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OCCUPATIONAL SURVEY REPORT

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WIDEBAND COMMUNICATIONS EQUIPMENT

AFSC 304X0

AFPT 90-304-413

NOVEMBER 1988

OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150-5000

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TABLE OF CONTENTS

	<u>PAGE NUMBER</u>
PREFACE.	iii
SUMMARY OF RESULTS	iv
INTRODUCTION	1
Background	1
SURVEY METHODOLOGY	2
Inventory Development.	2
Survey Administration.	2
Survey Sample.	3
Task Factor Administration	3
SPECIALTY JOBS (Career Ladder Structure)	6
Overview	6
Job Descriptions	9
Summary.	20
ANALYSIS OF DAFSC GROUPS	19
Skill Level Descriptions	21
Summary.	27
ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS.	27
JOB SATISFACTION	27
COMPARISON TO PREVIOUS SURVEY.	32
TRAINING ANALYSIS.	34
First-Enlistment Personnel	34
Task Difficulty (TD)	40
Training Emphasis (TE)	40
Specialty Training Standard (STS).	40
Plan of Instruction (POI).	44
Electronic Principles (EP)	47
ADDITIONAL ANALYSES.	47
Analysis of Major Commands (MAJCOM).	47
Analysis of CONUS Versus Overseas.	50
WRITE-IN COMMENTS.	50
IMPLICATIONS	51
APPENDIX A	52
APPENDIX B	53



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PREFACE

This report presents the results of a detailed Air Force occupational survey of the Wideband Communications Equipment (AFSC 304X0) specialty. The survey was requested by the Training Development Service Division (OMT) of the USAF Occupational Measurement Center. Authority for conducting occupational surveys is contained in AFR 35-2. Computer products upon which this report is based are available for use by operations and training officials.

The survey instrument used in this project was developed by Mr Roberto Salinas, Inventory Development Specialist. Computer programming support was provided by Mr Wayne Fruge, and administrative support was provided by Mr Richard Ramos. First Lieutenant Charles T. Jervey analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Charles D. Gorman, Chief, Airman Analysis Branch, Occupational Analysis Division, USAF Occupational Measurement Center.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies and computer products from which this report was produced may be obtained on request to the USAF Occupational Measurement Center, Attention: Chief, Occupational Analysis Division (OMY), Randolph AFB, Texas 78150-5000.

This report has been reviewed and approved.

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Center

SUMMARY OF RESULTS

1. Survey Coverage: Inventory booklets were administered worldwide to 2,842 Wideband Communications Equipment (AFSC 304X0) incumbents. The 1,833 respondents in the survey sample represent 55 percent of all assigned Wideband Communications Equipment personnel.
2. Career Ladder Structure: Nine jobs (including 16 variations) were identified in the career ladder structure analysis. The jobs were directly involved in supervisory functions, maintenance functions related to Wideband Communications systems, training, or mobility.
3. Career Ladder Progression: The AFSC 304X0 career ladder shows a common career progression pattern for mission equipment maintenance specialties as one advances from skill level to skill level. At the apprentice level, a basically technical job is performed, expanding to a broader job at the specialist level, where incumbents perform a wider range of technical tasks and begin to perform some supervisory tasks. At the technician level, supervisory tasks gained significantly in time spent performing.
4. AFR 39-1 Specialty Descriptions: A comparison of survey data to AFR 39-1 indicates the AFR 39-1 specialty descriptions provide an adequate overview of each of the specialty groups.
5. Job Satisfaction: Overall, respondents were satisfied with their jobs. Most specialty jobs and TAFMS groups felt their talents and training were well utilized. Comparative analysis with mission equipment maintenance personnel surveyed in 1987 showed a somewhat lower job satisfaction for the AFSC 304X0 career ladder, while comparison with AFSC 304X0 personnel surveyed in 1981 showed a more positive view of job satisfaction.
6. Training Analysis: Review of the matching of survey data to the AFSC 304X0 Specialty Training Standard (STS) indicates that most task performance sections are well supported. Data did not support several paragraphs, however, and they should be looked at to determine if inclusion in future revisions of the STS are warranted. Data indicate that performance measured sections of the Plan of Instruction (POI) of the E3ABR30430 002, Wideband Communications Equipment Specialist Course, showed significant percentages of first-enlistment airmen performing those tasks matched to these sections. Tasks not matched to the STS and POI indicate additional areas that may deserve inclusion in any revision to the documents. Areas of electronics principles (EP) were identified that were performed by 50 percent or more of the AFSC 30450 career ladder.
7. Additional Analyses: Analysis of MAJCOMs showed differences in areas of wideband communication equipment maintenance, although performance tasks were similar. MAJCOM groups tended to specialize in one particular area, whether it be Base Intrusion Security System (BISS), mobility, receiver maintenance, or electronic and installation functions. CONUS and overseas groups also showed the same differences. CONUS groups spent more time maintaining BISS, while overseas personnel concentrated on receiver maintenance.

8. Implications: The AFSC 304X0 career ladder is very diverse. There were no major differences discovered between skill levels, but MAJCOMs and CONUS and overseas personnel showed differences in the various areas of wideband communications maintenance. The AFR 39-1 job descriptions were adequate for all skill levels, and job satisfaction was positive for the jobs identified. Most areas of the STS were supported by survey data, although several paragraphs had low percentages of members performing. Data showed significant percentages of members performing tasks matched to performance measured sections of the POI. Tasks not referenced to either document should be reviewed by training personnel for possible inclusion in any revised STS or POI.

OCCUPATIONAL SURVEY REPORT
WIDEBAND COMMUNICATIONS EQUIPMENT
(AFSC 304X0)

INTRODUCTION

This is a report of the occupational survey of the Wideband Communications Equipment specialty completed by the Occupational Analysis Division, USAF Occupational Measurement Center, in October 1988. The USAFOMC Training Development Services Division (OMT) requested this project to obtain current occupational survey information for use in developing a Training Requirements Analysis (TRA) for the AFSC 304X0 career ladder.

Background

The Wideband Communications Equipment specialty was last surveyed in November 1981 as part of a combined survey of the AFSC 304X0 (Wideband Communications Equipment), AFSC 304X4 (Ground Radio Communications), and AFSC 304X6 (Space Communications Systems Equipment) career ladders.

The primary mission of the AFSC 304X0 specialty is to install, inspect, test, adjust, repair, modify, maintain, and operate fixed, mobile, and transportable wideband communications systems and maintain intrusion detection systems. Personnel in this career ladder must have a working knowledge of electronics and communications, including transistors and solid-state components applicable to wideband communications and intrusion detection systems.

All personnel entering this specialty must attend Course E3ABR30430 002, Wideband Communications Equipment Specialist, 25 weeks in length, at Keesler AFB, Mississippi. The course is a combination of principles-centered training and hands-on training in the operation, installation, inspection, testing, adjustment, organizational maintenance, and repair of microwave, voice, and teletype multiplex transportable wideband communications equipment and associated test equipment. Eleven of these 25 weeks is spent in electronic principles (EP), with the remainder of the course consisting of applied communications principles as described above.

Roughly 80 percent of the personnel in this specialty are assigned to AF Communications Command (AFCC), with the remaining 20 percent assigned to Tactical Air Command (TAC), United States Air Force Europe (USAFE), Pacific Air Command (PACAF), Air Training Command (ATC), Air Force Systems Command (AFSC), Air Force Elements Europe (AFELM EUR), and Air Force Elements Other (AFELM OTH).

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SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-304-413, dated May 1987. A tentative task list was formulated in visits with AFSC 304X0 personnel at Keesler AFB, Mississippi, to include tasks suggested by the specialty training standard (STS) and other career ladder documents. The tentative task list was then refined and validated by subsequent visits to the six operational CONUS sites listed below:

- Dyess AFB, Texas (SAC)
 - Base Intrusion Security System (BISS)
- Tinker AFB, Oklahoma (AFLC)
 - Mobility
- Eglin AFB, Florida (AFSC)
 - Fixed Microwave Radio
- Keesler AFB, Mississippi (AFCC)
 - Electronic and Installation (E&I)
- MacDill AFB, Florida (TAC)
 - Rapid Deployment Force
- Kelly AFB, Texas (AFLC)
 - Electronic and Installation (E&I)

From these visits, a final task list was developed containing 1,423 tasks organized under 20 duties. The background section in the job inventory included questions about job satisfaction, primary job title, and equipment maintained or used.

Survey Administration

From May 1987 through March 1988, survey control officers at consolidated base personnel offices worldwide administered the inventory booklets to personnel holding Wideband Communications Equipment DAFSCs (304X0). The lengthy administration time was a result of problems encountered in trying to obtain returns from critical bases. Personnel were selected from a mailing list generated from Uniform Airman Record (UAR) data tapes maintained by the Air Force Human Resources Laboratory (AFHRL). Each individual responding to the survey completed an information and background section, then checked each task performed in his or her job. After checking the tasks performed, the respondent then rated each task checked on a 9-point scale indicating relative time spent on that task. Ratings ranged from 1 (very small amount of time spent) through 5 (average amount of time spent) to 9 (very large amount of time spent). To

determine relative time spent for each task checked by a respondent, all of the respondent's ratings were assumed to account for 100 percent of his or her time spent on the job. These ratings were then summed, divided by the number of total responses, and the quotient multiplied by 100. This procedure provided a basis for comparing tasks not only in terms of percent members performing, but also in terms of average percent time spent on tasks and groups of tasks.

Survey Sample

All eligible personnel were administered survey booklets. Personnel who had been in their present job at least 6 weeks and not in permanent change of station (PCS) status, retirement, or hospital status were considered eligible for the survey. Table 1 shows the percentage distribution, by major command (MAJCOM), of assigned personnel in the career ladder as of September 1987, while Table 2 shows the percentage distribution by paygrade groups. Representation by MAJCOM and paygrade was good. The 1,833 respondents in the final sample represent 55 percent of assigned AFSC 304X0 personnel.

Task Factor Administration

In addition to completing the job inventory, selected senior Wideband Communications Equipment personnel were also asked to complete a second booklet for either task difficulty (TD) or training emphasis (TE) ratings. TD and TE information are used in a number of different analyses discussed in more detail within this report.

Task Difficulty: Each senior NCO completing a TD booklet was asked to rate each task in the inventory on a 9-point scale from extremely low to extremely high difficulty relative to the other tasks. Difficulty was defined as the length of time required for an average member to learn to perform that task. Interrater reliability between the 57 DAFSC 304X0 raters (as assessed through components of variance of standard group means) is .93, indicating good agreement. TD ratings were adjusted so tasks of average difficulty would have ratings of 5.00 and a standard deviation of 1.00. The resulting data are essentially a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Training Emphasis: Individuals selected to complete TE booklets were asked to rate all of the tasks on a 10-point scale from 0 (indicating that no training is required), to 9 (indicating that extremely high training emphasis was recommended). Training emphasis is a rating of tasks indicating which areas should receive emphasis in structured training for first-enlistment personnel. Structured training was defined as training provided through resident technical schools, Field Training Detachments (FTD), Mobile Training Teams (MTT), formal on-the-job training (OJT), or any other organized training method. The interrater reliability for the 46 DAFSC 304X0 raters of .88 was acceptable. The average TE rating was 1.68 and the standard deviation was 1.03. Tasks receiving ratings of 2.71 or higher are considered to have relatively high TE.

TABLE 1
304X0 MAJCOM DISTRIBUTION
(ASSIGNED MANNING AS OF SEPTEMBER 1987)

<u>MAJCOM</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AF COMMUNICATIONS COMMAND (AFCC)	79	77
TACTICAL AIR COMMAND (TAC)	7	6
USAF EUROPE (USAFE)	6	7
AIR TRAINING COMMAND (ATC)	3	3
PACIFIC AIR COMMAND (PACAF)	2	2
AF ELEMENTS EUROPE (EUR)	1	2
AF ELEMENTS (OTHER)	1	2
AF SYSTEMS COMMAND (AFSC)	1	1

Total 304X0 Personnel Assigned: 3,324
 Total 304X0 Personnel Eligible for Survey: 2,842
 Total 304X0 Personnel in Survey Sample: 1,833
 Percent of Assigned in Sample: 55%
 Percent of Eligible in Sample: 64%

NOTE: Personnel projected for PCS, retirement, or discharge; those in hospital status; and those with less than 6 weeks in their present job are not eligible for survey

TABLE 2
304X0 PAYGRADE DISTRIBUTION
(ASSIGNED MANNING AS OF SEPTEMBER 1987)

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	17	13
E-4	32	33
E-5	29	32
E-6	14	14
E-7	8	7
E-8	*	*

* Denotes less than .5 percent

The computer uses the TD and TE ratings for each task in the inventory, percent of first-enlistment respondents performing, and the Training Decision Logic Table found in ATCR 52-22 to compute an Automated Training Indicator (ATI) value for each task. This ATI, the TD and TE values, as well as percent of various groups of respondents performing can provide insight into the training requirements of a specialty. This may help validate decisions of training personnel to lengthen or shorten specific units of instruction to refine various training programs.

SPECIALTY JOBS (Career Ladder Structure)

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

For the purpose of organizing individual jobs into similar units of work, an automated job clustering program is used. 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 jobs 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 survey sample.

The basic identifying group used in the job structuring process is the job. A job 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 jobs, they are grouped together and labeled as clusters. In many career ladders, there are specialized jobs that are too dissimilar to be grouped into any cluster. These unique groups are labeled independent jobs.

Overview

An analysis of the tasks performed and time spent on those tasks by the 1,833 respondents resulted in identifying four clusters and five independent jobs within the Wideband Communications Equipment specialty. Figure 1 is a graphic representation of the way these nine groups were organized. The clusters centered around intrusion detection system maintenance, mobile and fixed wideband communications equipment maintenance, and supervisory functions. The five independent jobs centered around training, closed-circuit television

AFSC 304X0 SPECIALTY JOBS (N=1,833)

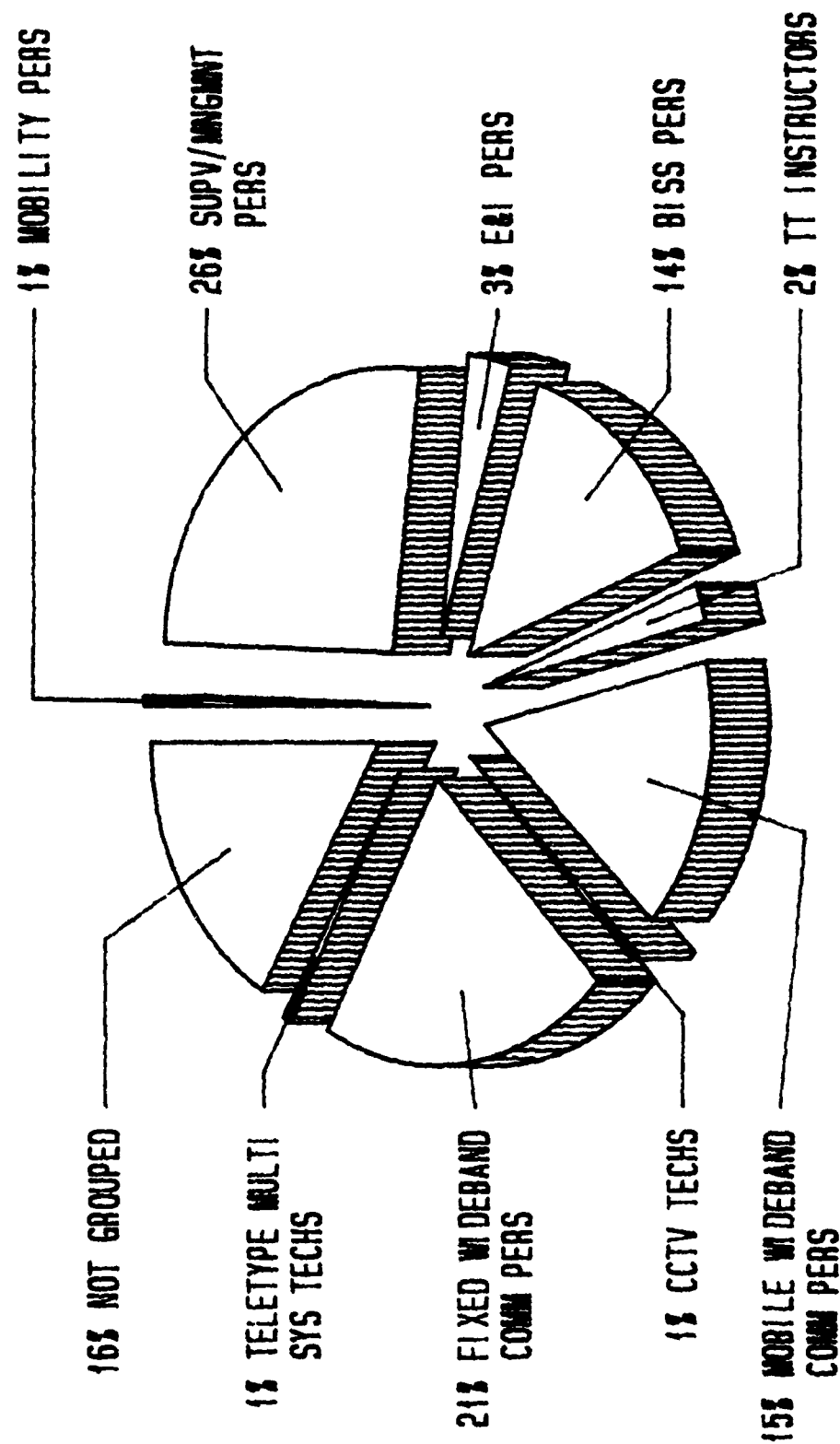


Figure 1

maintenance, teletype multiplexer system maintenance, mobility, and electronic and installation functions. The jobs in the following list are discussed in detail in the following pages.

