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Soldier's Manual and Trainer's Guide

MOS 25S

SATELLITE COMMUNICATIONS SYSTEMS OPERATOR-MAINTAINER

SKILL LEVELS 1, 2, 3, AND 4

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PREFACE

This publication is for skill levels (SLs) 1, 2, 3, and 4 soldiers holding military occupational specialty (MOS) 25S and for trainers and first-line supervisors. It contains standardized training objectives, in the form of task summaries, to train and evaluate soldiers on critical tasks that support unit missions during wartime. Trainers and first-line supervisors should ensure soldiers holding MOS 25S SLs 1/2/3/4 have access to this publication. When applicable, a chapter is devoted to listing duty specific tasks or those tasks and skills which are not common to all soldiers in MOS 25S SLs 1/2/3/4. It should be made available in the soldier's work area, unit learning center, and unit libraries.

This publication applies to the Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the U.S. Army Reserve (USAR).

The proponent for this publication is U.S. Army Training and Doctrine Command (TRADOC). Send comments and recommendations on Department of the Army (DA) Form 2028 (*Recommended Changes to Publications and Blank Forms*) directly to Commander, US Army Signal Center and Fort Gordon, ATTN: ATZH-DTM, Fort Gordon, Georgia 30905-5735.

Unless this manual states otherwise, masculine pronouns do not refer exclusively to men.

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CHAPTER 1

Introduction

1-1. **GENERAL**. The soldier training publication (STP) identifies the individual military occupational specialty (MOS) and training requirements for soldiers in various specialties. Another source of STP task data is the General Dennis J. Reimer Training and Doctrine Digital Library at http://train.army.mil/portal/index.jsp. Commanders, trainers, and soldiers should use the STP to plan, conduct, and evaluate individual training in units. The STP is the primary MOS reference to support the self-development and training of every soldier in the unit. It is used with the Soldier's Manual of Common Tasks, Army training and evaluation programs (ARTEPs), and FM 7-0, *Training the Force*, to establish effective training plans and programs that integrate soldier, leader, and collective tasks. This chapter explains how to use the STP in establishing an effective individual training program. It includes doctrinal principles and implications outlined in FM 7-0. Based on these guidelines, commanders and unit trainers must tailor the information to meet the requirements for their specific unit.

1-2. **TRAINING REQUIREMENT**. Every soldier, noncommissioned officer (NCO), warrant officer, and officer has one primary mission—to be trained and ready to fight and win our nation's wars. Success in battle does not happen by accident; it is a direct result of tough, realistic, and challenging training.

a. Operational Environment

(1) Commanders and leaders at all levels must conduct training with respect to a wide variety of operational missions across the full spectrum of operations; these operations may include combined arms, joint, multinational, and interagency considerations, and span the entire breadth of terrain and environmental possibilities. Commanders must strive to set the daily training conditions as closely as possible to those expected for actual operations.

(2) The operational missions of the Army include not only war, but also military operations other than war (MOOTW). Operations may be conducted as major combat operations, a small-scale contingency, or a peacetime military engagement. Offensive and defensive operations normally dominate military operations in war along with some small-scale contingencies. Stability operations and support operations dominate in MOOTW. Commanders at all echelons may combine different types of operations simultaneously and sequentially to accomplish missions in war and MOOTW. These missions require training since future conflict will likely involve a mix of combat and MOOTW, often concurrently. The range of possible missions complicates training. Army forces cannot train for every possible mission; they train for war and prepare for specific missions as time and circumstances permit.

(3) Our forces today use a train-alert-deploy sequence. We cannot count on the time or opportunity to correct or make up training deficiencies after deployment. Maintaining forces that are ready now, places increased emphasis on training and the priority of training. This concept is a key link between operational and training doctrine.

