

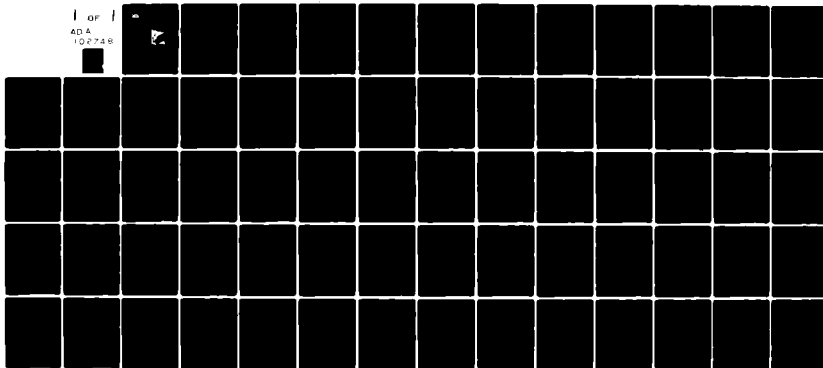
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GROUND RADIO OPERATOR CAREER LADDER AFSC 293X3.(U)
JUL 81

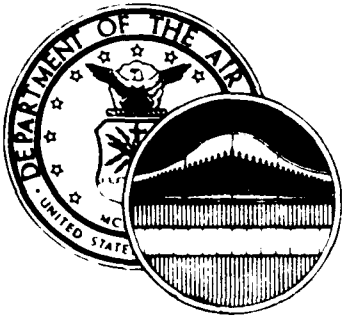
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OCCUPATIONAL SURVEY REPORT



GROUND RADIO OPERATOR CAREER LADDER

AFSC 293X3

AFPT 90-293-415

JUL 1981

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OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150

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PREFACE

This report presents the results of a detailed Air Force occupational survey of the Ground Radio Operator specialty (AFSC 293X3). The survey was requested by HQ AFCC at Scott AFB IL. Authority for conducting occupational surveys is contained in AFR 35-2. Computer printouts used in producing this report are available to training and operating officials.

The United States Air Force occupational analysis program has been in existence since 1956 when the Air Force Human Resources Laboratory began initial research into developing the methodology for conducting occupational surveys. In 1967, Air Training Command established an operational occupational analysis program which produced reports on 12 enlisted career ladder surveys annually. The program was expanded in 1972 to produce surveys of 51 career ladders each year. It was expanded again in 1976 to include the survey of officer utilization fields, to permit special management application projects, and to support interservice or joint service occupational analysis.

The survey instrument used in this project was developed by First Lieutenant Andrew Mellors, Inventory Development Specialist. Mr. James B. Keeth, First Lieutenant Gordon Curphy, and Dr. Henry C. Lindsey analyzed the survey data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

Copies of this report are available to air staff sections, major air commands, and other interested training and management personnel upon request to the USAF Occupational Measurement Center, attention to the Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150.

This report has been reviewed and is approved.

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SUMMARY OF RESULTS

1. Survey Coverage: Inventory booklets were administered to Ground Radio Operator (293X3) incumbents worldwide. The 293X3 survey results are based on the responses from 1,002 of the 1,513 assigned personnel or 66 percent of the total assigned population.

2. Career Ladder Structure: Twelve major job groups were identified within the 293X3 ladder. The six largest groups included Point-to-Point Operators, Mobile Communications Operators, Ground-to Air Operators, Shift Supervisors and NCOICs, Supervisors and Managers, and Combat Crew Communications Personnel. Smaller, more specialized groups identified included Air Support Request Net Operators, Weather Intercept Operators, Special Operations Squadron Operators, Administrative Support personnel, Intrabase Radio personnel, and Staff NCOs. Overall, the jobs were extremely heterogeneous. Most of the major jobs involved transmitting and receiving voice communications; however, Combat Crew and Special Operations Squadron personnel were exceptions. Job satisfaction varied considerably across jobs, with jobs involving senior level personnel in supervision functions having the highest job satisfaction indicators, jobs involving point-to-point and ground-to-air communications showing average or below average job satisfaction, and Mobile communications and combat crew personnel being the least satisfied.

3. Career Ladder Progression: Each of the skill level groups were fairly diverse, with very few tasks being performed by high percentages of incumbents. Both the 3- and 5-skill level jobs were technical in nature, with most of the common tasks being below average in task difficulty. At the 7-skill level, the job becomes one of supervisor, with very little time being spent on technical functions. In terms of time in service (TAFMS), the major shift to supervisory functions occurs at the fourth enlistment.

4. AFR 39-1 Specialty Descriptions: The 293X3 specialty descriptions were found to accurately reflect the tasks and duties performed by 293X3 incumbents. The 3- and 5-skill level description provided good coverage of the technical tasks performed, while the 7-skill level description accurately portrayed the supervisory nature of the job at that level.

5. Training: In such a diverse and heterogeneous ladder as this, training will often be a major problem. In general, the Specialty Training Standard (STS) for AFS 293X3 personnel appeared to cover major functions. However, because of some questionable matchings of tasks to STS paragraphs and because of a large number of tasks not referenced which were performed by fairly high percentages of 293X3 incumbents, this analysis was incomplete. The Plan of Instruction (POI) for course E3ABR29333 also had similar matching problems, but in general tended to be supported in a broad sense. Training objectives tended to cover most of the major functions being performed by first enlistment personnel. Followup action will be taken with the tech school to obtain a more accurate matching of tasks with the STS and POI documents and a more thorough analysis will be completed at that time.

6. Implications: Since the 293X3 career ladder was last surveyed in 1975, the basic job structure of ground radio operators has not changed much, except that airborne functions have been deleted. The 293X3 ladder is still a highly diverse and heterogeneous career ladder with many problems ranging from overcoming low job satisfaction to providing cost effective training. Functional managers should look closely at the diversity of jobs and low job satisfaction and assess their impact on such areas as retaining good personnel and training. A Utilization and Training Workshop is scheduled for late summer 1981 and could be very effective in examining these issues and coming up with constructive proposals to resolve many of these problem areas.

OCCUPATIONAL SURVEY REPORT
GROUND RADIO OPERATOR CAREER LADDER
(AFSC 293X3)

INTRODUCTION

This is a report of an occupational survey of the Ground Radio Operator career ladder (AFSC 293X3), completed by the Occupational Analysis Branch, USAF Occupational Measurement Center, in June 1981. The study was originally requested by HQ AFCC to gather updated information on career ladder incumbents. A previous survey of the 293X3 career ladder was published in July 1975.

Background

The Ground Radio Operator specialty has had a long and varied history. Since 1951, it has gone through a great number of AFSC designations and titles. For this report, the last two changes are perhaps the most significant for discussion. In 1972, the Radio Operator career ladder (AFS 293X3) was created, merging former AFSC's 293X0, Ground Radio Operator, and 293X2, Airborne Radio Operator. Two shreds were used in addition to the basic AFSC: the A shred for Airborne Command Post Communications and the B shred for Airborne Radio Countermeasures. In October of 1978, the airborne functions were taken out of the ladder and merged with airborne personnel from AFS 291X0 to form a new 294X0 AFSC. The 293X3 ladder was then retitled Ground Radio Operator.

The basic job of 293X3 personnel, as described by AFR 39-1, is to operate radio transmitting and receiving equipment in ground radio stations to conduct point-to-point and ground-air-ground communications. Entry into the career ladder is by attending course E3ABR29333 at Keesler AFB MS. This course is approximately eight weeks in length and covers such topics as touch typing and dictation, transcription, radio principles, antennas, and wave propagation; receiver and transceiver operations; calling and answering; message composition, format, and handling procedures; security; net operations; aeronautical message format and handling procedures; air-to-ground net operations; and air-to-ground console operations.

Major topics discussed in this report include: (1) survey methodology; (2) the job structure within the career ladder; (3) comparisons of the job structure and other survey data with career ladder documents, such as AFR 39-1 Speciality Descriptions, Plan of Instruction (POI), and the Speciality Training Standard (STS); (4) an analysis of Active Federal Military Service (AFMS) groups and duty AFSC groups; (5) an analysis of CONUS versus Overseas groups; and (6) comparison of the current survey with the previous survey.

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SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-293-415, dated May 1980. As a starting point, the 1974 inventory for AFS 293X3A/B was reviewed and revised through a comprehensive review of pertinent career ladder publications and directives and findings of the 1975 occupational survey report (OSR). This tentative task list was then further refined and modified in the field through personal on-site interviews with ten subject-matter specialists from three bases. The resulting job inventory contained a comprehensive listing of 389 tasks grouped under ten duty headings and a background section containing such information as grade, time in service, duty title, work area, and job satisfaction.

Survey Administration

During the period April through July 1980, consolidated base personnel offices (CBPOs) in operational units worldwide administered the inventory to all incumbents holding DAFSC 293X3. These incumbents were identified on a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual who completed the inventory first completed an identification and biographical information section and then checked each task performed in their current job. After checking all tasks performed, each member then rated each of these tasks on a nine-point scale showing relative time spent on that task as compared to all other tasks checked. The ratings ranged from one (very small amount time spent) through five (about average time spent) to nine (very large amount time spent).

To determine relative time spent for each task checked by a respondent, all of an incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each individual task rating is then divided by the total task ratings and multiplied by 100. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

Survey Sample

Personnel were selected to participate in this survey so as to insure an accurate representation across all MAJCOM and paygrade groups. Table 1 reflects the percentage distribution, by major command, of assigned personnel in the career ladder as of July 1980. Also listed is the percent distribution, by major command, of respondents in the final survey sample. The 1,002 respondents included in the final sample represent 66 percent of the 1,513 members assigned to the 293X3 career ladder. Table 2 reflects the paygrade group distributions, while Table 3 lists the sample distribution by AFMS groups. First enlistment personnel comprise 48 percent of the specialty. Overall, the survey sample provides a very good representation of the career ladder population as a whole.

TABLE 1
COMMAND REPRESENTATION OF SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
AFCC	83	86
USAFE	4	5
TAC	2	2
AFSC	1	2
MAC	1	1
OTHER	9	4
TOTAL	100	100

TOTAL ASSIGNED - 1,513
TOTAL SAMPLED - 1,002
PERCENT SAMPLED - 66%

* MANNING FIGURES AS OF MARCH 1980

TABLE 2
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	31	29
E-4	30	31
E-5	22	21
E-6	11	11
E-7	**	6
E-8	1	2
E-9	**	**

* MANNING FIGURES AS OF MARCH 1980
** DENOTES LESS THAN ONE PERCENT

TABLE 3

AFMS DISTRIBUTION OF SURVEY SAMPLE

<u>AFMS (MONTHS)</u>	<u>PERCENT OF SAMPLE</u>
1-48	48%
49-96	19%
97-144	12%
145-192	7%
193-240	6%
241+	8%

Task Factor Administration

In addition to completing a job inventory booklet, selected senior 293X3 personnel were also asked to complete a second booklet for either training emphasis (TE) or task difficulty (TD). The TE and TD booklets are processed separately from the job inventories. The information is then used in a number of different analyses discussed in more detail within the report.

Task Difficulty. Each individual completing a task difficulty booklet was asked to rate all of the tasks on a nine-point scale from extremely low to extremely high as to the relative difficulty of that task. Difficulty is defined as the length of time required by the average member to learn to do that task. Task difficulty data were independently collected from 52 experienced 7- or 9-skill level personnel stationed worldwide (see Table 4). The interrater reliability (as assessed through components of variance of standard group means) of .93 suggests very good agreement among 293X3 raters as to which tasks were the most or least difficult. Ratings were adjusted so that tasks of average difficulty have a rating of 5.00. The resulting data is essentially a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Job Difficulty Index (JDI). After computing a task difficulty rating for each task item, it is then possible to also compute a Job Difficulty Index (JDI) for the job groups identified in the survey analysis. This index provides a relative measure of which jobs, when compared to other jobs identified, are more or less difficult. An equation using the number of tasks performed and the average difficulty per unit time spent (ADPUTS) as variables is the basis for the JDI index. The index ranges from 1.0 for very easy jobs to 25.0 for very difficult jobs. The indices are adjusted so that the average job difficulty index is 13.00.

Training Emphasis. Individuals completing training emphasis booklets were asked to rate tasks on a ten-point scale from no training required to extremely heavy training required. Training emphasis is a rating of which tasks require structured training for first-term personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method. Training emphasis data were independently collected from 59 experienced 7- or 9-skill level personnel stationed worldwide (see Table 4). The interrater reliability (as assessed through components of variance of standard group means) for these raters was high (.91), indicating that there was good agreement among raters as to which tasks required some form of structured training and which did not. In this specialty, tasks rated highest in training emphasis have ratings of 3.6 and above. The average training emphasis is 1.8.

When used in conjunction with other factors, such as percent members performing, the task difficulty and training emphasis ratings can provide an insight into training requirements. This may help validate the lengthening or shortening of specific units of instruction in various training programs.

TABLE 4
COMMAND DISTRIBUTION OF 293X3 TASK DIFFICULTY
AND TRAINING EMPHASIS RATERS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF TASK DIFFICULTY RATERS</u>	<u>PERCENT OF TRAINING EMPHASIS RATERS</u>
AFCC	83	74	77
USAFE	4	6	6
TAC	2	*	2
AFSC	1	6	6
MAC	1	6	4
OTHER	<u>9</u>	<u>8</u>	<u>5</u>
TOTAL	100	100	100

* LESS THAN ONE PERCENT

CAREER LADDER STRUCTURE

In studying a specialty, it is important to first examine the variety of jobs which are performed by personnel in the career field. The degree of diversity of jobs within a specialty often has major implications for the personnel classification structure, formal resident training, OJT, and other Air Force management decisions.

The structure of jobs within the Ground Radio Operator career ladder was examined on the basis of similarity of tasks performed and the percent of time spent ratings provided by job incumbents, independent of specialty or other background factors.