- I. BASE INTRUSION SECURITY SYSTEM (BISS) PERSONNEL (STG204, N=261)
 - A. BISS Maintenance Supervisors (STG294, N=19)
 - B. Perimeter Security System Technicians (STG565, N=199)
 - C. Structure Security System Technicians (STG422, N=15)
- II. MOBILE WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL (STG124, N=283)
 - A. Mobile Tropospheric Radio Technicians (STG218, N=21)
 - B. Mobile Microwave Radio Technicians (STG202, N=256)
- III. FIXED WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL (STG106, N=377)
 - A. Fixed Tropospheric Radio Technicians (STG182, N=45)
 - B. Fixed Microwave Radio Technicians (GRP039, N=214)
 - C. Fixed Radio Voice Frequency Multiplexer Technicians (STG371, N=15)
 - D. Fixed Radio Teletype Multiplexer Technicians (STG244, N=72)
- IV. SUPERVISORY/MANAGEMENT PERSONNEL (STG019, N=482)
 - A. Plans and Requirements Managers (STG194, N=22)
 - B. Maintenance Training Managers (STG240, N=12)
 - C. Quality Control Managers (STG211, N=62)
 - D. Land Mobile Radio Managers (STG156, N=46)
 - E. Job Control Supervisors (GRP038, N=57)
 - F. NCOIC Wideband Communications Equipment (GRP040, N=144)
 - G. Mobility Supervisors (STG302, N=11)
- V. TECHNICAL TRAINING INSTRUCTORS (STG372, N=41)
- VI. CLOSED-CIRCUIT TELEVISION (CCTV) TECHNICIANS (STG138, N=10)
- VII. TELETYPE MULTIPLEXER SYSTEM TECHNICIANS (STG206, N=11)
- VIII. MOBILITY PERSONNEL (STG192, N=10)
- IX. ELECTRONIC AND INSTALLATION (E&I) PERSONNEL (STG369, N=56)

The above jobs account for 1,531 respondents (84 percent of the sample). The remaining 16 percent did not group with the clusters or independent jobs because of either the unique job they performed, the manner in which they perceived their jobs, or as a result of the diversity of the career ladder.

Table 3 provides selected background information, such as DAFSC distribution, average time in career field (TICF), and average number of tasks performed for the various job groups. Table 4 provides data on the relative time spent on each of the 20 duties by personnel in each of the major jobs. Also included in this report are appendices concerning the Wideband Communications Equipment specialty jobs. Appendix A provides background information for all the jobs identified in the career ladder structure analysis, including the jobs within the identified clusters. This appendix also lists tasks commonly performed by each of the jobs identified. Appendix B provides data on relative time spent on each of the duties by personnel within each of these jobs.

Job Descriptions

I. BASE INTRUSION SECURITY SYSTEM (BISS) PERSONNEL CLUSTER (STG204, N=261). The 261 members of this group comprise 14 percent of the survey sample. BISS personnel monitor, troubleshoot, repair, and replace various components of BISS systems, including sensors, relay equipment, closed-circuit televisions (CCTV), and alarm equipment. BISS is used to protect mission critical and high value resources such as strategic/tactical aircraft alert areas, weapons storage sites, and special mission aircraft parking ramps. Fifty-six percent of their job time is spent in BISS functions (see Table 4). Twenty-three percent of this group is located overseas. Tasks most commonly performed include:

- perform preventive maintenance inspections (PMI) on perimeter security systems
- isolate malfunctions in security system annunciators
- adjust security system area sensor system components
- adjust security system annunciator components
- adjust security system television camera components
- isolate system malfunctions to coder multiplexer sensor data
- install coder multiplexer sensor data (CMSD) circuit boards

BISS personnel average 74 months TAFMS, 48 months TICF, and perform an average of 154 tasks.

Three jobs were identified within this cluster. The 19 BISS Maintenance Supervisors (STG294) oversee the day-to-day maintenance of BISS. Thirty-four percent of their job time is spent in BISS maintenance, with another 31 percent of their job time spent in supervisory duties. The second job, Perimeter Security System Technicians (STG565), with 199 members, performs maintenance associated with BISS television and fence security systems, while the third job, Structure Security System Technicians (STG422), with 15 members, maintains sensor data systems associated with the BISS.

TABLE 3

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	BASE INTRUSION SECURITY SYSTEM (BISS) PERSONNEL (STG204)	MOBILE WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL (STG124)	FIXED WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL (STG106)
NUMBER IN GROUP	261	283	377
PERCENT OF SAMPLE	14%	15%	21%
PERCENT IN CONUS	77%	49%	27%
DAFSC DISTRIBUTION (PERCENT):			
30430	14%	10%	19%
30450	73%	80%	63%
30470	13%	10%	18%
PREDOMINATE PAYGRADES (DESCENDING)	E-4/5/3	E-4/5/3	E-4/5/3
AVERAGE MONTHS IN PRESENT JOB	21	22	22
AVERAGE T1CF (MOS)	48	58	63
AVERAGE TAFMS (MOS)	74	74	79
PERCENT IN FIRST ENLISTMENT	36%	32%	40%
PERCENT SUPERVISING	46%	41%	37%
AVERAGE NUMBER OF TASKS PERFORMED	154	184	210

TABLE 3 (CONTINUED)
SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	SUPERVISORY/ MANAGEMENT PERSONNEL (STG019)	TECHNICAL TRAINING INSTRUCTORS (STG372)**	CLOSED-CIRCUIT TELEVISION (CCTV) TECHNICIANS (STG138)**
NUMBER IN GROUP	482	41	10
PERCENT OF SAMPLE	26%	2%	1%
PERCENT CONUS	61%	98%	80%
DAFSC DISTRIBUTION (PERCENT):			
30430	3%	5%	20%
30450	37%	51%	60%
30470	60%	44%	20%
PREDOMINANT PAYGRADES (DESCENDING)	E-5/6/7	E-5/6/4	E-5/6/4
AVERAGE MONTHS IN PRESENT JOB	17	27	16
AVERAGE TICF (MOS)	119	99	79
AVERAGE TAFMS (MOS)	145	114	106
PERCENT IN FIRST ENLISTMENT	7%	2%	10%
PERCENT SUPERVISING	52%	2%	60%
AVERAGE NUMBER OF TASKS PERFORMED	53	17	119

** Independent Job

TABLE 3 (CONTINUED)
SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	TELETYPE MULTIPLEXER SYSTEM TECHNICIANS (STG206)**	MOBILITY PERSONNEL (STG192)**	ELECTRONIC AND INSTALLATION (E&I) PERSONNEL (STG369)**
NUMBER IN GROUP	11	10	56
PERCENT OF SAMPLE	1%	1%	3%
PERCENT CONUS	28%	80%	73%
DAFSC DISTRIBUTION (PERCENT):			
30430	27%	20%	2%
30450	64%	70%	80%
30470	9%	10%	18%
PREDOMINANT PAYGRADES (DESCENDING)			
	E-4/3/5	E-5/4/6	E-4/3/5
AVERAGE MONTHS IN PRESENT JOB	22	14	27
AVERAGE TICF (MOS)	35	30	59
AVERAGE TAFMS (MOS)	64	84	74
PERCENT IN FIRST ENLISTMENT	36%	20%	52%
PERCENT SUPERVISING	36%	50%	29%
AVERAGE NUMBER OF TASKS PERFORMED	63	35	49

** Independent Job

TABLE 4

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

DUTIES	BASE INTRUSION SECURITY SYSTEM (BISS) PERSONNEL (STG204)	MOBILE WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL (STG124)	FIXED WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL (STG106)
A ORGANIZING AND PLANNING	2	1	1
B DIRECTING AND IMPLEMENTING	1	1	1
C INSPECTING AND EVALUATING	2	1	1
D TRAINING	3	2	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	4	2	2
F PERFORMING SUPPLY FUNCTIONS	2	3	4
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	0	13	13
H PERFORMING SATELLITE OPERATION FUNCTIONS	13	*	*
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	*	12	13
J MAINTAINING ANTENNA SYSTEMS	1	11	2
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCIEVERS	1	11	14
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCIEVERS	*	6	10
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	*	5	10
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	*	2	5
O MAINTAINING MODEMS	*	1	1
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	56	*	1
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	5	8	18
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	1	20	1
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	1	1	1
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	5	*	*

* Denotes less than .5 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE 4 (CONTINUED)

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

DUTIES	SUPERVISORY/ MANAGEMENT PERSONNEL (STG019)	TECHNICAL TRAINING INSTRUCTORS (STG372)**	CLOSED-CIRCUIT TELEVISION (CCTV) TECHNICIANS (STG138)**
A ORGANIZING AND PLANNING	18	2	3
B DIRECTING AND IMPLEMENTING	10	6	2
C INSPECTING AND EVALUATING	14	3	3
D TRAINING	12	66	6
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	20	5	3
F PERFORMING SUPPLY FUNCTIONS	10	3	6
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	3	11	4
H PERFORMING SATELLITE OPERATION FUNCTIONS	*	0	0
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	3	2	10
J MAINTAINING ANTENNA SYSTEMS	1	*	0
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCIVERS	1	1	4
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCIVERS	1	1	1
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	1	1	1
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	*	*	2
O MAINTAINING MODEMS	*	*	*
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	1	0	14
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	1	*	6
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	4	1	1
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	1	0	*
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	*	0	32

* Denotes less than .5 percent

** Independent Job

NOTE: Columns may not add to 100 percent due to rounding

TABLE 4 (CONTINUED)

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

DUTIES	TELETYPE MULTIPLEXER SYSTEM TECHNICIANS (STG206)**	MOBILITY PERSONNEL (STG192)**	ELECTRONIC AND INSTALLATION (E&I) PERSONNEL (STG369)**
A ORGANIZING AND PLANNING	1	1	2
B DIRECTING AND IMPLEMENTING	*	1	1
C INSPECTING AND EVALUATING	1	2	2
D TRAINING	2	*	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	3	1	2
F PERFORMING SUPPLY FUNCTIONS	6	4	2
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	10	11	2
H PERFORMING SATELLITE OPERATION FUNCTIONS	0	0	0
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	12	8	10
J MAINTAINING ANTENNA SYSTEMS	0	10	1
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCEIVERS	1	2	*
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCEIVERS	1	2	*
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	9	2	*
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	39	3	*
O MAINTAINING MODEMS	3	0	0
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	0	0	1
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	12	7	1
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	1	47	4
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	1	1	69
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	0	0	1

* Denotes less than .5 percent

** Independent Job

NOTE: Columns may not add to 100 percent due to rounding

II. MOBILE WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL CLUSTER (STG124, N=283). Accounting for 15 percent of the total sample, this group spends a large percentage of job time (20 percent) in mobility and support functions. Members of this group also spend significant amounts of time in general maintenance, equipment operations, antenna system maintenance, and receiver maintenance (47 percent, see Table 4). Incumbents are responsible for maintaining mobile radio systems, including antenna assembly and corrosion control. Mobile Wideband Communications Equipment personnel average 184 tasks and are predominately at the 3- and 5-skill levels. Typical tasks performed by the 283 members of this specialty job include:

- perform turn-on procedures
- assemble parabolic antenna components
- perform receive signal level (RSL) checks
- establish wideband links
- remove camouflage netting
- remove mobile communication equipment
- establish orderwire contact with distant terminals

Personnel in this cluster average 58 months TICF and have an average pay-grade of E-4.

Two jobs were identified within this cluster. The 21 Mobile Tropospheric Radio Technicians (STG218) maintain tropospheric radio systems at mobile radio sites. Thirty-six percent of their job time is spent in general maintenance and equipment operations. A significant percentage of job time was also spent in antenna system maintenance (16 percent, see Appendix B). The second job, Mobile Microwave Radio Technicians (STG202), with 256 members, performs maintenance associated with mobile microwave radio systems. This group spends 34 percent of their job time in general maintenance, equipment operations, and antenna maintenance. Unlike Mobile Tropospheric Radio Technicians, members of this group spend a slightly greater amount of time in receiver maintenance and common and miscellaneous subassembly maintenance.

III. FIXED WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL CLUSTER (STG106, N=377). Comprised of four different jobs and representing 21 percent of the total sample (377 members), this cluster maintains fixed wideband radio systems. The job performed is highly technical, with 86 percent of their relative job time devoted to performing tasks involving general maintenance, equipment operation, or maintenance on receivers, transceivers, antennas, or common and miscellaneous subassemblies. Examples of tasks performed by members of this group include:

- perform RSL checks
- perform test tone level tests
- perform frequency modulation (FM) quieting curves
- adjust automatic gain control (AGC) components

remove electromechanical components using soldering methods
perform PMI on FM receivers
align frequency division multiplexers

The cluster is dominated by 3- and 5-skill level personnel (82 percent), with an average paygrade of E-4. Members average 79 months TAFMS and 63 months TICF.

The first job to be identified within this cluster was Fixed Tropospheric Radio Technicians (STG182). Unlike Mobile Tropospheric Radio Technicians, members of this group are assigned to fixed radio sites, and perform almost twice the number of tasks as do their mobile counterparts (103 versus 59). This group also spends a greater amount of time maintaining receivers. Fixed Microwave Radio Technicians (GRP039), with 214 members, comprise 21 percent of the survey sample, and maintain fixed microwave radio systems. This job differs from Mobile Microwave Radio Technicians in time spent maintaining antennas, receivers, transmitters, and voice frequency multiplexers. Fixed Radio Voice Frequency Multiplexer Technicians (STG371), was the third job identified. These 15 members maintain voice frequency multiplexer components on fixed wideband communications equipment. Eighteen percent of job time for this group is spent maintaining voice frequency multiplexers and associated interface equipment. Another 49 percent is spent in equipment operations, general maintenance, and maintenance of receivers and transmitters. The final job identified within this cluster is that of Fixed Radio Teletype Multiplexer Technicians (STG244). Maintenance of fixed radio teletype multiplexer components is the distinguishing feature of this group from other fixed wideband job groups, with 18 percent of their total job time spent in teletype multiplexer and associated interface equipment maintenance.

IV. SUPERVISORY/MANAGEMENT PERSONNEL CLUSTER (STG019, N=482). This cluster, representing approximately 26 percent of the sample, is comprised of individuals who perform a large number of supervisory and planning functions. Forming seven jobs, the personnel in this cluster spend little time on the technical work of the career ladder. Fifty-four percent of their job time is spent in supervisory duties (A-D) with another 30 percent spent in administrative and supply areas. Some of the most representative tasks of this group are:

write correspondence
determine work priorities
prepare APR
evaluate compliance with performance standards
develop work procedures
establish office instructions (OI)
conduct OJT
plan work assignments

Supervisors average 145 months TAFMS, 119 months TICF, and 53 tasks performed.

The first group of 22 Plans and Requirements Managers (STG194) serve in staff positions, primarily at the headquarters level. Their job centers around determining the future needs of the career ladder and managing the day-to-day contracts. Sixty-eight percent of their job time is spent in supervisory duties, with another 26 percent in administrative and supply areas. Maintenance Training Managers (STG240) was the second job identified. Responsible for overseeing on-the-job (OJT) training programs and determining other training requirements, the 12 members of this group spend over 40 percent of their job time in training duties. Quality Control Managers (STG211), with 62 members, distinguish themselves from the other Supervisory/Management personnel by the predominance of inspection and evaluation tasks performed, accounting for 30 percent of their job time. The primary duty of this job is to serve as technical advisor to the maintenance complex and assist the maintenance supervisors in identifying and resolving problems. The 46 Land Mobile Radio Managers (STG156) maintain mobile hand-held radios, and spend the majority of their job time in supply-related functions (31 percent). Unlike other jobs identified within this cluster, Job Control Supervisors (GRP038), with 57 members, are predominately 3- and 5-skill level (77 percent). This group coordinates the daily maintenance plan, ensuring the workcenters get the jobs done, and controls unscheduled maintenance by taking trouble calls, assigning job control numbers to them and then notifying the workcenters. The sixth job identified, NCOIC Wideband Communications Equipment (GRP040), consisting of 144 senior personnel, spends 55 percent of their job time in supervisory duties. Members of this group tend to be first-line supervisors, spending 26 percent of their job time in technical areas. Mobility Supervisors (STG302) comprise the last job in this cluster. Supervision of mobility teams and mobile radio sites is the primary job for the 11 members of this group. Twenty-nine percent of their job time is spent in mobility functions.

V. TECHNICAL TRAINING INSTRUCTORS (STG372, N=41). Accounting for only 2 percent of the total sample, members of this independent job spend the majority of their job time (66 percent) in training functions. Technical Training Instructors are responsible for the instruction and technical training, to include counseling, evaluation, and classroom and laboratory training, provided to entry-level personnel. Some of the most representative tasks performed by the 41 members of this specialty job include:

- score tests
- conduct resident course classroom training
- evaluate progress of students
- counsel personnel
- maintain training records, charts, and graphs
- conduct remedial training
- perform receive signal level (RSL) checks
- determine resident course training requirements

Technical Training Instructors average 17 tasks, and 114 months TAFMS.

VI. CLOSED-CIRCUIT TELEVISION (CCTV) TECHNICIANS (STG138, N=10). This independent job is similar to the BISS Personnel cluster described previously, in that closed-circuit televisions (CCTV) are part of BISS and maintained by both. The distinguishing factor is that, for this group, the majority of their job time is spent on CCTV maintenance (32 percent), while only 14 percent of job time is spent in BISS functions (see Table 4). Typical tasks performed by this group are:

- functionally test video display monitors
- adjust video circuits
- isolate camera faults
- align camera circuits
- test receive equalizers
- adjust balanced line matching amplifiers
- adjust security system television camera components

This group of predominately senior personnel averages 116 months TAFMS and 119 tasks performed.

VII. TELETYPE MULTIPLEXER SYSTEM TECHNICIANS (STG206, N=11). Although teletype multiplexer systems are a component of wideband systems, this group of 11 concentrates over 39 percent of their job time solely in the maintenance of teletype multiplexer systems. This is twice the amount of time their counterparts, Fixed Radio Teletype Multiplexer Technicians, spend performing the same type of maintenance (see discussion on Fixed Wideband Communications Equipment Personnel, described earlier). Representative tasks performed include:

- adjust frequency shift converter components
- replace frequency shift converters
- replace frequency shift keyers
- isolate malfunctions in frequency shift converters
- repair malfunctions in frequency shift converters
- adjust loop current control panel components

This group averages 63 tasks performed, and 64 months TAFMS.

VIII. MOBILITY PERSONNEL (STG192, N=10). The 10 members of this independent job spend 47 percent of their total job time in mobility-related functions. Incumbents do not perform the routine maintenance functions associated with this AFSC, but instead concentrate on the installation and removal of various types of mobile or transportable radio equipment and antennas. Tasks common to this job include:

- camouflage equipment
- anchor equipment vans and shelters
- construct facilities to support field activities
- inspect waveguides
- remove mobile communication equipment
- disassemble feedhorn assembly components
- layout power cables

Mobility personnel average 84 months TAFMS and perform an average of 35 tasks.

IX. ELECTRONIC AND INSTALLATION (E&I) PERSONNEL (STG369, N=56). With performance of electronic and installation functions accounting for 69 percent of their job time, the 56 members of this job are responsible for the installation, electronic wiring of, and initial testing of wideband communication equipment worldwide. Primarily junior personnel, 27 percent are located overseas. Representative tasks performed include:

- perform installation functions using power tools
- install communication/electronic equipment using drawings and sketches
- perform on-site E&I procedures
- install cross connections
- form and fan communication/electronic equipment cables
- lace cable assemblies
- install intermediate distribution frames (IDF)

This group averages 74 months TAFMS and performs an average of 49 tasks.

