DEPARTMENT OF THE AIR FORCE
Headquarters US Air Force
Washington DC 20330-1680

Air Force Job Qualification
Standard 3C1X1-215D
1 November 1995

USAF GLOBAL HIGH FREQUENCY (HF) SYSTEM
(Radio Communications Systems Journeyman/Craftsman)

SECTION A: GENERAL

1. This Air Force Job Qualification Standard (AFJQS) and attached Air Force Qualification Training Package (AFQTP) standardize on-the-job training (OJT) tasks and constitute an approved training program for the Global HF system. The AFJQS and AFQTP are used by unit training managers, supervisors, trainers, trainees, and other training functions to plan, conduct, and document OJT on this system.

2. Maintain the AFJQS IAW AFIs 36-2201 and 36-2233. Routine changes will be accomplished via page changes and urgent changes will be disseminated via message. Enter additional local tasks in the blank areas on the AFJQS or add forms. Develop Task Training Guides for added tasks; they should be consistent in content and format with those in the AFQTP. Submit recommended AFJQS/AFQTP improvements/corrections to the 81 TRSS Qualification Training Flight (81 TRSS/TSQS), 601 D Street, Keesler AFB MS 39534-2229.

3. Review Air Force publishing bulletins and AFIND8 to identify available training materials. Use this AFJQS in conjunction with other applicable JQSs or the Specialty Training Standard (STS) and locally-assigned tasks to identify work center duty positions. Also, use this AFJQS along with other applicable JQSs and the STS to evaluate newly assigned personnel and identify individual training requirements.

4. Tasks listed on the AFJQS have been selected IAW the Instructional System Development (ISD) process and are the minimum, mandatory AF training requirements for this system. An asterisk (*) preceding a task statement indicates it may not be common to all stations and training may be deferred if not applicable. Rationale for this deferment should be documented in the work center training plan.

5. Trainees must accurately perform each assigned task unassisted IAW Technical References (TRs) prior to being certified. To qualify for skill-level upgrade, trainees must be certified on assigned tasks, satisfactorily complete career knowledge training, and meet mandatory specialty qualifications IAW AFI 36-2101 and AFMAN 36-2108. After upgrade, assign individuals to other work center duty positions and continue qualification training.

OPR: HQ USAF/SCXB
OCR: 81 TRSS/TSQO
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SECTION B: DOCUMENTATION

1. AFJQS/STS tasks will be compiled in an automated training management system, such as the Core Automated Maintenance System (CAMS), if available. The system must contain each AFJQS/STS title line with appropriate AFJQS/STS numbers, titles, and dates. AFJQS/STS and automated documentation requirements are listed below.

a. Load applicable tasks in the automated training system or identify training requirements by circling the task numbers on each individual's AFJQS/STS.

b. If task statements contain more than one noun or action verb which precludes certification on the entire task, load/circle the noun or verb to indicate the individual is being trained only on that portion of the task.

c. When training is started on a task, enter the start date in the appropriate place. When training is complete, document training and task certification IAW local certification procedures.

2. The identification blocks listed below are to be used when the trainer is other than the trainee's immediate supervisor.

TRAINEE'S NAME	INITIALS	SSN
TRAINER'S NAME, INITIALS, DATE:		
TRAINER'S NAME, INITIALS, DATE:		
TRAINER'S NAME, INITIALS, DATE:		
TRAINER'S NAME, INITIALS, DATE:		

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

RONALD R. FOGLEMAN, General, USAF
Chief of Staff

KEVIN A. COLLINS, Colonel, USAF
Director of Information Management

5 Atch
1. AF Form 797
2. Trainer's Guide
3. Skill Training Material
4. Knowledge Evaluation Pamphlet
5. Diagrams Book

JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
*1	ATTENDANT TURRET OPERATIONS TR: 31R2-2GRC212-2; Local OIs							
a	Prepare the attendant turret for operations TR: Para 4-12.4							
b	Place a call via the ESS TR: Para 4-13.2							
c	Answer an incoming call TR: Para 4-13.3 and Table A-2							
d	Place a call on/off hold TR: Para 4-13.4 and Table A-3							
e	Release a call TR: Para 4-13.5							
f	Extend a call TR: Para 4-13.6 and Table A-4							
g	Establish three-way connection and call splitting TR: Para 4-13.23 and Table A-9							
h	Perform circuit preemption into a two-party connection TR: Para 4-13.8 and Table A-13							
i	Perform circuit preemption into a three-party connection TR: Para 4-13.9 and Table A-14							

JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
j	Preempt a busy circuit for a connection TR: Para 4-13.10 and Table A-15							
k	Originate a DSN call TR: Para 4-13.12 and Table A-17							
l	Originate a precedence call TR: Para 4-13.13 and Table A-18							
m	Originate an outgoing trunk call TR: Para 4-13.14 and Table A-7							
n	Extend an outgoing trunk call TR: Para 4-13.15 and Table A-8							
o	Upgrade a connection to lockout TR: Para 4-13.16 and Table A-5							
p	Establish a loop connection TR: Para 4-11.2.8							
q	Establish a radio connection TR: Para 4-13.11 and Table A-16							
r	Condition a radio TR: Para 4-13.21 and 4-13.22							
s	Install/Delete speed dialing TR: Para 4-13.7 and Table A-10							
					JQS NUMBER 3C1X1-215D			PAGE NO 2

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK		STA	CERTIFYI	TRAINE	MAJCOM DIRECTED	COMPLE

NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	RT DATE	NG OFFICIAL'S INITIALS	E'S INITIALS	USE ONLY			TION DATE
*2	VIDEO DISPLAY TERMINAL (VDT) OPERATIONS AND RECENT CHANGE COMMANDS TR: 31R2-2GRC212-2, Appendix D; 31R2-2GRC212-42-1, Para 2-2.3.2; Scope Signal III Operators Console Users							
a	Request class of service							
b	Request date and time							
c	Set date and time							
d	Request alert participant							
e	Change alert participant							
f	Request communications call participant							
g	Change communications call participant							
h	Request alert recorder/receiver pairing							
i	Change alert recorder/receiver pairing							
					JQS NUMBER 3C1X1-215D			PAGE NO 3

JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
j	Change BITE date and time							
*3	ALERT PRESET CONFIGURATION TR: 31R2-2GRC212-2; Local OIs							
a	Preset radios TR: Para 4-13.20 thru 4-13.20.5							
b	Request preset data TR: Para 4-13.18							
*4	VOX/PHONE PATCH PANEL OPERATIONS TR: 31R2-2GRC212-2; Local OIs							
a	Condition the VOX/phone patch panel for radio operations TR: Para 4-13.21c and 4-16.2							
b	Answer incoming calls TR: Para 4-16.2b							
c	Conduct phone patch operations TR: Para 4-16.2c							
d	Broadcast on multiple frequencies TR: Para 4-16.2c							
*5	SSIII EQUIPMENT PANELS							
					JQS NUMBER			PAGE NO
					3C1X1-215D			4

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK		STA	CERTIFYI	TRAINE	MAJCOM DIRECTED	COMPLE

NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	RT DATE	NG OFFICIAL'S INITIALS	E'S INITIALS	USE ONLY			TION DATE
a	Operate the control-monitor control panel TR: 31R2-2GRC212-2, Para 4-17.2; Local OIs							
b	Operate the control-monitor monitor panel TR: 31R2-2GRC212-2, Para 4-17.3 ; Local OIs							
*6	SCOPE CONTROL CONSOLE VOICE OPERATIONS TR: 31R2-4-362-2; Local OIs							
a	Access a level from the analog position TR: Para 3-39							
b	Change frequency from the analog position TR: Para 3-39							
c	Configure analog position for a phone patch TR: Para 3-43							
d	Configure analog position for a broadcast TR: Para 3-50							
e	Configure analog position for back-to-back relay TR: Para 3-43							
f	Perform dial service assistance (DSA) from the analog position TR: Para 3-55							
g	Join BUSY/OVERRIDE from the analog position using DSA TR: Para 3-55							
					JQS NUMBER 3C1X1-215D			PAGE NO 5

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
h	Access a level from the intercept position using an audio intercept module (AIM) TR: Para 3-66							
i	Access a level from the intercept position using a patch intercept module (PIM) TR: Para 3-68							
j	Configure intercept position for a broadcast TR: Para 3-95							
k	Configure intercept position for a 19th AIM phone patch via the AIMs TR: Para 3-83							
l	Configure intercept position for a 19th AIM phone patch via the PIMs TR: Para 3-74							
m	Perform an emergency phone patch as answer-to-answer from the intercept position TR: Para 3-103							
n	Perform subscriber-to-subscriber phone patch from the intercept position TR: Para 3-87							
o	Perform DSA from the intercept position TR: Para 3-100							
p	Relay back-to-back via an AIM from the intercept position TR: Para 3-79							
q	Relay back-to-back via a PIM from the intercept position TR: Para 3-80							
					JQS NUMBER 3C1X1-215D			PAGE NO 6

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TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
r	Call a SW-3600 subscriber via an AIM from the intercept position TR: Para 3-73							
s	Call a SW-3600 subscriber via a PIM from the intercept position TR: Para 3-74							
*7	SCOPE CONTROL CONSOLE DATA OPERATIONS TR: 31R2-4-362-2; Local OIs							
a	Perform a loop-back test from the analog position TR: Para 3-51							
b	Run data from the analog position using teletype one and crypto one TR: Para 3-49							
c	Run data from the analog position using crypto two TR: Para 3-49							
d	Configure analog position for full-duplex teletype operations TR: Para 3-49							
e	Configure analog position for twin sideband full-duplex teletype operations TR: Para 3-49							
f	Configure analog position for landline teletype operations TR: Para 3-49							
g	Perform a loop-back test from the intercept position TR: Para 3-78							

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
h	Configure intercept position for simplex/duplex teletype from the AIMs TR: Para 3-67, 3-89, 3-92, and 3-93							
i	Configure intercept position for simplex/duplex teletype from the PIMs TR: Para 3-69, 3-89, 3-92, and 3-93							
j	Configure intercept position for twin sideband full-duplex teletype from the AIMs TR: Para 3-67, 3-89, 3-92, and 3-93							
k	Configure intercept position for twin sideband full-duplex teletype from the PIMs TR: Para 3-69, 3-89, 3-92, and 3-93							
l	Configure intercept position for landline teletype operations TR: Para 3-67 and 3-69							
*8	SCOPE PATTERN EQUIPMENT OPERATIONS TR: 31R2-4-462-2; Local OIs							
a	Prepare console for operation TR: Para 4-8							
b	Answer/Call an aircraft TR: Para 4-13 and 4-17							
c	Place an outgoing call TR: Para 4-13							
d	Receive an incoming call TR: Para 4-21							
					JQS NUMBER 3C1X1-215D			PAGE NO 8

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY	COMPLETION DATE

e	Select a directional receive antenna TR: Para 4-18							
f	Configure console for a broadcast TR: Para 4-17							
g	Configure console for a phone patch TR: Para 4-12							
h	Access a scope control radio level TR: Para 5-34 and 5-35							
i	Answer/Call using intercom TR: Para 4-14 and 4-15							
j	Configure console for subscriber/multiple operator calls TR: Para 4-16							
*9	COORDINATOR CONSOLE EQUIPMENT OPERATIONS TR: 31R2-4-462-2; Local OIs							
a	Perform a pre-operational check TR: Para 4-8i							
b	Place an outgoing call TR: Para 4-22							
c	Receive an incoming call TR: Para 4-21							
					JQS NUMBER 3C1X1-215D			PAGE NO 9

JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS								
TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
d	Configure console for subscriber conferencing and monitoring TR: Para 4-23 and 4-24							
e	Operate the intercom TR: Para 4-25 and 4-26							
10	CONFIGURING AN/GSH-56 FOR OPERATIONS TR: 31S3-4-122-1; Local OIs							
a	Prepare recorder for operations TR: Para 3.5							
b	Perform recorder/playback voice TR: Para 3.6.1 and 3.6.2							
c	Perform fast forward/rewind TR: Para 3.6.3 and 3.6.4							
d	Perform automatic changeover TR: Para 3.7 and 3.8							
e	Activate failsafe alarm TR: Para 3.9							
*11	SACCS OPERATIONS TR: MCR 55-29; Local OIs							
a	Prepare for SACCS operations							
					JQS NUMBER 3C1X1-215D			PAGE NO 10

JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK		STA	CERTIFYI	TRAINE	MAJCOM DIRECTED			COMPLE

NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	RT DATE	NG OFFICIAL'S INITIALS	E'S INITIALS	USE ONLY			TION DATE
b	Compose a SACCS message							
c	Process a SACCS message							
d	Receive a SACCS message							
e	Perform a cold IPL							
f	Perform line printer unit (LPU) paper change							
12	Load the KG-84 crypto device TR: KAO-184; Local OIs							
*13	MESSAGE DISTRIBUTION TERMINAL (MDT) OPERATIONS TR: Message Processing Terminal Operations Manual, Version 4.1; Local OIs							
a	Generate a log analysis report TR: Page 119							
b	Generate a statistics report TR: Page 119							
c	Generate a log analysis report without the FM Line TR: Page 119							
					JQS NUMBER 3C1X1-215D			PAGE NO 11

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
d	Manually prepare a message using DD-173 entry format TR: Page 169							
e	Retrieve a PRO FORMA message TR: Page 169							
f	Retrieve previously transmitted/received messages from the hard drive TR: Page 169							
g	Backup previous day(s) messages from the hard drive to a diskette TR: Page 169							
h	Set-up device mapping TR: Page 214							
14	STU-III OPERATIONS TR: STU-III User's Guide; Local OIs							
a	Initiate a non-secure STU-III call							
b	Initiate a secure STU-III call							
*15	KL-43(D) OPERATIONS TR: KL-43(D) Operator's Manual; Local OIs							
a	Select MAIN MENU TR: Para 3.3							
					JQS NUMBER 3C1X1-215D			PAGE NO 12

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK		STA	CERTIFYI	TRAINE	MAJCOM DIRECTED	COMPLE

NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	RT DATE	NG OFFICIAL'S INITIALS	E'S INITIALS	USE ONLY			TION DATE
b	Enter plain-text message TR: Para 3.3.2							
c	Encrypt message TR: Para 3.3.3							
d	Decrypt message TR: Para 3.3.4							
e	Transmit message TR: Para 3.3.6.1							
f	Receive message TR: Para 3.3.6.2							
g	Authenticate TR: Para 3.3.9							
16	COMMUNICATIONS SECURITY (COMSEC) DOCUMENTS USAGE							
a	Authenticate using challenge and reply TR: AFM 33-109; PELE Authentication Documents; Local OIs							
b	Use transmission authentication TR: AFM 33-109; PELE Authentication Documents; AFKAO-5; Local OIs							
c	Encode/Decode a message/call sign TR: AFM 33-109; Applicable Encode/Decode Documents; AFKAO-1; AFKAI-1; Local OIs							
					JQS NUMBER 3C1X1-215D			PAGE NO 13

JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
*17	ALERT OPERATIONS TR: 31R2-2GRC212-2, Para 4.13.18; Local OIs							
a	Perform an all-station alert							
b	Perform a multi-station alert							
c	Perform an in-station alert							
d	Perform a communications call							
18	GENERAL MESSAGE HANDLING							
a	Process communications instructions for reporting vital intelligence sightings reports TR: JANAP 146; AFM 33-109, Para 4.3; Local OIs							
b	Process visual sighting reports TR: AFM 33-109, Para 4.3; Local OIs							
c	Process contingency/disaster relief TR: AFM 33-109, Para 4.4; Local OIs							
d	Process GLASS EYE reports TR: AFM 33-109, Para 4.5; Local OIs							
					JQS NUMBER 3C1X1-215D			PAGE NO 14

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
e	Process ACC recall and diversion procedures TR: AFM 33-109, Para 4.8; Local OIs							
f	Perform relay TR: AFM 33-109, Para 4.9; Local OIs							
g	Perform direction finding/spectrum interference resolution TR: AFI 10-707; AFM 33-109, Para 4.10; Local OIs							
h	Process bomber target changes TR: AFM 33-109, Para 4.11; Local OIs							
i	Process internal emergencies TR: AFM 33-109, Para 4.12; Local OIs							
j	Perform MAJCOM CINC and VCINC Command aircraft support TR: AFM 33-109, Para 4.13; Local OIs							
k	Provide White House Communications Agency (WHCA) support TR: AFM 33-109, Para 4.14; Local OIs							
l	Support communications contingency elements (CCEs) TR: AFM 33-109, Para 4.15; Local OIs							
m	Provide PACCS data support TR: AFM 33-109, Para 4.16; Local OIs							
n	Perform base isolation TR: AFM 33-109, Para 4.17; Local OIs							
					JQS NUMBER			PAGE NO
					3C1X1-215D			15

JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
o	Provide SART and SCT support TR: AFM 33-109, Para 4.18; Local OIs							
19	COMMAND AND CONTROL COMMUNICATIONS (C3) PROCEDURES TR: AFM 33-109; Local OIs							
a	Provide phone patch service TR: Para 3.13							
b	Provide AWACS HF communications support TR: Para 3.15							
c	Provide ACCCA support TR: Para 3.16							
d	Process a BENCH GIRL broadcast message TR: Para 3.17							
e	Provide AMC CLOSE WATCH mission support TR: Para 3.18							
f	Provide HQ Air Intelligence Agency and HQ AMC GYC-8 support TR: Para 3.20							
20	AIR/GROUND (A/G) MESSAGE TRAFFIC PROCEDURES							
a	Process an initial contact/departure report TR: AFM 33-109; ACP 121, US SUP 2; ACP 125; Local OIs							

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER		START DA	CERTIFYING OFFICIA	TRAINEE'S	MAJCOM DIRECTED USE ONLY	COMPLETION DATE

	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	TE	L'S INITIALS	INITIALS				
b	Process a position/revision report TR: AFM 33-109; ACP 121, US SUP 2; ACP 125; Local OIs							
c	Process an ATC clearance request TR: AFM 33-109; ACP 121 US SUP 2; ACP 125; DOD FLIP Handbook; Local OIs							
d	Disseminate message traffic TR: AFM 33-109; ACP 121 US SUP 2; ACP 125; JANAP 128; Local OIs							
21	SPECIAL MESSAGE HANDLING PROCEDURES TR: AFM 33-109; Local OIs							
a	Process hotline station traffic TR: Para 6.2 thru 6.4							
b	Process echo station traffic TR: Para 6.5							
c	Perform worldwide dissemination TR: Para 6.6							
d	Process equipment malfunction traffic TR: Para 6.7							
22	EMERGENCY TRAFFIC HANDLING							
a	Perform distress procedures TR: AFM 33-109, Chap 8; Local OIs							

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TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
b	Process lost communications traffic TR: ACP 121, US SUP 2; ACP 135; AFM 33-109, Chap 8; Local OIs							
c	Process communications alert traffic TR: ACP 121, US SUP 2; ACP 135; AFM 33-109, Chap 8; Local OIs							
d	Process aircraft emergencies TR: ACP 121, US SUP 2; ACP 135; AFM 33-109, Chap 8; Local OIs							
e	Alert search and rescue agencies TR: AFM 33-109, Chap 8 and 10; Local OIs							
f	Provide communications support for aerospace rescue and recovery units TR: AFM 33-109, Para 8.11; Local OIs							
g	Process emergency calls for Merchant Marine and US Navy ships TR: AFM 33-109, Chap 8; ACP 135; Local OIs							
23	BROADCAST PROCEDURES TR: AFM 33-109; Local OIs							
a	Process EAMs sent/received via HF, SACCS, and landline TR: Chap 5							
b	Prepare aircraft advisories received via HF and landline TR: Chap 6							
c	Disseminate DEFCONs via HF and landline TR: Para 5.21							
					JQS NUMBER 3C1X1-215D			PAGE NO 18

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JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	CERTIFYING OFFICIAL'S INITIALS	TRAINEE'S INITIALS	MAJCOM DIRECTED USE ONLY			COMPLETION DATE
d	Transfer net control station (NCS) via communications call or HF TR: Para 1.4							
24	Support mystic star missions TR: AFM 33-109, Para 3.14; DCA Circular 310-70-79; Local OIs							
25	EQUIPMENT OUTAGES TR: AFM 33-109, Chap 10; Local OIs							
a	Log-out equipment							
b	Log-in equipment							
					JQS NUMBER 3C1X1-215D			PAGE NO 19

TABLE OF CONTENTS

LIST OF ATTACHMENTS

INTRODUCTION

This Air Force Qualification Training Package (AFQTP) was developed to enhance on-the-job training for the operation of the USAF Global High Frequency (HF) System. It provides you, the trainer, the tools you need to rapidly train your people to a high degree of proficiency. It can also aid evaluators in performing well-rounded personnel evaluations. You'll find this AFQTP is a valuable tool that gives you and the people you train long-term dividends.

The goal of this organization is to publish accurate training material beneficial to trainers and trainees. The value of your expertise in meeting this goal cannot be overstated. We ask you to assist us in meeting this goal. If you find discrepancies in this AFQTP or have suggestions for its improvement, we want to know about them. Use the Trainer Survey located at the back of this Trainer's Guide. Don't be shy in presenting your suggestions or telling us we made an error. In return, we pledge to provide you an answer and to devote our resources to providing you the best possible training material.

81 TRSS QUALIFICATION TRAINING FLIGHT
601 D STREET
KEESLER AIR FORCE BASE MS 39534-2229

ABOUT THIS AFQTP

This AFQTP was developed using Instructional System Development (ISD) concepts by MSgt Michael J. Kelly and TSgt Ronald E. Maples. Mr. Hugh Frazier was the Training and Education Specialist. It was field tested and validated at Andrews, MacDill, McClellan, and Offutt Global stations.

OBJECTIVES. This AFQTP was developed with four objectives in mind.

1. To standardize on-the-job training.

2. To reduce training time while maintaining proficiency standards.

3. To provide trainers and trainees with a logically organized training plan which yields immediate and measurable feedback.

4. To provide a standard to measure task knowledge and performance during personnel evaluations.

APPLICATION. This AFQTP provides the trainee logical, step-by-step modules (lessons) covering task knowledge and the practical application of operation procedures. It permits the trainee to gain the required knowledge prior to demonstrating task proficiency. It also provides you a standardized training plan and a Knowledge Evaluation Pamphlet (KEP) for measuring the trainee's progress. Since the KEP provides excellent criteria for measuring task knowledge, it can also be used by task evaluators during personnel evaluations. This training material applies to personnel in upgrade and/or qualification training.

TRAINING PACKAGE CONTENTS

This training package consists of an Air Force Job Qualification Standard with an attached Air Force Qualification Training Package which includes a Trainer's Guide, Skill Training Material, Knowledge Evaluation Pamphlet, and Diagrams Book. Carefully inventory the package to ensure all parts have been received. Please advise us immediately if portions of the package are missing. The purpose and content of each part of the training package are explained below.

CAUTION

> This package is NOT intended to replace the applicable technical references. It is to be used in conjunction with these for training purposes only.

AIR FORCE JOB QUALIFICATION STANDARD (AFJQS). The AFJQS (AF Form 797) is a listing of all tasks performed at USAF Global HF sites that require structured training and certification. Use and maintain the AFJQS IAW applicable Air Force directives.

TRAINER'S GUIDE (TG). The TG provides you, the trainer, the tools and information you need to effectively conduct on-the-job training using this AFQTP.

Task Training Guides (TTG). Attachment 2 contains a series of TTGs. Every task identified on the AFJQS is covered on a TTG. TTGs provide you a detailed sequence of actions which must be followed to conduct effective on-the-job training and meet minimum requirements for task certification. TTGs identify all the material required to train the task and any prerequisite training required before task training can begin. Each TTG also contains a Task Evaluation Checklist. These checklists aid you in measuring the trainee's ability to successfully perform the task. Task Evaluation Checklists reflect the major areas of a task which must be performed satisfactorily before certification.

SKILL TRAINING MATERIAL (STM). The STM contains instructions on what the trainee is responsible for during the course of completing this AFQTP. The STM also contains training modules, review questions, a review question confirmation key, and performance procedures.

AFQTP Module. Each AFQTP module provides information and guidance to the trainee concerning the task being trained. The module may present the required information or it may make specific reading assignments to the trainee. Each module contains review questions the trainee must answer.

Review Questions. Review questions measure the trainee's attainment of the knowledge associated with the training objective(s). Review questions are open-book.

Review Question Confirmation Key. A review question confirmation key is in the back of the STM. It is used by the trainee to verify the review question answers are correct. It provides immediate feedback to the trainee to reinforce learning.

DIAGRAMS BOOK (DB). The Diagrams Book contains schematic drawings, forms, flow charts, illustrations, and other training aids the trainee may need during completion of this AFQTP.

KNOWLEDGE EVALUATION PAMPHLET (KEP). The KEP contains a test for each module. KEP questions are administered and checked by a trainer. Separate the KEP from the rest of the AFQTP and detach the KEP Key and Answer Sheet(s). Store the KEP and KEP Key in a secure place. Failure to do so compromises the KEP. The results of the KEP tests provide you immediate feedback as to how well the trainee understands the information.

DEVELOPING INDIVIDUAL TRAINING PLANS

For training to be effective, carefully plan what you want the trainee to do. Use the following steps to plan training.

1. Determine your work center's needs to assure 100% task coverage. Develop a work center Master Task List (MTL) IAW applicable directives. AFQTP 750X0-215G, ISD for OJT, provides you detailed guidance on MTL and work center training program development.

2. Review the trainee's training record and determine the trainee's previous training and certification. AF Form 623, On-the-Job Training Record, provides this information for each military member. You must question or evaluate the trainee to determine current proficiency levels.

3. Assign the trainee to a duty position. The duty position is a series of work center tasks the trainee is responsible to perform after training is completed. When making this assignment, you must first consider the work center's needs and then the needs of the trainee. After the trainee completes the training requirements of the initial duty position, assign additional duty positions and conduct the necessary training for each. Keep in mind that the objective of training is to produce a 100% qualified technician.

4. Develop the trainee's training plan outlining which tasks are to be trained and when the training takes place. You can use a General Purpose form (such as the AF Form 3126) or create a computer generated Individual Training Plan for this purpose (see Attachment 1).

5. Interview the trainee. Discuss with the trainee the initial duty or expanded duty position and training program.

6. Should circumstances dictate a change in duty position, or in training schedule, discuss this with the trainee and annotate the trainee's training record, AF Form 623a. On the Individual Training Plan, annotate the remarks area.

CONDUCTING OJT USING THIS TRAINING PACKAGE

IMPORTANT INFORMATION

The following training guidance is intended for use by qualified trainers. It is highly recommended that inexperienced trainers complete Air Force Training Course J4AJS3S2X1 00X, available on computer disk through your wing/unit training manager, before attempting to train anyone on this material.

1. Explain the AFJQS/AFQTP to the trainee and how they are used to conduct

training. If the trainee is enrolled in upgrade training (UGT), explain any CDC requirements which may apply and the trainee's UGT responsibilities.

NOTE

Trainees in UGT must use this AFJQS/AFQTP to satisfy the performance criteria for each task selected for training.

2. Using the trainee's Individual Training Plan, select the first task for training and review the applicable TTG. Ensure all training material and references are available. Assure that the trainee is qualified on all prerequisites for this task.

3. Discuss with the trainee the task objective(s) and training steps listed on the appropriate TTG. Assign the corresponding STM module for the trainee to complete.

4. Verify the trainee completed the review questions. Answer any questions the trainee may have. The trainee may use the AFQTP modules and technical references (TRs) to answer the review questions.

5. When you and the trainee are satisfied with the trainee's knowledge of the material, administer the module KEP Questions. The trainee may NOT refer to the AFQTP modules when answering the KEP questions. Normally, the trainee is not permitted to use TRs when taking a KEP test. If use of TRs is permitted, it will be stated in the STM and at the beginning of each KEP test. If TR use is permitted (open-book test), a score of 100% is required. If the use of TRs is not permitted, the trainee must score a minimum of 70% on the KEP tests. Check the trainee's KEP answers against the KEP Confirmation Key. Review missed KEP questions with the trainee to ensure understanding of the material. If the score is less than what is required, have the trainee restudy the module and retake the KEP.

6. Using the technical reference(s) and Task Evaluation Checklist as guidance, explain the task performance procedures to the trainee.

7. Demonstrate the task procedures to the trainee. Answer any questions the trainee has.

8. Have the trainee practice and explain the task procedures to you. Correct any errors the trainee may make.

9. Have the trainee perform the task procedures unassisted. Using the Task Evaluation Checklist, evaluate the trainee's performance. Should the trainee fail the evaluation, determine the cause of unsatisfactory performance. If the cause is a lack of knowledge, the trainee may have to retake the module. If the cause is a lack of trainee's skill, demonstrate the task again. Have the trainee practice the task under your supervision. When you and the trainee are satisfied that the task can be performed unassisted, reevaluate the trainee.

10. When the trainee performs the task at the desired level of proficiency without

assistance, document training and task certification IAW local certification procedures.

11. Using the Individual Training Plan, assign additional tasks until the trainee completes the requirements for the duty position.

12. Expand the trainee's duty position, if possible, by adding more tasks to the Individual Training Plan. Training continues until the trainee is 100% work center task qualified or is reassigned.

NOTE

Should the trainee not complete the AFJQS/AFQTP before being reassigned to another location which has this function, we recommend you retrieve the training material from the trainee and forward it to the gaining work center.

13. Schedule periodic evaluations after the trainee is task certified. We recommend you use the performance procedures and Task Evaluation Checklists to conduct these evaluations. The KEP developed for this AFQTP may also be used to measure the trainee's knowledge of the tasks.

14. When you are satisfied that the trainee has completed all of the requirements for this AFJQS/AFQTP, remove Attachment 4, Training Certification document, from the back of this TG and process it as follows:

a. Have the work center supervisor or designated person certify AFJQS/AFQTP completion on the document.

b. Attach the Trainee and Trainer Surveys and KEP answer sheets to the document.

c. Forward the document to the commander or designated representative for concurrence/nonconcurrence.

d. Mail the completed document to the address specified.

e. Upon receipt of a properly completed certification document, a Certificate of Training will be forwarded through channels to the trainee.

INDIVIDUAL TRAINING PLAN

TRAINEE: Amn SmithTRAINER: SSgt Jones

AFJQS NUMBER/ TASK NUMBER	ESTIMATED TRAINING TIME	ESTIMATED START DATE	DATE TRAINING COMPLETED	REMARKS
XXXXX-XXXX /1	2 days	21 Jan 95	23 Jan 95	
/2	4 hours	24 Jan 95	25 Jan 95	
EXAMPLE This Individual example only. accurate	Training It does not training	EXAMPLE Plan is an reflect times.		

ATTENDANT TURRET OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *1a through *1s

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-2GRC212-2
   b. Local OIs
   c. AFQTP Modules 1 through 6

4. REQUIREMENTS:

   a. Only applicable to stations equipped with Scope Signal III consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

5. TRAINING OBJECTIVES:

   a. Given TO 31R2-2GRC212-2 and local OIs, prepare the attendant turret for operations IAW prescribed procedures.

   b. Given TO 31R2-2GRC212-2 and local OIs, place a call via the ESS IAW prescribed procedures.

   c. Given TO 31R2-2GRC212-2 and local OIs, answer an incoming call IAW prescribed procedures.

   d. Given TO 31R2-2GRC212-2 and local OIs, place a call on/off hold IAW prescribed procedures.

   e. Given TO 31R2-2GRC212-2 and local OIs, release a call IAW prescribed procedures.

   f. Given TO 31R2-2GRC212-2 and local OIs, extend a call IAW prescribed procedures.

g. Given TO 31R2-2GRC212-2 and local OIs, establish a three-way connection and call splitting IAW prescribed procedures.

h. Given TO 31R2-2GRC212-2 and local OIs, perform circuit preemption into a two-party connection IAW prescribed procedures.

i. Given TO 31R2-2GRC212-2 and local OIs, perform circuit preemption into a three-party connection IAW prescribed procedures.

j. Given TO 31R2-2GRC212-2 and local OIs, preempt a busy circuit for a connection IAW prescribed procedures.

k. Given TO 31R2-2GRC212-2 and local OIs, originate a DSN call IAW prescribed procedures.

l. Given TO 31R2-2GRC212-2 and local OIs, originate a precedence call IAW prescribed procedures.

m. Given TO 31R2-2GRC212-2 and local OIs, originate an outgoing trunk call IAW prescribed procedures.

n. Given TO 31R2-2GRC212-2 and local OIs, extend an outgoing trunk call IAW prescribed procedures.

o. Given TO 31R2-2GRC212-2 and local OIs, upgrade a connection to lockout IAW prescribed procedures.

p. Given TO 31R2-2GRC212-2 and local OIs, establish a loop connection IAW prescribed procedures.

q. Given TO 31R2-2GRC212-2 and local OIs, establish a radio connection IAW prescribed procedures.

r. Given TO 31R2-2GRC212-2 and local OIs, condition a radio IAW prescribed procedures.

s. Given TO 31R2-2GRC212-2 and local OIs, install/delete speed dialing IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 1.

_ c. Discuss the review questions and answers with the trainee.
_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

_ f. Assign AFQTP Module 2.

_ g. Discuss the review questions and answers with the trainee.

_ h. Administer the KEP.

_ i. Check the KEP answers and review missed questions.

_ j. Assign AFQTP Module 3.

_ k. Discuss the review questions and answers with the trainee.

_ l. Administer the KEP.

_ m. Check the KEP answers and review missed questions.

_ n. Assign AFQTP Module 4.

_ o. Discuss the review questions and answers with the trainee.

_ p. Administer the KEP.

_ q. Check the KEP answers and review missed questions.

_ r. Assign AFQTP Module 5.

_ s. Discuss the review questions and answers with the trainee.

_ t. Administer the KEP.

_ u. Check the KEP answers and review missed questions.

_ v. Assign AFQTP Module 6.

_ w. Discuss the review questions and answers with the trainee.

_ x. Administer the KEP.

_ y. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the layout of the attendant turret and inspecting for loose connections. Explain what to look for, which problems must be reported, and how to do it.

_ (2) Discuss how to determine if the attendant turret is clear. Explain that the POS and NITE lamps indicate if it's busy.

_ (3) Discuss clearing the attendant turret. Explain the purpose and operation of the CLEAR lamp.

_ (4) Discuss adjusting the ring indication. Explain the purpose and operation of the volume knob.

_ (5) Discuss the test lamps. Explain the purpose and operation of the lamp test switch.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 1a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Inspected for loose connections.

_ (2) Ensured all loops are idle.

_ (3) Cleared attendant turret.

_ (4) Adjusted ring indication, if applicable.

_ (5) Activated lamp test.

_ b. Trainee is ready to be certified on AFJQS task 1a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (2) Discuss station directory dial codes and feature access codes. Explain how to select the number and feature access code.

_ (3) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (4) Discuss how to determine the dialing method. Explain the available dialing methods, and the purpose and differences of each method.

_ (5) Discuss the procedures for starting the dialing sequence, to include depressing START. Explain that the ESS returns a dial tone.

_ (6) Discuss the procedures for determining the precedence. Explain the purpose and operation of the precedence button.

_ (7) Discuss dialing from the DTMF keypad. Explain the layout of the BLF/ADSS; the purpose and operation of the ring/destination lamp; and the purpose and operation of the talk destination lamp.

_ (8) Discuss dialing from the BLF. Explain the BLF Matrix and how to select short number. Explain the purpose and operation of the talk destination lamp.

_ (9) Discuss headset/microphone configuration for conversation. Explain the purpose and operation of the talk destination lamp.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 1b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Dialed number at DTMF keypad, if applicable.

_ (5) Entered number at BLF/ADSS, if applicable.

_ (6) Initiated contact with called party.

_ b. Trainee is ready to be certified on AFJQS task 1b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (2) Discuss recognizing an incoming call. Explain how the operator is signaled--the ESS beeps, one of six SOURCE lamps on the turret will flash, CALL WAITING lamp flashes, and the PRIORITY lamp lights (if priority).

_ (3) Discuss the procedures used to answer the call. Explain the purpose and operation of the flashing LOOP key; how to complete the loop; depressing the LOOP key; and how to determine if the loop is complete. Include that the LOOP ATTENDANT, SOURCE, and TALK SOURCE lamps light and the ESS sends the calling number to the display window.

_ (4) Discuss headset/microphone configuration for conversation. Explain the purpose and operations of the talk destination lamp.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 1c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Depressed appropriate FLASH LOOP key.

_ (2) Checked display window to left of DTMF keypad to verify.

_ (3) Answered call with handset or headset.

_ b. Trainee is ready to be certified on AFJQS task 1c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the procedures for placing a call on hold. Explain the purpose and operation of the HOLD key, to include depressing the HOLD key. Explain that a loop must be placed on hold before another loop can be picked up, and that the ESS beeps if a call is placed on hold for longer than 30 seconds.

_ (2) Discuss the procedures for removing a call from hold. Explain the purpose and operation of the LOOP key to include depressing the LOOP key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 1d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Depressed HOLD key to place call on hold.
_ (2) Depressed HOLD key to remove call from hold.

_ b. Trainee is ready to be certified on AFJQS task 1d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (2) Discuss station directory dial codes and feature access codes. Explain how to select the number and feature access code.

_ (3) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (4) Discuss how to determine the dialing method. Explain the available dialing methods and the purpose and differences of each method.

_ (5) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (6) Discuss the procedures for determining the precedence. Explain the purpose and operation of the precedence button.

_ (7) Discuss dialing from the DTMF keypad. Explain the layout of the BLF/ADSS; the purpose and operation of the ring/destination lamp; and the purpose and operation of the talk destination lamp.

_ (8) Discuss dialing from the BLF. Explain the BLF Matrix and how to select short number. Also explain the purpose and operation of the talk destination lamp.

_ (9) Discuss headset/microphone configuration for conversation. Explain the purpose and operation of the talk destination lamp.
_ (10) Discuss severing the loop to release the call. Explain the purpose and operation of the

REL ATT (release attendant) key to include depressing the REL ATT key, and observing the attendant and destination lamps extinguish.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 1e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Dialed number at DTMF keypad, if applicable.

_ (5) Entered number at BLF/ADSS, if applicable.

_ (6) Depressed REL ATT key.

_ b. Trainee is ready to be certified on AFJQS task 1e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (2) Discuss recognizing an incoming call. Explain how the operator is signaled--the ESS beeps, one of six SOURCE lamps on the turret will flash, CALL WAITING lamp flashes, and the PRIORITY lamp lights (if priority).

_ (3) Discuss the procedures used to answer the call. Explain the purpose and operation of

the flashing LOOP key; how to complete the loop, to include depressing the LOOP key; and how to determine if the loop is complete. Include that the LOOP ATTENDANT, SOURCE, and TALK SOURCE lamps light and the ESS sends the calling number to the display window.

_ (4) Discuss verifying that the loop is complete. Explain the purpose and operation of the source and attendant lamps.

_ (5) Discuss headset/microphone configuration for conversation. Explain the purpose and operation of the talk destination lamp.

_ (6) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (7) Discuss station directory dial codes and feature access codes. Explain how to select the number and feature access code.

_ (8) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (9) Discuss how to determine the dialing method. Explain the available dialing methods. Include the purpose and differences of each method.

_ (10) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (11) Discuss the procedures for determining the precedence and explain the purpose and operation of the precedence button.

_ (12) Discuss dialing from the DTMF keypad. Explain the layout of the BLF/ADSS; the purpose and operation of the ring/destination lamp; and the purpose and operation of the talk destination lamp.

_ (13) Discuss dialing from the BLF. Explain the BLF Matrix and how to select short number. Also explain the purpose and operation of the talk destination lamp.

_ (14) Discuss the procedures for connecting the source party to the destination party to include depressing the CONN key.

_ (15) Discuss the procedures for dropping out of the extended call. Explain the purpose and operation of the REL ATT key to include depressing the REL ATT key. Explain that the loop will ring back if the destination party does not answer after six rings or 36 seconds.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 1f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Depressed appropriate FLASH LOOP key.

_ (2) Checked display window to left of DTMF keypad to verify.

_ (3) Answered call.

_ (4) Depressed LOOP key.

_ (5) Depressed START key.

_ (6) Obtained dial tone.

_ (7) Dialed number at DTMF keypad, if applicable.

_ (8) Entered number at BLF/ADSS, if applicable.

_ (9) Depressed CONN key.

_ (10) Depressed REL ATT key.

_ b. Trainee is ready to be certified on AFJQS task 1f. Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 as guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (2) Discuss recognizing an incoming call. Explain how the operator is signaled--the ESS

beeps, one of six SOURCE lamps on the turret will flash, CALL WAITING lamp flashes, and the PRIORITY lamp lights (if priority).

_ (3) Discuss the procedures used to answer the call. Explain the purpose and operation of the flashing LOOP key; how to complete the loop, to include depressing the LOOP key and how to determine if the loop is complete. Include that the LOOP ATTENDANT, SOURCE, and TALK SOURCE lamps light and the ESS sends the calling number to the display window.

_ (4) Discuss headset/microphone configuration for conversation. Explain the purpose and operation of the talk destination lamp.

_ (5) Discuss station directory dial codes. Explain how to select the directory number.

_ (6) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (7) Discuss how to determine the dialing method. Explain the available dialing methods and the purpose and differences of each method.

_ (8) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (9) Discuss the procedures for determining the precedence. Explain the purpose and operation of the precedence button.

_ (10) Discuss dialing from the DTMF keypad. Explain the layout of the BLF/ADSS; the purpose and operation of the ring/destination lamp; and the purpose and operation of the talk destination lamp.

_ (11) Discuss dialing from the BLF. Explain the BLF Matrix and how to select short number. Also explain the purpose and operation of the talk destination lamp.

_ (12) Discuss the procedures for talking to each party. Explain the purpose and operation of the destination (DES) and source (SRC) keys, and the operation of the HOLD button.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 1g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 19a if evaluation is unsatisfactory.)

_ (1) Depressed appropriate FLASH LOOP key.

_ (2) Checked display window to left of DTMF keypad to verify.

_ (3) Answered call.

_ (4) Depressed LOOP key.

_ (5) Depressed START key.

_ (6) Obtained dial tone.

_ (7) Dialed number at DTMF keypad, if applicable.

_ (8) Entered number at BLF/ADSS, if applicable.

_ (9) Depressed CONN key.

_ (10) Depressed TALK SRC key or TALK DES key, as applicable.

_ (11) Depressed LOOP ON HOLD, then OFF HOLD.

_ (12) Depressed REL ATT key to release connection.

_ b. Trainee is ready to be certified on AFJQS task 1g. Follow local certification procedures.

21. OBJECTIVE 5h TRAINING STEPS:

_ a. Using technical references and the checklist in para 22 as guidance, discuss the task steps for achieving objective 5h with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss station directory dial codes. Explain how to select the directory number.

_ (2) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (3) Discuss the procedures for starting the dialing sequence to include depressing

START. Explain that the ESS returns a dial tone.

_ (4) Discuss the procedures for determining the precedence. Explain the purpose and operation of the precedence button.

_ (5) Discuss the preemption procedures. Explain the function of the RINGING lamp. Include that when the preempt party answers the RINGING lamp extinguishes and the loop SOURCE lamp lights.

_ (6) Discuss terminating the call. Explain the purpose and operation of the REL ATT key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

22. TASK 1h EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 21a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Depressed appropriate precedence key.

_ (5) Entered directory number for preempt party.

_ (6) Depressed REL ATT key to terminate call.

_ b. Trainee is ready to be certified on AFJQS task 1h. Follow local certification procedures.

23. OBJECTIVE 5i TRAINING STEPS:

_ a. Using technical references and the checklist in para 24 as guidance, discuss the task steps for achieving objective 5i with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for

each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss station directory dial codes. Explain how to select the directory number.

_ (2) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (3) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (4) Discuss the procedures for determining the precedence. Explain the purpose and operation of the precedence button.

_ (5) Discuss the preemption procedures. Explain the function of the RINGING lamp and that when the preempt party answers the RINGING lamp extinguishes and the loop SOURCE lamp lights. Also explain that the two remaining conference connections are maintained.

_ (6) Discuss terminating the call to the preempt party. Explain the purpose and operation of the REL ATT key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

24. TASK 1i EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 23a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Depressed appropriate precedence key.

_ (5) Entered directory number for preempt party.

_ (6) Depressed REL ATT key.

_ b. Trainee is ready to be certified on AFJQS task 1i. Follow local certification procedures.

25. OBJECTIVE 5j TRAINING STEPS:

_ a. Using technical references and the checklist in para 26 as guidance, discuss the task steps for achieving objective 5j with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss connecting a calling party to a busy circuit. Explain that the HOLD key is depressed for the loop the calling party is on.

_ (2) Discuss station directory dial codes. Explain how to select the directory number.

_ (3) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (4) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (5) Discuss the procedures for determining the precedence. Explain the purpose and operation of the precedence button.

_ (6) Discuss the preemption procedures. Explain the function of the RINGING and SOURCE lamps.

_ (7) Discuss making the connection. Explain the use of the CONN key and that the connection is made when the CONN key and then LOOP key on hold are depressed.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

26. TASK 1j EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 25a if evaluation is unsatisfactory.)

_ (1) Depressed the HOLD key on loop used by calling party.

_ (2) Depressed LOOP key.

_ (3) Depressed START key.

_ (4) Obtained dial tone.

_ (5) Depressed appropriate precedence key.

_ (6) Entered directory number for preempt party.

_ (7) Depressed the CONN key.

_ (8) Depressed the LOOP key on loop used by the calling party.

_ b. Trainee is ready to be certified on AFJQS task 1j. Follow local certification procedures.

27. OBJECTIVE 5k TRAINING STEPS:

_ a. Using technical references and the checklist in para 28 as guidance, discuss the task steps for achieving objective 5k with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (2) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (3) Discuss station directory dial codes and precedence. Explain how to select the precedence and directory number for DSN and reception of DSN dial tone.

_ (4) Discuss dialing the DSN number. Explain that precedence and number are entered. Include the lighting of the TALK DES lamp.

_ (5) Discuss terminating the connection. Explain the purpose and operation of the REL ATT key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

28. TASK 1k EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 27a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Entered appropriate precedence and DSN directory number.

_ (5) Dialed DSN precedence and number.

_ (6) Depressed REL ATT key to release connection.

_ b. Trainee is ready to be certified on AFJQS task 1k. Follow local certification procedures.

29. OBJECTIVE 5l TRAINING STEPS:

_ a. Using technical references and the checklist in para 30 as guidance, discuss the task steps for achieving objective 5l with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (2) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (3) Discuss station directory dial codes and precedence. Explain how to select the precedence and directory number.

_ (4) Discuss dialing the precedence and directory number. Explain that precedence and number are entered. Include the lighting of the TALK DES lamp.

_ (5) Discuss terminating the connection. Explain the purpose and operation of the REL ATT key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

30. TASK 1l EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 29a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Entered precedence and directory number.

_ (5) Depressed REL ATT key to release connection.

_ b. Trainee is ready to be certified on AFJQS task 1l. Follow local certification procedures.

31. OBJECTIVE 5m TRAINING STEPS:

_ a. Using technical references and the checklist in para 32 as guidance, discuss the task steps for achieving objective 5m with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss outgoing trunk calls. Explain what they are and when they are used.

_ (2) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (3) Discuss the specific trunk call procedures. Explain the use of the DTMF key associated with the trunk group and that the trunk group must be idle. Explain that the associated DESTINATION lamp lights and the ESS returns a dial tone.

_ (4) Discuss dialing the directory number. Explain how the number is entered and that the ESS returns a ringback tone.

_ (5) Discuss terminating the connection. Explain the purpose and operation of the REL ATT key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

32. TASK 1m EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 31a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Entered trunk group on DTMF keypad.

_ (5) Entered directory number.

_ (6) Depressed REL ATT to release connection.

_ b. Trainee is ready to be certified on AFJQS task 1m. Follow local certification procedures.

_ c. Assign the next task for training.

33. OBJECTIVE 5n TRAINING STEPS:

_ a. Using technical references and the checklist in para 34 as guidance, discuss the task steps for achieving objective 5n with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss extending a trunk call. Explain when a trunk call is extended. Include when calling party requests a trunk.

_ (2) Discuss the specific trunk call procedures. Explain the use of the DTMF key associated with the trunk group and that the trunk group must be idle. Also explain that the associated DESTINATION lamp lights and the ESS returns a dial tone.

_ (3) Discuss departing the connection. Explain the purpose and operation of the REL ATT key. Include that the calling party receives a dial tone upon your departure.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

34. TASK 1n EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 33a if evaluation is unsatisfactory.)

_ (1) Answered call from station or tie trunk.

_ (2) Entered trunk group on DTMF keypad.

_ (3) Monitored for dial tone.

_ (4) Depressed REL ATT key.

_ b. Trainee is ready to be certified on AFJQS task 1n. Follow local certification procedures.

35. OBJECTIVE 5o TRAINING STEPS:

_ a. Using technical references and the checklist in para 36 as guidance, discuss the task steps for achieving objective 5o with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for

each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the lockout procedures. Explain the purpose of lockout and the purpose and operation of the LOCKOUT key.

_ (2) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (3) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (4) Discuss station directory dial codes and feature access codes. Explain how to select the directory number and feature access code.

_ (5) Discuss upgrading existing transmitter/receiver connections. Explain the use of the LOCKOUT key, establishing lockout, and removal from lockout.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

36. TASK 1o EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 35a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Entered transmitter/receiver directory dial code.

_ (5) Depressed LOCKOUT key and ADSS transmit/receive number.

_ (6) Observed turret display indicates LOCK and transmit/receive directory number.

_ b. Trainee is ready to be certified on AFJQS task 1o. Follow local certification procedures.

37. OBJECTIVE 5p TRAINING STEPS:

_ a. Using technical references and the checklist in para 38 as guidance, discuss the task steps for achieving objective 5p with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss loop connections. Explain the capabilities of the ESS and that both subscribers must be on hold.

_ (2) Discuss opening the first loop for connection. Explain the purpose and operation of the LOOP key.

_ (3) Discuss transferring the call. Explain the purpose and operation of the CONF (conference) switch.

_ (4) Discuss opening the second loop for connection. Explain the purpose and operation of the LOOP key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

38. TASK 1p EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 37a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key on first loop.

_ (2) Depressed CONN key.

_ (3) Depressed LOOP key on second loop.

_ b. Trainee is ready to be certified on AFJQS task 1p. Follow local certification procedures.

39. OBJECTIVE 5q TRAINING STEPS:

_ a. Using technical references and the checklist in para 40 as guidance, discuss the task steps for achieving objective 5q with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (2) Discuss station directory dial codes and feature access codes. Explain how to select the number and feature access code.

_ (3) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (4) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (5) Discuss establishing a connection between transmitter/receiver/operator, and that the order of connection is not important. Explain the procedures for entering the access codes and directory numbers.

_ (6) Discuss releasing from the connection. Explain the purpose and operation of the REL ATT key. Include that the TALK SRC/DES lamps should extinguish.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

40. TASK 1q EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 39a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Entered transmit/receive access code.

_ (4) Dialed transmit/receive directory number.

_ (5) Depressed REL ATT key.

_ b. Trainee is ready to be certified on AFJQS task 1q. Follow local certification procedures.

41. OBJECTIVE 5r TRAINING STEPS:

_ a. Using technical references and the checklist in para 42 as guidance, discuss the task steps for achieving objective 5r with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (2) Discuss station directory dial codes and feature access codes. Explain how to select the number and feature access code.

_ (3) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (4) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (5) Discuss establishing a connection between transmitter/receiver/operator, and that the order of connection is not important. Explain the procedures for entering the access codes and directory numbers.

_ (6) Discuss selecting/conditioning the transmitter. Explain the codes used for making changes; that the code must be preceded by "01;" and that the number "4" selects antenna type. Include two-digit codes for antenna selection.

_ (7) Discuss antenna azimuth selection. Explain that entering "5" selects azimuth, and the azimuth is selected in 30 degree increments.

_ (8) Discuss selecting operating power. Explain choices of high power and low power. Entering "31" is high power, "30" is low power.

_ (9) Discuss selecting/conditioning the receiver. Explain the codes used for making changes; that the code must be preceded by "02;" and that the number "4" selects antenna type. Include two-digit codes for antenna selection.

_ (10) Discuss selecting mode of operation. Explain the mode selection key entries to include the mode codes; 1 - CW; 2 - AM; 3 - USB; 4 - UUSB.

_ (11) Discuss selecting the operating frequency. Explain that the number "1" allows operator frequency selection and the frequency must be six digits.

_ (12) Discuss selecting Automatic Gain Control (AGC). Explain that the number "6" allows for AGC selection and the desired gains are; 0 - Voice; 1 - Data; 2 - Facsimile.

_ (13) Discuss selecting type of operation. Explain the operation key entries and the codes; 8 - Simplex; 88 - Duplex.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

42. TASK 1r EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 41a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Obtained dial tone.

_ (4) Entered transmitter/receiver conference code.

_ (5) Entered transmitter/receiver channel code.

_ (6) Entered transmitter selection code.

_ (7) Selected transmitter antenna and azimuth, if RLP.

_ (8) Selected operating power.

_ (9) Entered receiver selection code.

_ (10) Selected receiver antenna and azimuth, if RLP.

_ (11) Entered transmitter/receiver selection code.

_ (12) Selected mode of operation.

_ (13) Entered operating frequency.

_ (14) Selected AGC.

_ (15) Selected Simplex or Duplex operation.

_ b. Trainee is ready to be certified on AFJQS task 1r. Follow local certification procedures.

43. OBJECTIVE 5s TRAINING STEPS:

_ a. Using technical references and the checklist in para 44 as guidance, discuss the task steps for achieving objective 5s with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how to ensure the audio path is open between the ESS and attendant turret. Explain the purpose of the VOX operation conference lamps.

_ (2) Discuss station directory dial codes and feature access codes. Explain how to select the number and feature access code.

_ (3) Discuss dialing from the attendant turret. Explain use of the first available idle loop.

_ (4) Discuss the procedures for starting the dialing sequence to include depressing START. Explain that the ESS returns a dial tone.

_ (5) Discuss installing a speed call assignment and the special speed access code. This code (117) is entered prior to the directory number. The star (*) key is depressed after directory number is entered. Include assigning a speed call number.

_ (6) Discuss the trunk access group code. Explain what these codes are, and that they are entered using the * key.

_ (7) Discuss entering the number to be shortened. Explain the number must be seven digits, right fill with ones to complete the number, if necessary. Depress the * key after number entry.

_ (8) Discuss ending the speed call assignment. Explain the purpose and operation of the REL ATT key.

_ (9) Discuss deleting a speed call assignment and the special speed access code. This code (118) is entered prior to the speed number to delete.

_ (10) Discuss ending the speed call deletion. Explain the purpose of and operation of the REL ATT key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

44. TASK 1s EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 43a if evaluation is unsatisfactory.)

_ (1) Dialed feature access code to install speed call.

_ (2) Entered directory number for speed dialing assignment.

_ (3) Depressed star (*) key.

_ (4) Entered trunk group access code.

_ (5) Depressed * key.

_ (6) Dialed required precedence and 7- or 10-digit DSN number.

_ (7) Depressed * key.

_ (8) Depressed REL ATT key to end speed calling assignment.

_ (9) Depressed LOOP key.

_ (10) Depressed START key.

_ (11) Entered the feature access code to delete speed dialing.

_ (12) Entered designated 3-digit speed call number.

_ (13) Depressed REL ATT key.

_ b. Trainee is ready to be certified on AFJQS task 1s. Follow local certification procedures.

_ c. Assign the next task for training.

VIDEO DISPLAY TERMINAL (VDT) OPERATIONS
AND RECENT CHANGE COMMANDS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *2a through *2j

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-2GRC212-2
   b. TO 31R2-2GRC212-42-1
   c. Local OIs
   d. AFQTP Module 7

4. REQUIREMENTS:

   a. Only applicable to stations equipped with Scope Signal III consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

   d. Ensure trainee has completed AFQTP Modules 1 through 6.

5. TRAINING OBJECTIVES:

   a. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, request class of service IAW prescribed procedures.

   b. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, request date and time IAW prescribed procedures.

   c. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, set date and time IAW prescribed procedures.

   d. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, request alert participant IAW prescribed procedures.

e. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, change alert participant IAW prescribed procedures.

f. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, request communications call participant IAW prescribed procedures.

g. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, change communications call participant IAW prescribed procedures.

h. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, request alert recorder/receiver pairing IAW prescribed procedures.

i. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, change alert recorder/receiver pairing IAW prescribed procedures.

j. Given TO 31R2-2GRC212-2, TO 31R2-2GRC212-42-1, and local OIs, change Built-In Test Equipment (BITE) date and time IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 7.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Request Class of Service command and that this function is most often used by maintenance personnel.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 2a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Entered Request Class of Service command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Returned system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Request Date and Time command.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 2b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Entered Request Date and Time command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Returned system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Set Date and Set Time commands.

_ (2) Discuss inputting the commands. Explain the format for the commands and the command sequences.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 2c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Entered Set Date command sequence.

_ (2) Entered Set Time command sequence.

_ (3) Verified/interpreted inputs on VDU and printer.

_ (4) Returned system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Request Alert Participants command.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 2d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Entered Request Alert Participant command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Returned system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Change Alert Participants command.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 2e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Entered Change Alert Participant command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Returned system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving the objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Request Communications Call Participant command.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 2f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Entered Request Communications Call Participant command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Returned system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2f. Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 as guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Change Communications Call Participant command.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 2g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 19a if evaluation is unsatisfactory.)

_ (1) Entered Change Communications Call Participant command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2g. Follow local certification procedures.

21. OBJECTIVE 5h TRAINING STEPS:

_ a. Using technical references and the checklist in para 22 as guidance, discuss the task steps for achieving objective 5h with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Request Alert Recorder/Receiver Pairing command.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

22. TASK 2h EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 21a if evaluation is unsatisfactory.)

_ (1) Entered Request Alert Recorder/Receiver Pairing command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Returned system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2h. Follow local certification procedures.

23. OBJECTIVE 5i TRAINING STEPS:

_ a. Using technical references and the checklist in para 24 as guidance, discuss the task steps for achieving objective 5i with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Change Alert Recorder/Receiver Pairing command.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

24. TASK 2i EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 23a if evaluation is unsatisfactory.)

_ (1) Entered Change Alert Recorder/Receiver Pairing command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2i. Follow local certification procedures.

25. OBJECTIVE 5j TRAINING STEPS:

_ a. Using technical references and the checklist in para 26 as guidance, discuss the task steps for achieving objective 5j with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss how the recent change commands work with the ESS. Explain the purpose of the Change BITE Date and Time command.

_ (2) Discuss inputting the command. Explain the format for the command and the command sequence.

_ (3) Discuss verifying/interpreting a valid command on the VDU. Explain how to verify/interpret.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

26. TASK 2j EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 25a if evaluation is unsatisfactory.)

_ (1) Entered Change BITE Date and Time command sequence.

_ (2) Verified/interpreted input on VDU and printer.

_ (3) Returned system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 2j. Follow local certification procedures.

_ c. Assign the next task for training.

ALERT PRESET CONFIGURATION
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *3a and *3b

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-2GRC212-2
   b. Local OIs
   c. AFQTP Module 8

4. REQUIREMENTS:

   a. Only applicable to stations equipped with Scope Signal III consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

   d. Ensure trainee has completed AFQTP Modules 1 through 7.

5. TRAINING OBJECTIVES:

   a. Given TO 31R2-2GRC212-2, and local OIs, preset radios IAW prescribed procedures.

   b. Given TO 31R2-2GRC212-2, and local OIs, request preset data IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 8.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the operation of the DTMF keypad and the layout of the attendant turret. Explain the proper order to perform functions.

_ (2) Discuss selecting a transmitter and receiver to preset. Explain the directory number composition, and the transmitter/receiver conference code.

_ (3) Discuss initiating the preset process. Explain the PRESET START/STOP command key and that all entries that follow are preset commands until the PRESET START/STOP command key is depressed again.

_ (4) Discuss the transmitter presets and the transmitter selection command. Explain the procedures for selecting the transmit antenna and power level.

_ (5) Discuss the receiver presets and the receiver selection command. Explain the procedures for selecting the receive antenna and AGC.

_ (6) Discuss presetting the transmitter/receiver. Include the transmitter/receiver selection command. Explain the procedures for selecting the mode of operation and frequency.

_ (7) Discuss terminating the preset process. Explain the PRESET START/STOP key and that depressing this key informs the level decoder there is no more data for storage.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 3a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Depressed LOOP key.

_ (2) Depressed START key.

_ (3) Entered transmitter/receiver conference code.

_ (4) Entered transmitter/receiver directory numbers.

_ (5) Depressed the PRESET START/STOP command key.

_ (6) Entered transmitter selection code.

_ (7) Selected transmitter antenna and azimuth (RLP).

_ (8) Selected operating power.

_ (9) Entered receiver selection code.

_ (10) Selected receiver antenna and azimuth (RLP).

_ (11) Selected AGC.

_ (12) Entered transmitter/receiver selection code.

_ (13) Selected mode of operation.

_ (14) Entered operating frequency.

_ (15) Depressed PRESET START/STOP command key.

_ b. Trainee is ready to be certified on AFJQS task 3a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the procedures for requesting the preset data for a transmitter or receiver.

_ (2) Discuss the keyboard entries required to request data for a transmitter and the use of PST after the transmitter number.

_ (3) Discuss the keyboard entries required to request data for a receiver and the use of PST after the receiver number.

_ (4) Discuss changing preset conditions. Explain that one or more of the preset conditions can be changed and the procedures to use.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 3b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Entered transmitter or receiver number, as applicable.

_ (2) Entered preset display command.

_ (3) Depressed ENTER key.

_ (4) Observed VDU display.

_ (5) Changed preset condition(s), if required.

_ b. Trainee is ready to be certified on AFJQS task 3b. Follow local certification procedures.

_ c. Assign the next task for training.

VOICE OPERATED TRANSMIT (VOX)/PHONE PATCH PANEL OPERATIONS TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *4a through *4d

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-2GRC212-2
   b. Local OIs
   c. AFQTP Module 9

4. REQUIREMENTS:

   a. Only applicable to stations equipped with Scope Signal III consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

   d. Ensure trainee has completed AFQTP Modules 1 through 8.

5. TRAINING OBJECTIVES:

   a. Given TO 31R2-2GRC212-2, and local OIs, condition the VOX/Phone Patch Panel for radio operations IAW prescribed procedures.

   b. Given TO 31R2-2GRC212-2, and local OIs, answer incoming calls IAW prescribed procedures.

   c. Given TO 31R2-2GRC212-2, and local OIs, conduct phone patch operations IAW prescribed procedures.

   d. Given TO 31R2-2GRC212-2, and local OIs, broadcast on multiple frequencies IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 9.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the VOX/Phone Patch Panel. Explain the reason for the panel; the concept of operations; and the function of the controls and indicators.

_ (2) Discuss placing the required transmitters and receivers on the panel. Explain the procedures for accomplishing this to include the use of the OPR CONF and associated RADIO LEVEL CONTROL.

_ (3) Discuss establishing connection with transmitter/receiver. Explain the use of directory numbers and feature access codes and the proper key sequence.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 4a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Conditioned radios at VOX.

_ (2) Dialed three-way conference at DTMF keypad.

_ (3) Extinguished all OPR CONF lamps at VOX.

_ (4) Monitored receivers at the Monitor Control Panel

_ (5) Answered call at VOX.

_ b. Trainee is ready to be certified on AFJQS task 4a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss incoming calls. Explain how notification of an incoming call is made. Include that the applicable OFF-HOOK switch flashes.

_ (2) Discuss answering an incoming call. Explain that depressing the applicable OFF-HOOK switch answers the call. Include that the applicable OFF-HOOK switch changes from flashing to steady.

_ (3) Discuss extending a landline subscriber from the attendant turret to the applicable SUBSCRIBER LINE CONTROL. Explain the procedures for accomplishing this to include the use of the START key to initiate.

_ (4) Discuss patching the subscriber to a radio. Explain the procedures for accomplishing this. Include the functions of the REL ATT key, OFF-HOOK, OPR CONF, and MATRIX (right arrow angle) switches.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 4b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Depressed OFF-HOOK switch.

_ (2) Extended landline subscriber from attendant turret to line A, B, or C.

_ (3) Depressed REL ATT key.

_ (4) Depressed OFF-HOOK switch.

_ (5) Depressed related MATRIX switch.

_ b. Trainee is ready to be certified on AFJQS task 4b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss initiating phone patches. Explain the use of the OPR CONF HOLD button.

_ (2) Discuss conducting phone patches. Explain the procedures for both operator controlled and voice activated phone patches. Include the use of the VU and LINE LEVEL to adjust line volume. Explain the use of the AVOX/RCV, VOX/KEY, and VOX HOLD buttons.

_ (3) Discuss terminating the connection. Explain how the operator releases from the circuit and the use of the OPR CONF button.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 4c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Depressed MATRIX key for first available OFF-HOOK lamp.
_ (2) Dialed subscriber.

_ (3) Took call off HOLD, if applicable.

_ (4) Operated footswitch for outgoing conversation (anti-VOX), if applicable.

_ (5) Placed radios on HOLD for VOX operation, if applicable.

_ (6) Removed OPR from circuit by releasing OPR CONF button.

_ b. Trainee is ready to be certified on AFJQS task 4c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss broadcasting on multiple frequencies. Explain the use of the RADIO LEVEL CONTROLS and depressing each level desired for the broadcast.

_ (2) Discuss terminating the broadcast. Explain that depressing the OPR CONF button for each radio level releases that level.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 4d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Depressed RADIO LEVEL CONTROLs 1, 2, and 3.

_ (2) Depressed footswitch to broadcast.

_ (3) Depressed OPR CONF to release radio levels.

_ b. Trainee is ready to be certified on AFJQS task 4d. Follow local certification procedures.

_ c. Assign the next task for training.

SCOPE SIGNAL III EQUIPMENT PANELS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *5a and *5b

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-2GRC212-2
   b. Local OIs
   c. AFQTP Module 10

4. REQUIREMENTS:

   a Only applicable to stations equipped with Scope Signal III consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

   d. Ensure trainee has completed AFQTP Modules 1 through 9.

5. TRAINING OBJECTIVES:

   a. Given TO 31R2-2GRC212-2, and local OIs, operate the Control-Monitor Control Panel IAW prescribed procedures.

   b. Given TO 31R2-2GRC212-2, and local OIs, operate the Control-Monitor Monitor Panel IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 10.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss operating the Control-Monitor Control Panel. Explain the purpose of the panel.

_ (2) Discuss the Control-Monitor Control Panel controls and indicators. Explain the function of each.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 5a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Disabled a recorder control channel.

_ (2) Muted transmitters and receivers.

_ (3) Adjusted headset audio.

_ (4) Bypassed control panel electronics.

_ b. Trainee is ready to be certified on AFJQS task 5a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for

achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss operating the Control-Monitor Monitor Panel. Explain the purpose of the panel.

_ (2) Discuss the Control-Monitor Monitor Panel controls and indicators. Explain the function of each.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 5b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Monitored receiver audio level.

_ (2) Set squelch noise threshold.

_ (3) Monitored transmitter audio level.

_ b. Trainee is ready to be certified on AFJQS task 5b. Follow local certification procedures.

_ c. Assign the next task for training.

SCOPE CONTROL CONSOLE VOICE OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *6a through *6s

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-4-362-2
   b. Local OIs
   c. AFQTP Module 11

4. REQUIREMENTS:

   a. Only applicable to stations equipped with Scope Control Consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

   d. Ensure trainee has completed AFQTP Modules 1 through 5.

5. TRAINING OBJECTIVES:

   a. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, access a level from the analog position IAW prescribed procedures.

   b. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, change frequency from the analog position IAW prescribed procedures.

   c. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure analog position for a phone patch IAW prescribed procedures.

   d. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure analog position for a broadcast IAW prescribed procedures.

   e. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure analog position for back-to-back relay IAW prescribed procedures.

f. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, perform dial service assistance (DSA) from the analog position IAW prescribed procedures.

g. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, Join BUSY/OVERRIDE from the analog position using DSA IAW prescribed procedures.

h. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, access a level from the intercept position using an audio intercept module (AIM) IAW prescribed procedures.

i. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, access a level from the intercept position using a patch intercept module (PIM) IAW prescribed procedures.

j. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure intercept position for a broadcast IAW prescribed procedures.

k. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure intercept position for a 19th AIM phone patch via the AIMs IAW prescribed procedures.

l. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure intercept position for a 19th AIM phone patch via the PIMs IAW prescribed procedures.

m. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, perform an emergency phone patch as answer-to-answer from the intercept position IAW prescribed procedures.

n. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, perform subscriber-to-subscriber phone patch from the intercept position IAW prescribed procedures.

o. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, perform DSA from the intercept position IAW prescribed procedures.

p. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, relay back-to-back via an AIM from the intercept position IAW prescribed procedures.

q. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, relay back-to-back via a PIM from the intercept position IAW prescribed procedures.

r. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, call a SW3600 subscriber via an AIM from the intercept position IAW prescribed procedures.

s. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, call a SW3600 subscriber via a PIM from the intercept position IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objectives for the tasks, including the work center speed and accuracy standards for performing each task. Also discuss the conditions under which they are normally performed.

_ b. Assign AFQTP Module 11.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to depress OPR push-button on any of the six radio line panels. Explain that you will hear a dial tone from the SW-3600.

__ (2) Show trainee how to dial the two-digit switchboard access codes for the desired level. Explain to use level one, dial code 11; the HF static of the normal preset frequency for level one; and the four supervisory tones--two high-pitched tones from the transmitter site and two lower-pitched tones from the receiver site. Discuss if no tones are received, either a hold was left on the radio or an equipment problem exists. If a problem exists, trainee must notify supervisor/senior operator.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 6a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Depressed OPR push-button on any of the six radio line panels.

_ (2) Dialed the two switchboard access codes for the desired level.

_ b. Trainee is ready to be certified on AFJQS task 6a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to dial radio/line code 44, J-Box Hold Off. Explain this will drop all holds and return the level to its normal preset condition; the first two tones indicate the level is ready to receive additional dialing instructions; the set of four tones indicate the level has accepted the dialing instructions and the function is complete.

_ (2) Show trainee how to dial radio/line code 45 for Simplex.

_ (3) Show trainee how to dial radio/line code 61, USB ON. Explain if LSB operation is desired, dial radio/line code 62, LSB ON.

_ (4) Show trainee how to dial radio/line code 34 for an OMNI antenna.

_ (5) Show trainee how to dial radio/line code 5 and a 6-digit frequency.

_ (6) Show trainee how to depress the keyswitch to key the radio. Explain the radio can be keyed using the VOX key lever or via dial radio/line code 47, if 47 is dialed, you must subsequently dial 48 to remove Lock Key. Explain the steady tone indicating the transmitter is keying, if the tone lasts longer than 30 seconds, the radio is not tuning properly and may fault out. If a problem exists, notify supervisor/ senior operator.

_ (7) Show trainee how to dial radio/line code 46 for Duplex. Explain this places the radio in the half-duplex operating mode.

_ (8) Show trainee how to depress the footswitch and give a short test to check for proper operation.

__ (9) Show trainee how to dial radio/line code 41, J-Box Hold On. Explain this code will freeze all the entered dial functions, making redialing unnecessary.

__ (10) Show trainee how to dial radio/line code 44, J-Box Hold Off, and depress OFF on line panel in use, when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 6b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Dialed radio/line code 44, J-Box Hold Off.

_ (2) Dialed radio/line code 45 for Simplex.

_ (3) Dialed radio/line code 61, USB ON.

_ (4) Dialed radio/line code 34 for an OMNI antenna.

_ (5) Dialed radio/line code 5 and a 6-digit frequency.

_ (6) Depressed the keyswitch to key the radio.

_ (7) Dialed radio/line code 46 for Duplex.

_ (8) Depressed footswitch and gave a short test to check for proper operation.

_ (9) Dialed radio/line code 41, J-Box Hold On.

_ (10) Dialed radio/line code 44, J-Box Hold Off, and depressed OFF on line panel when finished.

_ b. Trainee is ready to be certified on AFJQS task 6b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain to trainee to access and condition a radio level as described for changing a frequency.

_ (2) Show trainee how to depress monitor (MON) on the line panel in use after receiving and copying phone patch (ZAF) request and advising aircraft to standby.

_ (3) Show trainee how to contact desired party via the 15-line cordless switchboard hotlines or DSN lines. Explain once contacted, give the ground party a ZAF briefing (if needed).

_ (4) Show trainee how to depress operator 1 extend (OPR 1 EXTEND) on the 15-line cordless switchboard line.

_ (5) Show trainee how to depress PATCH on the extend line panel (far left line panel on the console).

_ (6) Show trainee how to depress PATCH on the line panel previously placed in monitor (MON). Explain you can talk with the aircraft alone by going into OPR on the line panel with the radio.

_ (7) Show trainee how to depress the footswitch and advise the aircraft to initiate the patch.

_ (8) Show trainee how to key PATCH A override button for aircraft to transmit and PATCH B override button for ground party to transmit. Explain to trainee to adjust the meters during a patch to keep the reading between -6dBm and -10dBm.

NOTE

If desired, you can talk to either party individually. Depress OPR on the line panel with the radio to contact the aircraft. Depress OPR on the extend line panel or 15-line cordless to talk with the ground party.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 6c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Depressed monitor (MON) on the line panel after receiving and copying phone patch (ZAF) request and advising aircraft to standby.

_ (2) Contacted desired party via the 15-line cordless switchboard hotlines or DSN lines.

_ (3) Depressed operator 1 extend (OPR 1 EXTEND) on the 15-line cordless switchboard line.

_ (4) Depressed PATCH on the extend line panel (far left line panel on the console).

_ (5) Depressed PATCH on the line panel previously placed in monitor (MON).

_ (6) Depressed footswitch and advised aircraft to initiate patch.

_ (7) Keyed PATCH A override button for aircraft to transmit and PATCH B override button for ground party to transmit.

_ b. Trainee is ready to be certified on AFJQS task 6c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select a radio line panel by depressing OPR.

_ (2) Show trainee how to dial the desired level. Explain if you need to change frequencies, refer to the procedures for changing frequency.

_ (3) Show trainee how to depress HOLD on the line panel. Explain to trainee to repeat above steps 1 and 3 until you have selected all the required levels.

_ (4) Show trainee how to depress OPR on all the line panels you selected.

_ (5) Show trainee how to depress footswitch and transmit traffic.

_ (6) Show trainee how to depress OFF on all line panels after completing the broadcast.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 6d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Selected a radio line panel by depressing OPR to receive a dial tone.

_ (2) Dialed the desired level.

_ (3) Depressed HOLD on line panel.

_ (4) Depressed OPR on all line panels selected.

_ (5) Depressed footswitch and transmit traffic.

_ (6) Depressed OFF on all line panels after completing broadcast.

_ b. Trainee is ready to be certified on AFJQS task 6d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to depress monitor (MON) on the calling party line panel.

_ (2) Show trainee how to depress OPR on another line panel and dial up a second radio level.

_ (3) Show trainee how to condition radio for desired frequency and contact the requested party.

_ (4) Show trainee how to advise contacted party to standby and place that line panel in PATCH position.

_ (5) Show trainee how to depress OPR on line panel in monitor (MON) and advise party to call the requested party, and then place that line panel in PATCH.

_ (6) Show trainee how to key manually via PATCH A override button for left line panel and PATCH B for right line panel.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 6e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Depressed monitor (MON) on the calling party line panel.

_ (2) Depressed OPR on another line panel and dialed up a second radio level.

_ (3) Conditioned radio for desired frequency and contacted the requested party.

_ (4) Advised contacted party to standby and placed that line panel in PATCH position.

_ (5) Depressed OPR on line panel in monitor (MON), advised party to call the requested party, then placed that line panel in PATCH.

_ (6) Keyed manually via PATCH A override button for left line panel and PATCH B for right line panel.

_ b. Trainee is ready to be certified on AFJQS task 6e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to depress ANSWER on the DSA when the call indicator flashes and process SW-3600 subscriber's request for information or a radio level.

_ (2) Show trainee how to depress the DSA button for a radio level, if requested.

_ (3) Show trainee how to dial a radio level. Explain AIM must be in EXTEND position at the intercept.

_ (4) Show trainee how to depress MONITOR then OFF. Explain subscriber now has control of the radio.

_ (5) Show trainee how to re-enter the circuit by first depressing ANSWER on the DSA, and then moving the spring loaded switch to "A." Explain this will allow the operator to talk with the SW-3600 subscriber without going live over the air.

_ (6) Show trainee how to depress MONITOR, and then OFF on the DSA after providing the subscriber with requested assistance. Again, explain the subscriber has control of the circuit, but the operator may still re-enter.

_ (7) Show trainee how to depress MONITOR and then OFF again once the subscriber no longer needs assistance. Explain the subscriber now has complete control of the circuit, and the operator CANNOT re-enter without overriding the circuit.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 6f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Depressed ANSWER on the DSA when the call indicator flashes and processed SW-3600 subscriber's request for information or a radio level.

_ (2) Depressed the DSA button for a radio level, if requested.

_ (3) Dialed a radio level.

_ (4) Depressed MONITOR then OFF.

_ (5) Re-entered the circuit by first depressing ANSWER on the DSA, and then moving the spring loaded switch to "A."

_ (6) Depressed MONITOR, then OFF on the DSA after providing the subscriber with requested assistance.

_ (7) Depressed MONITOR, then OFF once the subscriber no longer needs assistance.

_ b. Trainee is ready to be certified on AFJQS task 6f. Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 as guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to depress ANSWER on the DSA when the call indicator flashes.

_ (2) Show trainee how to depress DSA button again to receive another dial tone and dial requested circuit. Explain if the circuit is BUSY, the BUSY LINE indicator will light on the DSA.

_ (3) Show trainee how to depress the DSA MONITOR button to monitor conversation and determine priority of service. Explain when the MONITOR button is depressed, the JOIN BUSY and OVERRIDE lights on the DSA will light.

_ (4) Show trainee how to depress the JOIN BUSY button and footswitch to talk with both parties on the circuits.

_ (5) Show trainee how to depress the spring loaded switch to "A" to talk with the calling party only or depress spring loaded switch to "B" to talk with called party only.

_ (6) Show trainee how to depress OVERRIDE to disconnect present party and connect calling party.

_ (7) Show trainee how to depress MONITOR and then OFF on DSA. Explain the calling party now has control of circuit and the operator can monitor the line to provide any assistance, if required.

_ (8) Show trainee how to depress MONITOR and then OFF again. Explain the calling party still has control of the circuit but the operator CANNOT re-enter.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 6g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 19a if evaluation is unsatisfactory.)

_ (1) Depressed ANSWER on the DSA when the call indicator flashes and processed subscriber's request for assistance.

_ (2) Depressed DSA button again to receive another dial tone and dialed requested circuit.

_ (3) Depressed DSA MONITOR button to monitor conversation and determined priority of service.

_ (4) Depressed JOIN BUSY button and footswitch to talk with both parties on the circuit.

_ (5) Depressed spring loaded switch to "A" to talk with the calling party only or depressed spring loaded switch to "B" to talk with called party only.

_ (6) Depressed OVERRIDE to disconnect present party and connected calling party.

_ (7) Depressed MONITOR and then OFF on DSA.

_ (8) Depressed MONITOR and then OFF again.

_ b. Trainee is ready to be certified on AFJQS task 6g. Follow local certification procedures.

21. OBJECTIVE 5h TRAINING STEPS:

_ a. Using technical references and the checklist in para 22 as guidance, discuss the task steps for achieving objective 5h with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to access a level from an AIM by first depressing the LINE button on the ARM then the ANSWER button on desired level. Explain you should receive four supervisory tones, two from each site. If you need to change frequency at this stage, proceed as follows:

_ (a) Show trainee how to dial 44 (Radio Dial Code for J-Box Hold Off).

_ (b) Show trainee how to dial 45 (Radio Dial Code for Simplex).

_ (c) Show trainee how to dial 5 or 8 and a 6-digit frequency or dial 7x or 9x for a preset frequency.

_ (d) Show trainee how to dial 34 (omnidirectional antenna).

_ (e) Show trainee how to dial 41 (Radio Dial Code for J-Box Hold On). Explain you may place a SWBD line hold on the level using the ARM, instead of dialing radio line code 41. Also, that the line hold works like radio code 41 except that the ARM is used to set or release the hold.

_ (f) Show trainee how to dial 46 (Radio Dial Code for Duplex).

_ (g) Show trainee how to depress footswitch and give a short test to check for proper operation.

_ (h) Show trainee how to call distant station and pass traffic.

_ (i) Show trainee how to dial 44 (Radio Dial Code for J-Box Hold Off) when done and the frequency is no longer needed.

_ (2) Show trainee how to depress RELEASE on ARM to exit level and return to normal preset frequency.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

22. TASK 6h EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 21a if evaluation is unsatisfactory.)

_ (1) Accessed a level from an AIM by first depressing the LINE button on the ARM then the ANSWER button on desired level.

_ (2) Dialed 44 (Radio Dial Code for J-Box Hold Off).

_ (3) Dialed 45 (Radio Dial Code for Simplex).

_ (4) Dialed 5 or 8 and a 6-digit frequency or dialed 7x or 9x for a preset frequency.

_ (5) Dialed 34 (omnidirectional antenna).

_ (6) Dialed 41 (Radio Dial Code for J-Box Hold On).

_ (7) Dialed 46 (Radio Dial Code for Duplex).

_ (8) Depressed footswitch and gave a short test to check for proper operation.

_ (9) Called distant station and passed traffic.

_ (10) Dialed 44 (Radio Dial Code for J-Box Hold Off).

_ (11) Depressed RELEASE on ARM to exit level and returned to normal preset frequency.

_ b. Trainee is ready to be certified on AFJQS task 6h. Follow local certification procedures.

23. OBJECTIVE 5i TRAINING STEPS:

_ a. Using technical references and the checklist in para 24 as guidance, discuss the task steps for achieving objective 5i with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to depress SWBD on ARM.

_ (2) Show trainee how to depress ANSWER on a PIM.