For the purpose of organizing individual jobs into similar units of work, an automated job clustering program is used. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Program (CODAP) system for job analysis. Each individual job description in the sample is compared to every other job description in terms of tasks performed and the relative amount of time spent on each task in the job inventory. The automated system is designed to locate the two job descriptions with the most similar tasks and percent time ratings and combine them to form a composite job description. In successive stages, new members are added to initial groups or new groups are formed based on the similarity of tasks and percent of time ratings in each individual job description. This procedure is continued until all individuals and groups are combined to form a single composite representing the total sample. The resulting analysis of the variety of groups of jobs serves to identify: (1) the number and characteristics of the different jobs which exist within the career ladders; (2) the tasks which tend to be performed together by the same respondents; and (3) the breadth or narrowness of the jobs which exist within the Space Systems Equipment career ladder.

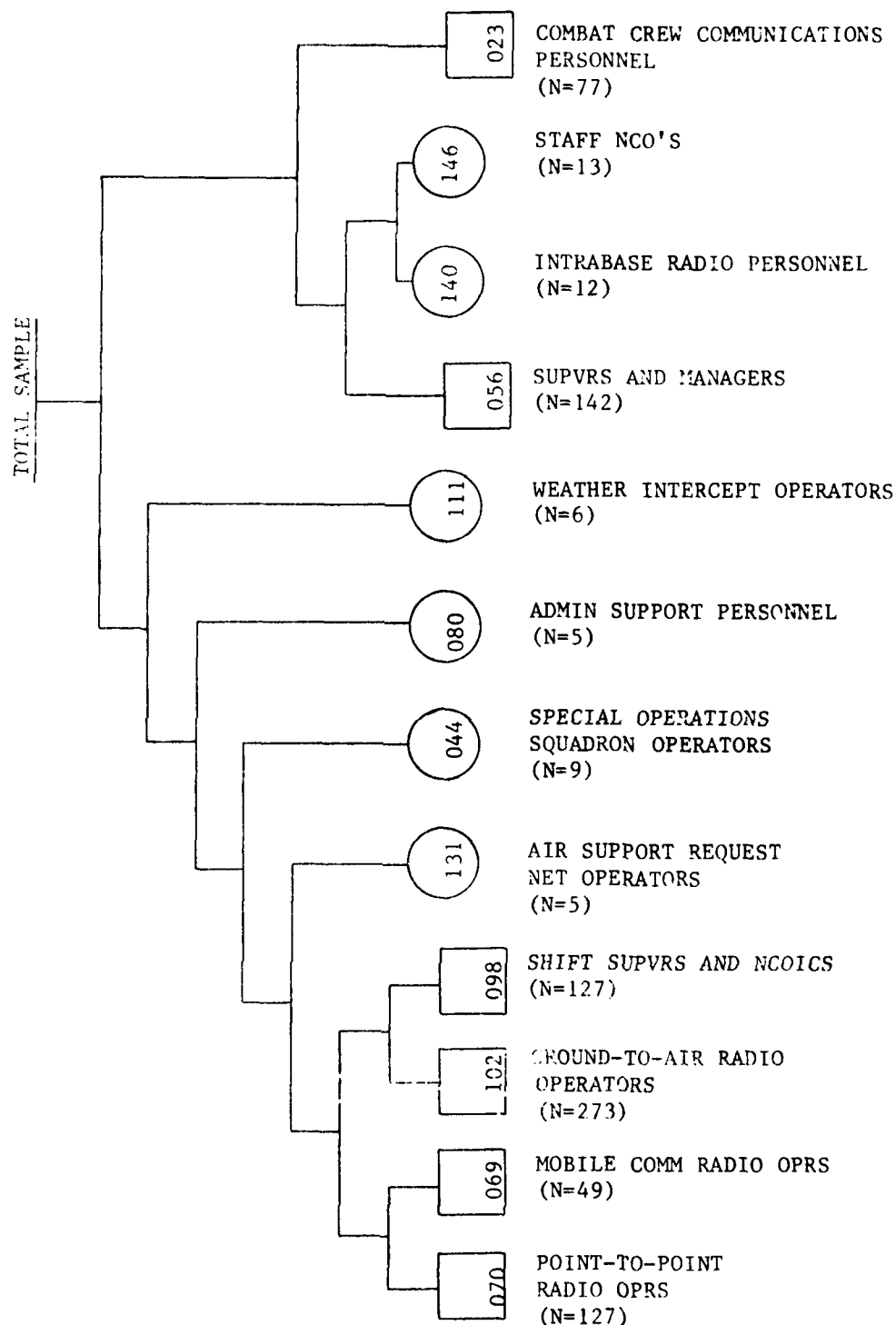
The basic identifying group used in the hierarchical job structuring process is the Job Type. A job type is a group of individuals who perform many of the same tasks and spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as Clusters. In many career fields, there are specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled Independent Job Types.

The jobs performed by Ground Radio Operators are illustrated in Figure 1. Based on the similarity of tasks performed and the amount of time spent performing each task, six clusters and six independent job types were identified. These clusters and independent job types are listed below:

- I. POINT-TO-POINT RADIO OPERATORS (GRP070, N=127)
- II. MOBILE COMMUNICATIONS RADIO OPERATORS (GRP069, N=49)
- III. GROUND-TO-AIR RADIO OPERATORS (GRP102, N=273)
- IV. SHIFT SUPERVISORS AND NCOICs (GRP098, N=127)

FIGURE 1

SIMPLIFIED 293X3 JOB STRUCTURE



- V. AIR SUPPORT REQUEST NET OPERATORS (GRP131, N=5)
- VI. SPECIAL OPERATIONS SQUADRON OPERATORS (GRP044, N=9)
- VII. ADMINISTRATIVE SUPPORT PERSONNEL (GRP080, N=5)
- VIII. WEATHER INTERCEPT OPERATORS (GRP111, N=6)
- IX. SUPERVISORS AND MANAGERS (GRP056, N=142)
- X. INTRABASE RADIO PERSONNEL (GRP140, N=12)
- XI. STAFF NCOs (GRP146, N=13)
- XII. COMBAT CREW COMMUNICATIONS PERSONNEL (GRP023, N=77)

The respondents forming these 12 clusters and independent job types account for 84 percent of the survey sample. While many of the remaining 16 percent reported similar job titles to those listed above, they did not group together due to their unique task responses.

Overview

Generally, the 293X3 career ladder is fairly heterogeneous, with a wide variety of jobs being performed by 293X3 personnel. The type of radio operator job performed depends primarily upon the type of communications mission and the amount of supervision 293X3 personnel are performing. For example, the job performed by Point-to-Point Radio Operators is fairly similar to that performed by Ground-to-Air Radio Operators, but both are involved with a different type of communications mission. This difference in mission is responsible for the task differences between these major job groups. This same phenomenon can account for many of the other job groups identified.

Brief descriptions of each cluster and independent job type are presented below. In addition, there are six tables at the end of this section that provide additional information about each group. Tables 5 and 6 provide the relative percent time spent on each duty by personnel in each of the groups. Tables 7 and 8 provide selected background information, such as DAFSC distribution and AFMS information. Tables 9 and 10 provide job satisfaction and related data for each group. Appendix A lists common tasks performed by members of each group.

1. POINT-TO-POINT RADIO OPERATORS (GRP070). This group of 127 respondents operate the radios and associated equipment found at Military Affiliated Radio System (MARS) stations, field radio units, commando escort units, NATO units, and SITFA units used for point-to-point communications. These incumbents do not communicate with aircraft but instead concentrate on transmitting and receiving communications to and from other ground based communications facilities. Typical tasks performed include:

- adjust receivers to obtain readable signals
- log incoming or outgoing messages
- transmit or receive messages using HF equipment
- tune or change transceiver frequencies manually
- make phone patches

- V. AIR SUPPORT REQUEST NET OPERATORS (GRP131, N=5)
- VI. SPECIAL OPERATIONS SQUADRON OPERATORS (GRP044, N=9)
- VII. ADMINISTRATIVE SUPPORT PERSONNEL (GRP080, N=5)
- VIII. WEATHER INTERCEPT OPERATORS (GRP111, N=6)
- IX. SUPERVISORS AND MANAGERS (GRP056, N=142)
- X. INTRABASE RADIO PERSONNEL (GRP140, N=12)
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- adjust receivers to obtain readable signals
- log incoming or outgoing messages
- transmit or receive messages using HF equipment
- tune or change transceiver frequencies manually
- make phone patches

Most of these members are relatively inexperienced, with 71 percent being in their first enlistment. Average time in the career field is 38 months. In addition, job satisfaction is extremely low. Only 38 percent found their job interesting and 54 percent felt their job was not utilizing their talents.

II. MOBILE COMMUNICATIONS RADIO OPERATORS (GRP069). These 49 respondents work primarily in combat communications groups or tactical and control unit stations. While many tasks performed by these members are the same as performed by the above group, they also perform some unique mobile tasks such as:

- construct or orient antennas for mobile or portable operations
- operate M series motor vehicles
- set up mobile radio equipment or antennas
- set up field radio equipment or antennas
- set up radio equipment shelters

As with the above group, these members are relatively inexperienced. Eighty-two percent are in their first enlistment and average only 28 months in the career field. Job satisfaction is also extremely low. Fifty-seven percent found the job dull, with similar percentages indicating the job does not utilize their talents or training. In addition, 24 percent of this group are required to maintain proficiency in International Morse Code (IMC), second highest of all job groups.

III. GROUND-TO-AIR RADIO OPERATORS (GRP102). These 273 personnel comprise the largest major job group in the 293X3 ladder, making up 27 percent of the total sample. Unlike the two previous groups, these incumbents work primarily at aeronautical stations and GIANT TALK radio stations. Members are primarily concerned with transmitting and receiving ground-to-air voice communications. Typical tasks include:

- relay communications traffic between fixed stations and aircraft
- coordinate air-to-ground message traffic
- make phone patches
- make scheduled voice broadcasts
- process requests from aircraft in flight

As with the two previous groups, this is also a fairly inexperienced group with 68 percent of the members being in their first enlistment. Average time in the career field is 41 months. Job satisfaction, although somewhat higher than the previous two groups, was still low, with only 54 percent finding their job interesting. However, perceived utilization of training was high, with 74 percent indicating their training was utilized well or better.

IV. SHIFT SUPERVISORS AND NCOICs (GRP098). These 127 incumbents are the firstline supervisors at a variety of ground-to-ground as well as ground-to-air communications facilities. Distinct subgroups of Mobile Communications Supervisors, Aeronautical Station Supervisors, and Point-to-Point Shift Supervisors were identified. Incumbents of these groups spend an average of 37 percent of their job time performing supervisory duties, and spend the remainder on administrative or communications related duties. As expected, many of the common tasks performed by these incumbents involve some aspect of supervision or transmitting and receiving voice communications, and include:

conduct OJT
transmit or receive messages using HF equipment
supervise Ground Radio Operators (AFSC 293X3)
maintain position or circuit logs
make timecards

Since these respondents are performing both a technical and a supervisory job, they perform a relatively high average number of tasks (77) and have a fairly high JDI (17.8). As expected, these incumbents are fairly senior, averaging 99 months TAFMS. Thirty-one percent hold the 7-skill level. It is interesting to note that these incumbents appear to be fairly satisfied with their job, with 64 percent finding their job interesting and 70 percent planning to reenlist.

V. AIR SUPPORT REQUEST NET OPERATORS (GRP131). These five respondents are working primarily out of Camp Red Cloud at a Tactical and Control Unit station. These incumbents are primarily concerned with ground-to-ground communications, and seem to be more involved with communications security than other major job groups. These respondents spend 47 percent of their time transmitting and receiving voice communications. Typical tasks include:

encode or decode messages manually
set codes on cryptographic devices
relay communications traffic between fixed stations and mobile stations
inventory communications security (COMSEC) materials
maintain master station logs

All of these incumbents hold the 5-skill level, and all work a rotating eight or 12 hour shift. Four of these personnel are assigned to PACAF, and only one person is in his first enlistment. Job satisfaction data appears to be about average, with 60 percent finding their jobs interesting. However, 60 percent also feel their training is being utilized little or not at all.

VI. SPECIAL OPERATIONS SQUADRON OPERATORS (GRP044). Eighty-nine percent of the nine personnel in this independent job type are required to maintain International Morse Code (IMC) proficiency. Almost all of these incumbents are working at the 7th SOS out of Ramstein AFB, GFR and are responsible for transmitting and receiving communications in IMC. These respondents also appear to have a mobile mission, and spend 31 percent of their job time setting up and maintaining ground radio equipment. Typical tasks performed by these personnel include:

transcribe international morse code by hand
calibrate portable transceivers
adjust manual telegraph keys
pack pallets
send international morse code

Eighty-nine percent of these incumbents are assigned to USAFE, and 90 percent hold the 5-skill level. A review of job satisfaction data reveals these personnel are fairly dissatisfied with their job, with only 44 percent finding their job interesting and only 22 percent perceiving their talents are being utilized at least fairly well.

VII. ADMINISTRATIVE SUPPORT PERSONNEL (GRP080). These five incumbents spend more time compiling and maintaining records and logs than any other major job group. Although these incumbents do spend some job time transmitting and receiving voice communications, most of the tasks performed by a majority of these incumbents are administrative in nature, and include:

- write and type correspondence
- type records, reports, or forms
- maintain publications or directive files
- maintain files of messages transmitted or received
- maintain position or circuit logs
- prepare and forward joint message forms (DD Form 173)
- establish publication libraries

These incumbents work in a variety of communications facilities, and 80 percent are assigned to AFCC. Only 40 percent are in their first enlistment. An examination of job satisfaction data reveals these incumbents are rather dissatisfied with their job, with only 40 percent finding their job interesting. In addition, 60 percent perceive their talents and training being utilized little or not at all.

VIII. WEATHER INTERCEPT OPERATORS (GRP111). These six members are all E-4 airmen primarily located at Incirlik AFB. All hold a 5-skill level and perform relatively few tasks (average of 17). Common tasks performed include:

- tune or change receiver frequencies manually
- adjust receivers to obtain readable signals
- maintain master station logs
- transmit or receive messages by HF equipment and radio teletype systems
- interpret weather reports for transmission
- operate rotating antenna equipment
- prepare outage reports

Job satisfaction was fairly low among the group members, with only 50 percent finding the job interesting. A fairly high 83 percent felt their talents were not used at all or very little and 67 percent felt the same about their training.