Summary

Four clusters (including 16 jobs) and five independent jobs were identified in the career ladder structure analysis. The clusters were directly involved with functions associated with maintenance of intrusion detection systems, microwave and fixed radio systems, and supervisory or managerial functions. The independent jobs were directly involved with training, electronic and installation functions, mobility, and maintenance of closed-circuit televisions and teletype multiplexer systems. These nine groups, combined, present a clear picture of the Wideband Communications Equipment Specialty.

ANALYSIS OF DAFSC GROUPS

DAFSC analysis identifies similarities and differences in task and duty performance at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as AFR 39-1 Specialty Descriptions and the STS, reflect what career ladder personnel are actually doing in the field.

Comparison of the duty and task performance between DAFSCs 30430 and 30450 indicated that, while there are some minor differences, the jobs they perform are essentially the same, as evidenced by the fact that there is an 80 percent similarity in the tasks they perform. Therefore, they will be discussed as a combined group in this report. Survey data, if desired, will also be available for each separate skill level.

The distribution of skill-level groups across major specialty jobs is shown in Table 5, while Table 6 shows the relative time spent on each duty across the two skill-level groups being discussed.

The AFSC 304X0 career ladder shows a typical career progression pattern seen in most mission equipment maintenance specialties as one advances from the 3-skill level through the 7-skill level. As shown in Table 6, AFSC 30430/50 personnel are spending the majority of their job time on technical tasks, while 43 percent of the AFSC 30470 job incumbent's time is spent on the supervisory duties A-D (see Table 6). Table 7 presents representative tasks of and differences across skill-level groups, while Tables 8 and 9, respectively, present job descriptions for the AFSC 30430/50 and 30470 skill levels.

Skill Level Descriptions

DAFSC 30430/50: As in most career ladders, the job performed by 3- and 5-skill level respondents is largely technical in nature. The 1,319 airmen in the 3- and 5-skill level group (representing 72 percent of the survey sample) perform an average of 142 tasks, with 271 of the total 1,423 survey tasks accounting for 55 percent of their job time. Twelve percent of their job time is spent in BISS-related tasks, 11 percent in general maintenance, and 23 percent in specialized maintenance (see Table 6). The average TICF is 51 months, with an average TAFMS of 69 months. Forty-two percent of this group work as Fixed or Mobile Wideband Communications Equipment Personnel (see Table 5).

DAFSC 30470: Seven-skill level personnel comprise 28 percent of the survey sample. This group averages 136 months TICF, 165 months TAFMS, and performs an average of 120 tasks. Most 7-skill level personnel work as Supervisors (56 percent) or Fixed Wideband Communications Equipment personnel (13 percent, see Table 5). Like many other career ladders, supervisory tasks account for a large percentage of job time at the 7-skill level (43 percent, see Table 6). This trend is supported by Table 9, where tasks performed by the highest percentages of 7-skill level personnel are primarily supervisory in nature.

TABLE 5
DISTRIBUTION OF 304X0 DAFSC GROUP MEMBERS
ACROSS MAJOR SPECIALTY JOBS
(PERCENT RESPONDING)

<u>MAJOR SPECIALTY JOBS</u>	<u>DAFSC 30430/50 (N=1,319)</u>		<u>DAFSC 30470 (N=513)</u>	
	<u>Nmbr</u>	<u>Pct</u>	<u>Nmbr</u>	<u>Pct</u>
I. BASE INTRUSION SECURITY SYSTEM (BISS) PERSONNEL (N=261)	227	17%	34	7%
II. MOBILE WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL (N=283)	254	19%	28	5%
III. FIXED WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL (N=377)	309	23%	68	13%
IV. SUPERVISORY/MANAGEMENT PERSONNEL (N=483)	193	15%	289	56%
V. TECHNICAL TRAINING INSTRUCTORS (N=41)**	23	2%	18	4%
VI. CLOSED-CIRCUIT TELEVISION (CCTV) TECHNICIANS (N=10)**	8	1%	2	*
VII. TELETYPE MULTIPLEXER SYSTEM TECHNICIANS (N=11)**	10	1%	1	*
VIII. MOBILITY PERSONNEL (N=10)**	9	1%	1	*
IX. ELECTRONIC AND INSTALLATION (E&I) PERSONNEL (N=56)**	46	3%	10	2%
X. PERCENT NOT GROUPED (N=310)	240	18%	62	12%

* Denotes less than .5 percent

** Independent Job

NOTE: Columns may not add to 100 percent due to rounding

TABLE 6
RELATIVE PERCENT TIME SPENT ON DUTIES BY 304X0 DAFSC GROUPS

DUTIES	DAFSC 30430/50 (N=1,319)	DAFSC 30470 (N=513)
A ORGANIZING AND PLANNING	4	12
B DIRECTING AND IMPLEMENTING	2	8
C INSPECTING AND EVALUATING	2	12
D TRAINING	5	11
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	6	11
F PERFORMING SUPPLY FUNCTIONS	5	6
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	9	5
H PERFORMING SATELLITE OPERATION FUNCTIONS	*	*
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	11	6
J MAINTAINING ANTENNA SYSTEMS	3	2
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCEIVERS	7	4
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCEIVERS	5	3
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	5	2
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	3	1
O MAINTAINING MODEMS	*	*
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	12	4
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	9	5
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	7	4
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	4	3
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	1	1

* Denotes less than .5 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE 7

REPRESENTATIVE TASKS FOR 304X0 DAFSC GROUPS
WITH DIFFERENCES BETWEEN THE GROUPS
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 30430/ 30450 (N=1,319)	DAFSC 30470 (N=513)	DIFFERENCE
I222 PERFORM CORROSION CONTROL	64	31	+33
I230 REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	50	24	+26
G189 PERFORM TURN-ON PROCEDURES	59	36	+23
G188 PERFORM TURN-OFF PROCEDURES	59	36	+23
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	50	29	+21
I234 REMOVE ELECTRONIC COMPONENTS, OTHER THAN MICRO- MINIATURE COMPONENTS, USING SOLDERING METHODS	46	27	+19

F130 MAINTAIN OFFICE SUPPLIES	15	33	-18
D77 DETERMINE OJT TRAINING REQUIREMENTS	15	34	-19
A7 DRAFT BUDGET REQUIREMENTS	7	27	-20
C53 EVALUATE PROCEDURES FOR STORAGE, INVENTORY, AND INSPECTION OF PROPERTY ITEMS	8	28	-20
E113 PREPARE SUPPLY JUSTIFICATIONS	15	35	-20
A14 ESTABLISH STANDARD OPERATING PROCEDURES (SOP)	8	28	-20

TABLE 8
REPRESENTATIVE TASKS PERFORMED BY AFSC 30430/30450
SKILL LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
I222 PERFORM CORROSION CONTROL	64
G189 PERFORM TURN-ON PROCEDURES	59
G188 PERFORM TURN-OFF PROCEDURES	59
F136 PREPARE REPARABLE ITEMS FOR TURN-IN	50
I230 REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	50
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	50
F135 PREPARE NONREPARABLE ITEMS FOR TURN-IN	49
E102 MAKE ENTRIES ON MAINTENANCE FORMS	47
D73 CONDUCT OJT	46
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	46
G186 PERFORM TEST TONE LEVEL TESTS	46
I234 REMOVE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	46
G156 OBSERVE TEST EQUIPMENT, SUCH AS SCOPES AND SIGNAL ANALYZERS, TO DETERMINE EQUIPMENT OPERATION	44
I242 REPAIR CABLE ASSEMBLIES	44
I249 REPLACE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	43
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	42
R1299 OPERATE SMALL GOVERNMENT VEHICLES, SUCH AS PICKUPS OR PASSENGER VEHICLES	41
I258 UNPACK COMPONENTS AND MODULES	41
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	41
I240 REMOVE MOUNTING HARDWARE	41
I255 REPLACE MOUNTING HARDWARE	41
G165 PERFORM CIRCUIT FAULT ISOLATION PROCEDURES	41
I259 UNPACK TEST EQUIPMENT	40
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	40

TABLE 9
REPRESENTATIVE TASKS PERFORMED BY AFSC 30470
SKILL LEVEL PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
B41 WRITE CORRESPONDENCE	76
B29 COUNSEL PERSONNEL	66
A4 DETERMINE WORK PRIORITIES	64
C60 PREPARE APR	60
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	56
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	54
C47 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	53
A6 DEVELOP WORK PROCEDURES	51
A20 PLAN WORK ASSIGNMENTS	50
D73 CONDUCT OJT	49
C45 EVALUATE CAPABILITY OF EQUIPMENT	49
E92 MAINTAIN CORRESPONDENCE FILES	49
F139 REVIEW TABLE OF ALLOWANCES (TA)	48
A3 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, AND SUPPLIES	48
C51 EVALUATE INSPECTION REPORTS	48
E106 PREPARE IN-HOUSE DOCUMENTS, SUCH AS CHECKLISTS	46
E91 DISTRIBUTE CORRESPONDENCE, TECHNICAL INFORMATION, OR DIRECTIVES	45
F138 RESEARCH SUPPLY CATALOGS	45
A25 SCHEDULE LEAVES	44
D79 DEVELOP TRAINING PLANS	44
A12 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	42
B31 DIRECT MAINTENANCE CREW ACTIVITIES	41
F137 PREPARE REQUISITIONS FOR PARTS, TOOLS, AND SUPPLIES	41
A16 PLAN BRIEFINGS	40
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	40
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	39
C58 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	39
D84 EVALUATE TRAINING METHODS	38

Summary

Career ladder progression in this specialty is typical of most mission equipment maintenance career ladders through all skill levels. As one progresses from the 3- to the 5-skill level, technical tasks account for a large proportion of job time. At the 7-skill level, percent time spent in managerial areas increases significantly. Representation of skill levels across specialty jobs shows the majority performing as either Supervisors or Fixed or Mobile Wideband Communications Equipment personnel.

ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS

The results of the skill level and job structure analyses were compared with the AFR 39-1 Specialty Descriptions, dated 1 February 1988, for the Wideband Communications Equipment Specialty. The descriptions in AFR 39-1 describe in broad terms the tasks and duties performed by members of the various skill-level groups of a career ladder. There are two descriptions applicable to this study. One describes the jobs of AFSCs 30410, 30430, and 30450; the second describes the jobs of AFSC 30470.

The descriptions for the 3-, 5-, and 7-skill levels were well supported by the findings of this survey. The descriptions depict the highly technical aspect of the job, as well as the increase in supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of members of all of the nine major jobs identified by the job structure analysis process.

JOB SATISFACTION

An important part of analysis within any OSR involves the job satisfaction of members and how their responses compare with the responses of members of similar Air Force specialties. Reported job interest, perceived utilization of talents and training, satisfaction with sense of accomplishment gained from jobs, and expressed reenlistment intentions for the AFSC 304X0 specialty jobs are presented in Table 10. Table 11 presents the job satisfaction data for the AFSC 304X0 respondents, broken down into three groups (first-enlistment, second-enlistment, and career). A comparative sample of mission equipment maintenance personnel surveyed by the USAF Occupational Measurement Center during 1987 also appear in Table 11. These career fields included AFSCs 303X1, 303X3, 304X6, 321X1, 427X0, 427X2, and 427X3.

The responses of members in most jobs were generally positive. Most indicated effective use of talents and training. No one particular group perceived their jobs as being least satisfying, although Teletype Multiplexer System Technicians and Mobility Personnel found their jobs the least interesting of all the jobs identified, and E&I Personnel expressed the least

TABLE 10

**JOB SATISFACTION INDICATORS BY MAJOR SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)**

	<u>BASE INTRUSION SECURITY SYSTEM (BISS) PERSONNEL (STG204)</u>	<u>MOBILE WIDEBAND COMM EQUIPMENT PERSONNEL (STG124)</u>	<u>FIXED WIDEBAND COMM EQUIPMENT PERSONNEL (STG106)</u>
<u>EXPRESSED JOB INTEREST:</u>			
INTERESTING	72	71	81
SO-SO	17	19	12
DULL	11	9	7
<u>PERCEIVED USE OF TALENTS:</u>			
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	78 21	16 84	84 15
<u>PERCEIVED USE OF TRAINING:</u>			
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	54 45	82 18	90 10
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>			
SATISFIED	66	60	74
NEUTRAL	14	14	11
DISSATISFIED	20	26	15
<u>REENLISTMENT INTENTIONS:</u>			
WILL/PROBABLY WILL REENLIST	60	66	65
WILL NOT/PROBABLY WILL NOT REENLIST	37	33	31
WILL RETIRE	3	1	3

* Columns may not add to 100 percent due to nonresponse and rounding

TABLE 10 (CONTINUED)

JOB SATISFACTION INDICATORS BY MAJOR SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

	SUPERVISORY/ MANAGEMENT PERSONNEL (STG019)	TECHNICAL TRAINING INSTRUCTORS (STG372)**	CLOSED-CIRCUIT TELEVISION (CCTV) TECHNICIANS (STG138)**
<u>EXPRESSED JOB INTEREST:</u>			
INTERESTING	74	73	60
SO-SO	14	17	30
DULL	12	7	10
<u>PERCEIVED USE OF TALENTS:</u>			
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	73 27	76 22	80 20
<u>PERCEIVED USE OF TRAINING:</u>			
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	55 45	73 15	60 40
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>			
SATISFIED	65	73	60
NEUTRAL	11	7	10
DISSATISFIED	23	17	30
<u>REENLISTMENT INTENTIONS:</u>			
WILL/PROBABLY WILL REENLIST	60	83	90
WILL NOT/PROBABLY WILL NOT REENLIST	22	15	0
WILL RETIRE	17	0	10

* Columns may not add to 100 percent due to nonresponse and rounding

** Independent Job

TABLE 10 (CONTINUED)

JOB SATISFACTION INDICATORS BY MAJOR SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

	TELETYPE MULTIPLEXER SYSTEM TECHNICIANS (STG206)**	MOBILITY PERSONNEL (STG192)**	ELECTRONIC AND INSTALLATION (E&I) PERSONNEL (STG369)**
<u>EXPRESSED JOB INTEREST:</u>			
INTERESTING	45	50	75
SO-SO	45	40	14
DULL	9	10	11
<u>PERCEIVED USE OF TALENTS:</u>			
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	82 18	90 10	77 23
<u>PERCEIVED USE OF TRAINING:</u>			
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	64 36	60 40	41 59
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>			
SATISFIED	45	60	68
NEUTRAL	27	0	14
DISSATISFIED	27	40	18
<u>REENLISTMENT INTENTIONS:</u>			
WILL/PROBABLY WILL REENLIST	55	70	50
WILL NOT/PROBABLY WILL NOT REENLIST	45	30	46
WILL RETIRE	0	0	4

* Columns may not add to 100 percent due to nonresponse and rounding

** Independent Job

TABLE 11

COMPARISON OF TAFMS GROUP JOB SATISFACTION INDICATORS
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	304X0 (N=498)	1987 COMP SAMPLE (N=2,187)	304X0 (N=591)	1987 COMP SAMPLE (N=994)	304X0 (N=744)	1987 COMP SAMPLE (N=1,613)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	73	72	71	73	73	78
SO-SO	17	17	16	14	15	14
DULL	9	11	13	12	11	8
<u>PERCEIVED USE OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	77	78	78	78	78	82
LITTLE OR NOT AT ALL	22	22	22	22	22	17
<u>PERCEIVED USE OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	68	83	64	81	68	79
LITTLE OR NOT AT ALL	31	17	35	19	32	20
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
SATISFIED	68	70	63	69	66	71
NEUTRAL	11	13	14	11	12	10
DISSATISFIED	20	17	23	20	22	19
<u>REENLISTMENT INTENTIONS:</u>						
WILL/PROBABLY WILL REENLIST	55	57	63	67	69	73
WILL NOT/PROBABLY WILL NOT REENLIST	44	43	36	31	15	10
WILL RETIRE	0	0	0	1	15	16

* Columns may not add to 100 percent due to nonresponse and rounding

** Comparative Sample is composed of all mission equipment maintenance career ladders surveyed in 1987
(includes AFSCs 303X1, 303X3, 304X6, 321X1, 427X0, 427X2, and 427X3)

likelihood to reenlist. Overall, personnel across all career ladder jobs are satisfied with their jobs, feel their talents and training are adequately utilized, and gain some sense of accomplishment from their work.

In a comparative study of experience groups of the AFSC 304X0 career ladder and mission equipment maintenance personnel surveyed by OMC in 1987, data indicate that AFSC 304X0 personnel are slightly lower across most job satisfaction indicators (see Table 11). The biggest difference is in perceptions of the use of training, where AFSC 304X0 1-48 months TAFMS groups and 49-96 months TAFMS groups show a much lower satisfaction than the comparative sample (see Table 11).

In a 1981 survey of the AFSC 304X0 career ladder, job satisfaction was seen to be slightly lower in comparison with the current survey (see Table 12). The biggest difference is noted in figures for reenlistment intentions, where the percent planning to reenlist was substantially higher for the 1987 sample (63 percent) than for the 1981 sample (45 percent). The 1981 sample did show a higher perception of training use than did the 1988 sample (72 percent versus 67 percent).

COMPARISON TO PREVIOUS SURVEY

The results of this survey were compared to those of the previous Occupational Survey Report AFPT 90-304-422, dated November 1981, for the AFSC 304X0 career ladder. Wideband Communications Equipment (AFSC 304X0), Ground Radio Communications (AFSC 304X4), and the Space Systems Equipment (AFSC 304X6) specialties were surveyed together. For purposes of comparison, only those jobs related to Wideband Communications Equipment will be considered.

The identified career ladder structure for the AFSC 304X0 career ladder in the present survey was similar to that of 1981, indicating the types of jobs which existed in 1981 have remained relatively unchanged through the years. In both analyses, Supervisory, Electronic and Installation, BISS, Technical Training Instructors, and Mobility jobs were identified. The current analysis, however, shows a more diverse career ladder structure, with the identification of Closed-Circuit Television Technicians and Teletype Multiplexer System Technicians. In the 1981 survey, Microwave Radio systems were described as part of the Radio Relay Maintenance job cluster. The current analysis has identified Tropospheric Radio Maintenance as well as Microwave Radio Maintenance, and has broken these two types of maintenance into four distinct jobs: Mobile and Fixed Tropospheric Radio Technicians, and Mobile and Fixed Microwave Radio Technicians. Job satisfaction was seen to be slightly higher for the current survey sample than that of 1981.

