C^{4}I TACTICAL OPERATIONS CENTER ENHANCED OPERATOR/MAINTAINER

NOVEMBER 2002

SOLDIER'S MANUAL and TRAINER'S GUIDE
MOS 14J

Soldier's Manual and Trainer's Guide, Skill Levels 1, 2, 3, and 4, MOS 14J, C^{4}I Tactical Operations Center Enhanced Operator/Maintainer

TABLE OF CONTENTS

Subject Area 15: Tactical Command System (TCS)

Subject Area 16: Sensor Operations

Subject Area 17: Sensor Maintenance

Subject Area 18: Software Troubleshooting

Subject Area 19: JTAGS Emplacement

Subject Area 20: JTAGS March Order

Subject Area 21: JTAGS Operation

Subject Area 27: Defense Design

Subject Area 28: JTAGS Detachment Sergeant

PREFACE

This publication is for soldiers holding MOS I4J (Skill Levels 1 through 4), their trainers, or first-line supervisors. It contains standardized training objectives in the form of task summaries that trainers and supervisors should use to train and evaluate soldiers on critical tasks that support unit missions during wartime. Soldiers holding MOS 14J (Skill Levels 1 through 4) must have access to this publication. It should be available in the soldier's work area, unit learning center, and unit libraries. Trainers and first-line supervisors will actively plan for soldiers to have access to this publication; however, it is not necessary for each soldier to have an individual copy.

The proponent for this publication is HQ, TRADOC. We encourage you, the users, to recommend changes and submit comments to improve this publication. You should use DA Form 2028. Key each of your comments to the specific page, paragraph, and line of the text in which you recommend the change. Provide reasons for each comment to ensure understanding and complete evaluation. Send the completed forms to Commandant, US Army Air Defense Artillery School, ATTN: ATSA-DT-WF, Fort Bliss, TX 799l6-3802.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

CHAPTER 1

Introduction

General: This manual identifies the individual MOS training requirements for soldiers in MOS 14J. Commanders, trainers, and soldiers should use it to plan, conduct, and evaluate individual training in units. This manual is the primary MOS reference to support the self-development and training of every AD C4I TOC Enhanced Operator/Maintainer (CMF 14) soldier.

Use this manual with the soldier's manuals of common tasks (STPs 21-1-SMCT and 21-24-SMCT), Army Training and Evaluation Programs (ARTEPs), and FM 25-101 to establish effective training plans and programs which integrate soldier, leader, and collective tasks.

Soldier's Responsibilities: Each soldier is responsible for performing individual tasks that the first-line supervisor identifies, based on the unit's mission-essential task list (METL). The soldier must perform the task to the standards listed in the soldier's manual. If a soldier has a question about how to do a task or which tasks in this manual he must perform, it is the soldier's responsibility to ask the first-line supervisor for clarification. The first-line supervisor knows how to perform each task or can direct the soldier to the appropriate training materials.

NCO Self-Development and the Soldier's Manual: Self-development is one of the key components of the leader development program. It is a planned, progressive, and sequential program followed by leaders to enhance and sustain their military competencies. It consists of individual study, research, professional reading, practice, and self-assessment. Under the self-development concept, the NCO, as an Army professional, has the responsibility to remain current in all phases of the MOS. The SM is the primary source for the NCO to use in maintaining MOS proficiency.

Another important resource for NCO self-development is the Army Correspondence Course Program (ACCP). Refer to DA Pamphlet 350-59 for information on enrolling in this program and for the list of courses, or write to: Army Institute for Professional Development, US Army Training Support Center, ATTN: ATIC-IPS, Newport News, VA 23628.

Unit learning centers are a valuable resource for planning out self-development programs. They can help access enlisted career maps, training support products, and extension training materials.

Training Support: This manual includes the following appendixes and information, which provide additional training support information:

- Appendix A, DA Form 5164-R (Hands-On Evaluation). The trainer may use this form to keep a record of the performance measures a soldier passes or fails. This form is applicable to all tasks in this SM. This appendix contains a sample of a completed DA Form 5164-R.

- Appendix B, DA Form 5165-R (Field Expedient Squad Book). This appendix provides a sample of a completed DA Form 5165-R as well as an overprinted copy for the tasks in this MOS. The NCO trainer can use this form to set up the leader book described in FM 25-101, Appendix B. The use of this form may help preclude writing the soldier tasks associated with the unit's METL and can become a part of the leader book.

- Glossary. The glossary, which follows the last appendix, is a single comprehensive list of acronyms, abbreviations, definitions, and letter symbols used in this publication.

- References. This section contains references, which support training of all tasks in this SM. Required references are listed in the Conditions statement and are required for the soldier to do the task. Related references are materials which help a trainer prepare for the task and are not required to perform the task.

CHAPTER 2

Training Guide

General: The TG identifies the essential components of a unit training plan for individual training. Units have different training needs and requirements based on differences in environment, location, equipment, dispersion, and similar factors. Therefore, the TG is intended as a guide for conducting unit training and not as a rigid standard.

The TG provides information necessary for planning training requirements for the MOS. The TG—
- Identifies subject areas in which soldiers must be trained.
- Identifies the critical tasks for each subject area.
- Specifies where soldiers are initially trained on each task.
- Recommends how often to train each task to sustain proficiency.
- Recommends a strategy for cross-training soldiers.
- Recommends a strategy for training soldiers to perform higher-level tasks.

Battle-Focused Training: As described in FMs 25-100 and 25-101, the commander must first define the METL as the basis for unit training. Unit leaders use the METL to identify the collective, leader, and soldier tasks which support accomplishment of the METL. Unit leaders then assess the status of training and lay out the training objectives and the plan for accomplishing needed training. Once the long- and short-range plans are prepared, leaders then execute and evaluate training. Finally, the unit's training preparedness is reassessed and the training management cycle begins again. This process ensures that the unit has identified what is important for the wartime mission, that the training focus is applied to the necessary training, and that training meets established objectives and standards.

Relationship of Soldier Training Publications to Battle-Focused Training: The two key components of enlisted STPs are the trainer's guide and soldier's manual. The TG and SM give leaders important information to help in the battle-focused training process. The TG relates soldier and leader tasks in the MOS and skill level to duty positions and equipment. It provides information on where the task is trained, how often training should occur to sustain proficiency, and who in the unit should be trained. As leaders go through the assessment and planning stages, they should use the TG as an important tool in identifying <u>what</u> needs to be trained. The execution and evaluation of soldier and leader training should rely on the Armywide training objectives and standards in the SM task summaries. The task summaries ensure that soldiers in any unit or location have the same definition of task performance and that trainers evaluate the soldiers to the same standard.

Figure 2-1 shows the relationship between battle-focused training and the use of the TG and SM. The left-hand side of the diagram shows the process of soldier training taken from FM 25-101, while the right side of the diagram shows how the STP supports each step of this process.

BATTLE-FOCUS PROCESS		STP SUPPORT PROCESS
SELECTS SUPPORTING SOLDIER TASKS		USES TG TO RELATE TASKS TO METL
CONDUCTS TRAINING ASSESSMENT		USES TG TO DEFINE WHAT SOLDIER TASKS TO ASSESS
DETERMINES TRAINING OBJECTIVES		USES TG TO SET OBJECTIVES
DETERMINES STRATEGY AND PLANS FOR TRAINING		USES TG TO RELATE SOLDIER TASKS TO STRATEGY
CONDUCTS PRE-EXECUTION CHECKS		USES SM TO DETERMINE TRAINING PREPARATION
EXECUTES TRAINING AND CONDUCTS AFTER ACTION REVIEW		USES SM TASK SUMMARY AS SOURCE FOR TASK PERFORMANCE
EVALUATES TRAINING AGAINST ESTABLISHED STANDARDS		USES SM TASK SUMMARY AS STANDARD FOR EVALUATION

Figure 2-1. TG and SM battle-focused training relationships.

Trainer's Responsibilities: Training soldier and leader tasks to standard and relating this training to collective mission-essential tasks is the responsibility of NCO trainers. Trainers use the steps below to plan and evaluate training:

● Identify soldier and leader training requirements. The NCO determines which tasks soldiers need to train on using the commander's training strategy. The unit's METL, ARTEP, and the MOS training plan in the TG are sources for helping the trainer define the individual training needed.

● Plan the training. Training for specific tasks can usually be integrated or conducted concurrently with other training or during "slack periods." The unit's ARTEP can assist in identifying soldier and leader tasks, which can be trained and evaluated concurrently with collective task training and evaluation.

- Gather the training references and materials. The SM task summary lists all references, which can assist the trainer in preparing for the training of that task.

- Determine risk assessment and identify safety concerns. Analyze the risk involved in training a specific task under the current conditions at the time of scheduled training. Ensure that your training preparation takes into account those cautions, warnings, and dangers associated with each task.

- Train each soldier. Show the soldier how the task is done to standard and explain step-by-step how to do the task. Give each soldier at least one chance to do the task step-by-step.

- Stress fratricide. Fratricide is an issue that every trainer must consider in all aspects of training and evaluation. Munitions do not distinguish between friend and foe. All trainers must train and stress procedures which must be followed to avoid fratricide. These procedures include IFF, weapon control status, vehicle and aircraft recognition, corridors, routes, zones, flight levels, and other considerations.

- Determine environmental impacts. Trainers must always be sensitive to the possibility of environmental contamination. They must ensure that troops, vehicles, equipment, and weapons for which they are responsible do not cause unnecessary contamination to the subsurface, surface, waterways, vegetation, and supersurface (air). Additionally, NBC usage must be limited to combat critical operations.

- Emphasize training in MOPP 4 clothing. Soldiers have difficulty performing even the very simple tasks in a nuclear and/or chemical environment. The combat effectiveness of the soldier and the unit can degrade quickly when trying to perform in MOPP 4. Practice is the best way to improve performance. The trainer is responsible for training and evaluating soldiers in MOPP 4 so that they are able to perform critical wartime tasks to standards under a nuclear and/or chemical environment.

- Check each soldier. Evaluate how well each soldier performs the tasks in this manual. Conduct these evaluations during individual training sessions or while evaluating soldier proficiency during the conduct of unit collective tasks. This manual provides an evaluation guide for each task to enhance the trainer's ability to conduct year-round, hands-on evaluations of tasks critical to the unit's mission. Use the information in the MOS training plan as a guide to determine how often to train the soldier on each task to ensure that soldiers sustain proficiency.

- Record the results. The leader book referred to in FM 25-101, Appendix B, is used to record task performance, and gives the leader total flexibility on the method of recording training. The trainer may use DA Forms 5164-R and 5165-R as part of the leader book.   The forms are optional and locally reproducible. STP 21-24-SMCT contains a copy of these forms and instructions for their use. This STP also includes copies of these forms.

- Retrain and evaluate. Work with each soldier until he can perform the task to specific SM standards.

Evaluation Guide: An evaluation guide exists for each task summary in the SM. Trainers use the evaluation guides year-round to determine if soldiers can perform their critical tasks to SM standards. Each evaluation guide contains one or more performance measures, which identify what the trainer needs to observe to score a soldier's performance. Each step is clearly identified by a P (Pass) and F (Fail), located under the Results column on each evaluation guide. Some tasks involve a process which the trainer must observe as the soldier performs the task. For other tasks, the trainer must evaluate an "end product" resulting from doing the task. The following are some general points about using the evaluation guide to evaluate soldiers:

- Review the guidance to become familiar with the information on which the soldier will be scored.

- Ensure that the necessary safety equipment and clothing needed for proper performance of the job are on-hand at the training site.

- Prepare the test site according to the Conditions section of the task summary. Some tasks contain special evaluation preparation instructions. These instructions tell the trainer what modifications must be made to the job conditions to evaluate the task. Reestablish the test site to the original requirements after evaluating each soldier to ensure that conditions are the same for each soldier.

- Advise each soldier of the information in the Brief Soldier section of the task summary before evaluating.

- Score each soldier according to the performance measures.

- Record the date and task performance (GO or NO-GO) in the leader book.

Training Tips for the Trainer:

1. Prepare yourself:

- Get training guidance from your chain of command on when training must take place, which soldiers should be trained, availability of resources, and a training site.

- Get the training objective (task conditions and standards) from the task summary in this manual.

- Ensure you can do the task. Review the task summary and the references in the References section. Practice doing the task or, if necessary, have someone train you on the task.

- Choose a training method.

- Prepare a training outline consisting of informal notes on what you want to cover during your training session.

- Practice your training presentation.

2. Prepare the resources:

- Obtain the required resources identified in the Conditions statement for each task.

- Gather equipment and ensure it is operational.

- Coordinate the use of training aids and devices.

- Prepare the training site according to the Conditions statement and Evaluation Preparation section of the task summary, as appropriate.

3. Prepare the soldiers:

- Tell the soldier what task to do and how well to do it. Refer to the Standards statement and Evaluation Preparation section for each task, as appropriate.

- Caution soldiers about safety, environment, and security.

- Provide any necessary training on basic skills that soldiers must have before they can be trained on the task.

- Pretest each soldier to determine who needs training in what areas by having the soldier perform the task. Use DA Form 5164-R and the Evaluation Guide in each task summary to make this determination.

4. Train the soldiers who failed the pretest:

- Demonstrate how to do the task or the specific performance steps to those soldiers who could not perform to SM standards. Have soldiers study the appropriate materials.

- Have soldiers practice the task until they can perform it to SM standards.

- Evaluate each soldier using the Evaluation Guide.

- Provide feedback to those soldiers who fail to perform to SM standards, and have them continue to practice until they can perform to SM standards.

5. Record results in the leader book.

Military Occupational Specialty Training Plan: One of the key components of the TG is the MOS training plan. It has two parts to assist the commander in preparing a unit training plan, which satisfies integration, cross-train, train-up, and sustainment training requirements for soldiers in this MOS.

Part One shows the relationship of an MOS skill level between duty position and critical tasks. These critical tasks are grouped by task commonality into subject areas. Section I lists subject area numbers and titles. Section II identifies the total training requirement in terms of subject areas listed in Section I, for each duty position within an MOS. The subject areas define the training requirements for each duty position within an MOS, and provide a recommendation for cross-training and train-up/merger training:

- Duty Position column—contains the MOS duty positions, by skill level, which have different training requirements.

- Subject Area column—lists by subject area number, the subject areas in which the soldier must be proficient for that duty position.

- Cross-Train column—lists the recommended duty position for which soldiers should be cross-trained.

- Train-Up/Merger column—lists the corresponding duty position for the next higher skill level or MOS the soldier will merge into on promotion.

Part Two lists by subject area, the critical tasks to be trained in an MOS, task number, task title, training location, sustainment training frequency, sustainment training SL, and the supported drill and/or ARTEP number and tasks:

- Subject Area column—lists the subject area number and title in the same order as in the MOS training plan, Part One, Section I.

- Task Number column—lists the task numbers for all tasks included in the subject area.

- Title column—lists the task title.

- Training Location column—identifies the training location where the task is first trained to STP standards. If the task is first trained to standard in the unit, the word Unit will be in this column. If the task is first trained to standard in the training base, it will identify the resident course where the task was taught. Figure 2-2 contains a list of training locations and their brevity codes.

```
AIT     —    Advanced Individual Training
ASI/SD  —    Additional Skill Identifier/Special Duty
ANCOC   —    Advanced Noncommissioned Officers Course
BCT     —    Basic Combat Training
BNCOC   —    Basic Noncommissioned Officers Course
Unit    —    Trained in the Unit
```

Figure 2-2. Training locations.

- Sustainment Training Frequency column—indicates the recommended frequency at which tasks should be trained to ensure soldiers maintain task proficiency. Figure 2-3 identifies the frequency codes used in this column.

```
AN   —   annually
BM   —   bimonthly (once every two months)
MO   —   monthly
QT   —   quarterly
SA   —   semiannually
```

Figure 2-3. Sustainment training frequency codes.

- Sustainment Training Skill Level column—lists the skill levels of the MOS for which soldiers must receive sustainment training to ensure they maintain proficiency to SM standards.

MOS TRAINING PLAN
MOS 14J
PART ONE. SUBJECT AREAS AND DUTY POSITIONS

SECTION I. SUBJECT AREA CODES

Skill Level 1

1	Communications
2	AMDPCS Communications
3	SINCGARS Operations
4	MSE Operations
5	Generators
6	Vehicle Operations
7	GPS Operations
8	Emplacement
9	March Order
10	JTIDS Operations
11	Common Hardware (CH)
12	ADSI Operations
13	AMDWS Operations
14	Engagement Operations
15	Tactical Command System (TCS)
16	Sensor Operations
17	Sensor Maintenance
18	Software Troubleshooting
19	JTAGS Emplacement
20	JTAGS March Order
21	JTAGS Operation
22	JTAGS Unit Level Maintenance

Skill Level 2

23	Senior Operator/Team Leader Duties

Skill Level 3

24	Tactical Operations and Supervision
25	JTAGS Engagement Controller

Skill Level 4

26	Conducting Tactical Operations
27	Defense Design
28	JTAGS Detachment Sergeant

MOS TRAINING PLAN MOS 14J PART ONE			
SECTION II. DUTY POSITION TRAINING REQUIREMENTS			
SL	**DUTY STATION**	**SUBJECT AREAS**	**CROSS-TRAIN**	**TRAIN UP/ MERGER**
1	Vehicle Driver/EWS operator/ Sensor-C4I Operator/Operations Assistant/ Team Leader	1-18	NA	14J20 Team Chief
	JTAGS Operator	19-22		
2	Team Chief/ Senior EWS Operator/ Assistant Liaison Sergeant/Team Leader/Assistant Operations Sergeant/ Liaison Sergeant/ Section Chief	1-18, 23	NA	14J30 Section Leader
	JTAGS Operator/ Assistant Operations Sergeant	19-22		
3	Assistant Operations Sergeant/ Section Chief/Section Leader/ Liaison Sergeant	24 24	NA NA	14J40 Platoon Sergeant
	JTAGS Crew Chief/Operations Sergeant	25		
4	Platoon Sergeant/Detachment Sergeant/Assistant Operations Sergeant/Operations Sergeant	26-28	NA	14Z50 Master/ First Sergeant

MOS TRAINING PLAN 14J14					
PART TWO: CRITICAL TASKS					
SUBJECT AREA	**TASK NUMBER**	**TITLE**	**TRAINING LOCATION**	**SUST TNG FREQ**	**SUST TNG SL**
Skill Level 1					
1. Communi-cations	113-571-1004	OPERATE IN RADIO NETS	AIT	MO	1-3
	113-573-6001	RECOGNIZE ECM AND IMPLEMENT ECCM	AIT	MO	1-4
	113-620-2026	OPERATE RADIO SET AN/GRC-213	UNIT	MO	1-4
	441-066-1028	PERFORM OPERATOR PMCS ON EPLRS RADIO SET AN/VSQ-2(V)2	AIT	MO	1-2
	441-066-1029	OPERATE EPLRS RADIO SET AN/VSQ-2(V)2	AIT	MO	1-2
	441-066-1030	LOAD EPLRS RADIO SET AN/VSQ-2(V)2 KEY SET	AIT	MO	1-2
2. AMDPCS Communi-cations	441-096-1098	OPERATE THE SINGLE-CHANNEL SATCOM RADIO	UNIT	MO	1-4
	441-096-1099	INITIALIZE THE RF350/355 HF TRANSCEIVER RADIO AND LINEAR POWER AMPLIFIER	AIT	MO	1-4
	441-096-1100	INITIALIZE THE ARC-187 FOR DATA OR VOICE OPERATIONS	AIT	MO	1-4
	441-096-1101	INITIALIZE THE MX-512PV DTS	AIT	MO	1-4
	441-096-1104	OPERATE THE ADI EQUIPMENT	AIT	MO	1-4
	441-096-1106	CABLE THE ADSI TERMINAL FOR STANDARD OPERATIONS	AIT	MO	1-4
	441-096-1109	INITIALIZE THE LAN	AIT	MO	1-4
	441-096-1110	PERFORM OPERATOR TROUBLESHOOTING ON THE LAN	AIT	MO	1-4
	441-096-1178	INITIALIZE ENCRYPTION DEVICE KG-40	AIT	MO	1-4
	441-096-1179	INITIALIZE ENCRYPTION DEVICE KG-84(*)/KVI-7	AIT	MO	1-4
	441-096-1180	INITIALIZE ENCRYPTION DEVICE KY-99	AIT	MO	1-4

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
3. SINC-GARS Operations	113-587-0058	PERFORM OPERATOR'S TROUBLESHOOTING ON SINCGARS	AIT	MO	1-4
	113-587-2070	OPERATE SINCGARS SINGLE-CHANNEL (SC)	AIT	MO	1-4
	113-587-2071	OPERATE SECURE SINCGARS FREQUENCY HOPPING (FH) (NET MEMBERS)	AIT	MO	1-4
	113-587-2075	OPERATE SINCGARS DATA DEVICES	AIT	MO	1-4
4. MSE Operations	113-625-2080	OPERATE DNVT TA-1035/A	AIT	MO	1-4
	113-625-2081	OPERATE DSVT KY-68	AIT	MO	1-4
	113-625-3067	PERFORM OPERATOR'S PMCS ON DSVT KY-68	UNIT	MO	1-2
	441-096-1188	OPERATE SECURE VOICE AND DATA TELEPHONE STU III/SECTEL	AIT	MO	1-4
5. Generators	441-096-1030	PERFORM OPERATOR PMCS ON GENERATOR SET, 5-KW	AIT	MO	1-2
	441-096-1031	OPERATE GENERATOR SET, 5-KW	AIT	MO	1-2
	441-096-1032	PERFORM OPERATOR TROUBLESHOOTING PROCEDURES ON GENERATOR SET, 5-KW	AIT	MO	1-2
	441-096-1033	PERFORM OPERATOR PMCS ON GENERATOR SET, 10-KW	AIT	MO	1-2
	441-096-1034	OPERATE GENERATOR SET, 10-KW	AIT	MO	1-2
	441-096-1035	PERFORM OPERATOR TROUBLESHOOTING PROCEDURES ON GENERATOR SET, 10-KW	AIT	MO	1-2
	441-096-1039	OPERATE GENERATOR SET, 5-KW (M1068)	UNIT	MO	1-3
	441-096-1061	PERFORM OPERATOR PMCS ON GENERATOR SET, 5-KW (M1068)	UNIT	MO	1-2
	441-096-1076	PERFORM OPERATOR PMCS ON GENERATOR SET, 30-KW	AIT	MO	1-3
	441-096-1077	OPERATE GENERATOR SET, 30-KW	AIT	MO	1-3

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
5. Genera-tors (Continued)	441-096-1119	OPERATE TACTICAL QUIET GENERATOR SET, 10-KW	AIT	MO	1-2
	441-096-1181	OPERATE THE UST WITH GENERATOR SET, 20-KW AND ECU	UNIT	MO	1-2
	441-096-1182	PERFORM PMCS ON THE UST WITH GENERATOR SET, 20-KW AND ECU	UNIT	MO	1-3
	441-096-1183	TROUBLESHOOT THE UST WITH GENERATOR SET, 20-KW AND ECU	UNIT	MO	1-4
	441-096-1184	OPERATE THE UST WITH GENERATOR SET, 35-KW	UNIT	MO	1-2
	441-096-1185	PERFORM PMCS ON THE UST WITH GENERATOR SET, 35-KW	UNIT	MO	1-3
	441-096-1186	TROUBLESHOOT THE UST WITH GENERATOR SET, 35-KW	UNIT	MO	1-4
6. Vehicle Operations	441-096-1069	PERFORM PMCS ON A TRACK VEHICLE	UNIT	MO	1-2
	441-096-1070	DRIVE AN M1068 LIGHT TRACK VEHICLE	UNIT	MO	1-2
	551-721-1352	PERFORM PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)	UNIT	MO	1-3
	551-721-1364	DRIVE VEHICLE WITH SEMIAUTOMATIC TRANSMISSION	UNIT	MO	1-3
7. GPS Operations	441-066-1032	PERFORM PMCS ON THE PLGR (GPS)	AIT	MO	1-3
	441-066-1033	PERFORM SETUP/INITIALIZATION OF THE PLGR (GPS)	AIT	MO	1-4
	441-066-1035	OPERATE THE PLGR (GPS)	AIT	MO	1-4
	441-066-1037	CONNECT PLGR (GPS) TO EXTERNAL DEVICES	AIT	MO	1-4
	441-066-1038	PERFORM EMERGENCY PROCEDURES ON THE PLGR (GPS)	AIT	MO	1-4
8. Emplace-ment	113-596-1068	INSTALL ANTENNA GROUP OE-254/GRC	AIT	MO	1-3
	441-096-1002	PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE SENSOR NODE	AIT	MO	1-3
	441-096-1003	PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE ABMOC OR A2C2	AIT	MO	1-3
	441-096-1004	POWER UP THE FAAD RWS	AIT	MO	1-3

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
8. Emplace-ment (Continued)	441-096-1005	ERECT THE SICPS TENT	UNIT	MO	1-3
	441-096-1006	POWER UP THE FAAD STS	AIT	MO	1-3
	441-096-1013	PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE BATTERY CP (STS)	AIT	MO	1-3
	441-096-1036	EMPLACE THE AB-903/G ANTENNA MAST ASSEMBLY ON THE STS	AIT	MO	1-3
	441-096-1056	PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE AMDPCS	AIT	MO	1-3
	441-096-1057	PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE M934 EXPANSIBLE VAN TCS	UNIT	MO	1-3
	441-096-1058	EMPLACE SATELLITE COMMUNICATION ANTENNA	AIT	MO	1-3
	441-096-1059	EMPLACE THE LAN	AIT	MO	1-3
	441-096-1072	PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE BATTERY CP (M1068)	UNIT	MO	1-3
	441-096-1074	PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE SENTINEL SENSOR	AIT	MO	1-3
	441-096-1115	EMPLACE THE RWS ANTENNA MAST	AIT	MO	1-4
	441-096-1129	POWER UP THE AMDPCS EQUIPMENT	AIT	MO	1-3
	441-096-1130	EMPLACE THE TADIL-A ANTENNAS	AIT	MO	1-3
9. March Order	441-096-1001	PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE SENSOR NODE	AIT	MO	1-3
	441-096-1008	POWER DOWN THE FAAD RWS	AIT	MO	1-3
	441-096-1009	PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE ABMOC OR A2C2	AIT	MO	1-3
	441-096-1010	POWER DOWN THE FAAD STS	AIT	MO	1-3
	441-096-1014	PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE BATTERY CP (STS)	AIT	MO	1-3
	441-096-1037	MARCH ORDER THE AB-903/G ANTENNA MAST ASSEMBLY ON THE STS	AIT	MO	1-3

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
9. March Order (Continued)	441-096-1067	PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE SENTINEL SENSOR	AIT	MO	1-3
	441-096-1073	PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE BATTERY CP (M1068)	UNIT	MO	1-3
	441-096-1096	PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE AMDPCS	AIT	MO	1-3
	441-096-1097	PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE M934 EXPANSIBLE VAN TCS	UNIT	MO	1-3
	441-096-1141	MARCH ORDER THE TADIL-A ANTENNAS	AIT	MO	1-3
	441-096-1142	MARCH ORDER THE RWS ANTENNA MAST	AIT	MO	1-3
10. JTIDS Operations	441-096-1016	PERFORM OPERATOR MAINTENANCE ON THE RADIO SET AN/GSQ-240	AIT	MO	1-3
	441-096-1017	INITIALIZE RADIO SET AN/GSQ-240	AIT	WK	1-4
	441-096-1018	OPERATE RADIO SET AN/GSQ-240	AIT	WK	1-4
11. Common Hardware (CH)	441-096-1038	CONNECT COMMUNICATIONS INTERFACE ON THE FAAD STS	AIT	MO	1-3
	441-096-1041	CONNECT COMMUNICATION INTERFACES ON THE FAAD RWS	AIT	MO	1-3
	441-096-1043	PERFORM COMMON HARDWARE PREVENTIVE MAINTENANCE	AIT	MO	1-2
	441-096-1044	PERFORM OPERATOR CORRECTIVE MAINTENANCE ON THE HCU/UCU	AIT	MO	1-2
	441-096-1048	PERFORM OPERATOR CORRECTIVE MAINTENANCE ON THE CMD	AIT	MO	1-2
	441-096-1049	PERFORM OPERATOR CORRECTIVE MAINTENANCE ON THE PRINTER	AIT	MO	1-2
	441-096-1055	PERFORM OPERATOR CORRECTIVE MAINTENANCE ON THE LCU	AIT	MO	1-2
	441-096-1146	PERFORM OPERATOR MAINTENANCE ON CHS II EQUIPMENT	AIT	MO	1-2
12. ADSI Operations	441-096-1140	OBTAIN SITE SPECIFIC DATA FROM OPTASK LINK	AIT	MO	1-3
	441-096-1190	PERFORM ADSI SITE INITIALIZATION	AIT	MO	1-3
	441-096-1191	ESTABLISH ADSI MODES OF OPERATION	AIT	MO	1-3

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
12. ADSI Operations (Continued)	441-096-1192	PERFORM ADSI MAP GENERATION	AIT	MO	1-3
	441-096-1193	SET DATA LINK FILTER PARAMETERS	AIT	MO	1-3
	441-096-1194	IDENTIFY AND REACT TO OPERATIONAL/SYSTEMS ALERTS	AIT	MO	1-3
	441-096-1195	ENTER TRACK DATA	AIT	MO	1-3
	441-096-1196	SEND ACTION/MANAGEMENT MESSAGES	AIT	MO	1-3
	441-096-1197	SET UP AUTOMATIC ASSIGNMENT OF IFF/SIF INFORMATION	AIT	MO	1-3
	441-096-1198	PREPARE A SCENARIO SCRIPT FILE	AIT	MO	1-3
13. AMDWS Operations	441-096-1143	INITIALIZE SOFTWARE ON THE AMDWS	AIT	MO	1-3
	441-096-1144	PERFORM AMDWS MAP GENERATION	AIT	MO	1-3
	441-096-1145	PERFORM AMDWS OVERLAY FUNCTIONS	AIT	MO	1-3
	441-096-1149	DISPLAY AIR PICTURE AND HOOK INFORMATION	AIT	MO	1-3
14. Engagement Operations	441-096-1081	REACT TO OPERATOR ERROR MESSAGES	AIT	MO	1-3
	441-096-1082	PERFORM DIRECTED EARLY WARNING PROCEDURES	UNIT	MO	1-3
	441-096-1083	PERFORM ARCHIVAL TASKS	AIT	MO	1-3
	441-096-1084	REACT TO AIR TRACK ALERTS ON THE BSD	AIT	MO	1-3
	441-096-1085	TOGGLE TRACK LINKS ON THE BSD	AIT	MO	1-3
	441-096-1086	HOOK AIR TRACKS	AIT	MO	1-3
	441-096-1087	MANUALLY DESIGNATE ID OR CLASSIFICATION (ONLY IF ID AUTHORITY)	AIT	MO	1-3
	441-096-1088	SET TRACK FILTERS ON THE BSD	AIT	MO	1-3
	441-096-1089	SELECT OVERLAYS ON THE BSD	AIT	MO	1-3
	441-096-1091	GENERATE OR MODIFY CONTROL MEASURES ON THE BSD	AIT	MO	1-3
	441-096-1092	ACKNOWLEDGE AND REVIEW MESSAGES AND STATUS ON THE BSD	AIT	MO	1-3
	441-096-1094	TERMINATE TACTICAL BSD OPERATIONS	AIT	MO	1-3
	441-096-1095	PERFORM CONOPS OPERATIONS	AIT	MO	1-3
	441-096-1189	PERFORM FAAD C2I SYSTEM INITIALIZATION	AIT	MO	1-3

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
15. Tactical Command System (TCS)	113-620-2028	OPERATE RADIO SET AN/GRC-193A	AIT	MO	1-4
	113-620-3063	PERFORM OPERATOR PMCS ON RADIO SET AN/GRC-193A	AIT	MO	1-4
	441-096-1111	POWER UP THE CTT/HR	AIT	MO	1-3
	441-096-1147	PERFORM PATCH PANEL OPERATIONS	AIT	MO	1-3
	441-096-1153	POWER UP THE PATRIOT TPW	AIT	MO	1-3
	441-096-1155	INITIALIZE THE TCS	AIT	MO	1-3
	441-096-1156	INITIALIZE THE CTT/HR	AIT	MO	1-3
	441-096-1157	TRANSFER INITIALIZATION PARAMETERS TO THE ICC, TCS, AND CTT/HR	AIT	MO	1-3
	441-096-1158	LOAD CRYPTO KEYS INTO THE CTT/HR	AIT	MO	1-3
	441-096-1159	GENERATE OSLB ISLB DATA	AIT	MO	1-3
	441-096-1160	SELECT OVERLAYS ON THE TPW	AIT	MO	1-3
	441-096-1163	GENERATE OR MODIFY CONTROL MEASURES ON THE TPW	AIT	MO	1-3
	441-096-1168	DISPLAY AIR PICTURE AND HOOK INFORMATION FROM ICC AND SIS	AIT	MO	1-2
	441-096-1169	SEND AND RECEIVE TAB AND POINTER MESSAGES	AIT	MO	1-3
	441-096-1171	PERFORM UTILITY FUNCTIONS ON THE TPW	AIT	MO	1-3
	441-096-1187	GENERATE MAP DATA (ADRG, DTED) ON THE TPW	AIT	MO	1-3
16. Sensor Operations	441-096-1062	ENERGIZE THE SENTINEL SENSOR	AIT	MO	1-3
	441-096-1063	INITIALIZE THE SENTINEL SENSOR	AIT	MO	1-3
	441-096-1064	OPERATE THE SENTINEL SENSOR	AIT	MO	1-3
	441-096-1065	DESTROY THE SENTINEL SENSOR TO PREVENT ENEMY USE	UNIT	MO	1-3
	441-096-1066	DE-ENERGIZE THE SENTINEL SENSOR	AIT	MO	1-3
	441-096-2014	LOAD SENTINEL SENSOR MODE 3/4 IFF CODES (ALLIED)	AIT	MO	1-3
17. Sensor Maintenance	441-096-1060	PERFORM PMCS ON THE SENTINEL SENSOR	AIT	MO	1-3

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
18. Software Trouble-shooting	441-096-1112	PERFORM OPERATOR TROUBLESHOOTING ON A UNIX SYSTEM	AIT	MO	1-4
	441-096-1113	PERFORM USER ACTIONS ON A UNIX SYSTEM	AIT	MO	1-4
	441-096-1114	PERFORM SYSTEM ADMINISTRATION FUNCTIONS ON A UNIX SYSTEM	AIT	MO	1-4
	441-096-1117	PERFORM NETWORK FUNCTIONS ON A UNIX SYSTEM	AIT	MO	1-4
	441-096-1118	PERFORM USER ACTIONS ON AN MSDOS SYSTEM	AIT	MO	1-4
19. JTAGS Emplace-ment	441-616-1003	EMPLACE THE JTAGS TACSTAR II ANTENNA SUBSYSTEM	ASI/SD	MO	1-3
	441-616-1004	EMPLACE THE JTAGS SHELTER	ASI/SD	MO	1-3
	441-616-1015	ENERGIZE THE JTAGS SYSTEM	ASI/SD	MO	1-3
	441-616-1025	EMPLACE THE 60-KW GENERATOR AND TRAILER	UNIT	MO	1-3
20. JTAGS March Order	441-616-1001	PREPARE THE JTAGS TACSTAR II ANTENNA SUBSYSTEM FOR TRAVEL	ASI/SD	MO	1-3
	441-616-1002	PREPARE THE JTAGS SHELTER FOR TRAVEL	ASI/SD	MO	1-3
	441-616-1016	DE-ENERGIZE THE JTAGS SYSTEM	ASI/SD	MO	1-3
	441-616-1026	PREPARE THE 60-KW GENERATOR AND TRAILER FOR TRAVEL	UNIT	MO	1-3
21. JTAGS Operation	441-616-1017	MANUALLY PROCESS A SATELLITE EVENT	ASI/SD	MO	1-3
	441-616-1018	AUTOMATICALLY PROCESS A SATELLITE EVENT	ASI/SD	MO	1-4
	441-616-1024	PERFORM DENIAL OR DESTRUCTION OF THE JTAGS SYSTEM EQUIPMENT	UNIT	MO	1-4
22. JTAGS Unit Level Maintenance	441-616-1005	PERFORM JTAGS TACSTAR II ANTENNA SUBSYSTEM OPERATOR MAINTENANCE PROCEDURES	ASI/SD	MO	1-3
	441-616-1006	PERFORM JTAGS SHELTER OPERATOR MAINTENANCE PROCEDURES	ASI/SD	MO	1-3
	441-616-1007	PERFORM OPERATOR PMCS ON A 60-KW GENERATOR	UNIT	MO	1-2
	441-616-1008	PERFORM OPERATOR PMCS ON THE TACSTAR II ANTENNA SUBSYSTEM ASSEMBLY	ASI/SD	MO	1-3

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
22. JTAGS Unit Level Maintenance (Continued)	441-616-1009	PERFORM OPERATOR PMCS ON THE JTAGS SHELTER	ASI/SD	MO	1-3
	441-616-1011	PERFORM OPERATOR PMCS ON THE M1022A1 MOBILIZER DOLLY SET	ASI/SD	MO	1-3
Skill Level 2					
23. Senior Operator/ Team Leader Duties	441-096-2005	SUPERVISE MARCH ORDER OF THE SENTINEL SENSOR AND SENSOR NODE	UNIT	MO	2-3
	441-096-2006	SUPERVISE EMPLACEMENT OF THE SENTINEL SENSOR AND SENSOR NODE	UNIT	MO	2-3
	441-096-2009	SUPERVISE OPERATIONS ON THE SENTINEL SENSOR	UNIT	MO	2-3
	441-096-2010	SUPERVISE DESTRUCTION OF THE SENTINEL SENSOR TO PREVENT ENEMY USE	UNIT	MO	2-3
	441-096-3005	SUPERVISE C3I SYSTEM EQUIPMENT PMCS AND TROUBLESHOOTING	UNIT	MO	2-4
	441-096-3013	SUPERVISE PMCS ON THE SENTINEL SENSOR	UNIT	MO	2-3
Skill Level 3					
24. Tactical Operations and Supervision	441-096-3001	SUPERVISE EMPLACEMENT OF THE ABMOC or A2C2	BNCOC	MO	3-4
	441-096-3002	SUPERVISE MARCH ORDER OF THE ABMOC or A2C2	BNCOC	MO	3-4
	441-096-3006	SUPERVISE FORCE OPERATIONS	BNCOC	MO	3-4
	441-096-3007	SUPERVISE ENGAGEMENT OPERATIONS	UNIT	MO	3-4
	441-096-3008	SUPERVISE EMPLACEMENT OF THE BATTERY COMMAND POST	BNCOC	MO	3
	441-096-3009	SUPERVISE MARCH ORDER OF THE BATTERY COMMAND POST	BNCOC	MO	3
25. JTAGS Engagement Controller	441-616-3001	SUPERVISE PREPARATION OF THE JTAGS SYSTEM EQUIPMENT FOR TRAVEL	ASI/SD	MO	3-4
	441-616-3002	SUPERVISE EMPLACEMENT OF THE JTAGS SYSTEM EQUIPMENT	ASI/SD	MO	3-4
	441-616-3003	SUPERVISE PMCS ON THE JTAGS SYSTEM EQUIPMENT	ASI/SD	MO	3-4
	441-616-3004	SUPERVISE OPERATOR MAINTENANCE ON THE JTAGS SYSTEM EQUIPMENT	ASI/SD	MO	3-4

PART TWO: CRITICAL TASKS

SUBJECT AREA	TASK NUMBER	TITLE	TRAINING LOCATION	SUST TNG FREQ	SUST TNG SL
25. JTAGS Engagement Controller (Continued)	441-616-3008	SUPERVISE JTAGS CONSOLE OPERATIONS	UNIT	MO	3-4
	441-616-3013	SUPERVISE DENIAL OR DESTRUCTION OF THE JTAGS SYSTEM EQUIPMENT	UNIT	MO	3-4
Skill Level 4					
26. Conduct-ing Tactical Operations	113-573-0001	CHECK SIGNAL SECURITY (SIGSEC) PROCEDURES	UNIT	MO	4
	441-096-4001	MONITOR ENGAGEMENT OPERATIONS	ANCOC	MO	4
	441-096-4012	SUPERVISE SENSOR PLATOON TACTICAL OPERATIONS	ANCOC	MO	4
	441-096-4018	COORDINATE AIRSPACE ACTIVITY INFORMATION WITH AIRSPACE USERS	ANCOC	MO	4
27. Defense Design	441-096-4013	PLAN SENSOR COVERAGE OF A STATIC OR CRITICAL ASSET	ANCOC	MO	4
	441-096-4014	PLAN SENSOR COVERAGE OF A MANEUVER FORCE	ANCOC	MO	4
28. JTAGS Detachment Sergeant	441-616-4001	MONITOR JTAGS SYSTEM OPERATIONS	UNIT	MO	4
	441-616-4002	MONITOR JTAGS OPERATOR LEVEL MAINTENANCE	UNIT	MO	4
	441-616-4003	MONITOR DENIAL OR DESTRUCTION OF JTAGS EQUIPMENT	UNIT	MO	4

CHAPTER 3

MOS/Skill Level Tasks

Skill Level 1

Subject Area 1: Communications

OPERATE IN RADIO NETS
113-571-1004

Conditions: Given a requirement and the following: 1. Radio set. 2. SOI. 3. Applicable TM for radio set used. 4. Applicable Army regulations. 5. Applicable Allied Communications Publications (ACPs). Supervision and assistance will be available.

Standards: Task standard has been met when you have properly entered the selected radio net and authenticated upon request of the NCS. You have transmitted and received traffic as directed by the NCS, performed duties as NCS, and have left or closed the net per applicable operating procedures and ACP for the radio net in which you are operating, according to PMs 1 through 5.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Determines operational net to be entered. (Refer to SOI or ANCD.)	——	——
2. Passes traffic as directed by the NCS. (Refer to ACP 125(E), ACP 124(D).ACP-126(C)	——	——
3. Requests permission to enter net. (Refer to ACP 125(E), ACP 124(D), ACP 126(C), FM 24-19, Operating Procedures.)	——	——
4. Requests permission from the NCS to leave the net. (Refer to ACP 125(E), ACP 124(D), ACP 126(C), ACP-131(*), FM 24-19, station leaving net and closing a net.)	——	——
5. Performs functions of an NCS. (Refer to ACP 125(E), ACP 124(D), FM 24-19, precedence prosigns.)	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	**Related**
ACP 125(E)	FM 24-19
ACP 126(C)	
ACP 131(*)	
SOI	

RECOGNIZE ECM AND IMPLEMENT ECCM

113-573-6001

Conditions: Given a radio set, electronic interference, technical manuals and Unit SOI extract. Supervision and assistance will be available.

Standards: Determine the type of electronic warfare that is directed at your station and employ ECCM for continued operation.

Performance Steps

1. Introduction. A close relationship exists between ECCM and COMSEC. Both defensive arts are based on the same principle. An enemy who does not have access to our essential elements of friendly information (EEFI) is a much less effective foe. The major goal of COMSEC is to ensure that friendly use of the electromagnetic spectrum for communications is by the enemy. The major goal of practicing sound ECCM techniques is to ensure the continued use of the electromagnetic spectrum. ECCM techniques are designed to ensure commanders some degree of confidence in the continued use of these techniques. Our objective must be to ensure that all communications equipment can be employed effectively by tactical commanders in spite of the enemy's concerted efforts to degrade such communications to the enemy's tactical advantage. The modification and the development of equipment to make our communications less susceptible to enemy exploitation are expensive processes. Equipment is being developed and fielded which will provide an answer to some of ECCM problems. Commanders, staff, planners, and operators remain responsible for security and continued operation of all communications equipment.
   a. Operators of communications equipment must be taught what jamming and deception can do to communications. They must be made aware that incorrect operating procedures can jeopardize the unit's mission and ultimately increase unit casualties. Preventive and remedial ECCM techniques must be employed instinctively. Maintenance personnel must be made aware that unauthorized or improperly applied modifications may cause equipment to develop peculiar characteristics which can be readily identified by the enemy.
   b. ECCM should be preventive in nature. ECCM should be planned and applied to force the enemy to commit more jamming, interception and deception resources to a target than it is worth, or is available. ECCM techniques must also be applied to force the enemy to doubt the effectiveness of the enemy's jamming and deception efforts.
   c. Before we can begin to prevent electronic countermeasures (ECM), we must first be certain of what we are trying to prevent.
     (1) Jamming is the deliberate radiation, reradiation, or reflection of electromagnetic energy with the object of impairing the use of electronic devices, equipment, or systems. The enemy conducts jamming operations against us to prevent us from effectively employing our radios, radars, navigational aids (NAVAIDS), satellites, and electro-optics. Obvious jamming is normally very simple to detect. The more commonly used jamming signals of this type are described below. Do not try to memorize them; just be aware that these and others exist. When experiencing a jamming incident, it is much more important to recognize it and take action to overcome it than to identify it formally.
       (a) Random noise. It is random in amplitude and frequency. It is similar to normal background noise and can be used to degrade all types of signals.
       (b) Stepped tones. These are tones transmitted in increasing and decreasing pitch. They resemble the sound of bagpipes.
       (c) Spark. The spark is easily produced and is one of the most effective forms of jamming. Bursts are of short duration and high intensity. Sparks are repeated at a rapid rate and are effective in disrupting all types of communications.
       (d) Gulls. The gull signal is generated by a quick rise and a slow fall of a variable radio frequency and is similar to the cry of a sea gull.

Performance Steps

(e) Random pulse. In this type of interference, pulses of varying amplitude, duration, and rate are generated and transmitted. Random pulses are used to disrupt teletypewriter, radar, and all types of data transmission systems.

(f) Wobbler. The wobbler is a single frequency which is modulated by a low and slowly varying tone. The result is a howling sound which causes a nuisance on voice radio communications.

(g) Recorded sounds. Any audible sound, especially of a variable nature, can be used to distract radio operators and disrupt communications. Examples of sounds include: music, screams, applause whistles, machinery noise, and laughter.

(h) Preamble jamming. This type of jamming occurs when the synchronization tone of speech security equipment is broadcast over the operating frequency of secure radio sets. Preamble jamming results in radios being locked in the receive mode. It is especially effective when employed against radio nets using speech security devices.

(i) Subtle jamming. This type of jamming is not obvious at all. With subtle jamming, no sound is heard from our receivers. They cannot receive incoming friendly signals, but everybody appears normal to the radio operator.

(2) Meaconing. This is a system of receiving radio beacon signals from NAVAIDS and rebroadcasting them on the same frequency to confuse navigation. The enemy conducts meaconing operations against us to prevent our ships and aircraft from arriving at their intended targets or destinations.

(3) Intrusion. Intentional insertion of electromagnetic energy into transmission paths with the objective of deceiving equipment operators or causing confusion. The enemy conducts intrusion operations against us by inserting false information into our receiver paths. This false information may consist of voice instructions, ghost targets, coordinates for fire missions, or even rebroadcasting of prerecorded data transmissions.

(4) Interference. Interference is any electrical disturbance which causes undesirable responses in electronic equipment. As a MIJI term, interference refers to the unintentional disruption of the use of radios, radars, NAVAIDS, satellites, and electro-optics. This interference may be of friendly, enemy, or atmospheric origin. For example, a civilian radio broadcast interrupting military communications is interference.

2. Communications Protective Measures.

a. Considerations. Properly applied ECCM techniques will deny valuable intelligence sources to the enemy and eliminate much of the threat that he poses to our combat operations. The following discussion describes practical ways to protect communications systems.

b. The siting of the transmitting antenna is critical in the ECCM process. Before making a decision about a proposed site for either a single-channel or multichannel antenna, there are two basic questions to answer:

(1) Are communications possible from the proposed site?

(2) Are there enough natural obstacles between the site and the enemy to mask transmission?

c. The final decision on site selection will often be a tradeoff between the answers to these two questions. The communications mission must have first priority in determining the actual antenna sites. There are additional actions that must be taken to limit the enemy's chances of interception and location successes. Transmitters and antennas should be located away from the headquarters. The two locations should be separated by more than 1 kilometer (0.62 mile). Erroneous radio frequency direction (RFD) data used in conjunction with observation data may favor the targeting of a decoy site instead of the actual transmitter site. This ploy depends upon good camouflage at the actual site. Transmitters grouped in one area indicate the relative value of the headquarters. Directional antennas reduce radiation exposure to enemy receivers and enhance the intended signal. (For instruction on directional antennas, refer to TC 24-21.)

d. Use the lowest possible transmitter power output. Lower power means less radiated power reaches the enemy and thus increases his difficulty in applying ECM.

Performance Steps
       e. Use only approved code systems. Never use unauthorized (homemade) codes. Use of non-NSA generated codes can provide a false COMSEC sense of security that can be exploited by enemy radio intercept operators. Only when absolutely necessary should traffic be passed in the clear.
       f. Rather than assuming equipment is defective, assume that it is operational. Operators must not contact other stations for equipment checks simply because no message has been transmitted in a set time frame.

Evaluation Preparation: Setup. A radio set operating in a radio net with interference applied to the system. Brief Soldier. Tell the soldier to ensure that he/she is applying proper tactics to the jamming system.

Performance Measures   **GO**   **NO GO**

  1. Determine if ECM is being employed.   ——   ——
       a. Check for accidental or unintentional interference. (Refer to FM 24-33.)
       b. Check for intentional interference. (Refer to FM 24-33.)

  2. Initiate operator's procedures. (Refer to FM 24-1 and FM 24-33.)   ——   ——
       a. Check the equipment ground to ensure that the interference is not caused by a buildup of static electricity.
       b. Disconnect the antenna.
          (1) Tunes the receiver above or below the normal frequency. If such detuning causes the intensity of the interfering signal to drop sharply, it can be assumed that the interference is the result of spot jamming.
       c. Identify the type of sound.
       d. Move the receiver or reorient the antenna, if possible, and listen or look for variations in the strength of the disturbance.
       e. Tune the receiver above or below the normal frequency. If such detuning causes the intensity of the interfering signal to drop sharply, it can be assumed that the interference is the result of spot jamming.

  3. Identify jamming signals. (Refer to FM 24-33.)   ——   ——

  4. Employ antijamming measures. (Refer to FM 24-1.)   ——   ——
NOTE: Antijamming measures are designed to allow radio operators to work effectively through intentional interference. Regardless of the nature of the interfering signal, radio operators WILL NOT reveal in the clear the possibility or success of enemy jamming.

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If any step is failed, show the soldier what was done wrong and how to do it correctly.

References
    Required   **Related**
    FM 24-1
    FM 24-33
    SOI

OPERATE RADIO SET AN/GRC-213

113-620-2026

Conditions: Given an operational radio set AN/GRC-213, operating frequency, a distant station, and TM 11-5820-923-12.

Standards: Acceptable performance is met when soldier can perform all the proper procedures to place the radio set into operation and shut it down per TM 11-5820-923-12.

Performance Measures	<u>**GO**</u>	<u>**NO GO**</u>

1. Perform preliminary setup procedures.   ____   ____
    a. Install radio set AN/GRC-213 onto vehicular mount.
    b. Make all necessary interconnections.
    c. Install whip antenna.
    d. Connect handset to the radio set.
    e. Set the radio set controls as follows:
        (1) Mode to V-TR.
        (2) ANT SEL to MIDDLE BNC position.
        (3) SB to either USB or LSB.
        (4) FREQUENCY kilohertz push buttons to operating frequency.
        (5) SQUELCH OFF/MAX control fully counterclockwise.
        (6) ANT LOADING to appropriate position, determined by antenna being used.
        (7) AMP-PWR-SUPPLY-SPEAKER to ON (if used).
        (8) VOLUME OFF/MAX to comfortable listening level.

2. Perform test procedures.   ____   ____
    a. Momentarily press the handset PUSH-TO-TALK (PTT) switch and verify that the handset emits a 1-kilohertz sidetone which terminates in less than 12 seconds.
    b. Turn the radio off.

3. Set controls for operation.   ____   ____
    a. OFF/MAX/VOLUME switch to OFF.
    b. MODE to V-TR.
    c. SB to either USB or LSB.
    d. FREQ SELECTOR push buttons to operating frequency.
    e. ANT SEL to MIDDLE BNC connector (for vehicle whip antenna).
    f. PWR ON/OFF to OFF.
    g. ANT LOADING to appropriate position, determined by antenna being used.

4. Perform operating procedure.   ____   ____
    a. Tune the radio by pressing the PUSH-TO-TALK (PTT)switch. Radio tunes automatically.
    b. Wait for continuous 1-kilohertz tone to cease and receiver noise level to increase.

5. Perform shutdown procedures for radio set AN/GRC-213.   ____   ____
    a. OFF/MAX/VOLUME switch OFF.
    b. FREQ SELECTOR push buttons ZEROIZE.
    c. PWR ON/OFF switch OFF.
    d. CIRCUIT BREAKER OFF.
    e. Push IN vehicle THROTTLE.
    f. IGNITION switch OFF.
    g. Disconnect whip antenna.

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
    TM 11-5820-923-12

PERFORM OPERATOR PMCS ON EPLRS RADIO SET AN/VSQ-2(V)2
441-066-1028

Conditions: The SICPS is emplaced and the EPLRS radio set is mounted in a vehicle configuration. Your supervisor directs you to perform PMCS on the EPLRS radio set. TM 11-5825-283-10, DA Form 2404 or DA Form 5988-E is available.

Standards: Performs the PMCS per TM 11-5825-283-10 without causing injury to self or other personnel, with no damage to equipment, and within the time prescribed by local command directives.

Performance Steps

1. Check radio set for loose or broken knobs or switches.

2. Check radio set jacks for bent or broken pins.

3. Check radio set pressure port for obstructions or damage to rain shield.

4. Check selectable power adapter for bent or broken pins on connectors.

5. Check power, RF, and URO extension cables for cracked insulation, bent or distorted connectors, or damaged pins.

6. Check memory battery (KAB-Keep Alive Battery).

7. Perform self-test to identify any faults.

8. Perform corrective actions for any operator correctable faults.

Performance Measures	GO	NO GO
1. Checked radio set for loose or broken knobs or switches.	――	――
2. Checked radio set jacks for bent or broken pins.	――	――
3. Checked radio set pressure port for obstructions or damage to rain shield.	――	――
4. Checked selectable power adapter for bent or broken pins on connectors.	――	――
5. Checked power, RF, and URO extension cables for cracked insulation, bent or distorted connectors, or damaged pins.	――	――
6. Checked memory battery (KAB-Keep Alive Battery).	――	――
7. Performed self-test to identify any faults.	――	――
8. Performed corrective actions for any operator correctable faults.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
    DA FORM 2404
    DA FORM 5988-E
    TM 11-5825-283-10

OPERATE EPLRS RADIO SET AN/VSQ-2(V)2
441-066-1029

Conditions: All emplacement procedures are complete and your supervisor directs you to operate the EPLRS radio set in a C4I environment.   Access to a network with net control station and the following are available:

1. EPLRS radio set AN/VSQ-2(V)2 with keys loaded.
2. User readout (URO).
3. Net Control Station (ERNIST or Signal Corps).
4. Host computer, initialized and in simulation mode.
5. C4I nodes.

Standards: Sends and receives FDL messages via the control net and the communications net, per SOP and TM 11-5825-283-10 without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Power up EPLRS radio set.

2. Identify Radio Set ID.

3. Load crypto keys.

4. Perform EPLRS self-test.

5. Enter the EPLRS net.

6. Ensure track related data and battlefield messages are sent and received at the C4I nodes.

7. Power down radio set as required.

Performance Measures	GO	NO GO
1. Powered up EPLRS radio set.	⎯⎯	⎯⎯
2. Identified RS ID.	⎯⎯	⎯⎯
3. Loaded crypto keys.	⎯⎯	⎯⎯
4. Performed EPLRS self-test.	⎯⎯	⎯⎯
5. Entered the EPLRS net.	⎯⎯	⎯⎯
6. Ensured track related data and battlefield messages were sent and received at the C4I nodes.	⎯⎯	⎯⎯
7. Powered down radio set as required.	⎯⎯	⎯⎯

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	**Related**
TM 11-5825-283-10	SOP

LOAD EPLRS RADIO SET AN/VSQ-2(V)2 KEY SET
441-066-1030

Conditions: The EPLRS radio set is installed in vehicle configuration at the C4I node with the user readout (URO) connected, powered up, and self-test is complete. The key set is not loaded or has been zeroized and your supervisor directs you to load it, using the load device, ANCYZ-10 (ANCD), and data fill cables.

Standards: Loads EPLRS RS AN/VSQ-2(V)2 key set per TM 11-5825-283-10. Ensures the "TRANSFER COMPLETED" message is displayed on ANCD and the URO displays the required key status in MSG field. Performs all steps without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Use the appropriate load device ANCD with correct crypto keys.
    a. Connect the fill cable to the load device.
    b. Initialize the load device.

2. Connect the fill cable to radio set when prompted.

3. Load IKEK and traffic key sets into the radio set.

4. Verify successful key set load, using URO.

5. Disconnect fill cable from radio set.

6. Power down the load device.

Performance Measures	**GO**	**NO GO**
1. Used the appropriate load device ANCD with correct crypto keys.	——	——
2. Connected the fill cable to radio set when prompted.	——	——
3. Loaded IKEK and traffic key sets into the radio set.	——	——
4. Verified successful key set load, using URO.	——	——
5. Disconnected fill cable from radio set.	——	——
6. Powered down the load device.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
    TM 11-5825-283-10   SOP

Subject Area 2: AMDPCS Communications

OPERATE THE SINGLE-CHANNEL SATCOM RADIO
441-096-1098

Conditions: All emplacement procedures are complete, SQUELCH and VOLUME controls are set to midrange, power is on, Fill 1 (COMSEC) variables loaded per instructions, pre-mission SATCOM setup performed, data device connected, and your supervisor directs you to operate the AN/PSC-5 radio. The following are available:

1. Radio set AN/PSC-5 with batteries.
2. Handset.
3. Satellite antenna installed.

Standards: Powers up, transmits and receives voice communications, sends and receives messages without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives per TM 11-5820-1130-12&P.

Performance Measures	**GO**	**NO GO**
1. Powered up AN/PSC-5 system.	⎯⎯	⎯⎯
2. Performed fill and pre-mission setup procedures as directed.	⎯⎯	⎯⎯
3. Performed LOS communication procedures.	⎯⎯	⎯⎯
4. Performed SATCOM communication procedures.	⎯⎯	⎯⎯
5. Performed DAMA operation procedures.	⎯⎯	⎯⎯

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
>   **Required**   **Related**
>   TM 11-5820-1130-12&P

INITIALIZE THE RF350/355 HF TRANSCEIVER RADIO AND LINEAR POWER AMPLIFIER

441-096-1099

Conditions: Your supervisor directs you to initialize the HF transceiver radio and LPA. The AMDPCS is emplaced and power is available to the shelter. The following are available:

1. NVIS AT-1011 HF antenna.
2. RF-351 antenna coupler and coaxial cable connected to the shelter communications entry panel (CEP) jack #5.

Standards: HF transceiver frequency field indicates "PASSED" and LPA for data or voice mode indicates a steady AMP: OPER and is ready for operation per local SOP. Successfully initializes the HF transceiver radio and LPA, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

  1. RF 355 LINEAR POWER AMPLIFIER (LPA)
    a. Place the AUTO/MANUAL BAND switch in the AUTO position.
    b. Toggle the LOCAL KEY ON/OFF switch to the OFF position.
    c. Toggle the TUNE PWR ON/OFF switch to the OFF position.
    d. Place the METER rotary switch to the FWD PWR (WATTS) position.
    e. Toggle the POWER switch to the ENABLE position.

  2. RF 350K TRANSCEIVER
    a. Press [AMP PWR] keypad switch to start 3-minute warm-up cycle.
Note: STBY flashes in the left LCD display.
    b. Set SPKR ON/OFF to the ON position.
    c. Rotate AUDIO knob to approximately midpoint.
    d. Rotate RF GAIN knob to approximately midpoint.
    e. Rotate SQUELCH knob to just shut-off background noise.
Note: Using too much squelch may cause some weak signals to be unheard.
    f. Select desired operating frequency.
      (1) Press FREQ keypad switch.
      (2) Enter frequency of operation by pressing the desired numbers on the keypad.
      (3) Press ENTER keypad switch.
    g. Press AUDIO SOURCE keypad switch to select voice operation (MIC) or TADIL-A operation (PATCH).
Note: Audio source setting is displayed in left LCD display.
    h. Connect microphone to HANDSET MIC jack if using voice mode.
    i. Press MODE keypad switch to select upper sideband (USB) or lower sideband (LSB).
    j. Press AGC keypad switch to select FAST for TADIL-A operation or SLOW for voice operation.
    k. After STBY stops flashing, press [STB/OPR] keypad switch to place LPA in operate mode.

