT-914/MPN
2780-2820 AT-867/GPN+( )
2780-2820 AT-868/GPN
2780-2820 OA-373A/GPN
2785-2825 66AKV-(*)
2790-2810 AS-5002(*)/MPS-501
2800- 66AGV
2800- 66AMH
2815-2910 AT-857/U
2830-2940 AT-398( )/U
2850- AT-900/U
2850-2930 AT-416/MPQ
2850-2930 AT-417/MPQ
2850-2930 AT-482/MPQ
2860-2900 AS-217/GPN-2+( )
2860-2900 AS-592/CPS-6B+( )
2900-3100 66AHV
2917.6- AS-300/CPS-1+( )
3000- $CR-545
3000- AS-77( )/MPN-1A
3000- AT-46( )/MPN-1A

SHF

AN-186
AS-235( )/UPN-4
AS-241( )/UPN-9
AS-379/FPN-1
AS-380/FPN-1
AS-381/FPN-1
AS-745/UPM-52
AT-65/UP
AT-86/U
RC-266
1.5-12100 OA-497(*)/TLR-1
9.5-12000 OA-563(XE-1)/TLR-1
200-5500 AT-49(*)/APR-4
900-12500 AIRTENNA
500-4500 AS-1024( )/TRD
500-18000 AN/TLA-2( )
930-40000 GAIN STANDARD HORNS
940-12100 AS-810( )/GPR
940-12100 OA-715( )/GL
950-10000 AT-678/TRM-6
1000-4900 AS-811(*)/GL
1000-4700 AT-941( )/GL
1000-5000 AT-737/GPQ-T+( )
1000-6000 AT-248/TPQ-1A
1000-10000 AT-573/URM-42
1000-12100 AN/GLA-6(*)
1120-5400 AS-771( )/URM-16
1550-5200 AS-1062/FPS+( )
1550-5200 AS-23/AP
1550-5200 AS-722/URM-42
1650-5200 AT-163/U
1900-4500 AS-598/U
1900-4900 AS-846( )/GL
1900-4900 AT-551/U
2000-4500 AS-584( )/U
2000-4500 AS-585( )/U
2000-4500 AS-699( )/TLR
2000-4500 AS-736( )/GL
2000-12100 OA-713( )/GL

SHF (continued)

2140-4340 AT-680/TRM-6
2200-3800 66AMX
2300-4000 AS-884( )/G
2600-3950 AT-152/U
2700-3019 AS-451/CPS-6B+( )
2700-3019 AS-452/CPS-6B
2700-3019 AS-453/CPS-6B
2700-3019 AT-198/CPS-6B
2700-3019 AT-199/CPS-6B
2700-3019 AT-591/CPS-6B
2700-3100 AS-916/GPQ-T1A+( )
2700-3300 AT-789( )/UPM-88
2700-3300 AT-790( )/UPM-88
2703-3064 AS-218/CPS-6+( )
2900-3100 66AHV
3000- 66AGG
3000-5100 66AGC
3000-11000 AT-408/UPM-46
3020-9120 AS-611( )/FPN-29
3100-3500 7621808
3100-3500 7622168
3100-3500 7622310
3100-3500 8005306
3140-3460 AS-107/AP
3256-3333 AS-171( )/UP
3256-3333 AS-221/CPN-17
3267-3330 AS-72( )/CPN-8
3267-3333 AS-80( )/CPN-8
3267-3333 AS-9/CPN-3
3300 ASC-1
3400-10000 AS-772( )/URM-16
3800-5000 AT-151/UPT
3900-4200 AT-555/APD-4
3900-6000 AT-153(*)/U
3900-6000 AT-153(XE-3)/U
3900-6200 AS-903/FPS-16
3900-6200 AS-912/FPS-16X
4190-7740 AT-681/TRM-6
4190-10000 AT-685/TRM-6
4400-5000 AS-478/GRC-15
4400-5000 AS-3029/MRC-505
4400-5000 AS-682/TRC-27
4400-5000 AT-534(XN-1)/GRC
4400-5000 AT-909/TRC-66
4400-5000 AT-970/TRC-66
4400-5000 AT-976/TRC-66
4400-5000 OA-1378/GRC
4400-5000 OA-2799/TRC-66
4460-5500 AS-841( )/GL
4460-5500 AT-552/U
4500-5500 AS-586( )/U
4500-5500 AS-737( )/GL
4500-12100 AS-812(*)/GL
4600-5000 AS-831/TX
4800-5200 AS-611( )/U
4800-5200 AT-175( )/U
5000-11000 AT-48/UP
5100-5300 AT-802/UPM-9A
5200-11000 AT-521/URM-42
5250-5310 AS-895/MPS-16
5250-5310 AT-713/MPS-16
5250-5310 AT-714/MPS-16
5250-5310 OA-1196/MPS-16+( )
5400-5500 AN/FPS-16(XN-2)
5400-5500 AT-674( )/U
5400-5500 AT-675( )/U
5400-5500 AT-787( )/UPM-88
5400-5500 AT-788( )/UPM-88
5450-5825 AS-619/SPS-10
5450-5825 AS-936/SPS-10B
5800-8500 AT-154(*)/U
5800-8500 AT-154(XE-3)/U
6125-8075 MW 4-FOOT (*) BAND
6125-8075 MW 6-FOOT (*) BAND
6275-6575 AS-403(*)/MPS-4
7050-10100 AT-155/U
7100-8000 AN/SRA-29
7100-8000 AS-737/GR
7100-8100 AS-830( )/GRA-33
7125-7475 MW 8-FOOT GL BAND
7960-10100 AT-682/TRM-6
8000-8500 AS-595( )/TRC-16
8100-12100 AT-154(*)/U
8100-12100 AT-154(XE-3)/U
8200-8400 AN/TLR-15