TABLE 12

COMPARISON OF JOB SATISFACTION DATA
(PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	1988 (N=498)	1981 (N=495)	1988 (N=591)	1981 (N=147)	1988 (N=744)	1981 (N=352)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	73	65	71	60	73	72
SO-SO	17	17	16	19	15	14
DULL	9	17	13	20	11	13
<u>PERCEIVED USE OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	77 22	71 29	78 22	74 26	78 22	79 21
<u>PERCEIVED USE OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	68 31	66 34	64 35	67 33	68 32	75 24
<u>SENSE OF ACCOMPLISHMENT FROM WORK:</u>						
SATISFIED	68	58	63	57	66	65
NEUTRAL	11	15	14	11	12	11
DISSATISFIED	20	28	23	32	22	26
<u>REENLISTMENT INTENTIONS:</u>						
WILL/PROBABLY WILL REENLIST	55	34	63	42	69	57
WILL NOT/PROBABLY WILL NOT REENLIST	44	44	36	35	15	13
WILL RETIRE	0	22	0	22	15	30

* Columns may not add to 100 percent due to nonresponse and rounding

TRAINING ANALYSIS

Occupational survey data provide several sources of information which can be used to make training programs more relevant and meaningful to students. The three most commonly used types of occupational survey information are the percent of first-enlistment personnel performing tasks covered in the job inventory, ratings of relative difficulty of tasks, and the ratings of relative emphasis which should be placed on tasks for first-enlistment training. These data can be used in evaluating training documents such as the STS and the POI.

First-Enlistment Personnel

First-enlistment personnel account for 27 percent of the survey sample. This group averages 30 months TICF, 33 months TAFMS, and performs an average of 144 tasks.

Analysis of tasks performed by first-enlistment respondents generally is useful to training personnel. Table 13 presents the relative percent time spent on duties by first-enlistment Wideband Communications Equipment personnel, while Table 14 contains examples of tasks performed by these personnel. Most of the tasks involved general maintenance or equipment operations. This is consistent with previous findings that these duties account for a substantial percent of job time for 3- and 5-skill level personnel (20 percent). Figure 2 reflects the distribution of first-enlistment respondents across career ladder jobs. Over 31 percent of the 1-48 months TAFMS respondents grouped with the Fixed Wideband Communications Equipment personnel cluster, indicating that most first-term airmen are assigned to this particular area. Within this cluster, it is seen that 52 percent of first-enlistment personnel are Fixed Microwave Radio Technicians and another 26 percent are Fixed Radio Teletype Multiplexer Technicians. Therefore, maintenance on Fixed Wideband Communication Equipment systems should receive a substantial degree of emphasis during first-enlistment training. Eighteen percent of first-enlistment personnel did not group with any of the identified jobs because of the way in which they answered the survey, perceived their jobs, or as a function of the diversity of the career ladder.

One area of analysis that is useful to training personnel is the type of equipment maintained or operated by various first-enlistment personnel. This analysis can be useful in determining what types of equipment to train students on in technical school or as part of OJT. Table 15 presents the various types of equipment maintained by AFSC 304X0 personnel and the percent members responding. Analysis shows the majority of first-enlistment personnel maintaining BISS equipment or the AN/TRC-97A Super High Frequency (SHF) Transceiver.

TABLE 13
RELATIVE PERCENT TIME SPENT ON DUTIES BY AFSC 304X0
FIRST-ENLISTMENT PERSONNEL

DUTIES	PERCENT TIME SPENT
A ORGANIZING AND PLANNING	2
B DIRECTING AND IMPLEMENTING	1
C INSPECTING AND EVALUATING	1
D TRAINING	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	4
F PERFORMING SUPPLY FUNCTIONS	4
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	11
H PERFORMING SATELLITE OPERATION FUNCTIONS	*
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	13
J MAINTAINING ANTENNA SYSTEMS	3
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCEIVERS	7
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCEIVERS	5
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	6
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	3
O MAINTAINING MODEMS	*
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	14
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	11
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	6
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	5
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	1

* Denotes less than .5 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE 14
 REPRESENTATIVE TASKS PERFORMED BY AFSC 304X0
 FIRST-ENLISTMENT PERSONNEL
 (1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=498)
I222 PERFORM CORROSION CONTROL	72
G189 PERFORM TURN-ON PROCEDURES	63
G188 PERFORM TURN-OFF PROCEDURES	63
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	56
I230 REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	54
G186 PERFORM TEST TONE LEVEL TESTS	51
G156 OBSERVE TEST EQUIPMENT, SUCH AS SCOPES AND SIGNAL ANALYZERS, TO DETERMINE EQUIPMENT OPERATION	50
I234 REMOVE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	49
I259 UNPACK TEST EQUIPMENT	47
I258 UNPACK COMPONENTS AND MODULES	47
F136 PREPARE REPARABLE ITEMS FOR TURN-IN	46
E102 MAKE ENTRIES ON MAINTENANCE FORMS	46
I249 REPLACE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	46
F135 PREPARE NONREPARABLE ITEMS FOR TURN-IN	46
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	45
I242 REPAIR CABLE ASSEMBLIES	44
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	43
G165 PERFORM CIRCUIT FAULT ISOLATION PROCEDURES	43
K351 ADJUST AUTOMATIC GAIN CONTROL (AGC) COMPONENTS	43
I257 SPLICE WIRING AND CABLES	43
I255 REPLACE MOUNTING HARDWARE	42
I218 ISOLATE MALFUNCTIONS IN SYSTEMS TO SPECIFIC EQUIPMENT	42
I243 REPAIR INTERNAL WIRING	41
I240 REMOVE MOUNTING HARDWARE	41
G172 PERFORM IDLE CHANNEL NOISE TESTS	41
I237 REMOVE ELECTRONIC SUBASSEMBLIES USING SOLDERING METHODS	41
I236 REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER THAN SOLDERING	40
I245 REPLACE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	40

DISTRIBUTION OF FIRST-ENLISTMENT PERSONNEL ACROSS SPECIALTY JOBS (N=498)

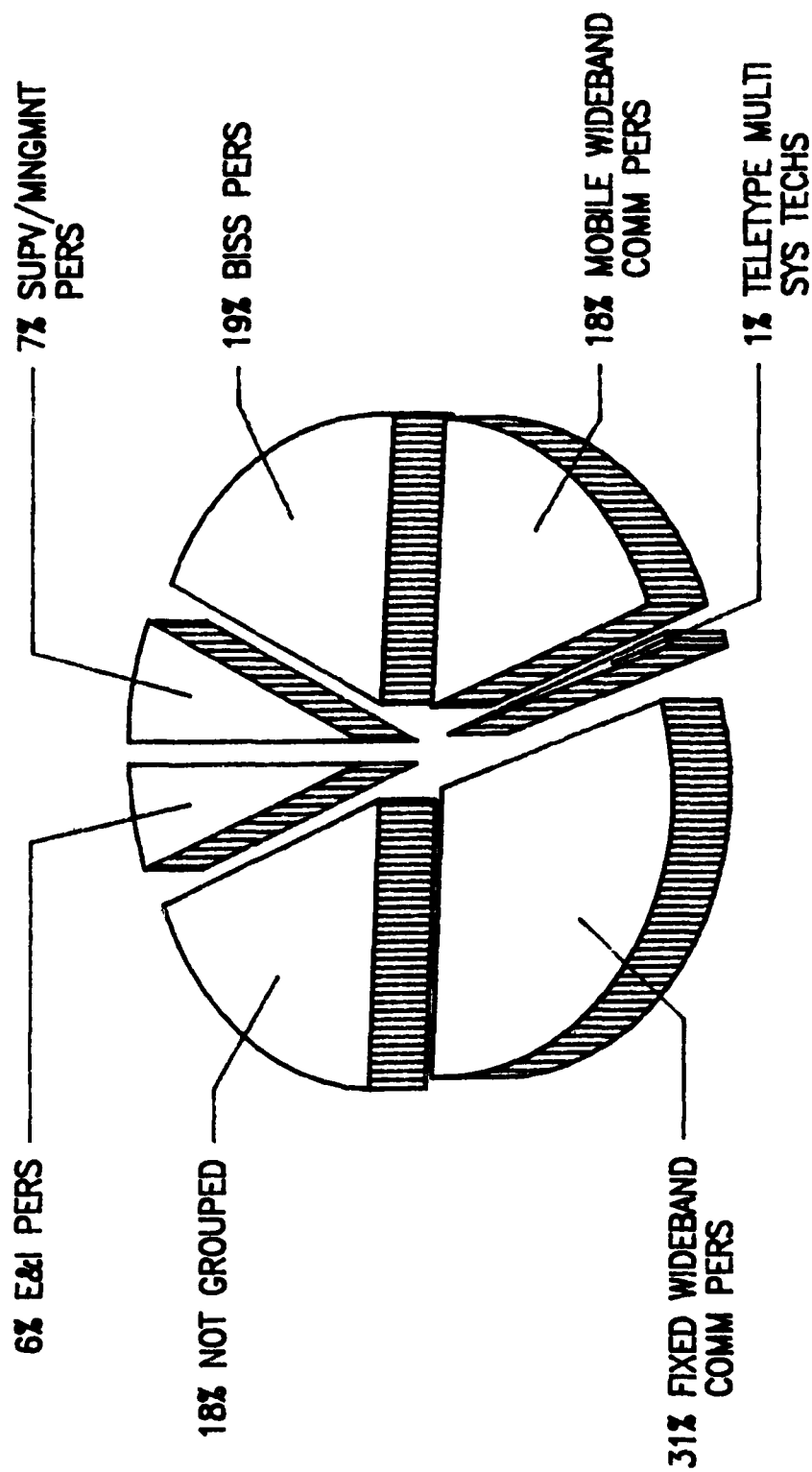


Figure 2

TABLE 15
EQUIPMENT MAINTAINED BY 304X0
FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS TAFMS)

<u>HF/SSB/ISB EQUIPMENT MAINTAINED</u>	<u>PERCENT MEMBERS RESPONDING</u>
205U-1	1
208A-1	2
208U-3	3
208U-10	3
310U-1	3
618T-1	3
651F-1	3
671G-1/F-1	3
AN/FRC-153	6
GA-11038	3
KWM-2/2A	8
KWT-6/5	5
MW-2/3	3
R-2174	4
R-390A	3

<u>SHF TRANSCEIVER EQUIPMENT MAINTAINED</u>	<u>PERCENT MEMBERS RESPONDING</u>
AN/FRA-90	4
AN/FRC-84	3
AN/FRC-109	3
AN/FRC-127	9
AN/FRC-148	2
AN/FRC-155/157/158/159/162/165	9
AN/FRC-167	3
AN/FRC-168	3
AN/FRC-171	6
AN/GSQ-120	1
AN/TRC-97A	20
AN/TRC-150	3
AN/TRC-170	9
MSC-64	2
Siemens 120/8000	4
Terracom TSC-600	6

TABLE 15 (CONTINUED)
EQUIPMENT MAINTAINED BY 304X0
FIRST-ENLISTMENT PERSONNEL
(1-48 MONTHS TAFMS)

<u>VHF/UHF RECEIVERS EQUIPMENT MAINTAINED</u>	<u>PERCENT MEMBERS RESPONDING</u>
AN/FRC-39 Family	6
AN/FRC-56	3
AN/FRC-96/97	8
AN/FRC-114	3
Granger 6000	6
<u>BISS EQUIPMENT MAINTAINED</u>	<u>PERCENT MEMBERS RESPONDING</u>
AN/GSQ-199	19
AN/GSS-20	21
AN/GSS-29	24
AN/GSS-30	4
AN/GXS-2	23
AN/PPS-15	4
GPS-15	8
GSM-266	13
GSS-26A	20
GSS-32	18
GSS-37	8
GXM-1	11

Task Difficulty (TD)

The relative difficulty of each task in the inventory was assessed through ratings by 57 experienced Wideband Communications Equipment NCOs. Their ratings were processed to produce an ordered listing of all tasks in terms of their relative difficulty, and were standardized to have an average difficulty of 5.00, with a standard deviation of 1.00. For a more complete description of these ratings, see the Task Factor Administration section in SURVEY METHODOLOGY.

In looking at tasks with the highest difficulty ratings (see Table 16), data indicate that most of the tasks deal with supervisory functions and maintenance functions related to voice frequency multiplexers, modems, and BISS.

Training Emphasis (TE)

Forty-six senior NCOs in the Wideband Communications Equipment specialty reviewed the job inventory, rating the degree of emphasis that should be placed on each task in first-enlistment training. Their ratings were processed to provide a rank order listing of tasks from high degree of training emphasis to no training required. The average rating was 1.68 and the standard deviation was 1.03, so tasks receiving ratings of 2.71 or higher were considered to have high training emphasis. For a more complete description of these ratings, see the Task Factor Administration section in SURVEY METHODOLOGY.

Of those tasks with highest TE ratings, most were performed by high percentages of first-job personnel (1-24 months TAFMS, see Table 17). Most of these tasks involved equipment operation functions, receiver, or voice frequency multiplexer maintenance.

Specialty Training Standard (STS)

A comprehensive review of the STS for AFSC 304X0, dated June 1983, compared STS items to survey data. The matching was accomplished with the help of training personnel from the 3300th Technical Training Wing at Keesler AFB, Mississippi. STS paragraphs containing performance information were evaluated. In looking at paragraphs matched with survey tasks, data generally support the significant paragraphs or subparagraphs. A few areas, however, were not supported. These paragraphs dealt with inspection of installed wideband communications equipment, recognition of defective test equipment, performance testing of equipment, and alignment of antennas (see Table 18). Training personnel and subject-matter experts should review these particular areas to determine if inclusion in future revisions to the STS are warranted. Technical tasks matched to elements of the STS showed high percentages of first-enlistment, and 5- and 7-skill level personnel performing those tasks. First-enlistment personnel tended to have a consistently higher percentage of members performing those tasks, followed by 5-skill level personnel.

TABLE 16

TASKS RATED HIGHEST IN TASK DIFFICULTY (TD)

TASKS	TASK DIF*	PERCENT MEMBERS PERFORMING		
		1ST ENL (N=498)	30450 (N=1,099)	30470 (N=513)
A7	7.94	2	8	27
A15	7.85	1	3	11
M631				
DRAFT BUDGET REQUIREMENTS				
ESTABLISH UNIT MANPOWER REQUIREMENTS				
ISOLATE MALFUNCTIONS IN CONTINUOUSLY VARIABLE SLOPE				
DELTA (CVSD) MODULATION MULTIPLEXERS	7.38	3	3	3
G153	7.35	2	3	2
MAINTAIN GSQ 120 RADAR TRANSFER SYSTEMS	7.22	12	22	44
D79	7.20	2	5	29
DEVELOP TRAINING PLANS	7.19	0	1	4
C63	7.15	4	6	23
WRITE STAFF STUDIES, SURVEYS, AND SPECIAL REPORTS	7.11	5	4	4
C62				
WRITE CIVILIAN PERFORMANCE RATINGS				
C44				
EVALUATE BUDGET REQUIREMENTS				
O796				
ISOLATE MALFUNCTIONS IN DIGITAL TO QPSK MODEMS				
P870				
ISOLATE MALFUNCTIONS IN CMSD PRINTED CIRCUIT BOARD TO				
COMPONENTS				
M633	7.04	15	14	6
ISOLATE MALFUNCTIONS IN ECHO SUPPRESSORS	7.03	5	5	4
A8	7.03	3	8	30
DRAFT SUPPLEMENTS AND CHANGES TO DIRECTIVES				
D78				
DEVELOP RESIDENT COURSE OR CAREER DEVELOPMENT COURSE				
(CDC) CURRICULUM MATERIALS				
O795	7.02	3	3	8
ISOLATE MALFUNCTIONS IN DIGITAL TO BPSK MODEMS	7.01	5	4	3
Q1009	6.97	0	1	0
ISOLATE MALFUNCTIONS IN ATOMIC STANDARDS				
O798	6.97	3	2	3
ISOLATE MALFUNCTIONS IN DC TO AUDIO PSK MODEMS				
S1372	6.96	0	1	1
PREPARE CIVIL ENGINEERING SCHEMES				
O801	6.95	0	0	1
ISOLATE MALFUNCTIONS IN DC TO RF PSK MODEMS				
Q1020	6.94	7	4	4
ISOLATE MALFUNCTIONS IN FIBER OPTIC SYSTEMS				
M644				
ISOLATE MALFUNCTIONS IN SOLID-STATE PULSE POSITION				
MODULATION (PPM) MULTIPLEXERS	6.93	4	3	3

* Average TD rating is 5.00 and the standard deviation is 1.00

TABLE 17

TASKS RATED HIGHEST IN TRAINING EMPHASIS (TE)

TASKS	TNG EMP*	PERCENT MEMBERS PERFORMING		TASK DIF**
		1ST JOB (N=101)	1ST ENL (N=498)	
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	5.85	67	56	3.56
G165 PERFORM CIRCUIT FAULT ISOLATION PROCEDURES	5.72	49	43	5.87
G156 OBSERVE TEST EQUIPMENT, SUCH AS SCOPES AND SIGNAL ANALYZERS, TO DETERMINE EQUIPMENT OPERATION	5.67	62	50	5.10
G186 PERFORM TEST TONE LEVEL TESTS	5.61	65	51	2.99
E102 MAKE ENTRIES ON MAINTENANCE FORMS	5.50	48	46	3.50
G161 PERFORM BASEBAND SWEEPS	5.39	43	30	3.63
G160 PERFORM BASEBAND LOADING	5.30	46	36	3.65
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	5.28	59	45	4.99
G172 PERFORM IDLE CHANNEL NOISE TESTS	5.24	53	41	3.45
G183 PERFORM SELECTIVE VOLTMEETER NOISE SLOT MEASUREMENTS	5.02	45	35	4.17
G181 PERFORM PREOPERATIONAL CHECKS OF EQUIPMENT	4.65	29	30	4.21
G189 PERFORM TURN-ON PROCEDURES	4.65	76	63	2.58
G187 PERFORM TRANSMISSION LEVEL TESTS	4.63	36	32	3.29
G188 PERFORM TURN-OFF PROCEDURES	4.63	78	63	2.36
M630 ALIGN TIME DIVISION MULTIPLEXERS	4.57	18	16	6.18
K420 PERFORM PMI ON FM RECEIVERS	4.52	50	39	4.84
M629 ALIGN FREQUENCY DIVISION MULTIPLEXERS	4.48	40	32	5.74
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	4.46	54	43	2.63
M646 ISOLATE MALFUNCTIONS IN SOLID-STATE TIME DIVISION MULTIPLEXERS	4.41	19	15	6.70
G173 PERFORM IMPULSE NOISE TESTS	4.33	35	20	4.31

* Training Emphasis has an average of 1.68 and a standard deviation of 1.03 (High TE = 2.71)

** Average TD rating is 5.00 and the standard deviation is 1.00

TABLE 18

EXAMPLES OF AFSC 304X0 STS ITEMS
NOT SUPPORTED BY OSR DATA

STS REFERENCE/TASKS	TNG EMP*	PERCENT MEMBERS PERFORMING			TSK DIF**
		FIRST- ENLISTMENT (N=498)	5-SKILL LEVEL (N=1,099)	7-SKILL LEVEL (N=513)	
9d(1) INSTALLATION OF WIDEBAND COMMUNICATIONS EQUIPMENT 1a/a 3c 4c					
S1364 PERFORM POST-INSTALLATION OPERATION TESTS	1.48	8%	6%	6%	5.46
9d(2) INTERCONNECTION OF WIDEBAND COMMUNICATIONS EQUIPMENT 2b 3c 4c					
S1389 VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF INSTALLED EQUIPMENT	1.74	10%	9%	9%	4.90
10d RECOGNIZE DEFECTIVE TEST EQUIPMENT THROUGH INDICATIONS OBTAINED DURING USE 2b 3c 4c					
I217 ISOLATE MALFUNCTIONS IN RADIO RELAY PECULIAR TEST EQUIPMENT	3.13	16%	17%	13%	5.68
I216 ISOLATE MALFUNCTIONS IN GENERAL USER CALIBRATION TEST EQUIPMENT	2.46	15%	18%	15%	5.49
11a(2) SIGNALING AND TERMINATING EQUIPMENT 2b 3c 4c					
Q1089 PERFORM PMI ON HYBRID/FOUR-WIRE TERM UNITS	2.46	11%	9%	6%	4.25
O1096 PERFORM PMI ON RINGDOWN CONVERTERS	2.24	14%	11%	6%	4.00
11a(9) ANTENNA SYSTEMS 2b/- 3c 4c					
J308 PERFORM PMI ON DIPOLE ANTENNAS	1.02	3%	2%	2%	3.76
J310 PERFORM PMI ON PARABOLIC ANTENNAS	1.59	16%	18%	8%	4.03

* Training Emphasis has an average of 1.68 and a standard deviation of 1.03 (High TE = 2.71)

** Task Difficulty has an average of 5.00 and a standard deviation of 1.00

Tasks not matched to any element of the STS are listed at the end of the STS computer listing included in the training extract. These were reviewed to determine if there were any tasks concentrated around any particular functions or jobs. There were 97 tasks not referenced to the STS and performed by 20 percent or more respondents of the STS target groups. The only trend noted was that performing general maintenance or equipment operation functions had the greatest percentage of unreferenced tasks. Many of the unreferenced tasks are managerial or supervisory in nature and are difficult to reference because that area of this STS, like most STSs, tended to be somewhat restricted in the scope of coverage. Examples of technical tasks performed by 20 percent or more respondents of the STS target groups, but which are not referenced to any STS element, are displayed in Table 19. Training personnel and subject-matter experts should review these and other eligible unreferenced tasks to determine if inclusion in the STS is warranted.