Performance Steps
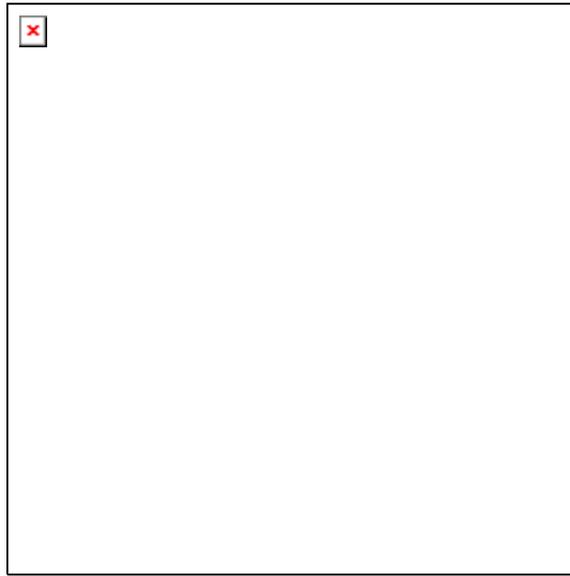
       l. Press [TX KEY] keypad switch to tune the LPA and antenna coupler.
  Note: TUNE and XMIT appears in right LCD display.
       m. After TUNE disappears from the display, press [TX KEY] keypad switch to unkey transmitter.
Note: XMIT disappears from the display.

Performance Measures	**GO**	**NO GO**
1. Powered up the HF transceiver and LPA.	——	——
2. Input the operating frequency.	——	——
3. Set the system for voice or data mode as directed by supervisor.	——	——
4. Selected upper or lower band as directed.	——	——
5. Tuned the LPA and antenna coupler.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                   IOM 20-00228-002
                                                 IOM 20-00229-002
                                                 LOCAL SOP

INITIALIZE THE ARC-187 FOR DATA OR VOICE OPERATIONS
441-096-1100

Conditions: Your supervisor directs you to initialize the ARC-187. The AMDPCS is emplaced and power is available to the shelter. The KY-57 crypto device is loaded with the cryptokeys.

Standards: Sets up the MXF-227 UHF radio control unit, KY-57 crypto device, and control panel controls for data or voice operations on the ANARC-187 UHF R/T, per the below Performance Steps.

Performance Steps
Note: The RT-1571/ARC-187 R/T unit is fully controlled by the MXF-227 control unit. Some shelters may have more than one ARC-187 (one for data and one for voice).

Note: For KG-40 procedures, refer to Task 441-096-1178.

1. Set the left rotary switch to MAN position on the MXF-227.

2. Set the right rotary switch to DATA (for TADIL-A) or MAIN (for voice) on the MXF-227.

3. Set the left rotary switch to 1 on the KY-57 (voice).

4. Set the MODE rotary switch to P (for TADIL-A) or C (for voice) on the KY-57.

5. Set the right rotary switch on the KY-57 to ON (voice).

6. At the control panel, set the CIPHER/PLAIN switch to PLAIN (for TADIL-A) or CIPHER (for voice).

7. At the control panel, set the VOICE/DATA switch to DATA (for TADIL-A) or VOICE.

8. Set the operating frequency on the MXF-227 by pressing the button under each digit until the correct number is displayed.

9. Set the LOS/SAT switch to the position corresponding to the type of antenna being used.

10. Set the TA RECEIVER rotary switch on the ADSI switch box to the UHF position.

Performance Measures	**GO**	**NO GO**
1. Performed proper setup procedures for radio set control.	‒‒‒	‒‒‒
2. Performed proper setup procedures for KY-57.	‒‒‒	‒‒‒
3. Performed proper setup procedures for ADSI switch box.	‒‒‒	‒‒‒

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	**Related**
	(O)TM 11-5810-256-12
	IOM 20-00228-002
	IOM 20-00229-002

INITIALIZE THE MX-512PV DTS
441-096-1101

Conditions: You are directed by your supervisor to initialize the MX-512PV DTS. The AMDPCS is emplaced and power is available to the shelter(s). The KG-40 is keyed and connected to the NTDS IN and NTDS OUT jacks on the ADSI processor and to the DTS. The DTS is connected to the ADSI switchbox for UHF, TADIL-A signals.

Standards: Initializes selected stations per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. On the black box switch, select the UHF position to allow the AN/ARC-187 to send/receive TADIL-A data through the DTS and ADSI.

2. Ensure the KG-40 is loaded (CURRENT CRYPTO).

3. Ensure ADSI RTR is set to transmit/receive TADIL-A.

4. Ensure ADSI CNTRL HD is present with LINK-ll software for TADIL-A operation.

5. On the DTS, ensure the power ON/OFF toggle switch is on, the AC power and power supply lamps are on, and the self-test operation has been completed.

6. Ensure ADSI CNTRL LINK-11 software will interface with DTS.
Note: DTS initialization menus appear on the ADSI monitor when in the CNTRL position.

7. Note: ROLL CALL Operation.
   a. In ROLL CALL operation, tactical data are exchanged between net members by time-sharing a single radio frequency. Each station in the net is assigned an address that is entered into its station address. The net control station enters the picket addresses into its address list and enters his station address at the end of the list. The net control station initiates ROLL CALL operation by selecting START on the front panel display. The net control station first sends its computer data to the net using the Interrogation-with-Message format (preamble, phase reference, start code, data, control stop code, address code). All pickets receive the data transmitted and transfer it to their computers. They also compare the address code sent at the end of the message with their own address code. The picket station which recognizes the received address code automatically switches to the transmit mode and sends its computer data to the net in the Picket Reply format (preamble, phase reference, start code, data, picket stop code). The net control station and all other pickets receive this transmitted data and transfer it to their computers. When the net control station recognizes the picket stop code, it automatically switches to transmit mode and interrogates the next address in the address list using the Interrogation format (preamble, phase reference address code). There is no computer data contained in this message. If the net control station does not recognize the picket stop code, the net control re-starts the roll call operation by interrogating the next picket in the address list.
   b. If the picket does not respond to an interrogation, it is automatically reinterrogated by the net control station. If the picket does not answer this second interrogation, then the net control station interrogates the next picket in the address list.
   c. ROLL CALL operation continues in this manner (interrogation, reply), sequencing every address in the address list, in the order they were entered, until manually stopped by selecting RESET at the net control station display.
   d. When the transmission is completed, set the EMCON to RADIO SILENCE. To terminate ROLL CALL operation, select the RESET button.

8. Net Control Station.

Performance Steps

      a. Preset the controls as detailed in steps 1 through 19 of Audio ROLL CALL Operation procedures. Initiate the start of ROLL CALL operation by selecting START on the display. Observe the STATUS area of the display for the Tx and Net Busy indications during the initial message transmission and the Rx, Net Busy, and Signal Quality indications during the reply from the addressed pickets. Also monitor the display for any TX DATA ERROR, RX DATA ERROR, or CONTROL CODE ERROR.

      b. These are all indications of degraded net connectivity or defective external equipment and/or connections. As the ROLL CALL operation is being performed, observe the Picket Address area of the display where brackets [xx] will be displayed around the current address being interrogated, and any picket address that does not respond to the second interrogation is underlined.

      c. Select RADIO SILENCE.

  9. Audio ROLL CALL operation procedures.

      a. Select EMCON.
      b. Select TRANSMIT ENABLE.
      c. Select NET MODE.
      d. Select ROLL CALL.
      e. Select STA MODE.
      f. Select net control station.
      g. Select STATION ADDRESS.
      h. Enter your assigned ADDR.
      i. Enter the address of each picket station listed in the operation orders net list.
      j. Enter own station code last.
      k. Select DOPPLER CORR.
      l. Select ON if necessary; otherwise, set to OFF.
      m. Select START to initiate transmission of test.
      n. Observe Tx indicator cycles are on when transmitting and off when receiving.
      o. Observe Rx indicator cycles are on when receiving and off when transmitting.
      p. Observe Net Busy indicator is on constantly.
      q. Observe no TX DATA or CONTROL CODE ERRORS appear when transmitting.
      r. Observe SIG QUALITY indicators are active for both USB and LSB during receive.

Note: Only one sideband is active in the single-tone mode of operation.

      s. Observe picket address list for NO ANSWER (reverse video) response from interrogated pickets.
      t. Select RESET to terminate operation when desired.
      u. Select EMCON.
      v. Observe no RX DATA or CONTROL CODE ERRORS appear when receiving.

Performance Measures	**GO**	**NO GO**
1. Set up switch box to interface with TADIL-A equipment.	——	——
2. Loaded KG-40 with current crypto.	——	——
3. Ensured ADSI was capable of TADIL-A operations (RTR, CNTRL HD).	——	——
4. Initialized DTS and ADSI for TADIL-A processing.	——	——
5. Ensured self-test operation was complete by performing loopback tests between ADSI, DTS, and UHF radio set.	——	——
6. Established an operational TADIL-A link.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**

                                                                        M1189

OPERATE THE ADI EQUIPMENT
441-096-1104

Conditions: You are given initialized ADI equipment and directed by your supervisor to operate it.

Standards: Performs in sequence, power-up, channel configuration, dial and operational modes without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives per TM 11-5895-1519-13&P.

Performance Measures	GO	NO GO
1. Powered up ADI equipment.	――	――
2. Performed channel configuration.	――	――
3. Performed display brightness adjustment.	――	――
4. Performed channel affiliation procedures.	――	――
5. Performed circuit dialing procedures.	――	――
6. Performed redialing procedures.	――	――
7. Preprogrammed conference calls.	――	――
8. Performed progressive conference calls.	――	――
9. Selected operational mode as directed.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                          Related
                                          TM 11-5895-1519-13&P

CABLE THE ADSI TERMINAL FOR STANDARD OPERATIONS
441-096-1106

Conditions: You are directed by your supervisor to cable the ADSI terminal for standard operations. The AMDPCS is emplaced. The ADSI equipment is installed in the racks.

Standards: The ADSI terminal is cabled for power up per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Connect the operator interface devices as follows:
    a. Connect video and PS/2 keyboard cable pairs from ADSI processor slots to the black box switch. (black box switch.).
        (1) A3 slot to black box switch. CTRL.
        (2) A10 slot to black box switch. MDB.
        (3) A17 slot to black box switch. RTR.
        (4) A12 to video splitter to black box switch. TSD Curbside TIP J4.
        (5) A15 to black box switch. TSD KYBD.
    b. Connect a mouse to J3.
    c. Connect a monitor to the black box switch. COMMON VIDEO and a keyboard to black box switch. COMMON KYBD.

2. Connect the internal display LAN "B" as follows:
    a. A BNC tee connector on ADSI A8 and A14.
    b. A BNC tee connector on A7.
    c. A coaxial cable from ADSI A8 Tee to A14 Tee.
    d. A coaxial cable from ADSI A14 Tee to LAN B RS.
    e. A coaxial cable from ADSI A8 Tee to LAN B RS.

3. Connect the internal LAN "B" as follows:
    a. A BNC tee connector on ADSI A7.
    b. A coaxial cable from each side of the tee ADSI A7 to LAN A RS.

4. Connect external LAN connections as follows:
    a. LAN A (and LAN B) cables exit the rigid wall shelters (RWS) from the roadside tent interface panel (TIP) LAN A (and LAN B) connector(s).
Note: The last RWS in line must have the connector covers attached. The covers are also 50-ohm termination.
    b. LAN cables enter the RWS communications entry panel (CEP) LAN A (and LAN B) connectors.
Note: The first RWS in line must have the connector covers attached. The covers are also 50-ohm terminations.

Note: Inspect all LAN connections to ensure there are no unconnected tee connectors, and that each end of each LAN has a 50-ohm terminator.

5. Configure the internal TADIL-B as follows:
    a. Connect an 8-lead Emulex cable from ADSI slot A20 through another emulex cable to ADSI slot A6 and J4 of CTT/HR.
    b. The 7-lead end goes to modem 3 and to the roadside aft panel.

6. Configure the external TADIL-B by connecting an 8-lead Emulex cable from ADSI slot A19 to V.23 modems 1 and 2.
Note: If another 4-channel modem is used, connect plugs 5 through 8 in same manner as above. Modems are connected to the outside world through three wires for each modem section (TX, RX, and GND) to the shelter patch panel and CEP cable hocks.

Performance Steps

7. Configure the TADIL-A as follows:
   a. Connect two NTDS cables from the ADSI rear panel NTDS IN and NTDS OUT (A18) jacks to the KG-40 crypto device.
   b. Connect two patch cables from the KG-40 device to the data terminal set (DTS), J4 and J6.
   c. Connect a data cable from the DTS to the black box switch. DTS port (TA receiver section).
   d. Connect a data cable from the black box switch. HF port to the Harris RF-350 HF radio.
   e. Connect a data cable from the black box switch. UHF port to the KY-57/control head for the ARC-187 UHF radio.

8. Configure the control signal connections as follows:
   a. Connect a DB-9 patch cable from the ADSI rear panel port J2 to the black box switch. COMM port.
   b. Connect a DB-9 patch cable from the black box switch. DTS port (Control section) to the control port J5 on the DTS equipment.
   c. Connect a patch cable from the black box switch. CTT/HR port to a breakout box J1 and from the breakout box J2 to the CTT/HR control port J1.

Note: The breakout box is used to connect a receive control signal to ADSI MDB computer through the COM4 port (card slot A4) and to provide an external connection point if required.

Note: Production systems will have all cables in harnesses or raceways. If cables are disconnected, label each cable or wire as it is removed to assist in correct reconnection.

Performance Measures	**GO**	**NO GO**
1. Connected operator interface devices.	――	――
2. Connected internal LAN cables.	――	――
3. Connected external LAN cables.	――	――
4. Connected TADIL-B cables.	――	――
5. Connected TADIL-A cables.	――	――
6. Connected control signal cables.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
      Required   **Related**
                                                            IOM 20-00228-002
                                                            IOM 20-00229-002

INITIALIZE THE LAN
441-096-1109

Conditions: Your supervisor directs you to initialize the LAN. The AMDPCS, COMMS van or JTOC van is connected, all equipment is powered on, all LAN cables are configured, connected, and operational data (OPDAT) is available.

Standards: Status boxes show green and the Comm Node Selections Area has the desired entries, per TB 11-7010-303-14-3, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Booted up AMDWS.	——	——
2. Selected "System Initialization" on Session Manager menu.	——	——
3. Selected "Initialization" from the system Initialization Main menu.	——	——
4. Selected "Communications" from the Initialization submenu.	——	——
5. Selected "Utilities" from the Communications dialog box.	——	——
6. Entered required information.	——	——
7. Selected "Quit."	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                                TB 11-7010-303-14-3

PERFORM OPERATOR TROUBLESHOOTING ON THE LAN

441-096-1110

Conditions: One or more LAN nodes is (are) not receiving data. Your supervisor directs you to locate and repair the problem. The AMDPCS, A2C2, ABMOC, or BCP LAN(s) is connected. All equipment is powered up and cryptokeys are loaded where appropriate. OPDAT information is available.

Standards: Verifies problem and corrects the fault per TM 11-7010-258-12&P, TM 11-7010-259-12&P, or TM 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Ensured computer LAN software was configured correctly.	——	——
2. Verified cables were properly configured.	——	——
3. Verified LANs were properly terminated.	——	——
4. Notified unit maintenance of any faults not corrected.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                        TM 11-7010-258-12&P
                                                        TM 11-7010-259-12&P
                                                        TM 11-7010-260-12&P

INITIALIZE ENCRYPTION DEVICE KG-40
441-096-1178

Conditions: Given a KG-40, KGX-40, and KOI-18 and direction from your supervisor to initialize the KG-40.

Standards: You are able to send and receive encrypted communication, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Ensured KGX-40 FUNCTION switch was set to OPERATE.	——	——
2. Set MODE per communications plan.	——	——
3. Ensured the KG-40 FILL switch was set to NORM.	——	——
4. Verified LOW BATTERY indicator was off.	——	——
5. Connected KOI-18 cable to KG-40 FILL connector.	——	——
6. Set FILL switch to LOAD.	——	——
7. Opened KOI-18 cover and aligned perforation at key-tape segment leading edge with KOI-18 alignment dots.	——	——
8. Inserted key-tape segment leading edge into the KOI-18 IN slot and pushed until it came out the OUT slot.	——	——
9. Grasped leading edge and pulled through the KOI-18 at a slow, steady rate.	——	——
10. Verified ZEROIZE indicator was off	——	——
11. Set KG-40 FILL switch to NORM and verified that VALID FILL indicator went on.	——	——
12. Removed KOI-18 cable from KG-40 FILL connector.	——	——
13. Set the KGX-40 FUNCTION switch to ALM CHK, then to OPERATE and verified the ALARM indicator was off.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                                     Related
                                                     TM 11-5810-292-13&P
                                                     TM 9-1430-606-12&P

INITIALIZE ENCRYPTION DEVICE KG-84(*)/KVI-7
441-096-1179

Conditions: Given a TSEC/KG-84(*) or KVI-7 with KOI-18, KYK-15, and KYK-13 and from your supervisor to initialize the KG-84(*) or KVI-7.

Standards: The TSEC/KG-84(*) (or KVI-7) self-test/alarm checks indicate normal readings, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Set the mode switch to STANDBY.	——	——
2. Set ENABLE/ZEROIZE switch to ENABLE.	——	——
3. Turned power switch to ON.	——	——
4. Turned mode switch to LDU.	——	——
5. Connected load device (KYK-13/TSEC or KOI-18/TSEC) to TSEC/KG-84(*).	——	——

Loading with KOI-18/TSEC:

	GO	NO GO
6. Inserted the tape leader into the KOI-18/TSEC slot.	——	——
7. Aligned the tape feed holes with the white dots.	——	——
8. Set TSEC/KG-84(*) INITIATE/IND TEST switch to INITIATE.	——	——
9. Observed that the TSEC/KG-84(*) PARITY light flashed once.	——	——
10. Pulled the leader tape through KOI-18/TSEC.	——	——
11. Observed the TSEC/KG-84(*) PARITY light for flash.	——	——
12. Set the TSEC/KG-84(*) mode switch to LDX.	——	——
13. Set the TSEC/KG-84(*) X-VAR switch to the desired position to load.	——	——
14. Repeated steps 1 through 6 above until all necessary variables were Loading.	——	——
15. Set the TSEC/KG-84(*) mode switch to OPR.	——	——
16. Observed the PARITY light for two flashes (the alarm light went off).	——	——
17. The FULL OPR indicator lit to indicate the distant TSEC/KG-84(*) was initialized.	——	——

Loading with the KYK-13/TSEC:

	GO	NO GO
18. Ensured KYK-13/TSEC mode switch was set to OFF/CHECK.	——	——
19. Pressed the KYK-13/TSEC INITIATE button.	——	——
20. Observed the flashing of the PARITY indicator light (the indicator flashed when it was ready to load).	——	——
21. Set the KYK-13/TSEC mode to ON.	——	——
22. Set the KYK-13/TSEC selector to the position containing the variable to be transferred.	——	——
23. Set the KYK-13/TSEC INITIATE/IND TEST switch to INITIATE then released.	——	——

Performance Measures	**GO**	**NO GO**
24. Observed the TSEC/KG-84(*) PARITY indicator for two flashes.	———	———
25. Set the KYK-13/TSEC mode switch to OFF/CHECK.	———	———
26. Set the mode switch from LDU to LDX.	———	———
27. Set the TSEC/KG-84(*) X-VAR switch to the desired position to load.	———	———
28. Repeated steps 18 to 24 above.	———	———
29. Set the TSEC/KG-84(*) mode switch to OPR.	———	———
30. Observed the PARITY light for two flashes.	———	———
31. Observed the alarm light (the light goes off).	———	———
32. The FULL OPR indicator lit to indicate the distant TSEC/KG-84(*) was initialized. Normal turn-on of the TSEC/KG-84:	———	———
33. When the TSEC/KG-84(*) had been zeroized, performed cold start initialization.	———	———
34. Set the mode switch to OPR.	———	———
35. Set the power switch to ON.	———	———
36. Observed the PARITY light for two flashes (the alarm light flashed once).	———	———
37. The FULL OPR indicator lit to indicate the distant station was initialized. Resynchronization (RESYNC):	———	———
38. Ensured the mode switch was in OPR.	———	———
39. Momentarily set INITIATE/IND TEST switch to INITIATE.	———	———

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
	(O)TM 11-5810-309-10
	TM 11-5810-292-13&P

INITIALIZE ENCRYPTION DEVICE KY-99
441-096-1180

Conditions: Given a KY-99 with KOI-18, KYK-15, and KYK-13 and directions from your supervisor to initialize the KY-99.

Standards: Records fill information on writing surface: mode control is set to RK, CT, PT: and fill cable is disconnected, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Evaluation Preparation: Setup: Ensure that all information, references, and equipment required to perform the task are available. KY-99 is connected to MST-20, VOL switch is off, and MODE switch is in CT. Use the FM and the evaluation guide to score the soldier's performance. Brief soldier: Tell the soldier what he is required to do per the task conditions and standards.

Performance Measures	**GO**	**NO GO**
1. Set VOL out of OFF position.	——	——
2. Pressed INIT when display showed "PSH INIT."	——	——
3. Connected fill device to KY-99 FILL connector.	——	——
4. Set KY-99 MODE switch to OFF LINE.	——	——
5. Pressed KY-99 arrow button.	——	——
6. Pressed INIT, read correct display, then pressed again.	——	——
Loading KOI-18:		
7. Repetitively pressed KY-99 arrow until desired fill position was displayed.	——	——
8. Inserted tape leader into KOI-18 slot.	——	——
9. Pressed KY-99 INIT.	——	——
10. When display flashed "LOAD n," pressed KY-99 INIT.	——	——
11. Pulled tape through at a steady rate.	——	——
12. Recorded fill information on KY-99 writing surface.	——	——
13. Set KY-99 mode control switch to RK, CT, or PT.	——	——
14. Disconnected fill connector.	——	——
Loading KYK-15:		
15. Performed Performance Measures 1 through 6.	——	——
16. Selected KYX-15 address select switch of the key to be transferred, then set to ON.	——	——
17. Set KYX-15 MODE switch to LD.	——	——
18. Pressed KY-99 INIT, read correct display, then pressed again.	——	——
19. Recorded fill information on KY-99 writing surface.	——	——
20. Returned KYX-15 address select switch to OFF.	——	——
21. Set KYX-15 MODE switch to OFF/CK.	——	——

Performance Measures	**GO**	**NO GO**
22. Set KY-99 mode control switch to RK, CT, or PT.	——	——
23. Disconnected fill cable.	——	——
Loading KYK-13:		
24. Performed Performance Measures 1 through 6.	——	——
25. Set KYK-13 MODE switch to ON.	——	——
26. Repetitively pressed KY-99 arrow until desired fill position was displayed.	——	——
27. Set KYK-13 FILL switch to position containing desired key.	——	——
28. Pressed KY-99 INIT, read correct display, then pressed again.	——	——
29. Recorded fill information on KY-99 writing surface.	——	——
30. Set KYX-15 MODE switch to OFF/CHECK.	——	——
31. Set KY-99 mode control switch to RK, CT, or PT.	——	——
32. Disconnected fill cable.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                           (O) TM 11-5810-375-13&P
                                                           (U) TB 11-5810-375-10
                                                           TM 11-5810-292-13&P

Subject Area 3: SINCGARS Operations

PERFORM OPERATOR'S TROUBLESHOOTING ON SINCGARS
113-587-0058

Conditions: Given a nonoperational SINCGARS, TM 11-5820-890-10-3, DA Pam 738-750, power source, and DA Form 2404.

Standards: Standards are met when equipment defects have been resolved to the following degree and unit is restored to operation, or deferred to a higher maintenance level.

Performance Steps

   1. Perform operator troubleshooting procedures in sequence IAW TM11-5820-890-10-3.

Performance Measures	**GO**	**NO GO**
1. Perform operator troubleshooting procedures in sequence IAW TM 11-5820-890-10-3.	——	——
2. Checks all cable connections to ensure that they are tight.	——	——
3. Makes sure antenna is properly connected and positioned.	——	——
4. Tries to verify that radio has line-of-sight with other stations.	——	——
5. Changes Position to see if communications improve.	——	——
6. If traffic is not heard in some time, performs passive late net entry.	——	——
7. Makes sure radio has adequate power (especially MANPACK).	——	——
8. Identifies any net station co-located in area (called co-site interference).	——	——
9. Determines if radio is being jammed by the enemy and if so, takes appropriate action.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
    DA PAM 738-750
    TM 11-5820-890-10-1
    TM 11-5820-890-10-3

OPERATE SINCGARS SINGLE-CHANNEL (SC)

113-587-2070

Conditions: Given an operational SINCGARS, KYK-13/TSEC with keys, distant station, TM 11-5820-890-10-1, TM 11-5820-890-10-3, ACP 125 US Suppl-1, DA Pam 738-750, FM 24-19, FM 24-18, and unit SOI.

Standards: The standards are met when a secure communications check is conducted in SC mode with a distant station.

Evaluation Preparation:

Performance Measures	**GO**	**NO GO**
1. Perform starting procedures.	——	——
2. Load traffic encryption key (TEK).	——	——
3. Enter net.	——	——
a. Use correct procedures.		
b. Conduct secure communications check.		
4. Exit net.	——	——
5. Perform stopping procedures.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References
Required	**Related**
TM 11-5820-890-10-1	ACP 125 US SUPPLEMENT-1
TM 11-5820-890-10-3	DA PAM 738-750
	FM 24-18
	FM 24-19
	SOI

OPERATE SECURE SINCGARS FREQUENCY HOPPING (FH) (NET MEMBERS)
113-587-2071

Conditions: Given an operational SINCGARS radio, ECCM fill device with FH data, KYK-13/TSEC with keys, distant net control station (NCS), unit SOI, DA Form 2404, TM 11-5820-890-10-1, TM 11-5820-890-10-3, ACP 125 US Suppl-1, DA Pam 738-750, FM 24-19, and FM 24-18.

Standards: The standards are met when FH communications is established using the cold start and CUE late entry methods and the radio check is successfully completed.

Evaluation Preparation:

Performance Measures	GO	NO GO
1. Perform starting procedures.	___	___

2. Perform net member CUE late net entry.
     a. Use correct procedures.
     a. Use correct call signs.
	___	___

3. Perform net member cold start procedures.
     a. Use correct call signs.
     b. Use correct procedures.
	___	___

4. Perform stopping procedures	___	___

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References
Required	Related
TM 11-5820-890-10-1	ACP 125 US SUPPLEMENT-1
TM 11-5820-890-10-3	DA PAM 738-750
	FM 24-18
	FM 24-19
	SOI

OPERATE SINCGARS DATA DEVICES
113-587-2075

Conditions: Given a SINCGARS operating in interconnected data device, TM 11-5820-890-10-1 or TM 11-5820-890-10-3.

Standards: Standard is met when data is sent and received over the net.

Performance Steps
NOTE: (Refer to TM 11-5820-890-10-1 or TM 11-5820-890-10-3 for Performance Measures 1 and 2).

   1. Connect data device cable to RT audio/data connector.

   2. Set FUNCTION switch to SQ ON.
NOTE: (Refer to appropriate data device TB for Performance Measures 3 and 4)

   3. Set data rate switch.

   4. Send and receive data.

Evaluation Preparation:

Performance Measures	GO	NO GO
NOTE: Refer to TM 11-5820-890-10-1 or TM 11-5820-890-10-3 and data device TM for PMs 1 and 2.		
1. Connect data device cable to RT audio/data connector.	——	——
2. Set FCTN to SC ON.	——	——
NOTE: Refer to appropriate data device TB for PMs 3 and 4.		
3. Set data rate switch.	——	——
4. Send and receive data.	——	——
5. Sends and receives TACFIRE DATA.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
TM 11-5820-890-10-1	ACP 125 US SUPPLEMENT-1
TM 11-5820-890-10-3	DA PAM 738-750
	FM 24-18
	FM 24-19
	SOI
	TB 11-5820-890-10-10
	TB 11-5820-890-10-11
	TB 11-5820-890-10-12
	TB 11-5820-890-10-13
	TB 11-5820-890-10-14
	TB 11-5820-890-10-4
	TB 11-5820-890-10-5
	TB 11-5820-890-10-6
	TB 11-5820-890-10-7
	TB 11-5820-890-10-8
	TB 11-5820-890-10-9

ASAT-generated blank page

Subject Area 4: MSE Operations

OPERATE DNVT TA-1035/A
113-625-2080

Conditions: This task is performed when directed by your supervisor and under any condition or situation. The following must be available for correct performance;

1. Digital nonsecure voice telephone TA-1035/a.
2. TM 11-5805-761-12&P.

Standards: Standard is met when DNVT operation is performed per Chapter 3, TM 11-5805-761-12&P and Unit SOP.

Evaluation Preparation: Setup: Ensure that all information, references and equipment required to perform the task are available. Insert a pre selected fault into the system per instructions. Use the FM and the evaluation guide to score the soldier's performance. Brief soldier. Tell the soldier that he is required to do per the task conditions and standard.

Performance Measures	GO	NO GO
1. Performs affiliation procedures.	——	——

2. Processes routine calls.
    a. Processes outgoing voice call.
    b. Processes incoming voice call.
	——	——

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
    TM 11-5805-761-13&P

OPERATE DSVT KY-68

113-625-2081

Conditions: This task is performed when directed by your supervisor and under any condition or situation. The following must be available for correct performance;

1. Properly installed DSVT KY-68.
2. TM 11-5810-329-10.
3. Electronic transfer device, TSED/KY-13.
4. Fill cable.

Standards: Standard is met when DSVT KY-68 operation is performed per Section III, TM 11-5810-329-10 and Unit SOP.

Evaluation Preparation: Setup: Ensure that all information, references and equipment required to perform the task are available. Insert a pre selected fault into the system per instructions. Use the FM and the evaluation guide to score the soldier's performance. Brief soldier. Tell the soldier that he is required to do per the task conditions and standard.

Performance Measures	GO	NO GO
1. Initializes DSVT KY-68.	――	――

2. Loads KY-68 with KYK-13.
     a. Connects KYK-13 to KY 68 using fill cable.
     b. Performs loading procedures.
     c. Disconnect fill cable from KY-68.
	――	――

3. Operates equipment under usual conditions
     a. Processes an outgoing call.
     b. Processes an incoming call.
     c. Processes an outgoing conference call.
     d. Processes and incoming conference call.
     e. Performs emergence access.
	――	――

4. Performs normal shutdown procedures.
     a. Performs complete shutdown.
     b. Performs shutdown saving COMSEC data.
	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                       (O)TM 11-5810-329-10

PERFORM OPERATOR'S PMCS ON DSVT KY-68
113-625-3067

Conditions: This task is performed when directed by your supervisor and under any condition or situation. The following must be available for correct performance;

1. Digital secure voice telephone, KY-68.
2. TM 11-5810-329-10.
3. DA Pam 738-750.
4. DA Form 2404 (Inspection and Maintenance Worksheet).

Standards: Standard is met when preventive maintenance checks and services (PMCS) on DSVT KY-68 operation is performed per para 2-4, TM 11-5810-329-10 and Unit SOP.

Evaluation Preparation: Setup: Ensure that all information, references and equipment required to perform the task are available. Insert a pre selected fault into the system per instructions. Use the FM and the evaluation guide to score the soldier's performance. Brief soldier. Tell the soldier that he is required to do per the task conditions and standard.

Performance Measures	GO	NO GO
1. Performs routine checks.	——	——
2. Checks fuses for proper amperage.	——	——
3. Inspects fill battery.	——	——
4. Checks ground wire.	——	——
5. Checks TB 750-38 for applicable modifications.	——	——
6. Records results of check and services on DA Form 2404.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                        DA FORM 2404
                                                        DA PAM 738-750

OPERATE SECURE VOICE AND DATA TELEPHONE STU III/SECTEL
441-096-1188

Conditions: Given STU III/SECTEL (*) with accessories, crypto ignition key (CIK), and instructions to send and receive voice and data communication.

Standards: Voice and data messages are successfully sent and received per local instructions.

Performance Measures	GO	NO GO
1. Applied power and verified message display indicated "RINGER MEDIUM-HI."	——	——
2. Adjusted software configuration.	——	——
3. Performed crypto fill procedures (message display will be blank at completion).	——	——
4. Checked crypto Status.	——	——
5. Performed voice communication procedures.	——	——
6. Performed secure dialing procedures.	——	——
7. Identified the correct procedures for reading or clearing a CIM.	——	——
8. Performed data communication (Secure Mode Only).	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                          STU III-SECTEL

Subject Area 5: Generators

PERFORM OPERATOR PMCS ON GENERATOR SET, 5-KW
441-096-1030

Conditions: The STS SICPS is emplaced and your supervisor directs you to perform before-, during-, or after-operation PMCS on the generator set. Assistance from a crew member and the following are available:

1. 5-KW generator set.
2. Applicable TM.
3. Basic issue items (BII).
4. Empty fuel can.
5. Fuel and oil as required.
6. Distilled water.
7. DA Form 2404 or 5988-E.
8. Drip pans or similar initial containment devices.
9. PPE, spill kit, and absorbent materials.
10. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: Performs the required PMCS, per applicable TM, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Evaluation Preparation: If trailer is not coupled to towing vehicle, ensure that wheels are securely chocked.

Performance Measures	GO	NO GO

1. Before-operation PMCS:
    a. Prevented hazardous material contamination of the environment.
    b. Verified that handbrakes were locked in the applied position and held the wheels.
    c. Checked on, around, and beneath the generator set per TM before-operation PMCS.
    d. Verified fire extinguisher was present and seal was unbroken.
	——	——

2. During-operation PMCS: checked on, around, and beneath the generator set per TM.	——	——

3. After-operation PMCS
    a. Checked on, around, and beneath the generator set per TM.
    b. Recorded all actions taken on DA Form 2404 or 5988E and submitted form to supervisor.
	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
APPLICABLE TECH MAN	AR 200-1
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	

OPERATE GENERATOR SET, 5-KW

441-096-1031

Conditions: Your supervisor directs you to start and operate the 5-KW tactical quiet generator set. All emplacement procedures are complete, the system is grounded, all pre-operational checks and services are completed, and the following are available:

1. 5-KW generator set.
2. Fuel and oil as required.
3. Grounding rod with ground cable.
4. Equipment power cable.
5. Drip pans or similar initial containment devices.
6. PPE, spill kit, and absorbent materials.
7. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids, and assistance from a crew member.

Standards: The generator set is running smoothly at the GOVERN position and supplying 120 vac to connected equipment, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Pre-start Procedures:	___	___
a. Prevented hazardous material contamination of the environment.		
b. Verified that all switches were in the proper position.		
2. Start Procedures:	___	___
a. Placed the MASTER switch to the PREHEAT position and held for 30 seconds.		
b. Placed the MASTER switch to the START position and held until the oil pressure reached 25 psi (172 kPa), voltage increased to its approximate rated value, and engine reached stable operating speed.		
c. Released the MASTER switch and ensured it returned to the PRIME & RUN position (if running from an auxiliary fuel source, moved the switch to the PRIME & RUN AUX FUEL positions).		
d. Checked all controls and indicators for proper operation, adjusting when necessary.		
e. Checked periodically for leaks, giving particular attention to the engine fuel and oil leaks.		
f. Listened for any unusual noises during operation, which may indicate a pending malfunction.		
3. Stopping Procedures:	___	___
a. Shut down the connected load.		
b. Set switch box ON/OFF switch below the lit GEN SET ON light to OFF position. Ensured the ON LINE was light out and the generator set power to the connected load was removed.		
c. Placed the AC CIRCUIT INTERRUPTER to the OPEN position.		
d. Allowed generator set to operate five minutes with no load applied.		
e. Placed the MASTER switch to the OFF position.		
f. Pressed the EMERGENCY STOP push button for emergency stops required.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
APPLICABLE TECH MAN	AR 200-1
	LOCAL SOP

PERFORM OPERATOR TROUBLESHOOTING PROCEDURES ON GENERATOR SET, 5-KW

441-096-1032

Conditions: Your section chief directs you to perform operator troubleshooting procedures on the generator set. You detect a fault while performing PMCS or you are given a DA Form 2404 or 5988-E with a reported fault. Assistance from a crew member and the following are available:

1. 5-KW generator set.
2. POL.
3. Tool kit.
4. DA Form 2404 or 5988-E.
5. DA Form 2407.
6. Applicable TM.

Standards: Corrects all correctable deficiencies, records all uncorrectable deficiencies on DA Form 2404 or 5988E, and submits the form to supervisor. Requests higher-level maintenance, if directed by the section chief, on DA Form 2407, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Evaluation Preparation: This task cannot list all malfunctions that may occur, or all the tests or inspections and corrective actions. If a malfunction is not listed or cannot be corrected by one of the listed corrective actions, notify your section chief. Before you use these performance measures, be sure you have performed all applicable operating checks (Task 441-096-1030).

Performance Measures	**GO**	**NO GO**
1. Fault 1: Engine failed to crank.	——	——
a. Checked that DEAD CRANK switch was in the NORMAL position.		
b. Checked DC circuit breaker on the control panel to ensure it was depressed.		
c. Inspected for loose, corroded, or broken battery cables or starter ground cable.		
d. Checked to see that electrolyte (liquid) level in each battery cell was above the top of the plates.		
2. Fault 2: Engine cranked but failed to start.	——	——
a. Checked for empty fuel tank, and filled tank if it was low or empty.		
b. Checked for dirty air cleaner element.		
c. Checked for sediment or water in both fuel filters and fuel strainer.		
(1) Opened drains on the bottom of fuel filters and fuel strainer to drain water and sediment.		
(2) Drained fuel system and used fresh clean fuel supply if necessary.		
d. Inspected for loose fuel fittings or bad fuel lines.		
e. Checked governor linkage for obstructions or binding and removed any obstructions.		
3. Fault 3: Engine knocked.	——	——
a. Checked lubrication oil level.		
b. Checked for loose parts or foreign objects in engine compartment.		
c. Checked for proper fuel.		
4. Fault 4: Engine started but did not run smoothly (misfired, knocked, or made unusual noises).	——	——
a. Performed Performance Measures b, c, and d under Fault 2.		
b. Checked air cleaner assembly to ensure shutter assembly was in proper position for either cold weather or normal weather operation.		

Performance Measures	**GO**	**NO GO**

    c. Inspected exhaust muffler assembly for any obstructions, and removed obstructions if possible.

5. Fault 5: Engine started and ran normally but suddenly stopped.   ——   ——
    a. Checked FAULT INDICATOR lights.
    b. Checked fuel level indicated by gauge on fuel tank and added fuel if necessary.
    c. Checked to ensure that shutters on the shutter box were fully opened.
    d. Checked to ensure blower housing grille and engine cooling fins were clean.
    e. Checked oil level and added correct weight oil if necessary.
    f. Checked that cap was open on the under side of the fuel filler and cleared the vent hole.

6. Fault 6: Engine ran but emitted black smoke in exhaust.   ——   ——
    a. Checked for restricted air intake.
        (1) Removed any restrictions from intake port.
        (2) Checked air filter and replaced if necessary.
    b. Checked load on generator by checking percentage rated current meter on control panel.

7. Fault 7: Engine ran with excessive oil consumption.   ——   ——
    a. Inspected for oil leaks, paying particular attention to front and rear oil seals, oil pan gasket, and dipstick cap.
    b. Checked for red warning signal on airflow indicator, which indicated a dirty air cleaner filter.
        (1) Cleaned or replaced filter.
        (2) Pushed reset button to reset airflow indicator.
    c. Checked for air leaks to crankcase (loose oil filler cap, leaks at gaskets, et cetera).

8. Fault 8: Generator supplied no voltage to load.   ——   ——
    a. Checked AC CIRCUIT INTERRUPTER for CLOSED position on control panel.
    b. Checked load terminal board.
        (1) Ensured load leads were attached to the correct load terminals.
        (2) Ensured connections were clean and tight.
    c. Checked reconnection switch behind control panel and ensured switch position matched load.
    d. Checked load terminal board again if reconnection switch was moved.
        (1) Ensured load leads were attached to the correct load terminals.
        (2) Ensured connections were clean and tight.
    e. Verified load was not excessive to generator capability and did not have an internal short.
    f. Checked engine speed.
        (1) Adjusted engine speed control assembly until frequency meter indicated rated frequency (60 hertz) with normal load on generator set.
        (2) If engine speed control assembly could not be adjusted, performed all performance measures listed under Fault 3.
        (3) Checked external governor linkage for binding.
        (4) Notified supervisor that a fault still existed.

9. Fault 9: Generator supplied improper (under or over) voltage frequency to load. ——   ——
    a. Made certain switch position matched load.
    b. Made certain load leads were attached to the correct load terminals. Made certain connections were clean and tight.
    c. Ensured engine was operating at proper speed.

Performance Measures   <u>GO</u>   <u>NO GO</u>

    d. Recorded all actions taken on DA Form 2404 or 5988-E.

    e. Notified supervisor of any uncorrectable faults.

    f. Requested higher level of maintenance support if directed by supervisor on
       DA Form 2407.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

    Required   **Related**

    APPLICABLE TECH MAN   AR 200-1

    DA FORM 2404   DA PAM 738-750

    DA FORM 2407

    DA FORM 5988-E

PERFORM OPERATOR PMCS ON GENERATOR SET, 10-KW
441-096-1033

Conditions: Your supervisor directs you to perform before-, during-, or after-operation PMCS on the generator set. The crew has emplaced the generator, and assistance from a crew member and the following are available:

1. 10-KW generator set.
2. Applicable TM.
3. Basic issue items (BII).
4. Empty fuel can.
5. POL as required.
6. Distilled water.
7. DA Form 2404 or 5988-E.
8. Drip pans or similar initial containment devices.
9. PPE, spill kit, and absorbent materials.
10. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: Performs the required PMCS per applicable TM, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures   <u>**GO**</u>   <u>**NO GO**</u>

1. Before-operation PMCS: ____   ____
   a. Prevented hazardous material contamination of the environment.
   b. Checked on, around, and beneath the generator set per TM before operation PMCS.
   c. Checked that the generator set ground was properly installed and grounding connections were tight.

2. During-operation PMCS: Checked on, around, and beneath the generator set per   ____   ____
TM.

3. After-operation PMCS: ____   ____
   a. Checked on, around, and beneath the generator set per TM.
   b. Recorded all actions taken on DA Form 2404 or 5988E and submitted form to supervisor.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
   Required   **Related**
   APPLICABLE TECH MAN   AR 200-1
   DA FORM 2404   DA PAM 738-750
   DA FORM 5988-E   LOCAL SOP

OPERATE GENERATOR SET, 10-KW

441-096-1034

Conditions: Your supervisor directs you to start and operate the 10-KW tactical quiet generator set. All emplacement procedures are complete, the system is grounded, and all pre-operational checks and services are completed. Assistance from a crew member and the following are available:

1. 10-KW generator set.
2. Fuel and oil as required.
3. Grounding rod with ground cable.
4. Equipment power cable.
5. Drip pans or similar initial containment devices.
6. PPE, spill kit, and absorbent materials.
7. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: The generator set is running smoothly at the GOVERN position and supplying 120 vac to connected equipment, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**

1. Pre-start Procedures:
    a. Prevented hazardous material contamination of the environment
    b. Verified that all switches were in the proper position.
	____	____

2. Starting and Operating Procedures:
    a. Placed the MASTER switch to the START position and held until oil pressure reached 25 psig, voltage increased to its approximate rated value, and engine reached stable operating speed.
    b. Released the MASTER switch and ensured it returned to the PRIME & RUN position (if running from an auxiliary fuel source, move the switch to the PRIME & RUN AUX FUEL positions).
    c. Checked all controls and indicators for proper operation, adjusting when necessary.
	____	____

3. Checked periodically for leaks, giving particular attention to the engine fuel and oil leaks.	____	____
4. Listened for any unusual noises during operation, which may indicate a pending malfunction.	____	____

5. Stopping Procedures:
    a. Set the switch box ON/OFF switch, for the generator set to be stopped, to OFF position.
    b. Placed the AC CIRCUIT INTERRUPTER to the OPEN position.
    c. Allowed generator set to operate for 5 minutes with no load applied.
    d. Placed MASTER SWITCH in OFF position.
    e. Pulled the DC CONTROL CIRCUIT BREAKER for emergency stops if required.
	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
APPLICABLE TECH MAN	AR 200-1
	LOCAL SOP

PERFORM OPERATOR TROUBLESHOOTING PROCEDURES ON GENERATOR SET, 10-KW
441-096-1035

Conditions: You detect a fault while performing PMCS, or you are given a DA Form 2404 or 5988-E with a reported fault, and your section chief directs you to perform operator troubleshooting procedures on the 10-KW generator set.   Assistance from a crew member and the following are available:

1. 10-KW generator set.
2. POL.
3. Tool kit.
4. DA Form 2404 or 5988-E.
5. DA Form 2407.
6. Applicable TM.

Standards: Corrects all correctable deficiencies, records all uncorrectable deficiencies on DA Form 2404 or 5988E, and submits the form to the supervisor. Requests higher-level maintenance, if directed by the section chief, on DA Form 2407 per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Evaluation Preparation: This task cannot list all malfunctions that may occur, or all the tests or inspections and corrective actions. If a malfunction is not listed or cannot be corrected by one of the listed corrective actions, notify your section chief. Before you use these performance measures, be sure you have performed all applicable operating checks (Task 441-096-1030).

Performance Measures	**GO**	**NO GO**
1. Fault 1: Engine failed to crank when the MASTER switch was held in the START position.	——	——
a. Checked DC circuit breaker on the control panel.		
b. Inspected battery cables and starter ground cable.		
c. Checked electrolyte (liquid) level in each battery cell.		
2. Fault 2: Engine cranked normally but failed to start.	——	——
a. Checked fuel tank.		
b. Checked both fuel filters and fuel strainer.		
c. Inspected fuel fittings and fuel lines.		
d. Checked governor linkage for obstructions.		
3. Fault 3: Engine started but did not run smoothly (misfired, knocked, or made unusual noises).	——	——
a. Performed Performance Measures b and c under Fault 2.		
b. Checked air cleaner assembly.		
c. Inspected exhaust muffler assembly.		
4. Fault 4: Engine started and ran normally but suddenly stopped.	——	——
a. Checked fuel level indicated by gauge on fuel tank.		
b. Checked shutter box.		
c. Checked blower housing grille and engine cooling fins.		
d. Checked oil level.		
e. Checked the fuel filler cap.		
5. Fault 5: Engine ran but emitted black smoke in exhaust.	——	——
a. Checked for restricted air intake.		
b. Checked load on generator by checking percentage rated current meter on control panel.		

Performance Measures	**GO**	**NO GO**

6. Fault 6: Engine ran with excessive oil consumption.　　　　　　　　　　　　　——　　——
    a. Inspected for oil leaks, paying particular attention to front and rear oil seals, oil pan gasket, and dipstick cap.
    b. Checked for red warning signal on airflow indicator, which indicates a dirty air cleaner filter.
    c. Checked for air leaks to crankcase (loose oil filler cap, leaks at gaskets, et cetera).

7. Fault 7: Generator supplied no voltage to load.　　　　　　　　　　　　　　　——　　——
    a. Checked AC CIRCUIT INTERRUPTER for CLOSED position on control panel.
    b. Checked load terminal board.
    c. Checked reconnection switch behind control panel and ensured switch position matched load.
    d. Checked load terminal board again if reconnection switch was moved.
    e. Checked engine speed.

8. Recorded all actions taken on DA Form 2404 or 5988E.　　　　　　　　　　　——　　——

9. Notified supervisor of any uncorrectable faults.　　　　　　　　　　　　　　——　　——

10. Requested higher level of maintenance support on DA Form 2407 if directed by supervisor.　　　　　　　　　　　　　　　　　　　　　　　——　　——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
APPLICABLE TECH MAN	AR 200-1
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	

OPERATE GENERATOR SET, 5-KW (M1068)
441-096-1039

Conditions: Your supervisor directs you to start and operate the 5-KW tactical quiet generator set. All emplacement procedures are complete, the system is grounded, and all pre-operational checks and services are completed. Assistance from a crew member and the following are available:

1. 5-KW generator set.
2. Fuel and oil as required.
3. Grounding rod with ground cable.
4. Equipment power cable.
5. Drip pans or similar initial containment devices.
6. PPE, spill kit, and absorbent materials.
7. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: The generator set is running smoothly at the GOVERN position and supplying 120 vac to connected equipment, per TM 9-6115-664-13&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Prevented hazardous material contamination of the environment.	——	——
2. Started engine using local control panel.	——	——
3. Started engine using remote control panel located inside rear of M1068 vehicle.	——	——
4. Moved the APU ON switch to ON position to apply generator load.	——	——
5. Checked voltmeter to ensure indicator needle was in green area to verify correct operating voltage.	——	——
6. Performed during-operation checks as required (Task 441-096-1061).	——	——
7. Shut down generator as required by placing the START/PRIME-RUN/OFF switch in the OFF position.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                                   Related
                                                   AR 200-1
                                                   LOCAL SOP
                                                   TM 9-6115-664-13&P

PERFORM OPERATOR PMCS ON GENERATOR SET, 5-KW (M1068)
441-096-1061

Conditions: Given a 5-KW diesel generator set model MEP-952 mounted on the M1068 tracked battery command post vehicle and the following:

1. 5-KW diesel generator.
2. BII.
3. DA Form 2404 or 5988-E.
4. Pen or pencil.
5. Drip pans or similar initial containment devices.
6. PPE, spill kit, and absorbent materials.
7. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.
8. TM 9-6115-664-13&P.

Standards: Performs the before-, during-, or after-operation PMCS, per TM 9-6115-664-13&P, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Evaluation Preparation: Refer to TM 9-6115-664-13&P, Section II, Table 2-1, for specific checks to be made for type of PMCS being performed.

Performance Measures	**GO**	**NO GO**
1. Prevented hazardous material contamination of the environment.	——	——
2. Performed before-operation checks as required.	——	——
3. Performed during-operation checks as required.	——	——
4. Performed after-operation checks as required.	——	——
5. Recorded all deficiencies on DA Form 2404 or 5988-E.	——	——
6. Recorded authorized adjustments or repairs made to correct deficiencies noted in step 5.	——	——
7. Recorded any uncorrectable deficiencies and reported to unit maintenance.	——	——
8. Submitted completed DA Form 2404 or 5988-E and reported equipment status to supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 9-6115-664-13&P	

PERFORM OPERATOR PMCS ON GENERATOR SET, 30-KW

441-096-1076

Conditions: The system is emplaced and your supervisor directs you to perform before-, during-, or after-operation PMCS on the generator set. Assistance from a crew member and the following are available:

1. 30-KW generator set.
2. Applicable TM.
3. Basic issue items (BII).
4. Empty fuel can.
5. Fuel and oil as required.
6. Distilled water.
7. DA Form 2404 or 5988-E.
8. Drip pans or similar initial containment devices.
9. PPE, spill kit, and absorbent materials.
10. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: Performs the before-, during-, or after-operation PMCS, per applicable TM, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Before-operation (B) PMCS	――	――
a. Prevented hazardous material contamination of the environment.		
b. Inspected trailer chassis (disconnected).		
c. Inspected generator set.		
d. Inspected engine compartment.		
e. Inspected cooling system.		
f. Inspected electrical system.		
g. Inspected control box assembly.		
2. During-operation (D) PMCS	――	――
a. Inspected control box assembly.		
b. Inspected generator set.		
c. Inspected engine compartment.		
d. Inspected cooling system.		
3. After-operation (A) PMCS	――	――
a. Inspected generator set.		
b. Inspected engine compartment.		
c. Inspected cooling system.		
d. Inspected control box assembly.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
APPLICABLE TECH MAN	AR 200-1
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	TM 9-2330-205-14&P
	TM 9-6115-644-10

OPERATE GENERATOR SET, 30-KW

441-096-1077

Conditions: Your supervisor directs you to start and operate the 30-KW tactical quiet generator set. All emplacement procedures are complete, the system is grounded, and all pre-operational checks and services are completed. Assistance from a crew member and the following are available:

1. 30-KW generator set.
2. Fuel and oil as required.
3. Grounding rod with ground cable.
4. Equipment power cable.
5. Drip pans or similar initial containment devices.
6. PPE, spill kit, and absorbent materials.
7. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: The generator set is running smoothly at the GOVERN position and supplying 120 vac to connected equipment, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Prevented hazardous material contamination of the environment.	——	——
2. Ensured the ground rod was properly installed into ground near generator ground terminal and connected.	——	——
3. Installed load cables.	——	——
4. Performed all initial adjustments.	——	——
5. Performed generator self-test.	——	——
6. Performed starting procedures.	——	——

    a. Placed MASTER SWITCH to START position.
    b. (Cold Weather only) Pushed ETHER/PRIME switch to ON position per instructions.
    c. Held MASTER SWITCH in START position until oil pressure reached at least 25 psi (172kPa), voltage had increased to its approximate rated value, and engine had reached stable operating speed.
    d. Released MASTER SWITCH to PRIME AND RUN position.
    e. If operating with an auxiliary fuel source, rotated MASTER SWITCH to PRIME AND RUN AUX FUEL position.
    f. Checked all controls and indicators for proper operation, adjusting when necessary.

	GO	**NO GO**
7. Performed correct stopping procedures;	——	——

    a. Placed the AC CIRCUIT INTERRUPTER to the OPEN position.
    b. Allowed generator set to operate for 5 minutes with no load applied.
    c. Placed MASTER SWITCH in OFF position
    d. If applicable (some models), placed DEAD CRANK switch in OFF position.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                             APPLICABLE TECH MAN
    AR 200-1
    TM 9-2330-205-14&P
    TM 9-6115-644-10

OPERATE TACTICAL QUIET GENERATOR SET, 10-KW
441-096-1119

Conditions: You are directed by your supervisor to operate the 10-KW generator set. The HMMWV-mounted tactical quiet generator (TQG) is emplaced at the Sentinel site. Power cables are connected and the generator is grounded to the ground stake. The DC CONTROL POWER circuit breaker (CB1) located behind the control panel is pressed in and the AC voltage reconnection switch is in the 120/208V 3PH position. The DEAD CRANK switch in the engine compartment is in the NORMAL position. The following are available:

1. 10-KW generator set.
2. Drip pans or similar initial containment devices.
3. PPE, spill kit, and absorbent materials.
4. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: The generator set is running smoothly and supplying 120 vac to connected equipment, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Prevented hazardous material contamination of the environment.	——	——
2. Ensured proper grounding.	——	——
3. Ensured power cable from ATG was securely connected to generator power output cable.	——	——
4. Performed pre-start procedures.	——	——
5. Performed starting and operating procedures.	——	——
6. Tested ground fault interrupt (GFI) circuit.	——	——
7. Periodically checked generator indicators and gauges for normal operation.	——	——
8. Performed generator shutdown.	——	——

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

    Related
    AR 200-1
    TM 9-6115-642-10

OPERATE THE UST WITH GENERATOR SET, 20-KW AND ECU

441-096-1181

Conditions: Your supervisor directs you to start and operate the 20-KW tactical quiet generator set. All emplacement procedures are complete, the system is grounded, and all pre-operational checks and services are completed. Assistance from a crew member and the following are available:

1. 20-KW generator set.
2. Fuel and oil as required.
3. Grounding rod with ground cable.
4. Equipment power cable.
5. Drip pans or similar initial containment devices.
6. PPE, spill kit, and absorbent materials.
7. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: Ensures the generator set is running smoothly at the GOVERN position and supplying 120 vac to connected equipment, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Steps

1. Engine and Generator Set Starting Procedures:
    a. Place POWER SELECTOR switch to OFF.
    b. Ensure shelter wiring cables from the wall mount receptacles, J2, J3, and J4 are connected and all circuit breakers are off.
    c. Turn ENGINE START switch counterclockwise to PREHEAT and hold for 10 seconds (longer if weather is cold).
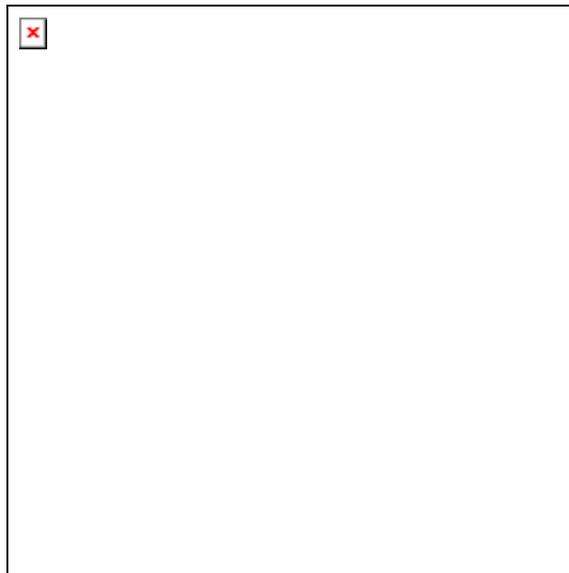
    d. Hold ENGINE START switch to START position (spring-return to RUN). Release the switch when engine starts (switch returns to RUN position).
    e. Check OIL PRESSURE gage on the instrument panel for minimum 20 psi (if pressure does not rise promptly to 20 psi, stop the engine by turning the engine selector switch to OFF and investigate the problem).

Performance Steps

   f. Turn POWER SELECTOR switch from OFF to GEN position (ensure circuit breaker CB5 is in the OFF position).
   g. Turn AMMETER/VOLTMETER switch from OFF to L1-L2 position.
   h. Check the generator output with the AMMETER/VOLTMETER switch in the L1-L2, L2-L3, and L3-L1 positions, verifying generator output voltage is 208 volts ac at each position (use the VOLTAGE ADJUST potentiometer on the instrument panel to adjust the voltage) and the frequency is approximately 60.5 Hz.
   i. Close generator circuit breaker CB5. Close all other circuit breakers that are needed (verify that the power indicator light adjacent to the receptacle illuminates when the circuit breaker is closed).

2. ECU Starting and Stopping Procedures:
   a. Starting procedures for ECU:
       (1) Ensure the insulated ducts between the shelter port and the ECU (top ports are supply; lower ports are for return) are connected.
           (a) Ensure the ducts are as straight as possible and fully extended to maximize airflow.
           (b) Ensure that the airflow to the condenser fan is unobstructed.
       (2) Ensure ECU circuit breaker CB1 is closed.
Note: Green power indicator should be lit and the phase indicator should not be lit.
       (3) Set thermostat to desired mode and temperature setting.
           (a) OFF: No ECU operation.
           (b) FAN: Circulating fan only operation.
           (c) COOL: Compressor and fan operation.
           (d) HEAT: Electric heating element and fan operation.
   b. Stopping procedures for ECU:
       (1) Place ECU SELECTOR switch to OFF.
       (2) On the generator set control panel, turn ECU circuit breaker (CB1) to OFF.

3. Stopping Procedures (Generator Set and ENGINE):
   a. Place all electrical devices in the OFF position.
   b. Place all circuit breakers in the OFF position.
   c. Place POWER SELECTOR switch to OFF.
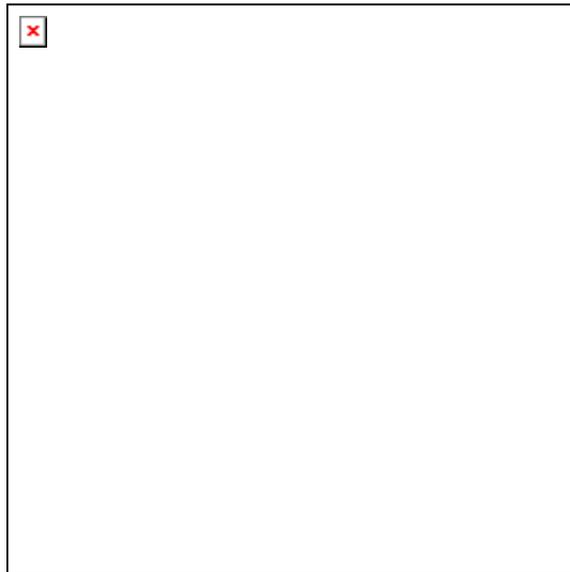
   d. Place ENGINE SELECTOR switch to OFF.

Performance Measures	**GO**	**NO GO**
1. Prevented hazardous material contamination of the environment.	‒‒‒	‒‒‒
2. Performed engine and generator set starting procedures.	‒‒‒	‒‒‒
3. Performed ECU starting procedures.	‒‒‒	‒‒‒
4. Performed stopping procedures for ECU.	‒‒‒	‒‒‒
5. Performed engine and generator set stopping procedures.	‒‒‒	‒‒‒

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                            AR 200-1
                                                            DSH MANUAL T2-90000

PERFORM PMCS ON THE UST WITH GENERATOR SET, 20-KW AND ECU

441-096-1182

Conditions: Your supervisor directs you to perform before-, during-, or after-operation PMCS on the generator set. The crew has emplaced the generator, and assistance from a crew member and the following are available:

1. 20-KW generator set.
2. Applicable TM.
3. Basic issue items (BII).
4. Empty fuel can.
5. POL as required.
6. Distilled water.
7. DA Form 2404 or 5988-E.
8. Drip pans or similar initial containment devices.
9. PPE, spill kit, and absorbent materials.
10. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: Performs the before-, during-, or after-operation PMCS, per applicable TM, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Steps

1. Before Operation:
Note: If any deficiencies are noted on the following checks and the item does not have an asterisk (*), the generator is not ready/available. If any leak is a Class III leak, the generator is not ready/available.
   a. Visually inspect the generator set for fuel, oil hydraulic and coolant leaks. Check for proper ground connections.
   b. Inspect for obstructions interfering with intakes and exhausts.
   c. Verify that trailer is properly positioned and level.
   d. Inspect fire extinguisher for presence, inspection date, and charge.
   e. Visually inspect batteries for secure mounting, cracked or broken cases, corrosion on terminal posts, damaged or frayed cables, and loose connections. Check electrolyte level if applicable.
   f. Visually inspect cooling system for leaks, damage, and loose or missing parts. Check coolant level. Proper level is 1 inch below the overflow pipe and the bottle is 1/3 to 1/2 full with cool engine. Add coolant as required. Check for the following:
      (1) Radiator damaged.
      (2) Hoses missing clamps or Class III leak.
      (3) Fan damaged, loose, or has unusual noise.
      (4) Fan belt worn, broken, or missing.
   g. Check engine oil level (should be between two marks). Add oil as necessary.
   h. Check all doors and panel for proper sealing and fit.
   i. Check generator air screen.
   j. Check air cleaner dust valve.
   k. Inspect ECU for the following:
      (1) Fan bearings for serviceability, grease.
      (2) Intake and exhaust air louvers are free of debris, inside and outside the enclosure.
      (3) Water buildup inside the ECU enclosure.
      (4) Condenser and evaporator fan belts.
      (5) Condenser and evaporator coils.

