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HANDBOOK OF PROCEDURES: RELIABILITY AND MAINTAINABILITY MONITOR--ETC(U)
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LEVEL II

HANDBOOK OF PROCEDURES:

RELIABILITY AND MAINTAINABILITY MONITORING PROGRAM FOR THE MARINE AIR COMMAND AND CONTROL SYSTEM (MACCS)

December 1974

Prepared for
COMMANDANT OF THE MARINE CORPS
DEPARTMENT OF THE NAVY
under Contract M00027-74-C-0099

ARINC RESEARCH CORPORATION

(1)

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FOREWORD

The purpose of this program is to provide an independent and objective monitoring of the failure and maintenance problems of the Marine Air Command and Control System (MACCS). The specific portions of the MACCS being monitored are the Tactical Air Command Central, AN/TYQ-1; the Tactical Air Operations Central, AN/TYQ-2; the Tactical Data Communications Central, AN/TYQ-3; the Radar Set, AN/TYQ-32; and other ~~mutually agreed upon~~ equipments associated with these systems. This is being accomplished by monitoring actual performance data relative to design objectives, identifying problem areas, and recommending specific corrective action.

The program is directed toward the performance of four general tasks:

- Continued collection, processing, compiling, and entry on magnetic tape of failure and maintenance data on MACCS equipments in the field
- Comparison of spare-parts provisioning with usage data
- Identification of maintenance problem areas and documentation of recommendations for improvement, when appropriate
- Provision of other quick-reaction services as directed by the Contract Officer in connection with these tasks, as so directed and funded

This handbook provides the program documentation used to perform the Reliability and Monitoring Program for the MACCS. It consists of ~~(1)~~ a detailed description of the characteristics and features of the MACCS R&M program; ~~(2)~~ a complete list of computer instructions and data used in solving the problem for which the program is designed; ~~(3)~~ the design criteria for the subject program in functional terminology and flow charts showing control flow in the program; and ~~(4)~~ the program operating procedures necessary to perform all aspects of program operation.

This handbook is divided into four parts:

1. MACCS Failure and Maintenance Data
2. Equipment Breakdown Codes
3. MACCS Operate-Hours Data
4. MACCS Part Quantity Data

DATA COLLECTION AND PROCESSING

MACCS Failure and Maintenance Data

In order to obtain malfunction information that will permit reliability and maintainability determinations, assist in product improvement, and provide parts-usage data, a Failure and Maintenance Report (FMR) must be prepared by the equipment user every time any work is accomplished within the system regardless of how small it may seem at the time. FMRs are completed in accordance with SI 2005-15/1 ( ). At least three liaison visits a year are made to the field to ensure proper completion of the FMRs.

Upon receipt by ARINC Research, the FMR is reviewed and the reported failure is classified with regard to its effect on the system. Failures are classified as CS, severe degradation of a major function; CL, moderate degradation of a tactical operational function; CI, insignificant degradation of a tactical operational function; and CN, no degradation of a tactical operational function (i.e., test-equipment malfunctions or inoperable repair parts).

The reviewed and classified FMR is transcribed into an FMR data-encoding sheet. The FMR data-encoding-sheet information is then keypunched on computer cards (card types 1, system data; 3, repairable-parts data; and 4, consumable-parts data). These cards are used to create (and add data to) the MACCS Failure and Maintenance Data Tape. The creation, update, and listing of, as well as corrections to the MACCS Failure and Maintenance Master Data Tapes are described in Part 1. The Equipment Breakdown codes, used in completing the FMR data-encoding sheets, are listed in Part 2.

MACCS Operate-Hours Data

Equally as important as the FMRs are the Weekly Equipment Timer Reports. These reports are filled out each week on the indicated equipments and submitted to ARINC Research for use in creating and updating the Operate Hours Tapes. The information on the Weekly Timer Reports is encoded onto operate-hour encoding sheets and keypunched on computer cards. The creation and maintenance of the MACCS Operate-Hours Data Tapes are described in Part 3.

MACCS Part Quantity Data

Part-quantity cards are created from data obtained from Marine Corps Stock Lists and are used in creating and updating the Part Quantity Data Tape. This tape lists all parts required to maintain and support the equipment. The creation and maintenance of the MACCS Part Quantity Data Tapes are described in Part 4.

REPORTS

The ultimate purpose of the Master Data Tapes is to provide data for the preparation of reports covering specified time periods so that equipment performance, parts usage, and maintenance actions can be examined and evaluated. The analysis of past performance, maintenance actions, and parts usage will give indications of possible future problems that could not otherwise be discerned and corrected in time to prevent long periods of degraded system operation.

1. MACCS FAILURE AND MAINTENANCE DATA

TABLE OF CONTENTS

FAILURE AND MAINTENANCE DATA

SECTION 1. INTRODUCTION

The purpose of this procedure is to put new FMR data on tape, check for errors, make corrections, merge new data with master data tape, and list.

This procedure is accomplished on an IBM 370/135 Disk Operating System (DOS) computer utilizing 5 utility routines, 4 RPG programs and 1 COBOL program. The output of the procedure is a magnetic tape that contains all of the reported failures and maintenance on the systems (AN/TYQ-1, AN/TYQ-2, AN/TYQ-3, and AN/TPS-32) within the Marine Air Command and Control System.

Failure and Maintenance Reports (FMRs) (enclosure 1) on the equipment of the MACCS units are received daily. The data on these reports are transcribed onto the FMR Encoding Form (enclosure 2). The data on the Encoding Forms are then keypunched onto IBM cards. Any errors or omissions discovered on the magnetic tape are recorded on the MACCS Changes Encoding Form (enclosure 3) and then keypunched onto IBM cards.

SECTION 2. APPLICABLE DOCUMENTS

No Government/non-Government documents are referred to in this procedure.

SECTION 3. INPUTS

a. To put new FMR data on tape and check for errors

   (1) IBM punched cards containing failure and maintenance data

   (2) Part quantity tape in part number order

   (3) Part quantity tape in federal stock number order

b. To make corrections to the new FMR data tape

   (1) IBM punched cards containing corrections

   (2) New FMR data tape

c. To merge new FMR data with old master FMR data tape and list

   (1) New FMR data tape

   (2) Old FMR master data tape

SECTION 4. BASIC OPERATIONS

a. To put new FMR data on tape and check for errors

The IBM cards containing failure and maintenance data are converted to data on magnetic tape using the CDTAPE routine. The new data are then sorted by Equipment Identity, FMR number, card type, suffix, federal stock number and component reference symbol by use of the SRTCTS routine. This tape is then checked for errors and valid part numbers and federal stock numbers using three RPG programs, ERRCHK, PRTCHK and FSNCHK. Enclosures 4,5,6 are the logic flow, operating procedure and program listings of this procedure.

b. To make corrections to the new FMR data tape

IBM cards containing corrected data are used with the EDTAPE, a COBOL program, to make correct any errors discovered during the error check programs. Enclosures 7, 8 and 9 are the logic flow, operating procedure and program listing of this procedure.

c. To merge new FMR data with the old master data tape and list

The corrected new FMR data tape and the old master data tape are merged and sorted utilizing the MRGSRT routine.

In the event that a computer listing of either tape is desired for inspection or analysis, LSTAPE, an RPG program, is run. Enclosures 10, 11, and 12 are the logic flow, operating procedure, and program listings of this procedure.

SECTION 5. OUTPUTS

a. To put new FMR data on tape and check for errors

The output consists of the following:

(1) A magnetic tape with new FMR data

(2) A printout listing errors discovered during the ERRCHK program

(3) A printout listing invalid part numbers discovered during the PRTCHK program.

(4) A printout listing invalid federal stock numbers discovered during the FSNCHK program

b. To make corrections to the new FMR data tape

The output consists of the following:

(1) A magnetic tape containing the new FMR data with all errors corrected

(2) A printout listing invalid cards for which corrections were not made.

c. To merge new FMR data with the old master data tape and list

The output consists of the following:

(1) A new master data tape

(2) A printout listing all of the records on the master data tape (This is an optional output)

FAILURE AND MAINTENANCE REPORT
SYSTEM INFORMATION

No.

A	SYSTEM DESIGNATION	SERIAL NO.	DATE	SYSTEM NO.	TIMER READING	REPORTING ACTIVITY	
B	LEVEL 1 (MAJOR UNIT) NAME OR REF DESIG.	PART NO.		SERIAL NO.	CONN. J NO.	TIMER READING	DURATION OF FAILURE / END OF REPAIR / FIRST DETECTED — MO. DAY YR. TIME
C	LEVEL 2 NAME OR REF. DESIG.	PART NO.		SERIAL NO.	CONN. J NO.	TIMER READING	
D	LEVEL 3 NAME OR REF. DESIG.	PART NO.		SERIAL NO.	CONN. J NO.	OPER. OR V RAD.	MAINT. TIME — MEN HRS. MIN.
E	LEVEL 4 NAME OR REF. DESIG	PART NO.		SERIAL NO.	CONN. J NO.	S. RADIATE	TROUBLE SHOOTING / PART PROCUREMENT / REPAIR / FINAL CHECK—CUT
F	FUNCTION(S) AFFECTED					CODE(S)	LOGISTICS ____ DAYS ____ HRS

G	FAILURE DETECTED DURING (X)		EFFECT OF FAILURE ON (X) — SYSTEM — MAJOR UNIT		REPORTED BY
	☐ STANDBY	☐ PREVENTIVE MAINT.	INOPERATIVE	☐ ☐	
	☐ NORMAL OPER.	☐ MODIFICATION	DEGRADED	☐ ☐	REPAIRED BY
	☐ EQUIP. CHECK	☐ OTHER (EXPLAIN)	INSIGNIFICANT	☐ ☐	
	FAILURE INTERMITTENT ? YES ☐ NO ☐		OTHER (EXPLAIN)	☐ ☐	

H — FIRST INDICATION OF FAILURE

I — REMARKS

☐ PRIMARY FAILURE
☐ SECONDARY FAILURE
☐ OTHER (EXPLAIN)

J	REPLACEMENT SERIAL NO.	RELATED REPORTS	MAINT LOG REFERENCE		RELIABILITY CLASSIFICATION

ARINC Research Corp.

REPAIR INFORMATION

CARD OR ASSEMBLY DISPOSITION (X)
☐ RETURNED TO SPARES ☐ SENT TO DEPOT
☐ REINSTALLED ☐ NO FAILURE FOUND
☐ SENT TO MFR ☐ OTHER (EXPLAIN)

TEST EQUIPMENT NO.
TEST PROCEDURE NO.

No.
REPAIR ACTIVITY

ITEMS REPLACED, REPAIRED OR ADJUSTED

REPAIRED	REPLACED	ADJUSTED	REF. DESIG.	REMOVED: PART NUMBER	REMOVED: SER. NO.	REMOVED: STOCK NUMBER	REMOVED: MFR.	INSTALLED: PART NUMBER	INSTALLED: SER. NO.	DEFECT	CODE

REMARKS:

REPAIR TIME	MO.	DAY	YR.	TIME
ENDED				
STARTED				

MAINTENANCE TIME	MEN	HRS.	MIN.
TROUBLE SHOOTING			
PART PROCUREMENT			
REPAIR			
FINAL CHECK-OUT			

LOGISTICS _____ DAYS _____ HRS.

REPAIRED BY

DEFECTIVE PART(S) ISOLATED BY
☐ MANUAL ☐ AUTOMATIC

ARINC Research Corp. Form OP-83A 4-7-65

FMR DATA ENCODING FORM
WITH INSTRUCTION SHEETS

Enclosure 2

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

MARINE AIR COMMAND AND CONTROL SYSTEM

FAILURE AND MAINTENANCE REPORTS

SHEET NO. _____ OF _____

DATE _____

W. O. NO.	DATE: MONTH	DATE: DAY	DATE: YEAR	FMR NO.	SUFFIX	EQUIP. IDENT.	R/M	C/E	GROUP: TIMER READING	GROUP: SERIAL NO.	TOTAL EVENT TIME	MFL	MREP	GROUP ACTIVE REPAIR: FL	GROUP ACTIVE REPAIR: PP	GROUP ACTIVE REPAIR: REP	CT
1 2 3	4 5	6 7	8	9 10 11 12	13	14 15 16 17 18	19	20 21	22 23 24 25	26 27 28 29	30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	54	55 56 57 58 59 60 61 62 63 64 65 66 67 68	69	70	71 72 73	74 75 76	77 78 79	80
1 9 6 1													•			•	•	•	1

P/S	DISP	MFL GP	HARDWARE IDENTITY: UN	AS	SA	MOD.	PART NUMBER	REF DESIG/ J-CONN NO.	SERIAL NO.	MREP GP	GROUP ACTIVE REPAIR: FL	PP	REP	TOTAL EVENT TIME	MFL	MREP	FAULT ACTIVE REPAIR: FL	PP	REP	CT
22	23	24	25 26 27 28		29 30 31 32		33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49	50 51 52 53	54	55 56 57 58 59 60		61 62 63	64 65 66 67 68	69	70	71 72 73	74 75 76	77 78 79	80
											•	•	•	•			•	•	•	3
											•	•	•	•			•	•	•	
											•	•	•	•			•	•	•	
											•	•	•	•			•	•	•	
											•	•	•				•	•	•	

P/S	DISP	HARDWARE IDENTITY: UN	AS	SA	MOD	PART NUMBER	REF DESIG/ J-CONN NO.	SERIAL NO.	PART: SYM	PART: POS.	FEDERAL STOCK NUMBER	MIL DEF	AWP DAYS	IT	CT
22	23	25 26 27 28		29 30 31 32		33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49	50 51 52 53	54	55 56 57 58 59	60 61 62 63 64 65 66 67 68 69 70 71 72	73 74 75	76 77 78	79	80
															4

INSTRUCTIONS FOR CODING FAILURE AND
MAINTENANCE DATA ON CARD TYPE 1
(GROUP LEVEL)

Column	Heading	Instructions
1-3	W.O. No.	Work Order Number - preprinted
4-8	Date	Enter month-day-year when equipment malfunction was FIRST DETECTED (FROM THE FMR).
9		Not Used
10-12	FMR No	A three digit number starting with 001 and progressing sequentially will be assigned by ARINC Research to each equipment Failure and Maintenance Report (FMR) received from each reporting activity (obtained from FMR).
14-18	Equip. Ident.	A five digit number which identifies each equipment under surveillance. Columns 14-15 codes assigned for system (squadron or activity) are listed in Table 1. Columns 16-18 codes assigned for each group are listed in Table 2.
19	R/M	Reason for Maintenance. Enter one of the following letters from FMR to indicate when the failure was detected. S - Malfunction detected during standby (for radar only). N - Malfunction detected during normal operations. Normal operation is defined as a state of operation other than during equipment check or preventative maintenance. C - Malfunction detected during equipment check. Equipment check is defined as a procedural equipment check, diagnostic test, or use of self-test features checks. A - Malfunction caused by accidental damage P - Malfunction detected during preventive maintenance (scheduled or unscheduled) F - Termination of data collection M - Modification

20-21	C/E	Cause and Effect. Enter codes from Table 3 to indicate the cause and effect which malfunction had on the equipment.
22-25	Timer Reading	Enter the timer reading of the group (from the FMR).
26-29	Serial No.	Enter the serial number of the group (from the FMR).
30-63		Not Used
64-48	Total Event Time	Enter the difference in time in tenths of hours of the two categories "First Detected" and "End of Repair" from the top half of the FMR.
69	MFL	Men-Fault Locate. Enter number of men required to locate the fault. Obtained from top half of FMR from Troubleshooting entry.
70	MREP	Men Repair. Enter number of men performing repair Obtained from top half of FMR from Repair Entry.
71-79	Group Active Repair	Enter times (in tenths of hours) from top half of FMR as follows: 71-73 FL - Time expended in Fault Location 74-76 PP - Time expended in procuring the required part(s) if available in the squadron supply 77-79 REP - Time expended in repairing and checkou of the system after the fault has been isolated
80	CT	Card Type - preprinted

INSTRUCTIONS FOR CODING FAILURE AND MAINTENANCE ON CARD TYPE 3

(REPAIRABLE PARTS LEVEL)

Column	Heading	Instructions
1-12		Same as columns 1-12 Card Type 1
13	Suffix	Enter the letter "A" and program alphabetically if more than 1 FMR is received on the same event.
14-21		Same as columns 14-21 card type 1
22	P/S	Enter the type of malfunction as follows: P - Primary. A malfunction or failure directly attributable to a fault of the equipment in its inherent capability to perform as required S - Secondary. A malfunction or failure caused by another malfunction or failure 0 - Operator Error. A malfunction or failure caused by operators or maintenance persons U - Unknown
23	DISP	Enter disposition to indicate specific repair action. A. Unknown, not applicable B. Removed and repaired (replaced parts) C. Removed and repaired without replacement parts D. Removed, but not repaired at 0, F & H level E. Received bad from Supply (removal) F. Removed, no defect found G. Repaired without removal H. No defect found, not removed J. Did not fail, used for installation in another location (SWAP) K. Preventative maintenance or modification L. Cleaned contacts
24	MFL GP	Same as column 69 Card Type 1

25-32	Hardware Identity	Enter codes as follows: 25-26 UN - Two digit code which identifies the unit within the equipment. See Equipment Breakdown for codes. 27-28 AS - Two digit code which identifies the assembly within the unit. See Equipment breakdown for codes. 29-30 SA - Two-digit code which identifies the subassembly within the assembly. See Equipment Breakdown for codes. 31-32 MOD - Two digit code which identifies the modules within the subassembly. See Equipment Breakdown for codes.
33-45	Part Number	Enter the Part Number of the module, subassembly, assembly or unit, whichever is listed as the lowest.
46-49	REF DESIG/J-CONN No.	Enter J - connector number of cards replaced, repaired, or adjusted (bay, shelf, and slot numbers) in these columns.
50-53	Serial No	Enter serial number of card, subassembly, assembly or unit as appropriate.
54	MREP GP	Same as Column 70 Card Type 1
55-63	Group Active Repair	Enter the top half of the FMR times in tenths of hour as follows: 55-57 FL - Time expended in fault location 58-60 PP - Time expended in procuring the required part(s) if available in the squadron supply 61-63 - REP - Time expended in repairing and checkout once the fault has been located
64-68	Total Event Time	Enter the difference in time from the two categories of First Detected (upper portion of FMR) and End of Repair Time (bottom portion of FMR).
69	MFL	Enter number of men performing fault location (troubleshooting) on bottom portion of FMR.
70	MREP	Enter number of men performing repair (bottom portion of FMR).
71-79	Fault Active Repair	Enter times in tenths of hours as follows:

		71-73 FL - Time expended in isolating the malfunction (bottom portion of FMR)
		74-76 PP - Time expended in procuring the required part(s) if available in the squadron supply (bottom portion of FMR)
		77-79 REP - Time expended in repairing the malfunction part(s) (bottom portion of FMR)
80	CT	Card Type - preprinted

INSTRUCTIONS FOR CODING FAILURE AND
MAINTENANCE DATA ON CARD TYPE 4
(CONSUMABLE PARTS LEVEL)

Column	Heading	Instructions
1-22		Same as columns 1-22 card type 3
23	DISP	Enter codes as follows:
		0 - Unknown
		1 - replaced
		2 - repaired
		3 - adjusted
		4 - cleaned
		5 - lubricated
		6 - returned to vendor
		7 - not applicable
		8 - no trouble found
		9 - other
24		Not used
25-53		Same as Card Type 3
54-59	PART	Enter codes as follows:
		54-55 SYM (Symbol)
		When code is one letter, dash column 55. Codes are as follows:
		A - Integrated Circuit
		AR - Magnetic Amplifier
		B - Motors, Synchros
		BL - Ballast
		C - Capacitors
		CB - Circuit Breakers
		CD - Throwaway Cards
		CR - Semiconductor Diodes
		DS - Lamps
		E - Terminals, contacts

F - Fuses

FA - Fans

FL - Filters

G - Mechanical Parts

H - Hardware, Misc.

J - Jacks

K - Relays

L - Inductors, Cables

M - Meters

N - Nixies

OT - Other

P - Plugs

PI - Pencil Tips

Q - Transistors

R - Resistors

RT - Mg. Drum Heads

S - Switches

SR - Silicon Controlled rectifier

T - Transformers

TF - Transfluxors

TR - TR Tubes

TY - Timers

V - Vacuum Tubes

W - Wire, Cables

X - Sockets (other than tube sockets)

SV - Tube Sockets

Y - Mylar

Z - Impedence Devices

		56-59 POS (position) Enter circuit number of the reported part. If less than four digits, record zeros to left of the circuit number.
60-72	Federal Stock Number	Enter the federal stock number.
73-75	MIL DEF	Enter three digit codes from Military Defect List (Table 4).
76-78	AWP Days	Awaiting Parts; not used
79	IT	Isolation Technique; not used
80	CT	Card Type - Preprinted

TYQ-1			TYQ-2			TYQ-3			TPS-32		
System	Codes Col 14-15	Unit	System	Codes Col 14-15	Unit	System	Codes Col 14-15	Unit	System	Codes Col 14-15	Unit
1	51	MCTSSA	1	01	MCCES	1	31	MACS-3	1	61	MCTSSA
2	52	H&HS-18	2	02	MCCES	2	32	MCCES	2	62	Contractor
3	53	MWCS-28	3	03	Rebuild	3	33	MACS-4	3	63	MCCES (Dehut)
4	54	MWCS-38	4	04	MACS-4(8)	4	34	MACS-4(8)	4	64	MACS-5
5	55	MCCES(MF)	5	05	MACS-7	5	35	MACS-7	5	65	MACS-2
6	56	MCCES(MT)	6	06	MCSC	6	36	MACS-5(9)	6	66	MACS-6
7	57	MCTSSA(A)	7	07	MACS-5	7	37	MACS-1	7	67	MCCES
			8	08	MACS-6	8	38	MACS-6	8	68	MACS-6
			9	09	MCTSSA	9	39	MCTSSA	9	69	MACS-7
			10	10	MCSC	10	40	MACS-5	10	70	MACS-4
			11	11	MACS-2	11	41	MACS-2	B-1	71	
			12	12	MACS-24	12	42	MACS-24	B-2	72	MACS-24
			MF-1	13	MCSC	13	43	MCSC	B-3	73	
			MF-2	14	MCTSSA	14	44	MWCS-28			
						15	45	MWCS-38			
						16	46	H&HS-18			

TABLE 1

TYQ-1		TYQ-2		TYQ-3		TPS-32	
Group	Codes Col 16-18	Group	Codes Col 16-18	Group	Codes Col 16-18	Group	Codes Col 10-18
ALL	351	5	011	17 No 1	301	PSOP64	611
		6	021	17 No 2	302	CP1020	621
		18 No 1	031	17 No 3	303	CP1021	631
		18 No 2	032	19 No 1	311	OJ182	641
		7	041	19 No 2	312	R1678	651
		12	051	20 No 1	321	T1167	661
						RT 997	671
		9 OP 1	061	20 No 2	322	T1166	681
		9 OP 2	062				
		9 OP 3	063	20 No 3	323	OE91	691
		9 OP 4	064	20 No 4	324	J2931	701
		9 OP 5	065	24 No 1	341	Radar Set	711
		23	071	24 No 2	342		
		25	081	24 No 3	343		
		26	091				
		27	101				

TABLE 2

TABLE 3

CAUSE OF FAILURE (COL 20)
C = Component D = Design Deficiency H = Human or Operator Errors M = Miscellaneous P = Preventive Maintenance Q = Peripheral or GFE Equipments U = Indeterminate W = Workmanship
EFFECT OF FAILURE (COL 21)
S = Severe degradation of a major tactical operational function L = Moderate degradation of a tactical operational function I = Insignificant effect on a tactical operational function N = No direct effect on a tactical operational function

TABLE 4

MALFUNCTION DESCRIPTION CODES - ALPHABETICAL LISTING

CODE	DESCRIPTION
956	Abnormal Function of Computer Mechanical Equipment
931	Accidental or Inadvertant Operation, Release or Activation
127	Adjustment or Alignment Improper
007	Arcing, Arced
103	Attack Display Malfunction
694	Audio and Video Faulty
693	Audio Faulty
710	Bearing Failing or Faulty
780	Bent, Buckled, Collapsed, Dented, Distorted or Twisted
135	Binding, Stuck or Jammed
838	B Plus Incorrect
070	Broken
719	Broken or Frayed Bonding or Ground Wire
108	Broken, Faulty or Missing Safety Wire or Key
720	Brush Failure/ Worn Excessively
900	Burned or Overheated
080	Burned Out or Defective Light Bulb
111	Burst or Ruptured
130	Change of Value
150	Chattering
910	Chipped
181	Compression Low
380	Compressor or Turbine Wheel Damaged - Reason Unknown
028	Conductance Incorrect
160	Contacts/Connection Defective
306	Contamination
170	Corroded
190	Cracked
605	Crazed
029	Current Incorrect
116	Cut
955	Data Link High Error Rate
846	Delaminated
117	Deteriorated
601	Detonation
230	Dirty
932	Does Not Engage, Lock or Unlock Correctly
606	Drone or Drone Component Not Recovered
142	Engine Removed, Excessive Maintenance
330	Excessive Hum
424	External Power Source
602	Failed, Damaged or Replaced Due to Malfunction of Associated Equipment or Item
242	Failed to Operate or Function - Specific Reason Unknown
290	Fails Diagnostic/ Automatic Test
959	Fails to Transfer to Redundant Equipment
051	Fails to Tune or Drifts
698	Faulty Card - Program or Checkout
697	Faulty Tape - Program or Checkout
069	Flame-out
037	Fluctuates, Unstable or Erratic
301	Foreign Object Damage
748	Frequency Erratic or Incorrect
177	Fuel Flow Incorrect
277	Fuel Nozzle Coking
472	Fuse Blown or Defective Circuit Protector
001	Gassy
065	High Voltage Standing Wave Ratio
317	Hot Start
816	Impedance Incorrect
246	Improper or Faulty Maintenance
086	Improper Handling
437	Improperly Positioned or Selected
958	Incorrect Display
088	Incorrect Gain
064	Incorrect Modulation
169	Incorrect Voltage
350	Insulation Breakdown
901	Intermittent
374	Internal Failure
481	Keyway or Spline Damaged or Worn
410	Lack of, or Improper Lubrication
158	Launch Damage
381	Leaking - Internal or External
382	Liquid Lock
383	Lock on Malfunction
730	Loose
105	Loose or Damaged Bolts, Nuts, Screws, Rivets, Fasteners, Clamps or Other Common Hardware
004	Low GM or Emission
962	Low Power Electronic
537	Low Power or Thrust
386	Maintenance Action Due to a Lost In Flight Occurrence
604	Manifold Pressure Beyond Limits
372	Metal on Magnetic Plug
009	Microphonic
253	Misfires
092	Mismatched - Wheel Halves, Electronic Parts, Etc.
106	Missing Bolts, Nuts, Screws, Rivets, Fasteners, Clamps, or Other Common Hardware
425	Nicked
799	No Defect
800	No Defect - Component Removed and/or Reinstalled to Facilitate Other Maintenance
801	No Defect - Component Removed for Technical Directive Compliance
804	No Defect - Removed for Scheduled Maintenance
803	No Defect - Removed for Time Change
806	No Defect - Removed as Part of a Matched System
957	No Display
094	No Gain or Emission
008	Noisy
255	No Output
396	Oil Breathing Excessive
398	Oil Consumption Excessive
603	Oil In Induction System
450	Open
003	Open Filament or Tube Circuit
457	Oscillating
458	Out of Balance
464	Overspeed
520	Pitted
010	Poor or Incorrect Focus
525	Pressure Incorrect
540	Punctured
567	Resistance Incorrect
315	RPM Fluctuation or Incorrect
583	Scope Presentation Incorrect or Faulty
935	Scored or Scratched
585	Sheared
615	Shorted
770	Slip Ring or Commutator Failure
314	Slow Acceleration
279	Spray Pattern Defective
660	Stripped
503	Sudden Stop
649	Sweep Malfunction
695	Sync Absent or Incorrect
334	Temperature Incorrect
664	Tension Incorrect
782	Tire Tread Area Defective - Use Cut, Delaminated, Punctured, Worn, Etc., if applicable
783	Tire Sidewall Damaged or Defective
784	Tire Bead Area Damaged or Defective
785	Tire Inside Surface Damaged or Defective
947	Torn
167	Torque Incorrect
877	Transportation Damage
599	Travel or Extension Incorrect
561	Unable to Adjust to Limits
690	Vibration Excessive
692	Video Faulty
878	Weather Damage
622	Wet
020	Worn, Chafed or Frayed
447	Wrong Logic - Program or Computer

MALFUNCTION DESCRIPTION CODES - HIGH POWER TUBES

CODE	DESCRIPTION	CODE	DESCRIPTION
963	Broken Filament/ Cathode Terminal	987	Input Pulse Distortion
969	Cannot Resonate Input Cavity	988	Loss of Vacuum
970	Coolant Leak	989	Low Coolant Flow Rate
971	Cracked Cathode Bushing	990	No Focus Current
972	Damaged Input Probe	991	Out of Band Frequency
973	Damaged Output Probe	992	Output Pulse Distortion
974	Does Not Track Tuning Curve	937	Overheated Cathode Stem
968	Dioding	964	Poor Spectrum
975	Filament to Cathode Short	938	Power Output Dip
981	Frequency Instability	993	RF Drive Improper
982	Frozen Tuning Mechanism	994	RF Feed-Thru Attenuated/Distorted
983	Grid to Cathode Short	995	RF Feed-Thru Completely Interrupted
984	Grid to Plate Short	996	RF Terminal Overheated
961	High Anode Current	997	RF Window Burned
985	High Body Current/Beam Interruption	966	RF Window Suck-in, Broken or Cracked
986	High Modulator Inverse		

MALFUNCTION DESCRIPTION CODES - NUMERICAL LISTING

CODE	DESCRIPTION
001	Gassy
003	Open Filament or Tube Circuit
004	Low GM or Emission
007	Arcing, Arced
008	Noisy
009	Microphonic
010	Poor or Incorrect Focus
020	Worn, Chafed or Frayed
028	Conductance Incorrect
029	Current Incorrect
037	Fluctuates, Unstable or Erratic
051	Fails to Tune or Drifts
064	Incorrect Modulation
065	High Voltage Standing Wave Ratio
069	Flame-out
070	Broken
080	Burned Out or Defective Ligh Bulb
086	Improper Handling
088	Incorrect Gain
092	Mismatched - Wheel Halves, Electronic Parts, Etc.
094	No Gain or Emission
103	Attack Display Malfunction
105	Loose or Damaged Bolts, Nuts, Screws, Rivets, Fasteners, Clamps or Other Common Hardware
106	Missing Bolts, Nuts, Screws, Rivets, Fasteners, Clamps or Other Common Hardware
108	Broken Faulty or Missing Safety Wire or Key
111	Burst or Ruptured
116	Cut
117	Deteriorated
127	Adjustment or Alignment Improper
130	Change of Value
135	Binding, Stuck or Jammed
142	Engine Removed, Excessive Maintenance
150	Chattering
158	Launch Damage
160	Contact/Connection Defective
167	Torque Incorrect
169	Incorrect Voltage
170	Corroded
177	Fuel Flow Incorrect
181	Compression Low
190	Cracked
230	Dirty
242	Failed to Operate or Function - Specific Reason Unknown
246	Improper or Faulty Maintenance
253	Misfires
255	No Output
277	Fuel Nozzle Coking
279	Spray Pattern Defective
290	Fails Diagnostic/ Automatic Test
301	Foreign Object Damage
306	Contamination
314	Slow Acceleration
315	RPM Fluctuation or Incorrect
317	Hot Start
330	Excessive Hum
334	Temperature Incorrect
350	Insulation Breakdown
372	Metal On Magnetic Plug
374	Internal Failure
380	Compressor or Turbine Wheel Damage - Reason Unknown
381	Leaking - Internal or External
382	Liquid Lock
383	Lock On Malfunction
386	Maintenance Action Due to a Lost In Flight Occurrence
396	Oil Breathing Excessive
398	Oil Consumption Excessive
410	Lack of, Or Improper Lubrication
424	External Power Source
425	Nicked
437	Improperly Positioned or Selected
447	Wrong Logic - Program or Computer
450	Open
457	Oscillating
458	Out of Balance
464	Overspeed
475	Fuse Blown or Defective Circuit Protector
481	Keyway or Spline Damaged or Worn
503	Sudden Stop
520	Pitted
525	Pressure Incorrect
537	Low Power or Thrust
540	Punctured
561	Unable to Adjust to Limits
567	Resistance Incorrect
583	Scope Presentation Incorrect or Faulty
585	Sheared
599	Travel or Extension Incorrect
601	Detonation
602	Failed, Damaged or Replaced Due to Malfunction of Associated Equipment or Item
603	Oil In Induction System
604	Manifold Pressure Beyond Limits
605	Crazed
606	Drone or Drone Component Not Recovered
615	Shorted
622	Wet
649	Sweep Malfunction
660	Stripped
664	Tension Incorrect
690	Vibration Excessive
692	Video Faulty
693	Audio Faulty
694	Audio and Video Faulty
695	Sync Absent or Incorrect
697	Faulty Tape - Program or Checkout
698	Faulty Card - Program or Checkout
710	Bearing Failing or Faulty
719	Broken or Frayed Bonding or Ground Wire

CODE	DESCRIPTION
720	Brush Failure/ Worn Excessively
730	Loose
748	Frequency Erratic or Incorrect
770	Slip Ring or Commutator Failure
780	Bent, Buckled, Collapsed, Dented, Distorted or Twisted
782	Tire Tread Area Defective - Use Cut, Delaminated, Punctured, Worn, Etc., if applicable
783	Tire Sidewall Damaged or Defective
784	Tire Bead Area Damaged or Defective
785	Tire Inside Surface Damaged or Defective
799	No Defect
800	No Defect - Component removed and/or Reinstalled to Facilitate Other Maintenance
801	No Defect - Component Removed for Technical Directive Compliance
803	No Defect - Removed for Time Change
804	No Defect - Removed for Scheduled Maintenance
806	No Defect - Removed as Part of a Matched System
816	Impedance Incorrect
838	B Plus Incorrect
846	Delaminated
877	Transportation Damage
878	Weather Damage
900	Burned or Overheated
901	Intermittent
910	Chipped
931	Accidental or Inadvertent Operation, Release or Activation
932	Does Not Engage, Lock or Unlock Correctly
935	Scored or Scratched
937	Overheated Cathode Stem
938	Power Output Dip
947	Torn
955	Data Link High Error Rate
956	Abnormal Function of Computer Mechanical Equipment
957	No Display
958	Incorrect Display
959	Fails to Transfer to Redundant Equipment
961	High Anode Current
962	Low Power Electronic
963	Broken Filament/ Cathode Terminal
964	Poor Spectrum
966	RF Window Sucken, Broken or Cracked
968	Dioding
969	Cannot Resonate Input Cavity
970	Coolant Leak
971	Cracked Cathode Bushing
972	Damaged Input Probe
973	Damaged Output Probe
974	Does Not Track Tuning Curve
975	Filament to Cathode Short
981	Frequency Instability
982	Frozen Tuning Mechanism
983	Grid to Cathode Short
984	Grid to Plate Short
985	High Body Current/Beam Interruption
986	High Modulator Inverse
987	Input Pulse Distortion
988	Loss of Vacuum
989	Low Coolant Flow Rate
990	No Focus Current
991	Out of Band Frequency
992	Output Pulse Distortion
993	RF Drive Improper
994	RF Feed-Thru Attenuated/Distorted
995	RF Feed-Thru Completely Interrupted
996	RF Terminal Overheated
997	RF Window Burned

MACCS CHANGES ENCODING FORM
WITH INSTRUCTION SHEET

Enclosure 3

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

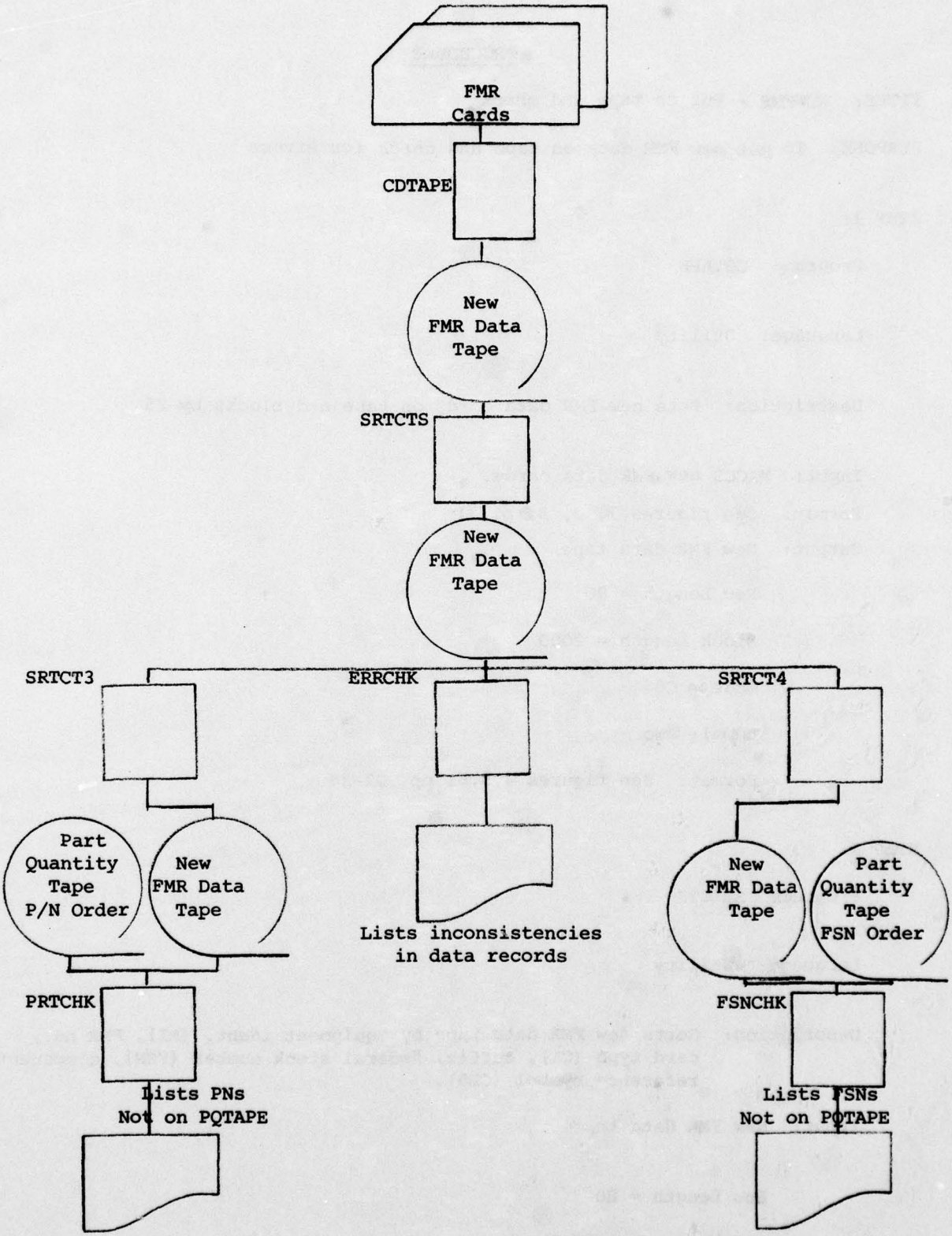
SHEET NO. _____ OF _____
DATE _____

	Record No.	Begin	End	MACCS CHANGES
	1 2 3 4 5	6 7	8 9	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

MACCS CHANGES ENCODING FORM

INSTRUCTION SHEET

Column	Heading	Instructions
1-5	Record No.	Enter record number from printout of new FMR data tape.
6-7	Begin	Enter two digit number of column where correction is to begin.
8-9	End	Enter two digit number of column where correction is to end.
10-80	MACCS Changes	Enter correct data .