IX. SUPERVISORS AND MANAGERS (GRP056). The 142 respondents in this cluster are the middle level supervisors and managers of the 293X3 career ladder. These incumbents spend 71 percent of their job time performing supervisory duties, and because of their extensive communications background, perform the highest average number of tasks (84) of all major job groups. These incumbents perform the broadest and most difficult job identified (JDI equals 202), and work in a variety of communications facilities. Distinct subgroups identified include Ground Radio Operations Supervisors; NCOICs, Combat Crew Communications Branch; Group Radio Operations Superintendents at aeronautical stations and radio operations headquarters; GIANT TALK station Superintendents; and Training Supervisors. Typical tasks performed by these senior 293X3 personnel include:

- determine work priorities
- schedule leaves or passes
- interpret policies, directives, or procedures for subordinates
- establish performance standards for subordinates
- counsel personnel on personal or military related problems

Eighty-three percent of these incumbents hold the 7- or 9-skill level, and 32 percent work a day shift. As expected, these respondents have fairly high job satisfaction indicators, with 59 percent finding their job interesting and 63 percent planning to reenlist.

X. INTRABASE RADIO PERSONNEL (GRP140). These 12 incumbents seem to perform a communications staff type of job. All but one hold the 7-skill level. These incumbents spend 40 percent of their job time directing and implementing and 27 percent on compiling and maintaining records or logs. Typical tasks performed by these incumbents include:

- maintain intrabase radio account records
- draft budget or financial requirements
- write staff studies, surveys, or special reports
- write correspondence
- inventory equipment, tools, or supplies

These incumbents are fairly senior, averaging 199 months TAFMS. These respondents appear to be satisfied with their jobs, with 75 percent finding their jobs interesting, 92 percent perceiving their talents are being utilized at least fairly well, and 75 percent planning to reenlist.

XI. STAFF NCOs (GRP146). These 13 incumbents primarily work at different radio operations headquarters and perform a communications staff type job. These incumbents spend almost all of their job time performing supervisory duties, yet do not report supervising anyone. Typical staff related tasks performed include:

- write staff studies, surveys, or special reports
- evaluate communications operations
- perform staff assistance visits
- plan briefings
- plan communications support of exercises or special missions

All of these incumbents are assigned to AFCC, and all hold the 7- or 9-skill level. These respondents are among the most senior of all major job groups, averaging 238 months TAFMS and having an average paygrade of E-7. Job satisfaction indicators are probably the best overall for all major job groups, with 77 percent finding their job interesting and 100 percent believing their talents are being utilized at least fairly well.

XVI. COMBAT CREW COMMUNICATIONS PERSONNEL (GRP023). These 77 personnel are all assigned to AFCC and most work in SAC bomb wings. Unlike most of the other major job groups, these incumbents do not operate radios. Instead, these incumbents are responsible for providing SAC bomber crews with communications information concerning their bombing mission. These incumbents spend 37 percent of their job time performing mission planning, and typical tasks performed include:

prepare communications kits
prepare flight publication kits
document destruction of classified material
check out or receive classified information for special missions
maintain current call sign lists

Seventy-four percent of these respondents hold the 5-skill level, and 47 percent are in their first enlistment. Most of these incumbents (55 percent) work a day shift. A review of job satisfaction data reveals these incumbents are somewhat dissatisfied with their job, with only 44 percent finding their job interesting. Perceived utilization of talents and training is significantly low, with only 45 percent indicating their talents are being utilized at least fairly well and only 21 percent perceiving their training is being utilized at least fairly well.

Summary

A wide variety of jobs are performed by 293X3 personnel. The type of job performed depends on a number of factors, some of which include the type of communications mission performed, the type of communications facility worked at, and the amount of supervisory responsibility an incumbent has. Most of the major job groups identified are responsible for different aspects of transmitting and receiving voice communications; however, Combat Crew Communications Personnel and Special Operations Squadron Operators do not appear to perform a job involving voice communications. They are much more involved with Morse Code than are other groups.

A review of job interest and related data (Tables 9 and 10) suggests that job satisfaction varies considerably depending on the type of job performed. Overall, personnel performing jobs involving supervision seem to be the most satisfied. Personnel performing standard ground-to-ground and ground-to-air communications functions appear to have average job satisfaction indicators. Finally, personnel involved with mobile communications and combat crew communications appear to be the least satisfied.

TABLE 5

RELATIVE TIME SPENT PERFORMING DUTIES BY CLUSTER GROUPS

DUTIES	POINT-TO- POINT RADIO OPERATORS (GRP070, N=127)	MOBILE COMM RADIO OPERATORS (GRP069, N=49)	GRD-TO- AIR RADIO OPERATORS (GRP102, N=273)	SHIFT SUPVRS AND NCOICs (GRP098, N=127)	SUPVRS AND MANAGERS (GRP056, N=142)	COMBAT CREW COMMUNICATIONS PERSONNEL (GRP023, N=77)
A ORGANIZING AND PLANNING	2	2	2	7	17	11
B DIRECTING AND IMPLEMENTING	4	4	4	14	24	7
C INSPECTING AND EVALUATING	2	*	1	5	16	3
D TRAINING	1	*	2	11	13	4
E COMPILING AND MAINTAINING RECORDS AND LOGS	30	15	18	16	14	24
F SETTING UP AND MAINTAINING GROUND RADIO EQUIPMENT	21	42	21	18	5	7
G TRANSMITTING AND RECEIVING	38	32	51	26	7	7
H PERFORMING PREFLIGHT AND POSTFLIGHT INSPECTIONS	-	*	*	*	*	-
I ISOLATING EQUIPMENT MALFUNCTIONS	*	*	*	1	*	*
J PERFORMING MISSION PLANNING	1	3	2	2	3	37
K PERFORMING CREW DUTIES	*	*	*	*	*	*
L PERFORMING AIR FORCE SATELLITE COMMUNI- CATIONS (AFSATCOM) FUNCTIONS	*	*	*	*	*	*

*LESS THAN ONE PERCENT

TABLE 6

RELATIVE TIME SPENT PERFORMING DUTIES BY INDEPENDENT JOB TYPES

DUTIES	AIR SUPPORT REQUEST NET OPERATORS (GRP131, N=5)	SP OPERS SQ OPERATORS (GRP044, N=9)	ADMIN SUPPORT PERSONNEL (GRP080, N=5)	WEATHER INTERCEPT OPERATORS (GRP111, N=6)	INTRABASE RADIO PERSONNEL (GRP140, N=12)	STAFF NCOs (GRP146, N=13)
A ORGANIZING AND PLANNING	*	2	7	1	16	20
B DIRECTING AND IMPLEMENTING	*	4	13	3	40	32
C INSPECTING AND EVALUATING	-	2	2	4	13	28
D TRAINING	-	2	6	1	3	6
E COMPILING AND MAINTAINING RECORDS AND LOGS	22	7	36	27	27	10
F SETTING UP AND MAINTAINING GROUND RADIO EQUIPMENT	24	31	9	39	*	*
G TRANSMITTING AND RECEIVING	47	47	24	26	-	1
H PERFORMING PREFLIGHT AND POSTFLIGHT INSPECTIONS	-	-	-	-	-	-
I ISOLATING EQUIPMENT MALFUNCTIONS	1	-	*	-	*	-
J PERFORMING MISSION PLANNING	4	5	2	-	*	3
K PERFORMING CREW DUTIES	-	-	-	-	-	-
L PERFORMING AIR FORCE SATELLITE COMMUNICATIONS (AFSATCOM) FUNCTIONS	-	-	-	-	-	-

*LESS THAN ONE PERCENT

TABLE 7

SELECTED BACKGROUND DATA FOR CLUSTER GROUPS

	POINT-TO- POINT RADIO OPERATORS (GRP070, N=127)	MOBILE COMM RADIO OPERATORS (GRP069, N=49)	GRD-TO- AIR RADIO OPERATORS (GRP102, N=273)	SHIFT SUPVRS AND NCOICs (GRP098, N=127)	SUPVRS AND MANAGERS (GRP056, N=142)	COMBAT CREW AND COMMUNICATIONS PERSONNEL (GRP023, N=77)
NUMBER IN GROUP:	127	49	273	127	142	77
PERCENT OF SAMPLE:	13%	5%	27%	13%	14%	8%
AVERAGE PAYGRADE:	3.5	3.4	3.7	4.7	6.2	4.2
AVERAGE NUMBER OF TASKS PERFORMED:	29	33	42	77	84	27
DAFSC:						
29333	24%	37%	19%	5%	-	13%
29353	73%	61%	77%	64%	17%	74%
29373	3%	-	4%	31%	71%	13%
29393	-	-	-	-	12%	-
AVERAGE MONTHS IN CAREER FIELD:	38	28	41	82	162	58
AVERAGE MONTHS TAFMS:	42	33	48	99	190	67
PERCENT IN FIRST ENLISTMENT:	71%	82%	68%	22%	3%	47%
PERCENT REQUIRED TO MAINTAIN IMC PROFICIENCY:	4%	24%	5%	6%	9%	1%
PERCENT SUPERVISING:	10%	4%	15%	63%	89%	9%
AVERAGE NUMBER SUPERVISED:	1	1	1	3	4	1

TABLE 8

SELECTED BACKGROUND DATA FOR INDEPENDENT JOB TYPES

	AIR SUPPORT REQUEST NET OPERATORS (GRP131, N=5)	SP OPERS SQ OPERATORS (GRP044, N=9)	ADMIN SUPPORT PERSONNEL (GRP080, N=5)	WEATHER INTERCEPT OPERATORS (GRP111, N=6)	INTRABASE RADIO PERSONNEL (GRP140, N=12)	STAFF NCOS (GRP146, N=13)
NUMBER IN GROUP:	5	9	5	6	12	13
PERCENT OF SAMPLE:	*	1%	*	1%	1%	1%
AVERAGE PAYGRADE:	4.4	3.9	4.2	4.0	6.2	6.8
AVERAGE NUMBER OF TASKS PERFORMED:	25	30	42	17	19	41
DAFSC:						
29333	-	11%	20%	-	-	-
29353	100%	89%	60%	100%	17%	-
29373	-	-	20%	-	83%	77%
29393	-	-	-	-	-	23%
AVERAGE MONTHS IN CAREER FIELD:						
AVERAGE MONTHS TAFMS:	46	67	57	46	166	230
PERCENT IN FIRST ENLISTMENT:	91	70	76	64	199	238
PERCENT REQUIRED TO MAINTAIN IMC PROFICIENCY:	20%	56%	40%	33%	8%	0%
	20%	89%	20%	17%	0%	0%
PERCENT SUPERVISING:						
AVERAGE NUMBER SUPERVISED:	0%	33%	20%	17%	0%	31%
	0	1	2	1	0	1

*LESS THAN ONE PERCENT

TABLE 9

JOB SATISFACTION DATA FOR CLUSTER GROUPS
(PERCENT MEMBERS RESPONDING)

	POINT-TO- POINT RADIO OPERATORS	MOBILE COMM RADIO OPERATORS	GRD-TO- AIR RADIO OPERATORS	SHIFT SUPVRS AND NCOICs	SUPVRS AND MANAGERS	COMBAT CREW COMMUNICATIONS PERSONNEL
<u>I FIND MY JOB:</u>						
DULL	37	57	27	23	20	34
SO-SO	23	8	18	13	21	22
INTERESTING	38	33	54	64	59	44
<u>MY JOB UTILIZES MY TALENTS:</u>						
NOT AT ALL TO VERY LITTLE	54	57	45	39	28	55
FAIRLY WELL TO BETTER	46	43	55	61	72	45
<u>MY JOB UTILIZES MY TRAINING:</u>						
NOT AT ALL TO VERY LITTLE	36	55	26	27	31	79
FAIRLY WELL TO BETTER	64	45	74	73	69	21
<u>I PLAN TO REENLIST:</u>						
NO OR PROBABLY NO	54	57	42	28	37	46
YES OR PROBABLY YES	45	43	57	70	63	54

TABLE 10

JOB SATISFACTION DATA FOR INDEPENDENT JOB TYPES
(PERCENT MEMBERS RESPONDING)

	AIR SUPPORT REQUEST NET OPERATORS	SPECIAL OPERATIONS SQ OPER	ADMIN SUPPORT PERSONNEL	WEATHER INTERCEPT OPERATORS	INTELLIGENCE RADIO PERSONNEL	STAFF NCOs
I FIND MY JOB:						
DULL		74	60	70	7	0
SO-SO	40	71	70	71	17	23
INTERESTING	96	84	7	50	75	77
MY JOB UTILIZES MY TALENTS:						
NOT AT ALL TO VERY LITTLE	40	78	60	63	7	0
FAIRLY WELL TO BETTER	60	22	40	37	92	100
MY JOB UTILIZES MY TRAINING:						
NOT AT ALL TO VERY LITTLE	60	44	60	67	58	31
FAIRLY WELL TO BETTER	40	56	40	33	42	69
I PLAN TO REENLIST:						
NO OR PROBABLY NO	40	44	60	67	25	23
YES OR PROBABLY YES	60	56	40	33	75	77

ANALYSIS OF DAFSC GROUPS

In conjunction with identifying the job structure of the Ground Radio Operator specialty, it is also important to examine similarities and differences among skill level groups. This analysis provides useful information that can be used in analyzing how accurately specialty documents, such as the AFM 39-1 Specialty Descriptions and the Specialty Training Standard (STS), reflect the tasks and jobs performed by incumbents.

Table 11 presents the relative time spent on duties by the various skill level groups. Overall, it can be seen from the data in this table that the 3- and 5-skill level jobs are relatively technical. Three duties pertaining to transmitting and receiving, setting up and maintaining ground radio equipment, and compiling and maintaining records and logs comprise 87 percent of the total job time. This trend is completely reversed at the 7-skill level where less than 25 percent of the job time is spent on technical functions. Supervisory functions and compiling and maintaining records and logs take up 79 percent of the overall job time.