Plan of Instruction (POI)

The POI for Course E3ABR30430 002, dated 1 October 1984, was reviewed using tasks matched by training personnel to the criterion objectives (CO), plus task difficulty, training emphasis, and percent first-enlistment personnel performing information. The occupational survey data indicate that significant percentages of first-enlistment personnel are performing those tasks that were matched to COs requiring task performance of students. This is a principles-centered course, teaching applied communications maintenance. Due to the diversity of the career ladder, it is hard to train on all of the equipment utilized by AFSC 304X0 personnel, and hard to keep personnel current on the older equipment. In discussions with training personnel, it was determined that most of the equipment-specific training is being conducted at the organizational level as part of an OJT program. This is consistent with the primary objectives of this course in teaching only the basic fundamental principles of equipment maintenance.

There were 56 tasks not matched with COs of the POI that were performed by 30 percent or more first-enlistment personnel and considered to be directly related to wideband communications equipment maintenance. Thirty-nine of these 56 tasks received above average TE ratings (2.71 or higher), but only nine tasks were rated as having average or above average difficulty for first-enlistment personnel. Examples of technical tasks performed by 30 percent or more first-enlistment personnel, but which are not referenced to any POI element, are displayed in Table 20. Training personnel should look at these unreferenced tasks to determine the feasibility of inclusion in any revision to the POI.

Training personnel are encouraged to review the computer printouts of the POI matched with survey data as they undertake future revisions of the POI. Particular emphasis should be placed on reviewing the tasks not referenced to COs to determine if new areas should be added to the basic courses.

TABLE 19

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE
GROUP MEMBERS AND NOT REFERENCED TO THE STS

TASKS	PERCENT MEMBERS PERFORMING			TNG EMP*	TASK DIF**
	1ST ENL (N=498)	DAFSC 30450 (N=1,099)	DAFSC 30470 (N=513)		
I244 REPLACE ELECTROMECHANICAL COMPONENTS USING METHODS OTHER THAN SOLDERING	32	33	22	2.50	3.69
I246 REPLACE ELECTROMECHANICAL SUBASSEMBLIES USING METHODS OTHER THAN SOLDERING	30	32	20	2.70	3.57
I253 REPLACE MECHANICAL COMPONENTS	39	36	21	2.09	3.39
I254 REPLACE MECHANICAL SUBASSEMBLIES	33	33	22	2.07	3.41
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	45	40	22	5.28	4.99
I211 CONSTRUCT SHOP CABLES	35	33	26	3.57	3.81
I243 REPAIR INTERNAL WIRING	41	41	23	3.54	5.19
I245 REPLACE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	40	39	21	3.65	4.36
Q1078 PERFORM PMI ON AMPLIFIERS	30	23	11	3.04	4.18
G152 ESTABLISH WIDEBAND LINKS	24	26	15	3.78	5.68
G158 PERFORM ALTERNATE CIRCUIT ROUTING AT PATCH AND TEST FACILITIES	21	16	10	4.20	4.22
I250 REPLACE ELECTRONIC MICROMINIATURE COMPONENTS USING SOLDERING METHODS	18	20	12	3.93	5.55

* Training Emphasis has an average of 1.68 and a standard deviation of 1.03 (High TE = 2.71)

** Average TD rating is 5.00 and the standard deviation is 1.00

TABLE 20

EXAMPLES OF TASKS NOT REFERENCED TO E3ABR30430 002 POI BLOCKS
(30 PERCENT OR MORE RESPONDING)

TASKS	PERCENT MEMBERS PERFORMING		TNG EMP*	TASK DIF**
	1ST JOB (N=101)	1ST ENL (N=498)		
I222 PERFORM CORROSION CONTROL	81	72	4.09	3.30
I230 REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	60	54	4.07	4.16
I226 REPLACE CABLE ASSEMBLIES	30	36	2.63	3.50
I227 REPLACE INTERNAL WIRING	32	34	2.61	4.87
I238 REMOVE MECHANICAL COMPONENTS	43	39	1.98	3.05
G187 PERFORM TRANSMISSION LEVEL TESTS	36	32	4.63	3.29
I249 REPLACE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	52	46	4.17	4.50
I257 SPLICE WIRING AND CABLES	41	43	3.50	4.18
K353 ADJUST DISCRIMINATOR COMPONENTS	37	31	3.80	5.72
Q986 ADJUST LOCAL OSCILLATOR COMPONENTS	39	32	2.91	5.01
I233 REMOVE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING METHODS OTHER THAN SOLDERING	34	29	3.37	3.30
I229 REMOVE ELECTROMECHANICAL COMPONENTS USING METHODS OTHER THAN SOLDERING	44	37	2.78	2.85
M622 ADJUST LEVEL REGULATOR COMPONENTS	30	21	3.13	4.89

* Training Emphasis has an average of 1.68 and a standard deviation of 1.03 (High TE = 2.71)

** Average TD rating is 5.00 and the standard deviation is 1.00

Electronics Principles (EP)

The Electronics Fundamentals paragraph of the STS and the electronic principles taught in the basic course can be evaluated using data from the Electronics Principles Inventory (EPI). The EPI is a knowledge-based inventory containing 1,366 questions in 63 electronics-related subject areas. It identifies the range of EPs personnel must understand to perform any electronics-related job.

Table 21 lists the 26 electronic areas where 50 percent or more AFSC 30450 airmen responded "yes" to performing these functions in their job. This data, as well as the complete data package for Keesler AFB AFSCs, can be useful to subject-matter experts when evaluating those portions of the STS and POI concerning electronics fundamentals or principles.

ADDITIONAL ANALYSES

Analysis of Major Commands (MAJCOM)

Although AFCC personnel constitute 80 percent of the AFSC 304X0 career ladder population, jobs performed by the other seven MAJCOMs were defined and compared to determine if job content varied by MAJCOM assignment. Table 22 presents data on the relative time spent on each of the 20 duties by personnel in each of the eight MAJCOM groups.

As would be expected, AFCC personnel are involved in the full range of the career ladder jobs, spending time on tasks pertaining to all areas of wideband communication equipment maintenance. Twenty-two percent of job time for AFCC personnel is spent in BISS maintenance and general maintenance. TAC, USAFE, and PACAF personnel spend much of their job time in mobility-related functions, with significant percentages of time spent in equipment operations, general maintenance, and receiver maintenance. General maintenance and equipment operations account for significant percentages of job time for AFELM OTH personnel. AFSC personnel perform the E&I functions of the career ladder, with 11 percent of total job time spent in this function. Another 37 percent of AFSC job time is spent in administrative, directing, and implementing duties. AFELM EUR spend 27 percent of their job time in common or miscellaneous subassembly maintenance and receiver maintenance, while ATC personnel perform the primary training function with 57 percent of job time spent in that area.

While some variations can be seen in the relative time spent on the various areas of wideband equipment maintenance, the number of personnel involved is too small to suggest any variation in the initial formal training program for career ladder personnel. If they feel it is warranted, career ladder managers could meet any necessary specialized training requirements by working out programs concentrating on systems with which the target populations are most involved.

TABLE 21
ELECTRONICS PRINCIPLES USED BY FIFTY PERCENT
OR MORE OF AFSC 30450 PERSONNEL

MATHEMATICS	OSCILLOSCOPES
DIRECT CURRENT	SEMICONDUCTOR DIODES
RESISTANCE AND RESISTIVE CIRCUITS	TRANSISTORS
METERS AND MULTIMETERS	TRANSISTOR AMPLIFIERS
ALTERNATING CURRENT	SOLID-STATE SPECIAL PURPOSE DEVICES
INDUCTORS AND INDUCTIVE REACTANCE	POWER SUPPLIES
CAPACITORS AND CAPACITIVE REACTANCE	OSCILLATORS
TRANSFORMERS	HETERODYNING AND MODULATION- DEMODULATION (MODEMS)
RCL CIRCUITS	FM SYSTEMS
FILTERS	USE OF SIGNAL GENERATORS
COUPLING	METER MOVEMENTS
SOLDERING OR SOLDERLESS CONNECTIONS	CABLE FABRICATION
RELAYS	DB AND POWER RATIOS

TABLE 22

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR COMMANDS (MAJCOM)

DUTIES	AFCC	TAC	USAFE	ATC	PACAF	AFELM (EUR)	AFELM (OTH)	AFSC
A ORGANIZING AND PLANNING	6	4	6	3	8	6	9	7
B DIRECTING AND IMPLEMENTING	4	2	3	6	4	2	4	17
C INSPECTING AND EVALUATING	5	4	4	3	4	4	5	5
D TRAINING	6	3	5	57	5	4	5	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	8	5	6	5	7	6	4	18
F PERFORMING SUPPLY FUNCTIONS	6	4	5	3	5	5	4	4
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	7	11	9	12	13	6	10	1
H PERFORMING SATELLITE OPERATION FUNCTIONS	*	*	*	0	*	*	1	0
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	10	11	8	2	9	8	13	10
J MAINTAINING ANTENNA SYSTEMS	2	7	6	*	8	4	5	3
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCEIVERS	5	10	11	3	6	12	5	0
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCEIVERS	4	7	5	2	3	5	4	9
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	4	5	5	1	3	6	4	6
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	2	2	2	*	*	3	1	0
O MAINTAINING MODEMS	*	*	*	*	*	1	1	0
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	12	1	*	1	1	3	0	3
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	8	9	8	1	2	15	9	2
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	4	13	15	1	20	8	8	1
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	4	1	1	*	1	1	7	11
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	1	*	*	*	0	2	*	0

* Denotes less than .5 percent

NOTE: Columns may not add to 100 percent due to rounding

Analysis of CONUS Versus Overseas

A comparison was made between the tasks performed and the background data for the DAFSC 30450 personnel who were assigned within the CONUS versus those assigned to an overseas location. Results indicated that, while the job performed by both groups was basically the same, a few variations did exist. Those respondents who were assigned overseas reported performing a higher average number of tasks than those within the CONUS (169 versus 124). In addition, overseas personnel spend the majority of their job time in common and miscellaneous subassembly maintenance and receiver maintenance, while their counterparts in CONUS concentrate on maintenance in support of BISS.

Finally, there were some background differences between the two groups. Both groups reported similar paygrades and time in service, but there were distinguishable differences in job satisfaction indicators. While perceptions of job interest and accomplishment from the job were fairly equal, CONUS personnel expressed lower satisfaction in the use of talents and training. Eighty-three percent of overseas respondents felt their talents were adequately utilized. Only 73 percent of CONUS personnel felt the same way. In utilization of training, an even bigger difference was noted. Only 57 percent of CONUS respondents felt their training was effectively utilized, while 76 percent of overseas respondents answered positively. For reenlistment intentions, overseas personnel were slightly higher in favoring reenlistment (70 percent versus 61 percent).

WRITE-IN COMMENTS

Write-in comments can lend particular insight into the thoughts of personnel in the career ladder. In addition to responding to the survey questions, incumbents were also encouraged to write in any additional information which may be relevant to the analysis of the 304X0 AFSC. This included such items as problems which they feel may presently exist in the career ladder, or tasks and equipment which individual members believe should be added to the job inventory. As a result, many comments covering a wide range of career field-related subjects were collected.

A number of respondents expressed the general perception that their utilization in the career field is not at its optimum. These respondents described how they were in staff positions and not performing actual wideband equipment maintenance, or how they were being utilized in a career field other than AFSC 304X0. According to these incumbents, when they are assigned to these other duties or positions, they are not able to apply the training they received in technical school and tend to forget what they learned. Or, incumbents are assigned to a system that is totally unfamiliar to them and they must then learn the system from scratch. Consequently, most of these respondents feel that a better utilization of AFSC 304X0 personnel needs to take place in order for the Air Force to fully benefit from their talents and training.

Finally, the majority of the other comments which were received consisted of a number of unique tasks that were performed, equipment maintained, and job titles held by some incumbents that were not listed in the job inventory.

IMPLICATIONS

This survey was conducted primarily to provide training information for use in developing a TRA by the USAFOMC Training Development Services Division.

These findings will have minimal impact on training. Analysis of career ladder documents indicates that the STS is generally supported by survey data, although several areas were not. Training personnel and subject-matter experts should review these areas to determine if inclusion is warranted in any revisions to the document. The POI is well supported by survey data. Tasks not referenced to the documents should also be reviewed by training personnel and subject-matter experts to determine if new areas should be added to the documents.

The findings of this survey suggest that the Wideband Communications Equipment Specialty is a diverse and highly technical career ladder. Survey respondents were organized around maintenance of fixed and mobile systems, intrusion detection systems, and specialized areas of wideband communication equipment maintenance. The present classification structure, as described by the AFR 39-1 Specialty Descriptions, accurately portrays the jobs in this study.

No serious job satisfaction problems appear to exist within this specialty. Overall, the job satisfaction responses were slightly lower than that of a comparative sample of Air Force personnel in 1987 and exceeded those responses of the comparative sample of a similar job group in a 1981 study.

The findings of this OSR come directly from survey data collected from Wideband Communications Equipment members worldwide. These data are readily available to training and utilization personnel, functional managers, and any other interested parties having a need for such information. Much of the data are compiled into extracts which are excellent tools in the decision-making process. These data extracts should be used when a training or utilization decision is made.

APPENDIX A
SELECTED REPRESENTATIVE TASKS PERFORMED BY
CAREER LADDER SPECIALTY JOBS

TABLE I

GROUP ID NUMBER AND TITLE: STG204, BASE INTRUSION SECURITY SYSTEM (BISS)
PERSONNEL

GROUP SIZE: 261

AVERAGE TIME IN JOB: 21 MONTHS

PREDOMINATE PAYGRADES: E-4/5/3

AVERAGE TAFMS: 74 MONTHS

PERCENT OF SAMPLE: 14%

AVERAGE TICF: 48 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
P872 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON PERIMETER SECURITY SYSTEMS	97
P847 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM ANNUNCIATORS	92
P816 ADJUST SECURITY SYSTEM AREA SENSOR SYSTEM COMPONENTS	90
P815 ADJUST SECURITY SYSTEM ANNUNCIATOR COMPONENTS	89
P835 ADJUST SECURITY SYSTEM TELEVISION CAMERA COMPONENTS	88
P818 ADJUST SECURITY SYSTEM CONTROL POWER SUPPLY COMPONENTS	87
P871 ISOLATE SYSTEM MALFUNCTIONS TO CODER MULTIPLEXER SENSOR DATA	86
P843 ISOLATE MALFUNCTIONS IN CODER MULTIPLEXER SENSOR DATA TO CIRCUIT BOARD	86
P841 INSTALL CODER MULTIPLEXER SENSOR DATA (CMSD) CIRCUIT BOARDS	86
P844 ISOLATE MALFUNCTIONS IN DISPLAY SENSOR DATA	86
P874 PERFORM PMI ON TELEVISION SECURITY SYSTEMS	86
P865 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM TELEVISION CAMERAS	86
P836 ADJUST SECURITY SYSTEM TELEVISION MONITOR COMPONENTS	85
P821 ADJUST SECURITY SYSTEM FENCE DISTURBANCE SENSOR SYSTEM COMPONENTS	85
P853 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM FENCE DISTURBANCE SENSOR SYSTEM	84
P866 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM TELEVISION MONITORS	84
P952 REPLACE SECURITY SYSTEM TELEVISION CAMERAS	84
P812 ADJUST DISPLAY SENSOR DATA	84
P911 REPAIR MALFUNCTIONS IN SECURITY SYSTEM FENCE DISTURBANCE SENSOR SYSTEMS	83
P923 REPAIR MALFUNCTIONS IN SECURITY SYSTEM TELEVISION CAMERAS	83
P901 REMOVE CMSD CIRCUIT BOARDS	83