2. During Operation:
   a. Monitor cooling system for leaks and proper level.

Performance Steps

       b. Monitor all doors and panel for proper sealing and fit.

       c. Ensure control panel indications are within specified limits:

           (1) Periodically monitor engine oil pressure (20-55 psi).

           (2) Frequency meter at 60 Hz +/- 2 percent.

           (3) Kilowatt meter not exceeding 20 KW.

           (4) AC ammeter not exceeding 60 amperes.

           (5) AC voltmeter indicating 208 volts.

           (6) Battery charging ammeter indicates 0 to +5 amps, depending on the battery charging rate.

           (7) DC Voltmeter indicating 24-28 volts.

              Adjust voltage potentiometer at lower right of instrument panel if necessary.

           (8) Fault indicator panel lights (coolant, overspeed, and low oil pressure) should be off during operation. Equipment is not ready/available if any bulbs are not lit when TEST or RESET switch is placed to TEST or RESET.

           (9) Coolant temperature gauge indication should be 170 to 200 degrees. Equipment is not ready/available if temperature exceeds 200 degrees.

           (10) Fuel level gauge indicates quantity of fuel in main tank.

  3. After Operation:

       a. Fill fuel tank at completion of operation.

       b. Check proper parking brake operation. Adjust using knob at the end of parking brake lever if needed.

  4. 50 Hours or 2 Weeks:

       a. Check fuel filter.

       b. Check engine air filter element. Clean dust cap and air element. Replace as necessary

       c. Check belt tension:

           (1) Should not have worn spots, cracks, or signs of fraying.

           (2) Should have approximately 1/2 inch of deflection with thumb pressure exerted midway between the pulleys.

       d. Check ECU air filter.

       e. Check ECU condenser and evaporator fan belts.

  5. 125 Hours: Inspect air filter.

  6. 250 Hours:

       a. Service fire extinguisher.

       b. Service battery.

       c. Change engine oil and filter.

       d. Check fan and alternator belt tension.

       e. Check surge break fluid for the following:

           (1) Evidence of being dirty, watery, cloudy, or rusty.

           (2) Should be level with the top of the reservoir (just below the cap threads).

       f. Check parking brake (adjust if necessary).

       g. Clean generator air screen.

       h. Clean ECU condenser and evaporator coils.

  7. 500 Hours:

       a. Change air filter.

       b. Change fuel filter.

  8. 1000 Hours:

       a. Inspect external for loose or missing bolts, nuts, or fittings.

       b. Drain and replace coolant.

  9. Trailer.

       a. Before Operation:

           (1) Check for loose bolts, nuts, or screws, or broken light reflectors.

Performance Steps

        (2) Inspect for gaps in welds.
        (3) Inspect for cracked or broken wiring harness insulation, bare wires, and loose or broken connectors.
        (4) Inspect wheel and tire for the following;
          (a) Damaged wheel(s); loose or missing lug nuts.
          (b) Cuts, foreign objects, or unusual tread wear on tires.
          (c) Proper tire pressure.
          (d) Spare tire securely bolted to the trailer.
        (5) Inspect drawbar coupler, inter-vehicular cable, and safety chains for the following:
          (a) Insecurely mounted and/or damaged drawbar.
          (b) Cuts and/or breaks in inter-vehicular cable.
          (c) Insecurely mounted and/or damaged safety chains.
        (6) Check tailgate assembly for damage, missing parts.
        (7) Check front support leg for ability to support trailer and ability to place in stowed position.
        (8) Inspect canvas cover assembly for the following:
          (a) Missing or unserviceable tie-down straps and snap fasteners.
          (b) Missing or unserviceable straps and buckles.
          (c) Ripped seams and tears.
      b. With vehicle inter-vehicular cables connected--
        (1) Operate towing vehicle light switch through all settings and check stoplights/taillights.
        (2) Listen for any usual noise(s) while towing trailer.
        (3) During towing, make sure trailer is tracking correctly behind towing vehicle with no side pull.
        (4) Brake system.
          (a) Check for brake fluid leakage from master cylinder, hydraulic brake tube assemblies, hydraulic brake hose, and fittings.
          (b) Apply parking brakes and move trailer slightly to see if parking brakes hold the wheels.

Performance Measures   **GO**   **NO GO**

1. Prevented hazardous material contamination of the environment.   ——   ——

2. Generator and ECU: ——   ——
    a. Performed before-operation checks.
    b. Performed during-operation checks.
    c. Performed after-operation checks.
    d. Performed 50-hour or 2-week checks.
    e. Performed 125-hour checks.
    f. Performed 250-hour checks.
    g. Performed 500-hour checks.
    h. Performed 1000-hour Checks.

3. Trailer: ——   ——
    a. Performed before-operation checks.
    b. Performed during-operation checks.
    c. Performed after-operation checks.

4. Recorded all actions taken on DA Form 2404 or 5988-E and submitted form to   ——   ——
    supervisor.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
    DA FORM 2404   AR 200-1
    DA FORM 5988-E   DA PAM 738-750
                                                          DSH MANUAL T2-90000

TROUBLESHOOT THE UST WITH GENERATOR SET, 20-KW AND ECU
441-096-1183

Conditions: Your section chief directs you to perform operator troubleshooting procedures on the generator set. You detect a fault while performing PMCS or you are given a DA Form 2404 or 5988E with a reported fault. Assistance from a crew member and the following are available:

1. 20-KW generator set.
2. POL.
3. Tool kit.
4. DA Form 2404 or 5988E.
5. DA Form 2407.
6. Applicable TM.

Standards: Corrects all correctable deficiencies, records all uncorrectable deficiencies on DA Form 2404 or 5988E, and submits the form to supervisor. Requests higher-level maintenance, if directed by the section chief, on DA Form 2407, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Steps

1. Engine does not crank.
    a. Check the battery for improperly connected or corroded terminals and loose or broken wires.
    b. Check for proper battery voltage.

2. Engine cranks but does not start.
Note: If an over temperature, low lubrication oil pressure, or overspeed condition is present or has occurred, the engine selector switch must be turned to the OFF position and then restarted. These conditions will cause the fuel actuator to de-energize and shut off fuel to the engine.
    a. Check fuel level.
    b. Check FUEL SELECTOR switch for proper position (should be in TRAILER position if drawing fuel from the trailer fuel tank and AUXILIARY position if drawing from an external source).
    c. Check fuel filter.
    d. Check fuel line.

3. Engine cranks but does not start (below 32 degrees F).
    a. Ensure generator has D1 rated fuel.
    b. Ensure proper oil is being used.

4. Engine stops.
    a. Check engine coolant level (should be less than 230 degrees).
    b. Ensure that generator set is not overloaded, by monitoring the wattmeter on the instrument panel.
    c. Observe that exhaust gas or cooling air is not being re-circulated.
    d. Ensure that air inlets or exhausts are not obstructed.
    e. Ensure fan belt has proper tension and is not worn.
    f. Check lubrication level.
    g. Check coolant level.
    h. Check coolant system for obstruction.

5. Excessive exhaust smoke.
    a. White smoke - check and drain fuel filter.
    b. Faint blue smoke - turn on ECU or apply additional load.
    c. Blue smoke - check oil level.
    d. Black smoke - check generator for overload, dirty or choked air filter, and excessive air inlet temperatures.

Performance Steps

    6. Excessive carbon deposits.
        a. Check for dirty or clogged air filter.
        b. Ensure exhaust system is not blocked or obstructed.
        c. Check for adequate and proper fuel and oil.
        d. Ensure generator is not running at less than 30 percent of full load.

Performance Measures	**GO**	**NO GO**

1. Performed troubleshooting on the following symptoms:
   a. Engine did not crank.
   b. Engine cranked but did not start (below 32 degrees F).
   c. Engine stopped.
   d. Excessive exhaust smoke.
   e. Excessive carbon deposits.
	——	——

2. Recorded all actions taken on DA Form 2404 or 5988E.	——	——
3. Notified section chief of any uncorrectable faults.	——	——
4. Requested higher level of maintenance support on DA Form 2407 if directed by supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 2407	DA PAM 738-750
DA FORM 5988-E	DSH MANUAL T2-90000

OPERATE THE UST WITH GENERATOR SET, 35-KW

441-096-1184

Conditions: All emplacement procedures are complete, the system is grounded, all pre-operational checks and services are completed, and your supervisor directs you to start and operate the 35-KW tactical quiet generator set. Assistance from a crew member and the following are available:

1. 35-KW generator set.
2. Fuel and oil as required.
3. Grounding rod with ground cable.
4. Equipment power cable.
5. Drip pans or similar initial containment devices.
6. PPE, spill kit, and absorbent materials.
7. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: Ensures the generator set is running smoothly and supplying 120 vac to connected equipment, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Steps

1. Start Procedure:
    a. Ensure POWER SELECTION switch is in the OFF position.
    b. Turn AMMETER/VOLTMETER switch to any "leg" position.
    c. Turn ENGINE START switch counterclockwise to PREHEAT and hold for 10 seconds (longer if weather is cold).
    d. Turn ENGINE START switch clockwise to START position. Release switch when engine starts.
    e. Turn POWER SELECTION switch to GEN position.
    f. Place generator circuit breakers to ON position (place other circuit breakers to ON as needed).

2. Stop Procedure:
    a. Place all electrical devices to OFF.
    b. Place all circuit breakers to OFF.
    c. Turn POWER SELECTION switch to OFF position.
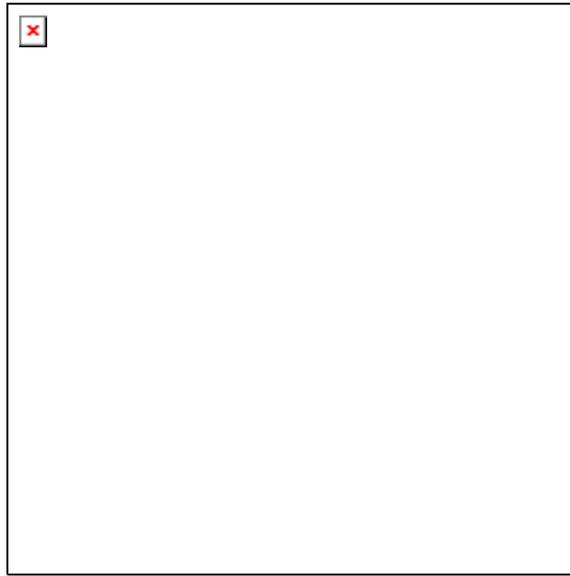
Performance Steps

     d. Turn ENGINE START switch to OFF position.

Performance Measures	**GO**	**NO GO**
1. Prevented hazardous material contamination of the environment.	——	——
2. Performed start procedure.	——	——
3. Performed operating procedures.	——	——
4. Performed stop procedure.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                     AR 200-1
                                                     DSH MANUAL T2-90000

PERFORM PMCS ON THE UST WITH GENERATOR SET, 35-KW
441-096-1185

Conditions: The system is emplaced and your supervisor directs you to perform before-, during-, or after-operation PMCS on the generator set. Assistance from a crew member and the following are available:

 1. 35-KW generator set.
 2. Applicable TM.
 3. Basic issue items (BII).
 4. Empty fuel can.
 5. Fuel and oil as required.
 6. Distilled water.
 7. DA Form 2404 or 5988-E.
 8. Drip pans or similar initial containment devices.
 9. PPE, spill kit, and absorbent materials.
10. Rags and approved accumulation containers for contaminated soil/absorbent materials/debris/hazardous fluids.

Standards: Performs the before-, during-, or after-operation PMCS, per applicable TM, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Steps

  1. Before Operation:
Note: If any deficiencies are noted on the following checks and the item does not have an asterisk (*), the generator is not ready/available. If any leak is a Class III leak, the generator is not ready/available.
        a. Visually inspect the generator set for fuel, oil, hydraulic, and coolant leaks. Check for proper ground connections.
        b. Visually inspect batteries for cracked or broken cases, corrosion on terminal posts, damaged or frayed cables, and loose connections. Check electrolyte level.
        c. Check coolant level. Proper level is 2 inches below the overflow pipe. Add coolant as required.
        d. Check engine oil level. Add oil as necessary.
        e. Check all doors and panel for proper sealing and fit.
         f. Check surge brake operation.
        g. Check air cleaner dust valve and restriction indicator.
        h. Check taillights for proper operation.

  2. During Operation:
        a. Monitor cooling system for leaks and proper level.
        b. Periodically monitor engine oil level.
        c. Monitor all doors and panel for proper sealing and fit.
        d. Ensure control panel indications are within specified limits:
            (1) Frequency meter at 60 Hz.
            (2) Kilowatt meter not exceeding 100 percent.
            (3) AC Ammeter not exceeding 100 percent.
            (4) AC Voltmeter indicating 208 volts.
            (5) Battery charging ammeter indicates 0 to +20 amps, depending on the battery charging rate. Should indicate in green portion of scale during normal operation.
            (6) Fault indicator panel lights should be off during operation. Bulbs are not lit when TEST or RESET switch is placed to TEST or RESET and/or fail to extinguish when switch is released.
            (7) Engine oil pressure gage indication should be 20 to 55 psi.

Performance Steps

        (8) Coolant temperature gauge indication should be 170 to 200 degrees. Equipment is not ready/available if temperature exceeds 200 degrees.

        (9) Fuel level gauge indicates quantity of fuel in main tank.

3. After Operation:
    a. Fill fuel tank at completion of operation.
    b. Check proper parking brake operation. Adjust using knob at the end of parking brake lever if needed.

4. 50 Hours or 2 Weeks: Check fuel filter.

5. 250 Hours:
    a. Service fire extinguisher.
    b. Service battery.
    c. Change engine oil and filter.
    d. Check fan and alternator belt tension.

6. Trailer.
    a. Before:
        (1) Check for loose bolts, nuts, or screws.
        (2) Inspect for gaps in welds.
        (3) Inspect for cracked or broken wiring harness insulation, bare wires, and loose or broken connectors.
        (4) Inspect wheel and tire for the following:
            (a) Damaged wheel(s); loose or missing lug nuts.
            (b) Cuts, foreign objects, or unusual tread wear on tires.
            (c) Proper tire pressure.
        (5) Inspect drawbar coupler, intervehicular cable, and safety chains for the following:
            (a) Insecurely mounted and/or damaged drawbar.
            (b) Cuts and/or breaks in intervehicular cable.
            (c) Insecurely mounted and/or damaged safety chains.
        (6) Check tailgate assembly for damage or missing parts.
        (7) Check front support leg for ability to support trailer and ability to place in stowed position.
        (8) Check front rack assembly for unserviceable slats and missing or unserviceable strap hinge assemblies.
        (9) Inspect for unserviceable bow assemblies.
     (10) Inspect side rack assembly for the following:
            (a) Missing or unserviceable bow clips.
            (b) Unserviceable stakes.
            (c) Unserviceable slats.
            (d) Missing or unserviceable strap hinge assemblies.
     (11) Inspect canvas cover assembly for ;
            (a) Missing or unserviceable tie-down straps and snap fasteners.
            (b) Missing or unserviceable ropes.
            (c) Missing or unserviceable straps and buckles.
            (d) Ripped seams and tears.
    b. With vehicle intervehicular cables connected--
        (1) Operate towing vehicle light switch through all settings and check stoplights/taillights.
        (2) Listen for any usual noise(s) while towing trailer.
        (3) Make sure trailer is tracking correctly behind towing vehicle with no side pull.
        (4) Brake system:
            (a) Check for brake fluid leakage from master cylinder, hydraulic brake tube assemblies, hydraulic brake hose, and fittings.
            (b) Apply handbrakes and move trailer slightly to see if handbrakes hold the wheels.

Performance Measures	**GO**	**NO GO**
1. Prevented hazardous material contamination of the environment.	——	——
2. Generator:	——	——

    a. Performed before-operation PMCS.
    b. Performed during-operation PMCS.
    c. Performed after-operation PMCS.
    d. Performed 50-hour or 2-week PMCS.
    e. Performed 250-hour PMCS.

3. Trailer:	——	——

    a. Performed before-operation PMCS.
    b. Performed during-operation PMCS.
    c. Performed after-operation PMCS.

4. Recorded all actions taken on DA Form 2404 or 5988-E and submitted form to supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
	DSH MANUAL T2-90000

TROUBLESHOOT THE UST WITH GENERATOR SET, 35-KW
441-096-1186

Conditions: You detect a fault while performing PMCS or you are given a DA Form 2404 or 5988-E with a reported fault, and your section chief directs you to perform operator troubleshooting procedures on the generator.   Assistance from a crew member and the following are available:

1. 35-KW generator set.
2. POL.
3. Tool kit.
4. DA Form 2404 or 5988-E.
5. DA Form 2407.
6. Applicable TM.

Standards: Corrects all correctable deficiencies, records all uncorrectable deficiencies on DA Form 2404 or 5988E, and submits the form to supervisor. Requests higher-level maintenance, if directed by the section chief, on DA Form 2407, per applicable TM, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Steps

1. Engine hard to start or will not start.
     a. Review starting procedure.
     b. Verify fuel is in tank.
     c. See "Starter Cranks Slowly."
     d. Ensure viscosity of oil is correct.
     e. Ensure proper type of fuel is being used.

2. Engine knocks.
     a. Check engine oil level.
     b. Remove and visually check thermostat
     c. See "Engine Overheats."

3. Engine runs irregularly or stalls frequently.
     a. Remove and check thermostat.
     b. Replace fuel filter.

4. Below normal engine temperature: Remove and check thermostat.

5. Lack of power.
     a. Verify engine is not overloaded.
     b. Clean air cleaner.
     c. Replace fuel filter.
     d. Check for proper fuel.
     e. Remove and check thermostat.

6. Low oil pressure.
     a. Check oil level.
     b. Check viscosity of oil.

7. High oil consumption.
     a. Check oil viscosity.
     b. Check for oil leaks.

8. Engine emits white smoke.
     a. Check for proper fuel.
     b. Ensure engine is at normal operating temperature.

Performance Steps

9. Engine emits black smoke.
    a. Check for proper fuel.
    b. Clean air cleaner.
    c. Reduce load.

10. Engine overheats.
    a. Reduce engine load.
    b. Check cooling system.
    c. Check belt tension.
    d. Flush cooling system.
    e. Check thermostat.
    f. Check grade of fuel.

11. High fuel consumption
    a. Use proper fuel.
    b. Clean air cleaner.
    c. Reduce load.

Performance Measures	GO	NO GO

1. Performed troubleshooting on the following symptoms:
   a. Engine hard to start or did not start.
   b. Engine knocked.
   c. Removed and visually checked thermostat.
   d. Checked "Engine Overheats."
   e. Engine ran irregularly or stalled frequently.
   f. Below normal engine temperature.
   g. Lack of power.
   h. Low oil pressure.
   i. High oil consumption.
   j. Engine emitted white smoke.
   k. Engine emitted black smoke.
   l. Engine overheated.
   m. High fuel consumption.
	――	――

2. Recorded all actions taken on DA Form 2404 or 5988E.	――	――
3. Notified section chief of any uncorrectable faults.	――	――
4. Requested higher level of maintenance support on DA Form 2407, if directed by supervisor.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 2407	DA PAM 738-750
DA FORM 5988-E	DSH MANUAL T2-90000

Subject Area 6: Vehicle Operations

PERFORM PMCS ON A TRACK VEHICLE
441-096-1069

Conditions: Your supervisor directs you to perform before-, during-, and after-operation PMCS on the M1068 tracked vehicle. The following are available:

1. M1068 tracked vehicle.
2. TM 9-2350-261-10.
3. BII.
4. DA Form 2404 or 5988-E.
5. Pen or pencil.
6. Replacement parts as required.

Standards: Performs the required PMCS, per TM 9-2350-261-10, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Prevented hazardous material contamination of the environment.	——	——
2. Entered required information in header portion of DA Form 2404 or 5988-E if used.	——	——
3. Performed before-operation inspection using PMCS tables in TM 9-2350-261-10, Section II.	——	——
4. Performed during-operation inspection as listed in TM 9-2350-261-10, Section II.	——	——
5. Performed weekly PMCS as listed in TM 9-2350-261-10, Section II.	——	——
6. Performed monthly PMCS as listed in TM 9-2350-261-10, Section II.	——	——
7. Corrected all deficiencies (faults) within the operator's level of maintenance using TM 9-2350-261-10, Section IV.	——	——
8. Submitted completed DA Form 2404 or 5988-E to supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 9-2350-261-10	

DRIVE AN M1068 LIGHT TRACK VEHICLE
441-096-1070

Conditions: Given an M1068 series vehicle and BII and directed to drive a M1068 series vehicle.

Standards: Drives the M1068 light track vehicle across varying terrain in all weather conditions. Applies driving techniques for operating a tracked vehicle across varying types of terrain and in all weather conditions, per applicable TM, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Steps

1. Before driving vehicle--
    a. Raise ramp and lock (if ramp is down).
    b. Close ramp access door if open.
    c. Close power plant access doors (if open).
    d. Adjust driver's seat as required.
    e. Connect CVC helmet to intercom control box.
    f. Fasten seat belt and shoulder harness.
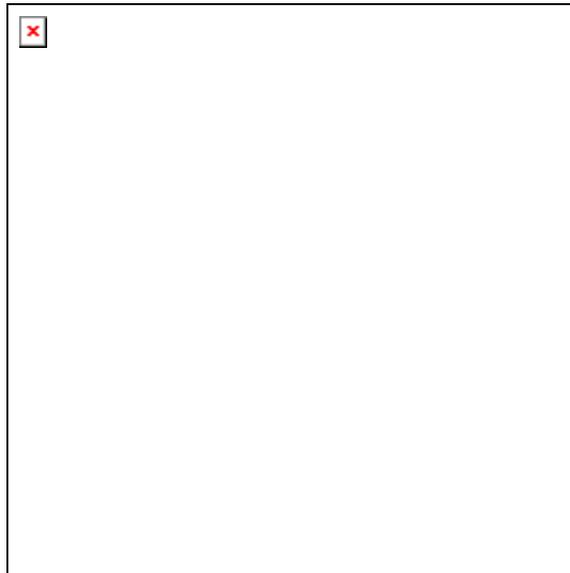
2. Start engine.
    a. Lock steering levers by pulling back hard on both levers while pressing lock buttons.
    b. Shift range selector lever to neutral (N) range.
    c. Turn MASTER SWITCH to ON position.
    d. Check that BATT GEN indicator is in yellow or green zone.
    e. Check that ENGINE OIL HI TEMP LO PRESS warning lamp is on.
    f. Push fuel cutoff control in.
    g. Pull air ventilator control out.
    h. Press horn switch to warn personnel, if tactical situation permits.
    i. Press START switch and hold until engine starts, but not longer than 15 seconds at a time.
  Note: If engine does not start, wait 30 seconds and try again.
    j. Check that ENGINE OIL HI TEMP LO PRESS lamp goes off within 10 seconds after engine starts.
    k. Check that BATT GEN indicator is in green zone.

Performance Steps
       l. Run engine at 800 to 1000 RPM for 3 to 5 minutes.
      m. Reduce engine RPM to idle speed (650 to 700 RPM).

  3. Drive carrier (normal conditions).

      a. Use reverse (R) range to back carrier.
      b. Use 1 range for steep grades, driving on ice, or entering or leaving water (below 10 MPH).
      c. Use 1-2 range for rough or soft terrain, water driving, and long or moderately steep grades (below 21 MPH).
      d. Use 1-3 range for normal driving on roads and level or rolling terrain (below 40 MPH).
      e. Use 2-3 range for high-speed driving on roads or level terrain when lightly loaded.

  4. Steer carrier (forward or reverse).
      a. Release steering lever locks by pulling back on both levers so buttons pop up.
      b. Step on accelerator pedal slightly and let steering levers go forward.
      c. Press pedal slowly and smoothly to move at desired speed.
      d. To steer right, pull back smoothly on right steering lever until carrier is moving in desired direction, then release lever forward to former position.
      e. To steer left, pull back smoothly on left steering lever until carrier is moving in desired direction, then release lever forward to former position.
      f. To slow carrier, pull back smoothly on both levers and let up on the accelerator pedal until desired speed is reached.
      g. To stop carrier, remove foot from accelerator pedal and pull back smoothly on both levers until vehicle stops.
      h. To lock brakes for parking, pull back hard on both steering levers and hold both locking buttons down, then release levers forward.

Performance Steps
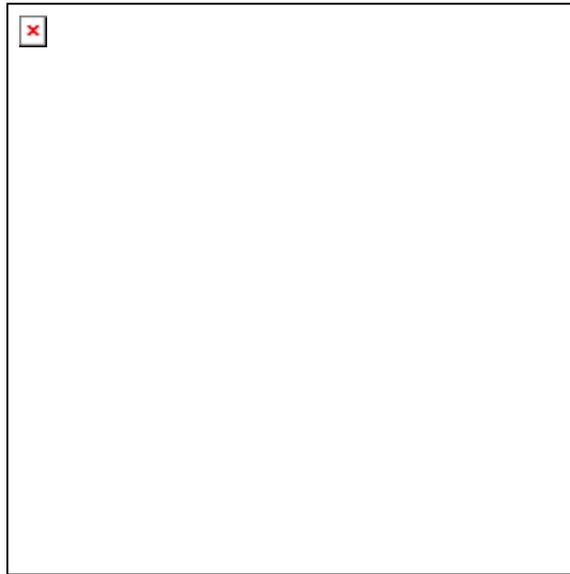
Note: Levers remain to the rear when locking buttons are engaged.
      i. Use pivot steering levers like normal steering levers (pull right lever to turn right and pull left lever to turn left).
Note: Drive at least one carrier length after pivot steer to remove strain from tracks and drive train.

  5. Stop engine.
     a. Lock steering levers.
     b. Shift range selector lever to neutral (N) range.
     c. Pull hand throttle to run engine at 800 to 1000 RPM until engine temperature gauge reads 160°F to 185°F (normal idle temperature).
     d. Push hand throttle in and allow engine to idle for a few seconds.
     e. Turn MASTER SWITCH to OFF position.

Performance Measures	**GO**	**NO GO**
1. Started engine.	____	____
2. Drove vehicle in varying terrain.	____	____
3. Halted vehicle and parked.	____	____
4. Shut off engine.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                         AR 200-1
                                         TC 21-306
                                         TM 9-2350-261-10

PERFORM PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

551-721-1352

Conditions: Given a clean tactical wheeled vehicle, trailer or other equipment requiring preventive maintenance, BII, either DA Form 2404 or DA Form 5988-E, rags and lubricants as necessary, level ground to work, spare parts as available, -10 (or 10-1, -12, -14) technical manual for the vehicle, trailer or equipment, hearing protection as necessary, and guidance on disposition of completed maintenance worksheets.

Standards: You have removed all watches, rings, and other jewelry for safety reasons. You have inspected the vehicle, trailer, or equipment according to the PMCS tables of the appropriate technical manual while wearing hearing protection, as necessary.   You have adhered to all WARNINGS, CAUTIONS, and notes concerning the items you have checked. You have distinguished between before, during, and after operation maintenance checks. Regarding faults you have detected, you have corrected all detected faults within your level of maintenance when possible. You have recorded all uncorrectable faults on either DA Form 2404 or DA Form 5988-E completely, accurately, and legibly. Once all maintenance checks were completed, you turned in the form to unit maintenance or your direct supervisor according to the unit SOP. All checks were completed without injury to personnel or damage to equipment.

 Performance Steps
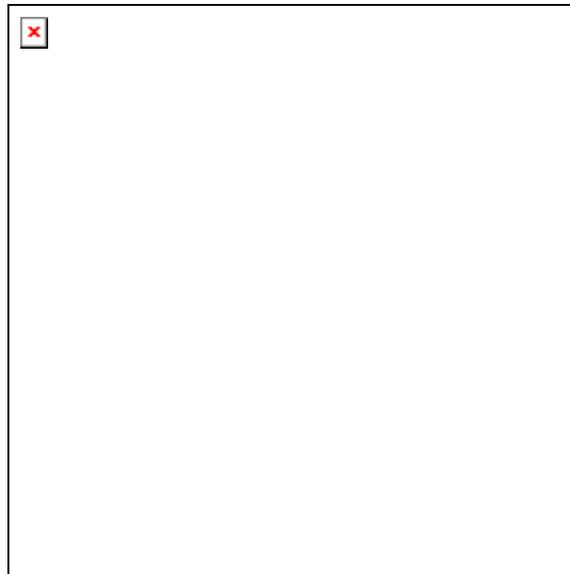
NOTES:
a. Cleanliness. Dirt, grease, oil, and debris only get in the way and may cover up a serious problem.

b. Bolts, Nuts, and Screws. Check bolts, nuts, and screws for obvious looseness, and missing, bent, or broken conditions. Look for chipped paint, bare metal, or rust around bolt heads, If any part seems loose, tighten it or notify unit maintenance.

c. Welds. Check for loose or chipped paint, rust, or gaps where parts are welded together. If a bad weld is found, notify unit maintenance.

d. Electric Wires and Connections. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and make sure wires are in good shape. If a bad wire or connector is found, notify unit maintenance.

Performance Steps

e. Hydraulic Lines and Fittings. Look for wear, damage, and leaks; make sure clamps and fittings are tight. Wet spots show leaks. A stain around a fitting or connector can mean a leak. If a leak comes from a loose-fitting connector, tighten it. If something is broken or worn out, notify unit maintenance.

f. Damage. Damage is defined as any condition that affects safety or would make the vehicle or equipment unserviceable for mission requirements.

1. Prepare for inspection.
    a. Acquire a blank copy of DA Form 2404 or DA Form 5988-E (or form from previous inspection that has had no fault entries annotated).
    b. Acquire the applicable technical manuals.
    c. Acquire all BII, tools, rags, and lubricants and available spare parts necessary for the inspection.
    d. Complete the header information for blocks 1, 2, 3, 6, and 7 of DA Form 2404 in the following manner:
        (1) Enter the name of the unit to which the vehicle or equipment belongs.
        (2) Enter the noun nomenclature and model of the vehicle or equipment.
        (3) Enter the serial or registration number. (Enter NSN if the other numbers are not available.)
        (4) Enter "PMCS" in block 6.
        (5) Enter the number and date of the referenced technical manual.
    e. Review the equipment data section information on the DA Form 5988-E for accuracy. Notify dispatcher or supervisor of discrepancies noted.
    f. Review TM for applicable WARNING and CAUTION information and applicable maintenance check items.
    g. Remove all jewelry to include rings, watches, and necklaces to avoid injury.

2. Perform before-operation preventive maintenance checks.
    a. Apply step-by-step troubleshooting procedures.
    b. Inspect vehicle, trailer, or equipment identified as before-operation interval checks from the TM.
    c. Correct all deficiencies on the spot if possible by following procedures in the TM or replacing defective parts if available.
    d. Annotate all uncorrectable faults on DA Form 2404 in the following manner:
        (1) Enter item number in 10b.
        (2) Enter status in block 10c.
        (3) Enter fault in block 10d.
        (4) Enter corrective action taken (if any by the operator) in block 10e.
        (5) Enter initials in block 10e if operators made corrections in block 10d.
    e. Annotate all uncorrectable faults on DA Form 5988-E in the following manner: Make entries as necessary under the "Maintenance Faults" section.
    f. If faults are corrected immediately, do NOT annotate on DA Form 2404 or DA Form 5988-E.
    g. Comply with all WARNINGS and CAUTIONS in the TM applicable to these procedures.

3. Perform during-operation checks on vehicle, trailer, or equipment.
    a. Apply step-by-step troubleshooting procedures.
    b. Inspect vehicle, trailer, or equipment identified as during-operation interval checks from the TM.
    c. Monitor the operation of the vehicle, trailer, or equipment for signs of loose parts, improper operation of components, worn bearings, improper air pressure, inoperative or incorrect reading gauges, unusual control, and degraded performance by listening, watching, and feeling for anything out of the ordinary.
    d. Annotate all uncorrectable faults during the operation on either DA Form 2404 or DA Form 5988-E as follows:
        (1) Blocks 10a,b,c,d,e of DA Form 2404.

Performance Steps

          (2) Under the "Maintenance Faults" section of DA Form 5988-E.
      e. If faults are corrected immediately, do NOT annotate on DA Form 2404 or DA Form 5988-E.
      f. Comply with all WARNINGS and CAUTIONS in the TM applicable to this procedure.

   4. Perform after-operation preventive maintenance checks.
      a. Apply step-by-step troubleshooting procedures.
      b. Inspect vehicle, trailer, or equipment items identified as after-operation interval checks from the TM.
      c. Correct all operator-level deficiencies noted on the spot if possible by following procedures in the TM or replacing defective parts if available.
      d. Annotate all uncorrectable faults during the operation on either DA Form 2404 or DA Form 5988-E as follows:
         (1) Blocks 10a,b,c,d,e or DA Form 2404.
         (2) Under the "Maintenance Faults" section of DA Form 5988-E.
      e. If faults are corrected immediately, do NOT annotate on DA Form 2404 or DA Form 5988-E.
      f. Comply with all WARNINGS and CAUTIONS in the TM applicable to this procedure.
      g. Complete blocks 4, 5, and 8 if uncorrectable faults were annotated on DA Form 2404. On DA Form 5988-E, sign the form when fault(s) are found and annotated.
      h. Enter today's date in block 10c if no faults were recorded and retains the form for subsequent use (DA Form 2404).
      i. On DA Form 5988-E, enter today's date in "fault description" column.

   5. Turn in DA Form 2404 or DA Form 5988-E to supervisor or unit maintenance supervisor according to unit SOP.
      a. Check completion of form by -
         (1) Checking header information.
         (2) Checking to ensure that all parts replaced are annotated on form.
         (3) Checking to ensure that you have completed blocks 4, 5, and 8 as operator if there are any faults recorded (DA Form 2404). Sign the DA Form 5988-E if there are any faults recorded.
      b. Give to supervisor or unit maintenance according to local SOP.

Evaluation Preparation: Setup: Provide for the soldier a vehicle, trailer, or item of equipment that requires preventive maintenance, BII, hearing protection, rags and lubricants, DA Form 2404 or DA Form 5988-E, applicable technical manual, and guidance of disposition of completed maintenance worksheets.

Brief Soldier: "You are to perform before-, during-, and after-operational preventive maintenance of a vehicle, trailer or item of equipment. You are to complete the maintenance work sheet properly, legibly and accurately as you proceed through all required inspection items. You are to turn in the completed form at the completion of your inspection to either your supervisor or unit maintenance according to the local SOP."

Performance Measures	**GO**	**NO GO**
1. Prepared for the inspection.	——	——
2. Performed before-operation preventive maintenance.	——	——
3. Performed during-operation preventive maintenance.	——	——
4. Performed after-operation preventive maintenance.	——	——
5. Turned in completed DD Form 2404 or DA Form 5988-E to supervisor or unit maintenance according to unit SOP.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
APPLICABLE TECH MAN	AR 200-1
	DA PAM 738-750
	FM 55-30

DRIVE VEHICLE WITH AUTOMATIC/SEMIAUTOMATIC TRANSMISSION

551-721-1364

Conditions: Given a tactical wheeled vehicle with an automatic or semiautomatic transmission with before-operation PMCS performed, dispatch, BII and -10 TM, accident forms, and logbook.

Standards: You have safely operated the vehicle by following all starting and operating procedures in the referenced vehicle technical manual. You have shifted gears and maintained full control of the vehicle during all movement (forward and backward). All driving maneuvers were completed without injury to personnel or damage to equipment.

Performance Steps

1. Prepare to drive the vehicle.
    a. Adjust the driver's seat as necessary.
    b. Adjust driving mirrors as necessary.
    c. Fasten the seat belt.
    d. Ensure the parking brake is applied.
    e. On vehicles with a front winch, ensure that power takeoff lever is in "DISENGAGE."
    f. Start vehicle engine (refer to vehicle TM for starting procedures).
    g. Observe all instruments and warning lights for proper indications.
    h. Allow engine to warm up for approximately 5 minutes.

2. Set the vehicle in motion.
    a. Turn on the lights as required.
    b. Refer to vehicle TM for proper procedures for placing the vehicle into motion.
    c. Place the gear selector lever in the appropriate gear.
    d. Check for approaching traffic.
    e. Signal to indicate the direction of movement.
    f. Release the parking brake.

3. Shift the gears.
    a. Refer to the vehicle TM for transmission shifting procedures.
    b. Release and then depress the accelerator as needed.
    c. Shift continually, as needed, until reaching the desired road speed.

Performance Steps

    4. Turn the vehicle.
        a. Prepare to turn (full turn).
            (1) Signal a right or left turn.
            (2) Observe responses of other vehicles to signals.
            (3) Reduce speed.
        b. Start to turn.
            (1) Rotate the top of the steering wheel in the direction of the turn.
            (2) Adjust the steering as required.
        c. Complete the turn.
            (1) Rotate the steering wheel in the opposite direction.
            (2) Stop rotating the steering wheel when in the straight-ahead position.
        d. Maneuver road curves.
            (1) Maneuver road curves.
            (2) Stay as far to the right as possible without leaving the lane.

    5. Stop the vehicle (nonemergency).
        a. Take foot off accelerator.
        b. Step on the engine retarder foot switch (as needed or applicable).
        c. For semiautomatic transmissions, place selector lever in proper range for driving conditions and/or load.
        d. Depress and release the accelerator as needed.
        e. Repeat steps a - d until the vehicle reaches the slowest possible road speed.
        f. Apply the service brakes.

    6. Back the vehicle.
        a. Completely stop the vehicle.
        b. Set the parking and service brake.
        c. Place the transmission selector lever in neutral (N).
        d. Post ground guides (if available) and checks behind the vehicle for any obstacles.
        e. Sound the horn (when the tactical situation permits).
        f. Place the transmission selector in the appropriate reverse gear (as applicable).
        g. Release the parking service brake.
        h. Steer a backward course to an object or place using ground guides.
        i. Completely stop the vehicle.

    7. Park the vehicle.
        a. Place the transmission selector lever in neutral (N).
        b. Set the parking brake.
        c. Shut down the engine (refer to TM for proper shutdown procedures.
            (1) Allow the engine to idle at specified speed (rpm) for 3 minutes to cool the turbocharger (as applicable).
            (2) Turn off the engine run switch.
        d. Drain air reservoir(s) as applicable or as needed.

Evaluation Preparation: Setup: Provide for the soldier a tactical wheeled vehicle with an automatic/semiautomatic transmission with before-operation preventive maintenance performed and a route to follow.

Brief Soldier: Tell the soldier to drive the vehicle safely, shifting through all gears. Tell him/her to drive the vehicle to preselected points and final destination and return to departure point.

Performance Measures	**GO**	**NO GO**
1. Prepared to drive the vehicle.	___	___
2. Set the vehicle in motion.	___	___

Performance Measures	**GO**	**NO GO**
3. Shifted the gears.	――	――
4. Turned the vehicle.	――	――
5. Stopped the vehicle (nonemergency).	――	――
6. Backed the vehicle.	――	――
7. Parked the vehicle.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If any step is failed, tell the soldier what was done wrong and how to do it correctly.

References

Required	**Related**
APPLICABLE TECH MAN	APPL TNG CIR
FM 21-305	AR 200-1

Subject Area 7: GPS Operations

PERFORM PMCS ON THE PLGR (GPS)
441-066-1032

Conditions: Your supervisor directs you to perform operator PMCS on the AN/PSN-11 precision lightweight GPS receiver (PLGR). The following are available:

1.   A fully operational PLGR.
2.   DA Form 2404 or DA Form 5988-E.
3. TM 11-5825-291-13.

Standards: Performs the PMCS on the PLGR, per TM 11-5825-291-13, without causing injury to self or other personnel, with no damage to equipment, and within the time prescribed by local command directives.

Performance Steps

1. Inspect the AN/PSN-11, mount, remote antenna, and helmet antenna for damage or missing parts.

2. Press the ON/BRT switch to turn unit on, and started self-test.

3. Verify that all segments of display light up with a test pattern of all dots.
Note: The display will show a copyright notice, software and hardware versions. Then the power-on, self-test starts. After a few seconds, self-test results and battery status are displayed. If the self-test fails, "FAILURES FOUND. PRESS MENU AND SELECT STATUS FOR DETAILS" message appears and remains until a key is pressed. If the self-test is successful, battery time used and battery time remaining are displayed and then the last computed position.

4. Replace main power battery as required.
Note: Perform PM 5 only if battery is replaced.

5. Reset battery status.
Note: The first two digits are for hours and last two for minutes. A battery with 1.5 hours of usage would be entered as "0130." The "LEFT" field is updated automatically.

6. Report any operator uncorrectable deficiencies to supervisor on DA Form 2404 or DA Form 5988-E as per DA Pam 738-750.

Performance Measures	**GO**	**NO GO**
1. Inspected the AN/PSN-11, mount, remote antenna, and helmet antenna for damaged or missing parts.	——	——
2. Pressed the ON/BRT switch to turn unit on, and started self-test.	——	——
3. Verified that all segments of display lit up with a test pattern of all dots.	——	——
4. Replaced main power battery as required.	——	——
5. Reset battery status.	——	——
6. Reported any operator uncorrectable deficiencies to supervisor on DA Form 2404 or DA Form 5988-E as per DA Pam 738-750.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
   DA FORM 2404   DA PAM 738-750
    DA FORM 5988-E
    TM 11-5825-291-13

PERFORM SETUP/INITIALIZATION OF THE PLGR (GPS)
441-066-1033

Conditions: Your precision lightweight GPS receiver (PLGR) has been zeroized, you have a new mission, or you have received a new GPS receiver. The power-on and self-test is successfully completed and your supervisor directs you to set up and initialize the PLGR.

Standards: Setup/initialization of the PLGR (GPS) is performed when "key loaded" is displayed, per TM 11-5825-291-13, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

   1. Turn PLGR on.

   2. Install crypto keys.

   3. Enter setup parameters.

   4. Enter initialization parameters.

   5. Enter way points as required.

   6. Enter a mission route as required.

   7. Transfer data from one PLGR to another as required.
Note: Data transfers require both units' serial ports be set to STANDARD.

   8. Disconnect data transfer cable and store when data is transferred.

Performance Measures	**GO**	**NO GO**
1. Turned PLGR on.	——	——
2. Installed crypto keys.	——	——
3. Entered setup parameters.	——	——
4. Entered initialization parameters.	——	——
5. Entered way points as required.	——	——
6. Entered a mission route as required.	——	——
7. Transferred data from one PLGR to another as required.	——	——
8. Disconnected data transfer cable and stored when data was transferred.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
    TM 11-5825-291-13   SOP

OPERATE THE PLGR (GPS)
441-066-1035

Conditions: The AN/PSN-11 precision lightweight GPS receiver (PLGR) is powered on and fully operational. Setup, initialization data, way points, and a mission route are entered. Your supervisor assigns you to operate the PLGR.

Standards: Operates the PLGR (GPS) per TM 11-5825-291-13, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps
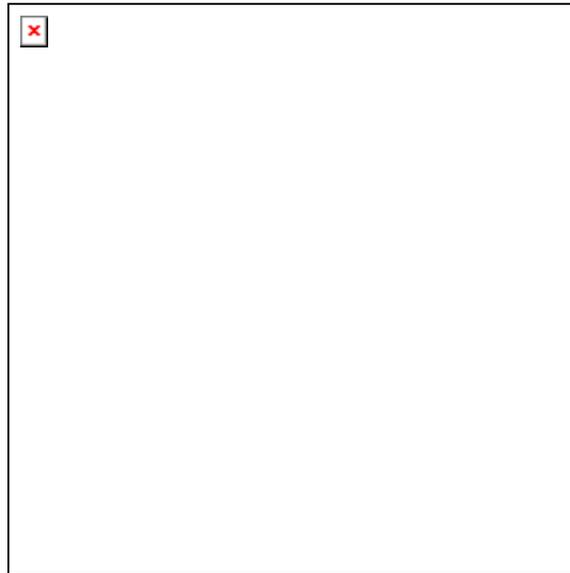
   1. Press POS key to bring up position display and verify the following:
      a. OP mode, position, and position error.
      b. Time and time error.
      c. Satellites tracked and visible satellites.

   2. Press NAV key to access navigation display.

   3. Select NAV display mode (SLOW, 2D FAST, or 3D FAST).
  Note: Use SLOW mode if traveling slower than approximately 1.5 KPH. SLOW is default mode.

   4. Select NAV method (DIRECT, COURSE TO, COURSE FROM, or ROUTE).

   5. Select a destination way point (final way point for a course).

   6. During navigation, respond to alerts (position error and corridor alert).

   7. Calculate relative position of a target.

   8. Survey a position.

  9. Provide timing data to SINCGARS radio.

Performance Measures	**GO**	**NO GO**
1. Pressed POS key to bring up position display and verified information.	____	____

Performance Measures	**GO**	**NO GO**
2. Pressed NAV key to access navigation display.	――	――
3. Selected NAV display mode (SLOW, 2D FAST, or 3D FAST).	――	――
4. Selected NAV method (DIRECT, COURSE TO, COURSE FROM, or ROUTE).	――	――
5. Selected a destination way point (final way point for a course).	――	――
6. Responded to alerts (position error and corridor alert) during navigation.	――	――
7. Calculated relative position of a target.	――	――
8. Surveyed a position.	――	――
9. Provided timing data to SINCGARS radio.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
TM 11-5825-291-13	SOP

CONNECT PLGR (GPS) TO EXTERNAL DEVICES
441-066-1037

Conditions: Your supervisor has directed you to install an AN/PSN-11 precision lightweight GPS receiver (PLGR) in your vehicle or to communications or computer equipment. An AN/PSN-11, mount, and all auxiliary equipment are available.

Standards: Connects PLGR to an external power source and ensures it is operating, per TM 11-5825-291-13, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Auxiliary equipment for the AN/PSN-11 consists of the following:
    a. External AC 110/220 vac power adapter and 9-32 vdc power cable. Both connect to J4 (lower jack) on rear of the PLGR. The DC cable has an inline 2 amp fuse.
    b. Remote magnetic mount antenna with 5-meter cable and helmet-mounted antenna with 1.5-meter cable. Both connect to J3 (center jack) on rear of the PLGR.
    c. Data transfer cables connect to J2 (upper jack) on rear of PLGR.
        (1) AN/PSN-11 to AN/PSN-11 cable to load another PLGR from one already loaded with mission data.
        (2) AN/PSN-11 to PC cable for remote operations and sending file data between a PC and PLGR.
        (3) AN/PSN-11 to HAVE QUICK cable.
        (4) AN/PSN-11 programming cable with serial port connector and banana plugs for connection to a stable 12 vdc power source.
    d. AN/PSN-11 to SINCGARS cable used for time signals to SINCGARS or loading cryptokeys via a KYK-13/KOI-18 or CYZ-10 (ANCD) COMSEC fill device. This cable connects to J1 jack on top of PLGR.

2. Making proper connections:
    a. Connect to power source.
        (1) Connect the PLGR to external AC power with AC power adapter (NSN 6130-01-376-2168).
            (a) Plug AC power adapter into 110 vac outlet.
            (b) Connect cable end to J4 (lower jack) on rear of PLGR.
        (2) Connect the PLGR to external DC power with DC power cable (NSN 6150-01-375-8661).
            (a) Attach cable end with lugs to 9-32 VDC power (lead with colored stripe to positive, other lead to negative).
            (b) Attach other end of 5-meter long cable to J4 (lower jack) on rear of PLGR.
    b. Connect PLGR to SINCGARS radio or COMSEC device with fill/data cable (NSN 6150-01-375-8666).
        (1) Attach one end of cable to J1 jack on top of PLGR.
        (2) Attach free end to SINCGARS AUD/DATA jack for time fill or to KYK-13/KOI-18 CYZ-10 (ANCD) COMSEC device for loading cryptokeys into PLGR.
    c. Connect PLGR to PC for remote operations or loading mission data with PC cable (NSN 6150-01-375-8664).
        (1) Attach 9-pin straight female plug to RS-232 male jack on PC (9-pin male to 25-pin female adapter may be required for some PCs).
        (2) Connect right-angled plug end of cable to J2 (upper jack) on rear of PLGR.
    d. Connect remote antenna to PLGR for better reception by performing one of the following:
        (1) Attach remote antenna cable connector to J3 (center jack) on rear of PLGR and place mag-mount antenna on exterior roof of vehicle or building.
        (2) Attach helmet mount antenna connector to J3 (center jack) and secure antenna to helmet with elastic straps.
    e. Connect PLGR to HAVE QUICK compatible device (cable NSN 6150-01-375-8665).

Performance Steps
        (1) Attach right-angled plug to J2 (upper jack) on rear of PLGR.
        (2) Attach stripped and tinned bare wires on free end of cable as follows:
           (a) Brown wire to output signal.
           (b) Brown with white stripe wire to return signal.

Performance Measures	**GO**	**NO GO**
1. Connected PLGR to external power source as directed.	——	——
2. Connected PLGR to SINCGARS radio or COMSEC device with fill/data cable.	——	——
3. Connected PLGR to PC for remote operations or loading mission data with PC cable.	——	——
4. Connected remote antenna (magmount or helmet) to PLGR for better reception.	——	——
5. Connected PLGR to HAVE QUICK compatible device.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	**Related**
TM 11-5825-291-13	SOP
	TM 11-5810-292-13&P
	TM 11-5820-890-10-7

PERFORM EMERGENCY PROCEDURES ON THE PLGR (GPS)
441-066-1038

Conditions: You are in danger of possible capture or you suspect you may be subject to jamming or false signals, or you hear noises or smell gas coming from your AN/PSN-11 precision lightweight GPS receiver (PLGR).

Standards: Performs emergency procedures on the PLGR (GPS), per TM 11-5825-291-13, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Zeroize all data entered into or collected by PLGR.

2. Reduce jamming effects.

3. Eliminate possible spoofing errors.

4. Replace damaged or leaking battery.

Performance Measures	GO	NO GO
1. Zeroized all data entered into or collected by PLGR.	––––	––––
2. Reduced jamming effects.	––––	––––
3. Eliminated possible spoofing errors.	––––	––––
4. Replaced damaged or leaking battery.	––––	––––

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
TM 11-5825-291-13	SOP

Subject Area 8: Emplacement

INSTALL ANTENNA GROUP OE-254/GRC
113-596-1068

Conditions: This task may be performed in a nuclear, biological, and chemical environment; therefore, some iteration should be done in MOPP 4. Given a requirement and the following: 1. Antenna group OE-254/GRC. 2. A frequency-modulated radio set (installed). 3. DA Pamphlet 738-750. 4. TM 11-5985-357-13. 5. DA Form 2404.

Standards: Install OE-254/GRC and perform preventive maintenance checks and services (PMCS) per TM 11-5985-357-13 and DA Pamphlet 738-750 within 30 minutes.

Performance Steps

1. Perform PMCS. (Refer to TM 11-5985-357-13.)
   a. Inventory antenna per Figure 4-1.
   b. Perform appropriate PMCS per Table 1.
   c. Annotate results of PMCS on DA Form 2404. (Refer to DA Pamphlet 738-750.)
Note: Refer to TM 11-5985-357-13 for steps 2 through 5.

2. Plan and select an antenna installation site--
   a. As far as possible from, and never adjacent to, high-tension power lines and telephone lines; install the antenna a distance equal to at least twice the height of the antenna from power lines.
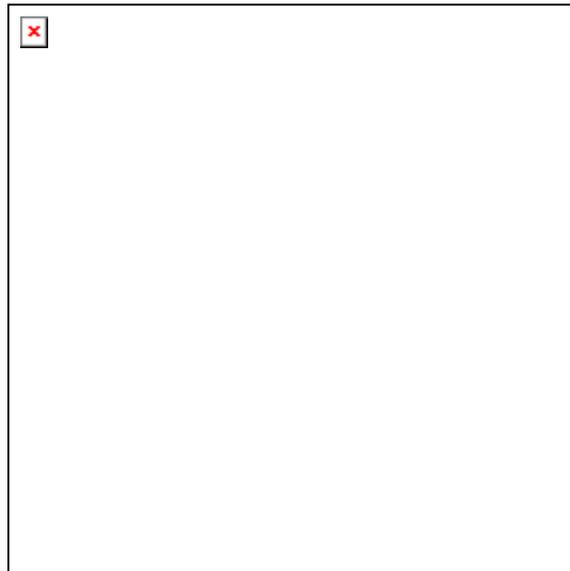
   b. In the clear, away from trees, buildings, and obstructions; preferably on the highest available land. Obstructions such as hills or man-made objects such as steel towers or steel or concrete structures tend to block or reduce transmission and reception in the direction in which they are located.
   c. As far as possible from other types of transmitting and or receiving equipment to avoid mutual coupling and interference.
   d. That is free and clear of all obstruction within a 25-foot radius (7.62 meters) of the mast and base assembly. Place the antenna so it can be reached easily during all weather conditions; initial assembly of the antenna system in the horizontal plane will require an assembly area approximately 8 feet wide and 42 feet long.

Performance Steps

  e. Ensure that the 80-foot coaxial cable will reach from the antenna to the radio set.
  f. If the antenna assembly is not to be raised to its full height, the tower and upper adapter assemblies must be used. For example, if the AS-3166/GRC is to be installed after the lower guy plate (blue), the following procedures, adapted to instructions in paragraph 2-4 of TM, shall apply:
    (1) Ensure the radius distance to the stakes is approximately 25 feet (7.62 meters)(maximum).
    (2) Assemble the upper adapter assembly to the lower adapter assembly after the lower guy plate (blue) is installed.

3. Position baseplate and guy stakes.
    a. Place the baseplate, with the ribs up, where the antenna is to be erected.
    b. Drive the stake of the mast and base assembly through the center hole of the baseplate with the hammer.
    c. Drive the two pin stakes through opposite corner holes of the baseplate.
    d. Locate the position of the four guy stake assemblies at a maximum radius of 25 feet (7.62 meters) from the center of the baseplate and a 90-degree angle between stakes (Figure 4-2). Align the baseplate ribs with two opposite stake assemblies. Approximate the guy stake positioning radius by using the five lower mast sections, the lower adapter assembly, and three upper mast sections fitted together to mark the guy stake location.
    e. Drive the four guy stakes as a 60-degree angle into the earth facing away from the mast (Figure 4-3).

4. Assemble the antenna.

Performance Steps
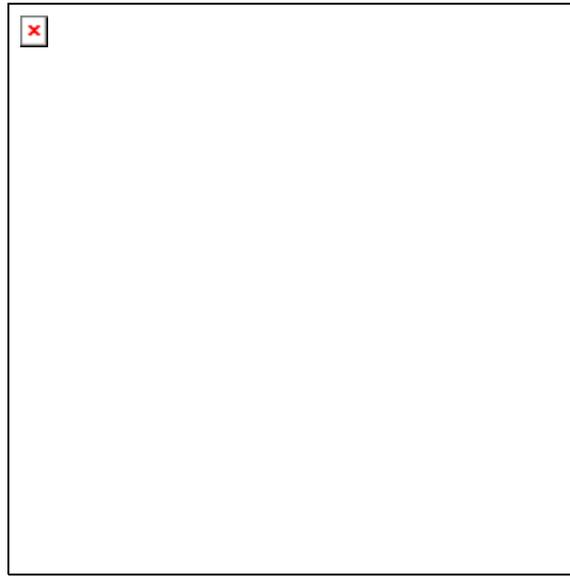
a. Assemble five lower mast sections by inserting the keyed male ends into the keyed female ends. Place the bottom section of the assembly over the movable portion of the mast and the base assembly.

b. Slide a guy plate (color coded blue) onto the male end of the lower adapter assembly. Assemble the lower adapter assembly to five lower mast sections.

c. Assemble five upper mast sections and join them with the six already assembled.

d. Slide a guy plate (color coded red) onto the male end of the upper adapter assembly. Assemble the upper adapter assembly to the mast.

e. Turn the guy plate so that one hole of each is uppermost.

f. Attach the guy hooks (color coded blue) of the four lower guy ropes to the holes of the lower guy plate.

g. Extend the guy ropes to the anchor assemblies and attach the free end guy loop of the guy snubber to the anchor hooks (Figure 4-4). When attached this way, each guy rope can be pulled so taut as desired by lengthening the guy loop.

h. Attach the upper four guys (color coded red) to the red guy plate and anchor assemblies in a similar manner (g above).

i. Pull the four side guy ropes, two upper and two lower; taut and secure them (Figure 4-5). The method for pulling guy lines taut is as follows:
   (1) Remove guy from snubber lock (Figure 4-6).
   (2) Pull snubber along guy in the direction of the mast (Figure 4-7).
   (3) Secure guy by looping guy under snubber (see Figure 4-5).

j. Lay the two bottom (lower and upper) guy ropes along one set of taut side ropes and adjust to the same length. Attach the bottom guy ropes to the back guy stake.

k. Erect the antenna mast using the procedures in paragraph 5. After the guy ropes are properly taut, lower the antenna and install the feedcone assembly with the antenna elements and erect the mast again.
   (1) Install feedcone assembly and antenna elements.
      (a) Coat the insulating extension screw thread with anticorrosion compound (silicone). Screw the insulating extension into the feedcone structure and assemble the mast.
      (b) Coat the screw threads on the AB-24, MS-117A, and MS-116A with anticorrosion compound. Assemble the antenna elements by screwing mast sections AB-24, MS-117A, and MS-116A (Figure 4-8) (one each: AB-24, MS-117A, and MS-116A in each section).

Performance Steps

(c) Assemble the antenna elements to the feedcone assembly by screwing the male ends on MS-116A into the female sockets located on the feedcone assembly (Figure 4-8). Place antenna tip caps on element tips.

(d) Unscrew the connector cap of the feedcone assembly connector and secure the cap to the connector protective bracket by sliding the clip on the cap under the retaining clip (if provided) until it is captivated in the slot. When secure, the cap will be captivated.

(e) Connect cable assembly and radio frequency CG-1889B/U to the feedcone assembly by screwing the cable connector into the connector located on the feedcone assembly.

(f) Relieve the strain on the fittings and on the cable connector by attaching the strain relief clamp through the fifth hole of the upper guy plate and attach it to the CG-1889/U. Leave a loop in the cable to prevent strain. Additional strain relief is provided by taping the cable assembly, using electrical tape, to the mast at a point just below the feedcone assembly base and at every 5 points from there to the bottom of the mast.

5. Erect antenna.
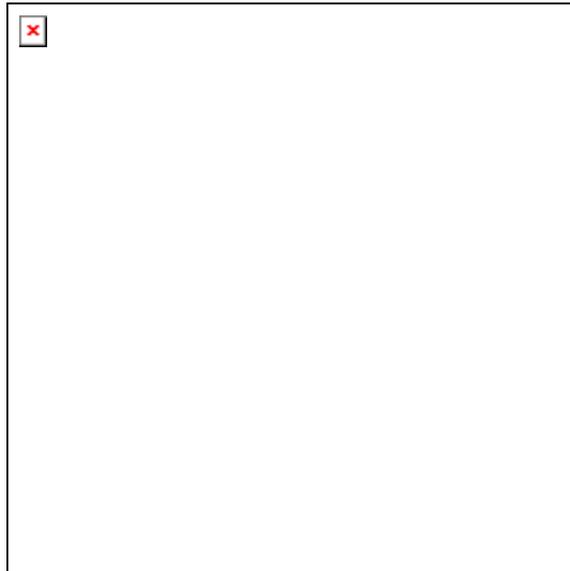
a. To raise the radial elements off the ground, obtain a box approximately 4 feet (1.2 meters) high and locate the box as a support under the antenna feedcone assembly.

b. Move the mast 90 degrees clockwise from the first stake (Figure 4-9). Adjust the tautness of the guy ropes to the first stake.

c. Move the mast 90 degrees counterclockwise from the second stake (Figure 4-9). Adjust the tautness of the guy ropes to the second stake.

d. Position yourself between the first and third guy stakes. Take the guy ropes in hand and walk toward the third stake while pulling the mast up and keeping the guy ropes leading to the second stake taut.

e. Adjust and tighten all guy ropes.