Skill Level Descriptions

DAFSC 29333. There were 155 incumbents in the overall survey sample who held a duty AFSC of 29333. Most of these were in paygrades E-2 and E-3. Overall, these respondents perform a variety of functions. Only 33 tasks were performed by 30 percent or more of 3-level personnel, 19 of which were performed by 50 percent or more (see Table 12). Most tasks involved transmitting and receiving, and keeping logs, with some emphasis also found on the operation of equipment, such as standard communications receivers and transmitters, portable transceivers, and fixed ground transceivers. All of the tasks were relatively low in difficulty. In terms of background information, 85 percent had less than two years in the career field and only 10 percent indicated that they had to maintain International Morse Code (IMC) proficiency.

A look at Table 13 gives some perspective as to where 3-skill level personnel were found among the job groups identified in the career ladder structure. As shown, the largest percentage (33 percent) were performing as ground-to-air radio operators, with smaller percentages being found as point-to-point operators (19 percent) and mobile communications operators (11 percent).

DAFSC 29353. The largest number of incumbents in the 293X3 ladder (607) were in the 5-skill level group. Basically there was not that much of a difference between the tasks performed by these incumbents and those performed by 3-skill level incumbents. The 5-skill level group was also very heterogeneous, with 43 tasks performed by 30 percent or more and 11 tasks being performed by 50 percent or more. Table 14 lists the most common tasks performed. As with the 3-skill level, common tasks were related to transmitting and receiving, keeping logs and records, and operating ground radio equipment. Also, most tasks were below average in difficulty, although the relative difficulty of individual tasks was somewhat higher than tasks being performed at the 3-skill level.

Distribution of 5-skill level members across job groups is displayed in Table 13. Again, the largest percentage of these incumbents (34 percent) were found in the ground-to-air operator cluster. And, a fairly sizeable percentage (15 percent) were performing as point-to-point operators. However, a noticeable trend among 5-skill level members was an increase in the percentages who fell into supervisory jobs, with 13 percent found in the Shift Supervisor and NCOIC cluster.

DAFSC 29373. Only 215 respondents were found in the 7-skill level group. Unlike their 3- and 5-skill level counterparts, these 7-skill level members performed primarily a supervisory job. And, as with the previous skill level groups, these incumbents also formed a heterogeneous group but not to the extent found at the lower skill levels. Twenty-two tasks were performed by 50 percent or more of the respondents (see Table 15), all but one being supervisory in nature or dealing with administrative areas such as typing. What technical tasks were performed did not comprise a large portion of the overall job time and were performed by less than half of the members. Sixty-five percent indicated they supervised others, supervising an average of three subordinates. Table 16 reflects those tasks best differentiating between the 5- and 7-skill levels. As expected, higher percentages of 5-skill levels were performing technical tasks while 7-skill levels were more involved with supervisory tasks.

As reflected in Table 13, most of the 7-skill level respondents (65 percent) fell into the two supervisory clusters. Another five percent were performing as Staff NCOs.

Summary

Overall, the skill level groups were fairly heterogeneous in nature, with very few tasks being performed by high percentages of incumbents. Both the 3- and 5-skill level jobs were largely technical in nature, with most of the common tasks being below average in task difficulty. At the 7-skill level, the job became one of supervisor, with very little time spent on technical functions.

TABLE 11

RELATIVE PERCENT TIME SPENT PERFORMING DUTIES BY DAFSC GROUPS

DUTIES	DAFSC 29333 (N=155)	DAFSC 29353 (N=607)	DAFSC 29373 (N=215)
A ORGANIZING AND PLANNING	2	5	15
B DIRECTING AND IMPLEMENTING	4	7	22
C INSPECTING AND EVALUATING	1	3	15
D TRAINING	1	4	11
E COMPILING AND MAINTAINING RECORDS AND LOGS	20	20	16
F SETTING UP AND MAINTAINING GROUND RADIO EQUIPMENT	21	19	7
G TRANSMITTING AND RECEIVING	46	35	12
H PERFORMING PREFLIGHT AND POSTFLIGHT INSPECTIONS	*	*	*
I ISOLATING EQUIPMENT MALFUNCTIONS	*	*	*
J PERFORM MISSION PLANNING	4	5	4
K PERFORMING CREW DUTIES	*	*	*
L PERFORM AIR FORCE SATELLITE COMMUNICATIONS (AFSATCOM) FUNCTIONS	*	*	*

* DENOTES LESS THAN ONE PERCENT

TABLE 12

TASKS PERFORMED BY 30 PERCENT OR MORE OF 29333 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
G216 MAKE PHONE PATCHES	83
G238 TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	74
E126 LOG INCOMING OR OUTGOING MESSAGES	64
E142 MAINTAIN PHONE PATCH RECORDS	64
E143 MAINTAIN POSITION OR CIRCUIT LOGS	61
G218 MAKE TIME CHECKS	58
G217 MAKE SCHEDULED VOICE BROADCASTS	52
G219 MONITOR OR MAINTAIN FREQUENCY STANDARDS OF STATIONS ON NET	51
E138 ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	50
G201 AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE- AND-REPLY SYSTEMS	50
G236 RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	49
G209 IDENTIFY INCOMING CALLS USING CALL SIGN LIST	45
E132 MAINTAIN FILES OF MESSAGES TRANSMITTED OR RECEIVED	45
F196 TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	39
G230 PREPARE MESSAGES USING HF VOICE FORMAT	39
E129 MAINTAIN CURRENT CALL SIGN LISTS	39
G225 OPERATE STANDARD COMMUNICATIONS RECEIVERS	37
G251 TRANSCRIBE VOICE TRANSMISSIONS USING TYPEWRITERS	37
G234 PROCESS REQUESTS FROM AIRCRAFT IN FLIGHT	37
E135 MAINTAIN LOGS OF AIRCRAFT TRANSMISSIONS OR RECEPTIONS	37
F163 CHANGE OR STORE RECORDING TAPES	37
G203 COORDINATE AIR-TO-GROUND MESSAGE TRAFFIC	36
F194 TUNE OR CHANGE RECEIVER FREQUENCIES MANUALLY	36
F192 TEST RECEIVER OR TRANSMITTER FREQUENCIES	36
G250 TRANSCRIBE VOICE TRANSMISSIONS BY HAND	35
G253 TRANSMIT OR RECEIVE "DO NOT ANSWER" TYPE BROADCASTS	35
G226 OPERATE STANDARD COMMUNICATIONS TRANSMITTERS	34
G205 ENCODE OR DECODE MESSAGES MANUALLY	34
G222 OPERATE FIXED GROUND TRANSCEIVERS	32
E140 MAINTAIN MASTER STATION LOGS	32
F164 CHECK OPERATION OF GROUND RADIO RECORDING EQUIPMENT	31
F193 TUNE OR CHANGE RECEIVER FREQUENCIES BY MEANS OF REMOTE CONTROL	30
G252 TRANSMIT AIRCRAFT CLEARANCES OR ADVISORIES	30

TABLE 13

DISTRIBUTION OF SKILL LEVEL MEMBERS ACROSS 293X3 JOB GROUPS
(PERCENT MEMBERS RESPONDING)

JOB GROUP	DAFSC 29333 (N=155)	DAFSC 29353 (N=607)	DAFSC 29373 (N=215)
WEATHER INTERCEPT OPERATOR	-	1	-
POINT-TO-POINT RADIO OPERATOR	19	15	2
AIR SUPPORT REQUEST NET OPERATOR	-	3	-
MOBILE COMMUNICATIONS RADIO OPERATOR	11	5	-
GROUND-TO-AIR RADIO OPERATOR	33	34	6
COMBAT CREW COMMUNICATIONS PERSONNEL	6	9	5
SPECIAL OPERATIONS SQUADRON OPERATOR	1	1	-
INTRABASE RADIO PERSONNEL	-	*	*
ADMINISTRATIVE SUPPORT PERSONNEL	1	*	*
STAFF NCO	-	-	5
SHIFT SUPERVISOR AND NCOIC	5	13	18
SUPERVISOR AND MANAGER	-	4	47
NOT GROUPED	24	15	17

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY 29353 5-SKILL LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
G258 TRANSCRIBE OR RECEIVE MESSAGES USING HF EQUIPMENT	78
G216 MAKE PHONE PATCHES	77
E143 MAINTAIN POSITION OR CIRCUIT LOGS	65
E126 LOG INCOMING AND OUTGOING MESSAGES	63
G201 AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE AND REPLY SYSTEMS	62
G218 MAKE TIME CHECKS	57
G209 IDENTIFY INCOMING CALLS USING CALL SIGN LIST	57
E142 MAINTAIN PHONE PATCH RECORDS	56
E140 MAINTAIN MASTER STATION LOGS	53
E129 MAINTAIN CURRENT CALL SIGN LISTS	52
G236 RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	52
G217 MAKE SCHEDULED VOICE BROADCASTS	48
F158 ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	47
F196 TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	47
G250 TRANSCRIBE VOICE TRANSMISSIONS BY HAND	45
E132 MAINTAIN FILES OF MESSAGES TRANSCRIBED OR RECEIVED	45
G203 COORDINATE AIR-TO-GROUND MESSAGE TRAFFIC	43
G219 MONITOR OR MAINTAIN FREQUENCY STANDARDS OF STATIONS ON NET	41
F194 TUNE OR CHANGE RECEIVER FREQUENCIES MANUALLY	41
G222 OPERATE FIXED GROUND TRANSCEIVERS	39

AVERAGE NUMBER OF TASKS PERFORMED - 47

TABLE 15

TASKS PERFORMED BY 50 PERCENT OR MORE OF 29373 RESPONDENTS

TASKS	PERCENT MEMBERS PERFORMING
B26 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	76
B68 WRITE CORRESPONDENCE	73
A5 DETERMINE WORK PRIORITIES	72
C91 PREPARE APRs	72
B48 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	69
A8 DEVELOP WORK METHODS OR PROCEDURES	63
E154 TYPE CORRESPONDENCE	62
D114 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	59
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	59
E155 TYPE RECORDS, REPORTS, OR FORMS	58
B27 COUNSEL SUBORDINATES ON CAREER PROGRESSION	58
A24 SCHEDULE LEAVES OR PASSES	58
B66 SUPERVISE GROUND RADIO OPERATORS (AFSC 29353)	57
A21 PLAN WORK ASSIGNMENTS	57
A12 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	55
D99 CONDUCT OJT	55
A11 ESTABLISH ORGANIZATIONAL POLICIES, OPERATING INSTRUCTION (OI), OR STANDARD OPERATING PROCEDURES (SOP)	53
E123 DOCUMENT DESTRUCTION OF CLASSIFIED MATERIALS	53
D102 COUNSEL TRAINEES ON TRAINING PROBLEMS	53
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	53
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	50
G258 TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	50

TABLE 16

TASKS WHICH BEST DIFFERENTIATE BETWEEN 29353 AND 29373 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 29353 (N=607)	DAFSC 29373 (N=215)	DIFFERENCE
G216 MAKE PHONE PATCHES	77	47	+30
E126 LOG INCOMING OR OUTGOING MESSAGES	63	35	+28
G258 TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	78	50	+28
G217 MAKE SCHEDULED VOICE BROADCASTS	48	21	+27
E143 MAINTAIN POSITION OR CIRCUIT LOGS	65	40	+25
G219 MONITOR OR MAINTAIN FREQUENCY STANDARDS OF STATIONS ON NET	41	16	+25
B68 WRITE CORRESPONDENCE	13	73	-60
B26 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	22	76	-54
C91 PREPARE APRs	21	72	-51
B48 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	22	69	-47
A5 DETERMINE WORK PRIORITIES	26	72	-46
A24 SCHEDULE LEAVES OR PASSES	13	58	-45
A8 DEVELOP WORK METHODS OR PROCEDURES	19	63	-44
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	9	53	-44
E154 TYPE CORRESPONDENCE	19	62	-43
A21 PLAN WORK ASSIGNMENTS	15	57	-42

COMPARISON TO AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data were compared to the AFR 39-1 Specialty Descriptions for AFSC 29313/29333/29353 and AFSC 29373, dated 31 October 1979. These descriptions are intended to give a broad overview of the duties and tasks performed by the various skill level personnel.

Overall, the two specialty descriptions were found to accurately reflect the tasks performed by 293X3 incumbents. The 3- and 5-skill level description provides good coverage of the technical jobs performed, while the 7-skill level description accurately portrays the supervisory nature of the job. No major changes are recommended at this time.

ANALYSIS OF TAFMS GROUPS

In conjunction with examining the job structure of the Ground Radio Operator specialty and trends as one progresses across skill levels, it is important to also look at trends across enlistment groups. In this specialty, trends reported in earlier sections were also noted when examining tasks performed by enlistment groups.

As is normal in most career ladders, the time spent on supervisory duties (A-D) increases as time in service increases (see Table 17). While incumbents in their second and third enlistments perform 20-30 percent of their time on supervisory duties, the major shift in emphasis from technical to supervisory jobs occurs at the fourth enlistment when 58 percent of the total job time is spent on supervision. At the same time, a noticeable drop in time spent on technical duties dealing with transmitting and receiving and setting up and maintaining ground radio equipment occurs. In addition, a very definite increase is noted at the third enlistment on training.

First Enlistment Personnel

In addition to the general TAFMS analysis, first enlistment personnel were examined on the basis of duties and tasks performed. As reflected in Figure 2, 38 percent of all first enlistment personnel work as ground-to-air radio operators in aeronautical stations or GIANT TALK stations. Another 19 percent are working in point-to-point units, such as MARS stations. Common tasks performed by 40 percent or more of first enlistment personnel are shown in Table 18. The small number of common tasks reflects the diversity of jobs within the specialty. For tasks representative of the various jobs seen in Table 2, see Appendix A.