(4) Units train to be ready for war based on the requirements of a precise and specific mission; in the process they develop a foundation of combat skills that can be refined based on the requirements of the assigned mission. Upon alert, commanders assess and refine from this foundation of skills. In the train-alert-deploy process, commanders use whatever time the alert cycle provides to continue refinement of mission-focused training. Training continues during time available between alert notification and deployment, between deployment and employment, and even during employment as units adapt to the specific battlefield environment and assimilate combat replacements.

b. How the Army Trains the Army

(1) Training is a team effort and the entire Army—Department of the Army, major commands (MACOMs), the institutional training base, units, the combat training centers (CTCs), each individual soldier and the civilian workforce—has a role that contributes to force readiness. Department of the Army and MACOMs are responsible for resourcing the Army to train. The Institutional Army, including schools, training centers, and NCO academies, for example, train soldiers and leaders to take their place in units in the Army by teaching the doctrine and tactics, techniques, and procedures (TTP). Units, leaders, and individuals train to standard on their assigned critical individual tasks. The unit trains first as an organic unit and then as an integrated component of a team. Before the unit can be trained to function as a team, each soldier must be trained to perform their individual supporting tasks to standard. Operational deployments and major training opportunities, such as major training exercises, CTCs, and ARTEPs provide rigorous, realistic, and stressful training and operational experience under actual or simulated combat and operational conditions to enhance unit readiness and produce bold, innovative leaders. The result of this Army-wide team effort is a training and leader development system that is unrivaled in the world. Effective training produces the force—soldiers, leaders, and units—that can successfully execute any assigned mission.

(2) The Army Training and Leader Development Model (Figure 1-1) centers on developing trained and ready units led by competent and confident leaders. The model depicts an important dynamic that creates a lifelong learning process. The three core domains that shape the critical learning experiences throughout a soldiers and leaders time span are the operational, institutional, and self-development domains. Together, these domains interact using feedback and assessment from various sources and methods to maximize warfighting readiness. Each domain has specific, measurable actions that must occur to develop our leaders.

Figure 1-1. Army Training and Leader Development Model

(3) The operational domain includes home station training, CTC rotations, and joint training exercises and deployments that satisfy national objectives. Each of these actions provides foundational

experiences for soldier, leader, and unit development. The institutional domain focuses on educating and training soldiers and leaders on the key knowledge, skills, and attributes required to operate in any environment. It includes individual, unit and joint schools, and advanced education. The self-development domain, both structured and informal, focuses on taking those actions necessary to reduce or eliminate the gap between operational and institutional experiences.

(4) Throughout this lifelong learning and experience process, there is formal and informal assessment and feedback of performance to prepare leaders and soldiers for their next level of responsibility. Assessment is the method used to determine the proficiency and potential of leaders against a known standard. Feedback must be clear, formative guidance directly related to the outcome of training events measured against standards.

c. Leader Training and Leader Development.

(1) Competent and confident leaders are a prerequisite to the successful training of units. It is important to understand that leader training and leader development are integral parts of unit readiness. Leaders are inherently soldiers first and should be technically and tactically proficient in basic soldier skills. They are also adaptive, capable of sensing their environment, adjusting the plan when appropriate, and properly applying the proficiency acquired through training.

(2) Leader training is an expansion of these skills that qualifies them to lead other soldiers. As such, doctrine and principles of training require the same level of attention of senior commanders. Leader training occurs in the Institutional Army, the unit, the CTCs, and through self-development. Leader training is just one portion of leader development.

(3) Leader development is the deliberate, continuous, sequential, and progressive process, grounded in Army values, that grows soldiers and civilians into competent and confident leaders capable of decisive action. Leader development is achieved through the lifelong synthesis of the knowledge, skills, and experiences gained through institutional training and education, organizational training, operational experience, and self-development. Commanders play the key roll in leader development that ideally produces tactically and technically competent, confident, and adaptive leaders who act with boldness and initiative in dynamic, complex situations to execute mission-type orders achieving the commander's intent.

d. Training Responsibility. Soldier and leader training and development continue in the unit. Using the institutional foundation, training in organizations and units focuses and hones individual and team skills and knowledge.

(1) **Commander Responsibility**.