LOGIC FLOW TO PUT NEW FMR DATA ON TAPE AND CHECK DATA FOR ERRORS

Enclosure 4

PROCEDURE

TITLE: NEWFMR - Put on tape and check

PURPOSE: To put new FMR data on tape and check for errors

STEP 1:

Program: CDTAPE

Language: Utility

Description: Puts new FMR data cards on tape and blocks by 25

Input: MACCS new FMR data cards.

Format: See figures 1, 2, 3, p. 31

Output: New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6, pp. 32-34

STEP 2:

Program: SRTCTS

Language: Utility

Description: Sorts new FMR data tape by equipment ident. (EI), FMR no., card type (CT), suffix, federal stock number (FSN), component reference symbol (CRS).

Input: New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6, pp. 32-34

Output: New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6, pp. 32-34

Order: EI, FMR, CT, Suffix, FSN, CRS

STEP 3:

Program: ERRCHK

Language: RPG

Description: Performs internal consistency check of data elements on the tape. Checks that: CT is valid (i.e., 1,3,4); record is in proper order (i.e., 1,3,4); blank columns are blank; group active repair is same on CT1 and CT3, if only one associated CT3; columns 1-12, 14-21 on CT3 and CT4 match associated CT1; columns 25-53 of CT4 match columns 25-53 of CT3 if only one associated CT3; record is 961 (i.e., columns 1-3).

Input: New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6 , pp. 32-34

Order: EI, FMR, CT, Suffix, FSN, CRS

Output: Listing of records with errors

STEP 4:

Program: SRTCT3

Language: Utility

Description: Sorts new FMR data tape by part number and group

Input: New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6, pp. 32-34

Output: New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6, pp. 32-34

Order: Part Number, Group

STEP 5:

Program: PRTCHK

Language: RPG

Description: Compares part numbers on new FMR data tape with part numbers on Part Quantity Tape (P/N order).

Input: (1) New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6, pp. 32-34

Order: Part Number, Group

(2) Part Quantity Tape in PN order

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Order: Part Number

Output: Listing of part numbers that are not on the Part Quantity Tape

STEP 6:

Program: SRTCT4

Language: Utility

Description: Sorts new FMR data tape by federal stock number and group

Input: New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6, pp. 32-34

Output: New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6 , pp. 32-34

Order: Federal Stock Number, Group

STEP 7:

Program: FSNCHK

Language: RPG

Description: Compares federal stock numbers on new FMR data tape with the federal stock numbers on the Part Quantity Tape (FSN order).

Input: (1) New FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 4,5,6, pp. 32-34

Order: Federal stock number, group

(2) Part Quantity Tape in FSN Order

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Order: Federal stock number

Output: Listing of federal stock numbers that are not on the Part Quantity Tape

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

MARINE AIR COMMAND AND CONTROL SYSTEM

FAILURE AND MAINTENANCE REPORTS

SHEET NO _____ OF _____

DATE _____

Figure 1

W.O. NO	DATE: MONTH	DATE: DAY	DATE: YEAR	FMR NO	EQUIP IDENT	R/M	C/E	GROUP: TIMER READING	GROUP: SERIAL NO.	TOTAL EVENT TIME	MFL	MREP	GROUP ACTIVE REPAIR: FL	GROUP ACTIVE REPAIR: PP	GROUP ACTIVE REPAIR: REP	CT
1	9	6	1							•			•	•	•	1

Figure 2

	SUFFIX	P/S	DISP	MFL GP	HARDWARE IDENTITY: UN	AS	SA	MOD	PART NUMBER	REF DESIG/ J-CONN NO.	SERIAL NO.	MREP GP	GROUP ACTIVE REPAIR: FL	PP	REP	TOTAL EVENT TIME	MFL	MREP	FAULT ACTIVE REPAIR: FL	PP	REP	CT
1													•	•	•	•			•	•	•	3
2													•	•	•	•			•	•	•	
3													•	•	•	•			•	•	•	
4													•	•	•	•			•	•	•	
5													•	•	•	•			•	•	•	2

Figure 3

	SUFFIX	P/S	DISP	HARDWARE IDENTITY: UN	AS	SA	MOD	PART NUMBER	REF DESIG/ J-CONN NO.	SERIAL NO.	PART: SYM	PART: POS	FEDERAL STOCK NUMBER	MIL DEF	AWP DAYS	IT	CT
1																	4
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	2

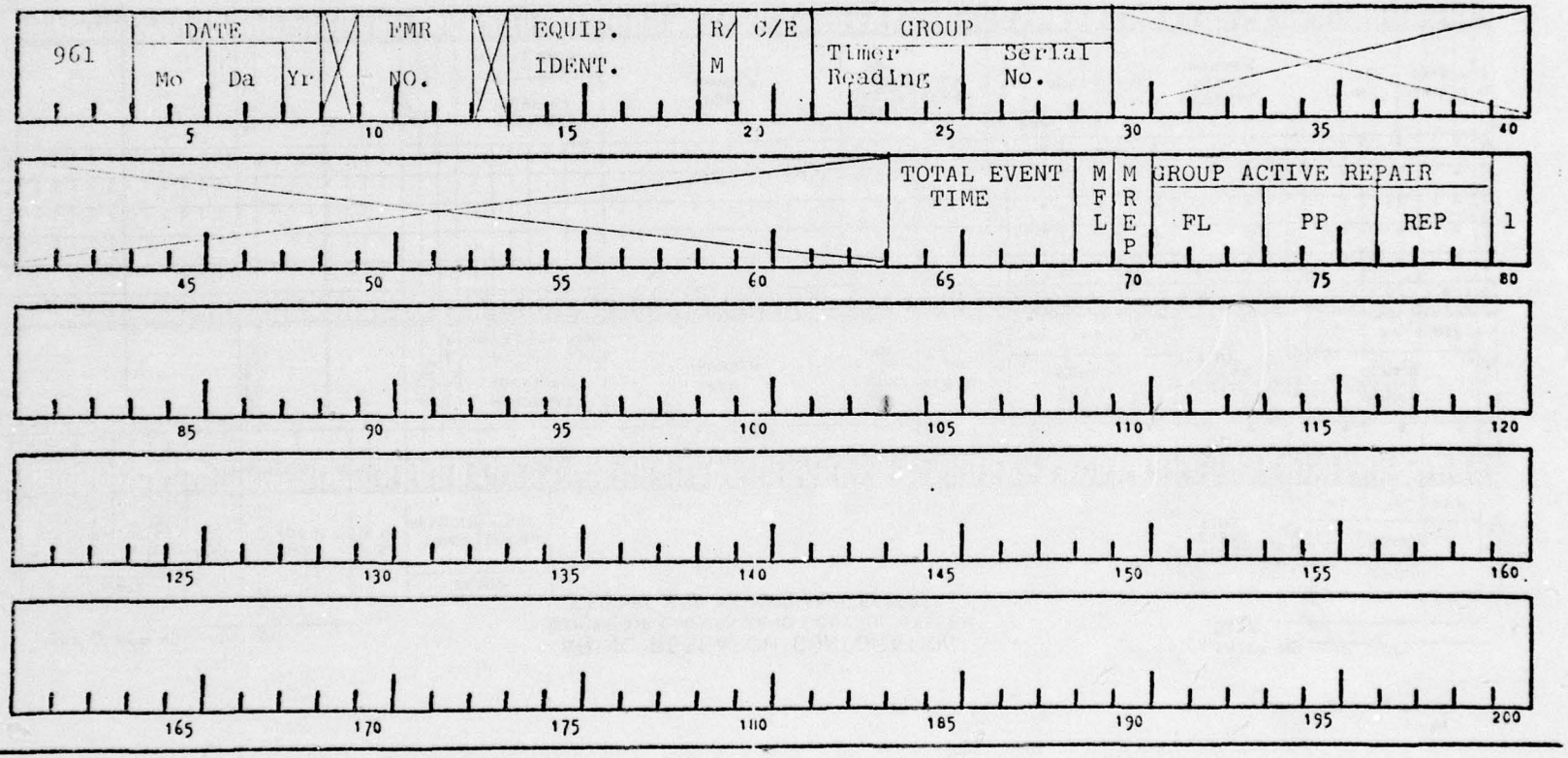
TAPE RECORD FORMAT

FILE NAME GROUP DATA RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER Card Type 1 BLOCKING FACTOR 25

						STANDARD	NON-STANDARD	NONE
PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	[ ]	[ ]	[X]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:



DPD - 40 8 - 16 - 66

Figure 4

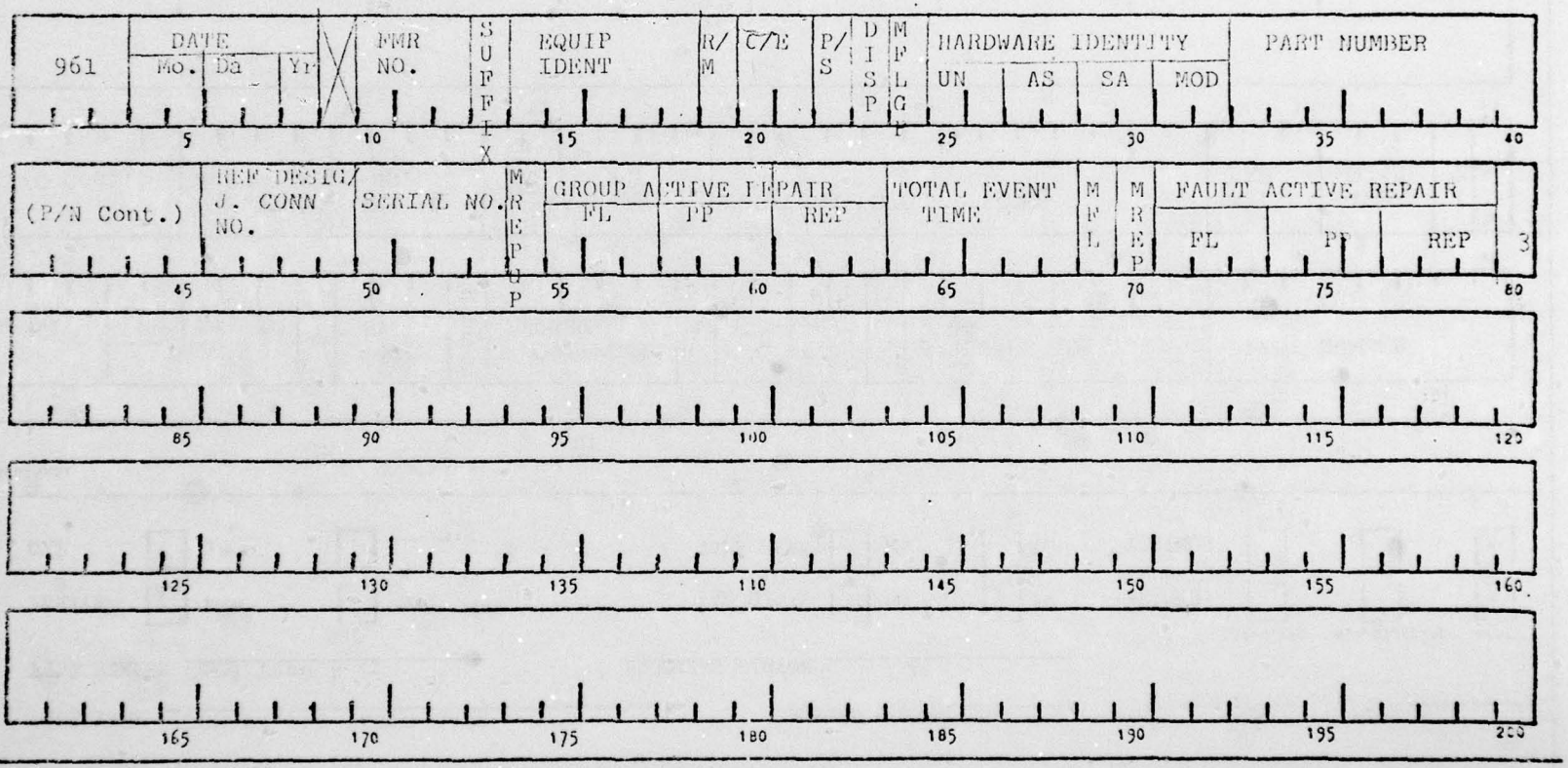
TAPE RECORD FORMAT

FILE NAME REPAIRABLE PARTS DATA RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER Card Type 3 BLOCKING FACTOR 25

PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	STANDARD [ ]	NON-STANDARD [ ]	NONE [X]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:



DPD - 40 8 - 16 - 66

Figure 5

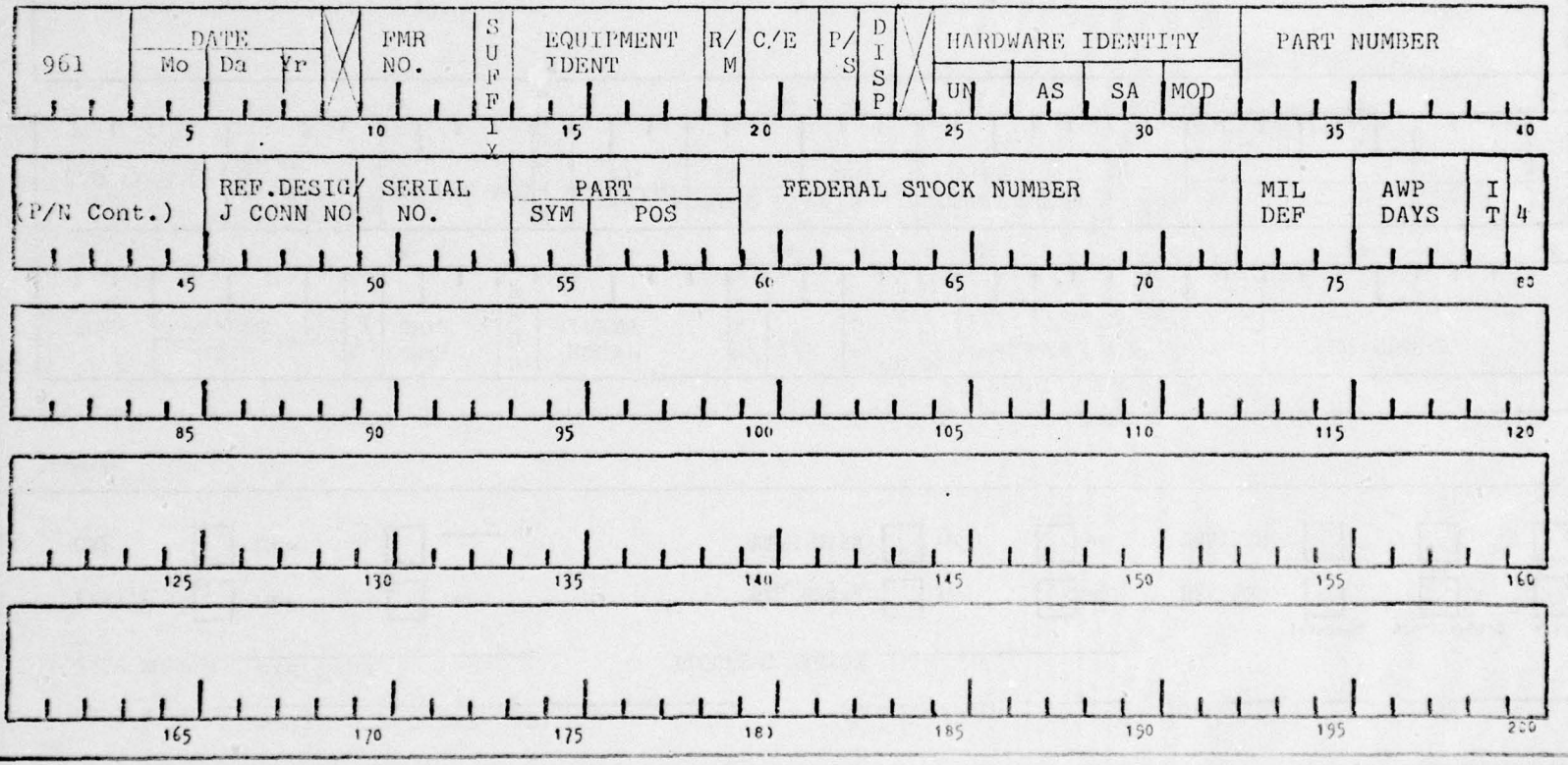
TAPE RECORD FORMAT

FILE NAME CONSUMABLE PARTS DATA RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER Card Type 4 BLOCKING FACTOR 25

						STANDARD	NON-STANDARD	NONE
PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	[ ]	[ ]	[X]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:



OPD - 40 8 - 16 - 66

Figure 6

PROGRAM LISTINGS TO PUT NEW
FMR DATA ON TAPE AND CHECK DATA FOR ERRORS

Enclosure 6

```
// JOB 1302-01 CDTAPE CARD-TAPE UTILITY (80/2000)          CRD  292
// ASSGN SYS005,X'292'
// ASSGN SYS004,X'00C'
// UPSI 00100000
// EXEC CDTP
// UCT TR,FF,A=(80,80),B=(80,2000),I1,OR,R1
// END
/*
/&
```

```
// JOB 1302-Q1 SRTCTS SORT SQ GRP FMR CT SFX FSN CRS                292  290
// ASSGN SYS002,X'292'
// ASSGN SYS001,X'290'
// ASSGN SYS003,X'131'
// DLBL SORTWK1,,0
// EXTENT SYS003,999999,1,0,100,2000
// EXEC SORT
 SORT FIELDS=(14,5,A,10,3,A,80,1,A,13,1,A,60,13,A,54,6,A),          *
               FORMAT=BI,WORK=1
 RECORD TYPE=F,LENGTH=80
 INPFIL BLKSIZE=2000
 OUTFIL BLKSIZE=2000
 OPTION LABEL=(U,U,U)
 END
/*
/&
```

```
// JOB 1302-01 ERRCHK ERROR CHECK FOR MASTER DATA TAPE                    290  PNT
// OPTION LINK,NODUMP,NOLISTX
// EXEC RPG
00000H
00010F*
00015F* THIS PROGRAM SEARCHES FOR ERRORS IN FMR TAPE DATA
00020F*
01010FTAPEIN  IPE F2000  80           TAPE   SYS011                  R
01020FLIST     O   V 132 132     OF   PRINTERSYSLST
02010ITAPEIN  AA  01
02020I                                     1  12 X1
02025I                                     9   9 X9
02030I                                    13  13 X13
02040I                                    14  21 X14
02050I                                    30  37 X30
02060I                                    69  69 X69
02070I                                    70  70 X70
02080I                                    71  79 TIMES
02100I                                    55  63 TIME3
02090I                                    80  80 X80
02110I                                    24  24 X24
02120I                                    54  54 X54
02140I                                    22  22 X22
02150I                                    25  53 X25
02160I                                    23  23 X23
02170I                                    38  45 X38
02180I                                    46  53 XX46
02190I                                    54  61 XX54
02200I                                    62  63 X62
02205I                                     1  80 XAL
03010C           N         ADD  1         N         50
03020C     1P              MOVE '4'       P          1         INIT PREV REC
03025C     01              SETOF                        985548
03026C     01              SETOF                        979695
03027C     01              SETOF                        949392
03028C     01              SETOF                        474645
03029C     01              SETOF                        448481
03040C     01    X80       COMP '1'                         11 TYPE 1
03050C     01    X80       COMP '3'                         13 TYPE 3
03060C     01    X80       COMP '4'                         14 TYPE 4
03064C     11              MOVE REC1      RECS      50
03068C     11              MOVE N         REC1      50
03070C     11    P         COMP '1'                         55 OUT OF SEQUENCE
03075C     11    X9        COMP ' '                     9898   IMPROPER
03080C     11    X13       COMP ' '                     9797   IMPROPER
03090C     11    X30       COMP '                       9696   IMPROPER
03100C     11    X38       COMP X30                     9595   IMPROPER
03110C     11    XX46      COMP X30                     9494   IMPROPER
03120C     11    XX54      COMP X30                     9393   IMPROPER
03130C     11    X62       COMP ' '                     9292   IMPROPER
03140C     11              MOVE X1        S1        12
03150C     11              MOVE X14       S14        8
03160C     11              MOVE X69       S69        1
03170C     11              MOVE X70       S70        1
03180C     11              MOVE XALL      XALLS     80
03190C     11              MOVE X80       P
```

ERRCHK

```
03191C  11                      MOVE XAL        XALL    80
03192C  11          M           COMP 1                          33
03193C  11 33       CHK1        COMP CHK3                   8484
03194C  11                      MOVE TIMES      CHK1    9
03196C  11                      MOVE 0          M       50
03198C  LR          M           COMP 1                          33
03199C  LR 33       CHK1        COMP CHK3                   8484
04000C  11                      GOTO SKIP
04005C  LR                      MOVE XALL       XALLS
04007C  LR                      MOVE REC1       RECS
04010C  13          P           COMP '1'                        51
04020C  13          P           COMP '3'                        52
04030C  13N51N52                SETON                       55      OUT OF SEQUENCE
04040C  13N55       S1          COMP X1                     4848    NO MATCH
04050C  13N55       S14         COMP X14                    4747    NO MATCH
04070C  13N55       S69         COMP X24                    4545    NO MATCH
04080C  13N55       S70         COMP X54                    4444    NO MATCH
04120C  13N55       X13         COMP ' '                        23 NO SUFFIX
04125C  13N55       X23         COMP ' '                        98 NO DISP CODE
04130C  13N55 23                MOVE X22        T22     1
04150C  13N55 23                MOVE X25        T25     29
04160C  13                      MOVE X80        P                   STORE CARD TYPE
04164C  13          M           ADD  1          M
04166C  13                      MOVE TIME3      CHK3    9
04170C  13                      GOTO SKIP
05010C  14          P           COMP '3'                        51
05020C  14          P           COMP '4'                        52
05030C  14N51N52                SETON                       55      OUT OF SEQUENCE
05040C  14N55       S1          COMP X1                     4848    NO MATCH
05050C  14N55       S14         COMP X14                    4747    NO MATCH
05060C  14N55       X13         COMP ' '                        23 NO SUFFIX
05065C  14N55       X24         COMP ' '                    9898    IMPROPER
05070C  14N55 23X22             COMP T22                    4646    NO MATCH
05090C  14N55 23X25             COMP T25                    4545    NO MATCH
05100C  14                      MOVE X80        P
05109C              SKIP        TAG
05110C  N11N13N14               SETON                       81
06010OLIST    H  201    OF
06020O        OR        1P
06030O                                      68 'MACCS DATA TAPE AUTOMA'
06040O                                      83 'TIC ERROR CHECK'
06050O         D 11     01 98
06051O        OR        01 97
06052O        OR        01 96
06053O        OR        01 95
06054O        OR        01 94
06055O        OR        01 93
06056O        OR        01 92
06060O                                      15 'RECORD NO.'
06070O                          N     Z     21
06080O                                      41 'IMPROPER COLUMN(S)'
06095O                          XAL         130
06100O         D 11     01 55
06110O                                      15 'RECORD NO.'
06120O                          N     Z     21
06130O                                      38 'OUT OF SEQUENCE'
```

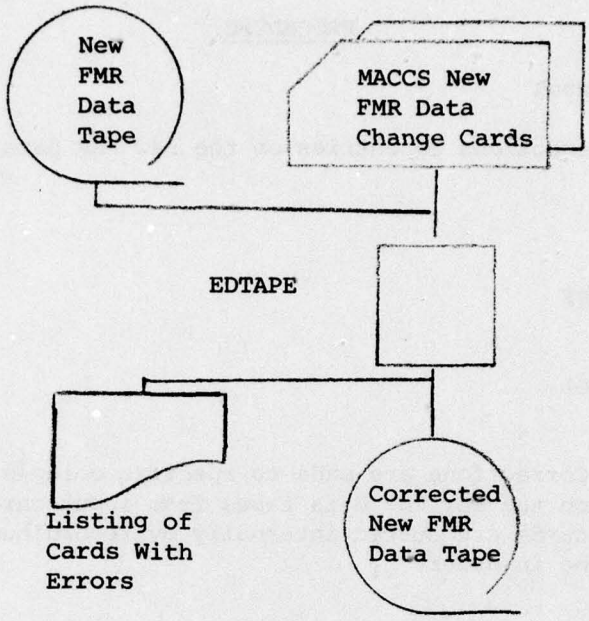
```
061450                    XAL       130
061500     D 11      01 48
061510    OR         01 47
061520    OR         01 46
061530    OR         01 45
061540    OR         01 44
061600                               15 'RECORD NO.'
061700                    N      Z   21
061900                               37 'MATCHING ERROR'
062050                    XAL       130
070100     D 11      N01N1P
070200                               15 'RECORD NO.'
070300                    N      Z   21
070400                               45 'NOT A 961-JOB'
070450                    XAL       130
070500     D 11      01 81
070600                               15 'RECORD NO.'
070700                    N      Z   21
070800                               40 'INVALID CARD TYPE'
070850                    XAL       130
070900     D 11      01 84
070930                               15 'RECORD NO.'
070940                    RECS   Z   21
070960                               41 'GROUP TIMES DIFFER'
070980                    XALLS     130
080000     T 21      LR
081000                               40 'END OF CHECK'
082000                    N      Z   70
083000                               88 'RECORDS PROCESSED'
/*
 ENTRY
// EXEC LNKEDT
// EXEC
/*
/&
```

```
// JOB 1302-01 SRTCT3 MAKES MSTR DATA READY FOR PRTCHK
// ASSGN SYS002,X'290'
// ASSGN SYS001,X'292'
// ASSGN SYS003,X'131'
// DLBL SORTWK1,,0
// EXTENT SYS003,999999,1,0,100,2000
// EXEC SORT
 SORT FIELDS=(33,13,A,16,2,A),FORMAT=BI,WORK=1
 RECORD TYPE=F,LENGTH=80
 INPFIL BLKSIZE=2000
 OUTFIL BLKSIZE=2000
 OPTION LABEL=(U,U,U)
 END
/*
/&
```

```
// JOB 1302-01 PRTCHK CHECKS P/N'S OF DATA TAPE AGAINST P/Q TABLE      91,2 PNT
// OPTION LINK
// EXEC RPG
00000H
01010FTAPEIN  IPEAF2000  80            TAPE   SYS013
01020FPARTQTY ISEAF2000  80            TAPE   SYS012
01030FPRINT   O   V 132 132     OF     PRINTERSYSLST
02010ITAPEIN  AA  10  80 C3
02020I                                      33  45 PN       M2
02030I                                      16  17 GRP      M1
02035I                                       1  80 REC
02040I        BB  20  80 C4
02050I        OR        80 C1
02060I        XX  99
02080IPARTQTY DD  40
02090I                                       1   2 GP       M1
02100I                                       6  18 PTN      M2
040100PRINT   H  301   1P
040200        OR       OF
040300                                  72 'EDIT LISTING'
040400        D 11     10NMR
040500                                  30 'P/N NOT IN TABLE'
040780                          REC     130
/*
 ENTRY
// EXEC LNKEDT
// EXEC
/&
```

```
// JOB 1302-01 SRTCT4 MAKES MSTR DATA READY FOR FSNCHK          290  292
// ASSGN SYS002,X'290'
// ASSGN SYS001,X'292'
// ASSGN SYS003,X'131'
// DLBL SORTWK1,,0
// EXTENT SYS003,999999,1,0,100,2000
// EXEC SORT
 SORT FIELDS=(60,13,A,16,2,A),FORMAT=BI,WORK=1
 RECORD TYPE=F,LENGTH=80
 INPFIL BLKSIZE=2000
 OUTFIL BLKSIZE=2000
 OPTION LABEL=(U,U,U)
 END
/*
/&
```

```
// JOB 1302-01 FSNCHK CHECKS FSN'S OF DATA TAPE AGAINST P/Q TABLE      93,2 PNT
// OPTION LINK
// EXEC RPG
00000H
01010FTAPEIN  IPEAF2000  80            TAPE   SYS013
01020FPARTQTY ISEAF2000  80            TAPE   SYS014                  R
01030FPRINT   O    V 132 132     OF     PRINTERSYSLST
02010ITAPEIN  AA  10  80 C3
02050I        OR       80 C1
02040I        BB  20   80 C4
02020I                                  60  72 FSN      M2
02030I                                  16  17 GRP      M1
02035I                                   1  80 REC
02060I        XX  99
02080IPARTQTY DD  40
02090I                                   1   2 GP       M1
02100I                                  19  31 FSN2     M2
04010OPRINT   H  301   1P
04020O        OR       OF
04030O                               72 'EDIT LISTING'
04040O        D 11     2ONMR
04050O                               30 'FSN NOT IN TABLE'
04078O                         REC   130
/*
 ENTRY
// EXEC LNKEDT
// EXEC
/&
```



LOGIC FLOW TO MAKE CORRECTIONS
TO NEW FMR DATA TAPES

Enclosure 7

PROCEDURE

TITLE: NEWFMR - Correct

PURPOSE: To make corrections to entries on the new FMR data tapes

STEP 1:

Program: EDTAPE

Language: COBOL

Description: Corrections are made to specific columns in specific records on the New FMR data tapes from input cards. Since the input cards are sorted internally by record number, they need not be in order.

Inputs: (1) MACCS NEWFMR Data Change Cards

Format: See figure 1, p. 47

(2) *New FMR data tape*

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 2,3,4, pp. 48-50

Outputs: (1) Corrected new FMR data tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figures 2,3,4, pp. 48-50

(2) Listing of invalid cards for which corrections were not made.

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

SHEET NO. _____ OF _____
DATE _____

	Record No.	Begin	End	MACCS CHANGES
	1 2 3 4 5	6 7	8 9	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Figure 1

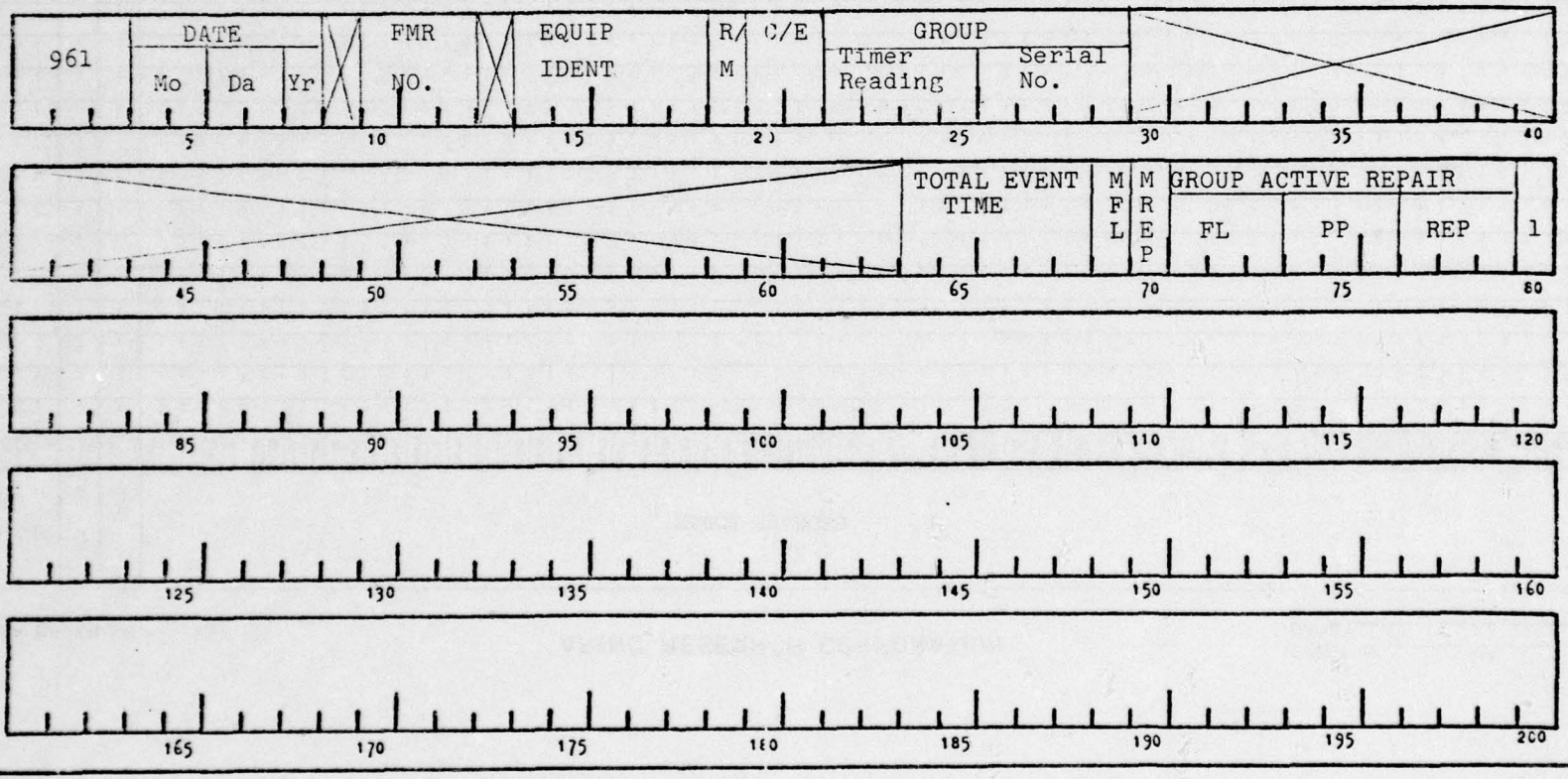
TAPE RECORD FORMAT

FILE NAME GROUP DATA RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER Card Type 1 BLOCKING FACTOR 25

						STANDARD	NON-STANDARD	NONE
PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	[ ]	[ ]	[X]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:



DPD - 40 8 - 16 - 66

Figure 2

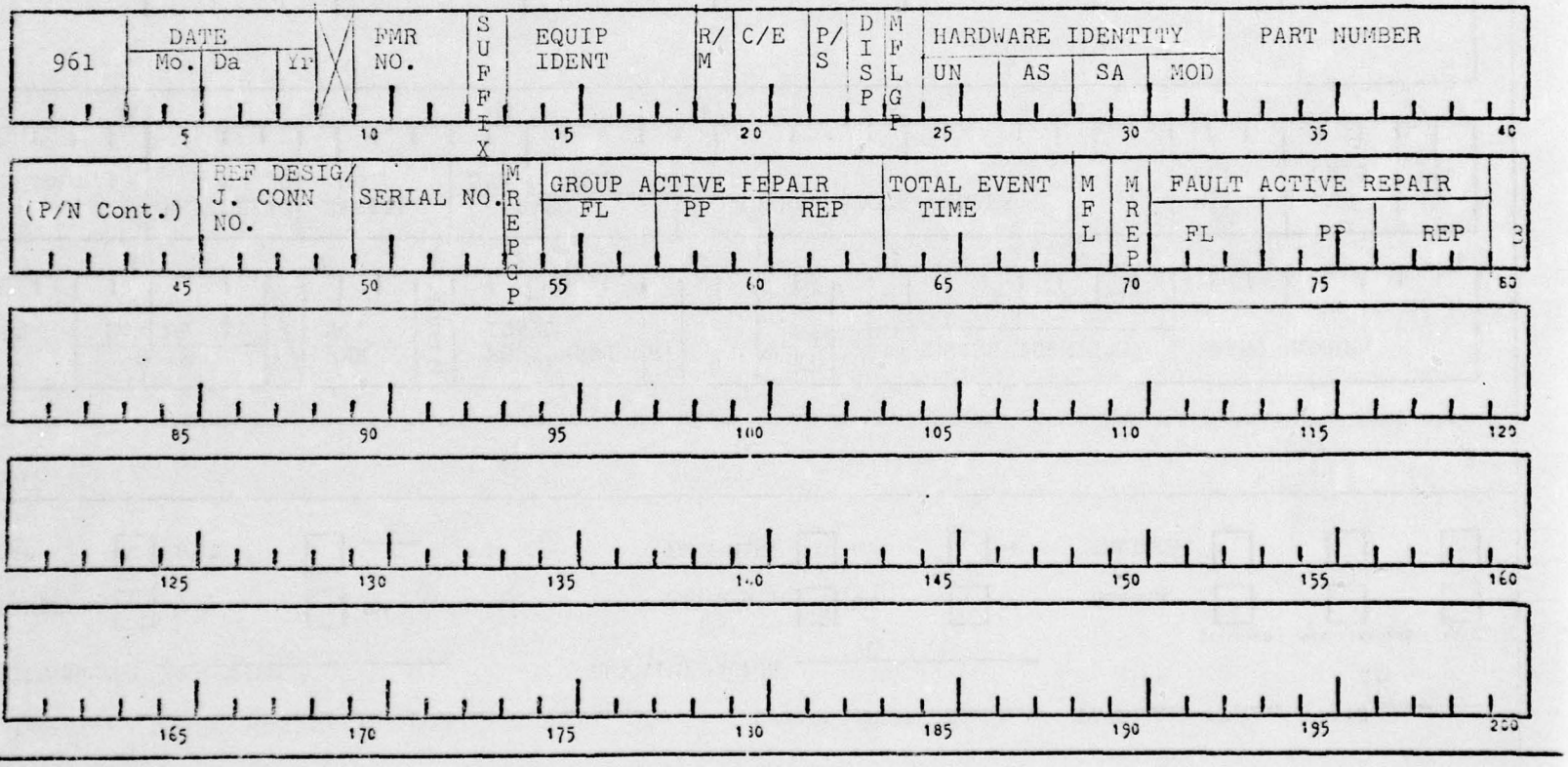
TAPE RECORD FORMAT

FILE NAME REPAIRABLE PARTS DATA RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER Card Type 3 BLOCKING FACTOR 25

PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	STANDARD [ ]	NON-STANDARD [ ]	NONE [X]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:



DPD - 40 8 - 16 - 66

Figure 3

TAPE RECORD FORMAT

FILE NAME CONSUMABLE PARTS DATA RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER Card Type 4 BLOCKING FACTOR 25

						STANDARD	NON-STANDARD	ASCII
PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	[ ]	[ ]	[ ]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:

961	DATE Mo	Da	Yr	X	FMR NO.	SUFFIX	EQUIPMENT IDENT	R/M	C/E	P/S	DISP	X	HARDWARE IDENTITY UN	AS	SA	MOD	PART NUMBER
1 5				6 10			11 15		16 20			21 25		26 30			31 35 40

(P/N Cont.)	REF.DESIG/ J CONN NO.	SERIAL NO.	PART SYM	PART POS	FEDERAL STOCK NUMBER	MIL DEF	AWP DAYS	IT	4
41 45	46 50		51 55		56 60 65 70	71 75		76	80

81 85 86 90 91 95 96 100 101 105 106 110 111 115 116 120

121 125 126 130 131 135 136 140 141 145 146 150 151 155 156 160

161 165 166 170 171 175 176 180 181 185 186 190 191 195 196 200

GPO - 40 8 - 16 - 66

Figure 4

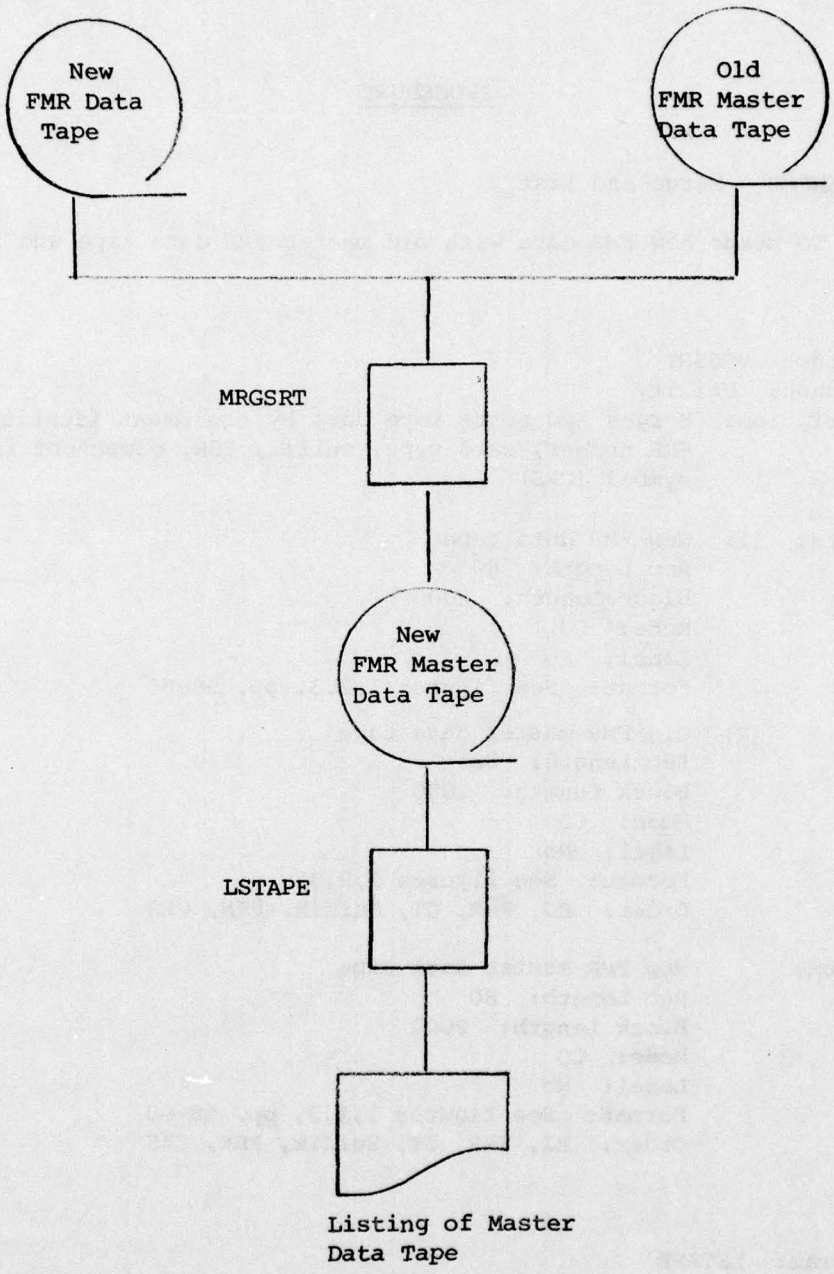
PROGRAM LISTING TO MAKE CORRECTIONS
TO NEW FMR DATA TAPES

Enclosure 9

```
// JOB 1302-01 EDTAPE MAKE CORRECTIONS                                290 291
// OPTION LINK,NODUMP,NOXREF,NOLISTX
// ASSGN SYS004,X'13C'
// EXEC FCOBOL
       IDENTIFICATION DIVISION.
       PROGRAM-ID. EDIT69.
       REMARKS. UPDATE AVCAL FILE USING CARDS WITH TAPE RECORD
           NUMBERS IN COLUMNS 1-5, BEGINNING COLUMN NUMBERS IN
           COLUMNS 6-7, ENDING COLUMN NUMBERS IN COLUMNS 8-9,
           AND NEW DATA FOR THOSE COLUMNS IN COLUMNS 10-80.
       ENVIRONMENT DIVISION.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT WORKFILE ASSIGN TO SYS001-DA-2314-S-SORTWK1.
           SELECT CRD ASSIGN TO SYS004-UR-2540R-S.
           SELECT REC3IN ASSIGN TO SYS011-UT-2400-S-AVINP.
           SELECT REC3OUT ASSIGN TO SYS012-UT-2400-S-AVOUT.
       DATA DIVISION.
       FILE SECTION.
       SD  WORKFILE DATA RECORD IS SRTREC, LABEL RECORDS ARE STANDARD.
       01  SRTREC.
           02  CARDRECNO PIC S9(7), USAGE COMPUTATIONAL-3.
           02  SRTBEGCOL PIC S9(3), USAGE COMPUTATIONAL-3.
           02  SRTENDCOL PIC S9(3), USAGE COMPUTATIONAL-3.
           02  SRTDATA.
               03  SRTCHAR OCCURS 71 TIMES, INDEXED BY SRTNDX, PIC X(1).
       FD  CRD LABEL RECORDS ARE OMITTED, DATA RECORD IS CARD-IMAGE.
       01  CARD-IMAGE.
           02  FILLER PIC X(80).
       FD  REC3IN LABEL RECORDS ARE OMITTED,  DATA RECORD IS INREC,
           BLOCK CONTAINS 25 RECORDS.
       01  INREC.
           02  FILLER PIC X(80).
       FD  REC3OUT LABEL RECORDS ARE OMITTED,  DATA RECORD IS OUTREC,
           BLOCK CONTAINS 25 RECORDS.
       01  OUTREC.
           02  OUTCHAR OCCURS  80 TIMES, INDEXED BY OUTNDX, PIC X(1).
       WORKING-STORAGE SECTION.
       77  ENDTEMP PIC S999, USAGE COMPUTATIONAL, SYNC.
       77  TAPERECNO PIC S9(7), USAGE COMPUTATIONAL-3, VALUE 0.
       77  DIFF PIC S9(3), USAGE COMPUTATIONAL-3.
       77  END-IND PIC X, VALUE '0'.
       77  OPRECNO PIC S9(7), USAGE COMP-3, VALUE 0.
       01  UPDATE-CARD.
           02  12COLS.
               03  NCHAR OCCURS  9 TIMES INDEXED BY UPDNDX, PIC X(1).
           02  3FIELDS REDEFINES 12COLS.
               03  UPD-REC PIC 9(5).
               03  UPD-BEG PIC 9(2).
               03  UPD-END PIC 9(2).
           02  UPD-DATA.
               03  UPD-CHAR PIC X(71).
       PROCEDURE DIVISION.
           OPEN INPUT REC3IN, CRD, OUTPUT REC3OUT.
           SORT WORKFILE ASCENDING KEY CARDRECNO, INPUT PROCEDURE
               READ-CARDS, OUTPUT PROCEDURE UPDATE-TAPE.
```

```
           CLOSE REC3IN, REC3OUT.
           STOP RUN.
       READ-CARDS SECTION.
       GET-CRD.
           READ CRD INTO UPDATE-CARD AT END GO TO LAST-CRD.
           PERFORM TEST-CHAR THRU TEST-XIT VARYING UPDNDX FROM 1 BY 1
               UNTIL UPDNDX GREATER THAN 9.
       CHECK-FLD1.
           MOVE UPD-REC TO CARDRECNO.
           IF CARDRECNO = 0 GO TO ERR.
           MOVE UPD-BEG TO SRTBEGCOL.
           IF SRTBEGCOL = 0 OR SRTBEGCOL GREATER THAN  80 GO TO ERR.
           MOVE UPD-END TO SRTENDCOL.
           IF SRTENDCOL = 0 OR SRTENDCOL GREATER THAN  80 GO TO ERR.
           SUBTRACT SRTBEGCOL FROM SRTENDCOL GIVING DIFF.
           IF DIFF LESS THAN 0 OR DIFF GREATER THAN 71 GO TO ERR.
           MOVE UPD-CHAR TO SRTDATA.
           RELEASE SRTREC.
           GO TO GET-CRD.
       ERR.
           DISPLAY '   ***   ERROR   ', CARD-IMAGE.
           GO TO GET-CRD.
       LAST-CRD.
           CLOSE CRD.
       EXIT-READ.
           EXIT.
       TEST-CHAR SECTION.
           IF NCHAR (UPDNDX) = ' ' MOVE '0' TO NCHAR (UPDNDX)
               GO TO TEST-XIT.
           IF NCHAR (UPDNDX) LESS THAN '0' OR NCHAR (UPDNDX) GREATER
               THAN '9' GO TO ERR.
       TEST-XIT.
           EXIT.
       UPDATE-TAPE SECTION.
           RETURN WORKFILE RECORD AT END STOP RUN.
       GET-TAPE.
           READ REC3IN INTO OUTREC AT END GO TO LAST-REC.
           ADD 1 TO TAPERECNO.
       COMP-RECNO.
           IF CARDRECNO LESS THAN TAPERECNO GO TO GET-SRTREC.
           IF CARDRECNO = TAPERECNO GO TO UPDATE-RECORD.
           IF UPD-BEG = '80' AND UPD-END = '80' AND UPD-CHAR = SPACES
                           GO TO GET-TAPE.
           WRITE OUTREC.
           ADD 1 TO OPRECNO.
           GO TO GET-TAPE.
       UPDATE-RECORD.
           MOVE SRTENDCOL TO ENDTEMP.
           SET SRTNDX TO 1.
           PERFORM MOVECHAR THRU EXIT-MOVE VARYING OUTNDX FROM
               SRTBEGCOL BY 1 UNTIL OUTNDX GREATER THAN ENDTEMP.
       GET-SRTREC.
           RETURN WORKFILE RECORD AT END MOVE '1' TO END-IND, MOVE
               9999999    TO CARDRECNO.
           GO TO COMP-RECNO.
       LAST-REC.
```

```
            DISPLAY SPACES.
            DISPLAY TAPERECNO, '   RECORDS INPUT'.
            DISPLAY OPRECNO, '   RECORDS OUTPUT'.
            IF END-IND = '1' GO TO EXIT-UPD.
            DISPLAY SPACES.
        NXT-REC.
            DISPLAY '   ***   NO RECORD ', CARDRECNO.
            RETURN WORKFILE RECORD AT END GO TO EXIT-UPD.
            GO TO NXT-REC.
        EXIT-UPD.
            EXIT.
        MOVECHAR SECTION.
            MOVE SRTCHAR (SRTNDX) TO OUTCHAR (OUTNDX).
            SET SRTNDX UP BY 1.
        EXIT-MOVE.
            EXIT.
/*
 ENTRY
// EXEC LNKEDT
// ASSGN SYS001,X'130'
// DLBL SORTWK1,,0
// EXTENT SYS001,111111,1,0,3280,600
// EXEC
/*
/&
```



LOGIC FLOW TO MERGE NEW FMR DATA WITH
OLD MASTER FMR DATA TAPE AND LIST

Enclosure 10

PROCEDURE

TITLE: NEWFMR - Merge and List

PURPOSE: To merge new FMR data with old master FMR data tape and list

Step 1:

Program: MRGSRT
Language: Utility
Description: Merges and sorts tape data by equipment identity (EI), FMR number, card type, suffix, FSN, component reference symbol (CRS)

Inputs: (1) New FMR data tape
Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See figures 1,2,3, pp. 58-60

(2) Old FMR master data tape
Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See figures 1,2,3
Order: EI, FMR, CT, Suffix, FSN, CRS

Output: New FMR master data tape
Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See figures 1,2,3, pp. 58-60
Order: EI, FMR, CT, Suffix, FSN, CRS

Step 2:

Program: LSTAPE
Language: RPG
Description: Each record on the master data tape is numbered and listed. The listing is designed to allow for ease of verification and manual correction of data. It is pointed out that this is an independent program and can be used to list either the new FMR data tape or the FMR master data tape.

Input: New FMR master data tape
Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See figures 1,2,3, pp. 58-60
Order: EI, FMR, CT, Suffix, FSN, CRS

Output: Listing of data tape

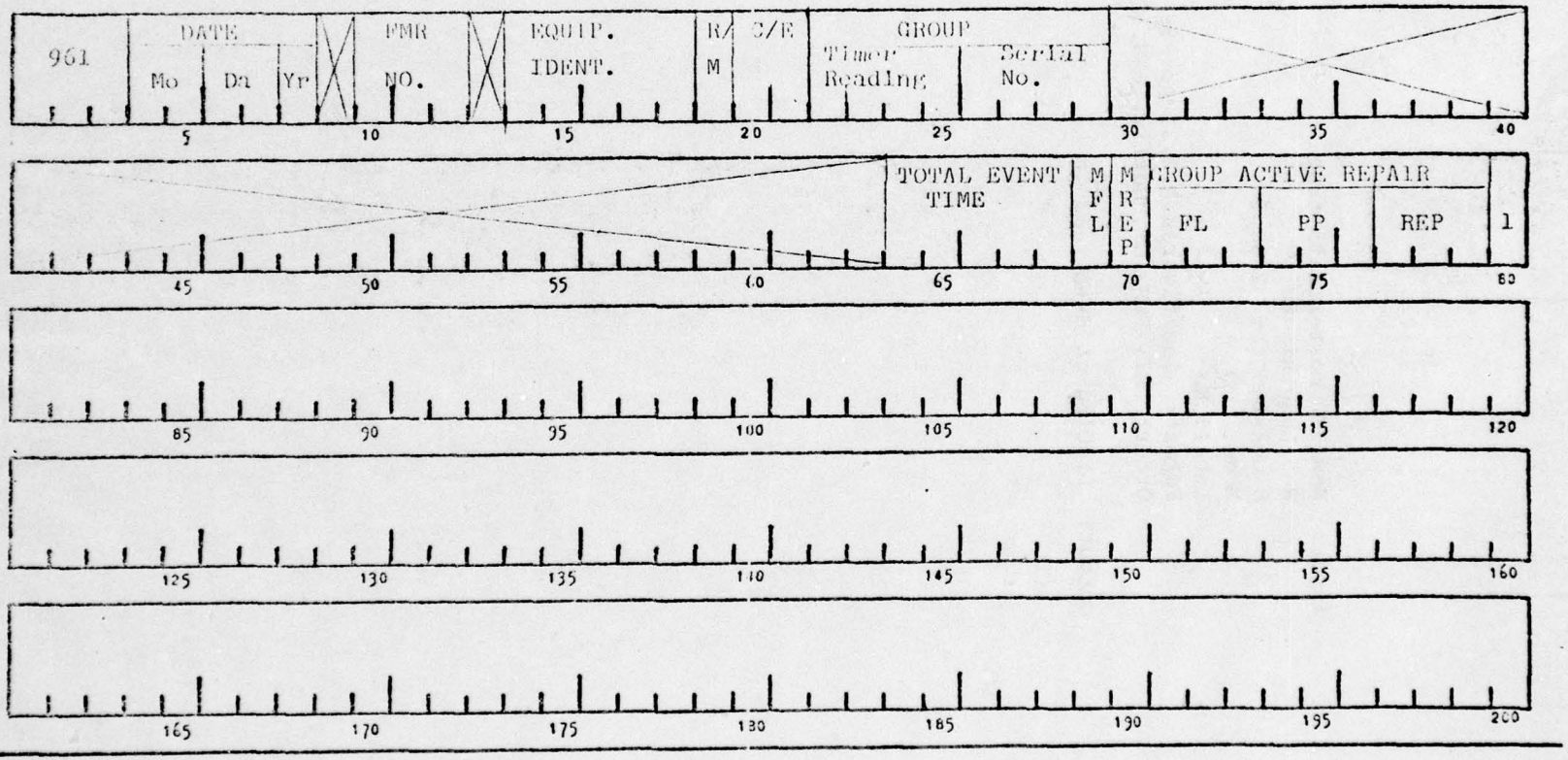
TAPE RECORD FORMAT

FILE NAME GROUP DATA RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER Card Type 1 BLOCKING FACTOR 25

PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	STANDARD [ ]	NON-STANDARD [ ]	NONE [X]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:



DPD - 40 8 - 16 - 66

Figure 1

TAPE RECORD FORMAT

FILE NAME REPAIRABLE PARTS DATA   RECORD LENGTH 80   PAGE ___ OF ___ DATE ______

FILE NUMBER Card Type 3   BLOCKING FACTOR 25

							STANDARD	NON-STANDARD	NONE
PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	[ ]	[ ]	[X]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:

961	DATE				FMR NO.	SUFFIX	EQUIP IDENT	R/M	C/E	P/S	DISP	MFLG	HARDWARE IDENTITY				PART NUMBER
	Mo.	Da	Yr	X									UN	AS	SA	MOD	

5 10 15 20 25 30 35 40

(P/N Cont.)	REF DESIG/ J. CONN NO.	SERIAL NO.	MREPGP	GROUP ACTIVE REPAIR			TOTAL EVENT TIME	MFL	MREP	FAULT ACTIVE REPAIR			3
				FL	PP	REP				FL	PP	REP	

45 50 55 60 65 70 75 80

85 90 95 100 105 110 115 120

125 130 135 140 145 150 155 160

165 170 175 180 185 190 195 200

DPD - 40   8 - 16 - 66

Figure 2

TAPE RECORD FORMAT

FILE NAME CONSUMABLE PARTS DATA RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER Card Type 4 BLOCKING FACTOR 25

PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO			STANDARD	NON-STANDARD	NONE
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO		HEADER	[ ]	[ ]	[X]
							TRAILER	[ ]	[ ]	[X]

REMARKS:

961	DATE Mo	DATE Da	DATE Yr	X	FMR NO.	SUFF IX	EQUIPMENT IDENT	R/M	C/E	P/S	DISP	X	HARDWARE IDENTITY UN	AS	SA	MOD	PART NUMBER

5 10 15 20 25 30 35 40

(P/N Cont.)	REF.DESIG/ J CONN NO.	SERIAL NO.	PART SYM	PART POS	FEDERAL STOCK NUMBER	MIL DEF	AWP DAYS	IT	4

45 50 55 60 65 70 75 80

85 90 95 100 105 110 115 120

125 130 135 140 145 150 155 160

165 170 175 180 185 190 195 200

DPO - 40 8 - 16 - 66

Figure 3

PROGRAM LISTINGS TO MERGE NEW FMR DATA
WITH THE OLD FMR MASTER DATA TAPE AND LIST

Enclosure 12

```
// JOB 1302-01 MRGSRT MERGE & SORT BY GRP SQD FMR CT SFX FSN CRS        91,93 92
// ASSGN SYS003,X'291'
// ASSGN SYS002,X'293'
// ASSGN SYS001,X'292'
// ASSGN SYS004,X'131'
// DLBL SORTWK1,,0
// EXTENT SYS004,999999,1,0,100,2000
// EXEC SORT
  SORT FIELDS=(14,5,A,10,3,A,80,1,A,13,1,A,60,13,A,54,6,A),          *
                FORMAT=BI,FILES=2,WORK=1
  RECORD TYPE=F,LENGTH=80
  INPFIL BLKSIZE=2000
  OUTFIL BLKSIZE=2000
  OPTION LABEL=(U,U,U)
  END
/*
/&
```

```
// JOB 1302-01 LSTAPE LISTS MSTR DATA FMR TAPE                    292 PRNT
// OPTION LINK,NODUMP
// EXEC RPG
00000H
00010F*
00015F* THIS PROGRAM LISTS THE MASTER (OR TEMPORARY) FMR DATA TAPE
00020F*
01010FREFMTD  IPE F2000  80          TAPE   SYS013                  R
01020FLIST    O   V 132 132     OF   PRINTERSYSLST
02010IREFMTD  AA  02
02020I                                    1   3 X1
02030I                                    4   5 X2
02040I                                    6   7 X3
02050I                                    8   8 X4
02060I                                   10  12 X5
02070I                                   14  15 X6
02080I                                   16  18 X7
02090I                                   19  19 X8
02100I                                   20  21 X9
02110I                                   22  23 X10
02120I                                   24  24 X11
02130I                                   25  25 X12
02140I                                   26  32 X13
02150I                                   33  45 X14
02160I                                   46  49 X15
02170I                                   50  53 X16
02180I                                   54  54 X17
02190I                                   55  59 X18
02200I                                   60  63 X19
02210I                                   64  68 X20
03010I                                   69  70 X21
03020I                                   71  72 X22
03030I                                   73  75 X23
03040I                                   76  78 X24
03050I                                   79  79 X25
03060I                                   80  80 X26
03070I                                   13  13 X30
04010C  02      X26       COMP '1'                    01 CARD TYPE 1
04020C  02      X26       COMP '3'                    03 CARD TYPE 3
04030C  02      X26       COMP '4'                    04 CARD TYPE 4
04040C  02      RECORD    ADD  1       RECORD  50
05010CLIST   H  301  OF
050200       OR      1P
050250                                 9 'REC. NO.'
050300       D 21    01 02
050400                        RECORDZ  6
050500                        X1      12
050600                        X2      15
050700                        X3      17
050800                        X4      18
050900                        X5      22
051000                        X6      27
051200                        X7      30
051300                        X8      33
051400                        X9      36
051500                        X10     39
```

```
051600                          X11       40
051700                          X12       41
051800                          X13       49
051900                          X20      111
052000                          X21      114
060100                          X22      117
060200                          X23      120
060300                          X24      123
060400                          X25      124
060500                          X26      130
060600      D  1      02 03
060650                          RECORDZ    6
060700                          X1        12
060800                          X2        15
060900                          X3        17
061000                          X4        18
061100                          X5        22
061200                          X30       24
061300                          X6        27
061500                          X7        30
061600                          X8        33
061700                          X9        36
061800                          X10       39
061900                          X11       40
062000                          X12       42
070100                          X13       49
070200                          X14       63
070300                          X15       68
070400                          X16       73
070500                          X17       95
070600                          X18      101
070700                          X19      105
070800                          X20      111
070900                          X21      114
071000                          X22      117
071100                          X23      120
071200                          X24      123
071300                          X25      124
071400                          X26      130
071500      D  1      04 02
071600                          RECORDZ    6
071700                          X1        12
071800                          X2        15
071900                          X3        17
072000                          X4        18
080100                          X5        22
080200                          X30       24
080300                          X6        27
080500                          X7        30
080600                          X8        33
080700                          X9        36
080800                          X10       39
080900                          X12       42
081000                          X13       49
081100                          X14       63
081200                          X15       68
```

```
081300                          X16     73
081400                          X17     75
081500                          X18     80
081600                          X19     85
081700                          X20     90
081800                          X21     92
081900                          X22     94
090100                          X23     98
090200                          X24     102
090300                          X26     130
/*
 ENTRY
// EXEC LNKEDT
// EXEC
/&
```

2. EQUIPMENT BREAKDOWN ENCODING TABLES

TABLE OF CONTENTS

SECTION 1. INTRODUCTION

The attached encoding tables are to be used to obtain the numerical codes to be entered in columns 25-32 of card type 3 and card type 4.

SECTION 2. DESCRIPTION

Columns 25-32 of card type 3 and card type 4 are used to identify the position location of a hardware equipment unit, assembly, subassembly and module. The appropriate codes for the AN/TYQ-1, AN/TYQ-2, AN/TYQ-3 and AN/TPS-32 are listed in the attached tables.

AN/TYQ-1

ENCODING TABLE

Enclosure 1

EQUIPMENT BREAKDOWN FOR: AN/TYQ-1 Page 1

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
				AN/TYQ-1		Operations Group
01				99-193989-01		Display Generation Group OA-8569
01	01			99-192045-01		CMPTR, Aux Display Gen CP-1018
01	01	01		39-193476-01		Video
		02		39-192484-01		Generator
		03		39-192488-01		Trackball Interface
		04		39-192492-01		Con. Termination B
		05		39-192500-02		Data Transfer No. 1
		06		39-192504-01		Data Transfer No. 2
		07		39-192512-01		Register K
		08		39-192542-01		Control No. 1
		09		39-192546-01		Control No. 2
		10		39-192558-01		Mode-Submode Counter
		11		39-192562-01		Positioner Co-Ord
		12		39-192584-01		Control No. 5
		13		39-192588-01		Control No. 6
		14		39-192592-01		Control No. 3
		15		39-192596-05		Control No. 4
		16		39-192600-01		Sub-Mode Control
		17		39-192604-01		Multiplexer Control
		18		39-192608-01		Interface
		19		39-192661-01		Conn. Termination
		20		39-192665-01		Computer Termination
		21		39-192677-01		Sync Distribution
		22		39-192681-01		Co-Ordinate Buffer
		23		39-194038-01		Extender Assy.
		24		39-197424-01		Maintenance Card
		25		39-204192-01		Clock Distribution
		26		39-205071-01		Memory Termination
		27		39-205075-01		Logic Termination
		28		82-201650-03	N1A01	Power Supply Assembly
		30		82-201655-01		Module A Assy. Wired

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01	01	30	01	39-201466-01	A1	-12V
			02	39-201412-01	A2	+12V
			03	39-201416-02	A3	-6V
			04	39-201416-01	A4	-5V
			05	39-201420-01	A5	Logic
			06	39-201424-01	A6	Current Limiter
		31		82-201661-01		Module Assy. Wired
			01	39-201289-01	A1	Module B +5V Regulator
			02	39-201393-01	A2	Module C +20V Sensor
		32		82-201666-01		Module C Assy. Wired
			01	39-201388-02	A1	Module B +5V Regulator
			02	39-201396-01	A2	Module C -20V Sensor
		33		82-201671-01		Module D Assy. Wired
			01	39-201321-01	A1	-12V
			02	39-201333-01	A2	+12V
			03	39-201329-02	A3	-6V
			04	39-201329-01	A4	-5V
			05	39-201337-01	A5	Current Limiter
		34		82-201679-01		Module E Assy. Wired
			01	39-201519-02	A1	Module E +20V & +5V Regulator
			02	39-201325-01	A2	Module E +20V & +5V Sensor
		35		82-201683-01		Module F Assy. Wired
			01	39-201519-01	A1	Module F +20V & +5V Regulator
			02	39-201325-01	A2	Module F +20V & +5V Sensor
			03	39-204670-01	A3	Clock Driver
			04	39-205065-03	A4	Encoder Pre-Format
		36		39-192468-02		Memory Buffer
			01	39-204667-01	A1, A2	Clock Driver
		37		39-192480-02		Marker X Generation
			01	39-204670-01	A1, A2	Clock Driver
		38		39-192554-02		Master Timing
			01	39-204670-01	A1	Clock Driver

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01	01	39		39-192612-02		Encoder No. 1
			01	39-204670-01	A1, A2	Clock Driver
		40		39-192472-01		Logic Decoder
			01	39-204670-01	A1, A2	Clock Driver
		41		39-192508-02		Register Display
			01	39-204670-01	A1	Clock Driver
		42		39-192669-02		Encoder No. 2
			01	39-204670-01	A1, A2	Clock Driver
		43		85-191250-01		Memory Unit Core
			01	39-192270-01	A1	Data
			02	39-192270-01	A2	Data
			03	39-192281-01	A3	Timing Control
			04	39-192273-01	A4	X/Y Driver
			05	85-204118-01	A4	Core Memory Unit
	02			99-191374-01		Console, Situation Display OJ 179/TYA-1 (V)
		01		39-190755-02	A1	Horiz Resonant Flyback Sweep Gen.
		02		39-197350-01	A2	Preamp & Focus
		03		39-197354-01	A3	Amp Power Focus
		04		39-193690-01	A4	Test Point
		05		39-190677-01	A5	Conv. Blanking Generator
		06		39-191375-01	A6	Lin. Corrector & Sweep Generator
		07		39-190829-01	A7	Sync. Processor
		08		39-191375-01	A8	Lin. Corrector & Sweep Generator
		09		39-190873-01	A9	Vert. Defl. Amp.
		10		39-190681-02	A10	Blanking, Sweep & Generation
		11		39-190751-01	A11	Video Preamp
		12		39-204176-01	A12	Video Amplifier
		13		85-193315-01	A13	SW Assy. Bulk
		14		38-192007-01	A14	Horiz. Amp. Assy.
			01	39-191269-01	A1	Horiz. Amp.
		16		85-191084-01	--	Coordinate Assy.
			01	SE-188534-01	A1	Trackball Assy.

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01	02	15		851543-1		20 kV Power Supply
	03			99-191872-01		Console Assy. WASB AN/TSA-39
		01		39-190755-02	A1	Resonant Flyback Sweep Generator
		02		39-193694-01	A2	Half Field Switch
		03		39-191375-01	A3	Linearity Corrector
		04		39-190629-01	A4	Syn. Processor
		05		39-190751-01	A5	Video Pre-Amp.
		06		39-204176-01	A6	Video Amplifier
		07		39-191375-01	A7	Linearity Corrector
		08		39-190673-01	A8	Vert. Defl. Amp.
		09		39-190681-02	A9	Blanking & Sweep Generator
		10		38-192007-01	A10	Horiz. Amp. Assy.
			01	39-191269-01	A1	Horiz. Amp.
		11		38-192006-02	A11	Vertical Ampl.
		12		85-191100-01	A12	Electronic SW Assy.
		14		11900		Low Voltage DC Pwr. Supply
		15		851544-1		Pwr. Supply HV
		16		99-192021-01		Cabinet Assy.
01	04			99-192711-01		CDPU Su-56
		01		92-190847-01		Projection Unit Assy.
			01	86-191000-01	A1	5" CRT Assy.
			02	38-197603-01	A1-A1	Video Amplifier Assy.
		02		99-192570-01		Electronics Unit, Projection
			01	39-190755-01	A1	Sweep Resonant Flyback
			02	39-191269-01	A2	Horiz. Amp.
			03	39-191852-01	A3	Failure Detection
			04	39-190669-01	A4	Focus Gen. Dynamic
			05	39-191375-01	A5	Lin. Corrector Sweep Gen.
			06	39-190629-01	A6	Processor Sync.
			07	39-191375-01	A7	Lin Corrector, Sweep Gen.
			08	39-190673-01	A8	Amp. Vertical Deflection
			09	39-190681-02	A9	Blanking & Sweep Protector
			10	39-191117-01	A10	Reg. Cur. Pin Cushion Focus
			11	39-190747-01	A11	Reg. Cur. Centering Coil
			12	39-195651-01	A12	Beam Orbitor
			13	39-190751-01	A13	Pre. Amp. Video
			14	85-193315-01	A14	Elect. SW Assy. Bulk
			15	39-191269-01	A15-A1	Amp. Assy. Horiz. Deflection
			16	39-191269-01	A16-A1	Amp. Assy. Horiz Deflection
			17	38-192006-02	A17	Amp. Assy. Vertical
			18	851543-1	PS1	50 kV Power Supply
			19	85-193054-01		Panel Assy.
		03		32-192685-01		Truss Assy.