_ (3) Show trainee how to dial the switchboard dial code for desired level. Explain the call light on the dial level will light, showing you have accessed the level, also the level must be in the EXTEND position to allow remote access.

_ (4) Show trainee how to place a SWBD ANALOG HOLD on PIM in use. Explain this holds the switchboard line used to access the level.

_ (5) Show trainee how to dial 44 (Radio Dial Code for J-Box Hold Off).

_ (6) Show trainee how to dial 45 (Radio Dial Code for Simplex).

_ (7) Show trainee how to dial 5 or 8 and a 6-digit frequency or dial 7x or 9x for a preset frequency.

_ (8) Show trainee how to dial 41 (Radio Dial Code for J-Box Hold On).

_ (9) Show trainee how to dial radio/line code 46 for Duplex.

_ (10) Show trainee how to depress footswitch and give a short test to check for proper operation.

_ (11) Show trainee how to call distant station and pass traffic.

_ (12) Show trainee how to dial 44 (Radio Dial Code for J-Box Hold Off) when the frequency is no longer needed,

_ (13) Show trainee how to depress the release level on the ARM to release the SWBD ANALOG HOLD placed on the PIM and return to normal preset frequency.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

24. TASK 6i EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 23a if evaluation is unsatisfactory.)

_ (1) Depressed SWBD on ARM.
_ (2) Depressed ANSWER on a PIM.

_ (3) Dialed the switchboard dial code for desired level.

_ (4) Placed a SWBD ANALOG HOLD on PIM in use.

_ (5) Dialed 44 (Radio Dial Code for J-Box Hold Off).

_ (6) Dialed 45 (Radio Dial Code for SIMPLEX).

_ (7) Dialed 5 or 8 and a 6-digit frequency or dialed 7x or 9x for a preset frequency.

_ (8) Dialed 41 (Radio Dial Code for J-Box Hold On).

_ (9) Dialed radio/line code 46 for Duplex.

_ (10) Depressed footswitch and gave a short test to check for proper operation.

_ (11) Called distant station and passed traffic.

_ (12) Dialed 44 (Radio Dial Code for J-Box Hold Off).

_ (13) Depressed the release level on the ARM to release the SWBD ANALOG HOLD placed on the PIM and return to normal preset frequency.

_ b. Trainee is ready to be certified on AFJQS task 6i. Follow local certification procedures.

25. OBJECTIVE 5j TRAINING STEPS:

_ a. Using technical references and the checklist in para 26 as guidance, discuss the task steps for achieving objective 5j with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to place the BRDCST-BELL OFF-BELL ON switch to BRDCST position. Explain this is a momentary action switch and returns to the BELL OFF position when released. Also explain when this switch is placed in the BRDCST position, the RELEASE push-button on the Audio Intercept Module (ARM) lights up.

NOTE

All the radios selected for the broadcast must be conditioned before the broadcast by following the procedures covered in previous paragraph.

_ (2) Show trainee how to depress footswitch and transmit traffic after seizing the radios for broadcast.

_ (3) Show trainee how to depress RELEASE on the ARM when the transmission is completed,

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

26. TASK 6j EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 25a if evaluation is unsatisfactory.)

_ (1) Placed the BRDCST-BELL OFF-BELL ON switch to BRDCST position.

_ (2) Conditioned all radio levels needed for broadcast.

_ (3) Seized radios for broadcast.

_ (4) Depressed footswitch and transmitted traffic.

_ (5) Depressed RELEASE on ARM when transmission is completed.

_ b. Trainee is ready to be certified on AFJQS task 6j. Follow local certification procedures.

27. OBJECTIVE 5k TRAINING STEPS:

_ a. Using technical references and the checklist in para 28 as guidance, discuss the task steps for achieving objective 5k with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to copy request for a phone patch on the level in use and have

aircraft standby.

_ (2) Show trainee how to depress MONITOR button on AIM in use.

_ (3) Show trainee how to depress RELEASE button on ARM to release out of radio circuit.

_ (4) Show trainee how to depress OPR 2 ANSWER on cordless switchboard to contact requested party.

_ (5) Show trainee how to advise ground party of phone patch request and give phone patch briefing, if necessary.

_ (6) Show trainee how to depress OPR 2 EXTEND button on cordless switchboard line. Explain 19th AIM will ring and call light will flash.

_ (7) Show trainee how to depress ANSWER on 19th AIM.

_ (8) Show trainee how to depress SWBD button on ARM to receive a dial tone.

_ (9) Show trainee how to dial level previously placed in MONITOR and apply an SWBD ANALOG HOLD via the ARM.

_ (10) Show trainee how to depress EXTEND button on 19th AIM.

_ (11) Show trainee how to depress JOIN on ARM. Explain this will connect the radio to the cordless switchboard line in use.

_ (12) Explain how to advise aircraft to initiate patch.

_ (13) Show trainee how to key for aircraft to transmit using LINE lever key on ARM and SWBD lever key for ground party to transmit.

_ (14) Show trainee how to depress OFF on 15-line cordless when phone patch is satisfactorily completed.

_ (15) Explain how to ask aircraft if further assistance is needed.

_ (16) Show trainee how to depress STANDBY button on 19th AIM.

_ (17) Show trainee how to depress RELEASE lever on ARM.

_ (18) Show trainee how to depress RELEASE button on ARM to drop out of 19th AIM.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

28. TASK 6k EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 27a if evaluation is unsatisfactory.)

_ (1) Copied request for a phone patch on the level in use and had aircraft standby.

_ (2) Depressed MONITOR button on AIM in use.

_ (3) Depressed RELEASE button on ARM to release out of radio circuit.

_ (4) Depressed OPR 2 ANSWER on cordless switchboard to contact requested party.

_ (5) Advised ground party of phone patch request and gave phone patch briefing, if necessary.

_ (6) Depressed OPR 2 EXTEND button on cordless switchboard line.

_ (7) Depressed ANSWER on 19th AIM.

_ (8) Depressed SWBD button on ARM to receive a dial tone.

_ (9) Dialed level previously placed in MONITOR and applied an SWBD ANALOG HOLD via the ARM.

_ (10) Depressed EXTEND button on 19th AIM.

_ (11) Depressed JOIN on ARM.

_ (12) Advised aircraft to initiate patch.

_ (13) Keyed for aircraft to transmit using LINE lever key on ARM and SWBD lever key for ground party to transmit.

_ (14) Depressed OFF on 15-line cordless when phone patch was complete.

_ (15) Depressed STANDBY button on 19th AIM.

_ (16) Depressed RELEASE lever on ARM.

_ (17) Depressed RELEASE button on ARM to drop out of 19th AIM.

_ b. Trainee is ready to be certified on AFJQS task 6k. Follow local certification procedures.

29. OBJECTIVE 5l TRAINING STEPS:

_ a. Using technical references and the checklist in para 30 as guidance, discuss the task steps for achieving objective 5l with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to answer 19th AIM and place in EXTEND.

_ (2) Show trainee how to place ARM in SWBD position to receive a dial tone.

_ (3) Show trainee how to dial 30 switchboard dial code for first available PIMs.

_ (4) Show trainee how to answer the ringing PIM. Explain both ANSWER and CALL lights illuminate.

_ (5) Show trainee how to place SWBD ANALOG HOLD on PIM via the ARM.

_ (6) Show trainee how to depress PATCH button on PIM.

_ (7) Show trainee how to answer another PIM with the ARM in the SWBD position.

_ (8) Show trainee how to dial desired radio level.

_ (9) Show trainee how to place SWBD ANALOG HOLD on PIM via the ARM. Explain if ZAF request from the aircraft, advise it to standby.

_ (10) Show trainee how to depress MONITOR button on PIM in use.

_ (11) Show trainee how to depress OPR 2 ANSWER button on the 15-line cordless and advise ground party of request.

_ (12) Show trainee how to depress OPR 2 EXTEND on the 15-line cordless line in use.

_ (13) Show trainee how to depress ANSWER on 19th AIM.

_ (14) Show trainee how to depress PATCH on PIM with aircraft.

_ (15) Show trainee how to depress JOIN on ARM.

_ (16) Show trainee how to depress footswitch and advise aircraft to initiate patch.

NOTE

The operator may desire to talk to either the aircraft or ground party only. Simply depress LINE button on the ARM to talk with aircraft or depress SWBD button on ARM to talk to ground party.

_ (17) Show trainee how to depress OFF on the 15-line cordless switchboard line in use when the phone patch is complete and no further assistance is needed.

_ (18) Show trainee how to depress STANDBY button on 19th AIM.

_ (19) Show trainee how to answer PIM with the radio.

NOTE

Once the 19th AIM has been connected to a PIM in this manner, it may be left in that condition indefinitely. If traffic is heavy, leave it configured to speed up assistance.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

30. TASK 6l EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 29a if evaluation is unsatisfactory.)

_ (1) Answered 19th AIM and placed in EXTEND.

_ (2) Placed ARM in SWBD position to receive a dial tone.

_ (3) Dialed 30 switchboard dial code for first available PIMs.

_ (4) Answered the ringing PIM.

_ (5) Placed SWBD ANALOG HOLD on PIM via the ARM.

_ (6) Depressed PATCH button on PIM.

_ (7) Answered another PIM with the ARM in the SWBD position.

_ (8) Dialed desired radio level using the switchboard access code for the level.

_ (9) Placed SWBD ANALOG HOLD on PIM via the ARM.

_ (10) Depressed MONITOR button on PIM in use.

_ (11) Depressed OPR 2 ANSWER button on the 15-line cordless and advise ground party of request.

_ (12) Depressed OPR 2 EXTEND on the 15-line cordless line in use.

_ (13) Depressed ANSWER on 19th AIM.

_ (14) Depressed PATCH on PIM with aircraft.

_ (15) Depressed JOIN on ARM.

_ (16) Depressed footswitch and advised aircraft to initiate patch.

_ (17) Depressed LINE button on the ARM to talk with aircraft or depressed SWBD button on ARM to talk to ground party.

_ (18) Depressed OFF on the 15-line cordless switchboard line in use when complete.

_ (19) Depressed STANDBY button on 19th AIM.

_ (20) Answered PIM with the radio.

_ b. Trainee is ready to be certified on AFJQS task 6l. Follow local certification procedures.

31. OBJECTIVE 5m TRAINING STEPS:

_ a. Using technical references and the checklist in para 32 as guidance, discuss the task steps for

achieving objective 5m with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to copy a ZAF request on the AIM or PIM in use and advise aircraft to standby.

_ (2) Show trainee how to place AIM or PIM in MONITOR.

_ (3) Show trainee how to depress OPR 2 ANSWER on the appropriate cordless switchboard line.

_ (4) Show trainee how to contact requested party and advise to standby. Explain to keep the line in OPR 2 ANSWER position.

_ (5) Show trainee how to depress ANSWER on the AIM or PIM in MONITOR.

_ (6) Show trainee how to depress MONITOR on same AIM or PIM.

_ (7) Show trainee how to advise aircraft to initiate patch. Explain in order for the ground party to transmit, use LINE KEY lever on ARM.

_ (8) Show trainee how depress OFF on the cordless line when patch is complete.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

32. TASK 6m EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 31a if evaluation is unsatisfactory.)

_ (1) Copied a ZAF request on AIM or PIM in use and advised aircraft to standby.

_ (2) Placed AIM or PIM in MONITOR.

_ (3) Depressed OPR 2 ANSWER on the appropriate cordless switchboard line.

_ (4) Contacted requested party and advised to standby.

_ (5) Depressed ANSWER on AIM or PIM in MONITOR.

_ (6) Depressed MONITOR on same AIM or PIM.

_ (7) Advised aircraft to initiate patch.

_ (8) Depressed OFF on the cordless line in use when patch is complete.

_ b. Trainee is ready to be certified on AFJQS task 6m. Follow local certification procedures.

33. OBJECTIVE 5n TRAINING STEPS:

_ a. Using technical references and the checklist in para 34 as guidance, discuss the task steps for achieving objective 5n with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to depress SWBD button on ARM.

_ (2) Show trainee how to depress ANSWER on a PIM and apply an SWBD ANALOG HOLD on the PIM.

_ (3) Show trainee how to dial 90 (Switchboard Dial Code for 19th AIM). Explain 19th AIM call light will flash and you will receive a ring indication.

_ (4) Show trainee how to depress EXTEND button on 19th AIM.

_ (5) Show trainee how to call the first party for the conference via the 15-line cordless. Explain how to advise them to standby and place the line on HOLD.

_ (6) Show trainee how to advise second party to standby. Explain to leave this line in OPR 2 ANSWER position on the 15-line cordless.

_ (7) Show trainee how to place line on HOLD in OPR 2 EXTEND position on the 15-line cordless.

_ (8) Show trainee how to answer 19th AIM and ensure ARM is in JOIN position.

_ (9) Show trainee how to request one of the parties to initiate conference. Explain for the party in OPR 2 ANSWER position to transmit, depress LINE KEY on ARM and for the party in OPR 2 EXTEND position to transmit, depress SWBD KEY on ARM.

_ (10) Show trainee how to depress OFF on the 15-line cordless when the conference is finished.

_ (11) Show trainee how to depress STANDBY button on 19th AIM.

_ (12) Show trainee how to depress ANSWER on PIM with SWBD ANALOG HOLD.

_ (13) Show trainee how to depress RELEASE lever on ARM.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

34. TASK 6n EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 33a if evaluation is unsatisfactory.)

_ (1) Depressed SWBD button on ARM.

_ (2) Depressed ANSWER on a PIM and applied an SWBD ANALOG HOLD on the PIM.

_ (3) Dialed 90 (Switchboard Dial Code for 19th AIM).

_ (4) Depressed EXTEND button on 19th AIM.

_ (5) Called the first party for conference via the 15-line cordless.

_ (6) Advised second party to standby.

_ (7) Placed line on HOLD in OPR 2 EXTEND position on the 15-line cordless.

_ (8) Answered 19th AIM and ensure ARM is in JOIN position.

_ (9) Requested one of the parties to initiate conference.

_ (10) Depressed OFF on the 15-line cordless when the conference is over.

_ (11) Depressed STANDBY button on 19th AIM.

_ (12) Depressed ANSWER on PIM with SWBD ANALOG HOLD.

_ (13) Depressed RELEASE lever on ARM.

_ b. Trainee is ready to be certified on AFJQS task 6n. Follow local certification procedures.

35. OBJECTIVE 5o TRAINING STEPS:

_ a. Using technical references and the checklist in para 36 as guidance, discuss the task steps for achieving objective 5o with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and and local procedures that apply.

_ (1) Explain to trainee that the ARM must be in LINE position to answer an incoming DSA call.

_ (2) Show trainee how to depress the LINE button on ARM to talk with the DSA subscriber only.

_ (3) Show trainee how to depress SWBD button on ARM to control the radio level.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

36. TASK 6o EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 35a if evaluation is unsatisfactory.)

_ (1) Checked that the ARM must be in the LINE position to answer an incoming DSA call.

_ (2) Depressed LINE button on ARM to talk with DSA subscriber only.

_ (3) Depressed SWBD button on ARM to control the radio level.

_ b. Trainee is ready to be certified on AFJQS task 6o. Follow local certification procedures.

37. OBJECTIVE 5p TRAINING STEPS:

_ a. Using technical references and the checklist in para 38 as guidance, discuss the task steps for achieving objective 5p with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for

each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain how to acknowledge request for service and advise subscriber to standby.

_ (2) Show trainee how to depress SWBD button on ARM and receive a dial tone.

_ (3) Show trainee how to dial level that other subscriber is on and place a SWBD ANALOG HOLD on that line.

_ (4) Show trainee how to advise second subscriber of request and to standby.

_ (5) Show trainee how to depress JOIN button on ARM and advise first subscriber to initiate patch.

_ (6) Show trainee how to depress LINE key switch on ARM (this is the radio you had in answer to begin with) to permit first subscriber to transmit.

_ (7) Show trainee how to depress SWBD key switch on ARM (this is the radio you called via the switchboard) to permit second subscriber to transmit.

_ (8) Show trainee how to depress RELEASE lever and LINE button on ARM when complete.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

38. TASK 6p EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 37a if evaluation is unsatisfactory.)

_ (1) Acknowledged request for service and advised subscriber to standby.

_ (2) Depressed SWBD button on ARM and received a dial tone.

_ (3) Dialed level that other subscriber is on and placed a SWBD ANALOG HOLD on the line.

_ (4) Advised second subscriber of request and to standby.

_ (5) Depressed JOIN button on ARM and advised first subscriber to initiate patch.

_ (6) Depressed LINE key switch on ARM (this is the radio you had in answer to begin with) to permit first subscriber to transmit.

_ (7) Depressed SWBD key switch on ARM (this is the radio you called via the switchboard) to permit second subscriber to transmit.

_ (8) Depressed RELEASE lever and LINE button on ARM when complete.

_ b. Trainee is ready to be certified on AFJQS task 6p. Follow local certification procedures.

39. OBJECTIVE 5q TRAINING STEPS:

_ a. Using technical references and the checklist in para 40 as guidance, discuss the task steps for achieving objective 5q with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to depress PATCH button on PIMs in use to connect the two radios.

_ (2) Show trainee how to place JOIN button on ARM in JOIN position.

_ (3) Show trainee how to answer one of the PIMs and request a subscriber to initiate patch.

_ (4) Show trainee how to key with LINE key lever on the ARM for the PIM in answer to transmit.

_ (5) Show trainee how to key with SWBD key lever on the ARM for unanswered PIM.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

40. TASK 6q EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 39a if evaluation is unsatisfactory.)

_ (1) Depressed PATCH button on PIMs in use to connect the two radios.

_ (2) Placed JOIN button on ARM in JOIN position.

_ (3) Answered one of the PIMs and requested a subscriber to initiate patch.

_ (4) Keyed with LINE key lever on the ARM for the PIM in answer to transmit.

_ (5) Keyed with SWBD key lever on the ARM for unanswered PIM.

_ b. Trainee is ready to be certified on AFJQS task 6q. Follow local certification procedures.

41. OBJECTIVE 5r TRAINING STEPS:

_ a. Using technical references and the checklist in para 42 as guidance, discuss the task steps for achieving objective 5r with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to answer an AIM not in use with the ARM in SWBD.

_ (2) Show trainee how to dial the two-digit code for subscriber.

_ (3) Show trainee how to depress RELEASE button on ARM to disconnect from the circuit when complete.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

42. TASK 6r EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 41a if evaluation is unsatisfactory.)

_ (1) Answered an AIM not in use with the ARM in SWBD and received a dial tone.

_ (2) Dialed the two-digit code for subscriber.

_ (3) Depressed RELEASE button on ARM to disconnect from the circuit when complete.

_ b. Trainee is ready to be certified on AFJQS task 6r. Follow local certification procedures.

43. OBJECTIVE 5s TRAINING STEPS:

_ a. Using technical references and the checklist in para 44 as guidance, discuss the task steps for achieving objective 5s with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and and local procedures that apply.

_ (1) Show trainee how to answer a PIM with the ARM in the SWBD position from the PIMs.

_ (2) Show trainee how to dial the switchboard dial code for the desired subscriber.

_ (3) Show trainee how to depress RELEASE button on ARM when complete.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

44. TASK 6s EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 43a if evaluation is unsatisfactory.)

_ (1) Answered a PIM with the ARM in the SWBD position from the PIMs.

_ (2) Dialed the switchboard dial code for the desired subscriber.

_ (3) Depressed RELEASE button on ARM when complete.

_ b. Trainee is ready to be certified on AFJQS task 6s. Follow local certification procedures.

_ c. Assign the next task for training.

SCOPE CONTROL CONSOLE DATA OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *7a through *7l

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-4-362-2
   b. Local OIs
   c. AFQTP Module 12

4. REQUIREMENTS:

   a. Only applicable to stations equipped with Scope Control Consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

   d. Ensure trainee has completed AFQTP Modules 1 through 5, and 11.

5. TRAINING OBJECTIVES:

   a. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, perform a loop-back test from the analog position IAW prescribed procedures.

   b. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, run data from the analog position using teletype one and crypto one IAW prescribed procedures.

   c. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, run data from the analog position using crypto two IAW prescribed procedures.

   d. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure analog position for full-duplex teletype operations IAW prescribed procedures.

   e. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure analog position for twin sideband full-duplex teletype operations IAW prescribed procedures.

f. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure analog position for landline teletype operations IAW prescribed procedures.

g. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, perform a loop-back test from the intercept position IAW prescribed procedures.

h. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure intercept position for simplex/duplex teletype from the AIMs IAW prescribed procedures.

i. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure intercept position for simplex/duplex teletype from the PIMs IAW prescribed procedures.

j. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure intercept position for twin sideband full-duplex teletype from the AIMs IAW prescribed procedures.

k. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure intercept position for twin sideband full-duplex teletype from the PIMs IAW prescribed procedures.

l. Given access to a Scope Control console, TO 31R2-4-362-2, and local OIs, configure intercept position for landline teletype operations IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objectives for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which they will normally be performed.

_ b. Assign AFQTP Module 12.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to patch in desired KG-84 system.

_ (2) Show trainee how to flip loop switch and initiate test.

_ (3) Explain to trainee procedures to follow if you have a problem with a KG-84 device. Explain how to switch over to the other system and log out the bad one.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 7a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Patched in desired KG-84 system.

_ (2) Flipped loop switch and initiated test.

_ (3) Switched over to other system and logged out bad one.

_ b. Trainee is ready to be certified on AFJQS task 7a Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to place line panel in the DATA position and key on radio with either the SW-4000A Keyline or by dialing 47, Lock Key on.

_ (3) Show trainee how to send a transmission after receiving a character drop on the printer.

_ (4) Show trainee how to remove Lock Key from the radio to receive data.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 7b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.

_ (2) Placed line panel in the DATA position and keyed on radio with either the SW-4000A Keyline or by dialing 47, Lock Key on.

_ (3) Sent a transmission after receiving a character drop on the printer.

_ (4) Removed Lock Key from the radio to receive data.

_ b. Trainee is ready to be certified on AFJQS task 7b Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to place line panel in DATA.

_ (3) Show trainee how to access a second line panel, dial the secondary data tone (80), and place that line panel in PATCH.

_ (4) Show trainee how to place second line panel in OPR and dial 47, Lock Key On.

_ (5) Show trainee how to place that line panel in PATCH.

_ (6) Show trainee how to receive traffic, by answering the radio, dialing 48 (Lock Key Off), then placing the line back in PATCH.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 7c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.

_ (2) Placed line panel in DATA.

_ (3) Accessed a second line panel, dialed the secondary data tone (80), and placed that line panel in PATCH.

_ (4) Placed second line panel in OPR and dialed 47, Lock Key On.

_ (5) Received traffic by answering the radio, dialing 48 (Lock Key Off), and placing the line back in PATCH.

_ b. Trainee is ready to be certified on AFJQS task 7c Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to depress OPR button on a line panel and access a radio level.

_ (3) Show trainee how to dial 44 (J-Box Hold Off), 61 (USB On), 45 (Simplex), 8 and 6-digit transmit frequency.

_ (4) Show trainee how to dial 46 (Duplex).

_ (5) Show trainee how to tune the transmitter and perform a voice check.

_ (6) Show trainee how to dial a 5 and a 6-digit receive frequency, 41 (J-Box Hold On).

_ (7) Show trainee how to dial 47 (Lock Key On) or place DATA Bus Keyline in Lock Key.

_ (8) Show trainee how to depress DATA on line panel in use. Explain you can now transmit and receive DATA simultaneously.

_ (9) Show trainee how to dial 44 and depress OFF on line panels, when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 7d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.

_ (2) Depressed OPR button on a line panel and accessed a radio level.

_ (3) Dialed 44 (J-Box Hold Off), 61 (USB On), 45 (Simplex), 8 and 6-digit transmit frequency.

_ (4) Dialed 46 (Duplex).

_ (5) Tuned transmitter and performed a voice check.

_ (6) Dialed a 5 and a 6-digit receive frequency, 41 (J-Box Hold On).

_ (7) Dialed 47 (Lock Key On) or placed DATA Bus Keyline in Lock Key.

_ (8) Depressed DATA on line panel in use.

_ (9) Dialed 44 and depressed OFF on line panels, when finished.

_ b. Trainee is ready to be certified on AFJQS task 7d Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to depress OPR on a line panel and dial the USB of a desired level.

_ (3) Show trainee how to dial 44 (J-Box Hold Off), 45 (Simplex), 63 (Twin sidebands of A1/B1), and 8 plus 6-digit transmit frequency.

_ (4) Show trainee how to dial 46 (Duplex).

_ (5) Show trainee how to tune the transmitter and perform a voice check.

_ (6) Show trainee how to dial a 5 and a 6-digit receive frequency, and 41 (J-Box Hold On).

_ (7) Show trainee how to depress MONITOR (MON) on the line panel, dial the LSB of that level, and then depress DATA.

_ (8) Show trainee how to depress OPR on the line panel with the level in USB and dial 47 (Lock Key On).

_ (9) Show trainee how to advise party you are sending DATA test on Lower Sideband.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 7e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.
_ (2) Depressed OPR on a line panel and dialed the USB of a desired level.

_ (3) Dialed 44 (J-Box Hold Off), 45 (Simplex), 63 (Twin sidebands of A1/B1), and 8 plus 6-digit transmit frequency.

_ (4) Dialed 46 (Duplex).

_ (5) Tuned the transmitter and performed a voice check.

_ (6) Dialed a 5 and a 6-digit receive frequency, and 41 (J-Box Hold On).

_ (7) Depressed MONITOR (MON) on line panel, dialed the LSB of that level, and then depressed DATA.

_ (8) Depressed OPR on the line panel with the level in USB and dialed 47 (Lock Key On).

_ (9) Advised party you are sending DATA test on Lower Sideband.

_ b. Trainee is ready to be certified on AFJQS task 7e Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to perform a voice check on the DSN line to confirm good two-way communications.

_ (3) Show trainee how to extend the line to the extend panel of the analog console.

_ (4) Show trainee how to perform another voice check, have party stand by, and place the extend panel on HOLD.

_ (5) Show trainee how to access any of the six radio line panels and dial switchboard code 80 (Secondary Teletype).

_ (6) Show trainee how to place the line in PATCH and the extend line panel in OPR, and then advise the distant end you are ready to receive or transmit.

_ (7) Show trainee how to depress OFF on the extend and radio line panels, when finished.

NOTE

When running data via landlines, do not dial a Lock Key On. PATCH in the desired crypto IAW local instructions.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 7f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.

_ (2) Performed a voice check on the DSN line to confirm good two-way communications.

_ (3) Extended the line to the extend panel of the analog console.

_ (4) Performed another voice check, had party stand by, and placed the extend panel on HOLD.

_ (5) Accessed one of the radio line panels and dialed switchboard code 80 (Secondary Teletype).

_ (6) Placed line in PATCH and extend line panel in OPR, then advised the distant end you are ready to receive or transmit.

_ (7) Depressed OFF on the extend and radio line panels, when finished.

_ b. Trainee is ready to be certified on AFJQS task 7f Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 as guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to patch in the desired KG-84 system.

_ (2) Show trainee how to flip loop switch and initiate test.

_ (3) Explain to trainee procedures to follow if you have a problem with a KG-84 device, switch over to the other system and log out the bad one.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 7g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 19a if evaluation is unsatisfactory.)

_ (1) Patched in desired KG-84 system.

_ (2) Flipped loop switch and initiated test.

_ (3) Switched over to other system and logged out bad one.

_ b. Trainee is ready to be certified on AFJQS task 7g Follow local certification procedures.

21. OBJECTIVE 5h TRAINING STEPS:

_ a. Using technical references and the checklist in para 22 as guidance, discuss the task steps for achieving objective 5h with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to depress LINE on the ARM and answer the desired level (USB).

_ (3) Show trainee how to dial 44 (J-Box Hold Off), 45 (Simplex), 5 or 8 plus 6-digit frequency.

_ (4) Show trainee how to dial 46 (Duplex) and perform a voice check.

_ (5) Show trainee how to dial 41 (J-Box Hold On), depress SWBD on the ARM, and then dial 80 (Secondary TTY).

_ (6) Show trainee how to apply a DATA Hold via the ARM, and then place the ARM in JOIN.

_ (7) Show trainee how to depress RELEASE on the ARM to transmit, or depress ANSWER on the AIM in use to receive.

An alternate method of performing this function is to substitute placing the ARM in JOIN in step 4 by doing the following:

_ (8) Show trainee how to depress LINE on the ARM and dial 47 (Lock Key On).

_ (9) Show trainee how to depress JOIN on the ARM, then transmit DATA.

_ (10) Show trainee how to depress LINE on the ARM to receive, and dial 48 (Lock Key Off), when finished

_ (11) Show trainee how to depress JOIN on the ARM.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

22. TASK 7h EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 21a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.

_ (2) Depressed LINE on the ARM and answered the desired level (USB).

_ (3) Dialed 44 (J-Box Hold Off), 45 (Simplex), 5 or 8 plus 6-digit frequency.

_ (4) Dialed 46 (Duplex) and performed a voice check.

_ (5) Dialed 41 (J-Box Hold On), depressed SWBD on the ARM, then dialed 80 (Secondary TTY).

_ (6) Applied a DATA Hold via the ARM, then placed the ARM in JOIN.

_ (7) Depressed RELEASE on the ARM to transmit, or depressed ANSWER on the AIM in use to receive.

_ (8) Depressed LINE on the ARM and dialed 47 (Lock Key On).

_ (9) Depressed JOIN on the ARM, then transmitted DATA.

_ (10) Depressed LINE on the ARM to receive, and dialed 48 (Lock Key Off), when finished

_ (11) Depressed JOIN on the ARM.

_ b. Trainee is ready to be certified on AFJQS task 7h Follow local certification procedures.

23. OBJECTIVE 5i TRAINING STEPS:

_ a. Using technical references and the checklist in para 24 as guidance, discuss the task steps for achieving objective 5i with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to place the ARM in SWBD and answer up a PIM.

_ (3) Show trainee how to dial the desired radio level, then place a SWBD DATA Hold on the PIM.

_ (4) Show trainee how to answer a second PIM, dial 80 (Secondary TTY), then place a DATA Hold on that PIM.

_ (5) Show trainee how to patch the PIMs together by depressing the PATCH buttons on the PIMs in use.

_ (6) Show trainee how to transmit DATA by dialing 47 (Lock Key on) or release ANSWER on the PIM. Explain that this allows the DATA bypass rack to key the radio.

(7) Show trainee how to receive DATA by dialing 48 (Lock Key Off) or ANSWER on

the PIM with the radio.

_ (8) Show trainee how to dial 44 (J-Box Hold Off), and then release all holds to normalize the equipment.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

24. TASK 7i EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 23a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.

_ (2) Placed ARM in SWBD and answered up a PIM.

_ (3) Dialed the desired radio level, then placed a SWBD DATA Hold on the PIM.

_ (4) Answered a second PIM, dialed 80 (Secondary TTY), then placed a DATA Hold on that PIM.

_ (5) Patched the PIMs together by depressing the PATCH buttons on the PIMs in use.

_ (6) Transmitted DATA by dialing 47 (Lock Key on) or releasing ANSWER on the PIM.

_ (7) Received DATA by dialing 48 (Lock Key Off) or ANSWER on the PIM with the radio.

_ (8) Dialed 44 (J-Box Hold Off), then released all holds to normalize the equipment.

_ b. Trainee is ready to be certified on AFJQS task 7i Follow local certification procedures.

25. OBJECTIVE 5j TRAINING STEPS:

_ a. Using technical references and the checklist in para 26 as guidance, discuss the task steps for achieving objective 5j with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to depress LINE on the ARM and answer the desired USB AIM.

_ (3) Show trainee how to dial 44 (J-Box Hold Off), 45 (Simplex), 5 or 8 and 6-digit transmit frequency, or how to use preset frequencies.

_ (4) Show trainee how to tune the transmitter and dial 46 (Duplex) to perform a voice check.

_ (5) Show trainee how to dial 5 and a 6-digit receive frequency (or use the receive preset frequency), 63 (Twin SSB On), 41 (J-box Hold On), and 47 (Lock Key On).

_ (6) Show trainee how to apply a LINE Hold via the ARM, answer the LSB AIM, and apply a LINE Hold via the ARM on that AIM also.

_ (7) Show trainee how to depress SWBD on the ARM, dial 80 (Secondary TTY), and apply a DATA Hold via the ARM.

_ (8) Show trainee how to depress LINE on the ARM, answer the USB AIM, and advise party that you are sending a DATA test on LSB.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

26. TASK 7j EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 25a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.

_ (2) Depressed LINE on the ARM and answered the desired USB AIM.

_ (3) Dialed 44 (J-Box Hold Off), 45 (Simplex), 5 or 8 and 6-digit transmit frequency, or used preset frequencies.

_ (4) Tuned the transmitter and dialed 46 (Duplex) to perform a voice check.

_ (5) Dialed a 5 and a 6-digit receive frequency (or used the receive preset frequency), 63 (Twin SSB On), 41 (J-box Hold On), and 47 (Lock Key On).

_ (6) Applied a LINE Hold via the ARM, answered the LSB AIM, and applied a LINE Hold via the ARM on that AIM also.

_ (7) Depressed SWBD on the ARM, dialed 80 (Secondary TTY), and applied a DATA Hold via the ARM.

_ (8) Depressed LINE on the ARM, answered the USB AIM, and advised party that you are sending a DATA test on LSB.

_ b. Trainee is ready to be certified on AFJQS task 7j Follow local certification procedures.

27. OBJECTIVE 5k TRAINING STEPS:

_ a. Using technical references and the checklist in para 28 as guidance, discuss the task steps for achieving objective 5k with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to access the A1 channel of the desired radio from one PIM.

_ (2) Show trainee how to dial 80 (Secondary Teletype) on a second PIM, and the B1 channel of the radio on a third one.

_ (3) Show trainee how to place holds on each PIM and condition the radios as previously described for accessing an AIM. Explain the circuit works the same as the AIMs, except that three PIMs are required. Discuss the channel used for DATA is patched to the PIM configured with a secondary DATA tone.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

28. TASK 7k EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 27a if evaluation is unsatisfactory.)

_ (1) Accessed the A1 channel of the desired radio from one PIM.

_ (2) Dialed 80 (Secondary Teletype) on a second PIM, and the B1 channel of the radio on a third one.

_ (3) Placed holds on each PIM and conditioned the radios as previously described for accessing an AIM.

_ b. Trainee is ready to be certified on AFJQS task 7k Follow local certification procedures.

29. OBJECTIVE 5l TRAINING STEPS:

_ a. Using technical references and the checklist in para 30 as guidance, discuss the task steps for achieving objective 5l with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to configure crypto for operations.

_ (2) Show trainee how to perform a voice check on a selected DSN line and ensure the Red Patch panel is set up for the Secondary System.

_ (3) Show trainee how to answer the 19th AIM with the ARM in SWBD, dial 80 (Secondary Teletype), and place an Analog SWBD Hold on the 19th AIM.

_ (4) Show trainee how to advise the distant end that you are ready to receive or send.

_ (5) Show trainee how to normalize the equipment when done.

An alternate method of running landline DATA is via the answer-to-answer method using the following steps:

_ (6) Show trainee how to dial 80 (Secondary Teletype) on a PIM and place an Analog SWBD Hold on the PIM via the ARM.

_ (7) Show trainee how to release the PIM by depressing the RELEASE button on the ARM, and then connect the landline party on the 15-line cordless switchboard.

_ (8) Show trainee how to advise party that you are ready to receive or transmit DATA and leave the line in answer.

_ (9) Show trainee how to answer the PIM with the secondary DATA tone. This connects the line to the station teletype equipment, and you are ready to send or receive traffic.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

30. TASK 7l EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 29a if evaluation is unsatisfactory.)

_ (1) Configured crypto for operations.

_ (2) Performed a voice check on a selected DSN line and ensured the Red Patch panel was set up for the Secondary System.

_ (3) Answered the 19th AIM with the ARM in SWBD, dialed 80 (Secondary Teletype), and placed an Analog SWBD Hold on the 19th AIM.

_ (4) Advised the distant end that you are ready to receive or send.

_ (5) Normalized equipment when done.

_ (6) Dialed 80 (Secondary Teletype) on a PIM and placed an Analog SWBD Hold on the PIM via the ARM.

_ (7) Released the PIM by depressing the RELEASE button on the ARM, and then connected the landline party on the 15-line cordless switchboard.

_ (8) Advised party that you are ready to receive or transmit DATA and leave the line in answer.

_ (9) Answered the PIM with the secondary DATA tone.

_ b. Trainee is ready to be certified on AFJQS task 7l Follow local certification procedures.

_ c. Assign the next task for training.

SCOPE PATTERN EQUIPMENT OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *8a through *8j

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-4-462-2
   b. Local OIs
   c. AFQTP Module 13

4. REQUIREMENTS:

   a. Only applicable to stations equipped with Scope Control and Scope Pattern consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

   d. Ensure trainee has completed AFQTP Modules 1 through 5, 11, and 12.

5. TRAINING OBJECTIVES:

   a. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, prepare console for operation IAW prescribed procedures.

   b. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, answer/call an aircraft IAW prescribed procedures.

   c. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, place an outgoing call IAW prescribed procedures.

   d. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, receive an incoming call IAW prescribed procedures.

   e. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, select a directional receive antenna IAW prescribed procedures.

f. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, configure console for a broadcast IAW prescribed procedures.

g. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, configure console for a phone patch IAW prescribed procedures.

h. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, access a Scope Control radio level using Scope Pattern IAW prescribed procedures.

i. Given access to a Scope Pattern console, TO 31R2-4-462-2, and local OIs, answer/call using intercom IAW prescribed procedures.

j. Given access to a Scope Pattern console, TO 31R2-4-462-2, and bcal OIs, configure console for subscriber/multiple operator calls IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objectives for the tasks, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which they are normally performed.

_ b. Assign AFQTP Module 13.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the layout of the console. Explain the purpose of the LAMP TEST switch. Show that all console indicators should light, except RECEIVE ANTENNA CONTROL, FIXED TUNED RADIO-OFF, SWITCHBOARD LINES-OFF, and SUB BUS 1/SUB BUS 2-RING-HOLD-OFF. Explain that if any lamps are burnt out, notify shift supervisor/senior operator.

_ (2) Show trainee how to check the headset plug and footswitch. Explain that the jack is

located on left side of console for the headset and footswitch jack is located on lower right side.

_ (3) Show trainee how to check the speakers. Explain the different frequencies positions for the speakers. Explain how to adjust the volume on the speakers.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 8a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 7a if evaluation is unsatisfactory.)

_ (1) Performed LAMP TEST.

_ (2) Checked headset plug and footswitch for proper connection.

_ (3) Checked the speakers for proper frequency and volume.

_ b. Trainee is ready to be certified on AFJQS task 8a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain which console line corresponds with assigned frequencies.

_ (2) Show trainee how to use the different transmitting devices (footswitch, headset, boommike). Explain that the footswitch is used when the console is configured for ANTI-VOX.

_ (3) Show trainee how to answer the line that corresponds to frequency aircraft is calling on. Explain how to position headset or mike 1/2 inch from lips.

_ (4) Show trainee how to key the transmitter.

_ (5) Show trainee how to copy an aircraft message or provide phone patch request.

_ (6) Show trainee how to depress line OFF when message has been copied and/or phone patch is terminated by the originator. Explain that the light will go out when deactivated.

_ (7) Explain the procedures for calling an aircraft are the same as above steps 1 through 5. Explain that the only exception is you will be attempting to contact an aircraft instead of copying a message or providing a phone patch.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 8b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 9a if evaluation is unsatisfactory.)

_ (1) Selected transmitting device.

_ (2) Answered line that corresponds to frequency that aircraft is calling on.

_ (3) Keyed transmitter.

_ (4) Copied aircraft message/provided phone patch request.

_ (5) Depressed line OFF when message has been copied and/or phone patch is terminated by the originator.

_ (6) Called an aircraft using the same procedures in para 9a, steps 4 through 7.

_ b. Trainee is ready to be certified on AFJQS task 8b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to check selected line for occupancy. Explain that the

CALL/BUSY lamp will be lit if line is occupied.

_ (2) Show trainee how to set the BUS SELECT switch to proper position. Explain that the SUB BUS lamp will light when line is selected for placing an outgoing call.

_ (3) Show trainee how to select the desired line to use. Explain that the CALL/BUSY lamp will light on all consoles when the line is selected. Explain that this prevents another operator from interrupting your call. **NOTE:** Ensure OPERATOR ROUTING is switched to SUB.

_ (4) Discuss the purpose for placing a call using HOTLINE. Explain where the HOTLINE is located and to whom the line is dedicated to.

_ (5) Show trainee how to select desired HOTLINE. Explain that since the line is connected directly to distant party no dialing is required.

_ (6) Show trainee how to call distant party by depressing RING on BUS.

_ (7) Show trainee how to terminate HOTLINE by depressing HOTLINE when call is completed.

_ (8) Show trainee how to place a call using FSK. Explain that FSK is routed through line 15 of the 15-line cordless switchboard.

_ (9) Explain how to depress line on Scope Pattern console when call is finished.

_ (10) Show trainee how to place a call using Dual-Tone Multifrequency Keying (DTMF). Know that DTMF is routed through line 15 of the 15-line cordless switchboard.

_ (11) Show trainee how to depress line on Scope Pattern console when call is finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 8c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 11a if evaluation is unsatisfactory.)

_ (1) Checked selected line for occupancy.
_ (2) Positioned BUS SELECT switch to the proper position.

_ (3) Selected HOTLINE to use.

_ (4) Called distant party by depressing RING on BUS.

_ (5) Terminated HOTLINE by depressing HOTLINE when call is completed.

_ (6) Depressed correct telephone line on console when placing a call using FSK.

_ (7) Dialed access code, waited for tone, then dialed phone number for distant party.

_ (8) Depressed line on Scope Pattern console when call is finished.

_ (9) Depressed correct telephone line on console when placing a call using DTMF.

_ (10) Dialed access code, waited for tone, then dialed phone number for distant party.

_ (11) Depressed line on Scope Pattern console when call is finished.

_ b. Trainee is ready to be certified on AFJQS task 8c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to acknowledge an incoming call by pressing flashing (white) CALL/BUSY indicator on telephone line. Explain that the (white) CALL/BUSY indicator will come on at all consoles and that access is available from the other consoles.

_ (2) Show trainee how to place a subscriber on hold by pressing (blue) HOLD indicator for the corresponding SUB BUS line. Also that all lines can be placed on hold, but only one subscriber can be placed on a bus at one time. Explain when an AUTOVON preempt occurs, the console buzzer sounds and the associated CALL/BUSY indicator flashes. When the operator presses the corresponding SUB BUS 1 or 2 OFF switch, the buzzer deactivates and the indicator extinguishes.

_ (3) Show trainee how to set the OPERATOR ROUTING switch to SUB position and check that associated (green) indicator lamp lights. Explain at this time, audio from the subscriber is received in the right earphone of the headset, if used. Also, the audio in the headset is controlled by the RIGHT HEADSET VOLUME on the console.

_ (4) Show trainee how to depress OFF on line when call is finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 8d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 13a if evaluation is unsatisfactory.)

_ (1) Acknowledged an incoming call by pressing flashing (white) CALL/BUSY indicator on telephone line.

_ (2) Placed a subscriber on hold by pressing (blue) HOLD indicator for the corresponding SUB BUS line.

_ (3) Set the OPERATOR ROUTING switch to SUB position and checked that associated (green) indicator lamp lights.

_ (4) Depressed OFF on line when call is finished.

_ b. Trainee is ready to be certified on AFJQS task 8d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select a RADIO BUS line that corresponds to frequency being used. Explain that if the receiver is being used selection can't take place.

_ (2) Show trainee how to position the BUS SELECT switch in the proper position. Explain that this switch must correspond with RADIO BUS position being used.

_ (3) Show trainee how to select an antenna direction using the RECEIVE ANTENNA CONTROL (N,E,S,W,O) button. Explain the different characters (N,E,S,W,O) appearing on the RECEIVER-ANTENNA STATUS display. Include, every time that a RADIO BUS line is selected the receiver is automatically reconnected to the omnidirectional antenna.

_ (4) Show trainee how to depress RADIO BUS on line when call is finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 8e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 15a if evaluation is unsatisfactory.)

_ (1) Selected RADIO BUS line that corresponded to frequency being used.

_ (2) Positioned BUS SELECT switch in the proper position.

_ (3) Selected antenna direction using the RECEIVE ANTENNA CONTROL (N,E,S,W,O) switch.

_ (4) Depressed RADIO BUS line when call was finished.

_ b. Trainee is ready to be certified on AFJQS task 8e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select BCST switch for RADIO BUS line selected.

_ (2) Show trainee how to select all RADIO BUS 1 or 2 lines required for broadcast. Discuss that if any radio transmitter is being used at another console it must be

released (OFF switch pressed). Explain how to release the hold condition (if in effect) on the SWITCHBOARD lines auto tune radios by pressing associated HOLD switch.

_ (3) Show trainee how to check that BUS SELECT switch is in the proper position and switch OPERATOR ROUTING to A/C. Explain that this switch must correspond with RADIO BUS.

_ (4) Show trainee how to transmit a broadcast.

_ (5) Show trainee how to release all effected radios by pressing OFF switch directly below the BCST switches.

_ (6) Show trainee how to select SWITCHBOARD LINES on RADIO BUS. Discuss that if any radio transmitter is being used at another console, it must be released (OFF switch pressed).

_ (7) Show trainee how to release the hold condition (if in effect) on the SWITCHBOARD LINES auto tune radios by pressing associated HOLD switch.

_ (8) Show trainee how to dial a level and channel frequency of the SWITCHBOARD LINES radio using the rotary dial.

_ (9) Show trainee how to place an auto-tuned radio on hold by pressing associated HOLD switch.

_ (10) Show trainee how to select BCST switch for RADIO BUS.

_ (11) Show trainee how to select all RADIO BUS 1 or 2 lines required for broadcast. Explain that if any radio transmitter is being used at another console, it must be released (OFF switch pressed).

_ (12) Show trainee how to release the hold condition (if in effect) on the SWITCHBOARD LINES auto tune radios by pressing associated HOLD switch.

_ (13) Show trainee how to check that the BUS SELECT switch is in the proper position and switch OPERATOR ROUTING to A/C. Explain that this switch must correspond with RADIO BUS position.

_ (14) Show trainee how to transmit a broadcast.

_ (15) Show trainee how to release all effected radios by pressing the OFF switch directly below the BCST switches.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 8f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 17a if evaluation is unsatisfactory.)

_ (1) Selected BCST switch for RADIO BUS line.

_ (2) Selected all RADIO BUS 1 or 2 lines required for broadcast.

_ (3) Checked that BUS SELECT switch is in the proper position and switch OPERATOR ROUTING to A/C.

_ (4) Transmitted broadcast.

_ (5) Released all effected radios by pressing the OFF switch directly below the BCST switches.

_ (6) Selected SWITCHBOARD LINES on RADIO BUS

_ (7) Released hold condition (if in effect) on SWITCHBOARD LINES auto tune radios by pressing associated HOLD switch.

_ (8) Dialed a level and channel frequency of the SWITCHBOARD LINES radio using the rotary dial.

_ (9) Placed auto-tuned radio on hold by pressing associated HOLD switch.

_ (10) Performed above steps 30 through 33 for the remaining SWITCHBOARD LINES.

_ (11) Selected BCST switch for RADIO BUS lines selected.

_ (12) Selected all RADIO BUS 1 or 2 lines required for broadcast.

_ (13) Released hold condition (if in effect) on SWITCHBOARD LINES auto tune radios by pressing associated HOLD switch.

_ (14) Checked that BUS SELECT switch is in the proper position and switch OPERATOR ROUTING to A/C.

_ (15) Transmitted broadcast.

_ (16) Released all effected radios by pressing the OFF switch directly below the BCST switches.

_ b. Trainee is ready to be certified on AFJQS task 8f. Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to acknowledge an incoming call on SUB BUS 1 or 2 lines 1 through 15. Explain when an AUTOVON preempt occurs, the console buzzer sounds and the associated CALL/BUSY indicator flashes. Show trainee how to deactivate the buzzer by pressing the associated SUB BUS 1 or 2 OFF switch.

_ (2) Show trainee how to set the BUS SELECT switch to BUS 1 or BUS 2 position corresponding to incoming call.

_ (3) Show trainee how to set the OPERATOR ROUTING switch to SUB position and check that associated (green) indicator lamp lights. Explain that at this time, audio from the subscriber is received in the right earphone of the headset, if used. Explain that audio in the headset is controlled by the RIGHT HEADSET VOLUME on the console.

_ (4) Show trainee how to place subscriber on hold by pressing (blue) HOLD indicator for corresponding SUB BUS line.

_ (5) Show trainee how to press RADIO BUS line that corresponds to frequency required. Explain that if the receiver is being used, the selection can't take place. Explain that this is indicated by red illumination on associated RECEIVER-ANTENNA STATUS display readout.

_ (6) Show trainee how to select the RECEIVE ANTENNA CONTROL (N,E,S,W,O) switch that corresponds to direction desired. Explain the characters (N,E,S,W,O) that appear on the RECEIVER-ANTENNA STATUS display.

Explain that every time a RADIO BUS line is selected the receiver is automatically reconnected to

the omnidirectional antenna.

_ (7) Show trainee how to select mode of operation by pressing AM/USB switch on selected RADIO BUS line. Explain that green lights for USB and yellow lights for AM.

_ (8) Show trainee how to check that OPERATE 1 PATCH CONTROL is in VOX position.

_ (9) Show trainee how to check that OPERATE 2 PATCH CONTROL is in RX position.

_ (10) Show trainee how to allow the subscriber to communicate with distant party by holding OPERATOR ROUTING switch in the A/C position.

_ (11) Show trainee how to allow the distant party to communicate with subscriber by returning OPERATOR ROUTING switch to center PATCH position. Explain that if a problem occurs with phone patch, operator can manually override by holding OPERATE 1 PATCH CONTROL switch in the TX or RX position.

_ (12) Show trainee how to release RADIO BUS and SUB BUS line when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 8g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 19a if evaluation is unsatisfactory.)

_ (1) Acknowledged an incoming call on SUB BUS 1 or 2 lines 1 through 15.

_ (2) Set the BUS SELECT switch to BUS 1 or BUS 2 position corresponding to incoming call.

_ (3) Set the OPERATOR ROUTING switch to SUB position.

_ (4) Placed subscriber on hold by pressing (blue) HOLD indicator for corresponding SUB BUS line.

_ (5) Pressed RADIO BUS line that corresponds to frequency required.

_ (6) Selected the RECEIVE ANTENNA CONTROL (N,E,S,W,O) switch that corresponds to direction desired.

_ (7) Selected mode of operation by pressing AM/USB switch on selected RADIO BUS line.

_ (8) Checked that OPERATE 1 PATCH CONTROL is in VOX position.

_ (9) Checked that OPERATE 2 PATCH CONTROL is in RX position.

_ (10) Communicated with distant party by holding OPERATOR ROUTING switch in the A/C position.

_ (11) Communicated with subscriber by returning OPERATOR ROUTING switch to center PATCH position.

_ (12) Released RADIO BUS and SUB BUS line when finished.

_ b. Trainee is ready to be certified on AFJQS task 8g. Follow local certification procedures.

21. OBJECTIVE 5h TRAINING STEPS:

_ a. Using technical references and the checklist in para 21 as guidance, discuss the task steps for achieving objective 5h with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain the Scope Control console layout.

_ (2) Show trainee how to select SWITCHBOARD LINES on RADIO BUS. Explain, that if any radio transmitter is being used at another console, it must be released (OFF switch depressed) before selecting.

_ (3) Show trainee how to access a Scope Control level by dialing a switchboard code using rotary dial. Explain that two high-pitched tones are coming from the transmitter and two low-pitched tones are coming from the receiver. Explain, if the beeps aren't received either the equipment is not operational, or a HOLD was left on the level. Also, explain, when dialing for access to Scope Control console, always dial slowly and wait for supervisory tones before dialing anything else.

_ (4) Show trainee how to dial radio code 44 J-BOX HOLD OFF. Explain that you should receive two beeps on the first digit and four beeps on the second.

__ (5) Show trainee how to dial radio code 45 for simplex operations. **NOTE:** For training purposes, we'll discuss changing TX and RX at the same time.

__ (6) Show trainee how to prepare Scope Control equipment for a frequency by dialing control code 5.

__ (7) Show trainee how to dial required frequency using six digits. Explain, that when you work with frequencies below 10MHz, always prefix and suffix frequency with a zero. Also explain that when you work with frequencies above 10MHz, always suffix frequency with a zero.

__ (8) Show trainee how to select an omnidirectional antenna by dialing 34. Explain never to dial while an antenna is rotating.

__ (9) Show trainee how to tune radio by pressing footswitch or use BUS keyline. Explain that a steady tone will indicate that the radio is in tune. Explain that the radio is finished tuning when the tone stops.

__ (10) Show trainee how to prepare console for duplex operations and a radio check by dialing control code 46.

__ (11) Show trainee how to dial 41 J-HOLD OFF. Explain this will hold frequencies and commands given.

__ (12) Show trainee how to depress HOLD on selected SWITCHBOARD LINES. Explain this holds level for operations.

__ (13) Show trainee how to release level on Scope Control by dialing 44 J-HOLD OFF and depress HOLD switch on SWITCHBOARD LINES when finished.

__ b. Demonstrate correct task performance.

__ c. Review task steps with trainee and answer any questions.

__ d. Restore system to normal operating configuration.

__ e. Have trainee practice steps and assist as necessary.

22. TASK 8h EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 21a if evaluation is unsatisfactory.)

_ (1) Selected SWITCHBOARD LINES on RADIO BUS.

_ (2) Accessed a Scope Control level by dialing switchboard code using rotary dial.

_ (3) Dialed radio code 44 J-BOX HOLD OFF.

_ (4) Dialed radio code 45 for simplex operations.

_ (5) Prepared Scope Control equipment for a frequency by dialing control code 5.

_ (6) Dialed required frequency using six digits.

_ (7) Selected an omnidirectional antenna by dialing 34.

_ (8) Tuned radio by pressing footswitch or use BUS keyline.

_ (9) Prepared console for duplex operations and a radio check by dialing control code 46.

_ (10) Dialed 41 J-HOLD OFF.

_ (11) Depressed HOLD on selected SWITCHBOARD LINES.

_ (12) Released level on Scope Control by dialing 44 J-HOLD OFF and depressed HOLD switch on SWITCHBOARD LINES when finished.

_ b. Trainee is ready to be certified on AFJQS task 8h. Follow local certification procedures.

23. OBJECTIVE 5i TRAINING STEPS:

_ a. Using technical references and the checklist in para 23 as guidance, discuss the task steps for achieving objective 5i with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to depress INTERCOM IC button. Explain that the blue busy light will illuminate on all positions to show the intercom is in use.

_ (2) Show trainee how to depress CALL button labeled for the console or remote site desired. Explain this will cause a ring indication at the console or site.

_ (3) Show trainee how to key footswitch and continued with conversation. Explain that moving the headset to the INTERCOM jack, keying the footswitch isn't necessary.

_ (4) Show trainee how to depress INTERCOM IC switch on the console to answer call.

_ (5) Show trainee how to release intercom by pressing INTERCOM IC when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

24. TASK 8i EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 23a if evaluation is unsatisfactory.)

_ (1) Depressed INTERCOM IC button.

_ (2) Depressed CALL button labeled for the console or remote site desired.

_ (3) Keyed footswitch and continued with conversation.

_ (4) Depressed INTERCOM IC switch on the console to answer call.

_ (5) Released intercom by pressing INTERCOM IC when finished.

_ b. Trainee is ready to be certified on AFJQS task 8i. Follow local certification procedures.

25. OBJECTIVE 5j TRAINING STEPS:

_ a. Using technical references and the checklist in para 26 as guidance, discuss the task steps for achieving objective 5j with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to initiate a call by pressing desired IC positions 1 through 10.

_ (2) Show trainee how to notify called party by pressing IC switch indicator.

_ (3) Show trainee how to proceed with conference when all parties are on line.

_ (4) Show trainee how to release all parties by pressing IC switch indicator when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

26. TASK 8j EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to steps 25a if evaluation is unsatisfactory.)

_ (1) Initiated a call by pressing desired IC positions 1 through 10.

_ (2) Notified called party by pressing IC switch indicator.

_ (3) Proceeded with conference when all parties are on line.

_ (4) Released all parties by pressing IC switch indicator when finished.

_ b. Trainee is ready to be certified on AFJQS task 8j. Follow local certification procedures.

_ c. Assign the next task for training.

COORDINATOR CONSOLE EQUIPMENT OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *9a through *9e

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31R2-4-462-2
   b. Local OIs
   c. AFQTP Module 14

4. REQUIREMENTS:

   a. Only applicable to stations equipped with Scope Control Consoles.

   b. Test equipment to be used: None

   c. Downtime/user release is/is not required.

   d. Ensure trainee has completed AFQTP Modules 1 through 5, and 11 through 13.

5. TRAINING OBJECTIVES:

   a. Given access to a coordinator console, TO 31R2-4-462-2, and local OIs, perform a pre-operational check IAW prescribed procedures.

   b. Given access to a coordinator console, TO 31R2-4-462-2, and local OIs, place an outgoing call IAW prescribed procedures.

   c. Given access to a coordinator console, TO 31R2-4-462-2, and local OIs, receive an incoming call IAW prescribed procedures.

   d. Given access to a coordinator console, TO 31R2-4-462-2, and local OIs, configure console for subscriber conferencing and monitoring IAW prescribed procedures.

   e. Given access to a coordinator console, TO 31R2-4-462-2, and local OIs, operate the intercom IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 14.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the layout of the console. Explain the purpose of the LAMP TEST switch and that all console indicators should light, except subscriber RING, HOLD/OFF, and INTERCOM CALL. If any lamps are burnt out, notify shift supervisor/senior operator.

__ (2) Show trainee how to check that headset is firmly seated in associated jack.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 9a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Performed LAMP TEST.

_ (2) Checked that headset is firmly seated in associated jack.

_ b. Trainee is ready to be certified on AFJQS task 9a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain the three methods (hotlines, rotary dials or DTMF) for placing an outgoing call.

_ (2) Show trainee how to select a line on the switchboard to use. Explain that the CALL/BUSY light for the answered line will light at all positions indicating the line is in use.

_ (3) Show trainee how to contact party either by dialing the number or using HOTLINE.

_ (4) Show trainee how to communicate via headset while pressing the Push-to-Talk button as needed.

_ (5) Show trainee how to press the blue HOLD button to place line on HOLD, if needed.

_ (6) Show trainee how to press SUBSCRIBER LINES on HOLD line to answer the call again. Explain a maximum of three subscribers can be selected at one time and placed on HOLD for conferencing, but a total of 15 subscribers can be placed on HOLD and monitored, one at a time.

_ (7) Show trainee how to press OFF on SUBSCRIBER LINES when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 9b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Selected a line on the switchboard to use.

_ (2) Contacted party either by dialing the number or using HOTLINE.

_ (3) Communicated via headset while pressing the Push-to-Talk button as needed.

_ (4) Pressed blue HOLD button to place the line on HOLD, if needed.

_ (5) Pressed SUBSCRIBER LINES on the HOLD line to answer the call again.

_ (6) Pressed OFF on SUBSCRIBER LINES when finished.

_ b. Trainee is ready to be certified on AFJQS task 9b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to press the SUBSCRIBER LINES flashing CALL/BUSY light.

_ (2) Show trainee how to communicate with party via handset while pressing the Push-to-Talk button. Explain how to adjust handset audio by using HANDSET VOLUME control.

_ (3) Show trainee how to depress OFF on SUBSCRIBER LINES when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 9c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Pressed the SUBSCRIBER LINES flashing CALL/BUSY light.
_ (2) Communicated with party via handset while pressing the Push-to-Talk button.

_ (3) Depressed OFF on SUBSCRIBER LINES when finished.

_ b. Trainee is ready to be certified on AFJQS task 9c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain the three methods (hotlines, rotary dials or DTMF) for placing an outgoing call.

_ (2) Show trainee how to select a line on the switchboard to use. Explain that the CALL/BUSY light for the answered line will light at all positions indicating line is in use.

_ (3) Show trainee how to contact party either by dialing the number or using HOTLINE.

_ (4) Show trainee how to communicate via headset while pressing the Push-to-Talk button as needed.

_ (5) Show trainee how to press the blue HOLD button to place line on HOLD, if needed. Explain a maximum of three subscribers can be selected at one time and placed on HOLD for conferencing, but a total of fifteen subscribers can be placed on HOLD and monitored, one at a time.

_ (6) Show trainee how to repeat above steps 1 through 5 for second subscriber.

_ (7) Show trainee how to repeat above steps 1 through 4 for third subscriber.

_ (8) Show trainee how to press each subscriber switch indicator in turn. Explain that the HOLD light will go out on the two HOLD subscribers and the switch-indicator lights for all three lines. Explain the next steps will demonstrate configuring the coordinator console for monitoring subscriber.

_ (9) Show trainee how to monitor subscribers by adjusting MONITOR VOLUME control for speaker. Explain all 15 switchboard lines can be monitored.

_ (10) Show trainee how to monitor subscribers that are connected together by pressing one of the ANSWER buttons and HOLD button simultaneously. Explain that the blue light illuminates and line remains in ANSWER and the call is monitored via the monitor function of console.

_ (11) Show trainee how to depress OFF on SWITCHBOARD LINES when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 9d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Selected a line on the switchboard to use.

_ (2) Contacted party either by dialing the number or using HOTLINE.

_ (3) Communicated via headset while pressing the Push-to-Talk button as needed.

_ (4) Pressed blue HOLD button to place the line on HOLD, if needed.

_ (5) Repeated above steps 1 through 3 for second subscriber.

_ (6) Repeated above steps 1 through 4 for third subscriber.

_ (7) Pressed each subscriber switch indicator in turn.

_ (8) Monitored subscribers by adjusting MONITOR VOLUME control for speaker.

_ (9) Depressed OFF on SWITCHBOARD LINES when finished.

_ b. Trainee is ready to be certified on AFJQS task 9d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to press the INTERCOM IC button to receive incoming call. Explain that incoming calls are signaled by an audible buzzer and the blue INTERCOM busy light.

_ (2) Show trainee how to communicate with party via handset while pressing the Push-to-Talk button. Explain how to adjust handset audio by using HANDSET VOLUME control. The next steps will demonstrate configuring the coordinator console for making INTERCOM calls.

_ (3) Show trainee how to press the IC button located between BUSY and CALL indicators.

_ (4) Show trainee how to press buttons 1 through 10 that corresponds to the desired position or remote control. Explain once button is pressed, a ring signal is sent to selected station.

_ (5) Show trainee how to communicate with party via handset while pressing the Push-to-Talk button. Explain how to adjust handset audio by using HANDSET VOLUME control.

_ (6) Show trainee how to press the IC button when finished.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 9e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Pressed the INTERCOM IC button to receive incoming call.

_ (2) Communicated with party via handset while pressing the Push-to-Talk button.

_ (3) Pressed the IC button located between BUSY and CALL indicators.

_ (4) Pressed buttons 1 through 10 that correspond to the desired position or remote control.

_ (5) Communicated with party via handset while pressing the Push-to-Talk button.

_ (6) Pressed the IC button when finished.

_ b. Trainee is ready to be certified on AFJQS task 9e. Follow local certification procedures.

_ c. Assign the next task for training.

CONFIGURING AN/GSH-56 FOR OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 10a through 10e

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. TO 31S3-4-122-1
   b. Local OIs
   c. AFQTP Module 15

4. REQUIREMENTS:

   a. Test equipment to be used: None

   b. Downtime/user release is/is not required.

   c. Ensure trainee has completed AFQTP Modules 1 through 10 for stations equipped with Scope Signal III consoles.

   d. Ensure trainee has completed AFQTP Modules 1 through 5, and 11 through 14 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

   a. Given an AN/GSH-56 recorder, TO 31S3-4-122-1, and local OIs, prepare recorder for operations IAW prescribed procedures.

   b. Given an AN/GSH-56 recorder, TO 31S3-4-122-1, and local OIs, perform record/playback voice IAW prescribed procedures.

   c. Given an AN/GSH-56 recorder, TO 31S3-4-122-1, and local OIs, perform fast forward/rewind IAW prescribed procedures.

   d. Given an AN/GSH-56 recorder, TO 31S3-4-122-1, and local OIs, perform automatic changeover IAW prescribed procedures.

   e. Given an AN/GSH-56 recorder, TO 31S3-4-122-1, and local OIs, activate failsafe alarm

IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 15.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to press STOP on the head cover. Explain that the STOP LED indicator light should come on; also that all LED's will flash if the tape isn't threaded.

_ (2) Show trainee how to place a full reel of tape on left hand (supply reel) turntable so that tape will unwind as the reel is rotating counterclockwise.

_ (3) Show trainee how to place empty reel on right hand (take-up reel) turntable and match slots in reel with ridges on turntable to align reel. Explain how to secure reel by turning hub on turntable.

_ (4) Show trainee how to unwind about three feet of tape from the supply reel and thread it following the tape path. Explain that the oxide side of the tape must face up toward the heads.

_ (5) Show trainee how to route the tape over the top of the take-up reel and secure the free end by winding several layers of tape on the hub in a counterclockwise direction.

_ (6) Show trainee how to rotate the take-up reel to remove all tape slack and check to make sure tape is properly threaded and not twisted. Explain how to avoid improper operations and damage to the tape transport by ensuring the tape is threaded correctly.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 10a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Pressed STOP on the head cover.

_ (2) Placed a full reel of tape on left hand (supply reel) turntable so that tape will unwind as the reel is rotating counterclockwise.

_ (3) Placed empty reel on right hand (take-up reel) turntable and match slots in reel with ridges on turntable to align reel.

_ (4) Unwound about three feet of tape from the supply reel and threaded it following the tape path.

_ (5) Routed the tape over the top of the take-up reel and secured the free end by winding several layers of tape on the hub in a counterclockwise direction.

_ (6) Rotated the take-up reel to remove all tape slack and checked to make sure tape was properly threaded and not twisted.

_ (7) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 10a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to press PLAY and RECORD simultaneously. Explain that the indicator lights will come on, and the tape will start moving forward at normal recording speed.

_ (2) Show trainee how to press the left lower dot on keypad until the INPUT light comes on, then select the desired channel or channels. Explain that the input audio signals are displayed on the VU bar graph and can be audible at the loudspeaker. Explain how to

adjust volume control to desired level. (Time channel will not be heard.)

_ (3) Show trainee how to connect the headset plug to the phone jack and adjust the volume control for desired headphone audio level, if needed.

_ (4) Show trainee how to press STOP, when finished.

_ (5) Show trainee how to monitor the reproduced audio by pressing PLAY and selecting the desired channel numbers and setting SELECT to UPPER OR LOWER, depending on which deck has tape to be played back. Explain that the playback audio signals are displayed on the VU bar graph and are audible at the loudspeaker.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 10b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Pressed PLAY and RECORD simultaneously.

_ (2) Pressed the left lower dot on keypad until the INPUT light came on, then selected the desired channel or channels.

_ (3) Connected the headset plug to the phone jack and adjusted the volume control for desired headphone audio level, if needed.

_ (4) Pressed STOP, when finished.

_ (5) Monitored the reproduced audio by pressing PLAY and selecting the desired channel numbers and setting SELECT to UPPER OR LOWER, depending on which deck has tape to be played back.

_ (6) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 10b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to move the tape forward at high speed by pressing in and releasing the search knob then rotating the SEARCH control clockwise.

_ (2) Show trainee how to stop the tape by either centering the search knob or pressing STOP.

_ (3) Show trainee how to slow the tape by rotating the SEARCH control counterclockwise and back until the desired speed is attained.

_ (4) Show trainee how to audibly monitor the tape by holding the search control in until the tape cues, if needed.

_ (5) Show trainee how to press STOP, when finished.

_ (6) Show trainee how to move the tape in the reverse direction at high speed by pressing in and releasing SEARCH control, then rotating the SEARCH control counterclockwise.

NOTE

During the Fast Forward/Rewind operation, remember not to hold the SEARCH button in unless you intend to "CUE" the tape to the heads. This prevents excessive head wear during search operations.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 10c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Moved the tape forward at high speed by pressing in and releasing the search knob then rotating the SEARCH control clockwise.

_ (2) Stopped the tape by either centering the search knob or pressing STOP.

_ (3) Slowed the tape by rotating the SEARCH control counterclockwise and back until the desired speed is attained.

_ (4) Audibly monitored the tape by holding the search control in until the tape cues, if needed.

_ (5) Pressed STOP, when finished.

_ (6) Moved the tape in the reverse direction at high speed by pressing in and releasing SEARCH control, then rotating the SEARCH control counterclockwise.

_ (7) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 10c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to place the primary transport in RECORD. Explain that the standby transport must be in the STOP mode.

_ (2) Show trainee how to press left lower dot display select to FAILSAFE and press right lower dot on keypad to activate AUTO CHANGE. Explain that both LEDs will illuminate.

_ (3) Explain that the recorder will receive its automatic changeover signal at raday from the time generator. The automatic changeover, at any selected hour of the day, is accomplished with a simple modification.

_ b. Demonstrate correct task performance.
_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 10d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Placed the primary transport in RECORD.

_ (2) Pressed left lower dot display select to FAILSAFE and pressed right lower dot on keypad to activate AUTO CHANGE.

_ (3) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 10d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to press the left lower dot on keypad until the FAILSAFE light comes on.

_ (2) Show trainee how to check that the tape is recording by ensuring the scanner channel display is moving from channel to channel.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 10e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Pressed the left lower dot on keypad until the FAILSAFE light comes on.

_ (2) Checked that the tape is recording by ensuring the scanner channel display is moving from channel to channel.

_ (3) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 10e. Follow local certification procedures.

_ c. Assign the next task for training.

STRATEGIC AUTOMATED COMMAND CONTROL SYSTEM
(SACCS) OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *11a through *11f

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. MCR 55-29
b. Local OIs
c. AFQTP Module 16

4. REQUIREMENTS:

a. Only applicable to stations equipped with Air Wing Command Post communication processors.

b. Test equipment to be used: None

c. Downtime/user release is/is not required.

d. Ensure trainee has completed AFQTP Modules 1 through 10 and 15 for stations equipped with Scope Signal III consoles.

e. Ensure trainee has completed AFQTP Modules 1 through 5, and 11 through 15 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given MCR 55-29; an Air Wing Command Post (AWCP) communication processor; and local OIs, prepare for SACCS operations IAW prescribed procedures.

b. Given MCR 55-29; an AWCP communication processor; and local OIs, compose a SACCS message IAW prescribed procedures.

c. Given MCR 55-29; an AWCP communication processor; and local OIs, process a SACCS message IAW prescribed procedures.

d. Given MCR 55-29; an AWCP communication processor; and local OIs, receive a SACCS message IAW prescribed procedures.

e. Given MCR 55-29; an AWCP communication processor; and local OIs, perform a Cold Initial Program Load (IPL) IAW prescribed procedures.

f. Given MCR 55-29; an AWCP communication processor; and local OIs, perform line printer unit (LPU) paper change IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 16.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss preparing for SACCS operations. Explain the session security level.

_ (2) Discuss how to establish a session security level. Explain the steps necessary to accomplish. Include the use of the CLR LVL key and classification and category codes.

_ (3) Discuss the Master Menu. Explain how a message is accessed from this menu. Include the procedures to use.

_ (4) Discuss the Preformat Menu. Explain how a message is accessed from this menu. Include the procedures to use.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 13a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Established the session security level.

_ (a) Depressed the CLR LVL key.

_ (b) Entered classification and category codes.

_ (c) Depressed the ENTER key.

_ (d) Depressed the MENU key.

_ (2) Accessed a message from the Master Menu.

_ (a) Selected an open storage file for review.

_ (b) Depressed the ENTER key to review message.

_ (c) Depressed the MENU key to exit file and return to MASTER menu.

_ (3) Accessed a message from the Preformat Menu.

_ (a) Selected PREFORMAT menu from MASTER menu.

_ (b) Selected a storage file from the PREFORMAT menu to review.

_ (c) Exited file by depressing the CLR LVL or MENU key.

_ b. Trainee is ready to be certified on AFJQS task 13a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Brief the trainee on all safety precautions and local

procedures that apply.

_ (1) Discuss SACCS message composition using the Header Composition Menu. Explain why and when this menu is used and the procedures used for accessing the menu and entering the required information.

_ (2) Discuss SACCS message composition using the Free Form message composition method. Explain why and when this method is used and the procedures for entering the required information.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 13b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Composed a SACCS message using the Header Composition Menu.

_ (a) Depressed the MENU key.

_ (b) Accessed the HEADER COMP menu.

_ (c) Depressed the ENTER key.

_ (d) Entered message type.

_ (e) Entered message precedence.

_ (f) Entered message part number, if applicable.

_ (g) Entered total message part number.

_ (h) Depressed the TO key.

_ (i) Entered TO addressee(s).

_ (j) Terminated entries with two slants.

_ (k) Depressed INFO/ZEN keys to enter addressees, if needed.

_ (l) Edited/corrected entries, as required.

_ (m) Moved cursor to last addressee entry.

_ (n) Depressed the ENTER key.

_ (2) Composed a SACCS message using the Free Form message composition method.

_ (a) Depressed the CLR LVL key.

_ (b) Depressed the MEM CLR key.

_ (c) Entered the classification and category code, each followed by a slant.

_ (d) Entered message type.

_ (e) Depressed the RETURN key.

_ (f) Entered message precedence.

_ (g) Entered TO/INFO/ZEN addressees.

_ (h) Added multiple parts to message, if applicable.

_ (i) Depressed the RETURN key.

_ (j) Depressed the N/M key.

_ (k) Entered the word PART.

_ (l) Depressed SPACE BAR.

_ (m) Entered NN/MM.

_ (n) Depressed the STX key.

_ (o) Entered the classification.

_ (p) Entered message text.

_ (q) Depressed the ETX key.

_ (r) Reviewed/edited message.

_ (s) Depressed CLR LVL or MENU key to exit.

_ b. Trainee is ready to be certified on AFJQS task 13b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss message shell creation. Explain why and when this type of message is created and the procedures for creating a message shell. Explain the function and use of Master and Preformat Menu files.

_ (2) Discuss storing a SACCS message for later use. Explain why and when messages are stored and the procedures for storing a message. Explain the use of the Master and Preformat Menu files.

_ (3) Discuss retrieving a stored SACCS message. Explain the procedures used for retrieving a message.

_ (4) Discuss modifying a SACCS message. Explain the procedures used for modifying a message.

_ (5) Discuss deleting a SACCS message. Explain the procedures used for deleting a message.

_ (6) Discuss printing a SACCS message. Explain the procedures used for printing a message.

_ (7) Discuss transmitting a SACCS message. Explain the procedures used for transmitting a message.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 13c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Created a shell message.

_ (a) Depressed the CLR LVL key.

_ (b) Entered the classification and category codes.

_ (c) Depressed the ENTER key.

_ (d) Depressed the MEM CLR key.

_ (e) Entered message text.

_ (f) Depressed the HOME key.

_ (g) Depressed the FORMAT key.

_ (h) Entered the name of selected message.

_ (i) Depressed the TAB key.

_ (j) Entered M (Master Menu) or P (Preformat Menu), as applicable.

_ (k) Depressed the ENTER key.

_ (l) Entered number for Master or Preformat Menu file.

_ (m) Depressed the ENTER key.

_ (n) Reviewed/edited message shell.

_ (o) Depressed the CLR LVL key or MENU key to exit.

_ (2) Stored a SACCS message.

_ (a) Depressed the CLR LVL key.

_ (b) Entered classification/category codes.

_ (c) Depressed the ENTER key.

_ (d) Typed in message using Header or Free Form format.

_ (e) Reviewed/edited composed message.

_ (f) Depressed the MSU key.

_ (g) Stored message in one of three places.

_ (h) Write down the MSU file number and message name/classification/category.

_ (3) Retrieved a stored SACCS message.

_ (a) Depressed the MENU key.

_ (b) Accessed MSU menu using 2-digit code followed by the letter R.

_ (c) Depressed the ENTER key.

_ (d) Selected a file using 3-digit code.

_ (e) Depressed the DSPL MSG key.

_ (f) Reviewed/edited message.

_ (g) Depressed the MEM CLR key.

_ (4) Modified a SACCS message.

_ (a) Depressed the MENU key.

_ (b) Accessed MSU menu using 2-digit code followed by the letter R.

_ (c) Depressed the ENTER key.

_ (d) Selected a file using 3-digit code followed by the letter M.

_ (e) Depressed the DSPL MSG key.

_ (f) Reviewed/modified message.

_ (g) Depressed the MSU key.

_ (h) Depressed the MENU key.

_ (5) Deleted a SACCS message.

_ (a) Depressed the MENU key.

_ (b) Entered 2-digit code followed by the letter R.

_ (c) Depressed the ENTER key.

_ (d) Selected a file using 3-digit code followed by the letter D.

_ (e) Depressed the ENTER key.

_ (f) Depressed either MENU, MEM CLR, or CLR LVL key to exit.

_ (6) Printed a SACCS message.

_ (a) Depressed the CLR LVL key.

_ (b) Depressed the MENU key.

_ (c) Accessed MSU menu using 2-digit code followed by the letter R.

_ (d) Depressed the ENTER key.

_ (e) Selected a file using 3-digit code.

_ (f) Depressed the DSPL MSG key.

_ (g) Reviewed/edited message.

_ (h) Depressed the PRINT key.

_ (i) Depressed the OPR ACK key.

_ (7) Transmitted a SACCS message.

_ (a) Depressed the CLR LVL key.

_ (b) Depressed the MENU key.

_ (c) Accessed MSU menu using 2-digit code followed by the letter R.

_ (d) Depressed the ENTER key.

_ (e) Selected a file using 3-digit code.

_ (f) Depressed the DSPL MSG key.

_ (g) Reviewed/edited message.

_ (h) Depressed the XMT key.

_ (i) Depressed the OPR ACK key.

_ b. Trainee is ready to be certified on AFJQS task 13c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss EAM SACCS message reception. Explain the procedures for message reception. Include alarms, use of OPR ACK and EAM ACK keys, and message review.

_ (2) Discuss non-EAM SACCS message reception. Explain the procedures for message reception. Include use of OPR ACK and MENU keys.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 13d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Received a SACCS EAM message.

_ (a) Verified message received by monitoring VDU, OPR ACK and EAM ACK lights, and alarm sound/indicators for incoming message.

_ (b) Noticed LPU print out(s).

_ (c) Depressed the OPR ACK key.

_ (d) Reviewed message for validity.

_ (e) Depressed the EAM ACK key.

_ (f) Depressed the OPR ACK key.

_ (2) Received a SACCS non-EAM message.

_ (a) Verified message received by monitoring VDU, OPR ACK light, and LPU printing one copy.

_ (b) Depressed the OPR ACK or MENU key.

_ b. Trainee is ready to be certified on AFJQS task 13d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss a Cold Initial Program Load (IPL). Explain when and why a Cold IPL is used.

_ (2) Discuss the Cold IPL and DUMPFILE diskettes. Explain the function of both to include the procedures for using the diskettes.

_ (3) Discuss the procedures for performing a Cold IPL. Explain the steps necessary to accomplish the IPL.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 13e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Depressed the CLR LVL key.

_ (2) Removed DUMPFILE diskette from MSU.

_ (3) Inserted IPL diskette into MSU.

_ (4) Depressed IPL source button on CED-1 panel to PRI position.

_ (5) Depressed the IPL LOAD button on the CED-1 panel.

_ (6) Depressed the TAB key at the SECURITY menu.

_ (7) Entered numeric value, a space, DTG, a comma, and the letter C at the SWOP CUTE.

_ (8) Depressed the ENTER key when time hack agreed with DTG.

_ (9) Entered numeric value, a space, and the number 1 at the SWOP CUTE.

_ (10) Depressed the ENTER key.

_ (11) Removed the IPL diskette from MSU.

_ (12) Inserted the DUMPFILE diskette into MSU.

_ (13) Entered numeric value, a space, and the letter Y at the SWOP CUTE.

_ (14) Depressed the ENTER key.

_ (15) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 13e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Brief the trainee on all safety precautions and local procedures

that apply.

_ (1) Discuss the LPU unit. Explain how to determine when paper change is required.

_ (2) Discuss the LPU controls and indicators. Explain the procedures for changing LPU paper. The LPU does not have to be powered off but exercise extreme caution because of exposed power under the LPU drawer.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 13f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Depressed ON LINE/OFF LINE button so that OFF LINE lights.

_ (2) Opened LPU cover door.

_ (3) Unlocked LPU drawer.

_ (4) Pulled drawer forward to full extended position.

_ (5) Placed Printhead Release Lever to the rear position.

_ (6) Lifted paper roll and holder out of LPU.

_ (7) Removed thin plastic rod from paper roll and removed old paper.

_ (8) Placed new roll of paper in the holder.

_ (9) Placed the paper roll and holder into the LPU with the plastic rod riding in the slots.

_ (10) Guided paper through bottom feed, under the platen and behind the pinch rollers.

_ (11) Placed the Printhead Release Lever in the forward position.

_ (12) Pushed in drawer and hand tightened four black knobs.

_ (13) Closed LPU cover door and hand tightened the two silver knobs.

_ (14) Depressed the FORM FEED button one time to position paper.

_ (15) Depressed the ON LINE/OFF LINE button.

_ (16) Verified print lamp on the Summary Fault Unit (SFU) is out.

_ (17) Restored system to normal operation.

_ b. Trainee is ready to be certified on AFJQS task 13f. Follow local certification procedures.

_ c. Assign the next task for training.

LOADING THE KG-84 CRYPTO DEVICE
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBER: 12

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. KAO-184 Operator's Manual
   b. Local OIs

4. REQUIREMENTS:

   a. Test equipment to be used: None

   b. Downtime/user release is/is not required.

5. TRAINING OBJECTIVE:

Given a KG-84 crypto device, keylist, KOI-18 with fill cable, KAO-184 Operator's Manual, and local OIs, load the KG-84 crypto device IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign the trainee to read KAO-184 Operator's Manual.