(a) The unit commander is responsible for the wartime readiness of all elements in the formation. The commander is, therefore, the primary trainer of the organization and is responsible for ensuring that all training is conducted in accordance with (IAW) the STP to the Army standard.

(b) Commanders ensure STP standards are met during all training. If a soldier fails to meet established standards for identified MOS tasks, the soldier must retrain until the tasks are performed to standard. Training to standard on MOS tasks is more important than completion of a unit-training event such as an ARTEP. The objective is to focus on sustaining MOS proficiency—this is the critical factor commanders must adhere to when training individual soldiers units.

(2) **NCO Responsibility**.

(a) A great strength of the US Army is its professional NCO Corps who takes pride in being responsible for the individual training of soldiers, crews, and small teams. The NCO support channel parallels and complements the chain of command. It is a channel of communication and supervision from the Command Sergeant Major (CSM) to the First Sergeants (1SGs) and then to other NCOs and enlisted personnel. NCOs train soldiers to the non-negotiable standards published in STPs. Commanders

delegate authority to NCOs in the support channel as the primary trainers of individual, crew, and small team training. Commanders hold NCOs responsible for conducting standards-based, performance-oriented, battle-focused training and providing feedback on individual, crew, and team proficiency. Commanders define responsibilities and authority of their NCOs to their staffs and subordinates.

(b) NCOs continue the soldierization process of newly assigned enlisted soldiers, and begin their professional development. NCOs are responsible for conducting standards-based, performance-oriented, battle-focused training. They identify specific individual, crew, and small team tasks that support the unit's collective mission essential tasks; plan, prepare, rehearse, and execute training; and evaluate training and conduct after action reviews (AARs) to provide feedback to the commander on individual, crew, and small team proficiency. Senior NCOs coach junior NCOs to master a wide range of individual tasks.

(3) **Soldier Responsibility**. Each soldier is responsible for performing individual tasks identified by the first-line supervisor based on the unit's mission essential task list (METL). Soldiers must perform tasks to the standards included in the task summary. If soldiers have questions about tasks or which tasks in this manual they must perform, they are responsible for asking their first-line supervisor for clarification, assistance, and guidance. First-line supervisors know how to perform each task or can direct soldiers to appropriate training materials, including current field manuals, technical manuals, and Army regulations. Soldiers are responsible for using these materials to maintain performance. They are also responsible for maintaining standard performance levels of all Soldier's Manual of Common Tasks at their current skill level and below. Periodically, soldiers should ask their supervisor or another soldier to check their performance to ensure that they can perform the tasks.

1-3. **BATTLE-FOCUSED TRAINING**. Battle focus is a concept used to derive peacetime training requirements from assigned and anticipated missions. The priority of training in units is to train to standard on the wartime mission. Battle focus guides the planning, preparation, execution, and assessment of each organization's training program to ensure its members train as they are going to fight. Battle focus is critical throughout the entire training process and is used by commanders to allocate resources for training based on wartime and operational mission requirements. Battle focus enables commanders and staffs at all echelons to structure a training program that copes with non-mission-related requirements while focusing on mission essential training activities. It is recognized that a unit cannot attain proficiency to standard on every task whether due to time or other resource constraints. However, unit commanders can achieve a successful training program by consciously focusing on a reduced number of METL tasks that are essential to mission accomplishment.

a. Linkage between METL and STP. A critical aspect of the battle focus concept is to understand the responsibility for and the linkage between the collective mission essential tasks and the individual tasks that support them. For example, the commander and the CSM/1SG must jointly coordinate the collective mission essential tasks and supporting individual tasks on which the unit will concentrate its efforts during a given period. This task hierarchy is provided in the task database at the Reimer Digital Library. The CSM/1SG must select the specific individual tasks that support each collective task to be trained. Although NCOs have the primary role in training and sustaining individual soldier skills, officers at every echelon remain responsible for training to established standards during both individual and collective training. Battle focus is applied to all missions across the full spectrum of operations.

b. Relationship of STPs to Battle-focused Training. The two key components of any STP are the soldier's manual (SM) and trainer's guide (TG). Each gives leaders important information to help implement the battle-focused training process. The trainer's guide relates soldier and leader tasks in the MOS and skill level to duty positions and equipment. It states where the task is trained, how often training should occur to sustain proficiency, and who in the unit should be trained. As leaders assess and plan training, they should rely on the trainer's guide to help identify training needs.