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
	05			741420-1		Inter. Comm. Sta. LS-595/U
		01		741570-1	A1	Resistor Matrix No. 1
		02		741570-1	A2	Resistor Matrix No. 1
		03		741570-1	A2	Resistor Matrix No. 1
		04		741530-1	A4	Resistor Matrix No. 2
		05		741530-1	A5	Resistor Matrix No. 2
		06		741480-1	A6	Ring Detector
		07		741480-1	A7	Ring Detector
		08		741535-1	A8	Flasher & Sw.Bi Ring Detector
		09		741476-1	A9	Amplifier
		10		741488-1	A10	AGC Amplifier
		11		741488-1	A11	AGC Amplifier
		12		741456-1	A12	Accessory Board
	06			741540-1		Loud Speaker/Amp. LS 596-U
		01		741546-1	A1	Amp. Speaker Loud Speak/Amp
	07			99-195118-01		Power Supply Ring Gen. Equip.
		01		741460-1		20 Hz Ring Sig. Generator
			01	742543-1	A1	Oscillator 20 Hz
			02	742548-1	A2	Phase Splitter
			03	742553-1	A3	Driver Amp.
			04	742593-1	A4	Inverter Ring Assy.
			05	741470-1	A5	+24V P.S.
			06	741470-1	A6	+24V P.S.
			07	741470-1	A7	+24V P.S.
	08			99-194453-01		Communications Group
		01		741550-1		TTY Matrix
			01	741554-1	A1 - A8	Signal Sensor
		02		741430-1		Combining Network
			01	741566-1	A1	Resistor Matrix
			02	741566-1	A2	Resistor Matrix

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01	08	02	03	7-1496-1	A3	Amp. Dual Line
			04	741566-1	A4	Resistor Matrix
			05	7-1566-1	A5	Resistor Matrix
			06	7-1496-1	A6	Amp. Dual Line
			07	741566-1	A7	Resistor Matrix
			08	741566-1	A8	Resistor Matrix
			09	741496-1	A9	Amp. Dual Line
			10	741566-1	A10	Resistor Matrix
			11	741566-1	A11	Resistor Matrix
			12	741496-1	A12	Amp. Dual Line
			13	741496-1	A13	Amp. Dual Line
			14	741496-1	A14	Amp. Dual Line
			15	741496-1	A15	Amp. Dual Line
			16	741496-1	A16	Amp. Dual Line
			17	741464-1	A17	Control, Relays
		03		741440-1		Monitor Assy., 16 X 17 Matrix
			01	741445-1	A1	Accessory
			02	741496-1	A2	Amp. Dual Line
		04		741450-1		Direct Access Terminal
			01	742571-1	A1	Resistor Matrix
			02	741496-1	A2	Amp. Dual Line
			03	741484-1	A3	Ring Detector
			06	742571-1	A6	Resistor Matrix
			07	741496-1	A7	Amp. Dual Line
			08	741484-1	A8	Ring Detector
	09			32-221062-01		Data Terminal Rack
		01		74-1360-1	A2	TS-2969/G Digital Data Modem
			01	801430-1	A1	Lamp, Relay Driver
			02	801430-1	A2	Lamp, Relay Driver

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01	09	01	04	801480-1	A4	4 Bit Shift Register
			05	801480-1	A5	4 Bit Shift Register
			06	801460-1	A6	2 Input Nand Gates
			07	801460-1	A7	2 Input Nand Gates
			09	801460-1	A9	2 Input Nand Gates
			11	801400-1	A11	5 Master Slave FFs
			13	801468-1	A13	4 Input Nand Gates
			14	801460-1	A14	2 Input Nand Gates
			16	801464-1	A16	3 Input Nand Gates
			17	801468-1	A17	4 Input Nand Gates
			19	801460-1	A19	2 Input Nand Gates
			20	801402-1	A20	7 Master Slave, FFs
			21	801474-1	A21	Line Receiver
			22	801474-1	A22	Line Receiver
			23	801474-1	A23	Line Receiver
			24	801474-1	A24	Line Receiver
			25	801474-1	A25	Line Receiver
			26	801474-1	A26	Line Receiver
			28	801474-1	A28	Line Receiver
			30	801470-1	A30	Line Driver
			32	801430-1	A32	Lamp, Relay Driver
			33	801410-1	A33	4 Input Gate Expanders
			35	801460-1	A34	2 Input Nand Gates
			36	801400-1	A36	5 MasterSlave FFs
			37	801460-1	A37	2 Input Nand Gates
			39	801460-1	A39	2 Input Nand Gates
			40	801402-1	A40	7 Master Slave FFs
			41	741274-3	PS 1	Power Supply Assy. Multiple Output
		02		741380-1	A3, A7	MD 835/G, Modem Digital Data
			01	801464-1	A1	3 Input Nand Gates
			02	801400-1	A2	5 Master Slave FFs
			03	801480-1	A3	4 Bit Shift Register

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01	09	02	04	801460-1	A4	2 Input Nand Gates
			06	801452-1	A6	Temp. Compen. X Stal OSC
			07	801460-1	A7	2 Input Nand Gates
			08	801460-1	A8	2 Input Nand Gates
			09	801464-1	A9	3 Input Nand Gates
			10	801480-1	A10	4 Bit Shift Register
			11	801482-1	A11	8 Bit Shift Register
			12	801482-1	A12	8 Bit Shift Register
			14	801468-1	A14	4 Input Nand Gates
			15	801402-1	A15	7 Master Slave FFs
			16	801400-1	A16	5 Master Slave FFs
			17	801464-1	A17	3 Input Nand Gates
			18	801402-1	A18	7 Master Slave FFs
			19	801460-1	A19	2 Input Nand Gates
			20	801460-1	A20	2 Input Nand Gates
			22	801480-1	A22	4 Bit Shift Register
			23	801480-1	A23	4 Bit Shift Register
			24	801460-1	A24	2 Input Nand Gates
			25	801460-1	A25	2 Input Nand Gates
			27	801474-1	A27	Line Drive Receiver
			28	801474-1	A28	Line Receiver
			29	801474-1	A29	Line Receiver
			30	801474-1	A30	Line Receiver
			31	801474-1	A31	Line Receiver
			32	801474-1	A32	Line Receiver
			33	801474-1	A33	Line Receiver
			34	801468-1	A34	4 Input Nand Gates
			35	801402-1	A35	7 Master Slave FFs
			36	801480-1	A36	4 Bit Shift Register
			37	801460-1	A37	2 Input Nand Gates
			39	801452-1	A39	Temp Compen. Xstal OSC
			41	801460-1	A41	2 Input Nand Gates
			42	801480-1	A42	4 Bit Shift Register

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01	09	02	43	801460-1	A43	2 Input Nand Gates
			44	801402-1	A44	7 Master Slave FFs
			45	801460-1	A45	2 Input Nand Gates
			46	801464-1	A46	3 Input Nand Gates
			47	801460-1	A47	2 Input Nand Gates
			48	801482-1	A48	8 Bit Shift Register
			49	801482-1	A49	8 Bit Shift Register
			50	801468-1	A50	4 Input Nand Gates
			51	801400-1	A51	5 MasterSlave FFs
			52	801460-1	A52	2 Input Nand Gates
			53	801480-1	A53	4 Bit Shift Register
			54	801460-1	A54	2 Input Nand Gates
			55	801402-1	A55	7 Master Slave FFs
			56	801402-1	A56	7 Master Slave FFs
			57	801460-1	A57	2 Input Nand Gates
			58	801480-1	A58	4 Bit Shift Register
			59	801480-1	A59	4 Bit Shift Register
			61	800392-1	A61	Line Light Driver
			62	801470-1	A62	Line Driver
			63	801470-1	A63	Line Driver
			64	801470-1	A64	Line Driver
			65	801470-1	A65	Line Driver
			66	801470-1	A66	Line Driver
			67	741325-1	A67	Freq. Shift Keying Xmitt.
			69	741333-1	A69	Voltage Control Osc
			70	741337-1	A70	Phase Lock Control
			71	74134-1	A71	Resistor Capacitor Select
			72	741345-1	A72	Active Filter
			73	741356-1	A73	Pulser/Slicer
			74	741329-1	A84	Freq. Shift Keying Xmitt.
			75	741390-1	A75	Equalizer

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
40				GFE		Teletypewriter AN/TGC-14
41				GFE		Teletypewriter AN/TGC-29
42				GFE		Switchboard SB-22/PT
43				GFE		Telegraph Terminals TH-85
50				32-192793-01		Elect. Shelter S-471/TYQ-1(CV)
	01			85-194963-01		Panel, Power
51				HD-870/U		Air Conditioner
52				87-193535-01		Footswitch
53				99-192405-02		Inflatable Shelter (TYA-1) S-469
	01			6922001-2		Manual Status Board
54				BR6100-503		Lighting Fixture
	01			69034		Ballast (6250-484-8966)
	02			BR8113-501		Incan. Light in Huts
55				112700		Head Phone Set
56						Cables
57						Power Control Panel OA 8651/TYA-13
58				23J28002-2		AN/TYA-3 Hut

AN/TYQ-2

ENCODING TABLE

(AN/TYA-5)
(AN/TYA-6)
(AN/TYA-18)
(AN/TYA-7)
(AN/TYA-12)
(AN/TYA-9)

Enclosure 2

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01				532125-000	A1	Electronic Equip. Cabled Rack - Left
	50			532130-000	PS1	12V Power Supply PP4303
		01		531250-000	PS2A250	Amplifier Regulator
		02		531251-000	A1PS1A251	Electron Protector Circuit
02				532107-000		Drum and PS Cabled Rack
	02			532102-000		Indicator Roll Chart Panel Assy.
		10		530408		Indicator Roll Chart Front Panel
	04			530461		O & M Panel Assembly
		11		530411		O & M Front Panel
	03			530460		Maint. and Drum Operator Panel Assy
		12		530414		Maint. and Drum Operation Front Panel
	01			532100-000		Computer Drum, MU507
		13		532001-000		Drum Subassembly
			01	532004-000		Rotor Subassembly
	50			532130-001		12V Power Supply, PP4303
		01		531250-000		Amplifier Regulator
		02		531251-000		Electron Protector Circuit
	51			532132-000		26.5V Power Supply, PP4296
		01		531250-000		Amplifier Regulator
		02		531251-000		Electron Protector Circuit
03				531226-000		Electronic Equip. Cabled Rack - Right
04				GFE		Air to Gnd. Data Terminal, CV-1829
50				532115-000		Hut Structure Assembly
	71			532902		Air Conditioner
	72			532903		Air Conditioner Amplifier Control
	85			532109-000		Power Distribution Box
	90					Hut Lighting
	91			GFE		Hut Telephone, TA 312/PT
	82			533111-003		AC Power Harness
	70			532901		Temperature Control Panel
	86			532116-000		RFI Filter & Comm. Panel Assy.
	96			536324		Air Conditioner Power Cable Assy.
	97			536325		Air Conditioner Control Cable Assy.

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01				532225-000		Electronic Equipment Cabled Rack
02				533227		Magnetic Drum Cabled Rack
	11			532201-000		Drum Servo Assy. "L"
		11		532206-000		Drum Servo Subassy.
		12		532208-000		Error Detector Subassy.
		13		532131-000		SCR Voltage Regulator
			01	531060-001		Frequency Sensor
			02	531062-000		Error Detector
			03	531063-000		Sensor Simulator Amplifier
			04	531066-000		Test & External Trigger
	11			532201-000		Drum Servo Assy. "M"
	10			532200		Magnetic Drum "L"
		10		532202-000		Magnetic Drum Subassy.
			05	532003-000		Rotor Subassy.
				532200		Magnetic Drum "M"
		10		532002-000		Magnetic Drum Subassy.
			05	532003-000		Rotor Subassy.
03				533223		RIDP Panel Cabled Rack
	14			532204-000		" Operate Panel Assy. "L"
		15		534157		" Operate Front Panel
				532204-000		" Operate Panel Assy. "M"
		15		534157		" Operate Front Panel
04				532205-000		Power Supply & Radar Cabled Rack
50	85			532209-000		Power Distribution Box
50	70			532901-000		A. C. Temperature Control
04	13			532203-000		Maintenance Panel Assy.
		14		534156		Maintenance Front Panel
	50			532130-001		12V Power Supply
		01		531250-000		Amplifier Regulator
		02		531251-000		Electron Project Circuit
	51			532132-001		26.5V Power Supply, PP4296
04	51	01		531250-000		Amplifier Regulator
		02		531251-000		Electron Project Circuit
	52			532134-001		30V Power Supply, PP-4295
	12			532202-000		Video Quantizer Assy. "L"
		16		530539		Video Quantizer Chassis
				531224-000		Video Line Driver Amp.
				531273-000		Electron Switch Amp.
				531226-000		Threshold Set Amp.
				531227-000		Summation Feedback Amp.
				531228-000		Integrater one-shot Multivibrator
				531229-000		Jamming Detect Amp.
	12			532202-000		Video Quantizer Amp. "M"
	16			532217-000		IFF Decoder, KY-569
5				532400		Signal Data Converter, CV-1927
				531101		NOR Diode Gate

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
				531102		NOR Flip Flop
				531003		NOR Inverter
				531107		NOR Coaxial Line Driver
				531109		NOR Line Receiver
				531111		NOR Lamp Driver
				531116		NOR Digital Filter
				531219		Radar Interface, Circuit #I
				531222		Radar Interface Buffer
				531223		Radar Interface, Circuit #II
				531224-000		Video Line Driver Amp.
				531239		Radar Trigger Pulse Generator
				531270		Quantizer Circuit
				531271		Radar One-Shot
				531274		Bipolar Mode Gate Driver
				531275		Bipolar Trigger Generator
	54			532137		Power Supply, PP-4298
		05		531254		Electron Protector Circuit
		06		531255		Voltage Regulator
05				532400		Signal Data
50				532215		Hut Structure Assy.
	71			532903-000		Air Conditioner
	86			532216-000		RFI Filter
	72			523903-000		A.C. Amp. Control
	90					Hut Lighting
	82			533211		AC Power Harness
	91					Hut Telephone, TA-312/PT
	81			532249		Basic Hut
	96			536324		A.C. Power Cable Assy.
	97			536325		A. C. Control Cable Assy.

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01				532276		Electronic Equipment Cabled Rack
	01			532256-000		Status Panel Assy. 2-D
	02			532254-000		Operations Panel Assy. 2D
02				536457		Magnetic Drum Rack
	11			532221-0000		Magnetic Drum Servo "L"
		11		532206		Magnetic Drum Servo Subassy.
		12		532208-000		Error Detector Sub-Chassis
			01	531060-001		Drum Velocity Loop Error Detector
			02	531062-000		Electron Phase Error Synchronizer
			03	531063-000		Sensor Simulator Amp.
			04	531066-000		Test Signal Generator
		13		532131-000		Controller Rectifier Voltage Reg.
	10			532250-000		Magnetic Drum 10 inch
		14		532005-000		Magnetic Drum Subassy.
		15		532006-000		Rotor Subassy.
	11			532221-0000		Magnetic Drum Servo "M"
	10			532250-000		Magnetic Drum 10 inch
04				532255-000		Radar & Power Supply Cabled Rack
50	85			532259-000		Power Distribution Box
50	70			532901		A. C. Temperature Control
04	03			532253-000		Maintenance Panel Assy.
	04			532260-000		DC Power Monitor
	12			532202-000		Video Quantizer
		16		530539		Video Quantizer Chassis
				531224-000		Video Line Driver Amp.
				531226-001		Threshold Set Amp.
				531228-000		Integrator Multivibrator
				531229-000		Jamming Detector Amp.
				531273-000		Electron Switch Amp.
				531227-000		Summation Amp.
04	16			532217-000		IFF Decoder KY-569
	12			532202-000		Video Quantizer Code M
	12			532202-000		Video Quantizer Code V
	50			532130-001		Power Supply, PP-4303
		01		531250-000		Regulator
		02		531251-000		Electron Projector Circuit
	51			532132-001		Power Supply, PP-4296
		01		531250-000		Regulator
		02		531251-000		Electron Projector Circuit
	52			532134-001		Power Supply PP-4295

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
06				532275-000		Electronic Equipment Cabled Rack
	13			532263-000		Status Panel - 3D
	14			532264-000		Operations Panel - 3D
05				532400		Signal Data Converter
				531101		NOR Diode Gate
				531102		NOR Flip-Flop
				531103		NOR Inverter
				531107		NOR Coaxial Line Driver
				531109		NOR Line Receiver
				531111		NOR Lamp Driver
				531116		NOR Digital Filter
				531219		Radar Interface, Circuit I
				531222		Radar Interface, Buffer
				531223		Radar Interface, Circuit II
				531224-000		Video Line Driver Amp.
				531239		Radar Trigger Pulse Generator
				531270		Quantizer Circuit
				531271		Radar One-Shot
				531274		Bipolar Mode Gate Driver
05				531275		Bipolar Trigger Generator
				532137		Power Supply, PP-4298
	54	05		531254		Electron Projector Circuit
		06		531255		Voltage Regulator
05				532400		Signal Data Converter CV-1927
50				532256-000		Hut Structure Assy.
	71			532902		Air Conditioner
	86			532266-000		RFI Filter & Connector Panel
	72			532903		A.C. Amp Control
	90					Hut Lighting
	91					Hut Telephone, TA-312/PT
	81			532299		Basic Hut
	73			532900		A.C. Temp. Sensor
	72			532903		A. C. Amp. Control

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01				533350		Radar Mapper Cabled Rack
	21			532301-000		Video-Radar Converter #1
		14		532331-000		Video-Radar Converter Subassy.
		20		532337-000		Photomultiplier Tube Assy.
			03	530581		Mask
		21		532339-000		Photomultiplier Tube Socket Assy.
		06		532310-000		CRT Microposition Assy.
			26	532313-000		Micropositioner Subassy.
			27	532314-000		Micropositioner Power Supply
				531215-000		Micropositioner P.S. Card Type #1
				531216-000		Micropositioner P.S. Card Type #2
		18		532335-000		CRT Electron Projector Circuit
		19		532336-000		CRT Focusing Control
		10		532304-000		Censor Mapper Defl. Amp. Assy.
		10	04	534379		Deflection Amplifier Subassy.
	22			532301-000		Video-Radar Converter #2
	23			532301-000		Video-Radar Converter #3
	24			532301-000		Video-Radar Converter #4
02				532322-000		Power Supply Cabled Rack
	56			532140-000		1.8kV Power Supply, PP-4299
	56	24		530530		High Voltage Assy.
	58			532143-000		10kV Power Supply, PP4300
	58	25		537750		High Voltage Assy.
03				533351		Censor Mapper Cabled Rack
	03			532301-000		ClearPlot Video Converter, CV-1928
		15		532332-000		ClearPlot Video Converter Subassy
		20		532337-000		Photomultiplier Tube Assy,
03	03	20	03	530581		Mask
		21		532339-000		Photomultiplier Tube Assy.
		06		532310-000		CRT Micropositioner Assy.
			26	532313-000		CRT Micropositioner Subassy.
			27	532314-000		Micropositioner Power Supply
				531215-000		Micropositioner Power Supply Card Type #1
				531216-000		Micropositioner Power Supply Card Type #2
		18		532335-000		CRT Electron Projector Circuit
		19		532336-000		CRT Focusing Control
		10		532304-000		Censor Mapper Defl. Amp. Assy.

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
	04			532303-000		Monitor Video Converter IP-788
		16		532333-000		Monitor Video Converter Subassy.
		12		532311-000		CRT Assy.
			27	532314-000		Micropositioner Power Supply
				531215-000		Micropos. Power Supply Card Type #1
				531216-000		Micropos. Power Supply Card Type #2
		10		532304-000		Deflection Amplifier
		10	04	534379		Def. Amp. Subassy.
		18		532335-000		CRT Electron Projector Circuit
	01			532300		Crosstell Video Converter CV-1929
		17		532334-000		Crosstell Video Converter Subassy.
		19		532336-000		CRT Focusing Control
		06		532310-000		CRT Micropositioner Assy.
			26	532313-000		CRT Micropositioner Subassy.
			27	532314-000		Micropositioner Power Supply
				531215-000		Micropos. Power Supply Card Type #1
				531216-000		Micropos. Power Supply Card Type #2
		18		532335-000		CRT Electron Projector Circuit
		10		532304-000		Deflection Amplifier
			04	534379		Deflection Amp. Subassy.
		20		532337-000		Photomultiplier Tube Assy.
		21				Photomulitplier Tube Socket
04				532323-000		Power Supply Cabled Rack
	56			532140-000		1.8kV Power Supply
		24		530530		High Voltage Assy
	57			532142-000		7kV Power Supply PP-4297
		23		530130		High Voltage Assy.
	58			532143-000		10kV Power Supply PP-4300
05				532330-000		Electronic Equipment Cabled Rack
06				532327-000		Power Supply Cabled Rack
50	85			532309-000		Power Distribution Panel
06	05			532328-000		Maintenance & Operation Panel
		22		533335		Maintenance & Operation Front Panel
	50			532130-0001		12V Power Supply PP-4303
		01		531250-000		Regulator Amplifier
		02		531251-000		Electron Projector Circuit
	52			532134-0001		30V Power Supply PP-4295
		01		531250-000		Regulator Amplifier
		02		531251-000		Electron Projector Circuit
	51			532132-0001		26.5V Power Supply PP-4296
		01		531250-000		Regulator Amplifier
		02		531251-000		Electron Projector Circuit

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
	53			532136-000		Display Power Supply PP-4302
		05		531254		Electron Project, Overcurrent
		08		531257-000		Display Regulator
50				532315-000		Hut Structure Assy.
	81			532997-000		Basic Hut
	71			532902-000		Air Conditioner
	90					Hut Lighting
	82			534149		A.C. Power Harness
	83			534150-0001		DC Power Harness
	84			534151		Signal Power Harness
	91			GFE		Hut Telephone
	70			532901-0001		Temperature Control Panel
50	97			536325		Air Conditioner Control Cable Assy.
	72			532903-000		Air Conditioner Amplifier

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01				532704-000		Cable Switch Board Assy.
	19			532722-000		Com. Status Panel Assy.
	22			532738-000		Com. Switchboard Control
		34		530658-0400		Switchboard Control Subassy. I
		35		530569-0400		Switchboard Control Subassy. II
	66			532736-000		Intercom Station Audio Control
		30		530656-400		Audio Control Subassy. UHF-Net
	65			532734-000		Intercom Station Audio Control
		27		530653-0400		Audio Control Subassy. I
		28		530654		Audio Control Subassy. II
11				GFE		Operators Pack TA-221/PT
02				530570-0003		Electronic Equipment Rack
	23			532740-000		Telephone Terminal Assy. TA-486
	25			532741-000		Telephone Terminal TA-488
	26			532742-000		Telephone Terminal TA-487
	13			532713-000		Intercom Station IS-522
	16			532718-000		Missile Bat. Data Terminal Buffer
	17			532719-000		Control Sec. Data Terminal Buffer
	18			532721-000		-95V Power Supply
	54			532137-000		Power Supply PP-4298
		05		531254-000		Electron Projector, Overcurrent
		06		531255-000		Voltage Regulator
03				530570		Com. Electronic Equipment Rack
	14			532714-000		Telegraph, Telephone Terminal TA-484
	10			532708-000		Telegraph, Telephone Terminal TA-485
	10			532708-000		Telegraph, Telephone Terminal TA-485
	14			532709-000		Analog Missile Bat. Data Terminal
	11			532709-000		Analog Missile Bat. Data Terminal
	12			532711-000		Intercenter Data Terminal
	12			532711-000		Intercenter Data Terminal
	15			532717-000		Intercenter Data Terminal Buffer
	15			532717-000		Intercenter Data Terminal Buffer
	54			532137-000		Power Supply PP-4298
03	54	05		531254-000		Electron Projector, Overcurrent
		06		531255-000		Voltage Regulator
04				534242		Power Supply Rack
	54			532137-000		Power Supply PP-4298
		05		531254-000		Electron Projector, Overcurrent
		06		531255-000		Voltage Regulator
05				GFE		Radio Set GRC-134
06				532705		Radio Equipment Rack
07				GFE		100W Tuned Cavity Filter
08				GFE		100W Tuned Cavity Filter
19				GFE		1kW Tuned Cavity Filter
10				GFE		Radio Set, GRC-112

AD-A074 129 ARINC RESEARCH CORP ANNAPOLIS MD F/G 17/2
HANDBOOK OF PROCEDURES: RELIABILITY AND MAINTAINABILITY MONITOR--ETC(U)
DEC 74 M00027-74-C-0099
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2 OF 3
AD
A074129

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
50				532715-000		Hut Structure Assy.
	81			532749-000		Electronic Com. Shelter
	85			532726-000		Power Distribution Panel
	87			532725-000		Com. Terminal
	86			532716-000		RFI Filter & Con. Panel Assy.
	71			532902		Air Conditioner
	90					Hut Lighting
	83			533718		DC Power & Signal Harness
	82			533719		AC Power Harness
	91			GFE		Hut Telephone TA 312/PT
	94			GFE		UHF Single Antenna
	95			GFE		UHF Dual Antenna
	73			532900		A.C. Temperature Sensor
	70			532901		A. C. Temperature Control Panel
	72			532903		A. C. Control Amp.
	88			536395		Emergency Power Battery Box

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
10				532370-000		Power Control Unit
11				532355-000		Maintenance & Operation Panel
13				532358-000		Aux. Data Indic. Digital Display
	19			532397-000		Aux. Display Cabled Chassis
14				530612		Indicator-Operator Housing
	11			532357-001		Comp. Data Entry Control
		21		532373-000		Data Entry Cabled Panel
	10			532350-000		Control Indicator
		10		532351-000		Control Indicator Cable Chassis
		20		532371-000		CRT Electron Tube Unit
		32		532366-000		Signal Indicator Conduct. Glass
		22		532388-001		Upper Electr. Equip. Cabled Rack
		12		532354-000		Electrostatic Coupler
		11		532353-000		Min. Def. Amp.
			01	530575		Min. Def. Amp. Subchassis
	28			532389-000		R. H. Electronic Equip. Cabled
		33		532352-000		Major Def. Electron Beam Amp.
	59			532146-000		10kV Power Supply PP-4301
		34		530682		High Voltage Assy.
		35		530691		Power Supply Regulator
		36		530573		Amp. Subassy.
		37		530569-000		Oscillator Subassy.
	10	19		532368-000		Front Panel
			02	530680		Pencil, Electric
	13			532390-000		Analog Entry Cabled Panel
	20			532398-000		Analog Entry Card Rack
	24			532735-000		Intercom Station Trunk Control
		29		530655		Trunk Control Subassy.
	22			532733-000		Intercom Station Net Control
14	26			532737-000		Intercom Station UHF Chan. Cont.
		31		530657		Channeling Control Subassy.
	66			532736-000		Intercom Station UHF Audio Cont.
		30		530656		Audio Control Subassy.
	21			532732-000		Intercom Station Internal Cont.
		26		530651		Intercom Control Subassy.
	65			532734-000		Intercom Station Audio Control
		27		530653		Audio Control Subassy. No. 1
		28		530654		Audio Control Subassy. No. 2
	27			533623		Status Panel, Plastic
15				532383-000		Power Supply Cable Rack
	55			532139-000		Def. Amp. Power Supply
		09		531258-001		Reg. Project. Circuit
	50			532130-001		12V Power Supply PP-4303

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
		01		531250-000		Amp. Regulator
		02		521251-000		Electr. Proj. Circuit
	52			532134-001		30V Power Supply PP-4295
		01		531250-000		Amp. Regulator
		02		531251-000		Electr. Proj. Circuit
	53			532136-000		Display Power Supply PP-4302
		05		531254-000		Electr. Prot., Overcurrent
		08		531257-000		Display Regulator
	51			532132-001		26.5V Power Supply PP-4296
		01		531250-000		Amp. Regulator
		02		531251-000		Electr. Prot. Circuit
	17			532394-000		Display Control Unit #1
		16		532363-000		Electronic Equip. Cabled Rack
	14			532391-000		Display Control Unit #2
		13		532360-000		Electronic Equip. Cabled Rack
20				532370-000		Power Control Unit
21				532355-000		Maintenance & Operation Panel
23				532358-000		Aux. Data Indic. Digital Display
	19			532397-000		Aux. Display Cabled Chassis
24				530612		Indicator-Operator Housing
	11			532357-001		Comp. Data Entry Control
		21		532373-000		Data Entry Cabled Panel
	10			532350-000		Control Indicator
		10		532351-000		Control Indicator Cable Chassis
		20		532371-000		CRT Electron Tube Unit
		32		532366-000		Signal Indicator Conduct. Glass
		22		532388-001		Upper Electr. Equip. Cabled Rack
		12		532354-000		Electrostatic Coupler
		11		532353-000		Min. Def. Amp.
			01	530575-000		Min. Def. Amp. Subchassis
	28			532389-000		R.H. Electronic Equip. Cabled
		33		532352-000		Major Def. Electron Beam Amp.
	59			532146-000		10 kV Power Supply PP-4301
		34		530682		High Voltage Assy.
		35		530691		Power Supply Regulator
		36		530573		Amp. Subassy.
		37		530569		Oscillator Subassy.
	10	19		532368-000		Front Panel
			02	530680		Pencil, Electric
	13			532390-000		Analog Entry Cabled Panel
	20			532398-000		Analog Entry Card Rack
	24			532735-000		Intercom Station Trunk Control
		29		530655		Trunk Control Subassy.
	22			532733-000		Intercom Station Net Control
24	26			532737-000		Intercom Station UHF Chan. Cont.
		31		530657		Channeling Control Subassy.

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
	66			532736-000		Intercom Station UHF Audio Cont.
		30		530656		Audio Control Subassy.
	21			532732-000		Intercom Station Internal Cont.
		26		530651		Intercom Control Subassy.
	65			532734-000		Intercom Station Audio Control
		27		530653		Audio Control Subassy, No. 1
		28		530654		Audio Control Subassy, No. 2
	27			533623		Status Panel, Plastic
25				532383-000		Power Supply Cable Rack
	55			532139-000		Def. Amp. Power Supply
		09		531258-001		Reg. Protect. Circuit
	50			532130-001		12V Power Supply PP-4303
		01		531250-000		Amp. Regulator
		02		531251-000		Electr. Prot. Circuit
	52			532134-001		30V Power Supply PP-4295
		01		531250-000		Amp. Regulator
		02		531251-000		Electr. Prot. Circuit
	53			532136-000		Display Power Supply PP-4302
		05		531254-000		Electr. Prot., Overcurrent
		08		531257-000		Display Regulator
	51			532132-001		26.5V Power Supply PP-4296
		01		531250-000		Amp. Regulator
		02		531251-000		Electr. Prot. Circuit
	15			532392-000		Display Control Unit #1
		15		532362-000		Electronic Equip. Cabled Rack
	18	18		532395-000		Display Control Unit #2
				532367-000		Electronic Equip. Cabled Rack
						Console No. 3
30				532370-000		Power Control Unit
31				532355-000		Maintenance & Operation Panel
33				532358-000		Aux. Data Indic. Digital Display
	19			532397-000		Aux. Display Cabled Chassis
34				530612		Indicator-Operator Housing
	11			532357-001		Comp. Data Entry Control
		21		532373-000		Data Entry Cabled Panel
	10			532350-000		Control Indicator
		10		532351-000		Control Indicator Cable Chassis
		20		532371-000		CRT Electron Tube Unit
		32		532366-000		Signal Indicator Conduct. Glass
		22		532388-001		Upper Electr. Equip. Cabled Rack
		12		532354-000		Electrostatic Coupler
		11		532353-000		Min. Def. Amp.
			01	530575		Min. Def. Amp. Subchassis

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
	28			532389-000		R. H. Electronic Equip. Cabled
		33		532352-000		Major Def. Electron Beam Amp.
	59			532146-000		10kV Power Supply PP-4301
		34		530682		High Voltage Assy.
		35		530691		Power Supply Regulator
		36		530573		Amp. Subassy.
		37		530569-000		Oscillator Subassy.
	10	19		532368-000		Front Panel
			02	530680		Pencil, Electric
	13			532390-000		Analog Entry Cabled Panel
	20			532398-000		Analog Entry Card Rack
	24			532735-000		Intercom Station Trunk Control
		29		530655		Trunk Control Subassy.
	22			532733-000		Intercom Station Net Control
34	26			532737-000		Intercom Station UHF Chan. Cont.
		31		530657		Channeling Control Subassy.
	66			532736-000		Intercom Station UHF Audio Cont.
		30		530656		Audio Control Subassy.
	21			532732-000		Intercom Station Internal Cont.
		26		530651		Intercom Control Subassy.
	65			532734-000		Intercom Station Audio Control
		27		530653		Audio Control Subassy. No. 1
		28		530654		Audio Control Subassy. No. 2
	27			533623		Status Panel, Plastic
35				532383-000		Power Supply Cable Rack
	55			532139-000		Def. Amp. Power Supply
		09		531259-001		Reg. Protect. Circuit
	50			532130-001		12V Power Supply PP-4303
		01		531250-000		Amp. Regulator
		02		531251-000		Electr. Prot. Circuit
	52			532134-001		30V Power Supply PP-4295
		01		531250-000		Amp. Regulator
		02		531251-000		Electr. Prot. Circuit
	53			532136-000		Display Power Supply PP-4302
		05		531254-000		Electr. Prot., Overcurrent
		08		531257-000		Display Regulator
	51			532132-001		26.5V Power Supply PP-4296
		01		531250-000		Amp. Regulator
		02		531251-000		Electr. Prot. Circuit
	16			532393-000		Display Control Unit #1
		17		532364-000		Electronic Equip. Cabled Rack
	12			532359-000		Display Control Unit #2
		14		532361-000		Electronic Equip. Cabled Rack
	54			532137-000		Power Supply PP-4298
		05		531254-000		Electr. Protector, Overcurrent
		06		531255-000		Regulator Circuit

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
40				GFE		Teletypewriter AN/TGG-15
41				532387-000		Teletype Relay
42				GFE		Crypto, TSEC/KW7
43				533831		Electronic Equipment Cabinet
	29			532372-000		Communication System Control Group
	24			532735-000		Intercom Station Trunk Control
		29		530655		Intercom Trunk Control Subassy
	22			532733-000		Intercom Station Net Control
		30		530656		Audio Control Subassy.
	26			532737-000		Intercom Station UHF Channeling Control
		31		530657		Intercom UHF Channeling Subassy.
	66			532736-000		Intercom Station UHF Audio Control
		30		530656		Audio Control Subassy.
	21			532732-000		Intercom Station Internal Control
		26		530651		Intercom Internal Control Subassy.
	65			532734-000		Intercom Station Audio Control
		27		530653		Audio Control Subassy.
		28		530654		Audio Control Subassy.
50				532365-000		Hut Structure Assy.
	85			532369-000		Power Distribution Panel
	70			532901		A. C. Temperature Control
	71			532902		Air Conditioner
	72			532903		A. C. Amplifier Control
	73			532900		A. C. Temperature Sensor
	86			532376-000		RFI & Connector Panel
	87			532356-000		Communications J-Box
	90					Hut Lighting
	91			GFE		Hut Telephone TA-312
50	82			536240		A. C. Power Harness
	83			534154-0001		D. C. Power Signal Harness
	84			534153-0001		Com. DC & Signal Harness
	81			532997-000		Basic Hut
	92					Headset, Operator

AN/TYQ-3

ENCODING TABLE

(AN/TYA-17)
(AN/TYA-19)
(AN/TYA-20)

Enclosure 3

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01				758-5249-001		AN/USC-8(V) Data Modem Set
	01			769-8261-001		Rack, Wired, DMS
		01				Distribution Connectors
		02				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	762-4868-001		JJ8 Card - Phase Modulator
			03	762-4868-001		JJ8 Card - Phase Modulator
			04	762-4868-001		JJ8 Card - Phase Modulator
			05	762-5868-001		JJ8 Card - Phase Modulator
			06	762-4868-001		JJ8 Card - Phase Modulator
			07	762-4868-001		JJ8 Card - Phase Modulator
			08	762-5868-001		JJ8 Card - Phase Modulator
			09	762-4868-001		JJ8 Card - Phase Modulator
			10	762-4868-001		JJ8 Card - Phase Modulator
			11	762-4868-001		JJ8 Card - Phase Modulator
			12	762-4868-001		JJ8 Card - Phase Modulator
			13	762-4868-001		JJ8 Card - Phase Modulator
			14	762-4868-001		JJ8 Card - Phase Modulator
			15	762-4868-001		JJ8 Card - Phase Modulator
			16	762-4868-001		JJ8 Card - Phase Modulator
			17	566-2007-004		AV4 Card - Nand Gate
			18	566-2034-005		AU8 Card - NPN-PNP Inverter
			20	704-5897-001		NZ3 Card - Multipurpose Flip-Flop
			21	704-5897-001		NZ3 Card - Multipurpose Flip-Flop
			22	704-5897-001		NZ3 Card - Multipurpose Flip-Flop
			23	704-5897-001		NZ3 Card - Multipurpose Flip-Flop
			24	704-5897-001		NZ3 Card - Multipurpose Flip-Flop
			25	704-5897-001		NZ3 Card - Multipurpose Flip-Flop
			26	704-5897-001		NZ3 Card - Multipurpose Flip-Flop
			27	704-5897-001		NZ3 Card - Multipurpose Flip-Flop
			28	762-4920-001		JL5 Card - Decoupler
		03				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	762-4916-001		JJ7 Card - Transmit Mixer & Grouping
			03			JP7 Card - Level Control
			04	762-4936-001		JJ9 Card - Input/Output
01	01	03	05			G59 Card - Tone Monitor
			06	762-4920-001		JL5 Card - Decoupler
			07	762-4924-001		JL7 Card - Frame Transition Detector 1
			08	762-4928-001		JL8 Card - Frame Transition Detector 2
			09	762-4924-C01		JL7 Card - Frame Transition Detector 1
			10	762-4928-001		JL8 Card - Frame Transition Detector 2
			13	566-2034-005		AU8 Card - NPN-PNP Inverter
			14	566-2134-004		DN3 Card - NOR Gate
			15	566-2179-005		CU8 Card - Power Pulse Former
			16	566-2149-005		BA8 Card - Eight Count
			17	566-2149-005		BA8 Card - Eight Count
			18	566-2007-004		AV4 Card - Nand Gate
			19	566-2007-004		AV4 Card - Nand Gate
			20	566-2179-005		CU8 Card - Power Pulse Former
			21	566-2159-004		CY3 Card - Input Buffer
			22	566-2159-004		CY3 Card - Input Buffer

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
			23	566-2159-004		CY3 Card - Input Buffer
			24	566-2159-004		CY3 Card - Input Buffer
			25	566-2064-004		DN5 Card - Pedestal Gate
			26	566-2064-004		DN5 Card - Pedestal Gate
			27	566-2064-004		DN5 Card - Pedestal Gate
			28	762-4920-001		JL5 Card - Decoupler
		04				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			03	762-4940-001		JN2 Card - Receiver Mixer
			05	762-4940-001		JN2 Card - Receiver Mixer
			07	762-4940-001		JN2 Card - Receiver Mixer
			09	762-4940-001		JN2 Card - Receiver Mixer
			11	762-4972-001		JN5 Card - Doppler Tone Translator
			13	762-4972-001		JN5 Card - Doppler Tone Translator
			14	762-4888-001		JK5 Card - Signal Presence 1
			15	762-4888-001		JK5 Card - Signal Presence
			16	762-4892-001		JK7 Card - Signal Presence 2
			17	762-4900-001		JK9 Card - Signal Presence 3
			18	762-4904-001		JL2 Card - Signal Presence 4
			19	762-4932-001		JL9 Card - Doppler VCO
01	01	04	20	762-4956-001		JN3 Card - Operational Amplifier
			21	762-5200-001		JP5 Card - Phase Detector
			22	762-5200-001		JP5 Card - Phase Detector
			23	762-5196-001		JP4 Card - Digital Filter
			24	762-5196-001		JP4 Card - Digital Filter
			25	762-4984-001		JP3 Card - Filter Driver
			28	762-4920-001		JL5 Card - Decoupler
		05				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	762-4952-001		JN7 Card - Doppler Freq. Synthesizer
			03	762-4944-001		JN4 Card - Doppler Mixer
			04	762-4944-001		JN4 Card - Doppler Mixer
			05	762-4952-001		JN7 Card - Doppler Freq. Synthesizer
			08	762-4968-001		JP2 Card - OSC Self-Check #3
			09	762-4964-001		JN9 Card - OSC Self-Check #2
			10	762-4960-001		JN8 Card - OSC Self-Check #1
			11	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			12	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			13	762-4872-007		JM9 Card - 167.610 & 168.520 kHz osc.
			14	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			15	762-4872-006		JM8 Card - 186.560 & 191.840 kHz osc.
			16	762-4872-005		JM7 Card - 183.040 & 184.800 kHz osc.
			17	762-4872-004		JM5 Card - 179.520 & 181.280 kHz osc.
			18	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			19	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			20	762-4872-003		JM4 Card - 172.480 & 177.760 kHz osc.
			21	762-4872-002		JM3 Card - 176.000 & 250.000 kHz osc.
			22	762-4872-001		JM2 Card - 330.000 & 300.000 kHz osc.
			23	762-4876-001		JK2 Card - Strobe Driver
			24	566-2064-004		DN5 Card - Pedestal Gate
			25	774-5897-001		NZ3 Card - Multipurpose Flip-Flop
			26	774-5897-001		NZ3 Card - Multipurpose Flip-Flop

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
			27	566-2024-005		CU9 Card - Locked Oscillator
			28	762-4920-001		JL5 Card - Decoupler
01	01	06				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	762-4880-001		JK3 Card - RC Correlator
			03	762-4884-001		JK4 Card - Drive Logic
			04	762-4880-001		JK3 Card - RC Correlator
			05	762-4880-001		JK3 Card - RC Correlator
			06	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			07	762-4880-001		JK3 Card - RC Correlator
			08	762-4880-001		JK3 Card - RC Correlator
			09	762-4884-001		JK4 Card - Drive Logic
			10	762-4880-001		JK3 Card - RC Correlator
			11	762-4880-001		JK3 Card - RC Correlator
			12	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			13	762-4880-001		JK3 Card - RC Correlator
			14	762-4896-001		JK8 Card - Pulse Product Detector
			15	762-4908-001		JL3 Card - Logic Amplifier
			16	762-4896-001		JK8 Card - Pulse Product Detector
			17	762-4880-001		JK3 Card - RC Correlator
			18	762-4884-001		JK4 Card - Drive Logic
			19	762-4880-001		JK3 Card - RC Correlator
			20	762-4880-001		JK3 Card - RC Correlator
			21	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			22	762-4880-001		JK3 Card - RC Correlator
			23	762-4880-001		JK3 Card - RC Correlator
			24	762-4884-001		JK4 Card - Drive Logic
			25	762-4880-001		JK3 Card - RC Correlator
			26	762-4880-001		JK3 Card - RC Correlator
			27	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			28	762-4920-001		JL5 Card - Decoupler
01	01	07				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	762-4880-001		JK3 Card - RC Correlator
			03	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			04	762-4880-001		JK3 Card - RC Correlator
			05	762-4880-001		JK3 Card - RC Correlator
			06	762-4884-001		JK4 Card - Drive Logic
			07	762-4880-001		JK3 Card - RC Correlator
			08	76204880-001		JK3 Card - RC Correlator
			09	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			10	762-4880-001		JK3 Card - RC Correlator
			11	762-4880-001		JK3 Card - RC Correlator
			12	762-4884-001		JK4 Card - Drive Logic
			13	762-4880-001		JK3 Card - RC Correlator
			17	762-4880-001		JK3 Card - RC Correlator
			18	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			19	762-4880-001		JK3 Card - RC Correlator
			20	762-4880-001		JK3 Card - RC Correlator
			21	762-4884-001		JK4 Card - Drive Logic
			22	762-4880-001		JK3 Card - RC Correlator