TABLE I-A

GROUP ID NUMBER AND TITLE: STG294, BISS MAINTENANCE SUPERVISORS

GROUP SIZE: 19

AVERAGE TIME IN JOB: 17 MONTHS

PREDOMINATE PAYGRADES: E-5/6/4

AVERAGE TAFMS: 131 MONTHS

PERCENT OF SAMPLE: 1%

AVERAGE TICF: 74 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
P847 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM ANNUNCIATORS	95
C60 PREPARE APR	89
A20 PLAN WORK ASSIGNMENTS	89
A4 DETERMINE WORK PRIORITIES	89
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	89
P841 INSTALL CODER MULTIPLEXER SENSOR DATA (CMSD) CIRCUIT BOARDS	89
P872 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON PERIMETER SECURITY SYSTEMS	84
C51 EVALUATE INSPECTION REPORTS	84
P816 ADJUST SECURITY SYSTEM AREA SENSOR SYSTEM COMPONENTS	84
B29 COUNSEL PERSONNEL	84
P843 ISOLATE MALFUNCTIONS IN CODER MULTIPLEXER SENSOR DATA TO CIRCUIT BOARD	84
A25 SCHEDULE LEAVES	84
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	79
D73 CONDUCT OJT	79
D72 CONDUCT UPGRADE TRAINING	79
E113 PREPARE SUPPLY JUSTIFICATIONS	79
E94 MAINTAIN HISTORICAL RECORDS	79
A3 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, AND SUPPLIES	79
P844 ISOLATE MALFUNCTIONS IN DISPLAY SENSOR DATA	79
P815 ADJUST SECURITY SYSTEM ANNUNCIATOR COMPONENTS	79
P850 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM CONTROL POWER SUPPLIES	79
F139 REVIEW TABLE OF ALLOWANCES (TA)	79
A12 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	74

TABLE I-B

GROUP ID NUMBER AND TITLE: STG565, PERIMETER SECURITY SYSTEM TECHNICIANS

GROUP SIZE: 199

AVERAGE TIME IN JOB: 21 MONTHS

PREDOMINATE PAYGRADES: E-4/5/3

AVERAGE TAFMS: 67 MONTHS

PERCENT OF SAMPLE: 10%

AVERAGE TICF: 46 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
P872 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON PERIMETER SECURITY SYSTEMS	99
P835 ADJUST SECURITY SYSTEM TELEVISION CAMERA COMPONENTS	98
P874 PERFORM PMI ON TELEVISION SECURITY SYSTEMS	97
P952 REPLACE SECURITY SYSTEM TELEVISION CAMERAS	97
P865 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM TELEVISION CAMERAS	96
P836 ADJUST SECURITY SYSTEM TELEVISION MONITOR COMPONENTS	95
P923 REPAIR MALFUNCTIONS IN SECURITY SYSTEM TELEVISION CAMERAS	95
P895 REMOVE SECURITY SYSTEM TELEVISION CAMERAS	94
P866 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM TELEVISION MONITORS	94
P924 REPAIR MALFUNCTIONS IN SECURITY SYSTEM TELEVISION MONITORS	94
P847 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM ANNUNCIATORS	94
P815 ADJUST SECURITY SYSTEM ANNUNCIATOR COMPONENTS	93
P838 ADJUST SECURITY SYSTEM TELEVISION VIDEO AMPLIFIER COMPONENTS	92
P816 ADJUST SECURITY SYSTEM AREA SENSOR SYSTEM COMPONENTS	92
P953 REPLACE SECURITY SYSTEM TELEVISION MONITORS	92
P837 ADJUST SECURITY SYSTEM TELEVISION SWITCHING MATRIX UNIT COMPONENTS	92
P911 REPAIR MALFUNCTIONS IN SECURITY SYSTEM FENCE DISTURBANCE SENSOR SYSTEMS	90
P896 REMOVE SECURITY SYSTEM TELEVISION MONITORS	90
P905 REPAIR MALFUNCTIONS IN SECURITY SYSTEM ANNUNCIATORS	90
P853 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM FENCE DISTURBANCE SENSOR SYSTEM	89

TABLE I-C

GROUP ID NUMBER AND TITLE: STG422, STRUCTURE SECURITY SYSTEM TECHNICIANS

GROUP SIZE: 15

PREDOMINATE PAYGRADES: E-4/5/3

PERCENT OF SAMPLE: 1%

AVERAGE TIME IN JOB: 18 MONTHS

AVERAGE TAFMS: 66 MONTHS

AVERAGE TICF: 52 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
P870 ISOLATE MALFUNCTIONS IN CMSD PRINTED CIRCUIT BOARD TO COMPONENTS	100
P843 ISOLATE MALFUNCTIONS IN CODER MULTIPLEXER SENSOR DATA TO CIRCUIT BOARD	100
P928 REPAIR MALFUNCTIONS IN CMSD PRINTED CIRCUIT BOARD TO COMPONENTS	100
P871 ISOLATE SYSTEM MALFUNCTIONS TO CODER MULTIPLEXER SENSOR DATA	100
P930 REPAIR CMSD CIRCUIT BOARDS AND COMPONENTS	100
P819 ADJUST SECURITY SYSTEM DIGITAL DATA RECEIVER COMPONENTS	100
P844 ISOLATE MALFUNCTIONS IN DISPLAY SENSOR DATA	100
P902 REPAIR DISPLAY SENSOR DATA	100
P900 REMOVE CMSD	100
P816 ADJUST SECURITY SYSTEM AREA SENSOR SYSTEM COMPONENTS	93
P815 ADJUST SECURITY SYSTEM ANNUNCIATOR COMPONENTS	93
P841 INSTALL CODER MULTIPLEXER SENSOR DATA (CMSD) CIRCUIT BOARDS	93
P901 REMOVE CMSD CIRCUIT BOARDS	93
P872 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON PERIMETER SECURITY SYSTEMS	87
P847 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM ANNUNCIATORS	87
P862 ISOLATE MALFUNCTIONS IN SECURITY SYSTEM SENSOR DATA DECODERS	87
P957 REPLACE CMSD CIRCUIT BOARDS	87
P812 ADJUST DISPLAY SENSOR DATA	87
I236 REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER THAN SOLDERING	87

TABLE II

GROUP ID NUMBER AND TITLE: STG124, MOBILE WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL

GROUP SIZE: 283

AVERAGE TIME IN JOB: 22 MONTHS

PREDOMINATE PAYGRADES: E-4/5/3

AVERAGE TAFMS: 74 MONTHS

PERCENT OF SAMPLE: 15%

AVERAGE TICF: 58 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
G188 PERFORM TURN-OFF PROCEDURES	99
G189 PERFORM TURN-ON PROCEDURES	98
R1265 CLEAN MAINTENANCE WORK AREAS	92
J278 ASSEMBLE PARABOLIC ANTENNA COMPONENTS	92
J286 INSPECT WAVEGUIDES	92
R1266 CAMOUFLAGE EQUIPMENT	91
J287 INVENTORY ANTENNA SYSTEMS	89
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	89
G152 ESTABLISH WIDEBAND LINKS	89
R1299 OPERATE SMALL GOVERNMENT VEHICLES, SUCH AS PICKUPS OR PASSENGER VEHICLES	88
R1322 REMOVE CAMOUFLAGE NETTING	88
R1275 FIRE M-16 WEAPONS	88
R1325 REMOVE MOBILE COMMUNICATION EQUIPMENT	86
J305 PERFORM POST-DEPLOYMENT ANTENNA INSPECTIONS	86
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	86
J283 DISASSEMBLE PARABOLIC ANTENNA COMPONENTS	85
I222 PERFORM CORROSION CONTROL	85
J306 PERFORM PREDEPLOYMENT ANTENNA INSPECTIONS	83
R1287 INSTALL MOBILE COMMUNICATION EQUIPMENT	81
R1283 INSTALL CAMOUFLAGE NETTING	81
R1319 PREPARE CAMOUFLAGE NETTING	81
J276 ASSEMBLE FEEDHORN ASSEMBLY COMPONENTS	81
J281 DISASSEMBLE FEEDHORN ASSEMBLY COMPONENTS	80
R1262 ANCHOR EQUIPMENT VANS AND SHELTERS	77
R1318 POSITION VEHICLES	76
G172 PERFORM IDLE CHANNEL NOISE TESTS	76

TABLE II-A

GROUP ID NUMBER AND TITLE: STG218, MOBILE TROPOSPHERIC RADIO TECHNICIANS

GROUP SIZE: 21

AVERAGE TIME IN JOB: 11 MONTHS

PREDOMINATE PAYGRADES: E-4/5/3

AVERAGE TAFMS: 68 MONTHS

PERCENT OF SAMPLE: 1%

AVERAGE TICF: 48 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
G189 PERFORM TURN-ON PROCEDURES	100
G188 PERFORM TURN-OFF PROCEDURES	100
G172 PERFORM IDLE CHANNEL NOISE TESTS	95
J278 ASSEMBLE PARABOLIC ANTENNA COMPONENTS	90
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	90
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	90
G152 ESTABLISH WIDEBAND LINKS	81
J286 INSPECT WAVEGUIDES	76
R1263 CAMOUFLAGE EQUIPMENT	71
J283 DISASSEMBLE PARABOLIC ANTENNA COMPONENTS	71
J281 DISASSEMBLE FEEDHORN ASSEMBLY COMPONENTS	71
I222 PERFORM CORROSION CONTROL	71
G186 PERFORM TEST TONE LEVEL TESTS	71
J287 INVENTORY ANTENNA SYSTEMS	71
R1265 CLEAN MAINTENANCE WORK AREAS	67
R1299 OPERATE SMALL GOVERNMENT VEHICLES, SUCH AS PICKUPS OR PASSENGER VEHICLES	67
J276 ASSEMBLE FEEDHORN ASSEMBLY COMPONENTS	67
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	67
R1287 INSTALL MOBILE COMMUNICATION EQUIPMENT	62
J270 ADJUST PARABOLIC ANTENNA COMPONENTS	62
I259 UNPACK TEST EQUIPMENT	62
I219 PACK TEST EQUIPMENT	62
R1322 REMOVE CAMOUFLAGE NETTING	57
J306 PERFORM PREDEPLOYMENT ANTENNA INSPECTIONS	57
J305 PERFORM POST-DEPLOYMENT ANTENNA INSPECTIONS	57
R1325 REMOVE MOBILE COMMUNICATION EQUIPMENT	52

TABLE II-B

GROUP ID NUMBER AND TITLE: STG202, MOBILE MICROWAVE RADIO TECHNICIANS

GROUP SIZE: 256

PREDOMINATE PAYGRADES: E-4/5/3

PERCENT OF SAMPLE: 14%

AVERAGE TIME IN JOB: 23 MONTHS

AVERAGE TAFMS: 74 MONTHS

AVERAGE TICF: 59 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
G188 PERFORM TURN-OFF PROCEDURES	98
G189 PERFORM TURN-ON PROCEDURES	98
R1265 CLEAN MAINTENANCE WORK AREAS	95
J286 INSPECT WAVEGUIDES	93
R1263 CAMOUFLAGE EQUIPMENT	93
J278 ASSEMBLE PARABOLIC ANTENNA COMPONENTS	92
R1275 FIRE M-16 WEAPONS	92
R1322 REMOVE CAMOUFLAGE NETTING	91
G152 ESTABLISH WIDEBAND LINKS	92
R1299 OPERATE SMALL GOVERNMENT VEHICLES, SUCH AS PICKUPS OR PASSENGER VEHICLES	90
J287 INVENTORY ANTENNA SYSTEMS	90
R1325 REMOVE MOBILE COMMUNICATION EQUIPMENT	90
J305 PERFORM POST-DEPLOYMENT ANTENNA INSPECTIONS	89
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	89
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	89
J283 DISASSEMBLE PARABOLIC ANTENNA COMPONENTS	87
I222 PERFORM CORROSION CONTROL	86
J306 PERFORM PREDEPLOYMENT ANTENNA INSPECTIONS	86
R1319 PREPARE CAMOUFLAGE NETTING	86
R1283 INSTALL CAMOUFLAGE NETTING	85
R1287 INSTALL MOBILE COMMUNICATION EQUIPMENT	84
J276 ASSEMBLE FEEDHORN ASSEMBLY COMPONENTS	84
R1262 ANCHOR EQUIPMENT VANS AND SHELTERS	82
J281 DISASSEMBLE FEEDHORN ASSEMBLY COMPONENTS	82
R1318 POSITION VEHICLES	81
R1317 POSITION SHELTERS	79

TABLE III

GROUP ID NUMBER AND TITLE: STG106, FIXED WIDEBAND COMMUNICATIONS EQUIPMENT PERSONNEL

GROUP SIZE: 377
 PREDOMINATE PAYGRADES: E-4/5/3
 PERCENT OF SAMPLE: 21%

AVERAGE TIME IN JOB: 22 MONTHS
 AVERAGE TAFMS: 79 MONTHS
 AVERAGE TICF: 63 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	90
G186 PERFORM TEST TONE LEVEL TESTS	87
G189 PERFORM TURN-ON PROCEDURES	83
G188 PERFORM TURN-OFF PROCEDURES	83
I222 PERFORM CORROSION CONTROL	82
G156 OBSERVE TEST EQUIPMENT, SUCH AS SCOPES AND SIGNAL ANALYZERS, TO DETERMINE EQUIPMENT OPERATION	80
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	79
K351 ADJUST AUTOMATIC GAIN CONTROL (AGC) COMPONENTS	76
G184 PERFORM SWITCHOVERS OF EQUIPMENT SUBASSEMBLIES TO REDUNDANT EQUIPMENT	73
G165 PERFORM CIRCUIT FAULT ISOLATION PROCEDURES	71
I230 REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	71
K360 ADJUST PILOT TONE DETECTOR COMPONENTS	69
K420 PERFORM PMI ON FM RECEIVERS	69
I234 REMOVE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	68
Q961 ADJUST ATTENUATORS	68
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	68
M629 ALIGN FREQUENCY DIVISION MULTIPLEXERS	66
G183 PERFORM SELECTIVE VOLTMETER NOISE SLOT MEASUREMENTS	66
G172 PERFORM IDLE CHANNEL NOISE TESTS	66
K363 ADJUST RECEIVE INTERMEDIATE FREQUENCY (IF) AMPLIFIER COMPONENTS	66
I236 REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER THAN SOLDERING	66

TABLE III-A

GROUP ID NUMBER AND TITLE: STG182, FIXED TROPOSPHERIC RADIO TECHNICIANS

GROUP SIZE: 45

AVERAGE TIME IN JOB: 19 MONTHS

PREDOMINATE PAYGRADES: E-4/3/5

AVERAGE TAFMS: 58 MONTHS

PERCENT OF SAMPLE: 2%

AVERAGE TICF: 45 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	96
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	96
I222 PERFORM CORROSION CONTROL	93
G160 PERFORM BASEBAND LOADING	89
G186 PERFORM TEST TONE LEVEL TESTS	87
K420 PERFORM PMI ON FM RECEIVERS	82
I230 REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	80
G156 OBSERVE TEST EQUIPMENT, SUCH AS SCOPES AND SIGNAL ANALYZERS, TO DETERMINE EQUIPMENT OPERATION	78
G184 PERFORM SWITCHOVERS OF EQUIPMENT SUBASSEMBLIES TO REDUNDANT EQUIPMENT	78
G189 PERFORM TURN-ON PROCEDURES	78
K351 ADJUST AUTOMATIC GAIN CONTROL (AGC) COMPONENTS	78
G188 PERFORM TURN-OFF PROCEDURES	76
M659 PERFORM PMI ON FREQUENCY DIVISION MULTIPLEXERS	73
G161 PERFORM BASEBAND SWEEPS	71
G172 PERFORM IDLE CHANNEL NOISE TESTS	71
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	69
G165 PERFORM CIRCUIT FAULT ISOLATION PROCEDURES	69
I234 REMOVE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	69
G183 PERFORM SELECTIVE VOLTMETER NOISE SLOT MEASUREMENTS	67
I245 REPLACE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	67
G169 PERFORM FREQUENCY RESPONSE TESTS	62
F135 PREPARE NONREPARABLE ITEMS FOR TURN-IN	62

TABLE III-B

GROUP ID NUMBER AND TITLE: GRP039, FIXED MICROWAVE RADIO TECHNICIANS

GROUP SIZE: 214

PREDOMINATE PAYGRADES: E-5/4/6

PERCENT OF SAMPLE: 12%

AVERAGE TIME IN JOB: 24 MONTHS

AVERAGE TAFMS: 92 MONTHS

AVERAGE TICF: 76 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	93
K363 ADJUST RECEIVE INTERMEDIATE FREQUENCY (IF) AMPLIFIER COMPONENTS	90
K360 ADJUST PILOT TONE DETECTOR COMPONENTS	90
G184 PERFORM SWITCHOVERS OF EQUIPMENT SUBASSEMBLIES TO REDUNDANT EQUIPMENT	86
K353 ADJUST DISCRIMINATOR COMPONENTS	86
G186 PERFORM TEST TONE LEVEL TESTS	85
I222 PERFORM CORROSION CONTROL	85
G189 PERFORM TURN-ON PROCEDURES	84
K351 ADJUST AUTOMATIC GAIN CONTROL (AGC) COMPONENTS	84
G188 PERFORM TURN-OFF PROCEDURES	83
I230 REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	83
K362 ADJUST RECEIVE COMBINER COMPONENTS	83
Q986 ADJUST LOCAL OSCILLATOR COMPONENTS	80
G165 PERFORM CIRCUIT FAULT ISOLATION PROCEDURES	80
G183 PERFORM SELECTIVE VOLTMETER NOISE SLOT MEASUREMENTS	79
K449 REMOVE SOLID-STATE RECEIVE IF AMPLIFIERS	79
L543 ISOLATE MALFUNCTIONS IN SOLID-STATE FM MODULATORS	78
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	77
L521 ADJUST TRANSMITTER FREQUENCY MODULATION (FM) DETECTORS COMPONENTS	77
Q988 ADJUST PILOT TONE OSCILLATOR COMPONENTS	76
K498 REPLACE SOLID-STATE FM DETECTORS (DISCRIMINATORS)	76
K447 REMOVE SOLID-STATE PILOT TONE DETECTORS	76

TABLE III-C

GROUP ID NUMBER AND TITLE: STG371, FIXED RADIO VOICE FREQUENCY MULTIPLEXER
TECHNICIANS

GROUP SIZE: 15
PREDOMINATE PAYGRADES: E-4/6/2
PERCENT OF SAMPLE: 1%

AVERAGE TIME IN JOB: 13 MONTHS
AVERAGE TAFMS: 67 MONTHS
AVERAGE TICF: 37 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
G186 PERFORM TEST TONE LEVEL TESTS	100
M629 ALIGN FREQUENCY DIVISION MULTIPLEXERS	100
M659 PERFORM PMI ON FREQUENCY DIVISION MULTIPLEXERS	93
G172 PERFORM IDLE CHANNEL NOISE TESTS	93
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	93
I228 REMOVE AND REPLACE DESICCANTS	93
I222 PERFORM CORROSION CONTROL	93
M624 ADJUST PILOT GENERATOR COMPONENTS	93
K360 ADJUST PILOT TONE DETECTOR COMPONENTS	93
N730 ADJUST LOOP CURRENT CONTROL PANEL COMPONENTS	93
K363 ADJUST RECEIVE INTERMEDIATE FREQUENCY (IF) AMPLIFIER COMPONENTS	93
K420 PERFORM PMI ON FM RECEIVERS	87
M628 ADJUST E-AND-M SIGNALING AND CONTROL CIRCUIT COMPONENTS	87
L521 ADJUST TRANSMITTER FREQUENCY MODULATION (FM) MODULATOR COMPONENTS	87
M627 ADJUST TWO WIRE/FOUR WIRE CONVERSION AND TERMINATION CIRCUIT COMPONENTS	87
G188 PERFORM TURN-OFF PROCEDURES	87
K353 ADJUST DISCRIMINATOR COMPONENTS	87
K374 ALIGN FM RECEIVERS	87
K362 ADJUST RECEIVE COMBINER COMPONENTS	87
K367 ADJUST SQUELCH CIRCUIT COMPONENTS	87
G162 PERFORM BIT ERROR RATE TESTS	87
G150 ESTABLISH ORDERWIRE CONTACT WITH DISTANT TERMINALS	80
G184 PERFORM SWITCHOVERS OF EQUIPMENT SUBASSEMBLIES TO REDUNDANT EQUIPMENT	80
G187 PERFORM TRANSMISSION LEVEL TESTS	80
G165 PERFORM CIRCUIT FAULT ISOLATION PROCEDURES	80
K418 PERFORM PMI ON DIGITAL RECEIVERS	80