Job Satisfaction Data

Job satisfaction data were also examined for 293X3 personnel. Job interest and perceptions about utilization of talents and training, as well as reenlistment intentions, for first enlistment (1-48 months TAFMS), second enlistment (49-96 months TAFMS), and career (97+ months TAFMS) groups are shown in Table 19. Also included are comparative data for surveys of similar career ladders reported in 1980. (In this case, only one similar ladder was surveyed in 1980 - 272X0/D; thus, when using the comparative figures, it is important to keep this in mind.)

Overall, job satisfaction was low across all three enlistment groups reported. The percentages finding their job interesting was only 44 percent of first enlistment, 51 percent of second enlistment, and 60 percent of career personnel. These figures are significantly lower than seen for the single comparative ladder surveyed in 1980, where over 80 percent found their job interesting. Other data reflecting perceived utilization of talents and training showed similar trends.

In terms of reenlistment intentions, 47 percent of first enlistment personnel indicate a positive intention to reenlist (yes or probably yes) where 34 percent of the comparative first enlistment sample gave comparable responses. For all first enlistment personnel in all specialties surveyed in 1980, there were 41 percent indicating a positive reenlistment intent; thus it would appear that even though job interest and satisfaction among 293X3 personnel are low, reenlistment intent is higher than the Air Force average for first enlistment personnel among career 293X3 personnel reenlistment intent is lower than for personnel in other specialties.

In perspective, it would appear that the 293X3 specialty has quite a problem in terms of job satisfaction and retention of career personnel. Functional managers should examine this data closely, as well as the job satisfaction displayed for job groups, to determine the potential impact this low satisfaction may have on future resources.

TABLE 17

RELATIVE PERCENT TIME SPENT ON DUTIES BY ENLISTMENT GROUPS

DUTIES	ENLISTMENTS					
	1ST ENL 1-48 MOS (N=482)	2ND ENL 49-96 MOS (N=190)	3RD ENL 97-144 MOS (N=123)	4TH ENL 145-192 MOS (N=77)	5TH ENL 193-240 MOS (N=65)	6TH ENL 241+ MOS (N=52)
A ORGANIZING AND PLANNING	3	6	9	14	17	17
B DIRECTING AND IMPLEMENTING	4	9	13	21	25	28
C INSPECTING AND EVALUATING	2	4	6	11	14	23
D TRAINING	2	1	10	12	9	10
E COMPILING AND MAINTAINING RECORDS AND LOGS	21	20	19	15	16	12
F SETTING UP AND MAINTAINING GROUND RADIO EQUIPMENT	22	16	14	9	7	3
G TRANSMITTING AND RECEIVING	41	32	25	14	7	4
H PERFORMING PREFLIGHT AND POSTFLIGHT INSPECTIONS	*	*	*	-	*	-
I ISOLATING EQUIPMENT MALFUNCTIONS	*	1	*	*	*	*
J PERFORMING MISSION PLANNING	5	7	4	5	4	2
K PERFORMING CREW DUTIES	*	*	*	*	*	-
L PERFORMING AIR FORCE SATELLITE COMMUNICATIONS (AFSATCOM) FUNCTIONS	*	*	*	*	*	-

*INDICATES LESS THAN ONE PERCENT

FIGURE 2

DISTRIBUTION OF FIRST ENLISTMENT 293X3 RESPONDENTS AMONG JOB GROUPS
(N=482)

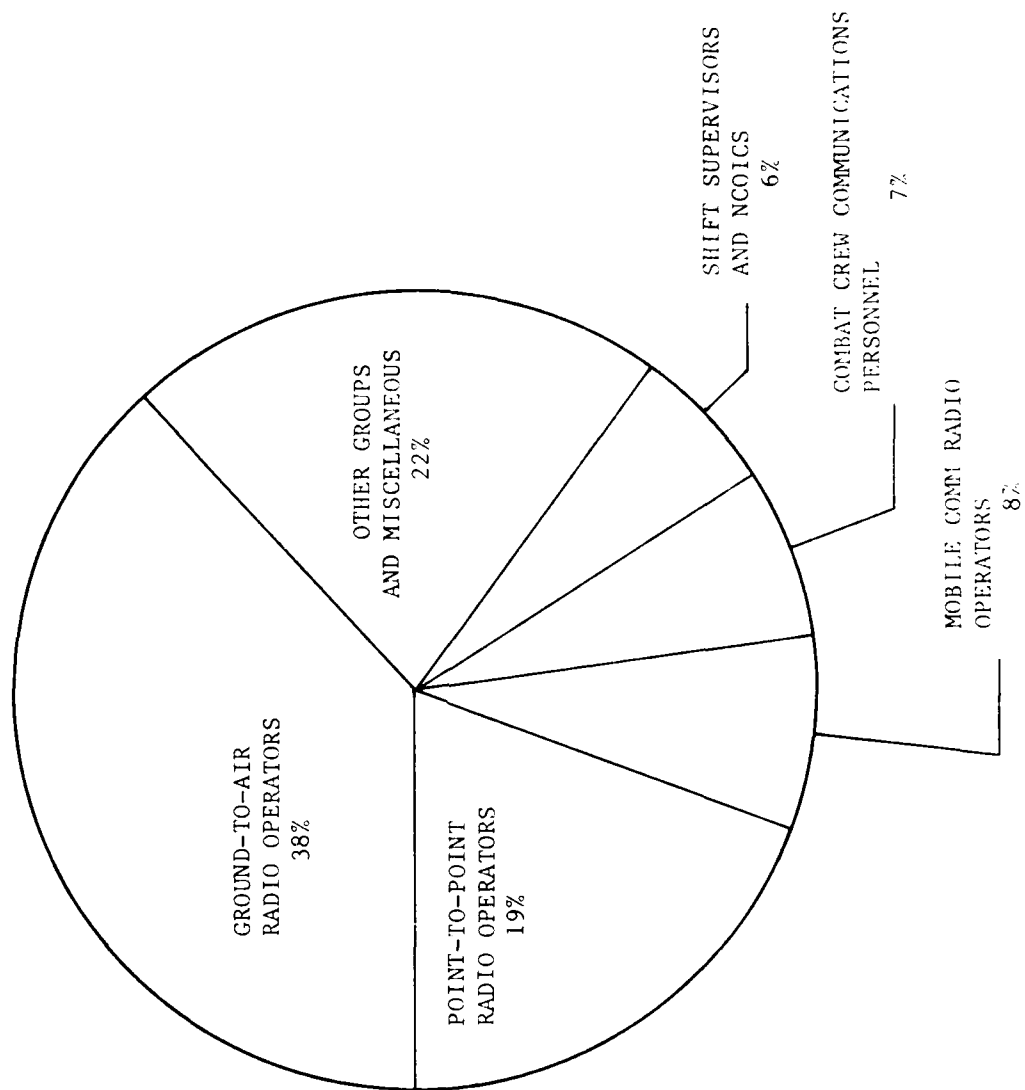


TABLE 18

COMMON TASKS PERFORMED BY FIRST ENLISTMENT 293X3 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
G216 MAKE PHONE PATCHES	78
G258 TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	76
E143 MAINTAIN POSITION OR CIRCUIT LOGS	65
E126 LOG INCOMING OR OUTGOING MESSAGES	63
E142 MAINTAIN PHONE PATCH RECORDS	59
G218 MAKE TIME CHECKS	59
G201 AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE- AND-REPLY SYSTEMS	59
G209 IDENTIFY INCOMING CALLS USING CALL SIGN LIST	55
G236 RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	52
G217 MAKE SCHEDULED BROADCASTS	51
G219 MONITOR OR MAINTAIN FREQUENCY STANDARDS OF STATIONS ON NET	49
F158 ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	49
E129 MAINTAIN CURRENT CALL SIGN LISTS	47
F196 TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	46
E132 MAINTAIN FILES OF MESSAGES TRANSMITTED OR RECEIVED	44
G230 PREPARE MESSAGES USING HF VOICE FORMAT	43
E140 MAINTAIN MASTER STATION LOGS	42
G234 PROCESS REQUESTS FROM AIRCRAFT IN FLIGHT	42
G205 ENCODE OR DECODE MESSAGES MANUALLY	42
F194 TUNE OR CHANGE RECEIVER FREQUENCIES MANUALLY	41
G203 COORDINATE AIR-TO-GROUND MESSAGE TRAFFIC	40
E135 MAINTAIN LOGS OF AIRCRAFT TRANSMISSIONS OR RECEPTIONS	40
G250 TRANSCRIBE VOICE TRANSMISSIONS BY HAND	40

TABLE 19
JOB SATISFACTION DATA FOR AFS 293X3

	<u>1ST ENLISTMENT</u>		<u>2ND ENLISTMENT</u>		<u>CAREER</u>	
		1980 COMP SAMPLE*		1980 COMP SAMPLE*		1980 COMP SAMPLE*
	293X3 (N=482)	(N=564)	293X3 (N=190)	(N=563)	293X3 (N=317)	(N=835)
<u>I FIND MY JOB:</u>						
DULL	34	4	31	8	22	9
SO-SO	22	4	18	8	16	9
INTERESTING	44	89	51	86	60	82
 <u>MY JOB UTILIZES MY TALENTS:</u>						
NOT AT ALL OR VERY LITTLE	50	11	50	14	33	17
FAIRLY WELL OR BETTER	49	88	50	85	65	79
 <u>MY JOB UTILIZES MY TRAINING:</u>						
NOT AT ALL OR VERY LITTLE	34	7	44	7	37	15
FAIRLY WELL OR BETTER	65	92	56	91	63	84
 <u>I PLAN TO REENLIST:</u>						
YES OR PROBABLY YES	47	34	56	43	72	67
NO OR PROBABLY NO	52	66	43	56	27	30

NOTE: COLUMNS WILL NOT NECESSARILY ADD TO 100 PERCENT DUE TO "NO RESPONSE"

*INCLUDES ALL MISSION EQUIPMENT OPERATIONS CAREER LADDERS SURVEYED IN 1980
(AFSC 272X0/D)

TRAINING ANALYSIS

Occupational survey data is just one of several sources of information which can be used to help make training programs more meaningful and relevant to students. Factors provided in occupational surveys which may be used in evaluating training are percent of first assignment (1-48 months TAFMS) members performing tasks, utilization of equipment available at the technical school for training (not collected for this study), task difficulty ratings, and training emphasis rated. An in-depth analysis of the 1-48 months TAFMS group was previously discussed in the ANALYSIS OF TAFMS GROUPS section of this report. This section will concentrate on the task difficulty and training emphasis data collected from 293X3 senior incumbents and a review of the Specialty Training Standard (STS) and Plan of Instruction (POI) for the career ladder. Technical school personnel at Keesler AFB matched inventory tasks to areas outlined in the STS, dated October 1978 and the POI for Course E3ABR29333, dated May 1980. A complete computer listing of these matchings, along with percent members performing and task difficulty and training emphasis for each task statement, has been forwarded to the technical school for their use in reviewing training documents.

Task Difficulty. The relative difficulty of each task in the job inventory was assessed through ratings of 52 experienced 7-skill level Ground Radio Operators. These ratings were processed to produce an ordered listing of all tasks in terms of their relative difficulty and were standardized to reflect an average difficulty of 5.0 and a standard deviation of 1.0. (For a more complete description of these ratings, refer to the Task Factor Administration Section of the INTRODUCTION.

Table 20 lists those tasks rated high in task difficulty by senior 293X3 personnel. Most of the tasks listed pertain to supervisory functions. Technical tasks listed pertain to sending and transcribing international morse code, preparing combat mission folders, and fabricating antennas. It is interesting to note that few of these tasks are performed by more than 20 percent of 293X3 personnel.

In order to get a better picture of the extent to which personnel are performing tasks rated above average in difficulty, Table 21 lists those above average tasks performed by 20 percent or more of all 293X3 incumbents. Again, supervisory tasks predominate.

Table 22 lists those tasks rated the least difficult by senior 293X3 personnel. Many of these tasks involve maintaining logs and records. Generally, these less difficult tasks are performed by 20 percent or more of the 293X3 respondents.

Job Difficulty. Task difficulty ratings and other data can be used to generate a Job Difficulty Index (JDI) which estimates the relative difficulty of the jobs within a specialty. This index can be used to differentiate among the jobs as well as to examine the progression of jobs from simpler entry level work to advanced technical and managerial jobs.

The JDI for each of the major Ground Radio Operator jobs (identified earlier in the CAREER LADDER STRUCTURE section) are displayed in Table 23. An average JDI would be about 13.00. As shown, supervisory jobs had the highest JDI's. These include the Supervisors and Managers, Shift Supervisors and NCOICs, and Staff NCOs. Most of the technical jobs were below average in job difficulty. The lowest JDI was found for Weather Intercept Operators (JDI = 7.8), followed next by Point-to-Point Operators (8.7).

Overall, the specialty has a somewhat realistic progression of jobs which tend to vary somewhat by increasing level of responsibility as the individual progresses in grade and time in the career ladder. However, the low job difficulty and job interest of some groups, especially point-to-point operators and weather intercept operators, suggests that some of these relatively junior jobs are fairly routine and uninteresting. For these groups, morale and job satisfaction may be a major problem which needs to be reviewed by Ground Radio Operations Managers. Perhaps some diversity in the types of work they are asked to do would be possible.

Training Emphasis. The relative training emphasis of each task in the job inventory was assessed through ratings of 59 experienced 7-skill level NCO's. These ratings were processed to produce an ordered listing of all tasks in terms of their recommended emphasis in training for first enlistment personnel. These ratings had an average rating of 1.85 and a standard deviation of 1.72. (For a more complete description of these ratings, see the section on Task Factor Administration in the INTRODUCTION.)

Table 24 lists those tasks which senior 293X3 personnel perceived as most needed to be trained. These tasks relate primarily to transmitting and receiving, maintaining logs or records, and transcribing transmissions. In addition, most of these tasks rated high in training emphasis were performed by 30 percent or more of 293X3 first enlistment personnel.

In addition to the training emphasis data presented in this report, a complete listing of tasks and associated training emphasis ratings will be forwarded to the 293X3 training manager and course development personnel at Keesler AFB for their use in reviewing present training documents and formal training programs.