_ c. Review the reading assignment and ask questions to ensure the trainee understands the material

7. OBJECTIVE TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss what the KG-84 crypto device does, its purpose, and how it works.

_ (2) Discuss the keylist tape used to load the crypto variables and the purpose and location of the keylist. Explain the safeguarding procedures associated with the keylist.

_ (3) Discuss opening the front panel plate of the crypto device, the purpose, and how it is done.

_ (4) Discuss the TX Data Rate toggle switch and the location and purpose of the switch. Explain the switch position required (A) for loading the crypto variables.

_ (5) Discuss the KOI-18 and fill cable, its purpose and location, and how to connect it to the device.

_ (6) Discuss inserting the keylist tape in the KOI-18. Explain which end of the tape is inserted.

_ (7) Discuss the MODE select switch, its location and purpose. Explain the switch position required (STNBY) and reason.

_ (8) Discuss zeroizing the equipment. Explain what the term zeroizing means; how and why device is zeroized; and how to determine successful zeroizing.

_ (9) Discuss the MODE select switch. Explain the switch position required (LDU) for loading crypto variables.

_ (10) Discuss the INITIATE lever, its location and purpose. Explain how to determine if the device is ready to include observation of the parity and alarm lights.

_ (11) Discuss the X-VAR select switch, and its location and purpose. Explain the switch position or positions (as applicable) for loading crypto variables.

_ (12) Discuss pulling the keylist tape through the KOI-18. Explain how to determine successful variable loading to include observation of the parity and alarm lights.

_ (13) Discuss the MODE select switch. Explain the switch position required (LDX) for loading backup or additional crypto variables.

_ (14) Discuss inserting the keylist tape in the KOI-18.

_ (15) Discuss the INITIATE lever. Explain how to determine if the device is ready to include observation of the parity and alarm lights.

_ (16) Discuss pulling the keylist tape through the KOI-18. Explain how to determine successful loading to include observation of the parity and alarm lights.

_ (17) Discuss loading additional keylist tape variables, and the reason and purpose for doing so. Explain X-VAR select switch positions for additional variables.

_ (18) Discuss disconnecting the KOI-18 fill cable. Explain how it is done and where to store it when loading is complete.

_ (19) Discuss the MODE select switch. Explain the switch position required (OPR) for operations. Include observation of the parity, alarm, and FULL OPR lights.

_ (20) Discuss the TX Data Rate toggle switch. Explain the switch position required (B) for operations.

_ (21) Discuss replacement of the front panel plate.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 12 EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Obtained appropriate keylist tape and KOI-18 with fill cable.

_ (2) Opened front panel plate.

_ (3) Placed TX Data Rate toggle switch in "A' position.

_ (4) Connected KOI-18 fill cable to crypto device.

_ (5) Inserted keylist tape in KOI-18.

_ (6) Placed MODE select switch in the STNBY position.

_ (7) Zeroized crypto device.

_ (8) Placed MODE select switch in the LDU position.

_ (9) Depressed INITIATE lever.

_ (10) Placed X-VAR select switch in the appropriate position.

_ (11) Pulled keylist through KOI-18.

_ (12) Placed MODE select switch in the LDX position.

_ (13) Inserted keylist tape in KOI-18.

_ (14) Depressed INITIATE lever.

_ (15) Pulled keylist through KOI-18.

_ (16) Disconnected KOI-18 fill cable from crypto device.

_ (17) Placed MODE select switch in the OPR position.

_ (18) Placed TX Data Rate toggle switch in position B.

_ (19) Replaced front panel plate.

_ (20) Returned keylist tape and KOI-18 to appropriate storage container.

_ b. Trainee is ready to be certified on AFJQS task 12. Follow local certification procedures.

_ c. Assign the next task for training.

MESSAGE DISTRIBUTION TERMINAL
(MDT) OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *13a through *13h

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. Message Processing Terminal Operations Manual, version 4.1
b. Local OIs
c. AFQTP Module 17

4. REQUIREMENTS:

a. Only applicable to stations equipped with an MDT.

b. Test equipment to be used: None

c. Downtime/user release is/is not required.

d. Ensure trainee has completed AFQTP Modules 1 through 10, and 15 for stations equipped with Scope Signal III consoles.

e. Ensure trainee has completed AFQTP Modules 1 through 5, and 11 through 15 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given an MDT, Message Processing Terminal Operations Manual, version 4.1, and local OIs, generate a log analysis report IAW prescribed procedures.

b. Given an MDT, Message Processing Terminal Operations Manual, version 4.1, and local OIs, generate a statistics report IAW prescribed procedures.

c. Given an MDT, Message Processing Terminal Operations Manual, version 4.1, and local OIs, generate a log analysis report without the FM line IAW prescribed procedures.

d. Given an MDT, Message Processing Terminal Operations Manual, version 4.1, and local OIs, manually prepare a message using DD-173 entry format IAW prescribed procedures.

e. Given an MDT, Message Processing Terminal Operations Manual, version 4.1, and local OIs, retrieve a PRO FORMA message IAW prescribed procedures.

f. Given an MDT, Message Processing Terminal Operations Manual, version 4.1, and local OIs, retrieve previously transmitted/received messages from the hard drive IAW prescribed procedures.

g. Given an MDT, Message Processing Terminal Operations Manual, version 4.1, and local OIs, backup previous day(s) messages from the hard drive to a diskette IAW prescribed procedures.

h. Given an MDT, Message Processing Terminal Operations Manual, version 4.1, and local OIs, set-up device mapping IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 17.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select Reports from the MAIN MENU by pressing the "C" key.

_ (2) Show trainee how to select Log Analysis by pressing the "A" key.

_ (3) Show trainee how to enter the date you wish to analyze by first entering the Julian date and then the year. (Example: 35995, 359=date and 95=year)

_ (4) Show trainee how to enter an "X" next to each category you wish to include in the report.

_ (5) Show trainee how to press the "END" key when all required information is given.

_ (6) Show trainee how to view the report by pressing the "A" key then the "F2" key. Explain to trainee that the arrows let you move around the report.

_ (7) Show trainee how to print the report by pressing the "A" key then the "D" key.

_ (8) Show trainee how to remove the report from the screen by pressing the "B" key.

_ (9) Show trainee how to re-queue the report onto the screen by pressing either the "C" or "Esc" key.

_ (10) Show trainee how to return to the MAIN MENU by pressing the "Esc" key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 13a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Selected Reports from the MAIN MENU by pressing the "C" key.

_ (2) Selected Log Analysis by pressing the "A" key.

_ (3) Entered the date you wish to analyze by first entering the Julian date and then the year.

_ (4) Entered an "X" next to each category you wish to include in the report.

_ (5) Depressed the "END" key when all required information is given.

_ (6) Viewed the report by pressing the "A" key then the "F2" key.

_ (7) Printed the report by pressing the "A" key then the "D" key.

_ (8) Removed the report from the screen by pressing the "B" key.

_ (9) Re-queued the report onto the screen by pressing either the "C" or "Esc" key.

_ (10) Returned to the MAIN MENU by pressing the "Esc" key.

_ b. Trainee is ready to be certified on AFJQS task 13a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select Reports from the MAIN MENU by pressing the "C" key.

_ (2) Show trainee how to select Statistics by pressing the "B" key.

_ (3) Show trainee how to enter the date you wish to analyze by first entering the Julian date and then the year. (Example: 35995, 359=date and 95=year)

_ (4) Show trainee how to press the "END" key when all required information is given.

_ (5) Show trainee how to view the report by pressing the "A" key then the "F2" key. Explain to trainee that the arrows when let you move around the report.

_ (6) Show trainee how to print the report by pressing the "A" key then the "D" key.

_ (7) Show trainee how to remove the report from the screen by pressing the "B" key.

_ (8) Show trainee how to re-queue the report onto the screen by pressing either the "C" or "Esc" key.

_ (9) Show trainee how to return to the MAIN MENU by pressing the "Esc" key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 13b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Selected Reports from the MAIN MENU by pressing the "C" key.

_ (2) Selected Statistics by pressing the "B" key.

_ (3) Entered the date you wish to analyze by first entering the Julian date and then the year.

_ (4) Depressed the "END" key when all required information is given.

_ (5) Viewed the report by pressing the "A" key then the "F2" key.

_ (6) Printed the report by pressing the "A" key then the "D" key.

_ (7) Removed the report from the screen by pressing the "B" key.

_ (8) Re-queued the report onto the screen by pressing either the "C" or "Esc" key.

_ (9) Returned to the MAIN MENU by pressing the "Esc" key.

_ b. Trainee is ready to be certified on AFJQS task 13b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select Reports from the MAIN MENU by pressing the "C" key.

_ (2) Show trainee how to select Log Analysis without the FM line by pressing the "C" key.

_ (3) Show trainee how to enter the date you wish to analyze by first entering the Julian date and then the year. (Example: 35995, 359=date and 95=year)

_ (4) Show trainee how to enter an "X" next to each category you wish to include in the report.

_ (5) Show trainee how to press the "END" key when all required information is given.

_ (6) Show trainee how to view the report by pressing the "A" key then the "F2"

key. Explain to trainee that the arrows let you move around the report.

_ (7) Show trainee how to print the report by pressing the "A" key then the "D" key.

_ (8) Show trainee how to remove the report from the screen by pressing the "B" key.

_ (9) Show trainee how to re-queue the report onto the screen by pressing either the "C" or "Esc" key.

_ (10) Show trainee how to return to the MAIN MENU by pressing the "Esc" key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 13c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Selected Reports from the MAIN MENU by pressing the "C" key.

_ (2) Selected log Analysis without the FM line by pressing the "C" key.

_ (3) Entered the date you wish to analyze by first entering the Julian date and then the year.

_ (4) Entered an "X" next to each category you wish to include in the report.

_ (5) Depressed the "END" key when all required information is given.

_ (6) Viewed the report by pressing the "A" key then the "F2" key.

_ (7) Printed the report by pressing the "A" key then the "D" key.

_ (8) Removed the report from the screen by pressing the "B" key.

_ (9) Re-queued the report onto the screen by pressing either the "C" or "Esc" key.

_ (10) Returned to the MAIN MENU by pressing the "Esc" key.

_ b. Trainee is ready to be certified on AFJQS task 13c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select Message Preparation from the MAIN MENU by pressing the "D" key.

_ (2) Show trainee how to select the DD-173 format by pressing the "A" key.

_ (3) Show trainee how to select the Plaindress message format by pressing the "A" key.

_ (4) Show trainee how to enter the TOF, DTG, MON, and YR by pressing the "ENTER" key for each entry. Explain that these entries are automatically entered.

_ (5) Show trainee how to enter the appropriate precedence for the "ACT" (action addressees). Explain the default precedence is "R" (Routine).

_ (6) Show trainee how to enter the appropriate precedence for the "INFO" (information) addressees. Explain if there are no information addressees, press the "ENTER" key.

_ (7) Show trainee how to enter the appropriate "CLASS" (classification) of the message. Explain the default classification is "U" (Unclassified).

_ (8) Show trainee how to enter the appropriate "LMF" (Language Media Format) of the message. Explain that most messages will use the default LMF "TT."

_ (9) Show trainee how to enter the appropriate "CIC" (Content Indicator Code) of the message. Explain that most messages will use the default CIC, which is "ZYUW."

_ (10) Show trainee how to enter the MESSAGE HANDLING INSTRUCTIONS, if needed. Explain that most messages do not contain any Message Handling Instructions, so if it doesn't, press the "ENTER" key.

_ (11) Show trainee how to enter the appropriate Tare Instructions, if needed. Explain that most messages do not contain any Tare Instructions, so if it doesn't, press the "ENTER" key.

_ (12) Show trainee how to enter the appropriate FM line. Explain if Global is the originator

of the message, type "USAF GLOBAL HF STA MCCLELLAN AFB CA//SCODA//", and press the "ENTER" key.

_ (13) Show trainee how to enter the appropriate TO line(s). Explain after each entry press the "ENTER" key.

_ (14) Show trainee how to enter the appropriate "INFO" (information) addressees. Explain after each entry press the "ENTER" key.

_ (15) Show trainee how to enter any ACCT (Accounting) information that is required. Explain that most messages do not contain any accounting information, so if it doesn't, press the "ENTER" key.

_ (16) Show trainee how to enter any message classification information required. Explain that most messages do not contain any message classification information, so if it doesn't, press the "ENTER" key.

_ (17) Show trainee how to enter the SUBJ (Subject) line of the message, if required.

_ (18) Show trainee how to type in the TEXT of the message and press the "ENTER", when finished.

_ (19) Show trainee how to SAVE the message by pressing the "A" key.

_ (20) Show trainee how to re-direct the OUTPUT of the message by pressing the "B" key.

_ (21) Show trainee how to direct the message back onto the screen by pressing either the "A" or "Esc" key.

_ (22) Show trainee how to print the message by pressing the "D" key.

_ (23) Show trainee how to transmit a message to AFAMPE by first pressing the "F" key, then the "F2" key when "Sanitize AFAMPE" appears on the screen, and finally press the "D" key to release the message to AFAMPE.

_ (24) Show trainee how to transmit a message over "HF PRI" or "HF SEC" by pressing the appropriate key "H" or "I", then the "F2" key when "Sanitize HF PRI" or "Sanitize HF SEC" appears on the screen and finally press the "D" key to release the message.

_ (25) Show trainee how to ADD the message to PRO FORMA by pressing the "D" key.

_ (26) Show trainee how to return to the MAIN MENU by pressing the "Esc" key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 13d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Selected Message Preparation from the MAIN MENU by pressing the "D" key.

_ (2) Selected the DD-173 format by pressing the "A" key.

_ (3) Selected the Plaindress message format by pressing the "A" key.

_ (4) Entered the TOF, DTG, MON, and YR by pressing the "ENTER" key for each entry.

_ (5) Entered the appropriate precedence for the "ACT" (action addressees).

_ (6) Entered the appropriate precedence for the "INFO" (information) addressees.

_ (7) Entered the appropriate "CLASS" (classification) of the message.

_ (8) Entered the appropriate "LMF" (Language Media Format) of the message.

_ (9) Entered the appropriate "CIC" (Content Indicator Code) of the message.

_ (10) Entered the MESSAGE HANDLING INSTRUCTIONS, if needed.

_ (11) Entered the appropriate Tare Instructions, if needed.

_ (12) Entered the appropriate FM line.

_ (13) Entered the appropriate TO line(s).

_ (14) Entered the appropriate "INFO" (information) addressees.

_ (15) Entered any ACCT (accounting) information required.

_ (16) Entered any message classification information required.

_ (17) Entered the SUBJ (subject) line of the message, if required.

_ (18) Typed in the TEXT of the message and pressed the "ENTER", when finished.

_ (19) SAVED the message by pressing the "A" key.

_ (20) Re-directed the OUTPUT of the message by pressing the "B" key.

_ (21) Directed the message back onto the screen by pressing either the "A" or "Esc" key.

_ (22) Printed the message by pressing the "D" key.

_ (23) Transmitted a message to AFAMPE by first pressing the "F" key, then the "F2" key when "Sanitize AFAMPE" appears on the screen, and finally pressed the "D" key to release the message to AFAMPE.

_ (24) Transmitted a message over "HF PRI" or "HF SEC" by pressing the appropriate key "H" or "I", then the "F2" key when "Sanitize HF PRI" or "Sanitize HF SEC" appeared on the screen and finally pressed the "D" key to release the message.

_ (25) ADDED the message to PRO FORMA by pressing the "D" key.

_ (26) Returned to the MAIN MENU by pressing the "Esc" key.

_ b. Trainee is ready to be certified on AFJQS task 13d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select Message Preparation from the MAIN MENU by pressing the "D" key.

_ (2) Show trainee how to select PRO FORMA by pressing the "D" key.

_ (3) Show trainee how to enter the PRO FORMA message that you wish to transmit by typing in the number corresponding with the message title.

_ (4) Show trainee how to edit the message by pressing the "ENTER" key until you return to the message in the DD-173 format.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 13e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Selected Message Preparation from the MAIN MENU by pressing the "D" key.

_ (2) Selected PRO FORMA by pressing the "D" key.

_ (3) Entered the PRO FORMA message that you wish to transmit by typing in the number corresponding with the message title.

_ (4) Edited the message by pressing the "ENTER" key until you return to the message in the DD-173 format.

_ b. Trainee is ready to be certified on AFJQS task 13e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select Message Preparation from the MAIN MENU by pressing the "D" key.

_ (2) Show trainee how to select Old Message Retrieval by pressing the "C" key.

_ (3) Show trainee how to press either the "C" key for previously GENERATED messages or "D" key for previously RECEIVED messages.

_ (4) Show trainee how to enter an "X" next to each category you wish to include in the retrieval and press "ENTER" when finished.

_ (5) Show trainee how to enter the CONSTRAINT SELECTIONS by entering the date you wish to begin the search and end the search using the Julian date and year format. Explain you may enter additional information about the message you are trying to retrieve in the appropriate box.

_ (6) Show trainee how to pull up messages by pressing the "ENTER" key.

_ (7) Show trainee how to use the MENU at the top of the screen in locating the message.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 13f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Selected Message Preparation from the MAIN MENU by pressing the "D" key.

_ (2) Selected Old Message Retrieval by pressing the "C" key.

_ (3) Depressed either the "C" key for previously GENERATED messages or "D" key for previously RECEIVED messages

_ (4) Entered an "X" next to each category you wish to include in the retrieval and pressed "ENTER" when finished

_ (5) Entered the CONSTRAINT SELECTIONS by entering the date you wish to begin the search and end the search using the Julian date and year format.

_ (6) Pulled up messages by pressing the "ENTER" key.

_ (7) Used the MENU at the top of the screen in locating the message.

_ b. Trainee is ready to be certified on AFJQS task 13f. Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 as guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select Message Backup/Restoration from the MAIN MENU by pressing the "F" key.

_ (2) Show trainee how to backup messages by pressing the "A" key. Explain that only one message can be backed up at a time.

_ (3) Show trainee how to select floppy drive a: by pressing the "A" key or floppy drive b: by pressing the "B" key.

_ (4) Show trainee how to enter the day you wish to backup by using the Julian date and year format and press the "END" key, when finished.

_ (5) Show trainee how to return to the MAIN MENU by pressing the "Esc" key.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 13g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 19a if evaluation is unsatisfactory.)

_ (1) Selected Message Backup/Restoration from the MAIN MENU by pressing the "F" key.

_ (2) Selected Message Backup by pressing the "A" key.

_ (3) Selected floppy drive a: by pressing the "A" key or floppy drive b: by pressing the "B" key.

_ (4) Entered the day you wished to backup by using the Julian date and year format and pressed the "END" key, when finished.

_ (5) Returned to the MAIN MENU by pressing the "Esc" key.

_ b. Trainee is ready to be certified on AFJQS task 13g. Follow local certification procedures.

21. OBJECTIVE 5h TRAINING STEPS:

_ a. Using technical references and the checklist in para 22 as guidance, discuss the task steps for achieving objective 5h with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select option B - SYSTEM CONFIGURATION from the MAIN MENU.

_ (2) Show trainee how to select option E - DEVICE MAPPING. Explain the devices that can be mapped. Explain what you want to do is map one of these devices to another one so the messages can be processed.

_ (3) Show trainee how to select option A - ADD A MAPPING. Explain the devices able to be mapped.

_ (4) Show trainee how to select the devices the messages are queued to.

_ (5) Show trainee how to select the device you want the messages to go to. Explain this allows the messages to be rerouted to the new device, and that in some instances you will be asked if you want to map just the first message in queue or all messages in queue.

_ (6) Explain to trainee that once you have selected a device, the MDT will update the system and you should see the name of the device under the heading MAPPED TO next to the device that you mapped.

_ (7) Show trainee how to remove a mapping when finished by selecting option B - REMOVE A MAPPING and choosing the device you picked when asked what device you wanted to map. Explain this should remove the device and return the screen to the original choices under the DEVICE column.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

22. TASK 13h EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following

checklist. (Return to step 21a if evaluation is unsatisfactory.)

_ (1) Selected option B - SYSTEM CONFIGURATION from the MAIN MENU.

_ (2) Selected option E - DEVICE MAPPING.

_ (3) Selected option A - ADD A MAPPING.

_ (4) Selected the devices the messages are queued to.

_ (5) Selected the device you want the messages to go to.

_ (6) Removed a mapping when finished by selecting option B - REMOVE A MAPPING and choosing the device you picked when asked what device you wanted to map.

_ b. Trainee is ready to be certified on AFJQS task 13h. Follow local certification procedures.

_ c. Assign the next task for training.

SECURE TELEPHONE UNIT III
(STU-III) OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 14a and 14b

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. STU-III User's Guide
   b. Local OIs

4. REQUIREMENTS:

   a. Test equipment to be used: None

   b. Downtime/user release is/is not required.

5. TRAINING OBJECTIVES:

   a. Given a STU-III, STU-III User's Guide, and local OIs, initiate a nonsecure STU-III call IAW prescribed procedures.

   b. Given a STU-III, STU-III User's Guide, Crytpo- Ignition Key (CIK), and local OIs, initiate a secure STU-III call IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign the trainee to read the STU-III User's Guide.

_ c. Discuss the reading assignment and ask questions to ensure the trainee understands the material.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the User's Guide for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the STU-III. Explain the operating procedures and the similarities to a standard phone when used for nonsecure communications.

_ (2) Discuss the Multiline Selector Unit. Explain the selections and identify the selection for nonsecure communications.

_ (3) Discuss initiating the nonsecure call. Explain the procedures for calling.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 14a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Selected a line on the Multiline Selector Unit.

_ (2) Lifted the handset off the cradle.

_ (3) Dialed desired number.

_ (4) Conducted conversation.

_ (5) Returned handset to cradle when complete.

_ b. Trainee is ready to be certified on AFJQS task 14a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for

achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the User's Guide for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the STU-III. Explain the operating procedures for secure communications and the similarities to a standard phone.

_ (2) Discuss the Crytpo-Ignition Key (CIK). Explain its purpose; the location of the security container where the CIK is located; and how the Key is inserted and used in the STU-III.

_ (3) Discuss the Multiline Selector Unit. Explain the selections and identify the selection for secure communications.

_ (4) Discuss initiating the secure call. Explain the procedures for calling.

_ (5) Discuss removing the CIK. Explain the storage requirements.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 14b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Obtained CIK from appropriate storage container.

_ (2) Inserted CIK in STU-III keyhole.

_ (3) Selected a line on the Multiline Selector Unit.

_ (4) Lifted the handset off the cradle.

_ (5) Dialed desired number.

_ (6) Advised called party you are ready to initiate a secure call.

_ (7) Turned CIK to the right 90 degrees and depressed the secure voice button.

_ (8) Recognized completed identification process.

_ (9) Conducted conversation.

_ (10) Depressed Nonsecure button when complete.

_ (11) Returned handset to cradle.

_ (12) Removed CIK from keyhole.

_ (13) Returned CIK to appropriate storage container.

_ b. Trainee is ready to be certified on AFJQS task 14b. Follow local certification procedures.

_ c. Assign the next task for training.

KL-43(D) OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *15a through *15g

2. ESTIMATED TASK TRAINING TIME:

3. TRAINING REFERENCES:

   a. KL-43(D) Operator's Manual
   b. Local OIs

4. REQUIREMENTS:

   a. Test equipment to be used: None

   b. Downtime/user release is/is not required.

5. TRAINING OBJECTIVES:

   a. Given a loaded KL-43(D), KL-43(D) Operator's Manual, and local OIs, select MAIN MENU IAW prescribed procedures.

   b. Given a loaded KL-43(D), KL-43(D) Operator's Manual, and local OIs, enter plain-text message IAW prescribed procedures.

   c. Given a loaded KL-43(D), KL-43(D) Operator's Manual, and local OIs, encrypt message IAW prescribed procedures.

   d. Given a loaded KL-43(D), KL-43(D) Operator's Manual, and local OIs, decrypt message IAW prescribed procedures.

   e. Given a loaded KL-43(D), KL-43(D) Operator's Manual, and local OIs, transmit message IAW prescribed procedures.

   f. Given a loaded KL-43(D), KL-43(D) Operator's Manual, and local OIs, receive message IAW prescribed procedures.

   g. Given a loaded KL-43(D), KL-43(D) Operator's Manual, and local OIs, authenticate IAW

prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objectives for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which they will normally be performed.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to turn the KL-43(D) on by pressing the top of the rocker switch on the rear right-hand side of the device. The device will respond with the title display which shows the product manufacturer and the version number of the cryptologic software.

_ (2) Show trainee how to enter the two digit number for the available Key Position. Explain that there are sixteen key positions, only four are displayed at a time, and by using the scroll the other keys can be displayed.

_ (3) Explain the different functions listed on the MAIN MENU.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 15a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Turned the KL-43(D) on by pressing the top of the rocker switch on the rear right-hand side of the device.

_ (2) Entered the two digit number for the available Key Position.

_ (3) Explained the different functions listed on the MAIN MENU.

_ b. Trainee is ready to be certified on AFJQS task 15a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to turn KL-43(D) on.

_ (2) Show trainee how to select MAIN MENU.

_ (3) Show trainee how to enter the WORD PROCESSOR mode by pressing "W" from the MAIN MENU. Explain the different modes on the display.

_ (4) Show trainee how to press "P" to enter the Plain Text Mode.

_ (5) Show trainee how to type in classification, if required. Explain the classification will become a permanent part of the message.

_ (6) Show trainee how to press ENTER. Wait for the display to show the editor is in the plain text mode for a few seconds then go blank.

_ (7) Show trainee how to enter in the message. The ENTER key may be used as a carriage return for formatting purposes and the KL-43(D) has word wrap. Explain the different editor and/or scrolling operations that can be used.

_ (8) Show trainee how to press EXIT once the message is complete and correct.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 15b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Turned KL-43(D) on.
_ (2) Selected MAIN MENU.

_ (3) Entered the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Pressed "P" to enter the Plain Text Mode.

_ (5) Typed in classification, if required.

_ (6) Pressed ENTER.

_ (7) Entered in the message.

_ (8) Pressed EXIT once the message is complete and correct.

_ b. Trainee is ready to be certified on AFJQS task 15b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to turn KL-43(D) on.

_ (2) Show trainee how to select MAIN MENU.

_ (3) Show trainee how to enter the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Show trainee how to press "P" to enter the Plain Text Mode.

_ (5) Show trainee how to type in classification, if required.

_ (6) Show trainee how to press ENTER.

_ (7) Show trainee how to enter in the message.

_ (8) Show trainee how to press EXIT once the message is complete and correct.

_ (9) Show trainee how to press "E" for ENCRYPT MESSAGE from the MAIN MENU. This will display the current key and ask the operator if this is the correct key for encryption.

_ (10) Show trainee how to press "Y" for YES. Explain the procedures for pressing "N" for NO.

_ (11) Show trainee how to review message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 15c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Turned KL-43(D) on.

_ (2) Selected MAIN MENU.

_ (3) Entered the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Pressed "P" to enter the Plain-Text Mode.

_ (5) Typed in classification, if required.

_ (6) Pressed ENTER.

_ (7) Entered in the message.

_ (8) Pressed EXIT once the message is complete and correct.

_ (9) Pressed "E" for ENCRYPT MESSAGE from the MAIN MENU.

_ (10) Pressed "Y" for YES.

_ (11) Reviewed message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ b. Trainee is ready to be certified on AFJQS task 15c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to turn KL-43(D) on.

_ (2) Show trainee how to select MAIN MENU.

_ (3) Show trainee how to enter the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Show trainee how to press "P" to enter the Plain-Text Mode.

_ (5) Show trainee how to type in classification, if required.

_ (6) Show trainee how to press ENTER.

_ (7) Show trainee how to enter the message.

_ (8) Show trainee how to press EXIT once the message is complete and correct.

_ (9) Show trainee how to press "E" for ENCRYPT MESSAGE from the MAIN MENU.

_ (10) Show trainee how to press "Y" for YES.

_ (11) Show trainee how to review message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ (12) Show trainee how to press "D" for DECRYPT MESSAGE from the MAIN MENU.

_ (13) Show trainee how to press "Y" for YES.

_ (14) Show trainee how to review message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 15d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Turned KL-43(D) on.

_ (2) Selected MAIN MENU.

_ (3) Entered the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Pressed "P" to enter the Plain-Text Mode.

_ (5) Typed in classification, if required.

_ (6) Pressed ENTER.

_ (7) Entered the message.

_ (8) Pressed EXIT once the message is complete and correct.

_ (9) Pressed "E" for ENCRYPT MESSAGE from the MAIN MENU.

_ (10) Pressed "Y" for YES.

_ (11) Reviewed message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ (12) Pressed "D" for DECRYPT MESSAGE from the MAIN MENU.

_ (13) Pressed "Y" for YES.

_ (14) Reviewed message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ b. Trainee is ready to be certified on AFJQS task 15d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to turn KL-43(D) on.

_ (2) Show trainee how to select MAIN MENU.

_ (3) Show trainee how to enter the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Show trainee how to press "P" to enter the Plain-Text Mode.

_ (5) Show trainee how to type in classification, if required.

_ (6) Show trainee how to press ENTER.

_ (7) Show trainee how to enter the message.

_ (8) Show trainee how to press EXIT once the message is complete and correct.

_ (9) Show trainee how to press "E" for ENCRYPT MESSAGE from the MAIN MENU.

_ (10) Show trainee how to press "Y" for YES.

_ (11) Show trainee how to review message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ (12) Show trainee how to press "C" from the MAIN MENU.

_ (13) Show trainee how to press "T" for TRANSMIT. Explain the Help mode (Direct Connect, and Acoustic Adapter).

_ (14) Show trainee how to press "S" after selection of TALK/DIRECT communications. Explain that TALK is used for Acoustic Connection and DIRECT is used for Direct Communication.

_ (15) Show trainee how to advise distant party you are ready to transmit.

_ (16) Show trainee how to press ENTER. Explain the displays showing and corrective to take, if needed.

_ (17) Show trainee how to switch to TALK and press EXIT.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 15e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Turned KL-43(D) on.

_ (2) Selected MAIN MENU.

_ (3) Entered the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Typed in classification, if required.

_ (5) Pressed ENTER.

_ (6) Entered the message.

_ (7) Pressed EXIT once the message is complete and correct.

_ (8) Pressed "E" for ENCRYPT MESSAGE from the MAIN MENU.

_ (9) Pressed "Y" for YES.

_ (10) Reviewed message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ (11) Pressed "C" from the MAIN MENU.

_ (12) Pressed "T" for TRANSMIT.

_ (13) Pressed "S" after selection of TALK/DIRECT communications.

_ (14) Advised distant party you are ready to transmit.

_ (15) Pressed ENTER.

_ (16) Switched to TALK and pressed EXIT.

_ b. Trainee is ready to be certified on AFJQS task 15e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to turn KL-43(D) on.

_ (2) Show trainee how to select MAIN MENU.

_ (3) Show trainee how to enter the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Show trainee how to press "P" to enter the Plain-Text Mode.

_ (5) Show trainee how to type in classification, if required.

_ (6) Show trainee how to press ENTER.

_ (7) Show trainee how to Enter the message.

_ (8) Show trainee how to press EXIT once the message is complete and correct.

_ (9) Show trainee how to press "E" for ENCRYPT MESSAGE from the MAIN MENU.

_ (10) Show trainee how to press "Y" for YES.

_ (11) Show trainee how to review message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ (12) Show trainee how to press "C" from the MAIN MENU.

_ (13) Show trainee how to press "R" for RECEIVE. Explain the Help mode (Direct Connect, and Acoustic Adapter).

_ (14) Show trainee how to press "S" after selection of TALK/DIRECT communication. Explain that TALK is used for Acoustic Connection and DIRECT is used for Direct Communication.

_ (15) Show trainee how to advise distant party you are ready to receive.

_ (16) Show trainee how to press ENTER. Explain the displays showing and corrective to take, if needed.

_ (17) Show trainee how to switch to TALK and press EXIT after message is receive.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 15f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Turned KL-43(D) on.

_ (2) Selected MAIN MENU.

_ (3) Entered the WORD PROCESSOR mode by pressing "W" from the MAIN MENU.

_ (4) Typed in classification, if required.

_ (5) Pressed ENTER.

_ (6) Entered the message.

_ (7) Pressed EXIT once the message is complete and correct.

_ (8) Pressed "E" for ENCRYPT MESSAGE from the MAIN MENU.

_ (9) Pressed "Y" for YES.

_ (10) Reviewed message by pressing "R" for REVIEW MESSAGE from the MAIN MENU and using the scroll keys.

_ (11) Pressed "C" from the MAIN MENU.

_ (12) Pressed "R" for RECEIVE.

_ (13) Pressed "S" after selection of TALK/DIRECT communications.

_ (14) Advised distant party you are ready to receive.

_ (15) Pressed ENTER.

_ (16) Switched to TALK and pressed EXIT.

_ b. Trainee is ready to be certified on AFJQS task 15f. Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 as guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to turn the KL-43(D) ON.

_ (2) Show trainee how to enter the two digit number for the available Key Position.

_ (3) Explain the different functions listed on the MAIN MENU.

_ (4) Show trainee how to press "A" for AUTHENTICATION from the MAIN MENU.

_ (5) Show trainee how to press "Y" for YES.

The following steps are used if a challenge is to be generated:

_ (6) Show trainee how to press "C."

_ (7) Show trainee how to transmit the four character challenge over the communications media used to the distant party.

_ (8) Show trainee how to receive the correct four character reply from the distant party. Explain the procedures to take if the challenge is incorrect. Explain that the internal clocks needed to be set within 20 seconds of each other.

The following steps are used if a reply is to be generated:

_ (9) Show trainee how to receive press "R."

_ (10) Show trainee how to enter the four character challenge received.

_ (11) Show trainee how to press ENTER.

_ (12) Show trainee how to transmit the four character reply to the distant party.

_ (13) Show trainee how to press EXIT after successful completion of the

challenge. Explain the procedures to take if the challenge is incorrect.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 15g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 19a if evaluation is unsatisfactory.)

_ (1) Turned the KL-43(D) ON.

_ (2) Entered the two digit number for the available Key Position.

_ (3) Explained the different functions listed on the MAIN MENU.

_ (4) Pressed "A" for AUTHENTICATION from the MAIN MENU.

_ (5) Pressed "Y" for YES.

The following steps are used if a challenge is to be generated:

_ (6) Pressed "C."

_ (7) Transmitted the four character challenge over the communications media used to the distant party.

_ (8) Received the correct four character reply from the distant party.

The following steps are used if a reply is to be generated:

_ (9) Pressed "R."

_ (10) Entered the four character challenge received.

_ (11) Pressed ENTER.

_ (12) Transmitted the four character reply to the distant party.

_ (13) Pressed EXIT after successful completion of the challenge.

_ b. Trainee is ready to be certified on AFJQS task 15g. Follow local certification procedures.

_ c. Assign the next task for training.

COMMUNICATIONS SECURITY (COMSEC)
DOCUMENTS USAGE
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 16a through 16c

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. AFM 33-109
b. AFKAO-5
c. AFKAO-1
d. AFKAI-1
e. Local OIs
f. AFQTP Module 18

4. REQUIREMENTS:

a. Test equipment to be used: None

b. Downtime/user release is/is not required.

c. Ensure trainee has completed AFQTP Modules 1 through 10 for stations equipped with Scope Signal III consoles.

d. Ensure trainee has completed AFQTP Modules 1 through 5, and 11 through 14 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given access to PELE authentication documents, AFM 33-109, and local OIs, authenticate using challenge and reply IAW prescribed procedures.

b. Given access to PELE authentication documents, AFM 33-109, AFKAO-5, and local OIs, use transmission authentication IAW prescribed procedures.

c. Given access to applicable encode/decode documents, AFKAO-1, AFKAI-1, and local OIs, encode/decode a message/call sign IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objectives for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which they will normally be performed.

_ b. Assign AFQTP Module 18.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select correct timetable for authentication from the PELE authentication document.

_ (2) Show trainee how to select the two authentication characters (letters), one from the far left margin and the other from the top of the table.

_ (3) Show trainee how to transmit the two authentication characters by requesting party to use proword AUTHENTICATE followed by the two letter challenge.

_ (4) Show trainee how to determine if authentication is correct by locating first letter of challenge printed along the far left margin then going horizontal along the table until you reach the second letter of the challenge located on the top of table. Explain the letter that intersects the two challenges is the reply.

_ (5) Show trainee how to select the correct character for a counter challenge.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 16a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Selected correct timetable for authentication from the PELE authentication document.

_ (2) Randomly selected two authentication characters (letters), one from the far left margin and the other from the top of the table.

_ (3) Transmitted the two authentication characters by requesting party to use proword AUTHENTICATE followed by the two letter challenge.

_ (4) Determined if authentication is correct by locating first letter of challenge printed along the far left margin then going horizontal along the table until you reach the second letter of the challenge located on the top of table.

_ (5) Selected the correct character for a counter challenge by following above procedures.

_ b. Trainee is ready to be certified on AFJQS task 16a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to select correct timetable for authentication from the PELE authentication document.

_ (2) Show trainee how to select the correct column on the table that is headed by the two-digit number corresponding to the current hour.

_ (3) Show trainee how to proceed down the column to the two-digit number corresponding to the current number of minutes past the hour. Explain that if the time being transmitted is odd use the authenticator for the next lowest even number.

_ (4) Show trainee how to transmit the authentication by transmitting the proword TIME followed by the current minutes past the hour followed by the proword AUTHENTICATION and the two authentication letters.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 16b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Selected correct timetable for authentication from the PELE authentication document.

_ (2) Selected the correct column on the table that is headed by the two-digit number corresponding to the current hour.

_ (3) Proceeded down the column to the two-digit number corresponding to the current number of minutes past the hour.

_ (4) Transmitted the authentication by transmitting the proword TIME followed by the current minutes past the hour followed by the proword AUTHENTICATION and the two authentication letters.

_ b. Trainee is ready to be certified on AFJQS task 16b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to encode **"27 F-117 Stealth Fighters departed Nellis at 1900z"**

_ (2) Show trainee how to decode the groups from the above sentence.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 16c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Encoded **"27 F-117 Stealth Fighters departed Nellis at 1900z".**

_ (2) Decoded groups from the above sentence.

_ b. Trainee is ready to be certified on AFJQS task 16c. Follow local certification procedures.

_ c. Assign the next task for training.

ALERT OPERATIONS
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: *17a through *17d

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. TO 31R2-2GRC212-2
b. Local OIs
c. AFQTP Module 19

4. REQUIREMENTS:

a. Test equipment to be used: None

b. Downtime/user release is/is not required.

c. Ensure trainee has completed AFQTP Modules 1 through 10, and 15 through 18 for stations equipped with Scope Signal III consoles.

d. Ensure trainee has completed AFQTP Modules 1 through 5, 11 through 15, and 18 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given applicable console, TO 31R2-2GRC212-2, and local OIs, perform an all-station alert IAW prescribed procedures.

b. Given applicable console, TO 31R2-2GRC212-2, and local OIs, perform a multi-station alert IAW prescribed procedures.

c. Given applicable console, TO 31R2-2GRC212-2, and local OIs, perform an in-station alert IAW prescribed procedures.

d. Given applicable console, TO 31R2-2GRC212-2, and local OIs, perform a communications call IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 19.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to determine the attendant turret is open. Explain the purpose of the VOX/PP panel CONF lamps. NOTE: Ensure that no CONF pushbuttons are ON.

_ (2) Show trainee how to select one of the six LOOP keys at the attendant turret.

_ (3) Show trainee how to depress the START button. Explain this results in a dial tone from the ESS.

_ (4) Show trainee how to enter the applicable message structure for DTMF signalling. Explain the input sequence and the format for the message structure.

_ (5) Show trainee how to verify/interpret valid input on CRT. Explain the format of the message structure.

_ (6) Show trainee how to depress REL ATT when complete.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 17a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Determined the attendant turret is open.

_ (2) Selected one of the six LOOP keys at the attendant turret.

_ (3) Depressed the START button.

_ (4) Entered the applicable message structure for DTMF signalling.

_ (5) Verified valid input on CRT.

_ (6) Depressed REL ATT when complete.

_ b. Trainee is ready to be certified on AFJQS task 17a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to determine the attendant turret is open. Explain the purpose of the VOX/PP panel CONF lamps. NOTE: Ensure that no CONF pushbuttons are ON.

_ (2) Show trainee how to select one of the six LOOP keys at the attendant turret.

_ (3) Show trainee how to depress the START button. Explain this results in a dial tone from the ESS.

_ (4) Show trainee how to enter the applicable message structure for DTMF signalling. Explain the input sequence and the format for the message structure.

_ (5) Show trainee how to verify/interpret valid input on CRT. Explain the format of the message structure.

_ (6) Show trainee how to depress REL ATT when complete.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 17b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Determined the attendant turret is open.

_ (2) Selected one of the six LOOP keys at the attendant turret.

_ (3) Depressed the START button.

_ (4) Entered the applicable message structure for DTMF signalling.

_ (5) Verified valid input on CRT.

_ (6) Depressed REL ATT when complete.

_ b. Trainee is ready to be certified on AFJQS task 17b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to determine the attendant turret is open. Explain the purpose of the VOX/PP panel CONF lamps. NOTE: Ensure that no CONF pushbuttons are ON.

_ (2) Show trainee how to select one of the six LOOP keys at the attendant turret.

_ (3) Show trainee how to depress the START button. Explain this results in a dial tone from the ESS.

_ (4) Show trainee how to enter the applicable message structure for DTMF signalling. Explain the input sequence. Explain the format for the message structure.

_ (5) Show trainee how to verify/interpret valid input on CRT. Explain the format of the message structure.

_ (6) Show trainee how to depress REL ATT when complete.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 17c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Determined the attendant turret is open.

_ (2) Selected one of the six LOOP keys at the attendant turret.

_ (3) Depressed the START button.

_ (4) Entered the applicable message structure for DTMF signalling.

_ (5) Verified valid input on CRT.

_ (6) Depressed REL ATT when complete.

_ b. Trainee is ready to be certified on AFJQS task 17c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to determine the attendant turret is open. Explain the purpose of the VOX/PP panel CONF lamps. NOTE: Ensure that no CONF pushbuttons are ON.

_ (2) Show trainee how to select one of the six LOOP keys at the attendant turret.

_ (3) Show trainee how to depress the START button. Explain this results in a dial tone from the ESS.

_ (4) Show trainee how to enter the applicable message structure for DTMF signalling. Explain the input sequence and the format for the message structure.

_ (5) Show trainee how to verify/interpret valid input on CRT. Explain the format of the message structure.

_ (6) Show trainee how to depress REL ATT when complete.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 17d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Determined the attendant turret is open.

_ (2) Selected one of the six LOOP keys at the attendant turret.

_ (3) Depressed the START button.

_ (4) Entered the applicable message structure for DTMF signalling.

_ (5) Verified valid input on CRT.

_ (6) Depressed REL ATT when complete.

_ b. Trainee is ready to be certified on AFJQS task 17d. Follow local certification procedures.

_ c. Assign the next task for training.

GENERAL MESSAGE HANDLING
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 18a through 18o

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. AFI 10-707
b. AFM 33-109
c. JANAP 146
d. Local OIs
e. AFQTP Module 20

4. REQUIREMENTS:

a. Test equipment to be used: None

b. Downtime/user release is/is not required.

c. Ensure trainee has completed AFQTP Modules 1 through 10, 15, 18, and 19 for stations equipped with Scope Signal III.

d. Ensure trainee has completed AFQTP Modules 1 through 5, 11 through 15, 18, and 19 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given applicable console, JANAP 146, AFM 33-109, and local OIs, process communications instructions for reporting vital intelligence sightings reports IAW prescribed procedures.

b. Given applicable console, AFM 33-109, and local OIs, process visual sighting reports IAW prescribed procedures.

c. Given applicable console, AFM 33-109, and local OIs, process contingency/disaster relief IAW prescribed procedures.

d. Given applicable console, AFM 33-109, and local OIs, process GLASS EYE reports IAW

prescribed procedures.

e. Given applicable console, AFM 33-109, and local OIs, process ACC Recall and Diversion procedures IAW prescribed procedures.

f. Given applicable console, AFM 33-109, and local OIs, perform relay IAW prescribed procedures.

g. Given applicable console, AFM 33-109, AFI 10-707, and local OIs, perform Direction Finding (DF)/Spectrum Interference Resolution IAW prescribed procedures.

h. Given applicable console, AFM 33-109, and local OIs, process Bomber Target Changes IAW prescribed procedures.

i. Given applicable console, AFM 33-109, and local OIs, process Internal Emergencies IAW prescribed procedures.

j. Given applicable console, AFM 33-109, and local OIs, perform MAJCOM CINC and MAJCOM VCINC Command Aircraft Support IAW prescribed procedures.

k. Given applicable console, AFM 33-109, and local OIs, provide White House Communications Agency (WHCA) support IAW prescribed procedures.

l. Given applicable console, AFM 33-109, and local OIs, support Communications Contingency Elements (CCEs) IAW prescribed procedures.

m. Given applicable console, AFM 33-109, and local OIs, provide PACCS data support IAW prescribed procedures.

n. Given applicable console, AFM 33-109, and local OIs, perform base isolation IAW prescribed procedures.

o. Given applicable console, AFM 33-109, and local OIs, provide SART and SCE support IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 20.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain to trainee that the aircraft will normally transmit a CIRVIS call three times to clear the frequency of traffic. Explain if that does not work, the proword "PAN" may be used to clear the frequency.

_ (2) Explain to trainee to always verify the authenticity of the message using challenge and reply authentication procedures. Explain if the aircraft is unable to authenticate, accept the message and inform all addressees of the incorrect authentication.

_ (3) Explain to trainee if a partial CIRVIS report is received, annotate the message to be relayed accordingly. Explain that the precedence of CIRVIS traffic is Flash (on all systems).

_ (4) Explain to trainee that CIRVIS reports are transmitted in plain language and sent essentially like a position report. Explain supplementary reports are made as additional information is obtained through continued observation.

_ (5) Explain to trainee a cancellation report is made when the unidentified objects are identified as friendly or when they are not considered to be a threat to national security. Explain comprehensive instructions for CIRVIS reports are in JANAP 146.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 18a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Aircraft transmitted a CIRVIS call three times to clear the frequency of traffic.

_ (2) Verified the authenticity of the message using challenge and reply authentication procedures.

_ (3) Annotated partial CIRVIS report and relayed accordingly.

_ (4) Transmitted CIRVIS report in plain language.

_ (5) Transmitted supplementary reports as additional information is obtained through continued observation.

_ (6) Transmitted cancellation report when the unidentified objects are identified as friendly or when they are not considered to be a threat to national security.

_ b. Trainee is ready to be certified on AFJQS task 18a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain to trainee how to acknowledge aircraft calling on published frequencies.

_ (2) Show trainee how to copy message containing the following information on falling satellites:

(a) Location of sighting.
(b) Azimuth and elevation of objects at beginning and end of sighting.
(c) Direction of travel.
(d) Number of objects sighted.
(e) Color of sighted objects.

_ (3) Show trainee how to relay message to US Space Command via AUTOVON or priority message.

_ (4) Show trainee how to coordinate with supervisor or senior operator.

_ (5) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 18b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Acknowledged aircraft calling on published frequencies.

_ (2) Copied message containing information on falling satellites.

_ (3) Relayed message to US Space Command via AUTOVON or priority message.

_ (4) Coordinated with supervisor or senior operator.

_ (5) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to review short-notice mission tasking message or no-notice AUTOVON notification.

_ (2) Show trainee how to coordinate with supervisor or senior operator.

_ (3) Show trainee how to ensure communication support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Show trainee how to process request(s) quickly and accurately.

_ (5) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 18c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Reviewed short-notice mission tasking message or no-notice AUTOVON notification.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Ensured communication support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Processed request(s) quickly and accurately.

_ (5) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain to trainee how to acknowledge aircraft calling on published frequencies.

_ (2) Show trainee how to copy message containing the following reconnaissance information:

(a) Mission identifier.
(b) Date and time of observation.
(c) Apparent ground zero in latitude and longitude.
(d) Radius in nautical miles.
(e) Crater (yes or no).
(f) Remarks (i.e., installation destroyed).

_ (3) Show trainee how to relay FLASH traffic via AUTOVON to NORAD region HQ as specified by aircraft.

_ (4) Show trainee how to coordinate with supervisor or senior operator.

_ (5) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 18d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Acknowledged aircraft calling on published frequencies.

_ (2) Copied message containing reconnaissance information.

_ (3) Relayed FLASH traffic via AUTOVON to NORAD region HQ as specified by aircraft.

_ (4) Coordinated with supervisor or senior operator.

_ (5) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive a message from HQ ACC to direct their aircraft home or to another destination. Explain the message might be transmitted either by phone, hotline, or DISN.

_ (2) Show trainee how to add time, authentication, and transmit the message in the applicable format.

_ (3) Show trainee how to deliver message. Explain if the message can't be delivered within one minute, contact originator for further guidance.

_ (4) Show trainee how to coordinate with supervisor or senior operator.

_ (5) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 18e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Received a message from HQ ACC to direct their aircraft home or to another destination.

_ (2) Added time, authentication, and transmitted the message in the applicable format.

_ (3) Delivered message. Contacted originator for further guidance, if needed.

_ (4) Coordinated with supervisor or senior operator.

_ (5) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain to trainee that DISN can be used for relaying messages to military addressees such as HQ AMC, HQ ACC, and/or USCENTCOM, if a written copy is required. If a date-time-group (DTG) is included in the aircraft's message to the Global station, it is the

DTG of the message when relayed via AUTODIN. Also, explain if no DTG is in the aircraft message, the DTG is the time-of-receipt (TOR) assigned by the ground operator to the aircraft's message.

_ (2) Explain to trainee that the file time entered in line 2 of the AUTODIN format is the time the message was time-stamped into the communications center.

_ (3) Explain to trainee that all messages received for voice relay are offered to the addressee. Also, explain if the message isn't accepted by the addressee, note refusal on the message form.

_ (4) Explain to trainee that under no circumstances is a message filed without a notation by the senior operator/shift supervisor concerning the action taken.

_ (5) Explain to trainee when handling ATC traffic to relay it by the most expeditious means possible (i.e., phone patch, hotline) to the ATC agency servicing the control area.

_ (6) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 18f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Relayed messages to military addressees such as HQ AMC, HQ ACC, and/or USCENTCOM, if a written copy is required.

_ (2) Located file time.

_ (3) Relayed messages for voice relay to the addressee.

_ (4) Contacted the senior operator/shift supervisor concerning the action taken, before filing message.

_ (5) Relayed ATC traffic by the most expeditious means possible (i.e., phone patch, hotline) to the ATC agency servicing the control area.

_ (6) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18f. Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 as guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

(1) Aircraft Navigational DF Assistance.

_ (a) Explain to trainee the following procedures provide assistance to aircraft requiring navigational/emergency location assistance, as well as DF assistance.

_ (b) Explain to trainee that Global operators will obtain the following information from the aircrew for relay to the DF facility: Frequency aircraft is operating on, aircraft call sign, and general area of search or location of aircraft.

_ (c) Explain to trainee that the DF facility advises the Global operator to request the aircraft to transmit its call sign and count from one to ten slowly, repeating this procedure three times.

_ (d) Explain to trainee that after the DF facility has obtained the coordinates, the Global operator advises the aircraft if additional action is required and/or pass the aircraft coordinates.

_ (e) Show trainee how to coordinate with supervisor or senior operator.

_ (f) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

(2) Spectrum Interference/RFI/DF Assistance.

_ (a) Explain to trainee that when an aircraft requests Spectrum Interference/RFI/DF assistance, the aircrew informs the Global station of the

frequency affected and type of interference (voice, morse code, teletype, etc.) and requests a read back to confirm receipt.

_ (b) Show trainee how to relay this information to its supporting DF facility who reports the DF fix information by confidential message to AFFMA/SCTA, Washington, DC and the aircrew's unit Command Center.

_ (c) Explain to trainee that in order to maintain operational security, DF information on the interfering station won't be relayed directly to the aircraft or mentioned on the air.

_ (d) Explain to trainee that the aircrew is responsible for reporting the Spectrum Interference/RFI incident after completing their flight.

_ (e) Show trainee how to coordinate with supervisor or senior operator.

_ (f) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 18g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 19a if evaluation is unsatisfactory.)

(1) Aircraft Navigational DF Assistance.

_ (a) Obtained the following information from the aircrew and relayed to the DF facility: Frequency aircraft is operating on, aircraft call sign, and general area of search or location of aircraft.

_ (b) Requested the aircraft to transmit its call sign and count from one to ten slowly, repeating this procedure three times.

_ (c) Advised the aircraft if additional action is required and/or passed the aircraft coordinates.

_ (d) Coordinated with supervisor or senior operator.

_ (e) Logged entry on appropriate form and filed message(s) in daily traffic file.

(2) Spectrum Interference/RFI/DF Assistance.

_ (a) Received information from aircrew informing the Global station of the frequency affected and type of interference (voice, morse code, teletype, etc.) and readback to confirm receipt.

_ (b) Relayed this information to its supporting DF facility who reports the DF fix information by confidential message to AFFMA/SCTA, Washington, DC and the aircrew's unit Command Center.

_ (c) Maintained operational security, DF information on the interfering station won't be relayed directly to the aircraft or mentioned on the air.

_ (d) Coordinated with supervisor or senior operator.

_ (e) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18g. Follow local certification procedures.

21. OBJECTIVE 5h TRAINING STEPS:

_ a. Using technical references and the checklist in para 22 as guidance, discuss the task steps for achieving objective 5h with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to transcribe message on appropriate form. Explain the different forms used for HF Global messages.

_ (2) Show trainee how to use authentication procedures with originator. Explain what authentication document to use and what type of authentication measure to use.

_ (3) Show trainee how to ensure authenticity of message is validated, if not follow procedures IAW AFM 33-109.

_ (4) Show trainee how to configure equipment for a broadcast.

_ (5) Show trainee how to call aircraft via HF. Know aircraft callsign assignment. Explain calling and answering procedures, if contact is not established within one minute, attempt In-

The-Blind TX. Discuss how to advise originator for further disposition, in no answer from aircraft.

_ (6) Show trainee how to transmit message traffic to aircraft. Explain to transmit message as received from originator. Discuss how to obtain an acknowledgement from the aircraft and that authenticity is established between aircraft and ground station.

_ (7) Show trainee how to pass aircraft's time of receipt (TOR) to originator.

_ (8) Show trainee how to coordinate with supervisor or senior operator.

_ (9) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

22. TASK 18h EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 21a if evaluation is unsatisfactory.)

_ (1) Transcribed message on appropriate form.

_ (2) Used authentication procedures with originator.

_ (3) Configured equipment for a broadcast.

_ (4) Called aircraft via HF.

_ (5) Transmitted message traffic to aircraft.

_ (6) Passed aircraft's time of receipt (TOR) to originator.

_ (7) Coordinated with supervisor or senior operator.

_ (8) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18h. Follow local certification procedures.

23. OBJECTIVE 5i TRAINING STEPS:

_ a. Using technical references and the checklist in para 24 as guidance, discuss the task steps for achieving objective 5i with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to notify the NCS by the fastest means available without compromising safety of station personnel. Explain FLASH precedence is authorized for notification of initial evacuation.

_ (2) Show trainee how the NCS ensures all other Global stations protect calls to the affected station. Explain if the NCS has an internal emergency, Andrews or McClellan will assume NCS responsibilities.

_ (3) Show trainee how the NCS reassumes control of the Global system if an ANCS has an internal emergency while performing NCS duties. Explain the MAJCOM HF Manager and the System Manager is notified by the next duty day.

_ (4) Explain to trainee if possible, an all frequency broadcast is made using the following format:

ALL STATIONS ALL STATIONS
THIS IS (affected stations call sign)
BREAK
INTERNAL EMERGENCY. STATION IS SECURING OPERATIONS.
BREAK
TIME (in minutes past the hour)
AUTHENTICATION IS (IAW AKAA-2001)
I SAY AGAIN (repeat entire message)
ACKNOWLEDGE

_ (5) Explain to trainee that Global stations and/or aircraft copying the message will acknowledge using the following transmission:

THIS IS (call sign)
ROGER OUT

_ (6) Explain to trainee if time allows, follow-up the transmission with a phone call to the affected MAJCOM HF Manager.

_ (7) Explain to trainee that after reentry into the net, contact NCS/ANCS by the fastest

means possible. Explain IMMEDIATE precedence is authorized for reentry notification. Also, explain Challenge and Reply authentication is required when using non-secure means of notification.

_ (8) Explain to trainee the reentering station transmits a DISN message to the applicable MAJCOM HF Manager and System Manager, explaining the reason for evacuation and any known mission impact.

_ (9) Show trainee how to coordinate with supervisor or senior operator.

_ (10) Show trainee how to log entry on appropriate form and filed message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

24. TASK 18i EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 23a if evaluation is unsatisfactory.)

_ (1) Notified the NCS by the fastest means available without compromising safety of station personnel.

_ (2) Broadcasted on all frequencies using the following format:

ALL STATIONS ALL STATIONS
THIS IS (affected stations call sign)
BREAK
INTERNAL EMERGENCY. STATION IS SECURING OPERATIONS.
BREAK
TIME (in minutes past the hour)
AUTHENTICATION IS (IAW AKAA-2001)
I SAY AGAIN (repeat entire message)
ACKNOWLEDGE

_ (3) Followed-up the transmission with a phone call to the affected MAJCOM HF Manager.

_ (4) Contacted NCS/ANCS by the fastest means possible, after reentry.

_ (5) Transmitted a DISN message to the applicable MAJCOM HF Manager and System Manager, explaining the reason for evacuation and any known mission impact.

_ (6) Coordinated with supervisor or senior operator.

_ (7) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18i. Follow local certification procedures.

25. OBJECTIVE 5j TRAINING STEPS:

_ a. Using technical references and the checklist in para 26 as guidance, discuss the task steps for achieving objective 5j with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to process mission notification from appropriate CINC/VCINC MAJCOM.

_ (2) Show trainee how to coordinate with supervisor or senior operator.

_ (3) Show trainee how to ensure communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Show trainee how to process inflight report information to the required addressees promptly.

_ (5) Show trainee how to relay departure reports to the next station's command. Explain that this report will contain actual time of departure and estimated destination block time.

_ (6) Show trainee how to relay arrival report messages via landlines to local command post and MNCS (MNCS will relay arrival reports to the MAJCOM Command Communications Comptroller).

_ (7) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

26. TASK 18j EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 25a if evaluation is unsatisfactory.)

_ (1) Processed mission notification from appropriate CINC/VCINC MAJCOM.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Ensured communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Processed inflight report information to the required addressees promptly.

_ (5) Relayed departure reports to the next station's command.

_ (6) Relayed arrival report messages via landlines to local command post and MNCS (MNCS will relay arrival reports to the MAJCOM Command Communications Comptroller).

_ (7) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18j. Follow local certification procedures.

27. OBJECTIVE 5k TRAINING STEPS:

_ a. Using technical references and the checklist in para 28 as guidance, discuss the task steps for achieving objective 5k with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to process mission notification from WHCA contingency team.

_ (2) Show trainee how to coordinate with supervisor or senior operator.

_ (3) Show trainee how to ensure communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) will be met.

_ (4) Show trainee how to receive and relay all information from the WHCA contingency team to the required addressees promptly.

_ (5) Show trainee how to log entry on appropriate form and file message(s) in daily traffic

file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

28. TASK 18k EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 27a if evaluation is unsatisfactory.)

_ (1) Processed mission notification from WHCA contingency team.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Ensured communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) will be met.

_ (4) Received and relayed all information from the WHCA contingency team to the required addressees promptly.

_ (5) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18k. Follow local certification procedures.

29. OBJECTIVE 5l TRAINING STEPS:

_ a. Using technical references and the checklist in para 30 as guidance, discuss the task steps for achieving objective 5l with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to process mission notification from ACC and/or AMC units.

_ (2) Show trainee how to coordinate with supervisor or senior operator.

_ (3) Show trainee how to ensure communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Show trainee how to authenticate CCE units upon entry into the net or upon

frequency changes.

_ (5) Show trainee how to advise NCS when any change in status affecting the contingency team occurs.

_ (6) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

30. TASK 18l EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 29a if evaluation is unsatisfactory.)

_ (1) Processed mission notification from ACC and/or AMC units.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Ensured communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Authenticated CCE units upon entry into the net or upon frequency changes.

_ (5) Advised NCS when any change in status affecting the contingency team occurs.

_ (6) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18l. Follow local certification procedures.

31. OBJECTIVE 5m TRAINING STEPS:

_ a. Using technical references and the checklist in para 32 as guidance, discuss the task steps for achieving objective 5m with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to process mission notification from a PACCS aircraft or

appropriate agency.

_ (2) Show trainee how to coordinate with supervisor or senior operator.

_ (3) Show trainee how to ensure communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Show trainee how to provide HF Single Side Band (SSB) data support according to mission tasking agreement.

_ (5) Show trainee how to provide an alternate route for passing secure record communications for command and control of the ACC force in the event the primary entry points are inoperative.

_ (6) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

32. TASK 18m EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 31a if evaluation is unsatisfactory.)

_ (1) Processed mission notification from a PACCS aircraft or appropriate agency.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Ensured communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Provided HF Single Side Band (SSB) data support according to mission tasking agreement.

_ (5) Provided an alternate route for passing secure record communications for command and control of the ACC force in the event the primary entry points are inoperative.

_ (6) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18m. Follow local certification procedures.

33. OBJECTIVE 5n TRAINING STEPS:

_ a. Using technical references and the checklist in para 34 as guidance, discuss the task steps for achieving objective 5n with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to process notification of a base isolation by competent authority (wing, command post, etc.).

_ (2) Show trainee how to coordinate with supervisor or senior operator.

_ (3) Show trainee how to authenticate when the authenticity of the calling party is in doubt.

_ (4) Show trainee how to direct station(s) to a discrete frequency, if possible.

_ (5) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

34. TASK 18n EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 33a if evaluation is unsatisfactory.)

_ (1) Processed notification of a base isolation by competent authority (wing, command post, etc.).

_ (2) Coordinated with supervisor or senior operator.

_ (3) Authenticated when the authenticity of the calling party is in doubt.

_ (4) Directed station(s) to a discrete frequency, if possible.

_ (5) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18n. Follow local certification procedures.

35. OBJECTIVE 5o TRAINING STEPS:

_ a. Using technical references and the checklist in para 36 as guidance, discuss the task steps for achieving objective 5o with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to process SARTs and SCE missions according to MAJCOM directives.

_ (2) Show trainee how to submit a contact report message to the supporting communications squadron/ group no later than five duty days after contact.

_ (3) Show trainee how to assign a discrete frequency, if possible.

_ (4) Explain to trainee that SCEs will notify Andrews or McClellan station via landline after training is completed.

_ (5) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

36. TASK 18o EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 35a if evaluation is unsatisfactory.)

_ (1) Processed SARTs and SCE missions according to MAJCOM directives.

_ (2) Submitted a contact report message to the supporting communications squadron/group no later than five duty days after contact.

_ (3) Assigned a discrete frequency, if possible.

_ (4) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 18o. Follow local certification procedures.

_ c. Assign the next task for training.

COMMAND AND CONTROL COMMUNICATIONS
(C3) PROCEDURES
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 19a through 19f

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. AFM 33-109
b. Local OIs
c. AFQTP Module 21

4. REQUIREMENTS:

a. Test equipment to be used: None

b. Downtime/user release is/is not required.

c. Ensure trainee has completed AFQTP Modules 1 through 10, 15, and 18 through 20 for stations equipped with Scope Signal III consoles.

d. Ensure trainee has completed AFQTP Modules 1 through 5, 11 through 15, and 18 through 20 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given applicable console, AFM 33-109, and local OIs, provide phone patch service IAW prescribed procedures.

b. Given applicable console, AFM 33-109, and local OIs, provide AWACS HF communications support IAW prescribed procedures.

c. Given applicable console, AFM 33-109, and local OIs, provide ACCCA Support IAW prescribed procedures.

d. Given applicable console, AFM 33-109, and local OIs, process a BENCH GIRL broadcast message IAW prescribed procedures.

e. Given applicable console, AFM 33-109, and local OIs, provide AMC CLOSE WATCH mission support IAW prescribed procedures.

f. Given applicable console, AFM 33-109, and local OIs, provide HQ Air Intelligence Agency and HQ AMC GYC-8 support IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 21.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss phone patch requests. Explain that the request can come from ground agencies, ships, or aircraft.

_ (2) Discuss the required information needed to perform the phone patch. Include subscriber information as well as station contact with desired distant end station.

_ (3) Discuss the phone patch briefing required for all ground agencies. Include the abbreviated version for agencies familiar with phone patch procedures.

_ (4) Discuss procedures to follow during the phone patch. Explain monitoring responsibilities.

_ (5) Discuss terminating the phone patch. Explain the actions taken to terminate. Include logkeeping responsibilities.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 19a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Received incoming call requesting phone patch support.

_ (2) Determined if phone patch could be completed.

_ (3) Provided ground agency with the required phone patch briefing.

_ (4) Connected subscriber to distant end station and monitored conversation.

_ (5) Terminated phone patch at conclusion or when interrupted with higher precedence traffic.

_ (6) Annotated phone patch on applicable form/log and filed.

_ b. Trainee is ready to be certified on AFJQS task 19a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss providing support to AWACS aircraft. Explain the types of traffic handled and the requirements for each.

_ (2) Discuss the procedures for phone patch service. Discuss the required information needed to perform the phone patch. Include subscriber information as well as station contact with desired distant end station.

_ (3) Discuss the procedures for handling message traffic. Explain how the

message is serviced. Include the requirements for processing this type of traffic.

_ (4) Discuss logkeeping requirements for both phone patches and message traffic.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 19b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Acknowledged aircraft calling on frequency.

_ (2) Received phone patch request or message traffic.

_ (3) Determined if phone patch could be completed, if applicable.

_ (4) Provided ground agency with the required phone patch briefing, if applicable.

_ (5) Connected subscriber to distant end station and monitored conversation, if applicable.

_ (6) Terminated phone patch at conclusion or when interrupted with higher precedence traffic, if applicable.

_ (7) Processed message traffic as required.

_ (8) Coordinated message traffic with senior operator/supervisor.

_ (9) Annotated phone patch/message traffic on applicable form/log and filed.

_ b. Trainee is ready to be certified on AFJQS task 19b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task

steps for achieving objective 5c with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss the support provided to ACC Control Aircraft (ACCCA). Explain the purpose of the ACCCA. Explain the types of traffic handled and the requirements for each.

_ (2) Discuss the procedures for phone patch service. Discuss the required information needed to perform the phone patch. Include subscriber information as well as station contact with desired distant end station.

_ (3) Discuss the procedures for handling message traffic. Explain how the message is serviced. Include the requirements for processing this type of traffic.

_ (4) Discuss logkeeping requirements for both phone patches and message traffic.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 19c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Acknowledged aircraft calling on frequency.

_ (2) Received phone patch request or message traffic.

_ (3) Determined if phone patch could be completed, if applicable.

_ (4) Provided ground agency with the required phone patch briefing, if applicable.

_ (5) Connected subscriber to distant end station and monitored conversation, if applicable.

_ (6) Terminated phone patch at conclusion or when interrupted with higher precedence traffic, if applicable.

_ (7) Processed message traffic as required.

_ (8) Coordinated message traffic with senior operator/supervisor.

_ (9) Annotated phone patch/message traffic on applicable form/log and filed.

_ b. Trainee is ready to be certified on AFJQS task 19c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss BENCH GIRL broadcast support, if applicable.

_ (2) Discuss the procedures for copying/processing FOXTROT broadcasts. Explain the receipt and echo procedures.

_ (3) Discuss correcting or cancelling a FOXTROT broadcast as needed. Explain the appropriate procedures.

_ (4) Discuss logkeeping requirements for message traffic.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 19d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Copied FOXTROT broadcast on appropriate form.

_ (2) Echoed broadcast, if applicable.

_ (3) Relayed broadcast, if applicable.

_ (4) Corrected or cancelled broadcast, if applicable.

_ (5) Coordinated traffic with senior operator/supervisor.

_ (6) Annotated message traffic on applicable form/log and filed.

_ b. Trainee is ready to be certified on AFJQS task 19d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss AMC CLOSE WATCH mission support. Explain the mission notification procedures. Include the types of support provided.

_ (2) Discuss the communications support requirements. Explain that necessary equipment must be identified to provide support.

_ (3) Discuss the procedures for phone patch service. Discuss the required information needed to perform the phone patch. Include subscriber information as well as station contact with desired distant end station.

_ (4) Discuss the procedures for handling message traffic. Explain how the message is serviced. Include the requirements for processing this type of traffic.

_ (5) Discuss logkeeping requirements for both phone patches and message traffic.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 19e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Processed mission notification from HQ AMC or other authorized agency.

_ (2) Coordinated mission notification with senior operator/supervisor.

_ (3) Ensured communications support requirements are available.

_ (4) Acknowledged aircraft calling on frequency.

_ (5) Received phone patch request or message traffic.

_ (6) Determined if phone patch could be completed, if applicable.

_ (7) Provided ground agency with the required phone patch briefing, if applicable.

_ (8) Connected subscriber to distant end station and monitored conversation, if applicable.

_ (9) Terminated phone patch at conclusion or when interrupted with higher precedence traffic, if applicable.

_ (10) Copied and relayed message traffic to applicable agencies as required.

_ (11) Coordinated message traffic with senior operator/supervisor.

_ (12) Advised CLOSE WATCH aircraft of hourly OPERATIONS NORMAL requirement.

_ (13) Briefed gaining station of aircraft mission status, if required.

_ (14) Annotated phone patch/message traffic on applicable form/log and filed.

_ b. Trainee is ready to be certified on AFJQS task 19e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss Air Intelligence Agency and HQ AMC GYC-8 mission support.

Explain the purpose of the Mission Tasking Agreement. Explain the mission notification procedures. Include the types of support provided.

_ (2) Discuss the procedures for phone patch service. Discuss the required information needed to perform the phone patch. Include subscriber information as well as station contact with desired distant end station.

_ (3) Discuss the procedures for handling message traffic. Explain how the message is serviced. Include the requirements for processing this type of traffic.

_ (4) Discuss logkeeping requirements for both phone patches and message traffic.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 19f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Processed mission tasking notification.

_ (2) Coordinated mission notification with senior operator/supervisor.

_ (3) Ensured communications support requirements are available.

_ (4) Acknowledged aircraft calling on frequency.

_ (5) Received phone patch request or message traffic.

_ (6) Determined if phone patch could be completed, if applicable.

_ (7) Provided ground agency with the required phone patch briefing, if applicable.

_ (8) Connected subscriber to distant end station and monitored conversation, if applicable.

_ (9) Terminated phone patch at conclusion or when interrupted with higher

precedence traffic, if applicable.

_ (10) Copied and relayed message traffic to applicable agencies as required.
_ (11) Coordinated message traffic with senior operator/supervisor.

_ (12) Annotated phone patch/message traffic on applicable form/log and filed.

_ b. Trainee is ready to be certified on AFJQS task 19f. Follow local certification procedures.

__ c. Assign the next task for training.

AIR/GROUND (A/G) MESSAGE
TRAFFIC PROCEDURES
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 20a through 20d

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. AFM 33-109
   b. ACP 121, US SUP 2
   c. ACP 125
   d. JANAP 128
   e. DOD FLIP Handbook
   f. Local OIs
   g. AFQTP Module 22

4. REQUIREMENTS:

   a. Test equipment to be used: None

   b. Downtime/user release is/is not required.

   c. Ensure trainee has completed AFQTP Modules 1 through 10, 15, and 18 through 21 for stations equipped with Scope Signal III consoles.

   d. Ensure trainee has completed AFQTP Modules 1 through 5, 11 through 15, and 18 through 21 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

   a. Given applicable console, AFM 33-109, ACP 121, US SUP 2, ACP 125, and local OIs, process an initial contact/departure report IAW prescribed procedures.

   b. Given applicable console, AFM 33-109, ACP 121, US SUP 2, ACP 125, and local OIs, process a position/revision report IAW prescribed procedures.

   c. Given applicable console, AFM 33-109, ACP 121, US SUP 2, ACP 125, DOD

FLIP Handbook, and local OIs, process an ATC clearance request IAW prescribed procedures.

d. Given applicable console, AFM 33-109, ACP 121, US SUP 2, ACP 125, JANAP 128, and local OIs, disseminate message traffic IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 22.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss initial contact/departure reports. Explain the purpose of this message traffic. Explain that conducting a phone patch between the aircraft and ground agency is the primary method. Explain that message traffic is a possibility.

_ (2) Discuss message handling requirements. Explain the time requirements involved, include a list of the information required on the message.

_ (3) Discuss the procedures used for relaying the message to the appropriate ground agency(cies).

_ (4) Discuss message filing and logkeeping requirements. Explain the procedures for both. Include the information required on the message before filing.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 20a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Answered incoming call from aircraft.

_ (2) Copied and receipted for initial contact/ departure report.

_ (3) Relayed message traffic to appropriate agency(ies), as directed.

_ (4) Annotated message with delivery information.

_ (5) Logged and filed message, as applicable.

_ b. Trainee is ready to be certified on AFJQS task 20a. Follow local certification procedures.

_ c. Assign the next task for training.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss position/revision reports. Explain the purpose of each of these messages. Explain that conducting a phone patch between the aircraft and ground agency is the primary method. Explain that message traffic is a possibility.

_ (2) Discuss message handling requirements. Explain the time requirements involved, include a list of the information required on the message.

_ (3) Discuss the procedures used for relaying the message to the appropriate ground agency(cies).

_ (4) Discuss message filing and logkeeping requirements. Explain the procedures for both. Include the information required on the message before filing.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 20b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Answered incoming call from aircraft.

_ (2) Copied and receipted for position/revision report.

_ (3) Relayed message traffic to appropriate agency(ies), as directed.

_ (4) Annotated message with delivery information.

_ (5) Logged and filed message, as applicable.

_ b. Trainee is ready to be certified on AFJQS task 20b. Follow local certification procedures.

_ c. Assign the next task for training.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss ATC clearance request. Explain the importance of the request to include the safety of the flight. Explain that conducting a phone patch between the aircraft and ground agency is the primary method. Explain that message traffic is a possibility.

_ (2) Discuss the procedures for obtaining an ATC clearance for an aircraft. Explain the procedures for relaying the approved clearance to the aircraft.

_ (3) Discuss message filing and logkeeping requirements. Explain the procedures for both, include the information required on the message before filing.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.
_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 20c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Answered incoming call from aircraft.

_ (2) Copied and receipted for ATC clearance request.

_ (3) Relayed request to nearest ATC facility.

_ (4) Annotated message with delivery information.

_ (5) Receipted for clearance from ATC facility.

_ (6) Contacted aircraft and relayed ATC clearance.

_ (7) Ensured aircraft acknowledgement.

_ (8) Logged and filed message, as applicable.

_ b. Trainee is ready to be certified on AFJQS task 20c. Follow local certification procedures.

_ c. Assign the next task for training.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss message traffic dissemination procedures. Explain the methods that are used, include HF voice and landline, and AUTODIN.

_ (2) Discuss disseminating message traffic via HF or landline. Explain the

procedures for each.

_ (3) Discuss disseminating message traffic via AUTODIN. Explain the procedures used by the station. Include operator responsibilities.

_ (4) Discuss message filing and logkeeping requirements. Explain the procedures for both, include the information required on the message before filing.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 20d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Relayed message traffic via HF, if applicable.

_ (2) Relayed message traffic via landline, if applicable.

_ (3) Relayed message traffic via AUTODIN, if applicable.

_ b. Trainee is ready to be certified on AFJQS task 20d. Follow local certification procedures.

_ c. Assign the next task for training.

SPECIAL MESSAGE HANDLING PROCEDURES
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 21a through 21d

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. AFM 33-109
b. Local OIs
c. AFQTP Module 23

4. REQUIREMENTS:

a. Test equipment to be used: None

b. Downtime/user release is/is not required.

c. Ensure trainee has completed AFQTP Modules 1 through 10, 15, and 18 through 22 for stations equipped with Scope Signal III consoles.

d. Ensure trainee has completed AFQTP Modules 1 through 5, 11 through 15, and 18 through 22 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given applicable console, AFM 33-109, and local OIs, process Hotline station traffic IAW prescribed procedures.

b. Given applicable console, AFM 33-109, and local OIs, process Echo station traffic IAW prescribed procedures.

c. Given applicable console, AFM 33-109, and local OIs, perform worldwide dissemination IAW prescribed procedures.

d. Given applicable console, AFM 33-109, and local OIs, process equipment malfunction traffic IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 23.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive message via designated hotline.

_ (2) Show trainee how to readback message for verification.

_ (3) Show trainee how to transcribe information into transmission format.

_ (4) Show trainee how to add transmission time and authentication before initiating the transmission.

_ (5) Show trainee how to transmit the traffic, tasking appropriate echo stations.

_ (6) Show trainee how to pass traffic and TOT to GOC.

_ (7) Show trainee how to obtain TOTs of echo stations.

_ (8) Show trainee how to advise supervisor or senior operator.

_ (9) Show trainee how to log entry on appropriate form and file message(s) in daily read file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.
_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 21a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Received message via designated hotline.

_ (2) Read back message for verification.

_ (3) Transcribed information into transmission format.

_ (4) Added transmission time and authenticated before initiating the transmission.

_ (5) Transmitted the traffic, tasking appropriate echo stations.

_ (6) Passed traffic and TOT to GOC.

_ (7) Obtained TOTs of echo stations.

_ (8) Advised supervisor or senior operator.

_ (9) Logged entry on appropriate form and filed message(s) in daily read file

_ b. Trainee is ready to be certified on AFJQS task 21a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive message via designated hotline.

_ (2) Show trainee how to read back message for verification.

_ (3) Show trainee how to transcribe information into transmission format.

_ (3) Show trainee how to add transmission time and authentication before initiating the transmission.

_ (4) Show trainee how to transmit the message on all published/assigned frequencies.

The following steps will take place if an incorrect text or authentication takes place:

_ (5) Show trainee how to cancel the original broadcast.

_ (6) Show trainee how to transmit the correct message tasking minimum echo stations.

_ (7) Show trainee how to echo stations that previously transmitted the incorrect message cancel the original message before re-echoing.

_ (8) Show trainee how to contact GOC on message status.

_ (9) Show trainee how to advise supervisor or senior operator.

_ (10) Show trainee how to log entry on appropriate form and file message(s) in daily read file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 21b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Received message via designated hotline.

_ (2) Read back message for verification.

_ (3) Transcribed information into transmission format.

_ (4) Added transmission time and authenticated before initiating the transmission.

_ (5) Transmitted the message on all published/ assigned frequencies.

The following steps will take place if an incorrect text or authentication takes place:

_ (6) Cancelled the original broadcast.

_ (7) Transmitted the correct message tasking minimum echo stations.

_ (8) Checked echo stations that previously transmitted the incorrect message cancel the original message before re-echoing.

_ (9) Contacted GOC on message status.

_ (10) Advised supervisor or senior operator.

_ (11) Logged entry on appropriate form and filed message(s) in daily read file

_ b. Trainee is ready to be certified on AFJQS task 21b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive message via designated hotline.

_ (2) Show trainee how to read back message for verification.

_ (3) Show trainee how to transcribe information into transmission format.

_ (4) Show trainee how to add transmission time and authentication before initiating the transmission.

_ (5) Show trainee how to transmit the traffic, tasking appropriate echo stations.

_ (6) Show trainee how to pass traffic and TOT to GOC.

_ (7) Show trainee how to make a second FLASH (IMMEDIATE if FLASH is unavailable) precedence call to the NCS/ANCS and pass the advisory.

_ (8) Show trainee how to standby for TOT from NCS/ANCS.

_ (9) Show trainee how to advise supervisor or senior operator.

_ (10) Show trainee how to log entry on appropriate form and file message(s) in daily read file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 21c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Received message.

_ (2) Read back message for verification.

_ (3) Transcribed information into transmission format.

_ (4) Added transmission time and authenticated before initiating the transmission.

_ (5) Transmitted the traffic, tasking appropriate echo stations.

_ (6) Passed traffic and TOT to GOC.

_ (7) Made a second FLASH (IMMEDIATE if FLASH is unavailable) precedence call to the NCS/ANCS and pass the advisory.

_ (8) Stood-by for TOT from NCS/ANCS.

_ (9) Advised supervisor or senior operator.

_ (10) Logged entry on appropriate form and filed message(s) in daily read file

_ b. Trainee is ready to be certified on AFJQS task 21c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to identify equipment malfunction.

_ (2) Show trainee how to transcribe information into transmission format.

_ (3) Show trainee how to add transmission time and authentication before initiating the transmission.

_ (4) Show trainee how to transmit the traffic, tasking appropriate echo stations.

_ (5) Show trainee how to pass traffic and TOT to GOC.

_ (6) Show trainee how to obtain TOTs of echo stations.

_ (7) Show trainee how to advise NCS of status.

_ (8) Show trainee how to advise supervisor or senior operator.

_ (9) Show trainee how to log entry on appropriate form and file message(s) in daily read file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 21d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the

following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Identified equipment malfunction.

_ (2) Transcribed information into transmission format.

_ (3) Added transmission time and authenticated before initiating the transmission.

_ (4) Transmitted the traffic, tasking appropriate echo stations.

_ (5) Passed traffic and TOT to GOC.

_ (6) Obtained TOTs of echo stations.

_ (7) Advised NCS of status.

_ (8) Advised supervisor or senior operator.

_ (9) Logged entry on appropriate form and filed message(s) in daily read file

_ b. Trainee is ready to be certified on AFJQS task 21d. Follow local certification procedures.

_ c. Assign the next task for training.