TABLE III-D

GROUP ID NUMBER AND TITLE: STG244, FIXED RADIO TELETYPE MULTIPLEXER
TECHNICIANS

GROUP SIZE: 72
PREDOMINATE PAYGRADES: E-4/5/3
PERCENT OF SAMPLE: 4%

AVERAGE TIME IN JOB: 18 MONTHS
AVERAGE TAFMS: 64 MONTHS
AVERAGE TICF: 48 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
N727 ADJUST FREQUENCY SHIFT KEYSER COMPONENTS	96
N726 ADJUST FREQUENCY SHIFT CONVERTER COMPONENTS	93
N738 ISOLATE MALFUNCTIONS IN FREQUENCY SHIFT KEYSERS	92
N765 REPAIR MALFUNCTIONS IN FREQUENCY SHIFT KEYSERS	90
N752 REMOVE FREQUENCY SHIFT KEYSERS	90
N737 ISOLATE MALFUNCTIONS IN FREQUENCY SHIFT CONVERTERS	89
N764 REPAIR MALFUNCTIONS IN FREQUENCY SHIFT CONVERTERS	89
N751 REMOVE FREQUENCY SHIFT CONVERTERS	89
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	89
G186 PERFORM TEST TONE LEVEL TESTS	88
I222 PERFORM CORROSION CONTROL	88
G156 OBSERVE TEST EQUIPMENT, SUCH AS SCOPES AND SIGNAL ANALYZERS, TO DETERMINE EQUIPMENT OPERATION	86
I234 REMOVE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	86
G165 PERFORM CIRCUIT FAULT ISOLATION PROCEDURES	82
N734 ISOLATE MALFUNCTIONS IN BALLAST PANELS	82
Q1186 REPAIR MALFUNCTIONS IN PATCH PANELS	81
I249 REPLACE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	81
N777 REPLACE FREQUENCY SHIFT KEYSERS	81
I230 REMOVE ELECTROMECHANICAL COMPONENTS USING SOLDERING METHODS	79
G188 PERFORM TURN-OFF PROCEDURES	79
I236 REMOVE ELECTRONIC SUBASSEMBLIES USING METHODS OTHER THAN SOLDERING	78
N776 REPLACE FREQUENCY SHIFT CONVERTERS	76
G189 PERFORM TURN-ON PROCEDURES	76
G190 PERFORM FREQUENCY MODULATION (FM) QUIETING CURVES	75
N748 PERFORM PMI ON TELETYPE MULTIPLEXERS	74

TABLE IV

GROUP ID NUMBER AND TITLE: STG019, SUPERVISORY/MANAGEMENT PERSONNEL

GROUP SIZE: 482

AVERAGE TIME IN JOB: 17 MONTHS

PREDOMINATE PAYGRADES: E-5/6/7

AVERAGE TAFMS: 145 MONTHS

PERCENT OF SAMPLE: 26%

AVERAGE TICF: 119 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
B41 WRITE CORRESPONDENCE	78
A4 DETERMINE WORK PRIORITIES	64
B29 COUNSEL PERSONNEL	55
E92 MAINTAIN CORRESPONDENCE FILES	55
E106 PREPARE IN-HOUSE DOCUMENTS, SUCH AS CHECKLISTS	52
C60 PREPARE APR	51
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	50
C47 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	49
A6 DEVELOP WORK PROCEDURES	49
A16 PLAN BRIEFINGS	48
F139 REVIEW TABLE OF ALLOWANCES (TA)	47
C51 EVALUATE INSPECTION REPORTS	47
E91 DISTRIBUTE CORRESPONDENCE, TECHNICAL INFORMATION, OR DIRECTIVES	46
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	45
C45 EVALUATE CAPABILITY OF EQUIPMENT	44
D79 DEVELOP TRAINING PLANS	44
A10 ESTABLISH OFFICE INSTRUCTIONS (OI)	44
A3 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, AND SUPPLIES	44
E99 MAINTAIN STATUS BOARDS AND CHARTS	42
A25 SCHEDULE LEAVES	41
D73 CONDUCT OJT	41
A20 PLAN WORK ASSIGNMENTS	40
A12 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	40
A24 SCHEDULE INSPECTIONS	39
F138 RESEARCH SUPPLY CATALOGS	39
E98 MAINTAIN SELF-INSPECTION GUIDES	36

TABLE IV-A

GROUP ID NUMBER AND TITLE: STG194, PLANS AND REQUIREMENTS MANAGERS

GROUP SIZE: 22

PREDOMINATE PAYGRADES: E-6/7/5

PERCENT OF SAMPLE: 1%

AVERAGE TIME IN JOB: 19 MONTHS

AVERAGE TAFMS: 180 MONTHS

AVERAGE TICF: 149 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
B41 WRITE CORRESPONDENCE	95
C63 WRITE STAFF STUDIES, SURVEYS, AND SPECIAL REPORTS	68
A16 PLAN BRIEFINGS	64
E92 MAINTAIN CORRESPONDENCE FILES	55
B30 DIRECT DESTRUCTION OF CLASSIFIED MATERIALS	41
E91 DISTRIBUTE CORRESPONDENCE, TECHNICAL INFORMATION, OR DIRECTIVES	36
A4 DETERMINE WORK PRIORITIES	32
C45 EVALUATE CAPABILITY OF EQUIPMENT	27
E112 PREPARE STATUS REPORTS	27
F139 REVIEW TABLE OF ALLOWANCES (TA)	27
C42 ANALYZE WORKLOAD REQUIREMENTS	27
A8 DRAFT SUPPLEMENTS AND CHANGES TO DIRECTIVES	23
E94 MAINTAIN HISTORICAL RECORDS	23
C48 EVALUATE CONTRACT DATA REQUIREMENT LISTINGS (CDRL)	23
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	23
C50 EVALUATE INITIAL SPARES SUPPORT LISTS (ISSL)	23
F138 RESEARCH SUPPLY CATALOGS	23
C56 EVALUATE SUGGESTIONS	18
B37 IMPLEMENT SECURITY PROGRAMS	18
D73 CONDUCT OJT	18
B27 CONDUCT STAFF MEETINGS	18
C44 EVALUATE BUDGET REQUIREMENTS	18
R1328 SECURE CLASSIFIED MATERIALS	18
S1345 INITIATE MESSAGES	14

TABLE IV-B

GROUP ID NUMBER AND TITLE: STG240, MAINTENANCE TRAINING MANAGERS

GROUP SIZE: 12

AVERAGE TIME IN JOB: 19 MONTHS

PREDOMINATE PAYGRADES: E-4/5/6

AVERAGE TAFMS: 124 MONTHS

PERCENT OF SAMPLE: 1%

AVERAGE TICF: 104 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
D79 DEVELOP TRAINING PLANS	92
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	92
B41 WRITE CORRESPONDENCE	83
D84 EVALUATE TRAINING METHODS	75
D80 DIRECT TRAINING PROGRAMS, OTHER THAN OJT	67
D86 PROCURE TRAINING AIDS, SPACE, AND EQUIPMENT	67
D83 EVALUATE PROGRESS OF STUDENTS	58
D76 DETERMINE TRAINING REQUIREMENTS FOR TRAINING PROGRAMS, OTHER THAN OJT OR RESIDENT COURSE PROGRAMS	58
D75 DETERMINE RESIDENT COURSE TRAINING REQUIREMENTS	58
A10 ESTABLISH OFFICE INSTRUCTIONS (OI)	58
D81 DIRECT OJT PROGRAMS	50
A24 SCHEDULE INSPECTIONS	50
C51 EVALUATE INSPECTION REPORTS	50
D77 DETERMINE OJT TRAINING REQUIREMENTS	50
E92 MAINTAIN CORRESPONDENCE FILES	50
E97 MAINTAIN PUBLICATION FILES	50
E109 PREPARE REQUISITIONS FOR PUBLICATIONS	50
D89 WRITE TRAINING REPORTS	50
B29 COUNSEL PERSONNEL	42
C61 SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	42
E98 MAINTAIN SELF-INSPECTION GUIDES	42
D72 CONDUCT UPGRADE TRAINING	33
E91 DISTRIBUTE CORRESPONDENCE, TECHNICAL INFORMATION, OR DIRECTIVES	33
E106 PREPARE IN-HOUSE DOCUMENTS, SUCH AS CHECKLISTS	33
A4 DETERMINE WORK PRIORITIES	33

TABLE IV-C

GROUP ID NUMBER AND TITLE: STG211, QUALITY CONTROL MANAGERS

GROUP SIZE: 62

PREDOMINATE PAYGRADES: E-6/5/7

PERCENT OF SAMPLE: 3%

AVERAGE TIME IN JOB: 14 MONTHS

AVERAGE TAFMS: 150 MONTHS

AVERAGE TICF: 128 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
C51 EVALUATE INSPECTION REPORTS	90
C47 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	85
E105 PREPARE EVALUATION REPORTS	82
B41 WRITE CORRESPONDENCE	77
A24 SCHEDULE INSPECTIONS	73
E103 PREPARE ACTIVITY REPORTS	71
C45 EVALUATE CAPABILITY OF EQUIPMENT	65
E104 PREPARE DEFICIENCY REPORTS	65
E91 DISTRIBUTE CORRESPONDENCE, TECHNICAL INFORMATION, OR DIRECTIVES	61
E106 PREPARE IN-HOUSE DOCUMENTS, SUCH AS CHECKLISTS	60
F92 MAINTAIN CORRESPONDENCE FILES	53
C54 EVALUATE SAFETY PROGRAMS	52
F134 PREPARE MATERIEL DEFICIENCY REPORTS (MDR)	50
A8 DRAFT SUPPLEMENTS AND CHANGES TO DIRECTIVES	48
C53 EVALUATE PROCEDURES FOR STORAGE, INVENTORY, AND INSPECTION OF PROPERTY ITEMS	47
A16 PLAN BRIEFINGS	42
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	40
D84 EVALUATE TRAINING METHODS	39
C63 WRITE STAFF STUDIES, SURVEYS, AND SPECIAL REPORTS	35
E100 MAINTAIN TECHNICAL ORDER (TO) FILES	34
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	32
A6 DEVELOP WORK PROCEDURES	32
E97 MAINTAIN PUBLICATION FILES	31
C56 EVALUATE SUGGESTIONS	31

TABLE IV-D

GROUP ID NUMBER AND TITLE: STG156, LAND MOBILE RADIO MANAGERS

GROUP SIZE: 46

PREDOMINATE PAYGRADES: E-5/4/6

PERCENT OF SAMPLE: 3%

AVERAGE TIME IN JOB: 16 MONTHS

AVERAGE TAFMS: 113 MONTHS

AVERAGE TICF: 91 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
F139 REVIEW TABLE OF ALLOWANCES (TA)	91
A7 DRAFT BUDGET REQUIREMENTS	85
F117 COORDINATE REPAIR OF EQUIPMENT WITH VENDORS AND OTHER AGENCIES	83
B41 WRITE CORRESPONDENCE	78
E92 MAINTAIN CORRESPONDENCE FILES	76
E94 MAINTAIN HISTORICAL RECORDS	70
A4 DETERMINE WORK PRIORITIES	65
A8 DRAFT SUPPLEMENTS AND CHANGES TO DIRECTIVES	65
C45 EVALUATE CAPABILITY OF EQUIPMENT	63
F136 RESEARCH SUPPLY CATALOGS	61
F129 MAINTAIN INVENTORY RECORDS	57
C44 EVALUATE BUDGET REQUIREMENTS	52
C47 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	48
F119 COORDINATE STOCK NUMBERS WITH VENDORS OR OTHER AGENCIES	48
F127 MAINTAIN EQUIPMENT ACCOUNTABILITY RECORDS	48
F135 PREPARE NONREPARABLE ITEMS FOR TURN-IN	48
E97 MAINTAIN PUBLICATION FILES	46
A24 SCHEDULE INSPECTIONS	46
F116 COORDINATE LOCAL PURCHASES WITH OFFICE OF PRIMARY RESPONSIBILITY (OPR)	43
E106 PREPARE IN-HOUSE DOCUMENTS, SUCH AS CHECKLISTS	41
E91 DISTRIBUTE CORRESPONDENCE, TECHNICAL INFORMATION, OR DIRECTIVES	41
F136 PREPARE REPARABLE ITEMS FOR TURN-IN	39
E98 MAINTAIN SELF-INSPECTION GUIDES	39
E113 PREPARE SUPPLY JUSTIFICATIONS	37

TABLE IV-E

GROUP ID NUMBER AND TITLE: GRP038, JOB CONTROL SUPERVISORS

GROUP SIZE: 57

PREDOMINATE PAYGRADES: E-4/5/6

PERCENT OF SAMPLE: 3%

AVERAGE TIME IN JOB: 13 MONTHS

AVERAGE TAFMS: 94 MONTHS

AVERAGE TICF: 85 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
E99 MAINTAIN STATUS BOARDS AND CHARTS	84
A4 DETERMINE WORK PRIORITIES	77
A16 PLAN BRIEFINGS	77
D73 CONDUCT OJT	63
E106 PREPARE IN-HOUSE DOCUMENTS, SUCH AS CHECKLISTS	61
E112 PREPARE STATUS REPORTS	58
B28 COORDINATE CANNIBALIZATION OF EQUIPMENT PARTS WITH APPROPRIATE AGENCIES	58
B31 DIRECT MAINTENANCE CREW ACTIVITIES	47
B29 COUNSEL PERSONNEL	47
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	46
E102 MAKE ENTRIES ON MAINTENANCE FORMS	42
C60 PREPARE APR	42
B41 WRITE CORRESPONDENCE	40
A10 ESTABLISH OFFICE INSTRUCTIONS (OI)	39
E96 MAINTAIN MAINTENANCE DATA USING CAMS	37
F117 COORDINATE REPAIR OF EQUIPMENT WITH VENDORS AND OTHER AGENCIES	37
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	37
B40 MAINTAIN CONTINGENCY PLANS	37
A6 DEVELOP WORK PROCEDURES	37
E90 COMPILE MAINTENANCE DATA USING COMPUTER AUTOMATIC MAINTENANCE SYSTEMS (CAMS)	35
D68 CONDUCT PROFICIENCY TRAINING	35
E97 MAINTAIN PUBLICATION FILES	33
D79 DEVELOP TRAINING PLANS	33

TABLE IV-F

GROUP ID NUMBER AND TITLE: GRP040, NCOIC WIDEBAND COMMUNICATIONS EQUIPMENT

GROUP SIZE: 144

AVERAGE TIME IN JOB: 18 MONTHS

PREDOMINATE PAYGRADES: E-6/7/5

AVERAGE TAFMS: 170 MONTHS

PERCENT OF SAMPLE: 8%

AVERAGE TICF: 136 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
B29 COUNSEL PERSONNEL	97
B41 WRITE CORRESPONDENCE	96
A4 DETERMINE WORK PRIORITIES	94
A20 PLAN WORK ASSIGNMENTS	88
C60 PREPARE APR	88
A3 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, AND SUPPLIES	85
A25 SCHEDULE LEAVES	84
A6 DEVELOP WORK PROCEDURES	83
C51 EVALUATE INSPECTION REPORTS	83
C47 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	81
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	81
A12 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	80
E92 MAINTAIN CORRESPONDENCE FILES	78
F139 REVIEW TABLE OF ALLOWANCES (TA)	78
E106 PREPARE IN-HOUSE DOCUMENTS, SUCH AS CHECKLISTS	78
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	76
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	76
D79 DEVELOP TRAINING PLANS	75
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	75
C58 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	72
A10 ESTABLISH OFFICE INSTRUCTIONS (OI)	72
D65 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	72
F138 RESEARCH SUPPLY CATALOGS	70
E91 DISTRIBUTE CORRESPONDENCE, TECHNICAL INFORMATION, OR DIRECTIVES	69

TABLE IV-G

GROUP ID NUMBER AND TITLE: STG302, MOBILITY SUPERVISORS

GROUP SIZE: 11

AVERAGE TIME IN JOB: 26 MONTHS

PREDOMINATE PAYGRADES: E-6/5/4

AVERAGE TAFMS: 138 MONTHS

PERCENT OF SAMPLE: 1%

AVERAGE TICF: 110 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
A4 DETERMINE WORK PRIORITIES	100
R1263 CAMOUFLAGE EQUIPMENT	100
R1322 REMOVE CAMOUFLAGE NETTING	100
R1318 POSITION VEHICLES	100
R1275 FIRE M-16 WEAPONS	100
R1319 PREPARE CAMOUFLAGE NETTING	91
R1299 OPERATE SMALL GOVERNMENT VEHICLES, SUCH AS PICKUPS OR PASSENGER VEHICLES	91
R1283 INSTALL CAMOUFLAGE NETTING	91
R1317 POSITION SHELTERS	91
B41 WRITE CORRESPONDENCE	82
R1264 CAMOUFLAGE PERSONNEL	82
R1315 PERFORM SITE SECURITY DUTIES	82
R1309 PAINT EQUIPMENT AND FACILITIES	82
R1282 INSTALL CABLING BETWEEN SITE VANS	82
R1311 PERFORM OPERATOR MAINTENANCE ON HAND OR AUTOMATIC WEAPONS	82
A20 PLAN WORK ASSIGNMENTS	73
E98 MAINTAIN SELF-INSPECTION GUIDES	73
A24 SCHEDULE INSPECTIONS	73
E92 MAINTAIN CORRESPONDENCE FILES	73
E99 MAINTAIN STATUS BOARDS AND CHARTS	73
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	73
R1262 ANCHOR EQUIPMENT VANS AND SHELTERS	73
C60 PREPARE APR	73
R1321 REMOVE CABLING BETWEEN SITE VANS	73
B29 COUNSEL PERSONNEL	73
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	73