Specialty Training Standard (STS). The 293X3 STS, dated October 1978, was reviewed against the survey data. To aid in the analysis, subject matter specialists at the Keesler Technical Training Center matched job inventory tasks to specific paragraphs in the STS. Each paragraph was then evaluated using task difficulty, training emphasis, and percent performing vectors.

In a general sense, the STS appears to cover most major functions of Ground Radio Operators. However, because of some questionable matchings of tasks to STS paragraphs and because of a large number of tasks not referenced which were performed by fairly high percentages of 293X3 incumbents (see Table 25), this analysis of the STS is somewhat incomplete and should not be construed as blanket approval of the document as it is currently written. Only after problems with the STS matching have been resolved and an extensive review of the data has been made by experienced

293X3 subject matter specialists can a full and complete analysis of the currency and accuracy of the STS be made. Computer printouts showing the STS-task matchings have been forwarded to the tech school for their review and re-evaluation.

Plan of Instruction (POI). The POI for course E3ABR29333, dated 12 May 1980, was also reviewed against occupational survey data for first enlistment personnel. Again, subject matter specialists at the Keesler Technical Training Center matched inventory tasks to specific learning objectives in the POI. Each objective was then evaluated using training emphasis ratings, task difficulty ratings, and percent of first enlistment personnel performing tasks. Overall, only 32 tasks were matched to the POI by tech school personnel. Of those objectives having tasks matched to them, most were supported by the survey data. In general, Blocks III and IV, covering point-to-point operations and ground-to-air functions are well supported since the majority of first enlistment personnel were found in these two job groups. Block I, covering typewriting, was supported since this is a function performed quite frequently by first enlistment personnel. And Block II, covering ground radio equipment such as receivers, transceivers, and antennas, also was appropriate.

However, a full and complete analysis of specific topics taught under each major block of instruction could not be made at this time due, again, to some questionable matchings of tasks to POI blocks, the small number of tasks matched, and a fairly large number of tasks not referenced which had high Training Emphasis ratings and 30 percent or more first-term personnel performing (see Table 26). As with the STS matchings, a complete computer printout showing matched tasks and all unreferenced tasks has been forwarded to the tech school for their review and reevaluation.

TABLE 20

TASKS RATED HIGH IN TASK DIFFICULTY BY 293X3 PERSONNEL

TASK	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=1,002)
SUPERVISE GROUND RADIO OPERATIONS SUPERINTENDENTS	7.18	2
RECEIVE INTERNATIONAL MORSE CODE	7.05	4
WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	7.00	10
SEND INTERNATIONAL MORSE CODE	6.96	4
TRANSCRIBE INTERNATIONAL MORSE CODE BY HAND	6.75	4
TRANSCRIBE INTERNATIONAL MORSE CODE USING TYPEWRITERS	6.66	2
DEVELOP RESIDENT COURSE OR CAREER DEVELOPMENT COURSE (CDC) CURRICULUM MATERIALS	6.60	3
PREPARE COMBAT MISSION FOLDERS (CMF)	6.44	7
WRITE TEST QUESTIONS	6.40	16
CONDUCT RESIDENT COURSE CLASSROOM TRAINING	6.37	4
PLAN COMMUNICATIONS SUPPORT OF EXERCISES OR SPECIAL MISSIONS	6.36	21
WRITE CIVILIAN PERFORMANCE RATINGS OR SUPERVISORY APPRAISALS	6.28	2
SUPERVISE CIVILIAN PERSONNEL	6.21	3
SUPERVISE PERSONNEL IN AFSCs OTHER THAN 293X3 OR 294X0	6.20	9
DIRECT IMPLEMENTATION OF EMERGENCY PROCEDURES TO SUPPORT DISASTER OR CONTINGENCY PLANS	6.19	17
PREPARE APRs	6.17	30
CONDUCT TRAINING CONFERENCES AND BRIEFINGS	6.15	12
DIRECT ESTABLISHMENT OF MOBILE FIELD RADIO STATIONS	6.13	11
MAINTAIN INTRABASE RADIO ACCOUNT RECORDS	6.11	6
DIRECT ESTABLISHMENT OF FIXED FIELD RADIO STATIONS	6.11	7
WRITE CORRESPONDENCE	6.10	27
FABRICATE ANTENNAS	6.08	7
DRAFT BUDGET OR FINANCIAL REQUIREMENTS	6.01	8
EVALUATE BUDGET OR FINANCIAL REQUIREMENTS	6.00	7
EVALUATE COMMUNICATIONS OPERATIONS	5.95	20
ESTABLISH ORGANIZATIONAL POLICIES, OPERATING INSTRUCTIONS (OIS), OR STANDARD OPERATING PROCEDURES (SOP)	5.95	22

TABLE 21

TASKS RATED ABOVE AVERAGE IN DIFFICULTY AND PERFORMED BY
20 PERCENT OR MORE OF THE 293X3 TOTAL SAMPLE

TASK	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=1,002)
PREPARE APRs	6.17	30
WRITE CORRESPONDENCE	6.10	27
DIRECT OPERATIONS OF GROUND RADIO STATIONS	5.94	22
COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	5.91	33
SUPERVISE GROUND RADIO OPERATORS	5.86	31
PLAN BRIEFINGS	5.83	20
DETERMINE TYPE OF INTERFERENCE	5.74	26
SUPERVISE APPRENTICE GROUND RADIO OPERATORS (AFS 29333)	5.69	23
CONDUCT OJT	5.56	37
MAINTAIN COMMUNICATIONS SECURITY (COMSEC) ACCOUNTS	5.44	20
DEVELOP WORK METHODS AND PROCEDURES	5.37	28
COUNSEL TRAINEES ON TRAINING PROGRESS	5.30	27
ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	5.29	24
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	5.29	31
SET UP FIELD RADIO EQUIPMENT OR ANTENNAS	5.20	22
CONDUCT TRAFFIC ANALYSES	5.12	24
SET UP MOBILE RADIO EQUIPMENT OR ANTENNAS	5.11	20
EVALUATE OJT TRAINEES	5.10	22
SEND OR RECEIVE MESSAGES USING INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) PROCEDURES	5.04	22
COORDINATE TRAFFIC WITH OTHER AGENCIES OR UNITS, SUCH AS TRAFFIC CONTROL OR AIRBORNE COMMAND POSTS	5.03	33

TABLE 22

TASKS RATED BELOW AVERAGE IN DIFFICULTY BY 293X3 PERSONNEL

TASK	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING (N=1,002)
ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	2.12	18
MAINTAIN VISITORS LOGS	2.59	29
MAINTAIN MASTER STATION CLOCK LOGS	2.63	12
MAKE TIME CHECKS	2.65	51
SCORE TESTS	2.83	14
INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	2.98	31
MAINTAIN STATION NUMBER SHEETS	3.00	9
CHANGE OR STORE RECORDING TAPES	3.04	34
LOAD OR UNLOAD BAGGAGE, CARGO, OR FOOD	3.08	2
MAKE SCHEDULED VOICE BROADCASTS	3.11	42
SCHEDULE LEAVES OR PASSES	3.12	22
MAINTAIN ACCESS LISTS	3.13	20
MAINTAIN PHONE PATCH RECORDS	3.19	51
SELECT OR CHANGE ANTENNAS BY REMOTE CONTROL	3.21	51
LOG INCOMING OR OUTGOING MESSAGES	3.29	56
OPERATE ROTATING ANTENNA EQUIPMENT	3.32	29
MAINTAIN FILES OF MESSAGES TRANSMITTED OR RECEIVED	3.43	43
LIST TRAFFIC WITH NET CONTROL STATIONS	3.44	23
ASSIGN PERSONNEL TO DUTY POSITIONS	3.46	25
MAINTAIN CURRENT CALLS SIGN LISTS	3.49	48
TUNE OR CHANGE TRANSCEIVER FREQUENCY BY MEANS OF REMOTE CONTROL	3.62	22
IDENTIFY INCOMING CALLS USING CALL SIGN LIST	3.62	51

TABLE 23

JOB DIFFICULTY INDICES FOR CAREER LADDER GROUPS

<u>JOB GROUPS</u>	<u>ATDPUTS*</u>	<u>AVERAGE NO. TASKS PERFORMED</u>	<u>JDI**</u>
SUPERVISORS AND MANAGERS	4.9	84	20.2
SHIFT SUPERVISORS AND NCOICs	4.6	77	17.2
STAFF NCO's	5.4	41	17.2
ADMINISTRATIVE SUPPORT PERSONNEL	4.6	42	13.3
INTRABASE RADIO PERSONNEL	5.1	19	12.6
SPECIAL OPERATIONS SQUADRON OPERATORS	4.7	30	12.2
COMBAT CREW COMMUNICATIONS PERSONNEL	4.7	27	11.6
GROUND-TO-AIR RADIO OPERATORS	4.2	42	11.3
MOBILE COMMUNICATIONS RADIO OPERATORS	4.3	33	10.7
AIR SUPPORT REQUEST NET OPERATORS	4.3	25	9.3
POINT-TO-POINT RADIO OPERATORS	4.1	29	8.7
WEATHER INTERCEPT OPERATORS	4.2	17	7.8

* AVERAGE TASK DIFFICULTY PER UNIT TIME SPENT

** MEAN JDI = 13.00

TABLE 24

TASKS RATED HIGHEST IN TRAINING EMPHASIS BY 293X3 PERSONNEL

TASK	TRAINING EMPHASIS	PERCENT 1-48 MOS PERFORMING (N=482)
TRANSCRIBE VOICE TRANSMISSIONS USING TYPEWRITERS	6.51	36
MAINTAIN POSITION OR CIRCUIT LOGS	6.42	65
RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	6.27	52
MAKE PHONE PATCHES	6.24	78
MAKE SCHEDULED VOICE BROADCASTS	6.19	51
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE-AND- REPLY SYSTEMS	6.10	60
TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	6.07	46
PREPARE MESSAGES USING HF FORMAT	6.02	43
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	6.00	76
TRANSMIT OR RECEIVE "DO NOT ANSWER" TYPE BROADCASTS	5.97	35
OPERATE FIXED GROUND TRANSCEIVERS	5.95	36
MAINTAIN PHONE PATCH RECORDS	5.80	59
PROCESS REQUESTS FROM AIRCRAFT IN FLIGHT	5.80	42
IDENTIFY INCOMING CALLS USING CALL SIGN LIST	5.69	55
TRANSCRIBE VOICE TRANSMISSIONS BY HAND	5.68	40
COORDINATE AIR-TO-GROUND MESSAGE TRAFFIC	5.63	40
LOG INCOMING OR OUTGOING MESSAGES	5.51	63
MONITOR OR PATCH RADIO TELETYPE TRAFFIC THROUGH HIGH FREQUENCY (HF) EQUIPMENT	5.51	33
TUNE OR CHANGE TRANSMITTER FREQUENCIES MANUALLY	5.46	33
ENCODE OR DECODE MESSAGES MANUALLY	5.41	42
ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	5.29	49

TABLE 25

EXAMPLES OF TASKS NOT REFERENCED TO STS 293X3

TASK	TNG EMP	TSK DIF	PERCENT MEMBERS PERFORMING		
			1st TERMERS (N=482)	29353 (N=607)	29373 (N=482)
G201 AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE- AND-REPLY SYSTEMS	6.10	4.06	59	62	44
E142 MAINTAIN PHONE PATCH RECORDS	5.80	3.19	59	56	32
G250 TRANSCRIBE VOICE TRANSMISSIONS BY HAND	5.51	4.89	33	35	21
G205 ENCODE OR DECODE MESSAGES MANUALLY	5.41	4.86	42	47	41
F167 CONFIGURE SCOPE PATTERN CONSOLES FOR OPERATION	5.34	4.57	19	20	13
F195 TUNE OR CHANGE TRANSCEIVER FREQUENCIES BY MEANS OF REMOTE CONTROL	5.24	3.62	24	25	17
E129 MAINTAIN CURRENT CALL SIGN LISTS	5.17	3.49	47	52	47
G238 RELAY COMMUNICATIONS TRAFFIC BETWEEN MOBILE STATIONS AND AIRCRAFT	5.17	4.44	11	12	7
F165 CONFIGURE EQUIPMENT TO PROVIDE RADIO-TO-RADIO RELAY	5.12	4.52	24	26	19
G237 RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND MOBILE STATIONS	5.12	4.35	25	23	14
F193 TUNE OR CHANGE RECEIVER FREQUENCIES BY MEANS OF REMOTE CONTROL	5.03	3.46	31	31	22
F197 TUNE OR CHANGE TRANSMITTER FREQUENCIES BY MEANS OF REMOTE CONTROL	4.98	3.70	27	29	20
G200 AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING "BUILT-IN" AUTHENTICATION SYSTEMS	4.93	4.19	22	22	15
G204 DETERMINE TYPE OF INTERFERENCE	4.83	5.74	23	28	30
F180 SELECT OR CHANGE ANTENNAS BY REMOTE CONTROL	4.64	3.21	28	31	20
F175 OPERATE ROTATING ANTENNA EQUIPMENT	4.48	3.32	32	35	18
F183 SET UP DUPLEX OPERATIONS	4.27	4.67	27	27	18

TABLE 26

EXAMPLES OF TASKS NOT REFERENCED TO POI FOR COURSE 3ABR29333

TASK	TRN EMP	TSK DIF	PCT 1st ENLISTMENT PERFORMING (N=482)
E143 MAINTAIN POSITION OR CIRCUIT LOGS	6.42	3.65	65
G236 RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	6.27	4.52	52
G252 TRANSMIT AIRCRAFT CLEARANCES OR ADVISORIES	6.19	4.64	30
F196 TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	6.07	4.41	46
E142 MAINTAIN PHONE PATCH RECORDS	5.80	3.19	59
G250 TRANSCRIBE VOICE TRANSMISSIONS BY HAND	5.68	4.58	40
G220 MONITOR OR PATCH RADIO TELETYPE TRAFFIC THROUGH HIGH FREQUENCY (HF) EQUIPMENT	5.51	4.89	33
F198 TUNE OR CHANGE TRANSMITTTER FREQUENCIES MANUALLY	5.46	4.61	33
G205 ENCODE OR DECODE MESSAGES MANUALLY	5.41	4.86	42
E129 MAINTAIN CURRENT CALL SIGN LISTS	5.17	3.49	47
E135 MAINTAIN LOGS OF AIRCRAFT TRANSMISSIONS OR RECEPTIONS	5.17	3.81	40
F163 CHANGE OR STORE RECORDING TAPES	5.14	3.04	38
F164 CHECK OPERATION OF GROUND RADIO RECORDING EQUIPMENT	5.07	3.32	34
G226 OPERATE STANDARD COMMUNICATIONS TRANSMITTERS	5.07	4.39	32
F193 TUNE OR CHANGE RECEIVER FREQUENCIES BY MEANS OF REMOTE CONTROL	5.03	3.46	31
E140 MAINTAIN MASTER STATION LOGS	4.86	3.85	42
E132 MAINTAIN FILES OF MESSAGES TRANSMITTED OR RECEIVED	4.66	3.43	44
F175 OPERATE ROTATING ANTENNA EQUIPMENT	4.48	3.32	32

ANALYSIS OF MAJOR COMMAND DIFFERENCES

In most studies, it is important to examine the tasks and duties performed by the various using commands in order to highlight differing trends across commands in terms of personnel utilization. In the 293X3 specialty, the majority of incumbents (83 percent) are assigned to AFCC. Thus, such a comparison across commands may be somewhat meaningless. However, some general comments appear warranted.