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
			23	762-4880-001		JK3 Card - RC Correlator
			24	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			25	762-4880-001		JK3 Card - RC Correlator
			26	762-4880-001		JK3 Card - RC Correlator
			27	762-4884-001		JK4 Card - Drive Logic
			28	762-4920-001		JL5 Card - Decoupler
01	01	08				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			03	566-2034-005		AU8 Card - NPN-PNP Inverter
			04	566-2034-005		AU8 Card - NPN-PNP Inverter
			05	566-2034-005		AU8 Card - NPN-PNP Inverter
			12	566-2134-004		DN3 Card - NOR Gate
			13	566-2134-004		DN3 Card - NOR Gate
			14	566-2134-004		DN3 Card - NOR Gate
			15	566-2034-005		AU8 Card - NPN-PNP Inverter
			16	566-2034-005		AU8 Card - NPN-PNP Inverter
			17	566-2007-004		AV4 Card - NAND Gate
			18	566-2007-004		AV4 Card - NAND Gate
			19	566-2134-004		DN3 Card - NOR Gate
			20	566-2134-004		DN3 Card - NOR Gate
			21	566-2154-005		AR5 Card - Counter Flip-Flop
			22	566-2154-005		AR5 Card - Counter Flip-Flop
			23	566-2154-005		AR5 Card - Counter Flip-Flop
			24	566-2154-005		AR5 Card - Counter Flip-Flop
			25	566-2154-005		AR5 Card - Counter Flip-Flop
			26	566-2179-005		CU8 Card - Power Pulse Former
			27	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			28	762-4920-001		JL5 Card - Decoupler
01	01	09				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	566-2134-004		DN3 Card - NOR Gate
			03	566-2154-005		AR5 Card - Counter Flip-Flop
			04	566-2154-005		AR5 Card - Counter Flip-Flop
			05	566-2154-005		AR5 Card - Counter Flip-Flop
			06	566-2179-005		CU8 Card - Power Pulse Former
			07	566-2179-005		CU8 Card - Power Pulse Former
			08	566-2007-004		AV4 Card - NAND Gate
			09			DF4 Card - Power Amplifier
			10	566-2007-004		AV4 Card - NAND Gate
			11	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			12	566-2154-005		AR5 Card - Counter Flip-Flop
			13	566-2154-005		AR5 Card - Counter Flip-Flop
			14	566-2154-005		AR5 Card - Counter Flip-Flop
			15	566-2134-004		DN3 Card - NOR Gate
			16	566-2154-005		AR5 Card - Counter Flip-Flop
			17	566-2154-005		AR5 Card - Counter Flip-Flop
			18	566-2154-005		AR5 Card - Counter Flip-Flop
			19	566-2179-005		CU8 Card - Power Pulse Former
			20	762-5189-004		DF3 Card - One Shot (40 µs)
			21	762-5189-004		DF3 Card - One Shot (100 µs - 4 ms)
			22	566-2069-005		DF7 Card - Output Buffer

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
			23	566-2069-005		DF7 Card - Output Buffer
			24	566-2069-005		DF7 Card - Output Buffer
			25	566-2069-005		DF7 Card - Output Buffer
			26	566-2069-005		DF7 Card - Output Buffer
			28	762-4920-001		JL5 Card - Decoupler
01	01	10				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			03	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			04	566-2007-001		AV4 Card - NAND Gate
			05	762-5189-004		DF3 Card - One Shot (4 ms)
			06	566-2149-005		BA8 Card - Eight Count
			07	566-2149-005		BA8 Card - Eight Count
			08	566-2149-005		BA8 Card - Eight Count
			09	566-2134-004		DN3 Card - NOR Gate
			10	566-2179-005		CU8 Card - Power Pulse Former
			11	566-2034-005		AU8 Card - NPN-PNP Inverter
			12	566-2034-005		AU8 Card - NPN-PNP Inverter
			13	566-2034-005		AU8 Card - NPN-PNP Inverter
			14	774-5897-001		NZ3 Card - Multipurpose Flip-Flop
			15	566-2064-004		DN5 Card - Pedestal Gate
			16	566-2007-004		AV4 Card - NAND Gate
			17	566-2034-005		AU8 Card - NPN-PNP Inverter
			18	566-2007-004		AV4 Card - NAND Gate
			19	566-2134-004		DN3 Card - NOR Gate
			20	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			21	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			22	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			23	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			24	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			25	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			26	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			27	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			28	762-4920-001		JL5 Card - Decoupler
01	01	11				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			03	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			04	566-2034-005		AU8 Card - NPN-PNP Inverter
			05	762-5189-002		DF3 Card - One Shot (250 µs - 2 ms)
			06	566-2134-004		DN3 Card - NOR Gate
			07	566-2179-005		CU8 Card - Power Pulse Former
			08	566-2179-005		CU8 Card - Power Pulse Former
			09	566-2154-005		AR5 Card - Counter Flip-Flop
			10	566-2154-005		AR5 Card - Counter Flip-Flop
			11	566-2007-004		AV4 Card - NAND Gate
			14	566-2034-005		AU8 Card - NPN-PNP Inverter
			15	566-2179-005		CU8 Card - Power Pulse Former
			16	566-2154-005		AR5 Card - Counter Flip-Flop
			17	565-2154-005		AR5 Card - Counter Flip-Flop
			18	566-2154-005		AR5 Card - Counter Flip-Flop

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
			19	566-2154-005		AR5 Card - Counter Flip-Flop
			20	566-2154-005		AR5 Card - Counter Flip-Flop
			21	566-2154-005		AR5 Card - Counter Flip-Flop
			22	566-2134-004		DN3 Card - NOR Gate
			23	762-5189-004		DF3 Card - One Shot (3.5 µs - 1.2 ms)
			24	566-2007-004		AV4 Card - NAND Gate
			25	566-2064-004		DN5 Card - Pedestal Gate
			26	774-5897-001		NZ3 Card - Multipurpose Flip-Flop
			27	774-5897-001		NZ3 Card - Multipurpose Flip-Flop
			28	762-4920-001		JL5 Card - Decoupler
01	01	12				Card Cage
			05	762-4912-001		JL4 Card - Function Test
			06	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			07	566-2007-004		AV4 Card - NAND Gate
			10	566-2154-005		AR5 Card - Counter Flip-Flop
			11	566-2154-005		AR5 Card - Counter Flip-Flop
			12	566-2154-005		AR5 Card - Counter Flip-Flop
			13	566-2134-004		DN3 Card - NOR Gate
			14	566-2154-005		AR5 Card - Counter Flip-Flop
			15	566-2007-004		AV4 Card - NAND Gate
			16	566-2154-005		AR5 Card - Counter Flip-Flop
			17	566-2007-004		AV4 Card - NAND Gate
			18	566-2149-005		BA8 Card - Eight Count
			19	566-2154-005		AR5 Card - Counter Flip-Flop
			20	566-2154-005		AR5 Card - Counter Flip-Flop
			21	566-2154-005		AR5 Card - Counter Flip-Flop
			22	566-2154-005		AR5 Card - Counter Flip-Flop
			23	566-2154-005		AR5 Card - Counter Flip-Flop
			24	566-2149-005		BA8 Card - Eight Count
			25	566-2179-005		CU8 Card - Power Pulse Former
			26	566-2034-005		AU8 Card - NPN-PNP Inverter
			27	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			28	762-4920-001		JL5 Card - Decoupler
		13		762-5159-001		DMS Control Panel
			01			Board Attenuator
			02			Board, Tone Grouping
		14		762-51610001		DMS Maintenance Panel
01	02					Cabinet
01	03			762-5202-001		Wiring Fixture
02				758-5250-001		Data Control C-6706
	01			769-8262-001		Wired Rack, DC
		01				Distribution Connectors
		02		762-9827-901		Power Supply
			01	762-9845-002		KH9 Card - Pos. 15VDC Regulator
			02	762-9845-003		KH8 Card - Pos. 6 VDC Regulator
			03	762-9840-002		KH7 Card - Neg. 6 VDC Regulator
			04	762-9840-003		KH5 Card - Neg. 15 VDC Regulator

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
		03		762-5157-001		Maintenance Kit
			15	762-5223-001		Adapter, Extender - 30 Pin
			18	762-5220-001		Adapter, Extender - 44 Pin
			20	762-5295-001		Extender, Circuit Board - 30 Pin
			22	762-5298-001		Extender, Circuit Board - 44 Pin
			25			Adapter, Rack/Circuit Board
			28			Phase Shifter
		04				Card Cage
			02	762-3949-001		MJ1 Card - TX Seq. Ind.
			04	762-5333-001		MJ2 Card - RX Seq. Ind.
02	01	05				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	566-2007-004		AV4 Card - NAND Gate
			03	566-2007-004		AV4 Card - NAND Gate
			04	566-2007-004		AV4 Card - NAND Gate
			05	566-2007-004		AV4 Card - NAND Gate
			06	566-2007-004		AV4 Card - NAND Gate
			07	566-2007-004		AV4 Card - NAND Gate
			08	566-2007-004		AV4 Card - NAND Gate
			09	566-2007-004		AV4 Card - NAND Gate
			10	566-2007-004		AV4 Card - NAND Gate
			11	566-2134-004		DN3 Card - NOR Gate
			12	566-2134-004		DN3 Card - NOR Gate
			13	566-2179-005		CU8 Card - Power Pulse Former
			14			DN5 Card - Pedestal Gate
			15			DN5 Card - Pedestal Gate
			16	762-4864-001		NZ3 Card - Multipurpose Flip-Flop
			17	762-4864-001		NZ3 Card - Multipurpose Flip-Flop
			18	566-2149-004		BA8 Card - Eight Count
			19	566-2149-005		BA8 Card - Eight Count
			20	566-2034-005		AU8 Card - NPN-PNP Inverter
			21	566-2034-005		AU8 Card - NPN-PNP Inverter
			22	566-2007-004		AV4 Card - NAND Gate
			24	566-2034-005		AU8 Card - NPN-PNP Inverter
			25	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			26	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			27	566-2179-005		CU8 Card - Power Pulse Former
			28	762-4920-001		JL5 Card - Decoupler
02	01	06				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	566-2007-004		AV4 Card - NAND Gate
			03	566-2007-004		AV4 Card - NAND Gate
			04	566-2007-004		AV4 Card - NAND Gate
			05	566-2007-004		AV4 Card - NAND Gate
			06	566-2134-004		DN3 Card - NOR Gate
			07	566-2007-004		AV4 Card - NAND Gate
			08	566-2007-004		AV4 Card - NAND Gate
			09	566-2007-004		AV4 Card - NAND Gate
			10	566-2007-004		AV4 Card - NAND Gate
			11	566-2134-004		DN3 Card - NOR Gate

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
			12	566-2134-004		DN3 Card - NOR Gate
			13	566-2007-004		AV4 Card - NAND Gate
			14	566-2007-004		AV4 Card - NAND Gate
			15	566-2007-004		AV4 Card - NAND Gate
			16	566-2034-005		AU8 Card - NPN-PNP Inverter
			18	566-2154-005		AR5 Card - Counter Flip-Flop
			19	566-2154-005		AR5 Card - Counter Flip-Flop
			20	566-2154-005		AR5 Card - Counter Flip-Flop
			23	566-2179-005		CU8 Card - Power Pulse Former
			24	566-2007-004		AV4 Card - NAND Gate
			25	566-2034-005		AU8 Card - NPN-PNP Inverter
			26	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			27	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			28	762-7920-001		JL5 Card - Decoupler
02	01	07				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	566-2179-005		CU8 Card - Power Pulse Former
			03	566-2154-005		AR5 Card - Counter Flip-Flop
			04	566-2154-005		AR5 Card - Counter Flip-Flop
			05	566-2154-005		AR5 Card - Counter Flip-Flop
			06	566-2034-005		AU8 Card - NPN-PNP Inverter
			07	566-2134-004		DN3 Card - NOR Gate
			08	566-2134-004		DN3 Card - NOR Gate
			09	566-2007-004		AV4 Card - NAND Gate
			10	566-2007-004		AV4 Card - NAND Gate
			11	566-2007-004		AV4 Card - NAND Gate
			12	566-2007-004		AV4 Card - NAND Gate
			13	566-2007-004		AV4 Card - NAND Gate
			14	566-2007-004		AV4 Card - NAND Gate
			15	566-2034-005		AU8 Card - NPN-PNP Inverter
			16	566-2007-004		AV4 Card - NAND Gate
			17	566-2007-004		AV4 Card - NAND Gate
			20	566-2179-005		CU8 Card - Power Pulse Former
			21	566-2034-005		AU8 Card - NPN-PNP Inverter
			22	566-2007-004		AV4 Card - NAND Gate
			23	566-2007-004		AV4 Card - NAND Gate
			24	566-2007-004		AV4 Card - NAND Gate
			25	566-2154-005		AR5 Card - Counter Flip-Flop
			26	566-2154-005		AR5 Card - Counter Flip-Flop
			27	566-2154-005		AR5 Card - Counter Flip-Flop
			28	762-4920-001		JL5 Card - Decoupler
02	01	08				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	566-2007-004		AV4 Card - NAND Gate
			03	566-2007-004		AV4 Card - NAND Gate
			04	566-2007-004		AV4 Card - NAND Gate
			05	566-2164-005		CV4 Card - Exclusive OR
			06	566-2134-004		DN3 Card - NOR Gate
			07	566-2007-004		AV4 Card - NAND Gate
			08	566-2134-004		DN3 Card - NOR Gate

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
02	01	08				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	566-2007-004		AV4 Card - NAND Gate
			03	566-2007-004		AV4 Card - NAND Gate
			04	566-2007-004		AV4 Card - NAND Gate
			05	566-2164-005		CV4 Card - Exclusive OR
			06	566-2134-004		DN3 Card - NOR Gate
			07	566-2007-004		AV4 Card - NAND Gate
			08	566-2134-004		DN3 Card - NOR Gate
			09	566-2134-004		DN3 Card - NOR Gate
			10	566-2034-005		AU8 Card - NPN-PNP Inverter
			11	566-2007-004		AV4 Card - NAND Gate
			12	566-2164-005		CV4 Card - Exclusive OR
			28	762-4920-001		JL5 Card - Decoupler
02	01	09				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	566-2149-005		BA8 Card - Eight Count
			03	566-2149-005		BA8 Card - Eight Count
			04	566-2149-005		BA8 Card - Eight Count
			05			AU8 Card - NPN-PNP Inverter
			06	566-2134-004		DN3 Card - NOR Gate
			07	566-2134-004		DN3 Card - NOR Gate
			08	566-2134-004		DN3 Card - NOR Gate
			09	566-2007-004		AV4 Card - NAND Gate
			10	566-2007-004		AV4 Card - NAND Gate
			11	566-2007-004		AV4 Card - NAND Gate
			12	566-2007-004		AV4 Card - NAND Gate
			13	566-2007-004		AV4 Card - NAND Gate
			14	566-2007-004		AV4 Card - NAND Gate
			15	566-2007-004		AV4 Card - NAND Gate
			16	566-2034-005		AU8 Card - NPN-PNP Inverter
			17	566-2134-004		DN3 Card - NOR Gate
			18	566-2007-004		AV4 Card - NAND Gate
			19	566-2007-004		AV4 Card - NAND Gate
			20	566-2134-004		DN3 Card - NOR Gate
			21	566-2007-004		AV4 Card - NAND Gate
			22	566-2007-004		AV4 Card - NAND Gate
			23	566-2134-004		DN3 Card - NOR Gate
			24			CV4 Card - Exclusive OR
			25	566-2007-004		AV4 Card - NAND Gate
			26	566-2134-004		DN3 Card - NOR Gate
			27	566-2134-004		DN3 Card - NOR Gate
			28	762-4920-001		JL5 Card - Decoupler
02	01	10				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	566-2034-005		AU8 Card - NPN-PNP Inverter
			03	566-2134-004		DN3 Card - NOR Gate
			04	566-2179-005		CU8 Card - Power Pulse Former
			05	762-5189-004		DF5 Card - One shot (10 µs - 42 ms)
			06	566-2007-004		AV4 Card - NAND Gate
			07	566-2007-004		AV4 Card - NAND Gate

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
			08	566-2134-004		DN3 Card - NOR Gate
			09	566-2134-004		DN3 Card - NOR Gate
			10	566-2134-004		DN3 Card - NOR Gate
			11	566-2007-004		AV4 Card - NAND Gate
			12	566-2007-004		AV4 Card - NAND Gate
			17	566-2007-004		AV4 Card - NAND Gate
			18	566-2149-005		BA8 Card - Eight Count
			19	566-2149-005		BA8 Card - Eight Count
			20	566-2007-004		AV4 Card - NAND Gate
			21	566-2034-005		AU8 Card - NPN-PNP Inverter
			22	566-2007-004		AV4 Card - NAND Gate
			23	566-2134-004		DN3 Card - NOR Gate
			24	566-2134-004		DN3 Card - NOR Gate
			25	566-2007-004		AV4 Card - NAND Gate
			26	566-2007-004		AV4 Card - NAND Gate
			27	566-2007-004		AV4 Card - NAND Gate
			28	762-4920-001		JL5 Card - Decoupler
02	01	11				Card Cage
			01	762-4912-001		JL4 Card - Function Test
			02	762-5189-004		DF3 Card - One Shot (40 µs - 11 ms)
			03	566-2179-005		CU8 Card - Power Pulse Former
			04	762-5189-004		DF3 Card - One shot (70 µs - 1.2 ms)
			05	762-5189-004		DF3 Card - One shot (40 µs - 1.6 ms)
			06	566-2179-005		CU8 Card - Power Pulse Former
			07	762-5189-004		DF3 Card - One shot (40 µs - 6.6 ms)
			08	566-2179-005		CU8 Card - Power Pulse Former
			09	762-2179-004		DF3 Card - One Shot (40 µs - 700 µs)
			10			GN7 Card - Shorting Card
			11			GN7 Card - Shorting Card
			12	566-2134-004		DN3 Card - NOR Gate
			13	566-2007-004		AV4 Card - NAND Gate
			14	566-2007-004		AV4 Card - NAND Gate
			15	566-2034-005		AU8 Card - NPN-PNP Inverter
			16	566-2179-005		CU8 Card - Power Pulse Former
			17	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			18	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			19	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			20	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			21	566-2134-004		DN3 Card - NOR Gate
			22	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			23	762-4894-001		JJ5 Card - Multipurpose Flip-Flop
			24	566-2134-004		DN3 Card - NOR Gate
			25	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			26	762-4864-001		JJ5 Card - Multipurpose Flip-Flop
			27	566-2134-004		DN3 Card - NOR Gate
			28	762-4920-001		JL5 Card - Decoupler
02	01	12				Card Cage
			05	762-4912-001		JL4 Card - Function Test
			06	566-2034-005		AU8 Card - NPN-PNP Inverter
			07	566-2007-004		AV4 Card - NAND Gate
			08	566-2134-004		DN3 Card - NOR Gate

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
			09	566-2007-004		AV4 Card - NAND Gate
			10	566-2034-005		AU8 Card - NPN-PNP Inverter
			11	566-2179-005		CU8 Card - Power Pulse Former
			12	774-5897-001		NZ3 Card - Multipurpose Flip-Flop
			13	774-5897-001		NZ3 Card - Multipurpose Flip-Flop
			15	566-2064-004		DN5 Card - Pedestal Gate
			16	566-2064-004		DN5 Card - Pedestal Gate
			17	566-2134-001		DN3 Card - NOR Gate
			19	566-2074-004		FY4 Card - Busy Detector
			20	566-2149-005		BA8 Card - Eight Count
			22	566-2007-004		AV4 Card - NAND Gate
			23	566-2149-005		BA8 Card - Eight Count
			24	566-2134-004		DN3 Card - NOR Gate
			25	566-2007-004		AV4 Card - NAND Gate
			26	566-2034-005		AU8 Card - NPN-PNP Inverter
			27	566-2007-004		AV4 Card - NAND Gate
			28	762-4920-001		JL5 Card - Decoupler
		13		762-3376-001		DC Control Panel
		14				DC Maintenance Panel
			01			24V Power Supply
	02					Cabinet
	03					Wiring Fixture
03				762-3268-001		Operator Control Rack
	01					Air Conditioner Control
		01		762-3448-002		C6659/GSA-78(V) AC Control
		02				AM4358/GSA-78(V) AC Control Amp.
		03				P/O AN/GSA-78(V) AC Control Sensor
		04				Wired Panel
	02					ID-1314/TYA-17 Alarm-Monitor
	03					C-6700/U Data Indicator Control
	04					Address Control C6701/U
		01		762-4912-001		JL4 Card - Function Test
		02		762-4948-001		JP8 Card - Address Output Amplifier
		03		566-2007-001		AV4 Card - NAND Gate
		04		566-2164-005		CV4 Card - Exclusive OR
		05		566-2134-004		DN3 Card - NOR Gate
		06		566-2134-004		DN3 Card - NOR Gate
		07		566-2007-001		AV4 Card - NAND Gate
		08		762-5189-004		DF3 Card - One Shot (10 µs - 42 ms)
		09		762-5189-004		DF3 Card - One Shot (40 µs - 1.6 ms)
		10		566-2179-005		CU8 Card - Power Pulse Former
		11		566-2149-005		BA8 Card - Eight Count
		12		566-2154-005		AR5 Card - Counter Flip-Flop
		13		566-2154-005		AR5 Card - Counter Flip-Flop
		14		566-2134-004		DN3 Card - NOR Gate
		15		566-2134-004		DN3 Card - NOR Gate
		16		566-2007-001		AV4 Card - NAND Gate
		17		566-2007-001		AV4 Card - NAND Gate

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
		18		566-2007-001		AV4 Card - NAND Gate
		19				Address Selector Extender Board
		20		762-4920-001		JL5 Card - Decoupler
03	05					Address Indicator Control C-6702/U
		01				Address Selector
		02		758-5349-001		Address Selector
		03		758-5349-001		Address Selector
		04		758-5349-001		Address Selector
		05		758-5349-001		Address Selector
		06		758-5349-001		Address Selector
		07		758-5349-001		Address Selector
		08		758-5349-001		Address Selector
		09		758-5349-001		Address Selector
		10		758-5349-001		Address Selector
	06			758-5231-001		Keyer Amplifier KY-580/TYA-17
		01		762-7313-001		JX3 Card - Keyer
		02		762-7310-001		JX2 Card - Oscillator - Amplifier
		03		762-3382-001		KD7 Card - Relay Control
		04		762-3382-001		KD7 Card - Relay Control
		05		762-3949-001		LK2 Card - Relay/Driver
		06		528-0052-005		RF Isolation Amplifier
		07				Wired Chassis
	07					Freq. Standard O-1107/SRC-16
		01		545-6556-005		Oscillator
		02		545-6554-004		1 MHz Divider
		03		545-6555-004		100 kHz Divider
		04		545-6557-005		Regulator
		05		547-4816-005		Elec. Equip. Chassis
	08					Stowage
04						Central Distribution Rack
	01					Central Distribution Frame
	02					Temperature Control
	03					Stowage Drawer
	04					Stowage Drawer
05						Work Bench
06						Air Conditioner, HD-706/GSA-78(V)
07						Air Conditioner, HD-706/GSA-78(V)
08						Elec. Equip. Shelter, S-353/TYA-17
	01					Data and Control Entry Panel
	02					Power and Signal Entry Panel
	03					AC Power Junction
	04					Maintenance Kit
		01				Maintenance Light
		02				Special Purpose Tools

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
		03				Cables Plus Adapters
		04				Cables Plus Adapters
	05					Power Control
	06					General Light Assembly
	07					General Light Assembly
	08					General Light Assembly
	09					General Light Assembly
	10					Hinged Shelf
		01				Work Light Assembly
		02				Work Light Assembly
	11					Telephone Mounting
		01				Telephone Set TA-312/PT
	12					General Light Assembly
09						Test Console
	01					AN/SSM-4A
		01				TS-1923A/SSM-4
			01			Tester W/O Case
						01 Card Cage
						01-01 JL4 Card - Function Test
						01-02 JL4 Card - Function Test
						01-05 KT7 Card - PPD Generator
						01-06 KT5 Card - Test Pattern Gen.
						01-07 KT8 Card - Squaring Amp.
						01-08 KJ4 Card - POS/NEG Pulse Driver
						01-09 JJ5 Card - Multipurpose Flip-Flop
						01-10 DN3 Card - NOR Gate
						01-11 DB2 Card - Inverter
						01-12 DA5 Card - NAND Gate
						01-13 GM8 Card - Voltage Control
						01-14 DN3 Card - NOR Gate
						01-15 GL8 Card - Spec. Funct. Gen.
						01-16 DZ7 Card - Phase Shifter
						01-17 GT4 Card - Multivibrator
						01-18 GL9 Card - Decade Resistor
						01-19 GM2 Card - Special Loads
						02 Test Connectors
						03 Program Switch
						04 Panel Assembly
						04-01 Marginal Test SW/IND
						04-02 Normal Test SW/IND
						04-03 Signal Gen. 1 & 2 SW/IND
						04-04 Mon in/Mon out SW/IND
						04-05 Ready Temp. SW/IND
						04-06 AC Power SW/IND
						05 Test Position Switch
						06 Relay Mounting Bracket
						07 Relay Board Assembly

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
09	01	02				Power Supply PP-37MA/SSM-4
			01			Power Supply W/O Case
						01 Pattern Gen Power Supply
						01-01 Pattern Gen Regulator
						02 Test Positive Power Supply
						02-01 Test Positive Regulator
						03 Test Negative Power Supply
						03-01 Test Negative Regulator
						04 Protective Circuit Card
	02					Oscilloscope AN/USM-218
		01				Oscilloscope OS-172(P)/USM (TEK 647)
		02				PreAmp AM-4455/U(TEK 10A2)
		03				Sweep Delay Gen TD-793/U(TEK11B2)
		04				Probe Kit (TEK P6008) (10A2)
		05				Probe Kit (TEK P6008) (10A2)
		06				Probe Kit (TEK P6008) (10A2)
	03					Voltmeter, Electronic, ME-30A/U
	04					Voltmeter, Electronic, ME313/U
	05					Voltmeter, Electronic, ME 314/U
	06					Sig. Generator SG-685/U
	07					Sig. Generator SG-685/U
	08					Digital Electronic Counter CP-843(P)
		01				Time Interval Unit TD-785/U
	09					Multimeter AN/USM-123A
	10					Impedance Matching Network CU-1498/U
	11					General Light Assembly
	12					Work Light Assembly

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01						Rcvr-Xmtr OA-4829/SRC-23(V)
	01					Elec. Equip Cabinet CY-4725/SRC-23(V)
		01				CKT Card - Thermal Alarm Control
	02					Transmitter Control C-4785/SRC-23(V)
		01				Electrical Equipment Chassis
		02				Power Supply
		03				Transmitter Relay Assembly
		04				Compression Amplifier
		05				Compression Amplifier
	03					Receiver Control C-4784/SRC-23(V)
		01				Electrical Equipment Chassis
		02				Power Supply
		03				Receiver Relay Assembly
		04				Network Squelch
		05				Network Squelch
		06				RF-BFO Oscillator
		07				Receiver Overload Protector
	04					Frequency Standard O-1107/SRC-16
		01				Oscillator
		02				1 MHz Divider
		03				100 kHz Divider
		04				Regulator
		05				Electrical Equipment Chassis
	05					Radio Receiver R-1361/SRC-23(V)
		01				RF Tuner
		02				MC Frequency Stabilizer
		03				Frequency Multiplier
		04				Frequency Divider-Stabilizer
		05				LSB Amplifier-Mixer
		06				Receiver Gain Control
		07				USB Amplifier Mixer
		08				Audio Frequency Amplifier
		09				Power Supply (AC)
		10				Electrical Equipment Chassis
	06					Radio Xmtr T-1004/SRC-23(V)
		01				RF Tuner
		02				MC Frequency Stabilizer
		03				Frequency Multiplier
		04				Frequency Divider-Stabilizer
		05				Transmitter Gain Control
		06				Balanced Modulator
		07				Electronic Control Amplifier
		08				Power Supply (AC)
		09				Electrical Equipment Chassis

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01	07					Radio Frequency Amplifier
		01				RF Amplifier
		02				Electronic Control Amplifier
		03				Relay Assembly
		04				Chassis and Power Supply
02						Rcvr-Xmtr OA-4829/SRC-23(V)
						Note: Use Unit 01 Breakdown for Unit 02.
03						Antenna Coupler Rack
	01					Monitor-Oscilloscope IP-803/U
		01				Power Supply H.V.
		02				Power Supply
		03				Electronic Control Amplifier
		04				Sweep Generator
		05				Electrical Equipment Chassis
	02					Bandpass Filter F-1039/U
		01				Electronic Control Amplifier
		02				Digital-Analog Converter
		03				Power Supply
	03					Bandpass Filter
		01				Electronic Control Amplifier
		02				Digital-Analog Converter
		03				Power Supply
	04					Antenna Coupler CU-1170/SRC-16
		01				Electronic Control Amplifier
		02				Discriminator, Loading-Phasing
		03				Antenna Coupler Control
		04				Electronic Control Amplifier
		05				Phasing Discriminator
		06				Power Supply
		07				Coupler Servo Control
		08				RF Filter
		09				Trap Assembly
		10				Tank Assembly No. 1
		11				Tank Assembly No. 2
	05					Antenna Coupler CU-1170/SRC-16
						Note: Use Assy 04 Breakdown for Assy 05.
	06					Antenna Coupler CU1169/SRC-16
		01				Electronic Control Amplifier
		02				Loading-Phasing Discriminator
		03				Antenna Coupler Control
		04				Electronic Control Amplifier
		05				Phasing Discriminator
		06				Power Supply
		07				Coupler Servo Control

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
		08				RF Filter
03	06	09				Tank Assembly No. 1
		10				Tank Assembly No. 2
	07					Antenna Coupler CU-1169/SRC-16
						Note: Use Assy 06 Breakdown for Assy 07.
	08					Electrical Dummy Load DA-173/GRM-10
	09					Receive RF Relay
	10					Power Distribution Assembly
	11					Temperature Control
04						Control Console
	01					Central Distribution Frame
	02					Radio Control C-6703/TYA-19
		01				KD9 Card - Microphone Amplifier
		03				KD7 Card - Control Relay
		04				KD7 Card - Control Relay
		05				KD7 Card - Control Relay
		06				KD7 Card - Control Relay
		07				KD7 Card - Control Relay
		11				KD7 Card - Control Relay
		12				KD7 Card - Control Relay
		17				Wired Cage
	03					Data Converter
		01				JX4 Card - Selective Amplifier
		02				JX5 Card - Output Discriminator
		03				JX4 Card - Selective Amplifier
		04				JX5 Card - Output Discriminator
		05				JX4 Card - Selective Amplifier
		06				JX5 Card - Output Discriminator
		07				JX4 Card - Selective Amplifier
		08				JX5 Card - Output Discriminator
		09				JX4 Card - Selective Amplifier
		10				JX5 Card - Output Discriminator
		13				JX7 Card - Switching Data Hub
		14				JX7 Card - Switching Data Hub
		15				JX7 Card - Switching Data Hub
		16				JX7 Card - Switching Data Hub
		18				KD8 Card - Summary Alarm
		19				Wired Cage
04	04					Amplifier Assy AM-4381/TYA-19
		01				Audio Frequency Amplifier
		02				Audio Frequency Amplifier
		03				Audio Frequency Amplifier
		04				Audio Frequency Amplifier
		05				Audio Frequency Amplifier
		06				RF Isolation Amplifier
		07				RF Isolation Amplifier
		08				RF Isolation Amplifier

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
		09				RF Isolation Amplifier
		10				Wired Chassis
	05					Power Supply Set OA-7633/TYA-19
		01				Power Supply
		02				Power Supply
		03				Power Supply
		04				KH4 Card - Alarm Detector
		05				KD7 Card - Control Relay
		06				Speaker Amplifier
		07				Audio Frequency Amplifier
		08				Wired Chassis
	06					Alarm - Monitor ID-1315/TYA-19
	07					Xmtr Control-Ind. C-6704/SRC-23(V)
	07	01				Freq. Select. Cont. C-4783/SRC-23(V)
	08					Rx Control-Ind. C-6705/SRC-23(V)
		01				Freq. Select. Cont. C-4783/SRC-23(V)
	09					Xmtr Control-Ind. C-6704/SRC-23(V)
		01				Freq. Select. Cont. C-4783/SRC-23(V)
	10					Rx Control-Ind. C-6705/SRC-23(V)
		01				Freq. Select. Cont. C-4783/SRC-23(V)
	11					AF-RF Monitor ID-1145/SRC-23(V)
	12					Control-Monitor C-6698/TYA-19
	13					Radio Freq. Test Cont. C-6699/TYA-19
	14					Air Conditioner Control
		01				Air Cond. Cont. C-6659/GSA-78(V)
		02				A/C Cont. Amp. AM-4358/GSA-78(V)
		03				A/C Cont. Sensor P/O AN/GSA-78(V)
		04				Wired Panel
04	15					Telephone Jack Assy, TA-662/TYA-19
		01				KD7 Card - Control Relay
		02				KD7 Card - Control Relay
		03				KD7 Card - Control Relay
		04				Wired Panel
	16					Speaker Panel
	17					Freq. Stand. Patch. Panel SB-2542
	18					Telephone Mounting
	19					Radio Test Set TS-1913/SRC-16
		01				Electrical Equipment Chassis
		02				Power Supply
		03				Amplifier Mixer
		04				Audio Frequency Amplifier
	20					Signal Comparator CM-270/SRC-16
		01				Frequency Multiplier Comparator
		02				RF Isolation Amplifier
		03				Chassis and Power Supply
		04				RF Isolation Amplifier
	21					Stowage Console
05						Work Bench

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
06						Air Condtioner HD-706/GSA-78(V)
07						Air Conditioner HD-706/GSA-78(V)
08						Elect. Equip. Shelter S-354
	01					Signal Entry Panel
	02					Power and RF Entry Panel
	03					Power Junction, A/C
	04					Maintenance Light
	05					Power Control
	06					General Light Assembly
	07					General Light Assembly
	08					General Light Assembly
	09					General Light Assembly
	10					Work Light Assembly
	11					Work Light Assembly
09						Antenna AS-1310/TYQ-3
	01					Photoelectric Control Unit
		01				Photoelectric Head
	02					Matching Transformer (179R-1)
	03					Obstruction Light Assembly
	04					RF Transfer Switch
	05					Stowage Kit
		01				Transit Case No. 1
		02				Transit Case No. 2
		03				Transit Case No. 3
		04				Transit Case No. 4
		05				Transit Case No. 5
		06				Transit Case No. 6
		07				Pallet Assembly
10						Antenna AS-1310/TYQ-3
						Note: Use Unit 09 Breakdown for Unit 10.

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
				AN/TYA-20		Compatability Computer Group
01				7046100-00	A1	Computer, Digital Data (CP-808)
	01			7046379-05	A1A1	Converter, Digital-Digital (I/O Chassis)
		01		7046307-00	A1A1A1	Capacitor Assy.
		02		"	A2	" "
		03		"	A3	" "
		04		"	A4	" "
		05		"	A5	" "
		06		"	A6	" "
		07		"	A7	" "
		08		"	A8	" "
		09		"	A9	" "
		10		"	A10	" "
		11		"	A11	" "
		12		"	A12	" "
	02			7046379-00	A1A2	Converter, Digital-Digital (I/O Chassis)
		01-12		7046307-00	A1A2A1-A12	Capacitor Assy. (Same as A1A1A1-A12)
	03			7046379-05	A1A3	Converter, Digital-Digital (I/O Chassis)
		01-12		7046307-00	A1A3A1-A12	Capacitor Assy. (Same as A1A1A1-A12)
	04			7046379-06	A1A4	Converter, Digital-Digital (I/O Chassis)
		01		7046307-00	A1A4A1	Capacitor Assy.
	05			7046379-02	A1A5	Converter, Digital-Digital (Control & Arith.)
		0-12		7046307-00	A1A5A1-A12	Capacitor Assy. (Same as A1A1A1-A12)
	06			7046379-03	A1A6	Converter, Digital-Digital (Control & Arith.)
		01-12		7046307-00	A1A6A1-A12	Capacitor Assy. (Same as A1A1A1-A12)
	07			7046379-04	A1A7	Converter, Digital-Digital (Control & Arith.)
		01-12		7046307-00	A1A7A1-A12	Capacitor Assy. (Same as A1A1A1-A12)
	08			7046115-00	A1A8	Film Memory Unit (Control & Bootstrap)
		01		7046114-00	A1A8A1	Film Memory Stack

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
01						
	09			7046380-00	A1A9	Core Memory Unit
		01		7046345-00	A1A9A1	Resistor Assy.
		02		7046298-00	A1A9A2	Regulator Voltage Assy.
		03		7046443-00	A1A9A3	Core Memory Stack
		05		7046347-00	A1A9A5	Resistor Assy.
	10				A1A10	Same as A1A9
	11				A1A11	" " "
	12				A1A12	" " "
	13				A1A13	" " "
	14			7046153-00	A1A14	Control, Indicator
		01		7046164-00		Control Panel (Front)
02				7046125-00	A2	Power Supply (PP-4892)
	11			7046140-00	A2A11	Terminal Board
	12			7046140-00	A2A12	Terminal Board
03				7050900-00	A3	Console I/O (OJ-65)(1538)
	01			7050913-00	A3A1	Hood Assy.
	02			7050904-00	A3A2	Logic Chassis Assy.
		01		7050931-00	A3A2A1	Converter (CV-2423)
		02		7050940-00	A3A2A2	Control, Indicator
		03		7051040-00	A3A2A3	Capacitor-Resistor Assy.
	03			7050903-00	A3A3	Reader Perforator (FP-170)
		01		7051044-00	A3A3A1	Reader, Tape
		02		7050952-00	A3A3A2	Perforator (PUNCH) (RO-348)
			01	BRPE11	A3A3A2A1	Perforator, Tape
			02	7051045-00	A3A3A2A2	Resistor Assy.