6. Connect to radio set.

Performance Steps
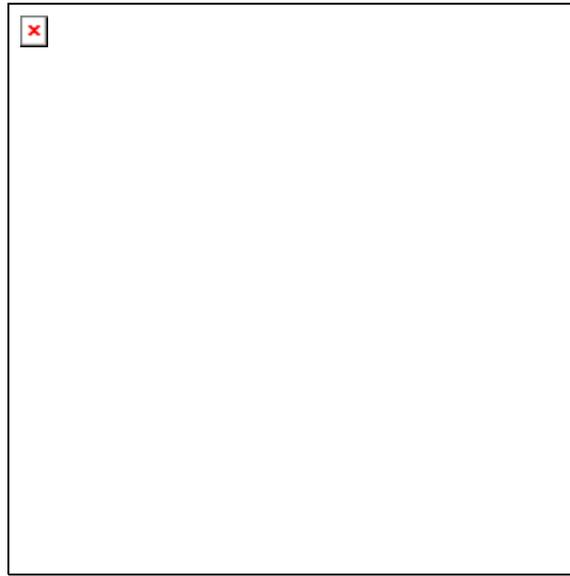
    a. Connect the CG-1889B/U connector to the connector of the radio set. Use connector adapter UG-349B/U as the interface between the CG-1889B/U connector and radios equipped with a type BNC antenna connector (Figure 4-10).

    b. To protect the cable from vehicles and persons walking in the area, lay boards on the ground on both sides of the CG-1889B/U. The boards should be thicker than the cable.

Performance Measures	**GO**	**NO GO**
(Refer to TM 11-5985-357-13 for all performance measures.)		
1. Perform PMCS.	——	——
2. Plan antenna installation site.	——	——
3. Position baseplate and guy stakes.	——	——
4. Assemble antenna equipment.	——	——
5. Erect antenna using two persons.	——	——
6. Connect the CG-1889B/U connector to the radio.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

| **Required**	**Related**
FM 24-18	DA PAM 738-750
TM 11-5985-357-13	GTA 11-3-20
	TB 43-0129

PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE SENSOR NODE
441-096-1002

Conditions: You have just arrived at the selected emplacement site. You are directed by your section chief to emplace the sensor node and prepare for action. Assistance is available.

Standards: Emplaces the sensor node, per TB 11-7010-269-10-1, TB 11-7010-305-10, and TM 11-5985-263-15, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Positioned the generator trailer and the shelter.	——	——
2. Erected the antenna mast assemblies.	——	——
3. Connected RF and data cables.	——	——
4. Attached and/or released vehicle whip antennas to upright position.	——	——
5. Applied power from the generator.	——	——
6. Powered up the shelter.	——	——
7. Performed FAAD C2I system initialization.	——	——
8. Selected track sources and link toggle.	——	——
9. Reported status to supervisor.	——	——
10. Monitored the voice nets.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	**Related**
	AR 200-1
	TB 11-7010-269-10-1
	TB 11-7010-305-10
	TM 11-5985-263-15

PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE ABMOC OR A2C2
441-096-1003

Conditions: You have just arrived at the selected emplacement site. You are directed by your supervisor to emplace the ABMOC or A2C2 and prepare for action. Assistance is available.

Standards: Emplaces the ABMOC or A2C2 per TM 11-5985-263-15, TB 11-7010-269-10-1, and TB 11-7010-305-10, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Positioned the generator trailer and the shelter.	——	——
2. Started the generator and adjusted for 120 vac, 60 hertz.	——	——
3. Erected the antennas.	——	——
4. Applied generator voltage.	——	——
5. Powered up the rigid wall shelter (RWS).	——	——
6. Initialized the JTIDS radio.	——	——
7. Performed FAAD C2I system initialization.	——	——
8. Selected track sources and link toggle menu.	——	——
9. Reported status to supervisor.	——	——
10. Monitored the voice nets.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                         Related
                                         AR 200-1
                                         TB 11-7010-269-10-1
                                         TB 11-7010-305-10
                                         TM 11-5985-263-15

POWER UP THE FAAD RWS

441-096-1004

Conditions: The FAAD RWS is emplaced and your supervisor has directed you to power it up. The generator is running and connected to the SICPS shelter power entry panel (PEP). The generator AC output circuit breaker is in the ON position.

Standards: Ensures the FAAD RWS is ready for initialization, per TB 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Preset switches to OFF prior to turning on the AC/KILL switch on the AC circuits control panel.	——	——
2. Set SOURCE SELECT switch to selected power source (internal or external).	——	——
3. Set AC/KILL switch to ON position.	——	——
4. Performed power up procedures.	——	——
5. Performed CHS power up.	——	——
6. Performed communication power up.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required   **Related**
                                                          TM 11-7010-260-12&P

ERECT THE SICPS TENT
441-096-1005

Conditions: The SICPS shelter is emplaced and operating, and your supervisor directs you to improve the site. The tent is unpacked and assistance from a crew member is available.

Standards: Erects the SICPS tent, per TM 11-7010-256-12&P, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Erected tent frame assembly.	——	——
2. Installed roof.	——	——
3. Installed lights.	——	——
4. Installed tent walls.	——	——
5. Installed tent liner.	——	——
6. Installed entrance way.	——	——
7. Installed rain gutter.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                        Related
                                        AR 200-1
                                        TM 11-7010-256-12&P

POWER UP THE FAAD STS
441-096-1006

Conditions: The sensor C2 node or BCP (light) is emplaced and your supervisor has directed you to power it up. The generator is running and connected to the power control module (PCM) of the STS. The generator AC OUTPUT circuit breaker is in the ON position.

Standards: Ensures the system is ready for initialization, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives per TM 11-7010-258-12&P.

Performance Measures	GO	NO GO
1. Performed system power-up.	⎯⎯	⎯⎯
2. Performed CHS power-up.	⎯⎯	⎯⎯
3. Performed communications power-up.	⎯⎯	⎯⎯

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                      TM 11-7010-258-12&P

PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE BATTERY CP (STS)
441-096-1013

Conditions: You have just arrived at the selected emplacement position for the BCP STS. You are directed to emplace and prepare for action. Assistance is available.

Standards: Emplaces the system to initialize and operate, and reports status to supervisor, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives per TM 11-7010-258-12&P.

Performance Measures	**GO**	**NO GO**
1. Dropped the generator trailer at the selected position.	——	——
2. Rolled up canvas sides on the generator trailer.	——	——
3. Rolled up rear canvas of STS, if required.	——	——
4. Deployed the SWGS.	——	——
5. Connected generator power cable to the power control module.	——	——
6. Installed the ladder on the STS.	——	——
7. Attached and/or released vehicle whip antennas.	——	——
8. Connected the RF cable to the EPLRS data radio.	——	——
9. Started the generator and adjusted for 120 vac and 60 hertz.	——	——
10. Switched generator AC circuit breaker to ON position.	——	——
11. Powered up the soft top shelter (Task 441-096-1006).	——	——
12. Performed FAAD C2I system initialization (Task 441-096-1189).	——	——
13. Selected track sources and link toggle.	——	——
14. Reported status to supervisor.	——	——
15. Monitored the voice nets.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                     AR 200-1
                                                   TB 11-7010-305-10
                                                   TM 11-7010-258-12&P

EMPLACE THE AB-903/G ANTENNA MAST ASSEMBLY ON THE STS
441-096-1036

Conditions: Your crew has just completed emplacing the soft top shelter (STS). You are directed by your section chief to emplace the AB-903/G mast on the STS. Assistance from a crew member is available.

Standards: Emplaces the AB-903/G antenna mast assembly on the STS, per TM 11-5985-263-15 and TM 11-7010-258-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command.

Performance Measures	**GO**	**NO GO**
1. Identified ideal location.	――	――
2. Removed the AB-903/G mast, mast mount, and ground plane from storage.	――	――
3. Installed the ASB on the front end of the HMMWV.	――	――
4. Prepared for vehicle mast setup.	――	――
5. Screwed whip antenna onto matching unit.	――	――
6. Installed counterpoise assembly on mast head.	――	――
7. Connected applicable antenna cables.	――	――
8. Elevated the AB-903/G mast using the hand crank.	――	――
9. Tightened the three lanyards to stabilize the mast.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                              AR 200-1
                                                              TM 11-5985-263-15
                                                              TM 11-7010-258-12&P

PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE AMDPCS
441-096-1056

Conditions: You have been directed by your supervisor to emplace the AMDPCS. The AMDPCS equipment, TMs, TBs, and appropriate regulations are available.

Standards: Initializes the system to ensure it is operational, and reports the status to the supervisor, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Emplaced vehicle.	――	――
2. Emplaced generator set	――	――
3. Emplaced SICPS.	――	――
4. Emplaced required antenna systems.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required   **Related**
                                                        AR 200-1
                                                        TM 11-7010-256-12&P

PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE M934 EXPANSIBLE VAN TCS
441-096-1057

Conditions: The TCS has arrived at the designated emplacement site collocated with the information and coordination central (ICC) shelter vehicle. You have been directed by your supervisor to emplace the M934 expansible van. Assistance is available.

Standards: Initializes the system to ensure it is operating, without causing injury to self or other personnel, per TM 9-2320-272-10 and TM 9-1430-606-12&P, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Emplaced generator at selected location within 80 feet of TCS van location.	——	——
2. Drove TCS van to designated location within 100 feet of ICC van.	——	——
3. Chocked M934 vehicle wheels.	——	——
4. Leveled TCS van.	——	——
5. Expanded TCS van body.	——	——
6. Installed ground rod and cable.	——	——
7. Installed TCS power cable.	——	——
8. Started generator and allowed to warm up until 115 vac readings were stable.	——	——
9. Applied power to TCS shelter.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                               AR 200-1
                                             TM 9-1430-606-12&P
                                             TM 9-2320-272-10

EMPLACE SATELLITE COMMUNICATION ANTENNA
441-096-1058

Conditions: You have just arrived at your new field location. You are directed by your supervisor to emplace the satellite antenna. The following are available:

1. Satellite antenna.
2. Radio set AN/PSC-5.
3. W6 cables.

Standards: Emplaces satellite communication antennas to ensure they are operational, per TM 11-5820-1130-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Removed antenna from carrying case.	——	——
2. Slid leg strap off leg and stowed in carrying case.	——	——
3. Pulled out and swung tripod legs to receptacles and set up on ground.	——	——
4. Extended, positioned, and tightened dipole elements.	——	——
5. Using compass, positioned antenna to desired azimuth according to operational requirements.	——	——
6. Connected cable W6 between antenna and receiver/transmitter.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
	AR 200-1
	TM 11-5820-1130-12&P

EMPLACE THE LAN
441-096-1059

Conditions: You have just arrived at your new field location. You are directed by your supervisor to emplace the LAN. The appropriate equipment, coaxial cabling, tees, and 50-ohm terminal resistors available.

Standards: Emplaces a local area network to ensure it is operational, per TM 11-7010-258-12&P, TM 11-7010-259-12&P, or TM 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Determined which LANs to use.	——	——
2. Selected appropriate cables.	——	——
3. Turned off all AC circuit breakers on the PCP.	——	——
4. Grounded each LAN system.	——	——
5. Connected all required cables.	——	——
6. Terminated each LAN with a 50-ohm terminator.	——	——
7. Verified operation of LAN.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                      Related
                                        AR 200-1
                                        TM 11-7010-258-12&P
                                        TM 11-7010-259-12&P
                                        TM 11-7010-260-12&P

PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE BATTERY CP (M1068)
441-096-1072

Conditions: You have arrived at the selected emplacement site for the BCP (M1068). The team leader directs you to emplace the M1068 TSICPS and prepare for action. Assistance is available.

Standards: Emplaces the M1068 TSCIPS system to ensure it is initialized and operating, and reports status to supervisor, per TB 11-7010-305-10, TM 11-7010-256-12&P, TM 5-6115-596-14, and TM 9-6115-644-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Positioned the vehicle at site as directed.	——	——
2. Locked steering levers and shut down the engine.	——	——
3. Deployed the SWGS.	——	——
4. Installed AB-903 antenna.	——	——
5. If remoting the on-board backup generator, placed generator in desired position, sandbagged, and applied power to TSICPS.	——	——
6. Connected power cable from BDE TOC power distribution box to EXTERNAL POWER IN receptacle located on the power entry panel (PEP) at roadside rear.	——	——
7. Connected all communication, signal, and data cables.	——	——
8. Performed TSICPS power-up procedures.	——	——
9. Performed FAAD C2I system initialization (Task 441-096-1189).	——	——
10. Selected track sources and link toggle.	——	——
11. Reported status to supervisor.	——	——
12. Monitored the voice nets.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                      AR 200-1
                                                      TB 11-7010-305-10
  TM 11-7010-256-12&P
  TM 5-6115-596-14
  TM 9-6115-644-10

PERFORM OPERATOR DUTIES DURING EMPLACEMENT OF THE SENTINEL SENSOR
441-096-1074

Conditions: You have just arrived at the selected Sentinel site. Your section chief or team leader directs you to emplace the Sentinel sensor, and prepare for action. Assistance from other crew members is available.

Standards: Emplaces the Sentinel sensor to ensure it is initialized and operating, and reports the status to team leader or section chief, per TM 9-1430-741-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Positioned ATG over site survey marker as directed by the section chief or team leader.	——	——
2. Uncoupled ATG trailer from HMMWV.	——	——
3. Stabilized ATG trailer.	——	——
4. Erected ATG antenna.	——	——
5. Positioned HMMWV.	——	——
6. Grounded Sentinel.	——	——
7. Laid and connected cables.	——	——
8. Prepared radio set for operation.	——	——
9. Connected PLGR to ATG.	——	——
10. Connected RF and data cables.	——	——
11. Installed IFF interrogator.	——	——
12. Installed KIV-16.	——	——
13. Applied power from generator.	——	——
14. Powered up the shelter.	——	——
15. Connected RCT and RCT remote cable from selected remote site to ATG.	——	——
16. Reported status to team leader or section chief.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                           Related
                                           AR 200-1
                                           TM 9-1430-741-10

EMPLACE THE RWS ANTENNA MAST
441-096-1115

Conditions: The ABMOC or A2C2 has been emplaced and your supervisor directs you to emplace the RWS antenna mast. The antenna mast is mounted on the side of the SICPS shelter in the collapsed position. Assistance from a crew member is available.

Standards: Emplaces the RWS antenna mast, per TB 11-7010-305-10 and TM 11-5985-263-15, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Unstowed JTIDS or EPLRS antenna, RF coax cable, and guy ropes from storage.	——	——
2. Attached JTIDS or EPLRS antenna to the mast.	——	——
3. Raised AB-903/G or MAS-1576 antenna mast using the hand crank.	——	——
4. Connected guy ropes to stakes and tightened them to stabilize the antenna.	——	——
5. Connected other end of RF coax cable to SEP.	——	——

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                           Related
                                         AR 200-1
                                         TB 11-7010-305-10
                                         TM 11-5985-263-15

POWER UP THE AMDPCS EQUIPMENT
441-096-1129

Conditions: Your supervisor directs you to power up the AMDPCS. The AMDPCS is emplaced. External power is available at each shelter.

Standards: Performs power-up procedures of the AMDPCS equipment to ensure it is operating, per TM 11-7010-258-12&P or TM 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Evaluation Preparation: Communications and peripheral equipment should be powered up first, in order for the software programs to recognize the equipment during the boot process.

Performance Measures	**GO**	**NO GO**
1. Ensured all peripheral equipment was properly connected.	——	——
2. Performed power-up procedures of the shelters and operations center work area.	——	——
3. Powered up air conditioning.	——	——
4. Used individual power switches to turn on all AC and DC powered equipment and workstations.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                               TM 11-7010-258-12&P
                                                               TM 11-7010-260-12&P

EMPLACE THE TADIL-A ANTENNAS
441-096-1130

Conditions: The system just arrived at its specific location. The section chief commands, "Prepare for action."

Standards: Emplaces the TADIL-A antennas, per TM 9-1430-606-12&P, TM 11-7010-258-12&P, or TM 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Identified ideal location.	——	——
2. Removed the TADIL-A duffle bag and antenna from storage to emplacement site.	——	——
3. Assembled mast sections.	——	——
4. Placed antenna adapter and antenna on top pole of mast assembly.	——	——
5. Connected coaxial cable to antenna mast assembly.	——	——
6. Raised antenna mast assembly and adjusted wire tension as needed.	——	——
7. Connected coaxial cable from AT3 to CP7/RF2 and from AT4 to CP8/RF1.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                            Related
                                            AR 200-1
                                            TM 11-7010-258-12&P
                                            TM 11-7010-260-12&P
                                            TM 9-1430-606-12&P

Subject Area 9: March Order

PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE SENSOR NODE
441-096-1001

Conditions: Your section chief directs you to prepare the sensor node soft top shelter (STS) or rigid wall shelter (RWS) for march order. Assistance is available.

Standards: Performs march order procedures of the sensor node to ensure the system is ready for road march, per TB 11-7010-269-10-1 and TB 11-7010-305-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Shut down equipment	――	――
2. Powered down shelter.	――	――
3. Disconnected and stowed antenna assembly.	――	――
4. Shut down generator.	――	――
5. Disconnected and stowed cables and SWGS.	――	――
6. Connected generator trailer to the vehicle and released trailer brakes.	――	――
7. Mounted vehicle and reported status.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    AR 200-1
                                                    TB 11-7010-269-10-1
                                                    TB 11-7010-305-10

POWER DOWN THE FAAD RWS

441-096-1008

Conditions: Your supervisor directs you to power down the FAAD RWS. All FAAD RWS equipment is powered on. Your battlefield situation display (BSD) is terminated and "Halted" is displayed on the engagement operations (EO) terminal.

Standards: Powers down the FAAD RWS and generator, per TB 11-7010-269-10-1 and TB 11-7010-305-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Used the individual power switches to turn off all AC and DC powered equipment and workstations.	——	——
2. Pulled AC breakers, one at a time, except AC MAIN.	——	——
3. Pulled DC breakers, one at a time, except DC MAIN.	——	——
4. Pulled DC MAIN and AC MAIN breakers.	——	——
5. Placed AC KILL switch in the KILL position.	——	——
6. On Uninterruptible Power Supply (UPS), set POWER switch(es) to OFF position.	——	——
7. Switched SOURCE SELECT switch to center position (OFF).	——	——

8. The following steps apply to the generator control panel if using the on-board generator.
   a. Switched AC POWER switch to DISABLE position.
   b. Turned MASTER SWITCH to OFF position.
	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                   Related
                                   TB 11-7010-269-10-1
                                   TB 11-7010-305-10

PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE ABMOC OR A2C2
441-096-1009

Conditions: Your supervisor directs you to prepare the ABMOC or A2C2 for march order. Assistance is available.

Standards: Prepares the ABMOC or A2C2 for road march, per TB 11-7010-269-10-1and TB 11-7010-305-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Turned EPLRS radio POWER switch to OFF position (left on for CONOPS operation).	——	——
2. Shut down equipment.	——	——
3. Powered down shelter.	——	——
4. Disconnected all RF cables from the communications interface panel.	——	——
5. Stowed the OE-254 antenna mast (with assistance).	——	——
6. Stowed the JTIDS antenna mast.	——	——
7. Tied down the whip antennas on top of the shelter.	——	——
8. Removed the EPLRS antenna and stowed.	——	——
9. Shut down the generator.	——	——
10. Disconnected and stowed the generator power cable from the power entry panel.	——	——
11. Drove the SICPS to the trailer site.	——	——
12. Attached the SICPS to the trailer and released the trailer hand brakes.	——	——
13. Mounted the vehicle and reported status.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                         Related
                                       AR 200-1
                                       TB 11-7010-269-10-1
                                       TB 11-7010-305-10

POWER DOWN THE FAAD STS
441-096-1010

Conditions: Your supervisor directs you to power down the FAAD STS. Your battlefield situation display (BSD) is terminated and "Halted" is displayed on the engagement operations (EO) terminal.

Standards: Powers down the system per TB 11-7010-269-10, TB 11-7010-269-10-1,TM 11-7010-258-12&P, and TM 9-6115-641-10 or TM 9-6115-642-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Saved and closed all workstations.	――	――
2. Pulled AC breakers, one at a time, using the correct sequence.	――	――
3. Pulled DC breakers, one at a time, using the correct sequence.	――	――
4. Turned off PRIMARY AC POWER circuit breaker.	――	――
5. Turned off generator as directed in the generator manual.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required
                                       Related
                                       TB 11-7010-269-10
                                       TB 11-7010-269-10-1
                                       TM 11-7010-258-12&P
                                       TM 9-6115-641-10
                                       TM 9-6115-642-10

PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE BATTERY CP (STS)
441-096-1014

Conditions: You are directed to prepare the BCP STS for march order. The BCP STS is operational. Assistance is available.

Standards: Prepares the BCP STS to ensure the system is ready for road march, per TB 11-7010-269-10-1, TM 9-6115-642-10, and TM 11-7010-258-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Performed EO console shutdown.	——	——
2. Placed SINCGARS voice radio to STBY.	——	——
3. Powered down the shelter.	——	——
4. Disconnected and stowed cables and SWGS.	——	——
5. Connected generator trailer to the vehicle and released trailer brakes.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
	AR 200-1
	TB 11-7010-269-10-1
	TM 11-7010-258-12&P
	TM 9-6115-641-10
	TM 9-6115-642-10

MARCH ORDER THE AB-903/G ANTENNA MAST ASSEMBLY ON THE STS
441-096-1037

Conditions: Your section chief directs you to prepare the AB-903/G antenna mast assembly for march order. Assistance from a crew member is available.

Standards: Places the AB-903/G antenna mast assembly in storage and ensures it is ready for road march, per TM 11-5985-263-15, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Lowered the AB-903/G mast using the hand crank.	——	——
2. Removed the mast from the mast mount.	——	——
3. Removed the three lanyards from the guy stakes and mast guy ring.	——	——
4. Removed the RF cable and strain clamp from the antenna head.	——	——
5. Removed the antenna ground plane from the masthead.	——	——
6. Removed whip antenna and matching unit/counterpoise adapter assembly.	——	——
7. Removed the mast mount from the HMMWV front end and stowed.	——	——
8. Removed the three guy stakes from the ground and stowed.	——	——
9. Removed the RF cable from the data SINCGARS and stowed.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                         Related
                                         AR 200-1
                                         TM 11-5985-263-15

PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE SENTINEL SENSOR
441-096-1067

Conditions: Your supervisor directs you to march order the Sentinel sensor. The Sentinel sensor is currently operational.

Standards: Ensures the Sentinel sensor is ready for road march, per TM 11-7010-269-10 and TM 9-1430-741-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Powered down sheltered subsystems.	——	——
2. Shut down shelter power.	——	——
3. Shut down generator power.	——	——
4. Shut down PLGR power.	——	——
5. Removed and stored external cables.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                  AR 200-1
                                                  TB 11-7010-269-10
                                                  TM 9-1430-741-10

PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE BATTERY CP (M1068)
441-096-1073

Conditions: Your supervisor directs you to prepare the BCP (M1068) for march order.   Your battlefield situation display (BSD) "shutdown" and "Halted" appears at the bottom of the display.

Standards: Ensures the BCP (M1068) is ready for road march, per TM 11-7010-256-12&P and TM 5-6115-596-14, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Performed EO console shutdown.	——	——
2. Placed EPLRS POWER switch to OFF and SINCGARS FCTN switch to STBY.	——	——
3. Powered down the shelter.	——	——
4. Disconnected and stowed cables and SWGS.	——	——
5. Stowed generator.	——	——
6. Stowed AB-903 antenna mast (Task 441-096-1037).	——	——
7. Closed the rear access door (if open) and secured.	——	——
8. Sounded horn to warn personnel of vehicle movement, if tactical situation permitted.	——	——
9. Started vehicle engine.	——	——
10. Reported status to team leader.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    AR 200-1
                                                    TM 11-7010-256-12&P
                                                    TM 5-6115-596-14

PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE AMDPCS
441-096-1096

Conditions: Your supervisor directs you to prepare the AMDPCS equipment for march order. The system is currently operational. Assistance is available.

Standards: Ensures the AMDPCS is ready for road march, per GTA 11-3-20, TM 11-5820-1130-12&P, and TM 9-2320-280-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. March ordered all antenna systems.	――	――
2. March ordered all SICPS.	――	――
3. March ordered all generator sets.	――	――
4. March ordered all assigned vehicles.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                        Related
                                        AR 200-1
                                        GTA 11-3-20
                                        TM 11-5820-1130-12&P
                                        TM 9-2320-280-10

PERFORM OPERATOR DUTIES DURING MARCH ORDER OF THE M934 EXPANSIBLE VAN TCS
441-096-1097

Conditions: Your supervisor directs you to march order the M934. The TCS is emplaced with the ICC and generator. Internal equipment is powered down. Data and communications cables and lines to the ICC are disconnected.

Standards: Ensures the M934 is ready for road march, per ARTEP 44-635-12-DRILL, TM 9-1430-606-12&P, and TM 9-2320-272-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Removed and stowed all equipment and gear from van floor.	——	——
2. Powered down air conditioner, if used.	——	——
3. Powered down heaters, if used.	——	——
4. Switched all switches on power distribution panel to OFF position.	——	——
5. Shut down generator.	——	——
6. Retrieved generator power cable.	——	——
7. Ensured all external cables and data lines were disconnected from shelter.	——	——
8. Stowed ground rod and cable.	——	——
9. Retracted van body to travel position.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
	AR 200-1
	ARTEP 44-635-12-DRILL
	TM 9-1430-606-12&P
	TM 9-2320-272-10

MARCH ORDER THE TADIL-A ANTENNAS
441-096-1141

Conditions: The system is in an emplaced configuration. The section chief commands, "March Order."

Standards: Stows the TADIL-A antennas and ensures they are ready for road march, per TM 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. With the TADIL-A antenna properly supported, released tension on the TADIL-A guy wires and lowered the antenna and disconnected guy wires.	——	——
2. Lowered the antenna.	——	——
3. Removed the antenna from its swivel base and disassembled.	——	——
4. Removed voice and data cables from antenna and secured on reel.	——	——
5. Pulled up the ground stakes.	——	——
6. Properly stored the antenna in the duffel bags.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
	AR 200-1
	TM 11-7010-260-12&P

MARCH ORDER THE RWS ANTENNA MAST
441-096-1142

Conditions: Your section chief directs you to prepare the RWS antenna mast for march order. Assistance from a crew member is available.

Standards: Stows the RWS antenna mast and ensures it is ready for road march, per TM 11-5985-263-15 and TM 11-7010-256-12&P or TM 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Lowered antenna.	——	——
2. Disconnected the RF coax cable with strain clamp from antenna.	——	——
3. Removed JTIDS antenna from mast.	——	——
4. Disconnected RF coax cable from the signal entry panel (SEP) and stowed in storage.	——	——
5. Replaced protective dust cover on SEP RF jack.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
 Required

 Related
 AR 200-1
 TM 11-5985-263-15
 TM 11-7010-256-12&P
 TM 11-7010-260-12&P

Subject Area 10: JTIDS Operations

PERFORM OPERATOR MAINTENANCE ON THE RADIO SET AN/GSQ-240
441-096-1016

Conditions: Your supervisor directs you to perform preventive maintenance checks and services as required (before-operation, during-operation, after-operation, or semiannually) on a scheduled or unscheduled basis. The following are available:

1. Cleaning cloths.
2. Detergent (NSN 7930-00-527-1207).
3. TM 11-5820-1154-12.

Standards: Performs required maintenance on the radio set AN/GSQ-240, per DA Pamphlet 738-750 and TM 11-5820-1154-12, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Performed before-operation PMCS.	——	——
2. Checked and cleaned blower air filter as needed.	——	——
3. Performed during-operation PMCS.	——	——
4. Performed quarterly PMCS.	——	——
5. Performed semiannual PMCS.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
TM 11-5820-1154-12	DA PAM 738-750

INITIALIZE RADIO SET AN/GSQ-240
441-096-1017

Conditions: Your supervisor directs you to initialize radio set AN/GSQ-240. The ADTOC, ABMOC, or A2C2 is emplaced and power is available to the SICPS shelter. The JTIDS 2M terminal and JTC (if used) are powered off. The following are available:

1. TM 11-7021-223-10.
2. JTIDS network information sheet.
3. Fill cable with a KYK-13 fill device or a data transfer device (AN/CYZ-10).

Standards: Establishes communication with valid cryptokeys, attains fine sync, updates message status appropriately, per TM 11-5820-1154-12 and TM 11-7021-223-10, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Performed system start-up procedures.	⎯⎯	⎯⎯
2. Performed cryptokey loading procedures.	⎯⎯	⎯⎯
3. Performed cryptokey loading procedures after a rollover.	⎯⎯	⎯⎯
4. Performed verification procedure for cryptokeys in the DTD.	⎯⎯	⎯⎯
5. Performed initialization procedures.	⎯⎯	⎯⎯
6. Monitored the JTC and RS for failure indications.	⎯⎯	⎯⎯

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
TM 11-7021-223-10	TM 11-5820-1154-12

OPERATE RADIO SET AN/GSQ-240
441-096-1018

Conditions: Your supervisor directs you to operate the radio set AN/GSQ-240. The JTIDS radio and JTIDS terminal controller are powered on and initialized.

Standards: Establishes voice communication, per TM 11-5820-1154-12 and TM 11-7021-223-10, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Modified menu options and initialization data as required. (TM 11-7021-223-10, Sections IV and V.)	——	——
2. Monitored network communications/status. (TM 11-7021-223-10, Section VIII.)	——	——
3. Responded to alerts and messages as required. (TM 11-7021-223-10, Section VII. TM 11-5820-1154-12, Chapter 3, Section III.)	——	——
4. Set the TERM MODE switch to STANDBY position if any of the following messages appeared on the JTC (only if cryptokeys must be retained).	——	——

    a. TERMINAL FAIL.
    b. THERMAL OVERLOAD.
    c. 28 VDC PWR indicator was not lit, and XMIT/BAT HTR and MAIN switches
       were on.
    d. TERM ON indicator was not lit and TERM MODE switch was in the ON
       position.
    e. LOAD FLAG was not latched and/or SECURE ALARM indicator was brightly
       lit (may require reloading of cryptokeys).

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                            TM 11-5820-1154-12
                                            TM 11-7021-223-10

Subject Area 11: Common Hardware (CH)

CONNECT COMMUNICATIONS INTERFACE ON THE FAAD STS
441-096-1038

Conditions: The crew has emplaced the STS. You are directed to connect the communications interfaces and cables.

Standards: Connects communications cables, per TM 11-7010-258-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Patched cords to signal entry panel.	——	——
2. Connected 26 pair cable.	——	——
3. Connected 2W/4W field wire.	——	——
4. Connected RF cables.	——	——
5. Connected communications equipment per local SOP.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
>   **Required**   **Related**
>   AR 200-1
>   LOCAL SOP
>   TM 11-7010-258-12&P

CONNECT COMMUNICATION INTERFACES ON THE FAAD RWS
441-096-1041

Conditions: The crew has emplaced the RWS. You are directed to connect the communications interfaces and cables.

Standards: Connects communications cables, per TM 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Patched cords to signal entry panel.	——	——
2. Connected 26 pair cable.	——	——
3. Connected 2W/4W field wire.	——	——
4. Connected RF cables.	——	——
5. Connected communications equipment per local SOP.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
>   **Required**   **Related**
>   AR 200-1
>   LOCAL SOP
>   TM 11-7010-260-12&P

PERFORM COMMON HARDWARE PREVENTIVE MAINTENANCE
441-096-1043

Conditions: The FAAD SICPS is emplaced and your supervisor directs you to perform preventive maintenance on the common hardware.

Standards: Performs common hardware preventive maintenance, per TM 11-7010-258-12&P or TM 11-7010-260-12&P and DA Pamphlet 738-750, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
STS:		
1. Performed operator PMCS on CHS-1 and CHS-2 STS SICPS.	——	——
2. Performed operator PMCS on CHS-1 and CHS-2 equipment.	——	——
RWS:		
3. Performed operator PMCS on CHS-1 and CHS-2 RWS SICPS.	——	——
4. Performed operator PMCS on CHS-1 and CHS-2 equipment.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
  Required   **Related**
                                                                        DA PAM 738-750
                                                                        TM 11-7010-258-12&P
                                                                        TM 11-7010-260-12&P

PERFORM OPERATOR CORRECTIVE MAINTENANCE ON THE HCU/UCU
441-096-1044

Conditions: You detect a malfunction on the HCU during preventive maintenance checks and services (PMCS) or during power up of the ABMOC, A2C2, BCP, or sensor C2 node.

Standards: Performs operator corrective maintenance on the HCU/UCU, per TM 11-7010-258-12&P, TM 11-7010-260-12&P, or TM 11-7021-213-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Performed corrective maintenance procedures for the following malfunctions after isolating the malfunction on the HCU:	——	——
a. Fan did not operate and POWER indicator was lit.		
b. POWER indicator was extinguished when POWER switch was on. Fan did not operate and POWER indicator was lit.		
c. POWER indicator was extinguished when POWER switch was on.		
d. POWER indicator was extinguished but computer operated.		
e. Trackball did not respond to operator inputs.		
f. HCU DOS shell did not respond.		
g. HCU failed power on self-test or boot-up.		
2. Recorded all uncorrectable faults on DA Form 2404 or 5988-E.	——	——
3. Requested maintenance support on DA Form 2407, if directed by supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	TM 11-7010-258-12&P
	TM 11-7010-260-12&P
	TM 11-7021-213-12&P

PERFORM OPERATOR CORRECTIVE MAINTENANCE ON THE CMD
441-096-1048

Conditions: You detect a malfunction on the color monitor display (CMD) during preventive maintenance checks and services (PMCS) or during power up of the ABMOC, A2C2, BCP, or sensor C2 node. TMs 11-7010-258-12&P or 11-7010-260-12&P and assistance from a crew member are available.

Standards: Performs operator corrective maintenance on the CMD, per TM 11-7010-258-12&P, TM 11-7010-260-12&P, or TM 11-7025-283-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**

1. Performed corrective maintenance procedures for the following malfunctions after isolating the malfunction on the CMD:
     a. Loss of AC power.
     b. Blower fan was inoperative.
     c. CMD screen display showed incorrect colors, text, or graphics.
     d. No display was on the CMD screen.
	——	——

2. Recorded all uncorrectable faults on DA Form 2404 or 5988-E.	——	——
3. Requested maintenance support on DA Form 2407, if directed by the supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	**Related**
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	TM 11-7025-283-12&P
TM 11-7010-258-12&P	
TM 11-7010-260-12&P	

PERFORM OPERATOR CORRECTIVE MAINTENANCE ON THE PRINTER
441-096-1049

Conditions: You detect a malfunction on the printer during preventive maintenance checks and services (PMCS) or during power up or operation of the ABMOC, A2C2, BCP, or sensor C2 node. TMs 11-7010-258-12&P or 11-7010-260-12&P and assistance from a crew member are available.

Standards: Performs corrective maintenance on the printer to ensure it is back on line and working or takes appropriate measures to notify supervisor and next higher maintenance echelon, per DA Pamphlet 738-750, TM 11-7010-258-12&P, TM 11-7010-260-12&P, or TM 11-7025-281-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Performed corrective maintenance procedures for the following malfunctions after isolating the malfunction on the printer:	——	——
a. Printer did not power up.		
b. Alarm indicator was on.		
c. Printer stopped and MENU indicator blinked.		
d. Printer did not respond to computer data.		
e. Frequent paper jams.		
f. Printouts not clear or data was missing.		
g. Printer switched to unidirectional printing.		
h. Menu and print feature buttons did not function.		
2. Recorded all uncorrectable faults on DA Form 2404 or 5988-E.	——	——
3. Requested maintenance support on DA Form 2407, if directed by supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	**Related**
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	TM 11-7025-281-12&P
TM 11-7010-258-12&P	
TM 11-7010-260-12&P	

PERFORM OPERATOR CORRECTIVE MAINTENANCE ON THE LCU

441-096-1055

Conditions: You detect a malfunction during PMCS or power up of the platoon CP, section CP, LNO LCU, or ADTOC LCU. TM 11-7010-258-12&P or TM 11-7010-260-12&P are available.

Standards: Ensures that the LCU is operating correctly. Annotates existing faults on DA Form 2404 or 5988-E and notifies supervisor and higher maintenance echelon, per DA Pamphlet 738-750 and TM 11-7010-258-12&P or TM 11-7010-260-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Performed corrective maintenance procedures for the following malfunctions after isolating the malfunction on the LCU:	——	——
a. Power switch was on but power indicator was not lit, and LCU was not operating.		
b. Power switch was on and LCU was operating, but POWER indicator on control panel was not lit.		
c. LCU was operating and LOW BATTERY indicator on control panel was on.		
d. LCU was operating but nothing appeared on display, or display was difficult to see.		
e. LCU was powered on but would not access hard disk drive.		
f. Intermittent disk read/write access errors occurred during floppy disk drive use.		
2. Recorded all uncorrectable faults on DA Form 2404 or 5988-E.	——	——
3. Requested maintenance support on DA Form 2407, if directed by supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
> **Required**
> DA FORM 2404
> DA FORM 5988-E
> TM 11-7010-258-12&P
> TM 11-7010-260-12&P

> **Related**
> DA PAM 738-750

PERFORM OPERATOR MAINTENANCE ON CHS II EQUIPMENT
441-096-1146

Conditions: The CHS-II equipment in the rigid wall shelter (RWS) SICPS, soft top shelter (STS) SICPS, or 5-ton expansible van TCS (Patriot BTOC) is emplaced. You receive an error message of software or hardware failure, or your supervisor directs you to perform operator-level maintenance on the CHS-II equipment. TMs 9-1430-606-12&P, 11-7010-260-12&P (RWS), 11-7010-258-12&P (STS), or 11-7010-259-12&P (5-ton TCS), and assistance from a crew member are available. PMCS is completed.

Standards: Performs required maintenance on CHS-II equipment, per DA Pamphlet 738-750 and TM 11-7010-258-12&P, TM 11-7010-259-12&P, TM 11-7010-260-12&P, or TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Inspected equipment for damage, incorrect connections, loose or damaged equipment or cables.	——	——
2. Determined malfunction using the Symptom Index.	——	——
3. Isolated malfunction using troubleshooting flowcharts.	——	——
4. Performed specific operator maintenance procedures as required.	——	——
5. Submitted uncorrectable deficiencies to unit maintenance using DA Forms 2404 or 5988-E, if directed by supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	
TM 11-7010-258-12&P	
TM 11-7010-259-12&P	
TM 11-7010-260-12&P	
TM 9-1430-606-12&P	

Subject Area 12: ADSI Operations

OBTAIN SITE SPECIFIC DATA FROM OPTASK LINK
441-096-1140

Conditions: Your supervisor has given you information to update your areas of responsibilities and radio frequencies for data and voice.

Standards: Obtains site specific data from OPTASK link, per the below Performance Steps, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. The OPTASK link contains technical operation data generated by the Air Force senior command and air defense liaison involved with air defense in the area of operations.

2. Information contained in the OPTASK link will include such information as listed below along with other operational instructions and data:
    a. TADIL links.
    b. Track block numbers.
    c. Areas of responsibility.
    d. Air space control orders.
    e. Radio frequencies for data and voice.
    f. Data link reference points.
    g. Encryption key lists and change times.
    h. Net control station assignments.
    i. Participating units involved.
    j. Units responsible for identification authority.

Performance Measures	GO	NO GO
1. Extracted required information as directed from OPTASK link.	——	——
2. Input selected data into ADSI system.	——	——
3. Secured OPTASK link according to unit TSOP.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
TSOP	ADSI-REV-AO1

PERFORM ADSI SITE INITIALIZATION
441-096-1190

Conditions: You have just arrived at your new location. You are directed by your supervisor to initialize the ADSI. The JTOC or FDC element is emplaced and powered up. All hard drives are inserted and locked. TACOPDAT is available.

Standards: Changes the site location in the TSD/MDB and MLIU, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

   1. Select the region generator.
Note: Before selecting the region generator, you will need the site name, map directory name, and USCC (system setup information). There are two ways to get the USCC: If you have a radar, the USCC is the position of the radar. If you do not have a radar, use the unit position for the USCC. If appropriate, get a copy of the OPTASK link document. It has setup information pertaining to the site. Information you will use includes assigned unit numbers, DLRP, and Track number (TN) blocks.
        a. Select "Start."--->"Programs"--->"Adsi"--->"WinSite."
Note: The region generator dialog box appears.
        b. Select "Define a new site."
Note: The New Site dialog box appears.
        c. Enter a name for the site into the field.
        d. Select OK.
Note: The new site appears in the ADSI Region Generator dialog box.
        e. Enter and verify the latitude and longitude information for the following fields:
            (1) USCC.
            (2) Unit position.
            (3) DLRP.
         f. Select "Save this site."
Note: The next time you start the TSD and use the select site option, the new site will appear in the list of available sites.
        g. Select "Standard Maps."
        h. Select "Next."
Note: When the Standard Maps dialog box appears, select the area of coverage, units, resolution, and colors.
         i. Select "Next."
Note: The Ready to Generate Maps and Images dialog box appears.
         j. Select "Generate."
Note: Status bars inform you of the map generation progress.
        k. When the generation is complete, select OK.
         l. Select "Exit."

   2. Select a site.
        a. Select OPER POSITN---> SYSTEM MANAGR--->C2DATA--->SELECT SITE.
Note: If data links are on, the system responds with the following operator notice:
"Turn off data links:
Enter (Y) ES / (N) O"
You must enter Y to continue. If N is selected, the process terminates and the system responds with the following operator notice:
MUST TURN OFF INTERFACES FIRST.
        b. Type Y.
Note: A list of sites by name appears.
        c. Select a site.
        d. Press "Enter."

Performance Steps
Note: If the data links are off, the system responds with the following operator notice:
"Turn links back on?"
Enter   (Y) ES   /   (N) O.
You must enter Y to continue. If N is slelected, you must turn links back on using the communication switch matrix.
OPER POSITN ----->SYSTEM MANAGR------>COMMS------>LINKS ON/OFF
      e. Type Y.

  3. Select site data.
      a. Select OPER POSITN-->SYSTEM MANAGR-->C2DATA-->SITE DATA.
      b. View the site data information.
      c. Select "Finished."
      d. Press "Enter."
Note: To save the settings you have selected and use them as the default settings at the next system start-up, select the SAVE DATA switch.

  4. Display maps.
      a. Select OPER POSITN--->SURV MODE--->MAP SELECT.
      b. Select the GEOGRAPHIC switch to display the geographic switches.
      c. Select the map features to be displayed by selecting the following choices:
            --COAST&LAKES
            --POLITICAL
            --RIVER&CANALS
Note: If you edited the names of the maps in the region generator, they will appear that way on the TSD soft switches.

  5. Set MLIU C2 data.
      a. Press F5 on MLIU display.
Note: If you have links turned on, a small dialog box appears with the selection "Turn Off Active Links" highlighted.
      b. Press "Enter."
Note: The "Edit Networks" area appears in the lower half of the MLIU screen.
      c. Determine which networks the system links use.
Note: For example, network 1 can be used for TADIL A and B and network 4 can be used for TADIL J.
      d. Enter applicable information in the following fields for all networks:
         (1) FPU.
         (2) MLIU Position.
         (3) Track Number Block.
         (4) USCC.
         (5) DLRP.
Note: The new site information should match the data entered into the Region Generator and the TSD.
      e. Press F10 to accept the changes.
Note: A dialog with an action menu appears.
Note: A "Restart Links" dialog box appears.
      f. Select "Leave Links OFF."
Note: Press ESC if you do not want to save the changes, or arrow down and select save changes.
      g. To reset the MLIU after all entries have been entered--
         (1) Press ALT + F10 to restart the MLIU.
         (2) Select start router at MLIU Main Menu.
         (3) Select F1--->LINK CONTROL.
            (a) Select and turn on the required external and internal link(s).
            (b) Select F10.
            (c) Save and Exit.
         (4) Select F7--->DATA REDUCTION.
            (a) Select "Dx On/Off."

Performance Steps

              (b) Select and turn on select external and internal link(s) for monitoring M series and J series messages.

        (5) Press F10 to accept the changes.

Note: After you have completed these steps, the site location in the MLIU will reflect the site location of the TSD/MDB.

Performance Measures	**GO**	**NO GO**
1. Defined a new site.	‒‒‒	‒‒‒
2. Selected a site.	‒‒‒	‒‒‒
3. Entered site data.	‒‒‒	‒‒‒
4. Displayed maps.	‒‒‒	‒‒‒
5. Set MLIU C2 data.	‒‒‒	‒‒‒

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                                    ADSI-REV-AO1

ESTABLISH ADSI MODES OF OPERATION

441-096-1191

Conditions: Your supervisor has assigned you to operate the ADSI. The ADSI system is defaulted to SYSTEM MANAGR for start-up. You have just received a TACOPDAT with the initialization setup and support information.

Standards: Establishes ADSI operational modes, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. The operator position (OPER POSITN) switch causes the OPER POSITN switch matrix to appear. The OPER POSITN switch is also known as the main switch matrix. All mode and setup switches, with the exception of the immediate mode switch matrix, are accessed using the OPER POSITN switch. You can return to the main switch matrix from any matrix in the system when you select the OPER POSITN switch that is always located in the lower right corner. Each operational mode (operator position) has its main menu and primary switches. The modes are--
    a. System Manager Mode.
    b. Surveillance Mode.
    c. Weapons Mode.
    d. Database Maintenance.
    e. Planning Mode.
    f. Simulation Mode.
    g. User Mode.
    h. Hardware Setup.

2. To select one of the six operational modes, select the OPER POSITN primary switch. The following secondary switches are displayed for operator selection:
    a. SYSTEM MANAGR: The System Manager Main Menu is displayed as the active main menu. The System Manager Main Menu controls those items that are usually selected at system installation and do not require extensive revision (configuration of system parameters, data link information, map generation, et cetera).
    b. SURV MODE: Controls that are usually selected during tactical operations. Capabilities include track entry and management, operational analysis and planning as well as air status and sensor.
    c. WEAPNS MODE: Used for air control, weapons and engagement commands, and missile defense capabilities.
    d. DB MAINT: Controls data in the non-real-time databases including the air tasking order (ATO), airspace coordination orders (ACOs), the intelligence databases, and the order of battle (OB) database.
    e. PLANNING: Controls terrain, 3-D images, and national imagery transmission format (NITF) processing functions and capabilities.
    f. SIMULATION: Controls recording/playback and simulation functions and capabilities.
    g. USER MODE: Configures the main switch matrix to fit your needs. The USER MODE matrix always contains the OPER POSITN switch.
    h. HW SETUP: Controls the improved data modem (IDM) hardware.

3. To select a site, perform the following:
    a. Select SELECT SITE.
    b. Select OPER POSITN.
    c. Select SYSTEM MANAGR.
    d. Select C2DATA.

Performance Steps

        e. If data links are on, the system responds with the following operator notice:
          "Turn off data links?
          Enter (Y)ES / (N)O"

Note: You must enter Y to continue. If N is selected, the process terminates and the system responds with the following operator notice: MUST TURN OFF INTERFACES FIRST.

        f. Type Y (a list of sites appears by name).
        g. Select a site.
        h. Press "Enter." If the data links are off, the system responds with the following operator notice:
          "Turn links back on?
          Enter (Y)ES / (N)O."

Note: You must enter Y to continue. If N is selected, you must turn links back on using the communication switch matrix.

Example: OPER POSITN--SYSTEM MANAGR--COMMS--LINKS OFF.

        i. Type Y.
        j. Select OPER POSITN--SYSTEM MANAGR--C2DATA--SITE DATA.
        k. Enter site data.
        l. Select FINISHED.
        m. Press "Enter."
        n. Select SAVE DATA.
        o. Select OPER POSITN--SURV MODE--MAP SELECT.
        p. Select GEOGRAPHIC (geographic switches displayed).
        q. Select COAST&LAKES--POLITICAL--RIVER&CANALS.

Note: If you edited the names of the maps in the region generator, they will appear that way on the TSD soft switches.

Note: The maps you selected are now displayed on the TSD.

  4. Perform Task 441-096-1190 (Perform ADSI Site Initialization).

Performance Measures	**GO**	**NO GO**
1. Selected SELECT SITE.	____	____
2. Selected OPER POSITN.	____	____
3. Selected SYSTEM MANAGR.	____	____
4. Selected C2DATA.	____	____
5. Entered a site.	____	____
6. Saved data.	____	____
7. Selected COAST&LAKES--POLITICAL--and RIVER&CANALS geographic switches.	____	____
8. Verified map was displayed on TSD.	____	____
9. Performed Task 441-096-1190.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                  ADSI-REV-AO1

PERFORM ADSI MAP GENERATION
441-096-1192

Conditions: You have just completed initialization of the ADSI. Latitude and longitude for your location's map center have been received. Your supervisor has directed you to generate an ADSI map.

Standards: Accomplishes all operational modes, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps
Note: Use the bottom half of the Region Generator dialog box to define the maps, images, and terrain you want to generate. You can generate the following standard maps for any site:
     Coastlines.
     Political boarders.
     Rivers.
     Roads.
     Railroads.
     Airports.
     Airways.
     Special use airways.
     Military training routes.
Generate images by using the location-specific Defense Mapping Agency (DMA) ARC digitized raster graphics (ADRG) CD-ROM.

Generate terrain by using the location-specific DMA digital terrain elevation data (DTED) CD-ROM.

  1. Generating Maps.
      a. Select a site from the Site Name drop-down list in the Region Generator dialog box.
      b. Click the Standard Maps check box and click any of the following check boxes you want displayed:
         (1) Airports.
         (2) Airways.
         (3) Special Use Airways.
         (4) Military Training Routes.
      c. Click Next> to display the Standard Maps dialog box.
Note: The images dialog box appears.
      d. Enter the area in Coverage (Data Miles).
      e. Select the High-Resolution check box to generate high-resolution maps.
      f. Select the default colors assigned to each element in the drop-down list.
      g. Click Next> to display the Ready to Generate Maps and Images dialog box.
      h. Click Generate.
Note: A dialog box informs you when the region generator has finished generating maps and images.
      i. Click OK to return to the standard maps dialog box.
Note: If you have already generated maps for the selected site and want to add additional map features such as airports or military training routes, you do not need to select the standard maps check box. Select the map features you want to add and then click Finish.

  2. Generating Images.
      a. Insert the ADRG CD.
      b. From the drop-down list, select the location for the image.
      c. Display the Images dialog box by clicking Images and then clicking Next>.
      d. Enter the Image Name or it will default to the location name.
      e. In the Image Center field, enter the latitude and longitude to match the ADRG CD-ROM you are using.
      f. Enter the area in Coverage (Data Miles).

Performance Steps

Note: The 512 data mile default is the most common coverage area.
      g. Select the appropriate Color radio button.
      h. Click Next> to display the Ready to Generate Maps and Images dialog box.
      i. Click Generate.
Note: Depending on the coverage area, resolution, and color, generation could take several minutes.

Note: A dialog box informs you when the region generator has completed the images.
      j. Click OK to return to the Images dialog box.
Note: You can now use the IMAGE SELECT switches in the TSD to display the images you generated.

   3. Generating Terrain.
      a. Insert the DTED CD-ROM into the appropriate drive.
      b. Select the site from the drop-down list.
      c. Display the terrain dialog box by clicking the Terrain check box and clicking Next>.
      d. In the Input DTED Path field, enter the drive letter or browse to the CD-ROM drive.
      e. Select Meters or Feet from the Input Unit drop-down list.
      f. Select Meters or Feet from the Output Unit drop-down list.
      g. Select the Perform min/max processing check box if you want minimum and maximum processing performed on each one-degree terrain block.
      h. Enter the appropriate measurements in the Northmost Latitude:, Southmost Latitude:, Westmost Longitude:, and Eastmost Longitude: fields.
Note: All blocks are referenced from the lower left corner. For example, enter the following latitude and longitude if you want to include four blocks surrounding a point with coordinates of 012 degrees 00' 00" E and 28 degrees 00' 00" N:

Note: Advance programming concepts recommends using 6-second data with the TSD.
      i. Select the speed in Output Resolutions.
Note: This selection allows you to control how much detail the region generator pulls from the DTED CD-ROM.
      j. Click Next> to display the Ready to Generate Maps and Images dialog box.
      k. Click Generate.
Note: Depending on the size of the area for which you are generating data, generation could take several minutes. A dialog box informs you when the region generator has completed the terrain.
      l. Click OK to return to the Terrain dialog box.

Performance Measures	**GO**	**NO GO**
1. Generated a map.	——	——
2. Generated appropriate images.	——	——
3. Generated appropriate terrain.	——	——
4. Displayed map with appropriate information.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                             ADSI-REV-AO1

SET DATA LINK FILTER PARAMETERS
441-096-1193

Conditions: The ADSI system has been emplaced in an area where an extremely high number of enemy and friendly aircraft are flying. The display has become saturated with tracks and messages. Your supervisor directs you to remove those of lesser priority from the screen.

Standards: Sets data link filter parameters to eliminate tracks deemed unnecessary by command, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps
Note: The XMIT FILTRS switch on the SYSTEM MANAGR switch matrix allows filtering of incoming data from specific sources (TADIL A, TADIL B, or TADIL J) and limits the volume of data transmitted to the C2 unit on the primary interface.

1. DL TX FILTRS switch: Defines data link transmit filters. Filters out tracks based on category and identity. Up to five different filter settings may be entered and each may be individually activated or deactivated. They become current when the entry form is completed. To set the data link transmit filters--
    a. Select DL TX FILTRS.
    b. Type Y or N in the ACT column (turns filters 1 through 5 on/off).
    c. Type Y in any column to filter out tracks of that type.
       Examples: To filter out all air tracks, set all columns in filter 1 to N except for the air column, which is set to Y.

       To filter out all unknowns and all surface friends, set filter 1 to filter air and unknown, set filter 2 to filter surface and friends, and activate both filters 1 and 2.
    d. Select FINISHED.
    e. Press "Enter" or F10.

2. SRCE FILTRS switch: Filters local tracks from specific sources (TDP, TACELINT), TACREP, and OTH-T tracks) based on category and identity. New tracks received that are filtered out will have a local track number (TN) assigned instead of a data link TN (DL TN). This limits the numbers assigned from the TN block and keeps the tracks from being transmitted over the primary interface. This switch will not affect tracks that already have a DL TN assigned. These filters become current when the ACCEPT FILTERS switch is selected.

   To set the source filters--
    a. Select SRCE FILTRS.
    b. Select the data source and press "Enter."
    c. Type Y no N in the appropriate row and column to turn the desired filters on and off.
Note: The current totals will show the number of tracks that currently pass the filters, and the proposed totals will show the number of tracks that would pass the new filters, if they were accepted. If a track already has a DL TN assigned, it will be counted even if it fails the new totals.
    d. Press ""Enter" when FINISHED? appears or press F10.
Note: To select additional data sources, repeat steps b. through d.
    e. Select ACCEPT FILTRS to apply the new source filters created.
Note: Select the INHIBT SIM TX switch to inhibit the transmission of new simulated tracks. This switch applies to all simulated tracks generated on the TSD and all scenario tracks designated as SIM and to RAMIT when the tracker is not present or not operational (tracks will be assigned a local TN with no transmission on the data link). When off, all tracks passing the source filters will be assigned and transmitted over the primary data link.
    f. Select SAVE FILTRS to save the source and data link transmit filters.

3. To select the types of tracks to display on the screen--

Performance Steps
    a. Select OPER POSITN.
    b. Select SURV MODE.
    c. Select DISPLY FILTRS.
    d. Selecting DATA LINK to filter tracks:
        (1) Select DATA LINK.
        (2) Press "Enter" (turns data links on or off).
        (3) Turn FAAD data link off.
        (4) Select FINISHED.
        (5) Press "Enter."
        (6) Select SAVE FILTRS.
    e. Selecting TRACK TYPE to filter tracks:
        (1) Select TRACK TYPE.
        (2) Press "Enter" (turns filters on or off).
        (3) Turn AIR off.
        (4) Select FINISHED.
        (5) Press "Enter."
    f. Selecting IDENT to filter tracks:
        (1) Select TRACK TYPE.
        (2) Press "Enter" (turns filters on or off).
        (3) Turn FRIENDLY off.
        (4) Select FINISHED.
        (5) Press "Enter."
    g. Selecting LINK TYP/ID to filter tracks to appear on the TSD by a combination of data link type, track type, and identity:
        (1) Select the LINK TYP/ID.
        (2) Select the data link and press "Enter."
        (3) Select the track type and press "Enter."
        (4) Select the "air IDENTS" and press "Enter" (turns on or off).
        (5) Select FINISHED.
        (6) Press "Enter."
    h. Select TRACK LINES to display pairing and engagement lines for tracks.
Example: If TN 1 is in the pairing or engagement is hooked when the TRACK LINES is cleared (off), the pairing or engagement lines remain displayed until the hook is released.
    i. Select the TRACK BLOCK to display the TN block for symbols on the TSD.
Note: If a track is hooked when the TRACK BLOCK switch is cleared (off), the TN block is displayed until the hook is released.
    j. Select VEL VECTRS to display tracks on the TSD with velocity vectors.
    k. Select OTHER FILTRS to display Mode 3 and altitude tracks on the TSD.
    l. To set altitude filters--
        (1) Select SET ALT 1.
        (2) Select ALT FILTRS.
        (3) Enter a lower and upper altitude.
        (4) Select FINISHED.
        (5) Press "Enter."
Notes:
  - Perform procedures l(2) through l(5) to enter information in ALT 2 and ALT 3.
  - The active altitude filter values appear in the lower left corner of the TSD.
  - FILTER NO M3 is used to filter tracks not possessing Mode 3 IFF (when on, filters tracks not processing/using Mode 3).

  4. The volume of data transmitted on the primary interface can be limited by configuring the transmit filters switch. The XMIT FILTRS switch allows the incoming data from specific sources and limits the volume of data transmitted to the C2 unit on the primary interface. To select XMIT FILTRS--
    a. Select OPER POSITN.
    b. Select SYSTEM MANAGR.

Performance Steps

     c. Select XMIT FILTRS.
     d. Select THE DL TX FILTRS.
     e. Type Y or N in any column to filter out undesired tracks.
     f. Select FINISHED.
     g. Press "Enter" or F10.

  5. To select geographic filters--
     a. Select GEO FILTRS.
     b. Select ADD INGEO (adds geographic input filters).
     c. Select an add input area and press "Enter."
     d. Select the add area by pressing a number from 1 through 10 and press "Enter."
     e. Use the cross hair or keyboard to define the filter area and press "Enter" for each line.
Note: The maximum number of lines that can be defined in an area is nine.
     f. Press ESC to close the area (the filter area solid lines change to a dotted line).
     g. Select FINISHED.
     h. Press "Enter."
     i. Select SAVE GEO/CR.
     j. Select SHOW GEO/CR.
Note: If the filters are in use, they will display as solid lines. If the filters are not in use, they will display as dashed lines.
Note: The coordinate entry (COORD ENTRY) switch is an on/off switch that, when on, prompts the operator to enter the coordinates of the area points in whatever value was selected using the readout setup (RDOUT SETUP) switch (LAT/LONG, UTM, MGR, or GEOREF). If off, the coordinates are entered with the cross hair.

  6. To delete a geographic input filter--
     a. Select DEL INGEO.
     b. Select the input filter to delete.
     c. Select FINISHED.
     d. Press "Enter."

  7. To turn on all geographic input filters defined using the ADD INGEO switch--
Note: When selected, the "IN GEO:" status in the lower left corner of the TSD toggles from INACT to ACTIVE.
     a. Select INGEO ON.
     b. Select the input area and press "Enter" to turn data links filters on or off.
     c. Select FINISHED.
     d. Press "Enter."

  8. To see the input filters for a specified data link--
Note: If all the points in the filter are within the current tactical coverage, the area will be shown in X/Y, with an L for local. If any of the points are outside the local range, the area will be shown in lattitude/longitude with a G for global.
     a. Select LIST INGEO.
     b. Select a data link and press "Enter."
     c. Select FINISHED.
     d. Press "Enter."

  9. To add geographic output filters--
Note: You can add geographic output filters with the ADD OUTGEO switch. You can add up to 10 geographic output areas for each data link. The ADSI then displays a filter label, indicating the filter's data link type (input) and number (for example, TDA:O:2).
     a. Select ADD OUTGEO.
     b. Select an add output area and press "Enter."
     c. Select the add area by pressing a number from 1 through 10 and press "Enter."
     d. Use the cross hair or keyboard to define the filter area and press "Enter" for each line.

Performance Steps
Note: The maximum number of lines that can be defined in an area is nine.
        e. Press ESC (closes area).
Note: The solid lines in the filter area change to a dotted line.
         f. Select FINISHED.
        g. Press "Enter."

 10. To delete a specified geographic output filter--
        a. Select DEL OUTGEO.
        b. Select a delete output filter and press "Enter."
        c. Select FINISHED.
        d. Press "Enter."

 11. Use OUTGEO ON to turn the output geographic filters defined in ADD OUTGEO on or off:
Note: When you select the OUTGEO ON switch, the "OUT GEO:" status in the lower left corner of the
TSD toggles from INACT to ACTIVE.
        a. Select OUTGEO ON.
        b. Select an output area and press "Enter" to turn it on and off.
        c. Select FINISHED.
        d. Press "Enter."