Of the 12 major job groups identified in the career ladder structure, nine were composed of high percentages (80-100 percent) of AFCC personnel. The remaining three groups were primarily composed of personnel from other commands, thus constituting the major differences in command utilization of 293X3 personnel.

The Mobile Communications Radio Operators (GRP069, N=49) job group was composed of only 43 percent AFCC personnel. USAFE (24 percent), TAC (12 percent), MAC (10 percent), and US Elements in Europe (six percent) were the major commands involved. Air Support Request Net Operators (GRP131, N=5) were assigned to PACAF (60 percent) or USAFE (20 percent). AFCC personnel were not involved at all. And finally, Special Operations Squadron Operators (GRP044, N=9) were primarily USAFE resources (89 percent). Only one respondent in the group indicated AFCC as his major command.

In summary, AFCC personnel were found to be performing most of the major duties and tasks listed in the 293X3 job inventory since they comprised 83 percent of the total career ladder population. However, 293X3 incumbents assigned to MAC, TAC, USAFE, PACAF, and US Elements in Europe units are more likely to be involved primarily with mobility operations or specialized functions such as special operations or air support.

USE OF INTERNATIONAL MORSE CODE (IMC)

Much interest has been expressed by HQ AFCC and the technical training school at Keesler in the extent to which international morse code (IMC) is used throughout the 293X3 career ladder. Data relating to IMC use across the various job groups is reflected in Tables 7 and 8 in the CAREER LADDER STRUCTURE section of this report. For the most part, only those in the Mobile Communications area (GRP069) and those assigned to the 7th SOS group overseas (GRP044) were required to maintain IMC proficiency to any great extent. All other major job groups, including point-to-point and ground-to-air operations, reflected very few personnel who indicated they were required to maintain IMC proficiency.

In terms of the overall career ladder, only 146 of the 1,002 survey respondents, or 15 percent of the total 293X3 sample, indicated that their station or communications compartment had Morse Code transmission capability. And, only 74 respondents indicated that they were required to maintain proficiency in IMC. Thus, very little use of IMC appears to be found in the 293X3 ladder.

COMPARISON TO PREVIOUS SURVEY

The results of this survey were compared to those of Occupational Survey Report, AFPT 90-293-123, dated 25 July 1975. At the time of the 1975 survey, both ground radio operators and airborne operators were combined in a single 293X3A/B AFSC. Since that time, the airborne operators have been taken out and given their own ladder, AFSC 294X0. Therefore, this comparison to the 1975 report will highlight similarities and differences to the ground radio personnel conclusions only.

Both the 1980 and 1975 surveys found very similar job structures. Both studies found point-to-point operators, ground-to-air operators, supervisors, and staff NCO's. Many of the smaller groups mentioned in the 1975 survey, such as MARS station operators, mobile communications operators, Inter-American Telecommunications Systems for the Air Forces (SITFA) personnel, commando escort personnel, NATO station operators, administrative specialists, aeronautical station operators, and Giant Talk operators, were also found in the 1980 study. In general, it appears no major changes have occurred in the overall job structure of the ground radio specialty, other than airborne functions being deleted.

A major problem found in the 1980 study was low job satisfaction among career ladder members. This trend was also apparent in the 1975 study.

Job progression patterns are similar between the two studies. Both the 1975 and 1980 studies reflect that new personnel are usually assigned to aeronautical or MARS stations. As one progresses, supervision becomes a greater responsibility. The 1980 data reflect a more supervisory role at the 7 skill level than was found in 1975. However, at that time many 7-skill levels were assigned to airborne units or to airborne command post units and continued to perform many technical functions. This trend does not occur in 1980 due to the deletion of these functions from the 293X3 ladder.

Overall, a comparison of the results of the 1975 and 1980 occupational surveys of the 293X3 Ground Radio Operators function shows a remarkable degree of stability in job performed and career progression. Very few major differences were noted.

IMPLICATIONS

It is apparent from the present study of the 293X3 career ladder that the job structure has not changed that much since 1975 when it was last surveyed, except that airborne functions have now been taken out and put into a 294X0 lateral career ladder. The 293X3 ladder is still fairly heterogeneous, with incumbents being found in a wide variety of jobs, ranging from point-to-point and air-to-ground operators to mobile operations, combat crew functions, intrabase radio functions, and several smaller specialized jobs such as weather intercept operators and air support request net operators.

Job satisfaction is still a major factor as it was in 1975. Only 51 percent of all career ladder respondents found their job interesting. However, this can be deceiving since several major job groups such as point-to-point radio operators, mobile communications operators, combat crew communications personnel, and several of the smaller specialized groups such as special operations squadron operators and administrative support personnel reflected much lower job satisfaction. Perhaps the only groups reflecting fairly high job satisfaction were those involving senior level supervisors, NCOICs, and managers. But even here the job satisfaction was not as high as would be expected, with only 64 percent of shift supervisors and NCOICs and 59 percent of supervisors and managers finding their jobs interesting.

Training may also be a major problem for the 293X3 career ladder. Survey data reflect that incumbents in jobs such as mobile communications, combat crew communications, air support request, administration support, weather intercept, and intrabase radio perceive their training as being utilized very little or not at all. With such a wide diversity of jobs, it becomes almost impossible to provide cost effective training for everyone at the tech school. This creates a burden on the OJT program at the unit level.

Functional managers for this ladder should look very closely at the diversity of jobs within the ladder and the low job satisfaction of incumbents and assess their impact on such areas as retaining good personnel and training. HQ AFCC has already taken some action in terms of addressing career irritants of their personnel. Other actions may still be needed. In terms of training, a Utilization and Training Conference will be convened in late summer of 1981 for the purpose of examining training issues. It is hoped that with such actions, some positive trends may start to emerge.

APPENDIX A

Tasks Performed By 293X3 Cluster and
Independent Job Type Groups

TASKS PERFORMED BY POINT-TO-POINT RADIO OPERATORS
(GRP070, N=127)

TASKS	PERCENT MEMBERS PERFORMING
LOG INCOMING OR OUTGOING MESSAGES	91
MAINTAIN POSITION OR CIRCUIT LOGS	91
MAKE PHONE PATCHES	90
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	82
ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	75
MAINTAIN MASTER STATION LOGS	75
TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	72
MAINTAIN PHONE PATCH RECORDS	68
TUNE OR CHANGE RECEIVER FREQUENCIES MANUALLY	65
MAKE TIME CHECKS	61
MONITOR OR MAINTAIN FREQUENCY STANDARDS OF STATIONS ON NET	55
MAINTAIN FILES OF MESSAGES TRANSMITTED OR RECEIVED	54
MAINTAIN CURRENT CALL SIGN LISTS	54
IDENTIFY INCOMING CALLS USING CALL SIGN LIST	50
OPERATE FIXED GROUND TRANSCEIVERS	50
TUNE OR CHANGE TRANSMITTER FREQUENCIES MANUALLY	48
LIST TRAFFIC WITH NET CONTROL STATIONS	48
TRANSCRIBE VOICE TRANSMISSIONS BY HAND	43
CALIBRATE FIXED GROUND TRANSCEIVERS	40
CONDUCT TRAFFIC COUNTS	40
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE- AND-REPLY SYSTEMS	40
PREPARE MESSAGES USING HF VOICE FORMAT	39
OPERATE ROTATING ANTENNA EQUIPMENT	38
OPERATE STANDARD COMMUNICATIONS RECEIVERS	36
COMPILE DAILY TRAFFIC RECORDS	36
MAKE SCHEDULED VOICE BROADCASTS	35
MAINTAIN EQUIPMENT STATUS REPORT FILES OR LOGS	35
TRANSCRIBE VOICE TRANSMISSIONS USING TYPEWRITERS	32
OPERATE STANDARD COMMUNICATIONS TRANSMITTERS	30

TASKS PERFORMED BY MOBILE COMMUNICATIONS RADIO OPERATORS
(GRP069, N=49)

TASK	PERCENT MEMBERS PERFORMING
SET UP MOBILE RADIO EQUIPMENT OR ANTENNAS	94
SET UP FIELD RADIO EQUIPMENT OR ANTENNAS	88
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE-AND-REPLY SYSTEMS	88
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	86
OPERATE M SERIES MOTOR VEHICLES	80
LOG INCOMING OR OUTGOING MESSAGES	80
ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	76
TUNE OR CHANGE RECEIVER FREQUENCIES MANUALLY	71
TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	71
SET UP RADIO EQUIPMENT SHELTERS	67
CONSTRUCT OR ORIENT ANTENNAS FOR MOBILE OR PORTABLE OPERATIONS	65
MAINTAIN POSITION OR CIRCUIT LOGS	63
INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	63
MAKE TIME CHECKS	63
OPERATE PORTABLE TRANSCEIVERS	61
MAKE PHONE PATCHES	59
TRANSCRIBE VOICE TRANSMISSIONS BY HAND	57
MAINTAIN FILES OF MESSAGES TRANSMITTED OR RECEIVED	57
ENCODE OR DECODE MESSAGES MANUALLY	57
TUNE OR CHANGE TRANSMITTER FREQUENCIES MANUALLY	53
PREPARE MESSAGES USING HF VOICE FORMAT	53
RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND MOBILE STATIONS	51
IDENTIFY INCOMING CALLS USING CALL SIGN LIST	51

RELATIVE TASKS PERFORMED BY GROUND-TO-AIR RADIO OPERATORS
(GRP102,N=273)

TASKS	PERCENT MEMBERS PERFORMING
MAKE PHONE PATCHES	99
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	93
RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	90
COORDINATE AIR-TO-GROUND MESSAGE TRAFFIC	81
MAINTAIN PHONE PATCH RECORDS	81
PROCESS REQUESTS FROM AIRCRAFT IN FLIGHT	79
MAKE SCHEDULED VOICE BROADCASTS	79
CHANGE OR STORE RECORDING TAPES	79
MAKE TIME CHECKS	76
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE- AND-REPLY SYSTEMS	73
MAINTAIN POSITION OR CIRCUIT LOGS	72
IDENTIFY INCOMING CALLS USING CALL SIGN LISTS	71
MAINTAIN LOGS OF AIRCRAFT TRANSMISSIONS OR RECEPTIONS	63
LOG INCOMING OR OUTGOING MESSAGES	63
CHECK OPERATION OF GROUND RADIO RECORDING EQUIPMENT	63
TRANSMIT OR RECEIVE "DO NOT ANSWER" TYPE BROADCASTS	63
COORDINATE TRAFFIC WITH OTHER AGENCIES OR UNITS, SUCH AS TRAFFIC CONTROL OR AIRBORNE COMMAND POSTS	63
TRANSMIT AIRCRAFT CLEARANCES OR ADVISORIES	60
TRANSCRIBE VOICE TRANSMISSIONS USING TYPEWRITERS	60
MAINTAIN CURRENT CALL SIGN LISTS	56
PREPARE MESSAGES USING HF FORMAT	55
TUNE OR CHANGE RECEIVER FREQUENCIES BY MEANS OF REMOTE CONTROL	55
MONITOR OR PATCH RADIO TELETYPE TRAFFIC THROUGH HIGH FREQUENCY (HF) EQUIPMENT	55

TASKS PERFORMED BY SHIFT SUPERVISORS AND NCOICs
(GRP098, N=127)

TASKS	PERCENT MEMBERS PERFORMING
MAKE PHONE PATCHES	94
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	91
CONDUCT OJT	84
SUPERVISE GROUND RADIO OPERATORS (AFSC 29353)	81
LOG INCOMING OR OUTGOING MESSAGES	81
MAINTAIN POSITION OR CIRCUIT LOGS	80
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE- AND-REPLY SYSTEMS	80
MAINTAIN MASTER STATION LOGS	78
MAKE TIME CHECKS	78
MAINTAIN PHONE PATCH RECORDS	76
IDENTIFY INCOMING CALLS USING CALL SIGN LIST	76
COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	73
COUNSEL TRAINEES ON TRAINING PROGRESS	72
MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	71
PREPARE MESSAGES USING HF VOICE FORMAT	70
TRANSCRIBE VOICE TRANSMISSIONS BY HAND	68
MAINTAIN FILES OF MESSAGES TRANSMITTED OR RECEIVED	68
RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	68
PREPARE APRs	67
SUPERVISE APPRENTICE GROUND RADIO OPERATORS (AFSC 29333)	65
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	65
TRANSCRIBE VOICE TRANSMISSIONS USING TELETYPEWRITERS	60
EVALUATE OJT TRAINEES	60
ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	60
COORDINATE AIR-TO-GROUND MESSAGE TRAFFIC	59
TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	58