TABLE V

GROUP ID NUMBER AND TITLE: STG372, TECHNICAL TRAINING INSTRUCTORS

GROUP SIZE: 41

AVERAGE TIME IN JOB: 27 MONTHS

PREDOMINATE PAYGRADES: E-5/6/4

AVERAGE TAFMS: 114 MONTHS

PERCENT OF SAMPLE: 2%

AVERAGE TICF: 99 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
D87 SCORE TESTS	100
D70 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	95
D64 ADMINISTER TESTS	95
D83 EVALUATE PROGRESS OF STUDENTS	85
D88 WRITE TEST QUESTIONS	73
B29 COUNSEL PERSONNEL	71
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	68
D69 CONDUCT REMEDIAL TRAINING	68
D74 DEMONSTRATE HOW TO LOCATE TECHNICAL OR NONTECHNICAL INFORMATION	63
D84 EVALUATE TRAINING METHODS	54
D78 DEVELOP RESIDENT COURSE OR CAREER DEVELOPMENT COURSE (CDC) CURRICULUM MATERIALS	37
D86 PROCURE TRAINING AIDS, SPACE, AND EQUIPMENT	34
E100 MAINTAIN TECHNICAL ORDER (TO) FILES	27
D79 DEVELOP TRAINING PLANS	24
G189 PERFORM TURN-ON PROCEDURES	24
G188 PERFORM TURN-OFF PROCEDURES	24
D68 CONDUCT PROFICIENCY TRAINING	22
G186 PERFORM TEST TONE LEVEL TESTS	22
E91 DISTRIBUTE CORRESPONDENCE, TECHNICAL INFORMATION, OR DIRECTIVES	20
B41 WRITE CORRESPONDENCE	20
G182 PERFORM RECEIVE SIGNAL LEVEL (RSL) CHECKS	20
G172 PERFORM IDLE CHANNEL NOISE TESTS	20
C47 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	17

TABLE VI

GROUP ID NUMBER AND TITLE: STG138, CLOSED-CIRCUIT TELEVISION (CCTV)
TECHNICIANS

GROUP SIZE: 10	AVERAGE TIME IN JOB: 16 MONTHS
PREDOMINATE PAYGRADES: E-5/6/4	AVERAGE TAFMS: 106 MONTHS
PERCENT OF SAMPLE: 1%	AVERAGE TICF: 79 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
T1404 FUNCTIONALLY TEST VIDEO DISPLAY MONITORS	100
T1400 ADJUST VIDEO CIRCUITS	100
T1401 ADJUST VIDEO DISPLAY MONITORS	90
T1423 TEST VIDEO CIRCUITS	90
T1406 ISOLATE CAMERA FAULTS	90
T1402 ADJUST VIDEO DISTRIBUTION AMPLIFIERS	90
T1403 ALIGN CAMERA CIRCUITS	90
T1414 REPAIR VIDEO DISPLAY MONITORS	80
T1415 REPAIR VIDEO DISTRIBUTION AMPLIFIERS	80
T1407 MEASURE POWER SUPPLIES	80
T1399 ADJUST VIDEO BOARDS	80
T1420 TEST DISTRIBUTION AMPLIFIERS	70
T1421 TEST RECEIVE EQUALIZERS	70
T1393 ADJUST BALANCED LINE MATCHING AMPLIFIERS	70
T1397 ADJUST RECEIVE EQUALIZERS	70
T1408 MEASURE REGULATOR VOLTAGES	70
P835 ADJUST SECURITY SYSTEM TELEVISION CAMERA COMPONENTS	70
C60 PREPARE APR	70
F137 PREPARE REQUISITIONS FOR PARTS, TOOLS, AND SUPPLIES	70
T1419 TEST BALANCED LINE MATCHING AMPLIFIERS	60
T1422 TEST TRANSMIT EQUALIZERS	60
T1395 ADJUST DISTRIBUTION AMPLIFIERS	60
T1398 ADJUST TRANSMIT EQUALIZERS	60
T1418 TEST AUDIO CIRCUITS	60
T1416 REPLACE IMAGE PICKUP TUBES	60
D85 MAINTAIN TRAINING RECORDS, CHARTS, AND GRAPHS	60
B31 DIRECT MAINTENANCE CREW ACTIVITIES	60

TABLE VII

GROUP ID NUMBER AND TITLE: STG206, TELETYPE MULTIPLEXER SYSTEM TECHNICIANS

GROUP SIZE: 11

AVERAGE TIME IN JOB: 22 MONTHS

PREDOMINATE PAYGRADES: E-4/3/5

AVERAGE TAFMS: 64 MONTHS

PERCENT OF SAMPLE: 1%

AVERAGE TICF: 35 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
N726 ADJUST FREQUENCY SHIFT CONVERTER COMPONENTS	100
N748 PERFORM PMI ON TELETYPE MULTIPLEXERS	100
N776 REPLACE FREQUENCY SHIFT CONVERTERS	100
N777 REPLACE FREQUENCY SHIFT KEYS	100
N751 REMOVE FREQUENCY SHIFT CONVERTERS	100
N752 REMOVE FREQUENCY SHIFT KEYS	100
N727 ADJUST FREQUENCY SHIFT KEYS COMPONENTS	91
N737 ISOLATE MALFUNCTIONS IN FREQUENCY SHIFT CONVERTERS	82
N738 ISOLATE MALFUNCTIONS IN FREQUENCY SHIFT KEYS	82
N764 REPAIR MALFUNCTIONS IN FREQUENCY SHIFT CONVERTERS	82
N765 REPAIR MALFUNCTIONS IN FREQUENCY SHIFT KEYS	82
N747 PERFORM PREVENTIVE MAINTENANCE INSPECTIONS (PMI) ON TELETYPE MULTIPLEXER ASSOCIATED INTERFACE EQUIPMENT	73
I222 PERFORM CORROSION CONTROL	73
N730 ADJUST LOOP CURRENT CONTROL PANEL COMPONENTS	73
I249 REPLACE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	64
I234 REMOVE ELECTRONIC COMPONENTS, OTHER THAN MICROMINIATURE COMPONENTS, USING SOLDERING METHODS	64
N734 ISOLATE MALFUNCTIONS IN BALLAST PANELS	64
F136 PREPARE REPARABLE ITEMS FOR TURN-IN	55
N725 ADJUST DIRECT CURRENT (DC) POWER SUPPLY COMPONENTS	55
N762 REPAIR MALFUNCTIONS IN BALLAST PANELS	55
N729 ADJUST LEVEL CONVERTERS	55
M661 PERFORM PMI ON TIME DIVISION MULTIPLEXERS	45
F126 MAINTAIN BENCHSTOCKS	45

TABLE VIII

GROUP ID NUMBER AND TITLE: STG192, MOBILITY PERSONNEL

GROUP SIZE: 10

AVERAGE TIME IN JOB: 14 MONTHS

PREDOMINATE PAYGRADES: E-5/4/6

AVERAGE TAFMS: 84 MONTHS

PERCENT OF SAMPLE: 1%

AVERAGE TICF: 30 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
R1265 CLEAN MAINTENANCE WORK AREAS	100
R1263 CAMOUFLAGE EQUIPMENT	100
R1322 REMOVE CAMOUFLAGE NETTING	90
R1296 OPERATE HEAVY DUTY VEHICLES, SUCH AS 1 1/2 TON TRUCKS AND 10-TON TRACTOR-TRAILER COMBINATIONS	90
R1262 ANCHOR EQUIPMENT VANS AND SHELTERS	80
R1266 CLEAR MOBILITY WORK AREAS	70
R1283 INSTALL CAMOUFLAGE NETTING	70
R1275 FIRE M-16 WEAPONS	70
R1268 CONSTRUCT FACILITIES TO SUPPORT FIELD ACTIVITIES	60
G189 PERFORM TURN-ON PROCEDURES	60
R1319 PREPARE CAMOUFLAGE NETTING	60
J286 INSPECT WAVEGUIDES	60
G1 PERFORM TURN-OFF PROCEDURES	50
R1325 REMOVE MOBILE COMMUNICATION EQUIPMENT	50
R1299 OPERATE SMALL GOVERNMENT VEHICLES, SUCH AS PICKUPS OR PASSENGER VEHICLES	50
R1321 REMOVE CABLING BETWEEN SITE VANS	50
R1309 PAINT EQUIPMENT AND FACILITIES	50
R1287 INSTALL MOBILE COMMUNICATION EQUIPMENT	40
I219 PACK TEST EQUIPMENT	40
R14 CAMOUFLAGE PERSONNEL	40
C60 PREPARE APR	40
J281 DISASSEMBLE FEEDHORN ASSEMBLY COMPONENTS	40
I222 PERFORM CORROSION CONTROL	30
L565 PERFORM PMI ON FM SHF TRANSMITTERS	30
K420 PERFORM PMI ON FM RECEIVERS	30
J278 ASSEMBLE PARABOLIC ANTENNA COMPONENTS	30

TABLE IX

GROUP ID NUMBER AND TITLE: STG369, ELECTRONIC AND INSTALLATION (E&I)
PERSONNEL

GROUP SIZE: 56
PREDOMINATE PAYGRADES: E-4/3/5
PERCENT OF SAMPLE: 3%

AVERAGE TIME IN JOB: 27 MONTHS
AVERAGE TAFMS: 74 MONTHS
AVERAGE TICF: 59 MONTHS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
S1361 PERFORM INSTALLATION FUNCTIONS USING POWER TOOLS	96
S1360 PERFORM INSTALLATION FUNCTIONS USING NONPOWER TOOLS	96
S1346 INSTALL COMMUNICATION/ELECTRONIC EQUIPMENT USING DRAWINGS AND SKETCHES	93
S1362 PERFORM ON-SITE E&I PROCEDURES	93
S1388 TERMINATE WIRES AND CABLES	91
S1347 INSTALL CROSS CONNECTIONS	91
S1344 FORM AND FAN COMMUNICATION/ELECTRONIC EQUIPMENT CABLES	89
S1356 MARK DESIGNATIONS ON COMMUNICATION EQUIPMENT	86
S1348 INSTALL FIXED COMMUNICATION EQUIPMENT	84
S1389 VISUALLY INSPECT INSTALLATION AND INTERCONNECTIONS OF INSTALLED EQUIPMENT	84
S1369 PERFORM E&I PREDEPLOYMENT ACTIONS	80
S1354 LACE CABLE ASSEMBLIES	80
S1385 RUN AND PREPARE COMMUNICATION/ELECTRONIC CABLES FOR INSTALLATION	79
S1349 INSTALL INTERMEDIATE DISTRIBUTION FRAMES (IDF)	75
S1371 POST E&I POST-DEPLOYMENT ACTIONS	73
S1355 LACE INTERNAL WIRING	70
S1352 INSTALL STATION GROUNDING SYSTEMS	64
R1275 FIRE M-16 WEAPONS	64
S1390 WIRE POWER DISTRIBUTION SYSTEMS	61
S1364 PERFORM POST-INSTALLATION OPERATION TESTS	57
S1334 ASSEMBLE SYSTEMS OR SUBSYSTEMS FROM COMPONENT PARTS	57
S1377 PREPARE SITE FOR EQUIPMENT INSTALLATION	55
S1340 CONSTRUCT INTERCONNECTS	55

APPENDIX B

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

TABLE I

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

DUTIES	JOBS			
	BISS PERSONNEL (STG204)	BISS MAINTENANCE SUPERVISORS (STG294)	PERIMETER SEC SYSTEM TECHNICIANS (STG565)	STRUCTURE SEC SYSTEM TECHNICIANS (STG422)
A ORGANIZING AND PLANNING	2	10	2	1
R DIRECTING AND IMPLEMENTING	1	4	1	1
C INSPECTING AND EVALUATING	2	7	1	1
D TRAINING	3	10	3	6
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	4	8	3	2
F PERFORMING SUPPLY FUNCTIONS	2	7	3	2
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	0	2	1	1
H PERFORMING SATELLITE OPERATION FUNCTIONS	13	*	0	0
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	*	8	13	22
J MAINTAINING ANTENNA SYSTEMS	1	1	*	*
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCEIVERS	1	1	*	*
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCEIVERS	*	1	*	*
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	*	*	*	0
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	*	0	*	*
O MAINTAINING MODEMS	*	0	0	0
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	56	34	59	54
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	5	2	5	5
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	1	1	1	2
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	1	1	*	*
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	5	*	5	1

* Denotes less than .5 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE I (CONTINUED)

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

DUTIES	JOBS		
	MOBILE WDBND COMM EQUIP PERSONNEL (STG124)	MOBILE TROPO RADIO TECHN (STG218)	MOBILE MICRO RADIO TECHN (STG202)
A ORGANIZING AND PLANNING	1	1	1
B DIRECTING AND IMPLEMENTING	1	1	1
C INSPECTING AND EVALUATING	1	1	1
D TRAINING	2	2	2
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	2	1	2
F PERFORMING SUPPLY FUNCTIONS	3	4	3
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	13	25	12
H PERFORMING SATELLITE OPERATION FUNCTIONS	*	*	*
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	12	11	12
J MAINTAINING ANTENNA SYSTEMS	11	16	10
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCIVERS	11	6	11
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCIVERS	6	4	6
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	5	3	6
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	2	1	2
O MAINTAINING MODEMS	1	*	1
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	*	1	*
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	8	3	8
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	20	19	20
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	1	*	1
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	*	0	*

* Denotes less than .5 percent

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TABLE I (CONTINUED)

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

DUTIES	JOBS					
	FIXED WDBND COMM EQUIP PERSONNEL (STG106)	FIXED TROPO RADIO TECHNS (STG182)	FIXED MICRO RADIO TECHNS (GRP039)	FIXED RADIO VCE FREQ TECHNS (STG371)	FIXED RADIO TELETYPE MULTI TECHNS (STG244)	
A ORGANIZING AND PLANNING	1	1	2	1	1	1
B DIRECTING AND IMPLEMENTING	1	1	1	*	1	1
C INSPECTING AND EVALUATING	1	1	1	*	1	1
D TRAINING	3	2	3	2	3	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	2	3	2	*	3	3
F PERFORMING SUPPLY FUNCTIONS	4	7	3	1	4	4
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	13	23	9	14	10	10
H PERFORMING SATELLITE OPERATION FUNCTIONS	*	*	*	*	*	*
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	13	19	10	9	14	14
J MAINTAINING ANTENNA SYSTEMS	2	2	3	1	*	*
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCEIVERS	14	10	17	14	3	3
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCEIVERS	10	9	11	12	2	2
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	10	9	10	18	10	10
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	5	1	3	7	18	18
O MAINTAINING MODEMS	1	*	1	*	2	2
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	1	0	2	0	1	1
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	18	10	19	20	24	24
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	1	2	2	1	1	1
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	1	*	1	*	1	1
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	*	*	1	1	*	*

* Denotes less than .5 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE I (CONTINUED)

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

DUTIES	JOBS										
	SUPVRY MGT/PERS (STG019)	PLANS/ RQMTS MGRS (STG194)	MAINT TNG MGRS (STG240)	Q LTY CON		LND MBL		JOB CON		NCOIC WDBND COMMS (GRP040)	MBLTY SUPVRS (STG302)
				MGRS (STG211)		RAD MGRS (STG156)	SPVS (GRP038)				
A ORGANIZING AND PLANNING	18	16	13	14	18	22	19	13	13		
B DIRECTING AND IMPLEMENTING	10	25	9	6	8	13	9	6	6		
C INSPECTING AND EVALUATING	14	21	11	30	12	4	15	8	8		
D TRAINING	12	6	47	8	6	14	12	7	7		
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	20	21	15	30	19	38	13	14	14		
F PERFORMING SUPPLY FUNCTIONS	10	5	2	5	31	5	9	5	5		
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	3	*	*	*	2	*	5	8	8		
H PERFORMING SATELLITE OPERATION FUNCTIONS	*	1	0	*	*	0	*	*	*		
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	3	*	0	2	1	*	6	4	4		
J MAINTAINING ANTENNA SYSTEMS	1	0	1	*	*	*	1	3	3		
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCEIVERS	1	0	0	*	0	0	2	1	1		
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCEIVERS	1	0	0	0	*	0	2	*	*		
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	1	0	0	*	0	1	1	*	*		
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	*	0	0	0	0	0	1	*	*		
O MAINTAINING MODEMS	*	0	0	0	0	0	*	0	0		
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	1	0	0	0	0	*	1	0	0		
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	1	0	0	*	0	0	2	*	*		
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	4	1	1	4	1	2	2	29	29		
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	1	4	0	*	1	*	1	*	*		
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	*	0	0	0	0	0	*	*	*		

* Denotes less than .5 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE I (CONTINUED)

RELATIVE PERCENT TIME SPENT ON DUTIES BY MAJOR SPECIALTY JOBS

DUTIES	TECH TNG INSTR (STG372)**	CCTV TECHNS (STG138)**	TELETYPE MULTI SYS TECHNS (STG206)**	MOBILITY PERS (STG192)**	E&I TECHNS (STG369)**
A ORGANIZING AND PLANNING	2	3	1	1	2
B DIRECTING AND IMPLEMENTING	6	2	*	1	1
C INSPECTING AND EVALUATING	3	3	1	2	2
D TRAINING	66	6	2	*	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	5	3	3	1	2
F PERFORMING SUPPLY FUNCTIONS	3	6	6	4	2
G PERFORMING EQUIPMENT OPERATION FUNCTIONS	11	4	10	11	2
H PERFORMING SATELLITE OPERATION FUNCTIONS	0	0	0	0	2
I PERFORMING GENERAL MAINTENANCE FUNCTIONS	2	10	12	8	0
J MAINTAINING ANTENNA SYSTEMS	*	0	0	10	10
K MAINTAINING RECEIVERS TO INCLUDE RECEIVE PORTION OF TRANSCEIVERS	1	4	1	2	1
L MAINTAINING TRANSMITTERS TO INCLUDE TRANSMITTER PORTION OF TRANSCEIVERS	1	1	1	2	*
M MAINTAINING VOICE FREQUENCY MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	1	1	9	2	*
N MAINTAINING TELETYPE MULTIPLEXERS AND ASSOCIATED INTERFACE EQUIPMENT	*	2	39	3	*
O MAINTAINING MODEMS	*	*	3	0	0
P MAINTAINING BASE AND INSTALLATION SECURITY SYSTEMS (BISS)	0	14	0	0	1
Q MAINTAINING COMMON OR MISCELLANEOUS SUBASSEMBLIES	*	6	12	7	1
R PERFORMING MOBILITY AND SUPPORT FUNCTIONS	1	1	1	47	4
S PERFORMING ELECTRONIC AND INSTALLATION (E&I) FUNCTIONS	0	*	1	1	69
T PERFORMING CLOSED-CIRCUIT TELEVISION (CCTV) FUNCTIONS	0	32	0	0	1

* Denotes less than .5 percent

** Independent Job

NOTE: Columns may not add to 100 percent due to rounding