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
03						
	04			7050916-00	A3A4	Fan Assy.
	05			7050920-00	A3A5	Wiring Harness
	06			7050973-00	A3A6	Power Supply
	07			MOD-311	A3A7	Printer (Kleinschmidt)(MX7972)
	08			PS-64-162-750		Freq. Converter
04				7050630-00	A4	Buffer Assy. (CV-2368)
	01			7050631-00	A4A1	Chassis Electrical Equipment
		01		7050633-00	A4A1A1	Panel, Mounting
05				7050760-00	A5	Cabinet Assy., Electrical
06					A6	Panel Assy., Connector
07				705716-00	A7	Connector, Electrical Assy.
08				7050705-00	A8	Adaptor Assy.
09				7050680-00	A9	Control Box Assy.
10				TSEC/KG-22		Cryptographic Unit (GFE)
	01			TSEC-KDG-8		
		02				

Position Identity				Part Number	Reference Symbol	Description/Nomenclature
Unit	Assy	SA	Mod			
50						Hut Structure Assy.
	81					Basic Hut
	71			HD-706/GSA-78		Air-Conditioner
	72			AM-4358/GSA-78		Air-Conditioner Control Amplifier
	73					Air-Conditioner Temperature Sensor
	70					Air-Conditioner Temperature Control
	85					Power Distribution Box
	86					RFI Filter, Connector Panel
	87					Telephone Ring Box
	88					Fire Fighting Equipment
	90					Hut Lighting
	91			TA-312/PT		Hut Telephone
	92					Data Cable

AN/TPS-32

ENCODING TABLE

Enclosure 4

EQUIPMENT BREAKDOWN FOR: AN/TPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
01				137000-1	1	PS Set OP-64	X2
	01				1A1	Panel, SB 3475	X2
	02			138007-1	1A2	Cont - Ind C8511	X2
		01			1A2A1	Elect. Control Box	6110-932-1987
	03				1A3	Panel, SB 3474	
		01			1A3A1	Power Supply	5840-351-4646
		02			1A3A2	Power Supply	5840-402-2893
		03			1A3A3	Power Supply	5840-351-4653
		04			1A3A4	Power Supply	5840-402-2902
		05			1A3A5	Power Supply	5840-402-2894
		06			1A3A6	Power Supply	5840-402-2908
		07			1A3A7	Power Supply	5840-402-2907
		08		145504-1	1A3A8	Regulator Assembly	6110-449-2800
		09			1A3A9	Sensor, Temp.	5840-187-0356
		10			1A3A10	Amp. Assemby	4130-932-1986
	05				1A5		
		01			1A5A1	Control Assy.	X2
		02			1A5A2	Power Supply	5840-402-2892
		03			1A5A3	Control Assembly	5840-406-7897
02				137002-1	2	Computer CP 1020	
	01			137404-1	2A1	Panel Control	5840-197-2854
	02			137445-1	2A2	Detector Assembly	
		01		137406-1	2A2A1	Detector No. 1	
		02		137415-1	2A2A2	Detector No. 2	
		03		137416-1	2A2A3	Detector No. 3	
	03			137446-1	2A3	Computer Assembly	
		01		137426-1	2A3A1	Computer No. 1	
		02		137427-1	2A3A2	Computer No. 2	
		03		137428-1	2A3A3	Computer No. 3	
		04		137460-1	2A3A4	Discrete Ckts	
	05			147417-1	2A5	Regulator, Volt	
		01			2A5A1	Regulator Assembly	6110-488-9364
		02			2A5A2	Regulator Assembly	6110-488-9364
		03			2A5A3	Regulator Assembly	6110-488-9364
		04			2A5A4	Regulator Assembly	6110-488-9364
		05			2A5A5	Regulator Assembly	6110-488-9364

EQUIPMENT BREAKDOWN FOR: AN/TPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
02	05	06			2A5A6	Regulator Assembly	6110-488-9364
		07			2A5A7	Regulator Assembly	6110-488-9364
		08			2A5A8	Regulator Assembly	6110-488-9364
		09			2A5A9	Regulator Assembly	6110-488-9364
		10			2A5A10	Regulator Assembly	6110-488-9364
		11			2A5A11	Regulator Assembly	6110-488-9364
		12			2A5A12	Regulator Assembly	6110-488-9364
		13			2A5A13	Regulator Assembly	6110-488-9364
		14			2A5A14	Regulator Assembly	6110-488-9364
		15		137226-1	2A5A15	Regulator Assembly	6110-488-9364
		16		137462-1	2A5A16	Ref. Volt Assembly	6110-193-1936
		17			2A5A17	Regulator Assembly	6110-471-9423
		18			2A5A18	Regulator Assembly	6110-471-9423
		19			2A5A19	Regulator Assembly	6110-488-6306
		21			2A5A21	Regulator Assembly	6110-489-1177
		22			2A5A22	Regulator Assembly	6110-489-1177
		24			2A5A24	Regulator Assembly	6110-471-9422
	06				2A6	Core Memory	5840-230-5367
		01			2A6A1	Current Source	5895-451-3560
		02			2A6A2	Timing Control	5840-187-0301
		03			2A6A3	Driver Switch	5840-187-0330
		04			2A6A4	Driver Switch	5840-187-0330
		05			2A6A5	Driver Switch	5840-187-0330
		06			2A6A6	Driver Switch	5840-187-0330
		07			2A6A7	Driver Switch	5840-171-0361
		08			2A6A8	Driver Switch	5840-171-0361
		09			2A6A9	Driver Switch	5840-171-0361
		10			2A6A10	Driver Switch	5840-171-0361
		14		41001262-001	2A6A14	Stack Assembly	5840-405-5667
		16			2A6A16	Data Channel	5840-187-0360
		17			2A6A17	Data Channel	5840-171-0361
		18			2A6A18	Data Channel	5840-171-0361
		19			2A6A19	Data Channel	5840-171-0361
		20			2A6A20	Data Channel	5840-171-0361
		21			2A6A21	Data Channel	5840-171-0361
		22			2A6A22	Data Channel	5840-171-0361
		23			2A6A23	Data Channel	5840-171-0361
		24			2A6A24	Data Channel	5840-171-0361
		25		41002227-3	2A6A25	Data Channel	5840-171-0361
		26			2A6A26	Data Channel	5840-171-0361

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
02	07				2A7	Core Memory	5840-230-5357
		01			2A7A1	Interface Logic	5840-187-0278
		02			2A7A2	Timing Control	5840-187-0300
		04			2A7A4	Data Channel	5840-187-0356
		05			2A7A5	Data Channel	5840-187-0356
		06			2A7A6	Stack Assembly	5840-137-3550
		07			2A7A7	Drive Switch	5840-187-0351
		08			2A7A8	Sink Switch	5840-187-0312
		09			2A7A9	Drive Switch	5840-187-0351
	08				2A8	Power Supply	5840-402-2891
	10			138010-1	2A10	Power Supply	5840-351-4655
	11				2A11	Data Channel	5840-187-0356
03				137003-1	3	Computer CP-1021	5840-491-7726
	01			137504-1	3A1	Panel	
	02			137172-1	3A2	MTDS IFF	
		01		137560-1	3A2A1	Interface Assembly	
		02		137561-1	3A2A2	IFF No. 1	
		03		137562-1	3A2A3	IFF No. 2	
		04		137563-1	3A2A4	Discrete Circuits	
		05		137535-1	3A2A4	IFF No. 3	
	03				3A3	Programmer	
		01		137506-1	3A3A1	Programmer No. 1	
		02		137515-1	3A3A2	Programmer No. 2	
		03			3A3A3	Programmer No. 3	
		04			3A3A4	Discrete Circuits	
	09			137941-1	3A9	Synchro CV 2729	5990-421-5135
	10			137517-1	3A10	Synthesizer	
		01		137518-10	3A10A1	Generator Assembly	5840-193-9569
		02		137518-11	3A10A2	Generator Assembly	5840-224-2023
		03		137518-12	3A10A3	Generator Assembly	5840-224-2023
		04		137520-1	3A10A4	Multiplier Assembly	5840-471-0531
		05		137518-1	3A10A5	Generator Assembly	5840-193-9568
		06		137518-2	3A10A6	Generator Assembly	5840-350-9951
		07		137518-3	3A10A7	Generator Assembly	5840-225-1451
		08		137521-1	3A10A8	Mixer Assembly	5840-471-0533
		09		137518-13	3A10A9	Generator Assembly	5840-224-2034
		10		137518-14	3A10A10	Generator Assembly	5840-224-2035
		11		137518-15	3A10A11	Generator Assembly	5840-224-2043

EQUIPMENT BREAKDOWN FOR: AN/TPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
03	10	12		137518-4	3A10A12	Generator Assembly	5840-225-1452
		13		137518-5	3A10A13	Generator Assembly	5840-225-1453
		14		137518-6	3A10A14	Generator Assembly	5840-193-9549
		15		137518-16	3A10A15	Generator Assembly	5840-224-2012
		16		137518-17	3A10A16	Generator Assembly	5840-224-2014
		18		137518-7	3A10A18	Generator Assembly	5840-193-9557
		19		137518-8	3A10A19	Generator Assembly	5840-193-9558
		20		137518-9	3A10A20	Generator Assembly	5840-193-9564
	11				3A11	Multiplexer TD 985	
		01			3A11A1	Generator Assembly	5840-351-4643
		02			3A11A2	Generator Assembly	5840-471-0538
		03			3A11A3	Generator Assembly	5840-471-9406
		04			3A11A4	Modulator Assembly	5840-415-9866
		05			3A11A5	Modulator Assembly	5840-444-3911
		06			3A11A6	Modulator Assembly	5840-415-9865
		07			3A11A7	Modulator Assembly	5840-471-9407
		08			3A11A8	Modulator Assembly	5840-471-9408
		09			3A11A9	Modulator Assembly	5840-471-9416
		10			3A11A10	Modulator Assembly	5840-471-9415
		11			3A11A11	Modulator Assembly	5840-471-9414
		12			3A11A12	Modulator Assembly	5840-471-9413
		13			3A11A13	Modulator Assembly	5840-471-9412
		14			3A11A14	Modulator Assembly	5840-471-9411
		15			3A11A15	Modulator Assembly	5840-471-9410
		16			3A11A16	Modulator Assembly	5840-471-9409
		17			3A11A17	Driver Assembly	5840-410-0080
		19			3A11A19	Detector Assembly	5840-471-9397
		20			3A11A20	Detector Assembly	5840-471-9396
		21			3A11A21	Detector Assembly	5840-471-9395
		22			3A11A22	Receiver Assembly	5840-230-5541
	12			137530-1	3A12	Synthesizer	
		01			3A12A1	Buffer Assembly	5840-480-2309
		02		137546-1	3A12A2	Generator Assembly	5840-471-0526
		03			3A12A3	Generator Assembly	5840-225-1460
		04			3A12A4	Generator Assembly	5840-193-9571
		05		137543-3	3A12A5	Generator Assembly	5840-225-1462
		06		137543-5	3A12A6	Generator Assembly	5840-225-1463
		07			3A12A7	Generator Assembly	5840-225-1464
		08			3A12A8	Generator Assembly	5840-478-0546

EQUIPMENT BREAKDOWN FOR: AN/TPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
03	12	09			3A12A9	Generator Assembly	5840-350-9949
		10			3A12A10	Generator Assembly	5840-350-9950
		11			3A12A11	Generator Assembly	5840-350-9960
		12		137532-1	3A12A12	Multiplier Assembly	5840-480-2305
		13		137540-1	3A12A13	Mixer Assembly	5840-480-2308
		14		137543-9	3A12A14	Generator Assembly	5840-225-1468
		15		137543-8	3A12A15	Generator Assembly	5840-225-1467
		16			3A12A16	Generator Assembly	5840-225-1466
		17			3A12A17	Generator Assembly	5840-350-9962
		18			3A12A18	Generator Assembly	5840-350-9973
		19			3A12A19	Generator Assembly	5840-350-9977
		20			3A12A20	Generator Assembly	5840-225-1454
		21			3A12A21	Generator Assembly	5840-225-1455
		22			3A12A22	Generator Assembly	5840-225-1458
		23			3A12A23	Amplifier Assembly	5840-471-0530
		26			3A12A26	Generator Assembly	5840-225-1457
		27			3A12A27	Generator Assembly	5840-225-1458
		28			3A12A28	Generator Assembly	5840-225-1459
		29		137544-1	3A12A29	Generator Assembly	5840-402-2896
		30			3A12A30	Amplifier Assembly	5840-480-2304
	13				3A13	Core	
		01			3A13A1	Interface Logic	5840-187-0290
		02			3A13A2	Timing Control	5840-149-9292
		03			3A13A3	Data Channel	5840-187-0364
		04			3A13A4	Data Channel	5840-187-0364
		05			3A13A5	Data Channel	5840-187-0364
		06			3A13A6	Stack Assembly	5840-478-0742
		07			3A13A7	Drive Switch	5840-187-0349
		08			3A13A8	Sink Switch	5840-257-4647
		09			3A13A9	Drive Switch	5840-187-0349
		10			3A13A10	Sink Switch	5840-257-4647
	14				3A14	Regulator Volt	
		01		137226-1	3A14A1	Regulator Assembly	6110-488-9364
		02		137226-1	3A14A2	Regulator Assembly	6110-488-9364
		03		137226-1	3A14A3	Regulator Assembly	6110-488-9364
		04		137226-1	3A14A4	Regulator Assembly	6110-488-9364
		05		137226-1	3A14A5	Regulator Assembly	6110-488-9364
		06		137226-1	3A14A6	Regulator	6110-488-9364

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
03	14	07		137226-1	3A14A7	Regulator Assembly	6110-488-9364
		08		137226-1	3A14A8	Regulator Assembly	6110-488-9364
		09		137226-1	3A14A9	Regulator Assembly	6110-488-9364
		10		137226-1	3A14A10	Regulator Assembly	6110-488-9364
		11		137226-1	3A14A11	Regulator Assembly	6110-488-9364
		12		137226-1	3A14A12	Regulator Assembly	6110-488-9364
		13		137226-1	3A14A13	Regulator Assembly	6110-488-9364
		14		137226-1	3A14A14	Regulator Assembly	6110-488-9364
		15		137226-1	3A14A15	Regulator Assembly	6110-488-9364
		16		137226-1	3A14A16	Regulator Assembly	6110-488-9364
		17			3A14A17	Regulator Assembly	6110-488-6306
		18			3A14A18	Regulator Assembly	6110-488-6306
		19			3A14A19	Regulator Assembly	6110-489-1177
		20			3A14A20	Regulator Assembly	6110-489-1177
		21			3A14A21	Regulator Assembly	6110-489-1177
		22			3A14A22	Regulator Assembly	6110-489-1177
		23			3A14A23	Regulator Assembly	6110-488-6304
		24			3A14A24	Regulator Assembly	6110-488-6304
		25			3A14A25	Regulator Assembly	6110-242-8123
		26			3A14A26	Regulator Assembly	6110-242-8123
		27			3A14A27	Regulator Assembly	6110-471-9422
	16				3A16	Power Supply	5840-351-4655
	17				3A17	Power Supply	5840-351-4655
	18			137455-1	3A18	Elevation Circuits	
		01			3A18A1	Comparator Assembly	5840-410-0071
		02			3A18A2	Comparator Assembly	5840-410-0071
		03			3A18A3	Comparator Assembly	5840-415-9663
		04			3A18A4	Comparator Assembly	5840-415-9663
		05			3A18A5	Comparator Assembly	5840-415-9663
		06			3A18A6	Pre-Amp Assembly	5840-410-0043
		07			3A18A7	Temp. Ref. Assembly	5840-187-0375
		08			3A18A8	Pre-Amp Assembly	5840-410-0043
		09			3A18A9	Buffer Assembly	5840-257-4649
		10			3A18A10	Buffer Assembly	5840-257-4649
		12			3A18A12	Amp. Assembly	5840-471-9364
		13			3A18A13	Amp. Assembly	5840-410-0040
		14			3A18A14	Filter Assembly consumable	5840-471-9360
		15			3A18A15	Contact Assembly	5840-482-7135
		16			3A18A16	Contact Assembly	5840-482-7135

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	
Unit	Assy	SA	Mod				
04				137004-1	4	Console OJ-182	
	01			137700-1	4A1	Ind. AZ IP 1022	
		01			4A1A1	Erase Read Circuits	
			03	137730-1	4A1A1A3	Control Assembly	5840-410-0062
		02			4A1A2	Display Circuits	
			07		4A1A2A7	Control Assembly	5840-410-0063
		03		137783-1	4A1A3	Amp. P.S. Am 6296	5840-195-1485
			01	137788-1	4A1A3A1	Amp Assembly	5840-187-0292
			02	137762-1	4A1A3A2	Amp Assembly	5840-517-6777
		04		137785-1	4A1A4	CRT Assembly	5960-481-6679
	02			137800-1	4A2	Ind. Hgt, IP 1023	
		01		138292-1		Panel Light	
			01	137807-1	4A2A1A1	Amp. Assy.	5840-471-0540
			02	137807-1	4A2A1A2	Amp. Assy	5840-471-0540
			03	137807-1	4A2A1A3	Amp. Assy	5840-471-0540
		02	01	137807-1	4A2A2A1	Amp. Assy	5840-471-0540
			02	137807-1	4A2A2A2	Amp. Assy	5840-471-0540
			03	137807-1	4A2A2A3	Amp. Assy	5840-471-0540
		03		137840-1	4A2A3	Power Supply PP 6459	5840-402-2887
		04		137841-1	4A2A4	CRT Assembly	5840-481-6677
	03			137700-1	4A3	Ind., AZ, IP 1022 S/A	04-01
	04				4A4	Control C7982	
		01		137846-1	4A4A1	Ball	5840-187-0240
		02		137846-1	4A4A2	Ball	5840-187-0240
		03		137847-1	4A4A3	Ball	5840-257-4645

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	
Unit	Assy	SA	Mod				
04	04	04		137846-1	4A4A4	Ball	5840-187-0240
		05		137846-1	4A4A5	Ball	5840-187-0240
04	05			137950-1	4A5	Generator, Sync	5840-432-4851
		01		137931-1	4A5A1	PPI Circuits	
		02			4A5A2	PPI Circuits	
		03		137861-1	4A5A3	Power Supply	5840-402-2897
		04			4A5A4	Servo Assembly	5840-471-9372
		05		137790-1	4A5A5	Servo Assembly	5840-481-6660
		06		137790-1	4A5A6	Servo Assembly	5840-481-6660
04	06				4A6	Conv. Sync CV 2730	X2
		01			4A6A1	Logic Circuits	X2
		02			4A6A2	RHI Circuits	X2
		03			4A6A3	Delay Line Circuits	X2
	07			137849-1	4A7	Power Supply Assy. PP6460	X2
		01			4A7A1	Power Supply	5840-402-2898
		02		137865-1	4A7A2	Power Supply PP 6464	5840-351-4650
		03			4A7A3	Power Supply	5840-402-2900
		04			4A7A4	Power Supply	5840-402-2899
			06		4A7A4A6	Regulator Assembly	6110-488-6306
			07		4A7A4A7	Regulator Assembly	6110-488-6306
			08		4A7A4A8	Regulator Assembly	6110-488-1177
			09		4A7A4A9	Regulator Assembly	6110-488-9364
			10		4A7A4A10	Regulator Assembly	6110-488-9364
			11		4A7A4A11	Regulator Assembly	6110-488-6304
			12		4A7A4A12	Regulator Assembly	6110-488-6304
			13		4A7A4A13	Regulator Assembly	6110-242-8123

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	
Unit	Assy	SA	Mod				
04	07	04	14		4A7A4A14	Regulator Assembly	6110-433-4144
			15		4A7A4A15	Dimmer Assembly	5840-495-3400
			16		4A7A4A16	Regulator Assembly	6110-433-4146
			17		4A7A4A17	Regulator Assembly	6110-433-4147
			10		4A10	Switch	5930-776-8720
			11	137970-1	4A11	Switch	5930-776-8720

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
05	03			137519-1	5A3	Processor Type 2	
		01		137118-1	5A3A1	Control Assembly	
		02		137145-2	5A3A2	Processor Video	
		03		137145-2	5A3A3	Processor Video	
		04		137145-2	5A3A4	Processor Video	
		05		137145-2	5A3A5	Processor Video	
	04				5A4	Regulator Volt	
		02			5A4A2	Regulator Assembly	6110-489-1177
		03			5A4A3	Regulator Assembly	6110-489-1177
		04			5A4A4	Regulator Assembly	6110-489-1177
		05			5A4A5	Regulator Assembly	6110-242-8123
		06		137267-1	5A4A6	Regulator Assembly	6110-242-8123
		07			5A4A7	Regulator Assembly	6110-242-8123
		08			5A4A8	Regulator Assembly	6110-488-6306
		09			5A4A9	Regulator Assembly	6110-488-6306
		10			5A4A10	Regulator Assembly	6110-488-6304
		11			5A4A11	Regulator Assembly	6110-488-6304
		12			5A4A12	Regulator Assembly	6110-488-9364
	05			137170-1	5A5	Amp-Fil AM 6297	
		01			5A5A1	Amp. Assy.	5840-197-2850
		02			5A5A2	Amp. Assy.	5840-197-2853
		03			5A5A3	Amp. Assy.	5840-197-2850
		04			5A5A4	Filter Assy.	5915-232-3205
		05			5A5A5	Filter Assy.	5915-403-1617

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
05	05	06			5A5A6	Filter Assembly	5915-194-6136
		07			5A5A7	Driver	5840-242-8079
		08			5A5A8	Driver	5840-242-8079
		09			5A5A9	Driver	5840-242-8079
		10			5A5A10	Amp. Assembly	5840-242-8079
		11			5A5A11	Amp. Assembly	5840-197-2850
		12			5A5A12	Amp. Assembly	5840-197-2850
		13			5A5A13	Amp. Assembly	5840-197-2850
		14			5A5A14	Amp. Assembly	5840-197-2850
		15			5A5A15	Detector Assembly	5840-197-2846
		16			5A5A16	Filter	5915-194-6149
		17			5A5A17	Filter	5915-194-1626
		18		137182-3	5A5A18	Filter	5915-403-1627
		19			5A5A19	Filter	5915-403-1628
		20			5A5A20	Filter	5915-403-1622
		21			5A5A21	Filter	5915-403-1623
		22			5A5A22	Filter	5915-194-6148
		23			5A5A23	Filter	5915-403-1624
		24			5A5A24	Filter	5915-403-1625
	06				5A6	Ampl Fil AM 6301	
		01			5A6A1	Filter	5915-403-1619
		02			5A6A2	Filter	5915-403-1620
		03			5A6A3	Filter	5915-403-1621
		04			5A6A4	Detector	5840-407-3767
		05			5A6A5	Detector	5840-481-9854
		06			5A6A6	Detector	5840-407-3767
		07			5A6A7	Detector	5840-481-9854
		08			5A6A8	Detector	5840-407-3767
		09			5A6A9	Detector	5840-481-9854
	07			137280-1	5A7	Controller Hat 105	
		01			5A7A1	Blanker F1284	
			01		5A7A1A1	Driver Assembly	5840-197-2925
			02		5A7A1A2	Driver Assembly	5840-197-2925
			03		5A7A1A3	Driver Assembly	5840-197-2925
			04		5A7A1A6	Driver Assembly	5840-197-2940
			05		5A7A1A6	Driver Assembly	5840-197-2940
			06	137519-1	5A7A1A6	Oscillator Assembly	5840-480-2306
			07		5A7A1A7	Driver Assembly	5840-197-2940
			08		5A7A1A8	Driver Assembly	5840-197-2958
			09		5A7A1A9	Driver Assembly	5840-197-2958
			10		5A7A1A10	Driver Assembly	840-197-2958

EQUIPMENT BREAKDOWN FOR: AN/TPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
05	03			137519-1	5A3	Processor Type 2	
		01		137118-1	5A3A1	Control Assembly	
		02		137145-2	5A3A2	Processor Video	
		03		137145-2	5A3A3	Processor Video	
		04		137145-2	5A3A4	Processor Video	
		05		137145-2	5A3A5	Processor Video	
	04				5A4	Regulator Volt	
		02			5A4A2	Regulator Assembly	6110-489-1177
		03			5A4A3	Regulator Assembly	6110-489-1177
		04			5A4A4	Regulator Assembly	6110-489-1177
		05			5A4A5	Regulator Assembly	6110-242-8123
		06		137267-1	5A4A6	Regulator Assembly	6110-242-8123
		07			5A4A7	Regulator Assembly	6110-242-8123
		08			5A4A8	Regulator Assembly	6110-488-6306
		09			5A4A9	Regulator Assembly	6110-488-6306
		10			5A4A10	Regulator Assembly	6110-488-6304
		11			5A4A11	Regulator Assembly	6110-488-6304
		12			5A4A12	Regulator Assembly	6110-488-9364
	05			137170-1	5A5	Amp-Fil AM 6297	
		01			5A5A1	Amp. Assy.	5840-197-2850
		02			5A5A2	Amp. Assy.	5840-197-2853
		03			5A5A3	Amp. Assy.	5840-197-2850
		04			5A5A4	Filter Assy.	5915-232-3205
		05			5A5A5	Filter Assy.	5915-403-1617

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
05	05	06			5A5A6	Filter Assembly	5915-194-6136
		07			5A5A7	Driver	5840-242-8079
		08			5A5A8	Driver	5840-242-8079
		09			5A5A9	Driver	5840-242-8079
		10			5A5A10	Amp. Assembly	5840-242-8079
		11			5A5A11	Amp. Assembly	5840-197-2850
		12			5A5A12	Amp. Assembly	5840-197-2850
		13			5A5A13	Amp. Assembly	5840-197-2850
		14			5A5A14	Amp. Assembly	5840-197-2850
		15			5A5A15	Detector Assembly	5840-197-2846
		16			5A5A16	Filter	5915-194-6149
		17			5A5A17	Filter	5915-194-1626
		18		137182-3	5A5A18	Filter	5915-403-1627
		19			5A5A19	Filter	5915-403-1628
		20			5A5A20	Filter	5915-403-1622
		21			5A5A21	Filter	5915-403-1623
		22			5A5A22	Filter	5915-194-6148
		23			5A5A23	Filter	5915-403-1624
		24			5A5A24	Filter	5915-403-1625
	06				5A6	Ampl Fil AM 6301	
		01			5A6A1	Filter	5915-403-1619
		02			5A6A2	Filter	5915-403-1620
		03			5A6A3	Filter	5915-403-1621
		04			5A6A4	Detector	5840-407-3767
		05			5A6A5	Detector	5840-481-9854
		06			5A6A6	Detector	5840-407-3767
		07			5A6A7	Detector	5840-481-9854
		08			5A6A8	Detector	5840-407-3767
		09			5A6A9	Detector	5840-481-9854
	07			137280-1	5A7	Controller Hat 105	
		01			5A7A1	Blanker F1284	
			01		5A7A1A1	Driver Assembly	5840-197-2925
			02		5A7A1A2	Driver Assembly	5840-197-2925
			03		5A7A1A3	Driver Assembly	5840-197-2925
			04		5A7A1A6	Driver Assembly	5840-197-2940
			05		5A7A1A6	Driver Assembly	5840-197-2940
			06	137519-1	5A7A1A6	Oscillator Assembly	5840-480-2306
			07		5A7A1A7	Driver Assembly	5840-197-2940
			08		5A7A1A8	Driver Assembly	5840-197-2958
			09		5A7A1A9	Driver Assembly	5840-197-2958
			10		5A7A1A10	Driver Assembly	840-197-2958

EQUIPMENT BREAKDOWN FOR: AN/TPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
05	08				5A8	Amp. Fil AM 6298	
		01			5A8A1	Filter Assembly	5915-194-6137
		02			5A8A2	Filter Assembly	5915-402-8772
		03			5A8A3	Filter Assembly	5915-402-8773
		04			5A8A4	Filter Assembly	5915-194-6137
		05			5A8A5	Filter Assembly	5915-402-8772
		06			5A8A6	Filter Assembly	5915-402-8773
		07			5A8A7	Detector	5840-407-3767
		08			5A8A8	Detector	5840-407-3767
		09			5A8A9	Detector	5840-407-3767
		10			5A8A10	Detector Assembly	5840-405-5672
		11			5A8A11	Detector Assembly	5840-405-5672
		12			5A8A12	Detector Assembly	5840-405-5672
		13			5A8A13	Detector Assembly	5840-405-5672
		14			5A8A14	Detector Assembly	5840-405-5672
		15			5A8A15	Detector Assembly	5840-405-5672
		16			5A8A16	Amp. Assembly	5840-197-2850
		17			5A8A17	Amp. Assembly	5840-197-2850
	09			137422-1	5A9	Amp. Fil AM 6299	
		01			5A9A1	Filter Assembly	5915-408-3329
		02			5A9A2	Filter Assembly	5915-402-8775
		03			5A9A3	Filter Assembly	5915-403-3281
		04			5A9A4	Filter Assembly	5915-408-3329
		05			5A9A5	Filter Assembly	5915-402-8775
		06			5A9A6	Filter Assembly	5915-403-3281
		07			5A9A7	Detector	5840-407-3767
		08			5A8A8	Detector	5840-407-3767
		09			5A8A9	Detector	5840-407-3767
		10			5A8A10	Detector Assembly	5840-405-5672
		11			5A8A11	Detector Assembly	5840-405-5672
		12			5A8A12	Detector Assembly	5840-405-5672
		13			5A8A13	Detector Assembly	5840-405-5672
		14			5A8A14	Detector Assembly	5840-405-5672
		15		137201-1	5A8A15	Detector Assembly P1FDD	5840-405-5672
		16			5A8A16	Amp. Assembly	5840-197-2850
		17			5A8A17	Amp. Assembly	5840-197-2850
05	10				5A10	Amp. Fil AM 6300	
		01			5A10A1	Filter Assembly	5915-402-8777
		02			5A10A2	Filter Assembly	5915-402-8778
		03			5A10A3	Filter Assembly	5915-403-3282

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
05	10	04			5A10A4	Filter Assembly	5915-402-8777
		05			5A10A5	Filter Assembly	5915-402-8778
		06			5A10A6	Filter Assembly	5915-403-3282
		07			5A10A7	Detector	5840-407-3767
		08			5A10A8	Detector	5840-407-3767
		09			5A10A9	Detector	5840-407-3767
		10			5A10A10	Detector Assembly	5840-405-5672
		11			5A10A11	Detector Assembly	5840-405-5672
		12			5A10A12	Detector Assembly	5840-405-5672
		13			5A10A13	Detector Assembly	5840-405-5672
		14			5A10A14	Detector Assembly	5840-405-5672
		15			5A10A15	Detector Assembly	5840-405-5672
		16			5A10A16	Amp. Assembly	5840-197-2850
		17			5A10A17	Amp. Assembly	5840-197-2850
	11				5A11	Driver AM 6302	
		01			5A11A1	Detector Assembly	5840-197-2859
		02			5A11A2	Detector Assembly	5840-197-2859
		04			5A11A4	Detector Assembly	5840-197-2851
		05			5A11A5	Generator Assembly	5840-402-2905
		06			5A11A6	Generator Assembly	5840-402-2903
		07			5A11A7	Generator Assembly	5840-197-2852
		08			5A11A8	Generator Assembly	5840-197-2852
		09			5A11A9	Generator Assembly	5840-197-2851
		10			5A11A10	Driver Assembly	5840-195-6547
		11			5A11A11	Generator Assembly	5840-402-2904
		13			5A11A13	Detector Assembly	5840-197-2858
		14			5A11A14	Detector Assembly	5840-197-2858
		16			5A11A16	Driver Assembly	5840-195-6547
		17			5A11A17	Generator Assembly	5840-402-2905
		18			5A11A18	Generator Assembly	5840-402-2903
		19			5A11A19	Generator Assembly	5840-402-2903
		21			5A11A21	Amp. Assembly	5840-195-6553
		22			5A11A22	Amp. Assembly	5840-195-6553
		23			5A11A23	Amp. Assembly	5840-195-6553
		24			5A11A24	Driver Assembly	5840-195-6547
		25			5A11A25	Generator Assembly	5840-402-2904
	12			145004-1	5A12	Delay Line Set P1FDD	5840-422-4222
	13				5A13	Delay Time Set P1FDD	5840-412-0223
		01			5A13A1	Control Intercom	5830-753-7853
			01		5A13A1A1	Control, Audio	5895-753-7855
			02		5A13A1A2	Control Audio	5895-753-7856

EQUIPMENT BREAKDOWN FOR: AN/TPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
05	13	02			5A13A2	Control, Intercom	5895-758-2144
			01		5A13A2A1	Control, Trunk	5840-451-6706
		03			5A13A3	Regulator Assembly	6110-489-1177
		04			5A13A4	Regulator Assembly	6110-242-8123
		05			5A13A5	Control	5895-758-2144
			01		5A13A5A1	Control, Trunk	5840-451-6706
		06			5A13A6	Control, Intercom	5830-753-7853
			01		5A13A6A1	Control, Audio	5895-753-7855
			02		5A13A6A2	Control, Audio	5895-753-7856
06				133004-1	6	Transmitter Radar T1167	
	01			133051-1	6A1	Transmitter Control C8510	
		01		133072-1	6A1A1	Plate Multiple Function No. 1	
			06	133071-1	6A1A1A6	Relay Assembly	5945-938-6899
			18	133071-1	6A1A1A18	Relay Assembly	5945-938-6899
			30	133071-1	6A1A1A30	Relay Assembly	5945-938-6899
			31	133071-1	6A1A1A31	Relay Assembly	5945-938-6899
			41	133071-1	6A1A1A41	Relay Assembly	5945-938-6899
			42	133071-1	6A1A1A42	Relay Assembly	5945-938-6899
			53	133071-1	6A1A1A53	Relay Assembly	5945-938-6899
			54	133071-1	6A1A1A54	Relay Assembly	5945-938-6899
	02				6A2		
		01		133063-1	6A2A1	Panel SB 3479	
			01	133073-1	6A2A1A1	Plate Multiple Function	
			06	133071-1	6A2A1A6	Relay Assembly	5945-938-6899
			19	133071-1	6A2A1A19	Relay Assembly	5945-938-6899
			32	133071-1	6A2A1A32	Relay Assembly	5945-938-6899
			45	133071-1	6A2A1A45	Relay Assembly	5945-938-6899
			58	133071-1	6A2A1A58	Relay Assembly	5945-938-6899
			59	133071-1	6A2A1A59	Relay Assembly	5945-938-6899
	03			133071-1	6A3		
		01		133038-1	6A3A1	Power Supply, 208 VAC	5840-402-2885
			01	134339-1	6A3A1A1	Power Supply Subassembly	
		02		134323-1	6A3A2	Panel Temperature	
	04			133101-1	6A4	Pressurizer Installation	
		01		133100-1	6A401	Control Indicator C 8509	
		02		133008-1	6A402 6A4B1	Sensor Temp. Circuit Card Assy.	5840-187-0356
	05	03		145643-1	6A5	Compressor Unit	4310-230-2410
		01		133010-1	6A5A1	Panel	

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
06	05	02		133703-1	6A5A2	Panel, Conn. MTG	
		05		133032-1	6A5A5	Power Supply, 208 VAC	5840-406-2307
		08		133075-1	6A5A8	Converter, Frequency, CV-2731	5840-195-6546
	06				6A6		
		01		133009-1	6A6A1	Panel	
		02		133105-1	6A6A2	Contractor Assembly	5840-938-6500
			01	133023-1	6A7A2A1	Sensor Assembly	5840-224-1878
		03		133028-1	6A6A3	Contractor Assembly	5840-224-1887
			01	133023-1	6A6A3A1	Sensor Assembly	5840-224-1878
		05		133008-1	6A6A5	Sensor	5840-187-0356
	07			133386-1	6A7	Panel	
		02		133020-1	6A7A2	Amplifier, Power Supply	5840-402-5959
		03		133070-1	6A7A3	Elect. Components Assembly	5840-187-0253
	08				6A8		
		02		133092-1	6A8A2	Power Supply	5840-145-2599
		03		133642-1	6A8A3	Interlock Relay	5840-938-6510
		04		133019-1	6A8A4	Test Assembly	
		05		133016-1	6A8A5	Oscillator Assembly	
	09			133014-1	6A9		
		03		133015-1	6A9A3	Power Supply, 117 VAC, PP6474	5840-402-2884
		04		133017-1	6A9A4	Test Assembly	
		05		133305-1	6A9A5	Filter Assembly	
	10			133030-1	6A10		
		02		133020-1	6A10A2	Amplifier	5840-402-7389
	11				6A11		
		02		133428-1	6A11A2	Amplifier, Subassembly	
		03		133440-1	6A11A3	Amplifier Subassembly	
		04		133020-1	6A11A4	Amplifier	5840-402-5959
		05		133444-1	6A11A5	Amplifier Subassembly	
07				133080-1	7	Receiver - Transmitter	RT/997/TPS-32
	01				7A1		
		01		133044-1	7A1A1	Panel Control	
			01	C6659GSA78V	7A1A1A1	Control Box, Electrical	6110-932-1987
			02	AM4358GSA78V	741A1A1	Amplifer, Control	4130-932-1968
	02				7A2		
	03				7A3		