 12. Use LIST OUTGEO to see the output filters for a specified data link.
Note: If all the points in the filter are within the current tactical coverage, the ADSI will show the area in
X/Y, with an L for local. If any of the points are outside the local range, the system will show the area in
lattitude/longitude with a G for global.
        a. Select LIST OUTGEO.
        b. Select "air IDENTS" and press "Enter" to turn them on and off.
        c. Complete the information for the area and select FINISHED.
        d. Press "Enter."

 13. Use ADD CRITCL to add up to 10 critical geographic areas.
Note: Each area has a three- to ten-sided polygon. The system labels the area as CRITICAL and
assigns an area number (such as CRITICAL:5). When a track is received that matches a predefined
criteria (such as hostile air, hostile surface, or hostile SAM site) within a critical area in use, a critical
track alert is generated.
        a. Select ADD CRITCL.
        b. Press "Enter" and use the mouse to define the area.
        c. Press "Enter" for each line in the area.
        d. Press "Esc" to close the area.

 14. Use DEL CRITCL to delete any of the specified critical area filters.
Note: There can be up to 10 filters specified for each link.
        a. Select DEL CRITCL.
        b. Select the area to delete.
        c. Press "Enter."

 15. Use CRITCL ON to activate or deactivate the critical areas defined with the add critical area (ADD
        CRITCL) switch.
Note: When you select this switch, the "CRITGEO:" status in the lower left corner of the TSD toggles
from INACT to ACTIVE.   When no critical areas exist, the system displays the following notice: NO
AREAS DEFINED.
Note: Critical areas cannot be individually selected. All areas are on or off.

 16. Use LIST CRITCL to display the current critical areas in the multi-function area.
If all the points in the filter are within the current tactical coverage, the system will show the area in X/Y
coordinates, with an L to indicate local. If any of the points are outside the local range, the system will
show the area in lattitude/longitude with a G to indicate global.
Note: When LIST CRITCL is selected, the current critical areas appear in the multi-function area.

Performance Steps

17. Use CRIT EVENTS to modify critical event requirements.
Note: Tracks received that match an existing requirement will cause a critical event,
radar threat, or missile launch alert to be generated depending on which event type is matched.
   a. Select CRIT EVENT.
   b. Select the event type and press "Enter."
   c. Select the event and press "Enter."
   d. Select the critical event and Press "Enter."
   e. Select FINISHED.
   f. Press "Enter."

Performance Measures	**GO**	**NO GO**
Note: Information for the following will be entered per directive/SOP:		
1. Set data link transmit filters.	——	——
2. Set the source filters.	——	——
3. Selected and updated using DATA LINK.	——	——
4. Selected and updated using LINK TYP/ID.	——	——
5. Selected and updated using TRACK LINES.	——	——
6. Selected and updated using TRACK BLOCK.	——	——
7. Displayed tracks on TSD with velocity vectors.	——	——
8. Selected and updated using OTHER FILTRS.	——	——
9. Selected values that appeared in the TSD.	——	——
10. Selected and updated geographic filters.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
   Required   **Related**
                                                   ADSI-REV-AO1

IDENTIFY AND REACT TO OPERATIONAL/SYSTEMS ALERTS
441-096-1194

Conditions: Your supervisor has assigned you to operate the ADSI. The ADSI screen is flashing and aural alerts are sounding.

Standards: Identifies and reacts to operational/system alerts, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps
Alerts appear on the TSD and are accompanied by sound. The types of alerts are--
- Command.
- Critical Event.
- IFF Situation.
- Emergency or Force Tell.
- Category ID/IFF Conflict.
- General.

Note: A yellow letter A appears in the first line of the system status area immediately following the system time display when any alert is still pending review. The yellow letter A appears for all alert types.

Note: You are notified of alerts to which you must respond and alerts broadcast to all participants in one of the following methods:
- The system status area border blinks alternately in red and white. Clear by replying (response required) or by clearing (no response required).
- A two-tone alert sounds for 5 seconds (warbling two-tone for emergency or force tell alert conditions, multiple monotone beeps for tracks, and single beep for warning for a data entry mistake).
- A text announcement of the command contents indicating the nature of the alert and the associated TN appears in yellow text overlaying the last two lines of the system status area. The announcement appears in the system status area for approximately 8 seconds. You can also view this text announcement in the multi-function area by pressing ALT F1. The meaning of each component in the string of text that appears on screen when an alert is sent is shown in the following example:

ENGAGE 7402 WPN:ANY FM:110:
- ENGAGE is the command type.
- 7402 is the TN.
- ANY is the (WPN) type.
- FM:110 is the address of the unit that is the source of the information displayed.

1. Command Alert: Command alerts apply to incoming commands/orders that transmit emergency orders for safety, set weapons posture and alert conditions, and order engagements of hostile targets. The three categories of command alerts are the following:
   a. Incoming order to which you must respond.
   b. Incoming order to which you are not required to respond (this type of command contains information broadcast to all participants on the data link net).
   c. Notices pertaining to transmitted commands.

2. Critical Event Alert: If a critical event occurs, the system notifies you with the following alerts:
   a. The system status area border blinks alternately in red and white. When you clear the alert, the blinking stops.
   b. A two-tone alert sounds for 5 seconds.
   c. A text announcement of the critical event and the associated TN appears in yellow text overlaying the last two lines of the system status area. The announcement appears in the system status area for approximately 8 seconds. You can also view this text announcement in the multi-function area by pressing ALT F1.

Performance Steps

3. IFF Situation Alert: If you receive an IFF situation alert indicating a hijacking, a communication/radio failure, or a state of emergency, the system notifies you with the following two-phase alert:
   a. Phase 1:
      (1) An initial series of high-pitched, dual monotone beeps for about 5 seconds and is repeated for the second phase of the alert.
      (2) The track with the IFF code indicating an emergency situation blinks. You can terminate the blinking without clearing the alert.
      (3) In the initial phase of the alert, a text announcement of the emergency alert and the associated TN appears in yellow text overlaying the last two lines of the system status area. The announcement appears in the system status area for approximately 8 seconds. You can also view this text announcement, shown in the following example, in the multi-function area by pressing ALT F1:
         EMERGENCY ON TRK XXXX
   b. Phase 2: In the second phase of the alert, the initial announcement changes to:
      IFF EMERG ON TRK XXXX
Note: A yellow letter E (emergency), R (communication/radio), or H (hijacking) appears in the hook readout area (HRO) immediately following the TN.

4. Emergency or Force Tell Alert: If you receive a message initiating an emergency or a force tell condition, the system notifies you with the following alerts:
   a. A series of high-pitched monotone beep sounds for 5 seconds.
   b. The subject track of the emergency or force tell condition blinks. You can terminate the blinking without clearing the alert.
   c. A text announcement of the emergency alert and the associated TN appears in yellow text overlaying the last two lines of the system status area. The announcement appears in the system status area for approximately 8 seconds. You can also view this text announcement in the multi-function area by pressing ALT F1.
      EMERGENCY ON TRK 1226.
   d. A yellow letter E (emergency) or F (force tell) or both are displayed in the HRO immediately following the TN.
Note: The system clears the alert indicators upon termination of an emergency or force tell alert by the originating unit.

5. Category ID/IFF Conflict Alert: If you receive a message initiating a category ID/IFF conflict condition, the system notifies you with the following alerts:
   a. A series of low-pitched monotone beeps sounds for 5 seconds.
   b. A text announcement indicating the existence of a category or ID/IFF conflict, the last two lines of the system status area. The announcement appears in the system status area for approximately 8 seconds. You can also view this announcement, as shown in the following example, in the multi-function area by pressing ALT F1:
      CAT CHG FRM 00141 CHNG 07616 TO LAND - Category Conflict Alert.
      ID CONFLICT TN:4001 REMOTE ID FRIEND - ID Conflict Alert.

6. General Alert: If you receive a message initiating a general alert condition, the system notifies you with the following alerts:
   a. A series of high-pitched monotone beeps sounds for 5 seconds.
   b. A text announcement indicating the condition or state that has caused the alert appears in yellow text overlaying the last two lines of the system status area. The announcement appears in the system status area for approximately 8 seconds. You can also view this announcement, as shown in the following example, in the multi-function area by pressing ALT F1:
      NEW DATA LINK TRACK RECVD BUT TRK FILE IS FULL
Note: This is a general alert informing you that the MDB track file is full.

Performance Measures	**GO**	**NO GO**
1. Identified and reacted to all three types of command alerts.	――	――
2. Identified and reacted to a critical event alert.	――	――
3. Identified and reacted to an IFF situation alert.	――	――
4. Identified and reacted to an emergency or force tell alert.	――	――
5. Identified and reacted to a category ID/IFF conflict alert.	――	――
6. Identified and reacted to a general alert.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
> **Required**   **Related**
>   ADSI-REV-AO1

ENTER TRACK DATA
441-096-1195

Conditions: You have received manual track reports from your supervisor that must be entered into the ADSI system.

Standards: Enters track data, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Select OPER POSITN.

2. Select SURV MODE.

3. Select TRACK ENTRY.

4. New Track: Use the New Track switch to manually enter a new track and display menu entries for all basic track information including type (air, surface, land), identity, position, quality, and mode codes. The track appears on the screen at the current location of the cross hair. To manually enter a new track--
    a. Select NEW TRACK.
    b. Select and enter track data.
    c. Select FINISHED.
    d. Press "Enter."

5. Update Track: Use the update track switch to modify the data of a hooked track. To update a hooked track--
Note: Update track provides the same prompts and switches as the new track switch, with the exception of TRACK TYPE. Once the type of track is set, it can only be changed with the change category switch.
    a. Hook the desired track.
    b. Select UPDATE TRACK.
    c. Enter the information you wish to change.
    d. Select FINISHED.
    e. Press "Enter."

6. Enter Data: The enter data switch provides a more convenient way to update the course and/or speed of the manual track by skipping over several identity selection menus. To update data for an existing track--
    a. Hook the desired track.
    b. Select ENTER DATA.
    c. Select and enter applicable information.
    d. Select FINISHED.
    e. Press "Enter."
     f. Select SENSOR.
    g. Press "Enter."

7. Intelligence Data: Use the intelligence data switch to enter track data not normally available from a tactical sensor (radar), or data that goes beyond basic identity information supported by the new track, update track, and enter data switches. To add track data--
    a. Hook the desired track.
    b. Select INTEL DATA.
    c. Select and enter any applicable information.
    d. Select FINISHED.
    e. Press "Enter."

Performance Steps

  8. Copy Track: Use the copy track switch to create a new track at the position of the cross hair, at a range/bearing entry, or at a designated location using the coordinate entry switch. All data from the currently hooked track is used. To copy a hooked track--
       a. Hook the desired track.
       b. Select COPY TRACK.
       c. Select UPDATE TRACK.
       d. Select FINISHED.
       e. Press "Enter."

  9. Reposition Track: Use the reposition track switch to move a track from its present position to a new position. To reposition a track--
Note: Neither the RG/BRG ENTRY nor the COORD ENTRY switch may be selected during this procedure.
       a. Hook the desired track.
       b. Move the cross hair to the new position.
       c. Select REPOS TRACK.
       d. Press "Enter."

  10. Change Category: The change category switch changes the category or type of track depending on the type of data link (TADIL A, TADIL B, or TADIL J). To change the track category--
       a. Hook the desired track.
       b. Select CHANGE CATEG.
       c. Press "Enter."
       d. Select the category.
       e. Press "Enter."
        f. Select the identification, if desired.
Note: If the data link is TADIL J, select the platform and platform activity.
       g. Press "Enter."

  11. Text Name: Use the text name switch to enter a text name for the hooked track by editing the data entry form that appears when you select this switch. To enter a text name for a track--
Note: The text name can replace the track number (TN) in the track data block depending on the TN priority.
       a. Select TEXT NAME.
       b. Enter a text name.
       c. Select FINISHED.
       d. Press "Enter."

  12. Free Text: Use the free-form text switch to enter text to be associated with a hooked track. Enter up to nine lines, 20 characters each, of free-form text. The text is added to the track file and transmitted to all registered data links that support a test message. To enter text with a hooked track--
       a. Hook the desired track.
       b. Select FREE TEXT.
       c. Press "Enter."
       d. Enter the desired text.
       e. Press "Enter."

  13. Range/Bearing Entry: Select the range/bearing entry switch to cause all track entry switches to prompt for the range and bearing of the new track instead of using the current cross hair location.

Performance Measures	**GO**	**NO GO**
1. Entered a new track.	____	____
2. Modified data of a hooked track.	____	____

Performance Measures	**GO**	**NO GO**
3. Updated the course and speed of a manual track using the ENTER DATA switch.	——	——
4. Entered track data using the INTEL DATA switch.	——	——
5. Created a new track using the COPY TRACK switch.	——	——
6. Moved a track to a new position using the REPOS TRACK switch.	——	——
7. Changed category and type of track using the CHANGE CATEG switch.	——	——
8. Entered a text name using the TEXT NAME switch.	——	——
9. Entered free-form text using the FREE TEXT switch.	——	——
10. Prompted the range and bearing of a new track using the RG/BRG ENTRY switch.	——	——
11. Prompted the coordinates of a new track using the COORD ENTRY switch.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
   Required   **Related**
                                                          ADSI-REV-AO1

SEND ACTION/MANAGEMENT MESSAGES
441-096-1196

Conditions: You have a requirement to send a number of messages to the participating units (PU) within your area.

Standards: Successfully sends action/management messages, per the below Performance Steps, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps
Note: The command authority is the only unit that will use the command and control switches regularly. Use these switches to send real-time engagement commands across the primary TADIL networks.

1. Select OPER POSITN.

2. Select WEAPNS MODE.

3. Select COMMD/CONTRL.

4. Transmit a Command (TADIL A and B):
    a. The command authority is the only unit that will use the command and control switches regularly. Use these switches to send real-time engagement commands across the primary TADIL networks.
        (1) Select OPER POSITN.
        (2) Select WEAPNS MODE.
        (3) Select COMMD/CONTRL.
    b. To transmit a Command (TADIL A and B):
Note: You can access the hold fire and salvo switches at any time. However, to use the following command switches requires force authority. If force authority has been granted, select the force authority switch (OPER POSITN-SYSTEM MANAGR-SYSTEM PARAMS-FORCE AUTH):
        - WPNS TIGHT.
        - WPNS FREE.
        - ENGAGE.
        - COVER.
        - CEASE FIRE.
        - CEASE ENGAGE.
Note: Transmitting an addressed command causes the system to send a response-required alert to the addressee. The unit or units respond to the command with either "WILCO, CANTCO, or HAVCO."
        (1) Select the switch that corresponds to the command you wish to send.
        (2) Type in ADDRESSEE.
        (3) Press "Enter."

Performance Steps
The system automatically fills in the track number (TN) for the following switches under the circumstances listed in the following steps:
- HOLD FIRE.
- CEASE FIRE
- CEASE ENGAGE.
- SALVO.
- ENGAGE.
- INVEST ASSIGN.
- COVER.

Note: TN is automatically entered.
TADIL A and B:
- In addressee data field when PU/RU site is hooked.
- In TN TGT data field if target that is not a friend is hooked when you select the switch.
- In TN FWS data field if interface is TADIL B.
- In TN FWS data field if interface is TADIL A and a track is hooked that is friendly when you select the switch.

ATDL 1:
- In addressee data field if PU/RU site is hooked.
- In TN TGT data field if hostile or unknown target is hooked when you select the switch.
    (4) Select WEAPON TYPE.
    (5) Select FINISHED.

Note: For the WPNS TIGHT and WPNS FREE switches, you will also be required to select the ALERT CONDITION. The system sends a command alert to the addressee. An informational response alert is received when the addressee responds.

5. To use the hold fire switch to order units not to fire on a target--
    a. Select HOLD FIRE.
    b. Type in ADDRESSEE.
    c. Press "Enter."
    d. Type in TN TGT.
    e. Press "Enter."
    f. Type in TN FWS.
    g. Press "Enter."
    h. Select FINISHED.
    i. Press "Enter."
    j. Select WEAPON TYPE.
    k. Press "Enter."

6. Use the cease fire switch to order units to stop firing on a target:
    a. Select CEASE FIRE.
    b. Type in ADDRESSEE.
    c. Press "Enter."
    d. Type in TN TGT.
    e. Press "Enter."
    f. Type in TN FWS.
    g. Press "Enter."
    h. Select FINISHED.
    i. Select WEAPON TYPE.

7. Use the cease engage switch to order a unit to break off an engagement:
    a. Select CEASE ENGAGE.
    b. Type in ADDRESSEE.
    c. Press "Enter."
    d. Type in TN TGT.
    e. Press "Enter."
    f. Type in TN FWS.

Performance Steps

g. Press "Enter."
h. Select FINISHED.
 i. Press "Enter."
 j. Select WEAPON TYPE.
k. Press "Enter."

8. Use the salvo switch to order all friendly aircraft to clear the vicinity of a target when another unit is firing on the target:
a. Select SALVO.
b. Type in ADDRESSEE.
c. PRESS "Enter."
d. Type in TN TGT.
e. Press "Enter."
 f. Type in TN FWS.
g. Press "Enter."
h. Select FINISHED.
 i. Press "Enter."
 j. Select WEAPON TYPE.
k. Press "Enter."

9. To use the engage switch to direct a unit to attack or intercept a target--
a. Select ENGAGE.
b. Type in ADDRESSEE.
c. Press "Enter."
d. Type in TN TGT.
e. Press "Enter."
 f. Type in TN FWS.
g. Press "Enter."
h. Select FINISHED.
 i. Press "Enter."
 j. Select WEAPON TYPE.
k. Press "Enter."

10. To use the investigate/assign switch to order a unit to perform all engagement functions but not fire until ordered--
a. Select INVEST ASSIGN.
b. Type in ADDRESSEE.
c. Press "Enter."
d. Type in TN TGT.
e. Press "Enter."
 f. Type in TN FWS.
g. Press "Enter."
h. Select FINISHED.
 i. Press "Enter."
 j. Select WEAPON TYPE.
k. Press "Enter."

11. To use the cover switch to order a unit into a position from which it can engage a target--
a. Select COVER.
b. Type in ADDRESSEE.
c. Press "Enter."
d. Type in TN TGT.
e. Press "Enter."
 f. Type in TN FWS.
g. Press "Enter."
h. Select FINISHED.

Performance Steps

      i. Press "Enter."
     j. Select WEAPON TYPE.
    k. Press "Enter."

12. To use the weapons tight switch to order a unit to only fire at targets positively identified as hostile--
    a. Select WPNS TIGHT.
    b. Type in ADDRESSEE.
    c. Press "Enter."
    d. Select FINISHED.
    e. Press "Enter."
    f. Select ALERT CONDITION.
    g. Press "Enter."

13. To use the weapons tight switch to order a unit to only fire at targets that are not positively identified as friendly--
    a. Select WPNS FREE.
    b. Type in ADDRESSEE.
    c. Press "Enter."
    d. Select FINISHED.
    e. Press "Enter."
    f. Select ALERT CONDITION.
    g. Press "Enter."

14. To use the engage ripple switch to order units to fire sequentially on a target (ATDL 1 only)--
    a. Select ENGAGE RIPPLE.
    b. Type in WEAPON TYPE.
    c. Press "Enter."
    d. Select FIRE SECTION.
    e. Press "Enter."

15. To use the scram switch to order all friendly aircraft to clear the vicinity of a target when another unit is firing on the target (ATDL 1 only)--
    a. Select SCRAM.
    b. Type in ADDRESSEE.
    c. Press "Enter."
    d. Type in TN TGT.
    e. Press "Enter."
    f. Select FINISHED.
    g. Press "Enter."
    h. Select WEAPON TYPE.
    i. Press "Enter."
    j. Select FIRE SECTION.
    k. Press "Enter."

16. Weapons/Engagement Status (W/ES): Use the weapons/engagement status (W/ES) switch matrix to set and transmit weapon status on missile sites and to set and transmit engagement status for an engaged friendly weapon system (FWS).
    Note: Use the weapons status switch only when the force authority switch is selected.
    a. To use the weapons status switch to display a series of menus and data entry forms for the status of an FWS--
       (1) Select WEAPON STATUS.
       (2) Type in TN FWS.
       (3) Press "Enter."
       (4) Select FINISHED.
       (5) Press "Enter."
       (6) Select WEAPON TYPE.

Performance Steps
        (7) Press "Enter."
        (8) Select WEAPON STATUS.
        (9) Press "Enter."
      (10) Type in weapons data.
      (11) Select FINISHED.
      (12) Press "Enter."
    b. To transmit engagement status--

Note: The engagement status switch displays a series of menus requesting the status of an engagement of an unknown or hostile track by an FWS.
Note: Immediately after selecting the switch, fill in the open data field by hooking a track or by typing the TN. Once both TNs are entered, a menu displays indicating the weapon type and the engagement status.
        (1) Select ENGMNT STATUS.
        (2) Type in TN FWS.
        (3) Press "Enter."
        (4) Type in TN TGT.
        (5) Select FINISHED.
        (6) Press "Enter."
        (7) Select WPN ENGMNT STATUS.
        (8) Press "Enter."
    c. Select the hot list switch to display a list of all tracks that are engaged and have a hot weapons inventory. Page through the list with the PG UP and PG DN keys.
    d. Select the engagement list switch to display a list of all current engagements. If an engaged track has hot weapons inventory, it is displayed in red. Page through the list with the PG UP and PG DN keys.

  17. Weapons Mode (TADIL J Only):
    a. Select OPER POSITN.
    b. Select WEAPNS MODE.
    c. To enter platform specific information on a track--
        (1) Select TRACK CONTRL.
        (2) Select PLATFM STATUS.
        (3) Type in platform data.
        (4) Select FINISHED.
        (5) Press "Enter."
    d. To assign a unit to a target--
        (1) Select ASSIGN.
        (2) Type in the ADDRESSEE.
        (3) Type in TN TGT and TN FWS.
        (4) Select FINISHED.
        (5) Select "Enter."
        (6) Select WEAPON TYPE.
        (7) Press "Enter."
    e. To select the other commands switch--
        (1) Select COMMD CONTRL.
        (2) Select OTHER COMMDS.
        (3) Select the command to transmit.
        (4) Press "Enter."
        (5) Type in ADDRESSEE.
        (6) Type in data.
        (7) Select FINISHED.
        (8) Press "Enter."
        (9) Select WEAPON TYPE.
      (10) Press "Enter."
    f. To add an engagement--

Performance Steps

    (1) Select OPER POSITN.
    (2) Select WEAPNS MODE.
    (3) Select W/ES.
    (4) Select ADD ENGMNT.
    (5) Type in TN FWS.
    (6) Press "Enter."
    (7) Type in TN TGT.
    (8) Press "Enter."
    (9) Select FINISHED.
    (10) Press "Enter."
    (11) Type in WEAPON ASSIGNMENTS.
    (12) Select FINISHED.
    (13) Press "Enter."
 g. To update the status of current engagements--
    (1) Select OPER POSITN.
    (2) Select WEAPNS MODE.
    (3) Select W/ES.
    (4) Select UPDATE ENGMNT.
    (5) Select the engagement to update.
    (6) Press "Enter."
    (7) Add or update WEAPON ASSIGNMENTS.
    (8) Select FINISHED.
    (9) Press "Enter."
 h. To break off a current engagement--
    (1) Select OPER POSITN.
    (2) Select WEAPNS MODE.
    (3) Select W/ES.
    (4) Select BREAK ENGMNT.
    (5) Select the engagement to break off.
    (6) Press "Enter."
 i. To send a heads up message to other units--
    (1) Select OPER POSITN.
    (2) Select WEAPNS MODE.
    (3) Select W/ES.
    (4) Select HEADS UP.
    (5) Type in TN TGT.
    (6) Select FINISHED.
    (7) Press "Enter."

Performance Measures

	GO	NO GO
1. Sent a hold fire message.	___	___
2. Sent a cease fire message.	___	___
3. Sent a cease engage message.	___	___
4. Sent a salvo message	___	___
5. Sent an engage message.	___	___
6. Sent an investigate/assign message.	___	___
7. Sent a cover message.	___	___
8. Sent a weapons tight message.	___	___
9. Sent an engage ripple message.	___	___

Performance Measures	GO	NO GO
10. Sent a scram message.	–––	–––
11. Sent a weapons status message	–––	–––
12. Sent an engagement status message.	–––	–––
13. Displayed a hot list.	–––	–––
14. Displayed all current engagements.	–––	–––
15. Entered platform specific information (TADIL J).	–––	–––
16. Assigned a unit to a target (TADIL J).	–––	–––
17. Added an engagement.	–––	–––
18. Updated status of current engagements.	–––	–––
19. Sent a heads up message.	–––	–––

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
   Required   **Related**
                                                     ADSI-REV-AO1

SET UP AUTOMATIC ASSIGNMENT OF IFF/SIF INFORMATION
441-096-1197

Conditions: Your supervisor directs you to update or enter new IFF information into the ADSI system. IFF and SIF information are available.

Standards: Successfully sets up automatic assignment of IFF/SIF information, per the below Performance Steps, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Select OPER POSITN.

2. Select SURV MODE.

3. Select ID BY RADIFF.

4. To use the mode ID order switch to specify which IFF mode codes have priority in assigning identity data--
   a. Select MODEID ORDER.
   b. Rank each mode from 0 to 4.
Note: 0 = mode off and 4 = mode is the highest priority.
   c. Select FINISHED.
   d. Press "Enter."
   e. Select SAVE MODEID.
Note: Save the settings selected and use them as the default settings at the next system start-up.

5. To use the mode identification switches to set the IFF mode code ranges to identify tracks--
Note that the mode identification switches allow you to enter the following information:
MODE 1 IDENT--Enter a mode 1 IFF code along with the selected identity information data. Enter up to 22 mode 1 IFF codes.
Example: 11-FRND/HELO/MEDEVAC (TADIL A/TADIL B/ATDL-1).
MODE 2 IDENT--Enter intervals of mode 2 IFF codes along with the selected identity information data. Enter up to 22 mode 2 IFF codes. Enter a specific mode 2 IFF code by entering the same value in the LOW and HI data entry fields.
MODE 3 IDENT--Allow an interval of mode 3 IFF codes along with the selected identity information data. Enter a specific mode 3 IFF code by entering the same value in the LOW and HI data entry fields.
Example: 3700-4300-SPFR/INT/UNAV (ATDL-1).
MODE 4 IDENT--Enter a type of mode 4 response (such as no response [NR], invalid response [IR], or valid response [VR]) along with selected identity information data.
Example: VR-/FRND/GENERAL/MIL TRA.
Note: This data provides for the automatic identification of radar tracks. Any radar tracks received are automatically assigned the selected identity information if the mode data matches. The identity information menus shown depend on the tactical data link type, and are the same as those shown when an air track is hooked and the IDENT switch is selected.
   a. Select a mode identification switch (MODE 1 IDENT through MODE 4 IDENT).
   b. Press "Enter."
   c. Enter the desired information.
   d. Select FINISHED.
   e. Press "Enter."
Note: Repeat steps 5a through 5e until you have set ranges for each mode that you will use to identify tracks.

Performance Measures   **GO**   **NO GO**

1. Selected ID BY RADIFF.   ____   ____

Performance Measures	GO	NO GO
2. Prioritized Modes 1 through 4.	___	___
3. Entered information for each mode in use.	___	___

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Related
	ADSI-REV-AO1

PREPARE A SCENARIO SCRIPT FILE
441-096-1198

Conditions: You are tasked to prepare an air defense scenario to support a training mission. You are required to perform several functions pertaining to scenario generation.

Standards: Correctly establishes a scenario that enables the different functions of recording, playback, and creation of track data for a script file, per the below Performance Steps, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Select OPER POSITN.

2. Select SIMULATION.

3. Select SCNRIO.

4. To turn on or turn off available scenarios--
Note: This switch displays a list of previously recorded scenarios.
      a. Select SCNRIO ON/OFF.
      b. Select scenario file.
      c. Press "Enter."

5. To designate the units written to or read from scenario files--
Note: When the system reads a unit designation from a scenario file, it substitutes the designation for the last EDIT PARAMS selection, enters it in the data entry form, and displays it in the multi-function area when the EDIT PARAMS switch is on.
      a. Select EDIT PARAMS.
      b. Press "Enter" to change settings.
      c. Select FINISHED.
      d. Press "Enter."

6. Pause scenario switch: Select PAUSE SCNRIO to pause the playback of a scenario. Select the switch again to resume playback from the point it was paused.

7. Scenario fast forward switch: Select SCNRIO FWD to read the scenario file without pause and without regard to time intervals in the file, until the switch is turned off.

8. Takeover scenario track: Hook the track and select TAKOVR SCN TK to change the currently hooked track from a SCEN or TGTGEN track to a manual track.

9. Clear data switch: Select CLEAR DATA to clear all data link tracks and radar plot symbology from the display and the track database.
Note: All communication link interfaces must be turned off prior to using this switch.

10. To enter the number of tracks and the maximum X/Y values for the tracks--
Note: These tracks are recorded to the scenario file if the RANDOM TRKS switch is selected when the RECORD SCNRIO switch is turned on.
      a. Select RANDOM TRKS.
      b. Select track type.
      c. Type in track data.
      d. Select FINISHED.
      e. Press "Enter."

11. To designate the data source of a hooked track--
Note: The data source entered must be one currently held in the master database (MDB).
      a. Hook the track.
      b. Select DESIG SOURCE.

Performance Steps
        c. Type in the source.
        d. Select FINISHED.
        e. Press "Enter."

  12. To enter raw data link messages to transmit to the connected data link--
        a. Select SEND DL MSG.
        b. Select the entry format.
        c. Type in the message data.
        d. Select FINISHED.
        e. Press "Enter."

  13. To designate the hard-disk drive to be used for reading and writing scenario files--
        a. Select SCNRIO DRIVE.
Note: The available drives are listed for selection.
        b. Select the drive to use.
        c. Press "Enter."

  14. To select the path name for the scenario--
        a. Select SCNRIO PATH.
Note: The directory path defaults to SCNFILES.
        b. Select scenario directory.

  15. To record track generation and updates--
Note: To record TGTGEN tracks as normal updates, select "No" for the record target generation switch commands (REC TGTGEN CMDS) prompt.
        a. Select RECORD SCNRIO.
        b. Type Y to turn off data links.
        c. Type in the file name.
        d. Press "Enter."
        e. Type Y or N for REC TGTGEN CMDS.
        f. Select FINISHED.
        g. Press "Enter."

  16. To delete a previously recorded scenario--
        a. Select DELETE SCNRIO.
        b. Select the scenario file to delete.
        c. Press "Enter."
        d. Type Y or N.

  17. To enter the name of a text file to send to the printer--
        a. Select PRINT FILE.
        b. Type in the file name.
        c. Select FINISHED.
        d. Press "Enter."

  18. To control display data recording to a disk file--
Note: This recording can be played back to recreate the visual display.
Note: Only radar plots and data link tracks are recorded and displayed; range rings and other display features are not recorded for playback.
        a. Select OPER POSITN.
        b. Select SIMULATION.
        c. Select RECORD PLAYBK.
        d. Select RECORD DISPLY.

Performance Steps

Note: System status area displays the message RECORD IN PROGRESS. When this switch is on, data received from the MDB and plot data received from a tracker or surveillance control data link (SCDL) are recorded for playback. The name of the recording file is created automatically and is defined as month, day, hour, and minute, with an extension that starts with the letter R followed by two digits representing the file position in the sequence of files created. Recorded display files are stored in the RECDATA directory. The current file is closed once per hour and a new file is opened when the current recording drive is full. The system automatically starts recording on the second recording drive, if any. When both recording drives are full, recording terminates. To terminate recording, select RECORD DISPLY again.

19. To select a recorded file to be played back--
      a. Select START PLAYBK.
      b. Select the desired file.
      c. Press "Enter."

20. To display summary information about the selected recording file--
      a. Select RECORD INFO.
      b. Select a file.
      c. Press "Enter."

21. To select a recorded file for deletion--
      a. Select DELETE PLAYBK.
      b. Select a file for deletion.
      c. Press "Enter."

22. To display radar plots when a recorded file is selected for playback, select PLAYBK TRKS. This is an on/off switch; the default is on.

23. PLAYBK DERG: Not used.

24. To clear all data link tracks and radar plot symbology from the display and the track database, select CLEAR DATA.

25. To stop the playback of a recorded file and to stop the system clock, select PLAYBK PAUSE. Select the switch again to resume.

26. To enter the number of minutes to advance the playback--
Note; The system reads the appropriate amount of data from the playback file and displays it in an accelerated mode. Playback slows to normal speed after fast forwarding is complete. If the entry for the number of minutes goes past the end of the file, the background color of the switch returns to black, indicating the file was fast forwarded to the end.
      a. Select FAST FWD.
      b. Type in the amount of time to skip.
      c. Select FINISHED.
      d. Press "Enter."

27. To select the disk drive for playing a recorded file--
Note: The available drives are listed. The list always contains the default drive (usually drive C) and can also contain up to two other drives.
      a. Select PLAYBK DRIVE.
      b. Select the drive from the list provided.
      c. Press "Enter."

28. To select the disk drive to use for recording--
      a. Select RECORD DRIVE.
      b. Select the drive from the list provided.
      c. Press "Enter."

Performance Measures	**GO**	**NO GO**
1. Turned available scenarios on then turned them off.	——	——
2. Designated the units written to, then read from, scenario files.	——	——
3. Changed the hooked track from a SCEN or TGTGEN track to a manual track.	——	——
4. Cleared all data link tracks and radar plot symbology from the display and the track database.	——	——
5. Entered the number of tracks and the maximum X/Y values for those tracks.	——	——
6. Designated the data source of a hooked track.	——	——
7. Entered raw data link messages to transmit to the connected data link.	——	——
8. Recorded track generation and updates.	——	——
9. Deleted a previously recorded scenario.	——	——
10. Entered the name of a text file to send to the printer.	——	——
11. Recorded and played back a file.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                 ADSI-REV-AO1

Subject Area 13: AMDWS Operations

INITIALIZE SOFTWARE ON THE AMDWS
441-096-1143

Conditions: The Air and Missile Defense Workstation (AMDWS) is emplaced and powered up. Initialization parameters are available. Your supervisor directs you to initialize the software on the AMDWS.

Standards: Initializes software on the AMDWS, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Input boot-up configuration information as required.	⸺	⸺
2. Input NGD changes if required.	⸺	⸺
3. Input track sources if required.	⸺	⸺
4. Selected Air and Missile Defense Workstation.	⸺	⸺
5. Selected Defense Planner functions as required.	⸺	⸺
6. Selected Situation Awareness functions as required.	⸺	⸺

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                  TB 11-7010-303-14-3

PERFORM AMDWS MAP GENERATION
441-096-1144

Conditions: Your supervisor directs you to generate an AMDWS map. The AMDWS is powered up.
Unit location, weapon, and sensor information are available.

Standards: Performs AMDWS map generation, with no damage to the equipment, and within the time
prescribed by local command directives.

Performance Measures	GO	NO GO
1. Selected Maps from main menu.	——	——
2. Obtained desired AOI.	——	——
3. Selected desired map display type.	——	——
4. Edited selected map display type.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any
step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                              TB 11-7010-303-14-3

PERFORM AMDWS OVERLAY FUNCTIONS
441-096-1145

Conditions: Your supervisor directs you to perform AMDWS overlay functions. Map generation for the AMDWS has been completed. OPTASK link, along with sensor, weapons, and track information are available.

Standards: Performs AMDWS overlay functions, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Selected overlay type from Air Picture main menu.	——	——
2. Selected sensor type.	——	——
3. Created overlay.	——	——
4. Deployed overlay.	——	——
5. Modified overlay.	——	——
6. Deleted overlay.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                              TB 11-7010-303-14-3

DISPLAY AIR PICTURE AND HOOK INFORMATION
441-096-1149

Conditions: The input of all tactical data and overlays into the AMDWS has been completed and your supervisor directs you to display air picture and hook information.

Standards: Properly displays air picture and hook information, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Selected File from the map menu bar.	——	——
2. Selected Mission.	——	——
3. Selected Save-As Current Situation.	——	——
4. Selected Mode from the map menu bar.	——	——
5. Selected Situation Awareness.	——	——
6. Entered the mission name with extension (name.msn, et cetera).	——	——
7. Selected Save.	——	——
8. Selected Preferences, Display Filters, and General.	——	——
9. Toggled on the air picture by selecting the dots next to AB picture and TBM, then selected Apply.	——	——
10. Selected (hooked) air tracks.	——	——
11. Identified information in track hook dialog box.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    TB 11-7010-303-14-3

Subject Area 14: Engagement Operations

REACT TO OPERATOR ERROR MESSAGES
441-096-1081

Conditions: The Engagement Operations System or HTU is operating, and the screen may be displaying any menu screen, data entry screen, or battlefield situation display (BSD). A beep sounds and a message appears in the operator error viewport.

Standards: Corrects the Operator Error messages, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
Data Entry Screens:		
1. Checked data entry table for function being performed to verify entry was legal value.	——	——
2. Verified entered data was correct.	——	——
Menus and BSD:		
3. Checked to verify if key pressed was an available option.	——	——
4. Reselected correct function key.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                              TB 11-7010-269-10

PERFORM DIRECTED EARLY WARNING PROCEDURES
441-096-1082

Conditions: Your equipment is nonoperational, or you are a forward observer and must search for aerial targets manually, or you observe an unreported aerial target. The following are available:

1. Map.
2. Compass.
3. Grease pencil.
4. Binoculars.
5. SINCGARS voice radio.

Standards: Sends detected target information using voice directed early warning on the division early warning net, per FM 44-43 or FM 44-44, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. States preface.	――	――
2. Makes identification.	――	――
3. Provides local air defense warning information.	――	――
4. Indicates direction.	――	――
5. Indicates size.	――	――
6. Identifies affected asset.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    FM 44-43
                                                    FM 44-44

PERFORM ARCHIVAL TASKS
441-096-1083

Conditions: The engagement operations workstation is displaying the FAAD C2I: MAIN MENU. Your supervisor directs you to copy selected files to or from the floppy drive or tape drive (archive device) for backup copies or to update files on the hard disk.

Standards: Completes backup or updating files on the hard drive, per TB 11-7010-271-14-1, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Selected F12 VFK (SYSTEM RESET).	——	——
2. Selected F9 VFK (EXIT TO OPERATING SYSTEM).	——	——
3. Listed contents of tape.	——	——
4. Copied specific files to hard disk.	——	——
5. Printed tape file list.	——	——
6. Printed floppy file list.	——	——
7. Formatted floppy disk.	——	——
8. Copied all files to floppy disk.	——	——
9. Copied selected files to floppy disk.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required
                                     Related
                                     TB 11-7010-271-14-1

REACT TO AIR TRACK ALERTS ON THE BSD
441-096-1084

Conditions: One or more air track alerts appear in the track alert viewport on the battlefield situation display (BSD).

Standards: Responds to all alerts, per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Selected F1 (track clear) VFK.	——	——
2. Selected F1 (single track) VFK and verified track alert information was displayed in track alert viewport.	——	——
3. Repeated step 2 for each track alert until all track alerts were cleared.	——	——
4. Selected F2 (other clear) VFK to clear other alerts as required.	——	——
5. Selected USER TOP VFK F7 to return to top level.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                        TB 11-7010-269-10-1

TOGGLE TRACK LINKS ON THE BSD
441-096-1085

Conditions: The battlefield situation display (BSD) is displayed. Your supervisor directs you to toggle track links on the BSD.

Standards: Toggles track links on the BSD, per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Selected F9 (STATUS) VFK.	——	——
2. Selected F10 (LINK TOGGLE) VFK and verified link toggle data was displayed in the message menu viewport.	——	——

3. Selected ON or OFF for the following items:
     a. ADJACENT FAAD-1.
     b. ADJACENT FAAD-2.
     c. TADIL-B.
     d. E3A.
     e. SENSOR HARDWIRE.
      f. INTRAFAAD NET.
     g. INTRAFAAD BROADCAST
     h. SENSOR BROADCAST.
      i. COMMAND & CONTROL LINKS.
	——	——

4. Selected USER TOP VFK F7 and returned to top level VFKs.	——	——
5. Selected F9 (LINK STATUS) and checked the status of communication links.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                                             TB 11-7010-269-10-1

HOOK AIR TRACKS
441-096-1086

Conditions: Air tracks are displayed on the battlefield situation display (BSD) and additional information is required on a track or tracks.

Standards: Hooks and obtains required identification of all air tracks, per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Evaluation Preparation: A box appears around selected track when hooked. After selecting the EVENT HISTORY VFK, the track event history appears in the message menu viewport. After selecting the TRACK NUM HOOK VFK, the track number prompt appears in the hook prompt viewport.

Performance Measures	**GO**	**NO GO**
1. Hooked selected air track.	——	——
2. Hooked E-3A air track (AWACS).	——	——
3. Hooked air track by number.	——	——
4. Hooked air track by track number sequence.	——	——
5. Hooked air track by ADJACENT FAAD track number.	——	——
6. Hooked air track by TADIL-B track number.	——	——
7. Hooked air track by intraFAAD broadcast track number.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                              TB 11-7010-269-10-1

MANUALLY DESIGNATE ID OR CLASSIFICATION (ONLY IF ID AUTHORITY)
441-096-1087

Conditions: An air track displayed on the battlefield situation display (BSD) must be redesignated or reclassified.

Standards: Manually redsignates or reclassifies air traffic ID (only if ID authority), per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Placed BSD cursor over selected air track using trackball and hooked.	——	——
2. Selected ASSIGN ID ALT-F3 HVFK.	——	——
3. Selected new items for MANUAL ID and MANUAL CLASS.	——	——
4. Processed new information.	——	——
5. Selected DEHOOK ALT-F5 HVFK.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                       TB 11-7010-269-10-1

SET TRACK FILTERS ON THE BSD
441-096-1088

Conditions: Selected track filter parameters on the battlefield situation display (BSD) must be changed as battlefield conditions change.

Standards: Enters or updates track filters on the BSD as battlefield conditions change, per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Pressed F6 (ALERTS/ALARMS) VFK.	——	——
2. Pressed F9 (ALERT THR) VFK.	——	——
3. Selected fixed- and rotary-wing thresholds.	——	——
4. Processed changes by highlighting PROCESS box and pressing RETURN.	——	——
5. Pressed F10 (TK ALM ON/OFF) VFK as required.	——	——
6. Pressed F11 (OT ALM ON/OFF) VFK as required.	——	——
7. Pressed F7 (USER TOP) VFK.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                      TB 11-7010-269-10-1

SELECT OVERLAYS ON THE BSD
441-096-1089

Conditions: Selected overlays on the battlefield situation display (BSD) must be changed as battlefield conditions change.

Standards: Updates selected overlays on the BSD as the battlefield conditions change, per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	<u>**GO**</u>	<u>**NO GO**</u>
1. Pressed F4 (OVRLY) VFK.	——	——
2. Pressed F4 (DECLUTTER) VFK.	——	——
3. Pressed F9 (TK NUM ON/OFF) VFK as required.	——	——
4. Pressed F10 (UNIT ON/OFF) VFK as required.	——	——

5. Pressed F11 (TRACK) VFK and selected YES or NO for the following symbology displayed in the message menu viewport:
  a. Hostile FW, RW.
  b. Unknown FW, RW.
  c. Suspect FW, RW.
  d. Friend FW, RW.
  e. Simulated tracks.
	——	——

6. Pressed F12 (CM) VFK and selected ON or OFF for the control measure overlays displayed in the message menu viewport.	——	——
7. Pressed USER TOP VFK.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                                               TB 11-7010-269-10-1

GENERATE OR MODIFY CONTROL MEASURES ON THE BSD
441-096-1091

Conditions: Selected control measures on the BSD must be generated or modified to reflect changing battlefield conditions or movement to new site.

Standards: Generates or updates the BSD appropriately to reflect current battlefield conditions, per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Pressed F10 (MSG) VFK.	――	――
2. Pressed F10 (CTRL MEAS) VFK.	――	――
3. Selected desired control measures to generate--	――	――

      a. ADJACENT FAAD-1.
      b. ADJACENT FAAD-2.
      c. AIRFIELD.
      d. ASSET POINT.
      e. BOUNDARY.
      f. DROP ZONE.
      g. FAADEZ.
      h. FARP.
      i. FEBA.
      j. FLOT.
      k. FSCL.
      l. LLTR.
      m. L.
      n. PROHIBITED AREA.
      o. RA-FW.
      p. RA-FW.
      q. SBS.
      r. SUAAR.
      s. SUB.
      t. WCV.

Performance Measures	<u>GO</u>	<u>NO GO</u>
4. Generated control measure.	――	――
5. Pressed USER TOP VFK.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                     TB 11-7010-269-10-1

ACKNOWLEDGE AND REVIEW MESSAGES AND STATUS ON THE BSD
441-096-1092

Conditions: The battlefield situation display (BSD) is displayed and the MESSAGE RECEIVED alarm is flashing.

Standards: Acknowledges and reviews messages and status on the BSD, per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Pressed F10 (MSG) VFK.	——	——
2. Pressed F11 (DISP MSG) VFK then F11 (OWN) or F12 (SBRD) to view messages.	——	——
3. Highlighted desired message.	——	——
4. Pressed F12 (DELETE) or F10 (MODIFY) VFK.	——	——
5. Made desired changes if F10 VFK was pressed.	——	——
6. Repeated steps 3 through 5 for each message.	——	——
7. Pressed F6 (RETURN LAST) VFK.	——	——
8. Pressed F12 (ACK MSG) VFK.	——	——
9. Highlighted desired message.	——	——
10. Pressed F9 (WILCO), F10 (HAVCO), or F11 (CANTCO) to acknowledge message.	——	——
11. Repeated steps 9 and 10 for each message.	——	——
12. Pressed F6 (RETURN LAST) VFK.	——	——
13. Pressed F7 (USER TOP) VFK.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                             TB 11-7010-269-10-1

TERMINATE TACTICAL BSD OPERATIONS
441-096-1094

Conditions: All equipment is powered on. The battlefield situation display (BSD) is displayed on the CMD. Movement orders have been received, maintenance must be performed, or you are taking over the role of an ABMOC for CONOPS.

Standards: Terminates tactical BSD operations, per TB 11-7010-269-10-1, with no damage to the equipment, and within the time prescribed by local command directives.

Evaluation Preparation: For CONOPS only, where you are configuring as another node (ABMOC, A2C2, BCP, or sensor C2), stop after step 5. For termination, skip step 5 and continue to step 6.

Performance Measures	GO	NO GO
1. Selected F12 (SYS MODE) VFK.	——	——
2. Selected F10 (TERM) VFK.	——	——
3. Selected F12 (TERM YES) VFK.	——	——
4. Selected F12 (SYSTEM RESET) VFK.	——	——

5. Selected F1 (SYSTEM RESET) (reconfiguring).
    a. Selected F12 (RESET YES) VFK.
    b. Selected F7 (USER TOP) VFK.
	——	——

6. Selected F10 (SHUTDOWN) VFK.	——	——
7. Selected F12 (YES) VFK.	——	——
8. Powered down the HCU.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                          Related
                                          TB 11-7010-269-10-1

PERFORM CONOPS OPERATIONS
441-096-1095

Conditions: You are in an A2C2, BCP, or Sensor C2 node. The ABMOC is preparing to move or is inoperative. You are required to perform the functions of an ABMOC. The battlefield situation display (BSD) is displayed on your screen, and the SOI is available.

Standards: Performs CONOPS, per FM 3-0 and FM 44-48, within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Determined equipment status.	——	——
2. Determined appropriate action based on equipment status.	——	——
3. Reported equipment status to higher headquarters.	——	——
4. Reconfigured the node to perform ABMOC functions.	——	——
5. Ensured lower echelons were notified of change.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
SOI	FM 3-0
	FM 44-48

PERFORM FAAD C2I SYSTEM INITIALIZATION
441-096-1189

Conditions: Your supervisor directs you to initialize the FAAD C2I system. All equipment is powered on. The FAAD C2I main menu is displayed. All required parameters (SOI) are available.

Standards: Performs FAAD C2I system initialization, per TB 11-7010-305-10, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Performed subsystem initialization.	––––	––––
2. Performed communication data initialization.	––––	––––
3. Completed unit linkage table.	––––	––––
4. Changed external track dissemination priorities as directed by higher authority.	––––	––––
5. Performed track-related data initialization	––––	––––
6. Performed data recording options initialization.	––––	––––

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                                               TB 11-7010-305-10

Subject Area 15: Tactical Command System (TCS)

OPERATE RADIO SET AN/GRC-193A
113-620-2028

Conditions: Given an operational radio set AN/GRC-193A, operating frequency, a distant station, and TM 11-5820-924-13.

Standards: The standards are met when the soldier can perform all the proper procedures to place the radio set into operation and shut it down IAW TM 11-5820-924-13.

Performance Measures	GO	NO GO
1. Perform preliminary setup procedures.	___	___

    a. Ensure the air intake and exhaust ports on antenna coupler CU-2064 and power amplifier AM-6545 are clear.

    b. Ensure all cables are tight and connected to the proper connections on all components and equipment is grounded.

    c. Set the radio set controls.

        (1) OFF/MAX/VOLUME switch to OFF.

        (2) MODE to V-TR.

        (3) SB SELECTOR to USB or LSB.

        (4) 20 or 60MA (not used with VOICE or CW).

        (5) TTY/SPKR ON/OFF to OFF.

        (6) SQUELCH CONTROL to MID RANGE.

        (7) ANT CPLR CB - PUSH IN to RESET.

        (8) PA CB - PUSH IN to RESET.

        (9) 400W/100W selector to 100W.

2. Perform test procedures.	___	___

    a. Momentarily press the handset PUSH-TO-TALK (PTT) switch and verify that the handset emits a 1-kHz sidetone which terminates in less than 12 seconds.

    b. Turn the radio off.

3. Set controls for operation.	___	___

    a. CIRCUIT BREAKER to ON.

Performance Measures   **GO**   **NO GO**

      b. Start vehicle engine by adjusting throttle.

      c. OFF/MAX/VOLUME switch turn to right ½ turn.

      d. FREQ SELECT PUSH BUTTONS to set operating frequency.

  4. Perform operating procedures. Wait for continuous 1-kHz tone to cease and   ——   ——
receiver noise level to increase.

  5. Perform shutdown procedures for radio set AN/GRC-193A.   ——   ——

      a. OFF/MAX/VOLUME switch to OFF.

      b. FREQ SELECTOR PUSH BUTTONS to ZEROIZE.

      c. PWR ON/OFF switch to OFF.

      d. CIRCUIT BREAKER to OFF.

      e. Vehicle THROTTLE push to IN.

      f. IGNITION switch to OFF.

      g. Disconnect whip antenna.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References
    Required   **Related**
    TM 11-5820-924-13

PERFORM OPERATOR PMCS ON RADIO SET AN/GRC-193A
113-620-3063

Conditions: Given a tactical or nontactical situation, under all weather conditions; a requirement; radio set AN/GRC-193A, complete; TM 11-5820-924-13, DA Pam 738-750, DA Form 2404; soft, damp cloth and a soft-bristled brush. This task may be performed in an NBC environment.

Standards: The standards are met when PMCS levels are performed, two of three faults are correctly identified, and DA Form 2404 is completed per TM 11-5820-924-13.

Performance Measures	**GO**	**NO GO**
1. Perform daily checks and services.	⎯⎯	⎯⎯
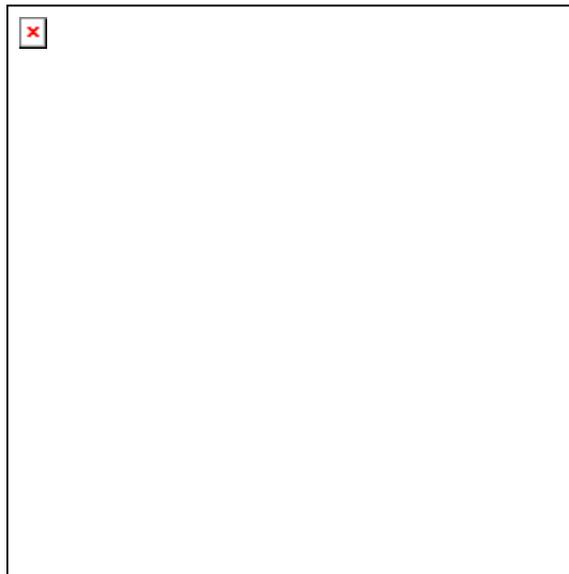
    a. Ensure cover fastening screws on the power amplifier and the antenna coupler are tight.

    b. Ensure all units are securely clamped to the mount.

    c. Ensure all units and cables are undamaged and all cable connections are tight.

    d. Ensure rubber seals on the power amplifier circuit breakers are not damaged.

    e. Clean the external surfaces of all units.

    f. Remove anything blocking the air inlets (front) and air exhausts (rear) of the power amplifier and antenna coupler.

2. Perform weekly checks and services or before each time the radio set is used.	⎯⎯	⎯⎯

Performance Measures   <u>GO</u>   <u>NO GO</u>
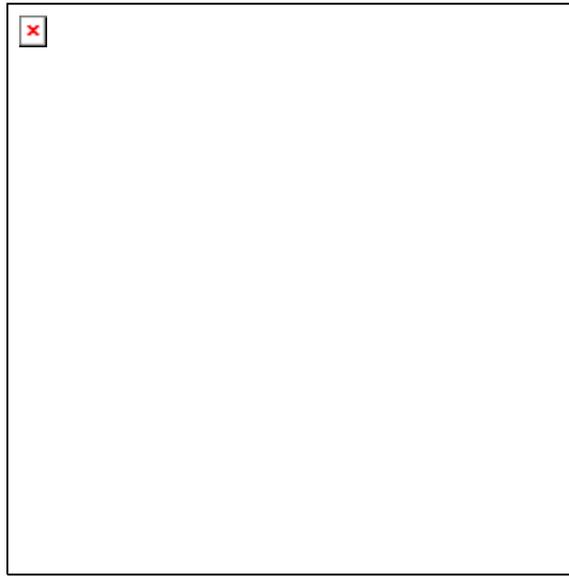
    a. Clean the external surfaces of the units of the AN/GRC-193A.

    b. Check all interconnecting cables and connectors for cracks and breaks. Ensure the bonding jumper grounds the equipment. Replace cables that have cuts, cracks, or broken connectors.

    c. Ensure the meter faces (glass) are not loose or broken.

    d. Check fuses on the AM-6879 for correct value. Check spare for quantity and proper value.

    e. Ensure there are no items in front or back of the CU-2064 and AM-6545 that will obstruct air flow through the intake louver.

    f. Ensure rubber seals on the AM-6545 circuit breakers are not damaged or missing.

3. Perform weekly checks and services or during each time the radio set is used.   ——   ——

    a. During operational checks, observe that the mechanical action of knobs, switches, and controls is smooth and free of external or internal binding.

    b. Operate the equipment on an authorized frequency to verify its capabilities.

4. Complete DA Form 2404.   ——   ——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References
    Required   **Related**
    DA FORM 2404
    DA PAM 738-750
    TM 11-5820-924-13

POWER UP THE CTT/HR
441-096-1111

Conditions: You have just arrived at a new field location. You are directed by your supervisor to power up the CTT/HR. The Tactical Command System (TCS) is emplaced. Shelter power up procedures have been completed.

Standards: Powers up the CTT/HR, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	<u>**GO**</u>	<u>**NO GO**</u>
1. Set PWR ON/OFF switch to the OFF position at the CTT/HR.	——	——
2. Ensured LAMP TEST/LAMP DSBL switch was in the center position.	——	——
3. Initialized portable computer system.	——	——
4. Set PWR ON/OFF switch to ON at the CTT/H-R. The PWR indicator was lit. The message INIT and BIT RUNNING scrolled across the portable computer status screen.	——	——
5. Ensured the BIT PASS message was displayed on the computer system status screen.	——	——
6. Toggled and held LAMP TEST/LAMP DSBL switch to LAMP TEST. All indicators lit at the computer system and the status screen displayed small green squares.	——	——
7. Released the LAMP TEST/LAMP DSBL switch and verified that all indicators except PWR were off, and the portable computer system status screen displayed the current stored time.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                 ARTEP 44-635-12-DRILL
                                                TM 9-1430-606-12&P

PERFORM PATCH PANEL OPERATIONS
441-096-1147

Conditions: The TCS and ICC are emplaced. External TADIL-A data, TCS-ICC communications, and other voice lines must be connected using 4-wire, 2-wire, 26-pair or fiber optic lines. Internal TADIL-A and phone lines must be connected.

Standards: Performs patch panel operations, per TM 11-7010-259-12&P or TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO

1. Connected fiber optic cable from TCS to ICC if required.
     a. Connected fiber optic cable to TCS 1CP9 connector.
     b. Connected free end of cable to ICC fiber optic connector.
	⎯⎯	⎯⎯

2. Connected 1W1 cable assembly from TCS to ICC if fiber optic cable was not used.
     a. Connected 1W1 cable to TCS 1CP1 connector.
     b. Connected free end of cable to ICC 1CP8 connector.
	⎯⎯	⎯⎯

3. Connected 26-pair cable from TCS to ICC for communications as required.
     a. Connected 26-pair cable to TCS A17J2.
     b. Connected free end to ICC external patch panel A43J2.
     c. Installed patch cord from ICC internal A42 WIRELINES CH 1 to ROUTING LOGIC port 4.
     d. Installed patch cord from ICC A42 WIRELINES CH 11 to TADIL-A port.
	⎯⎯	⎯⎯

4. Connected 4-wire cables from TCS to ICC for communications as required.
     a. Connected TCS A17 CH 1 to ICC external panel A43 CH 1 (BTOC DATA).
     b. Connected TCS A17 CH 11 to ICC A43 CH 11 (TADIL-A).
     c. Installed patch cord from ICC internal A42 WIRELINES CH 1 to ROUTING LOGIC port 4.
     d. Installed patch cord from ICC internal A42 WIRELINES CH 11 to TADIL-A port.
	⎯⎯	⎯⎯

5. Connected AN/GRA-39 remote control radio for ICC control of TADIL-A as required.	⎯⎯	⎯⎯
6. Connected additional voice communications lines as required.	⎯⎯	⎯⎯

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required	Related
	TM 11-7010-259-12&P
	TM 9-1430-606-12&P

POWER UP THE PATRIOT TPW
441-096-1153

Conditions: Your supervisor has directed you to power up the Patriot TPW. The ABC phase sequence indicator on shelter left side is lit. The address indicator SCSI ADR is set to six. The hard disk drives are installed.

Standards: Powers up the Patriot TPW, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Set necessary circuit breakers to the ON position.	――	――
2. Set necessary power switches to ON position.	――	――
3. Checked SCSI address.	――	――
4. Logged on to activate TPW software.	――	――
5. Selected desired mission.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
　　Required　　　　　　　　　　　　　　　**Related**
　　　　　　　　　　　　　　　　　　　　　　TM 9-1430-606-12&P

INITIALIZE THE TCS
441-096-1155

Conditions: You have just completed TCS emplacement. Your supervisor directs you to initialize the TCS. The TCS shelter power-up procedures are completed. The BCP and VME rack ON indicators are lit.

Standards: Initializes the TCS after initializing the CTT/HR, control and display unit, communications processor, and tactical data information link rack, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Initialized CTT/HR (Task 441-096-1156).	——	——
2. Initialized control and display unit.	——	——
3. Performed control and display unit sign-on procedures.	——	——
4. Initialized communications processor.	——	——
5. Initialized tactical data information link rack.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                      TM 9-1430-606-12&P

INITIALIZE THE CTT/HR

441-096-1156

Conditions: Your supervisor directs you to initialize the CTT/HR. Power up procedures for the CTT/HR and control display unit (CDU) have been completed.

Standards: Initializes the CTT/HR (KG! DCON is displayed on the status display), without causing injury to self or other personnel, per TM 9-1430-606-12&P, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Set baud rate.	——	——
2. Loaded crypto keys.	——	——
3. Set KYK-13 off and disconnected from CTT/HR.	——	——
4. Observed KG1 DCON message was displayed on status display.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                             TM 9-1430-606-12&P

TRANSFER INITIALIZATION PARAMETERS TO THE ICC, TCS, AND CTT/HR
441-096-1157

Conditions: Your supervisor has directed that you transfer initialization parameters to the ICC, TCS, and CTT/HR. The ICC/ECS, BCP, and CTT/HR are powered up. ICC is in the OB mode of operation to receive data transfers. Initialization parameters are available.

Standards: Transfers initialization parameters to the ICC, TCS, and CTT/HR (Print Send form disappears), per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Evaluation Preparation:
1. The TPW must be the server to transfer any data.
2. ICC must be in the OB mode of operation to receive a data transfer.
3. The ICC database will be overwritten with the transferred data.
4. The BCP and CTT/HR are currently not used.

Performance Measures	GO	NO GO
1. Selected Initialize menu button from TPW main menu.	——	——
2. Selected ICC Init to display Initialization Application forms window.	——	——
3. Selected desired overlays and input required information (Task 441-096-1160).	——	——
4. At the end of each application form, selected appropriate destination or action to be performed (accept, execute, copy, print, send, or exit). A message or form was displayed after each selection.	——	——
5. Verified TCS tactical link was good.	——	——
6. Verified operate modes of ICC and FU.	——	——
7. Sent an OSLB to an FU.	——	——
8. Received a buffer transfer from ICC.	——	——
9. Sent a buffer transfer assets/volumes to the ICC.	——	——
10. Sent and printed tab data.	——	——
11. Selected destination.	——	——
12. Selected Execute button.	——	——
13. Selected Exit to leave the Print/Send form.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                               TM 9-1430-606-12&P
                                               TM 9-2320-272-10

LOAD CRYPTO KEYS INTO THE CTT/HR
441-096-1158

Conditions: Your supervisor has directed you to load the crypto keys into the CTT/HR. The CTT/HR is powered up and initialized. The loading device ANCD or KYK-13 is loaded with crypto keys.