TASKS PERFORMED BY AIR SUPPORT REQUEST NET OPERATORS
(GRP131, N=5)

TASKS	PERCENT MEMBERS PERFORMING
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	100
MAINTAIN MASTER STATION LOGS	100
INVENTORY COMMUNICATIONS SECURITY (COMSEC) MATERIALS	100
MAINTAIN POSITION OR CIRCUIT LOGS	100
RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND MOBILE STATIONS	80
ENCODE OR DECODE MESSAGES MANUALLY	80
CHANGE OR STORE RECORDING TAPES	80
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE-AND-REPLAY SYSTEMS	80
SET CODES ON CRYPTOGRAPHIC DEVICES	80
LOG INCOMING OR OUTGOING MESSAGES	80
STORE, RESEARCH, OR MAINTAIN INVENTORY LISTS OF CLASSIFIED DOCUMENTS	60
CHECK OPERATION OF GROUND RADIO RECORDING EQUIPMENT	60
TRANSCRIBE VOICE TRANSMISSIONS BY HAND	60
TUNE OR CHANGE RECEIVER FREQUENCIES MANUALLY	60
TUNE OR CHANGE TRANSMITTER FREQUENCIES MANUALLY	60
OPERATE FIXED GROUND TRANSCEIVERS	40
RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	40
IDENTIFY INCOMING CALLS USING CALL SIGN LIST	40
ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	40
MAINTAIN CURRENT CALL SIGN LISTS	40
TYPE RECORDS, REPORTS, OR FORMS	40
SET UP SUPPORT EQUIPMENT SHELTERS	40
OPERATE M SERIES MOTOR VEHICLES	40
SET UP FIELD RADIO EQUIPMENT OR ANTENNAS	40
REQUEST WEATHER REPORTS	20
SEND POSITION REPORTS	20

TASKS PERFORMED BY SPECIAL OPERATIONS SQUADRON OPERATORS
(GRP044, N=9)

TASKS	PERCENT MEMBERS PERFORMING
ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	100
MAKE PHONE PATCHES	100
TRANSCRIBE INTERNATIONAL MORSE CODE BY HAND	89
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE- AND-REPLY SYSTEMS	89
TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	89
LOG INCOMING OR OUTGOING MESSAGES	89
PACK PALLETS	89
CALIBRATE PORTABLE TRANSCEIVERS	78
RECEIVE INTERNATIONAL MORSE CODE	78
SEND INTERNATIONAL MORSE CODE	78
ADJUST MANUAL TELEGRAPH KEYS	78
ENCODE OR DECODE MESSAGES MANUALLY	78
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	67
TRANSMIT OR RECEIVE MESSAGES BY RADIO TELETYPE SYSTEMS	67
PROCESS REQUESTS FROM AIRCRAFT IN FLIGHT	56
RELAY COMMUNICATIONS TRAFFIC BETWEEN FIXED STATIONS AND AIRCRAFT	56
SET UP FIELD RADIO EQUIPMENT OR ANTENNAS	56
MONITOR OR PATCH RADIO TELETYPE TRAFFIC THROUGH HIGH FREQUENCY (HF) EQUIPMENT	56
TRANSCRIBE VOICE TRANSMISSIONS BY HAND	44
IDENTIFY INCOMING CALLS USING CALL SIGN LIST	44
MAINTAIN LOGS OF AIRCRAFT TRANSMISSIONS OR RECEPTIONS	44
CALIBRATE FIXED GROUND TRANSCEIVERS	44
REQUEST WEATHER REPORTS	44
SET UP MOBILE RADIO EQUIPMENT OR ANTENNAS	44
PREPARE AIRBORNE COMMUNICATION SYSTEMS OPERATOR' KITS	44

TASKS PERFORMED BY ADMINISTRATIVE SUPPORT PERSONNEL
(GRP080, N=5)

TASKS	PERCENT MEMBERS PERFORMING
TYPE RECORDS, REPORTS, OR FORMS	100
MAINTAIN PUBLICATIONS OR DIRECTIVE FILES	100
MAINTAIN POSITION OR CIRCUIT LOGS	100
MAKE PHONE PATCHES	100
WRITE CORRESPONDENCE	80
PREPARE INTERFERENCE REPORTS	80
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE- AND-REPLY SYSTEMS	80
TRANSCRIBE VOICE TRANSMISSIONS BY HAND	80
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	80
LOG INCOMING OR OUTGOING MESSAGES	80
MAINTAIN FILES OF MESSAGES TRANSMITTED OR RECEIVED	80
MAKE TIME CHECKS	80
TYPE CORRESPONDENCE	60
MAINTAIN RECORDS, CORRESPONDENCE, OR REPORT FILES	60
PREPARE AND FORWARD JOINT MESSAGE FORMS (DD FORM 173)	60
DOCUMENT DESTRUCTION OF CLASSIFIED MATERIALS	60
MAINTAIN VISITOR'S LOG	60
IDENTIFY INCOMING CALLS USING CALL SIGN LISTS	60
TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	60
COMPILE DAILY TRAFFIC RECORDS	60
OPERATE FIXED GROUND TRANSCEIVERS	60
ENCODE OR DECODE MESSAGES MANUALLY	60
ESTABLISH PUBLICATION LIBRARIES	40
ADMINISTER TESTS	40
DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	40
INITIATE PERSONNEL ACTION REQUESTS	40

TASKS PERFORMED BY WEATHER INTERCEPT OPERATORS
(GRP111, N=6)

TASK	PERCENT MEMBERS PERFORMING
TUNE OR CHANGE RECEIVER FREQUENCIES MANUALLY	100
ADJUST RECEIVERS TO OBTAIN READABLE SIGNALS	100
MAINTAIN MASTER STATION LOGS	100
MAINTAIN POSITION OR CIRCUIT LOGS	83
OPERATE STANDARD COMMUNICATIONS RECEIVERS	50
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	50
TRANSMIT OR RECEIVE MESSAGES BY RADIO TELETYPE SYSTEMS	50
IDENTIFY INCOMING CALLS USING CALL SIGN LIST	50
OPERATE ROTATING ANTENNA EQUIPMENT	50
PREPARE OUTAGE REPORTS	50
CONSTRUCT OR ORIENT ANTENNAS FOR MOBILE OR PORTABLE OPERATIONS	50
INTERPRET WEATHER REPORTS FOR TRANSMISSION	33
OPERATE STANDARD COMMUNICATIONS TRANSMITTERS	33
DETERMINE TYPE OF INTERFERENCE	33
COMPILE DAILY TRAFFIC RECORDS	33
MAINTAIN EQUIPMENT STATUS REPORT FILES OR LOGS	33
MAINTAIN COORDINATORS' LOGS	33
SELECT OR CHANGE ANTENNAS BY REMOTE CONTROL	33
TUNE CHANGE TRANSMITTER FREQUENCIES MANUALLY	33
ADJUST ANTENNA TUNING UNITS	33
TYPE RECORDS, REPORTS, OR FORMS	33
OPERATE AUXILIARY GENERATORS	33

TASKS PERFORMED BY SUPERVISORS AND MANAGERS
(GRP056, N=142)

TASKS	PERCENT MEMBERS PERFORMING
COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	96
WRITE CORRESPONDENCE	94
PREPARE APRs	94
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	91
DETERMINE WORK PRIORITIES	86
SCHEDULE LEAVES OR PASSES	86
ESTABLISH ORGANIZATIONAL POLICIES, OPERATING INSTRUCTIONS (OIs), OR STANDARD OPERATING PROCEDURES (SOPs)	82
ASSIGN PERSONNEL TO DUTY POSITIONS	82
ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	82
ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	80
COUNSEL SUBORDINATES ON CAREER PROGRESSION	79
DEVELOP WORK METHODS OR PROCEDURES	77
PLAN WORK ASSIGNMENTS	77
TYPE CORRESPONDENCE	74
MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	73
PLAN COMMUNICATIONS SUPPORT OF EXERCISES OR SPECIAL MISSIONS	71
EVALUATE COMMUNICATIONS OPERATIONS	69
PLAN BRIEFINGS	69
DETERMINE OJT TRAINING REQUIREMENTS	68
TYPE RECORDS, REPORTS, OR FORMS	68
INDORSE AIRMEN PERFORMANCE REPORTS (APRs)	68
DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	68
EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	65
EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	65
DOCUMENT DESTRUCTION OF CLASSIFIED MATERIALS	64

TASKS PERFORMED BY INTRABASE RADIO PERSONNEL
(GRP140, N=12)

TASKS	PERCENT MEMBERS PERFORMING
MAINTAIN INTRABASE RADIO ACCOUNT RECORDS	100
TYPE RECORDS, REPORTS, OR FORMS	92
MAINTAIN RECORDS, CORRESPONDENCE, OR REPORT FILES	83
TYPE CORRESPONDENCE	83
WRITE CORRESPONDENCE	83
DRAFT BUDGET OR FINANCIAL REQUIREMENTS	83
INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	75
PREPARE REQUESTS FOR EQUIPMENT REPAIR	67
EVALUATE BUDGET OR FINANCIAL REQUIREMENTS	58
DETERMINE WORK PRIORITIES	58
WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	58
PREPARE REQUISITIONS FOR SUPPLIES OR EQUIPMENT	58
PLAN BRIEFINGS	58
PERFORM STAFF ASSISTANCE VISITS	50
DEVELOP WORK METHODS OR PROCEDURES	50
PREPARE RECURRING CONTROL SYMBOL (RCS) REPORTS	50
MAINTAIN PUBLICATIONS OR DIRECTIVE FILES	42
DRAFT RECOMMENDED CHANGES TO COMMUNICATIONS PUBLICATIONS	42
MAINTAIN EQUIPMENT STATUS REPORT FILES OR LOGS	33
CONDUCT TRAINING CONFERENCES OR BRIEFINGS	33
MAINTAIN COMMUNICATIONS EQUIPMENT ACCOUNT RECORDS	33
EVALUATE PROCEDURES FOR STORAGE, INVENTORY, OR INSPECTION OF PROPERTY ITEMS	33
DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	33

TASKS PERFORMED BY STAFF NCOs
(GRP146, N=13)

TASKS	PERCENT MEMBERS PERFORMING
WRITE CORRESPONDENCE	100
WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	100
PERFORM STAFF ASSISTANCE VISITS	100
PLAN BRIEFINGS	92
DRAFT RECOMMENDED CHANGES TO COMMUNICATIONS PUBLICATIONS	92
EVALUATE COMMUNICATIONS OPERATIONS	92
DETERMINE WORK PRIORITIES	85
EVALUATE INSPECTION REPORTS OR PROCEDURES	77
INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	77
CATEGORIZE INFORMATION AS TOP SECRET, SECRET, CONFIDENTIAL, OR FOR OFFICIAL USE ONLY	77
INSPECT COMMUNICATIONS STATIONS	69
PLAN COMMUNICATIONS SUPPORT OF EXERCISES OR SPECIAL MISSIONS	69
EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	62
MAINTAIN RECORDS, CORRESPONDENCE, OR REPORT FILES	62
RESOLVE TECHNICAL PROBLEMS OF SUBORDINATES	54
DRAFT BUDGET OR FINANCIAL REQUIREMENTS	54
TYPE CORRESPONDENCE	54
DEVELOP WORK METHODS OR PROCEDURES	54
ESTABLISH PUBLICATION LIBRARIES	54
MAINTAIN PUBLICATIONS OR DIRECTIVE FILES	54
PLAN LAYOUT OF FACILITIES	54
EVALUATE STATION OR UNIT REPORTS, GRAPHS, OR STUDIES	46
ANALYZE TECHNICAL REPORTS	46
DIRECT UTILIZATION OF EQUIPMENT	46
DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	46

TASKS PERFORMED BY COMBAT CREW COMMUNICATIONS PERSONNEL
(GRP023, N=77)

TASKS	PERCENT MEMBERS PERFORMING
PREPARE COMMUNICATIONS KITS	92
INVENTORY COMMUNICATIONS SECURITY (COMSEC) MATERIALS	79
PREPARE FLIGHT PUBLICATION KITS	78
DOCUMENT DESTRUCTION OF CLASSIFIED MATERIALS	70
STORE, RESEARCH, OR MAINTAIN INVENTORY LISTS OF CLASSIFIED DOCUMENTS	65
CHECKOUT OR RECEIVE CLASSIFIED INFORMATION FOR SPECIAL MISSIONS	65
MAINTAIN CURRENT CALL SIGN LISTS	55
TYPE RECORDS, REPORTS, OR FORMS	55
ENCODE OR DECODE MESSAGES MANUALLY	49
TYPE CORRESPONDENCE	47
PREPARE COMSEC KITS	47
PREPARE COMBAT MISSION FOLDERS (CMF)	44
AUTHENTICATE STATIONS OR MESSAGE TRAFFIC USING CHALLENGE-AND-REPLY SYSTEMS	44
DETERMINE WORK PRIORITIES	43
INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	43
CONSTRUCT HF REPORTING GUIDES	40
SET UP FIELD RADIO EQUIPMENT OR ANTENNAS	40
TRANSMIT OR RECEIVE MESSAGES USING HF EQUIPMENT	39
PLAN COMMUNICATIONS SUPPORT OF EXERCISES OR SPECIAL MISSIONS	39
TUNE OR CHANGE TRANSCEIVER FREQUENCIES MANUALLY	39
MAINTAIN ACCESS LISTS	38
MAINTAIN COMMUNICATIONS SECURITY (COMSEC) ACCOUNTS	38
MAINTAIN LOGS OF AIRCRAFT TRANSMISSIONS OR RECEPTIONS	36
DEVELOP WORK METHODS OR PROCEDURES	36
CONDUCT PREMISSION OR POSTMISSION BRIEFINGS OR DEBRIEFINGS	35
MAINTAIN PUBLICATIONS OR DIRECTIVE FILES	31
PREPARE MESSAGES USING HF VOICE FORMAT	31

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