EMERGENCY TRAFFIC HANDLING
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 22a through 22g

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. AFM 33-109
b. ACP 135
c. AFI 10-707
d. ACP 121, US SUP 2
e. Local OIs
f. AFQTP Module 24

4. REQUIREMENTS:

a. Test equipment to be used: None

b. Downtime/user release is/is not required.

c. Ensure trainee has completed AFQTP Modules 1 through 10, 15, and 18 through 23 for stations equipped with Scope Signal III consoles.

d. Ensure trainee has completed AFQTP Modules 1 through 5, 11 through 15, and 18 through 23 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given applicable console, AFM 33-109, and local OIs, perform distress procedures IAW prescribed procedures.

b. Given applicable console, ACP 121, US SUP 2, ACP 135, AFM 33-109, and local OIs, process lost communications traffic IAW prescribed procedures.

c. Given applicable console, ACP 121, US SUP 2, ACP 135, AFM 33-109, and local OIs, process communications alert traffic IAW prescribed procedures.

d. Given applicable console, ACP 121, US SUP 2, ACP 135, AFM 33-109, and local OIs, process aircraft emergencies IAW prescribed procedures.

e. Given applicable console, AFM 33-109, and local OIs, alert Search and Rescue agencies IAW prescribed procedures.

f. Given applicable console, AFM 33-109, and local OIs, provide communications support for Aerospace Rescue and Recovery units IAW prescribed procedures.

g. Given applicable console, ACP 135, AFM 33-109, and local OIs, process emergency calls for Merchant Marine and US Navy ships IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 24.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to clear frequencies by sending out an ALL STATIONS broadcast.

_ (2) Show trainee how to process traffic to proper authority.

_ (3) Show trainee how to terminate traffic by sending out an ALL STATIONS broadcast.

_ (4) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.
_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 22a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Cleared frequencies by sending out an ALL STATIONS broadcast.

_ (2) Processed traffic to proper authority.

_ (3) Terminated traffic by sending out an ALL STATIONS broadcast.

_ (4) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 22a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive notification from ATC and/or authorized agency. Explain that if communication with an aircraft is not established within 5 minutes following a required reporting period, lost communications action must be taken.

_ (2) Show trainee how to obtain the following information from ATC and/or authorized agency concerning aircraft:

a. Aircraft call sign.
b. Last known position and/or last station in contact with aircraft.
c. Agency making the request.
d. Initials of requesting party.
e. Phone number of requesting agency.

_ (3) Show trainee how to coordinate with supervisor or senior operator.

_ (4) Show trainee how to broadcast an initial all frequencies call. Explain the necessity to broadcast a secondary call 15 seconds after the initial call, if contact is not established.

_ (5) Show trainee how to advise secondary and tertiary stations of situation and have them attempt to contact aircraft. Explain the contact procedures will be the same for the secondary and tertiary stations.

_ (6) Show trainee how to transmit In-The-Blind at least once during lost communications.

_ (7) Show trainee how to contact ATC or authorized agency after secondary and tertiary stations attempts at contact with aircraft are unsuccessful.

_ (8) Show trainee how to continue all frequencies broadcast every 5 minutes until contact is established or advised otherwise by ATC or authorized agency.

_ (9) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 22b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Received notification from ATC and/or authorized agency. Understood that if communication with an aircraft was not established within 5 minutes following a required reporting period, lost communications action must be taken.

_ (2) Obtained information from ATC and/or authorized agency concerning aircraft.

_ (3) Coordinated with supervisor or senior operator.

_ (4) Broadcast an initial all frequencies call. Understood to broadcast a secondary call 15 seconds after the initial call, if contact was not established.

_ (5) Advised secondary and tertiary stations of situation and had them attempt to contact aircraft.

_ (6) Transmitted In-The-Blind at least once during lost communications.

_ (7) Contacted ATC or authorized agency after secondary and tertiary stations attempts at contact with aircraft were unsuccessful.

_ (8) Continued all frequencies broadcast every 5 minutes until contact was established or advised otherwise by ATC or authorized agency.

_ (9) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 22b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive ATC Communications Alert notification. Explain how to exchange initials with distant party.

_ (2) Explain the three different alert phases.

a. INCERFA (Uncertainty Phase).
b. ALERFA (Alert Phase).
c. DISTRESFA (Distress Phase).

_ (3) Show trainee how to coordinate with supervisor or senior operator.

_ (4) Show trainee how to initiate Communications Alert phase broadcast on published frequencies.

_ (5) Show trainee how to report status update to ATC.

_ (6) Show trainee how to continue Communications Alert Phase broadcast until contact is established or advised otherwise by ATC or authorized by ATC.

_ (7) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 22c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Received ATC Communications Alert notification.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Initiated Communications Alert phase broadcast on published frequencies.

_ (4) Reported status update to ATC.

_ (5) Continued Communications Alert Phase broadcast until contact was established or advised otherwise by ATC or authorized by ATC.

_ (6) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 22c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Explain the three different types of aircraft emergency traffic.

a. Distress (MAYDAY).
b. Urgency (PAN).
c. Safety (SECURITE).

_ (2) Show trainee how to receive emergency traffic from aircraft.

_ (3) Explain to trainee that aircraft will determine the category degree.

_ (4) Show trainee how to coordinate with supervisor or senior operator.

_ (5) Show trainee how to clear frequency for emergency traffic using ALL STATIONS broadcast.

_ (6) Show trainee how to move aircraft to a discrete frequency only if this will not disrupt or lose communications.

_ (7) Show trainee how to copy all traffic from aircraft and relay to appropriate agency. Explain, if time permits obtain the information on the emergency checklist, but not to interrupt aircraft to fill out checklist.

_ (8) Show trainee how to contact and advise ATC of aircraft emergency and status.

_ (9) Show trainee how to initiate Search and Rescue when requested by ATC or authorized agency.

_ (10) Show trainee how to terminate aircraft emergency advised by ATC, authorized agency or aircraft.

_ (11) Show trainee how to transmit cancellation message.

_ (12) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 22d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Received emergency traffic from aircraft.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Cleared frequency for emergency traffic using ALL STATIONS broadcast.

_ (4) Moved aircraft to a discrete frequency only if this will not disrupt or lose communications.

_ (5) Copied all traffic from aircraft and relayed to appropriate agency.

_ (6) Contacted and advised ATC of aircraft emergency and status.

_ (7) Initiated Search and Rescue when requested by ATC or authorized agency.

_ (8) Terminated aircraft emergency when advised by ATC, authorized agency or aircraft.

_ (9) Transmitted cancellation message.

_ (10) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 22d. Follow local certification procedures.

15. OBJECTIVE 5e TRAINING STEPS:

_ a. Using technical references and the checklist in para 16 as guidance, discuss the task steps for achieving objective 5e with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive incoming call requesting search and rescue assistance.

_ (2) Show trainee how to coordinate with supervisor or senior operator.

_ (3) Show trainee how to notify appropriate ATC agency.

_ (4) Show trainee how to alert appropriate military rescue coordination center according to local directives.

_ (5) Explain to trainee that supervisor or senior operator obtains the time the rescue agency was notified by ATC and logs it in the MSL.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

16. TASK 22e EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 15a if evaluation is unsatisfactory.)

_ (1) Received incoming call requesting search and rescue assistance.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Notified appropriate ATC agency.

_ (4) Alerted appropriate military rescue coordination center according to local directives.

_ (5) Supervisor or senior operator obtained the time the rescue agency was notified by ATC and logged it in the MSL.

_ b. Trainee is ready to be certified on AFJQS task 22e. Follow local certification procedures.

17. OBJECTIVE 5f TRAINING STEPS:

_ a. Using technical references and the checklist in para 18 as guidance, discuss the task steps for achieving objective 5f with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive mission notification from Aerospace Rescue and Recovery units.

_ (2) Show trainee how to coordinate with supervisor or senior operator.

_ (3) Show trainee how to ensure communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (4) Show trainee how to review local procedures developed by the Global stations and Aerospace Search and Rescue units.

_ (5) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

18. TASK 22f EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 17a if evaluation is unsatisfactory.)

_ (1) Received mission notification from Aerospace Rescue and Recovery units.

_ (2) Coordinated with supervisor or senior operator.

_ (3) Ensured communications support requirements (radios needed, frequency, teletype, discrete frequency, etc.) could be met.

_ (4) Reviewed local procedures developed by the Global stations and Aerospace Search and Rescue units.

_ (5) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 22f. Follow local certification procedures.

19. OBJECTIVE 5g TRAINING STEPS:

_ a. Using technical references and the checklist in para 20 as guidance, discuss the task steps for achieving objective 5g with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to receive emergency call from a merchant ship or a US Navy ship.

_ (2) Show trainee how to copy the following traffic:

a. Name of ship.
b. International call sign.
c. Position.
d. Date and Time.
e. Brief description of emergency.

_ (3) Show trainee how to coordinate with supervisor or senior operator.

_ (4) Show trainee how to relay message via DSN to appropriate Navy command center.

_ (5) Show trainee how to monitor frequency at all times for additional information from either the merchant ship or the Navy command center.

_ (6) Show trainee how to terminate emergency call when advised by either the merchant ship or Navy command center.

_ (7) Show trainee how to log entry on appropriate form and file message(s) in daily traffic file.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

20. TASK 22g EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 19a if evaluation is unsatisfactory.)

_ (1) Received emergency call from a merchant ship or a US Navy ship.

_ (2) Copied the following traffic:

a. Name of ship.
b. International call sign.
c. Position.
d. Date and Time.
e. Brief description of emergency.

_ (3) Coordinated with supervisor or senior operator.

_ (4) Relayed message via DSN to appropriate Navy command center.

_ (5) Monitored frequency at all times for additional information from either the merchant ship or the Navy command center.

_ (6) Terminated emergency call when advised by either the merchant ship or Navy command center.

_ (7) Logged entry on appropriate form and filed message(s) in daily traffic file.

_ b. Trainee is ready to be certified on AFJQS task 22g. Follow local certification procedures.

_ c. Assign next task for training.

BROADCAST PROCEDURES
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 23a through 23d

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. AFM 33-109
b. Local OIs
c. AFQTP Module 25

4. REQUIREMENTS:

a. Test equipment to be used:

b. Downtime/user release is/is not required.

c. Ensure trainee has completed AFQTP Modules 1 through 10, 15, and 18 through 24 for stations equipped with Scope Signal III consoles.

d. Ensure trainee has completed AFQTP Modules 1 through 5, 11 through 15, and 18 through 24 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVES:

a. Given applicable console, AFM 33-109, and local OIs, process EAMs sent/received via HF, SACCS, and landline IAW prescribed procedures.

b. Given applicable console, AFM 33-109, and local OIs, prepare aircraft advisories received via HF and landline for transmission IAW prescribed procedures.

c. Given applicable console, AFM 33-109, and local OIs, disseminate DEFCONs via HF and landline IAW prescribed procedures.

d. Given applicable console, AFM 33-109, and local OIs, transfer net control station (NCS) via Communications Call or HF IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 25.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss EAM reception. Explain the procedures for receiving EAMs via HF, SACCS/MDT, and landline.

_ (2) Discuss EAM transmission. Explain the transmission procedures to include equipment configuration, and the procedures for transmitting scheduled broadcasts.

_ (3) Discuss message handling procedures, to include transcribing message to applicable form, logging, and filing.

_ (4) Discuss notification of applicable agencies upon completion of transmission; which agencies are notified and when.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 23a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Receipted for EAM via HF, SACCS/MDT, or landline.

_ (2) Transcribed EAM to applicable form.

_ (3) Transmitted received EAM via HF.

_ (4) Transmitted scheduled EAM via HF.

_ (5) Notified applicable agencies.

_ (6) Logged and filed completed message.

_ b. Trainee is ready to be certified on AFJQS task 23a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss receiving aircraft advisory messages. Explain the procedures for receiving messages via HF and landline. Explain the procedures for landline reception. Include establishing the authenticity of the originator and the use of read back procedures.

_ (2) Discuss aircraft advisory transmission. Explain the transmission procedures to include equipment configuration and assignment of time and authentication to message. Explain echo taskings and how they are determined.

_ (3) Discuss message handling procedures. Include transcribing message to applicable form, logging, and filing.

_ (4) Discuss notification of applicable agencies upon completion of transmission. Include which agencies are notified and when. Explain the required information to be relayed.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 23b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Receipted for aircraft advisory message.

_ (2) Verified authenticity of originator.

_ (3) Transcribed message to applicable form.

_ (4) Prepared aircraft advisory for transmission (added time and authentication, and echo stations if applicable).

_ (5) Transmitted message via HF.

_ (6) Notified applicable agencies.

_ (7) Logged and filed completed message.

_ b. Trainee is ready to be certified on AFJQS task 23b. Follow local certification procedures.

11. OBJECTIVE 5c TRAINING STEPS:

_ a. Using technical references and the checklist in para 12 as guidance, discuss the task steps for achieving objective 5c with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss DEFCON change message reception. Explain procedures for both HF and landline reception. Include verification of originator if over landline circuits.

_ (2) Discuss message preparation. Explain the use of USKAC 72 and assignment of time and authentication.

_ (3) Discuss message handling procedures. Include transcribing message to applicable form, logging, and filing.

_ (4) Discuss notification of applicable agencies upon completion of transmission,

include which agencies are notified and when. Explain the required information to be relayed.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

12. TASK 23c EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 11a if evaluation is unsatisfactory.)

_ (1) Receipted for DEFCON change message.

_ (2) Verified authenticity of originator if over landline.

_ (3) Transcribed message to applicable form.

_ (4) Prepared DEFCON change for transmission (added time and authentication, and echo stations if applicable).

_ (5) Transmitted DEFCON change via HF.

_ (6) Notified applicable agencies.

_ (7) Logged and filed completed message.

_ b. Trainee is ready to be certified on AFJQS task 23c. Follow local certification procedures.

13. OBJECTIVE 5d TRAINING STEPS:

_ a. Using technical references and the checklist in para 14 as guidance, discuss the task steps for achieving objective 5d with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss transferring NCS. Explain the procedures used for both scheduled and unscheduled transfers. Explain what constitutes the necessity for an unscheduled NCS transfer.

_ (2) Discuss notification of stations and applicable agencies upon transfer of NCS. Include which agencies are notified and when. Explain the required information to be transmitted/relayed.

_ (3) Discuss message handling procedures. Include transcribing message to applicable form, logging, and filing.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

14. TASK 23d EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 13a if evaluation is unsatisfactory.)

_ (1) Transcribed NCS assumption message on applicable form.

_ (2) Prepared message for transmission (added time and authentication).

_ (3) Transmitted message advising net of NCS assumption.

_ (4) Notified applicable agencies of NCS assumption.

_ (5) Logged and filed completed message.

_ b. Trainee is ready to be certified on AFJQS task 23d. Follow local certification procedures.

_ c. Assign the next task for training.

MYSTIC STAR SUPPORT
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 24

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

a. DCA Circular 310-70-79
b. Local OIs
c. AFQTP Module 26

4. REQUIREMENTS:

a. Test equipment to be used: None

b. Downtime/user release is/is not required.

c. Ensure trainee has completed AFQTP Modules 1 through 10, 15, and 18 through 25 for stations equipped with Scope Signal III consoles.

d. Ensure trainee has completed AFQTP Modules 1 through 5, 11 through 15, and 18 through 25 for stations equipped with Scope Control consoles.

5. TRAINING OBJECTIVE:

Given DCA Circular 310-70-79, AFM 33-109, access to Scope Pattern and/or Scope Control equipment, secure teletype equipment, and local OIs, support MYSTIC STAR missions IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

_ b. Assign AFQTP Module 26.

_ c. Discuss the review questions and answers with the trainee.

_ d. Administer the KEP.

_ e. Check the KEP answers and review missed questions.

7. OBJECTIVE TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving the objective with trainee. Ensure all Notes, Cautions, and Warnings listed in the TO for each step are covered. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Show trainee how to acknowledge advance notification by AUTODIN message, short-notice DSN from Andrews, or no-notice by aircraft.

_ (2) Show trainee how to ensure message contains the following information:

a. Call sign of aircraft.
b. Priority of mission.
c. Departure and arrival station.
d. Length of mission.
e. DV Code on board.
f. Type of service required (i.e., voice, data, or both).

_ (3) Show trainee how to coordinate with supervisor or senior operator.

_ (4) Show trainee how to ensure communication support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (5) Show trainee how to condition radio level(s) and secure teletype for desired frequency and mode of operation.

_ (6) Show trainee how to obtain the following information and relay to MNCS (Andrews VIP) once the aircraft is airborne:

a. Aircraft actual time of departure.
b. Estimated time of arrival (ETA) or estimated time of blocks (ETB).

_ (7) Show trainee how to assign primary, secondary, and tertiary frequencies upon initial contact IAW Foxtrot listing in DCAC 310-70-79.

_ (8) Explain to trainee if mission is already in progress, obtain necessary information on aircraft from MNCS (Andrews VIP) or directly from aircraft.

_ (9) Show trainee how to perform radio checks every 15 minutes.

_ (10) Show trainee how to relay all message traffic to the MNCS (Andrews VIP).

_ (11) Explain to trainee once the aircraft has arrived, obtain the following information and relay to MNCS (Andrews VIP):

a. Actual arrival time.
b. Estimated departure time, if aircraft is going to have minimum ground time.
c. ETA to next destination, if aircraft is going to have minimum ground time.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 24 EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Acknowledged advance notification by AUTODIN message, short-notice DSN from Andrews, or no-notice by aircraft.

_ (2) Ensured message contains the following information:

a. Call sign of aircraft.
b. Priority of mission.
c. Departure and arrival station.
d. Length of mission.
e. DV Code on board.
f. Type of service required (i.e., voice, data, or both).

_ (3) Coordinated with supervisor or senior operator.

_ (4) Ensured communication support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

_ (5) Conditioned radio level(s) and secure teletype for desired frequency and mode of operation.

_ (6) Obtained the following information and relayed to MNCS (Andrews VIP), once aircraft was airborne:

a. Aircraft actual time of departure.
b. Estimated time of arrival (ETA) or estimated time of blocks (ETB).

_ (7) Assigned primary, secondary, and tertiary frequencies upon initial contact IAW Foxtrot listing in DCAC 310-70-79.

_ (8) Obtained necessary information on aircraft from MNCS (Andrews VIP) or directly from aircraft, if mission was already in progress.

_ (9) Performed radio checks every 15 minutes.

_ (10) Relayed all message traffic to the MNCS (Andrews VIP).

_ (11) Obtained the following information and relayed to MNCS (Andrews VIP) once the aircraft arrived:

a. Actual arrival time.
b. Estimated departure time, if aircraft is going to have minimum ground time.
c. ETA to next destination, if aircraft is going to have minimum ground time.

_ b. Trainee is ready to be certified on AFJQS task 24. Follow local certification procedures.

_ c. Assign the next task for training.

EQUIPMENT OUTAGES
TASK TRAINING GUIDE

TRAINEE'S NAME:_____

1. AFJQS TASK NUMBERS: 25a and 25b

2. ESTIMATED TASK TRAINING TIME:_____

3. TRAINING REFERENCES:

   a. AFM 33-109
   b. Local OIs

4. REQUIREMENTS:

   a. Test equipment to be used: None

   b. Downtime/user release is/is not required.

5. TRAINING OBJECTIVES:

   a. Given a console, AFM 33-109, local OIs, and a log-out situation, log-out equipment IAW prescribed procedures.

   b. Given a console, AFM 33-109, local OIs, and a log-in situation, log-in equipment IAW prescribed procedures.

6. INITIAL TRAINING STEPS (Check when completed):

_ a. Discuss the objective for the task, including the work center speed and accuracy standards for performing the task. Also discuss the conditions under which it is normally performed.

7. OBJECTIVE 5a TRAINING STEPS:

_ a. Using technical references and the checklist in para 8 as guidance, discuss the task steps for achieving objective 5a with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss identifying equipment problems. Explain how to verify that a problem

exists. Include any local procedures used for testing.

_ (2) Discuss the procedures for logging out equipment. Explain the procedures for notifying Job Control and other applicable agencies of the equipment status. Include the requirement to obtain a Job Control Number. Explain when and how to notify the appropriate station/agency(ies) of any station status change.

_ (3) Discuss local documentation required. Explain the local procedures for updating the equipment status board. Include all forms and filing procedures.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

8. TASK 25a EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 7a if evaluation is unsatisfactory.)

_ (1) Verified equipment problem.

_ (2) Determined equipment log-out is required.

_ (3) Notified Job Control of the equipment log-out.

_ (4) Obtained Job Control Number.

_ (5) Annotated equipment outage on appropriate form.

_ (6) Annotated equipment outage in Master Station Log.

_ (7) Annotated equipment outage on equipment status board.

_ (8) Filed appropriate form in traffic files.

_ (9) Notified the appropriate agency(ies) if station status changed.

_ b. Trainee is ready to be certified on AFJQS task 25a. Follow local certification procedures.

9. OBJECTIVE 5b TRAINING STEPS:

_ a. Using technical references and the checklist in para 10 as guidance, discuss the task steps for achieving objective 5b with trainee. Brief the trainee on all safety precautions and local procedures that apply.

_ (1) Discuss logging in equipment. Explain the procedures for ensuring the equipment is operational.

_ (2) Discuss the procedures for notifying Job Control and other applicable agencies of the equipment status. Include notifying the appropriate station/agency(ies) of any station status change.

_ (3) Discuss local documentation required. Explain the local procedures for updating the equipment status board. Include all forms and filing procedures.

_ b. Demonstrate correct task performance.

_ c. Review task steps with trainee and answer any questions.

_ d. Restore system to normal operating configuration.

_ e. Have trainee practice steps and assist as necessary.

10. TASK 25b EVALUATION:

a. Have trainee perform task steps unassisted and evaluate performance IAW the following checklist. (Return to step 9a if evaluation is unsatisfactory.)

_ (1) Verified successful corrective action.

_ (2) Logged-in equipment with Job Control.

_ (3) Updated status of equipment on equipment outage board.

_ (4) Entered equipment log-in information in Master Station Log.

_ (5) Annotated log-in on appropriate form.

_ (6) Filed appropriate form in traffic files.

_ (7) Notified the appropriate agency(ies) if station status changed.

_ b. Trainee is ready to be certified on AFJQS task 25b. Follow local certification procedures.

TRAINER SURVEY

Publication Date of AFJQS/AFQTP ___

Name _____ (optional)

Unit _____

DSN _____

1. The purpose of the Air Force Job Qualification Standard is to provide a standardized training program on a specific piece of equipment or function. Do feel this product accomplished this purpose?

Yes No

2. Do you feel this product is useful in training this equipment or function?

Yes No

3. Was the information in the product technically accurate? If not, please identify the incorrect information in the comment area below.

Yes No

4. Do feel this products is an effective instructional tool?

Yes No

5. Please comment below on what is needed in this training package to enhance its effectiveness.

_____

_____

_____

81 TRSS/TSQS
601 D STREET
KEESLER AFB MS 39534-2229

TRAINING CERTIFICATION FOR
AFJQS/AFQTP 3C1X1-215D
USAF GLOBAL HF SYSTEM

I certify the individual listed below has completed all of the requirements for the above AFJQS/AFQTP. Date completed _____.

_____

(Please Print) TRAINEE'S RANK, FIRST, MI, LAST NAME

_____

(Please Print) UNIT MAILING ADDRESS, INCLUDING ZIP CODE

_____

SUPERVISOR'S RANK/NAME DUTY TITLE DSN

CONCUR/NONCONCUR

_____

Commander or Designated Representative

Please attach the completed and graded KEP answer sheet(s) and Trainer/Trainee Surveys and mail to the address listed below. A certificate of training will be issued upon receipt of these documents.

81 TRSS/TSQS
601 D STREET
KEESLER AFB MS 39534-2229

NOTE

Do NOT submit trainees for training certificates more than once per AFJQS/AFQTP. Some AFJQSs/ AFQTPs are used for recurring training, but only ONE certificate will be issued for a trainee per AFJQS/AFQTP.

PERSONAL DATA

PRIVACY ACT OF 1974
(5 U.S.C. 552a)

TABLE OF CONTENTS

PREFACE

This Air Force Qualification Training Package (AFQTP) was developed to standardize the OJT program for USAF Global High Frequency (HF) System. It explains the functional operation of the system.

Put this package to use. We hope you'll find it to be a valuable tool which aids you in becoming proficient in the shortest possible time.

This training package was developed by MSgt Michael J. Kelly and TSgt Ronald E. Maples, 81 TRSS Qualification Training Flight, Keesler AFB, MS. The Training and Education Specialist was Mr. Hugh Frazier. It was validated by 789 CS, Andrews AFB MD; 6 CS, MacDill AFB FL; Det 1, 755 CS, Offutt AFB NE; and 77 CS, McClellan AFB CA. SSgt Molly Mayhew, 789 CS/SCMY, Andrews AFB MD; TSgt Raymond Allen, 6 CS/SCSRO, MacDill AFB FL; TSgt Willie Brooks, Det 1, 755 CS/GLOB, Offutt AFB NE; and TSgt Cynthia Ingram, 77 CS/SCO, McClellan AFB CA, were the Subject Matter Experts for the system.

CAUTION

This package is NOT intended to replace the applicable technical references. It is to be used for training purposes only.

INSTRUCTIONS TO THE TRAINEE

1. Be sure your trainer explains the qualification training process (task assignment, proficiency attainment, task certification), your responsibilities, and how to use this AFQTP.

2. Review the Air Force Job Qualification Standard (AFJQS) and this Skill Training Material (STM) to get an idea of their content.

3. Your trainer uses the AFJQS to assign your initial tasks and the corresponding AFQTP modules. You and your trainer jointly plan your anticipated progress.

4. Make sure you understand the prerequisites before attempting each module (ask your trainer). If you are not familiar with the prerequisites, training is necessary.

5. Within normal workload constraints, set aside sufficient time to work on the package. Studies into effective training programs indicate that the best trainees reserve the same time each day to complete their study. Pace yourself; establish a schedule and stick to it. Give yourself top priority in becoming qualified.

6. After you read the information in the module, answer the review questions and immediately check your responses. You may use the AFQTP modules and technical references to answer the questions. Ask your trainer to explain the questions you don't understand or answer incorrectly. Refer to applicable technical references for more detailed information.

7. After you answer the review questions, your trainer will administer the Knowledge Evaluation Pamphlet (KEP). Answer all KEP questions and give the answer sheet to your trainer for grading. Your trainer will discuss any incorrect answers with you. You are normally NOT allowed to use the AFQTP modules to answer the KEP questions. If you are <u>not</u> permitted to use technical references, you must score 70% or more on each test. In some cases, technical references may be used to answer the KEP questions. This is identified at the beginning of the particular module test. If you are permitted to use the references (open-book test), you must score 100%.

8. You are required to demonstrate your task proficiency by completing the

performance procedures identified at the end of each module. When both you and your trainer are satisfied that you have attained the required proficiency level, you may be certified on the AFJQS following local certification procedures. If you are not completely satisfied that you have obtained the required proficiency level, further study and practice are needed before you initial the AFJQS.

CAUTION

You are not to perform on the equipment without your trainer being present.

9. Your trainer assigns additional tasks (modules) until you have completed the entire package and have become position qualified.

10. We need your help in revising this AFQTP and in developing future AFQTPs. Make note of any problem areas you find as you encounter them. If you have recommendations, suggestions, corrections, or comments, please jot them down on the Trainee Survey located at the back of this book. When you complete the AFQTP, give the survey to your trainer to attach to the Training Certification document located at the back of the Trainer's Guide. When we receive the Training Certification document and all attachments, we will forward your Certificate of Training. We pledge to devote all our resources to providing you with the best possible training materials.

MODULE 1
SYSTEM ORIENTATION

OBJECTIVES

a. Explain the Operational Mission of the USAF Global HF System.

b. Explain the USAF Global HF System configuration.

c. Explain how System Management is provided within the USAF Global HF System.

d. Identify and describe the administrative requirements within the USAF Global HF System.

e. Identify and describe the operational requirements of the USAF Global HF System.

TRAINING REFERENCE

AFM 33-109

INTRODUCTION

The restructuring process in the Air Force has resulted in many changes in the communications field. The USAF Global High Frequency (HF) System is just one of those changes. Stations previously known as Global Command and Control System, Giant Talk, Mystic Star, and Commando Escort systems have been consolidated to form the USAF Global HF System. These stations were consolidated to conserve frequency spectrum, maximize resources, and provide the Department of Defense with quality HF service.

This Air Force Qualification Training Package (AFQTP) gives you detailed information

on the mission, purpose, and operations of the USAF Global HF System. You will be answering review and test questions and performing practical exercises under the guidance of your trainer. At the conclusion of this AFQTP, if you have applied yourself, you will be qualified in Global HF System operations.

The purpose of this module is to ensure you understand the operational mission, system configuration, system management, and administrative and operational requirements of Global HF.

INFORMATION

Now that you know something about this AFQTP, it is time to look at Global HF and your role as an operator in the system.

MISSION

The USAF Global HF System, hereafter called the Global HF System, is an HF network of single-sideband (SSB) radio stations strategically located throughout the world. The system provides continuous, reliable, rapid, two-way communications to all Department of Defense (DOD) aircraft, ships, and ground agencies, regardless of their location. It is capable of supporting command and control, special purpose, and contingency air/ground (A/G), point-to-point, and ship-to-shore communications. The system or individual stations are not dedicated to any service, command, or other activity as they support all authorized users on a priority basis.

SYSTEM CONFIGURATION

The Global HF System consists of 15 stations, hereafter called Global stations. The five stations in the Continental United States (CONUS) are at Elkhorn, NE (detached from Offutt AFB); McClellan AFB, CA; Andrews AFB, MD; MacDill AFB, FL; and Bayonne, NJ. The station at Bayonne is civilian operated using URC-119 equipment. The station at MacDill is the only CONUS military station not equipped with Scope Signal III (SSIII) equipment. MacDill is equipped with Scope Control and Scope Pattern consoles. The command post tied to the system is the United States Strategic Command (USSTRATCOM) Command Center at Offutt AFB, NE.

The 10 overseas Global stations are at Albrook AFB, Panama; Andersen AB, Guam; Yokota AB, Japan; Elmendorf AFB, Alaska; Thule AB, Greenland; RAF Croughton, United Kingdom; Hickam AFB, HI; Lajes AB, Azores; Incirlik AB, Turkey; and Ascension Island. The stations at Albrook, Andersen, Ascension, Hickam, and Lajes are not equipped with SSIII equipment. These stations, like MacDill, are equipped with Scope Control and Scope Pattern consoles.

All Global stations operate 24 hours a day, seven days a week, with the exception of the Bayonne station. It operates Monday through Friday from 0800 to 1600 hours, Eastern Standard Time.

CONNECTIVITY. Dedicated circuits interconnect all SSIII equipped ground stations and the USSTRATCOM Command Center. USSTRATCOM connects through the Offutt (Elkhorn) Global station. Although the station at Incirlik is equipped with SSIII, it is not connected at this time.

DUAL TONE MULTI-FREQUENCY (DTMF) DIALING. Each SSIII equipped station has its own DTMF telephone number, as does the USSTRATCOM Command Center. The operator dials the number over dedicated circuits. This allows anyone who uses the system to access each station's private branch exchange (PBX) switchboard. DTMF dialing allows you to send specific alert activation messages from one station to another. The Electronic Switching System (ESS) handles routing of these alert messages in SSIII equipped Global stations.

A DTMF signal code is a preselected sequence of numbers the operator enters from the keypad. Once entered, the code directs the SSIII equipment to take specific actions. These actions might include rotating an antenna to a specified azimuth, changing frequency, keying of transmitters, etc.

Figure D1-1 in the Diagrams Book shows a front door seizure. Imagine Offutt AFB initiates an alert. It would seize McClellan AFB via line 205-208 (#1 in Figure D1-1) and Andrews AFB via 205-202 (#2 in the figure). This front door seizure is the most direct means of accessing the station through an alert trunk.

However, the Offutt circuitry may detect a problem on the #1 line to McClellan. It would then seize McClellan via Andrews over lines #2 and #3. This is a back door alerting (see Figure D1-1).

Remember the terms "front door" and "back door" as they relate to line seizures. Back door alert seizures do not use the most direct alert trunk.

ALTERNATE ROUTE SEIZURES. Another important term is "Defense Switching Network (DSN) Altroute." An operator manually enters Altroute information into the ESS Altroute participant table which identifies a Flash precedence DSN number. This allows seizure of a station's ESS and associated equipment using DSN circuitry. This situation usually occurs when a primary alert line is faulty. If this happens, the operator at the station with the faulty line makes the connection. Remember, back door and DSN Altroute are two separate backup routes for the alert. The SSIII equipment automatically selects back door routing.

CONTROLLING ALERT CIRCUITRY. As explained above, the ESS handles routing alert messages within SSIII equipped stations. Each SSIII equipped station has its own computer-generated ESS. Module 3 explains the ESS in more detail.

No CONUS Global stations connect to all other net stations. USSTRATCOM Command Center duty controllers can identify the status of their primary alert trunks. However, the nonconnective factor of stations not equipped with SSIII prevents them from determining the status of other circuits.

To combat this problem, each SSIII equipped CONUS station has special programs in the ESS that collect alert circuit status information. Each station's ESS passes this information back and forth among the ESSs at other CONUS stations. After compiling and correlating the information, the ESS sends it to the USSTRATCOM Command Center. The Command Center alert panel then displays the network information status. Module 3 covers this in more detail.

The CONUS SSIII equipped Global station uses the secondary line to pass this data to the Command Center. Keep in mind this secondary line, to the alert panel, transmits voice but receives only data information. Because this inward path to the alert panel is for data, it cannot receive voice. Consequently, the primary line from the command post is for voice path (transmit (TX) and receive (RX)) broadcast or voice purposes. It is a two-way connection from the CONUS Global station.

SYSTEM MANAGEMENT

The Major Command (MAJCOM) HF Managers are responsible for the day-to-day operation, administration, and maintenance of the Global stations. Operational control, and direct authority of the system is administered by the Global System Manager, HQ AFC4A/SYXR. This authority normally lies with the Net Control Station (NCS) but can be given to any station within the system. The Global System Manager is also responsible for all worldwide management decisions.

AUTHORIZED USERS. Global stations are authorized for use by all DOD ground agencies, aircraft, and ships. Mission prioritization is determined at the Headquarters level. Service is provided to non-DOD users on a noninterference basis.

NCS/ANCS RESPONSIBILITIES. The Offutt Global station is the NCS of the Global HF System. Its operational authority is confined to the effective movement of traffic within the system and to maintain circuit discipline and traffic flow at all times. Operational problems will be handled at the lowest possible level. Disputes and arguments are not tolerated. If disputes arise and cannot be resolved at the Supervisor/NCOIC level, elevate them to the next level, NCS NCOIC, for resolution. The NCS authority is final.

The Alternate Net Control Stations (ANCSs) are the Andrews and McClellan Global stations. Either station can act as the Net Control Station (NCS) during scheduled/unscheduled transfers. Module 25 will expand on the NCS task requirements. Both stations are also responsible for the effective movement of traffic within the system while acting as NCS. The NCS/ANCS stations must work together to manage the system by exchanging operating instructions and net status reports.

All Global stations are responsible for promoting circuit discipline and ensuring established guidelines and procedures are followed.

ADMINISTRATIVE REQUIREMENTS

These are necessary within communications systems to establish continuity, standardization, and discipline. The following information provides the minimum criteria necessary for the Global HF System.

FORMS. Within the Global HF System, there are forms which are essential to perform assigned duties and tasks. The list provided below covers the most important forms used by position operators on a daily basis. See AFM 33-109, Atch 7.

Position Log. Use this log at the console to record all circuit activity when recording devices fail, for quarterly training, and during exercises.

AF Form 3653, HF Radio Facility Outage Record. Use this form to track all outages affecting a station's operational status.

AF Form 3654, Emergency Action Message. Use this form to document all EAMs received via HF, SACCS, MDT, or landline.

AF Form 3655, HF Radio Facility Contact and Phone Patch Record. Use this form to record contacts on frequencies and all processed phone patches.

AF Form 3656, HF Radio Facility Foxtrot Message Blank. Use this form for all "DO NOT ANSWER" broadcasts transmitted/received either by HF or landline.

AF Form 3657, Global HF System Message Blank. Use this form to record all message traffic received/transmitted via HF and landline. Local reproduction of this form is authorized.

AF Form 3658, Global HF Alert Log. Use this form to document the status of each alert. Its use is mandatory for all CONUS stations and optional for overseas stations. Local reproduction of this form is authorized.

DD Form 1753, Master Station Log. Use this log to reflect all significant activities/events within the station. It can also be used as a position log when recording devices fail, for quarterly training, and during exercises. Use of a computer generated log is authorized.

OPERATING INSTRUCTIONS (OIs). OIs include detailed procedures and practices necessary for the successful operation of your station. OIs are prepared specifically as ready references for procedures distinctive to your station.

READ FILE. Each station maintains a read file containing special or one-time instructions pertaining to operations. This file also contains information on local base programs and policies. All personnel should review this file for new items of interest at the beginning of a shift.

CURRENT/FUTURE OPERATIONS FOLDER. This folder is developed to contain information concerning special communications taskings. All information and requirements necessary for mission support is placed in this folder. This folder must also be reviewed daily.

OPERATOR AIDS. Each station uses operator aids as a ready reference to aid and assist operating personnel. Some minimum requirements that may be directed by your MAJCOM HF Manager are an Antenna Diagram Chart, an Equipment Status Board, and a station clock.

The Antenna Diagram Chart. Contains, as a minimum, the type of available antenna, frequency range of the antenna, and the primary EAM transmit azimuth.

The Equipment Status Board. Contains, as a minimum, all impaired equipment, Job Control Number (JCN), time out, reason for outage (RFO), estimated time of return to operation (ETRO), any follow-up action, and an As of Line which is verified at the beginning of each shift.

Station Clock. All stations have a 12- or 24-hour clock which is readily accessible and highly visible to duty operators. Daily, within the first hour of each shift, this device should be checked against a suitable time standard (i.e., WWV, WWVH, or JJY).

RECORDERS. The system uses the AN/GSH-56 Recorder exclusively. Due to the Global HF System being subject to COMSEC monitoring, use of the system constitutes consent. Tone warning devices are authorized on administrative lines and other designed circuits. Module 15 covers the AN/GSH-56 Recorder.

SYSTEM CHECK. Perform a system check within the first hour of each shift. Each operator is responsible for checking all equipment associated with their assigned position. A station equipment and circuits checklist should be developed to help expedite completion. Annotate deficiencies in the Master Station Log.

COMMAND ALERT FUNCTION. The Command Alert Function (CAF), explained in

greater detail in Module 19, is controlled by the NCS until otherwise advised by the USSTRATCOM Command Center Communications Controller or surviving command, and other control elements.

COMMUNICATIONS CALLS. Operationally, these calls are run by the NCS or ANCS as a directed net. The NCS/ANCS polls each station using the geographical location of the station until all stations respond. This procedure is common after completion of ALL STATION alerts. The procedures for accomplishing these calls are covered in Module 19.

If, during the NCS poll, a station, Yokota, for instance, receives priority traffic destined for the NCS, that station may interrupt the communications call by stating "YOKOTA TRAFFIC OUT." The NCS will stop the poll, acknowledge traffic receipt, and terminate the communications call.

MANNING. The NCOIC determines shift composition for their specific Global station. Each shift is manned sufficiently to perform all required duties and any contingency or local support requirements. As a minimum, each shift consists of one shift supervisor or senior operator and one certified operator for every two published frequencies.

SECURITY. Personnel working within the Global facility must have a security clearance commensurate with the highest classified communications traffic the facility is capable of receiving, processing, or storing. Unauthorized deviations, or variations of the prescribed procedures, create confusion, reduce reliability and speed, and nullify security precautions.

OPERATIONAL REQUIREMENTS

The basic requirements for most radio communications facilities are crucial within the Global HF System where attention to detail is stressed.

CALL SIGNS. When assigned, call signs are used for identification by all users of Global stations. Global stations will use unclassified call signs, i.e., Offutt Global.

The collective call sign for all Air Combat Command (ACC) aircraft is "**SKYKING**." The meaning is, "all ACC aircraft copy the following transmission. This is a do-not-answer blind transmission."

The collective call sign for all ground command and control sites and ground command and control radio communications facilities is "**SKYBIRD**." The meaning is, "all Global stations, ACC Command Posts, Launch Control Centers, and any other tasked facilities, prepare to copy the following."

The collective call sign for all Global stations is "**MAINSAIL**." The meaning is, "any ground station this station has a request. Over."

When passing call signs over landline circuits, spell them phonetically. This practice is important whenever the correct spelling is in doubt.

FREQUENCIES. Upper sideband (USB) is the authorized and normal mode of operation within the Global HF System. Alphanumeric designators are assigned to frequencies for ease of operations only.

Use discrete frequencies to handle sensitive traffic whenever possible. Provide service on discrete frequencies based on mission/traffic priority and equipment availability. Global stations are authorized to operate on discrete and additional frequencies with spare equipment to meet known propagational conditions. When additional frequencies are used, advise the NCS.

AUTHENTICATION. Operators use it as a security measure to disclose fraudulent transmissions. Authentication is mandatory under the following conditions:

- On messages requiring positive action by the aircraft, e.g., aborts, deletion of mission requirements, flight plan deviation, etc.
- When encrypted traffic, except EAMs, is transmitted or received.
- When receiving contact and amplifying reports of Emergency War Plans (EWP) conditions.
- When transmitting or receiving Air Intelligence Agency alert/warning.
- When receiving or relaying emergency action message traffic for rebroadcast or AUTODIN injection.

- When the authenticity of a station is in doubt.

- When a station first enters, requests to leave the net for any reason, or returns to the net following a temporary shutdown.

NOTE

Global stations will **never** authenticate for ground agencies, ships, or aircraft.

PHONE PATCHES. Global stations provide radiotelephone patch service to permit direct voice communications between ground agencies and aircraft by electrically connecting telephone circuits or voice channels to radio equipment. Global operators process four types of phone patch requests; Air-to-Ground, Ground-to-Air, Ship-to-Shore, and Shore-to-Ship.

Air-to-Ground. When you receive a request from an aircraft, you must decode the call sign, establish connectivity with the ground party, and brief the ground party on procedures before starting the phone patch. If you encounter any unusual delays in servicing the aircraft's request, advise the aircraft immediately of any changes or difficulties.

Ground-to-Air. Before a phone patch request from a ground activity can be serviced, you need to know the precedence of the call, telephone extension or office where the calling party can be contacted, and the general direction of the aircraft, if known.

Ship-to-Shore. When you receive a request from a ship, you must decode the call sign, if applicable, establish connectivity with the ground party, and brief the ground party on procedures before starting the phone patch. If you encounter any unusual delays in servicing the ship's request, advise the ship immediately of any changes or difficulties.

Shore-to-Ship. Before a phone patch request from a ground activity can be serviced, you need to know the precedence of the call, telephone extension or office where the calling party can be contacted, and if known, the general area of operation for the ship.

Briefing. In addition to knowing the procedures for radiotelephone patches, you are responsible for giving the ground subscriber the USAF HF Phone Patch briefing.

Once you contact the ground party, give them the following briefing: "The call sign of your party is (CALL SIGN). Your call sign is (CALL SIGN). Please use these call signs during your conversation. Any reference to persons who do not have an assigned call sign will be by the individual's last name only. Rank or first names will not be used over the air. Do not refer to geographical locations if it will result in a security violation. Your conversation is being recorded."

If the ground agency is familiar with phone patch procedures, use the following: "Do you acknowledge the USAF HF Phone Patch briefing?" Following an affirmative reply, state: "Your conversation is being recorded."

Guidelines. Be aware of the following guidelines when processing phone patches within the Global HF System:

- Complete the phone patch and monitor the conversation.

- If the phone patch seems to be of an unofficial nature or contains an obvious transmission security violation, advise your supervisor. Your supervisor sends a message to the aircraft's parent commander and the ground agency's parent organization with an info copy to your MAJCOM HF Manager and the System Manager.

- Operators will not terminate a phone patch or call attention to any transmission violations.

- Requests for phone patch service will not be refused. Authenticity of a subscriber is the called party's responsibility.

- Attempt to copy phone patch traffic and relay it to addressees if the radio reception is not of sufficient quality to complete the phone patch.

TRAFFIC REQUIRING SPECIAL HANDLING. Certain messages, originated by both ground and airborne environments, require special handling due to their critical nature. Most of these are identified through the use of special "FLAGWORDS" which are acronyms or

special call signs assigned only for this purpose.

TRAFFIC PRECEDENCE. See AFM 33-109, Atch 8, for a traffic listing of all traffic handled within the Global HF System. Keep in mind this is not a prioritized listing. Traffic in each category is to be handled on a first in, first out basis. After reviewing the listing, return to this module.

MESSAGE TEXT. The text of any message received over the Global HF System can be in the form of alphacharacters, alphanumerics, codewords or acronyms, or numerical sequences.

SUMMARY

The USAF Global HF System provides continuous, reliable, rapid, two-way communications to all DOD ground agencies, aircraft, and ships. It is capable of supporting command and control, special purpose, and contingency A/G, point-to-point, and ship-to-shore communications.

The system consists of 15 stations located throughout the world. Nine of these stations are equipped with Scope Signal III consoles. The other six stations are equipped with Scope Control and Scope Pattern consoles. Ground stations having Scope Signal III equipment are interconnected by dedicated circuits.

Responsibility for the day-to-day operation, administration, and maintenance of the system rests with your MAJCOM HF Manager. Global stations are authorized for use by all DOD agencies and aircraft. The Offutt Global station is the NCS of the system. Its operational authority is confined to the effective movement of traffic within the system and to maintain circuit discipline and traffic flow at all times. The NCS authority is final. The ANCSs are the Andrews and McClellan Global stations. Either station can act as the NCS during scheduled/unscheduled transfers. All Global stations are responsible for promoting circuit discipline and to ensure established guidelines and procedures are followed.

While Global stations vary in size, mission, traffic volume, equipment, and other operating factors, many functions are common to all stations. The administrative requirements such as, the use of forms, operating instructions, and operator aids are necessary within this and all communications systems to establish continuity, standardization, and discipline. The basic

operational requirements for most radio communications facilities such as, the use of call signs, frequencies, and authentication are crucial within the Global HF System.

ADDITIONAL READING

USKAC-72
AFKAO-1
AFKAI-1
AKAA 2001
JANAP 146
ACP 122
ACP 125
ACP 121, US Sup 2

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What is the USAF Global HF System?

2. What does the USAF Global HF System provide?

3. How many stations make up the USAF Global HF System and how many are located overseas?

4. Which Global stations are equipped with Scope Signal III consoles?

5. What is the ESS?

6. Which type of dialing would you use to send alert activation messages from one station console to a distant station's console?

7. Who is responsible for day-to-day operation and administration of the Global stations?

8. Who is authorized to use the USAF Global HF System?

9. Which Global station is the NCS of the system?

10. Which form is used for EAMs received via HF, SACCS, MDT, or landline?

11. How is the AF Form 3657, Global HF System Message Blank, used?

12. What is the purpose of operator aids?

13. How often is the station clock checked against a time suitable standard?

14. What is the meaning of SKYKING?

15. What is the normal mode of operation within the Global HF System?

16. What is authentication?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a

closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will assign the next module.

MODULE 2
RADIO WAVE CREATION AND PROPAGATION

OBJECTIVES

a. Explain the creation of radio waves.

b. Explain the ionosphere layer breakdown and ionospheric variations related to communications.

c. Explain propagation documents and reports.

d. Explain frequency range and selection.

PREREQUISITE

Completion of AFQTP Module 1.

INTRODUCTION

In order for you to provide effective communications support on a worldwide basis, you must have a basic understanding of radio wave creation and the primary transmission paths of a radio wave. The D, E, Es, F, F1, and F2 layers of the ionosphere will be discussed to show the effects they have on communications. Additionally, there are regular (diurnal, seasonal, geographic and sunspots) and irregular (solar flares, sudden ionospheric disturbances and solar radio bursts) variations related to communications that can hamper your operating capacity. But, with an understanding of the primary and secondary HF propagation reports, you'll be able to select a frequency that will provide the best communications at that given time. And finally, we'll explain how to separate transmit and receive frequencies for enhanced communications.

INFORMATION

RADIO WAVE CREATION

Alternating current in a conductor creates magnetic fields that expand and collapse with each alternation. At frequencies below approximately 10,000 cps, these fields completely collapse between alternations. However, at frequencies above 10,000 cps, these fields no longer collapse completely. Instead, they are pushed away (radiated) from the conductor (antenna) in the form of electromagnetic energy, commonly known as **radio waves.** This radiation is composed of perpendicular waves: one electrostatic in nature, and the other magnetic. Both of these waves are at right angles to the direction of propagation. These waves travel at the speed of light (186,000 statute miles per second, 162,000 nautical miles per second, or 3x108 meters per second.)

We already know that when the radio frequency leaves the transmitter, it goes to the conductor (antenna) where its characteristics are changed into the form of a radio wave. The act of radio waves traveling from one point (antenna) to another (antenna) is called **propagation**. All radio waves are propagated by one of three primary transmission paths: **direct waves, ground waves, or sky waves.** The primary transmission path that a radio wave takes is decided by the propagating characteristics of its frequency and the direction and manner in which it is radiated. Now let's talk about the three different transmission paths.

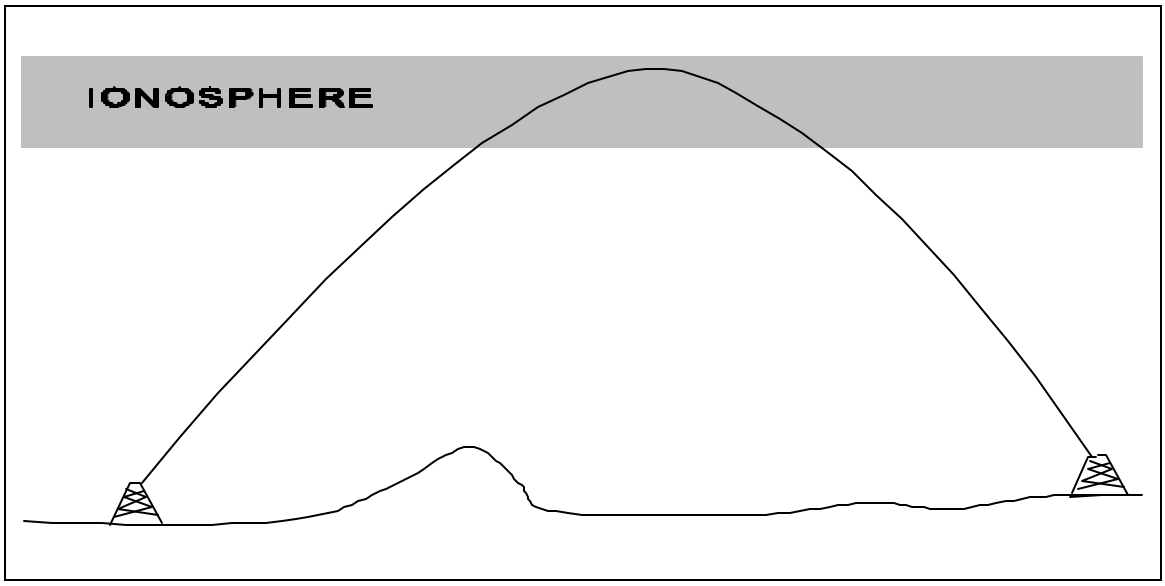
DIRECT WAVE. This radio wave travels in a straight line (line of sight or LOS) from the transmit antenna to the receive antenna. The average distance of direct wave is therefore limited by the height of the transmit and receive antenna. Therefore, the higher the antennas the more distance allowed between two stations. Direct waves are used mostly with frequencies above 30 Megahertz (VHF and above).

GROUND WAVE. This radio wave travels along the surface of the earth. There are three different paths that a wave takes to the receiver: a direct path, a surface path, and a ground-reflected path. Low and medium frequencies of 30 to 3000 Kilohertz (KHz) travel best along the surface of the earth.

SKY WAVE. This radio wave travels upward through the atmosphere where it is refracted (made to change direction) back to earth. Sky wave communications become possible when the bending (refraction) of the waves is great enough to return the waves to earth. Sky wave transmissions are very effective for long distance communications in the high-frequencies (HF) range (3 to 30MHz). HF is the primary means of communications used in

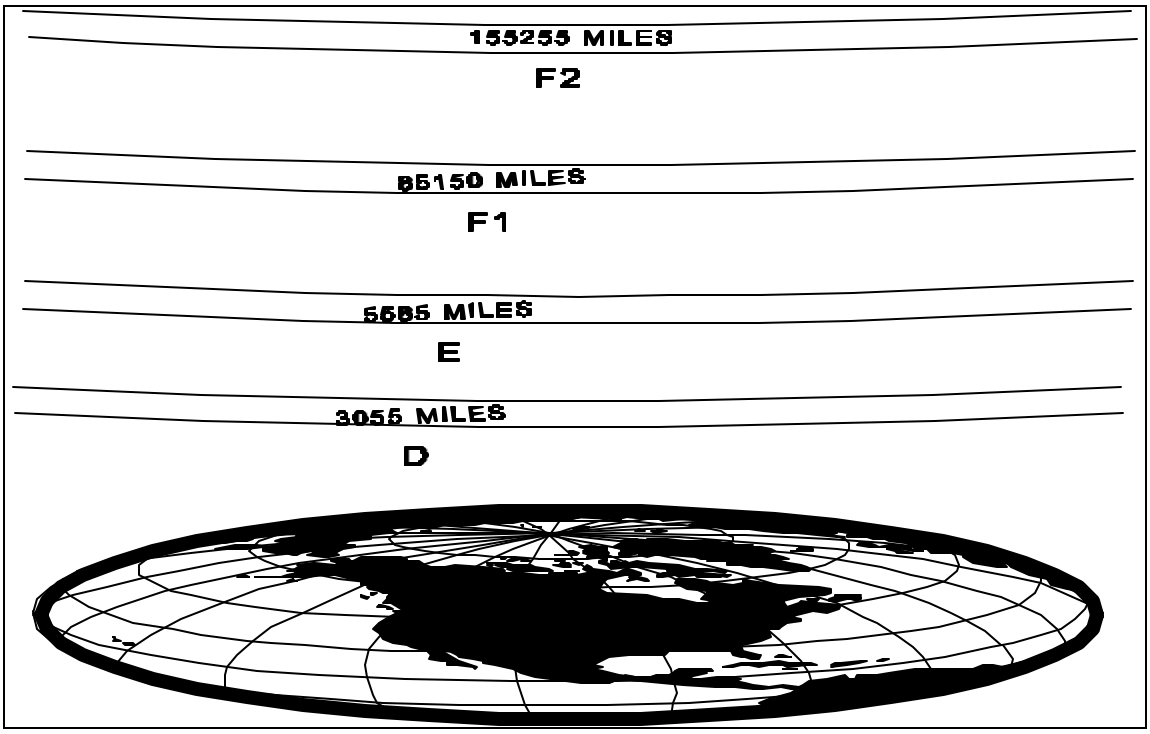
Global HF stations. See Figure 2-1.

We've briefly discussed radio wave creation and the different transmission paths they take; now let's talk about the atmosphere and its effect on communications. The atmosphere surrounding the earth consists of three major areas. These areas are the troposphere, stratosphere, and ionosphere. The **ionosphere** is the area that most concerns Global operators.



IONOSPHERE LAYER BREAKDOWN AND VARIATIONS RELATED TO COMMUNICATIONS

The ionosphere consists of layers of mixed gases located 30 to 600 miles above the earth's surface. The distinct layers are D, E, Es, F, F1, and F2 with each layer increasing in height and ionization intensity. Figure 2-2 shows the daytime ionospheric layers. The Es layer is omitted in this figure because of its irregular occurrence. These layers of the ionosphere are caused by the sun's rays. As the sun's radiation hits the atmosphere, it causes some electrons of the air molecules to be knocked loose. This is known as **ionization**. When the sun sets, this process stops and the electrons rejoin with the air molecules. This causes the D- and E-layers to disappear and the F1 and F2 layers combine into a single F-layer.



D-LAYER. This layer extends from about 30 to 55 miles above the Earth. During the day, ionization is very low and there is little, if any, refraction of radio waves in this layer. At night this layer disappears. The D-layer is responsible for the majority of ionospheric noise and radio wave absorption.

E-LAYER. This layer extends from about 55 to 85 miles above the Earth. Since ionization is produced by solar ultraviolet and X-ray radiation, ionization drops to low values at night. As a result, the E-layer critical frequency is practically nonexistent and little if any nighttime reflection will occur. During the day, reflections from the E-layer are useful for communications at distances up to about 2,000 miles.

Sporadic E (Es). Abnormal ionization, thought to be caused by sudden increases in solar activity, occurs very often in the E-region. When bursts of high-intensity solar energy enters the ionosphere, areas of high ionization called **sporadic E**, may occur. These areas are so highly charged that frequencies that normally use the F-layer for refraction (bending) never reach the F-layer. They are returned to earth by reflection (mirror image) from the sporadic E-layer. The effects of sporadic E on communications are positive, although they are very temporary. They promote the use of higher frequencies and excellent communications during the daylight hours. The Es may also interfere with the use of higher ionospheric layers, thus degrading the communications path.

F-LAYER. The F-region is the most important part of the ionosphere. Most sky wave transmissions involve one or more refractions from the F-region. During the day there are two separate layers in the F-region, the F1 and F2 layers. At night these two layers combine to form a single F-layer.

F1 Layer. The F1 layer is the lower part of the daytime F-layer. This layer extends from about 85 to 150 miles above the earth, and it exists only during daylight hours, disappearing at night. Maximum density of the F1 layer occurs shortly after noon, local time, when the sun is directly overhead.

F2 Layer. This upper portion of the F-Layer has a range of 155 to 250 miles. It is present 24 hours a day but varies in altitude with geographic location, solar activity, and local time. The critical frequency for this layer will peak after local noon and decrease gradually throughout the night. It is most useful for communications at night.

The ionosphere is constantly changing, so the ability of the ionosphere to refract HF sky waves is constantly changing. In addition to the different layers and their effect, we must also take into consideration the variations that affect the ionosphere. First, there are the regular variations: 11-year sunspot cycle, 27-day sunspot, diurnal and seasonal. Then, there are the irregular variations: solar flares, solar radio bursts, sudden ionospheric disturbances, and ionospheric storms. Fortunately, most of the factors that affect the ionosphere are predictable.

DIURNAL (daily) CHANGES. These changes take place between night and day. During the day, when the sun's radiation is present, higher frequencies are more effective. The lower frequencies are easily absorbed in the ionosphere during the day. At night, the lower frequencies are more easily refracted and more effective. The higher frequencies tend to pass through the ionosphere at night.

SEASONAL VARIATIONS. During the summer months of the Northern Hemisphere, the sun's rays strike the earth more directly. This affects the ionosphere in two ways. The sun's radiation is more concentrated and the nights are shorter. Also, the ionization levels remain higher because the sun is present longer. During the winter months, the results are just the opposite, in winter we have a wider range of critical frequencies and less absorption of all frequencies. There is more variation between nighttime and daytime operating frequencies during winter than during summer.

GEOGRAPHIC VARIATIONS. At the equator, the angle at which the ionosphere faces the sun is more direct than the angle at either the north or the south pole. This means the sun's rays cannot be refracted at the equator. They penetrate causing a greater degree of ionization at the equator than at other parts of the world. Additionally, the earth's magnetic field is not even, which causes the thickness of the ionosphere to vary. This is more evident in the Asiatic and Australian regions.

SUNSPOTS. These are considered regular ionospheric variations because they are predictable and occur at regular intervals. They are dark, cooler spots on the surface of the sun that have a varying effect on the sun's radiation. The more sunspots present on the sun -- the more radiation hits the ionosphere. Sunspot numbers vary in two ways. The number of sunspots facing the earth changes every 27 days due to the sun's rotation. This causes the sunspot number to vary on a monthly basis. The sunspot number also varies in a 11-year cycle from a low of 10 to a high of 110. Both the 27-day sunspot variations and the 11-year sunspot cycle have major effects on ionization. The overall effect will be the use of higher frequencies during maximum sunspot activity.

SOLAR FLARES. These are the main cause of most irregular ionospheric disturbances. They are large eruptions of gases on the surface of the sun. They produce a great amount of radiation and affect sky wave propagation. There are two types of phenomena associated with solar flares: sudden ionospheric disturbances and solar radio bursts. The high degree of radiation from these solar flares produces abnormally high ionization in all layers. These increases in ionization occur throughout the day and are called **sudden ionospheric disturbances (SIDs)**. The length of time and the frequencies disrupted depend on the magnitude of the solar flare. Lower frequencies will become virtually useless. The only solution is to use higher than normal frequencies. A SID only occurs during daylight hours and, unfortunately, is not predictable. They rarely last more than an hour. The other phenomena is **solar radio bursts** that originate as background radiation and as enhancements from bright regions and transient disturbance, such as flares. Many flares are accompanied by increased emissions at the radio frequencies. The cause of this increased emission is believed to be the passage of particle streams through the earth's atmosphere.

Up to this point, we've talked about how radio waves were created, the different layers of the ionosphere and atmospheric variations that can affect communications. Two more factors to use when selecting the best possible frequency are propagation prediction documents and reports. Ionospheric propagation predictions can be divided into three categories. These are

long-term predictions, near real-time predictions, and real-time predictions. Long-term and near real-time predictions are accomplished using various propagation documents. The real-time predictions are accomplished by the Air Force Space Forecast Center (AFSFC) at Falcon AFB, Colorado. Also, stations can have real-time predictions using ionospheric sounding equipment called chirpsounder. Now, let's talk more about the different propagation documents and reports.

PROPAGATION DOCUMENTS AND REPORTS

As mentioned earlier in this module, the prediction of sky wave propagation conditions is made by using one or more of the propagation prediction documents that are available. These documents provide information that, by predicting upcoming ionospheric events, helps you work around ionospheric variations that might otherwise halt your communications.

LONG-TERM REPORTS. The most common long-term propagation report used by radio operators is the HF Radio Usable Frequency Prediction report (commonly known as MUF-FOT report). This report contains predictions of daily HF radio propagation conditions and is distributed via the Air Weather Network or AUTODIN. An accurate report requires the latitude and longitude of the transmitting and receiving locations, the dates of operation, and the predicted or observed sunspot number (SSN). As with any long-term report, MUF-FOT reports should be kept current by also using short-term reports.

NEAR-REAL-TIME REPORTS. These reports provide current propagation information that is used to upgrade the 30-day long-term predictions, resulting in near-real-time (short term) propagation predictions. Two short-term prediction reports that are received by most Air Force radio stations are called the Primary HF Propagation Report and the Secondary HF Radio Propagation Report.

Primary HF Propagation Report. The Primary HF Propagation Report is issued once daily at 0600Z and contains information on high frequency (HF) radio propagation conditions. The report includes observed and forecasted propagation conditions, and a commentary on conditions. Also, included is a summary of solar flare induced disturbances and observed/forecasted solar radio flux values.

Secondary HF Propagation Report. In addition to the Primary HF Propagation Report, the AFSFC issues a Secondary HF Propagation Report via AUTODIN every six

hours. It is issued at 1200Z, 1800Z, and 0000Z. The 0600Z report includes both the primary and secondary reports. This secondary report updates the primary report and both of these short-term documents are used to update long-term predictions, thereby providing near-real-time predictions.

REAL-TIME REPORTS. Currently, the most commonly used method to provide real-time propagation data is with the use of the AN/TRQ35(V), deployable frequency system chirp sounder, more commonly known as the "Turkey 35." The transmitter and receiver provide data on the propagation conditions of a specific circuit or path. The spectrum monitor provides information on spectrum occupancy over the whole HF spectrum, and detects the frequencies that are propagating best.

FREQUENCY RANGE AND SEPARATION

To ensure proper separation during voice and data operations, frequencies for each have been designated at most stations. Your use of the recommended frequency ranges lowers the possibility of confusion among operators and/or prevents degradation of communications support provided to requestors. Deviations from the recommended frequencies may be necessary.

Full-duplex data operations (transmit and receive on two separate frequencies) is becoming very common at most stations. When you operate a full-duplex circuit, the transmit and receive frequencies must be separated by a safe margin. This prevents "bleed over" or feedback from occurring on the frequencies. In addition to full-duplex operations, providing simultaneous voice and data operations is common. Voice and data frequencies must also be separated by a safe margin to prevent voice transmissions from interfering with incoming data signals. The main reason for this might be due to the proximity of the antennas.

You should always use a minimum of 20 percent separation between the transmit and receive frequencies when operating a full-duplex data circuit. Also, you should use a minimum of 20% to separate voice and data frequencies when providing simultaneous support. For example, data transmit frequency of 16.407MHz x 20%, results in 19.688MHz. What this means is that 16.407MHz would be your receive and 19.688MHz would be your transmit frequency.

SUMMARY

In this module we learned how frequencies above 10,000 cps are pushed away (radiated) from the conductor (antenna) in the form of electromagnetic energy, commonly known as radio waves. The primary transmission path a radio wave takes is decided by the propagating characteristics of its frequency and the direction and manner in which it is radiated.

We also talked about ionization and how intensity affects the different layers of the ionosphere. In addition to the different layers and their effects, we also discussed other variations that can affect the ionosphere. First, there are the regular variations: 11-year sunspot cycle, 27-day sunspot, diurnal and seasonal. Then, there are the irregular variations: solar flares, solar radio bursts, sudden ionospheric disturbances, and ionospheric storms.

Next, we covered the most common long-term propagation report used by radio operator the HF Radio Usable Frequency Prediction report (commonly known as MUF-FOT report). We also know that the MUF-FOT reports should be kept current by using short-term reports.

Your use of the recommended frequency ranges lowers the possibility of confusion among operators and/or prevents degradation of communications support provided to requestors. When you operate a full-duplex circuit, the transmit and receive frequencies must be separated by a safe margin. This prevents "bleed over" or feedback from occurring on the frequencies.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What is the speed at which radio waves travel?

2. What is the definition of propagation as it applies to HF?

3. What determines which transmission path a radio wave travels?

4. What are the distinct layers of the ionosphere?

5. What causes the F1 and F2 layers of the ionosphere to combine into a single F layer?

6. What effect do areas of high ionization (sporadic E) have on frequencies?

7. What causes the number of sunspots on the sun to vary on a monthly basis?

8. What is the main cause of an irregular ionospheric disturbance?

9. List the different methods of ionospheric propagation predictions.

10. Why are voice and data frequencies separated by a 20% margin?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will assign the next module.

MODULE 3
CONTROL SITE EQUIPMENT

OBJECTIVES

a. Identify the functions of control site operator position consoles.

b. Identify the functions of control site equipment components.

c. Explain the interface between control site operator position consoles and equipment components.

PREREQUISITES

Completion of AFQTP Modules 1 and 2.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. TO 31R2-4-362-2
3. TO 31R2-4-462-2
4. TO 31W2-4-156-2

INTRODUCTION

The control site is the center of all Global HF Operations. Control site operators send and receive highly perishable traffic to/from air crews, ground agencies, and contingency teams. To meet the needs of these customers, communications must be reliable, rapid, and responsive. As stated in Module 1, not all stations are equipped with Scope Signal III consoles. This module covers different types of consoles and other control site equipment components you may use depending on the configuration of your station.

INFORMATION

OPERATOR POSITION CONSOLES

SCOPE SIGNAL III (SSIII). This console gives radio operators the ability to control and monitor all SSIII equipment. It provides you with complete station equipment status and configuration information. The specific tasks you perform at this operator console are covered in future modules. The console gives you access to the Electronic Switching Subsystem (ESS) (explained below) and its control functions during an alert activation. From here, you can communicate with a radio subscriber over a selected transmitter and receiver pair.

You can also select operating frequencies, modes, power level, antenna type, antenna azimuth, and radio precedence levels. Diagnostic tests, with a Visual Display Unit (VDU) display or printed results, are also available through the console. In addition, the console provides a visual display of the station's operating status. The following paragraphs describe the major components of the SSIII console.

Headset/Speakers. The console has two headset-microphone jacks installed on the console shelf. They work with a foot switch and a hand-operated audio control switch on the headset cord. The console left speaker and left headset monitor audio only, for use with the Control-Monitor Monitor Panel. The right speaker and right headset provide audio for operational circuits (radios and telephones).

Anytime the station participates in an alert seizure, the alert speaker activates. An audio broadcast of the actual alert message follows. You can't completely mute any of the speakers during an alert.

Video Display Terminal (VDT). The VDT displays station equipment status and results of performance assessments. You initiate fault identifications and preset equipment through the terminal keyboard. The terminal's VDU also provides a visual indication of an alert seizure. This terminal has been updated in most stations. In addition to the VDU and keyboard, it now consists of a 286 or 386 central processing unit (CPU).

Control-Monitor Control Panel (MCP). The console control panel assembly houses the Control MCP. This unit disables and/or enables audio to as many as 21 recorder/reproducer channels. Additionally, it meters microphone or transmit audio, and

controls headphone volume and microphone gain. It also selects radio frequency (RF) loopback tests, Frequency Shift Key (FSK), or Dual Tone Multi-Frequency (DTMF) key operation (through the footswitch), and self-tests for the Control MCP and the Control-Monitor Monitor Panel lamps.

Dialed Number Display. The dial number display, above the Control MCP, provides a visual indication of the DTMF dialing functions. Each digit, as you dial, appears in sequence on the display unit. The unit displays 32 characters in 2 rows of 16. Entering the 33rd digit clears the display and the 33rd digit then appears as the first display character. Since there is no dial start or end indication, the displayed number can be confusing. For example, the number series "5971110063811100" actually represents two DSN calls. The first seven digits represent a DSN number followed by the feature access code "0" which routes it to the attendant turret. The last eight digits represent a different DSN number also routed to the attendant turret.

Voice Operated Transmit (VOX)/Phone Patch Panel. The VOX/Phone Patch Panel provides a means to adjust audio levels. It also allows you to activate VOX/Anti-VOX levels during voice or data operations. It can conference up to three subscribers with as many as three different radio levels, in any combination.

The HOLD functions on the panel allow you to preselect radios from the panel and conduct their operations without reconditioning radios for each transmission. Voltage Unit (VU) meters monitor the audio level of each line for VOX/Anti-VOX operation.

Control-Monitor Monitor Panel. The monitor panel assembly can house as many as 12 control modules. To provide precise monitoring capability, these panels can select any combination of four sidebands for as many as 12 receivers. When selected, the control modules provide audio to the left speaker/headset and right speaker/headset. Each control module also controls the volume and squelch gains for each channel and selects transmitter sidebands for Control MCP VU meter monitoring.

Fault Alarm Panel. This panel has indicators and an audible alarm that show control site and console faults, and their source(s). A reset button resets the audible alarm. It also changes the red lamp to amber, but the condition is still shown until the fault is corrected. Alarms external to the console cause both visual and audible alarm indications.

Attendant Turret. The attendant turret at each console enables you to control the

interconnection of the circuits that end at the ESS. It performs the same basic functions as a private branch exchange (PBX). It also provides remote control of radios using the DTMF keypad, as well as some other special features. Module 6 covers this piece of equipment in greater detail.

Electronic Switching Subsystem (ESS). Dedicated circuits, backed up by automatic dial-up DSN circuits, interconnect the ESS at different SSIII sites. This network of circuits forms the alert network. Normal access to this network is through the alert panels at the USSTRATCOM Command Center and the attendant turret on the operator console. DTMF tone sequences come from these units and initiate the proper actions as the operator directs. The ESS automatically responds to the operator commands, outside lines, or Command Center requests. It then takes the actions specified for the transmitters and receivers at the station.

In general, incoming radio and line calls go through the operator console for servicing. However, DTMF dialing and the returning supervisory tones give a remote user complete remote control of a transmitter/receiver level. Appropriate class markings (e.g., Class A, B, or C telephones) allow certain users to access the ESS without operator intervention. Thus, voice traffic and DTMF control can extend throughout the DSN or Direct Distant Dialing (DDD) networks. See Figure D3-1 in the Diagrams Book for a list of SSIII equipment (supervisory) tones.

Functions. The ESS controls the SSIII signal routing, radios, equipment switching, and diagnostics. It interfaces the audio of several control panels. These include the one at the Command Center, the Control-Monitor Control Panel, and the Control-Monitor Monitor Panel. It interfaces the audio of the FSK telephones, radio transmitters and receivers, and telephone loops and trunks. It also interfaces the audio of other network stations.

The ESS provides status data to the alert panels. It accepts local control from the attendant turrets and remote control from a Command Center alert panel. ESS-stored programs control intrastation and interstation circuits and equipment for worldwide alerts, intersite communications, and normal ground-to-air communications.

There are three primary functions of the ESS. First, it allows attendant (local) turret control of call extension and conferencing, class marking, call-up, and control of the radios. Second, the ESS allows you to reroute calls during periods of heavy traffic. Third, the performance/status assessment capability helps identify service requests, process calls, manage

the system, and control circuits. This control allows connection of calls and gathering of alert trunk status data.

Operations and Capabilities. In addition to the individ-ual subscribers and equipment connected to the ESS, it also interfaces with other networks. These are DSN, Strategic Operations Conference System (SOCS), at certain stations, and telephone company/local base systems. These interfaces permit subscriber call extensions and allow the ESS to process alternate routing if the primary alert trunks are inoperative. If several simultaneous subscriber calls tie up the system, the ESS will accept prioritization of the subscriber calls.

Subscribers have one of five precedence levels: FLASH OVERRIDE (FO), FLASH (F), IMMEDIATE (I), PRIORITY (P), OR ROUTINE (R). If the ESS blocks a subscriber's call which has a precedence level above R, it can preempt a call of lower precedence.

Modem Buffer. The modem buffer is a computer that interfaces the operator console, the ESS, and the transmitter and receiver sites. It is a major system component for performance assessment, status display, and Built-In-Test-Equipment (BITE) diagnostics.

The modem buffer processes all VDU terminal operations. It processes and routes your commands (status updates, switch modifications, and alert configurations) to the applicable site BITE control system or switch. The control site equipment prints and/or displays the commands, and their responses.

The modem buffer provides the ESS interface to process modification commands and perform BITE functions. The modem buffer BITE program identifies and isolates faults in the ESS and prints them on the control site printer. Entering a test program (e.g., which transmitter/receiver, antenna, and its parameters) activates a test set in the modem buffer. The modem buffer then collects results and prints/displays them for the operator. The modem buffer BITE continually checks (or polls) the transmitter/receiver site BITE for performance assessments and fault detection and isolation.

DATA INTERCEPT. This console is commonly called SCOPE CONTROL. It provides controlled interconnections between radio circuits and various subscribers, including manual/dial telephone, FSK telephone, remote station, low-speed teletype (TTY), and special data subscribers. This console allows you to remotely control transmitters and receivers. Control information is dialed via a rotary dial telephone with frequency-shift oscillators.

Most typical scope control consoles consist of five major equipment assemblies. These are the Analog operator console, 15-Line Cordless Switchboard, Intercept operator console, Tophat section, and Writing shelf.

Analog Operator. The analog operator position is the left-hand bay of the console. It serves as a ground-to-air and point-to-point position.

Control Panel. The common controls and indicators are located on this panel. They control and monitor the patched line panels, operator audio circuits, monitor circuit, and recorder.

Dial Service Assistance (DSA) Panel. The DSA panel provides the connection for the switchboard and the line and extend panels. It is used to provide dial service assistance to calling subscribers. The panel permits you to monitor both circuits, communicate with both subscribers, and override dialed busy circuits.

Extend Panel. The extend panel links the cordless switchboard and line panels. It permits you to patch a circuit from the cordless switchboard to a line panel.

Line Panels. Each line panel terminates a line from the SW3600 switchboard. Access to the SW3600 switchboard is provided through six line panels. The operator can use any line panel to dial through the SW3600 to any other SW3600 subscriber. Any 15-line cordless switchboard subscriber can be patched to the circuit.

Line Monitor Panel. This panel houses the speaker and provides connections to the operator headset for monitoring the DSA, extend, and line panels. It also allows for monitoring of up to six external circuits.

15-Line Cordless Switchboard. The cordless switchboard is located in the center of the console. It provides 15 subscribers with two- or four-wire, manual or dial circuits. Conference capability from the switchboard does not exist. To be connected to a circuit, subscribers must be extended through the Analog or Intercept Console, or be patched to the SW3600 switchboard. See Figure D3-2 for an explanation of the switchboard controls and indicators.

Intercept Operator. The intercept operator position is the right-hand bay of the console. It contains special subscriber Patch Intercept Modules (PIMs). Each allows access to the SW3600 PIMs. The console also contains the Audio Intercept Modules (AIMs). One AIM is used for each radio channel.

Patch Intercept Modules. The PIMs allow you to patch a special digital subscriber through the SW3600 to a radio level or another SW3600 subscriber.

Audio Intercept Modules. The only way you can access a radio is through an AIM. Each AIM is assigned a dial code number.

VOCODER Control Module. The VCM permits you to talk and listen to subscribers in an established special data circuit and monitor either the local subscriber side or the radio side of the circuit.

VU METER Modules. The VU meter measures the signals from the intercept operator position.

DSA Modules. These allow you to provide dial service to calling subscribers including establishing circuits and ringing called subscribers. It permits you to talk or listen to subscribers, monitor dialed circuits, join busy circuits, and, if required, override busy circuits.

Audio Routing Modules. This module connects the line and switchboard with the intercept operator FSK dialing unit. It connects an AIM, PIM, VCM, or DSA module to the dialing unit so you can establish circuits for a subscriber.

Data Control Module. This module is used to control the mode of operation of circuits set up for special digital subscribers.

Operator Common Control Panel. This panel allows you to control and monitor the operator audio circuits. Additionally, it allows you to visually monitor various conditions within and outside the intercept operator position.

Tophat Section. This section extends across the top of the analog operator position,

cordless switchboard, and intercept operator position. There are two display units providing a visual display of the operation mode and operating frequency of each transmitter and receiver level. See Figure D3-3 for an explanation of the status display controls and indicators.

Mode Module. This module provides control of and monitors the mode of operations used in special data circuits.

Alarms Module. This module monitors the operation of modems used in the circuits set up for special data subscribers.

Writing Shelf. This shelf extends across the entire width of the console and is mounted 29 inches above the floor.

Headset/Boom Microphones. There are two headset jacks installed on the shelf. One each for the analog and intercept operator positions. They work with a foot switch mounted on the kickplate of the console. Each operator can choose either the headset or boom microphone. The headset/microphones for the analog operator are narrowband microphones. They provide the frequency response required for voice communications. The headset/microphones for the intercept operator are wideband microphones. They provide the low-frequency response characteristics required for digital voice communications.

Dial Assemblies. There are two FSK rotary dial assemblies, one each for the analog and intercept operator consoles. These permit you to use dialing circuits to control external equipment.

Dual Tone Multi-Frequency (DTMF) Units. These DTMF units or keyers are connected to the DSN through the cordless switchboard. They allow you to call subscribers in the DSN system.

SCOPE PATTERN. This console is a cabinet and a work desk. The console's front panel contains the controls and indicators for 15 subscriber lines, 12 radio circuits, 10 intercom stations, and antenna selection/orientation. Telephone subscriber/radio patches are possible from any of the 15 subscriber lines to any of the 12 radios. The intercom circuit provides access to other intercom circuits on the consoles for operator-to-operator communications. Push-button switches are provided for antenna direction and receiver azimuth selection. Read

back indication is presented by the readout display. A DTMF keyset and rotary (FSK) dialer are provided for dialing desired numbers.

The equipment allows you to perform three basic functions. First, you can access and control up to 15 subscriber lines. Second, you can patch two subscribers together. Finally, eight fix-tuned and four auto-tuned radios allow you to control communications with airborne or fixed stations.

The scope pattern equipment is capable of operating in the USB and AM (with maintenance assistance) modes but USB is the normal mode of operation. The system employs omnidirectional transmit and receive antennas. However, the receive antenna operates as a directional antenna in 90-degree increments only. Using multi-couplers allows numerous receivers to use the receive antenna simultaneously.

The speakers were added to the scope pattern console to eliminate the continuous use of headsets and lessen the headset fatigue factor. Three speakers normally lay across the top of the scope pattern console. They are controlled by a panel with three rotary switches each having 12 positions. The first eight switch positions match the eight fix-tuned lines, and the last four match the four switchboard lines.

Switchboard Lines. Each scope pattern console, coordinator console, and scope control console have the same phone lines connected to the 15-line cordless switchboard. There are four switchboard lines on the right-hand side of the fixed radio lines. These lines allow access to the scope control equipment.

Intercom Operation. The Intercom lets the operator contact any console, the transmitter site, or the receiver site without going through either a radio or a switchboard line.

COORDINATOR CONSOLE. Like the scope pattern console, the coordinator console is a cabinet and a work desk. The front panel of the console contains controls and indicators for 15 subscriber lines and 10 intercom stations. A DTMF keyset and rotary dial allow the calling of desired numbers. The primary handset jack is on the left side of the console along with a cradle to hang the handset. The secondary OPERATE and INTERCOM jacks are immediately below the front control panel. The major difference between the coordinator and scope pattern console is the latter's ability to access radio levels. Since the coordinator console doesn't need to access radios, it lacks a footswitch.

The coordinator console allows you to perform several functions: subscriber incoming/outgoing calls; subscriber conferencing; subscriber monitoring; and inter-communications with other operator, coordinator, or remote intercom stations. One of the unique functions of the coordinator console is its subscriber conferencing capability. A conference simply means having two or more parties connected at the same time.

EQUIPMENT COMPONENTS

These control site equipment components are not part of any console. They are used at the control site in conjunction with the operator position consoles mentioned earlier. You may or may not have these components at your station.

SW3600 SWITCHBOARD. The SW3600 switchboard is a 100-line unit (100 subscribers) and operates like a conventional telephone system. Each subscriber is assigned a programmed, two-digit telephone number (dial code). Each input line to the switchboard consists of a pair of wires for each transmit and receive function. A maximum of 36 lines (CALLING and CALLED party connections) can operate simultaneously. All dialing information is entered as FSK tones. The exact number of subscribers connected to the SW3600 switchboard will vary from station to station.

PRINTER. Control sites equipped with SSIII consoles have two printers that interface directly with, but have no output capacity, to the modem buffer. If one printer is busy and additional data comes in, the modem buffer sends the new data to the second printer. This prevents accidental loss of data.