Standards: Loads crypto keys into the CTT/HR (KG1 DCON message is displayed on the status display), per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Set baud rate on CTT/HR.	——	——
2. Identified loading device to be used.	——	——
3. Prepared loading device.	——	——
4. Connected loading device to RT.	——	——
5. Loaded crypto keys.	——	——
6. Disconnected loading device from RT.	——	——
7. Set loading device ON/OFF to OFF.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                          TM 9-1430-606-12&P

STP 44-14J14-SM-TG

GENERATE OSLB ISLB DATA
441-096-1159

Conditions: Your supervisor has directed you to generate OSLB ISLB data. The TCS is powered up and initialized. ICC data or planned area data is available.

Standards: Generates OSLB ISLB data (the TPW computes and displays OSLB or ISLB data), per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Selected PE button from tactical planning main menu.	––––	––––
2. Input coordinate, datum, and radar PTL if required.	––––	––––
3. Selected OSLB or ISLB.	––––	––––
4. Selected Generate.	––––	––––
5. Input ISLB values.	––––	––––
6. Saved OSLB or ISLB data.	––––	––––

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    TM 9-1430-606-12&P

SELECT OVERLAYS ON THE TPW
441-096-1160

Conditions: Power-up and initialization for the TCS and its associated equipment has been completed. Operational and tactical information (OPTASK link, sensor, weapons, track, et cetera) is available. Your supervisor has directed you to select an overlay.

Standards: Selects overlays on the TPW, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Created overlays as required.	――	――
2. Loaded overlay as required.	――	――
3. Merged overlays as required.	――	――
4. Toggled symbols on and off as required.	――	――
5. Listed overlays.	――	――
6. Deleted overlays as required.	――	――
7. Transferred overlays as required.	――	――
8. Integrated overlay from another TPW as required.	――	――
9. Selected overlay defaults as required.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    TM 9-1430-606-12&P

GENERATE OR MODIFY CONTROL MEASURES ON THE TPW
441-096-1163

Conditions: The TPW is powered up and initialized. The mission map is displayed. Air control measure (ACM)/air control order (ACO) data is available. Your supervisor has directed you to generate or modify control measures on the TPW as necessary.

Standards: Generates or modifies control measures on the TPW, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
Entering a preplanned ACM:		
1. Added an ACM.	⎯⎯	⎯⎯
2. Changed an ACM.	⎯⎯	⎯⎯
3. Deleted an ACM.	⎯⎯	⎯⎯

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                          TM 9-1430-606-12&P

DISPLAY AIR PICTURE AND HOOK INFORMATION FROM ICC AND SIS
441-096-1168

Conditions: The tactical planning workstation is powered up and operational. Your supervisor has directed you to display air picture and hook information from the ICC and SIS.

Standards: Displays air picture and hook information from ICC and SIS, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Displayed for view the ICC air picture as required.	——	——
2. Hooked via mouse ICC/SIS tracks as required.	——	——
3. Hooked via summary form ICC/SIS tracks using summary form as required.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                          TM 9-1430-606-12&P

SEND AND RECEIVE TAB AND POINTER MESSAGES
441-096-1169

Conditions: The tactical planning workstation is powered up and operational. You have received pointers and tabular messages for the ICC and other TPWs.

Standards: Sends and receives tab and pointer messages, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Retrieved an existing message.	――	――
2. Modified message.	――	――
3. Sent message.	――	――
4. Saved message.	――	――
5. Deleted message.	――	――
6. Created a new message.	――	――
7. Sent pointers to the ICC and TPW.	――	――
8. Read and displayed received messages.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                         TM 9-1430-606-12&P

PERFORM UTILITY FUNCTIONS ON THE TPW
441-096-1171

Conditions: The TPW is powered up and initialized. Footprints must be added and/or deleted. Existing files must be stored for archive or backup purposes. Floppy disk and exabyte tapes are available.

Standards: Performs utility functions on the TPW, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Loaded TBM footprints.	——	——
2. Deleted TBM footprints.	——	——
3. Viewed current statistics of hard disk.	——	——
4. Archived tactical data information to a floppy.	——	——
5. Archived data to an exabyte tape.	——	——
6. Restored data from a floppy.	——	——
7. Restored data from an exabyte tape.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
  Required   **Related**
                                                                  TM 9-1430-606-12&P

GENERATE MAP DATA (ADRG, DTED) ON THE TPW
441-096-1187

Conditions: The TPW is powered up. Tactical and operational information is available. Your supervisor has directed you to generate map data.

Standards: Generates map data (ADRG, DTED) on the TPW, per TM 9-1430-606-12&P, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Loaded ADRG data.	——	——
2. Deleted ADRG data.	——	——
3. Loaded DTED data.	——	——
4. Deleted DTED data.	——	——
5. Updated WDB map properties.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                                      TM 9-1430-606-12&P

Subject Area 16: Sensor Operations

ENERGIZE THE SENTINEL SENSOR
441-096-1062

Conditions: The antenna transceiver group (ATG) and HMMWV are emplaced. All power and communications cables are connected. The FAAD C3I data link cable is connected to the sensor C2 node (for normal operation). The generator is running and the EXITE button is pressed. Your supervisor directs you to energize the Sentinel.

Standards: Energizes the Sentinel, per TM 9-1430-741-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives when the POWER ON, RAD OFF, HV OFF, XMTR WARMING, ANT ROT OFF, and CW or CCW indicators are on and all others are off.

Performance Measures	GO	NO GO
1. Verified that PHASE DETECTOR correct (green) indicator was on and incorrect (red) indicator was off.	——	——
2. Verified correct AC voltages at each rotary switch position.	——	——
3. Set rotary switch to OFF.	——	——
4. Set AZIMUTH DRIVE circuit breaker to ON.	——	——
5. Verified POWER OFF indicator was on and CB OPEN circuit breaker was off.	——	——
6. Pressed and released POWER ON switchlamp.	——	——
7. Pressed and held COMPTR RESET switchlamp for 2 seconds then released.	——	——
8. Verified all RSC indicators were showing correct indication.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
  Required

  Related
  AR 200-1
  TM 9-1430-741-10

INITIALIZE THE SENTINEL SENSOR
441-096-1063

Conditions: The antenna transceiver group (ATG) is emplaced. All power and signal cables are connected. All equipment is powered up. Your supervisor directs you to initialize the Sentinel.

Standards: Initializes the Sentinel (the RCT, radar set, and FAAD data link are operational), per TM 9-1430-741-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Verified adaptation constants checksum on RCT initialization menu.	——	——
2. Selected and performed AUTOMATIC or MANUAL initialization as directed.	——	——

3. If MANUAL initialization was performed--
    a. Selected and performed LIVE or TRAINING as directed.
    b. If TRAINING was performed, selected and performed SIMULATOR or FIFTH SCALE as directed.
	——	——

4. Ensured the following indicators were on:
    a. XMIT READY.
    b. ANT ROT ON.
    c. CW or CCW.
    d. HV ON.
    e. RAD ON.
	——	——

5. Verified correct status in system status window.	——	——
6. Verified initialization was completed.	——	——
7. Ensured RCT, radar set, and FAAD C2I data link were operational.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
   Required   **Related**
                                              AR 200-1
                                              TM 9-1430-741-10

OPERATE THE SENTINEL SENSOR
441-096-1064

Conditions: Your supervisor assigns you as the Sentinel operator. The Sentinel is emplaced with the sensor C2 node. All equipment is powered up and operating. Initialization is completed. The mission or tactical situation permits tests to be run.

Standards: Operates the Sentinel, per TM 9-1430-741-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Performed procedures in OP MENU #1.	――	――
2. Performed procedures in OP MENU #2.	――	――
3. Performed procedures in OP MENU #3.	――	――
4. Responded to data link message alerts.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    AR 200-1
                                                    TM 9-1430-741-10

DESTROY THE SENTINEL SENSOR TO PREVENT ENEMY USE
441-096-1065

Conditions: The ground-based sensor Sentinel is in immediate danger of being captured by threat forces. Conditions prevent the system from being removed to friendly areas. Your team leader or section chief has ordered you to destroy the Sentinel equipment.

Standards: Destroys the Sentinel by any means available to prevent its use by the enemy, per TM 9-1430-741-10.

Performance Measures	GO	NO GO
1. Zeroed all radios that would not be evacuated, of crypto and frequency hop data, and smashed.	——	——
2. Smashed, burned, or blew up all critical components on the ATG using all available means.	——	——
3. Cut all cables, wires, and lines as time permitted.	——	——
4. Disabled all accessory equipment and vehicles that could not be evacuated.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                   Related
                                   AR 200-1
                                   TM 750-244-2
                                   TM 750-244-6
                                   TM 9-1430-741-10

DE-ENERGIZE THE SENTINEL SENSOR
441-096-1066

Conditions: Your supervisor directs you to march order the Sentinel. The Sentinel is currently operational.

Standards: Shuts down the Sentinel and radar set generator (removes power from the Sentinel, sensor node, and generator), per TM 5-6115-585-12 and TM 9-1430-741-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Pressed and released RAD ON/RAD OFF switchlamp (RAD OFF indicator came on and RAD ON indicator went off).	——	——
2. Pressed and released HV OFF switchlamp (HV OFF indicator came on and HV ON indicator went off).	——	——
3. Pressed and released ANT ROT OFF switchlamp (ANT ROT OFF indicator came on and ANT ROT ON indicator went off).	——	——
4. Pressed and released POWER OFF switchlamp (POWER OFF indicator came on and POWER ON indicator went off).	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
	AR 200-1
	TM 5-6115-585-12
	TM 9-1430-741-10

LOAD SENTINEL SENSOR MODE 3/4 IFF CODES (ALLIED)
441-096-2014

Conditions: The Sentinel IFF codes have expired or will expire soon and your supervisor directs you to load the Sentinel mode 3/4 IFF code. The following are available:

1. Code tapes.
2. SAIC version 2 lightweight computer (V2LC).
3. Special identification feature (SIF) code book.
4. KOI-18 tape reader.
5. KYK-13 fill device.
6. ECCM fill cable (ON512424).
7. AN/TPX-56 interrogator set.

Standards: Loads Sentinel mode 3/4 IFF codes. M4 TIME, SIF TIME, SIF CODES, SIF BLOCK, IFF MODE, and IFF INTERROG ACTIVE TRACKS display correct information, per TM 9-1430-741-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Loaded Mode 4 (M4) codes into the KYK-13 using the KOI-18.	――	――
2. Loaded Mode 4 codes from the KYK-13 into KIV-16.	――	――
3. Manually loaded SIF codes.	――	――
4. Loaded SIF codes from remote control terminal.	――	――
5. Changed IFF interrogation rate.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                             Related
                                             AR 380-40
                                           TM 11-5825-291-13
                                           TM 9-1430-741-10

Subject Area 17: Sensor Maintenance

PERFORM PMCS ON THE SENTINEL SENSOR
441-096-1060

Conditions: You are given a requirement to perform operator level PMCS on the Sentinel AN/MPQ-64. The following are available:

1. TM 9-1430-741-10.
2. BII.
3. DA Form 2404 or 5988-E.
4. A pen or pencil.

Standards: Performs PMCS on the Sentinel, per TM 11-5825-283-10 and TM 9-1430-741-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Performed before-mission checks on the Sentinel.	——	——
2. Performed during-mission checks on the Sentinel.	——	——
3. Performed after-mission checks on the Sentinel.	——	——
4. Performed weekly checks on the Sentinel.	——	——
5. Performed monthly mission checks on the Sentinel.	——	——
6. Noted deficiencies on DA Form 2404 or 5988-E with corrective actions.	——	——
7. Notified unit maintenance of any uncorrectable deficiencies.	——	——
8. Turned in completed DA Form 2404 or 5988-E to supervisor.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 9-1430-741-10	TM 11-5825-283-10

Subject Area 18: Software Troubleshooting

PERFORM OPERATOR TROUBLESHOOTING ON A UNIX SYSTEM
441-096-1112

Conditions: Given a UNIX system that will not operate, using issued reference material, and a UNIX-based operating system.

Standards: Performs operator troubleshooting on a UNIX system, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

Note: The following troubleshooting procedures are to assist you in the problems that are most likely to occur. However, it is not possible to identify all malfunctions that may occur, nor all the procedures, checks, et cetera that can be performed.

STARTUP FAILURES

1. Login prompt missing:
    a. Check terminal power switch.
    b. Check monitor power switch.
    c. Check brightness control.
    d. Press return key several times while monitoring screen for prompt.
    e. While holding down "Ctrl" key, press "Q" key several times.
    f. Press "Break" key and "Return" key alternately.
    g. If the system has a modem, proceed to Step 10.
    h. If cursor is present, check data line to terminal.
    i. If steps a through g do not correct the problem or if screen is blank, notify system maintenance.

2. No response after login:
    a. Wait 2 minutes.
    b. Determine if other users are having the same problems.
    c. Notify system maintenance.

3. Backspace does not work:
    a. While holding down "Ctrl" key, press "h" key several times.
    b. While holding down "Shift" key, press "3" key.
    c. Notify system maintenance

4. "Gibberish" appears on screen: If using a modem, go to step 8, otherwise notify system maintenance.

5. Error message appears:
    a. Perform procedures of error message.
    b. Notify system maintenance.

6. Terminal is hung:
    a. Use the following keystrokes to attempt escape from program:
        (1) "Return."
        (2) "Delete."
        (3) "Ctrl-x."
        (4) "q."
        (5) "Esc."
        (6) "Break."
        (7) "Ctrl-."

Performance Steps

        (8) Enter "Ctrl-d" or "exit" only as a last resort and only after performing step 6.b.

    b. Use the following commands/procedures in sequence to reset terminal:

        (1) Keystroke "tset."

        (2) Keystroke "Ctrl-j tset Ctrl-j."

        (3) Turn terminal off, then on.

        (4) Press "Return" when cursor appears.

        (5) Keystroke" tset."

        (6) Keystroke "stty sane."

7. Perform the following procedures to kill a hung process:

    a. Check with other users on same computer.

    b. Log in on another terminal.

    c. Check processes:

        (1) Enter "ps -fu" [loginname].

        (2) Identify hung process (PID number).

        (3) Enter "kill -15 [PID]."

        (4) Press "Return" key twice to ensure system is not hung.

        (5) If system is not hung, log out of second terminal and continue work on original terminal.

        (6) If system is still hung, enter "Kill -9 [PID]."

        (7) If system is still hung, enter "Kill -9 [PPID]."

        (8) If system is still hung, notify system maintenance.

8. Ensure the following steps are taken:

    a. Verify terminal and computer are set up properly for the use of the modem and ensure it is compatible.

    b. With terminal and modem off, ensure all configuration settings are correct (baud rate, handshake, parity, character size, stop bits, et cetera).

    c. With modem on, ensure power light is on and then turn on computer/terminal.

    d. Ensure interface cable, phone line, and power cords are correctly connected to the terminal and modem.

    e. Dial in on modem.

    f. If system still fails to operate properly, notify system maintenance.

9. "vi Display" is abnormal:

    a. If the "vi Display" is abnormal, it is probably in open mode. This will be indicated at the bottom of the screen. In open mode, the screen will only display one line at a time. To get out of open mode, first exit vi by pressing the Escape key and entering the :q! command.

    b. Enter the following commands:

        (1) For Bourne shell system ($ system prompt), enter the following commands:

        "cd <>, TERM=[terminal type] <>, export TERM<>, . .profile<>." If an error message is received, try again with emphasis on the . . profile command.

        (2) For C-shell system (% system prompt), enter the following commands:

        "Cd<>, setenv TERM [terminal type], source .login"

        If there is no message stating the correct terminal type, notify system maintenance.

10. "vi" commands do not respond: If the command letters appear on the screen, the system is probably in the insert mode. To get out of the insert mode, press escape key, backspace over the command and x them out. Try the command letters while in the escape mode. If the system still fails to respond, ensure the "Caps Lock" and "Alpha Lock" keys are not in the depressed state. If the "vi" commands still do not respond, notify system maintenance.

Performance Steps

11. System Prompt Reappears: When the system prompt reappears, it is an indication that you have accidentally entered a key sequence that sent you back to UNIX. If it is just temporary, you will see ":sh" at the bottom of the screen before the system prompt appears. This means that the keys that were accidentally entered have the same effect as the colon command, "sh." To get back into the calendar file with "vi", type exit at the system prompt and press the return key. If you did not get back into the calendar file, hit the escape key and wait a few seconds. If the terminal beeps when you press the escape key, you are ready to give the exit command (i.e. zz).

Evaluation Preparation: Note to evaluator: If using a modem, perform procedures a. through f. in Performance Step 8.

Performance Measures	**GO**	**NO GO**
STARTUP FAILURES		
1. Identified all faults in UNIX system.	——	——
2. Performed corrective procedures for the following malfunctions:	——	——
a. Missing login prompt.		
b. Failure of UNIX system to respond after login.		
c. Backspace not working.		
d. "Gibberish" appearing on the screen.		
e. Error message appears on screen.		
f. Hung terminal.		
g. Hung process.		
h. An abnormal "vi display."		
i. "vi" commands not responding.		
j. System prompt reappearing.		
3. Recorded all uncorrectable faults on DA Form 2404 or 5988-E.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	**Related**
DA FORM 2404	0-89588-715-0
DA FORM 5988-E	DA PAM 738-750

PERFORM USER ACTIONS ON A UNIX SYSTEM
441-096-1113

Conditions: The FAAD ABMOC/A2C2, BCP, sensor C2, AMDPCS, or Patriot TCS is emplaced. All equipment is powered up. A requirement exists to perform routine user action tasks on the UNIX system.

Standards: Performs user actions on a UNIX system, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Different commands for listing directories:
    a. ls   lists current directory vertically.
    b. ls files   lists files in current and sub directories.
    c. ls -r   lists files/directories vertically but inversely.
    d. ls -a   lists files whose names start with a dot (.).
    e. ls -aR, ls -a -R, ls -R -a   lists all files including dot files.
    f. ls -CaR   lists names in several columns.
    g. pwd   lists path of current directory.
    h. cd [directory name]   changes directory to that listed.
    i. ls..   lists files/directory in parent directory.

2. Manipulating files:
    a. cat <filename.ext>   checks a file's contents.
    b. cat dir/<filename.ext>   checks a file's contents in a different directory.
    c. cp <filename.ext> <new filename.ext>   copies a file to a new file (can move as many files
        as are identified).
    d. mv <filename.ext> <dir/new filename.ext>   moves a file to another directory (can move as
        many files as are identified).
    e. rm   removes files (deletes).
    f. mkdir   creates a new directory.
    g. rmdir   removes directories (must be empty first).
    h. Wild cards:
        (1) .*   matches all files in a directory with same given characters (i.e. UNIX*).
        (2) *   matches all files in a directory except those with a dot.
        (3) *.*   matches all files in a directory that have a dot in the filename.
        (4) ?   matches all files in a directory that have the same number and type of known
             characters in the same location (i.e. UN?X or dog?le?).
        (5) [n or ltr] matches files with any number or letter that is the same as that in the brackets.

3. vi Editor Mode:
    a. Esc   Toggles the vi editor mode from text mode to command mode.
    b. lp or lpr   Command to schedule a print request.
    c. Movement commands:
        (1) h   go one space left   I   go one space right
        (2) j   go one line down   k   go one line up
        (3) w   go to next word   W   go to next space
        (4) b   go to start of word   B   go to previous space
        (5) e   go to end of word   ^   beginning of line
        (6) $ end of line   H   go to top of screen
        (7) L   go to bottom of screen   G   go to end of text
    d. Saving, Quitting, and Colon commands:
        (1) ;:w   write contents of editor to original file   :w file   write contents of editor to file
        (2) :wq write out the file and quit editor   :q   quit editor (allowed only if no changes)
        (3) :q! quit the editor no matter what   ZZ or :wq! write out file and quit editor

Performance Steps

        (4) :r file   read contents of file into editor   :e file   edit file

        (5) :! cmd   execute command   :r! cmd   read output of command into text

    e. Insert commands:

        (1) i   insert mode   a append mode

        (2) I   insert at beginning of line   A append at end of line

        (3) r   replace a single character   R overstrike mode

        (4) o open a line below the cursor   O open a line above the cursor

    f. Text Modification commands:

        (1) dd delete current line   dw delete to end of word

        (2) dW delete to next space   D delete to end of line

        (3) cc change current line   C change to end of line

        (4) s substitute text for character   S   substitute for entire line

Performance Measures

	GO	NO GO
1. Listed directories per instructions.	――	――
2. Listed files per instructions.	――	――
3. Changed directories per instructions.	――	――
4. Checked file contents per instructions.	――	――
5. Copied files per instructions.	――	――
6. Moved files per instructions.	――	――
7. Deleted files per instructions.	――	――
8. Created a new directory.	――	――
9. Removed directory just created.	――	――
10. Located files using wild cards per instructions.	――	――
11. Toggled between text and command per instructions.	――	――
12. Used vi commands.	――	――

        a. Used Movement commands.

        b. Used Saving, Quitting, and Colon commands.

        c. Used Insert commands.

        d. Used Text Modification commands.

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References

    Required   **Related**

                                                    0-89588-715-0

PERFORM SYSTEM ADMINISTRATION FUNCTIONS ON A UNIX SYSTEM

441-096-1114

Conditions: The FAAD ABMOC/A2C2, BCP, sensor C2, AMDPCS, or Patriot TCS is emplaced. All equipment is powered up. A requirement exists to perform routine system administration tasks.

Standards: Performs system administration functions on a UNIX system, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. System logbooks: A logbook must be maintained as a record of system activity, software updates, configuration file changes, backup schedules, maintenance activities, et cetera. If the system crashes, logbook information may assist in determining what may have caused the system to crash. It can also assist in reconstructing configurations, user accounts, and which backup files are the most recent to use in restoring the system. Some of the information that should be in the logbook is listed below.
   a. Listings of system configuration files.
   b. Hardware configuration.
   c. Any special startup or shutdown procedures.
   d. Run levels or run level changes.
   e. Scheduled execution of commands or scripts using cron.
   f. Device file listings.
   g. Backup schedules and scripts.
   h. How backups are organized, dates, tape names, et cetera.
   i. Notations of configuration changes, times of shift changes, activities performed, start-up and shut-down times, maintenance activities, et cetera.
   j. When users are added or removed and why.
Note: UNIX is case sensitive. Therefore, commands or utility names (in italics) must be typed exactly as shown. For example, the cron command will not be found or executed if it is typed Cron or CRON. Sometimes undesired or dangerous results may occur if text is typed incorrectly. Always check for errors before pressing the <ENTER> key.

2. Starting up UNIX: UNIX is normally booted at power-up and automatically configures itself according to the configuration files and initialization scripts. The usual sequence is abbreviated below:
   a. The kernel is uncompressed and booted into single-user mode (for a compressed kernel).
   b. Device drivers are loaded and devices are configured.
   c. Partitions and directories are mounted read-only while the file systems are checked.
   d. Partitions are remounted read-write after file system block count checks are completed.
   e. System daemons are started and the default multi-user run level is initiated.
   f. A login process is started for each terminal and port listed in the initialization file. At this point users may log into the system.

3. System activity files: The system's accounting capabilities are set up to collect data on various system activities.
   a. /usr/adm/pacct shows a binary record of each process run.
   b. /etc/utmp contains data about each currently logged-in user.
   c. /usr/adm/wtmp is a binary file that records each login and logout.
   d. /usr/adm/lastlog contains the date and time of the last login for each user.

4. Monitoring system activity: The AIX accounting system implements System V style accounting. However, BSD accounting commands are also supported.

Performance Steps

a. Resource use reporting. The sa utility produces system usage reports based on the image (command) that was executed and not by user or project. Data fields available for each image are listed below:
   (1) Number of times called.
   (2) Total CPU time (system + user).
   (3) Elapsed time.
   (4) Average number of I/O operations.
   (5) System CPU time.
   (6) User CPU time.

b. Connect time reporting. The ac utility reports on user connect time. This data is in the /usr/adm/wtmp file.
   (1) The ac with no options displays total connect time (in hours) for all users for the lifetime of the wtmp file.
   (2) The ac with user names after shows total connect time for those users.
   (3) The -p option breaks down connect time by user.
   (4) The -d option shows dates and totals; with names, shows dates and totals for those users.
   (5) Using -d and -p together produces a summary of login activity broken down by user and date.

c. AIX implements System V accounting but also extends accounting into printer usage. The data file /usr/adm/qacct is used to store printer usage data.

5. Process termination: Occasionally processes have to be killed, either because the process is stopped, hung up, or any of a variety of reasons, such as forcibly terminating a login session or tty port. All processes have a process identification (PID) number that uniquely identifies that process.

a. Identifying a PID. The ps command is used to display the PID and status of processes.
   (1) The ps -e will display all system processes. This will help identify processes that should not be running, et cetera.
   (2) The ps -f will display a full listing, including the process start time. This is useful to determine those processes that may have been idle for an unusually long time.

b. Terminating a process. The kill command sends a signal (the default is -15, a terminate signal) to a process. Killing a user's login shell effectively logs out that user. The command who -uH can be used to identify users and display terminal usage (idle time).
   (1) The kill 384 would send a TERM signal to process number 384.
   (2) The kill -9 384 would have to be used if the process did not terminate (a -9 signal is a KILL signal).
   (3) The kill -3 (QUIT) or kill -2 (interrupt) may have to be used on those processes that -9 does not kill (such as processes waiting for unavailable NFS resources).

6. System run levels: An example of a need to change system run levels may be to perform maintenance, power down the system, or rebooting. Some of the System V run levels are defined below:

a. Standard defined run levels:
   (1) Run level 0 is the power down state where the system can safely be turned off.
   (2) Run level 1 (or S) is used for system administration or single-user mode.
   (3) Run level 2 is multi-user mode in an isolated, non-networked system or a networked, non-server system.
   (4) Run level 3 is the remote file sharing state for server systems on networks that share local resources with other systems.
   (5) Run level 4 is currently unused but can be defined locally.
   (6) Run level 5 is a firmware state used for some types of maintenance activities, running diagnostics, or booting from an alternate disk, et cetera.
   (7) Run level 6 is used to reboot the system.
   (8) Run level q causes init to reread its configuration files.

Performance Steps

      b. Changing run levels. To change run levels, the init process is used and can be requested with the telinit utility (for example, telinit 6 will reboot the system). AIX does not have a telinit utility; however, it is just a link to init, which can be used directly. To display the current run level, the command who -r is used. Each run level generally has its own set of initialization files.

7. Mounting or unmounting file systems: On power up, the init process looks in the file /etc/inittab to automatically mount file systems and devices. However, to access a floppy, change floppies, or check file systems with fsck, the mount and unmount commands are used.

      a. To mount a file system or device, the format is as shown below. The -t option is used to mount a file system type different from the default file system type. Square brackets here and at other places denote the enclosed text as optional.

            mount [-t fstype] device mount_point

      for example:

            mount /dev/dsk/c0d0s2 /usr
            mount /dev/dsk/fd0 /tmp
            mount -t msdos /dev/dsk/fd1 /dos

      This will mount an SCSI drive file system at the /usr subdirectory, floppy disk 0 (equivalent to DOS A:) at mount point /tmp, and a DOS compatible floppy disk on sub-directory /dos.

Note: Device and directory names are examples only. Actual system devices may have different names.

      b. To unmount a device (file system), use the format shown below. For example, floppy disks must be unmounted before removing or swapping, to prevent possible corruption of files and to ensure buffers are flushed to disk.

            umount /tmp

      This will unmount the device attached to the /tmp mount point.

Note: A file system should not be checked while mounted. Also, a busy file system cannot be unmounted.

8. Backing up system files: Full or partial backups of system and user files should be made on a regular basis. System size and tape capacity will determine whether full backups or backups by directory or file system are more feasible.

      a. Archive frequency. A suggested schedule is daily backup of files that have changed and weekly backup of the entire system. The required frequency of backups will depend on local TSOP and system usage levels. During a complete backup, remember to unmount any devices or file systems that do not need to be backed up (floppy disks or CD-ROMs, et cetera). Also, complete or partial backups are best done in single-user mode to prevent another user from opening or changing a file during backup.

      b. Archive utilities. The tar (tape archive) utility is normally used to make backups to tape devices, although it can also archive to a file. The cpio (copy in/out) utility is a bit more flexible in that it can span multiple tapes for large backups and more efficiently packs data on the tape than tar.

Note: Tape devices normally do not have to be manually mounted before they can be addressed as this is usually done during system boot.

      c. The tar format and options. The format for the tar utility is--

            tar -key/options [archive_device/file] file/directory

Performance Steps
        (1) The tar keys--

-c	create an archive.
-x	extract from an archive.
-u	add at end of an existing archive.
-t	list archive contents.

        (2) The tar options--

-f	device or file to write to.
-v	verbose output, list file names as processed.
-w	interactive file selection.
-M	use multiple tapes (not available on all tar versions).

Note: At least one of the archiving keys (c,x,u,t) is required for the tar utility to work. If the -f option is used, it must be the last one with the device or file name immediately after.
        (3) The tar examples--

```
tar -cvf /dev/rmt1 /
tar -cv /.
tar -cvf /home/saved.
tar -cvMf /dev/tape /.
tar -xvf /dev/tape.
```

        Line one will back up the entire system to the device "rmt1," line two to the default device. Line three will back up the current directory (".") to a file named "saved" in the /home subdirectory. Line four will back up the system using multiple tapes to device (or link) "tape." Line five extracts files from "tape."
Note: If the -M option is not available in the tar utility, the cpio utility must be used. Device names used in tar and cpio examples are arbitrary names only. Your system device names may be different.
     d. The cpio formats and options: The format of the cpio utility varies depending on what action is being performed. The cpio is a filter, which receives its input from standard input, which it archives, then writes the archive to its standard output. Both input and output can be redirected (< or >) or piped (|) from another command such as the find command.
        (1) The cpio options--

-o	create an archive (send out).
-i	extract from an archive (read in).
-p	copy files to another directory on the same system.
-v	verbose, list file names as processed.
-B	use a larger block size (5120 bytes, default is 512 bytes).
-c	write headers in portable format.
-a	reset a file's access time (used with -i).
-m	maintain a file's modification time (used with -o).
-d	create directories if necessary (used with -i).
-L	follow symbolic links (used with -o).
-r	interactively rename files (used with -i).
-t	list contents of archive, no files copied (used with -i).
-u	overwrite a newer file with an older one from an archive.

Note: An -o, -i, or -p must be the first argument.

Performance Steps

        (2) The cpio examples--

                find / -ctime -1 -print | cpio -o > /dev/rmt1.

This will back up all files changed less than one day ago to magnetic tape device "rmt1." Changes refer to modification, permission, or ownership changes. The find "-print" option may not be needed on all systems, as newer versions have it as the default.

                cpio -itv /dev/rmt1.

This will print a table of contents of archive on "rmt1." This can be used to verify that an archive was successfully written to the backup device.

                cpio -imvu /home/important.document < /dev/rmt1.

This will extract the file "important.document" from the archive on device "rmt1" and overwrite an existing file, if any. This is useful if a file is accidentally deleted or is corrupted.

                ls -alR / | cpio -o > /dev/rmt1.

This will back up all files to archive device "rmt1." The ls command lists all files from the root directory (/) recursively (-R) and pipes the file names to the cpio filter.

                cpio -i < /dev/rmt1.

This will extract all files from archive device "rmt1."

  e. Incremental backup using cpio. An efficient method of system backup consists of backing up only those files that have changed since the last backup. The -newer option of the find command is used to accomplish this.

     (1) Make a reference backup.

                touch /etc/time.stamp.ref.
                find / -print | cpio -o > /dev/rmt1.

The first line creates a file with the current date for reference. Line two performs a reference backup of the entire system.

     (2) Make an incremental backup.

                touch /etc/time.stamp.1.
                find / -newer /etc/time.stamp.ref -print | cpio -o > /dev/rmt1.

The first line creates a file with the current date for the next backup. Line two archives those files that are newer than or have been modified since the date of the reference file date.

     (3) Subsequent incremental backups. To continue the trend as outlined above, simply change the file names to the next higher number (2,...x, et cetera).

                touch /etc/time.stamp.2.
                find / -newer /etc/time.stamp.1 -print | cpio -o > /dev/rmt1.

Note: Old time stamp files should be deleted on a regular basis.

  9. System shutdown: A UNIX system must be terminated properly to prevent file corruption. The command to accomplish this is shutdown. This command brings the system to single-user mode by default.

Performance Steps
     a. The syntax for shutdown is below.

<div align="center">shutdown [-g n] [-i level] [-y].</div>

     Where -g n is the grace period option and n is number of seconds to wait (default is 60 seconds). The -i level option allows the system to be put into any of the following states--

0	power system off.
1	administrative state.
S	single-user mode.
5	firmware state.
6	reboot after shutdown.

     The -y option bypasses the shutdown confirmation prompt.
     b. Some shutdown examples.

shutdown -g300 -y	shutdown in five minutes with no prompts.
shutdown -g0 -y	shutdown immediately.
shutdown -g0 -i0 -y	shutdown to power-off state.

     c. Shutdown sequence. It is recommended you run the sync command twice to flush all buffers to disk before removing power.

<div align="center">shutdown -g300 -y ; sync ; sync ; halt.</div>

     This will shut down the system to single-user mode with a 5-minute delay, sync the disks twice to ensure all buffers are flushed, then halt the processor. The semicolon allows commands to be executed on the same line but may not be available in all shells.

Performance Measures	**GO**	**NO GO**
1. Maintained a logbook of system activity.	――	――
2. Started up UNIX system.	――	――
3. Monitored system activity as required.	――	――
4. Terminated or restarted processes as required.	――	――
5. Changed runlevels or rebooted system as required.	――	――
6. Mounted or unmounted file systems as required.	――	――
7. Made full or partial backups as scheduled.	――	――
8. Shut down UNIX system.	――	――

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
     Required   **Related**
     TSOP   1-56592-127-5

PERFORM NETWORK FUNCTIONS ON A UNIX SYSTEM

441-096-1117

Conditions: The FAAD ABMOC/A2C2, BCP, AMDPCS, or Patriot TCS equipment is cabled up in standard configuration and all equipment is powered up. The network configuration files need to be modified to add or delete network users (hosts) or the network is not exchanging packets with all users. User and IP address data is available.

Standards: Performs network functions on a UNIX system, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps

1. Internet Protocol (IP) addresses: IP addresses are split into four 8-bit numbers called octets. This format is called dotted quad notation. IP addresses are grouped into a network number and a host number. These numbers are managed by the Network Information Center (NIC). The local network manager will supply the needed numbers for your configuration.

2. Network classes: Networks are divided into four classes, depending on the size of the network. Any network can be a stand-alone net or a sub-network of another net.
   a. Class A networks are numbered 1.x.x.x through 126.x.x.x. The first octet is the network number. This supports 126 networks, each with roughly 16 million hosts.
   b. Class B networks number from 128.x.x.x through 191.255.x.x. The first two octets contain the network number. This allows for 16384 nets with 65534 hosts each.
   c. Class C networks number from 192.x.x.x through 223.255.255.x, with the network number in the first three octets. This allows over 2 million networks with 254 hosts each. The networks in the ADTOC (or Patriot BTOC) are class B and C nets.

3. Special network addresses: Some net addresses are reserved for special functions within a network.
   a. Loopback addresses are used for testing, et cetera. A class C loopback address is 127.0.0.1.
   b. Broadcast addresses are used to address all stations on the network simultaneously. A class C broadcast address is x.x.x.255.
   c. Default routes have an address of 0.0.0.0 and are used to deliver datagrams to users that are not part of the local network. These default nodes then look for a gateway address to forward to.
   d. Gateway addresses are assigned a host number of x.x.x.1. A gateway is a host that is connected to two or more physical networks simultaneously and is configured to pass packets between them.
   e. Netmask addresses are used to mask the network portion of the IP address number for internal routing and is 255.255.255.0 for a class C network.
   f. Local network addresses have all zeros in the network portion of the address. For example, an address of 0.0.0.17 means host 17 on a class C net.

4. Domain name system/server (DNS): DNS provides a hierarchical naming system that divides a domain into subdomains. Finally, each host in a subdomain is given a symbolic name. For example, a host named eagle may have a fully qualified domain name (FQDN) of eagle.adtoc.bdenet.divnet.mil. This system allows the name server to resolve addresses on a large network (or small) without having a huge file of network addresses on each host machine in the net.

5. TCP/IP configuration files: The following files describe the host network configuration parameters. Parameters used here are for illustration purposes only.
   a. /etc/HOSTNAME file stores the system's FQDN:

       adsi.adtoc.bdenet.

Performance Steps

b. /etc/hosts file contains a list of IP addresses and host names for your local network:

```
127.0.0.1      localhost
192.168.14.2 adsi.adtoc.bdenet   adsi
192.168.14.3 crtd.adtoc.bdenet   crtd
192.168.14.7 fops.adtoc.bdenet    fops
192.168.14.5 fdc.adtoc.bdenet     fdc
192.168.14.11          staff.adtoc.bdenet   staff
```

c. /etc/networks file also contains names and network addresses and is used by the routing command "route" to specify a network by its name instead of the IP address:

```
loopback      127.0.0.1
localnet      192.168.14.0
```

d. /etc/host.conf file. UNIX uses a resolver library to obtain the IP address that corresponds to a host name. This file specifies how names are resolved in what order. The "multi" option is for hosts that may have multiple IP addresses ("lives" in several networks simultaneously):

```
order hosts,bind
multi on
```

e. /etc/resolv.conf file is used by the resolver to determine IP addresses. The first line specifies your system's domain name. The name server line is the IP address of the name servers for your domain:

```
domain bdenet
name server          192.168.14.223
name server          192.168.14.4
```

f. /etc/rc.d/rc.inet1 script file sets the network variables IPADDR, NETMASK, NETWORK, BROADCAST, and GATEWAY for the ethernet interface (eth0). It also attaches the loopback device, associates IP addresses with names, and sets up the routing table. Edit this script file on each host machine to set these definitions to the correct IP addresses.

6. Network configuration at boot time: The network is booted at powerup by running startup scripts. The init process (daemon) runs immediately after UNIX boots. This process consults the /etc/inittab file, then runs various setup scripts depending on the current system run level.
   a. /etc/rc.d/rc.inet1 performs the basic network setup.
   b. /etc/rc.d/rc.inet2 starts several persistent network programs (daemons). These are processes that, if killed, "respawn" (restart) themselves automatically.

7. TCP/IP diagnostics: Several programs (processes) can be used to monitor network status and diagnose problems.
   a. /sbin/ifconfig can be used to view the currently configured network interfaces or to associate an IP address with a network device.
   b. /sbin/route can be used to check the IP routing table or to set up routing tables.
   c. The ping command is used to check connectivity to a host by sending an "echo" packet to which every host responds. ping also computes round-trip delay times, packets transmitted, packets received, and percent of packet loss.
   d. The netstat command can also be used to check network status of TCP and UDP connections, routing table status, interface table statistics, and active servers and processes (sockets).
   e. Using the dmesg command will aid in diagnostics by allowing the user to read the boot messages to look for network error messages. If the messages scroll off the top of the screen too quickly to read, use the following combination to pause after each screenful of information:

```
dmesg | more
```

Performance Steps

8. Adding a host to the network: The network files that have to be modified to add a host (user) consist of adding an entry to the /etc/hosts file in the format of--

    <IP address> <hostname.subdomain.domain> <hostname>

Note: If the host is a name server, also add the IP address to the /etc/resolv.conf file. The system will have to be rebooted to reinitialize the network and recognize the added user.

Performance Measures	**GO**	**NO GO**
1. Edited network configuration files as required, allowing users (hosts) to communicate within the local network.	——	——
2. Edited network configuration files as required, allowing communication links to external hosts.	——	——
3. Edited network configuration files as required, adding a user to the local network.	——	——
4. Edited network configuration files as required, adding an external link to another network.	——	——
5. Tested network links as required, ensuring all hosts were communicating with each other.	——	——

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                      1-56592-127-5

PERFORM USER ACTIONS ON AN MSDOS SYSTEM
441-096-1118

Conditions: Given a computer with DOS that operates, using issued reference material, and files that need to be modified, added, or deleted.

Standards: Performs user actions on an MS DOS, per the below Performance Steps, without causing injury to self or other personnel, with no damage to the equipment, and within the time prescribed by local command directives.

Performance Steps
Note: DOS versions 2.0 and higher provide the support of hierarchical directories and many of the UNIX-like commands. The following paragraphs provide comparable information on the two systems.

1. File System: DOS, like UNIX, has a hierarchical file system with a single root directory. The commands that manipulate the hierarchy operate in much the same fashion.
    a. Access--Unlike UNIX, DOS accesses a multiple file system on-line, rather than a single file system spanning multiple volumes. A file system (complete hierarchy) is limited to one fixed disk or diskette. Therefore, it can have several mounted, independent file systems at any one time. The drive designation changes the system from one file system to another, or it can be used to refer to files on drives other than the default drive. UNIX, on the other hand, has a single file system in which multiple volumes are mounted onto the single hierarchy. Unlike UNIX, DOS has no user level file protection.
    b. File Naming Rules--UNIX can have up to 14 characters and contain any ASCII character, including upper and lower cases, DOS divides the name into two parts (1 to 8 characters in Windows 3.1 or earlier, more in Windows 95 and later, followed by a period, then an optional extension of up to 3 characters; i.e. MYFILE.EXT).
    c. File Specifications--File specifications in DOS are similar to UNIX. The file hierarchy path is used to access files not found in the current working directory. The only difference is that DOS uses the backlash (as the name of the root directory and for specifying paths. UNIX uses the regular slash (/),
    d. File Names and Wild Card Characters--DOS supports * and ? wild card characters which function almost like their UNIX counterparts. The Use of * in a file specification causes the rest of the filename to be ignored in the match with directory files. For example, a*b.X*y is equivalent to a*.b*. Thus complex file specifications are not possible with DOS. The ? matches a single character but will match trailing blanks. Thus, ???.* would match all files with 1, 2, or 3 characters before the period and any extension.
    e. File Manipulation Commands--Like UNIX, DOS has basic file manipulation commands for copying, deleting, displaying, printing, and listing. The commands take file specifications of the type described above, so that all drives and paths are accessible from any directory.

2. Comparison of UNIX and DOS Commands:
    a.

FUNCTION	UNIX COMMAND	DOS COMMAND
(1) Directory Contents	ls, 1 lc	dir
(2) Move files	mv	move
(3) Copy files	cp	copy
(4) Rename files	mv	ren
(5) Delete files	rm	del
(6) Display ascii file on terminal	cat, pr	type
(7) Print files	lpr, print	print, prn
(8) Create a directory	mkdir	mkdir, md
(9) Delete a directory	rmdir	rmdir, rd
(10) Change directory	cd	chdir, cd
(11) Display current directory	pwd	dir

Performance Steps

3. Batch Files--Just as the UNIX shell can be programmed by creating shell scripts, DOS can be programmed by creating scripts called batch files. Batch files in DOS are not as flexible as shell scripts, but they are nevertheless a powerful component of DOS.

   Batch files have the extension bat and are invoked by giving their file names only. There are 10 replaceable parameters, %0-%9, where %0 is the name of the command and the rest are positional arguments on the command line. Note the similarity to UNIX shell command line parameters $0-$9.

   The batch command language includes commands for argument processing (SHIFT), decision making (IF, GOTO), loops (FOR), and tailoring the interface (REM, ECHO, CLS, PAUSE).

4. Program Development Tools--There are several DOS tools that are counterparts to UNIX program development tools. While they have different commands and operate differently, they perform the similar functions for DOS as their counterparts in UNIX. The following are a few:

   1. edlin   a line context editor similar to ed
   2. debug   an interactive debugger similar to adb
   3. link   the DOS linker similar to ld
   4. Edit   file editor

Performance Measures	**GO**	**NO GO**
1. Created and named directories.	——	——
2. Renamed directories.	——	——
3. Created and named DOS files.	——	——
4. Renamed DOS files.	——	——
5. Listed files.	——	——
6. Located directories and files (used * and ? and switched drives when necessary).	——	——
7. Deleted files.	——	——
8. Deleted directories.	——	——
9. Copied files.	——	——

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    0-471-83799-7
                                                    MS53129-0393

Subject Area 19: JTAGS Emplacement

EMPLACE THE JTAGS TACSTAR II ANTENNA SUBSYSTEM
441-616-1003

Conditions: Your supervisor directs you to emplace the JTAGS antenna subsystem. Assistance and the following are available:

1. Sledgehammer.
2. Tool kit.
3. Inclinometer.
4. TM 9-5895-616-12&P-1.
5. TM 9-5895-616-12&P-2.

Standards: Disassembles the antennas and stows them in their proper containers. Rolls and stows the antenna control and RF cables. Stows the anchors, stabilization assemblies, ground rods, and cable. Stows the antenna cases on the prime mover.

Performance Measures	**GO**	**NO GO**
1. Removed the ground pads from the tripod transit case and placed them in a triangle on the ground roughly 60 inches apart.	——	——
2. Removed the tripod from the transit case and placed it on the ground pads.	——	——
3. Aligned the tripod using the inclinometer.	——	——
4. Leveled the tripod using the two leveling bubbles.	——	——
5. Anchored the antenna using the anchor arrows and come-along assemblies.	——	——
6. Grounded the antenna tripod assembly.	——	——
7. Sat the elevation axis to minimum 10 degrees.	——	——
8. Attached the center panel to the tripod.	——	——
9. Changed the four-way panel clamps from stowed to assembly position.	——	——
10. Attached the cross elevation actuator to the center panel.	——	——
11. Released the clutch and moved the antenna into the horizontal position.	——	——
12. Attached the top, sides, and bottom panels to the center panel.	——	——
13. Attached the triangular side panels to the top, sides, and bottom panels.	——	——
14. Attached the two upper feed horn strut assemblies to the antenna.	——	——
15. Attached the lightning rod to the top reflector panel.	——	——
16. Released the clutch and moved the antenna into the vertical position.	——	——
17. Attached the two lower feed horn strut assemblies to the antenna.	——	——
18. Attached the feed horn assembly to the feed horn strut assemblies.	——	——
19. Connected cables from the antennas to the AIU.	——	——
20. Set the elevation axis to the correct elevation for the appropriate satellite.	——	——

Performance Measures   GO   NO GO

  21. Repeated steps 1 through 20 for each antenna.   ____   ____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
    TM 9-5895-616-12&P-1   AR 200-1
    TM 9-5895-616-12&P-2

EMPLACE THE JTAGS SHELTER
441-616-1004

Conditions: Your supervisor directs you to emplace the JTAGS shelter, which is connected to a prime mover. Assistance and the following are available:

1. Sledgehammer.
2. Tool kit.
3. Multimeter.
4. Tactical or commercial power.
5. TM 9-5895-616-12&P-1.
6. TM 9-5895-616-12&P-2.

Standards: Ensures the JTAGS shelter is disconnected from the primer mover, leveled, and grounded. Installs all interior equipment. Opens all environmental control unit (ECU) vents. Installs lightning rods, anemometer, wind direction vane, and global positioning system (GPS) antennas.

Performance Measures	GO	NO GO
1. Disconnected the shelter from the prime mover.	——	——
2. Lowered and removed mobilizers from the shelter (as required).	——	——
3. Installed leveling jacks and level shelter.	——	——
4. Installed grounding rods and lightning rods to shelter.	——	——
5. Prepared the shelter for entry.	——	——
6. Connected the power cable to the power source, then to the shelter.	——	——
7. Installed and connected the anemometer, SINCGARS, GPS, UHF SATCOM antennas, and the telephone distribution box.	——	——
8. Installed and connected interior shelter equipment.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
Required	Related
TM 9-5895-616-12&P-1	AR 200-1
TM 9-5895-616-12&P-2	TM 9-2330-205-14&P
	TM 9-2330-379-14&P
	TM 9-6115-645-10

ENERGIZE THE JTAGS SYSTEM
441-616-1015

Conditions: Your supervisor directs you to energize the JTAGS system. Power is applied (either commercial or tactical) to the shelter. Assistance and the following are available:

1. A shelter.
2. TM 9-5895-616-12&P-1.
3. TM 9-5895-616-12&P-2.

Standards: Completes energizing procedures for the JTAGS system, per TM 9-5895-616-12&P-1 and TM 9-5895-616-12&P-2, with no personal or equipment safety violations.

Performance Measures	GO	NO GO
1. Performed power-on procedures (energized generator if no commercial power available).	——	——
2. Performed power-on procedures for workstations.	——	——
3. Logged in procedures.	——	——
4. Performed real-time mode procedures.	——	——
5. Performed antenna interface unit initialization procedures.	——	——
6. Loaded tactical decryptor units.	——	——
7. Loaded or created an area of interest (AOI).	——	——
8. Ran the SGRAF (status graph) procedure.	——	——
9. Performed communications link setup procedures.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
Required	Related
TM 9-5895-616-12&P-1	AR 200-1
TM 9-5895-616-12&P-2	TM 11-5820-890-10-1
	TM 9-6115-645-10

EMPLACE THE 60-KW GENERATOR AND TRAILER
441-616-1025

Conditions: Your supervisor directs you to perform emplacement procedures on a trailer-mounted 60-KW generator connected to a prime mover. Assistance and the following are available:

1. Sledgehammer.
2. Crescent wrench (10-inch).
3. Prime mover.
4. Ground rod and cable.

Standards: Sets the hand brakes, closes the air lines, and lowers and secures the support jack. Ensures the generator trailer is disconnected from prime mover and is grounded.

Performance Measures	**GO**	**NO GO**
1. Applied hand brakes.	‒‒	‒‒
2. Lowered and secured support jack.	‒‒	‒‒
3. Disconnected air brake hoses, intervehicular cable, and safety chains.	‒‒	‒‒
4. Disconnected trailer from prime mover.	‒‒	‒‒
5. Grounded generator.	‒‒	‒‒

Evaluation Guidance: Score the soldier GO if he passes all performance measures. Score the soldier NO-GO if he fails any performance measure. If the soldier fails any performance measure, explain what he did wrong and how to do it correctly.

References

Required	Related
	AR 200-1
	LOADER TRANSPORTER
	TM 9-5895-616-12&P-1
	TM 9-5895-616-12&P-2
	TM 9-6115-645-10

Subject Area 20: JTAGS March Order

PREPARE THE JTAGS TACSTAR II ANTENNA SUBSYSTEM FOR TRAVEL
441-616-1001

Conditions: Your supervisor directs you to prepare an emplaced and de-energized antenna subsystem for travel. Assistance and the following are available:

1. Sledgehammer.
2. Stake puller kit.
3. Storage cases.
4. Tool kit.
5. TM 9-5895-616-12&P-1.
6. TM 9-5895-616-12&P-2.

Standards: Stabilizes, levels, aligns, and grounds the JTAGS TACSTAR II antenna. Lays and connects cables. Properly stows antenna storage cases.

Performance Measures	GO	NO GO
1. Disconnected and stowed antenna cables from the shelter.	——	——
2. Disconnected and stowed antenna cables at the antenna interface unit (AIU).	——	——
3. Released clutch on antenna assembly and positioned antenna to the 90/80 mark on the clutch assembly.	——	——
4. Removed feed/LNA assembly and stowed in associated protective case.	——	——
5. Removed bottom two feed horn strut assemblies and stowed in associated protective case.	——	——
6. Released clutch and positioned the reflector assembly in a horizontal or near-horizontal position.	——	——
7. Removed top two feed horn strut assemblies and stowed in associated protective cases.	——	——
8. Removed each corner reflector panel and stowed in the reflector transport assembly (RTA). Ensured that the rounded cutouts of each panel were positioned either in the top/right metal cup or the bottom/left metal cup of the RTA.	——	——
9. Removed the top, sides, and bottom panels and stowed in the RTA.	——	——
10. Removed lightning rod and stowed in the feed horn strut assembly protective case.	——	——
11. Released clutch and repositioned center panel to a vertical position.	——	——
12. Removed the azimuth actuator and stowed in mounting bracket of the positioner transport assembly (PTA).	——	——
13. Relocated and secured (tightened down) the four-way panel clamp assemblies.	——	——
14. Removed the center reflector panel and stowed it in the RTA. Ensured that the weight of the center panel was being supported.	——	——

Performance Measures	**GO**	**NO GO**
15. Released ratchet on both come-alongs until all tension was removed from antenna ground anchors.	——	——
16. Released and inverted each telescopic foot tube so that the flange rested on the top of the holding tube.	——	——
17. Collapsed the positioner assembly by unlocking the lock-release lever at the bottom of the tripod and slid the center collar up the support tube.	——	——
18. Stowed the positioner in the PTA, ensuring that the telescopic foot tubes were positioned correctly. (Released the clutch, if necessary, to position the retainer pins properly for correct stowage.)	——	——
19. Hung and secured the ground pads from the retainer clips on the PTA.	——	——
20. Recovered and stowed antenna ground anchoring assemblies.	——	——
21. Repeated steps 3 through 19 for each antenna.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
    TM 9-5895-616-12&P-1
    TM 9-5895-616-12&P-2

PREPARE THE JTAGS SHELTER FOR TRAVEL
441-616-1002

Conditions: Your supervisor directs you to prepare an emplaced and de-energized JTAGS shelter for travel. Assistance and the following are available:

1. Tool kit.
2. Stake puller kit.
3. Prime mover.
4. Applicable references.

Standards: Loads antenna storage cases. Stows ground rods, lightning rods, ground cables, and power cable. Stows and secures all interior equipment. Secures all storage cabinets. Connects the shelter to the prime mover.

Performance Measures	**GO**	**NO GO**
1. Disconnected power cable at the source and at the shelter I/O panel, and stowed the power cable.	——	——
2. Disconnected and stowed interior shelter equipment.	——	——
3. Removed and stowed lightning rod ground cables.	——	——
4. Removed and stowed the anemometer, SINCGARS, global positioning system (GPS), and UHF SATCOM antennas, telephone distribution box, and all associated cables.	——	——
5. Installed the protective covers on the ECU.	——	——
6. Closed and secured all doors and cabinets.	——	——
7. Removed and stowed the leveling jacks.	——	——
8. Raised and secured the mobilizers and shelter.	——	——
9. Connected shelter to prime mover.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
  Required   **Related**
                                        TM 9-2330-205-14&P
                                        TM 9-2330-379-14&P
                                        TM 9-5895-616-12&P-1
                                        TM 9-5895-616-12&P-2
                                        TM 9-6115-645-10

DE-ENERGIZE THE JTAGS SYSTEM
441-616-1016

Conditions: Your supervisor directs you to de-energize a JTAGS shelter. Assistance and a shelter are available.

Standards: Completes de-energizing procedures for the JTAGS system, per TM 9-5895-616-12&P-1 and TM 9-5895-616-12&P-2, with no personal or equipment safety violations.

Performance Measures	GO	NO GO
1. Shut down Indigos 1 & 2, and monitored.	——	——
2. Shut down processor rack equipment.	——	——
3. Shut down communications rack equipment and VME chassis.	——	——
4. Shut down half-rack equipment and mission processor (Onyx).	——	——
5. Shut down the UPS.	——	——
6. Shut down the ECU.	——	——
7. Performed power-off procedures.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
                                              TM 11-5820-890-10-1
                                              TM 9-5895-616-12&P-1
                                              TM 9-5895-616-12&P-2
                                              TM 9-6115-645-10

PREPARE THE 60-KW GENERATOR AND TRAILER FOR TRAVEL
441-616-1026

Conditions: Your supervisor directs you to prepare an emplaced and de-energized 60-kilowatt generator for travel. Assistance and the following are available:

1. Adjustable wrench (10-inch).
2. Stake puller kit.
3. Prime mover.

Standards: Stows ground rod and cable, and connects air lines, safety chains, and intervehicular cable. Connects generator trailer to prime mover and releases hand brakes.

Performance Measures	**GO**	**NO GO**
1. Disconnected power cables and capped connectors and receptacles.	——	——
2. Closed rear and side panels.	——	——
3. Closed the screen-backing door.	——	——
4. Removed and stowed ground rod and cable.	——	——
5. Connected generator trailer to prime mover.	——	——
6. Connected air brake hoses, safety chains, and intervehicular cable.	——	——
7. Raised and secured support jack.	——	——
8. Released hand brakes.	——	——

Evaluation Guidance: Score the soldier GO if he passes all performance measures. Score the soldier NO-GO if he fails any performance measure. If the soldier fails any performance measure, explain what he did wrong and how to do it correctly.

References
    Required

                                       Related
                                       AR 200-1
                                       TM 9-5895-616-12&P-1
                                       TM 9-5895-616-12&P-2
                                       TM 9-6115-645-10

STP 44-14J14-SM-TG

Subject Area 21: JTAGS Operation

MANUALLY PROCESS A SATELLITE EVENT
441-616-1017

Conditions: While performing as a JTAGS operator, you are required to manually collect a satellite event.

Standards: Isolates and identifies the walking dot pattern. Manually collects, processes, and evaluates the track; and releases or promotes a warning message within 20 seconds. Notifies the senior JTAGS operator.

Evaluation Preparation:
Setup: A simulated track will be inserted for training purposes.
Brief Soldier: Explain to the soldier not to promote the track or release on a live system, but to explain the actions that he would take for a live event.

Performance Measures	GO	NO GO
1. Identified a walking dot pattern as tactical ballistic missile (TBM), slow walker (SW), or a special event.	——	——
2. Set the console for manual collect mode.	——	——
3. Manually collected representative returns.	——	——
4. Evaluated track and determined validity.	——	——
5. Released or promoted warning message.	——	——
6. Notified supervisor of all findings.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
<table>
<tr><td>**Required**</td><td>**Related**</td></tr>
<tr><td></td><td>TM 9-5895-616-12&P-1</td></tr>
<tr><td></td><td>TM 9-5895-616-12&P-2</td></tr>
</table>

3 - 235

AUTOMATICALLY PROCESS A SATELLITE EVENT
441-616-1018

Conditions: While performing as a JTAGS operator, you are required to automatically collect a satellite event.

Standards: Selects a satellite event, verifies the walking dot pattern, processes and evaluates the track, and releases or promotes a warning message within 20 seconds. Notifies the senior JTAGS operator.

Evaluation Preparation:
Setup: A simulated track will be inserted for training purposes.
Brief Soldier: Explain to the soldier not to promote the track or release on a live system, but to explain the actions that he would take for a live event.

Performance Measures	**GO**	**NO GO**
1. Selected the event.	——	——
2. Identified a walking dot pattern.	——	——
3. Evaluated track and determined validity.	——	——
4. Released or promoted a warning message.	——	——
5. Notified supervisor of all findings.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                      TM 9-5895-616-12&P-1
                                                      TM 9-5895-616-12&P-2

PERFORM DENIAL OR DESTRUCTION OF THE JTAGS SYSTEM EQUIPMENT
441-616-1024

Conditions: The enemy is moving toward your position. Your supervisor directs you to perform denial or destruction on the JTAGS equipment. Assistance and the following are available:

1. Authorized demolition material.
2. Tools and petroleum material.
3. Unit denial plan.
4. Unit TSOP.
5. FM 5-250.

Standards: Denies or destroys the JTAGS equipment to prevent the enemy from restoring the equipment to a usable condition by repair or cannibalization. Performs procedures per unit TSOP and unit denial plan. Follows all safety procedures.

Evaluation Preparation:
Setup: Evaluator will simulate this task for training purposes. Tell the soldier if he is to deny or destroy the equipment. Evaluate the performance measure(s) which apply to your instructions. Perform Performance Measures 34 and 35 when using incendiary grenades or Performance Measure 36 when using safety fuse.
Brief Soldier: Explain the procedures to take to deny or destroy, given available materials and time.