SHF (continued)

8400-12100 AS-758( )/GL
8460-12100 AT-841( )/GL
8460-12100 AT-559(*)/U
8500-9000 AN-193
8500-9000 AN-205
8500-9000 AS-299/AP
8500-9000 AT-859/TPG-4
8500-9600 MARK 25, MOD 6A
8500-9600 AS-1006/MPQ-29
8500-9600 AS-1097( )/ULT-T2
8500-9600 AS-1005/TPS-502
8500-9600 AS-916( )/GPG-T1A+( )
8500-9600 AT-311/TPS-10D
8500-9600 AT-312/TPS-10D
8500-9600 AT-68/UP
8500-9600 AT-785( )/UPM-88
8500-9600 AT-786( )/UPM-88
8500-9600 MARK 21, MOD 1, UNIT 1A
8500-9600 MARK 23, MOD D, UNIT 1G
8500-9600 OA-375/TPS-10D+( )
8500-9600 7621595
8500-12100 AS-587( )/U
8500-12100 AS-590( )/U
8600-9600 AT-273(*)/UPM
8600-9600 AT-421( )/UPM-47
8700-9500 AT-39/AP
8800-9600 AS-733( )/U
8900-9400 AS-499/UPN
8900-9400 AS-502/TPN+( )
8900-9400 AT-938/TPN
8900-9400 AT-939/TPN
9000-9130 AS-762/MPN-5
9000-9130 AT-262/MPN-5+( )
9000-9130 AT-409/MPN-5
9000-9160 AS-1001/TPN-12
9000-9160 AS-1025/TPN-12
9000-9160 AS-1079/FPN-40
9000-9160 AS-1080/FPN-40
9000-9160 AS-919/GPN+( )
9000-9160 AS-920/GPN+( )
9000-9160 AS-866/FPN-39
9000-9160 AS-867/FPN-39
9000-9160 AS-998( )/FPN
9000-9160 AT-290/GPN+( )
9000-9160 AT-291/GPN+( )
9000-9160 AT-899/TPN-12
9000-9160 AT-910/TPN-12
9000-9160 OA-1368/FPN-39
9000-9160 OA-2231/TPN-12
9000-9160 OA-2232/TPN-12
9000-9160 OA-234/GPN+( )
9000-9160 OA-235/GPN+( )
9000-9160 OA-2666/FPN-40
9000-9180 AS-763/MPN-5
9000-9180 AT-263/MPN-5+( )
9000-9180 AT-410/MPN-5+( )
9000-9180 AT-776/FPN-28
9000-9180 AT-777/FPN-28
9000-9600 AN-194
9000-9600 AN-206
9000-9600 AT-860/TPG-4
9003-9160 AS-467/CPS-10
9003-9160 AS-496/MPN-5
9003-9160 AS-497/MPN-5
9080- AT-901/U

SHF (continued)

9098-10000 AS-
9098-10000 AS-
9098-10000 AS-
9098-10000 AS-
9098-10000 AS-
9098-10000 AT-
9190-9300
9200-9400 AS-
9200-9400 MARK 22
9200-9530
9200-9600 AS-
9230-9404 AS-
9250-9404 AT-
9305-9415
9307-9435 AS-
9310-
9310- AS-
9310-9430
9320-9430
9395-9415
9345-9404 AS-
9375- MIL
9375- AS-
9375- AS-
9375- AS-
9375- AS-
9800-10000
10000-
10000- AS-
10000- AS-
10000- AT-
10000- AT-
10000-
12000-18000
12000-18000
12000-18000
12400-18000
12400-18000 OA-
12800-18000 AT-
15840-16160 KU-
16000- TWO-
16000-
16000-
16000- OA-
16272-16600
18000-26500
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24000- AS-
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EHF

930-40000 GAIN
8200-41000
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33000-33500
33000-36000
34512-35203 AS-
34885- AS-
34885- AS-

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