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
07	03	01		133784-1	7A3A1	Panel Assembly	
	04				7A4		
		01		133088-1	7A4A1	Panel	
		02		133008-1	7A4A2	Sensor	5840-187-0356
	05			133025-1	7A5		
		01		131032-1	7A5A1	Panel	
		02		145516-1	7A5A2	Amplifier	5840-488-6255
			01	25173	7A5A2A1	Isolator	5840-137-6761
			02	25251	7A5A2A2	Amplifier	5840-137-6763
			03	25261	7A5A2A3	Attenuator, Variable	5985-233-7242
			04	25183	7A5A2A4	Isolator	5840-137-6762
		03		131028-1	7A5A3	Panel Test	
		04		131033-1	7A5A4	Power Supply	
			01	131027-1	7A5A4A1	Regulator, Voltage	6110-938-6787
			02	131034-1	7A5A4A2	Regulator Assembly	6110-938-6789
			03	131035-1	7A5A4A3	Regulator Assembly	6110-938-6790
			04	131038-1	7A5A4A4	Power Supply Subassembly	5840-194-6007
		05		131026-1	7A5A5	Pre-Amp	5840-224-1877
		06		131031-1	7A5A6	Generator Assembly	
	06				7A6		
		01		133089-1	7A6A1	Panel	
		02		133021-1	7A6A2	Test Assembly	
		03		133095-1	7A6A3	Amp. Power Supply	5840-195-1484
			01	133020-1	7A6A3A1	Amplifier	5840-402-5959
		04		133031-1	7A6A4	Relay Assembly	5840-224-1889
		07		133008-1	7A6A7	Sensor	5840-187-0356
		08		133025-1	7A6A8	Tester, TR Limit	
	07				7A7	Panel	
		01		133050-1	7A7A1		
	08			133089-1	7A8		
		02		133029-1	7A8A2	Control, Power Supply	5840-195-1507
			01	133023-1	7A8A2A1	Sensor Assembly	5840-224-1878
	09			135126-1	7A9		
	10				7A10		
	11			134330-1	7A11		
		02		133091-1	7A11A2	RF Power Amp.	
		03		133092-1	7A11A3	Control	5840-145-2599
		04		133070-1	7A11A4	Elect. Comp.	5840-187-0253
	12			133741-1	7A12		
		02		135326-1	7A12A2	Shorting Device	5840-938-6511

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
08				135004-1	8	Transmitter, Radar, T-1166	SMR Code X2
	01			134262-1	8A1	Panel, AC Outlet	SMR Code X2
		01		145657-9	8A1XDS1	Indicator Assy.	AFFR
	02			133785-1	8A2	Panel, Blank	SMR Code X2
	03			135020-1	8A3	Panel, Temp. Control	SMR Code X2
		01		C6659-GSA78V	8A3A1	Control Box, Electrical	6110-932-1987
		02		AM4358-GSA78V	8A3A2	Amp., Electronic Control	4130-932-1986
	04			135009-1	8A4	Coolant Installation	SMR Code U
		01		135005-1	8A4A1	Panel, Monitor, SB-3469	SMR Code X2
			01	145657-11	8A4A1XDS-1	Indicator Assy.	AFFR
			02	145657-11	8A4A1XDS-2	Indicator Assy	AFFR
			03	145657-11	8A4A1XDS-3	Indicator Assy.	AFFR
			04	145657-11	8A4A1XDS-4	Indicator Assy.	AFFR
		02		145547-1	8A4B1	Pump, Cent. Radial Flow	4320-403-3254
		03		133376-1	8A4S3	Switch, Float	6680-413-0298
	05	01		135014-1	8A5A1	Panel, Monitor SB-3470	6680-413-0298
			01	145658-23	8A5A1S1	Light Switch Assy.	AFFR
			02	145658-22	8A5A1S2	Light Switch Assy	AFFR
			03	145658-24	8A5A1S3	Light Switch Assy.	AFFR
			04	145658-22	8A5A1S4	Light Switch Assy.	AFFR
			05	145658-6	8A5A1S5	Light Switch Assy.	AFFR
			08	145658-1	8A5A1S8	Light Switch Assy.	AFFR
			09	145658-1	8A5A1S9	Light Switch Assy.	AFFR
			10	145658-7	8A5A1S10	Light Switch Assy.	AFFR
			11	145658-4	8A5A1S11	Light Switch Assy.	AFFR
			12	145657-15	8A5A1XDS2	Indicator	AFFR
			13	145657-7	8A5A1XDS3	Indicator	AFFR
			14	145657-7	8A5A1XDS4	Indicator	AFFR
			15	145657-7	8A5A1XDS5	Indicator	AFFR
			16	145657-15	8A5A1XDS6	Indicator	AFFR
			17	145657-7	8A5A1XDS7	Indicator	AFFR
			18	145657-6	8A5A1XDS8	Indicator	AFFR
			19	145657-7	8A5A1XDS9	Indicator	AFFR
			20	145657-7	8A5A1XDS10	Indicator	AFFR
			21	145657-2	8A5A1XDS11	Indicator	AFFR
			22	145657-2	8A5A1XDS12	Indicator	AFFR
			23	145657-2	8A5A1XDS13	Indicator	AFFR
			24	145657-2	8A5A1XDS14	Indicator	AFFR
			25	145657-2	8A5A1XDS15	Indicator	AFFR
			26	145657-2	8A5A1XDS16	Indicator	AFFR

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
08	05	01	27	145657-15	8A5A1XDS17	Indicator	AFFR
			28	145657-16	8A5A1XDS18	Indicator	AFFR
			30	145657-16	8A5A1XDS20	Indicator	AFFR
			31	145657-15	8A5A1XDS21	Indicator	AFFR
			32	145657-15	8A5A1XDS22	Indicator	AFFR
				145657-2	8A5XDS1	Indicator	AFFR
		02		135007-1	8A5A2	Waveguide Installation (Test Assy)	X2
		03		133008-1	8A5A3	Sensor, Temperature	5840-254-4917
		04		134402-1		Chart	U
		05		134393-2		Interlock Assy.	X2
			01	14567-2	8A5XDS1	Indicator	AFFR
		06		135018-1		Power Supply	U
	06						
		01		135013-1	8A6A1	Panel, Power Distribution	X2
			01	145658-20	8A6A1S1	Light Switch Assy.	AFFR
			02	145658-26	8A6A1S2	Light, Switch Assy.	AFFR
			03	145657-1	8A6A1XDS1	Indicator	AFFR
			04	145657-8	8A6A1XDS4	Indicator	AFFR
			05	145657-17	8A6A1XDS5	Indicator	AFFR
			06	134393-2		Interlock Assy	X2
		02		133031-1	8A6A2	Relay Assy.	5840-224-1883
		05		133095-1	8A6A5	Amplifer, Power Supply, AM6304	5840-195-1484
			01	133020-1	8A6A5A1	Generator Assy	5840-402-5959
		06		133008-1	8A6A6	Sensor, Temp.	5840-254-4917
	07			135258-1	8A7	Panel	X2
		01		133637-1		Inter Lock Assy.	X2
		02			8A7A2	Control, Power Supply C8507	X2
			01	133023-1	8A7A2A1	Sensor Assy.	5840-224-1878
		03		145657-3		Indicator	AFFR
	08				8A8		
		01		134393-2		Interlock Assy.	AFFR
		02		145657-2	8A8XDS1	Indicator	AFFR
	09			135196-1	8A9	Panel	
		01		134393-2		Interlock Assy.	AFFR
		02		145657-2	8A9XDS1	Indicator	AFFR
		03		134327-1		P.S. Installation Subassy.	U
		04		135163-1		P.S. Installation Subassy.	U

EQUIPMENT BREAKDOWN FOR: AN/UPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	MOD				
08	09	05		134329-1		P.S. Installation Subassy.	U
		06		135103-1	8A9DC1	Coupler, Directional Waveguide	5985-413-5383
	10			135199-1	8A10	Panel	X2
		02		133091-2	8A10A2	Amplifier, R.F., AM 6295	X2
			01	133148-2		Amplitron Assy	X2
			02	133147-1		Tank Assy.	5840-223-1700
			03	133162-1		Tank Subassy.	X2
		03		133092-1	8A10A3	Control Power Supply C8508	X2
		04		133070-1	8A10A4	Control Assy.	5840-187-0253
	11			135198-1	8A11	Panel	X2
		01		134395-1		Interlock Assy	
		03		145502-1	8A11Z1	Network	5915-421-6383
		04		135170-1	8A11DC1	Couper, Directional, Waveguide Type	5985-412-5386
		02		135326-1	8A11A2	Shorting Device	5840-938-6511
	12			135023-1	8A12	Regulator Voltage	X2
		02		805533G3		Variable Transformer Assy	X2
		03		810757G2		Variable Transformer Subassy.	X2
		04		804032G1		Variable Transformer Subassy.	X2
		01		803028G1	8A12A1	Control Unit	6110-244-2308
	13			135021-1		Maint. Group Radar Set OQ-73	U
		01		144044-1		Adapter, Test	5840-230-5306
		02				Adapter, Test	5840-481-6662
		03				Adapter Test	5840-478-0739
		04				Divider, Power, R.F., CN-1331	5840-223-1702
			01	144289-1		Divider Subassy.	X2
		05		144057-1		Meter, Flow Rate Indicator	6680-358-0429
		06		144062-1		Dummy Load	5840-195-1500
		07		144063-1		Dummy Load DA-565	5840-195-1501
		08				Oscilloscope AN/USM-281A	6625-228-2201
		09				Generator, Sig., AN/URM 61A	6625-519-2056

EQUIPMENT BREAKDOWN FOR: AN/TPS-32

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	Mod				
09				0E-91/TPS-32	9	Antenna Group	5840-230-5289
	01			AB1152TPS-32	9A1	Antenna Pedestal	X2
		01		J-2390/TPS-32	9A1A1	Interconnecting Box	5840-402-2906
		02		131021-1	9A1A2	Waveguide Installation	X2
		03		131007-1		Antenna Drive Mount	X2
		04		131012-1		Bearing Antenna Mount	5840-424-3937
		06		131009-1		Gearbox Drive	5840-224-1867
		07		145630-1		Coupler, Rotary, RF	5840-193-9570
		08		131010-1	9A1A8	Servomechanism, Take-Off Data	5840-938-6481
	02			AS2536TPS-32	9A2	Antenna Pedestal Mtd., MTR-Driven	X2
	03			131060-1	9A3	Hydraulic Installation	X2
	04			131015-1	9A4	Radar Set Subassembly	5840-402-5966
	05			AS2188U	9A5	Antenna, IFF	5985-168-8915
	06			145520-1	9B1	Motor, AC, 400 Hz	6105-177-4631

Position Identity				Part Number	Reference Symbol	Description/Nomenclature	FSN
Unit	Assy	SA	Mod				
10				144000-1	10	Interconnection Box	5840-481-6661
	01			144001-1	10A1	Remoting Unit	SMR Code X2
		01		137573-8	10A1A1	Detector Assy.	5840-471-9400
		02		137573-7	10A1A2	" "	5840-471-9399
		03		137573-6	10A1A3	" "	5840-471-9398
		04		137573-5	10A1A4	" "	5840-237-8326
		05		137573-4	10A1A5	" "	5840-237-8325
		06		137573-3	10A1A6	" "	5840-237-8322
		07		137573-2	10A1A7	" "	5840-237-8321
		08		137573-1	10A1A8	" "	5840-480-2310
		09		137533-1	10A1A9	" "	5840-471-9384
		10		137573-9	10A1A10	" "	5840-471-9401
		11		137573-10	10A1A11	" "	5840-471-9389
		12		137573-11	10A1A12	" "	5840-471-9390
		13		137573-12	10A1A13	" "	5840-471-9391
		14		137573-13	10A1A14	" "	5840-471-9392
		15		137573-14	10A1A15	" "	5840-471-9393
		16		137573-15	10A1A16	" "	5840-471-9394
		17		137575-1	10A1A17	Driver Assy.	5840-471-0532
		21		137571-19	10A1A21	Modulator Assy.	5840-471-9419
		22		137571-18	10A1A22	Modulator Assy.	5840-471-9418
		23		137571-17	10A1A23	" "	5840-471-9417
	02			144022-1	10A2	Interface Unit	SMR Code X2
		01		137262-1	10A2A1	Regulator Assy.	6110-489-1177
		02		137263-1	10A2A2	" "	6110-242-8123
		05		531031	10A2A5	Driver Assy.	5895-018-4591
		06		"	10A2A6	" "	5895-018-4591
		07		"	10A2A7	" "	"
		08		"	10A2A8	" "	"
		09		"	10A2A9	" "	"
		10		"	10A2A10	" "	5840-232-9299
		11		144025-1	10A2A11	Receiver Assy.	5895-018-4592
		12		144026-1	10A2A12	Driver Assy.	5840-415-9862
		13		531032	10A2A13	Receiver Assy.	5895-018-4592

3. MACCS OPERATE-HOURS DATA

TABLE OF CONTENTS

OPERATE-HOURS DATA

SECTION 1. INTRODUCTION

The purpose of this procedure is to add new operate hours to the operate-hours tapes and to make corrections to the operate hours already on magnetic tape. This procedure, consisting of two utility routines and one COBOL program, is performed on the IBM 370/135 Disk Operating System (DOS) computer.

Weekly Equipment Timer Reports (enclosure 1) are received from the MACCS field units and transcribed onto the Weekly Equipment Timer Report Encoding Form (enclosure 2). From this form, IBM cards are keypunched to incorporate all of the operate-hours data.

Corrections to data already on magnetic tape are encoded onto the MACCS Changes Encoding Form (enclosure 3) and keypunched on IBM cards.

SECTION 2. APPLICABLE DOCUMENTS

No Government/non-Government documents are referred to in this procedure.

SECTION 3. INPUTS

The inputs to add new data to the operate-hours tapes are IBM cards and a magnetic tape.

The inputs to correct data already on the operate-hours tapes are IBM cards and a magnetic tape.

SECTION 4. BASIC OPERATIONS

To add new data to the operate-hours tapes, the data on cards are put on magnetic tape by the utility routine CDTAPE. Then utility routine MRGHRS merges and sorts the new operate hours with the hours on the old master operate-hours tape by equipment identity and card type. Enclosures 4,5, and 6 are the logic flow, operating procedure and program listings of this procedure. This new tape is retained and used as the master operate-hours tape.

To make corrections to the existing operate-hours tapes, EDTAPE, a COBOL program, is used. Enclosures 7,8, and 9 are the logic flow, operating procedure and program listing of this procedure.

SECTION 5. OUTPUTS

The output of this procedure is a magnetic tape that contains the operate hours on each of the equipment groups of the systems of the MACCS. Operate hours on each system (i.e., AN/TYQ-1, AN/TYQ-2, AN/TYQ-3 and AN/TPS-32) of the MACCS are placed on a separate magnetic tape.

WEEKLY EQUIPMENT TIMER REPORTS

Enclosure 1

AN/TYQ-1 WEEKLY EQUIPMENT TIMER REPORT

For:_____ Date:_____

Technician:_____ Ext._____

System_____

Equipment	Serial No.	Timer Reading
AN/TYA-1 Display Generator Group DGEG		
AN/TYA-3 Teletypewriter Group		
Power Supply No. 1		
Power Supply No. 2		
Power Supply No. 3		
AN/TYA-16 Communication Group		
Modem No. 1		
Modem No. 2		
Modem No. 3		
Modem No. 4		
Modem No. 5		
CDPU Command Display Projection Unit		

AN/TYQ-2 WEEKLY EQUIPMENT TIMER REPORT

For:_____ Date:_____

Technician:_____ Ext._____

EQUIPMENT				SERIAL NO.	TIMER READING
AN/TYA-5	Central Computer Group		I Hut		
	PN 532100 Magnetic Drum*				
AN/TYA-6	Data Processor Group		II Hut		
	PN 532250	L Unit Drum (2D)*			
		M Unit Drum (2D)*			
AN/TYA-18	Radar IFF Data Processor Group		IIA Hut		
	PN 532250	N Unit Drum (2D)*			
		V Unit Drum (3D)*			
AN/TYA-18	Radar IFF Data Processor Group		IIA Hut		
	PN 532250	N Unit Drum (2D)*			
		V Unit Drum (3D)*			
AN/TYA-7	Geographic Display Group		III Hut		
AN/TYA-12	Communications Group		VII Hut		
AN/TYA-26	Ancillary Group		ANC		
AN/TYA-9	Operator Group (Power Panel)		OP 1		
	Console One	(PCU)			
	Console Two	(PCU)			
	Console Three	(PCU)			
	Operator Group (Power Panel)		OP 2		
	Console One	(PCU)			
	Console Two	(PCU)			
	Console Three	(PCU)			
	Operator Group (Power Panel)		OP 3		
	Console One	(PCU)			
	Console Two	(PCU)			
	Console Three	(PCU)			
	Operator Group (Power Panel)		OP 4		
	Console One	(PCU)			
	Console Two	(PCU)			
	Console Three	(PCU)			
	Operator Group (Power Panel)		OP 5		
	Console One	(PCU)			
	Console Two	(PCU)			
	Console Three	(PCU)			
TS-2426	Analog Test Set*				
TS-2425	Digital Test Set*				
TS-2424	Power Supply Tester*				
OA-7538/TYQ-2	Drum Fill Unit				
AN/TYM-2	Micropositioner Test Set*				

*Read on the first of the month only

AN/TYQ-3 WEEKLY EQUIPMENT TIMER REPORT

For:_____ Date:_____

Technician:_____Ext._____

Equipment	Serial No.	Timer Reading
AN/TYA-17 Data Terminal Group		
AN/SSM-4A		
USC-8		
AN/TYA-19 Data Communications Group		
Radio Channel No. 1		
Radio Channel No. 2		
AN/TYA-20 Compatibility Computer Group		
CP-808		
AN/TYA-24 Maintenance Transport Group		
URM-158		
URM-159		

AN/TPS-32 WEEKLY EQUIPMENT TIMER REPORT

FOR:_____ Date:_____

Technician:_____ Ext:_____

OL-56/TPS-32 Data Analysis Group (Operations Shelter) Serial No._____

Timer Location	Identification	Reading
Main Power Panel	CMPTR	
	DISPLAY	
	RCVR	
	PWR SUP	

OR-65/TPS-32 Receiver-Transmitter Group Serial No. _____
(Transmitter Shelter #1)

Timer Location	Identification	Reading
SB-3478 Gen. #1 Primary Power Panel	1st Stage FIL	
	2nd Stage FIL	
	3rd Stage FIL	
	1st Stage HV	
	2nd Stage HV	
	3rd Stage HV	
SB-3483 Gen. #2 Primary Power Panel	TRIG AMPL FIL	
	DRIVER FIL	
	TRIG AMPL HV	
	DRIVER HV	
SB-3482 RF Head Test Panel	PWR SUPPLY HV	

OT-26/TPS-32 Transmitter-Interrogater Group Serial No. _____
(Transmitter Shelter #2)

Timer Location	Identification	Reading
SB-3471 Power Distribution Panel	FINAL FIL	
	FINAL HV	
	TRIG AMPL FIL	
	TRIG AMPL HV	

WEEKLY EQUIPMENT TIMER REPORT ENCODING
FORM WITH INSTRUCTION SHEET

Enclosure 2

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

SHEET NO. ____ OF ____
DATE ____

SQUADRON:

MACS	GROUP	Group S/N	ACCEPTANCE DATE MO DAY	ACCEPTANCE HOURS	HOURS PER QUARTER (CT: A: 66,67,68 CT: B 69,70,71 CT C: 72,73,74 CT D: 75, 76, 77)													
					1	2	3	4	1	2	3	4	1	2	3	4		C
1 2	3 4 5	6 7 8 9	10 11 12 13 14	15 16 17 18 19	20 21 22 23	24 25 26 27 28 29 30 31	32 33 34 35	36 37 38 39	40 41 42 43	44 45 46 47	48 49 50 51	52 53 54 55	56 57 58 59	60 61 62 63	64 65 66 67	68 69 70 71 72 73 74 75 76 77 78 79	80	
1																		
2																		
3																		
4																		
5																		
6																		
7																		
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23																		
24																		
25																		

WEEKLY EQUIPMENT TIMER REPORT
ENCODING FORM INSTRUCTION SHEET

Column	Heading	Instructions
1-2	MACS	Enter two digits of squadron code.
3-5	Group	Enter three digits of group code.
6-9	Group S/N	Enter serial number of the group.
10-14	Acceptance Date	Enter month, day and year equipment was accepted.
15-19	Acceptance Hours	Enter timer recording of equipment when accepted.
20-67	Hours per Quarter	Enter the total number of hours per quarter the equipment group operated. 1st four digits 1st quarter 2nd four digits 2nd quarter 3rd four digits 3rd quarter 4th four digits 4th quarter

NOTE: Columns 20-35 are for years 66, 69, 72, 75.

Columns 36-51 are for years 67, 70, 73, 76.

Columns 52-67 are for years 68, 71, 74, 77.

68-79		Not Used
80	CT	Enter the following code: A if 1966, 1967, 1968 B if 1969, 1970, 1971 C if 1972, 1973, 1974 D if 1975, 1976, 1977

MACCS CHANGES ENCODING FORM
WITH INSTRUCTION SHEET

Enclosure 3

WORK ORDER NO. 1302-01

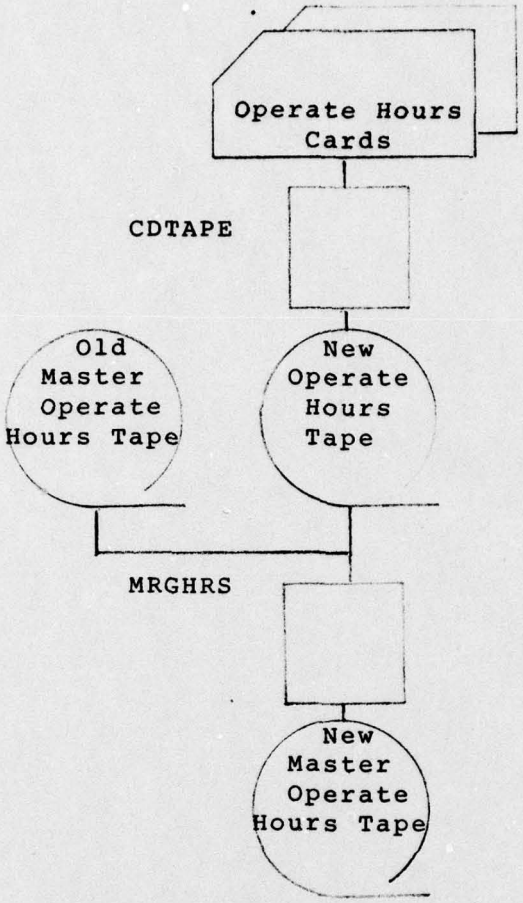
ARINC RESEARCH CORPORATION

SHEET NO. ______ **OF** ______
DATE ______

	Record No. (1 2 3 4 5)	Begin (6 7)	End (8 9)	MACCS CHANGES (10–80)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

MACCS CHANGES ENCODING FORM
INSTRUCTION SHEET

Column	Heading	Instructions
1-5	Record No.	Enter record number from printout of operate-hours tape.
6-7	Begin	Enter two-digit number of column where correction is to begin.
8-9	End	Enter two-digit number of column where correction is to end.
10-80	MACCS Changes	Enter correction data.



LOGIC FLOW TO ADD OPERATE HOURS
TO OPERATE HOURS TAPES

Enclosure 4

PROCEDURE

TITLE: OPHRRS - ADDRECS

PURPOSE: To add new operate hours to operate-hours tapes

STEP 1:

Program: CDTAPE

Language: Utility

Description: Puts new operate-hours cards on tape and blocks by 25

Input: MACCS Operate-Hours Cards.

Format: See Figure 1, p. 156.

Output: New Operate-Hours Tape.

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figure 2, p. 157.

STEP 2:

Program: MRGHRS

Language: Utility

Description: Sorts and merges new operate-hours with old master operate-hours tape

Enclosure 5

Input: (1) New Operate-Hours Tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figure 2, p. 157.

(2) Old Master Operate-Hours Tape

Rec Length = 80

Block Length = 2000

Mode = CO

Label: No

Format: See figure 2, p. 157.

Output: New Master Operate-Hours Tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figure 2, p. 157.

Order: Equipment ID, CT

WORK ORDER NO. 1302-01

SQUADRON:

ARINC RESEARCH CORPORATION

SHEET NO. ______ OF ______

DATE ______

HOURS PER QUARTER

CT: A: 66,67,68
CT: B 69,70,71

CT C: 72,73,74
CT D: 75, 76, 77

	MACS	GROUP	Group S/N	ACCEPTANCE DATE MO	ACCEPTANCE DATE DAY	ACCEPTANCE HOURS	CT A/B 1	CT A/B 2	CT A/B 3	CT A/B 4	CT C/D 1	CT C/D 2	CT C/D 3	CT C/D 4	1	2	3	4		CF
	1 2	3 4 5	6 7 8 9	10 11	12 13 14	15 16 17 18 19	20 21 22 23	24 25 26 27	28 29 30 31	32 33 34 35	36 37 38 39	40 41 42 43	44 45 46 47	48 49 50 51	52 53 54 55	56 57 58 59	60 61 62 63	64 65 66 67	68 69 70 71 72 73 74 75 76 77 78 79	80
1																				
2																				
3																				
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25																				

Figure 1

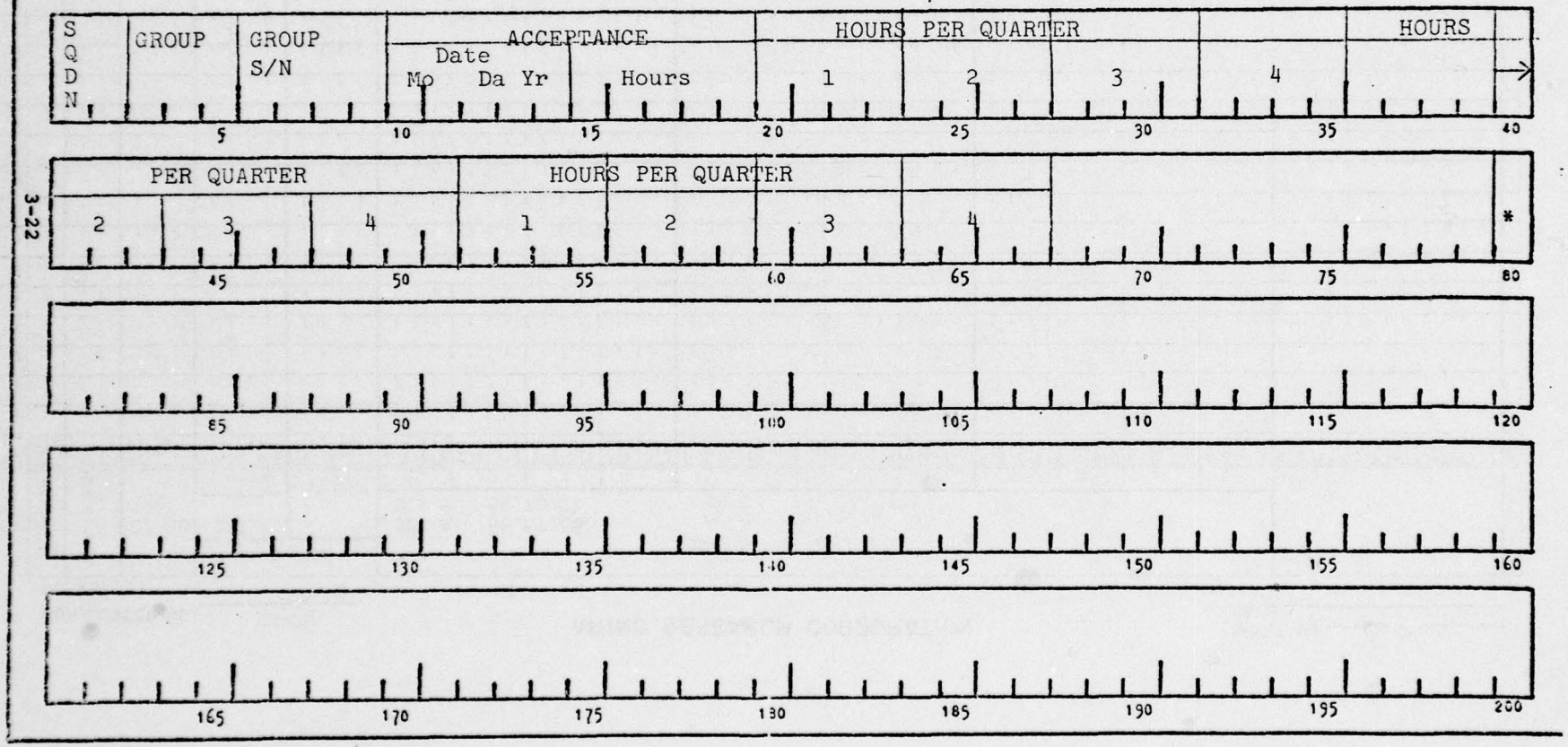
TAPE RECORD FORMAT

FILE NAME OPHRRS RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER ___ BLOCKING FACTOR 25

PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	[ ] STANDARD	[ ] NON-STANDARD	[X] NONE
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS: * Enter A if 1966, 1967, 1968
B if 1969, 1970, 1971
Enter C if 1972, 1973, 1974
Enter D if 1975, 1976, 1977



3-22

CPD - 40 8 - 16 - 66

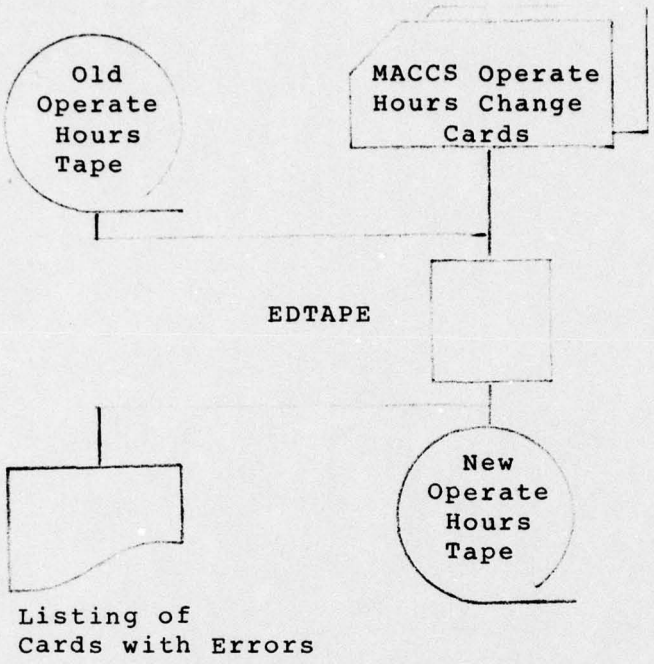
Figure 2

PROGRAM LISTINGS TO ADD NEW
OPERATE-HOURS TO MASTER OPERATE-HOURS TAPES

Enclosure 6

```
// JOB 1302-01 CDTAPE CARD-TAPE UTILITY (80/2000)          CRD 292
// ASSGN SYS005,X'292'
// ASSGN SYS004,X'00C'
// UPSI 00100000
// EXEC CDTP
// UCT TR,FF,A=(80,80),B=(80,2000),I1,OR,R1
// END
/*
/&
```

```
// JOB 1302-01 MRGHRS MERGE NEW OPERATE HOURS DATA WITH OLD DATA        90,91 93
// ASSGN SYS002,X'290'
// ASSGN SYS003,X'291'
// ASSGN SYS001,X'293'
// ASSGN SYS004,X'131'
// DLBL SORTWK1,00
// EXTENT SYS004,999999,1,0,100,2000
// EXEC SORT
 SORT FIELDS=(1,5,A,80,1,A),FORMAT=BI,WORK=1,FILES=2
 RECORD TYPE=F,LENGTH=80
 INPFIL BLKSIZE=2000
 OUTFIL BLKSIZE=2000
 OPTION LABEL=(U,U,U)
 END
/*
/&
```



LOGIC FLOW TO MAKE CORRECTIONS
TO OPERATE HOURS TAPES

Enclosure 7

PROCEDURE

TITLE: OPHRRS Corrections

PURPOSE: To make corrections to operate-hours tapes

STEP 1:

Program: EDTAPE

Language: COBOL

Description: Corrections are made to specific columns in specific records on the operate-hours tapes from the input cards. Since the input cards are sorted internally by record number, they need not be in order.

Input: (1) MACCS Operate-Hours Change Cards

Format: See figure 1, p. 163.

(2) Old Master Operate-Hours Tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figure 2, p. 164.

Output: (1) New Master Operate-Hours Tape

Rec Length = 80

Block Length = 2000

Mode = C0

Label: No

Format: See figure 2, p. 164.