Performance Measures	**GO**	**NO GO**
Destroyed mechanical components by improper operation:		
1. Drained crankcase oil from equipment.	___	___
2. Operated engine at high-idle speed.	___	___
3. When time permitted, verified that considerable (if not permanent) damage had occurred.	___	___
4. Employed other or additional destruction methods when directed.	___	___
Destroyed system components by mechanical means:		
5. Used priorities established in unit TSOP.	___	___
6. Disconnected equipment from power source.	___	___
7. Removed and emptied all fire extinguishers.	___	___
8. Destroyed equipment by smashing or cutting priority items.	___	___
9. Used caution when destroying cathode ray tube (flying glass and gases). Wore protective clothing, if possible.	___	___
10. Heaped cables and other equipment together so that piecing equipment together was difficult for the enemy.	___	___
11. Employed other or additional destruction methods, when directed.	___	___
Destroyed system components by weapons fire:		
12. Used priorities established in unit TSOP.	___	___
13. Disconnected equipment from power source.	___	___
14. Removed and emptied all fire extinguishers.	___	___
15. Verified that firing distance was at least 275 meters without protective cover.	___	___

Performance Measures	<u>GO</u>	<u>NO GO</u>
16. Verified that the area was free of friendly troops.	——	——
17. Fired on equipment with machine gun, rifle, grenade, or rocket launcher.	——	——
18. Verified that 10 minutes of weapons fire had elapsed after firing on equipment unless several well-placed hits occurred that started an intense fire.	——	——

Destroyed system components by demolition:

19. Used priorities established in unit TSOP.	——	——
20. Disconnected equipment from power source.	——	——
21. Removed and emptied all fire extinguishers.	——	——
22. Placed a proper size explosive charge in area designated for the component(s) being destroyed.	——	——
23. Followed procedures to prime charges and set up the type firing system(s) directed by the supervisor.	——	——
24. Evacuated the area immediately.	——	——

Destroyed system components using fire:

25. Used priorities established in unit TSOP.	——	——
26. Gathered solid flammable materials from around the site.	——	——
27. Gathered rags, clothing, paper, petroleum products, safety fuses, or other ignition source(s) for igniting the fire(s).	——	——
28. Checked the immediate area of demolition to locate any critical components blown away by the blast (when applicable).	——	——
29. Piled parts as close to the center of the fire as possible (when applicable).	——	——
30. Disconnected equipment from power source.	——	——
31. Removed and emptied all fire extinguishers.	——	——
32. Packed flammable materials under and around equipment to be destroyed.	——	——
33. Soaked flammable materials with gas, oil, and diesel fuel.	——	——
34. Placed an incendiary grenade (when available) on each important component.	——	——
35. Activated the incendiary grenades.	——	——
36. Used a safety fuse that was long enough to permit evacuation to a safe area.	——	——
37. Evacuated area immediately.	——	——

Performed denial of the JTAGS equipment:

38. Powered down equipment being denied.	——	——
39. Removed vital equipment or components.	——	——
40. Concealed vital equipment or components by submerging underwater, concealing in caves, or burying.	——	——
41. Dispersed components or equipment into heavy underbrush, when concealment was not possible.	——	——

Performance Measures   **GO**   **NO GO**

42. Recovered concealed items, if the area was recaptured.   ___   ___

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
    FM 5-250
    TSOP

Subject Area 22: JTAGS Unit Level Maintenance

PERFORM JTAGS TACSTAR II ANTENNA SUBSYSTEM OPERATOR MAINTENANCE PROCEDURES
441-616-1005

Conditions: Given a DA Form 2404 or 5988-E with an identified fault, or your supervisor directs you to repair a fault. Assistance, parts, required POL, and the following are available:

1. Sledgehammer.
2. Power.
3. Tool kit.
4. TM 9-5895-616-12&P-1.
5. TM 9-5895-616-12&P-2.
6. Digital multimeter AN/PSM-45.

Standards: Isolates the fault to the line replaceable unit(s) (LRU), per TM 9-5895-616-12&P-1 and TM 9-5895-616-12&P-2, within 40 minutes, with no equipment or personal safety violations. Repairs, replaces, or adjusts the defective LRU(s), or notifies supervisor of any maintenance support requirements. Records all actions taken on DA Form 2404 or 5988-E per DA Pamphlet 738-750.

Evaluation Preparation:
Setup: A simulated fault will be inserted for training purposes.
Brief Soldier. Explain the procedures taken to isolate and correct the fault.

Performance Measures	GO	NO GO
1. Performed check procedures to verify presence of fault.	——	——

2. Selected and performed appropriate corrective procedure(s).
    a. Made appropriate adjustments.
    b. Performed appropriate fault isolation procedures.
    c. Replaced LRU(s).
    d. Notified supervisor of any maintenance support requirements.
	——	——

3. Performed operational check to verify fault was correct.	——	——
4. Recorded faults and corrective actions taken on DA Form 2404 or 5988-E.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References

Required	Related
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 9-5895-616-12&P-1	
TM 9-5895-616-12&P-2	

PERFORM JTAGS SHELTER OPERATOR MAINTENANCE PROCEDURES
441-616-1006

Conditions: Given a DA Form 2404 or 5988-E with an identified fault, or your supervisor directs you to repair a fault. Assistance, parts, and the following are available:

1. JTAGS shelter.
2. Power.
3. Tool kit.
4. TM 9-5895-616-12&P-1.
5. TM 9-5895-616-12&P-2.
6. TM 3-4240-288-12&P.

Note: If the unit is using the automated system, substitute the appropriate ULLS form or printout.

Standards: Isolates the fault to the defective line replaceable unit(s) (LRU), per TM 9-5895-616-12&P-1 and TM 9-5895-616-12&P-2, within 40 minutes, with no equipment damage or personal safety violations. Replaces and/or adjusts the defective LRU(s), or notifies supervisor of any maintenance support requirements. Records all actions taken on DA Form 2404 or 5988-E per DA Pamphlet 738-750.

Evaluation Preparation:
Setup: A simulated fault will be inserted for training purposes.
Brief Soldier. Explain the procedures taken to isolate and correct the fault.

Performance Measures	**GO**	**NO GO**
1. Performed check procedures to verify presence of fault by using FD/FI window, and rerouted the data stream if possible.	——	——

2. Selected and performed appropriate corrective procedure(s) if rerouting of data stream was not possible.
    a. Made appropriate adjustments.
    b. Performed appropriate fault isolation procedures.
    c. Replaced LRU(s) as required.
    d. Notified supervisor of any maintenance support requirements.
	——	——

3. Performed operational check to verify fault was corrected.	——	——
4. Recorded faults and corrective actions.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 3-4240-288-12&P	
TM 9-5895-616-12&P-1	
TM 9-5895-616-12&P-2	

PERFORM OPERATOR PMCS ON A 60-KW GENERATOR
441-616-1007

Conditions: Your supervisor directs you to perform operator preventive maintenance checks and services (PMCS) on the generator. Assistance and the following are available:

1. 60-KW generator.
2. Authorized tools.
3. POL operating supplies.
4. Cleaning materials.
5. DA Form 2404 or 5988-E.
6. TM 9-6115-645-12.

Standards: Completes PMCS on the 60-kw generator for operational status, per TM 5-6115-545-12, with no personal or equipment safety violations. Corrects all correctable deficiencies and records uncorrected deficiencies on DA Form 2404 or 5988-E per DA Pamphlet 738-750. Notifies supervisor of any maintenance support requirements.

Performance Measures	**GO**	**NO GO**
1. Ensured generator was properly grounded, and all switches and circuit breakers were turned off.	——	——
2. Performed before-operation PMCS.	——	——
3. Started generator using starting procedures.	——	——
4. Performed during-operation PMCS.	——	——
5. Adjusted for proper voltage and frequency.	——	——
6. Shut generator down.	——	——
7. Performed after-operation PMCS.	——	——
8. Entered all uncorrected deficiencies on DA Form 2404 or 5988-E.	——	——
9. Notified supervisor of any maintenance support requirements.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 9-6115-645-10	TM 9-2330-205-14&P
	TM 9-5895-616-12&P-1
	TM 9-5895-616-12&P-2

PERFORM OPERATOR PMCS ON THE TACSTAR II ANTENNA SUBSYSTEM ASSEMBLY
441-616-1008

Conditions: Your supervisor directs you to perform PMCS on the JTAGS TACSTAR II antenna subsystem. Assistance and the following are available:

1. Cleaning materials.
2. Lubricants.
3. Replacement hardware.
4. DA Form 2404 or 5988-E.
5. TM 9-5895-616-12&P-1.
6. TM 9-5895-616-12&P-2.
7. Tools as required.

Standards: Completes the appropriate daily, monthly, or semiannual PMCS on the TACSTAR II antenna subsystem, per TM 9-5895-616-12&P-1 and TM 9-5895-616-12&P-2, with no personal or equipment safety violations. Corrects all correctable deficiencies and records uncorrected deficiencies on DA Form 2404 or 5988-E per DA Pamphlet 738-750. Notifies supervisor of any maintenance support requirements.

Performance Measures	**GO**	**NO GO**

1. Checked reflector panels, tripod legs, moving parts, and tiedowns for damage or wear.

2. Verified axis leveling and ensured knurled adjusting knobs were tight.

3. Verified operation of front panel indicator lamps on antenna interface unit (AIU) and replaced as necessary.

4. Checked that all cables, latches, rubber flaps, door fasteners, and switch covers were tight and in serviceable condition.

5. Checked inside of AIU for presence of water and allowed moisture to evaporate if necessary.

6. Checked pressure (2-3 psig) and humidity gauges on low noise amplifier (LNA) for proper indications.

7. Checked for exposed surfaces, corrosion, or paint damage and cleaned with brush and touch-up paint if required.

8. Checked humidity indicator for presence of moisture contamination and replaced desiccant as necessary.

9. Checked for loose or damaged connectors, damaged or abraded cables or wiring, and tightened, replaced, or repaired as required.

10. Verified handcranking ability of the antenna(s) as follows:
    a. Using a 3/8-inch ratchet or handle, rotated elevation actuator cw and ccw.
    b. Repeated above step for cross-elevation actuator.

11. Checked antenna manual drive controls from the AIU as follows.
    a. Set LOCAL/REMOTE switch to LOCAL.
    b. Set UP/DOWN switch to UP position and verified antenna drove in the up direction and stopped when limit switch was reached (16 degrees).
    c. Set UP/DOWN switch to DOWN position and verified antenna drove in the down direction and stopped when limit switch was reached (-14 degrees).

Performance Measures   **GO**   **NO GO**

     d. Set CCW/CW switch to the CCW position and verified antenna rotated ccw
       in cross-elevation and stopped when limit switch was reached (15 degrees).

     e. Set CCW/CW switch to the CW position and verified antenna rotated cw in
       cross-elevation and stopped when limit switch was reached (15 degrees).

12. Entered uncorrected deficiencies on DA Form 2404 or 5988-E.   ——   ——

13. Notified supervisor of any maintenance support requirements.   ——   ——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References

    Required   **Related**
    DA FORM 2404   AR 200-1
    DA FORM 5988-E   DA PAM 738-750
    TM 9-5895-616-12&P-1
    TM 9-5895-616-12&P-2

PERFORM OPERATOR PMCS ON THE JTAGS SHELTER
441-616-1009

Conditions: Your supervisor directs you to perform PMCS on the JTAGS shelter.   Assistance and the following are available:

1. Cleaning materials.
2. Lubricants.
3. Replacement hardware.
4. DA Form 2404 or 5988-E.
5. TM 9-5895-616-12&P-1.
6. TM 9-5895-616-12&P-2.

Standards: Completes PMCS on the JTAGS shelter, per TM 9-5895-616-12&P-1 and TM 9-5895-616-12&P-2, with no personal or equipment safety violations. Corrects all correctable deficiencies and records uncorrected deficiencies on DA Form 2404 or 5988-E per DA Pamphlet 738-750. Notifies supervisor of any maintenance support requirements.

Performance Measures	**GO**	**NO GO**
1. Cleaned and serviced air filters.	——	——
2. Lubricated door hinges and all slide rails.	——	——
3. Ensured cabinets were clean and dry.	——	——
4. Checked equipment lamps, dials, and control knobs for damage.	——	——
5. Cleaned and serviced all connectors.	——	——
6. Entered uncorrected deficiencies on DA Form 2404 or 5988-E.	——	——
7. Notified supervisor of any maintenance support requirements.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References

Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 9-5895-616-12&P-1	
TM 9-5895-616-12&P-2	

PERFORM OPERATOR PMCS ON THE M1022A1 MOBILIZER DOLLY SET
441-616-1011

Conditions: Your supervisor directs you to perform PMCS on the M1022A1 dolly set, which is connected to the towing vehicle. Assistance and the following are available:

1. TM 9-2330-379-14&P.
2. Tool kit.
3. DA Form 2404 or 5988-E.
4. Cleaning materials.
5. Goggles.

Note: If the unit is using the automated system, substitute the appropriate ULLS form or printout.

Standards: Completes PMCS on the dolly set for operational status, per TM 9-2330-379-14&P, with no personal or equipment safety violations. Corrects all correctable deficiencies and records uncorrected deficiencies on DA Form 2404 or 5988-E per DA Pamphlet 738-750. Notifies supervisor of any maintenance support requirements.

Performance Measures	**GO**	**NO GO**
1. Applied service brakes and listened for air leaks.	——	——
2. Pulled towing vehicle forward slightly to check operation of mobilizer service brakes.	——	——
3. Checked all twist locks for tightness or corrosion.	——	——
4. Checked air bags for even inflation by visually checking ride height indicator rings on shock absorbers and added air as required to ensure that shelter rode level.	——	——
5. While driving, checked that shelter did not wander, did not pull to one side, or did not have unusual vibration.	——	——
6. Completed DA Form 2404 or 5988.	——	——
7. Notified supervisor of any maintenance support requirements.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
Required	**Related**
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 9-2330-379-14&P	

Skill Level 2

Subject Area 23: Senior Operator/Team Leader Duties

SUPERVISE MARCH ORDER OF THE SENTINEL SENSOR AND SENSOR NODE
441-096-2005

Conditions: Given a Sentinel and sensor node, TM 9-1430-741-10, wrench, and pliers, you receive a movement order. Your crew must prepare the Sentinel and sensor node for march order.

Standards: Supervises march order of the Sentinel and sensor node, per TM 9-1430-741-10 and ARTEP 44-176-15-MTP, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Supervised Sentinel and sensor turn-off, then generator turn-off procedure.	——	——
2. Supervised data link cable being disconnected and stowed.	——	——
3. Supervised system cables being disconnected and stowed.	——	——
4. Supervised grounding equipment being disconnected and stowed.	——	——
5. Supervised radar antenna being stowed.	——	——
6. Supervised ATG trailer being lowered.	——	——
7. Supervised ATG trailer being coupled to HMMWV.	——	——
8. Supervised radios and radio antennas being prepared for transport.	——	——
9. Supervised final preparation for movement	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
TM 9-1430-741-10	AR 200-1
	ARTEP 44-176-15-MTP

SUPERVISE EMPLACEMENT OF THE SENTINEL SENSOR AND SENSOR NODE
441-096-2006

Conditions: You have just arrived at the selected emplacement site. Your crew must emplace the Sentinel and the sensor node rigid wall shelter (RWS) and prepare for action.

Standards: Supervises emplacement of the Sentinel and sensor node, per TM 9-1430-741-10 and ARTEP 44-176-15-MTP, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Selected an ATG site with a slope of less than 7 degrees.	——	——
2. Selected a vehicle site within 40 meters of the ATG.	——	——
3. Selected a sensor node RWS site within 200 meters of the Sentinel.	——	——
4. Directed RWS driver to selected site.	——	——
5. Directed the Sentinel driver to position the ATG over the site survey marker, disconnected trailer, and drove to the vehicle site.	——	——
6. Ensured the vehicle was positioned with the rear toward the ATG, if possible.	——	——
7. Checked for proper connections and ground after the crew emplaced the vehicle.	——	——
8. Ensured the azimuth drive circuit breaker was set to OFF before the crew raised the antenna on the ATG.	——	——
9. Checked the emplacement of the ATG.	——	——
10. Checked the sensor node site after the crew emplaced the RWS.	——	——
11. Reported status to higher headquarters.	——	——

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                           AR 200-1
                                                           ARTEP 44-176-15-MTP
                                                           TM 9-1430-741-10

SUPERVISE OPERATIONS ON THE SENTINEL SENSOR
441-096-2009

Conditions: The ground-based sensor (GBS) is emplaced with the sensor node rigid wall shelter (RWS). The equipment is powered up and operating, and initialization is complete. You have assigned an operator to the Sentinel.

Standards: Directs diagnostic tests if the situation permits, assists personnel in the sustainment of radar set operations, and monitors radar status and track information, per TM 9-1430-741-10 and ARTEP 44-176-15-MTP, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures   **GO**   **NO GO**

1. Directed the crew to perform the following system diagnostics if the mission or   ——   ——
   tactical situation permitted:
     a. Monitored the radar during operation to ensure command and/or operational
        instruction messages were received.
     b. Monitored radar status.
     c. Ensured operating parameters were entered and changed as required.
     d. Monitored track information.

2. Directed crew member to update system time as required.   ——   ——

3. Directed crew member to change antenna rotation to avoid interference as   ——   ——
   required.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
   Required   **Related**
                                                        AR 200-1
                                                        ARTEP 44-176-15-MTP
                                                        TM 9-1430-741-10

SUPERVISE DESTRUCTION OF THE SENTINEL SENSOR TO PREVENT ENEMY USE
441-096-2010

Conditions: The Sentinel is in immediate danger of being captured by threat forces. Conditions prevent the system from being removed to friendly areas. Orders from the platoon sergeant, platoon leader, or supported unit commander have been received and verified to destroy the Sentinel equipment.

Standards: Ensures the major components of the vehicle and antenna transceiver group (ATG) are destroyed as completely as possible, using all available means, per TM 9-1430-741-10. Ensures all classified documents and materials are destroyed by burning, shredding, or pulping, and verifies material is unrecoverable.

Performance Measures	GO	NO GO
1. Verified the radio in the vehicle was zeroed of frequency hop and crypto data as applicable, and smashed (if not being evacuated).	——	——
2. Verified the major components in the ATG were rendered totally unusable and ensured reconstruction was impossible.	——	——
3. Verified the interiors of the vehicle and ATG enclosure were saturated with fuel from the generator and vehicle fuel tanks and fuel cans.	——	——
4. Cautioned crew members to light fuel in equipment from a distance, if possible, to minimize personal injury if fuel tanks exploded.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required

Related
AR 200-1
ARTEP 44-176-15-MTP
TM 750-244-2
TM 750-244-6
TM 9-1430-741-10

SUPERVISE C3I SYSTEM EQUIPMENT PMCS AND TROUBLESHOOTING
441-096-3005

Conditions: You are required to supervise personnel performing PMCS on de-energized C3I system equipment. A fault may exist on C3I equipment. The following are available:

1. System operator(s).
2. System equipment.
3. Cleaning materials.
4. Applicable TMs.
5. DA Form 2404 or 5988-E.

Standards: Supervises C3I system equipment PMCS and troubleshooting, per applicable technical manual and DA Pamphlet 738-750, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Assigned selected personnel to perform PMCS.	——	——
2. Ensured personnel performed PMCS steps per applicable chart in the TM (daily, weekly, monthly, before, or after).	——	——
3. Performed general inspection to ensure all items were available, clean, and serviceable.	——	——
4. Ensured panels, doors, and access covers were in place and secured.	——	——
5. Supervised system operational checks to verify if fault existed.	——	——
6. Notified unit maintenance if fault was uncorrectable by the operator.	——	——
7. Ensured all uncorrectable deficiencies were recorded on DA Form 2404 or 5988-E.	——	——
8. Checked to see if safety precautions were followed at all times, to prevent injuries or equipment damage.	——	——

Evaluation Guidance: Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
APPLICABLE TECH MAN	AR 200-1
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	

SUPERVISE PMCS ON THE SENTINEL SENSOR
441-096-3013

Conditions: You schedule your section to perform PMCS on the Sentinel. The following are available:

1. Section member assistance.
2. TM 9-1430-741-10.
3. BII and tools.
4. Cleaning material.
5. Pen or pencil.
6. DA Form 2404 or DA Form 5988-E.

Standards: Supervises PMCS on the Sentinel; per DA Pamphlet 738-750, TM 11-5820-890-20-1, and TM 9-1430-741-10; without causing injury to self or other personnel; with no damage to the equipment; with minimal damage to the environment; and within the time prescribed by local command directives.

Performance Measures	**GO**	**NO GO**
1. Determined what level of PMCS was due on the Sentinel (daily or weekly).	——	——
2. Scheduled section personnel to perform PMCS at the required interval.	——	——
3. Ensured that all tools, cleaning material (detergent, isopropyl alcohol, soft bristle brush, and rags) were available.	——	——
4. Ensured daily checks were performed.	——	——
5. Ensured weekly checks on the ATG were performed.	——	——
6. Verified that diagnosed faults were correct.	——	——
7. Ensured operator corrected deficiencies within the operator level of maintenance.	——	——
8. Inspected completed maintenance assignments.	——	——
9. Reviewed entries on DA Form 2404 or 5988-E.	——	——
10. Completed entries on DA Form 2404 or 5988-E to reflect inspection results.	——	——
11. Completed DA Form 2407 requesting unit maintenance support (if applicable).	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
DA FORM 2404	AR 200-1
DA FORM 5988-E	DA PAM 738-750
TM 9-1430-741-10	TM 11-5820-890-20-1
	TSOP

Skill Level 3

Subject Area 24: Tactical Operations and Supervision

SUPERVISE EMPLACEMENT OF THE ABMOC or A2C2
441-096-3001

Conditions: Your crew has arrived at the selected emplacement site and must emplace the RWS and OE-254 antenna.

Standards: Supervises emplacement of the ABMOC or A2C2, per TB 11-7010-269-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Directed driver to generator position and disconnected trailer.	——	——
2. Directed the SICPS into position and support vehicle to selected position.	——	——

3. Checked for the following after the crew emplaced the OE-254 antenna mast:
   a. Mast erected approximately 15 meters from CP.
   b. RF cable attached to antenna and strain relief clamp.
   c. Mast secured and RF cable connected to signal entry panel.
	——	——

4. Checked for the following after the crew emplaced the RWS:
   a. Generator powered up and adjusted for 120 vac, 60 hertz.
   b. System grounded with generator ground rod and surface wire grounding system (SWGS).
   c. JTIDS and EPLRS antennas installed.
   d. Vents open on RWS and sides rolled up on generator trailer.
   e. Engagement operations (EO) and force operations (FO) consoles powered up and initialized.
   f. FAAD C2I system initialization completed, track sources selected, and communications links toggled on.
	——	——

5. Reported system status to higher headquarters.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                   AR 200-1
                                                   TB 11-7010-269-10

SUPERVISE MARCH ORDER OF THE ABMOC or A2C2
441-096-3002

Conditions: You receive a movement order. Your crew must prepare the ABMOC or A2C2 for march order.

Standards: Supervises march order of the ABMOC or A2C2, per TB 11-7010-269-10, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Checked for the following in the rigid wall shelter (RWS):	——	——
a. JTIDS indicator control panel (ICP) in STBY position.		
b. SINCGARS FCTN switch in STBY position.		
c. EPLRS POWER switch in OFF position.		
d. FO and EO terminals were powered down.		
e. All other equipment powered down.		
2. Checked for the following after the crew had completed preparations for march order:	——	——
a. All cables disconnected and stowed.		
b. OE-254 mast and antenna lowered, disassembled, and stowed.		
c. AB-903 mast lowered and antenna stowed.		
d. Generator powered down, and SWGS and generator ground rod retrieved and stowed in trailer.		
e. Trailer connected to vehicle, hand brakes released, and canvas sides rolled down and secured.		
3. Reported system status to higher headquarters.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                  AR 200-1
                                                  TB 11-7010-269-10

SUPERVISE FORCE OPERATIONS
441-096-3006

Conditions: You are responsible for timely database updates, report generation and distribution, database replication, plotting of friendly and enemy unit movement, and generating graphics in a BNTOC or as a liaison A2C2 node.

Standards: Supervises network management, message routing lists, and communications configurations. Ensures database changes for intelligence and logistics are posted in a timely manner. Reviews maneuver graphics and overlays for correct entry of reports and messages. Implements operator sustainment training and supervises operator PMCS per FM 44-100.

Performance Measures	GO	NO GO
1. Performed functions required for planning the total ADA mission.	——	——
2. Performed functions required for coordinating the total ADA mission.	——	——
3. Performed functions required for preparing the total ADA mission.	——	——
4. Performed functions required for sustaining the total ADA mission.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                 AR 200-1
                                                 FM 44-100

SUPERVISE ENGAGEMENT OPERATIONS
441-096-3007

Conditions: You are responsible for managing the task organization and system control of target distribution to the FAAD battalion assets and combined arms elements. You also must monitor the air defense warning (ADW) conditions and weapon control orders (WCOs) in an ABMOC, A2C2, sensor node, or platoon command post (CP) subsystem.

Standards: Supervises engagement operations; per TB 11-7010-269-10, TB 11-7010-269-10-1, or TB 11-7010-271-14; without causing injury to self or other personnel or damage to the equipment.

Performance Measures	GO	NO GO
1. Coordinated activation of FAAD C2I subsystems.	——	——
2. Established system parameters and subsystem roles (track sources, relays, et cetera).	——	——
3. Monitored system functions and operation.	——	——
4. Authorized system reconfiguration, if required.	——	——
5. Monitored ADW conditions and WCOs.	——	——
6. Established data link reference point for dissemination to C2 elements.	——	——
7. Delegated receiving and processing of external tracks to an A2C2 or sensor node, if required.	——	——
8. Monitored the division air picture.	——	——
9. Recommended to division commander ADW levels.	——	——
10. Authorized dissemination of ADWs or ADW changes approved by division commander.	——	——
11. Acted as air track ID authority for FAAD C2 subsystems.	——	——
12. Prepared and disseminated airspace use restrictions and battlefield control measures (division boundary, FEBA, FLOT, and fire support coordination line).	——	——
13. Authorized and verified dissemination of IFF Mode III ID codes to sensor subsystems.	——	——
14. Supervised air track relay operations.	——	——
15. Determined sensor coverage requirements.	——	——
16. Coordinated with division and supported elements for track priorities, unit boundaries, and other battlefield geometry to minimize saturation and efficiently distribute track information to fire units.	——	——
17. Performed as a liaison to firing batteries for air track distribution.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
> **Required**   **Related**
>   TB 11-7010-269-10

References
    Required   **Related**
                                                            TB 11-7010-269-10-1
                                                            TB 11-7010-271-14

SUPERVISE EMPLACEMENT OF THE BATTERY COMMAND POST
441-096-3008

Conditions: Your crew has arrived at the emplacement site and must emplace the M1068 battery CP.

Standards: Supervises emplacement of the battery command post, per TM 11-7010-256-12&P and TM 5-6115-596-14, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO
1. Directed the track vehicle into position.	——	——
2. Checked for the following after the system was emplaced:	——	——
a. Surface wire grounding system (SWGS) was installed.		
b. Generator was emplaced and sandbagged, if remoted.		
c. AB-903 mast and antenna were erected and secured with guy stakes.		
d. AC and DC equipment circuit breakers were set to ON.		
e. AC VOLTS meter read 110 VAC nominal.		
f. EO and FO terminals were powered on.		
g. EPLRS and SINCGARS were powered on.		
3. Checked that the HCU was in operational mode and the BSD displayed any available tracks.	——	——
4. Reported system status to higher headquarters.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                     Related
                                     AR 200-1
                                     TM 11-7010-256-12&P
                                     TM 5-6115-596-14

SUPERVISE MARCH ORDER OF THE BATTERY COMMAND POST
441-096-3009

Conditions: You receive a movement order. Your crew must prepare the battery command post for march order.

Standards: Supervises march order of the battery command post, per TM 11-7010-256-12&P and TM 5-6115-596-14, without causing injury to self or other personnel, with no damage to the equipment, with minimal damage to the environment, and within the time prescribed by local command directives.

Performance Measures	GO	NO GO

1. Checked for the following inside the M1068:
    a. FO and EO terminals powered down.
    b. SINCGARS FCTN switch in STBY position.
    c. EPLRS power switch in OFF position.
    d. All other equipment powered down.
	⎯⎯	⎯⎯

2. Checked for the following after the crew completed preparations for march order:
    a. Generator powered down and stowed.
    b. AB-903 mast retracted and antenna stowed.
    c. Guy ropes and stakes retrieved and stowed.
    d. SWGS retrieved and stowed.
    e. All cables stowed.
	⎯⎯	⎯⎯

3. Reported system status to higher headquarters.	⎯⎯	⎯⎯

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required

                                                    Related
                                                    AR 200-1
                                                    TM 11-7010-256-12&P
                                                    TM 5-6115-596-14

Subject Area 25: JTAGS Engagement Controller

SUPERVISE PREPARATION OF THE JTAGS SYSTEM EQUIPMENT FOR TRAVEL
441-616-3001

Conditions: You are required to supervise personnel preparing the joint tactical ground station (JTAGS) system equipment for travel. The equipment is emplaced. The following are available:

1. Section personnel.
2. Tool kit.
3. Prime mover.
4. Stake puller kit.
5. 60-KW generator set.
6. TACSTAR II antenna subsystem.
7. JTAGS shelter.
8. Mobilizer.

Standards: Receives warning order and informs crew members to prepare the JTAGS system equipment for travel. Ensures the JTAGS system equipment is prepared for travel and coupled to the associated prime mover.

Performance Measures	GO	NO GO
1. Received the warning order to move.	——	——
2. Gave the order to crew members to prepare for travel.	——	——
3. Ensured crew members followed all safety procedures.	——	——
4. Verified the 60-kw generator set was ready for travel.	——	——
5. Verified the TACSTAR II antenna subsystem was ready for travel.	——	——
6. Verified the JTAGS shelter was ready for travel.	——	——
7. Reported system status to higher headquarters.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
	AR 200-1
	TM 11-5820-890-10-1
	TM 9-2330-205-14&P
	TM 9-2330-379-14&P
	TM 9-5895-616-12&P-1
	TM 9-5895-616-12&P-2
	TM 9-6115-645-10

SUPERVISE EMPLACEMENT OF THE JTAGS SYSTEM EQUIPMENT
441-616-3002

Conditions: You are required to supervise personnel performing emplacement of the joint tactical ground station (JTAGS) system equipment. The following are available:

1. Section personnel.
2. JTAGS shelter.
3. Sledgehammer.
4. Tool kit.
5. Ground rod and cable.
6. TACSTAR II antenna subsystem.
7. 60-KW generator.
8. Mobilizer.

Standards: Ensures the JTAGS system equipment is prepared for operation, with no personnel or equipment safety violations. Continuously inspects and upgrades areas of responsibility.

Performance Measures	GO	NO GO
1. Ensured crew members followed all safety procedures.	——	——
2. Verified the 60-kw generator set and trailer were emplaced.	——	——
3. Verified the TACSTAR II antenna subsystem was emplaced.	——	——
4. Verified the JTAGS shelter was ready for operations.	——	——
5. Inspected and upgraded area of responsibility.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
  Required　　　　　　　　　　　　　　**Related**
　　　　　　　　　　　　　　　　　　　　　AR 200-1
　　　　　　　　　　　　　　　　　　　　　TM 11-5820-890-10-1
　　　　　　　　　　　　　　　　　　　　　TM 9-2330-205-14&P
　　　　　　　　　　　　　　　　　　　　　TM 9-2330-379-14&P
　　　　　　　　　　　　　　　　　　　　　TM 9-5895-616-12&P-1
　　　　　　　　　　　　　　　　　　　　　TM 9-5895-616-12&P-2
　　　　　　　　　　　　　　　　　　　　　TM 9-6115-645-10

SUPERVISE PMCS ON THE JTAGS SYSTEM EQUIPMENT
441-616-3003

Conditions: Your operator/maintainer has received a DD Form 314 indicating scheduled PMCS is due on the JTAGS shelter, mobilizer, 60-KW generator, and TACSTAR II antenna system. The JTAGS system is emplaced and power is applied. Parts, required POL, and the following are available:

1. TM 9-2330-379-14&P.
2. TM 9-5895-616-12&P-1.
3. TM 9-5895-616-12&P-2.
4. TM 9-6115-645-10.
5. Tool kit.
6. DA Form 2404 or 5988-E.

Standards: Ensures the JTAGS system is energized, operational, and all checks and adjustments are completed. Ensures the operator performs the correct check procedures. Ensures that deficiencies and actions taken are entered on DA Form 2404 or 5988-E per DA Pamphlet 738-750. Notifies supervisor of any maintenance support requirements.

Performance Measures	GO	NO GO
1. Checked to determine which periodic checks were due.	——	——
2. Ensured operator used correct tools and test equipment.	——	——
3. Ensured operator performed the check procedures per appropriate TM.	——	——
4. Ensured operator followed all safety procedures.	——	——
5. Inspected equipment to ensure it met TM standards.	——	——
6. Ensured all deficiencies and actions taken were logged.	——	——
7. Notified supervisor of any maintenance support requirements.	——	——
8. Made appropriate entries on appropriate maintenance form.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
    DA FORM 2404   DA PAM 738-750
    DA FORM 5988-E
    TM 9-2330-379-14&P
    TM 9-5895-616-12&P-1
    TM 9-5895-616-12&P-2
    TM 9-6115-645-10

SUPERVISE OPERATOR MAINTENANCE ON THE JTAGS SYSTEM EQUIPMENT
441-616-3004

Conditions: Given an identified fault in the JTAGS shelter, and when the JTAGS equipment is emplaced with power applied. Operators, parts, and TMs 9-5895-616-12&P-1 and -2 are available.

Standards: Ensures the JTAGS system is energized and operational. Ensures operator replaces and/or adjusts the defective LRU(s). Ensures operator follows all safety procedures. Ensures that fault and corrective actions are entered on DA Form 2404 or 5988-E. Notifies supervisor of any maintenance support requirements.

Performance Measures	GO	NO GO
1. Assigned operator to perform corrective action.	——	——
2. Ensured operator verified fault.	——	——
3. Ensured operator performed appropriate fault isolation procedure.	——	——
4. Ensured operator replaced and/or adjusted the defective LRU(s).	——	——
5. Ensured operator followed all safety procedures.	——	——
6. Ensured that fault and corrective actions were entered on appropriate maintenance forms.	——	——
7. Notified supervisor of any maintenance support requirements.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
Required	**Related**
DA FORM 2404	DA PAM 738-750
DA FORM 5988-E	
TM 9-5895-616-12&P-1	
TM 9-5895-616-12&P-2	

SUPERVISE JTAGS CONSOLE OPERATIONS
441-616-3008

Conditions: You are required to supervise JTAGS console operations. The JTAGS system is operational and all areas of interest (AOI) are configured per local SOP.

Standards: Supervises crew members performing console operations and evaluates satellite events.

Performance Measures	GO	NO GO
1. Verified the AOI configuration.	――	――
2. Verified all communication links were established and operating.	――	――
3. Supervised processing of satellite events.	――	――
4. Supervised track coordination.	――	――
5. Released all promoted tracks.	――	――
6. Reported released tracks to higher headquarters.	――	――

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                            TM 9-5895-616-12&P-1
                                                            TM 9-5895-616-12&P-2

SUPERVISE DENIAL OR DESTRUCTION OF THE JTAGS SYSTEM EQUIPMENT
441-616-3013

Conditions: The enemy is moving toward your position. Your commander directs you to perform denial or destruction on the JTAGS equipment. Personnel and the following are available:

1. Authorized demolition material.
2. Tools and petroleum material.
3. Unit denial plan.
4. Unit SOP.

Standards: Ensures individuals deny or destroy the JTAGS equipment to prevent the enemy from restoring equipment to a usable condition by repair or cannibalization. Ensures personnel follow all procedures and safeties per unit TSOP and unit denial plan.

Performance Measures	**GO**	**NO GO**
1. Briefed individuals on situation and whether they were to deny or destroy the equipment.	——	——

2. Supervised denial of equipment.
    a. Briefed individuals on the priority of denial.
    b. Assigned individuals to remove designated components and parts of equipment.
    c. Directed individuals to conceal or disperse equipment.
    d. Reported status to platoon sergeant upon completion of denial procedures.
	——	——

3. Supervised destruction of equipment.
    a. Briefed individuals on the situation and priority of destruction.
    b. Directed individuals to perform one or more of the following:
        (1) Destroy equipment by improper operation.
        (2) Destroy equipment by mechanical means.
        (3) Destroy equipment by weapons fire.
        (4) Destroy equipment by demolitions.
        (5) Destroy equipment by fire.
    c. Ensured that proper procedures were followed.
    d. Reported status to platoon sergeant upon completion of destruction.
	——	——

4. Ensured safety procedures were followed.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                    FM 5-250

Skill Level 4

Subject Area 26: Conducting Tactical Operations

CHECK SIGNAL SECURITY (SIGSEC) PROCEDURES
113-573-0001

Conditions: This task is performed in a tactical or nontactical situation, under all weather conditions. You will be provided with an established signal node with organic cryptosystems and an operation order (OPORD).

Standards: The standards are met when emission, physical, crypto, transmission, and electronics areas of security are checked, and corrective action is taken for any discrepancy noted.

Evaluation Preparation: Setup: Different types of signal operational requirements will be in effect for this task. Brief Soldier: You are required to check SIGSEC at the signal area node and make necessary corrections.

Performance Measures	GO	NO GO
1. Review the mission OPORD, signal operation instructions (SOI), and standard operating procedure (SOP) to determine specific SIGSEC policies and operating procedures for your signal node.	——	——
2. Check emission security.	——	——
3. Check physical security. a. Area node. b. Area where a cryptosystem is employed. c. Emergency evacuation and destruction plans. d. Handling of classified material waste. e. Control of access and crypto safeguards.	——	——
4. Check cryptographic security. a. Proper utilization of cryptosystems. b. Encryption of all classified information. c. Competent operation of cryptosystems.	——	——
5. Check TRANSEC. a. Radio communications. b. Conventional telephone communications.	——	——
6. Direct appropriate corrective action to be taken for any discrepancy noted.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required	Related
AR 380-5	(O)TB 380-41
AR 530-1	FM 24-18
FM 34-60	FM 3-19.30
SOI	

MONITOR ENGAGEMENT OPERATIONS
441-096-4001

Conditions: You are responsible for monitoring engagement operations in an ABMOC or A2C2 within a G3 section or for monitoring detached operations in support of combined arms elements. A remote engagement operations monitor is available.

Standards: Monitors air track traffic, air defense warnings (ADW), weapon control orders (WCOs), node and fire unit locations, and other messages. Notifies node operators or supervisors of changes or updates as required per applicable technical manual.

Performance Measures	GO	NO GO
1. Monitored operating procedures and implemented improvements.	——	——
2. Reviewed air track distribution and fire unit coverage for effectiveness.	——	——
3. Ensured all WCOs and ADWs were initiated in a timely manner.	——	——
4. Generated reports as required to document airspace activity.	——	——
5. Advised higher headquarters of noted deficiencies.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                                    APPLICABLE TECH MAN

SUPERVISE SENSOR PLATOON TACTICAL OPERATIONS
441-096-4012

Conditions: The enemy has been pushed back and the FEBA has moved forward. Higher headquarters directs you to provide employment and deployment strategy and guidelines to the sensor crews as necessary.

Standards: Provides sensor management and deployment methods and guidelines in a tactical and nontactical environment, per ARTEP 44-176-15-MTP and TM 9-1430-741-10. There is no time limit imposed on this task.

Performance Steps

1. Sensor management plan:
    a. Sensor sections are deployed in support of the FAAD fire units to provide early warning and to assist in the engagement process.
    b. The FAAD battalion S3 has staff responsibility for integrating the use of the battalion's organic sensors to include the development of the battalion's SMP. The SMP is modified as the tactical situation dictates. The plan contains specific guidance for the deployment and operation of the sensor. Close coordination between the sensor platoon sergeant, supported unit commander, and the battalion S3 is required to ensure that adequate overall sensor coverage is obtained. The SMP contains the following points:
        (1) Mutual support requirement for the sensor sections.
        (2) Operating frequencies required in specific geographical locations.
        (3) Security of operational methods of the sensor such as blinking and use of operating modes.
        (4) Deployment methods.

2. Employment methods: Sensors are normally deployed under battalion control to provide coordinated area coverage according to the battalion SMP. However, sensors may be attached to or placed under the operational control of a firing battery to better suit the maneuver scheme.
    a. Attachment is done when lines of communications are so extended that the S3 and the sensor platoon leader cannot control and position radars to effectively support each ADA firing battery. When employed in this way, at least two sensors should be allocated to a battery. This will afford a continuous-coverage capability in meeting deployment requirements. One of the sensors can remain in position while the other displaces.
    b. The FAAD battalion commander will consider certain factors to determine which method to use. These factors include, but are not limited to--
        (1) Deployment of supported forces.
        (2) Deployment of fire units.
        (3) The enemy threat, both air and ground.
        (4) Terrain level, hills, valleys, water, et cetera.
        (5) Electronic warfare environment.
    c. There are three methods of employment:
        (1) Method A. The sensor platoon leader deploys the sensor sections with staff supervision exercised by the battalion ABMOC OIC. The S3 coordinates the map-selected sensor positions with the A2C2 element. In this method, the platoon sergeant or leader retains control of the sensor sections.
        (2) Method B. Two sensor sections are attached to each firing battery. The firing battery recommends sensor positions to the ABMOC OIC. The S3 coordinates these positions with the A2C2 element, approves or changes them, and confirms the approved positions to the firing battery commander.
        (3) Method C. Two sensor sections can be attached to a firing battery, as in method B. The rest of the sensor sections remain under the sensor platoon as in method A.

3. Employment guidelines:

Performance Steps
      a. Mutual support. Sentinels should be employed no more than 20 kilometers apart. This will ensure mutual support by overlapping coverage and will minimize dead spaces caused by terrain masking. Sensors displace on order, to provide continual coverage of tactical operations. They also displace on the initiative of the section chief, when required, to prevent imminent destruction. The radars will transmit in short, unevenly spaced intervals according to the SMP.
      b. Employed by pairs. When sensors are employed by pairs, they may be emplaced from 5 to 10 kilometers to increase difficulty in locating them by enemy direction to the SMP.
      c. Site selection. Individual sensor sites are chosen to obtain maximum low-attitude radar coverage of a designated area. Sites are also selected to ensure radio line of sight to the maximum number of in-range fire units and ABMOC. Since the sensor will be an attractive target for attack, it should be located within the defense perimeter of ground security and ADA forces whenever possible.

   4. Survivability:
      a. Avoid detection. Actions that should be taken to improve battlefield survival include--
         (1) Selecting a position that is hidden from enemy ground observation.
         (2) Moving into position during darkness.
         (3) Taking advantage of terrain to provide cover and concealment for the radar.
         (4) Using garnish netting, pattern painting, and natural material to camouflage the position.
         (5) Blending equipment into natural background.
         (6) Erasing and covering tracks.
         (7) Keeping position litter-free.
         (8) Enforcing noise and light discipline.
         (9) Continuously practicing communications security, that is, maintaining radio silence when possible.
        (10) Exercising EMCON, that is, blinking of radars, limiting numbers of radar in operation, and frequency management.
      b. Movement. One of the best ways to keep the enemy confused as to the location of the sensor is to move often. When changing positions, it is not necessary to move very far; 200 to 500 meters is enough. Other considerations are as follows:
         (1) Move often to keep the enemy from targeting your position.
         (2) Do not move a great distance.
         (3) Move at night or when visibility is limited.
         (4) Move and get back in operation quickly.
         (5) Move after recent air reconnaissance of the area.
         (6) Move if the position has been fired upon.

Evaluation Preparation:
Setup: Ensure that all information, references and equipment required to perform the task are available. Insert a pre-selected fault into the system per instructions. Use the FM and the evaluation guide to score the soldier's performance.
Brief soldier. Tell the soldier what he is required to do per the task Conditions and Standards.

Performance Measures	**GO**	**NO GO**
1. Modified the SMP.	——	——
2. Selected the method of sensor employment.	——	——
3. Followed employment guidelines.	——	——
4. Took actions to improve battlefield survival.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                          AR 200-1
                                                          ARTEP 44-176-15-MTP
                                                          TM 9-1430-741-10

COORDINATE AIRSPACE ACTIVITY INFORMATION WITH AIRSPACE USERS

441-096-4018

Conditions: Army airspace command and control (A2C2) is deployed with the division G3. This is an ongoing operation used to advise of friendly and unknown airspace users.

Standards: Ensures concurrent employment of airspace users in the accomplishment of the AirLand Battle missions, per FM 100-103. There is no time limit set for this task.

Performance Steps

Note: One of the fundamental principles of air defense is to integrate all weapons under one unified commander, into the force commander's scheme of maneuver, and into the battle for air superiority. A2C2 ensures concurrent employment of airspace users in the accomplishment of AirLand Battle missions. A2C2 coordinates, integrates, and regulates the use of airspace. It defines dimensions and identifies all airspace users.

1. As one of the participants in the A2C2 effort, the divisional ADA battalion provides command and control information, early warning information, and divisional ADA unit locations to the ADADO at the A2C2 element. In return, the ADADO must provide airspace management information to the divisional TOC via courier, radio teletypewriter, multichannel, or the battalion radio nets. Division air defense command and control must optimize--
   a. The effective and efficient use of division air defense fire units and radar capabilities.
   b. Protection of friendly aircraft by minimizing or eliminating the risk of engagement by friendly Army air defense.
   c. Support of ground forces by integrating with the ground commander's scheme of maneuver, by limiting the effectiveness of enemy air offensive efforts to a level permitting freedom of action to friendly forces, and by providing air battle intelligence to ground forces so that they can effectively exercise passive and active air defense measures.

Note: Some of the A2C2 facilities available are Air Force and some are Army. But they are all there to support the joint effort. Descriptions of these facilities are found in FM 1-120 and FM 100-103.

2. The division tactical operations center is the command installation that groups personnel and communications facilities to accomplish centralized control and coordination of tactical operations. The division commander establishes an A2C2 element within his TOC.

3. At the maneuver brigade and battalion level, no special staff elements exist to perform A2C2 functions. However, existing staff personnel perform such functions as supporting liaison and/or fire support representatives, and subordinate unit commanders on a by-exception basis. S3 air supervises airspace control functions. Staffing at this level should conform to division staffing where possible.

4. The A2C2 performs the following functions:
   a. Through correlation of airspace management information, identifies and resolves potential conflicts concerning the use of airspace.
   b. Develops and maintains the airspace utilization map.
   c. Recommends, maintains, and disseminates LLTR.
   d. Recommends airspace use restrictions (prohibited areas, airspace control zones, and control measures).
   e. Maintains and disseminates the information on all ROAs and standard-use Army air routes, weapons-free zones, preplanned field artillery fires, airmobile operations, major aviation operations, and FARP locations.
   f. Relays information concerning air defense warnings and rules of engagement (weapon control status and hostile criteria).
   g. Monitors the status of air defense and aviation assets and advises the commander.
   h. Coordinates and disseminates information concerning the establishment of coordinating altitudes and changes thereto.

Performance Steps
    i. Provides relevant airspace management information for the development of air movement plans, and ensures that airlift requirements are included in airspace utilization annexes.

Performance Measures   **GO**   **NO GO**

1. Identified and helped resolve potential conflicts concerning the use of airspace.   ——   ——

2. Developed and maintained airspace utilization map.   ——   ——

3. Recommended, maintained, and disseminated LLTRs.   ——   ——

4. Disseminated information on all restricted operation areas, and standard-use   ——   ——
   Army air routes, weapons-free zones, and other airspace user information.

5. Relayed information concerning air defense warning rules of engagement.   ——   ——

Evaluation Guidance: Score the soldier GO if he passes all performance measures. Score the soldier NO-GO if he fails any performance measure. If the soldier fails any performance measure, explain what he did wrong and how to do it correctly.

References
    Required   **Related**
                                                     FM 100-103
                                                     FM 1-120

Subject Area 27: Defense Design

PLAN SENSOR COVERAGE OF A STATIC OR CRITICAL ASSET
441-096-4013

Conditions: Your platoon receives a warning order from the S3 or supported unit commander to cover a critical asset. All MTOE and associated equipment are available to include basic load of maps for the mission area.

Standards: Designs sensor radar coverage for a static or critical asset and implements the battalion SMP, per ARTEP 44-176-15-MTP and TM 9-1430-775-10. Accomplishes this task within 1 hour.

Performance Steps

1. Ensured the radars transmitted in short, unevenly spaced intervals.

2. Designated which radar should radiate and for how long.

3. Ensured the radar coverage of low-altitude approaches.

4. Conformed radar coverage to weapons defense design.

5. Ensured alert data was passed to ABMOC and fire units to allow effective reaction time.

6. Collocated the radar systems within the defenses of ground security forces unit for ground support.

7. Ensured each radar had an alternate position and could accomplish the mission from the assigned position.

8. Selected one of the following methods of deployment most suited to the tactical operation:
   a. Method A. The sensor platoon leader deploys the sensor sections with staff supervision exercised by the battalion ABMOC OIC. The S3 coordinates the map-selected sensor positions with the A2C2 element. In this method, the platoon sergeant or leader retains control of the sensor sections.
   b. Method B. Two sensor sections are attached to each firing battery. The firing battery recommends sensor positions to the ABMOC OIC. The S3 coordinates these positions with the A2C2 element, approves or changes them, and confirms the approved positions to the firing battery commander.
   c. Method C. Two sensor sections can be attached to a firing battery, as in method B. The rest of the sensor sections remain under the sensor platoon as in method A.

9. Designed radar coverage plan.
   a. Used mutual support techniques.
      (1) Placed the Sentinel radars no more than 20 kilometers apart.
      (2) Gave priority to the front, flanks, and rear of the protected area.
      (3) Used random displacement to enhance survivability.
      (4) Employed no closer than 24 kilometers from the FEBA or line of contact.
   b. Provided for radar coverage.
      (1) Ensured adequate number of radars was available to provide adequate radar coverage of asset.
      (2) Integrated factors of METT-T.
      (3) Kept squad leaders informed as to change in tactical environment.

Performance Measures	**GO**	**NO GO**
1. Ensured the radars were properly located.	‒‒‒‒	‒‒‒‒
2. Verified the radars were correctly set up.	‒‒‒‒	‒‒‒‒

Performance Measures	**GO**	**NO GO**
3. Ensured alert data was passed to ABMOC and fire units to allow effective reaction time.	——	——
4. Selected the method of deployment most suited to the tactical operation.	——	——
5. Designed radar coverage plan.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
   Required   **Related**
                                                          ARTEP 44-176-15-MTP
                                                          TM 9-1430-775-10

PLAN SENSOR COVERAGE OF A MANEUVER FORCE
441-096-4014

Conditions: Your platoon receives a warning order from the S3 or supported unit commander. All MTOE and associated equipment are available, to include basic load of maps for the mission area.

Standards: Designs sensor radar coverage for the supported element and implements the battalion SMP, per ARTEP 44-176-15-MTP and TM 9-1430-741-10. Accomplishes this task within 1 hour.

Performance Steps

1. Estimate the situation.
    a. Consider factors of METT-T.
    b. Brief squad leaders on mission and tactical situation.
    c. Ensure number of applicable radars is available to provide adequate radar coverage of supported unit.

2. Design a radar coverage plan.
    a. Use mutual support, that is, Sentinels no more than 20 kilometers apart with overlapping radar coverage to ensure adequate support.
    b. Ensure radar coverage of low-altitude approaches to division area, priority to front, flanks, and rear areas.
    c. Ensure alert data is passed to the ABMOC in time to ensure effective reactive time by the fire units.
    d. Locate the radar with a fire unit or within the defense of a ground security force in case of ground attack.
    e. Ensure each radar has an alternate position and can accomplish the mission from the position.

3. Plan the movement.
    a. Ensure all mission times are met.
    b. Establish radar setup points along routes of travel to ensure radar coverage of the maneuver element convoys (use bounding overwatch method).
    c. Consider time necessary to link up with supported elements and travel time from current location to supported elements.
    d. Consider obstacles and any alternate routes to mission areas.

4. Implement the battalion SMP.
    a. Ensure radars transmit in short, unevenly spaced intervals.
    b. Designate which radar is to radiate, when, and for how long.
    c. Ensure radar coverage extends beyond the unit positions by at least 10 kilometers.

Performance Measures	GO	NO GO
1. Estimated the situation.	——	——
2. Designed a radar coverage plan.	——	——
3. Planned the movement.	——	——
4. Implemented the battalion SMP.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly.

References
Required   **Related**
                                          ARTEP 44-176-15-MTP
                                          TM 9-1430-741-10

ASAT-generated blank page

Subject Area 28: JTAGS Detachment Sergeant

MONITOR JTAGS SYSTEM OPERATIONS
441-616-4001

Conditions: The crews have emplaced the JTAGS system for operation using the applicable regulations.

Standards: The platoon sergeant must ensure that the operators are performing system operations correctly.

Performance Measures	GO	NO GO
1. Verified that system operations were being done correctly.	——	——
2. Verified status reports and track reports were done within time limits.	——	——
3. Reported system status to higher headquarters.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
    Required   **Related**
                                                  TM 11-5820-890-10-1
                                                  TM 9-5895-616-12&P-1
                                                  TM 9-5895-616-12&P-2

MONITOR JTAGS OPERATOR LEVEL MAINTENANCE
441-616-4002

Conditions: Given an identified fault in a JTAGS shelter, and when the JTAGS equipment is emplaced with power applied. A crew, parts, and TM 9-5895-616-12&P-1 and -2 are available.

Standards: The JTAGS system is energized and operational. Ensures the crew replaces and/or adjusts the defective LRU(s). Ensures the crew follows all safety procedures. Ensures that fault and corrective actions are entered on appropriate forms per DA Pamphlet 738-750. Notifies OIC of any maintenance support requirements.

Performance Measures	GO	NO GO
1. Verified that system maintenance was being done correctly.	——	——
2. Ensured the crews followed all safety procedures.	——	——
3. Notified OIC of any maintenance support requirements.	——	——
4. Maintained maintenance records per DA Pamphlet 738-750.	——	——

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
Required	Related
TM 9-5895-616-12&P-1	DA PAM 738-750
TM 9-5895-616-12&P-2	TM 11-5820-890-10-1

MONITOR DENIAL OR DESTRUCTION OF JTAGS EQUIPMENT
441-616-4003

Conditions: Capture of the unit by the enemy is imminent. You have received orders to deny or destroy the equipment. The equipment is emplaced and operational. Crew members and all required destruction materials are available.

Standards: Renders the equipment tactically useless to the enemy in the time prescribed by local command directives.

Performance Steps

1. Authority: Only division or higher commanders have the authority to order the denial or destruction of equipment. They may, however, delegate this authority to subordinate commanders when the situation demands it. Report the denial or destruction of equipment through command channels.

2. Denial: Equipment or vital parts of equipment may be denied an enemy by concealment or dispersion. This is accomplished by taking advantage of the surrounding area. Submerging equipment or repair parts underwater (oceans, lakes, rivers, swamps, et cetera) is an effective denial measure. Concealment in caves (or preferably, by burial) is also effective. Where the surrounding area does not lend itself to such disposal, widely dispersed material, preferably into heavy underbrush, can serve as a denial or delaying measure. In the event the area is recaptured, efforts should be made to recover concealed items.

3. Methods of Destruction:
   a. Destruction by improper operation. Confine destruction by improper or abusive operation to the mechanical components of the system such as generator motors and the motors of other on-site vehicles. Drain the crankcase oil and allow the equipment to operate at a high-idle speed to cause considerable, if not permanent, damage.
   b. Destruction by mechanical means. Mechanical destruction is effective as a means of destroying specific items of equipment or parts of equipment. It is not, however, an effective means of complete destruction. Use any heavy-ended, long-handled tool such as a sledgehammer or a crowbar as an effective instrument for mechanical destruction. You may also use wire cutters, knives, or emptied fire extinguishers. Disconnect the equipment from its power source and empty all fire extinguishers. You should then determine the priority for destruction of parts. Destroy the parts by smashing or cutting those items having a priority. After destruction is complete, heap electrical cables and other items to hinder the enemy from piecing the equipment together. If you are going to apply other methods of destruction, such as fire or demolition, heaping will aid in a more total destruction of the equipment.
   c. Destruction by weapons fire. You cannot rely upon this method of destruction to destroy the same parts on like equipment or to produce the same degree of destruction as other methods. Use destruction by weapons fire if time does not allow for burning or demolition. Disconnect the equipment from its power source and remove and empty fire extinguishers. Fire on the equipment with machine guns, with rifles using rifle grenades, with rocket launchers using antitank rockets, or with artillery. Allotted time is 10 minutes. Although one well placed hit may render the equipment temporarily useless, several hits are usually required for its complete destruction. If, however, you start an intense fire, the equipment may be considered destroyed. For safety purposes, do not fire on equipment from a distance less than 275 meters (900 feet) without protective cover. Using weapons fire to destroy equipment creates a hazard from ricocheting bullets or flying shrapnel. Therefore, accomplish destruction in an area free of friendly troop concentrations.

Performance Steps

       d. Destruction by fire. Fires can be built to produce more heat or more smoke. For destruction, heat is preferable, but smoke may be useful. If destruction by fire is authorized, you may find many solid flammable materials in and around the site. Discarded end pieces of wood from construction or wooden pallets are one example. You can easily locate other combustible materials such as rags, clothing, paper, and canvas on site. Use petroleum products such as gasoline, oil, or diesel fuel to augment the solid combustibles and to ensure rapid burning. Use a standard safety fuse for ignition, or incendiary grenades, if available, to start and spread fires. Disconnect equipment from its power source and remove and empty all fire extinguishers. Pack solid flammable material under and around the equipment to be destroyed. Proper concentration of equipment to be burned will provide a hotter, more destructive fire. Soak the material with a petroleum product. If using an incendiary grenade to start the fire, place one grenade in each important component. Ensure safety fuses are long enough to permit personnel to withdraw to a safe area and ignite fuses using any of the standard methods listed in FM 5-250. Destruction by fire, when properly used with mechanical and demolition methods, will completely destroy the equipment.

       e. Destruction by demolition. Successful destruction by explosives requires that all personnel be familiar with provisions of FM 5-250. Destruction of the equipment by demolition is the most effective method for the destruction of specific components of equipment. The equipment or material required for effective demolition are TNT or equivalent, electrical blasting caps and wire (or non-electrical blasting caps and safety fuses), and a blasting machine (for electrical blasting caps only). Disconnect equipment from its power source and remove and empty all fire extinguishers. Refer to unit TSOP for the size and placement of explosives in the major end items and related equipment. Refer to FM 5-250 to prepare the recommended charge and primer. Dual-prime the charges to minimize the possibility of misfire. Place the recommended charge and primer for simultaneous detonation of charges.
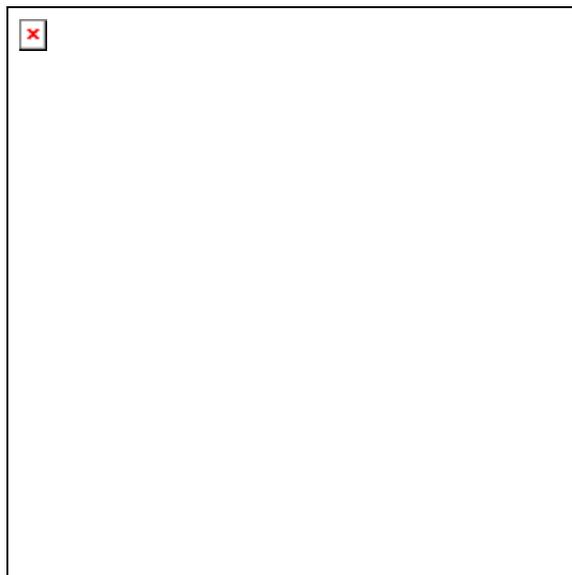
Note: A safety fuse burns at the rate of 1 foot per 30 to 40 seconds. Test a length of fuse before using it. For non-electrical blasting caps, allow at least 5 feet of safety fuse. Ignite the safety fuse and take cover immediately. For electrical blasting caps, take cover before firing, as detonating is simultaneous. When using explosives, the danger area is a minimum radius of 275 meters (900 feet). Destruction by demolition, when used with destruction by mechanical means and with destruction by fire will completely destroy the equipment.

   4. Destruction Priority:

Performance Steps

      a. Classified equipment. Always give priority to the destruction of classified equipment and associated documents.

      b. Essential parts. When lack of time prevents complete destruction of equipment, give priority to the destruction of essential parts. Destroy the same parts on all like equipment.

      c. Equipment installed in vehicles. Destroy installed equipment based on the specific priority established for the item of equipment rather than for the vehicle. Example: Cryptographic equipment first, radios second, and vehicle components third.

      d. Repair parts. Give the same priority for destruction of essential parts as you would to the destruction of similar repair parts in storage or test areas.

      e. Cryptographic equipment and material. Follow the detailed destruction procedure specified in instructions issued by the appropriate communications security authority, to ensure the rapid and effective destruction of all types of cryptographic equipment and material.

      f. Ensure all destruction is great enough to prevent duplication by, or revealing the means of operation or function to, the enemy.

  5. Site Selection: Select a site that will cause the greatest obstruction to enemy movement and also prevent hazards to friendly troops from fragment and blasts that may occur incidental to destruction of equipment.

  6. Safety Precautions: Use the minimum number of personnel needed to destroy equipment. Be careful when using flammable or incendiary devices to avoid injury to personnel.

  7. Execution: The proper and timely execution of emergency destruction procedures will prevent the enemy from using or capturing the equipment when the unit is being overrun.

Performance Measures   **<u>GO</u>**   **<u>NO GO</u>**

1. Monitored denial procedures.   ____   ____

2. Monitored destruction procedures.   ____   ____

3. Monitored safety procedures.   ____   ____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any step is failed. If the soldier fails any steps, explain what was done wrong and how to do it correctly.

References
      Required   **Related**
                                              FM 5-250

APPENDIX A

DA Form 5164-R (Hands-On Evaluation)
Instructions to the Trainer

1. Enter the title and number of the task to be evaluated at the top of the form.

2. In column a, enter the number of each performance measure from the Evaluation Guide.

3. In column b, enter each performance measure from the Evaluation Guide that corresponds to the number in column a (information may be abbreviated if necessary).