RECORDER. The AN/GSH-56 is a 20-channel recorder that records audio on as many as 19 channels. Channel 18 records a continuous time reference. It has an automatic scan (searches for programmed time playback), sensor touch operation, and the capability for expansion to 40 channels. Specific recorder operations are covered in Module 15.

SAC AUTOMATED COMMAND AND CONTROL SYSTEM (SACCS). The SACCS, also known as SAC Digital Information Network (SACDIN), provides CONUS Global operators the capability to process messages via electrical means. This equipment can interface with DCS Automatic Digital Networks (AUTODIN). The SACCS equipment is common only to CONUS Global stations at Andrews, Offutt, and McClellan. It is slated to be replaced by the Message Distribution Terminal. Specific SACCS operations are covered in

Module 16.

MESSAGE DISTRIBUTION TERMINAL (MDT). The MDT was developed as an AUTODIN communications message terminal to provide on-line automated message distribution. It provides reliable secure transmission/reception of narrative/data pattern messages. The MDT consists of a central processing unit, keyboard, monitor, and magnetic tape units. Module 17 covers the MDT in greater detail.

OPERATIONAL INTERFACE

SSIII CONSOLES. From the console, you control all PBX and radio operations through the ESS. Also, you initiate changes in operational configuration requiring the site's computers to respond in a certain manner. This process also routes through the modem buffer. The ESS links all intrasite and intersite lines, external lines, and special purpose circuits.

The ESS links the operator's console with the transmitter/receiver sites for radio operations. It also provides audio input to the recorder and fault detection data to the modem buffer. The modem buffer interfaces with the ESS and transmitter/receiver sites to provide modification changes and to assess performance. The modem buffer provides input to the control site printers. Thus, you can control all PBX and radio operational functions from this console.

DATA INTERCEPT (SCOPE CONTROL) CONSOLES. The scope control radios are remotely controlled through the use of equipment located at the transmitter/receiver sites and two-digit dial codes. The system uses two different types of dial codes. See Figure D3-4 for a list of switchboard and radio dial codes.

The SW3600 switchboard links the operator's console with the transmitter/receiver sites for radio level access. This is done through the use of switchboard dial codes.

Radio/Line dial codes condition the radio level for different operating modes via the rotary dialing head at both the analog and intercept operator positions. The control equipment at the transmitter/receiver sites confirms acceptance by returning supervisory control tones. See Figure D3-5 for an explanation of supervisory tones.

SCOPE PATTERN CONSOLES. The four switchboard lines allow access to the scope control equipment. The procedure is the same. You'll use switchboard and radio/line

dial codes for access and control of the equipment. In most stations, the operators use these lines to contact the transmitter and receiver sites when accomplishing frequency changes.

SUMMARY

Now you have an idea about the different types of consoles and other control site equipment components you may use. The specific equipment you'll use depends on the configuration of your station.

The SSIII console gives radio operators the ability to control and monitor all SSIII equipment. It provides you with complete station equipment status and configuration information. It allows you to select operating frequencies, modes, power level, antenna type, antenna azimuth, and radio precedence levels.

The ESS controls the SSIII signal routing, radios, equipment switching, and diagnostics. It allows attendant (local) turret control of call extension and conferencing, class marking, call-up, and control of the radios.

The modem buffer is a computer that interfaces the operator console, the ESS, and the transmitter and receiver sites. It is a major system component for performance assessment, status display, and BITE diagnostics.

The Data Intercept console, commonly called Scope Control, provides controlled interconnections between radio circuits and various subscribers. It allows you to remotely control transmitters and receivers. Control information is dialed via a rotary dial telephone. Typical consoles consist of an analog operator console, 15-line cordless switchboard, intercept operator console, Tophat section, and writing shelf.

The Scope Pattern console is a cabinet and a work desk. It allows you to access and control up to 15 subscriber lines and gives you the capability to patch two subscribers together. Controlling communications with airborne or fixed stations is another basic function you perform using this console. Access to scope control equipment through the switchboard lines provides increased capabilities.

Like the scope pattern console, the coordinator console is a cabinet and a work desk. The front panel of the console contains controls and indicators for 15 subscriber lines and 10

intercom stations. A DTMF keyset and rotary dial allow the calling of desired numbers. The major difference between the coordinator and scope pattern console is the latter's ability to access radio levels. One of the unique functions of the coordinator console is its subscriber conferencing capability.

The SW3600 switchboard is a 100-line unit and operates like a conventional telephone system. A maximum of 36 lines can operate simultaneously. All dialing information is entered as FSK tones. The exact number of subscribers connected to the SW3600 switchboard will vary from station to station.

The AN/GSH-56 is a 20-channel recorder that records audio on as many as 19 channels. It can be expanded to 40 channels.

The SACCS, commonly called SACDIN, provides CONUS Global operators the capability to process messages via electrical means. This equipment can interface with AUTODIN networks and is common only to CONUS Global stations at Andrews, Offutt, and McClellan. It is slated to be replaced by the Message distribution terminal. The MDT was developed to replace existing AUTODIN communications message terminals. It provides reliable secure message dissemination.

From the SSIII console, you control all PBX and radio operations through the ESS. You also initiate changes in operational configuration requiring the site's computers to respond in a certain manner. This process also routes through the modem buffer. The ESS links the SSIII console with the transmitter/receiver sites for radio operations. The modem buffer interfaces with the ESS and transmitter/receiver sites to provide modification changes and to assess performance. The modem buffer provides input to the control site printers. Thus, you can control all PBX and radio operational functions from this console.

The scope control radios are remotely controlled through the use of control equipment located at the transmitter/receiver sites and two-digit dial codes. The SW3600 switchboard links the operator's console with the transmitter/receiver sites for radio level access through the use of switchboard dial codes. Conditioning the radio level for different operating modes is accomplished using radio/line dial codes. The control equipment at the transmitter/receiver sites confirms acceptance by returning supervisory control tones.

The four switchboard lines on the scope pattern console allow access to the scope

control equipment. You'll use switchboard and radio/line dial codes for access and control of the equipment.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. On a SSIII console, what performs the same basic functions as a PBX?
2. What are the three functions of the ESS?

3. Which computer interfaces the SSIII console, ESS, and transmitter/receiver sites?

4. Which five major equipment assemblies does the typical scope control console consist of?

5. How is access to the SW3600 switchboard provided by the analog operator console?

6. What is the only way a radio can be accessed from the intercept operator console?

7. Which controls and indicators are located on the front panel of the scope pattern console?

8. What on the scope pattern console allows access to scope control equipment?

9. What is the major difference between the coordinator and scope pattern consoles?

10. What is one unique function of the coordinator console?

11. What is the MDT?

12. What is the function of radio/line dial codes?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will assign the next module.

MODULE 4
TRANSMITTER SITE EQUIPMENT

OBJECTIVES

a. Explain the functions of the Scope Signal III (SSIII) transmitter equipment.

b. Explain the functions of the Scope Control transmitter equipment.

c. Explain the functions of the Scope Pattern transmitter equipment.

PREREQUISITE

Completion of AFQTP Modules 1 through 3.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. TO 31R2-4-362-2
3. TO 31R2-4-462-2

INTRODUCTION

Module 3 covered the different types of consoles and equipment located at a control site. This module will cover information about the functions of the transmitter site equipment for SSIII, Scope Control and Scope Pattern consoles. This module will explain the different pieces of the transmitter and how they operate. Each of the consoles we discuss in this module operate in the High Frequency (HF) range. Let's look at the equipment being used.

INFORMATION

SCOPE SIGNAL III (SSIII) TRANSMITTER EQUIPMENT

TRANSMITTER. The HF-80 series equipment is the heart of the transmitter. This equipment has a level decoder, transmitter (or exciter), Radio Frequency (RF) amplifier (or power amplifier), and antenna matrix.

ANTENNA MATRIX. CONUS transmitter sites have six Rosetta Log Periodic (RLP) and four omnidirectional antennas. Each site's antenna matrix can switch any transmitter to any antenna or dummy load.

DUMMY LOAD. The dummy load is a 50-ohm resistive load the operator can use to test and verify the transmitter's operational status. It does not radiate the transmitter output signal over HF. It consists of a rack-mounted wattmeter and a directional coupler at the dummy load input. The dummy load can read both forward and reflected power, and can handle 15kW of continuous power.

LEVEL DECODER. The transmit level decoder receives commands from the control site operator, formats them, and distributes them to the transmitter, power amplifier, and antenna software. These commands select frequency, power, mode, antenna, and azimuth. Each decoder also advises the operator, or remote subscriber, of the equipment status. The level decoder does this by returning a tone (commonly known as a "supervisory tone") to the control site operator.

Each transmitter level has its own transmit level decoder. Because of this, failure of a decoder only affects the remote control of its related transmitter level.

AZIMUTH CONTROL DECODER. The azimuth control decoder accepts commands, through the antenna software, from a transmit level decoder. These commands select a particular antenna and its azimuth. The decoder executes these commands according to precedence, or on a first-come, first-serve basis. For example, a FLASH precedence command executes before an IMMEDIATE precedence command. A second FLASH precedence command would not interrupt the first one, but would execute before the waiting IMMEDIATE precedence command. These commands then relay to the antenna matrix.

The azimuth control decoder is the single point of control for the transmit matrix and RLPs. It provides remote control of the matrix and antenna rotators to the control site operator or subscriber. A separate RLP control unit allows local control for each antenna.

BUILT-IN-TEST-EQUIPMENT (BITE). The transmit BITE contains the BITE computer, BITE CRT/terminal (normally used by maintenance personnel only), and transmit level decoders. The BITE diagnoses the performance of the entire transmitter site by polling the transmit level decoder at regular intervals. In other words, it continually asks the transmit level decoders if the system is functioning properly. It then notifies the control site operator of the status. It also performs self-diagnostics and assesses the performance of its own components.

The BITE also isolates faults and allows transmitter site and control site personnel to initiate computer-aided diagnostic routines. The BITE detects site alarms and prints out an alarm message on appropriate site printers. It also communicates with control site computers during RF loop-back tests.

If the BITE computer fails, it only affects this gathering of system and self-diagnostic information. Site operations would continue. Each transmit level decoder retains essential information in permanent memory. Should temporary power failure occur, a back-up battery will protect the memory, and its preset information.

ORDERWIRE. A maintenance orderwire telephone with a 12-button Dual Tone Multi-frequency (DTMF) keypad allows communication between station maintenance personnel, operators, and other network maintenance personnel. This communication routes through the ESS.

PORTABLE PHONE. A portable maintenance telephone enables antenna maintenance personnel to communicate between the site building and the base of any antenna. Operators can contact maintenance personnel at any antenna by dialing the appropriate transmitter or receiver antenna code.

SCOPE CONTROL TRANSMITTER EQUIPMENT

The transmitter site consists of four to eight Universal Radio Group (URG) transmitter levels, jackfield, status display, local Frequency Shift Keying (FSK) telephone, antenna matrix, matrix control, frequency standards, and various antennas. The transmitters and antennas can be locally or remotely controlled. Scope Control equipment covers frequencies from 2MHz to 30MHz in 100Hz increments. Frequency selection and all commands, such as duplex operation, antenna selection and position, are dialed via the radio equipment by the operator. Except frequency selection, all dial commands are two-digit.

313J-2. The 313J-2 J-box controls the dial code pulse equipment for each radio level. It generates supervisory tones that allow for remote control of the equipment. These tones are sent back to the operator at the Control Site.

313K-2. The 313K-2 K-box contains preset cards allowing the operator to select any one of ten transmitter presets by dialing two digits. Frequency, mode, power output, selection of antenna, and antenna azimuth make up a preset. One 313K-2 is common to four transmitter levels. If you can control frequency input with longhand dialing but not the preset codes, have maintenance check the K-box.

313L-2. The 313L-2 L-box is used when a selected six-digit frequency is dialed. One 313L-2 is shared by four transmitter levels. If you cannot control frequency input with longhand dialing, try the preset codes. Have maintenance check the L-box.

310V-1. The 310V-1 Exciter Rack contains an IF and RF Translator for each radio level. The IF and RF boost the power of the signal, it also serves as a buffer between the oscillator and antenna to protect the signals from outside variations (wind, snow, rain) originating at the antenna.

208U-10. The 208U-10 Power Amplifier operates at a 3.5kW low or 10kW high output level. The power amplifier operates in the same manner as the IF and RF. The only difference is that the power amplifier output level can be controlled by the operator.

635-W-1. The 635-W-1 Harmonic Filter attenuates undesired harmonics.

MATRIX AND CONTROL. The transmitter matrix and control receives information from the 313 equipment and use it to select desired antenna and azimuth.

DISPLAY. The display generator transfers the transmitter frequency, mode, and antenna information to the Control Site and to the local display.

The transmitter site will also have an antenna farm. The farm will consist of RLPs and omnidirectional antennas. There are many different types of antennas used within the system. Your trainer or supervisor will explain the different antennas used at your location.

SCOPE PATTERN TRANSMITTER EQUIPMENT

The scope pattern transmitting equipment is the same as the equipment being used for

scope control. The name of the equipment is Collins 208-U-3 Transmitters. Like scope control, the scope pattern system is capable of operating in the USB and AM (with maintenance assistance) modes but USB is the normal mode of operation. The only difference between the two is the scope pattern console uses only omnidirectional antennas and scope control uses both RLPs and omnidirectional.

SUMMARY

This module covered the functions of the transmitter site equipment. As you can see, there is more to know about transmitters than just pushing buttons. Although in-depth knowledge of how a transmitter functions is more of a maintenance concern, operators should make an effort to learn how the equipment operates. This module covered the basics of transmitter equipment and what purpose they serve; however, hands-on training and additional reading will broaden your knowledge of transmit site equipment.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. Name four pieces of equipment at a SSIII transmitter site.

2. How many transmit RLP and omnidirectional antennas do CONUS station transmitter sites have?

3. Which transmitter site equipment switches transmitters to any antenna or dummy load?

4. What is the primary function of the transmit BITE during normal operations?

5. Name some equipment found at a Scope Control transmitter site.

6. What piece of Scope Control equipment controls the dial code pulse equipment for each radio level?

7. What is the output level of the Scope Control Power Amplifier?

8. What is the frequency spectrum of the Scope Pattern console using Collins 208-U-3 transmitters?

9. What type of transmit antennas are used with Scope Pattern?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will assign the next module.

MODULE 5
RECEIVER SITE EQUIPMENT

OBJECTIVES

a. Explain the functions of the Scope Signal III (SSIII) receiver equipment.

b. Explain the functions of the Scope Control receiver equipment.

c. Explain the functions of the Scope Pattern receiver equipment.

PREREQUISITE

Completion of AFQTP Modules 1 through 4.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. TO 31R2-4-362-2
3. TO 31R2-4-462-2

INTRODUCTION

There are many similarities in the equipment assets of Global HF transmitter and receiver sites. The Global receiver site consists of commercial off-the-shelf equipment that operates in a fixed-station, controlled environment. This module identifies and explains the functions of receiver site equipment that an operator must understand.

INFORMATION

SCOPE SIGNAL III (SSIII) TRANSMITTER EQUIPMENT

RECEIVER. The HF-8054/54A receiver is the heart of the receiver site. It can operate on a maximum of four independent sidebands.

ANTENNA MATRIX. Under normal operating conditions, the receiver site matrix has two Rosetta Log Periodics (RLPs) and two omnidirectional antennas. It is possible, however, to add two more antennas and to connect any receiver to any of the receive antennas. The receive antenna matrix contains a BITE unit. This allows full remote control of the matrix via serial commands from the control site operator or subscriber.

LEVEL DECODER. Each receiver has its own level decoder. The decoder receives dual tone multi-frequency (DTMF) signals from the control site operator or remote subscriber. It then decodes these signals and sends out commands to control the frequency, mode, antenna selection, and azimuth.

Because each radio level uses one receive level decoder, a failure of a level decoder affects only one receiver level. Each decoder returns supervisory tones to the control site operator or the remote subscriber to indicate equipment status.

AZIMUTH CONTROL DECODER. The azimuth control decoder receives and executes commands to select a particular RLP antenna and its azimuth. The control decoder receives these commands from the receive level decoders and executes them on a first come and first serve basis. A separate RLP control unit permits local control for each RLP antenna.

BUILT IN TEST EQUIPMENT (BITE). The receive BITE contains the BITE computer, the BITE CRT/terminal (normally used by maintenance personnel only), and the receive level decoders. The receiver BITE computer performs the same functions as the transmit BITE computer. The BITE responds to control site operator status by sending status information back for display at the position operator's console.

SCOPE CONTROL TRANSMITTER EQUIPMENT

The receiver site consists of four to eight Universal Radio Group (URG) receiver levels, a jackfield, a status display, an FSK telephone, antenna couplers, frequency standards, and various antennas. Receivers can be locally or remotely controlled and cover the same frequency range as the transmitters. Again, except frequency selection, all dial commands are two-digit. Now, let's breakdown the receiver site equipment.

All 313 equipment is the same as at the transmitter site. Therefore, we will not cover the material again.

The 651F-1 receiver rack contains the same IF and RF translators used in the 310V-1 exciter. An IF and RF translator is used for each receiver level. As mentioned in module four, the purpose of the IF and RF is to boost the signal coming into the receiver.

The 635V-1 receiver filter prevents receiver over-load when operating in duplex.

The receiver antenna matrix control selects the proper receiving antenna.

The antenna multicoupler is an active, fixed-tuned, broadband, isolation device. This device allows several radio receivers to operate effectively on one antenna.

The display generator transfers receiver frequency and mode information to the Control Site and to the local display.

SCOPE PATTERN RECEIVER EQUIPMENT

Just like the transmitting equipment, the scope pattern receiving equipment is the same as the equipment being used for scope control. The only difference between the two sets of receiving equipment is that the scope pattern consoles use only omnidirectional antennas and scope control uses both RLPs and omnidirectional.

SUMMARY

This module covered the functions of the receiver site equipment. The receiver equipment completes the communication chain started by the transmitter. As you can tell the receiver has the same equipment as the transmitter. The only difference is the direction in which a signal

enters the equipment.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. How many receive RLP and omnidirectional antennas do CONUS receiver sites have?

2. Which equipment at the receiver site selects the proper antenna?

3. What is the purpose of a receiver site level decoder?

4. Explain the function of the receiver site azimuth control decoder.

5. What is the primary function of the receive BITE?

6. What is the purpose of the antenna multicoupler?

7. What is the purpose of the display generator?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will assign the next module.

MODULE 6
ATTENDANT TURRET OPERATIONS

OBJECTIVES

a. Explain the purpose of station directory dial codes and feature access codes.

b. Explain the functions of the attendant turret controls and indicators.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 5.
2. Only applicable to stations equipped with SSIII consoles.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. Local OIs

INTRODUCTION

Operators use the attendant turret more than any other part of the SSIII complex. It is the operational control center of the entire system. This module provides a description of the attendant turret controls and indicators and covers the functions it allows you to perform.

INFORMATION

DIAL CODES

You control station and network switching within the SSIII system by using three-digit station directory dial codes and special feature access codes. The format is the same for all SSIII equipped stations. You will enter some type of code during the performance of almost all

attendant turret tasks.

DIRECTORY DIAL CODES. You'll use station directory dial codes to access radio levels and condition them for operations. There are 12 radio levels; each level may have up to 4 sideband channels at both the transmitter and receiver sites. The sideband channels available are A1, upper sideband (USB); B1, lower sideband (LSB); A2, upper-upper sideband (UUSB); and B2, lower-lower sideband (LLSB). Each of these sideband channels has an assigned station directory dial code.

Select the appropriate code(s) when accessing the radios for operation. The first digit defines the site you are calling. Calls to the control site begin with "4"; transmitter site, "5"; and receiver site, "6." At the transmitter site, the second digit defines the exciter level. At the receiver site, the second digit shows the receiver level. The third digit identifies the sideband for either site. For example, if you enter 611, you are accessing the USB channel for level one from the receiver site. Figure D6-1 in the Diagrams Book shows an example of the station directory dial codes for the Offutt Global station.

FEATURE ACCESS CODES. You'll use these codes to connect a radio transmitter and receiver to the attendant turret. You'll also use them when establishing conferences and making DSN or local telephone calls from the attendant turret. These codes allow you to enter a DSN or administrative telephone number into the ESS for speed calling.

FUNCTIONS

The attendant turret provides many of the same functions as a 100-line office switchboard. For example, its capabilities include initiating and receiving calls, establishing conferences, and splitting calls to other subscribers.

The left half of the turret contains the DTMF keypad with the controls and indicators required to perform attendant functions. The right half contains the optional Busy Lamp Field and Attendant Direct Station Selection (BLF/ADSS). These components allow you to select station lines and trunks and display their busy status. See Figure D6-2 for an explanation of the attendant turret controls and indicators.

Your first step in performing any task on a piece of equipment is to prepare that equipment for the task. Pre-operational procedures such as, checking for loose connections

and lamp tests are normally an everyday task. Now, let's look at some of the capabilities of the attendant turret.

PLACING A CALL VIA THE ESS. This is similar to dialing a phone number using an ordinary telephone set. The basic difference is, with the attendant turret, there are two ways to place a call. You place a call by using either the DTMF keypad or the BLF/ADSS field.

ANSWERING AN INCOMING CALL. The ESS assigns incoming calls to the operator position. To answer incoming calls on a loop, you must release from any other loop activity. You terminate busy loops on site by depressing HOLD, REL ATT, or REL DES, or by party termination. If the loop is idle, the console tone ringer sounds. The SOURCE, RINGING, CALL WAITING, and PRIORITY (if applicable) lamps light.

PLACING CALLS ON/OFF HOLD. This is extremely important in accomplishing several other functions. The ESS allows you to service only one call at a time. This requires you to become proficient in placing calls on and off hold.

NOTE

The ESS allows you to use only one loop at a time even though the attendant turret has six LOOP keys. You must terminate the chosen loop or place it on hold before selecting another loop.

RELEASING CALLS. This accomplishes the same objective as hanging up the handset on an office telephone set.

EXTENDING CALLS. The extend feature transfers a subscriber from a turret loop to another subscriber. You can release from the loop. This joins the two subscribers through the switch (clearing the loop). You can also remain in the loop and establish a three-way connection.

NOTE

When the destination answers, the attendant turret loop clears and both subscribers connect in the ESS. If you release the

REL ATT key while ringing and the destination does not answer, the loop remains active. It rings back within six rings or 36 seconds.

THREE-WAY CONNECTION AND CALL SPLITTING. Automatic call splitting occurs whenever two parties, in addition to the operator, are on the same loop. On incoming calls to the console, the calling party is the source. The accessed station or trunk becomes the destination. After seizing the destination (second party) trunk or the called station answers, the attendant turret automatically splits to the destination. At this point the TALK DES lamp lights. When an operator answers a call transfer request on a loop, the requesting party is the destination. The other party becomes the source. In the latter case, the operator automatically splits to the destination party and the TALK DES lamp lights.

CIRCUIT PREEMPTIONS. This function allows you to preempt (drop) one party of a two-way or three-way connection without terminating the connection. It also allows you to connect a calling party to a busy circuit.

LOOP CONNECTIONS. At the attendant turret, you can connect two loops together through the ESS. Such connections can only occur in the ESS and, as such, the turret cannot remain in the connection.

RADIO CONNECTIONS. This task is similar to establishing loop connections. You'll perform this function using the feature access codes and directory dial codes mentioned earlier. Using the appropriate codes establishes a connection between the transmitter, receiver, and operator.

LOCKOUT PROCEDURES. The LOCKOUT feature upgrades a connection to FLASH precedence. This prevents any changes or seizures by equal or lower precedence command entries. The Global HF stations with SSIII consoles have reserved this feature exclusively for aircraft emergencies and base isolations.

CONDITIONING RADIOS. The DTMF keypad provides you with a means of conditioning radios in the SSIII environment. This requires familiarity with the keying sequence, the meaning of supervisory tones, and station directory dial codes. See Figure D6-3 for a breakdown of the DTMF commands. Figure D3-1 shows the meanings of the different SSIII supervisory tones. Use the attendant turret only! In Module 9, you will learn how to condition

a radio through the VOX/Phone patch panel.

NOTE

Use the priority and the key/unkey carefully. They have precedences from FLASH OVERRIDE down to and including PRIORITY. You can also key/unkey the transmitters using "A0" and "A9."

SPEED DIALING. This feature allows entry of a DSN or administrative telephone number into the ESS. This way, when you dial the access number, the ESS automatically dials the desired telephone number. Enter speed call numbers using the special feature access code "117." Delete them with "118." See Figure D6-4 for procedures that augment and simplify the instructions given in the TO for speed dialing.

SUMMARY

You'll use the attendant turret more than any other part of the SSIII complex. It is the operational control center of the entire system. Within the SSIII system, you'll control station and network switching by using three-digit station directory dial codes and special feature access codes. Station directory dial codes are used to access radio levels and condition them for operations. Both the transmitter and receiver site have 12 radio levels with up to four sideband channels per level.

Feature access codes are used to connect a radio transmitter and receiver to the attendant turret. You also use them when establishing conferences and making DSN or local telephone calls from the attendant turret. These codes allow you to enter a DSN or administrative telephone number into the ESS for speed calling.

The attendant turret provides many of the same functions as a 100-line office switchboard. Some of its capabilities include initiating and receiving calls, establishing conferences, and splitting calls to other subscribers.

The left half of the turret contains the DTMF keypad with controls and indicators required to perform the attendant functions. The right half contains the optional Busy Lamp Field and

Attendant Direct Station Selection (BLF/ADSS). These components allow you to select station lines and trunks and display their busy status.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What is used to control station and network switching with the SSIII system?

2. What does each digit of the three-digit station directory dial code signify?

3. What is used to connect a radio transmitter and receiver to the attendant turret?

4. What does the left half of the attendant turret contain?

5. What is the purpose of the BLF/ADSS feature?

6. What is the purpose of the extend function?

7. How many conference bridges does the ESS have and how many circuits can each connect?

8. An operator tries to add a subscriber to a full bridge. What are the results of this action?

9. How many loops can the attendant turret connect through the ESS?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the procedures for performing the attendant turret functions. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Preparing the attendant turret for operations.
2. Placing a call via the ESS.
3. Answering an incoming call.
4. Placing a call On/Off HOLD.
5. Releasing a call.
6. Extending a call.
7. Establishing a three-way connection and call splitting.
8. Performing circuit preemption into a two-party connection.
9. Performing circuit preemption into a three-party connection.
10. Preempting a busy circuit for a connection.
11. Originating a DSN call.
12. Originating a precedence call.
13. Originating an outgoing trunk call.
14. Extending an outgoing trunk call.
15. Upgrading a connection to lockout.
16. Establishing a loop connection.
17. Establishing a radio connection.
18. Conditioning a radio.
19. Installing/deleting speed dialing.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 7
VIDEO DISPLAY TERMINAL (VDT) OPERATIONS AND RECENT CHANGE COMMANDS

OBJECTIVES

a. Explain the function of the Video Display Terminal.

b. Identify the Video Display Terminal keyboard controls and functions.

c. Explain the Video Display Terminal status displays.

d. Identify recent change commands and their functions.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 6.
2. Only applicable to stations equipped with SSIII consoles.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. TO 31R2-2GRC212-42-1
3. Scope Signal III Operators Console Users Manual
4. Local OIs

INTRODUCTION

The Video Display Terminal (VDT) is the link between the operator and the ESS. It provides you the means to enter commands directly into the system.

Understanding the VDT and its relation to the ESS is necessary before performing the recent change commands. The VDT consists of a Central Processing Unit (CPU), Video Display Unit (VDU) and keyboard. The CPU is the brain of the system. It processes the data transferred to it from the keyboard and then transfers the results to the VDU. The VDU is simply a display screen. You should already be familiar with the basic layout of a keyboard. However, there are special function keys on this terminal keyboard that require further study before using the recent change commands.

Recent change commands provide you a means to selectively change, add, or delete ESS subscribers. Since these commands can have a large impact on subscriber capabilities, you must be careful when entering them. All recent change commands go to the ESS and use the command address header "ESS."

INFORMATION

VIDEO DISPLAY TERMINAL

The BITE/modem buffer connects the operator's console VDT to the ESS. Together they command the transmitter and receiver sites to perform diagnostic tests and display the responses. The BITE/modem buffer processes diagnostic commands from the VDT to the transmitter and receiver site equipment. Transmitter and receiver site equipment status and fault data return to the BITE/modem buffer for processing before display on the VDU.

COMMUNICATION MODES. The terminal is capable of operating in either the local or on-line mode. The normal operational mode for communications is local.

Local Operations. When the VDT is operating in the local mode, communications occur between the keyboard and terminal memory only. Local operation is for user control.

On-Line Operations. Data is entered into the terminal memory, displayed on the screen, and simultaneously routed to the BITE/modem buffer. On-line operation is for data transfer with the BITE/modem buffer.

TRANSMISSION MODE. When in the on-line mode, transmission occurs on a character-by-character basis. In the local mode, you can transmit the screen contents in a

block, single line, or page at a time.

KEYBOARD

FEATURES. The keyboard has two important features that are extremely useful for inputting data. They are the cursor and the audible alarm.

Cursor. The cursor is the position/line reference symbol on the VDU. It appears on the display screen as a short underscore. It indicates the line or character position the keyboard is currently addressing.

Audible Alarm. The audible alarm's function is similar to a bell on a typewriter. It warns of the approach of the end of line if you enter more than 72 characters on one line. It also sounds if you attempt an illegal keyboard entry. When associated computers detect a need to warn the operator, a continuous alarm sounds. You can mute this alarm by striking any key or depressing the spacebar.

Looking at the keyboard, the half-sized keys above the standard keyboard are the special function, editing, cursor, and terminal mode control keys.

CONTROLS. The keyboard generates codes which the terminal interprets to display information and communicate with other equipment. The keyboard produces three main types of codes: character, control character, and escape sequence codes.

Character Codes. These can display and/or transmit characters. For example, striking the "A" key causes the displayable character code for the letter "A" to appear on the VDU. Depending on mode of operation, this code goes either through the main or auxiliary port, or both, and is displayed on the VDU.

Control Character Codes. These characters are not displayable; however, they initiate specific functions. To generate a control character, depress and hold the CTRL key while simultaneously typing the desired alphanumeric key.

Escape Sequence Codes. These characters are not displayable; however, they also initiate specific functions. To perform an escape operation, depress and release the ESC key.

Then depress the desired alphanumeric key. For example, depressing ESC and the letter "E" clears the screen.

FUNCTIONS. There are four distinct classifications of VDT keyboard functions. They are special function, line and character control, alphanumeric, and miscellaneous keys.

Special Function Keys. The site commands determine the operation of the special function keys. All SSIII VDTs have these function keys. A sampling of the these keys and their function follows:

F1-HELP. Provides on-line help.

F2-XMTR. Provides the transmitter site status update.

F3-RCVR. Provides the receiver site status update.

F4-LOCK. Disables (locks out) the VDT output. In other words, it reserves the terminal for local needs. The screen can't communicate with the BITE/modem buffer. Therefore, the terminal cannot receive status updates until you execute a command or re-initialize the BITE/modem buffer. This allows you to observe screen data without interruption.

F5-LIST. Accesses the recent command list buffer.

Line and Character Control Keys. These keys help you perform basic editing functions on the text displayed on the VDU.

Alphanumeric Keys. These keys, (A through Z, punctuation, and shiftable numeric keys) are in the same order as a standard typewriter keyboard. They also perform similar functions. The 0-9 keys are numeric entry data keys. The SHIFT, LOCK, or CTRL keys don't affect the numeric pad keys. The DECIMAL POINT (.) generates the same code as the period on a typewriter. It is on the numeric pad as a convenience feature.

Miscellaneous Keys. These keys provide a variety of functions for you, including controlling terminal communication and terminal operation. The ENTER key is an extremely important miscellaneous key. It toggles displays between the transmit and receive while in the SYSTEM mode. When not in SYSTEM mode, the ENTER key is used to process commands.

STATUS DISPLAYS

VIDEO DISPLAY UNIT (VDU). The VDU shows the operational status of the transmitter and receiver site equipment, displays ESS messages, and displays alert trunk status messages. It has two pages of display, each with a 24-line capacity for displaying data. Each line is 80 characters long. The last line is for system status information and other system messages. You can scroll the screen display window up and down, and display either the first or second page of memory. See Figure D7-1 in the Diagrams Book.

The VDU displays information for you to use. This includes transmitter and receiver site status, fault detection and isolation, computer response, and operator initiated data.

FUNCTION KEY COMMAND BAR. This is the top line of the screen display. Special Function keys, covered earlier, are displayed in this area. The default command bar is made up of the five keys listed above and F6-ALRM, F7-ALRT, F8-TIME, and F9-EXIT. The command bar will change when you depress and hold down the CTRL or ALT key. The command bar will reveal commands associated with a combination CTRL/ALT and function key. For example, an operator signs on duty at the terminal by depressing the CTRL and F2 keys. Therefore, there are three distinct command bars, the default, the CTRL key, and the ALT key.

OPERATOR ON DUTY LINE. The operator on duty line occupies the next to last line of the VDU. At the beginning of your shift, you log onto the terminal with your rank, and first and last name. The system is designed to allow the tracking of system error messages and radio level alert seizures in combination with the current shift console operator. This provides maintenance with a direct point of contact. On the left side of this line is a count-down timer. All status files are updated to protected files every two minutes. This ensures a minimal loss of data in the event of a power failure or re-boot. The maximum amount of data lost would be two minutes.

OPERATION STATUS LINE. The operation status line occupies the last line of the VDU. It has seven separate fields that tell you which operating modes and features are currently in use. Figure 7-1 shows an example of this line.

LOCAL	4800B7ODD	IDLE	SYSTEM MODE	**********	HH:MM:SS	D MMM YY

Figure 7-1. Operation Status Line

BITE/Modem Buffer. The first field displays the communications mode.

Local. User control. Communications occur between the keyboard and terminal memory only.

On-line. Data transfer with the BITE/modem buffer. Data is entered into the terminal memory, displayed on the screen, and simultaneously routed to the BITE/modem buffer.

Serial Protocol. The second field displays the baud rate, word size, and parity. The software initializes in the default settings for the respected site and does not require any changes.

Baud Rate. The baud rate displays the transmission speed, i.e., 4800B, 1200B, 9600B, etc.

Word Size. Words can be either 6, 7, or 8 bits.

Parity. The parity will be one of three options, ODD, EVEN, or NONE.

Serial Activity. The third field displays the current activity being performed.

Idle. This indicates there is no activity on the line.

XMT. This indicates the system is transmitting data to the BITE/modem buffer.

RCV. This indicates the system is receiving data from the BITE/modem buffer.

Terminal Operations Modes. The fourth field indicates the current user operation in process. When you select an enhanced feature, the function will display the status here.

System. No functions selected. The system mode is the default mode. The terminal is only collecting data in this mode.

Edit. The command editor is active.

Help. The on-line help system is active.

Alarm. The alarm buffer window is open.

Alert. The alert buffer window is open.

List. The command list function is active.

Buffer Watermark. The fifth field shows when data is being received. When incoming data is received, it is stored in a data holding buffer until it is processed. The watermark is a representation of that buffer. As the data comes in, you will notice the area change showing you the buffer is filling.

Current Time. The sixth field displays the current time in 24 hour format.

Current Date. The seventh field displays the current date in day-month-year format.

TRANSMITTER SITE STATUS. During normal operations, the transmitter site status is on page 1. The BITE/modem buffer updates the status as the BITE process detects changes. Updates are available on demand by depressing F2 on the keyboard.

RECEIVER SITE STATUS. This is on page 2 of the screen's display. The BITE/modem buffer also updates this display on demand when you depress the F3 key. When the terminal receives an update for page 2, it displays it for less than one second. Therefore, SCROLL to page 2 to read the data. While in page 2 display, both page 1 and 2 continue to update data. Transmitter updates cause the display to return to page 1.

FAULT DETECTION AND ISOLATION. This occurs within the BITE computers at the control site, transmitter site, and receiver site. The computers collect and process this information and display it on the VDU (and print it if needed). If you enter an improper command, the computer sends a response to the VDU indicating an invalid command.

To use the VDT for local use, depress the F4 key. This locks out the screen from the BITE/modem buffer and prevents updates from interrupting the screen. The screen does not display updates in this mode, however, you can send them to the printer. Normally, you would

depress the F4 key before attempting to enter any ESS recent change command.

RECENT CHANGE COMMANDS

As stated earlier, recent change commands provide you a means to selectively change, add, or delete ESS subscribers. There are several terms and abbreviations you will need to learn before using the recent change commands. See Figure D7-2 in the Diagrams Book. These terms are necessary in using the recent change commands.

ABBREVIATIONS/SYMBOLS. Each recent change command contains a combination of abbreviations or a combination of abbreviations and symbols. In the Diagrams Book, Figure D7-3 shows the abbreviations and their meanings and Figure D7-4 shows the symbols and their meanings.

COMMAND SEQUENCE. All commands to the ESS must be in a specific format. The operator sends the character and symbol codes to the computer. Since these form the basis for the commands, it is critical you enter them perfectly. Remember, the spacebar and the backspace key send codes to the computer. If used to adjust the cursor position, they add codes to the command sequence. This results in the computer's rejection of any command input. Therefore, it is important to use the cursor movements instead. To finalize the command sequence, you must depress the ENTER key.

Request Class of Service. Determines the capability of a subscriber in association with the ESS. The command sequence is ESS R RC 0 nnn. This is normally a maintenance function.

Request Date and Time. Obtains current time and date of the ESS. The command sequence is ESS R RW.

Set Date. Set Date sets the calendar in the ESS. The command sequence is ESS R SC mm dd yy.

Set Time. Set Time sets the ESS system clock. Initiating the command sets the seconds portion of the clock to 00. Each printer displays this information. You may have to avoid using the space between the hours and minutes. The command sequence is ESS R SW 0 hh mm.

Request Alert Participant. Determines the station alert configuration. The command sequence is ESS R SN.

Change Alert Participant. Changes the transmitter, receiver, alert speaker, and alert trunks associated with alert activations. The command sequence is ESS R CN e 0 nnn t.

Request Communications Call Participant. Determines station participants of a communications call alert. The command sequence is ESS R SQ.

Request Alert Recorder/Receiver Pairing. Determines present pairing of alert receivers with the alert recorder channels. The command sequence is ESS R SR.

Change Communications Call Participant. Changes the sta-tion participants of a communications call alert. The command sequence is ESS R CQ e 0 nnn 1.

Change Alert Recorder/Receiver Pairing. Matches alert receivers to the recorder alert channels. The command sequence is ESS R CR e 0 nnn 0 nnn.

Change BITE Date and Time. All VDUs display this, as do all printed messages from the BITE system. Depressing the SEND key sets the seconds portion of the clock to "00". It is not necessary to insert a space between the hours and minutes. The command sequence is CU mm dd yy hh mm.

HELP PROGRAMS. The VDT contains the HELP programs for preprogrammed assistance.

SUMMARY

The VDT is the link between you and the ESS. It provides you the means to enter commands directly into the system. Understanding the VDT and its relation to the ESS is essential before performing recent change commands. The VDT consists of a CPU, keyboard, and Video Display Unit (VDU).

The keyboard generates codes which the terminal interprets to display information and communicate with other equipment. The keyboard produces three main types of codes: character, control character, and escape sequence codes. The keyboard function keys are

broken down into four areas. They are special function, line and character control, alphanumeric, and miscellaneous keys.

The VDU shows the operational status of the transmitter and receiver site equipment, displays ESS messages, and displays alert trunk status messages. It has two pages of display, each with a 24-line capacity for displaying data. The last line is for system status information and other system messages. You can scroll the screen display window up and down, and display either the first or second page of memory.

Recent change commands provide you a means to selectively change, add, or delete ESS subscribers. They contain a combination of abbreviations or a combination of abbreviations and symbols. All commands to the ESS must be in a specific format. The operator sends the character and symbol codes to the computer. Since these commands can have a large impact on subscriber capabilities, you must be careful when entering them.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What are the two operational modes of communication and which would you normally use?

2. How many characters can you type on one line before the audible alarm sounds?

3. What are the three main types of codes the keyboard produces?

4. How are control character codes and escape sequence codes displayed?

5. Explain the functions of keys F1 through F5.

6. How many line characters, data lines, and pages of display does the VDU have?

7. During normal operations, which page of the VDU displays the transmitter site status?

8. The status update for the transmitter site is available on demand to the operator. How does the operator demand this update?

9. Which feature allows the operator to selectively change, add, or delete ESS subscribers?
10. What is the Change Alert Recorder/Receiver Pairing recent change command format?

11. What is the format of the Change Alert Participant recent change command?

12. What is the format of the Set BITE Date and Time recent change command?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the procedures for VDT operations and recent change commands. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Entering Request Class of Service command sequence.
2. Entering Request Date and Time command sequence.
3. Entering Set Date command sequence.
4. Entering Set Time command sequence.
5. Entering Request Alert Participant command sequence.
6. Entering Change Alert Participant command sequence.
7. Entering Request Communications Call Participant command sequence.
8. Entering Change Communications Call Participant command sequence.
9. Entering Request Alert Recorder/Receiver Pairing command sequence.
10. Entering Change Alert Recorder/Receiver Pairing command sequence.
11. Entering Change BITE Date and Time command sequence.
12. Verifying/interpreting inputs on the VDU.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 8
ALERT PRESET CONFIGURATION

OBJECTIVES

a. Identify the Video Display Unit transmitter and receiver status display indicators.

b. Explain the procedures for remote equipment operations.

c. Explain the procedures for requesting the preset data of radios.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 7.
2. Only applicable to stations equipped with SSIII consoles.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. Local OIs

INTRODUCTION

This module expands on the remote control and display indicators of the Scope Signal III equipment configuration. Remote control, in this instance, refers to when the radios are seized for alert operations by the USSTRATCOM Command Center or another station. You'll learn the procedures for presetting radios for this seizure in this module. Alert operations are covered in Module 19. Since this module relies heavily on previous information, it is important you understand the information in Modules 6 and 7. You may wish to review these modules before proceeding.

INFORMATION

TRANSMITTER AND RECEIVER STATUS DISPLAY INDICATORS

The Video Display Unit (VDU) displays the station operating status, as well as transmitter and receiver status. It takes less than 30 seconds from request initiation until the update appears on the screen. Page 1 of the VDU displays the transmitter site status; page 2, the receiver site status. Refer to Figure D8-1 in the Diagrams Book as these displays and their columns are described.

RADIO. This column displays either the transmitter or receiver number, i.e., TX01, RX01.

ANT. Four different indications may appear in the ANT column. They are antenna type, antenna number, azimuth, or a transmitter site dummy load indication. If it is an RLP antenna, its number and azimuth appear, e.g., R1/090. An omnidirectional antenna appears as OMN, plus the antenna number, e.g., OMN2. Six asterisks (******) indicate a dummy load.

FREQ. This column displays operating frequency in kHz and hundredths of Hz (i.e., 11243.0kHz) in a six-digit format. If the frequency has only four digits, e.g., 8364, a zero is inserted at the beginning and end of the frequency (083640). If the frequency has five digits, e.g., 11243, the zero is inserted at the end (112430).

MODE. Five displays can appear in this column: CW, AME, ISB, SBY, or OFF. The CW display indicates continuous wave; AME, Amplitude Modulation Equivalent; ISB, Independent Sideband; SBY, the amplifier at the transmitter site is on standby status; and OFF, the exciter is off. The normal display for Global HF SSIII operations is ISB.

CHANNEL. An "X" indicates which channel (sideband) is in use (A1, A2, B1, B2). You can enable and disable the desired channel by using the DTMF control codes. Use "23" for USB enabled and "27" for USB disabled. The normal channel for Global HF operations is A1/USB. We covered these control codes in Module 6. See Figure D6-3 in Diagrams Book for a listing of the DTMF codes.

KEY. This column applies to the transmitter site. "U" indicates an unkeyed condition. "K" or "R" indicates a keyed condition.

PWR. This column applies to the transmitter site. "HI" indicates high power (10kW). "LO" indicates low power (3kW).

RFG. This column applies to the radio frequency gain of the receiver site. Report any indication other than "10" to receiver site maintenance.

AGC. This column applies to receivers. The current channel shows "0" for voice, "1" for data, or "2" for facsimile. Changing the AGC requires redialing the mode. Some SSIII station managers require maintenance personnel to perform any AGC adjustments. Check local procedures before attempting this.

PRI. This is the antenna precedence for a particular radio. It appears as "FO" for FLASH OVERRIDE, "F" for FLASH, "I" for IMMEDIATE, or "P" for PRIORITY. No display in this column indicates a ROUTINE precedence.

FLT. This display shows the fault status of a radio. It appears as either a two-digit or three-letter display in reverse video. To determine the displays' meanings, enter the applicable transmitter or receiver number, "FLT", and the ENTER key, e.g., TX01 FLT (ENTER).

COMMENTS. There are six possible VDU displays in this column. Their meanings are as follows:

DTMF. The radio is under remote control with the desired display under normal conditions.

LOCAL. Maintenance has the radio under local control, and it isn't accessible from the console. Used by maintenance personnel for PMIs, diagnostics, etc.

ALERT. A position operator has seized the transmitters/ receivers during an alert. This can happen from positions at the USSTRATCOM Command Center, Offutt, Andrews, or McClellan when they initiate an alert.

B-CONTROL. The radio is under BITE control and is not accessible from the console.

LOCKOUT. The operator and the control site don't have radio access.

NO-PST. The level decoder has no preset information for that particular radio.

REMOTE EQUIPMENT OPERATIONS

There are two tasks the Global HF operator performs associated with the remote control of SSIII equipment. They are presetting radios and requesting preset data. These tasks are important to ensure equipment is configured properly.

NOTE

Select the antenna and power before selecting the frequency. If not done, the transmitter won't complete the tune cycle, and the power automatically sets to high level. You'd then have to reconfigure or retune the power and the transmitter antenna.

Each level decoder can store one alert preset. You normally preset a radio with frequency, mode, power level, antenna, and antenna azimuth. This preset is used only when the radio is seized for an alert. To establish a preset, depress the PRESET START/STOP command key, "7". The radio will accept all succeeding entries as preset commands until you depress "7" again.

Now, let's look at how you start this process and subsequently preset a radio for an alert seizure.

Dial the transmitter/receiver conference code (111). This allows you to connect to both the transmitter and receiver.

Select the transmitter by entering the appropriate directory number, preceded by a "0". See Figure D6-1 of Diagrams Book for a listing of the station directory numbers. Enter the receiver directory number, also preceded by a "0". For example, the entry "111 0511 0611" would select radio level #1. For transmitters, the directory number is in the 500s; for receivers, in the 600s. Therefore, following the "0", transmitters have a "5" as the most significant digit; receivers a "6". The second, or next most significant digit, selects the level, or radio. For example, transmitter #1 requires the number "1" as the second digit. The third, or least significant digit, selects the sideband. Entering a "1" in this position selects USB.

Depress the PRESET START command key "7". The level decoder treats all

subsequent entries as preset commands until you again depress "7".

Depress the transmitter selection command "01". This directs all subsequent entries to the transmitter until you depress "00" or "02".

Select the desired transmit antenna by entering "4" and the antenna number. For RLPs, you must select the azimuth. Depress "5" and two digits for the azimuth. For example, 36 = 360 degrees and 03 = 30 degrees.

Enter the desired power level by depressing "3", followed by "0" for low, or "1" for high-power levels. Normally, you would select high power for alert presets.

Depress the receiver selection command "02" to direct subsequent entries to the receiver.

Select the desired receiver antenna by entering "4", followed by the antenna number. If it is an RLP, set the azimuth.

Select AGC for voice operation. Depress "6", followed by "0".

Depress transmitter/receiver selection "00" to direct subsequent commands to both the transmitter and receiver.

Select the mode by depressing "2", followed by the desired mode number. This is normally the A1 mode. Enter this mode by depressing "3".

Enter the frequency by depressing "1", followed by six numbers within the range of 2 to 29.999MHz.

Depress the preset key ("7") to inform the level decoder that you have no further data for storage in memory.

NOTE

Presetting a radio does not, in itself, change the present condition of the radio. This happens during an alert. Therefore, if you must configure to the same preset conditions, initiate a

single-level alert (F*FA). This tunes the radio to the preset conditions.

REQUESTING PRESET DATA

You can determine preset data at the keyboard by entering the transmitter or receiver number, "PST", and depressing the ENTER key, e.g., "TX01 PST ENTER key." If you have conditioned the radios, you can change the preset conditions by depressing the PRESET START key "7". Enter the new condition(s) and depress the PRESET STOP key "7". For example, "7 31 7" would change low power to high power without totally reconditioning the radios.

SUMMARY

The VDU displays the station operating status, as well as transmitter and receiver status. It takes less than 30 seconds from request initiation until the update appears on the screen. Page 1 of the VDU displays the transmitter site status; page 2, the receiver site status.

Status information is displayed in 12 separate columns on the screen. These columns display the radio number, antenna, operating frequency, mode of operation, channel (sideband), key condition, power output, radio frequency gain, automatic gain control, precedence, fault status, and general comments.

There are two tasks the Global HF operator performs associated with the remote control of SSIII equipment. They are presetting radios and requesting preset data. These tasks are important to ensure equipment is configured properly.

You must select the antenna and power before selecting the frequency. If not, the transmitter won't complete the tune cycle, and the power automatically sets to high level. You'd then have to reconfigure or retune the power and the transmitter antenna.

Initiate presets by depressing the PRESET START/STOP command key, "7". The radio will accept all succeeding entries as preset commands until the operator depresses "7" again. Presetting a radio does not, in itself, change the present condition of the radio. This happens during an alert.

You can determine preset data at the keyboard by entering the transmitter or receiver number and "PST", e.g., "TX01 PST." If you have conditioned the radios, you can change the preset conditions without totally reconditioning the radios.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What is on pages 1 and 2 of the VDU display?

2. What are the four possible indications that may appear in the ANT column on the VDU?

3. How do frequencies 8364, 11243, 20150, and 4781kHz appear on the VDU display?

4. What does the MODE display "SBY" on the VDU mean?

5. What does the KEY display "U" on the VDU mean?

6. What must you also change while changing the AGC?

7. Which keyboard entry would supply the meaning of a radio fault status on the FLT display for transmitter 02?

8. What is the status if the COMMENTS display indicates DTMF, ALERT, B-CONTROL, or LOCKOUT?

9. Before selecting a frequency, what should you select to prevent possible retuning?

10. Which key sequence establishes a preset?

11. What indicates, to the system, completion of a preset configuration?

12. How does the operator obtain the preset data via the Video Display Terminal?

13. How do you change a preset condition without changing other preset data?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the procedures for presetting radios and requesting preset data. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Presetting radios.
2. Requesting preset data.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 9
VOICE OPERATED TRANSMIT (VOX)/PHONE PATCH PANEL OPERATIONS

OBJECTIVES

a. Identify statements that accurately describe the VOX/Phone Patch Panel controls and indicators.

b. Explain the procedures for operating the VOX/Phone Patch Panel.

c. Explain the procedures for answering incoming calls.

d. Explain the procedures for conducting phone patch operations.

e. Explain the procedures for broadcasting on multiple frequencies.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 8.
2. Only applicable to stations equipped with SSIII consoles.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. Local OIs

INTRODUCTION

In Module 6, setting up 3-way conferences from the attendant turret through the ESS was covered. If one or more of the subscribers to this conference is using a radio, problems arise. Audio from the receiver causes DTMF signaling difficulties with the transmitter, and receiver

noise interferes with DTMF key and mute messages. A special transmitter/receiver conference feature (DTMF code 111) in the switch resolves these problems. It filters out receiver audio from the transmitter and radio control. Unfortunately, this imposes additional limitations during attendant turret operations. First, you are limited in that a fourth subscriber is precluded from joining the 3-way conference; this prevents phone patch capability. Second, you can not adjust subscriber audio levels from the turret; this prohibits subscribers with poor circuit connections to the station from voice operating (VOX) the transmitters. Third, a multi-frequency broadcast capability is not available.

The VOX/Phone Patch Panel on the console corrects these limitations. It provides mission support capability to the operator by patching as many as three subscribers with up to three radio levels, in any combination. It also provides VOX and ANTI-VOX capability, and the necessary audio adjust controls associated with VOX operation.

This panel gives you conference access to radios and subscribers, while allowing multi-frequency broadcast on as many as three radios. The panel connects to the switch, allowing you to complete PBX and radio control using the turret DTMF keypad.

INFORMATION

CONTROLS AND INDICATORS

Understanding the function and purpose of the VOX/Phone Patch Panel's controls and indicators is essential for you to successfully operate it. Here's a description of the panel's basic controls and indicators.

LINE LEVEL. This is a Voltage Unit (VU) meter that indicates the transmit audio level sent from the attendant turret or a subscriber line. The optimum gain is "0".

LINE GAIN. These controls increase or decrease incoming subscriber audio. Use them in association with the LINE LEVELS.

A, B, and C SUBSCRIBER LINE CONTROLS. These allow the operator to answer incoming calls, place outgoing calls through the ESS, or place a line on HOLD. They work with the A, B, and C LINE LEVEL and LINE GAIN controls.

SUBSCRIBER/RADIO MATRIX. This matrix connects up to three subscribers to as many as three radio levels. It is a multiple pushbutton operation. RIGHT-ANGLE arrow keys are part of this matrix. When lit, these show which SUBSCRIBER LINE and RADIO LEVEL have been selected for connection.

VOX/KEY. These buttons activate VOX capability for appropriate radio levels and adjust the sensitivity of the VOX keying circuit. They work with respective VOX KEY and VOX HOLD controls.

AVOX/RCV. These activate the ANTI-VOX for appropriate radio levels and adjust the ANTI-VOX key sensitivity circuit. This allows data or voice receiver audio to preempt VOX transmissions. They work with the respective AVOX RCV controls.

VOX HOLD. These adjust the timeout control of the VOX keying circuit in association with the respective VOX KEY buttons. Through key mute adjustments, they compensate for slow rates of speech by delaying the transmitter unkeying.

LAMP TEST. This button lights all panel lamps to check for burned-out bulbs.

OPR CONF. These re-route audio from the turret to the panel. Even though you can still use the turret keypad, you must release the OPR CONF to receive or transmit audio.

RADIO LEVEL CONTROLS 1, 2, and 3. These select and condi-tion as many as three transmit/receive levels. They also extend levels from the turret to the panel, and place levels on hold. Depress OFF HOOK to connect to the ESS. To select radios and place them on hold, use the "111" conference code. Depress the HOLD button to place the level on hold. This lights the CALL and extends the radio to the panel.

OPERATING PROCEDURES

The VOX/Phone Patch Panel works in close association with the attendant turret. There are four operational tasks associated with the panel. They are conditioning the panel for radio operations, answering incoming (radio/subscriber) calls, conducting phone patch operations, and performing multiple frequency broadcasting.

There are two ways to place transmitters and receivers on the panel. You can extend them from the turret if there is not a 3-way conference in the loop. You can also depress OPR CONF and the associated RADIO LEVEL CONTROL on the panel. Using this method, you establish a 3-way conference on each frequency you are monitoring with a channel of the applicable transmitter and receiver. Once this is done, depress the OPR CONF switches until the lamps go out. The transmitters and receivers are now dialed up on the panel.

ANSWERING INCOMING CALLS

RADIO CALLS. To answer a radio call from the panel, all loops on the attendant turret must first be idle (not lit). When you receive a call, a receiver call indicator for the applicable receiver flashes. Answer it by depressing OPR CONF switch for the applicable receiver.

SUBSCRIBER CALLS. Subscribers may call the panel direct using DTMF, or an operator may extend them from the turret to the panel. Answer calls to the panel by depressing the OFF HOOK/CALL switch for the applicable SUBSCRIBER LINE. Calls received at the turret must be extended to a SUBSCRIBER LINE before they can be connected to a RADIO LEVEL.

CONDUCTING PHONE PATCH OPERATIONS

Phone Patches are conducted using Voice Activated Transmit (VOX) or PUSH-TO-TALK (PTT) procedures depending on the situation. Connect a SUBSCRIBER LINE to a RADIO LEVEL for phone patching. To complete a subscriber to radio connection, depress the applicable RADIO LEVEL OFF HOOK switch. A RIGHT-ANGLE switch on the Matrix will light and point to the SUBSCRIBER LINE and RADIO LEVEL selected.

For remote subscriber radio control, use the phone patch VOX configuration to give a DTMF subscriber radio levels to control. However, it is better for the subscriber to use "A0" and "A9" for key/unkey. You may have problems when dialing DTMF signals in VOX, such as

the transmitter keying on the DTMF control signal.

BROADCASTING ON MULTIPLE FREQUENCIES

Normally, you monitor three frequencies on your console. To broadcast, depress the applicable OPR CONF buttons for each frequency you wish to broadcast on. Depress your footswitch to transmit multi-frequency broadcasts.

NOTE

In SSIII stations, radio maintenance has hardwired consoles one and three together. This allows an operator at console one to access frequencies on console three. The console three operator must release its HOLD matrix for the three OPR CONF levels. This feature is known as a Console Patch operation. More information on this operation can be obtained through your local radio maintenance.

SUMMARY

The VOX/Phone Patch Panel on the console provides mission support capability to the operator by patching as many as three subscribers, in any combination, with up to three radio levels. It also provides VOX and ANTI-VOX capability, and the necessary audio adjust controls associated with VOX operation.

The panel gives you access to radios and subscribers, while allowing multi-frequency broadcast on as many as three radios. It connects to the ESS, allowing you to complete PBX and radio control using the turret DTMF keypad.

The VOX/Phone Patch Panel works in close association with the attendant turret. There are four operational tasks associated with the VOX/Phone Patch Panel. They are conditioning the panel for radio operations, answering incoming calls, conducting phone patch operations, and performing multiple frequency broadcasting.

In SSIII stations, radio maintenance has hardwired consoles one and three together. This

allows an operator at console one to access frequencies on console three. This feature is known as a Console Patch operation.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. Which problems of 3-way conferencing via the ESS standard conferencing feature are eliminated by using the VOX/Phone Patch Panel?

2. Describe the VOX/Phone Patch Panel capabilities.

3. Describe the functions of the A B C Subscriber Line Controls.

4. Which adjustment compensates for slow rates of speech by delaying the transmitter unkeys?

5. What is the purpose of the OPR CONF?

6. What are the two methods of placing transmitters and receivers on the panel?

7. Explain how to respond to a DTMF subscriber calling direct to the VOX/Phone Patch Panel.

8. What is the best key/unkey method for a DTMF subscriber to control a phone patch remotely?

9. How are multi-frequency broadcasts conducted?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the procedures for operating the VOX/Phone Patch Panel. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Conditioning the VOX/Phone Patch Panel for radio operations.
2. Answering incoming calls.
3. Conducting phone patches.
4. Performing multi-frequency broadcasts.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 10
SCOPE SIGNAL III EQUIPMENT PANELS

OBJECTIVES

1. Given TO 31R2-2GRC212-2, and Local OIs, operate the Control-Monitor Control Panel IAW prescribed procedures.

    a. Identify the Control-Monitor Control Panel controls and indicators.

    b. Identify the function of the Control-Monitor Control Panel controls and indicators.

2. Given TO 31R2-2GRC212-2, and Local OIs, operate the Control-Monitor Monitor Panel IAW prescribed procedures.

    a. Identify the Control-Monitor Monitor Panel controls and indicators.

    b. Identify the function of the Control-Monitor Monitor Panel controls and indicators.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 9.
2. Only applicable to stations equipped with SSIII consoles.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. Local OIs

INTRODUCTION

Module 3 briefly mentioned the Control-Monitor Control Panel and the Control-Monitor Monitor Panel. It touched on functions such as the Control-Monitor Control Panel's ability to disable audio to 12 recorder channels. This module adds to that information by explaining each

of these panels. It also describes the fault alarm panel.

INFORMATION

OPERATE THE CONTROL-MONITOR CONTROL PANEL

The Control-Monitor Control Panel controls the monitoring and recording of the SSIII console radio channels. The panel consists of controls and indicators which allow you to perform these functions.

CONTROLS AND INDICATORS

The controls and indicators on the Control-Monitor Control Panel allow you to perform various functions such as, disabling the audio to a recorder channel, or establishing an RF Loopback test. The controls and indicators on this panel are the RECORDER CONTROL SWITCH/INDICATOR, BYPASS, LOOP TEST SWITCH/INDICATOR, VU METER SWITCH/INDICATOR, FOOTSWITCH SWITCH/INDICATOR, HEADSET VOLUME CONTROLS, LAMP TEST SWITCH, and the VU METER.

FUNCTIONS

RECORDER CONTROL SWITCH/INDICATOR. You can disable the audio to a selected channel recorder by depressing the appropriate switch for that channel. There are 21 switch/indicators but only 12 are used. The applicable indicator lights show which channel recorder is disabled.

BYPASS. The BYPASS connects the headset/microphone to the control site audio jackfield. Manual patching by control site maintenance personnel provides the operator with an audio path to the transmitter and receiver sites. Control site maintenance can key the transmitters by patching in their DTMF phone and manually dialing "A0" or "A9". This feature provides a backup broadcast capability during unforeseen failures of the ESS and/or consoles.

LOOP TEST SWITCH/INDICATOR. This switch is used only during RF loopback testing. An RF loopback test checks the performance of an HF radio channel. It measures the quality of the communication path and verifies the operating parameters of the transmitter,

receiver, and antenna. The indicator lights when the loop test is engaged.

VU METER SWITCH/INDICATOR. This switch allows you to select the microphone or transmitter audio for monitoring on the VU Meter. The indicator lights when selected.

FOOTSWITCH SWITCH/INDICATOR. This two-position pushbutton selects operation for FSK or DTMF keying. Selecting the FSK position and pressing the FOOTSWITCH causes an FSK-mode transmission. The pushbutton is a split-light indicator that illuminates either FSK or DTMF at all times. The normal position is DTMF.

Selecting the DTMF position and pressing the FOOTSWITCH keys the transmitter and mutes the receiver. It does this by sending a two-character DTMF sequence ("A0") on-line. Releasing the FOOTSWITCH transmits another two-character DTMF sequence ("A9") to unkey the transmitter and unmute the receiver.

HEADSET VOLUME CONTROLS. LEFT and RIGHT volume controls allow you to adjust the volume level to the left and right headphones. The MIC GAIN control allows you to adjust the microphone audio level for an external headset or handset. The LAMP TEST switch allows for checking all panel indicator lamps.

VU METER. This meter shows the signal level of the microphone or transmitter when the VU METER switch is selected.

OPERATE THE CONTROL-MONITOR MONITOR PANEL

This panel consists of nine separate control modules and is expandable to 12. Each control module monitors selected sidebands and allows for adjusting the volume and squelch of each receiver's audio to the headsets. You can also use these modules to select sidebands for measuring the audio levels of as many as 12 transmitters.

CONTROLS AND INDICATORS

The controls and indicators on the Control-Monitor Monitor Panel allow you to perform various audio monitoring functions. The controls and indicators on this panel are the VU SELECT, VU METER SWITCH/INDICATOR, LEFT/RIGHT SWITCH/INDICATOR, CALL-INDICATOR/CHANNEL-SELECT SWITCHES, and the VOLUME/SQUELCH CONTROL.

FUNCTIONS

VU SELECT. A four position switch that allows you to select the transmitter sideband (channel), A1, A2, B1, or B2, for monitoring on the VU Meter. The switches on each of the control modules control the audio to the VU meter on the Control-Monitor Control Panel. Use the VU meter to monitor the transmit audio levels on any of 12 transmit levels. The Control-Monitor Control Panel VU Meter switch must be in XMT.

VU METER SWITCH/INDICATOR. Depressing this switch selects the transmitter for the selected sideband. It disables all other transmitter sideband monitoring. An indicator lights to show the transmitter is being monitored.

LEFT/RIGHT SWITCH/INDICATOR. Use this switch to select either the left or right headset earphone or speaker for monitoring audio. Left or right indicator lights to show selection.

CALL-INDICATOR/CHANNEL-SELECT SWITCHES. The call indicator (C) lamp for the applicable sideband flashes to indicate the presence of audio above a preset level. Depressing the switch allows you to monitor channel audio on the speaker and headset. Selecting the sideband for monitoring also illuminates the applicable control module acknowledgment (A) lamps on all consoles for that sideband. This indicates that an operator is monitoring the sideband.

VOLUME/SQUELCH CONTROL. The squelch control sets the gain for that receiver's audio. It squelches the audio signal from the receiver at the console, not the receiver itself.

NOTE

Use the squelch control with caution, since you might not hear weak signals on the headset.

The volume control adjusts the receiver signal level into the earphone. The squelch and volume controls on the Control-Monitor Monitor Panel affect the headset's earphones only. The speakers have their own volume control. When using any control module, you can also monitor audio on the left console speaker.

STATION COMMON ALARM PANEL. This fault alarm panel provides audio and visual notification of power supply failures. These power supplies can be internal or external. There are 12 panel indicators, only 9 are used, that show console and control site faults when they occur. When a fault is detected, the applicable red indicator lamp lights and the panel sounds an audible alarm. Depressing the RESET switch silences the audible alarm and the red light goes out. The applicable amber indicator lamp lights and remains lit until the fault is cleared by maintenance.

SUMMARY

The Control-Monitor Control Panel controls the monitoring and recording of the SSIII console radio channels. There are various switch/indicators that allow you several options. These options include; disabling the audio to a selected channel recorder, performing RF loopback tests to measure the quality of the communication path and verify the operating parameters of the transmitter, receiver, and antenna, selecting the microphone or transmitter audio for monitoring on the VU Meter, and selecting FSK or DTMF operation keying.

Individual volume controls allow you to adjust the volume level to the left and right headphones. The MIC GAIN control allows you to adjust the microphone audio level for an external headset or handset. The LAMP TEST switch allows for checking all panel indicator lamps.

The Control-Monitor Monitor Panel consists of 9 separate control modules and is expandable to 12. Each control module monitors selected sidebands and allows for adjusting the volume and squelch of each receiver's audio to the headsets. You can also use these modules to select sidebands for measuring the audio levels of as many as 12 transmitters.

The VU SELECT switch on the Control-Monitor Monitor Panel is a four position switch that allows you to select the transmitter sideband for monitoring on the VU Meter. Use the VU Meter to monitor the transmit audio levels on any of 12 transmit levels.

When audio above a preset level is detected, the call indicator (C) lamp for the applicable sideband flashes. Selecting the sideband for monitoring illuminates the applicable control module acknowledgment (A) lamps on all consoles for that sideband.

The volume control adjusts the receiver signal level into the earphone. The squelch and volume controls on the Control-Monitor Monitor Panel affect the headset's earphones only. The speakers have their own volume control.

Audio and visual notification of power supply failures is the function of the Station Common Alarm fault panel. Nine panel indicators are used to show console and control site faults when they occur. When a fault is detected, the applicable red indicator lamp lights and the panel sounds an audible alarm.

REVIEW QUESTIONS

After answering the following questions, check your answers against the confirmation key at the back of this volume. Review the material for any questions you missed.

1. What are the two positions of the FOOTSWITCH?

2. How many separate control modules are on the Control-Monitor Monitor Panel and what are their purposes?

3. Why is it important to exercise caution when using the squelch control?

4. Which function does the VU Meter perform?

5. Which position must the Control-Monitor Control Panel VU Meter Switch be in to monitor the transmit audio levels?

6. If an external power supply fails, what must each console operator do to mute the alarm?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the operation of the Control-Monitor Control Panel and Control-Monitor Monitor Panel. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Disabling a recorder control channel.
2. Muting transmitters and receivers.
3. Adjusting headset audio.
4. Bypassing control panel electronics.
5. Monitoring receiver audio level.
6. Setting squelch noise threshold.
7. Monitoring transmitter audio level.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 11
SCOPE CONTROL CONSOLE VOICE OPERATIONS

OBJECTIVES

a. Explain the different methods of frequency input.

b. Explain analog voice operations.

c. Explain intercept voice operations.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 5.
2. Only applicable to stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. TO 31R2-4-362-2
2. Local OIs

INTRODUCTION

Due to the complexity of the Scope Control System, it is essential to develop a thorough understanding of the operating principles involved. The Scope Control console consists of four major components: the Analog console (left side), the 15-line Cordless Switchboard (middle), the Intercept console (right side), and the Top Hat unit (status display). For ease of studying, refer to the console while reading this module.

INFORMATION

FREQUENCY INPUT METHODS

Access to Scope Control radio levels is controlled by the Intercept console operator. By using the Extend/Standby function of the AIMs, the Intercept operator may allow or deny access to any level. Once a level is accessed, control then becomes possible using the radio (line) dial codes.

The two methods of frequency input from the console are manual (longhand) and preset (shorthand) dialing.

LONGHAND DIALING. Longhand dial codes consist of single digit codes that tell the equipment you want to input a frequency. The two radio/line codes are 5 and 8. In simplex operations, code 5 or 8 changes both the transmitter and receiver. In duplex operations, code 5 changes the receiver and code 8 changes the transmitter only. When dialing the first digit (5 or 8), you should hear two supervisory control tones (one from the receiver and one from the transmitter). Once the operator completes dialing the 6-digit frequency, four supervisory control tones (two from the receiver and two from the transmitter) indicate the function is complete.

Enter the frequency as a 6-digit number. For example, if the frequency is 9023, you prefix and suffix the frequency with zero (090230). If the frequency is 5700.5, you prefix the frequency zero (05700.5). Another example would be frequencies above 10MHz. For instance, if the frequency is 11226, you suffix with zero (112260). If the frequency is 20006.5, you add nothing. These were examples of how to dial frequencies using longhand dialing. The other method of dialing is shorthand dialing.

SHORTHAND DIALING. Shorthand dialing allows you to quickly access a PRESET frequency. Shorthand dial codes consist of PRESET frequencies entered as 2-digit codes. In simplex operations, code 7 or 9 changes both the transmitter and receiver. In duplex operations, code 7 changes the receiver and code 9 changes the transmitter only. When dialing the first digit, two supervisory control tones are heard (one from the receiver and one from the transmitter). The second digit corresponds to the required PRESET frequency. Upon dialing the second digit, four supervisory control tones (two from the receiver and two from the

transmitter) indicate the function is complete. Remember, when dialing 7 or 9, the receiver mutes.

Preset dial codes are conditioned for USB mode, low-power out, and for an OMNI antenna. By knowing this bit of information, you can trick the equipment into accepting an OMNI on receive and an LP on transmit or vice versa. Further training on the equipment will be accomplished later with your trainer's assistance.

ANALOG VOICE OPERATIONS

The Analog console (Opr 1) allows the following functions to be performed:

- Access the SW-3600 switchboard through any of the six line panels.

- Provide Dial Service Assistance (DSA) to any subscribers of the SW-3600 switchboard. The DSA allows the operator to assist subscribers by accessing levels or coordinating the use of levels. It also allows the operator to enter a busy circuit and override it, if needed. There are three DSA modules and two DSA circuits. (One DSA module on the Analog console and two DSA modules on the Intercept console.) Only two modules from the same DSA circuit can be ANSWERED simultaneously, and DSA service is provided only when the DSA circuit is called.

- Access radios via the SW-3600 switchboard and remotely select the frequency, transmission mode, antenna azimuth, transmitter power, and keying. There are seven line panels but only six are available for accessing the radios. The seventh (far left) panel is an extend panel used for phone patching.

- Monitor all communications connected to the Analog console.

- Provide patch circuits between external telephone lines and radio levels, or between two and more radio levels.

- Obtain access to an external order wire circuit.

- Measure and control audio line levels in patch condition.

- Patch low-speed Radio Teletype (RATT) to radio circuits.

INTERCEPT VOICE OPERATIONS

The Intercept console consists of three major components, the Audio Intercept Modules (AIMs), Patch Intercept Modules (PIMs), and the Audio Routing Modules (ARMs). A1 channel or USB channel is the control channel for Scope Control. The A1 AIM is normally the second AIM from the left on each radio/level.

Any subscriber connected to SW-3600 can be accessed from the Intercept console via any AIMs or PIMs with the ARM in the SWBD position. With the ARM in the SWBD position, you have direct access to the SW-3600. The dial tone from the SW-3600 allows you to dial the switchboard dial code for any SW-3600 subscriber.

The Intercept console can broadcast on all AIMs and PIMs simultaneously. Normally, only four levels are used for a broadcast.

Phone patches can be run from the Intercept console using the 19th AIM via the PIMs and the AIMs and by the emergency (answer-to-answer) method. Once the 19th AIM has been connected to a PIM in this manner, it may be left in that condition indefinitely. If traffic is heavy, leave it set up to speed up assistance.

If the 19th AIM is inoperative, phone patches may still be accomplished using an emergency phone patch known as an "Answer-to-Answer" patch. However, it can give maintenance personnel some problems due to the hot levels coming directly into the console. Operators need to adjust the gain on the cordless line to prevent these hot levels. Problems or not, it's the most common way an emergency phone patch is run at most stations.

The Intercept console also allows the operator to run a Subscriber-to-Subscriber patch. Use this procedure for subscriber conferencing. The conference can be between two cordless subscribers or two cordless subscribers and an SW-3600 subscriber. Substitute a radio or SW-3600 subscriber for the PIM to allow for a 3- or 4-way conference, if including the operator.

SUMMARY

Access to Scope Control radio levels are controlled by the Intercept console operator. Once a level is accessed, control then becomes possible using the radio (line) dial codes. There are two methods of frequency input: manual (longhand) and preset (shorthand) dialing. Longhand dial codes consist of single digit codes that tell the equipment you want to input a frequency. Shorthand dialing consists of PRESET frequencies entered as 2-digit codes.

The Analog and Intercept console. The Analog console allows you to access radios via the SW-3600 switchboard and remotely select the frequency, transmission mode, antenna azimuth, transmitter power, and keying. The Intercept position allows you to connected any subscriber to the SW-3600 console via any AIMs or PIMs with the ARM in the SWBD position. The Intercept console can broadcast on all AIMs and PIMs simultaneously. Phone patches can be run from the Intercept console using the 19th AIM via the PIMs and the AIMs and by the emergency (answer-to-answer) method. Also, the Intercept console allows the operator to run a Subscriber-to-Subscriber patch. This procedure is used mainly for subscriber conferencing.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. Name the four major components of the Scope Control console.

2. Which mode, power output, and antenna are automatically selected when using preset dial codes?

3. How many line panels on the analog position are available for accessing the radios?

4. What is the purpose of the seventh (far left) line panel located on the analog position?

5. Which channel is the control channel for Scope Control?

6. How many levels are used on the intercept position for a broadcast?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate Scope Control Voice operations. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Accessing a level from the analog position.
2. Changing frequency from the analog position.
3. Configuring analog position for a phone patch.
4. Configuring analog position for a broadcast.
5. Configuring analog position for a Back-to-Back relay.
6. Performing DSA from the analog position.
7. Joining BUSY/OVERRIDE from the analog position using DSA.
8. Accessing a level from the intercept position using an AIM.
9. Accessing a level from the intercept position using a PIM.
10. Configuring intercept position for a broadcast.
11. Configuring intercept position for a 19th AIM phone patch via the AIMS.
12. Configuring intercept position for a 19th AIM phone patch via the PIMS.
13. Performing an emergency phone patch known as Answer-to-Answer patch from the intercept position.
14. Performing Subscriber-to-Subscriber phone patch from the intercept position.
15. Performing DSA from the intercept position.
16. Configuring intercept position for a relay Back-to-Back via an AIM.
17. Configuring intercept position for a relay Back-to-Back via a PIM.
18. Calling an SW3600 subscriber from the intercept position via an AIM.
19. Calling an SW3600 subscriber from the intercept position via a PIM.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 12
SCOPE CONTROL CONSOLE DATA OPERATIONS

OBJECTIVES

a. Explain Analog Data operations.

b. Explain Intercept Data operations.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 5, and 11.
2. Applicable only to stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. TO 31R2-4-362-2
2. Local OIs

INTRODUCTION

Due to the complexity of the console, you must have a thorough understanding of the operating principles involved. Module 11 covered Scope Control console voice operations. This module covers Scope Control console teletype operations. If you acquired a good working knowledge of voice operations, data operations will be easy. There are only a few minor differences between the two. Refer to the console while reading this module.

INFORMATION

Operators commonly refer to Radio Teletype as "DATA." Radio Teletype (RATT) operations are accomplished over radio frequencies and via in-house loop-backs. The equipment currently used in Global stations can process teletype traffic at 100 words per minute

at 75 baud. Standard Global RATT service is conducted with High Space (2425), Low Mark (1575) with a center tone of 2000Hz, and an 850Hz FSK modem. The capability exists to have Low Space, High Mark with maintenance assistance. Also, the console has the capability to run teletype either over HF or landlines.

Switchboard loop-backs are important when providing teletype support. This loop checks the in-house operation of the teletype and crypto equipment, and the SW-3600. There are six different teletype loops available to check Scope Control equipment operations. Each loop is designed to progressively add more equipment to help in troubleshooting. Your knowledge of these loops will aid you immensely. Along with the loops, a working knowledge of the Red Patch panel and Black Teletype rack is essential. The panel and rack aids in configuring different pieces of equipment when needed.

The switchboard loop-back checks the operation of all in-station equipment, minus the radios. To perform the loop-back with the KG-84/84As, patch in the desired 84 system, flip loop switch and initiate test. If you have a problem with a KG-84 device, switch over to the other system and log out the bad one.

SIMPLEX RATT and HALF-DUPLEX DATA are very similar. To run simplex/half-duplex data follow the steps described at the Red Patch panel. The only difference is that in simplex the receiver mutes, while in half-duplex it does not. Since the receiver mutes while transmitting in simplex, the information typed on the ASR 28 keyboard will not print.

Due to airborne platform limitations, the majority of Global teletype will be in the simplex mode. However, it is common for the Global Operator to work in the half-duplex mode to ensure the equipment is functioning properly. Remember, when working in the duplex mode, if you do not dial radio/line code 46 for duplex, you will not receive your transmission on the printer. As mentioned earlier, you will be in simplex and the receive will mute.

ANALOG DATA OPERATIONS

At most stations, the Analog console is hardwired to teletype system one and crypto one. All the operator has to do is place the radio in the data position via the ARM. The teletype and crypto equipment must be powered up and on-line.

Analog FULL-DUPLEX DATA is not used often due to aircraft equipment limitations. Once the current refitting of the airborne platforms is completed, full-duplex will become the primary teletype mode. Full-duplex teletype allow both the subscriber and you to transmit simultaneously, using two separate frequencies. For the best results, these frequencies should be at least 10 percent apart. This is to eliminate bleed over (interference) of the output signal. When working with data, always bring up the transmit frequency first, and then perform a voice check to ensure the proper operation of the level.

Analog TWIN SSB FULL-DUPLEX DATA is another rarely used function due to equipment limitations. The circuit allows the subscriber and discrete teletype operator to transmit voice and RATT simultaneously. Again a frequency separation of 10 percent is recommended. When using twin SSB full-duplex operations, you will not hear any of your transmissions since you're operating on two separate frequencies.

If running teletype on USB and VOICE on LSB, key for LSB is either the SW-4000A Keyline or by dialing Lock Key On. If operations are not conducted on a near-continual basis, dial 48 or place the SW-4000A on OFF.

Global stations are tasked to provide teletype service via landlines. This procedure is simple when using the secondary data system.

INTERCEPT DATA OPERATIONS

The procedures above just covered Analog Data operations. This section will cover Intercept Data operations. The procedures for conditioning a level are the same as for the Analog/Intercept voice or Analog Data.

As mentioned earlier in this module, the switchboard loop-back checks out the operation of all in-station equipment, minus the radios. Again, to perform the loop-back with the KG-84/84As, patch in the desired 84 system, flip loop switch and initiate test. If you have a problem with a KG-84 device, switch over to the other system and log out the bad one.

The procedures for Intercept FULL-DUPLEX DATA are the same as simplex/half-duplex except the level is configured for duplex and has different transmit and receive frequencies. When running full-duplex you have the capability for voice on USB and Data on LSB. Both can be run simultaneously. Any operations on LSB requires a Lock Key on USB, unless using the lower side of the A1 channel.

SUMMARY

A switchboard loop-back checks the in-house operation of the teletype and crypto equipment, and the SW-3600. There are six different teletype loops available to check Scope Control equipment operations. Each loop is designed to progressively add more equipment to help in troubleshooting.

Analog Full-Duplex Data and Intercept Full-Duplex Data are not used often due to aircraft equipment limitations. Once the current refitting of the airborne platforms is completed, full-duplex will become the primary teletype mode. Full- duplex teletype allows both the subscriber and you to transmit simultaneously, using two separate frequencies. When operating in full-duplex mode the frequencies should be at least 10 percrnt apart. This is to eliminate bleed over (interference) of the output signal. When working with data, always bring up the transmit frequency first, and then perform a voice check to ensure the proper operation of the level.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. At which speed and baud rate can equipment used in Global stations process teletype traffic?
2. How many different loops are available and what are their purposes?

3. Which action is required if you have a problem with a KG-84 device?

4. Which teletype and crypto are hardwired to the Analog console?

5. What is the recommended separation of frequencies?

6. Why is TWIN SSB FULL-DUPLEX DATA rarely used?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate Scope Control console Data operations. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Performing a Loop-Back test from the Analog position. 2. Running DATA from the Analog position using Teletype (TTY) one and Crypto one.
3. Running DATA from the Analog position using Crypto two.
4. Configuring a radio level for Full-Duplex TTY operations from the Analog position.
5. Configuring a radio level for Twin Sideband Full-Duplex TTY operations from the Analog position.
6. Configuring Analog position for Landline Teletype operations.
7. Performing a Loop-Back test from the Intercept position.
8. Configuring Intercept position for Simplex/Duplex TTY from the AIMs.
9. Configuring Intercept position for Simplex/Duplex TTY from the PIMs.
10. Configuring Intercept position for Twin Sideband Full-Duplex TTY from the AIMs.
11. Configuring Intercept position for Twin Sideband Full-Duplex TTY from the PIMs.
12. Configuring Intercept position for Landline teletype operations.