(2) Listing of invalid cards for which corrections were not made

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

SHEET NO. _____ OF _____
DATE _____

	Record No.	Begin	End	MACCS CHANGES
	1 2 3 4 5	6 7	8 9	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
1				
2				
3				
4				
5				
6				
7				
8				
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11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Figure 1

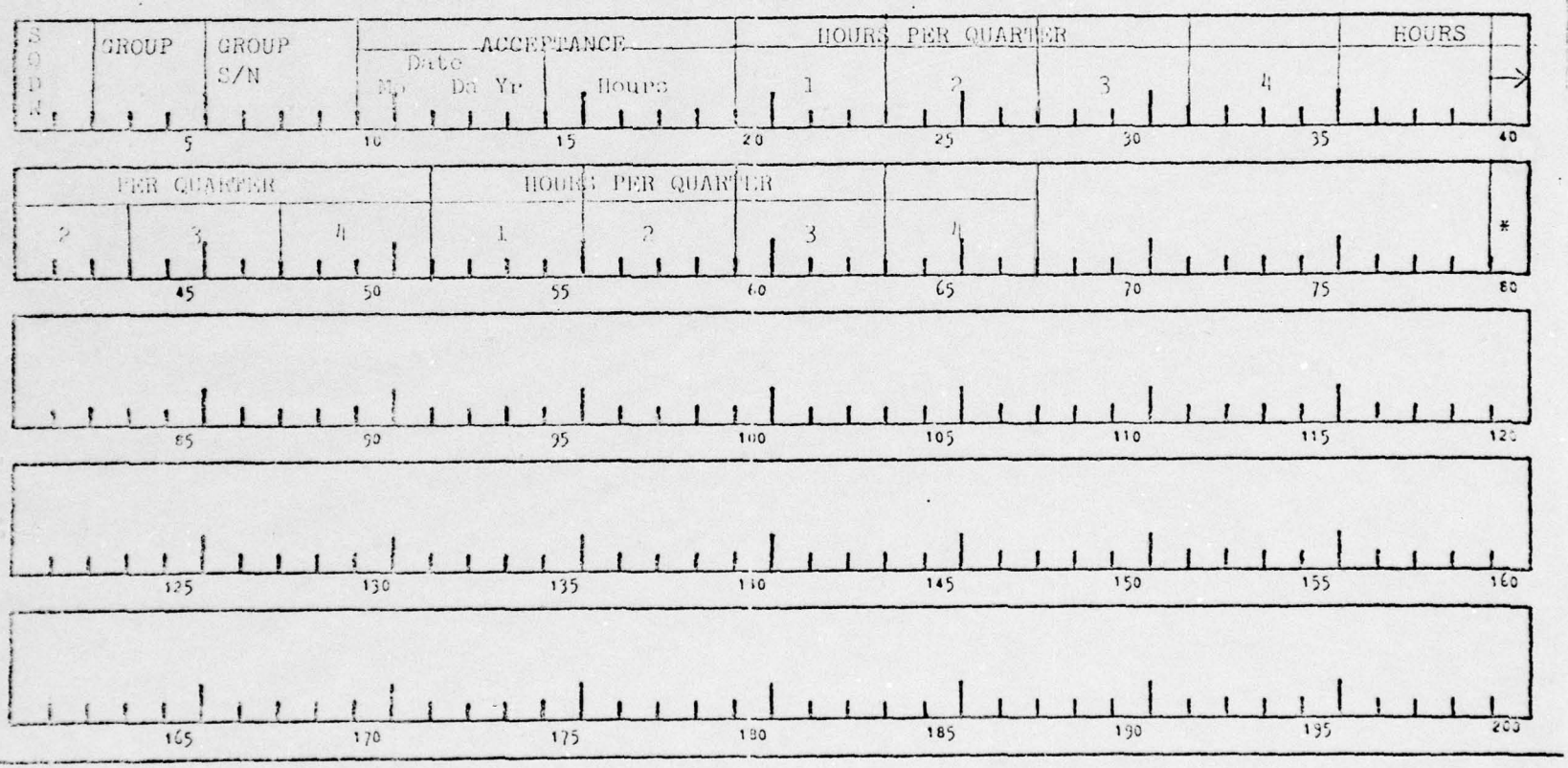
TAPE RECORD FORMAT

FILE NAME OPHRS RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER ___ BLOCKING FACTOR 25

						STANDARD	NON-STANDARD	NONE
PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	[ ]	[ ]	[X]
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS: * Enter A if 1966, 1967, 1968; B if 1969, 1970, 1971; Enter C if 1972, 1973, 1974; Enter D if 1975, 1976, 1977



3-31

SPD - 40 8 - 16 - 66

Figure 2

PROGRAM LISTING TO MAKE CORRECTIONS
TO OPERATE-HOURS TAPES

```
// JOB 1302-01 EDTAPE MAKE CORRECTIONS                          290  291
// OPTION LINK,NODUMP,NOXREF,NOLISTX
// ASSGN SYS004,X'130'
// EXEC FCOBOL
       IDENTIFICATION DIVISION.
       PROGRAM-ID. EDIT69.
       REMARKS. UPDATE AVCAL FILE USING CARDS WITH TAPE RECORD
           NUMBERS IN COLUMNS 1-5, BEGINNING COLUMN NUMBERS IN
           COLUMNS 6-7, ENDING COLUMN NUMBERS IN COLUMNS 8-9,
           AND NEW DATA FOR THOSE COLUMNS IN COLUMNS 10-80.
       ENVIRONMENT DIVISION.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT WORKFILE ASSIGN TO SYS001-DA-2314-S-SORTWK1.
           SELECT CRD ASSIGN TO SYS004-UR-2540R-S.
           SELECT REC3IN ASSIGN TO SYS011-UT-2400-S-AVINP.
           SELECT REC3OUT ASSIGN TO SYS012-UT-2400-S-AVOUT.
       DATA DIVISION.
       FILE SECTION.
       SD  WORKFILE DATA RECORD IS SRTREC, LABEL RECORDS ARE STANDARD.
       01  SRTREC.
           02  CARDRECNO PIC S9(7), USAGE COMPUTATIONAL-3.
           02  SRTBEGCOL PIC S9(3), USAGE COMPUTATIONAL-3.
           02  SRTENDCOL PIC S9(3), USAGE COMPUTATIONAL-3.
           02  SRTDATA.
               03  SRTCHAR OCCURS 71 TIMES, INDEXED BY SRTNDX, PIC X(1).
       FD  CRD LABEL RECORDS ARE OMITTED, DATA RECORD IS CARD-IMAGE.
       01  CARD-IMAGE.
           02  FILLER PIC X(80).
       FD  REC3IN LABEL RECORDS ARE OMITTED,  DATA RECORD IS INREC,
           BLOCK CONTAINS 25 RECORDS.
       01  INREC.
           02  FILLER PIC X(80).
       FD  REC3OUT LABEL RECORDS ARE OMITTED,  DATA RECORD IS OUTREC,
           BLOCK CONTAINS 25 RECORDS.
       01  OUTREC.
           02  OUTCHAR OCCURS  80 TIMES, INDEXED BY OUTNDX, PIC X(1).
       WORKING-STORAGE SECTION.
       77  ENDTEMP PIC S999, USAGE COMPUTATIONAL, SYNC.
       77  TAPERECNO PIC S9(7), USAGE COMPUTATIONAL-3, VALUE 0.
       77  DIFF PIC S9(3), USAGE COMPUTATIONAL-3.
       77  END-IND PIC X, VALUE '0'.
       77  OPRECNO PIC S9(7), USAGE COMP-3, VALUE 0.
       01  UPDATE-CARD.
           02  12COLS.
               03  NCHAR OCCURS  9 TIMES INDEXED BY UPDNDX, PIC X(1).
           02  3FIELDS REDEFINES 12COLS.
               03  UPD-REC PIC 9(5).
               03  UPD-BEG PIC 9(2).
               03  UPD-END PIC 9(2).
           02  UPD-DATA.
               03  UPD-CHAR PIC X(71).
       PROCEDURE DIVISION.
           OPEN INPUT REC3IN, CRD, OUTPUT REC3OUT.
           SORT WORKFILE ASCENDING KEY CARDRECNO, INPUT PROCEDURE
               READ-CARDS, OUTPUT PROCEDURE UPDATE-TAPE.
```

```
           CLOSE REC3IN, REC3OUT.
           STOP RUN.
       READ-CARDS SECTION.
       GET-CRD.
           READ CRD INTO UPDATE-CARD AT END GO TO LAST-CRD.
           PERFORM TEST-CHAR THRU TEST-XIT VARYING UPDNDX FROM 1 BY 1
               UNTIL UPDNDX GREATER THAN 9.
       CHECK-FLD1.
           MOVE UPD-REC TO CARDRECNO.
           IF CARDRECNO = 0 GO TO ERR.
           MOVE UPD-BEG TO SRTBEGCOL.
           IF SRTBEGCOL = 0 OR SRTBEGCOL GREATER THAN  80 GO TO ERR.
           MOVE UPD-END TO SRTENDCOL.
           IF SRTENDCOL = 0 OR SRTENDCOL GREATER THAN  80 GO TO ERR.
           SUBTRACT SRTBEGCOL FROM SRTENDCOL GIVING DIFF.
           IF DIFF LESS THAN 0 OR DIFF GREATER THAN 71 GO TO ERR.
           MOVE UPD-CHAR TO SRTDATA.
           RELEASE SRTREC.
           GO TO GET-CRD.
       ERR.
           DISPLAY '   ***   ERROR   ', CARD-IMAGE.
           GO TO GET-CRD.
       LAST-CRD.
           CLOSE CRD.
       EXIT-READ.
           EXIT.
       TEST-CHAR SECTION.
           IF NCHAR (UPDNDX) = ' ' MOVE '0' TO NCHAR (UPDNDX)
               GO TO TEST-XIT.
           IF NCHAR (UPDNDX) LESS THAN '0' OR NCHAR (UPDNDX) GREATER
               THAN '9' GO TO ERR.
       TEST-XIT.
           EXIT.
       UPDATE-TAPE SECTION.
           RETURN WORKFILE RECORD AT END STOP RUN.
       GET-TAPE.
           READ REC3IN INTO OUTREC AT END GO TO LAST-REC.
           ADD 1 TO TAPERECNO.
       COMP-RECNO.
           IF CARDRECNO LESS THAN TAPERECNO GO TO GET-SRTREC.
           IF CARDRECNO = TAPERECNO GO TO UPDATE-RECORD.
           IF UPD-BEG = '80' AND UPD-END = '80' AND UPD-CHAR = SPACES
                           GO TO GET-TAPE.
           WRITE OUTREC.
           ADD 1 TO UPRECNO.
           GO TO GET-TAPE.
       UPDATE-RECORD.
           MOVE SRTENDCOL TO ENDTEMP.
           SET SRTNDX TO 1.
           PERFORM MOVECHAR THRU EXIT-MOVE VARYING OUTNDX FROM
               SRTBEGCOL BY 1 UNTIL OUTNDX GREATER THAN ENDTEMP.
       GET-SRTREC.
           RETURN WORKFILE RECORD AT END MOVE '1' TO END-IND, MOVE
               9999999    TO CARDRECNO.
           GO TO COMP-RECNO.
       LAST-REC.
```

```
            DISPLAY SPACES.
            DISPLAY TAPERECNO, '   RECORDS INPUT'.
            DISPLAY OPRECNO, '   RECORDS OUTPUT'.
            IF END-IND = '1' GO TO EXIT-UPD.
            DISPLAY SPACES.
        NXT-REC.
            DISPLAY '   ***   NO RECORD ', CARDRECNO.
            RETURN WORKFILE RECORD AT END GO TO EXIT-UPD.
            GO TO NXT-REC.
        EXIT-UPD.
            EXIT.
        MOVECHAR SECTION.
            MOVE SRTCHAR (SRTNDX) TO OUTCHAR (OUTNDX).
            SET SRTNDX UP BY 1.
        EXIT-MOVE.
            EXIT.
/*
 ENTRY
// EXEC LNKEDT
// ASSGN SYS001,X'130'
// DLBL SORTWK1,,0
// EXTENT SYS001,111111,1,0,3280,600
// EXEC
/*
/&
```

4. MACCS PART QUANTITY DATA

TABLE OF CONTENTS

PART-QUANTITY DATA

SECTION 1. INTRODUCTION

The purpose of this procedure is to add new part data to the part quantity tapes and to make corrections to the part quantity data already on magnetic tape. This procedure, consisting of three utility routines and one COBOL program, is performed on the IBM 370/135 Disk Operating System (DOS) computer.

New data (i.e., group number, part number, federal stock number, minimum stockage list quantity, quantity of parts within a group, SMR code, nomenclature of the part, description of the part, and the replacement factor for the part) are obtained from the applicable Marine Corps Stock Lists and transcribed onto the Part Quantity Encoding Form (Enclosure 1). From this form, IBM cards are keypunched to incorporate all of the aforementioned data.

Corrections to data already on magnetic tape are encoded onto the MACCS Changes Encoding Form (Enclosure 2) and keypunched on IBM cards.

SECTION 2. APPLICABLE DOCUMENTS

The following Marine Corps Stock Lists were utilized in creating the part-quantity tapes on the systems of the MACCS:

a.	AN/TYQ-1	SL-4-04428A
b.	AN/TYQ-2	SL-4-04019A
c.	AN/TYQ-3	SL-4-04429A
		SL-4-05776A
		SL-4-05777A
		SL-4-05778A
		SL-4-05780A
		SL-4-05783A
d.	AN/TPS-32	SL-4-04401A
		SL-4-84289B
		SL-4-84299B
		SL-4-84300B
		SL-4-84315B
		SL-4-84335B (Interim)

SECTION 3. INPUTS

The inputs to add new data to the part quantity tapes are IBM cards and a magnetic tape. The inputs to correct data already on the part quantity tapes are IBM cards and a magnetic tape.

SECTION 4. BASIC OPERATIONS

To add new data to the part quantity tapes, the data on cards are put on magnetic tape by the utility routine CDTAPE. Then MRGPQ3 merges and sorts the new part data with the data on the old master part quantity tape by part number and group. This routine is followed by MRGPQ4, which merges and sorts the new part data with the data on another old master part quantity tape by federal stock number and group. Enclosures 3, 4, and 5 are the logic flow, operating procedure and program listings of this procedure.

To make corrections to the existing part quantity tapes, EDTAPE, a COBOL program, is used. Enclosures 6, 7, and 8 are the logic flow, operating procedure and program listing of this procedure.

SECTION 5. OUTPUTS

The output of these procedures is a magnetic tape containing part quantity information on each of the equipment groups of the systems of the MACCS. Part quantity data on each system (i.e., AN/TYQ-1, AN/TYQ-2, AN/-TYQ-3, and AN/TDS-32) is placed on separate magnetic tapes.

These tapes are used as the basic source of part data on each system. Any part numbers and federal stock numbers on the FMR data tapes are checked against these tapes.

PART QUANTITY DATA ENCODING FORM
WITH
INSTRUCTION SHEET

Enclosure 1

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

MACCS PART QTY DATA Rev. 1 (8/23/72)

SHEET NO. _____ OF _____

DATE _____

	GROUP		Part Number	Federal Stock Number	MSL QTY	QTY Within Group	SMR Code	Nomenclature	Description	Repl Factor
	1	2 3 4 5	6 7 8 9 10 11 12 13 14 15 16 17 18	19 20 21 22 23 24 25 26 27 28 29 30 31	32 33 34 35	36 37 38 39 40 41 42 43	44 45 46 47 48	49 50 51 52 53 54 55 56 57 58 59 60 61	62 63 64 65 66 67 68 69 70 71 72 73 74 75	76 77 78 79 80
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
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14										
15										
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18										
19										
20										
21										
22										
23										
24										
25										

PART QUANTITY DATA ENCODING

FORM INSTRUCTION SHEET

Column	Heading	Instructions
1-2	Group	Enter last two digits of group code.
3-5		Not used
6-18	Part Number	Enter part number.
19-31	Federal Stock Number	Enter federal stock number.
32-35	MSL Quantity	Enter Minimum Stockage List quantity.
36-43	QTY Within Group	Enter quantity of parts within the group.
44-48	SMR Code	Enter SMR code (if applicable).
49-61	Nomenclature	Enter nomenclature of part.
62-75	Description	Enter description of part.
76-80	Replacement Factor	Enter replacement factor for part.

MACCS CHANGES ENCODING FORM

WITH INSTRUCTION SHEET

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

SHEET NO. _____ OF _____
DATE _____

	Record No.	Begin	End	MACCS CHANGES
	1 2 3 4 5	6 7	8 9	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
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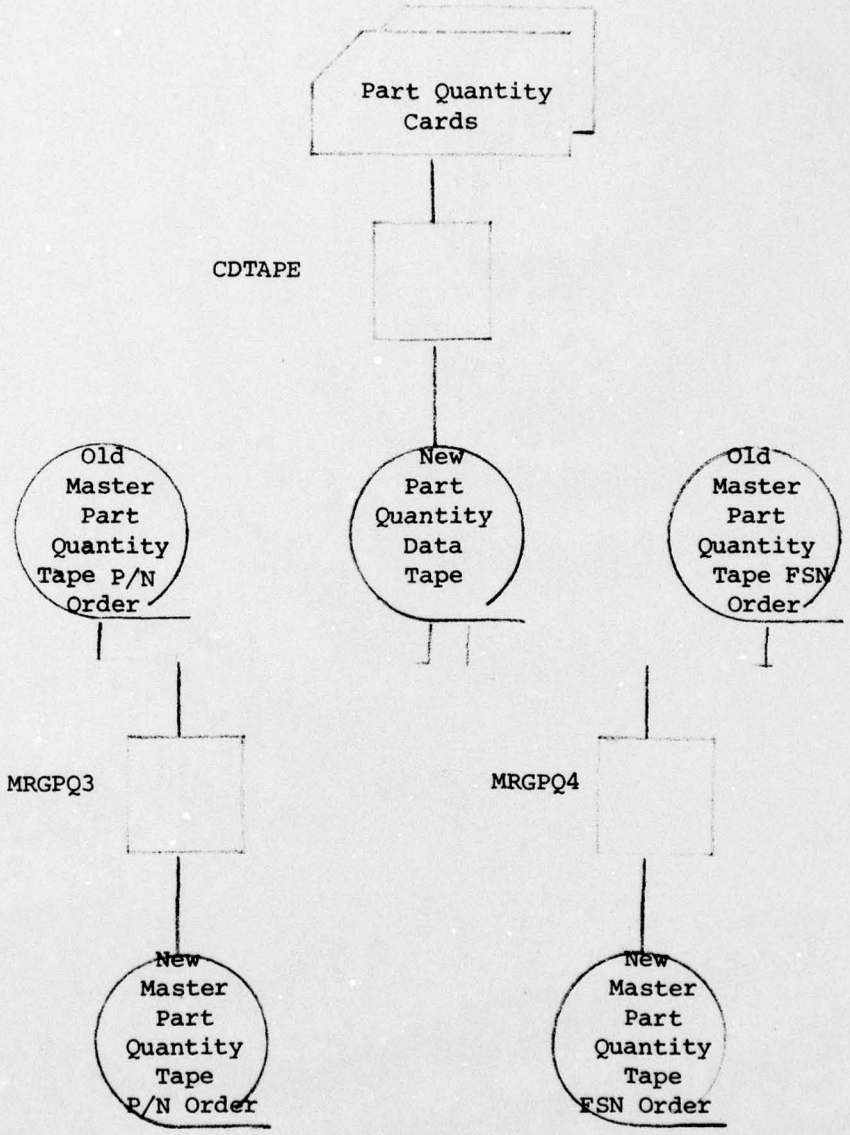
MACCS CHANGES ENCODING FORM

INSTRUCTION SHEET

Column	Heading	Instructions
1-5	Record Number	Enter record number from printout of part quantity tape.
6-7	Begin	Enter two-digit number of column where correction is to begin.
8-9	End	Enter two-digit number of column where correction is to end.
10-80	MACCS Changes	Enter correct data.



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LOGIC FLOW TO ADD NEW DATA TO MASTER
PART QUANTITY TAPES

Enclosure 3

AD-A074 129 ARINC RESEARCH CORP ANNAPOLIS MD F/6 17/2
HANDBOOK OF PROCEDURES: RELIABILITY AND MAINTAINABILITY MONITOR--ETC(U)
DEC 74 M00027-74-C-0099
UNCLASSIFIED 1302-01-4-1362 NL

3 OF 3
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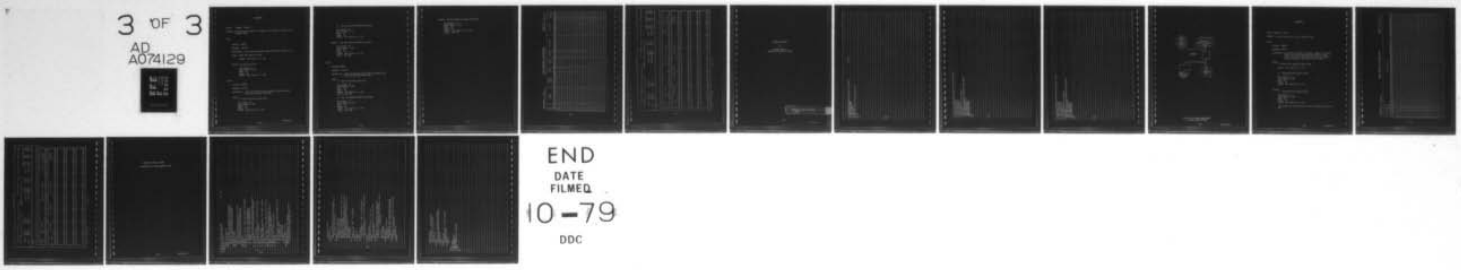

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PROCEDURE

TITLE: PQUPDT - PHASE 1

PURPOSE: To add new part numbers or federal stock numbers to master part quantity tapes

STEP 1

Program: CDTAPE

Language: Utility

Description: Puts new part-quantity cards on tape and blocks by 25

Input: MACCS Part Quantity Cards

Format: See Figure 1, p. 181.

Output: New Part Data Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 182.

STEP 2

Program: MRGPQ3

Language: Utility

Description: Sorts and merges new part numbers with master part quantity data tape (PN order)

Input:

(1) New Part Quantity Data Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 182.

(2) Old Part Quantity Master Data Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 182.

Output: New Part Quantity Master Data Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 182
Order: P/N, GRP

STEP 3

Program: MRGPQ4

Language: Utility

Description: Sorts and merges new FSN data with Master Part Quantity Data Tape (FSN order)

Input:

(1) New Part Quantity Data Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 182
Order: FSN, GRP

(2) Old Part Quantity Master Data Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 182.
Order: FSN, GRP

Output: New Part Quantity Master Data Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 182.
Order: FSN, GRP

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

MACCS PART QTY DATA Rev. 1 (8/23/72)

SHEET NO. ____ OF ____

DATE ____

	GROUP		Part Number	Federal Stock Number	MSL QTY	QTY Within Group	SMR Code	Nomenclature	Description	Repl Factor
	1	2	3,4,5	6 7 8 9 10 11 12 13 14 15 16 17 18	19 20 21 22 23 24 25 26 27 28 29 30 31	32 33 34 35	36 37 38 39 40 41 42 43	44 45 46 47 48	49 50 51 52 53 54 55 56 57 58 59 60 61	62 63 64 65 66 67 68 69 70 71 72 73 74 75	76 77 78 79 80
1										
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Figure 1

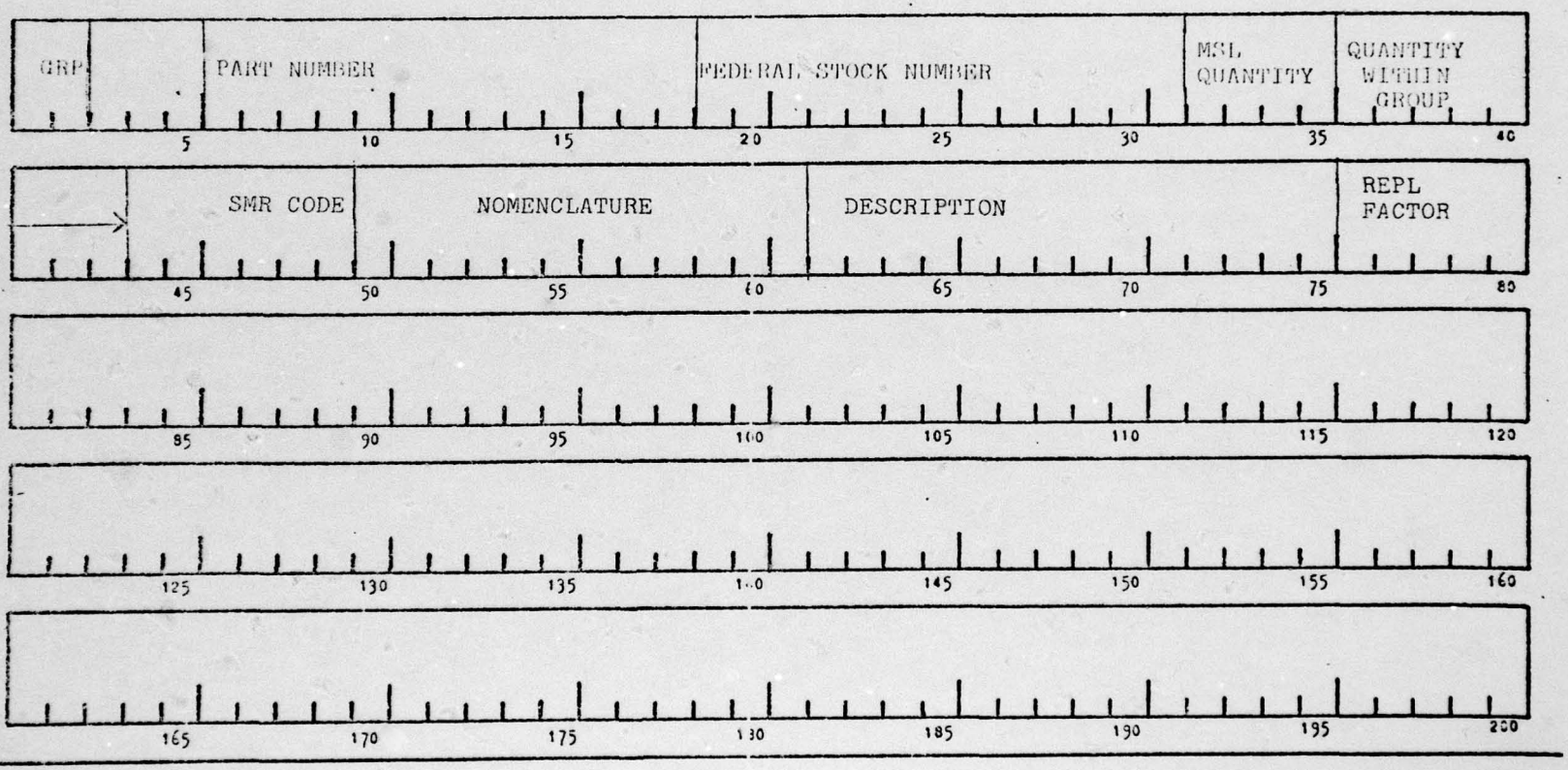
TAPE RECORD FORMAT

FILE NAME PQUPDT RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER ___ BLOCKING FACTOR 25

						STANDARD	NON-STANDARD	NONE
PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO	HEADER	[ ]	[ ]	[X]
GAP	[X] 3/4 "	[ ] ___	TAPE MARK	[X] YES	[ ] NO	TRAILER	[ ]	[ ]	[X]

REMARKS:



DPD - 40 8 - 16 - 66

Figure 2

PROGRAM LISTINGS

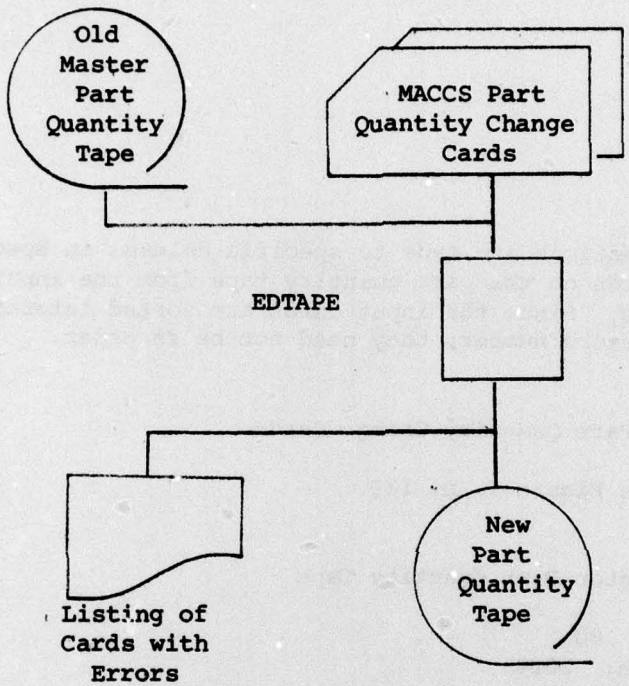
TO

ADD NEW DATA TO
MASTER PART QUANTITY TAPES

```
// JOB 1302-01 CDTAPE CARD-TAPE UTILITY (80/2000)          CRD  292
// ASSGN SYS005,X'292'
// ASSGN SYS004,X'00C'
// UPSI 00100000
// EXEC CDTP
// UCT TR,FF,A=(80,80),B=(80,2000),I1,OR,R1
// END
/*
/&
```

```
// JOB 1302-01 MRGPQ3 CREATE UPDATED P-Q TAPE, SORT BY P/N
// ASSGN SYS003,X'290'
// ASSGN SYS002,X'291'
// ASSGN SYS001,X'292'
// ASSGN SYS004,X'131'
// DLBL SORTWK1,,0
// EXTENT SYS004,999999,1,0,100,2000
// EXEC SORT
  SORT FIELDS=(6,13,A,1,2,A),FORMAT=BI,FILES=2,WORK=1
  RECORD TYPE=F,LENGTH=80
  INPFIL BLKSIZE=2000
  OUTFIL BLKSIZE=2000
  OPTION LABEL=(U,U,U)
  END
/*
/&
```

```
// JOB 1302-01 MRGPQ4 CREATE UPDATED P-Q TAPE, SORT BY FSN
// ASSGN SYS003,X'290'
// ASSGN SYS002,X'291'
// ASSGN SYS001,X'293'
// ASSGN SYS004,X'131'
// DLBL SORTWK1,,0
// EXTENT SYS004,999999,1,0,100,2000
// EXEC SORT
 SORT FIELDS=(19,13,A,1,2,A),FORMAT=BI,FILES=2,WORK=1
 RECORD TYPE=F,LENGTH=80
 INPFIL BLKSIZE=2000
 OUTFIL BLKSIZE=2000
 OPTION LABEL=(U,U,U)
 END
/*
/&
```



LOGIC FLOW TO MAKE CORRECTIONS
TO PART QUANTITY TAPES

PROCEDURE

TITLE: PQUPDT - Phase 2

PURPOSE: To make corrections to part quantity tapes

Step 1

Program: EDTAPE

Language: COBOL

Description: Corrections are made to specific columns in specific records on the part quantity tape from the input cards. Since the input cards are sorted internally by record number, they need not be in order.

Inputs:

(1) MACCS Part Quantity Change Cards

Format: See Figure 1, p. 189.

(2) Old Master Part Quantity Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 190.

Outputs:

(1) New Master Part Quantity Tape

Rec Length: 80
Block Length: 2000
Mode: CO
Label: No
Format: See Figure 2, p. 190.

(2) Listing of invalid cards for which corrections were not made

WORK ORDER NO. 1302-01

ARINC RESEARCH CORPORATION

SHEET NO. _____ OF _____
DATE _____

	Record No.	Begin	End	MACCS CHANGES
	1 2 3 4 5	6 7	8 9	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
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Figure 1

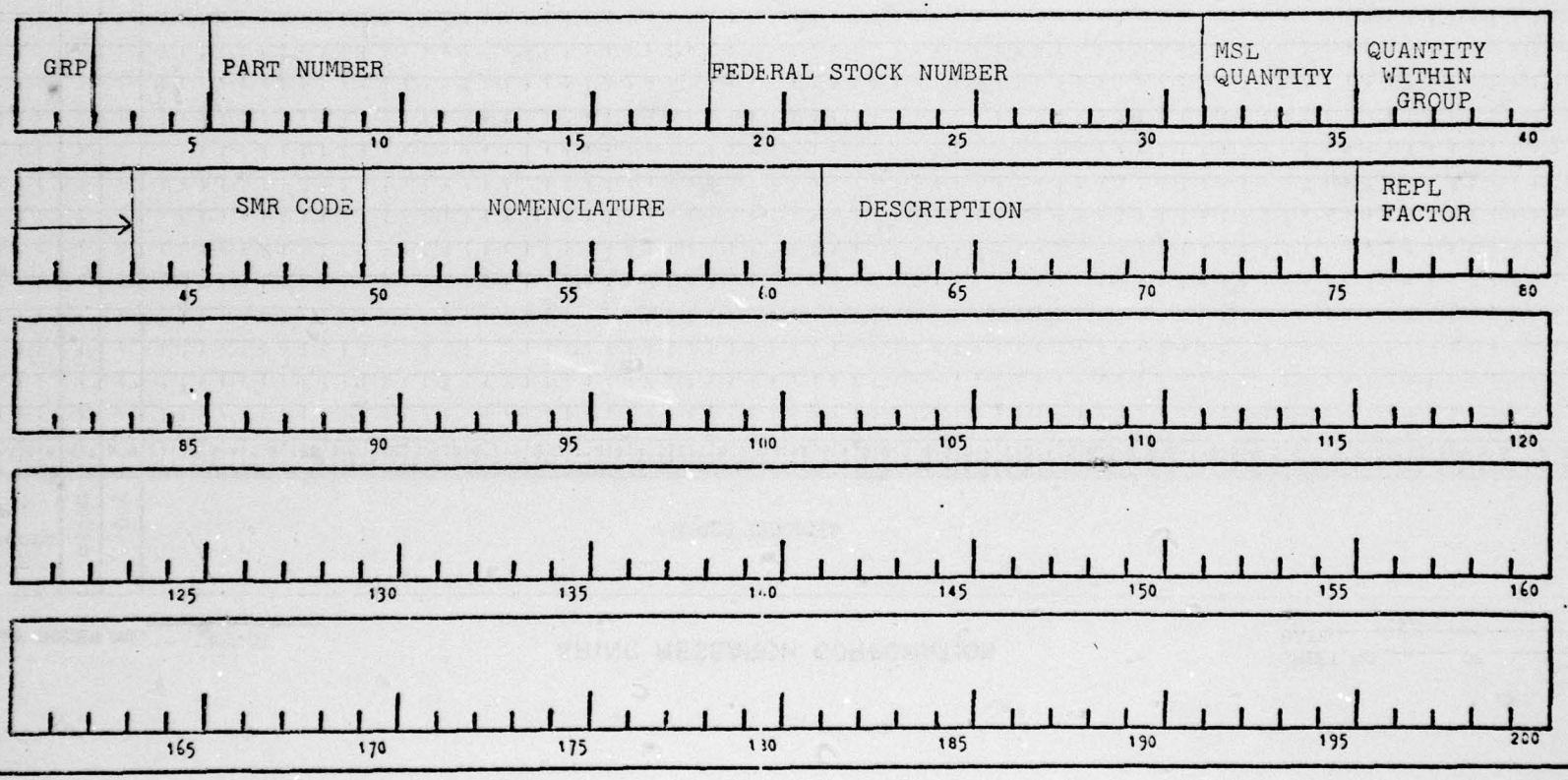
TAPE RECORD FORMAT

FILE NAME PQUPDT RECORD LENGTH 80 PAGE ___ OF ___ DATE ___

FILE NUMBER ___ BLOCKING FACTOR 25

PARITY	[X] EVEN	[ ] ODD	PAD W/9's	[ ] YES	[X] NO		STANDARD	NON-STANDARD	NONE
GAP	[X] 3/4"	[ ] ___	TAPE MARK	[X] YES	[ ] NO	HEADER	[ ]	[ ]	[X]
						TRAILER	[ ]	[ ]	[X]

REMARKS:



DPD - 40 8 - 16 - 66

Figure 2

PROGRAM LISTING TO MAKE

CORRECTIONS TO PART QUANTITY TAPES

```
// JOB 1302-01 EDTAPE MAKE CORRECTIONS                          290  291
// OPTION LINK,NODUMP,NOXREF,NOLISTX
// ASSGN SYS004,X'130'
// EXEC FCOBOL
       IDENTIFICATION DIVISION.
       PROGRAM-ID. EDIT69.
       REMARKS. UPDATE AVCAL FILE USING CARDS WITH TAPE RECORD
           NUMBERS IN COLUMNS 1-5, BEGINNING COLUMN NUMBERS IN
           COLUMNS 6-7, ENDING COLUMN NUMBERS IN COLUMNS 8-9,
           AND NEW DATA FOR THOSE COLUMNS IN COLUMNS 10-80.
       ENVIRONMENT DIVISION.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT WORKFILE ASSIGN TO SYS001-DA-2314-S-SORTWK1.
           SELECT CRD ASSIGN TO SYS004-UR-2540R-S.
           SELECT REC3IN ASSIGN TO SYS011-UT-2400-S-AVINP.
           SELECT REC3OUT ASSIGN TO SYS012-UT-2400-S-AVOUT.
       DATA DIVISION.
       FILE SECTION.
       SD  WORKFILE DATA RECORD IS SRTREC, LABEL RECORDS ARE STANDARD.
       01  SRTREC.
           02  CARDRECNO PIC S9(7), USAGE COMPUTATIONAL-3.
           02  SRTBEGCOL PIC S9(3), USAGE COMPUTATIONAL-3.
           02  SRTENDCOL PIC S9(3), USAGE COMPUTATIONAL-3.
           02  SRTDATA.
               03  SRTCHAR OCCURS 71 TIMES, INDEXED BY SRTNDX, PIC X(1).
       FD  CRD LABEL RECORDS ARE OMITTED, DATA RECORD IS CARD-IMAGE.
       01  CARD-IMAGE.
           02  FILLER PIC X(80).
       FD  REC3IN LABEL RECORDS ARE OMITTED,  DATA RECORD IS INREC,
           BLOCK CONTAINS 25 RECORDS.
       01  INREC.
           02  FILLER PIC X(80).
       FD  REC3OUT LABEL RECORDS ARE OMITTED,  DATA RECORD IS OUTREC,
           BLOCK CONTAINS 25 RECORDS.
       01  OUTREC.
           02  OUTCHAR OCCURS  80 TIMES, INDEXED BY OUTNDX, PIC X(1).
       WORKING-STORAGE SECTION.
       77  ENDTEMP PIC S999, USAGE COMPUTATIONAL, SYNC.
       77  TAPERECNO PIC S9(7), USAGE COMPUTATIONAL-3, VALUE 0.
       77  DIFF PIC S9(3), USAGE COMPUTATIONAL-3.
       77  END-IND PIC X, VALUE '0'.
       77  OPRECNO PIC S9(7), USAGE COMP-3, VALUE 0.
       01  UPDATE-CARD.
           02  12COLS.
               03  NCHAR OCCURS  9 TIMES INDEXED BY UPDNDX, PIC X(1).
           02  3FIELDS REDEFINES 12COLS.
               03  UPD-REC PIC 9(5).
               03  UPD-BEG PIC 9(2).
               03  UPD-END PIC 9(2).
           02  UPD-DATA.
               03  UPD-CHAR PIC X(71).
       PROCEDURE DIVISION.
           OPEN INPUT REC3IN, CRD, OUTPUT REC3OUT.
           SORT WORKFILE ASCENDING KEY CARDRECNO, INPUT PROCEDURE
               READ-CARDS, OUTPUT PROCEDURE UPDATE-TAPE.
```

```
            CLOSE REC3IN, REC3OUT.
            STOP RUN.
        READ-CARDS SECTION.
        GET-CRD.
            READ CRD INTO UPDATE-CARD AT END GO TO LAST-CRD.
            PERFORM TEST-CHAR THRU TEST-XIT VARYING UPDNDX FROM 1 BY 1
                UNTIL UPDNDX GREATER THAN 9.
        CHECK-FLD1.
            MOVE UPD-REC TO CARDRECNO.
            IF CARDRECNO = 0 GO TO ERR.
            MOVE UPD-BEG TO SRTBEGCOL.
            IF SRTBEGCOL = 0 OR SRTBEGCOL GREATER THAN  80 GO TO ERR.
            MOVE UPD-END TO SRTENDCOL.
            IF SRTENDCOL = 0 OR SRTENDCOL GREATER THAN  80 GO TO ERR.
            SUBTRACT SRTBEGCOL FROM SRTENDCOL GIVING DIFF.
            IF DIFF LESS THAN 0 OR DIFF GREATER THAN 71 GO TO ERR.
            MOVE UPD-CHAR TO SRTDATA.
            RELEASE SRTREC.
            GO TO GET-CRD.
        ERR.
            DISPLAY '   ***   ERROR   ', CARD-IMAGE.
            GO TO GET-CRD.
        LAST-CRD.
            CLOSE CRD.
        EXIT-READ.
            EXIT.
        TEST-CHAR SECTION.
            IF NCHAR (UPDNDX) = ' ' MOVE '0' TO NCHAR (UPDNDX)
                GO TO TEST-XIT.
            IF NCHAR (UPDNDX) LESS THAN '0' OR NCHAR (UPDNDX) GREATER
                THAN '9' GO TO ERR.
        TEST-XIT.
            EXIT.
        UPDATE-TAPE SECTION.
            RETURN WORKFILE RECORD AT END STOP RUN.
        GET-TAPE.
            READ REC3IN INTO OUTREC AT END GO TO LAST-REC.
            ADD 1 TO TAPERECNO.
        COMP-RECNO.
            IF CARDRECNO LESS THAN TAPERECNO GO TO GET-SRTREC.
            IF CARDRECNO = TAPERECNO GO TO UPDATE-RECORD.
            IF UPD-BEG = '80' AND UPD-END = '80' AND UPD-CHAR = SPACES
                                GO TO GET-TAPE.
            WRITE OUTREC.
            ADD 1 TO OPRECNO.
            GO TO GET-TAPE.
        UPDATE-RECORD.
            MOVE SRTENDCOL TO ENDTEMP.
            SET SRTNDX TO 1.
            PERFORM MOVECHAR THRU EXIT-MOVE VARYING OUTNDX FROM
                SRTBEGCOL BY 1 UNTIL OUTNDX GREATER THAN ENDTEMP.
        GET-SRTREC.
            RETURN WORKFILE RECORD AT END MOVE '1' TO END-IND, MOVE
                9999999    TO CARDRECNO.
            GO TO COMP-RECNO.
        LAST-REC.
```

```
            DISPLAY SPACES.
            DISPLAY TAPERECNO, '   RECORDS INPUT'.
            DISPLAY OPRECNO, '   RECORDS OUTPUT'.
            IF END-IND = '1' GO TO EXIT-UPD.
            DISPLAY SPACES.
        NXT-REC.
            DISPLAY '   ***   NO RECORD ', CARDRECNO.
            RETURN WORKFILE RECORD AT END GO TO EXIT-UPD.
            GO TO NXT-REC.
        EXIT-UPD.
            EXIT.
        MOVECHAR SECTION.
            MOVE SRTCHAR (SRTNDX) TO OUTCHAR (OUTNDX).
            SET SRTNDX UP BY 1.
        EXIT-MOVE.
            EXIT.
/*
 ENTRY
// EXEC LNKEDT
// ASSGN SYS001,X'130'
// DLBL SORTWK1,,0
// EXTENT SYS001,111111,1,0,3280,600
// EXEC
/*
/&
```