4. If more than one soldier will be evaluated on the specific task, or if the same soldier will be evaluated more than once, you may locally reproduce the partially completed DA Form 5164-R.

5. Before evaluating a soldier, enter the date, the evaluator's name, and the soldier's name and unit.

6. For each performance step evaluated, enter a check in Column c (PASS) or Column d (FAIL), as appropriate.

7. Check the status block GO or NO-GO, as appropriate, by referring to the Evaluation Guide for the task standard.

8. Figure A-1 provides an example of a completed DA Form 5164-R. Figure A-2 provides a blank copy.

Note to the training manager: Use of this form is optional. However, it allows you to maintain information on soldier proficiency at the performance and/or skill level.

HANDS-ON EVALUATION For use of this form, see AR 300-37; the proponent agency is DCSOPS		DATE *11 SEP 02*	
TASK TITLE *PERFORM PMCS ON THE PLGR (GPS)*		**TASK NUMBER** *441-096-1120*	
ITEM *(a)*	**PERFORMANCE STEP TITLE** *(b)*	**SCORE (*Check one*)**	
		(c) **PASS**	*(d)* **FAIL**
1.	*Inspects the AN/PSN-11, mount, remote antenna, and helmet antenna for damage or missing parts.*	✔ **P**	☐ **F**
2.	*Presses the ON/BRT switch to turn unit on, and starts self-test.*	✔ **P**	☐ **F**
3.	*Verifies that all segments of display light up with a test pattern of all dots.*	✔ **P**	☐ **F**
4.	*Replaces main power battery as required.*	✔ **P**	☐ **F**
5.	*Resets battery status.*	✔ **P**	☐ **F**
6.	*Reports any operator uncorrectable deficiencies to supervisor on DA Form 2404.*	✔ **P**	☐ **F**
		☐ **P**	☐ **F**
		☐ **P**	☐ **F**
		☐ **P**	☐ **F**
		☐ **P**	☐ **F**
		☐ **P**	☐ **F**
		☐ **P**	☐ **F**
		☐ **P**	☐ **F**
		☐ **P**	☐ **F**
EVALUATOR'S NAME *SFC THOMPSON*		**UNIT** *HQ BTRY, 6TH ADA*	
SOLDIER'S NAME *SPC SNUFFY*		**STATUS**	☐ GO ☐ NO GO

DA FORM 5164-R, SEP 85   EDITION OF DEC 82 TO BE USED

Figure A-1. Completed sample of DA Form 5164-R.

HANDS-ON EVALUATION For use of this form, see AR 300-37; the proponent agency is DCSOPS		DATE	
TASK TITLE		**TASK NUMBER**	
ITEM *(a)*	PERFORMANCE STEP TITLE *(b)*	SCORE (*Check one*)	
		(c) PASS	*(d)* FAIL
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
		☐ P	☐ F
EVALUATOR'S NAME		UNIT	
SOLDIER'S NAME		STATUS	☐ GO ☐ NO GO

DA FORM 5164-R, SEP 85   EDITION OF DEC 82 TO BE USED

Figure A-2. Blank DA Form 5164-R.

APPENDIX B

**DA Form 5165-R (Field Expedient Squad Book)
Instructions to the Trainer**

1. Make all entries in pencil.

2. Record the date in the GO block if the soldier demonstrated task proficiency to soldier's manual standards. Keep this form current by always recording the most recent date on which the soldier demonstrated task proficiency.

3. Record the date in the NO-GO block if the soldier failed to demonstrate task proficiency to soldier's manual standards. Soldiers who failed to perform the task should be retrained and evaluated until they can do the task. Once the soldier performs the task correctly, enter the date in the GO block and erase the previous entry from the NO-GO block.

4. Read down each column (GO/NO-GO) to determine the training status of that individual. This will give the trainer a quick indication of tasks on which a soldier needs training or needs to be checked.

5. Read across the rows for each task to determine the training status of your echelon. The trainer can readily see on which tasks training should be focused.

6. Add the names of newly assigned soldiers to one of the blank columns.

7. Line through the training status column of any soldier who departs from the unit.

8. Figure B-1 provides an example of a completed DA Form 5165-R. Figure B-2 is provided with task numbers and titles already entered.

Note to the training manager: The training status of groups (teams, section, or platoon) can be maintained in key critical MOS at any echelon, by entering the echelon (1st Platoon, 2nd Platoon, or 3rd Platoon) in the column headings. Simply have trainers report the percentage of their soldiers who have demonstrated proficiency on each task, and record this information for each echelon.

Titles of subject areas and tasks have been abbreviated due to limited spacing on this form. See Chapters 2 and 3 for complete titles.

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 1 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C⁴I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME / STATUS

TASK NUMBER AND SHORT TITLE	GEORGE WATSON GO	NO-GO	JIM HESS GO	NO-GO	RODNEY SHEFFIELD GO	NO-GO	MARTIN WILKERSON GO	NO-GO	SAMMY SHARP GO	NO-GO
SKILL LEVEL 1										
SA 1: COMMO										
113-571-1004 OPR IN RADIO NETS	03/23 /99		03/23 /99		03/23 /99			03/23 /99	03/23 /99	
113-573-6001 RECOGNIZE ECM AND IMPLEMENT ECCM	04/07 /99		03/23 /99			03/23 /99	03/23 /99		03/23 /99	
113-620-2026 OPR RADIO SET AN/GRC-213	04/28 /99			03/23 /99		03/23 /99	03/23 /99		03/23 /99	
441-066-1028 PERF OPR PMCS ON EPLRS RADIO SET AN/VSQ-2(V)2	03/23 /99			03/23 /99	03/23 /99		03/23 /99		03/23 /99	
SA 2: AMDPCS COMMO										
441-096-1098 OPR THE SC SATCOM RADIO	03/23 /99		03/23 /99		03/23 /99			03/23 /99	03/23 /99	

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-1. Completed Sample of DA Form 5165-R.

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET   1   OF   26

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS																			
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
SKILL LEVEL 1																				
SA 1: COMMO																				
113-571-1004 OPR IN RADIO NETS																				
113-573-6001 RECOGNIZE ECM AND IMPLEMENT ECCM																				
113-620-2026 OPR RADIO SET AN/GRC-213																				
441-066-1028 PERF OPR PMCS ON EPLRS RADIO SET AN/VSQ-2(V)2																				
441-066-1029 OPR EPLRS RADIO SET AN/VSQ-2(V)2																				
441-066-1030 LOAD EPLRS RADIO SET AV/VSQ-2(V)2 KEY SET																				
SA 2: AMDPCS COMMO																				
441-096-1098 OPR THE SC SATCOM RADIO																				

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R.

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 2 OF 26

USAPPC V1.00

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer

STATUS

TASK NUMBER AND SHORT TITLE	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1099 INIT THE RF 350/355 HF TRANSCEIVER RADIO AND LPA																				
441-096-1100 INIT THE ARC-187 FOR DATA OR VOICE OPS																				
441-096-1101 INIT THE MX-512PV DTS																				
441-096-1104 OPR THE ADI EQUIP																				
441-096-1106 CABLE THE ADSI TERM FOR STD OPS																				
441-096-1109 INIT THE LAN																				
441-096-1110 PERF OPR TBLSHTING ON THE LAN																				
441-096-1178 INIT ENCRYPTION DEV KG-40																				
441-096-1179 INIT ENCRYPTION DEV KG-84(-)KVI-7																				

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

	SHEET	
	3	OF	26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS																		
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1180 INIT ENCRYPTION																		
DEV KY-99																		
SA 3: SINCGARS OPS																		
113-587-0058 PERF OPR'S																		
TBLSHTING ON SINCGARS																		
113-587-2070 OPR SINCGARS SC																		
113-587-2071 OPR SECURE																		
SINCGARS FH (NET MEMBERS)																		
113-587-2075 OPR SINCGARS																		
DATA DEV																		
SA 4: MSE OPS																		
113-625-2080 OPR DNVT TA-1035/A																		
113-625-2081 OPR DSVT KY-68																		
113-625-3067 PERF OPR'S PMCS																		
ON DSVT KY-68																		
441-096-1188 OPR SECURE VOICE																		
AND DATA TEL STU III/SECTEL																		

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 4 OF 26

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS															
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
SA 5: GEN																
441-096-1030 PERF OPR PMCS ON GEN SET, 5-KW																
441-096-1031 OPR GEN SET, 5-KW																
441-096-1032 PERF OPR TBLSHTING PROC ON GEN SET, 5-KW																
441-096-1033 PERF OPR PMCS ON GEN SET, 10-KW																
441-096-1034 OPR GEN SET, 10-KW																
441-096-1035 PERF OPR TBLSHTING PROC ON GEN SET, 10-KW																
441-096-1039 OPR GEN SET, 5-KW (M1068)																
441-096-1061 PERF OPR PMCS ON GEN SET, 5-KW (M1068)																

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK
For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 5 OF 26

SOLDIER'S NAME

USER APPLICATION STP 44-14J14-SM-TG MOS 14J1/4 C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer TASK NUMBER AND SHORT TITLE	STATUS																			
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1076 PERF OPR PMCS ON GEN SET, 30-KW																				
441-096-1077 OPR GEN SET, 30-KW																				
441-096-1119 OPR TAC QUIET GEN SET, 10-KW																				
441-096-1181 OPR THE UST WITH GEN SET, 20-KW AND ECU																				
441-096-1182 PERF PMCS ON THE UST WITH GEN SET, 20-KW AND ECU																				
441-096-1183 TBLSHT THE UST WITH GEN SET, 20-KW AND ECU																				
441-096-1184 OPR THE UST WITH GEN SET, 35-KW																				
441-096-1185 PERF PMCS ON THE UST WITH GEN SET, 35-KW																				

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET   6   OF   26

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

STATUS

TASK NUMBER AND SHORT TITLE	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1186 TBLSHT THE UST WITH GEN SET, 35-KW																
SA 6: VEH OPS																
441-096-1069 PERF PMCS ON A TRACK VEH																
441-096-1070 DRIVE AN M1068 LIGHT TRACK VEH																
551-721-1352 PERF PMCS																
551-721-1364 DRIVE VEH WITH SEMI- AUTO TRANSMISSION																
SA 7: GPS OPS																
441-066-1032 PERF PMCS ON THE PLGR (GPS)																
441-066-1033 PERF SETUP/INIT OF THE PLGR (GPS)																
441-066-1035 OPR THE PLGR (GPS)																

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 7 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS														
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	
441-066-1037 CONNECT PLGR (GPS) TO EXT DEV															
441-066-1038 PERF EMER PROC ON THE PLGR (GPS)															
SA 8: EMPL															
113-596-1068 INST ANT GRP OE-254/GRC															
441-096-1002 PERF OPR DUTIES DURING EMPL OF THE SENSOR NODE															
441-096-1003 PERF OPR DUTIES DURING EMPL OF THE ABMOC OR A²C²															
441-096-1004 PWR UP THE FAAD RWS															
441-096-1005 ERECT THE SICPS TENT															

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

| SHEET | 8 | OF | 26 |

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS																
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1006 PWR UP THE FAAD																
STS																
441-096-1013 PERF OPR DUTIES																
DURING EMPL OF THE BTRY																
CP (STS)																
441-096-1036 EMPL THE AB-903/G																
ANT MAST ASSY ON THE STS																
441-096-1056 PERF OPR DUTIES																
DURING EMPL OF THE AMDPCS																
441-096-1057 PERF OPR DUTIES																
DURING EMPL OF THE M934																
EXPANSIBLE VAN TCS																
441-096-1058 EMPL SAT COMMO ANT																
441-096-1059 EMPL THE LAN																
441-096-1072 PERF OPR DUTIES																
DURING EMPL OF THE BTRY																
CP (M1068)																

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 9 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS																			
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1074 PERF OPR DUTIES																				
DURING EMPL OF THE																				
SENTINEL SENSOR																				
441-096-1115 EMPL THE RWS ANT																				
MAST																				
441-096-1129 PWR UP THE AMDPCS																				
EQUIP																				
441-096-1130 EMPL THE TADIL-A ANT																				
SA 9: MO																				
441-096-1001 PERF OPR DUTIES																				
DURING MO OF THE SENSOR																				
NODE																				
441-096-1008 PWR DOWN THE FAAD																				
RWS																				
441-096-1009 PERF OPR DUTIES																				
DURING MO OF THE																				
ABMOC OR A2C2																				

DA FORM 5165-R, SEP 85

EDITION OF DEC 82 IS OBSOLETE

USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 10 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS														
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1010 PWR DOWN THE FAAD STS														
441-096-1014 PERF OPR DUTIES DURING MO OF THE BTRY CP (STS)														
441-096-1037 MO THE AB-903/G ANT MAST ASSY ON THE STS														
441-096-1067 PERF OPR DUTIES DURING MO OF THE SENTINEL SENSOR														
441-096-1073 PERF OPR DUTIES DURING MO OF THE BTRY CP (M1068)														
441-096-1096 PERF OPR DUTIES DURING MO OF THE AMDPCS														

DA FORM 5165-R, SEP 85　EDITION OF DEC 82 IS OBSOLETE　USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 11 OF 26

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS															
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1097 PERF OPR DUTIES DURING MO OF THE M934 EXPANSIBLE VAN TCS																
441-096-1141 MO THE TADIL-A ANT																
441-096-1142 MO THE RWS ANT MAST																
SA 10: JTIDS OPS																
441-096-1016 PERF OPR MAINT ON THE RADIO SET AN/GSQ-240																
441-096-1017 INIT RADIO SET AN/GSQ-240																
441-096-1018 OPR RADIO SET AN/GSQ-240																
SA 11: CH																
441-096-1038 CONNECT COMMO INTERFACE ON THE FAAD STS																
441-096-1041 CONNECT COMMO INTERFACES ON THE FAAD RWS																

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 12 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS																
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	
441-096-1043 PERF COMMON																	
H/W PREVENTIVE MAINT																	
441-096-1044 PERF OPR CORR																	
MAINT ON THE HCU/UCU																	
441-096-1048 PERF OPR CORR																	
MAINT ON THE CMD																	
441-096-1049 PERF OPR CORR																	
MAINT ON THE PRN																	
441-096-1055 PERF OPR CORR																	
MAINT ON THE LCU																	
441-096-1146 PERF OPR MAINT ON																	
CHS II EQUIP																	
SA 12: ADSI OPS																	
441-096-1140 OBTAIN SITE SPECIFIC																	
DATA FROM OPTASK LINK																	
441-096-1190 PERF ADSI SITE INIT																	
441-096-1191 EST ADSI MODES OF OP																	

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 13 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE — STATUS (GO / NO-GO)

TASK NUMBER AND SHORT TITLE
441-096-1192 PERF ADSI MAP GENERATION
441-096-1193 SET DATA LINK FILTER PARAMETERS
441-096-1194 ID AND REACT TO OP/SYS ALERTS
441-096-1195 ENTER TRACK DATA
441-096-1196 SEND ACTION/MGMT MSGs
441-096-1197 SET UP AUTO ASGMT OF IFF/SIF INFO
441-096-1198 PREP A SCENARIO SCRIPT FILE
SA 13: AMDWS OPS
441-096-1143 INIT SOFTWARE ON THE AMDWS

DA FORM 5165-R, SEP 85

EDITION OF DEC 82 IS OBSOLETE

USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

	SHEET		
	14	OF	26

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS																				
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	
USER APPLICATION																					
STP 44-14J14-SM-TG MOS 14J1/4 C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer																					
441-096-1144 PERF AMDWS MAP GENERATION																					
441-096-1145 PERF AMDWS OVERLAY FCTNs																					
441-096-1149 DISPLAY AIR PICTURE AND HOOK INFO																					
SA 14: ENGMT OPS																					
441-096-1081 REACT TO OPR ERROR MSGs																					
441-096-1082 PERF DIRECTED EW PROC																					
441-096-1083 PERF ARCHIVAL TASKS																					
441-096-1084 REACT TO AIR TRACK ALERTS ON THE BSD																					
441-096-1085 TOGGLE TRACK LINKS ON THE BSD																					

USAPPC V1.00

EDITION OF DEC 82 IS OBSOLETE

DA FORM 5165-R, SEP 85

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 15 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS																
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1086 HOOK AIR TRACKS																
441-096-1087 MANUALLY DESIGNATE ID OR CLASSIFICATION (ONLY IF ID AUTHORITY)																
441-096-1088 SET TRACK FILTERS ON THE BSD																
441-096-1089 SELECT OVERLAYS ON THE BSD																
441-096-1091 GENERATE OR MODIFY CRTL MEAS ON THE BSD																
441-096-1092 ACK AND REVIEW MSGs AND STATUS ON THE BSD																
441-096-1094 TERM TAC BSD OPS																
441-096-1095 PERF CONOPS OPS																
441-096-1189 PERF FAAD C²I SYS INIT																

DA FORM 5165-R, SEP 85 EDITION OF DEC 82 IS OBSOLETE USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see **AR 350-57, the proponent agency is ODCSOPS**

SHEET 16 OF 26

USAPPC V1.00

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS																				
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
SA 15: TAC CMD SYS (TCS)																				
113-620-2028 OPR RADIO SET																				
AN/GRC-193A																				
113-620-3063 PERF OPR PMCS ON																				
RADIO SET AN/GRC-193A																				
441-096-1111 PWR UP THE CTT/HR																				
441-096-1147 PERF PATCH PNL OPS																				
441-096-1153 PWR UP THE PATRIOT																				
TPW																				
441-096-1155 INIT THE TCS																				
441-096-1156 INIT THE CTT/HR																				
441-096-1157 TFR INIT																				
PARAMETERS TO THE ICC, TCS,																				
AND CTT/HR																				
441-096-1158 LOAD CRYPTO																				
KEYS INTO THE CTT/HR																				

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 17 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

STATUS

TASK NUMBER AND SHORT TITLE	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1159 GENERATE OSLB ISLB DATA																
441-096-1160 SELECT OVERLAYS ON THE TPW																
441-096-1163 GENERATE OR MODIFY CTRL MEAS ON THE TPW																
441-096-1168 DISPLAY AIR PICTURE AND HOOK INFO FROM ICC AND SIS																
441-096-1169 SEND AND RECEIVE TAB AND POINTER MSGs																
441-096-1171 PERF UTIL FCTNs ON THE TPW																
441-096-1187 GENERATE MAP DATA (ADRG, DTED) ON THE TPW																
SA 16: SENSOR OPS																

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 18 OF 26

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS																	
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-1062 ENERGIZE THE SENTINEL SENSOR																		
441-096-1063 INIT THE SENTINEL SENSOR																		
441-096-1064 OPR THE SENTINEL SENSOR																		
441-096-1065 DESTROY THE SENTINEL SENSOR TO PREVENT ENEMY USE																		
441-096-1066 DE-ENERGIZE THE SENTINEL SENSOR																		
441-096-2014 LOAD SENTINEL SENSOR MODE 3/4 IFF CODES (ALLIED)																		
SA 17: SENSOR MAINT																		
441-096-1060 PERF PMCS ON THE SENTINEL SENSOR																		

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 19 OF 26

USER APPLICATION	SOLDIER'S NAME																	
STP 44-14J14-SM-TG MOS 14J1/4 C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer																	
	STATUS																
TASK NUMBER AND SHORT TITLE	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
SA 18: SOFTWARE TBLSHTING																	
441-096-1112 PERF OPR TBLSHTING ON A UNIX SYS																	
441-096-1113 PERF USER ACTIONS ON A UNIX SYS																	
441-096-1114 PERF SYS ADMIN FCTNs ON A UNIX SYS																	
441-096-1117 PERF NETWORK FCTNs ON A UNIX SYS																	
441-096-1118 PERF USER ACTIONS ON AN MSDOS SYS																	
SA 19: JTAGS EMPL																	
441-616-1003 EMPL THE JTAGS TACSTAR II ANT SUBSYS																	
441-616-1004 EMPL THE JTAGS SHELTER																	

DA FORM 5165-R, SEP 85　　EDITION OF DEC 82 IS OBSOLETE　　USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 20 OF 26

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS																			
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-616-1015 ENERGIZE THE JTAGS SYS																				
441-616-1025 EMPL THE 60-KW GEN AND TRAILER																				
SA 20: JTAGS MO																				
441-616-1001 PREP THE JTAGS TACSTAR II ANT SUBSYS FOR TVL																				
441-616-1002 PREP THE JTAGS SHELTER FOR TVL																				
441-616-1016 DE-ENERGIZE THE JTAGS SYS																				
441-616-1026 PREP THE 60-KW GEN AND TRAILER FOR TVL																				
SA 21: JTAGS OPS																				
441-616-1017 MANUALLY PROC A SAT EVENT																				

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK
For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 21 OF 26

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS																
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	
441-616-1018 AUTO PROC A SAT EVENT																	
441-616-1024 PERF DENIAL OR DEST OF THE JTAGS SYS EQUIP																	
SA 22: JTAGS UNIT LEVEL MAINT																	
441-616-1005 PERF JTAGS TACSTAR II ANT SUBSYS OPR MAINT PROC																	
441-616-1006 PERF JTAGS SHELTER OPR MAINT PROC																	
441-616-1007 PERF OPR PMCS ON A 60-KW GEN																	
441-616-1008 PERF OPR PMCS ON THE TACSTAR II ANT SUBSYS ASSY																	
441-616-1009 PERF OPR PMCS ON THE JTAGS SHELTER																	

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 22 OF 26

SOLDIER'S NAME

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS																
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-616-1011 PERF OPR PMCS ON																
THE M1022A1 MOBILIZER																
DOLLY SET																
SKILL LEVEL 2																
SA 23: SR OPR/TL DUTIES																
441-096-2005 SUPV MO OF THE																
SENTINEL SENSOR AND																
SENSOR NODE																
441-096-2006 SUPV EMPL OF THE																
SENTINEL SENSOR AND																
SENSOR NODE																
441-096-2009 SUPV OPS ON THE																
SENTINEL SENSOR																
441-096-2010 SUPV DEST OF THE																
SENTINEL SENSOR TO																
PREVENT ENEMY USE																

DA FORM 5165-R, SEP 85

EDITION OF DEC 82 IS OBSOLETE

USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK
For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 23 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS																		
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-3005 SUPV C³I SYS EQUIP PMCS AND TBLSHTING																				
441-096-3013 SUPV PMCS ON THE SENTINEL SENSOR																				
SKILL LEVEL 3																				
SA 24: TAC OPS AND SUPERVISION																				
441-096-3001 SUPV EMPL OF THE ABMOC OR A²C²																				
441-096-3002 SUPV MO OF THE ABMOC OR A²C²																				
441-096-3006 SUPV FORCE OPS																				
441-096-3007 SUPV ENGMT OPS																				
441-096-3008 SUPV EMPL OF THE BTRY CP																				
441-096-3009 SUPV MO OF THE BTRY CP																				

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 24 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center (TOC) Enhanced Operator/Maintainer

TASK NUMBER AND SHORT TITLE	SOLDIER'S NAME																			
	STATUS																			
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
SA 25: JTAGS ENGMNT CONTROLLER																				
441-616-3001 SUPV PREP OF THE JTAGS SYS EQUIP FOR TVL																				
441-616-3002 SUPV EMPL OF THE JTAGS SYS EQUIP																				
441-616-3003 SUPV PMCS ON THE JTAGS SYS EQUIP																				
441-616-3004 SUPV OPR MAINT ON THE JTAGS SYS EQUIP																				
441-616-3008 SUPV JTAGS CONSOLE OPS																				
441-616-3013 SUPV DENIAL OR DEST OF THE JTAGS SYS EQUIP																				
SKILL LEVEL 4																				
SA 26: CONDUCTING TAC OPS																				
113-573-0001 CHK SIGSEC PROC																				

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 25 OF 26

USER APPLICATION

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC)Enhanced
Operator/Maintainer

SOLDIER'S NAME

TASK NUMBER AND SHORT TITLE	STATUS																				
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-096-4001 MONITOR ENGMT OPS																				
441-096-4012 SUPV SENSOR PLT																				
TAC OPS																				
441-096-4018 COORD AIRSPACE																				
ACTIVITY INFO WITH																				
AIRSPACE USERS																				
SA 27: DEFENSE DESIGN																				
441-096-4013 PLAN SENSOR																				
COVERAGE OF A STATIC OR																				
CRIT ASSET																				
441-096-4014 PLAN SENSOR																				
COVERAGE OF A MANEUVER																				
FORCE																				
SA 28: JTAGS DETACHMENT SGT																				
441-616-4001 MONITOR JTAGS																				
SYS OPS																				

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

FIELD EXPEDIENT SQUAD BOOK

For use of this form, see AR 350-57, the proponent agency is ODCSOPS

SHEET 26 OF 26

USER APPLICATION

SOLDIER'S NAME

STP 44-14J14-SM-TG
MOS 14J1/4
C4I Tactical Operations Center
(TOC) Enhanced
Operator/Maintainer

TASK NUMBER AND SHORT TITLE	STATUS																									
	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO	GO	NO-GO
441-616-4002 MONITOR JTAGS																										
OPR LEVEL MAINT																										
441-616-4003 MONITOR DENIAL																										
OR DEST OF JTAGS EQUIP																										

DA FORM 5165-R, SEP 85   EDITION OF DEC 82 IS OBSOLETE   USAPPC V1.00

Figure B-2. Overprinted DA Form 5165-R (continued).

GLOSSARY

A2C2
Army airspace command and control

ABMOC
air battle management operations center

AC, ac
Active Component; assistant commandant; alternating current; aircraft

ACCP
Army Correspondence Course Program

ACM
airspace control measure

ACO
airspace control order; airspace coordination orders

ACP
airspace control point; Allied Communication Publication

AD
air defense; armored division

ADA
air defense artillery

ADADO
Assistant Division Air Defense Officer

ADI
air defense initiative; air defense interface

ADRG
ARC digitized raster graphics

ADSI
air defense system integrator

ADTOC
Air Defense Tactical Operations Center

ADW
air defense warning

AGR
Active Guard Reserve

AIT
advanced individual training

AIU
antenna interface unit

AIX
  advanced IBM UNIX

AM
  amplitude modulation; ante meridiem

AMDPCS
  air and missile defense planning and control system

AMDWS
  Air and Missile Defense Workstation

amp
  amplifying; amplifier

an
  annually

ANCD
  automated net control device

ANCOC
  Advanced Noncommissioned Officers Course

AOAP
  Army Oil Analysis Program

AOI
  area of interest

APU
  auxiliary power unit

AR
  Army Regulation; Army Reserve

ARTEP
  Army Training and Evaluation Program

ASB
  antenna support base

ASI
  additional skill identifier

ATCCS
  Army Tactical Command and Control System

ATDL
  Army tactical data link

ATG
  antenna transceiver group

ATO
  air tasking order

attn
  attention

AWACS
  airborne warning and control system

BCP
  battery command post

bde
  brigade

BII
  basic issue items

BM
  ballistic missile; battlefield management; bimonthly (once every two months)

BNC
  Bendix nomex connector

BNCOC
  Basic Noncommissioned Officers Course

BNTOC
  battalion tactical operations center

BSD
  battlefield situation display

BSU
  beam steering unit

BTOC
  brigade tactical operations center

C2
  command and control

C2I
  command, control, and intelligence

C3
  command, control, and communications

C3I
  command, control, communications, and intelligence

C4I
  command, control, communications, computers, and intelligence

CCW (ccw)
  counterclockwise

CD-ROM
  compact disk-read only memory

CDU
computer display unit; control display unit

CEP
circular error probablity, communications entry panel

CH, Ch, ch
computer hardware; chief; check; common hardware

CHS
combat health support; common hardware and software

CIK
crypto ignition key

CIM
compromised information message

CMD, cmd
cruise missile defense; color monitor display; command

CMF
career management field

COMSEC
communications security

CONOPS
continuous operations

CP
command post

CPU
central processing unit

critical task
A task which is essential for accomplishment of the unit's mission, successful individual skill performance, survival in combat, and which requires training. An individual or collective task that is essential to duty or mission accomplishment and which requires training.

cross-training
The systematic training of the soldier on tasks related to another job within the same MOS or task related to a secondary MOS within the same skill level.

CTT/HR
commander's tactical terminal/hybrid receiver (USA term)

cue
A word, situation, or other signal for action. An initiating cue is a signal to begin performing a task or task performance step. An internal cue is a signal to go from one element of a task to another. A terminating cue indicates task completion.

CVC
combat vehicle crewman

CW (cw)
> clockwise

DA
> Department of the Army

DAMA
> demand assignment multiple access

DC, dc
> District of Columbia; direct current

DD
> Department of Defense (form)

DEW
> directed early warning; directed-energy weapon

directed early warning
> (DEW)--Pertinent sectored early warning from a remote source (HIMAD, ground-based sensor, TDAR, or early warning system operators) that is passed only to predesignated units or sectors. This early warning is usually tracked by controlling centers within the division or brigade.

DL
> data link

DLRP
> data link reference point

DMA
> Defense Mapping Agency

DNS
> domain name server/system

DNVT
> digital nonsecure voice terminal

DOS
> disk operating system

DSVT
> digital secure voice terminal

DTD
> data transfer device

DTED
> digital terrain elevation data

DTS
> data terminal set

ECCM
> electronic counter-countermeasures

ECM
> electronic countermeasures

ECS
> engagement control station

ECU
> environmental control unit

EEFI
> essential elements of friendly information

EMCON
> emission control

emplacement
> 1. A prepared position for one or more weapons or pieces of equipment, for protection against hostile fire or bombardment, and from which they can execute their tasks. 2. The act of fixing a gun in a prepared position from which it may be fired.

engagement
> An attack with guns or air-to-air missiles by an interceptor aircraft, or the launch of an air defense missile by air defense artillery and the missile's subsequent travel to intercept.

EO
> engagement orders; engagement operations

EPLRS
> enhanced position location reporting system

ESD
> electrostatic discharge

evaluation
> Measurement of the demonstrated ability of soldiers or units to perform a task, and supporting skill and knowledge; or learning objective against the established standard.

evaluation guide
> The section of the task summary in a soldier's manual which lists the pass/fail performance measures for evaluating the soldier's performance on the task.

EWS
> early warning system; electronic warfare section

exercise
> Collective task training designed to develop proficiency and crew teamwork in performing the task to the established standard. It also provides practice for performing supporting individual critical tasks. Exercises may be conducted in units and resident training.

FAAD
> forward area air defense

FAADEZ
> forward area air defense engagement zone

FARP
forward arming and refueling point

FD/FI
fault detection/fault isolation

FDC
fire direction center

FDL
FAAD data link

FEBA
forward edge of the battle area

feedback
Information and data, provided both within and outside the training system, that indicates the efficiency or effectiveness of the system or product. It is the data and information provided to the appropriate training proponent concerning the effectiveness and efficiency of the proponents training products. Also information provided to a student concerning his/her training performance.

FH
frequency hopping

FLOT
forward line of own troops

FM
field manual; frequency modulation

FO
forward observer; force operations; field order

FOUO
for official use only

FPU
forward participating unit

FQDN
fully qualified domain name

freq
frequency

FSCL
fire support coordination line

FU
fire unit

FW
fixed wing

FWS
friendly weapon system

G3
>Assistant Chief of Staff (Operations and Plans)

GBS
>ground-based sensor; Global Broadcast System

GFI
>ground fault interrupt

GO, NO-GO
>A pass or fail grade given to a soldier when he is evaluated on how well he can perform a task. The soldier is either given a pass or fail, that is, GO or NO-GO.

GPS
>gunner primary sight; Global Positioning System

GTA
>graphic training aid

HCU
>hard copy unit; high-capacity computer unit

HF
>high frequency

HIMAD
>high- to medium-altitude air defense

HMMWV
>high-mobility multipurpose wheeled vehicle

HRO
>hook readout area

HTU
>handheld terminal unit

HVFK
>hook variable function key

Hz (HZ)
>hertz (cycles per second)

I/O
>input/output

ICC
>information and coordination central; information control center

ICP
>indicator control panel

ID
>identification; infantry division

IDL
    international data link

IDM
    improved data modem

IFF
    identification, friend or foe

IKEK
    initial key encryption key

IP
    intercept point; indicate position; Internet protocol

ISLB
    initial search lower bounds

jamming
    the deliberate radiation, reradiation, or reflection of electromagnetic energy to prevent or degrade the receipt of information by a receiver. It includes communications jamming and noncommunications jamming.

JTAGS
    joint tactical air ground station

JTC
    JTIDS terminal controller

JTIDS
    Joint Tactical Information Distribution System

JTOC
    jump tactical operations center

KAB
    keep-alive battery

kHz
    kilohertz

KOI
    key operation instructions

kPa
    kilopascals

KPH
    kilometers per hour

kw
    kilowatt

LAN
    local area network

LCD
    liquid crystal display

LCU
    launcher control unit; lightweight computer unit

LED
    light emitting diode

LLTR
    low-level transit route

LNA
    low noise amplifier

LNO
    liaison officer

LOS
    line of sight

LPA
    linear power amplifier

LRU
    line replaceable unit

LSB
    lower sideband

MDB
    master data base

METL
    mission-essential task list

METT-T
    mission, enemy, terrain, troops, and time

MIJI
    meaconing intrusion jamming interference

MLIU
    multi-link interface unit

MO, mo
    march order; monthly

MOPP
    mission-oriented protective posture

MOS
    military occupational specialty

MS DOS
    Microsoft disk operating system

MSE
missile support element; mobile subscriber equipment; multisubscriber equipment

msg, MSG
message; master sergeant

msl, MSL
missile; mean sea level

MTOE
modified table of organization and equipment

MTP
mission training plan; MOS training plan

NAVAIDS
navigational aids

NBC
nuclear, biological, and chemical

NCO
noncommissioned officer

NCS
net control station

NFS
north finding system

NGD
network group definition

NIC
Network Information Center

NITF
national imagery transmission format

NMC
nonmission capable

NRI
net radio interface

NSA
National Security Agency

NSN
nonstandard number; national stock number

NTDS
navy/naval tactical data/display system

NVIS
near vertical incidence skywave

OB
operational battalion; order of battle

OCONUS
outside Continental U.S.

OIC
officer in charge

OPDAT
operational data

OPORD
operation order

OPSEC
operations security

OPTASK
operations task

OSLB
operational search lower bound

OTAR
over-the-air rekeying

OTH-T
over-the-horizon targeting

pam
pamphlet

passive air defense
Measures other than active air defense taken to minimize the effects of hostile air action. These include cover, concealment, camouflage, dummy positions, and dispersion.

PC
personal computer

PCM
pulse code modulation, power control module

PCP
platoon command post; power control panel

PEP
power entry panel

performance measures
The actions that can be objectively observed and measured to determine if a task performer has performed the task to the prescribed standard. These measures are derived from the task performance steps during task analysis.

performance step
A single discrete operation, movement, or action that comprises part of a task.

PID
     positive identification; process identifier

PLGR
     precision lightweight GPS receiver

PM
     product manager; preventive maintenance; project manager; performance measure; post meridiem

PMCS
     preventive maintenance checks and services

POL
     petroleum, oils, and lubricants

PPE
     personal protection equipment

PSI
     pounds per square inch

psig
     pounds per square inch gauge

PTA
     positioner transport assembly

PTL
     primary target line

PU
     power unit; participating unit

QEAM
     quick erect antenna mast

qt
     quarterly; quart

R/T
     receiver transmitter

RCT
     remote control terminal; radar control terminal

RF
     radio frequency

RFD
     radio frequency direction

RPG
     radar processor group; rocket-propelled grenade

RPM
     revolutions per minute; rounds per minute

RS
radar set; radio set; readiness station (USA term); Roving Sands; roadside

RT
receiver/transmitter

RTA
reflector transport assembly

rtr
router

RW
rotary wing

RWS
rigid wall shelter

S3
Operations and Training Officer (US Army)

SA
selective availability; semiannually; situation awareness; surface-to-air; subject area

SAIC
Scientific Applications International Corporation

SATCOM
satellite communications

SB
supply bulletin; switchboard

SBS
sensor broadcast sector

SC
single channel

SCDL
surveillance control data link

SCSI
small computer system interface

SD
special duty

SECTEL
secure telephone

SEP
signal entry panel; spherical error probability; September

SGRAF
status graph

SICPS
Standardized Integrated Command Post System

SIF
selective identification feature

SIGSEC
signal security

SINCGARS
single-channel ground and airborne radio system

SIS
special intelligence sources

SL
squad leader; skill level; sea level

SM
soldier's manual

SMCT
soldier's manual of common tasks

SMP
sensor management plan

SOI
signal operation instructions

soldiers manual
(SM) lists critical task summaries for a specific MOS and skill level (SL); provides conditions, standards, and performance measures for each critical task and is the base document for all MOS-specific individual task training and evaluation.

SOP
standing operating procedure

SPA
selectable power adapter

STP
soldier training publication

STS
softtop shelter

STU
secure telephone unit

SUAAR
standard use Army aircraft route

SUB
supported unit boundary

SW, sw
> slow walker; software

SWGS
> surface wire grounding system

TACELINT
> tactical electronic intelligence

TACOPDAT
> tactical operational data

TADIL
> tactical digital information link

TB
> technical bulletin

TBM
> tactical ballistic missile

TC
> technical coordinator; training circular

TCP
> traffic control post; transmission control protocol

TCS
> Tactical Command System; Tactical Control Station (THAAD/Patriot)

TDAR
> transportable defense acquisition radar

TDDS
> TRAP data dissemination system

TEK
> traffic encryption key

TG
> trainer's guide

TIBS
> Tactical Intelligence Broadcast Service; Theater Information Broadcast Service; Theater Intelligence Broadcast System

TIP
> tent interface panel

TM, tm
> technical manual; theater missile; team

TN
> track number

TNT
> trinitrotoluene

TOC
> tactical operations center

TPW
> tactical planner workstation; training program worksheet

TQG
> tactical quiet generator

TRANSEC
> transmission security

TSD
> tactical system display

TSICPS
> Track Standardized Integrated Command Post System

TSOP
> tactical standing operating procedure

UCU
> ultra-capacity computer unit

UDP
> user datagram protocol

UHF
> ultrahigh frequency

ULLS
> unit level logistics system

UPS
> uninterruptable power supply

URO
> user readout

USAADASCH
> United States Army Air Defense Artillery School

USB
> upper sideband

USCC
> unit system coordinate center

UST
> utilities shelter transporter

V2LC
> version 2 lightweight computer

vac
 volts alternating current

vdc
 volts direct current

VFK
 variable function key

VME
 versa module Europa

WCO
 weapon control order

WCV
 weapons control volume

WDB
 world data base

REFERENCES

Required Publications

Required publications are sources that users must read in order to understand or to comply with this publication.

Army Regulations

AR 380-5	Department of the Army Information Security Program (EMO). 29 September 2000
AR 530-1	Operations Security (OPSEC). 3 March 1995

Department of Army Forms

DA FORM 2404	Equipment Inspection and Maintenance Worksheet. 1 April 1979
DA FORM 2407	Maintenance Request. 1 July 1994
DA FORM 5164-R	Hands-on Evaluation (LRA). 1 September 1985
DA FORM 5165-R	Field Expedient Squad Book (LRA). 1 September 1985
DA FORM 5988-E	Equipment Inspection Maintenance Worksheet (EGA). 1 March 1991

Department of Army Pamphlets

DA PAM 738-750	Functional Users Manual for the Army Maintenance Management System (TAMMS) (EMO). 1 August 1994

Field Manuals

FM 24-1	Signal Support in the AirLand Battle. 15 October 1990
FM 24-18	Tactical Single-Channel Radio Communications Techniques. 30 September 1987
FM 24-33	Communications Techniques: Electronic Counter-Countermeasures. 17 July 1990
FM 34-60	Counterintelligence. 3 October 1995
FM 5-250	Explosives and Demolitions (Change 1, 30 June 1999). 30 July 1998

Other Product Types

ACP 125(E)	Communication Instructions - Radiotelephone Procedures. 1 August 1987
ACP 126(C)	Communication Instructions Teletypewriter (Teleprinter) Procedures. 3 May 1989
ACP 131(*)	Communication Instructions--Operating Signals.
SOI	Signal Operation Instructions.
TSOP	Tactical Standing Operating Procedures.

Technical Manuals

APPLICABLE TECH MAN	Equipment Operation and Maintenance.
TM 11-5805-761-13&P	Operator's, Unit, & DS Maintenance Manual (Including RPSTLs) for Telephone, Digital, Non-Secure Voice TA-1035/U. 1 September 1995
TM 11-5820-1154-12	Operator's and Unit Maintenance Manual for JTIDS Radio Set AN/GSQ-240A(C) (Change 1, 01 May 00). 1 April 1999
TM 11-5820-890-10-1	Operator's Manual for SINCGARS Ground Combat Net Radio, ICOM MANPACK Radio AN/PRC-119A, Short Range Vehicular Radio AN/VRC-87A. 1 September 1992

TM 11-5820-890-10-3	Operator's Manual for SINCGARS Ground Combat Net Radio, Non-ICOM MANPACK Radio AN/PRC-119, Short Range Vehicular Radio AN/VRC-87. 1 September 1992
TM 11-5820-923-12	Operator's and Organizational Maintenance Manual for Radio Set, AN/GRC-213 (Change 2, 01 Sep 90). 14 February 1986
TM 11-5820-924-13	Operator's, Organizational and Direct Support Maintenance Manual for Radio Set, AN/GRC-193A (Change 1, 15 Oct 91). 14 February 1986
TM 11-5825-283-10	Operator's Manual for MANPACK Radio Sets AN/ASQ-177C(V)4; AN/PSQ-6C; AN/VSQ-2C(V)1; AN/VSQ-2C(V)2; AN/VSQ-2C(V)4; Grid Reference Radio Set AN/GRC-229C; Downsized Enhanced Command Response Unit RT-1718/TSQ-158A. 15 August 2000
TM 11-5825-291-13	Operations and Maintenance Manual for Satellite Signals Navigation Sets AN/PSN-11 and AN/PSN-11(V)1. 1 April 2001
TM 11-5985-357-13	Operator's, Organizational, and Direct Support Maintenance Manual for Antenna Group, OE-254/GRC. 1 February 1991
TM 11-7010-258-12&P	Operator's and Unit Maintenance Manual (Including RPSTLs) for Tactical Command Systems Used in Soft Top Standardized Integrated Command Post System. 15 July 2001
TM 11-7010-259-12&P	Operator's and Unit Maintenance Manual (Including RPSTL) for Tactical Command Systems Used in the 5-Ton Standardized Integrated Command Post System (SICPS). 15 April 2001
TM 11-7010-260-12&P	Operators and Unit Maintenance Manual (Including Repair Parts and Special Tools Lists) for Tactical Command Systems Used in Rigid Wall Shelter (Change 1, 15 Feb 99). 15 March 1998
TM 11-7021-223-10	Operator's Manual for JTIDS/MIDS Terminal Controller. 15 December 2000
TM 3-4240-288-12&P	Operator's and Unit Maintenance Manual Including Repair Parts and Special Tools List for Collective Protection Equipment NBC, Simplified, M20 (Including C1-2). 20 August 1987
TM 9-1430-606-12&P	Operator/Crew and Organizational Maintenance Manual (including RPSTL) Tactical Command System (Patriot Air Defense Guided Missile System). 29 September 2000
TM 9-1430-741-10	Operator's Manual for Sentinel, AN/MPQ-64. 1 June 2001
TM 9-2330-379-14&P	Operator's, Unit, Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Dolly Set, Lift, Transportable Shelter, 7 1/2-Ton M1022. 15 December 1988
TM 9-2350-261-10	Operator's Manual for Carrier, Personnel, Full-Tracked: Armored, M113A2; Carrier, Command Post, Light: Tracked, M577A2; Carrier (Change 5, 15 Jul 97). 12 July 1990
TM 9-5895-616-12&P-1	Operator's and Unit Maintenance Manual (Including RPSTL) for Command System Tactical: AN/TYS-1, Volume 1 (Change 4, 20 Nov 01). 30 April 1997
TM 9-5895-616-12&P-2	Operator's and Unit Maintenance Manual (Including RPSTL) for Command System Tactical: AN/TYS-1, Volume 2 (Change 4, 20 Nov 01). 30 April 1997
TM 9-6115-645-10	Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet 60-KW, 50/60 and 400 HZ MEP-806A (50/60 HZ), MEP-816A (400 HZ) (Change 2, 30 Oct 96). 30 July 1993
TM 9-6115-664-13&P	Operator, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List for 5 KW, 28 VDC, Auxiliary Power Unit (APU) MED 952B. 1 November 2000

Related Publications

Related publications are sources of additional information. They are not required in order to understand this publication.

Army Regulations
AR 200-1 | Environmental Protection and Enhancement (EMO). 21 February 1997
AR 380-40 | (O) Policy for Safeguarding and Controlling Communications Security (COMSEC) Material (U). 30 June 2000

Army Training and Evaluation Program
ARTEP 44-176-15-MTP | Mission Training Plan for a Sentinel Platoon. 26 July 2001
ARTEP 44-635-12-DRILL | Patriot Crew Drills for Information Coordination Central (ICC), with Electric Power Unit II (EPU II), Communications Relay Group (CRG). (To be published.)

Department of Army Forms
DA FORM 2028 | Recommended Changes to Publications and Blank Forms. 1 February 1974
DA FORM 2404 | Equipment Inspection and Maintenance Worksheet. 1 April 1979

Department of Army Pamphlets
DA PAM 350-59 | Army Correspondence Course Program Catalog (Only Available on EM 0001). 26 October 2001
DA PAM 738-750 | Functional Users Manual for the Army Maintenance Management System (TAMMS) (EMO). 1 August 1994

Field Manuals
FM 100-103 | Army Airspace Command and Control in a Combat Zone. 7 October 1987
FM 1-120 | Army Air Traffic Services Contingency and Combat Zone Operations (This item is included on EM 0205). 22 May 1995
FM 21-305 | Manual for the Wheeled Vehicle Driver AFMAN-24-306. 27 August 1993
FM 24-18 | Tactical Single-Channel Radio Communications Techniques. 30 September 1987
FM 24-19 | Radio Operator's Handbook. 24 May 1991
FM 25-101 | Battle Focused Training. 30 September 1990
FM 3-0 | Operations. 14 June 2001
FM 3-19.30 | Physical Security. 8 January 2001
FM 44-100 | US Army Air and Missile Defense Operations. 15 June 2000
FM 44-43 | Bradley Stinger Fighting Vehicle for Platoon and Squad Operations. 3 October 1995
FM 44-44 | Avenger Platoon, Section, and Squad Operations. 3 October 1995
FM 44-48 | Tactics, Techniques, and Procedures for the Sensor Platoon. 21 September 1993
FM 5-250 | Explosives and Demolitions (Change 1, 30 June 1999). 30 July 1998
FM 55-30 | Army Motor Transport Units and Operations (Change 1, 15 September 1999). 27 June 1997

Graphic Training Aids

GTA 11-3-20   Installation of Antenna OE254. 1 July 1983

Lubrication Orders

LOADER TRANSPORTER   Loader Transporter.

Other Product Types

0-471-83799-7   UNIX for Programmers: An Introduction, ISBN # 0-471-83799-7. 1
                                    January 1988

0-89588-715-0   The ABC's of SCO UNIX, ISBN # 0-89588-715-0. 1 June 1991

1-56592-127-5   Essential System Administration, 2nd Edition, ISBN # 1-56592-127-5. 1
                                    October 1995

ACP 125 US SUPPLEMENT-1   Communications Instructions Radiotelephone Procedures for Use by
                                    United States Ground Forces. 1 October 1985

ADSI-REV-AO1   Air Defense Systems (Integrator User's Guide, Version 11)

DSH MANUAL T2-90000   Operations and Maintenance Manual for the UST HP2-C Trailer System.
                                    30 May 2000

IOM 20-00228-002   Operations Manual for the COMM SICPS ADA Brigade TOC. 11
                                    September 1998

IOM 20-00229-002   Operations Manual for the JTOC SICPS ADA Brigade TOC. 11
                                    September 1998

LOCAL SOP   Standard Operating Procedure.

M1189   Operation and Maintenance Instructions for MX-512PV Link -11 Data
                                    Terminal (Change 1, 1 May 2001). 1 February 2001

MS53129-0393   Take a Road Trip with the MS-DOS 6 Upgrade. 1 January 1993

SOI   Signal Operation Instructions.

SOP   Standard Operating Procedure.

STU III-SECTEL   User's Guide for Secure Voice & Data Telephone STU III/SECTEL. 1
                                    February 1988

Soldier Training Publications

STP 21-1-SMCT   Soldier's Manual of Common Tasks, Skill Level 1. 1 October 2001

STP 21-24-SMCT   Soldier's Manual of Common Tasks (SMCT), Skill Levels 2-4. 1 October
                                    2001

Technical Bulletins

(O)TB 380-41   Procedures for Safeguarding, Accounting, and Supply Control of
                                    COMSEC Material (Change 1, 29 Sep 95). 1 October 1994

(U) TB 11-5810-375-10   KY-99 and KY-99A Operator's Pocket Guide. 1 September 1995

TB 11-5820-890-10-10   Operation of Digital Message Device AN/PSG-5 (Fire Support Team)
                                    with SINCGARS Ground Radio Set. 1 April 1993

TB 11-5820-890-10-11   Operation of Maneuver Control System (MCS) with SINCGARS Ground
                                    Radio Sets. 1 April 1993

TB 11-5820-890-10-12   Operation of Lightweight TACFIRE, AN/PYC-1 (BCT) and AN/PSC-2
                                    (DCT) with SINCGARS Ground Radio Sets. 1 April 1993

TB 11-5820-890-10-13   Operation of Mortar Ballistic Computer M23 with SINCGARS Ground
                                    Radio Sets. 1 April 1993

TB 11-5820-890-10-14   Operation of LS-671 Loudspeaker with SINCGARS Radio Sets. 1 April
                                    1993

TB 11-5820-890-10-4	Operation of Variable Format Message Entry Device AN/GSC-21 with SINCGARS Ground Radio Sets. 1 April 1993
TB 11-5820-890-10-5	Operation of Tactical Fire Direction System AN/GSG-10 with SINCGARS Ground Radio Sets. 1 April 1993
TB 11-5820-890-10-6	Operation of Lightweight Digital Facsimile AN/UXC-7 with SINCGARS Ground Radio Sets. 1 April 1993
TB 11-5820-890-10-7	Operation of Secure Net Radio Interface Unit TSEC/KY-90 with SINCGARS Ground Radio Sets. 1 April 1993
TB 11-5820-890-10-8	Operation of Battery Computer System AN/GYK-29 with SINCGARS Ground Radio Sets. 1 April 1993
TB 11-5820-890-10-9	Operation of Digital Message Device AN/PSG-2A with SINCGARS Ground Radio Sets. 1 April 1993
TB 11-7010-269-10	Operator's Manual for Communication Control Set AN/TSQ-182, AN/TSQ-183, AN/TSQ-183A, AN/TSQ-184, AN/TSQ-184A, AN/TSQ-184B Subsystems Part of FAAD C31 and Intelligence (Version 4A) (Change 1, 15 May 1998). 1 October 1995
TB 11-7010-269-10-1	Operator's Manual for Communication Control Sets AN/TSQ-182A, AN/TSQ-183B, AN/TSQ-183C, AN/TSQ-184C, AN/TSQ-184D, AN/TSQ-184E Subsystems Part of FAAD C3I and Intelligence (Version 4R). 15 May 1998
TB 11-7010-271-14	System Overview and Simulation/Training Manual for FAAD C3I System Software Version 4D (Change 1, 01 Dec 1996). 1 December 1995
TB 11-7010-271-14-1	System Overview and Simulation/Training Manual for Forward Area Air Defense Command, Control, and Intelligence System. 15 May 1998
TB 11-7010-303-14-3	Forward Area Air Defense Command, Control, and Intelligence Systems, Vol 3, AMDWS, S2 and S3. 15 May 2000
TB 11-7010-305-10	Operator's Manual for Communication Control Sets AN/TSQ-182A, AN/TSQ-182B, AN/TSQ-183B, AN/TSQ-183C, AN/TSQ-184C, AN/TSQ-183D, AN/TSQ-184C, AN/TSQ-184D, AN/TSQ-184E, and AN/TSQ-184F (Subsystems of Forward Area Air Defense C2I Systems). 15 December 2001
TB 43-0129	Safety Requirements for Use of Antenna and Mast Equipment (Change 1, 15 April 1989). 15 June 1986

Technical Manuals

(O) TM 11-5810-375-13&P	Operator's, Unit, and Direct Support Maintenance Manual (Including RPSTL) KY-99 MINTERM and KY-99A MINTERM (Change 2, 01 May 98). 1 February 1996
(O)TM 11-5810-256-12	Operator's and Organizational Maintenance Manual Communications Security Equipment TSEC/KY-57 (Change 1, 30 September 1996). 12 August 1993
(O)TM 11-5810-309-10	Operator's Manual, Dedicated Loop Encryption Device, TSEC/KG-84A. 10 December 1984
(O)TM 11-5810-329-10	Operator's Manual for Digital Subscriber Voice Terminal TSEC/KY-68. 3 June 1996
APPLICABLE TECH MAN	Equipment Operation and Maintenance.
TM 11-5810-292-13&P	(FOUO) Operator's Unit, and Direct Support Maintenance Manual, General Purpose Tape Reader KOI-18, Electronic Transfer Device KYK-13, and Net Control Device KYX-15/15A. 31 May 1989
TM 11-5820-1130-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Radio Set AN/PSC-5. 1 June 2000

TM 11-5820-1154-12	Operator's and Unit Maintenance Manual for JTIDS Radio Set AN/GSQ-240A(C) (Change 1, 01 May 00). 1 April 1999
TM 11-5820-890-10-1	Operator's Manual for SINCGARS Ground Combat Net Radio, ICOM MANPACK Radio AN/PRC-119A, Short Range Vehicular Radio AN/VRC-87A. 1 September 1992
TM 11-5820-890-10-7	SINCGARS ICOM Ground Radios Used With Automated Net Control Device (ANCD) AN/CYZ-10 and Precision Lightweight GPS Receiver (PLGR) AN/PSN-11 Net Control Station (NCS) Pocket Guide Radio Sets. 1 December 1998
TM 11-5820-890-20-1	Unit Maintenance Manual for Ground ICOM Radio Sets AN/PRC-119A: AN/VRC-87A, AN/VRC 87D, AN/VRC-88A, AN/VRC-88D, AN/VRC-89A, AN/VRC-90A, AN/VRC-91A, and AN/VRC-92A. 30 December 1998
TM 11-5825-283-10	Operator's Manual for MANPACK Radio Sets AN/ASQ-177C(V)4; AN/PSQ-6C; AN/VSQ-2C(V)1; AN/VSQ-2C(V)2; AN/VSQ-2C(V)4; Grid Reference Radio Set AN/GRC-229C; Downsized Enhanced Command Response Unit RT-1718/TSQ-158A. 15 August 2000
TM 11-5825-291-13	Operations and Maintenance Manual for Satellite Signals Navigation Sets AN/PSN-11 and AN/PSN-11(V)1. 1 April 2001
TM 11-5895-1519-13&P	Operator's, Unit, and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for Converter Group, Signal Data OU-178/TTC (Change 3, 01 Oct 96). 1 September 1991
TM 11-5985-263-15	Operator's, Organizational, Direct Support, General Support, and Depot Maintenance Manual (Including Repair Parts and Special Tools List) for Mast, AB-903/G (Change 2, 06 Apr 79). 20 May 1970
TM 11-7010-256-12&P	Operator's and Unit Maintenance Manual (Including RPSTL), for Tactical Command Systems Used in M1068 Standardized Integrated Command Post System. 15 April 2001
TM 11-7010-258-12&P	Operator's and Unit Maintenance Manual (Including RPSTLs) for Tactical Command Systems Used in Soft Top Standardized Integrated Command Post System. 15 July 2001
TM 11-7010-259-12&P	Operator's and Unit Maintenance Manual (Including RPSTL) for Tactical Command Systems Used in the 5-Ton Standardized Integrated Command Post System (SICPS). 15 April 2001
TM 11-7010-260-12&P	Operators and Unit Maintenance Manual (Including Repair Parts and Special Tools Lists) for Tactical Command Systems Used in Rigid Wall Shelter (Change 1, 15 Feb 99). 15 March 1998
TM 11-7021-213-12&P	Operator's and Unit Maintenance Manual (Including RPSTL) for Series 300 Digital Computers. 1 February 1996
TM 11-7021-223-10	Operator's Manual for JTIDS/MIDS Terminal Controller. 15 December 2000
TM 11-7025-281-12&P	Operator's and Unit Maintenance Manual (Including RPSTL) for Automatic Data Processing Printers PT-546(V)1/U, PT-546(V)2/U, PT-546(V)3/U, PT-546(V)4/U, PT-546(V)5/U (Change 1, 01 Sep 94). 15 July 1993
TM 11-7025-283-12&P	Operator's and Unit Maintenance Manual (Including RPSTL) for Display Unit IP-1620(V)1/U, IP-1620(V)2/U, IP-1621(V)1/U, IP-1621(V)2/U, IP-1654(V)1/U, IP-1654(V)2/U, IP-1655/U (Change 1, 15 Oct 94). 15 May 1993
TM 5-6115-585-12	Operator's Organizational and Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical Skid MTD, 10-KW, 1 Phase, 2 Wire; 1 Phase, 3 Wire and 3 Phase, 4 Wire 120/240 and 120/208 Volts (Change 12, 27 Apr 92).) 25 July 1977

TM 5-6115-596-14	Operator's, Organizational, Direct Support and General Support Maintenance Manual for Generator Set, Gasoline Engine Driven, 4.2-KW, 150 Amp, 28 V, DC Model DC 4.2-ORD/28 (Change 4, 15 Jul 91). 20 June 1980
TM 750-244-2	Procedures for Destruction of Electronics Material to Prevent Enemy Use (Electronics Command). 14 March 1972
TM 750-244-6	Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive Command). 3 October 1972
TM 9-1430-606-12&P	Operator/Crew and Organizational Maintenance Manual (including RPSTL) Tactical Command System (Patriot Air Defense Guided Missile System). 29 September 2000
TM 9-1430-741-10	Operator's Manual for Sentinel, AN/MPQ-64. 1 June 2001
TM 9-1430-775-10	Operator's Manual for Radar Set AN/PPQ-2 (Change 2, 22 Sep 95). 10 September 1993
TM 9-2320-272-10	Operator's Manual for Truck, 5-Ton, 6X6, M939, M939A1, and M939A2 Series Trucks (Diesel), Truck, Cargo: 5-Ton, 6X6 Dropside, M923 (Change 1, 22 Feb 99). 15 August 1996
TM 9-2320-280-10	Operator's Manual for Truck, Utility: Cargo/Troop Carrier, 1-1/4 Ton, 4X4, M998 (EIC: BBD); M998A1 (EIC:BBN) (Change 2, 30 Nov 01). 31 January 1996
TM 9-2330-205-14&P	Operator's, Organizational, Direct Support and General Support Maintenance (Including Repair Parts and Special Tools List) for Chassis, Trailer: Generator, 2 1/2-Ton, 2-Wheel, M200A1 (Change 1, 18 Mar 88). 11 September 1984
TM 9-2330-379-14&P	Operator's, Unit, Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Dolly Set, Lift, Transportable Shelter, 7 1/2-Ton M1022. 15 December 1988
TM 9-2350-261-10	Operator's Manual for Carrier, Personnel, Full-Tracked: Armored, M113A2; Carrier, Command Post, Light: Tracked, M577A2; Carrier (Change 5, 15 Jul 97). 12 July 1990
TM 9-5895-616-12&P-1	Operator's and Unit Maintenance Manual (Including RPSTL) for Command System Tactical: AN/TYS-1, Volume 1 (Change 4, 20 Nov 01). 30 April 1997
TM 9-5895-616-12&P-2	Operator's and Unit Maintenance Manual (Including RPSTL) for Command System Tactical: AN/TYS-1, Volume 2 (Change 4, 20 Nov 01). 30 April 1997
TM 9-6115-641-10	Operator's Manual for Generator Set Skid Mounted, Tactical Quiet 5 KW, 60 and 400 HZ MEP-802A (60 HZ) MEP-812A (400 HZ) (Change 2, 30 Oct 96). 30 December 1992
TM 9-6115-642-10	Operator's Manual for Generator Set Skid Mounted, Tactical Quiet 10-KW, 60 and 400 HZ MEP-803A (60 HZ) MEP-813A (400 HZ) (Change 2, 30 Oct 96). 30 December 1992
TM 9-6115-644-10	Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet 30 KW, 50/60 and 400 HZ MEP-805A (50/60 HZ), MEP-815A (400 HZ), (Change 2, 30 Oct 96). 30 July 1993
TM 9-6115-645-10	Operator's Manual for Generator Set, Skid Mounted, Tactical Quiet 60-KW, 50/60 and 400 HZ MEP-806A (50/60 HZ), MEP-816A (400 HZ) (Change 2, 30 Oct 96). 30 July 1993
TM 9-6115-664-13&P	Operator, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List for 5 KW, 28 VDC, Auxiliary Power Unit (APU) MED 952B. 1 November 2000

Training Circulars

TC 21-306   Tracked Combat Vehicle Driver Training. 10 February 2000

By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0230701

DISTRIBUTION:

Active Army, Army National Guard, and US Army Reserve: Not to be distributed. Electronic media only.