After you complete these procedures, your trainer will review you work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 13
SCOPE PATTERN EQUIPMENT OPERATIONS

OBJECTIVES

a. Explain how to prepare the Scope Pattern console for operations.

b. Explain the various operations associated with the Scope Pattern console.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 5, 11, and 12.
2. Only applicable to stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. TO 31R2-4-462-2
2. Local OIs

INTRODUCTION

Scope Pattern equipment consists of four operator consoles, two coordinator consoles, and five common equipment cabinets. The coordinator console is covered in the next module. The Scope Pattern console allows the operator to perform three basic functions:

- Access and control up to 15 subscriber lines.
- Control communications with airborne or fixed stations on up to eight fix-tuned and four auto-tuned radios.
- Patch two subscribers together.

For ease of training refer to the console while reading this module, if possible. Your

trainer will assist in operating the equipment as needed.

INFORMATION

PREPARE FOR OPERATIONS

At each shift change, check the Scope Pattern console for proper operation. If you find any problems (including burned-out light bulbs), inform the supervisor and/or senior operator for corrective action. To check the operator console, press the LAMP TEST switch. All console indicators should light except the following:

- Receive Antenna Control
- FIXED Tuned Radio - OFF
- Switchboard Lines - OFF
- SUB BUS 1/SUB BUS 2 - RING - HOLD - OFF
- Intercom Call

Next, check the headset and/or handset for correct insertion in their associated jacks. Do the same with the footswitch plug located on the lower-left side of the operator console. Also, be sure the speakers are on the right frequencies. The speakers were added to the Scope Pattern console upon termination of the aeronautical mission to eliminate the continuous use of headsets and lessen the headset fatigue factor. Three speakers normally lay across the top of the Scope Pattern console. They are controlled by a panel with three rotary switches each having 12 positions. The switches are wired so the first eight positions match the eight fix-tuned lines, and the last four positions match the four switchboard lines.

Select the radios assigned to your position one at a time in BUS 2 (BUS 2 is conditioned for the duplex mode that allows the operator to hear his/her transmission). Make a short test count on each to ensure they are operating. Again, if you find any problems, inform the supervisor/senior operator for corrective action.

OPERATIONS

Before answering or calling an aircraft, review the procedures for establishing communications with your trainer. The procedures should be similar to the ones you learned in

technical school. One important procedure to follow is the positioning of the microphone. Have the microphone, handset or headset, positioned an 1/2 inch away from your lips. If you position the microphone to close, your voice will become distorted to the receiving party. If your position the microphone to far from your mouth, the receiving party might have a hard time understanding you. When you have completed you call and no further assistance is required, depress the OFF button on the line panel in use. This places you back into the Monitor mode, unless you're wearing headsets. During headset operation, press the Monitor button for the level(s) assigned to monitor.

When calling an aircraft, the same procedure applies as answering an aircraft. However, to establish communications with the aircraft use the long call method. Once contact is established, advise the aircraft you have traffic or query him/her for needed information. When you have completed your call and no further assistance is required, depress the OFF button on the line panel in use.

Due to HF characteristics, you may need to change antenna direction at times to improve reception. This is a simple task from the operator position. Just depress the button on the antenna control corresponding with the direction needed. The antenna control buttons are located in the upper-right corner of the console. The five selections are:

N - North azimuth 360 degrees
S - South azimuth 180 degrees
E - East azimuth 90 degrees
W - West azimuth 270 degrees
O - OMNI directional

Antenna selection, using the antenna control, is only possible on fixed tune radios. This method of antenna selection will not work with the four switchboard levels. You have to access a Scope Control level then dial the two-digit code for the desired antenna.

Since Global HF provides command and control communications to a variety of users, many different communications formats and procedures are used. One type of communication accomplished from the Scope Pattern position is a radio broadcast. The purpose of a broadcast is to pass weather observations, special advisories, or emergency war orders to aircraft.

Each Scope Pattern console, coordinator console, and Scope Control console has the

same phone lines connected to the 15-line cordless switchboard.

Operation of the cordless switchboard is a simple process that will take you only a short time to master. Normally, the lines are clearly labeled. To help you remember these lines, have your trainer tell you which ones are used and their purpose. Annotate the information for future reference.

When working with the switchboard, remember, no matter where the line has been answered or placed on HOLD, access to that line is always available from any operator on the Scope Pattern or Scope Control console. However, if the line was placed on HOLD, the HOLD must be dropped from the console where it was applied.

At one time or another, you will need to place a line on HOLD. To do this, just press the HOLD switch associated with the BUS in use. The blue indicator associated with the line in use will light. The line is now in HOLD status and any other line may be answered. To get back on the line placed on HOLD, answer the line. The blue indicator will go out and you're reconnected. Remember that only one line at a time may be answered on each BUS of the console.

If you receive another call, either place the line you're on back on HOLD, or answer the call on the BUS not in use. For example, if you had caller one on BUS 1, have him/her standby. Select SUB BUS 2 and answer the incoming call by pressing the appropriate answer button on BUS 2. You are now connected to the caller on the second line (BUS 2), and the first caller (BUS 1) is standing by. If you are on headsets, you can hear both parties simultaneously. One is in your primary earphone (left side) and the other in monitor (right side), depending on which BUS you have in answer. You can alternate between the parties by switching back and forth on the BUS select switch. By using a similar procedure, you can run dual phone patches off the same console. All fifteen lines may be placed on HOLD at once, but they each have to be answered and placed on HOLD one at a time.

Answering an incoming call is a simple task. Your first warning is usually an audio buzzer followed by the flashing CALL/BUSY indicator (located above the line). To answer, set the BUS select switch to the BUS you're going to answer the call on. Depress the enclosed switch-indicator in the SUB BUS you're working. The flashing CALL/BUSY light will go steady and the audio buzzer will mute. Be sure the OPERATOR ROUTING switch is in the SUB position. You may now answer the line IAW local telephone answering procedures. The

primary volume control knob controls the audio level.

To run a phone patch, answer the radio line that the aircraft is calling on, copy the request, and have him/her standby. Answer a line that corresponds to the radio BUS you are using. Follow the procedures above for placing a call. Once you have the ground party on the line and have given the required phone patch briefing, place the operator routing switch to PATCH and advise the aircraft to initiate. Key by using the appropriate operator patch control switch. When both parties have satisfactorily completed their conversation, press the OFF button on the appropriate SUB BUS and place the operator routing switch in the A/C position. Ask the aircraft if they require further assistance.

There are four switchboard lines on the right-hand side of the fixed radio lines. These lines allow access to the Scope Control equipment. In most stations, the operators use these lines to contact the TX and RX sites when accomplishing frequency changes. To use these lines, the OPERATOR ROUTING switch must be in the A/C or PATCH position. When you answer one of these lines with the routing switch in the A/C or PATCH position, you will receive a dial tone from the SW-3600 switchboard. You then dial a two-digit switchboard dial code for Scope Control, and access either a radio or an SW-3600 subscriber.

Many Global HF missions require continuous uninterrupted discrete support. It is important that operators learn how to access and control the Scope Control radios so they can provide the high quality discrete service our customers need. In the process, they will become highly qualified operators. Switchboard line operations are similar to the ones for fixed radio lines with two exceptions. There is no SSB/AM Mode switch on the line and you must dial up the radio using the rotary dial.

When using these lines, be sure the BUS Select switch corresponds to the BUS you're operating on. Additionally, the OPERATOR ROUTING switch must be in the A/C position. Answer the line and dial the switchboard code for the level or site desired.

If you call the TX or RX site for a frequency change or to check out the line, be sure to press the OFF button for the line you used when done. This will drop everything you just did. If you need to put the line on HOLD, depress the HOLD button (the top button on each row). You may drop off the line and return to it later without having to re-dial.

Normally, after accessing a radio, you would depress the HOLD button on the switchboard line in use. You can monitor the line using the speaker and not have to re-dial the

radio each time you use it.

Before going too far into Scope Control, there are a few details you need to know. You already know that Scope Pattern uses fix-tuned radios and Scope Control uses auto (remote control) tuned radios. Since Scope Control is a remote control system, there is a system of supervisory tones used to control the equipment. These tones tell the operator if the equipment is working properly or if a fault condition exists.

When you first dial up a Scope Control level, you should receive a series of four beeps: two high-pitched and two low-pitched. The high-pitched tones are from the transmitter site, and the low-pitched tones are from the receiver site. Recognizing the difference in these tones can save you many headaches later, especially when you're experiencing equipment problems. If you did not receive the four beeps, one of two things has happened: the equipment is not operational, or a HOLD was left on the level. To check the operations of the level, dial radio code 44, J-Box hold off. You should receive two beeps on the first digit and four beeps on the second. If you received the beeps as stated, the equipment is operational and a HOLD was left on. When dialing radio codes on Scope Control, always wait for the supervisory tones before dialing anything else. If you don't, you could fault out the radio.

When dialing frequencies on Scope Control, they must always contain six digits. For example, you want to dial up the frequency 4746. First, dial code 45 then the control code 5 to tell the equipment to prepare for a frequency, and then dial 047460, not 4746. The equipment is designed to work only with six-digit frequency inputs. If you are working with frequencies below 10MHz, always prefix and suffix your frequency with a zero. Frequencies above 10MHz must be suffixed with a zero.

When working with Scope Control, remember to dial slowly and wait for your supervisory tones. Never dial a new function while an antenna is rotating or a level is tuning. Scope Control is an old piece of equipment that must be treated with tender loving care.

There are two more functions allowed using the Scope Pattern console: intercom and subscriber/multiple. The Intercom lets the operator contact any console, or any of the four sites, without going through either a radio or a switchboard line. The Subscriber/Multiple operator call lets the operator perform a conference with as many as 10 parties.

SUMMARY

You now have the background knowledge to perform pre-operational checks and simple tasks on the Scope Pattern console. At each shift change, check the Scope Pattern console for proper operation. When you encounter a problem (including burned-out light bulbs), inform the supervisor and/or senior operator for corrective action. Another procedure performed before operating the equipment is the positioning of the microphone. Position the microphone 1/2 inch from your lips. This allows for good reception on the receiving end.

One type of communication accomplished from the Scope Pattern position is a radio broadcast. The purpose of a broadcast is to pass weather observations, special advisories, or emergency war orders to aircraft. Also, we discussed how important it is that operators learn how to access and control the Scope Control. When accessing a Scope Control level, you should receive a series of four beeps: two high-pitched and two low-pitched. The high-pitched tones are from the transmitter site, and the low-pitched tones are from the receiver site. Your trainer will assist you in becoming proficient on this piece of equipment.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What are the basic functions that may be performed from the Scope Pattern position?

2. Which action is taken if you encounter a problem while checking the equipment during shift change?

3. When were the speakers added to the Scope Pattern console?

4. How far should the microphone be positioned from your mouth?

5. How do you select an antenna using the switchboard levels on the Scope Pattern console?

6. What is the purpose of broadcasts?

7. Why is it important for operators to learn how to access and control the Scope Control radios?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate Scope Pattern operations. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Preparing console for operations.
2. Answering/Calling an aircraft.
3. Placing an outgoing call.
4. Receiving an incoming call.
5. Selecting a directional receive antenna.
6. Configuring console for a broadcast.
7. Configuring console for a phone patch.
8. Accessing a Scope Control radio level using Scope Pattern.
9. Answering/Calling using the intercom.
10. Configuring console for subscriber/multiple operator calls.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 14
COORDINATOR CONSOLE EQUIPMENT OPERATIONS

OBJECTIVES

a. Explain how to prepare the Coordinator console for operations.

b. Explain the various operations associated with the Coordinator console.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 5, and 11 through 13.
2. Only applicable to stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. TO 31R2-4-462-2
2. Local OIs

INFORMATION

PREPARE CONSOLE FOR OPERATIONS

At each shift change, check the Coordinator console for proper operation. To check the operator console, press the LAMP TEST switch. All console indicators should light except the following: Subscriber RING - HOLD - OFF and Intercom Call. Also, check that the handset plug is firmly seated in the associated jack located on the left side of the console. If you find any problems (including burned out light bulbs), inform the supervisor and/or senior operator for corrective action.

OPERATIONS

To place an outgoing call, an operator can choose one of three methods: hotlines, rotary dial, or DTMF. Regardless of method, select a line on the cordless switchboard. The CALL/BUSY light for the answered line will light at all positions indicating the line is in use. Contact the party using either the hotlines, rotary dial, or DTMF. Communicate using the handset while depressing the Push-to-Talk button as needed.

To place the line on HOLD, simply press the blue HOLD button on the 15-line cordless. The blue HOLD indicator flashes above the line you were using, and the Call/Busy light illuminates. The line is now on HOLD. To answer the line again, simply depress the ANSWER button on that line. A maximum of three subscribers can be selected at one time and placed on HOLD for conferencing. A total of 15 subscribers can be placed on HOLD and monitored, one at a time.

Answering an incoming call is a simple process. The CALL/BUSY light will flash and a console buzzer will sound to indicate an incoming call. Depress the button under the flashing CALL/BUSY light. The light will become steady at your position and at all other positions. Communicate using the handset while depressing the Push-to-Talk button on the handset. The audio level in the handset earphone is adjusted by the console volume control.

One unique function of the Coordinator console is its subscriber conferencing capability. A conference simply means having two or more parties connected at the same time.

Contact the subscriber as described in placing a call. Once each subscriber is contacted, answer the lines together. The console allows up to three lines to be answered and connected. The total number of parties that may be tied into a conference is four when it includes the console operator. If more parties need to participate, get assistance from the base operator. To disconnect the conference, simply depress the OFF button and all lines are disconnected. Another method is to place all lines on HOLD, and release only the parties that are finished conferencing.

Any line on HOLD at the console can be monitored via the speakers by adjusting the monitor volume gain up to an audible level. When subscribers are connected, the speakers are silenced and calls are monitored with the handset or headset. However, the system can be

avoided by simply depressing one of the ANSWER buttons and the HOLD button simultaneously. The blue HOLD light illuminates and the line remains in ANSWER. The call is now being monitored via the monitor function of the console.

Coordinator console INTERCOM operation is similar to the Scope Pattern console. Incoming calls are signaled by an audible buzzer and the blue INTERCOM busy light. To answer the call, depress the INTERCOM IC button. The IC button illuminates and confirms the connection to the intercom circuit. All communications are performed via the handset using the Push-to-Talk button.

To place a call on the intercom, depress the IC button located between the BUSY and CALL indicators. Then select the button (1 through 10) on the IC row directly below, which corresponds to the desired position or remote station. When the button is depressed, a ring signal is sent to the selected station. Once the other station answers, all communications are again accomplished via the handset. Depress the IC button when finished. You are now connected once more to the 15-line cordless circuits. Once the INTERCOM IC button is depressed, all signals on the console are routed to the monitor side.

SUMMARY

As the name states, the Coordinator console is used mainly by the supervisor and/or senior operator to coordinate high volumes of traffic. The major difference between the Coordinator and Scope Pattern console is the latter's ability to access radio levels. The Coordinator console allows for the following operational functions:

1. Subscriber incoming/outgoing call.
2. Subscriber conferencing.
3. Subscriber monitoring.
4. Inter-communications with other operator, coordinator, or remote intercom stations.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the

same basic meaning. Review the applicable portions of this module for all missed questions.

1. Which light indicators will not light-up during LAMP TEST?

2. What happens to the CALL/BUSY light on all console, when a switchboard line is selected?

3. Which button must be pressed while talking via the headset?

4. What is the maximum number of subscribers that can be placed on HOLD for conferencing?

5. What is the total number of subscribers that can be placed on HOLD at one time?

6. How many lines can be monitored at one time?

7. How do you monitor subscribers who are connected for conferencing?

8. How do you receive an incoming call using the intercom?

9. How do you adjust the headset audio?

10. How are incoming calls signaled?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the coordinator console equipment operations. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Performing a pre-operational check.
2. Placing an outgoing call.
3. Receiving an incoming call.
4. Configuring console for subscriber conferencing and monitoring.
5. Operating intercom.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 15
CONFIGURING AN/GSH-56
FOR OPERATIONS

OBJECTIVES

a. Describe the components, controls, and indicators of the AN/GSH-56 Recorder.

b. Explain the various operations associated with the AN/GSH-56 Recorder.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10 for stations equipped with SSIII consoles.
2. Completion of AFQTP Modules 1 through 5, and 11 through 14 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. TO 31S3-4-122-1
2. Local OIs

INTRODUCTION

Most Global HF control sites are using the AN/GSH-56 Recorders. Sites equipped with AN/GSH-35 Recorders are having logistic and reliability problems. The Air Force has a project under way to replace the AN/GSH-35 with AN/GSH-56 Recorders. Since the AN/GSH-35 is being replaced this module will only cover the components, controls, indicators, and the various operations associated with the AN/GSH-56 Recorder. Refer to the recorder while reading this module.

INFORMATION

COMPONENTS, CONTROLS, AND INDICATORS

The AN/GSH-56 Recorder is a 20-channel recorder. Channels 1 through 19 are available for recording radios and selected circuits. At most stations, channel 20 is reserved for the Digitime time code generator.

COMPONENTS. The recorder consists of three major components: Tape Transports, Electronics Assembly, and Cabinet Assembly. These components are used primarily by maintenance personnel, but as an operator you need to become familiar with them.

Tape Transports. This self-contained unit consists of a tape drive mechanism and an electronic control unit. The tape reel turntables, reel hold-downs, control buttons, and indicators are all on the front panel.

Electronics Assembly. This assembly contains the electronic components and circuits required for recording, monitoring traffic, and detecting malfunctions. It consists of a front panel and a printed circuit board (PCB) card cage. The front panel displays channel selector and monitor buttons, a loudspeaker and a related volume control, and the headphone and re-record jacks. Also displayed are and LED bar graph that operates as a VU meter, a scanner-channel select display, channel and mode select switches, and the Digitime System with Autosearch.

The Digitime System with Autosearch has three capabilities:

1. Generator. The generator produces and displays a recordable signal with time of day in digital form. It can also switch to the standby transport at any selected hour of the day.

2. Reader. The reader decodes and displays recorded time of day at any speed or direction of tape movement. A single track head delivers the recorded time to the reader from either of the selected transports.

3. Autosearch. Select the desired time by rotating the thumbwheel switches. The Autosearch then interfaces with the tape transport to move the tape at the highest possible speed while seeking the referenced time. Accuracy is within 10 seconds. Autosearch can function on either selected tape deck.

Cabinet Assembly. The power supply, located within the cabinet assembly, distributes power to the electronics, tape transports, Digitime System, and various interconnected cables.

VARIOUS OPERATIONS

There are five activities associated with configuring the control site recorder for operations: Prepare for Operations, Record/Playback Voice, Fast Forward/Rewind, Automatic Changeover, and Failsafe Alarm.

NOTE

During the Fast Forward/Rewind operation, remember not to hold the SEARCH button in unless you intend to "CUE" the tape to the heads. This prevents excessive head wear during search operations.

In dual transport systems, you may automatically start recording on a standby transport whenever a failure or out-of-tape condition occurs on the operating tape or when the raday changeover signal is received.

In automatic operation, the Recorder/Reproducer will automatically switch from one tape transport to the other in the event of failure. In addition, the time reference system will cause a changeover from the primary tape transport to the standby transport at raday. There will be a period of simultaneous recording by both transports to ensure communications occurring at raday are not separated onto two tapes. At the end of the tape, that transport will automatically stop.

SUMMARY

The AN/GSH-56 Recorder is a 20-channel recorder. Channels 1 through 19 are available for recording radios and selected circuits. Channel 20 is reserved for the time code generator at most stations. The recorder consists of three major components: Tape Transports, Electronics Assembly, and Cabinet Assembly. The tape transports consist of a tape drive mechanism and an electronic control unit. The electronics assembly contains the electronic components and circuits required for recording, monitoring traffic, and detecting malfunctions. The cabinet assembly contains the power supply that distributes power to the electronics, tape transports, Digitime System, and various interconnected cables.

The five activities associated with configuring the control site recorder for operations include: Prepare for Operations, Record/Playback Voice, Fast Forward/Rewind, Automatic Changeover, and Failsafe Alarm. During the Fast Forward/Rewind operation, remember not to hold the SEARCH button in unless you intend to "CUE" the tape to the heads. This prevents excessive head wear during search operations. In automatic operation, we explained the Recorder/Reproducer will automatically switch from one tape transport to the other in the event of failure.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. Why is the AN/GSH-56 Recorder replacing the AN/GSH-35?

2. What is channel 20 of the AN/GSH-56 normally used for?

3. What are the three basic components of the AN/GSH-56?

4. Which component of the AN/GSH-56 contains the Digitime System?

5. How accurate is the Autosearch on the recorder?

6. Which component contains the power supply for the AN/GSH-56?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the AN/GSH-56 operations. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Preparing recorder for operations.
2. Performing record/playback voice.
3. Performing fast forward/rewind.
4. Performing automatic changeover.
5. Activating failsafe alarm.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 16
STRATEGIC AUTOMATED COMMAND CONTROL SYSTEM (SACCS) OPERATIONS

OBJECTIVES

a. Explain the purpose and capability of the AWCP communication processor.

b. Explain and describe the different functions of the AWCP communication processor components.

PREREQUISITES

1. Only applicable to stations equipped with the Air Wing Command Post communication processor.
2. Completion of AFQTP Modules 1 through 10, and 15 for stations equipped with SSIII consoles.
3. Completion of AFQTP Modules 1 through 5, and 11 through 15 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. MCR 55-29
2. Local OIs

INTRODUCTION

The Air Wing Command Post (AWCP) communication processor is found only in CONUS Global stations at Andrews, Offutt, and McClellan. If you're assigned to an overseas Global station, this information will help you better understand other equipment existing within the Global HF System. This module will not cover every aspect of SACCS but gives the basic equipment functions and operational tasks performed daily by CONUS Global HF operators.

NOTE

SACCS messages at locations with no equipment are prepared in AUTODIN format on DD Form 173. Eventually, all stations will be equipped with the Message Distribution Terminal (MDT). SACCS messages will be accomplished using SARAH LITE for transmission over the MDT.

INFORMATION

SACCS OPERATION PREPARATION

This preparation is vital to beginning system functions. Establishing a session security level prepares the terminal for operations. The Session Security Level Menu automatically appears on the Visual Display Unit (VDU) screen after an Initial Program Load (IPL) or when the CLR LVL key is depressed. You identify the classification and category (security level) by entering a three-digit code combination from those shown on the menu. The first digit is the classification code; the second and third digits are the category codes.

EQUIPMENT PURPOSE

The Strategic Automated Command and Control System (SACCS) is sometimes referred to as SACDIN. SACCS is a data transmission system supporting various MAJCOM's command and control needs. This system is responsive, reliable, and secure.

The AWCP communication processor is commonly referred to as the SACCS terminal. The AWCP lets you compose, transmit, and receive messages. These messages are packetized for transmission. Each packet can have up to 256 characters and many packets will be required for long messages. Each message is limited to 52 lines/80 characters per line, or 4,160 characters per message.

EQUIPMENT COMPONENTS

The AWCP communication processor has one equipment rack and two collocated user

terminal elements (CUTEs). The CUTE consists of the Visual Display Unit/Keyboard (VDU/KB) and the Line Printer Unit (LPU).

VISUAL DISPLAY UNIT (VDU). The VDU is used to compose and edit messages. There is a 24-line display area consisting of 19 lines for message composition and editing, a separator line of dashes, 3 lines for notifications, and a VDU/KB status notification line.

Line 1-19/Message Composition Area. The VDU has a message composition area of 52 lines/80 characters per line. Messages to be transmitted for AUTODIN injection must be no larger than 52 lines/69 characters per line.

Line 20/Separator Line. This line of dashes separates the display area into two parts. You control lines 1-19 and the computer and VDU/KB software control lines 21-24.

Line 21/Status Area. This line indicates the number of messages in the display message queue, the precedence of the highest priority message in queue, and the session security level you have established for message composition.

Line 22/Status Message Area. The computer uses this line to advise of events, problems, and the AWCP's status. The line 22 notice will remain on the screen until the "OPR ACK" key is pressed to blank out the notice and allow the next notice, if any, to be shown. The OPR ACK key light will light whenever the computer sends a new notice to the VDU/KB.

Line 23/Response Area. This line is divided into two parts and shows system response when one of the eight control keys is pressed. The left part shows which key was pressed and the right part shows the system response, which may be an error message describing the mistake.

Line 24/VDU/KB Status. This line is divided into seven fields.

Scroll Location. Shows which 19 lines of the 52 line message composition areas are shown on the VDU screen.

Cursor Position. Shows which of the 80 column locations the cursor is in.

Test. Shows which of the three test modes was selected and is currently being run.

Terminal Status. Shows the status of the message composition area. The three responses are "READY," "WAIT," and "BUSY."

KB Response. Shows if a key entry was rejected and why it was rejected. This field also gives certain warnings.

I/O Status. Shows you the condition of the link between the VDU/KB and the computer. A blank in this field shows a normal connection. "I/O OUT" indicates the link has been lost.

VDU/KB Failure. Indicates the VDU or KB has failed and is followed by a visual fail alarm being lit. The VDU failure shows the VDU has failed a built-in check. This indication can be cleared by pressing the "CLR LVL" key. The KB failure (KEY ERR) is a parity error between the KB and the VDU. It shows up as a blob.

KEYBOARD. Use the keyboard to make entries into the message composition buffer and to instruct the computer to perform certain actions (e.g., transmit the message, clear the screen, display menus, etc.). The KB also provides the visual and audible alarm signals.

There are 11 different key groupings. At times, the KB entries will be rejected or other warnings will be given. The rejections and warnings will be accompanied by a "beep."

LINE PRINTER UNIT (LPU). The LPU prints messages, system notifications, and the contents of the message composition area. Each page printed has a security banner at the top and bottom. The security banner shows the security level (classification and category) contained in the message, or if the "PRNT" key was pressed, that of the session security level.

SUMMARY FAULT UNIT (SFU). The SFU shows the AWCP equip-ment and line faults. The SFU has four segments.

Transmission Segment. The red and black patch fields on the SFU are not used at the AWCP.

CAUTION

Keep fingers and foreign objects out of the patch fields!!!

Line Restoral Segment. The Tone Dialing Unit (TDU), ON/OFF Hook button, TO MODEM button, key pad, and audio monitor are not currently used at the AWCP.

Fault Indicator Segment. An audio alarm sounds as notification of an equipment malfunction. An indicator light will come on to show the malfunction category (e.g., COMM 1, PRNT, MSU, etc.). Each equipment drawer, except the Mass Storage Units (MSUs), has its own fault lamp to show which piece of equipment is defective. The SFU has visual and audible alarm signals.

Visual. Active fault lamps are lit red when a fault happens. They remain on until the fault is cleared. Disconnected signal lines will show up as faults.

Audible. An audible alarm sounds whenever a fault lamp is lit. The alarm automatically shuts off after 15 seconds, however, the fault lamp will remain on until the fault is cleared. The alarm can be shut off manually by pressing the RESET button on the SFU panel.

Power Segment. Red and black DC power is supplied to the SFU from the Power Supply Drawer. SFU RED and BLACK PWR toggle switches provide the power when in the ON position.

MASS STORAGE UNIT (MSU). The MSU is a flexible disk drive which provides on-line storage on changeable floppy diskettes. These diskettes provide the computer software needed to operate the AWCP. There are two MSU drives at the AWCP.

MSU 01. This is the preferred location for the Initial Program Load (IPL) diskette. The IPL diskette is the source of the computer language needed to run the AWCP. The computer language is read from the IPL diskette into the computer's main memory at the Initial Program Load (IPL). After the IPL, remove the IPL diskette and place the DUMPFILE diskette in MSU 01. If the AWCP aborts, crashes, or is restarted, a dump of the computer main memory is made to the DUMPFILE diskette. When a "dump" occurs, a notice will be received on the LPU to mount a new DUMPFILE diskette.

MSU 02. This is the diskette for the Master/Preformat menus and the MSU storage files. This diskette stores your messages. Both CUTEs share the same Master/Preformat Menus. Each CUTE is assigned 80 separate MSU storage files, however, CUTE #1 cannot access CUTE #2's MSU storage files and vice versa. This provides 216 locations to store messages. Currently, this diskette cannot be removed and replaced at will. Replacing the diskette requires a complete re-IPL of the AWCP. MSU 02 also serves as a back-up IPL/DUMPFILE MSU drive in the event MSU 01 breaks. If MSU 02 is used as the IPL/DUMPFILE MSU drive, the capability to retrieve messages is lost. This is due to MSU 02 being assigned the only MSU drive for storing messages.

CAUTION

The magnetic media diskettes used in the MSUs are preprogrammed and provided by HQ ACC. DO NOT USE any other kind of diskette (e.g., word processing) in the MSUs. Always keep diskettes clean and free from contamination by fluids, fingerprints, hair, dust, smoke particles, excessive heat, etc.

CONTROL ELECTRONICS DRAWER (CED-1). The CED-1 houses the SACCS computer and performs the central processing, memory, and line control. The computer software is read into the CED-1 from the IPL diskette during the Initial Program Load. All functions of the AWCP are controlled by this operation.

CRYPTO (KG-84A). The KG-84A provides communications security protection for every message transmitted on a dedicated communication line between any two connected SACCS nodes.

MODEM. The modem performs the necessary modulation and demodulation on the signals transmitted and received over the SACDIN communication lines.

POWER SUPPLY. The power supply provides power for the AWCP equipment not having internal DC power supplies. The drawer has two sections (Red and Black) to isolate power for the circuits handling unencrypted classified data (red circuits) from those handling unclassified or encrypted data (black).

BLOWER. The blower provides the cooling air for all of the equipment in the equipment racks.

There are five additional tasks which are performed at CONUS Global stations. They are composing a message, processing a message, receiving a message, performing a Cold IPL, and performing LPU paper changes.

MESSAGE PROCESSING

There are various methods to compose message headings and format messages. For example, the Header Composition Menu provides a fixed format you use to create the header part of a message. It contains protected fields with spaces for entries in each field. The cursor automatically moves to the next field when an entry fills the field or you can use the TAB key to move from one field to another. After completing this menu, enter your message text. Limit your message length to 51 lines or less.

It is not necessary to use the Header Composition Menu. You can also use the Free Form Message Composition method. Using this method, you compose the entire message without using the Header Composition Menu.

Messages processed via the SACCS terminal involve storing information for later review, retrieving messages previously stored to be modified, deleted, printed, or transmitted to command and control agencies. The Master and Preformat Menus are storage areas for messages created for later use. There are 25 locations available for message storage on the Master Menu. The Preformat Menu is an extension of the Master Menu and has 30 locations available for message storage.

There are two different types of messages which can be received at the SACCS terminal.

They are EAMs and non-EAMs. Each requires distinct acknowledgment procedures.

This task is performed most often when a restart or stoppage occurs on the SACCS terminal. It must not be used as a means to correct perceived software or hardware problems.

As stated earlier, the LPU prints messages, system notifications, and the contents of the message composition area. When a red stripe appears on the right-hand side of the paper, it indicates there are 25 pages remaining on the roll. The PAPER ALARM red lamp lights when no paper is available. When this light comes on the computer stops sending messages to the LPU. The PRNT indicator lamp ON at SFU is another indication. You must know how to change the paper.

SUMMARY

SACCS is a data transmission system supporting various MAJCOM's command and control needs. The system is responsive, reliable, and secure.

The AWCP communication processor, commonly referred to as the SACCS terminal, is found only in CONUS Global stations at Andrews, Offutt, and McClellan. The AWCP lets you compose, transmit, and receive messages. These messages are packetized for transmission. SACCS messages at locations with no equipment are prepared in AUTODIN format on DD Form 173. The AWCP communication processor has one equipment rack and two collocated user terminal elements (CUTEs). The CUTE consists of the Visual Display Unit/Keyboard (VDU/KB) and the Line Printer Unit (LPU).

Eventually, all stations will be equipped with the Message Distribution Terminal (MDT). SACCS messages will be accomplished using SARAH LITE for transmission over the MDT.

Establishing a session security level prepares the terminal for operations. You identify the classification and category by entering a three-digit code combination from those shown on the menu. The first digit is the classification code; the second and third digits are the category codes.

The Header Composition Menu provides a fixed format that you use to create the header part of a message. It contains protected fields with spaces for entries in each field.

It is not necessary to use the Header Composition Menu. You can compose the entire message by using the Free Form Message Composition method. Messages processed via the SACCS terminal involve storing information for later review, retrieving messages previously stored to be modified, deleted, printed, or transmitted to command and control agencies.

The Master and Preformat Menus are storage areas for messages created for later use. There are 25 locations available for message storage on the Master Menu. The Preformat Menu is an extension of the Master Menu and has 30 locations available for message storage.

There are two different types of messages which can be received at the SACCS terminal. They are EAMs and non-EAMs.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What are the three functions performed by SACCS?

2. How many lines of the VDU are actually used for message composition?

3. Which VDU line displays the established session security level?
4. What three indicators inform the operator the LPU is low on paper?

5. How many segments make up the SFU and what are they?

6. What is the preferred location for the IPL diskette?

7. What does the diskette in MSU 02 contain?

8. What are the functions of the CED-1?

9. What is the main SACCS encryption device?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the SACCS terminal operations. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Preparing for SACCS operations.
2. Composing a SACCS message via the Air Wing Command Post (AWCP) communication processor.
3. Processing a SACCS message via the AWCP communication processor.
4. Acknowledging receipt of a SACCS message via the AWCP communication processor.
5. Performing a Cold IPL via the AWCP communication processor.
6. Performing an LPU paper change.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 17
MESSAGE DISTRIBUTION TERMINAL (MDT) OPERATIONS

OBJECTIVES

a. Explain the purpose of the Message Distribution Terminal (MDT) System.

b. Describe the MDT System equipment.

c. Explain message preparation for the MDT.

PREREQUISITES

1. Only applicable for stations equipped with the Message Distribution Terminal.
2. Completion of AFQTP Modules 1 through 10, 15, and 16 for stations equipped with SSIII consoles.
3. Completion of AFQTP Modules 1 through 5, 11 through 14, and 16, if applicable, for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. MDT Operations Manual, Version 4.1
2. Local OIs

INTRODUCTION

Welcome to the Message Distribution Terminal. This module describes the system and other aspects of the MDT hardware. The explanations provide complete up-to-date information on the MDT including the CPU, monitor, keyboard, and magnetic tape units. This module presents the message preparations options which allow you to prepare many types of messages from the keyboard by recalling messages from floppy diskette or hard disk, creating

and recalling Pro-Forma messages, or transmitting messages.

INFORMATION

MDT PURPOSE

The MDT was developed as an AUTODIN communications message terminal for military commands to provide on-line automated message distribution. The MDT eliminates the use of punched cards and paper tape in the work center and replaces them with floppy disks as the new communications transmit and receive medium. The MDT system provides an upgraded, reliable, and stable AUTODIN communications system that requires lower cost to maintain and operate. This system also has greater expansion capacity than its predecessor.

The MDT system provides dependable, secure transmission/reception of narrative/data pattern messages on a store-and-forward, message switching with error detection capabilities. A Plain Language Address (PLA) internal data base is provided for automatic routing of messages. Individual passwords provide access and security entry levels for all users. A Data Communication (DCOM) Light Display provides data on the status of all configured lines.

A complete audit trail of logged events is maintained by the system in both Random Access Memory (RAM) and hard disk. The audit trails provide complete protection against loss of messages. The current 24-hour period is maintained in both RAM and hard disk, while preceding days are archived on the hard disk only. The number of archived logs/messages is dependent on the amount of space available on the disk and the number of messages processed during each raday. It is recommended that the log and message files be archived on a floppy diskette daily to prevent loss of data. If additional space is needed on the hard disk, the system will overwrite logs and messages. At the beginning of each raday, or when a system load has been accomplished, a check is made of the hard disk to ensure at least 5k of space is available for that day's log/message file.

The MDT/Message Processing Terminal (MPT) software is unclassified prior to installation. Upon installation and operation, the application software must be afforded the same protection as the classification level of data entered into the system. The system processes classified and special category messages; therefore, security protection is provided to all transmitted, received, and stored messages. The System Administrator is responsible for

initially configuring, adding, and removing users' names and passwords to/from the list of users. This system feature provides the utmost in security protection. Users are only afforded access to their maximum security clearance level.

MDT EQUIPMENT

PROCESSOR. The heart of the MDT computer is the Central Processing Unit (CPU). MDT requires a few mandatory equipment items for operation. The MDT needs a 386 or 486 computer in order to operate at 16MHz or greater. The processor also requires 4-megabyte or greater of RAM space. MDT offers a great amount of memory with additional space for future expansion. Any adaptable hard drive must have a minimum capacity of 42-megabyte. The system also requires one DCOM Light Display card kit with an option to add another one later. A 3.5", 1.44MB floppy disk drive comes as standard equipment.

MONITOR. The monitor must be a 14-inch non-glare screen with an 8 x 19 character block in a 480-line mode compatible with enhanced graphic adapter (EGA), color graphics adapter (CGA), monochrome display adapter (MDA) with Hercules video modes, IBM VGA, and a constant 31kHz horizontal scan frequency. For the MDT/MPT application, the display can be set so each message classification is identified by a different color. This monitor provides all the color graphic capabilities needed to produce the images in this program.

KEYBOARD. The standard 101-key keyboard is arranged so keys are easy to use for all types of keyboard entries. Most keys have an auto-repeat feature. Those keys that do not automatically repeat are the SHIFT, CTRL, ALT, CAPS LOCK, SCROLL LOCK, and NUM LOCK. Twelve function keys are placed in the top row in groups of four for easier access and more accurate operation. An LED panel in the upper right-hand corner of the keyboard or LEDs on the keys provide easy detection on CAPS LOCK, NUM LOCK, and SCROLL LOCK status. Many key functions are programmed for special uses by the application program. Also, the system has been programmed so the keyboard operates in a manner similar to that of a teletype. Uppercase letters will be entered regardless of whether the keyboard is shifted up or down.

MAGNETIC TAPE UNIT. Magnetic tape was the first external, erasable, computer controlled storage medium and is still utilized in today's technology and advanced computer equipment processing. Tapes between ½ and 1 inch wide store large quantities of information. Magnetic Tape Units provide an excellent means for storage of great amounts of data.

MESSAGE PREPARATION

To help in training, position yourself in front of the MDT for the remainder of this module. Your trainer will assist, when needed. The first subject is the DD-173 Message form.

Depress **D** at the AUTODIN TERMINAL - Function selection menu display the MESSAGE PREPARATION - MESSAGE SOURCE menu. The options available from this menu are DD-173, DD-173(OCR Entry), Old Message Retrieval, PRO FORMA Message Retrieval, Single Card Message Entry, and SARAH/DINAH/PCMT Message Retrieval.

DD-173 ENTRY. Press **A** from the MESSAGE PREPARATION - MESSAGE SOURCE MENU to select the DD-173 Entry option. The system displays the next menu titled MESSAGE PREPARATION - MESSAGE FORMAT TYPE. Five types of messages can be generated: Plaindress, Abbreviated Plaindress, Data Pattern, Service Message, and Short Form Readdressal.

DD-173 ENTRY - PLAINDRESS. Enter **A** from the MESSAGE PREPARATION - MESSAGE FORMAT TYPE to display the DD-173 Plaindress template. The DD-173 template is displayed with the following input fields:

TOF (Time Of File). This is the time the message was filed with the communications center. The input field consists of seven numeric characters, the 3-digit Julian date, and the 4-digit time. The system defaults to its internal clock.

DTG (Date-Time-Group). The date and time when the message was originated consists of six numeric characters, 2-digit date and 4-digit time. This also defaults to the system clock.

MON (Month). Consists of three alphabetic charac-ters. This also defaults to the system clock.

YR (Year). Represents the last two digits of the current year. Default value is the system clock.

ACT (Action). The message precedence(s) is assigned by the originator. Valid

characters for precedence are Y, Z, O, P, and R. The action precedence character must be greater than the information precedence. The system will default to Routine (R).

INFO. Identifies the precedence of the message to only the information addressees for dual precedence messages. For single precedence messages, this block must be space filled. For dual precedence messages, it must contain the action precedence. Valid precedence characters are Z, O, P and R. The system disallows the use of Y precedence for info addresses. The default value is Unclassified (U).

CLASS (Classification). Classification is the character entered by the user that causes the system to modify the security level banner and will be used to create the classification information in format line 12a of the message. Valid classification characters are: T, S, C, R, E, and U. If creating messages of specific classification has been disallowed, the system will sound an audible alarm and not accept the entry.

SPECAT. Caveat provided by the originator of the message. The valid characters are A and B. SIOP-ESI messages must be TOP SECRET with SPECAT A. All other SPECAT messages must use the designator specified by service directives and local instructions concerning SPECAT message processing. The default value for this field is blank.

LMF. Consists of two alpha characters. The valid LMF pairs are: AA, AC, AT, CA, CC, CT, RT, TA, TC, and TT. The default value for this field is TT.

Content Indicator Code (CIC). Consists of four alpha characters or three alpha characters and one numeric character. The appropriate CIC can be assigned by the message originator or communications center. The default value for this field is ZYUW.

Message Handling Instructions. Used to designate infor-mation to be placed in the transmission instructions line (format line 4) or the preamble (format line 5) of the message. A slant bar (/) is used to separate information. Data entered to the left of the slant bar is placed in format line 4. Data entered to the right of the slant appears in format line 5. The exception is that the Z signal ZYB is placed in format line 5 if the characters ADMIN are detected. The characters OPS are disregarded by the system. The default value for this field is blank.

Book. Not available for data input. To create a Book Message, insert **ZYQ** preceded

by a slant (/) in the Message Handling Instructions block. The operating signal ZYQ will be placed in format line 5 of the message being created. The operating signal ZEX may be used if preferred, which indicates the message may be processed as a book message.

Transmission Instructions. This is an optional field used to enter operating signals and specific transmission responsibility. There is no limit to the number of lines entered. Data entered in this field is automatically inserted between F/L 4 and F/L 5 of the message (ZNR or ZNY) with appropriate SPECAT/SHDs as applicable. Depress ENTER or END to advance to the next input field.

Preamble. This optional field is for continuation lines of F/L 5. Data input in this field is inserted between F/L 5 (DTG) and F/L (FM). This field should not be used when creating messages destined for LDMX/NAVCOMPARS processing, as the message will be rejected. Depress ENTER or END to advance to the next input field.

Originator. This is a mandatory field containing the originator's PLA. The field size is 1 to 5 lines. The first line has a maximum size of 55 characters. The next four lines have maximum sizes of 50 characters (continuation lines). There can only be one originator. Depress ENTER or END to advance to the next input field.

Action Addressee(s). This is a mandatory field. The field size is 1 to 5 lines. The first line has a maximum size of 55 characters. The next four lines have maximum sizes of 50 characters. There is no limit to the number of action addressees that may be entered. Access continuation lines by pressing DOWN ARROW. Continuation lines are indented five spaces. Depress ENTER or END to validate the PLA and advance to the next input field. If the entered PLA is not in the database, the prompt **"The PLA Is Unknown To The System"** is displayed. Depress A to correct a PLA which has been mistyped. Depress B to edit the PLA database.

When the PLA is contained in the database but no routing indicators have been associated with it, the system displays a menu with the prompt **"The PLA Entered Has No Routing Indicator For The Message Classification Level ( )."** Four options are provided:

A. Return and fix the original PLA entry.
B. Edit the address database.
C. Change the message class.

E. Use the RI in the LDMX field.

Select the desired option (A, B, C, E) to continue. Refer to the MDT Operations Manual section on Routing File Maintenance for procedures to add/modify a PLA within the database. Selecting E directs the system to format the message in ACP-126M and discontinues routing indicator validation. PLAs continue to be validated against the database.

When the entered PLA is contained in the database but no SPECAT routing indicator has been associated with it, the system displays the prompt **"The PLA Entered Has No Routing Indicator For The Message Classification Level ( )."** Five options are provided:

A. Return and fix the original PLA entry.
B. Edit the address database.
C. Change the message classification.
D. Change the message SPECAT.
E. Use the RI in the LDMX field (ACP-126M format).

Select the desired option (A, B, C, D, E). Refer to the MDT operations Manual section on Routing File Maintenance for procedures to add/modify a PLA within the database. Selecting E directs the system to format the message in ACP-126M and discontinue routing indicator validation. PLAs continue to be validated against the database.

If the PLA has a SPECAT in the database too low for the current message SPECAT value, the system displays the prompt **"The PLA you specified has a SPECAT value () too low for the current message SPECAT value()."** Three options are provided:

A. Return and fix the original PLA entry.
B. Edit the address database.
C. Change the message SPECAT.

Select the desired option (A, B, C) to continue. Refer to the MDT Operations Manual section on Routing File Maintenance for procedures to add/modify a PLA within the database.

The following fields are displayed after the PLA entered has passed validation:

INFORMATION ADDRESSEE(S). This is a mandatory field if INFO precedence was

entered in the message heading. The field size is one to five lines. The first line has a maximum size of 55 characters. The next four lines have maximum sizes of 50 characters (continuation lines). There is no limit to the number of information addressee(s). You access continuation lines by pressing the DOWN ARROW key. Continuation lines are indented five spaces. Depress ENTER or END to advance to the next input field. The same procedures apply within the information addressee field as within the action addressee field. Refer to the Action Addressee field above for validation rules and/or additional menus. PLAs in the Info field containing Office Codes cannot be duplicated in the Action or XMT field with the same Office Codes. An error notice is displayed if PLAs are duplicated.

Transmit (XMT). Only displayed if an AIG or CAD were entered as Action or Info addressees. AIGs or CADs can only be ACT Addressees. Each exempt addressee field is one to five lines in size. The first line is 55 alphanumeric characters and the next four lines (continuation lines) are each 50 alphanumeric characters in length. Blank lines are not accepted. If the message is JANAP 128 format, any addressee appearing following the prosign XMT causes the system to delete its associated routing indicator from F/L 2 generation. There is no limit to the number of XMT addressees; however, each exempted addressee must appear in one or more of the AIGs/CADs as an Action Info Addressee. Depress the DOWN ARROW key for continuation lines. Continuation lines are indented five spaces. Depress ENTER or END to validate the PLA and advance to the next input field.

ACCT. Enter the accounting symbols for the message if applicable accounting information designates the agency responsible for payment of communications charges. The maximum size for this input field is 55 alphanumeric characters. If the system was configured with a default accounting symbol (Community Parameters), this field is system supplied. Depress ENTER or END to advance to the next input field.

MESSAGE CLASSIFICATION. The message classification with the appropriate SPECAT caveat is supplied by the system, based on the classification and SPECAT code previously entered in the heading. A maximum of 19 lines is available for data input. The security classification is a protected field and cannot be changed by the user. If the classification is incorrect or a change in classification is desired, press HOME to move the cursor upward to the heading classification field where the classification parameter can be altered. Depress ENTER or END to validate the entry and advance the cursor to the next input field. If the entered flag word is found to be valid or the message classification limit for the flag word is exceeded, an error notice will be displayed, **"The Message Classification limit was**

exceeded by the use of a Flag Word in the Message Classification Field." Depress ESC to return to and correct the flag word entry. Depress ENTER or END to revalidate the entry and advance to the next input field.

MESSAGE SUBJECT INFORMATION. The subject information element contains the protected key word SUBJ:. Enter the message subject line or press ENTER or END to advance to the next input field. If the SUBJ: field is left blank, this line is deleted upon message conversion.

MESSAGE TEXT INFORMATION. This field contains the mes-sage. This is a free-form field with no limit to the number of lines that may be entered; however, the system limits the total message size to 40,000 characters upon conversion to a ACP-126M format. Validation is performed when the message is converted to the transmission format, not during screen input. If the message is created in a JANAP 128 format, paging and sectioning occur. Data entry is limited to 69 alphanumeric characters per line for narrative and 80 characters for data pattern. At the end of each line of text, an alarm sounds to denote the end of line. The user must press ENTER to move the cursor to the next blank line. To move the cursor to a previous line, press UP ARROW. Depress HOME to move the cursor to a previous input field. When ENTER or END is pressed following a blank input line, the system assumes the message is complete and formats the message in JANAP 128 or ACP-126M. The following options are available for disposition of the created message:

A - SAVE	Saves the message to Hard Disk.
B - OUTPUT	Delivers the message to a designated output device based on options provided.
C - TRANSMIT	Transmits the message to port number one (Host).
D - ADD TO PRO FORMA	Adds this message to the PRO FORMA File. A request for a file or PRO FORMA name for the message is displayed.

Re-Edit Message. To re-edit the message, press ESC once. The system reformats the message into the previous DD-173 display for editing.

Delete Message. To delete (scrub) the message without transmission, press ESC twice.

Now, DD-173 entry in the abbreviated plaindress. Depress B to advance to the DD-173 Abbreviated Plaindress Message template (equivalent to the Plaindress display). The DD-173 heading template is displayed with eight input fields filled in with default values. Procedures for generating an Abbreviated Plaindress message are the same as a Plaindress except for F/L 6 (FM), F/L 7 (TO), and F/L 8 (INFO).

ACTION ADDRESSEE(S). Enter the action addressee PLA and, if applicable, the routing indicator. The entered PLA is not used to create F/L 7. The system uses the PLA and/or associated RI to generate F/L 2. Optionally, a slant bar (/) followed by RI, a space, and from 1 to 46 alphanumeric characters can be entered to provide the system with the required RI. This RI is inserted in F/L 2 and the PLA (ABCDE) is ignored. Abbreviated Plaindress messages will be formatted in JANAP 128 only. ACP-126M and ACP-127 formatted messages are not generated. The field size is one to five lines. The first line has a maximum size of 55 characters. The next four lines have a maximum size of 50 characters (continuation lines). Depress ENTER or END to validate the PLA and advance to the next input field. Now, let's discuss old message retrieval.

OLD MESSAGE RETRIEVAL

The Old Message Retrieval option allows the retrieval of messages from the hard disk and floppy disk(s). The system retrieves messages processed within the past 100 days and lists up to 1000 messages for retrieval. Depress C to select Old Message Retrieval option. The system displays a menu containing retrieval options. The options and their functions are:

A - Read from a Floppy.	Displays a menu listing files on the floppy.
B - Copied to a Floppy.	Select A or B. The system advances to the MESSAGE RETRIEVAL. CONSTRAINT SELECTION menu.
C - Generated	Displays a screen for selecting the Message Category to be retrieved. Depress X for each type of message to be included in the retrieval. The UP ARROW and DOWN ARROW moves the cursor through the options. When an X is inserted, EXCLUDED will change to INCLUDED reflecting that choice. Depress END to advance to the MESSAGE RETRIEVAL CONSTRAINT SELECTION menu.

D - Received	Displays a screen for selection of the received line(s) to be analyzed. Enter an X for each line to be used. The UP ARROW and DOWN ARROW are used to move the cursor through the options. When an X is inserted, EXCLUDED will change to INCLUDED. Enter an X on all lines when unsure of the specific line on which messages were received. Depress END to advance to the MESSAGE RETRIEVAL CONSTRAINT SELECTION menu.
E - Received Errors	This option searches the on-line storage system for messages that were received from Lines 1-10 or peripheral devices with errors (i.e., Misroutes, Errors in (F/Ls). The system advances to the MESSAGE RETRIEVAL CONSTRAINT SELECTION menu.

Message Retrieval is specified according to the message retrieval constraint parameters. The default values are the current Julian date and year (JJJYY), and retrieval Time between 0000Z and 2359Z. When ALL messages for the current radio day are to be retrieved, press END to initiate the retrieval. If additional retrieval constraints are desired, select them prior to pressing END.

DATE (Julian Date). Valid entries consist of Julian Date and Year (JJJYY) in the From and To block. To retrieve only ONE day, enter the same Julian Date/Year in both blocks.

DTG (DATE TIME GROUP). Retrieves a message by a specific date time group (F/L 5). Valid entries consist of a complete date time group, including year and month.

OSSN (ORIGINATING STATION SERIAL NUMBER). Retrieves a message by a specific originating, station serial number (F/L 2). Valid entry is the message's four numeric OSSN.

TOF (TIME-OF-FILE). Retrieves a message by a specific message time of file (F/L 2). Valid entries are the message's 7 numeric character TOF, a 3-digit Julian date (001-365/366 leap year), and 4-digit time (0001-2359) specified in Zulu Time.

PREC (PRECEDENCE). Retrieves a message by a specific precedence (F/L 5). Valid

entries consist of Y, Z, O. P, or R.

CLASS (CLASSIFICATION). To retrieve a message by a specific classification (F/L 12a). Valid entries consist of T, S, C, R, E, and U. The entered classification must exactly match the classification of the message to be retrieved. If the operator's security level is exceeded, the system sounds an audible alarm and the entry is not accepted.

LMF (LANGUAGE MEDIA FORMAT). Retrieves a message by a specific LMF (F/L 2). Valid entries are AA, AC, AT, CA, CC, DD, CT, RT, TA, TC, and TT.

CIC . Retrieves by a message specific CIC (F/L 2). Valid entries consist of four alpha characters or three alpha and one numeric characters.

TIME. Retrieves by a specific time frame. The default value is FROM 0000Z TO 2359Z.

KEYWORD. Retrieves a message by a specific keyword(s) or text field(s) within the message (Heading and Text). The field size is 1 to 25 alphanumeric characters.

FROM PLA. To retrieve a message by a specific originator PLA (F/L 6). If office codes were included as pan of F/L 6, they must he included as pan of the PLA or the message is not retrieved. The field size is 1 to 55 alphanumeric characters.

When END is pressed to commence retrieval, the system displays "Searching The Disk..YEAR..DAY." If the retrieval is successful, the system displays the RETRIEVED MESSAGE xx OF xx menu. The number of messages retrieved is indicated at the top of the screen. The first message is displayed below the selection menu.

The options for the retrieved messages menu are defined below:

A - NEXT	Brings the next message to the display when more than one message was retrieved.
B - PREVIOUS	Brings the previous message to the display when more than one message is retrieved and displayed.

C - FIRST — Brings the first message of the total number retrieved to the display if the screen is positioned on any message other than the first retrieved message.

D - LAST — Brings the last message of the total number retrieved to the display if the screen is positioned on any message other than the last retrieved message.

E - EDIT DD-173 — Displays the current message in the DD-173 template format for editing.

F - OUTPUT — Brings Output Menu to the display.

G - RE-ADDRESS — Displays the DD-173 template for entry of the Readdressal heading. When completed, the readdressal heading is added to the retrieved message and the message is displayed for operator review and action. Three options are available: Save, Output, and Transmit.

H - RETRANSMIT — Displays an option screen to select the Routing Indicator. If A is selected, the message is retransmitted with the original routing indicator. If B is selected, a prompt is displayed to enter the new routing indicator. The message is automatically retransmitted to the host with no further operator review.

K - Transmit this message — Transmits the displayed message.

L - Transmit this — Transmits ALL retrieved messages.

If message retrieval was unsuccessful, the system displays "NO MESSAGES WERE FOUND WITH THE RESTRICTIONS ENTERED. 1. ENTER NEW RESTRICTIONS." Depress the number 1 to return to the Message Retrieval Constraint Selection menu or ESC to exit Old Message Retrieval.

The last message preparation to be covered is the PRO FORMA Message

Retrieval. This option allows the retrieval of previously stored messages from the PRO FORMA Message File. PRO FORMA messages are stored on the system's Hard Disk (Drive C). There is no limit to the number of PRO FORMA messages that can be stored by the system; however, a recommended limit is 100. PRO FORMA Message number(s) and file name(s) is/are not displayed to users logged into the system with a security level lower than the stored Pro Family Message classification. Depress D to select the PRO FORMA Message Retrieval option. The system displays the PRO FORMA Message Retrieval menu showing the PRO FORMA Message(s) by number and file name. Only 16 file names and numbers are displayed per screen.

When a PRO FORMA message is displayed the PLA(s) and associated Routing Indicators are contained in the database (Route File Maintenance). When the PLA(s) and associated RI(s) are not in the database, the system displays the prompt: "THE PLA ENTERED IS UNKNOWN IN THE SYSTEM." Two options are provided:

A - To return and fix the original PLA entry	Displays the message DD-173 format for editing.
B - To edit the PLA database	Defaults to Routing File Maintenance to add, or change the unknown PLA.

When the PLA(s) is contained in the database but has no associated RI, the system responds with the prompt: "THE PLA ENTERED HAS NO ROUTING INDICATOR (RI) FOR THE MESSAGE CLASSIFICATION LEVEL ( )." Four options are provided:

A - To return and fix the original PLA entry	Displays the message in DD-173 format for editing.
B - To edit the address	Defaults to Routing File Maintenance to add a routing indicator for the PLA.
C - To change the message class	Displays the message in DD-173 format for editing.
D - To use the RI in the LDMX	Displays the message in JANAP-128 format with the default

LDMX Routing Indicator configured in Community Parameters inserted.

When the retrieved message is displayed in a JANAP-128 or ACP-126M format, four options are available for disposition of the message:

A - SAVE Saves to Hard Disk. This option does not save to the PRO FORMA file, but saves to the system message file.

B - OUTPUT Delivers the message to a designated output device, based on options provided. A menu is displayed which provides the delivery devices. All configured and enabled devices are selectable.

C - TRANSMIT Transmits the message to port number one (Host). No additional menu displays are displayed.

D - DELETE Deletes the message from the PRO FORMA file.

When the retrieved message is in DD-173 format, editing is performed the same as DD-173 entry, Plaindress procedures. When editing is completed, the message is converted to JANAP-128 or ACP-126M format for transmission.

After the message has been saved, outputted, transmitted, deleted, or scrubbed, the Pro Format message menu is displayed. Enter additional PRO FORMA message number(s) to retrieve or press ESC to exit. When a retrieved PRO FORMA message is re-edited by pressing ESC, the message is converted to a JANAP-128 or ACP-126M.

Four options are available for disposition of the message:

A - SAVE Save to Hard Disk (C drive). This option does not save to the PRO FORMA file, but saves to the system message file.

B - OUTPUT Deliver the message to a designated output device, based on options provided. A menu is displayed which provides the delivery devices. Configured and enabled devices are selectable.

C - TRANSMIT — Transmit the message to port number one (Host). No additional menus or screens are displayed.

D - ADD TO PRO FORMA — Saves the retrieved PRO FORMA message to the PRO FORMA file. When selected, this option provides two sub-options to save the message.

The sub-options available are:

A - Overwrites the old message entry — Overwrites the message file with the edited version entry.

B - Create a new message entry — The prompt: "ENTER A DESCRIPTION OF THE MESSAGE" is displayed. The input field size is 1 to 20 alphanumeric characters. Type the description for the new PRO FORMA message and press ENTER to save.

The following additional functions are available when in the JANAP 128/ACP-127 edit mode. There are no menu entries for these functions, follow the instructions given:

Edit Message — Depress ESC once to format the message in DD-173 for review and editing.

Delete Message — Depress ESC twice to delete (scrub) the message without transmission. This action does not delete it from the PRO FORMA file.

SUMMARY

As described, the Message Distribution Terminal is a state-of-the-art system that sets a new standard of reliability, availability, and serviceability. The system gives both current users and new users the best in modern message processing technology while minimizing operating and maintenance costs. The accurate flow of information from higher headquarters and

throughout all DOD installations is imperative and will truly be enhanced with this new system.

The MDT eliminates the use of punched cards and paper tape in the work center by replacing them with floppy disks as the new communications transmit and receive medium. The MDT system provides an upgraded, reliable, and stable AUTODIN communications system that requires lower cost to maintain and operate. This system also has greater expansion capacity than its predecessor.

The heart of the MDT computer is the Central Processing Unit (CPU). The standard 101-key keyboard is provided and arranged so that keys are easy to use. The magnetic tape was the first external, erasable, computer controlled storage medium and is still utilized in today's technology and advanced computer equipment processing.

Finally, the five types of messages that can be generated are: Plaindress, Abbreviated Plaindress, Data Pattern, Service Message, and Short Form Readdressal. Also, there is no limit to the number of action or information addressee(s) contained within a message. When typing in the text, remember, there is a free-form field with no limit to the number of lines that may be entered; however, the system limits the total message size to 40,000 characters. After sending out a message there are ways to retrieve it for either reference, editing, or retransmitting. One of these is the Old Message Retrieval option which allows the retrieval of messages from the hard disk and floppy disk(s). Another, is the PRO FORMA Message Retrieval. This option allows the retrieval of previously stored messages from the PRO FORMA Message File. The PRO FORMA file is stored on the system's Hard Disk (Drive C).

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. How is protection against message loss maintained?

2. Which type of computer is needed in order for MDT to operate?

3. What was the reason for developing the MDT?

4. How are logged events maintained?
5. Which piece of equipment is the heart of the MDT?

6. How much RAM space does the processor require?

7. How much space should be available on the hard drive at the beginning of each raday, or when a system load has been accomplished?

8. How many numeric characters are contained in the DTG?

9. What is the maximum number of characters the MESSAGE TEXT INFORMATION can contain?

10. Which drive stores the PRO FORMA messages?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate Message Distribution Terminal operations. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Generating a log analysis report.
2. Generating a statistics report.

3. Generating a log analysis without the FM line.
4. Preparing a message using the DD-173 entry format.
5. Retrieving a PRO FORMA message.
6. Retrieving transmitted/received message from the hard drive.
7. Backing-up previous day(s) message to a diskette.
8. Performing device mapping.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 18
COMMUNICATIONS SECURITY (COMSEC)
DOCUMENTS USAGE

OBJECTIVES

a. Explain the purpose of authenticating, encoding and decoding, and assigning call signs.

b. Explain the various authentication, encode and decode, and call signs documents.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10, and 15 through 17 for stations equipped with SSIII consoles.
2. Completion of AFQTP Modules 1 through 5, 11 through 14, 15, and 17 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. AFM 33-109
2. AFKAO-5
3. AFKAO-1
4. AFKAI-1
5. USKAC 72
6. USKAC 373
7. Local OIs
8. AKAC 318

INTRODUCTION

As a radio operator, you hold an important position within the Operations Security

(OPSEC) program. Every word transmitted over an unsecure system can be monitored and analyzed. It is vital you know and follow good security practices when using authentication, encode/decode, and call signs documents. This module explains the purpose of authenticating, encoding/decoding, and assigning call signs. Also, this module explains the various authentication, encode/decode, and call signs documents

INFORMATION

COMSEC DOCUMENTS PURPOSE

Authentication is an effective security measure used to identify and prevent fraudulent transmissions. Authentication is the use of an encrypted code to verify the authenticity of a message (message authentication), the validity of a transmission (transmission authentication), or the validity and authenticity of a station (challenge and reply or station authentication). The mission being supported and type of traffic processed will determine which authentication system is used. Authentication is mandatory under the following conditions:

- Messages requiring positive action by the aircraft, e.g., aborts, changes to mission requirements, etc.
- Encrypted traffic is transmitted or received.
- Receiving contact and amplifying reports of Emergency War Plans (EWP) conditions.
- Transmitting or receiving an Air Intelligence Agency alert/warning.
- Receiving or relaying Emergency Action Messages (EAM) for rebroadcast or AUTODIN injection.
- Authenticity of a station is in doubt.
- Station enters or secures from the net.

Global stations will never authenticate for ground agencies or aircraft. If a Global station is asked to authenticate, challenge and reply procedures are used to validate the identification of the Global station only; never the traffic being passed. Messages passed via Global stations must include internal authentication from the sender as appropriate.

VARIOUS COMSEC DOCUMENTS

PELE. The most common authentication document used within Global stations is the AKAA 2001 PELE Authentication system. The PELE authentication system may be used for either challenge and reply authentication or transmission authentication. Detailed instructions for the use of the 2001 and other authentication documents are contained on the cover pages of each document. The instructions are in part classified and, therefore, not included in this module. Your trainer will cover the instructions section during actual hands-on training.

Strict adherence to authentication procedures is a must and is the key to the successful use of these documents. The two types of procedures normally used within Global HF are challenge and reply, and transmission authentication.

CHALLENGE AND REPLY. Challenge and reply establishes the authenticity of two stations. One station will issue a challenge and the other will give a reply using the appropriate authentication. The stations are considered authentic if both stations have correctly challenged and replied to each other. The general rule regarding challenge and reply authentication is that the called party always challenges first. If this rule is violated, the entire purpose for authentication is voided and a possible compromise situation is created. REMEMBER! THE CALLED PARTY MUST CHALLENGE FIRST WITHOUT EXCEPTION.

TRANSMISSION AUTHENTICATION. Transmission authentication applies when it is impractical to use Challenge and Reply authentication. Use it for "Do Not Answer type messages" or when no answer is required. Transmission authentication is always based on the actual time of transmission. The authenticator is good for four minutes from time of transmission. However, if you receive a broadcast for echo or relay, the authenticators and time are updated to match your transmission time.

If a station can/will not authenticate or authenticates incorrectly, receipt for the traffic anyway. The received messages are relayed in the normal manner. However, all addressees will be advised that the challenged station did not authenticate or authenticated incorrectly. A statement to this effect is added as a note to the message text. Additionally, notify the shift supervisor or NCOIC about the discrepancy.

Along with the NATO authentication documents (i.e., AMSA 1601) that mirror the 2001, there are two other types of authentication documents: One is the USKAA-287, White House Communications Agency (WHCA) Authentication System, and the other is the Numerical Cipher Authentication System (AKAC 874 or AKAC 1662, depending on your location). Procedures vary little from the AKAA 2001 and the purpose remains the same.

The USKAA-287 is used for White House Communications Agency operations. Its purpose is to provide support to JCS Comm Plan 1-87.

The AKAC 874/AKAC 1662 is used to authenticate during joint Navy/Air Force operations. Each service branch has its own particular documents but the procedures are the same.

The AKAC 318 is used by hotline stations. It is a special operations code that identifies worldwide advisories. It supports the JCS White Wolf Advisory Plan.

ENCODE/DECODE PROCEDURES. Encoded messages are used when a message must be encoded for security reasons. A code is defined as any system of communications in which arbitrary groups of letters or numbers represent units of plain text of varying length. As radio operators, we simply copy the encoded text and relay it to the addressees. Radio operators will not decode the text of an aircraft message unless the message addressee is encoded within the text. Also, if you write the message text on a piece of scrap paper and encode it on that same piece of paper, that paper becomes classified with the same security classification as the message you are sending. General guidance for these procedures are in the AFKAO-5.

Due to the worldwide mission of Global stations, various encode/decode documents are used. Common encode/decode documents used in radio operations are the USKAC 72 and the USKAC 373. Since they are very similar in construction, once you have learned how to use one, you will be able to use any of them. However, you need to familiarize yourself with the title and authorized users of each document held by your station. Your trainer will provide you with the documents and explain the procedures for encoding/decoding and transmitting coded messages. Remember! Strict adherence to the instructions and procedures is a must and is the key to an effective OPSEC program.

CALL SIGNS

Another important factor of a good OPSEC program is the use of call signs. Global stations will utilize unclassified call signs (example: Incirlik Global). AFKAI-1 contains USAF aircraft, units, organizations, activities, key personnel, bases, or other geographical locations call signs. AFKAO-1 contains the instructions for using USAF Voice Call Signs.

The following information will give you a better understanding of USAF Voice Call Signs.

- The collective call sign for all ACC aircraft and missile crews is "**SKYKING**." The meaning of **SKYKING** is "All ACC aircraft copy the following transmission."

- The collective call sign of selected ground command and control sites and ground command and control communications radio facilities is "**SKYBIRD**." The meaning of **SKYBIRD** is "All Global Stations, ACC Command posts, Launch Control Centers, and any other tasked facilities, prepare to copy the following."

- "**MAINSAIL**" is another collective call sign. The meaning of the call sign is "Any ground station this station has a request, Over." This call sign is used by aircraft attempting contact with any Global station that hears its transmission. AMC aircrews are the primary users of this collective call.

- **Station Call Signs**. The voice call sign of a Global station is the geographical name of the station's location, suffixed with Global for military stations. Some military stations use changing and static call signs. Changing call signs are randomly selected, assigned, and changed at periodic intervals. Static call signs are permanently assigned to a special unit or activity. They are normally assigned only to an activity where security is secondary to operational considerations. Civilian stations use the geographical name, suffixed with radio.

- **Aircraft Tactical Call Signs**. They consist of pronounceable code words suffixed with a two-digit number from 01 to 99. The basic word usually identifies the parent organization, and the numerical suffix identifies the specific aircraft or pilot. This type of call sign is used for security reasons, to conceal the identity of the aircraft, its type, and the point of departure. The suffix 01 is reserved for the Commander-in-Chief.

- **Aircraft Nontactical Call Signs**. These consist of a prefix and the last five digits of the aircraft's tail number. The tail number consists of a total of six digits. The first two digits indicate the year the aircraft was manufactured and the last four the serial number of the aircraft.

- **Civilian Aircraft**. They use several different methods to identify themselves. One is a five-letter designation. Another is a combination of characters corresponding to the official registration marking of the aircraft. A third method is to use the abbreviation of the airline followed by the flight number.

SUMMARY

Authentication is an effective security measure used to identify and prevent fraudulent transmissions. All messages passed via Global stations must include internal authentication from the sender as appropriate. The two types of procedures normally used within Global HF are challenge and reply, and transmission authentication. Challenge and reply establishes the authenticity of two stations and transmission authentication applies when it is impractical to use Challenge and Reply authentication.

Encoded messages are used when a message must be encoded for security reasons. A code is defined as any system of communications in which arbitrary groups of letters or numbers represent units of plain text of varying length. The most common encode/decode documents used in radio operations are the USKAC 72 and the USKAC 373.

Global stations will utilize unclassified call signs (example: Incirlik Global). AFKAI-1 contains USAF aircraft, units, organizations, activities, key personnel, bases, or other geographical locations call signs. The AFKAO-1 contains the instructions for using USAF Voice Call Signs.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed

questions. Explain the various authentication, encode and decode, and call signs documents

1. What determines which authentication system is used?

2. Which authentication procedures are used to validate the identification of a Global station?

3. Where are detailed instructions for the use of the 2001 and other authentication documents contained?

4. What is the purpose of challenge and reply?

5. What is the general rule regarding challenge and reply authentication?

6. When is transmission authentication used?

7. When are messages encoded?

8. What are the different types of methods used to identify civilian aircraft?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate COMSEC document usage. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Authenticating Air-to-Ground Traffic.

2. Encoding/Decoding Air-to-Ground Traffic.
3. Encoding/Decoding Air-to-Ground Call Signs.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 19
ALERT OPERATIONS

OBJECTIVES

a. Explain the correlation between Alerts and Dual Tone Multi-Frequency (DTMF) signaling and Electronic Switching Subsystems (ESS).

b. Explain the various types of alerts associated with Global HF Operations.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10, and 15 through 18 for stations equipped with SSIII consoles.
2. Completion of AFQTP Modules 1 through 5, 11 through 14, 15, 17, and 18 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. TO 31R2-2GRC212-2
2. Local OIs

INTRODUCTION

Using alerts in an automatic, coordinated fashion is one of the functions of Global HF system operations. An alert is the remote seizure of transmitters, receivers, and antennas at one or more Scope Signal III (SSIII) stations. It allows rapid dissemination of Air Combat Command operational data or Emergency War Orders (EWO) to strategic forces by remote control broadcasting.

The ESS provides the automation for performing Alert Operations. For example, a SSII consus station post alert panel activates designating an alert. The operator picks up the

handset. A preprogrammed DTMF message goes out from the alert panel to the ESS-associated station(s). This seizes the designated equipment for broadcast.

Modules 6 and 8 contain background material that is extremely important in understanding and initiating alerts. If you didn't understand that information go back and review the material.

INFORMATION

DTMF SIGNALING AND ESS

DTMF SIGNALING. The DTMF preprogrammed message sent by the operator to the ESS has a special sequence of digits. This sequence returns DTMF supervisory tones and instructs the ESS to execute the alert process. TO 31R2-2GRC212-12, Switchboard Operations section, explains the specific sequence of DTMF digits.

ESS. The ESS makes two connections when it receives a preprogrammed message from the alert panel or operator console. First, it connects to its predesignated transmitters (if it is one of the alerted stations). Second, it connects to the trunks of other stations in the alert. This establishes a broadcast connection, allowing the single incoming station trunk to speak to all other stations and transmitters. If the alert seizes transmitters, the ESS also seizes predesignated receivers and connects them to the recorder.

To explain this sequence of events further, look at the following example:

1. The operator enters the proper DTMF code sequence at the USSTRATCOM Command Center or Offutt Global Station.

2. Offutt's ESS seizes transmitters and receivers. It also seizes the trunks to McClellan and Andrews AFB and passes along the DTMF message. This message goes through the network with the DTMF header indicating an alert is in progress (F*F).

3. The ESSs at McClellan, Andrews, and Offutt AFB react similarly according to the

orders in the message. This might include seizing or not seizing transmitters and receivers within their own stations.

4. Each seized transmitter and receiver throughout this alert system tunes to preset frequencies and connects to the appropriate antenna. If they are RLPs, it rotates them to the designated azimuths.

ALERTS

There are three types of alerts: EWO, Peacetime, and Communications Call.

EWO. This alert has a FLASH OVERRIDE precedence and involves all stations. The command **"FO*FO 05 A"** is depressed on the DTMF keypad to seize the transmitters at all SSIII stations.

PEACETIME. This alert has FLASH precedence and can involve all stations, a single station, or any multi-station combination. The command **"F*F O5 A"** is for an All Station Alert (ASA); command **"F*F 05 05 A"** for a Single Station Alert (SSA); and **"F*F020805A"**, for a Multi-Station Alert (MSA). By depressing these digits, the Global Net Control Station (NCS) and Alternate Net Control Station(s) (ANCS) can seize transmitters at all, individual, or selected SSIII stations.

COMMUNICATIONS CALL. This alert has an IMMEDIATE precedence and involves either all stations or a single station only. The communications call provides administrative call conferencing capability by connecting station operators. It does not affect transmitters and receivers. For example, after an alert, the command post/Global Station can use the conference call to contact the Global operators. They often do this to determine if the alert was successful. This is a tremendous aid, since the alert has no automated feedback process.

NOTE

Each position operator must remember when dialing any of the aforementioned alerts to use the two person concept. This ensures that the traffic is passed using some type of alert and the contents are correct. Any doubts as to what type of alert to

dial should be brought to the attention of the shift coordinator or shift supervisor.

SUMMARY

The DTMF preprogrammed message sent by the operator to the ESS has a special sequence of digits. This sequence returns DTMF supervisory tones and instructs the ESS to execute the alert process. The ESS makes two connections when it receives a preprogrammed message from the alert panel or operator console. First, it connects to its predesignated transmitters (if it is one of the alerted stations). Second, it connects to the trunks of other stations in the alert.

There are three types of alerts: EWO which involves all stations; peacetime which can involve all stations, a single station, or any multi-station combination; and communications calls which involve either all stations or a single station only.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What is the purpose of SSIII alerts?

2. What provides the automation necessary to carry out the alert?

3. Name the three types of alerts and their associated precedence.

4. Is it possible for the Communications Call to be a multi-station alert?

5. What is the purpose of the Communications Call?

6. What is the dialing sequence to initiate a single-station alert?

7. What is the dialing sequence to initiate an all-stations alert?

8. What is the dialing sequence to initiate an multi-station alert?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate alert operations. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Performing an All-Station Alert.
2. Performing a Multi-Station Alert.
3. Performing an In-Station Alert.
4. Performing a Communications Call.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 20
GENERAL MESSAGE HANDLING

OBJECTIVES

a. Explain the purpose of message handling.

b. Explain the various messages associated with the general message handling procedure.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10, and 15 through 19 for stations equipped with SSIII consoles.
2. Completion of AFQTP Modules 1 through 5, 11 through 14, 15, and 17 through 19 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. AFI 10-707
2. AFM 33-109
3. JANAP 146
4. Local OIs

INTRODUCTION

Global HF stations provide support for various types of messages, such as Visual Sighting Reports, Contingency/ Disaster Relief, and GLASS EYE Reports to name a few. This module addresses general and miscellaneous message handling procedures for these various types of messages.

INFORMATION

PURPOSE OF MESSAGE HANDLING

Message handling is a vital means by which radio operators play a key role in providing feedback to command authorities on information received from airborne and ground forces. For this purpose, messages must be processed with strict attention to detail and compliance with governing directives.

Within the Global HF System, all message traffic is assigned a precedence of either FLASH, IMMEDIATE, or ROUTINE. The precedence will be assigned by the originator of the message. The order by which traffic is handled depends on the order received within each precedence, e.g., first in, first out. All messages received are accepted and delivered by the fastest means available. Messages of questionable validity are brought to the attention of the shift supervisor/senior operator on duty.

TYPES OF MESSAGES

COMMUNICATIONS INSTRUCTIONS FOR REPORTING VITAL INTELLIGENCE SIGHTINGS (CIRVIS/MERINT) REPORTS. Airborne or waterborne stations will transmit a CIRVIS/MERINT report upon sighting hostile or unidentified single aircraft or formations directed against the United States and/or Canada. A CIRVIS report is from an airborne station while MERINT is from a waterborne station.

Aircraft will normally transmit a CIRVIS call three times to clear the frequency of traffic. If that does not work, the proword "PAN" may be used to clear the frequency. Always verify the authenticity of the message using challenge and reply authentication procedures. If the aircraft is unable to authenticate, accept the message and inform all addressees of the incorrect authentication. If a partial CIRVIS report is received, annotate the message to be relayed accordingly. The precedence of CIRVIS traffic is Flash (on all systems). The following is a example of a CIRVIS report:

Aircraft: CIRVIS - CIRVIS - CIRVIS - MCCLELLAN - THIS IS AIR FORCE 25935 ON EIGHT NINER - CIRVIS REPORT - OVER

Ground: AIR FORCE 25935 - THIS IS MCCLELLAN - GO AHEAD

Aircraft: FLASH - CIRVIS REPORT - AIR FORCE 25935 SIGHTED FORMATION OF SIX JET BOMBERS - CONFIGURATION IS SWEPT WING WITH EIGHT JET ENGINES - SIX HUNDRED MILES WEST OF SAN FRANCISCO AT 1350Z - HEADING 270 DEGREES - NO MARKINGS OBSERVED - OVER

Ground: THIS IS MCCLELLAN - ROGER - OUT

As shown, the CIRVIS report is transmitted in plain language and is sent essentially like a position report. Supplementary reports are made as additional information is obtained through continued observation. A cancellation report is made when the unidentified objects are identified as friendly or when they are not considered to be a threat to national security. Comprehensive instructions for CIRVIS reports are in JANAP 146.

VISUAL SIGHTING REPORTS. Aircrews are required to report sightings of reentering satellites through a Global station for relay to US Space Command. The message may be relayed either by voice (DSN 312-268-1211, extension 4444) or by immediate precedence message to RUWOKDB/USSPACECOM SPACE SURV CEN CMAFB CO. When reporting a visual sighting report relay the following information:

- Location of sighting.
- Azimuth and elevation of objects at beginning and end of sighting.
- Direction of travel.
- Number of objects sighted.
- Color of objects sighted.
- Length of time observed.
- Time of observation.

CONTINGENCY/DISASTER RELIEF. Although not a primary task of the Global HF System, the strategic locations and operating capabilities of the stations make them a perfect contingency/disaster relief net. This tasking may come from many sources, but must originate at

the MAJCOM or higher level, unless the contingency/disaster is in a Global station's local area and the unit commander has granted approval. Extended support in excess of 10 days must be requested and approved at the wing or higher level.

GLASS EYE REPORTS. All Global stations are designated ground entry stations for submission of GLASS EYE reports. All GLASS EYE reports are relayed to US Space Command in the same manner as Visual Sighting Reports. Because of the critical nature of this traffic, all messages received are read back for confirmation prior to relay. The reports should include the following information:

- Mission identifier
- Date/Time of observation
- Apparent ground zero in latitude and longitude
- Radius in nautical miles
- Crater (yes or no)
- Remarks (such as installation destroyed, etc.)

AIR COMBAT COMMAND RECALL AND DIVERSION PROCEDURES. HQ ACC and its subordinate units, with operational control over flying missions, on occasion direct their sorties to return to home base, or another destination. Units will contact a Global station and pass the message in the applicable format. Messages can be transmitted in the FOXTROT or Receipt Requested. Text may be encoded groups or words as contained in USKAC-72 (Strategic Air Operations Code Worldwide). Global stations add time, authentication, and transmit the message in the applicable format. If the message can't be delivered within one minute, contact originator for further guidance.

RELAY PROCEDURES. DISN can be used for relaying messages to military addressees such as HQ AMC, HQ ACC, and/or USCENTCOM, if a written copy is required. If a date-time-group (DTG) is included in the aircraft's message to the Global station, it is the DTG of the message when relayed via AUTODIN. If no DTG is in the aircraft message, the DTG is the time-of-receipt (TOR) assigned by the ground operator to the

aircraft's message. The file time entered in line 2 of the AUTODIN format is the time the message was time-stamped into the communications center.

All messages received for voice relay are offered to the addressee. If the message isn't accepted by the addressee, note refusal on the message form. Under no circumstances is a message filed without a notation by the senior operator/shift supervisor concerning the action taken. When handling ATC traffic relay it by the most expeditious means possible (i.e., phone patch, hotline) to the ATC agency servicing the control area.

DIRECTION FINDING (DF)/MEACONING, INTRUSION, JAMMING, AND SPECTRUM INTERFERENCE PROCEDURES. Global stations experiencing Spectrum Interference request DF assistance as prescribed by the local OIs/LOAs and submit Spectrum Interference reports according to AFI 10-707. Operators must be familiar with Spectrum Interference reporting requirements and procedures.

Spectrum Interference incidents reported include suspected intrusion, suspected jamming, and interference causing severe frequency degradation (75-100 percent effective on one or all frequencies). Spectrum Interference reports are used by appropriate agencies to develop a data base on each frequency. Data is then used to determine and analyze the effectiveness of the HF spectrum to provide optimum communications. Additionally, the data collected is used to plan for frequency changes.

Aircraft Navigational DF Assistance. The following procedures provide assistance to aircraft requiring navigational/emergency location assistance, as well as DF assistance. Strict adherence to the DF request is essential to preclude harmful disclosures. Global operators will obtain the following information from the aircrew for relay to the DF facility:

- Frequency aircraft is operating on
- Aircraft call sign
- General area of search or location of aircraft

The DF facility advises the Global operator to request the aircraft to transmit its call sign and count from 1 to 10 slowly, repeating this procedure three times. After the DF facility has

obtained the coordinates, the Global operator advises the aircraft of any additional action required and provides the coordinates to the aircraft.

Spectrum Interference/RFI/DF Assistance. When an aircraft requests Spectrum Interference/RFI/DF assistance, the aircrew informs the Global station of the frequency affected and type of interference (voice, morse code, teletype, etc.) and requests a readback to confirm receipt. The Global operator relays this information to its supporting DF facility who reports the DF fix information by confidential message to AFFMA/SCTA, Washington, DC and the aircrew's unit Command Center. To maintain operational security, DF information on the interfering station won't be relayed directly to the aircraft or mentioned on the air. The aircrew is responsible for reporting the Spectrum Interference/RFI incident after completing their flight. The DF facility is responsible for reporting DF fix information.

Due to the wide variety of global station locations and capabilities, each MAJCOM ensures its stations maintain adequate OIs and LOAs to coordinate with local ATC agencies, Joint Rescue Coordination Center, and appropriate military and civilian agencies to ensure procedures are correct. Review and revise these documents annually.

BOMBER TARGET CHANGE (BTC). One of the primary means of sending BTC messages to aircraft is the Global system. These messages originate from HQ ACC or Strategic Force Advisors (STRATFOR). A receipt from the aircraft is required. Use AF Form 3657, Global HF System Message Blank, or local message forms to receipt for BTC messages. Upon receipt of a BTC message, attempt contact with the aircraft on all published frequencies. Once contact is established with the aircraft, transmit the BTC message. Relay time of delivery to the originator. Challenge and reply authentication is used with HQ Command Center or STRATFOR office, and aircraft.

INTERNAL EMERGENCIES. During emergency situations (e.g., bomb threat, fire, or natural disaster) the affected station notifies the NCS by the fastest means available without compromising safety of station personnel. FLASH precedence is authorized for notification of initial evacuation. The NCS ensures all other Global stations protect calls to the affected station. If the NCS has an internal emergency, Andrews or McClellan will assume NCS responsibilities. The NCS reassumes control of the Global system if an ANCS has an internal emergency while performing NCS duties. The MAJCOM HF Manager and the System Manager are notified by the next duty day. If possible, an all frequency broadcast is made using the following format:

ALL STATIONS ALL STATIONS
THIS IS (affected stations call sign)
BREAK
INTERNAL EMERGENCY. STATION IS SECURING OPERATIONS.
BREAK
TIME (in minutes past the hour)
AUTHENTICATION IS (IAW AKAA-2001)
I SAY AGAIN (repeat entire message)
ACKNOWLEDGE

Global stations and/or aircraft copying the message will acknowledge using the following transmission:

THIS IS (call sign)
ROGER OUT

If time allows, follow-up the transmission with a phone call to the affected MAJCOM HF Manager. After reentry into the net, contact NCS/ANCS by the fastest means possible. IMMEDIATE precedence is authorized for reentry notification. Challenge and Reply authentication is required when using non-secure means of notification. Also, the reentering station transmits a DISN message to the applicable MAJCOM HF Manager and System Manager, explaining the reason for evacuation and any known mission impact.

COMMANDER-IN-CHIEF (CINC) AND VICE COMMANDER-IN-CHIEF (VCINC) COMMAND AIRCRAFT SUPPORT. When CINC/VCINC prepare for travel, the itinerary is passed to the Global stations along the intended flight route. Stations receiving an itinerary message are prepared to provide all possible communications assistance and are encouraged to provide a discrete frequency as primary once initial contact with the aircraft is established. CINC/VCINC aircraft call signs are assigned according to AFKAI-1. Never reveal an aircraft's location over HF.

CINC/VCINC airborne radio operators are responsible for monitoring Global system published frequencies. Once initial contact has been established, the aircraft advises the Global station of any extended periods when primary/secondary frequencies are not being monitored. All inflight reports taken are passed to the required addressees promptly. The

departure reports must be sent to the next station's command post or base operations. These reports consist of the actual time of departure and estimated destination block time. Arrival report messages consist of the actual time of arrival at destination. Global stations receiving these messages must relay them via landlines to the following agencies:

- Local command post
- NCS (NCS will relay arrival reports to the MAJCOM Command Center Communications Comptroller)

WHITE HOUSE COMMUNICATIONS AGENCY (WHCA). Conus Global stations provide support to WHCA Communications Contingency Teams as required according to WHCA communications-electronics operations instructions and Chairman, Joint Chief of Staff National Military Command System (NMCS) Comm Plan 1-93.

COMMUNICATIONS CONTINGENCY ELEMENTS (CCEs). CCEs provide ACC and AMC units with a communications capability to support deployments in support of contingencies. CCEs are authorized users of the Global system and are authorized to contact any Global station for mission support. Challenge and Reply authentication is required when CCEs enter the net or change frequencies. The NCS must be advised when any change in status affecting the contingency team occurs.

CCEs comply with all instructions given by Global station operators. If possible, CCEs are provided discrete frequency communications support. CCEs will maintain a continuous listening watch on published/assigned frequencies. Call signs are used according to AFKAI-1 or as directed. If other than AFKAI-1 call signs are used, the tasking organization must provide call signs to the applicable global stations by classified message.

POST ATTACK COMMAND AND CONTROL SYSTEM (PACCS) DATA SUPPORT. The Offutt and McClellan stations are tasked to provide HF Single Side band (SSB) data support between ground command centers and the PACCS aircraft according to mission tasking agreement. These stations will provide an alternate route for passing secure record communications for command and control of the ACC force in the event the primary entry points are inoperative.

BASE ISOLATION. Global stations notified of a base isolation by competent authority

(wing, command post, etc.) will immediately comply with all requests. Authentication is used only when the authenticity of the calling party is in doubt. A party's inability to authenticate is not justification for denial of service.

Precedence of real world base isolation traffic is FLASH. Initial contact may include the flagword "HAYSEED." Once contact is established and the initial phone patch or information is passed, the station is directed to a discrete frequency, if possible. This traffic will only be interrupted by traffic of a higher priority.

Base isolation exercise and loss of connectivity exercise traffic are assigned IMMEDIATE precedence. Initial contact may include the flagword "JUNKYARD." These exercises normally consist of a radio check or phone patch to show connectivity then terminated. Due to the magnitude of the missions supported by the Global system, extended exercise support isn't possible.

STRATEGIC AIRCRAFT RECONSTITUTION TEAM (SART) AND STRATEGIC COMMUNICATIONS ELEMENT (SCE) SUPPORT. SARTs are conducted according to MAJCOM directives. Initial contact is normally attempted through the Andrews or McClellan Global Stations. If SCEs are unable to contact Andrews or McClellan, contact will be established with another Global station or PACCS aircraft. After initial contact, the Global station assigns a discrete frequency to the SCE to complete training. Except for this initial contact, training will not be conducted on primary Global frequencies. Each station submits a contact report message to the supporting communications squadron/group no later than five duty days after contact. SCEs will notify the Andrews or McClellan stations via landline after training is completed.

SUMMARY

Message handling is a vital means by which radio operators play a key role in providing feedback to command authorities on information received from airborne and ground forces. Within the Global HF System, all message traffic is either FLASH, IMMEDIATE, or ROUTINE.

Aircrews are required to report visual sightings of satellites returning to earth though a Global station for further relay to US Space Command. Also, although not a primary task of the Global HF System, the strategic locations and operating capabilities of the stations make them a perfect contingency/disaster relief net. Remember, during internal emergency situations the affected station notifies the NCS by the fastest means available without compromising safety of station personnel.

When working CINC/VCINC aircraft, call signs are assigned according to AFKAI-1. Never reveal an aircraft's location over HF. If tasked to work with CCEs units, challenge and reply authentication is required when CCEs enter the net or change frequencies.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. Who plays a key role in providing feedback to command authorities on information received from airborne and ground forces?

2. Which action is taken when messages of questionable validity are received?

3. Where do operators relay visual sightings reports of satellites returning to earth?

4. What makes Global stations a perfect contingency/disaster relief net?

5. Which information is included in a GLASS EYE report?

6. Which type of transmission is used for ACC Recall and Diversion?

7. By which means is ATC traffic relayed to the ATC agency servicing the control area?

8. Name the different types of Spectrum Interference incidents that are reported.

9. Which information will Global operators obtain from the aircrew for relay to the DF facility?

10. Who does the affected station notify during emergency internal situations?

11. Where do Global stations relay arrival report?

12. Which operation instructions do operators follow when supporting WHCA Communications Contingency Teams?

13. What is the purpose of Communications Contingency Elements (CCEs)?

14. Which flagword may initial contact reports include?

15. Which action is taken after initial contact with a Strategic Communications Element (SCE)?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the General Message Handling procedures. Following

the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Processing Communications Instructions for Reporting Vital Intelligence Sighting.
2. Processing Visual Sighting Reports.
3. Processing Contingency/Disaster Relief.
3. Processing a GLASS EYE Report.
4. Performing ACC Recall and Diversion procedures.
5. Performing Relay procedures.
6. Performing Direction Finding (DF)/Spectrum Interference Resolution.
7. Processing Bomber Target Change.
8. Performing Internal Emergencies.
9. Performing MAJCOM CINC and MAJCOM VCINC Command Aircraft Support.
10. Providing White House Communications Agency (WHCA) Support.
11. Supporting Communications Contingency Elements (CCEs).
12. Providing PACCS Data Support.
13. Performing Base Isolation.
14. Providing SART and SCE Support.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 21
COMMAND AND CONTROL COMMUNICATIONS (C3) PROCEDURES

OBJECTIVES

a. Explain the purpose of phone patch service.

b. Explain procedures for contacting aircraft, ships, or ground agencies.

c. Explain the purpose of Airborne Warning and Control System (AWACS) HF

communications support.

d. Explain how to provide AWACS HF communications support.

e. Explain the purpose of Air Combat Command Control Aircraft (ACCCA) Support.

f. Explain how to provide ACCCA Support.

g. Explain the purpose of a BENCH GIRL broadcast message.

h. Explain how to process a BENCH GIRL broadcast message.

i. Explain the purpose of Air Mobility Command (AMC) CLOSE WATCH mission support.

j. Explain how to provide AMC CLOSE WATCH mission support.

k. Explain the purpose of Air Intelligence Agency and HQ AMC GYC-8 support.

l. Explain how to provide Air Intelligence Agency and HQ AMC GYC-8 support.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10, and 15 through 20 for stations equipped with SSIII consoles.
2. Completion of AFQTP Modules 1 through 5, 11 through 14, 15, and 17 through 20 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. AFM 33-109
2. Local OIs

INTRODUCTION

Command and Control Communications (C3) procedures are a routine part of your daily duties. You perform essential and important functions which are critical to the success of the Command and Control (C2) process. Your support of this process comes in several different areas.

INFORMATION

PHONE PATCH SERVICE

Global stations provide Radiotelephone patch service to permit direct voice communications between ground agencies, aircraft, and ships by electrically connecting telephone circuits or voice channels to radio equipment. The term "phone patch" applies to the complete circuit. This service is provided to authorized subscribers only. Global operators process four types of phone patch requests; Air-to-Ground, Ground-to-Air, Ship-to-Shore, and Shore-to-Ship.

Air-to-Ground. When you receive a request from an aircraft, you must decode the call sign, establish connectivity with the ground party, and brief the ground party on procedures before starting the phone patch. If you encounter any unusual delays in servicing the aircraft's request, advise the aircraft immediately of any changes or difficulties.

Ground-to-Air. Before a phone patch request from a ground activity can be serviced, you need to know the precedence of the call, telephone extension or office where the calling party can be contacted, and the general direction of the aircraft, if known.

Ship-to-Shore. When you receive a request from a ship, you must decode the call sign, if applicable, establish connectivity with the ground party, and brief the ground party on procedures before starting the phone patch. If you encounter any unusual delays in servicing the ship's request, advise the ship immediately of any changes or difficulties.

Shore-to-Ship. Before a phone patch request from a ground activity can be serviced, you need to know the precedence of the call, telephone extension or office where the calling party can be contacted, and if known, the general area of operations for the ship.

A request for phone patch service includes all information necessary for you to complete the call, including the identities and location of the calling and called parties and telephone numbers, if known. Information on acquiring and using call signs may be obtained from AFKAI-1 and AFKAO-1. For aircraft or ship movement traffic, immediate precedence will automatically be assigned and the phone patch request routed accordingly. You will not, under any circumstances, refuse service solely because the user failed to comply with the instructions contained in this paragraph.

If a phone patch request is to an aircraft or ship you are not in direct contact with, determine if another Global station has contact. If so, direct the requesting party to call that station for service.

Briefing. In addition to knowing the procedures for radiotelephone patches, you are responsible for giving the ground subscriber the USAF HF Phone Patch briefing. Copies of this briefing are normally placed at each operating position.

Once you contact the ground party, give them the following briefing: "The call sign of your party is (CALL SIGN). Your call sign is (CALL SIGN). Please use these call signs during your conversation. Any reference to persons who do not have an assigned call sign will be by the individual's last name only. Rank or first names will not be used over the air. Do not refer to geographical locations if it will result in a security violation. Your conversation is being recorded."

NOTE

Call signs, when used, are according to AFKAI-1 or other applicable directives. Phone patches to standard base facilities, i.e., Base Ops, Weather, etc., are by geographical location and facility identification. For example: Elmendorf Base Ops, Andersen Metro, Hickam Billeting, etc.

If the ground agency is familiar with phone patch procedures, use the following: "Do you acknowledge the USAF HF Phone Patch briefing?" Following an affirmative reply, state: "Your conversation is being recorded."

Guidelines. Be aware of the following guidelines when processing phone patches within the Global HF System:

- Complete the phone patch and monitor the conversation.
- If the phone patch seems to be of an unofficial nature or contains an obvious transmission security violation, advise your supervisor. Your supervisor sends a message to the aircraft's parent commander and the ground agency's parent organization with an info copy to your MAJCOM HF Manager and the System Manager.
- Operators will not terminate a phone patch or call attention to any transmission violations.
- Requests for phone patch service will not be refused. Authenticity of a subscriber is the called party's responsibility.
- Attempt to copy phone patch traffic and relay it to addressees if the radio reception is not of sufficient quality to complete the phone patch.

NOTE

Radio operators have no responsibility in determining if security violations have occurred. However, if a security violation is suspected, the tapes are marked, and the shift supervisor/senior operator makes an annotation in the Master Station Log. The NCOIC reviews the tapes and determines if any further action is required.

AWACS HF COMMUNICATIONS SUPPORT

Global stations provide support to Airborne Warning and Control System (AWACS) aircraft while on normal mission/training flights or drug interdiction missions. Certain net stations have been tasked as ground entry points (GEP) for these missions. The tasked stations will have locally developed procedures to meet these unique requirements. However, all stations will provide assistance as requested.

Global stations provide discrete A/G HF communications support to AWACS aircraft on request. Priority of service is according to mission priorities (Published Frequency Support). AWACS aircraft make initial contact on published frequencies listed in the Flight Information Handbook. Discrete service is used, if possible, if extended service is required or expected. The AWACS aircraft must provide Defense Switched Network (DSN) numbers for ground agencies not located on the same installation as the Global station.

AIR COMBAT COMMAND CONTROL AIRCRAFT (ACCCA) SUPPORT

The ACCCA is a mobile command facility which provides C2 during deployments/redeployments of tactical and strategic air forces. Global station support of the ACCCA consists of phone patch service, radioteletype (RTTY) service, and relay of C2 messages between the Airborne Movement Control Team and ground control agencies.

BENCH GIRL BROADCAST MESSAGE SUPPORT

Global stations at Yokota, Elmendorf, and Andersen provide broadcast support to USCINCPAC. CINCPACAF Operations Plan "BENCH GIRL" outlines required support and procedures in support of USCINCPAC. This traffic is a DO NOT ANSWER type (FOXTROT) broadcast which is flash precedence. Operators hearing this type of traffic on frequency will terminate lower precedence traffic until completion of the broadcast. If you are at one of the stations supporting this requirement, your trainer will give you the appropriate additional training.

AIR MOBILITY COMMAND (AMC) CLOSE WATCH MISSION SUPPORT

Selected AMC aircraft are designated by HQ AMC as CLOSE WATCH missions. These missions are identified by the flag word "CLOSE WATCH" to ensure special Command Center attention is given to the mission for operational C2 reasons. Real-time information is required on CLOSE WATCH missions.

When notified via message that a flight is a CLOSE WATCH mission, the Global station in contact with the CLOSE WATCH aircraft relays by DSN, all movement reports to the Tanker Aircraft Control Center (TACC), at Scott AFB, IL. Upon initial contact, the Global station operator will advise all CLOSE WATCH aircraft to make hourly operations normal

reports to any Global station for relay to TACC. The TACC is divided into three cells; East, West, and Americas. Messages are relayed via DSN to the applicable cells; East (USAFE) DSN 576-1748, West (PACAF) DSN 576-1749, Americas (North/South) DSN 576-1747. CLOSE WATCH service can be to any DOD agency, MAJCOM, or authorized user, when requested by the System Manager.

AIR INTELLIGENCE AGENCY AND HQ AMC GYC-8 SUPPORT

Details of support are addressed in the Mission Tasking Agreement (MTA). Any Letter of Agreement (LOA) or MTA that affects station operations must be approved by applicable MAJCOMs and the System Manager. Copies of LOAs/MTAs must be on file at each station, MAJCOM, and with the System Manager. MAJCOMs are responsible for annual revalidation of LOAs/MTAs.

Stations supporting this requirement ensure sufficient personnel are adequately trained to provide all required coordination and operational support.

SUMMARY

Command and Control Communications procedures are a routine part of your daily duties. You perform essential and important functions which are critical to the success of the C2 process.

Global stations provide Radiotelephone patch service to permit direct voice communications between ground agencies, aircraft, and ships by electrically connecting telephone circuits or voice channels to radio equipment. You will process four types of phone patch requests; Air-to-Ground, Ground-to-Air, Ship-to-Shore, and Shore-to-Ship.

A request for phone patch service includes all information necessary for you to complete the call, including the identities and location of the calling and called parties and telephone numbers, if known. For aircraft or ship movement traffic, immediate precedence will automatically be assigned and the phone patch request routed accordingly. You will not, under any circumstances, refuse service. In addition to knowing the procedures for radiotelephone patches, you are responsible for giving the ground subscriber the USAF HF Phone Patch

briefing. Copies of this briefing are normally placed at each operating position.

If the phone patch seems to be of an unofficial nature or contains an obvious transmission security violation, advise your supervisor. Your supervisor sends a message to the aircraft's parent commander and the ground agency's parent organization with an info copy to your MAJCOM HF Manager and the System Manager.

Radio operators have no responsibility in determining if security violations have occurred. However, if a security violation is suspected, the tapes are marked, and the shift supervisor/senior operator makes an annotation in the Master Station Log. The NCOIC reviews the tapes and determines if any further action is required.

Global stations provide support to Airborne Warning and Control System (AWACS) aircraft while on normal mission/training flights or drug interdiction missions. Tasked stations will have locally developed procedures to meet these unique requirements. All stations will provide assistance as requested.

The ACCCA is a mobile command facility which provides C2 during deployments/redeployments of tactical and strategic air forces. Global station support of the ACCCA consists of phone patch service, radioteletype (RTTY) service, and relay of C2 messages between the Airborne Movement Control Team and ground control agencies.

Global stations at Yokota, Elmendorf, and Andersen provide broadcast support to USCINCPAC. CINCPACAF Operations Plan "BENCH GIRL" outlines required support and procedures in support of USCINCPAC. The traffic is a DO NOT ANSWER type (FOXTROT) broadcast which has a flash precedence.

Selected AMC aircraft are designated by HQ AMC as CLOSE WATCH missions. These missions are identified by the flag word "CLOSE WATCH" to ensure special Command Center attention is given to the mission for operational C2 reasons. The Global station in contact with the CLOSE WATCH aircraft relays by DSN, all movement reports to the Tanker Aircraft Control Center (TACC), at Scott AFB, IL. CLOSE WATCH service will be provided to any DOD agency, MAJCOM, or authorized user, when requested by the System Manager.

Details of support for Air Intelligence Agency and AMC GYC-8 are addressed in the

Mission Tasking Agreement (MTA). Copies of LOAs/MTAs must be on file at each station, MAJCOM, and with the System Manager. Stations supporting this requirement ensure sufficient personnel are adequately trained to provide all required coordination and operational support.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What is the purpose of phone patch service?

2. What should a radio operator do if the radio circuit is not sufficient quality to complete the phone patch?

3. What is the purpose of AWACS HF communications support?

4. Which types of support do radio operators provide to ACC Control Aircraft?

5. Which Global HF stations provide broadcast support to USCINCPAC?

6. Why are AMC aircraft identified by the flag word "CLOSE WATCH"?

7. Who is required to maintain a file for copies of Letters of Agreement and Mission Tasking Agreements?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate performing command and control communications procedures. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Providing phone patch service.
2. Providing AWACS HF communications support.
3. Providing ACCCA Support.
4. Processing a BENCH GIRL broadcast message.
5. Providing AMC CLOSE WATCH mission support.
6. Providing Air Intelligence Agency and HQ AMC GYC-8 support.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 22
AIR/GROUND (A/G) MESSAGE TRAFFIC PROCEDURES

OBJECTIVES

a. Describe initial contact/departure reports.

b. Describe position/revision reports.

c. Explain the procedures for handling an AETC clearance request.

d. Explain message traffic dissemination.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10, and 15 through 21 for stations equipped with SSIII consoles.
2. Completion of AFQTP Modules 1 through 5, 11 through 14, 15, and 17 through 21 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. AFM 33-109
2. ACP 121, US SUP 2
3. ACP 125
4. JANAP 128
5. DOD FLIP Handbook
6. Local OIs

INTRODUCTION

Aircraft messages, in general, deal with flight regularity and contain information for base facilities or controlling agencies. Information, such as aircraft position, changes in operating schedules, servicing requirements, and non-routine requirements of the aircraft could be included in these messages. Normally, the aircraft will conduct a phone patch with the ground

agency and deliver the information directly. Circumstances may prevent the aircraft from using a phone patch, therefore you must be familiar with the requirements for processing aircraft message traffic.

In this module, for training purposes, assume that the aircraft is using message traffic rather than conducting phone patches to deliver its information.

INFORMATION

INITIAL CONTACT/DEPARTURE REPORTS

Aircraft will normally establish contact with the Global station servicing their flight path as soon as possible after takeoff. An initial contact report is normally used when an aircraft establishes contact with your station for the first time. The aircraft should provide you with all the applicable information. If not, you must ask for the necessary information. An initial contact report consists of:

- Aircraft Call Sign.
- Departure Point and Time.
- Destination and Estimated Time of Arrival (ETA).
- Assigned Flight Level.
- Estimated Time of Arrival for the first Communications Control Zone (CCZ) entry point.
- CCZ exit point and ETA.
- Area Control Center (ACC)/Oceanic Area Control (OAC) monitored for Air Traffic Control (ATC).
- Remarks (DV Code, Special Instructions, Relay Instructions, etc.).

A departure report, although rare, may be used in lieu of an initial contact report. A departure report is basically a condensed version of an initial contact report. This report consists of the aircraft call sign, departure point and time, flight level, destination, and ETA.

If the aircraft is flying in your area of responsibility, you should assume the aircraft's communications guard. This lets the aircraft know you are maintaining a listening watch for traffic. Upon assuming communications guard, assign primary and secondary frequencies and a secondary guard station. The secondary guard station is normally the station in the next CCZ on the aircraft's flight path.

Relay all information in these reports to the ground agencies specified by the aircraft. Relay pertinent flight information to the secondary guard station and any other stations along the flight path of the aircraft.

POSITION/REVISION REPORTS

The position/revision reports are other types of reports not normally used. The position report consists of the aircraft's present position and time, flight level, next estimated position, and ETA. The revision report is used to change or update previously reported information such as a new ETA for the next estimated position or destination. Each of these reports can contain any additional information deemed necessary by the pilot such as inflight weather conditions. Relay these reports to the appropriate ground agencies as directed by the aircraft.

ATC CLEARANCE REQUESTS

An aircraft may contact you requesting an urgent ATC clearance such as a request for immediate clearance to a new flight level or a change in the route of flight. You must copy the request and make every effort to contact the nearest Air Route Traffic Control Center to obtain the desired clearance for the aircraft. Keep the aircraft informed of any delays.

When relaying an approved ATC clearance to an aircraft, as a rule, the aircraft should readback the clearance. This type of flight information is imperative to the safety of the aircrew and other aircraft in the area. Having the aircraft repeat the clearance, ensures the aircraft has received the correct information.

MESSAGE TRAFFIC DISSEMINATION

You will relay all aircraft message traffic by voice or Automatic Digital Network (AUTODIN). The majority of traffic processed in Global stations is voice relayed via HF circuits or landlines. Message traffic is relayed, exactly as received, to the applicable ground agencies identified by the aircraft or mission handling procedures. The handling time limitations for each relay method are different. Have your trainer explain the message handling time requirements. All messages received and/or relayed will show the time of receipt (TOR), initials of all agencies/operators involved in the handling, and the method of receipt.

The format for voice relay messages is not as critical as those relayed via AUTODIN. Messages relayed via AUTODIN are required to be in the exact format required by that system. If the format is incorrect, the computer reading the message will not accept the message and you will encounter a considerable time delay.

Your involvement with message traffic requiring AUTODIN relay will vary depending on your station. Operators at some stations only copy the traffic and ensure it is in the proper format. It is then given to other personnel for AUTODIN injection. At some stations, operators must copy the traffic, ensure it is in the proper format, and inject the message into AUTODIN. Each station has varying degrees of operator responsibility. Have your trainer explain the local procedures for your station.

SUMMARY

Aircraft messages generally deal with flight regularity and contain information for base facilities or controlling agencies. Normally, the aircraft will conduct a phone patch with the ground agency and deliver the information directly. You must be familiar with the requirements for processing aircraft message traffic should circumstances prevent using a phone patch.

Aircraft will normally establish contact with the Global station servicing their flight path as soon as possible after takeoff. An initial contact report is normally used when an aircraft establishes contact with your station for the first time. If the aircraft does not provide you with the necessary information, you must ask for it.

A departure report, although rare, may be used in lieu of an initial contact report. A

departure report is basically a condensed version of an initial contact report. This report consists of the aircraft call sign, departure point and time, flight level, destination, and ETA.

If the aircraft is flying in your area of responsibility assume the aircraft's communications guard. Upon assuming communications guard, assign primary and secondary frequencies and a secondary guard station.

Relay all information in these reports to the ground agencies specified by the aircraft. Relay pertinent flight information to the secondary guard station and any other stations along the flight path of the aircraft.

The position report consists of the aircraft's present position and time, flight level, next estimated position, and ETA. The revision report is used to change or update previously reported information such as a new ETA for the next estimated position or destination. Each of these reports can contain any additional information deemed necessary by the pilot such as inflight weather conditions. Relay these reports to the appropriate ground agencies as directed by the aircraft.

An aircraft may contact you requesting an urgent clearance from the Air Route Traffic Control Center. Make every effort to obtain the clearance for the aircraft.

You will relay all aircraft message traffic by voice or AUTODIN. The majority of traffic processed in Global stations is voice relayed via HF circuits or landlines. Message traffic is relayed, exactly as received, to the applicable ground agencies identified by the aircraft or mission handling procedures. All messages received and/or relayed will show the time of receipt (TOR), initials of all agencies/operators involved in the handling, and the method of receipt.

Messages relayed via AUTODIN are required to be in the exact format required by that system. If the format is incorrect, the computer reading the message will not accept the message and you will encounter a considerable time delay. Your involvement with message traffic requiring AUTODIN relay will vary depending on your station.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. When will an aircraft normally establish contact with the Global station servicing their flight path?

2. Which information does an initial contact report consist of?

3. What is the purpose of a revision report?

4. Which action will you take if an aircraft requests an ATC clearance?

5. How is the majority of traffic processed in a Global station?

6. Which information will each message received/relayed be annotated with?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate processing A/G message traffic. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Processing initial contact/departure reports.
2. Processing position/revision reports.
3. Processing ATC clearance requests.
4. Disseminating message traffic.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 23
SPECIAL MESSAGE HANDLING PROCEDURES

OBJECTIVES

a. Explain how to handle Hotline Station Traffic.

b. Explain how to process Echo Station Traffic.

c. Explain how to perform Worldwide Dissemination.

d. Explain how to process Equipment Malfunction Traffic.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10, and 15 through 22 for stations equipped with SSIII consoles.
2. Completion of AFQTP Modules 1 through 5, 11 through 14, 15, and 17 through 22 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. AFM 33-109
2. Local OIs

INTRODUCTION

A requirement exists to provide special communications support to reconnaissance operations. This module provides specific tasking and operating procedures for global stations in support of worldwide reconnaissance operations. In addition, specific instructions, timing criteria, and message formats are established for global stations and missions monitoring agencies, which are to be used when communicating with reconnaissance aircraft and agencies.

INFORMATION

HOTLINE STATION TRAFFIC

Hotlines allow the fastest means possible to contact selected units (Command Post, NORAD, Base METRO, etc.) for relay of vital information. HQ MAJCOMs and local procedures will determine which hotlines are installed at Global stations. Global hotline stations will:

- Readback message for verification.
- Transcribe information into transmission format.
- Add transmission time and authentication before initiating the transmission.
- Transmit the traffic, tasking appropriate echo stations.
- Pass traffic and TOT to GOC.
- Obtain TOTs of echo stations.
    - -- TOTs of echo stations won't be passed to GOC.
    - -- If GOC wants the TOTs of echo stations, it calls the originating station.

ECHO STATION TRAFFIC

Echo traffic is used to relay messages received from other stations. This ensures that total coverage on all assigned frequencies is accomplished.

Readback messages for verification. If a station copies the traffic directly over the frequency, it must be copied and verified by two operators prior to transmission, or the station must wait for landline receipt and readback before transmitting the message. Remember to transcribe the information into transmission format, add TOT and authentication prior to

initiating transmission, and transmit the message on all published/assigned frequencies.

Echo stations do not knowingly echo messages containing an incorrect text; challenge and reply procedures are initiated with the station who transmitted the incorrect text or authentication. This will alert the station that an error was made. The station in error will:

- Cancel the original broadcast. If an error is made in a More to Follow broadcast, disregard the entire transmission and retransmit the entire broadcast.

- Transmit the correct message tasking minimum echo stations.

  -- Echo stations that previously transmitted the incorrect message cancel the original message before re-echoing.

  -- Stations who transmitted the original message correctly do not cancel but re-echo. TOT is the time the text was transmitted correctly.

Immediately upon determining incorrect advisory text is transmitted by a station and correction procedures are completed, the station making the error makes a FLASH precedence call to GOC and advise the GOC controller of all circumstances and corrective actions. The GOC controller determines if another message must be transmitted to counteract the incorrect message. All aircraft advisories heard/copied on frequency are monitored in their entirety and verified for correct format.

WORLDWIDE DISSEMINATION

The purpose of worldwide dissemination is to ensure all messages of importance are transmitted in a manner that will allow friendly units to receive messages of great importance regardless of their location.

All Global stations echo worldwide advisories. When a station receives traffic for worldwide dissemination, the operator follows the procedures used for hotline station traffic handling. If the advisory is given directly to the NCS/ANCS, they use the alert line to task all stations using the "ALL STATIONS" broadcast. After calling GOC, the operator makes a second FLASH (IMMEDIATE if FLASH is unavailable) precedence call to the NCS/ANCS and passes the advisory. The NCS/ANCS uses the alert line to task the Global net to echo the

advisory. The NCS/ANCS then stands by for all TOTs and passes all TOTs to the originating station.

Global stations without alert lines are notified of the advisory taskings on frequency or via landline by stations with alert line capabilities. Croughton notifies all European stations and Ascension. Yokota contacts Andersen and Hickam, and the NCS/ANCS notifies MacDill and Albrook.

Should the NCS/ANCS receive an advisory during an EAM broadcast with stations seized, they immediately disregard the traffic in progress (unless it's a worldwide advisory or can be completed within 30 seconds) and broadcast the advisory.

EQUIPMENT MALFUNCTION TRAFFIC

The purpose of equipment malfunction traffic is to inform other stations of problems your station is experiencing. Stations echoing another station that's experiencing a problem will follow the procedures used for hotline station traffic handling.

If a hotline station receives advisory traffic while experiencing malfunctions affecting its ability to transmit on any published/assigned frequency, the Global operator establishes contact with an echo station. That station acts as originating station and follows procedures used for hotline station traffic handling. The station experiencing the problem will contact the NCS regarding the problem.

SUMMARY

Hotlines are used to contact selected units (Command Post, NORAD, Base METRO, etc.) for relay of vital information. Echo traffic is used to relay messages received from other stations. This ensures total coverage on all assigned frequencies is accomplished. Worldwide dissemination ensures all messages of importance are transmitted in a manner that will allow friendly units to receive messages of great importance regardless of their location. Equipment malfunction traffic informs other stations of problems your station is experiencing.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What is the purpose of Hotlines?

2. Name some of the units that might have a hotline.

3. Which information should be added to traffic before initiating the transmission?

4. What is the purpose of Echo traffic?

5. What is the purpose of Worldwide Dissemination?

6. Which action is taken when the NCS/ANCS receives an advisory during an EAM broadcast with stations seized?

7. How are Global stations without alert lines notified of the advisory taskings?

8. Who establishes contact with an Echo station if a hotline station receives advisory traffic while experiencing an equipment malfunction?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate Special Message handling procedures. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel

comfortable with the procedures, you will be evaluated on the following:

1. Handling Hotline Station Traffic.
2. Processing Echo Station Traffic.
3. Performing Worldwide Dissemination.
4. Processing Equipment Malfunction Traffic.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 24
EMERGENCY TRAFFIC HANDLING

OBJECTIVES

a. Explain how to perform distress procedures.

b. Explain how to process lost communications traffic.

c. Explain how to process communications alert traffic.

d. Explain how to process aircraft emergencies.

e. Explain how to alert search and rescue agencies.

f. Explain how to provide communications support for aerospace rescue and recovery units.

g. Explain how to process emergency calls for Merchant Marine and US Navy ships.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10, and 15 through 23 for stations equipped with SSIII consoles.

2. Completion of AFQTP Modules 1 through 5, 11 through 14, 15, and 17 through 23 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. AFM 33-109
2. Local OIs
3. ACP 135
4. AFI 10-707

5. ACP 121, US SUP 2

INTRODUCTION

The Air Force has developed standardized procedures to cope with practically any type of emergency. This standardization and the additional training all Global personnel receive will drastically reduce the accident rate in all USAF commands. There are different types of emergencies that might be encountered while working in a Global station. This module explains the actions you should take during an emergency, and how to initiate search and rescue actions. The courses of action discussed here are basic and are intended as guidelines only.

INFORMATION

DISTRESS PROCEDURES

Any DOD aircraft or marine vessel is authorized to use the Global HF system during emergency situations. During an emergency situation, with time permitting, Global operators will patch an aircraft to its parent command post or as advised. If a delay is anticipated, the Global operator obtains as much information as possible from the aircraft concerning the nature of the emergency while the patch is being established. This information includes present position and time, flight level, estimated position and time, true heading, indicated air speed (IAS), nature of distress, souls on board, type of assistance requested, intentions of the aircraft commander, and any other information that aids in rescue actions. All emergency traffic will be assigned a FLASH precedence.

The Global station that establishes communications with the aircraft in distress is responsible for coordinating and relaying all distress traffic unless control is transferred to another station by the aircraft. Once a station establishes communication with an aircraft in distress the operator will clear the frequency using the following broadcast:

ALL STATIONS ALL STATIONS ALL STATIONS
THIS IS (station call sign spoken three times)
BREAK
STOP TRANSMITTING ON (frequency)
(aircraft call sign, distress or Urgency)
BREAK
(station call sign) **OUT**

If the emergency situation is such it precludes the operator from making the HF broadcast on the distress frequency, advise the NCS. Stations actively engaged in emergency communications will:

- Clear the frequency (SSIII stations will "lock out" distress frequency) and contact the NCS.

- Provide all possible assistance.

- Enter all distress information and actions in the MSL.

- Retain and store distress traffic case files along with marked tapes of distress according to AFI 37-133V2.

- Stations not actively engaged in the emergency, but monitoring the frequency, will provide any assistance required.

The Global station responsible for coordinating distress traffic will terminate the distress traffic when the aircraft is no longer in a distress situation. The cancellation may be made by the pilot of the distressed aircraft or by another aircraft on the scene in the event the distressed aircraft is unable to cancel. Distress communications may also be terminated when advised by the appropriate air traffic control (ATC) or military control agency.

The distress termination message is transmitted on all frequencies used by the Global station during the distress. The distress termination message consists of:

MAYDAY
ALL STATIONS ALL STATIONS ALL STATIONS
THIS IS (station call sign spoken once)
TOR of the termination message
Call sign of the station which was in distress
DISTRESS TRAFFIC ENDED
(station call sign) **OUT**

Global stations hearing the urgency call PAN will cease transmission on the frequency concerned to prevent interference with the exchange of urgency conditions. Resume transmission when a listening watch indicates the urgency message has been transmitted and acknowledged. The Global station acknowledging the urgency traffic will:

- Take immediate action appropriate to the nature of the emergency or appropriate to the request transmitted by the aircraft.

- Inform the appropriate ATC agency and/or military control center as necessary.

When the urgency message requires termination, the aircraft that originated the message must cancel it by addressing a message to the stations originally called.

When the requirement for urgency traffic no longer exists, the appropriate Global station transmits an announcement similar to that prescribed for terminating distress traffic replacing MAYDAY with PAN.

LOST COMMUNICATIONS TRAFFIC

The fact an aircraft does not report problems is no indication an emergency situation does not exist. When communications are not established within the five minutes following a required reporting point, action must be taken to assure the safety of the aircraft. Lost Communications procedures are initiated by the Air Route Traffic Control Center (ARTCC) responsible for the Command and Control Zone (CCZ), military command center, or Global station. Regardless of the initiating authority, information concerning an overdue aircraft must include the following:

- Aircraft's call sign.

- Last known position or last station in contact with the aircraft.

- Agency making the request.
- Initials of requesting party.
- Phone number of requesting party/agency.

Immediately after the call (or during the call if other operators are available) make the following all frequencies broadcast:

(AIRCRAFT CALL SIGN stated two times.) **THIS IS** (YOUR STATION CALL SIGN stated two times) **WITH AN ALL FREQUENCIES CALL**. AIRCRAFT CALL SIGN) **IF YOU COPY THIS TRANSMISSION, PLEASE STATE YOUR FREQUENCY. OVER.**

If contact is not established within 15 seconds after the initial broadcast, make another call. If no contact is established within 30 seconds after this call, proceed as follows:

- Contact the secondary and standby Global station for the area and have them attempt contact with the aircraft. Each station will make two All Frequency broadcasts, 15 seconds apart.
- If unable to contact the aircraft within five minutes after initiating Lost Communications procedures, the primary Global station advises the ATC agency of the situation, requests further instructions, and advises the aircraft's military control agency. The Global station continues its efforts to establish contact with the aircraft using the following steps.
- Make an All Frequencies call by stating:

(AIRCRAFT CALL SIGN stated twice.) THIS IS (YOUR STATION CALL SIGN stated twice) **ALL FREQUENCY REQUEST**. (AIRCRAFT CALL SIGN) **IF YOU COPY THIS TRANSMISSION, PLEASE STATE YOUR FREQUENCY. IF ANY OTHER STATION HAS INFORMATION CONCERNING** (AIRCRAFT CALL SIGN), **PLEASE CONTACT** (YOUR STATION CALL SIGN) **OR** (REQUESTING AGENCY) **BY THE FASTEST AVAILABLE MEANS.** (Repeat the whole transmission.) (YOUR STATION CALL SIGN) **OUT.** Wait ten seconds and repeat three times.

- Repeat All Frequencies transmission every five minutes until contact is established, or you are advised to terminate by the requesting agency.

- Contact adjacent stations and request them to attempt contact with the aircraft. If other aircraft are known to be in the general area, request that they attempt contact on UHF/VHF guard frequencies. If contact is reestablished have the aircraft standby for an immediate phone patch to the concerned agencies.

- When unable to establish contact by the above means another method, called an "In-The-Blind" transmission, can be made. It instructs the aircraft to send a series of signals by alternately depressing and releasing the microphone's push-to-talk button. If any signals are heard instruct the aircraft to respond to "yes/no" questions by depressing the push-to-talk button, once for yes and twice for no. An "In-The-Blind" message is prefixed by the phrase "Transmitting In-The-Blind." The following is an example of this type of transmission:

M12345, M12345 DE LAJES, LAJES "TRANSMITTING-IN-THE BLIND." IF YOU COPY THIS TRANSMISSION, KEY YOUR PUSH-TO-TALK BUTTON AT LEAST 5 TIMES AT THE CONCLUSION OF THIS CALL. (Repeat call) **LAJES STANDING BY.**

Regardless of the outcome of the "In-The-Blind" call, continue your attempt to contact the aircraft until advised to stop by an authorized agency. There will be times when, due to continued lack of information regarding an aircraft's whereabouts, ARTCC will determine that search and rescue operations are necessary. The phrase "Communications Alert" is used to identify these operations. The responsible ATC agency will assign these phases, normally within five minutes after the aircraft's estimated reporting time. It may vary slightly among the various control areas.

COMMUNICATIONS ALERT TRAFFIC

The Communications Alert consists of three phases: UNCERTAINTY, ALERT, and DISTRESS.

- **INCERFA** (Uncertainty Phase) - INCERFA is declared of knowledge concerning its location, or knowledge of possible difficulties. This phase usually covers the first

30 minutes of Lost Communications procedures.

- **ALERFA** (Alert Phase) - ALERFA is declared when fear exists for the aircraft's safety due to a continued lack of information concerning its position or progress, or because definite information reveals certain difficulties are unavoidable. If no contact is made with the aircraft by the time the fuel aboard would be exhausted under normal flying conditions, it is certain that a distress situation exists.

- **DISTRESFA** (Distress Phase) - DISTRESFA is declared when immediate assistance is required. Normally actual search and rescue operations begin with the declaration of the distress phase. All stations are required to maintain a listening watch on all, or specified, frequencies for possible transmissions from the missing aircraft.

NOTE

ATC may declare any one of these phases without initiating any other procedures outlined above.

The following is an example of a Communication Alert initiation broadcast:

ALL STATIONS, ALL STATIONS, ALL STATIONS. THIS IS (YOUR STATION CALL SIGN stated three times). (APPROPRIATE ARTCC CENTER) **HAS DECLARED** (AIRCRAFT CALL SIGN) (APPROPRIATE COMMUNICATION ALERT PHASE) **AT** (TIME). (AIRCRAFT CALL SIGN) **IF YOU COPY THIS TRANSMISSION OR IF ANY STATION HEARING THIS BROADCAST HAS INFORMATION CONCERNING** (AIRCRAFT CALL SIGN), **PLEASE CONTACT** (YOUR STATION CALL SIGN) **OR** (REQUESTING AGENCY) BY THE FASTEST AVAILABLE MEANS. (Repeat transmission). (YOUR STATION CALL SIGN) **OUT**.

The following is an example of a Communication Alert cancellation broadcast:

ALL STATIONS, ALL STATIONS, ALL STATIONS. THIS IS (YOUR STATION CALL SIGN stated three times). (APPROPRIATE ARTCC CENTER) **HAS CANCELED** (APPROPRIATE COMMUNICATION ALERT PHASE) **ON** (AIRCRAFT CALL SIGN) **AT** (TIME). (Repeat transmission). (YOUR STATION CALL SIGN) **OUT**.

AIRCRAFT EMERGENCIES

Any HF frequency from 3-30MHz may be used for emergency traffic. ACP 121, US SUP 2, and ACP 135 list the procedures and frequencies reserved for coordinating and handling distress traffic. The following is a list of the most common distress frequencies:

- 121.5MHz - VHF International emergency frequency
- 243.0MHz - UHF International emergency frequency
- 2182kHz - Maritime Calling and Distress frequency
- 8364kHz - International Lifeboat, Life raft, and Survival Craft frequency

There are three emergency categories: Distress, Urgency, and Safety. Before going into the actual procedures for each emergency, you need to be familiar with the information required when an aircraft declares an emergency.

The information on the emergency checklist is obtained as time permits. Do not interfere with the aircraft's handling of the emergency in order to fill the blanks on the checklist. The aircrew has checklists that also need to be accomplished and are more critical at the time. Be prepared to copy the required information and handle each emergency as a unique situation. The following information should be part of an emergency checklist:

- Call sign
- Present or Estimated Position
- True Heading, Magnetic Heading
- Air Speed (True or Indicated)
- Aircraft type
- Nature of emergency
- Assistance required (fix, steer, bearing, intercept)
- Pilot's intentions (turn around, ditch, proceed on)
- Flight Level
- Fuel remaining
- Souls on Board
- Hazardous cargo on board

The definition of DISTRESS is the condition of being threatened by grave or imminent danger which requires immediate assistance. The international voice call sign is

MAYDAY. Distress traffic has absolute priority over all other transmissions. All stations hearing the distress call will immediately cease all transmissions capable of interfering with the distress traffic. However, they must continue to monitor the distress frequency.

Coordinating Distress Traffic - The station that establishes communications with the aircraft is responsible for coordinating and relaying all distress traffic until control is transferred to another station. Use all possible means to maintain contact with the distress aircraft for the duration of the emergency.

The station that assumes responsibility for coordinating the distress traffic will, when necessary, clear the distress frequency by making the following transmission (Lajes is used as an example):

ALL STATIONS, ALL STATIONS, ALL STATIONS. THIS IS LAJES, LAJES, LAJES. STOP TRANSMITTING. DISTRESS.

If the need to change frequencies arises, extreme caution must be exercised to prevent the possibility of losing communications. Refer to ACP 121, US SUP 2, Chap 8, for more guidance.

Relay all aircraft distress traffic to the appropriate ATC agency, the Rescue Coordination Center (RCC), and Military control agency, by the most expeditious means. After relaying the traffic notify adjacent stations of the emergency in progress and DF facilities which may be of assistance.

Maintain continuous guard on the frequency in use by the distress aircraft. Assign secondary and standby frequencies that the aircraft may use. The senior operator will act as the backup operator and monitor all transmissions to and from the aircraft. Under no circumstances will the frequency used by the aircraft be left unguarded.

Terminate distress communications upon notification by the distress aircraft, responsible ATC agency, or military control agency. The distress termination message will be transmitted on all frequencies used by the Global station during the coordination of distress traffic. The message will consist of:

MAYDAY (spoken once).

ALL STATIONS (spoken three times).
THIS IS
Global station call sign (spoken once).
TOR of termination message.
Identification of station which was in distress.
DISTRESS TRAFFIC ENDED
OUT

As soon as the distress is over, give all traffic and tapes of the distress traffic to the NCOIC for review. Ensure all pertinent events are in the MSL.

Action required of other Global stations not directly involved in distress traffic:

- If requested by the coordinating station, monitor the distress frequency and assist, as necessary
- Intercept and copy traffic to/from the distress aircraft
- Acknowledge intercepted distress messages in cases where the message must be relayed to another agency
- Retain all records of distress traffic

If needed, Global stations may request assistance from other aircraft to:

- Assist the primary Global station in maintaining communications with the aircraft in distress
- Copy and relay traffic to and from distress aircraft
- Maintain a listening watch, where possible, on VHF, UHF, and other distress frequencies

URGENCY traffic is defined as information concerning the safety of ships, aircraft, or of some person on board or within sight, but which does not require immediate assistance. The international call sign is PAN. Urgency traffic has priority over all traffic except distress.

Stations that hear an urgency call will stop transmitting on the frequency concerned in order not to interfere with the exchange of urgency communications. Transmissions may be resumed after three minutes or when a listening watch indicates that the urgency message has been transmitted and acknowledged and additional urgency traffic is not likely. The Global station acknowledging the urgency traffic will take immediate action, appropriate to the nature of the emergency or to the aircraft request. Also, inform the concerned ATC agency and/or military control agency as necessary.

The aircraft that initiated the urgency traffic must cancel it by notifying the station(s) originally called. When urgency traffic has been cancelled, the Global station will transmit a termination message on all frequencies using the following format:

ALL STATIONS ALL STATIONS ALL STATIONS
THIS IS
Global station call sign (spoken once).
TOR of termination message.
Identification of station with urgency.
URGENCY TRAFFIC ENDED
OUT

A SAFETY message concerns the safety of navigation or contains important meteorological warnings. The international voice call sign is SECURITE.

Stations receiving a safety message will relay or take actions IAW the addressees and/or instructions listed. Global stations hearing the safety signal will ensure they do not interfere with the exchange of safety communications. Remember, aircraft are authorized to use the international voice call sign for urgency--PAN, to relay this traffic, if SECURITE fails to clear the frequency.

ALERT SEARCH AND RESCUE AGENCIES

All HF Global stations are tasked to contact the appropriate search and rescue agencies, when required. Local directives will state the fastest means of alerting the proper agency.

Global stations are responsible for notifying the appropriate ATC agency and alerting the appropriate military rescue coordination center according to local directives. If the ATC agency notifies a search and rescue agency, the shift supervisor/senior operator obtains the time the rescue agency was notified by ATC and logs it in the MSL.

COMMUNICATIONS SUPPORT FOR AEROSPACE RESCUE AND RECOVERY UNITS

Aerospace rescue and recovery units are authorized to use any of facilities of the Global system when communicating with their search and rescue aircraft. Local procedures for use of equipment and support are developed between the Global station and Air Force rescue units.

EMERGENCY CALLS FOR MERCHANT MARINE AND US NAVY SHIPS

The Air Force is the only DOD agency operating HF radio stations 24 hours a day, all year round. Global stations may receive calls from US Flag/Effective US Controlled Fleet (EUSF) merchant ships experiencing attacks (military or terrorists), harassment, piracy, or natural disasters. Ships requiring assistance from a Global station will call on published frequencies. Normally, two-way communications are established prior to message transmission. However, stations must be prepared to copy traffic on the initial call as follows:

ANY STATION GUARDING THIS NET (OR SPECIFIC GLOBAL STATION) **THIS IS** (NAME OF SHIP), **EMERGENCY MESSAGE FOLLOWS**:

TO: Fleet Commander-in-Chief (appropriate Command Center)

- Name of ship
- International call sign
- Position
- Date and Time
- Brief description of emergency

Upon receipt of the message, the Global operator will relay it via commercial telephone to designated Navy command centers

SUMMARY

Any DOD aircraft or marine vessel is authorized to use the Global HF system during emergency situations. The fact an aircraft does not report problems, is no indication an emergency situation does not exist. When communications are not established within the five minutes following a required reporting point, action must be taken to assure the safety of the aircraft. If needed, Lost Communications procedures are initiated by the ARTCC responsible for the CCZ, military command center, or Global station.

Three Communications Alert phases are used. INCERFA is declared when doubt exists as to the safety of the aircraft due to lack of knowledge concerning its location, or knowledge of possible difficulties. ALERFA is declared when fear exists for the aircraft's safety due to a continued lack of information concerning its position or progress or because definite information reveals certain difficulties are unavoidable. Finally, DISTRESFA is declared when immediate assistance is required. Normally, actual search and rescue operations begin with the declaration of the distress phase.

All HF Global stations are tasked to contact the appropriate search and rescue agencies, when required. Local directives will state the fastest means of alerting the proper agency. Aerospace rescue and recovery units are authorized to use any of facilities of the Global system when communicating with their search and rescue aircraft.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. Who is authorized to use the Global system during emergency situations?

2. What should an operator do if a delay is anticipated while trying to establish a phone patch?

3. Which action is taken when Global stations hear the urgency call **"PAN"** (safety-of-flight problem)?

4. Where do you receive a Lost Communications notification from?

5. How many times should you Transmit In-The-blind?

6. How long should you continue Communications Alert Phase broadcasts?

7. When should you terminate aircraft emergency?

8. When should you move an aircraft to a discrete frequency?

9. Which HF Global station(s) are tasked to contact the appropriate search and rescue agencies?

10. Which guideline will state the fastest means of alerting the proper agency?

11. Which information should be recorded when processing Emergency Calls for Merchant Marine and US Navy Ships?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the Special Message Handling procedures. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel

comfortable with the procedures, you will be evaluated on the following:

1. Performing distress procedures.
2. Processing Lost Communications traffic.
3. Processing Communications Alert traffic.
4. Processing aircraft emergencies.
5. Alerting Search and Rescue Agencies.
6. Providing Communications Support for Aerospace Rescue and Recovery Units.
7. Processing Emergency Calls for Merchant Marine and US Navy Ships.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 25
BROADCAST PROCEDURES

OBJECTIVES

a. Explain the purpose of Emergency Action Messages (EAMs).

b. Explain the purpose of Aircraft Advisories.

c. Explain the purpose of DEFCON change broadcasts.

d. Explain the procedures for transferring Net Control Station (NCS) responsibilities.

PREREQUISITES

1. Completion of AFQTP Modules 1 through 10, and 15 through 24 for stations equipped with SSIII consoles.

2. Completion of AFQTP Modules 1 through 5, 11 through 14, 15, and 17 through 24 for stations equipped with Scope Control consoles.

TRAINING REFERENCES

1. AFM 33-109
2. Local OIs

INTRODUCTION

Global HF broadcasts, like the messages covered in Module 16, are essential to mission accomplishment. EAMs, Aircraft Advisories, DEFCONs, and NCS Transfers are different types of broadcasts utilized in day-to-day operations. A complete understanding of Module 15, traffic precedence, and AFM 33-109, Atch 10, are especially important for successful

completion of the tasks covered in this module.

INFORMATION

EMERGENCY ACTION MESSAGES (EAMs)

EAMs are a primary means for the National Military Command System (NMCS) and subordinate field commanders to pass National Command Authority (NCA) directions to CINCs and nuclear forces. CINCs use these directions to notify their command elements to take specific actions during Pre, Trans, and Post attack environments. This information can be applied to both peacetime and Emergency War Order (EWO) situations. The relative importance of EAMs cannot be overemphasized. Read AFM 33-109, Chap 5, Sec A, for specific EAM processing guidelines, then return to this module.

AIRCRAFT ADVISORIES

You provide essential communications support to USSTRATCOM reconnaissance operations. Operators must learn operating procedures for Global HF facilities in support of USSTRATCOM reconnaissance operations worldwide. In addition, specific instructions, timing criteria, and message formats are established for Global HF facilities. Mission monitor agencies are to be used when communicating with USSTRATCOM reconnaissance aircraft and agencies.

The term HOTLINE STATION refers to all hotline subscribers and the Global Operations Center (GOC). Traffic received via normal landlines from these agencies should be handled with the same urgency as traffic received over direct hotlines.

It is absolutely imperative that hotline traffic be accurately receipted for, and transmitted quickly over HF, using the dual-operator concept to verify accuracy. All operators must use readback procedures as verification.

Unless indicated otherwise, the original receiving station must relay all reconnaissance traffic to the GOC (after initial transmission, if applicable). Relay the traffic, including the initial Time of Transmission (TOT), using FLASH precedence. If you experience landline difficulties, request assistance from any Global station you are in HF contact with.

If you have more than one message to transmit, use MORE TO FOLLOW procedures. Read AFM 33-109, Chap 6, Sec B, for instructions on these procedures and then return to this module.

DEFCON CHANGE NOTIFICATIONS

It is the responsibility of CINC/MAJCOM Command Centers and Airborne Command Posts (ABNCPs) to notify Global stations of DEFCON changes. These changes fall into two distinct categories which are Actual and Exercise. DO NOT mention DEFCON conditions/changes over unsecure means. Use the USKAC-72 groups to communicate these broadcasts. Actual DEFCON Notifications are real world defense conditions relating to current or possible situations. Exercise DEFCON Notifications are used by USSTRATCOM and Chairman, Joint Chiefs of Staff (CJCS) during exercises only.

The USSTRATCOM Command Center may inject the DEFCON changes into the Global System directly over HF via the all station alert. Operational procedures within the Global System will not change unless it is specifically indicated. Read AFM 33-109, Chap 5, Sec C, for more details on DEFCON procedures, and then return to this module.

NCS TRANSFERS

NCS responsibilities will be transferred when directed by HQ USSTRATCOM or the NCS. The transfer can be accomplished as scheduled or unscheduled. The transfer of NCS is accomplished by either HF, or Communications Call to all stations by the station assuming NCS.

UNSCHEDULED. Transfer NCS when a station has lost 50 percent of its transmit and receive capability on the operational frequency complement, or loss of all landline connectivity, and/or loss of all station alert capability. If these situations affect the NCS, the NCS will try to perform its duties to the extent of existing capabilities.

SCHEDULED. Scheduled changes are developed by the NCS monthly. This allows Andrews and McClellan to become proficient in the assumption of NCS responsibilities. Changeovers should not exceed 10 days per month. The NCS must remain on standby status with the capability to immediately resume responsibilities if Andrews or McClellan cannot fulfill these duties.

The station assuming NCS must notify the USSTRATCOM Command Center and the GOC. Upon terminating NCS, the ANCS forwards all information pertaining to the net to the NCS.

SUMMARY

Emergency Action Messages are a primary means for CINCSTRAT and subordinate field commanders to notify their command elements to take action during Pre, Trans, and Post attack environments. This information can apply to both peacetime and EWO situations. The relative importance of these messages cannot be overemphasized.

Aircraft advisories provide communications support to USSTRATCOM reconnaissance operations. You must learn the operating procedures for your Global HF facility in support of USSTRATCOM reconnaissance operations worldwide.

The term HOTLINE STATION refers to all hotline subscribers and the GOC. Traffic received via normal landlines from these agencies should be handled with the same urgency as traffic received over direct hotlines.

It is absolutely imperative that hotline traffic be accurately receipted for, and transmitted quickly over HF, using the dual-operator concept to verify accuracy. All operators must use readback procedures as verification for hotline traffic.

Unless indicated otherwise, the original receiving station must relay all reconnaissance traffic to the GOC. Relay the traffic, including the initial TOT, using FLASH precedence. If you experience landline difficulties, request assistance from any Global station you have HF contact with.

It is the responsibility of USSTRATCOM Command Center or ABNCP to notify Global stations of DEFCON changes. These changes fall into two distinct categories: Actual and Exercise. Actual DEFCON Notifications are real world defense conditions relating to current or possible situations. Exercise DEFCON Notifications are used by USSTRATCOM during exercises only.

NCS responsibilities are transferred when directed by HQ USSTRATCOM or the NCS. The transfer can be accomplished as scheduled or unscheduled. Unscheduled transfers occur when the NCS station has lost 50 percent transmit and receive capability on the operational frequency complement, or loss of all landline connectivity, and/or loss of all station alert capability. Scheduled changes are developed by the NCS monthly. This allows Andrews and McClellan to become proficient in the assumption of NCS responsibilities. Each changeover should not exceed 10 days per month.

ADDITIONAL READING

ACP 125
USKAC-72

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What are EAMs used for by the NMCS and subordinate field commanders?

2. Which types of stations are referred to as HOTLINE STATIONS?

3. Which procedures should be utilized if a station has more than one Aircraft Advisory broadcast to transmit?

4. Who is responsible to inform Global stations of DEFCON notifications?

5. Which agencies are responsible for notifying Global stations of DEFCON changes?

6. Who may direct a change in NCS?

7. Which facilities must be notified during an NCS transfer?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate the procedures for making broadcasts. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Processing an EAM via HF or SACCS.
2. Preparing an Aircraft Advisory for transmission over HF.
3. Disseminating a DEFCON change notification via HF or SACCS. (Simulate)
4. Transferring NCS via HF or communications call. (Simulate)

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS. Your trainer will assign the next task.

MODULE 26
MYSTIC STAR SUPPORT

OBJECTIVES

a. Explain the MYSTIC STAR mission.

b. Explain the procedures used to support MYSTIC STAR missions.

PREREQUISITES

1. Must have completed AFQTP Modules 1 through 5.
2. Must have completed AFQTP Modules 6 through 10 for stations equipped with Scope Signal III.
3. Must have completed AFQTP Modules 11 through 14 for stations equipped with Scope Control and Scope Pattern.

TRAINING REFERENCES

1. DCA Circular 310-70-79
2. AFM 33-109
3. Local OIs

INTRODUCTION

MYSTIC STAR is an unclassified nickname for a secure/unsecure voice and data Air-to-Ground communications system. The Defense Communications Agency (DCA) has overall operational direction and management of the MYSTIC STAR Network. The DCA Operation Center has operational direction of the system. The Andrews VIP station performs duty as the Net Control Station (NCS).

INFORMATION

MISSION

According to DCA Circular 310-70-79, the mission of the MYSTIC STAR system is "to provide high-quality voice and data communications to the President, Vice President, Cabinet Members, Foreign Heads of State, and other senior government and military officials while aboard Special Air Mission (SAM), VIP, or Command aircraft (including the Presidential helicopters)."

The MYSTIC STAR System consists of all the equipment and circuits installed in ground stations and aircraft that support the MYSTIC STAR mission. The network consists of ground-based HF radio and UHF SATCOM equipment, connecting circuitry, and control equipment. It provides transmission interface for voice and data traffic between the user and SAM, VIP, or Command aircraft. The following is a description of the ground HF portion:

System. There are eight primary and nine secondary MYSTIC STAR HF radio stations located throughout the world. Each primary station provides four levels while secondary stations provide a minimum of one level of equipment. A level is defined as a transmitter, a receiver, and other associated equipment.

All MYSTIC STAR identified levels at the primary sites are remotely controlled by the NCS through interstation lines. Each HF radio level can provide two full-duplex ISB channels using two interstation lines, or one full/half-duplex SSB channel with one interstation line. The capabilities of each station are also determined by the number of dedicated interstation lines to the NCS. In addition, the NCS can access and remotely control radio levels at secondary sites using interstation or DSN lines.

A typical station encompasses a Communications Relay Center (CRC), a Transmitter Site, and a Receiver Site. The CRC consists of consoles, switches, and associated common control equipment. The transmitter site utilizes 10KW transmitters that are used throughout the network. Each station has a mixture of rotatable log periodic and omnidirectional antennas, and associated antenna selection matrixes.

SUPPORT

Supporting two missions simultaneously sometimes result in confusion over who has priority for the levels identified for MYSTIC STAR. For this reason, Global HF Stations' support is IAW mission priority listings in AFM 33-109. DCAC 310-70-79 identifies the mission priority used within the MYSTIC STAR system.

IAW AFM 33-109, the system or individual stations may not be dedicated to any service, command, or other activity. Authorized users obtain support on a precedence basis. Problems of this nature are normally elevated to the NCOIC for settlement.

At times, Andrews Global becomes saturated with missions. When this occurs, all priority four missions will be given to other Global stations. This tasking is received by one of three methods:

- Advance notification by DISN message
- Short notification DSN from Andrews
- No notice by aircraft

The following information is required for support:

- Call sign of aircraft
- Priority of mission
- Departure and arrival station
- Length of mission
- DV Code on board
- Type of service required (i.e., voice, data, or both)

Once the information is received, the senior operator/ supervisor will make a decision based on the following:

- Are there sufficient radios to support all customers?
- Is this a higher priority mission than any current or upcoming mission?
- Can the mission be supported totally or only partially?

If the mission can be properly supported, proceed as follows:

1. Condition a radio level (scope pattern/scope control) for the desired frequency and mode of operation.

a. If the mission is already in progress, obtain the appropriate frequencies from Andrews Global.

b. If the mission has not started yet, obtain the estimated aircraft departure time.

c. Upon initial contact, assign a primary, secondary, and tertiary frequency from the FOXTROT listing in DCAC 310-70-79.

2. Provide all assistance requested by the aircraft and Andrews VIP.

3. Once the aircraft is airborne, obtain the following information and relay to Andrews VIP.

a. Aircraft actual time of departure.

b. Estimated time of arrival (ETA) or estimated time of blocks (ETB).

c.

4. While you have the aircraft's communications guard, perform a periodic radio check to ensure continuous and reliable two-way communication for the duration of the flight.

5. Once the aircraft has arrived at its destination, obtain the actual arrival time and relay it to Andrews VIP.

6. If the aircraft will have minimum ground time, obtain the following information for relay to Andrews:

a. Estimated departure time.

b. ETA to new destination.

During certain missions, Andrews may request you relay all message traffic to them in addition to the usual traffic relays generated by the aircraft. Andrews needs to keep the Special Air Mission (SAM) Command Post aware of the aircraft progress.

SUMMARY

The mission of the MYSTIC STAR system is "to provide high-quality voice and data communications to the President, Vice President, Cabinet Members, Foreign Heads of State, and other senior government and military officials while aboard Special Air Mission (SAM), VIP, or Command aircraft (including the Presidential helicopters)."

The MYSTIC STAR system consists of all the equipment and circuits installed in ground stations and aircraft that support the MYSTIC STAR mission. The network consists of ground-based HF radio and UHF SATCOM equipment, connecting circuitry, and control equipment. It provides transmission interface for voice and data traffic between the user and SAM, VIP, or Command aircraft.

A typical station encompasses a Communications Relay Center (CRC), a Transmitter Site, and a Receiver Site. The CRC consists of consoles, switches, and associated common control equipment. The transmitter site utilizes 10KW transmitters that are used throughout the network. Each station has a mixture of rotatable log periodic and omnidirectional antennas, and associated antenna selection matrixes.

REVIEW QUESTIONS

Answer the questions and compare your responses with the confirmation key in the back

of this book. Your responses do not have to match word-for-word, but should convey the same basic meaning. Review the applicable portions of this module for all missed questions.

1. What is the unclassified nickname for a secure/unsecure voice and data A/G/A communications system?

2. What is the mission of MYSTIC STAR?

3. What does the MYSTIC STAR network consist of?

4. What does the typical MYSTIC STAR station encompass?

5. Where is the mission priority used within the MYSTIC STAR system located?

6. Which action is taken when Andrews Global becomes saturated with missions?

ADDITIONAL INSTRUCTIONS

When ready, ask your trainer to administer the KEP questions for this module. This is a closed-book test and you must score 70% or more. Your trainer will check your answers and review any incorrectly answered questions with you. When you have achieved the KEP standard, your trainer will demonstrate supporting a Mystic Star mission. Following the demonstration, you will be given an opportunity to practice the procedures. When you feel comfortable with the procedures, you will be evaluated on the following:

1. Acknowledging advance notification by AUTODIN message, short-notice DSN from Andrews, or no-notice by aircraft.
2. Ensuring message contains the following information:
    a. Call sign of aircraft.
    b. Priority of mission.

c. Departure and arrival station.

d. Length of mission.

e. DV Code on board.

f. Type of service required (i.e., voice, data, or both).

3. Coordinating with supervisor or senior operator.

4. Ensuring communication support requirements (radios needed, frequency, teletype, discrete frequency, etc.) can be met.

5. Conditioning radio level(s) and secure teletype for desired frequency and mode of operation.

6. Obtaining the following information and relay to NCS (Andrews VIP), once aircraft is airborne:

a. Aircraft actual time of departure.

b. Estimated time of arrival (ETA) or Estimated time of blocks (ETB).

7. Assigning primary, secondary, and tertiary frequencies upon initial contact IAW FOXTROT listing in DCAC 310-70-79.

8. Obtaining necessary information on aircraft from NCS (Andrews VIP) or directly from aircraft, if mission is already in progress.

9. Performing radio checks every 15 minutes.

10. Relaying all message traffic to the NCS (Andrews VIP).

11. Obtaining the following information and relay to NCS (Andrews VIP) once the aircraft has arrived:

a. Actual arrival time.

b. Estimated departure time, if aircraft is going to have minimum ground time.

c. ETA to next destination, if aircraft is going to have minimum ground time.

After you complete these procedures, your trainer will review your work. When you are proficient in performing the procedures, you may be certified on the AFJQS.

REVIEW QUESTIONS CONFIRMATION KEY

MODULE 1

1. An HF network of SSB radio stations strategically located throughout the world
2. It provides continuous, reliable, rapid, two-way communications to all DOD aircraft and ground agencies
3. 15, 10
4. Offutt, Andrews, McClellan, Bayonne, Elmendorf, Yokota, Croughton, Thule, and Incirlik
5. Electronic switching subsystem
6. Dual Tone Multi-Frequency (DTMF)
7. MAJCOM HF Managers
8. All DOD agencies and aircraft with service provided to non-DOD users on a noninterference basis
9. Offutt
10. AF Form 3654
11. Used to record all message traffic received/transmitted via HF and landline
12. To be used as a ready reference to aid and assist operating personnel
13. Within the first hour of each shift
14. All ACC aircraft copy the following transmission. This is a do-not-answer blind transmission
15. USB
16. A security measure to disclose fraudulent transmissions

MODULE 2

1. The speed these waves travel is (186,000 statute miles per second, 162,000 nautical miles per second, or 3x108 meters per second) the speed of light
2. The act of radio waves traveling from one point (antenna) to another (antenna)
3. The primary transmission path that a radio wave takes is decided by the propagating characteristics of its frequency and the direction and manner in which it is radiated
4. D, E, Es, F, F1, and F2
5. As the sun's radiation hits the atmosphere, it causes some electrons of the air molecules to be knocked loose. This is known as **ionization**. When the sun sets, this process stops and the electrons rejoin with the air molecules. This causes the D- and E-layers to disappear and the F1 and F2 layers combine into a single F-layer

6. These areas are so highly charged that frequencies normally use F-layer for refraction (bending) never reach the F-layer. They are returned to earth by reflection (mirror image) from the sporadic E-layer
7. The number of sunspots facing the earth changes every 27 days due to the sun's rotation
8. Large eruptions of gases on the surface of the sun known as solar flares
9. Long-term predictions, near real-time predictions, and real-time predictions
10. This prevents "bleed over" or feedback from occurring on the frequencies

MODULE 3

1. Attendant turret
2. First, it allows attendant (local) turret control of call extension and conferencing, class marking, call-up, and control of the radios. Second, the ESS allows you to reroute calls during periods of heavy traffic. Third, the performance/status assessment capability helps identify service requests, process calls, manage the system, and control circuits
3. Modem buffer
4. Analog operator console, 15-line cordless switchboard, intercept operator console, tophat section, and writing shelf
5. Through six line panels
6. By using an audio intercept module (AIM)
7. The controls and indicators for 15 subscriber lines, 12 radio circuits, 10 intercom stations, and antenna selection/orientation
8. Four switchboard lines located on the right-hand side of the fixed radio lines
9. The coordinator console is not capable of accessing radio levels and does not have a footswitch
10. Its subscriber conferencing capability
11. The message distribution terminal, an AUTODIN communications message terminal that provides on-line automated message distribution
12. Radio/line dial codes are used to condition radio levels for different operating modes

MODULE 4

1. Level decoder, transmitter (or exciter), Radio Frequency (RF) amplifier (or power amplifier), and antenna matrix
2. CONUS transmitter sites have six Rosetta Log Periodic (RLPs) and four omnidirectional

antennas

3. Antenna Matrix

4. The BITE diagnoses the performance of the entire transmitter site by polling the transmit level decoder at regular intervals.

5. Four to eight Universal Radio Group (URG) transmitter levels, jackfield, status display, local Frequency Shift Keying (FSK) telephone, antenna matrix, matrix control, frequency standards, and various antennas

6. 313J-2

7. Power Amplifier operates at a 3.5kW low or 10kW high output level

8. The entire HF spectrum (2-30MHz)

9. Omnidirectional antennas

MODULE 5

1. Two RLPs and two omnidirectional antennas

2. Antenna matrix control

3. Receive DTMF signals from the control site operator or remote subscriber

4. The azimuth control decoder receives and executes commands to select a particular RLP antenna and its azimuth

5. The BITE responds to control site operator status requests by sending status information back for display at the position operator's console

6. This device allows a number of radio receivers to operate effectively on one antenna

7. The display generator transfers receiver frequency and mode information to the Control Site and to the local display

MODULE 6

1. Station directory dial codes and feature access codes
2. The first digit defines the site you are calling, the second digit defines; the exciter level at the transmitter site; the receiver level at the receiver site, the third digit identifies the sideband for either site
3. Feature access codes
4. The DTMF keypad with controls and indicators required to perform the attendant functions
5. The allow for selection of station lines and trunks and display their busy status
6. To transfer a subscriber from a turret loop to another subscriber
7. eight conference bridges, each can connect up to six circuits
8. A busy signal sounds and the turret alphanumeric screen displays FLL
9. The turret can connect two loops together through the ESS

MODULE 7

1. Local and on-line modes, the normal operational mode for communications is local
2. 72
3. Character codes, Control character codes, and Escape sequence codes
4. They are not displayed
5. F1 provides you an On-line help system, F2 provides the transmitter site status update, F3 provides the receiver site status update, F4 disables the VDT output
6. Two pages of display, 24 data lines, 80 line characters
7. Page one
8. Depressing F2 on the keyboard
9. Recent change commands
10. ESS R CR e 0 nnn 0 nnn
11. ESS R CN e 0 nnn t
12. CU mm dd yy hh mm

MODULE 8

1. Page one displays the transmitter site status; page two, the receiver site status
2. Antenna type, number, azimuth, or dummy load indication
3. 083640, 112430, 201500, and 047810
4. Indicates that the amplifier at the transmitter site is on standby status

5. Indicates an unkeyed condition
6. Must redial the mode
7. TX02 FLT (ENTER)
8. DTMF indicates remote control of the radio; ALERT indicates the radio was seized during an alert; B-CONTROL indicates the radio is under BITE control; LOCKOUT indicates that the operator and the control site have been isolated from access
9. The antenna and power
10. PRESET START/STOP Command Key 7
11. A second entry of Command Key 7
12. By entering the applicable transmitter or receiver number, PST, and the ENTER key, e.g., TX01 PST ENTER
13. By depressing PRESET START 7, entering the new conditions, and depressing PRESET STOP 7, e.g., 7 31 7

MODULE 9

1. It filters out receiver audio from the transmitter and allows radio control/operation from the turret
2. Provides patching of as many as three subscribers within any combination of up to three radio levels
3. Allow the operator to answer incoming calls, place outgoing calls through the ESS, or place a line on hold
4. VOX HOLD
5. Select radios and place them on hold
6. Extending them from the turret or by the use of the OPR CONF and RADIO LEVEL controls on the panel itself
7. Depress OPR CONF, the applicable MATRIX button, and the SUBSCRIBER CONTROL OFF-HOOK button to respond
8. It is better for the subscriber to use "A0" and "A9" for key/unkey
9. By depressing the applicable OPR CONF buttons

MODULE 10

1. FSK, DTMF
2. Nine, each control module monitors selected sidebands and allows for adjusting the volume and squelch of each receiver's audio to the headsets
3. Weak signals may not be heard on the headset
4. This meter shows the signal level of the microphone or transmitter when the VU METER switch is selected
5. XMT
6. Depress the RESET switch

MODULE 11

1. The Analog console (left side), the 15-line Cordless Switchboard (middle), the Intercept console (right side), and the Top Hat unit (status display)
2. USB mode, low-power out, and for an OMNI antenna
3. Six
4. Phone patching
5. The A1 channel or USB channel
6. Normally, only four levels are used for a broadcast

MODULE 12

1. 100 words per minute at 75 baud
2. Six, progressively add more equipment to help in troubleshooting
3. Switch over to the other system and log out the bad one
4. Teletype one and crypto one
5. 10%
6. Equipment limitations

MODULE 13

1. Access and control of up to 15 subscriber lines, control communications with airborne or fixed stations on up to eight fix-tuned and four auto-tuned radios, patch two subscribers together
2. Notify the supervisor and/or senior operator
3. Upon termination of the aeronautical mission
4. 1/2 inches

5. By accessing a Scope Control level and dialing a two-digit code for the antenna required
6. To pass weather observations, special advisories, or emergency war orders
7. So they can provide the high quality discrete service our customers need.

MODULE 14

1. Subscriber RING, HOLD/OFF, and INTERCOM CALL indicators
2. The CALL/BUSY light for the answered line will light at all positions indicating the line is in use
3. Push-to-Talk button
4. Three
5. 15
6. 15
7. By pressing one of the ANSWER buttons and HOLD button simultaneously
8. Press the INTERCOM IC button
9. HANDSET VOLUME control
10. An audible buzzer and the blue INTERCOM busy lights

MODULE 15

1. Sites equipped with the AN/GSH-35 Recorders are having logistic and reliability problems
2. Channel 20 is normally reserved for the Digitime time code generator
3. Tape Transports, Electronics Assembly, and Cabinet Assembly
4. Cabinet Assembly
5. Accuracy is within 10 seconds
6. Cabinet Assembly

MODULE 16

1. Compose, transmit, and receive messages
2. 19
3. Line 21

4. Red stripe on right side of page; paper alarm red lamp ON at LPU; PRNT indicator lamp ON at SFU
5. 4; transmission, line restoral, fault indicators, and power
6. MSU 01
7. Master/Preformat menus and the MSU storage files
8. Perform central processing, memory, and line control
9. The KG-84A

MODULE 17

1. Messages are saved on a floppy diskette daily
2. 386 or 486 computer
3. As an AUTODIN communications message terminal for military commands to provide on-line automated message distribution.
4. By the system in both Random Access Memory (RAM) and hard disk
5. Processor
6. 4-megabyte or greater
7. 5k
8. 6
9. 40,000
10. C: drive

MODULE 18

1. The mission being supported and type of traffic processed
2. Challenge and reply
3. On the cover pages of each document
4. To establish the authenticity of two stations
5. The called party always challenges first
6. When it is impractical to use challenge and reply authentication
7. When a message must be encoded for security reasons
8. One is a five-letter designation. Another is a combination of characters corresponding to the official registration marking of the aircraft. A third method is to use the abbreviation of the airline followed by the flight number

MODULE 19

1. Allows rapid dissemination of STRATCOM operational data or Emergency War Orders (EWO) to the strategic forces by remote control broadcasting
2. ESS
3. EWO (FLASH), Peacetime (FLASH), Communications Call (IMMEDIATE)
4. No, all-stations or single-stations only
5. The communications call provides administrative call conferencing capability by connecting station operators
6. F*F 05 05 A
7. F*F O5 A
8. F*F020805A

MODULE 20

1. Operators
2. They are brought to the attention of the shift supervisor/senior operator on duty
3. US Space Command
4. The strategic locations and operating capabilities of the stations
5. Mission identifier, date/time of observation, apparent ground zero in latitude and longitude, radius in nautical miles, crater (yes or no), remarks (such as installation destroyed, etc.)
6. FOXTROT or Receipt Requested
7. By the most expeditious means possible
8. Suspected intrusion, suspected jamming and interference causing severe frequency degradation
9. Frequency the aircraft is operating on, aircraft call sign, and general area of search or location of the aircraft
10. NCS
11. Local command post and NCS (NCS will relay arrival reports to the MAJCOM Command Center Communications Comptroller
12. WHCA communications-electronics operations instructions and Chairman, Joint chief of Staff National Military Command system (NMCS) Comm Plan 1-90.
13. CCEs provide ACC and AMC units with a communications capability to support deployments in support of contingencies
14. HAYSEED
15. Assign a discrete frequency to the SCE to complete training

MODULE 21

1. Phone patch service is provided by Global stations permitting direct voice communications between ground agencies, ships, and aircraft by connecting telephone circuits to a radio channel
2. Copy the traffic and attempt to relay it between the two parties
3. To provide support to AWACS while on normal/training flights or drug interdiction missions
4. Phone patch service, radioteletype service, and relay of C2 messages between the Airborne Movement Control Team and ground control agencies
5. Andersen, Elmendorf, and Yokota
6. To ensure special Command Center attention is given the mission for operational C2 reasons
7. Each station affected, the System Manager, and the MAJCOM

MODULE 22

1. As soon as possible after takeoff
2. Aircraft call sign, departure point and time, destination and ETA, Flight level, ETA for the first CCZ entry point, CCZ exit point and ETA, ACC/OAC monitored for ATC, and Remarks
3. The revision report is used to change or update previously reported information
4. You must copy the request and make every effort to contact the nearest Air Route Traffic Control Center and obtain the clearance
5. The majority of traffic is voice relayed over HF circuits or landlines
6. All messages will show the TOR, initials of all agencies/operators involved in the handling, and the method of receipt

MODULE 23

1. Allow the fastest means possible to contact selected units for relay of vital information
2. Command Post, NORAD, Base METRO
3. Add transmission time and authentication
4. Relay messages received from other stations to ensure that total coverage on all assigned frequencies is accomplished
5. Ensure that all messages of importance are transmitted in a manner that will allow friendly units to receive messages of great importance regardless of their location
6. They immediately disregard the traffic in progress (unless it's a worldwide advisory or can

be completed within 30 seconds) and broadcast the advisory

7. On frequency or via landline by stations with alert line capabilities

8. The Global operator

MODULE 24

1. Any DOD aircraft or marine vessel

2. The Global operator should obtains as much information as possible from the aircraft concerning the nature of the emergency while the patch is being established

3. Cease transmission on the frequency concerned in order not to interfere with the exchange of urgency conditions

4. ATC and/or authorized agency

5. At least once

6. Until contact is established or advised otherwise by ATC

7. When advised by ATC, authorized agency or aircraft

8. Only if this will not disrupt or lose communications

9. All

10. Local directives

11. Name of ship, international call sign, position, date and time, and brief description of emergency

MODULE 25

1. To pass National Command Authority directions to CINCs and nuclear forces

2. All hotline subscribers and the Global Operations Center

3. MORE TO FOLLOW procedures

4. It is the responsibility of CINC/MAJCOM Command Centers and Airborne Command Posts to notify Global stations of DEFCON changes

5. It is the responsibility of the USSTRATCOM Command Center or ABNCP

6. HQ USSTRATCOM or the NCS

7. USSTRATCOM Command Center and the GOC

MODULE 26

1. MYSTIC STAR

2. To provide high-quality voice and data communications to the President, Vice President, Cabinet Members, Foreign Heads of State, and other senior government and military officials while aboard Special Air Mission (SAM), VIP, or Command aircraft (including the Presidential

helicopters)

3. Ground-based HF radio and UHF SATCOM equipment, connecting circuitry, and control equipment
4. A Communications Relay Center (CRC), a Transmitter Site, and a Receiver Site
5. DCAC 310-70-79
6. All priority four missions will be given to other Global stations

TRAINEE SURVEY

Publication Date of AFJQS/AFQTP ___

Name _____ (optional)

Unit _____

DSN _____

1. The purpose of this training package is to provide a standardized training program on a specific piece of equipment or function. Do feel this product accomplished this purpose?

Yes No

2. Do you feel this product is useful in training this equipment or function?

Yes No

3. Was the information in the product technically accurate? If not, please identify the incorrect information in the comment area below.

Yes No

4. Do feel this product is an effective instructional tool?

Yes No

5. Please comment below on what is needed in this training package to enhance its effectiveness.

_____

_____

_____

81 TRSS/TSQS
601 D STREET
KEESLER AFB MS 39534-2229

KNOWLEDGE EVALUATION PAMPHLET (KEP)

This pamphlet should be separated from the package immediately and stored to prevent compromise of the questions. The KEP confirmation key located at the back of this pamphlet should be detached and stored.

After the trainee completes each module, the supervisor/trainer administers the corresponding KEP test. Using the KEP confirmation key, the supervisor/trainer checks the trainee's answers and reviews the incorrect responses. If the trainee does not achieve the minimum required score on each module test, he/she must reaccomplish the entire module.

The answer sheet for the KEP is located at the back of this pamphlet. This answer sheet may be detached to make it easier to enter the answers.

The trainee's responses to the KEP questions will aid us in evaluating the effectiveness of this training package. After the questions have been answered for all the module tests, please attach the completed and graded answer sheets and trainee/trainer surveys to the training certification document located in the back of the Trainer's Guide and send the package to us at this address:

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601 D STREET
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KEP QUESTIONS - MODULE 1

1. What is the USAF Global HF System?

   a. A VHF ISB alert activation network
   b. An HF SSB system supporting the DOD
   c. A worldwide communications network of ACC air crews and ground stations
   d. A UHF communications system supporting ACC Reconnaissance Forces

2. Which command is the USAF Global HF System dedicated to?

   a. ACC
   b. AMC
   c. USSTRATCOM
   d. None, the system supports all authorized users

3. The USAF Global HF System consists of __ stations.

   a. 10
   b. 12
   c. 15
   d. 18

4. During an alert seizure, the initiating site detects problems in the primary line. The system automatically uses a/an _____ seizure to reroute this alert through secondary lines.

   a. Altroute
   b. back door
   c. front door
   d. secondary line

5. Who is responsible for the day-to-day operation and administration of the USAF Global HF System?

a. NCS
b. HQ USAF
c. HQ AFC4A
d. MAJCOM HF Managers

6. Who is responsible for maintaining circuit discipline within the system?

a. NCS
b. HQ USAF
c. HQ AFC4A
d. MAJCOM HF Manager

7. Which AF Form is used to record contacts on frequencies and for all phone patches processed?

a. 3653
b. 3654
c. 3655
d. 3656

8. Which information is contained on the Antenna Diagram Chart?

a. Frequency range of the antenna and the antenna location only
b. Type of antenna, frequency range of antenna, and the primary EAM transmit azimuth
c. Type of antenna, frequency range of the antenna, and the antenna's location in relation to true north
d. Type of antenna, the primary EAM transmit azimuth, and the antenna's location in relation to true north

9. How often is a system check performed?

a. Daily
b. Weekly
c. Within the first hour of each shift
d. Within the first two hours of each shift

10. What is the collective call sign for all ACC aircraft?

a. SKYBIRD
b. SKYKING
c. MAINSAIL
d. KINGBIRD

11. What is the collective call sign for all Global stations?

a. SKYBIRD
b. SKYKING
c. MAINSAIL
d. MAINTIME

12. Global stations will ____ authenticate for ground agencies or aircraft.

a. never
b. always
c. rarely
d. normally

KEP QUESTIONS - MODULE 2

1. What is the term used to describe a radio wave traveling from one point (antenna) to another (antenna)?

   a. Sky wave
   b. Propagation
   c. Line-of-sight
   d. Point-to-point

2. What are the three types of radio waves?

   a. Direct waves, point-to-point, and air/ground/air waves
   b. Ground waves, radio waves, and ground-reflected waves
   c. Ground waves, ground-reflected waves, and sky waves
   d. Direct waves, ground waves, and sky waves

3. Which one of the radio waves travels upward through the atmosphere where it is then refracted (made to change direction) back to earth?

   a. Sky
   b. Direct
   c. Ground
   d. Point-to-point

4. Which part of the atmosphere most concerns Global operators?

   a. Stratosphere
   b. Troposphere
   c. Ultrasphere
   d. Ionosphere

5. Which layer is responsible for the majority of ionospheric noise and radio wave absorption

a. D
b. E
c. Es
d. F

6. The maximum density of the F1 layer occurs shortly after

a. midnight, local time.
b. midnight, zulu time.
c. noon, local time.
d. noon, zulu time.

7. What are considered regular ionospheric variations because they are predictable and occur at regular intervals?

a. Sudden Ionospheric Disturbances
b. Nuclear Burst
c. Solar flares
d. Sunspots

8. Where can Air Force radio stations get ionospheric propagation prediction documents?

a. Space Forecast Center at Falcon AFB, Colorado
b. Global Weather Service at Randolph AFB, Texas
c. HF Global Station at Hickam AFB, Hawaii
d. WWV at Fort Collins, Colorado

9. What is the most common long-term propagation report used by radio operators?

   a. Primary HF Propagation Report
   b. Secondary HF Propagation Report
   c. Air Force Global Weather Report
   d. The HF Radio Usable Frequency Prediction Report

KEP QUESTIONS - MODULE 3

1. Which piece of equipment at a SSIII control site gives a visual indication of an alert seizure?

   a. VDU
   b. Alert panel
   c. ESS console
   d. Control site monitor

2. To avoid confusion, special attention is necessary when viewing the SSIII dial digit display because

   a. there are no dial start or end indications.
   b. it reflects the previous, not the current, number.
   c. it displays each conferenced number, regardless of precedence.
   d. its location above the Control MCP can cause interference with Control MCP operations.

3. The SSIII Control MCP

   a. selects RF loopback tests.
   b. is a voice encryption device.
   c. performs the same basic functions as a PBX.
   d. is a major system component for performance assessment.

4. What is the maximum number of SSIII Control MCPs that can be monitored?

   a. 5
   b. 10
   c. 12
   d. 20

5. You depressed the reset button on the SSIII fault alarm panel only once. What does this do to the fault indications?

a. Automatically changes the lamps from red to blue
b. Automatically changes the lamps from amber to red
c. Corrects the fault and halts all fault indications
d. Continues to show alarm conditions until the fault is corrected

6. Which of the following is not a function of the SSIII VOX/Phone Patch Panel?

a. Allows adjustment of audio levels
b. Conferences up to three subscribers
c. Provides operator access to microdisc assembly
d. Allows operators to preselect radios without conditioning them

7. The extend panel on the analog operator position of the scope control console links the cordless switchboard and the

a. modem.
b. line panel.
c. alarm panel.
d. electronic switching subsystem.

8. Which three basic functions are performed on Scope Pattern equipment?

a. Access, control, and patch up to 15 subscribers
b. Control communications with airborne, mobile, or fixed stations
c. Access 15 subscribers, direct airborne communications, and control 12 radios
d. Access and control up to 15 subscribers lines, control communication with airborne or fixed stations, and patch two subscribers together

9. What is the maximum number of lines that can operate simultaneously on the SW3600 switchboard?

a. 36 calling and called party connections
b. 100 calling and called party connections
c. 16 calling and 16 called party connections
d. 26 calling and 26 called party connections

10. Which recorder channel normally contains the digitime generator time reference?

a. 1
b. 12
c. 18
d. 20

11. The control site recorder has the expansion capability to record simultaneously on ___ channels.

a. 10
b. 20
c. 30
d. 40

12. What links the SSIII console with the transmitter/receiver sites for radio operations?

a. Modem buffer
b. Attendant turret
c. Video Display Unit
d. Electronic Switching Subsystem

13. What is the main purpose of a switchboard dial code?

    a. Access a cordless switchboard
    b. Access a scope control radio level
    c. Control a scope control radio level
    d. Control access to the scope pattern console

KEP QUESTIONS - MODULE 4

1. What Scope Signal III equipment is the heart of the transmitter?

   a. HF-80 series equipment
   b. HF-180 series equipment
   c. HF-80(A) series equipment
   d. HF-280(A) series equipment

2. The _____ ____ is a 50-ohm resistive load that the operator can use to test and verify the transmitter's operational status.

   a. azimuth rotator
   b. antenna matrix
   c. level decoder
   d. dummy load

3. Which piece of Scope Signal III can read both forward and reflected power, and handle 15kW of continuous power?

   a. Azimuth rotator
   b. Antenna matrix
   c. Level decoder
   d. Dummy load

4. What is the single point of control for the transmit matrix and RLPs?

   a. Azimuth control decoder
   b. Antenna matrix
   c. Level decoder
   d. Dummy load

5. Which piece of Scope Signal III equipment diagnoses the performance of the entire transmitter site by polling the transmit level decoder at regular intervals?

a. Built-In-Tune-Equipment
b. Built-In-Test-Equipment
c. Built-In-Transmitting-Equipment
d. Built-In-Troubleshooting-Equipment

6. How can communication between station maintenance personnel, operators, and other network maintenance personnel be accomplished using the Scope Signal III console?

a. By dialing the seven-digit extension
b. Using a maintenance orderwire telephone
c. Tune in the frequency reserved for maintenance checks
d. Using a hand-held radio (commonly known as "Walkie-Talkie")

7. Antenna maintenance personnel can communicate between the site building and the base of any antenna by using

a. orderwire.
b. dedicated hotline.
c. a portable maintenance telephone.
d. the base operator for assistance.

8. How are operators able to perform frequency selection and all commands, such as duplex operation, antenna selection and position?

a. Dialed via the telephone by the operator
b. Dialed via the radio equipment by the operator
c. All changes are done prior to shift change by maintenance
d. By calling the transmitter and receiver site personnel and having them make the changes

9. What is the output level of the Scope Signal III Power Amplifier?

a. .5kw low or 15kw high
b. 1.0kw low or 15kw high
c. 3.0kw low or 10kw high
d. 3.5kW low or 10kW high

10. The normal mode of operation for the Scope Pattern console is

a. HF.
b. USB.
c. UHF, HF/SSB.
d. AM with maintenance assistance.

KEP QUESTIONS - MODULE 5

1. What is the maximum number of sidebands the SSIII receiver can use for operations?

   a. 1
   b. 2
   c. 3
   d. 4

2. What piece of equipment decodes signals from the DTMF and sends out the commands to control the frequency, mode, antenna selection, and azimuth?

   a. Level decoder
   b. Antenna matrix
   c. Control decoder
   d. Receiver matrix

3. What piece of equipment receives and executes commands to select a particular RLP antenna and its azimuth?

   a. Level Decoder
   b. Antenna matrix
   c. Azimuth control decoder
   d. Receiver antenna selector

4. Name the equipment that responds to control site operator status by sending status information back for display at the position operator's console.

   a. Built-In-Tune-Equipment
   b. Built-In-Test-Equipment
   c. Built-In-Tactical-Evaluation
   d. Built-In-Troubleshooting-Equipment

5. How can the receivers be controlled?

   a. Remote only from control site
   b. Local only from operator position
   c. Locally or remotely from operator position
   d. Ask maintenance for assistance in configuring equipment

6. What is the purpose of the IF and RF amplifiers?

   a. Lower the signal strength
   b. To boost the signal coming into the receiver
   c. To separate the signal coming into the receiver
   d. Make the signal coming into the receiver intelligible

7. The _____ allows several radio receivers to operate effectively on one antenna.

   a. multicoupler
   b. dual receiver
   c. resistor
   d. balun

KEP QUESTIONS - MODULE 6

1. Which of the following statements is true concerning the command access codes for conditioning radios?

   a. 118 begins the procedure
   b. 1 allows selection of receivers
   c. 2 allows selection of transmitters
   d. 5 allows selection of an RLP azimuth

2. Which access code adds a DSN line to a conference?

   a. 8
   b. 9
   c. 117
   d. 118

3. Which access code deletes a speed dialing feature?

   a. 112
   b. 113
   c. 117
   d. 118

4. The lockout feature is only for

   a. alerts.
   b. CAMP ON precedence calls.
   c. BUSY/RESTRICT precedence calls.
   d. aircraft emergencies and base isolations.

5. Which precedence must you use to lockout a call?

a. FLASH
b. PRIORITY
c. IMMEDIATE
d. FLASH/OVERRIDE

6. What is the first step in installing a speed dialing assignment?

a. Enter feature access code
b. Enter shortened dialing number
c. Enter telephone number to be shortened
d. Select an idle LOOP key then depress START

Match the function in Column B with the attendant turret controls and indicators in Column A. There is only one correct function for each control or indicator.

Column A	Column B
7. REL ATT	a. Drops out of loop
	b. Provides dial tone
8. START key	c. Connects turret to console
	d. Flashes as incoming call rings
9. DTMF keypad	e. Displays busy status of station lines
10. SOURCE lamp	f. Indicates precedence of calling party
11. ADSS/BLF field	g. Indicates talk/source key is depressed
12. Alphanumeric screen	h. Allows dialing into lines, trunks, transmitters, and receivers

KEP QUESTIONS - MODULE 7

1. Communications occur between the keyboard and terminal memory only when the VDT is operating in the _____ mode.

   a. local
   b. on-line
   c. keyboard
   d. character

2. The F1 key

   a. displays the on-line help system.
   b. demands request of the receiver site status.
   c. demands request of the transmitter site status.
   d. displays the function of the remaining special function keys.

3. What is the purpose of the F5 key?

   a. Clears the VDT screen
   b. It has no defined purpose
   c. Accesses the Recent Command List buffer
   d. Blocks communications between the terminal and modem buffer

4. Which page of the VDU display shows the transmitter site status?

   a. One
   b. Two
   c. Three
   d. Four

5. Which key is depressed to update the receiver status display?

   a. F1
   b. F2
   c. F3
   d. F4

6. Which of the following is a function of the recent change commands?

   a. Initiates alerts
   b. Deletes ESS subscribers
   c. Performs lockout procedures
   d. Selects operating frequencies for the transmitter and receiver sites

Match the function in Column B with its recent change command in Column A. There is only one correct function for each command.

Column A	Column B
7. ESS R RW	a. Set Date
8. ESS R SN	b. Set Time
9. ESS R SQ	c. Request Date and Time
10. ESS R RC 0 nnn	d. Change BITE Date and Time
11. ESS R SW 0 hh mm	e. Request Class of Service
12. ESS R SC mm dd yy	f. Request Alert Participant
13. CU mm dd yy hh mm	g. Request Communications Call Participant

KEP QUESTIONS - MODULE 8

1. What would be the indication under the ANT status column if the antenna selection is "Dummy Load?"

   a. OMN01
   b. R1/090
   c. ******
   d. *******

2. How is transmitter number 1 displayed in the RADIO column of the transmitter site status screen?

   a. TR01
   b. TX01
   c. TRAN01
   d. XMTR01

3. In SSIII Global HF operations, the normal MODE display is

   a. AME.
   b. ISB.
   c. SBY.
   d. OFF.

4. The AGC refers to the

   a. power amplifier.
   b. transmitter.
   c. receiver.
   d. antenna.

Match the functions in Column B with their preset commands in Column A. There is only one correct

function for each command.

Column A		Column B	
5.	7 23 7	a.	Presets frequency
6.	7 31 7	b.	Presets high power
7.	7 61 7	c.	Presets AGC to data
8.	7 01 406 515 7	d.	Presets radio mode to USB
9.	7 1 067610 7	e.	Presets transmit RLP antenna six to 150 degrees

10. Which azimuth does the operator dial to obtain a 90 degree antenna?

    a. 03
    b. 09
    c. 30
    d. 90

11. How many digits must a frequency selection contain, including the command key?

    a. 4
    b. 5
    c. 6
    d. 7

12. Which command requests the preset data of receiver number 1?

    a. RX01
    b. PST RX
    c. RX PST
    d. RX01 PST

KEP QUESTIONS - MODULE 9

1. A feature allows connection of 3-way conferencing from the attendant turret rather than from the VOX/Phone Patch Panel. This feature

   a. is especially useful for multi-frequency broadcasts.
   b. prevents incorporation of DTMF signaling into the system.
   c. is the optimum method of conducting phone patch operations.
   d. causes receiver noise to interfere with DTMF key and mute messages.

2. How many subscribers and radio levels will the subscriber/radio matrix allow you to connect?

   a. Six subscribers and six radio levels
   b. Five subscribers and five radio levels
   c. Three subscribers and three radio levels
   d. Twelve subscribers and twelve radio levels

3. Which control allows you to conference with subscribers and/or radios?

   a. HOLD
   b. AVOX/RCV
   c. OPR CONF
   d. A, B, or C LINE LEVEL

4. Which control allows you to select and condition as many as three transmit/receive levels from the turret to the panel and place levels on hold?

   a. HOLD
   b. AVOX/RCV
   c. OPR CONF
   d. RADIO LEVEL CONTROLS 1, 2, and 3

5. You are receiving an incoming call. Which control do you depress on the A, B, or C

SUBSCRIBER LINE control to answer the subscriber?

a. HOLD
b. OFF HOOK
c. LINE GAIN
d. LINE LEVEL

6. There are two ways to place transmitters and receivers on the panel. You can extend them from the turret or you can depress

a. HOLD and the associated SUBSCRIBER LINE.
b. OFF HOOK and the associated SUBSCRIBER LINE.
c. HOLD and the associated RADIO LEVEL CONTROL on the panel.
d. OPR CONF and the associated RADIO LEVEL CONTROL on the panel.

7. The operator can conduct multi-frequency broadcasts on how many radios via the VOX/Phone Patch Panel?

a. 1
b. 3
c. 6
d. 12

KEP QUESTIONS - MODULE 10

1. Which of the following is not a switch/indicator on the Control-Monitor Control Panel?

   a. BYPASS
   b. Loop Test
   c. Recorder Control
   d. Call-Indicator/Channel-Select

2. If the ESS fails, which feature provides an emergency broadcast capability?

   a. RF proof
   b. Footswitch
   c. BYPASS connector
   d. Call-Indicator/Channel Select

3. Which feature on the Control-Monitor Control Panel checks the performance of a radio channel?

   a. BYPASS
   b. VU Meter
   c. Loop Test
   d. Volume/Squelch

4. To check the condition of all indicator lights on the Control-Monitor Control Panel, depress the

   a. BYPASS connector on the Control-Monitor Monitor Panel.
   b. LAMP TEST switch on the Control-Monitor Monitor Panel.
   c. BYPASS connector on the Control-Monitor Control Panel.
   d. LAMP TEST switch on the Control-Monitor Control Panel.

5. How many separate control modules does the Control-Monitor Monitor Panel contain?

a. 6
b. 9
c. 12
d. 15

6. What is the maximum number of Control-Monitor Monitor Panel control modules that can be monitored?

a. 6
b. 9
c. 12
d. 15

7. How will you know that one of the operators selected a sideband for monitoring?

a. Column 5 on the VDU indicates "SEL"
b. You hear an audible alarm over the speakers
c. The applicable control module acknowledgment lamps on all consoles illuminate
d. Only the applicable control module acknowledgment lamp on the selecting operator's console illuminates

KEP QUESTIONS - MODULE 11

1. The four major components of the Scope Control console are: the Analog console, 15-line cordless switchboard, Intercept console, and

   a. FSK.
   b. DTMF.
   c. TopHat.
   d. Hotlines.

2. A frequency below 10MHz, such as 9023.5, is entered as

   a. 9023.50.
   b. 09023.5.
   c. 9023.05.
   d. 09023.50.

3. Preset dial codes are conditioned for

   a. USB, Low-Power Out, and OMNI antenna.
   b. SSB, Low-Power Out, and OMNI antenna.
   c. LSB, High-Power Out, and directional antenna.
   d. LLSB, High-Power Out, and directional antenna.

4. How many line panels are available on the Analog console to access radios?

   a. 8
   b. 7
   c. 6
   d. 5

5. When the operator completes dialing, how many control tones indicate the function is complete?

   a. Two supervisory control tones
   b. A series of four supervisory tones
   c. Two high-pitched tones from the transmitter and two low-pitched tones from the receiver
   d. One high-pitched tone from the receiver and one low-pitched tone from the transmitter

6. The major components of the Intercept console are the AIMs, the PIMs, and the

   a. ARMs.
   b. TOPHAT.
   c. DSA modules.
   d. Status Display.

7. What is the control channel for Scope Control?

   a. A1 only
   b. A1 or USB
   c. USB or LSB
   d. ISB, USB, or LSB

8. Normally, how many levels are used on the Intercept console for a broadcast?

   a. All available AIMs and PIMs
   b. 4 AIMs and 5 PIMs
   c. 4
   d. 2

9. What must operators do to prevent maintenance problems during an emergency (Answer-to-Answer) phone patch?

a. Adjust the gain to prevent hot levels
b. Turn off tape recorder to prevent over-heating
c. Turn down the volume to minimize speaker damage
d. Turn off all unnecessary equipment to boost power

KEP QUESTIONS - MODULE 12

1. Operators commonly refer to teletype as

    a. DATA.
    b. RATT.
    c. radioteletype.
    d. point-to-point.

2. Standard Global RATT service is conducted with ____ Space (2425), and ____ Mark (1575).

    a. center, low
    b. medium, low
    c. high, low
    d. low, high

3. What is the purpose of a Loop-Back test?

    a. Checks the in-house operation of the teletype and crypto equipment, and the telephone lines
    b. Checks the in-house operation of the teletype and crypto equipment, and the SW-3600
    c. Checks the in-house operation of the teletype and crypto equipment
    d. Checks the in-house operation of the teletype and the telephone lines

4. What will become the primary teletype mode once the current refitting of the airborne platforms is completed?

    a. Simplex
    b. Full-Duplex
    c. Half-Duplex
    d. Twin Sideband Full-Duplex

5. What is the recommended frequency separation?

a. 2%
b. 5%
c. 8%
d. 10%

6. What action is taken if you have a problem with a KG-84 device?

a. Switch over to the other system and log out the bad one
b. Pull out the malfunctioning KG-84 and replace it
c. Try to fix the problem given by the BITE test
d. Notify maintenance

7. The procedures for Intercept FULL-DUPLEX RATT are the same as Simplex/Half-Duplex except the level

a. has different transmit and receive frequencies.
b. is configured for simplex and has a different receive frequencies.
c. is configured for Half-Duplex and has a different receive frequencies.
d. is configured for duplex and has different transmit and receive frequencies.

KEP QUESTIONS - MODULE 13

1. What should be accomplished before operating the Scope Pattern console?

    a. Turn power ON
    b. Check Scope Pattern for proper operations
    c. Consult with supervisor/senior operator
    d. Review call signs and frequencies to be used for the day

2. Which switch is pressed to check the bulbs on the Scope Pattern console?

    a. CONSOLE TEST
    b. BITE TEST
    c. LAMP TEST
    d. BULB TEST

3. How far should the headset or mike be positioned from the lips?

    a. 1 1/2 inches
    b. 3/4 inches
    c. 1/4 inch
    d. 1/2 inch

4. Which action is taken, if reception is poor?

    a. Change mode of operations
    b. Terminate phone patch
    c. Change frequency
    d. Rotate antenna

5. Antenna selection using Scope Control is accomplished using a ___-digit codes.

   a. 1
   b. 2
   c. 3
   d. 4

6. How is the audio level controlled on the console?

   a. Primary volume control
   b. Call maintenance and have them adjust volume
   c. By remote control from the operator position
   d. The supervisor is the only person who can adjust the volume control

7. How many switchboard lines are located on the Scope Pattern equipment?

   a. 2
   b. 4
   c. 8
   d. 10

8. Which types of tones are received from the transmitter when dialing for a level?

   a. Four high-pitched tones
   b. Four low-pitched tones
   c. Two high-pitched tones
   d. Two low-pitched tones

9. What should you do when dialing for access to a Scope Control level?

a. Wait for supervisory tones before dialing anything else
b. Continuously dial until your are finished
c. Override the level first before dialing
d. Dial 47 for the level you want to use

10. Which part of the Scope Pattern console allows the operator to contact any console, or any of the four sites, without going either through a radio or a switchboard line?

a. Intercom
b. Hotlines
c. Manual ring down line
d. Automatic ring down line

KEP QUESTIONS - MODULE 14

1. Which action do you take if you find problems while checking the coordinator console for proper operations?

a. Notify maintenance of problem
b. Log out equipment with job control
c. Inform the supervisor and/or senior operator
d. Switch operations to another console and notify distant party of situation

2. What are the three methods an operator can choose when placing an outgoing call?

a. DTMF, SATCOM, or HF
b. Hotlines, rotary dial, or DTMF
c. Hotlines, Data, or point-to-point
d. Rotary dial, Hotlines, or orderwire

3. What is the maximum number of subscribers that can be selected and placed on HOLD for conferencing at once?

a. 3
b. 6
c. 9
d. 15

4. What is the total number of subscribers that can be placed on HOLD at once?

a. 5
b. 10
c. 15
d. 20

5. How many lines can be monitored at once?

   a. 4
   b. 5
   c. 10
   d. 15

6. How is the handset audio level controlled?

   a. Gain control
   b. Change handset
   c. Audio level control
   d. Console volume control

7. How many parties can be connected for a conference?

   a. 2
   b. 4
   c. 5
   d. 10

KEP QUESTIONS - MODULE 15

1. How many channels are available on the AN/GSH-56 Recorder?

   a. 5
   b. 10
   c. 15
   d. 20

2. Which recorder channels are normally available for recording radios and selected circuits?

   a. Channels 1 through 5
   b. Channels 1 through 11
   c. Channels 1 through 19
   d. Channels 5 through 20

3. How many recorder channels are normally available for time-hack?

   a. 1
   b. 3
   c. 16
   d. 20

4. The tape transport is a self-contained unit consisting of

   a. a tape reel turntable, reel holds, and control buttons.
   b. a tape drive mechanism and an electronic control unit.
   c. a tape drive and electronic control unit.
   d. a printed circuit board (PCB).

5. Which component contains the circuits required for recording, monitoring and malfunction detection?

a. Tape Transports
b. Cabinet Assembly
c. Electronics Assembly
d. Digitime Time-Code Unit

6. What are the three capabilities or functions of the digitime system?

a. Generator, Reader, and Autosearch
b. Reader, Recorder, and Generator
c. Autosearch, Timer, and Reader
d. Timer, Reader, and Recorder

7. Which function of the digitime system can transfer to the standby transport at any selected hour of the day?

a. Reader
b. Generator
c. Autosearch
d. Cabinet Assembly

KEP QUESTIONS - MODULE 16

1. Which Global stations are equipped with the AWCP communication processor?

   a. All CONUS stations
   b. Andrews and Elkhorn only
   c. Andrews, Elkhorn, and McClellan
   d. Andrews, Elkhorn, MacDill, and McClellan

2. Which data transmission system presently supports various MAJCOM's command and control needs?

   a. DSN
   b. SATIN
   c. SACCS
   d. AUTODIN

3. Messages are packetized for transmission. What is the maximum number of characters each packet can contain?

   a. 196
   b. 226
   c. 256
   d. 286

4. What does the message composition area on the VDU screen consist of?

   a. 51 lines/69 characters per line
   b. 51 lines/80 characters per line
   c. 52 lines/69 characters per line
   d. 52 lines/80 characters per line

5. What are the line/character restrictions of a message to be injected via AUTODIN?

   a. 51 lines/69 characters per line
   b. 51 lines/80 characters per line
   c. 52 lines/69 characters per line
   d. 52 lines/80 characters per line

6. Which SACCS component is the preferred location for IPL diskette?

   a. CED-1
   b. CUTE 01
   c. MSU 01
   d. MSU 02

7. Which statement best describes CED-1?

   a. Controlled by the AWCP
   b. Houses the IPL diskette
   c. Houses the SACCS computer
   d. Controls the SATIN computer

KEP QUESTIONS - MODULE 17

1. Which of the following does the MDT eliminate?

   a. SARAH
   b. Floppy disk
   c. Dot Matrix printer
   d. Punched cards and paper tape

2. What provides complete protection against loss of messages?

   a. MS DOS
   b. DCT 1000
   c. Audit trail
   d. Floppy disk

3. What provides access and security entry levels for all users?

   a. DCOM
   b. SARAH
   c. Password
   d. Audit trail

4. What is the least amount of available space needed for a particular day's log/message file?

   a. 5k
   b. 10k
   c. 15k
   d. 20k

5. What provides the status of all configured lines?

   a. Alarm
   b. MS DOS
   c. Audit trails
   d. Data Communications Light Display

6. Which type(s) of messages is/are afforded security protection?

   a. Stored
   b. Received
   c. Transmitted
   d. Stored, received, and transmitted

7. What is the least amount of RAM megabytes required for operation?

   a. 2
   b. 3
   c. 4
   d. 6

8. Which type floppy disk drive is standard on the MDT?

   a. 3.5" 1.44MB
   b. 5.25" 1.44MB
   c. Magnetic tape drive
   d. Punched cards and paper tape

9. What is the least amount of mega byte capacity needed for the hard drive to operate?

   a. 32
   b. 42
   c. 50
   d. 100

10. What was the first external erasable computer controlled storage medium?

   a. Cards
   b. Paper tape
   c. Floppy disk
   d. Magnetic tape

KEP QUESTIONS - MODULE 18

1. What is the purpose of authentication?

   a. To identify the name of stations
   b. To identify and prevent fraudulent transmissions
   c. To allow personnel entrance into a Global station
   d. To verify authenticity of a person on the telephone

2. What determines which authentication system is used?

   a. The time of day the message was received
   b. The type of aircraft making the broadcast
   c. The geographical location of the Global station
   d. The mission being supported and type of traffic being processed

3. What is the most common authentication document used within Global stations?

   a. AFKAO-1
   b. USAF-100
   c. AKAA 2001
   d. AFKAI 2002

4. Where are detailed instructions for the use of AKAA 2001 and other authentication documents contained?

   a. On the cover pages of each document
   b. AFM 33-109 authentication document instructions
   c. In the each Global stations local operating instructions
   d. The COMSEC Security Officer has the instructions locked in his/her safe

5. Authentication is mandatory under the following conditions, except:

   a. Station enters or secures from the net
   b. Encrypted traffic is transmitted or received
   c. When the identity of the person calling the station on the phone is in doubt
   d. Receiving contact and amplifying reports of Emergency War Plans (EWP) conditions

6. Which authentication document is used for White House Communications Agency operations?

   a. USKAA-286
   b. USKAA-287
   c. USKAO-289
   d. USKAO-290

7. Which document contains instructions for USAF Voice Call Signs?

   a. AKAA-1
   b. AFKAO-1
   c. AKAA-2001
   d. USKAA-287

8. What is the collective call sign for all ACC aircraft and missile crews?

   a. SKYKING
   b. SKYBIRD
   c. MAINSAIL
   d. COVERALL

9. What is the collective call sign meaning, "Any ground station this station has a request, Over?"

   a. SKYKING
   b. SKYBIRD
   c. MAINSAIL
   d. COVERALL

10. Which call signs are randomly selected, assigned, and changed at periodic intervals?

   a. Static call signs
   b. Changing call signs
   c. Tactical call signs
   d. Nontactical call signs

KEP QUESTIONS - MODULE 19

1. Which function provides the automation for performing Alert Operations?

   a. ESS
   b. DTMF
   c. KG-84
   d. Hotlines

2. How many connections does the ESS make when it receives a preprogrammed message from the alert panel or operator console?

   a. 1
   b. 2
   c. 3
   d. 4

3. What are the three types of alerts?

   a. EWO, Wartime, ACC Command Center
   b. ACC, Peacetime, ACC Command Center
   c. Real-time, Near Real-time, Wartime
   d. EWO, Peacetime, Communications Call

4. Which alert has a FLASH OVERRIDE precedence and involves all stations?

   a. ACC
   b. EWO
   c. Peacetime
   d. Communications Call

5. Which alert has FLASH precedence and can involve all stations, a single station, or any multi-station combination?

a. ESS
b. EWO
c. Peacetime
d. Communications Call

6. Which alert has an IMMEDIATE precedence and involves either all stations or a single station only

a. ESS
b. EWO
c. Peacetime
d. Communications Call

7. The communications call provides administrative call conferencing capability by connecting station operators and affects both the transmitters and receivers.

a. True
b. False

KEP QUESTIONS - MODULE 20

1. Extended Contingency/Disaster relief support in excess of __ days must be approved at the wing or higher level.

a. 10
b. 14
c. 21
d. 30

2. Where do operators relay GLASS EYE reports?

a. NORAD
b. US Space Command
c. Air Combat Command
d. Air Force Intelligence Agency

3. Which encode/decode document is for ACC Recall and Diversion messages?

a. AFKAI-1
b. USKAC-72
c. AKAA 2001
d. USKAO-273

4. Which Spectrum Interference incidents are reported?

   a. Suspected intrusion, suspected jamming, suspected meaconing, and frequency degradation
   b. Suspected intrusion, suspected jamming, and noise such as morse code that will degrade communications
   c. Suspected intrusion, suspected jamming and interference causing severe frequency degradation
   d. Suspected intrusion, suspected meaconing, and interference causing severe frequency degradation

5. Where do Bomber Target Change (BTC) originate from?

   a. HQ AMC, or HQ ACC Command Center
   b. HQ ACC, NORAD, and MAJCOM Command Center
   c. HQ ACC or Strategic Force Advisors (STRATFOR)
   d. HQ ACC, Strategic Force Advisors (STRATFOR), and Unit Command Centers

6. Which Global station assumes control if the NCS has an internal emergency?

   a. Lajes
   b. Offutt
   c. MacDill
   d. Andrews

7. Where are CINC/VCINC aircraft call signs located?

   a. AFKAO-1
   b. AFKAI-1
   c. AKAA 2001
   d. USKAO-273

8. When is an aircraft's geographical location in plain language over HF allowed?

   a. Never
   b. When flying in the CONUS
   c. When flying with DVs aboard
   d. Only with aircraft commander's permission

9. Which Global stations are CCEs authorized to contact for support?

   a. Offutt only
   b. MacDill only
   c. Andrews only
   d. Any Global station

10. Which Global stations provide data support for PACCS?

   a. Offutt, Andrews, or MacDill
   b. Andrews and McClellan
   c. Offutt and McClellan
   d. Any Global station

11. What is the precedence of real world base isolation traffic?

   a. FLASH
   b. ROUTINE
   c. IMMEDIATE
   d. No precedence is used

12. Which Global stations do SARTs normally attempt to initially contact?

a. Offutt, Andrews, and McClellan
b. Offutt, Andrews, or MacDill
c. Andrews or McClellan
d. Any Global station

KEP QUESTIONS - MODULE 21

1. What is the precedence assigned to phone patch traffic dealing with aircraft movement?

    a. Flash
    b. Routine
    c. Priority
    d. Immediate

2. Who is responsible for the authenticity of a phone patch?

    a. Called party
    b. Calling party
    c. Aircraft Commander
    d. Aircraft's parent MAJCOM

3. What determines the priority of service given to AWACS aircraft?

    a. Type of traffic
    b. Amount of traffic
    c. Mission priorities
    d. Duration of mission

4. If supporting an AWACS mission for an extended period of time, you should use

    a. LSB.
    b. teletype.
    c. a discrete frequency.
    d. the initial contact frequency.

5. What does the acronym ACCCA stand for?

a. Air Combat Command Control Aircraft
b. Air Combat Command Command Aircraft
c. Air Combat Command Contingency Aircraft
d. Air Command and Control Communications Aircraft

6. In support of ACCCA, radio operators are responsible for relaying traffic between ground control agencies and the

a. ACC Command Post.
b. Airborne Movement Control Team.
c. tactical and strategic air forces.
d. Air Combat Command Contingency Center.

7. Which precedence is assigned to BENCH GIRL broadcast messages?

a. Flash
b. Routine
c. Priority
d. Immediate

8. Which of the following does not normally provide broadcast support to USCINCPAC?

a. Yokota
b. Andersen
c. Elmendorf
d. McClellan

9. Which Headquarters selects designated AMC aircraft as CLOSE WATCH missions?

   a. ACC
   b. AMC
   c. USAF
   d. Air Intelligence Agency

10. Where is the Tanker Aircraft Control Center located?

   a. Scott AFB
   b. Offutt AFB
   c. McGuire AFB
   d. Langley AFB

11. Where are the details of Air Intelligence Agency and HQ AMC GYC-8 support detailed?

   a. AMC Regulation 33-1
   b. AIC Document 33-7910
   c. Mission Tasking Agreements
   d. Joint Air Intelligence Agency/AMC GYC-8 Manual for Operations

KEP QUESTIONS - MODULE 22

1. Which type of aircraft message is normally accomplished when the aircraft establishes contact with your station for the first time?

a. Revision
b. Position report
c. Request for Service
d. Initial contact report

2. A departure report consists of

a. aircraft call sign, departure point, flight level, and destination only.
b. aircraft call sign, departure point and time, and flight level only.
c. aircraft call sign, departure point and time, flight level, destination, and ETA.
d. aircraft call sign, departure point and time, next estimated position and time, destination, and ETA only.

3. When a Global station assumes an aircraft's communications guard, the station will assign a primary and secondary guard frequency and a/an

a. traffic frequency.
b. discrete frequency.
c. secondary guard station.
d. alternate Air Route Traffic Control Center.

4. A position report consists of the aircraft call sign, present position and time, flight level, next estimated position, and

a. ETA.
b. heading.
c. destination.
d. CCZ exit point.

5. Aircraft position/revision reports are relayed to appropriate agencies as directed by the

   a. aircraft.
   b. parent MAJCOM.
   c. parent organization.
   d. servicing ATC facility.

6. As a rule, when relaying an approved ATC clearance to an aircraft, you should

   a. record the transmission.
   b. state the clearance twice.
   c. have the aircraft readback the clearance.
   d. keep the transmission as short as possible.

7. By which two methods is all aircraft message traffic relayed?

   a. HF and voice
   b. HF and landline
   c. AUTODIN and voice
   d. AUTODIN and landline

KEP QUESTIONS - MODULE 23

1. What is the purpose of Echo traffic?

    a. Relay messages received from other stations
    b. To verify the authenticity of traffic received
    c. Contact the NCS/ANCS without tying up the frequencies
    d. Ensure the aircraft calling is in control of a Global station

2. How many operators must verify traffic copied directly over the frequency before transmission?

    a. 1
    b. 2
    c. 3
    d. Supervisor or senior operator will verify

3. What action is taken when a station transmits an incorrect text or authentication?

    a. Notify NCS/ANCS
    b. Give to supervisor
    c. Challenge and reply is initiated
    d. Place a note at the end of the message stating that the text is incorrect

4. What action is taken if an error is made in a More to Follow broadcast?

    a. Give to supervisor or senior operator for action
    b. Pass message and note that this message has an error
    c. Notify NCS/ANCS of the error and pass message to addressee(s)
    d. Disregard the entire transmission and retransmit the entire broadcast

5. Who determines if a correct message must be transmitted to counteract the incorrect More to

Follow broadcast?

a. NCS/ANCS
b. GOC controller
c. Senior Operator
d. HQ ACC Command Center

6. What procedures do operators follow when a station receives traffic for worldwide dissemination?

a. Echo Traffic
b. Advisory Injection
c. Worldwide Dissemination
d. Hotline Station Traffic

7. Which station notifies MacDill and Albrook of a worldwide dissemination?

a. Yokota
b. NCS/ANCS
c. Croughton
d. Nobody, they'll receive the message over alert lines

KEP QUESTIONS - MODULE 24

1. Which precedence is assigned to emergency traffic?

   a. FLASH
   b. ROUTINE
   c. IMMEDIATE
   d. Precedence is not of matter when handling emergency traffic

2. Who determines that the state of distress or the seriousness of the emergency has lessened?

   a. Aircraft commander
   b. The Global operator
   c. MAJCOM Command Center
   d. Supervisor/senior operator

3. How many minutes following a required reporting period, should lost communications action be taken?

   a. 1
   b. 5
   c. 10
   d. 15

4. How many seconds following an initial broadcast should a secondary broadcast be transmitted?

   a. 5
   b. 10
   c. 15
   d. 20

5. What are the three alert phases?

a. MAYDAY, PAN, SECURITE
b. UNCERFA, SAFETY, INCERFA
c. Distress, Urgency, Safety
d. INCERFA, ALERFA, DISTRESFA

6. What are the three different categories of aircraft emergency traffic?

a. MAYDAY, PAN, SECURITE
b. UNCERFA, SAFETY, INCERFA
c. Distress, Urgency, Safety
d. INCERFA, ALERFA, DISTRESFA

7. Who is responsible for notifying the appropriate ATC agency and alerting the appropriate military rescue coordination center according to local directives?

a. Aircraft commander
b. The Global station
c. MAJCOM Command Center
d. Supervisor/senior operator

8. Which HF Global station(s) are aerospace rescue and recovery units authorized to use?

a. All
b. Offutt
c. McClellan
d. Only the station authorized by the Command Center

9. How will ships requiring assistance contact a Global station?

   a. Hotlines
   b. Published frequencies
   c. Through another Global station
   d. Usually through the NAVY operations officer

10. Where should you relay all Emergency Calls for Merchant Marine and US Navy Ships traffic?

   a. The appropriate Navy Command Center
   b. Relay to the ships homeport
   c. Supervisor/senior operator
   d. Ship commander

KEP QUESTIONS - MODULE 25

1. EAMs are a primary means for the National Military Command System and subordinate field commanders to pass _____ directions to CINCs and nuclear forces.

   a. Presidential
   b. Joint Chief of Staff
   c. National Command Authority
   d. Command and Control Communications

2. Which statement best describes the importance of EAMs?

   a. EAMs provide aircrew and operator training
   b. The relative importance cannot be overemphasized
   c. Challenge and reply authentication must be used with all EAMs
   d. Broadcasts are just as important as messages within the HF Global System

3. Which concept is used to verify accuracy of an Aircraft Advisory broadcast?

   a. Dual-circuit
   b. Dual-channel
   c. Dual-operator
   d. operator-supervisor

4. All reconnaissance traffic must be relayed to the

   a. GOC.
   b. NMCS.
   c. USSTRATCOM Command Center.
   d. aircraft parent organization.

5. Which two categories do DEFCON changes fall under?

   a. Test, Actual
   b. Actual, Exercise
   c. Official, Temporary
   d. Real World, Simulated

6. Which agency may inject DEFCON changes directly into the system via HF?

   a. NCA
   b. GOC
   c. CJCS
   d. USSTRATCOM Command Center

7. How is an NCS transfer action disseminated to all net stations by the assuming NCS?

   a. HF
   b. SACCS/MDT message
   c. Communications Call
   d. HF or Communications Call

8. Each NCS changeover should not exceed _ days per month.

   a. 3
   b. 7
   c. 10
   d. 14

KEP QUESTIONS - MODULE 26

1. Who has overall operational direction and management of the MYSTIC STAR Network?

   a. Andrews Global VIP Station
   b. Defense Communications Agency (DCA)
   c. Air Force Communications Agency (AFC4A)
   d. White House Communications Agency (WHCA)

2. Who performs duties as Net Control Station (NCS) for MYSTIC STAR?

   a. Andrews VIP
   b. McClellan Global
   c. Special Air Mission (SAM) Command Post
   d. White House Communications Agency (WHCA)

3. How many primary and secondary MYSTIC STAR HF stations are located throughout the world?

   a. 5 primary, 6 secondary
   b. 6 primary, 7 secondary
   c. 7 primary, 8 secondary
   d. 8 primary, 9 secondary

4. How many kilowatts are the transmitters used by MYSTIC STAR stations capable of producing?

   a. 1KW
   b. 5KW
   c. 10KW
   d. 15KW

5. Who is responsible for settling problems concerning authorized users of the MYSTIC STAR

system?

a. Position operator
b. Senior operator
c. Supervisor
d. NCOIC

6. Which station is responsible for keeping the Special Air Mission (SAM) Command Post aware of a SAM aircraft progress?

a. Offutt Global
b. MacDill Global
c. Andrews Global
d. Global station in contact with aircraft

KEP CONFIRMATION KEY

MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5
1. b	1. b	1. a	1. a	1. d
2. d	2. d	2. a	2. d	2. a
3. c	3. a	3. a	3. d	3. c
4. b	4. d	4. c	4. a	4. b
5. d	5. a	5. d	5. b	5. c
6. a	6. c	6. c	6. b	6. b
7. c	7. d	7. b	7. c	7. a
8. b	8. a	8. d	8. b	
9. c	9. d	9. a	9. d	
10. b		10. c	10. b	
11. a		11. d		
12. a		12. d		
		13. b		

MODULE 6	MODULE 7	MODULE 8	MODULE 9	MODULE 10
1. d	1. a	1. c	1. d	1. d
2. a	2. c	2. b	2. c	2. c
3. d	3. b	3. b	3. c	3. c
4. d	4. a	4. c	4. d	4. d
5. a	5. c	5. d	5. b	5. b
6. d	6. b	6. b	6. d	6. c
7. a	7. c	7. c	7. b	7. c
8. b	8. f	8. e		
9. h	9. g	9. a		
10. d	10. e	10. b		
11. e	11. b	11. d		
12. f	12. a	12. d		
	13. d			

MODULE 11	MODULE 12	MODULE 13	MODULE 14	MODULE 15
1. c	1. a	1. b	1. c	1. d
2. b	2. c	2. c	2. b	2. c
3. a	3. b	3. d	3. a	3. a
4. c	4. b	4. d	4. c	4. b
5. c	5. d	5. b	5. d	5. c
6. a	6. a	6. a	6. d	6. a
7. b	7. d	7. b	7. b	7. b
8. c		8. c		
9. a		9. a		
		10. a		

MODULE 16	MODULE 17	MODULE 18	MODULE 19	MODULE 20
1. c	1. d	1. b	1. a	1. a
2. c	2. c	2. d	2. b	2. b
3. c	3. c	3. c	3. d	3. b
4. d	4. a	4. a	4. b	4. c
5. c	5. d	5. c	5. c	5. c
6. c	6. d	6. b	6. d	6. d
7. c	7. c	7. b	7. b	7. b
	8. a	8. a		8. a
	9. b	9. c		9. d
	10. d	10. b		10. c
				11. a
				12. c

MODULE 21

1. d
2. a
3. c
4. c
5. a
6. b
7. a
8. d
9. b
10. a
11. c

MODULE 22

1. d
2. d
3. c
4. a
5. a
6. c
7. c

MODULE 23

1. a
2. b
3. c
4. d
5. b
6. d
7. b

MODULE 24

1. a
2. a
3. b
4. c
5. d
6. c
7. b
8. a
9. b
10. a

MODULE 25

1. c
2. b
3. c
4. a
5. b
6. d
7. d
8. c

MODULE 26

1. b
2. a
3. d
4. c
5. d
6. c

KEP QUESTIONS ANSWER SHEET

NAME_____ RANK_____ DAFSC_____ DSN_____

ORGANIZATION_____MAJCOM_____ DATE COMPLETED_____

MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5
1. ____	1. ____	1. ____	1. ____	1. ____
2. ____	2. ____	2. ____	2. ____	2. ____
3. ____	3. ____	3. ____	3. ____	3. ____
4. ____	4. ____	4. ____	4. ____	4. ____
5. ____	5. ____	5. ____	5. ____	5. ____
6. ____	6. ____	6. ____	6. ____	6. ____
7. ____	7. ____	7. ____	7. ____	7. ____
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9. ____	9. ____	9. ____	9. ____	
10. ____		10. ____	10. ____	
11. ____		11. ____		
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		13. ____		

MODULE 6	MODULE 7	MODULE 8	MODULE 9	MODULE 10
1. ____	1. ____	1. ____	1. ____	1. ____
2. ____	2. ____	2. ____	2. ____	2. ____
3. ____	3. ____	3. ____	3. ____	3. ____
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8. ____	8. ____	8. ____		
9. ____	9. ____	9. ____		
10. ____	10. ____	10. ____		
11. ____	11. ____	11. ____		
12. ____	12. ____	12. ____		
	13. ____			

MODULE 11

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MODULE 12

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MODULE 13

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MODULE 14

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MODULE 15

1. ____ 1.

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MODULE 16

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MODULE 17

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MODULE 18

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MODULE 19

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MODULE 20

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5. ____
6. ____
7. ____
8. ____
9. ____
10. ____
11. ____
12. ____

MODULE 21	MODULE 22	MODULE 23	MODULE 24	MODULE 25
1. ____	1. ____	1. ____	1. ____	1. ____
2. ____	2. ____	2. ____	2. ____	2. ____
3. ____	3. ____	3. ____	3. ____	3. ____
4. ____	4. ____	4. ____	4. ____	4. ____
5. ____	5. ____	5. ____	5. ____	5. ____
6. ____	6. ____	6. ____	6. ____	6. ____
7. ____	7. ____	7. ____	7. ____	7. ____
8. ____			8. ____	8. ____
9. ____			9. ____	
10. ____			10. ____	
11. ____				

MODULE 26

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____

NOTE: After completing and grading all tests, attach this answer sheet, along with the Trainee and Trainer Surveys, to the Training Certification document located in the back of the Trainer's Guide. Send the package to the following address:

81 TRSS/TSQS
601 D STREET
KEESLER AFB MS 39534-2229

TABLE OF CONTENTS

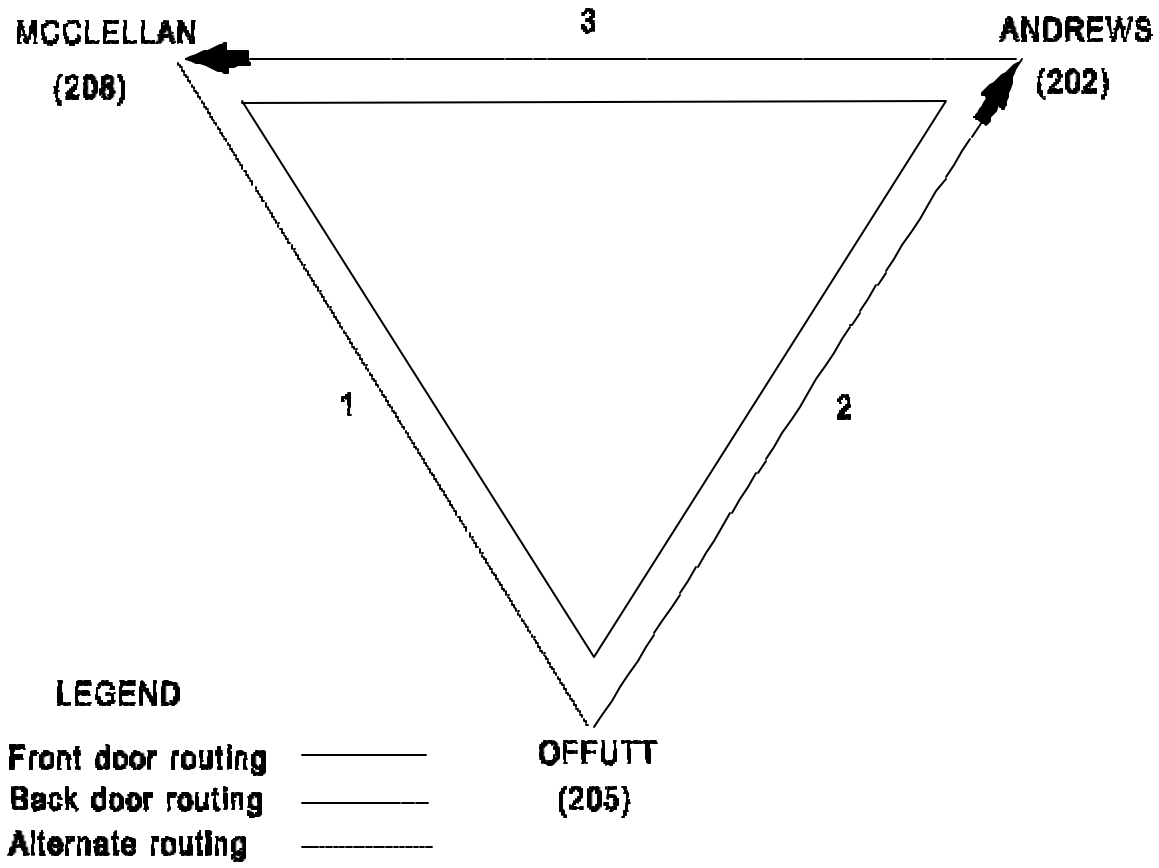


Figure D1-1. Routing/Seizure Example

SIGNAL	MEANING
One short beep	Continue dialing
Two short beeps	Function completely entered
Three short beeps	Equipment busy or locked out
Four short beeps	Equipment fault
Five short beeps	Dialing error
Long beeps	Antenna rotating
Continuous tone	Power amplifier tuning
Recorded voice message	Frequency out of antenna's range

Figure D3-1. SSIII Equipment Tones

The 15-line cordless switchboard is located in the center of the system capable of programmed expansion (SCOPE) control console. It contains 15 cordless dedicated Defense Switching Network (DSN) hotlines and/or administrative phone lines. The dedicated hotlines are connected to agencies which are frequently contacted and two administrative lines used for providing phone patching and relaying of messages.

1. **ANTENNA STATUS** indicates status of external antenna. Not connected in most stations.

2. **RF PROVE** indicates an associated external transmitter is keyed. Not connected in most stations.

3. **CALL/BUSY** indicates an incoming but unanswered (flashing) call or the line is in use by another operator.

4. **OFF-HOLD/OPR 1 ANSWER/OPR 1 EXTEND/OPR 2 ANSWER/OPR 2 EXTEND**

   a. **OFF** terminates the subscriber line and places the line on hook. Will illuminate when depressed.

   b. **HOLD** places a subscriber line off hook without connecting the line to the operator's consoles. Will illuminate when depressed.

   c. **OPR 1 ANSWER** connects the subscriber to the Analog operator's position talk and listen bus. Allows dialing on the administrative phone lines in this position. Will illuminate when depressed.

   d. **OPR 1 EXTEND** connects the subscriber line to the EXTEND LINE PANEL on the analog operator's position. Does not allow dialing when in this position. Will illuminate when depressed.

   e. **OPR 2 ANSWER** connects the subscriber line to the intercept operator's position talk and listen bus. Allows dialing of administrative phone lines when in this position. Will illuminate when depressed.

   f. **OPR 2 EXTEND** connects the subscriber line to the 19th AIM to the intercept operator's position. Does not allow dialing when in this position. Will illuminate when depressed.

5. **OPERATOR AUDIO LEVELS**

   a. **OPERATOR 1** controls the signal level of phone/hotlines to the analog operator.

   b. **OPERATOR 2** controls the signal level of phone/hotlines to the intercept operator.

6. **RING** provides ringing signal for calling on hotlines. Capable of use from both the analog and intercept consoles.

7. **SW-4000A** is used for keying the transmitter during TTY operations. Not required to perform this function as a position operator.

8. **STATION ALARM** will illuminate when a station alarm occurs (blown fuse).

Figure D3-2. 15-Line Cordless Switchboard Controls and Indicators (Cont'd)

Figure D3-2. 15-Line Cordless Switchboard Controls and Indicators

The Tophat section, which contains the status display, is located above the analog position, 15-line cordless, and intercept position on the console. It contains status readouts, radio/levels 1-4, and various inputs which the operator dials. The status display shows the transmitter functions separately from the receiver functions.

NOTE: The status display is not always 100 percent correct. It has a delay and will not update as quickly as the operator dials. Therefore, remember what you have entered and DO NOT rely on the status display.

1. **CONTROLS and INDICATORS**

a. **A-1/A-2/B-1/B-2.** When illuminated, indicates the path the operator or radio has selected.

b. **PC-AFC-SMPX-DATA.** When illuminated,

(1) **PC** indicates Pilot Carrier of the equipment is enabled.

(2) **AFC** indicates Automatic Frequency Control is enabled.

(3) **SMPX** indicates the equipment is in SIMPLEX mode.

(4) **DATA** indicates the equipment is in DATA CONSTANT mode.

c. **KEY-RF PROVE-RDY-LOW PWR.** When illuminated,

(1) **KEY** indicates the equipment is keyed.

(2) **RF PROVE** indicates the equipment is radiating radio frequency energy.

Figure D3-3. Status Display Controls and Indicators

(3) **RDY** indicates the power amplifier of the transmitter is ready.

(4) **LOW PWR** indicates low-power operations (3KW) are being conducted.

d. **FAULT-PWR ON-LCL RADIO-PA FAULT.** When illuminated,

(1) **FAULT** indicates a fault in the equipment.

(2) **PWR ON** indicates the equipment power is on.

(3) **LCL RADIO** indicates equipment is being controlled by either the transmitter or receiver site.

(4) **PA FAULT** indicates a power amplifier fault has occurred in the transmitter.

e. **FREQUENCY** is a six digit display of the frequency in Megahertz.

f. **ANT** indicates the azimuth of the equipment antenna, OMNI (34), Dummy Load (39) or Rotatable Log Periodic or Rosette Antenna (03, 06, 09, 12, etc.). If 99 is displayed, it indicates no antenna is accessed.

2. **DEMAND READOUT.** Momentarily depressed. Sends a signal through the CRC to the transmitter and receiver requesting an update of the status displays.

Figure D3-3. Status Display Controls and Indicators

SWITCHBOARD Dial Code	**Allows access to sites or equipment**
16	Transmitter site
17	Receiver site
56	Time Signal
11	Scope Control Level 1 USB
21	Scope Control Level 2 USB
31	Scope Control Level 3 USB
41	Scope Control Level 4 USB
51	Scope Control Level 5 USB
61	Scope Control Level 6 USB

Figure D3-4. Switchboard and Radio Dial Codes

RADIO Dial Code	Allows for remote control of equipment
00	360 degree LP
03	30 degree LP
5	Long hand dial of frequency
06	60 degree LP
8	Long hand dial of frequency
09	90 degree LP
12	120 degree LP
15	150 degree LP
18	180 degree LP
21	210 degree LP
24	240 degree LP
27	270 degree LP
30	300 degree LP
33	330 degree LP
34	OMNI antenna
36	360 degree LP
41	J-Box Hold ON
44	J-Box Hold Off
45	Simplex
46	Duplex
61	USB ON
62	LSB ON

NOTE: This list of switchboard (SWBD) and radio dial codes, though not complete, contains the basic ones needed to access and control equipment.

Figure D3-4. Switchboard and Radio Dial Codes

Supervisory tones are provided to assist the operator in remotely controlling the equipment. If all transmitters, receivers, and associated intersite equipment are working properly, you will hear either two or four tones (beeps) from both the transmitter or receiver sites. The absence of tones will alert you that the entered instructions have not been accepted and you do not have control of the equipment. The absence of one set of tones will greatly assist in troubleshooting the equipment. The higher pitched tone comes from the transmitter site and the lower pitched one comes from the receiver site. The following is a list of supervisory tones and their meanings:

1. One beep is received from each site when the first digit is dialed. This indicates the equipment is operational.

> **Note:** It is important you wait for the beeps to return from both sites before dialing the second digit.

2. Two beeps are received from each site when the second digit is dialed and the function is complete.

3. Three beeps received from a site indicate a busy condition of the associated function.

> **Example:** Dialing an antenna azimuth when all rotatable antennas are in use or exceeding the 20 second time limit in completing a dial function.

4. Five beeps are received when the radio equipment faults. If the Transmitter Power Amplifier does not complete tuning within 30 seconds, the transmitter will fault out.

5. A continuous tone is received while the Transmitter Power Amplifier is tuning.

6. A continuous series of beeps (approximately one second apart) is received while a Log Periodic antenna is rotating. The antenna rotates three to six degrees between beeps.

7. If, upon accessing a level without dialing a function, you immediately receive a series of tones, the J-Box for that level is locked up.

8. Before a level can be remotely controlled, the AIM associated with the control channel must be selected by operator 2 or dialed by any of the SW3600 switchboard subscribers.

9. Once a radio control dial function is started, it must be completed within 20 seconds or the function will automatically default (cancel).

10. When dialing a specific frequency, all six digits must be dialed. Frequencies below 10MHz must start with a zero. Preset frequencies require only a two-digit command.

Figure D3-5. Supervisory Tones

CIRCUIT	DIR NO.	CIRCUIT	DIR NO.	CIRCUIT	DIR NO.
ANDREWS, ALERT TRK	202	MAINT, CTL SITE	400	RECEIVER 12A1	624*
ANTENNA, RCVR SITE	608	MAINT, RCVR SITE	600*	RECEIVER 12A2	627*
ANTENNA, XMTR SITE	508	MAINT, XMTR SITE	500	RECEIVER 12B1	625*
DSN 2-WAY 1	801	MCCLELLAN ALERT TRK	208	RECEIVER 12B2	626*
DSN 2-WAY 2	802	PACCS	701	MACDILL TRUNK 2	703*
DSN INWARD	803	RECEIVER 01A1	611	RECORDER, CH 13	473
DSN INWARD 2	804	RECEIVER 01A2	610*	RECORDER, CH 14	474
DSN INWARD 3	805	RECEIVER 01B1	612*	RECORDER, CH 15	475
C.O. TRUNK 1	901	RECEIVER 01B2	613*	RECORDER, CH 16	476
C.O. TRUNK 2	902	RECEIVER 02A1	621	RECORDER, CH 17	477
COMMAND POST PRI	205	RECEIVER 02A2	620*	RECORDER, CH 18	478
COMMAND POST SEC	206	RECEIVER 02B1	622*	RF LOOP, CONS 1	417
CONF BRIDGE, P 01	481	RECEIVER 02B2	623*	RF LOOP, CONS 2	427
CONF BRIDGE, P 02	482	RECEIVER 03A1	631	RF LOOP, CONS 3	437
CONF BRIDGE, P 03	483	RECEIVER 03A2	630*	RF LOOP, CONS 4	447*
CONF BRIDGE, P 04	484	RECEIVER 03B1	632*	RF LOOP, CONS 5	457*
CONF BRIDGE, P 05	485	RECEIVER 03B2	633*	TRANSMITTER 01A1	511
CONF BRIDGE, P 06	486	RECEIVER 04A1	641	TRANSMITTER 01A2	510*
CONF BRIDGE, P 07	487	RECEIVER 04A2	640*	TRANSMITTER 01B1	512*
CONF BRIDGE, P 08	488	RECEIVER 04B1	642*	TRANSMITTER 01B2	513*
CONF BRIDGE, P 09	489	RECEIVER 04B2	643*	TRANSMITTER 02A1	521
CONF BRIDGE, P 10	490	RECEIVER 05A1	651	TRANSMITTER 02A2	520*
CONF BRIDGE, P 11	491	RECEIVER 05A2	650*	TRANSMITTER 02B1	522*
CONF BRIDGE, P 12	492	RECEIVER 05B1	652*	TRANSMITTER 02B2	523*
CONSOLE 1	410	RECEIVER 05B2	653*	TRANSMITTER 03A1	531
CONSOLE 2	420	RECEIVER 06A1	661	TRANSMITTER 03A2	530*
CONSOLE 3	430	RECEIVER 06A2	660*	TRANSMITTER 03B1	532*
CONSOLE 4	440*	RECEIVER 06B1	662*	TRANSMITTER 03B2	533*
CONSOLE 5	450*	RECEIVER 06B2	663*	TRANSMITTER 04A1	541
ELMENDORF ALERT TRK	214*	RECEIVER 07A1	671	TRANSMITTER 04A2	540*
FSK, CONSOLE 1	419	RECEIVER 07A2	670*	TRANSMITTER 04B1	542*
FSK, CONSOLE 2	429	RECEIVER 07B1	672*	TRANSMITTER 04B2	543*
FSK, CONSOLE 3	439	RECEIVER 07B2	673*	TRANSMITTER 05A1	551
FSK, CONSOLE 4	449*	RECEIVER 08A1	681	TRANSMITTER 05A2	550*
FSK, CONSOLE 5	459*	RECEIVER 08A2	680*	TRANSMITTER 05B1	552*
FUTURE 10 ALERT TRK	215*	RECEIVER 08B1	682*	TRANSMITTER 05B2	553*
FUTURE 11 ALERT TRK	204*	RECEIVER 08B2	683*	TRANSMITTER 06	561
HOTLINE 1	401	RECEIVER 09A1	691	TRANSMITTER 06A2	560*
HOTLINE 2	402	RECEIVER 09A2	690*	TRANSMITTER 06B1	562*
HOTLINE 3	403	RECEIVER 09B1	692*	TRANSMITTER 06B2	563*
HOTLINE 4	404	RECEIVER 09B2	693*	TRANSMITTER 07A1	571
HOTLINE 5	405	RECEIVER 10A1	604*	TRANSMITTER 07A2	570*
HOTLINE 6	406	RECEIVER 10A2	607*	TRANSMITTER 07B1	572*
KY-65, CONS 1	418*	RECEIVER 10B1	605*	TRANSMITTER 07B2	573*
KY-65, CONS 2	428*	RECEIVER 10B2	606*	TRANSMITTER 08A1	581
KY-65, CONS 3	438*	RECEIVER 11A1	614*	TRANSMITTER 08A2	580*
KY-65, CONS 4	448*	RECEIVER 11A2	617*	TRANSMITTER 08B1	582*
KY-65, CONS 5	458*	RECEIVER 11B1	615*	TRANSMITTER 08B2	583*
MACDILL TRUNK 1	702*	RECEIVER 11B2	616*	TRANSMITTER 09A1	591

Figure D6-1. Station Directory Dial Codes (Cont'd)

CIRCUIT	DIR NO.	CIRCUIT	DIR NO.	CIRCUIT	DIR NO.
TRANSMITTER 09A2	590*	VOX 1 IN, CONS 1	411	VOX 2 OUT, CONS 1	415
TRANSMITTER 09B1	592*	VOX 1 IN, CONS 2	421	VOX 2 OUT, CONS 2	425
TRANSMITTER 09B2	593*	VOX 1 IN, CONS 3	431	VOX 2 OUT, CONS 3	435
TRANSMITTER 10A1	504*	VOX 4 IN, CONS 4	441*	VOX 2 OUT, CONS 4	445*
TRANSMITTER 10A2	507*	VOX 1 IN, CONS 5	451*	VOX 2 OUT, CONS 5	455*
TRANSMITTER 10B1	505*	VOX 1 OUT, CONS 1	414	VOX 3 IN, CONS 1	413
TRANSMITTER 10B2	506*	VOX 1 OUT, CONS 2	424	VOX 3 IN, CONS 2	423
TRANSMITTER 11A1	514*	VOX 1 OUT, CONS 3	434	VOX 3 IN, CONS 3	433
TRANSMITTER 11A2	517*	VOX 1 OUT, CONS 4	444*	VOX 3 IN, CONS 4	443*
TRANSMITTER 11B1	515*	VOX 1 OUT, CONS 5	454*	VOX 3 IN, CONS 5	453*
TRANSMITTER 11B2	516*	VOX 2 IN, CONS 1	412	VOX 3 OUT, CONS 1	416
TRANSMITTER 12A1	524*	VOX 2 IN, CONS 2	422	VOX 3 OUT, CONS 2	426
TRANSMITTER 12A2	527*	VOX 2 IN, CONS 3	432	VOX 3 OUT, CONS 3	436
TRANSMITTER 12B1	525*	VOX 2 IN, CONS 4	442*	VOX 3 OUT, CONS 4	446*
TRANSMITTER 12B2	526*	VOX 2 IN, CONS 5	452*	VOX 3 OUT, CONS 5	456*
SPEAKER, ALERT	408	TEST SET	407	SAC TEL NET	700

* = FUTURE EXPANSION

Figure D6-1. Station Directory Dial Codes (Cont'd)

FEATURE ACCESS CODES

TRUNK DESCRIPTION	DIAL	NOTES:	CODE
1. FUTURE EXPANSION	ROUTE TO ATTENDANT		0
2. DSN ALERT TRUNK EMULATOR. CHANGE THIS DIAL CODE	TRANSMITTER/RECEIVER/CONFERENCE		
ACCESS	111	PERIODICALLY IN ALL ESSs	
AATE..(NOTE 2)	112	THAT ARE TIED INTO THE ALERT	
PLACE CALL ON HOLD	113	NETWORK TO PREVENT	
RETRIEVE CALL HOLD	114	UNAUTHORIZED ALERTS FROM	
PLACE CODED HOLD	115	DSN. CHANGE THE CODE AT THE	
RETRIEVE CODED HOLD	116	SAME TIME IN ALL ESSs IN THE.	
SET UP SPEED CALL	117	NETWORK SO THAT DSN	
CANCEL SPEED CALL	118	ALTERNATE ROUTING WILL	
OUTGOING C O TRUNK	9	WORK FOR ALERTS.	
OUTGOING DSN	8		
6-PARTY CONFERENCE	161		
6-PARTY CONFERENCE	162		
6-PARTY CONFERENCE	163		
6-PARTY CONFERENCE	164		
6-PARTY CONFERENCE..(NOTE 1)	165		
6-PARTY CONFERENCE..(NOTE 1)	166		
6-PARTY CONFERENCE..(NOTE 1)	167		
6-PARTY CONFERENCE..(NOTE 1)	168		

Figure D6-1. Station Directory Dial Codes (cont'd)

NOMENCLATURE	FUNCTION
Cable Jack	Connects turret to console
BLF/ADSS	Indicates which line is busy
Group Selection	Assists in "Quick Call"
DTMF Keypad	Allows for dialing into lines/trunks/transmitters or receivers
Start Key	Gives dial tone for dialing
Release Attendant (REL ATT)	Drops out of loop
Priority Call	Indicates that incoming call is higher than Routine
Talk Destination Key (TALK DES)	Allows talking to originally Called station in split calling
Talk Destination Lamp	Lights when the operator depresses the TALK DES key
Talk Source Key (TALK SRC)	Allows talking to calling station in split calling
Talk Source Lamp	Lights when the operator depresses the TALK SRC key
Hold	Allows operator to put party on hold, rings back in 45 seconds
Call Waiting	Indicates incoming call
Alphanumeric Screen	Indicates precedence, type, or number of calling party
Release Destination (REL DES)	Allows operator to hang up without from loop

Lock Out.....Allows operator to upgrade circuit to "FLASH"

Audible Signal Adjust.....Increase or decreases incoming ring

Figure D6-2. Attendant Turret Controls and Indicators

NOMENCLATURE	FUNCTION
Trunk Busy	Not used
Lamp Test	Allows operator to test all lamps
Minor (Mn) Alarm	Lights when minor fault is detected in the ESS
Major (Mj) Alarm	Lights when major fault is detected in the ESS
Position Busy Key (POS BUSY)	Allows operator to transfer a call to another console
Position Busy Lamp	Lights when operator depresses POS BUSY key
Connect key (CONN)	Allows connect feature to join two loops
Conference (CONF) Key	Allows for conference feature
Conference Lamp	Lights when operator depresses CONF key

ATTENDANT LOOP

Destination	Indicates called party answered
Ringing	Indicates incoming/outgoing call is ringing
Camp On	Not used
Attendant	Indicates operator access loop
Hold	Lights as party is put on hold

Figure D6-2. Attendant Turret Controls and Indicators (cont'd)

COMMAND	COMMAND KEY	ARGUMENTS
FREQUENCY	1	F1F2F3F4F5F6
MODE	2	M1
POWER	3	P1
ANTENNA	4	A1A2
AZIMUTH	5	B1B2
AGC	6	S1
PRESET START/STOP	7	NONE
DUPLEX/SIMPLEX	8	NONE
KEY/MUTE	A	0
UNKEY/UNMUTE	A	9
PRIORITY 1	FO	NONE
PRIORITY 2	F	NONE
PRIORITY 3	I	NONE
PRIORITY 4	P	NONE
TX/RX SELECTION	0	K1

ARGUMENTS KEY:

F1F2F3F4F5F6	020000 TO 299999
M1	1 = CW, 2 = AM, 3 = USBEN, 4= UUSBEN, 5= LSBEN, 6 = LLSBEN, 7 = USBDIS, 8 = UUSBDIS, 9 = LSBDIS, 0 = LLSBDIS
P1	0 = LOW, 1 = HIGH
A1A2	00 = ANY ANTENNA, 01 THROUGH 13 = SPECIFIC ANTENNA
B1B2	00 THROUGH 36 (DROP TRAILING ZERO) IN 30 DEGREE INCREMENTS ONLY
S	0 = VOICE, 1 = DATA, 2 = FAX
K1	0 = BOTH, 1 = TRANSMIT, 2 = RECEIVE

Figure D6-3. DTMF Commands (Cont'd)

These instructions augment and simplify the instructions given in TO 31R2-2GRC212-12 for speed dialing.

Use the following procedures to dial CENTRAL OFFICE (ON BASE) NUMBERS:

Enter the trunk group access code, e.g., 9.
Depress the star (*) key.
Dial the 7-digit administrative number. If the number has less than seven digits, use trailing "1"s to right-fill the number to seven digits. For example, you would enter the administrative numbers "44370" as "4437011" and "4370" as "4370111."
Depress the star key. The ESS returns the assurance tone after you depress the star key the third time.
Depress the REL ATT key to end the speed-call assignment.

Use the following procedures to establish a speed call through worldwide or local DSN:

Instead of entering the trunk group access code, dial the worldwide DSN code according to your local requirements.
Depress the star key.
Establish keypad dialing (FO).
Establish keypad dialing (P).
Dial the desired precedence of the telephone number (P, I, F, or FO).
Dial the 7-digit DSN number. For numbers requiring an area code, this will be a 10-digit number.
Depress the star key.
The ESS returns the assurance tone after you depress the star key the third time.
Depress the REL ATT key to end the speed-call assignment.

Use the following procedures to delete a speed call from CENTRAL OFFICE (ON BASE) or LOCAL/WORLDWIDE DSN:

After selecting an idle loop, depress the START key. The ESS returns a dial tone.
Key in the DELETE SPEED CALL access code (118). The ESS returns the feature dial tone.

Dial the assigned 3-digit speed call number (300 through 399).
Drop from the loop.

Figure D6-4. Speed Dialing Instructions

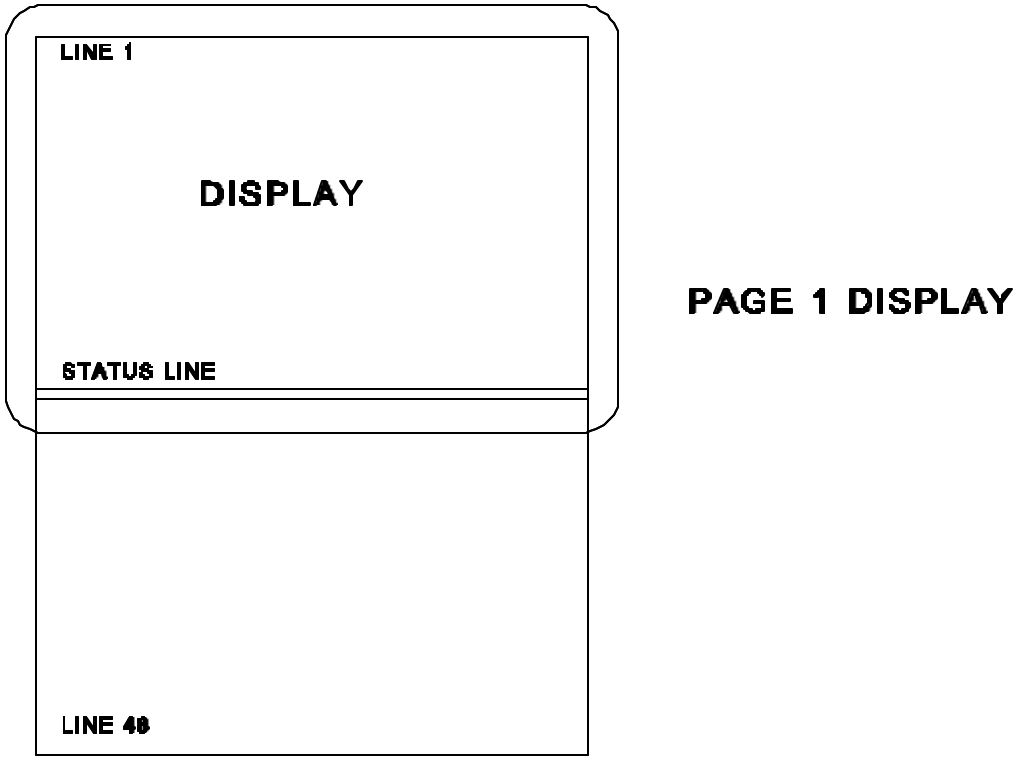
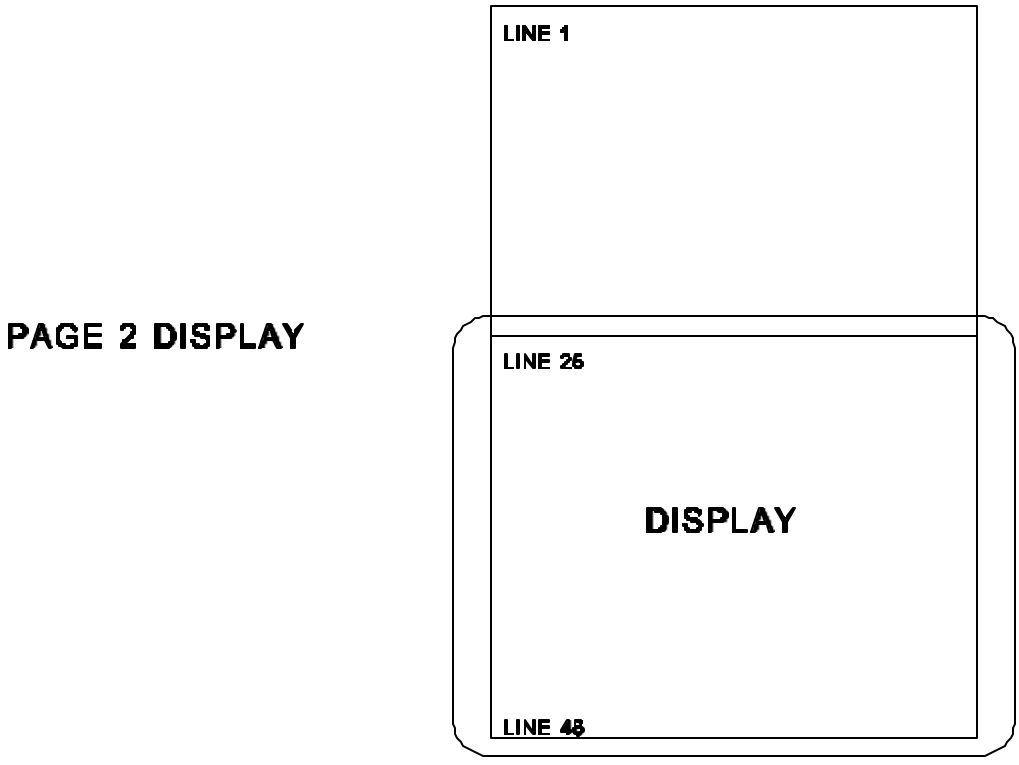


Figure D7-1. VDU Display



TERM	MEANING
Class of Service	Describes subscriber's capabilities in relation to the ESS. Identified by a numerical class level.
Address	Identifies to the computer which equipment items are to receive the command, e.g., 'ESS' (address) indicates the Electronic Switch Subsystem will receive the command.
Command Designator	Identifies type of command, e.g., 'R' indicates a Recent Change Command.
Action Designator	Identifies the nature of the command, e.g., 'RC' indicates the nature of the command, e.g., 'RC' indicates the command will request class of service.
Customer Group	Identifies an ESS user group. Uses a numeric indicator. SSIII is the only ESS customer in the system and its designator is '0.'
Directory Number	Identifies DTMF number for any equipment item or subscriber that has switch access.

Figure D7-2. Recent Change Command Terms

COMMAND	MEANING
ESS	Address for Electronic Switch Subsystem
CC	Change class of service
CN	Change alert participant
CQ	Change communications call participant
CR	Change alert recorder receiver pairing
CZ	Change AUTOVON alternate routing
O	SSIII customer group designator
RC	Request class of service
RW	Request time/date
SC	Set date
SN	Request alert participant
SR	Request alert recorder/receiver pairing
SQ	Request communications call participant
SW	Set ESS clock
SZ	Request AUTOVON alternate routing

Figure D7-3. Recent Change Command Abbreviations

SYMBOL	MEANING
nnn	Directory number (100 thru 900)
hh	Hours (00 thru 23)
mm	Minutes (00 thru 59) or Month (01 thru 12)
dd	Day (01 thru 31)
yy	Year (00 thru 99)
t	Trunk type (1 = alert, 2 = TX, 3 = RX, 4 = alert speaker)
ee	Entry number (00 thru 31)

Figure D7-4. Recent Change Command Symbols

TRANSMITTER SITE DISPLAY, PAGE ONE

TX		CHANNEL									----AGC----						
RADIO	ANT	FREQ	MODE	A2	A1	B1	B2	KEY	PWR	RFG	A2	A1	B1	B2	PRI	FLT	COMMENTS
TX01	R1/090	067610	ISB	X	X			U	LO						I	TUN	DTMF
	******		CW	X	X			K	HI						FO	##	LOCAL
	OMN2		AME												F		LOCKOUT
			SBY														ALERT
			OFF														B-CONT
																	NO-PST

RECEIVER SITE DISPLAY, PAGE TWO

RX		CHANNEL									----AGC----						
RADIO	ANT	FREQ	MODE	A2	A1	B1	B2	KEY	PWR	RFG	A2	A1	B1	B2	PRI	FLT	COMMENTS
RX01	R1/090	067610	ISB		X					00		2			I		DTMF
	OMN2		CW	X	X					:		1			FO	##	LOCAL
			AME							15		0			F		LOCKOUT
			SBY														ALERT
			OFF														B-CONT
																	NO-PST

Figure D8-1. VDU Status Displays