(1) Leaders conduct and evaluate training based on Army-wide training objectives and on the task standards published in the soldier's manual task summaries or in the Reimer Digital Library. The task summaries ensure that trainers in every unit and location define task standards the same way and trainers evaluate all soldiers to the same standards.

(2) Figure 1-2 shows how battle-focused training relates to the trainer's guide and soldier's manual. The left column shows the steps involved in training soldiers and the right column shows how the STP supports each of these steps.

BATTLE-FOCUS PROCESS	STP SUPPORT PROCESS
Select supporting soldier tasks	Use TG to relate tasks to METL
Conduct training assessment	Use TG to define what soldier tasks to assess
Determine training objectives	Use TG to set objectives
Determine strategy; plan for training	Use TG to relate soldier tasks to strategy
Conduct pre-execution checks	Use SM task summary as source for task performance
Execute training; conduct after action review	Use SM task summary as source for task performance
Evaluate training against established standards	Use SM task summary as standard for evaluation

Figure 1-2. Relationship of Battle-focused Training and STP

1-4. **TASK SUMMARY FORMAT**. Task summaries outline the wartime performance requirements of each critical task in the SM. They provide the soldier and the trainer with the information necessary to prepare, conduct, and evaluate critical task training. As a minimum, task summaries include information the soldier must know and the skills that he must perform to standards for each task. The format of the task summaries included in this SM is as follows:

a. Task Number. A 10-digit number identifies each task or skill. This task number, along with the task title, must be included in any correspondence pertaining to the task.

b. Task Title. The task title identifies the action to be performed.

c. Conditions. The task conditions identify all the equipment, tools, references, job aids, and supporting personnel that the soldier needs to use to perform the task in wartime. This section identifies any environmental conditions that can alter task performance, such as visibility, temperature, or wind. This section also identifies any specific cues or events that trigger task performance, such as a chemical attack or identification of a threat vehicle.

d. Standards. The task standards describe how well and to what level the task must be performed under wartime conditions. Standards are typically described in terms of accuracy, completeness, and speed.

e. Training and Evaluation. The training evaluation section identifies specific actions, known as performance steps, which the soldier must do to successfully complete the task. These actions are in the evaluation guide section of the task summary and are listed in a GO/NO GO format for easy evaluation. For some tasks, the training and evaluation section may also include detailed training information in a training information outline and an evaluation preparation section. The evaluation preparation section indicates necessary modifications to task performance in order to train and evaluate a task that cannot be trained to the wartime conditions. It may also include special training and evaluation preparation instructions to accommodate these modifications, and any instructions that should be given to the soldier before evaluation.

f. References. This section identifies references that provide more detailed and thorough explanations of task performance requirements than those given in the task summary description.

g. Warnings. Warnings alert users to the possibility of immediate personal injury or damage to equipment.

h. Notes. Notes provide a supportive explanation or hint that relates to the performance standards.

1-5. **TRAINING EXECUTION**. All good training, regardless of the specific collective, leader, and individual tasks being executed, must comply with certain common requirements. These include adequate preparation, effective presentation and practice, and thorough evaluation. The execution of training includes preparation for training, conduct of training, and recovery from training.

a. Preparation for Training. Formal near-term planning for training culminates with the publication of the unit-training schedule. Informal planning, detailed coordination, and preparation for executing the training continue until the training is performed. Commanders and other trainers use training meetings to assign responsibility for preparation of all scheduled training. Preparation for training includes selecting tasks to be trained, planning the conduct of the training, training the trainers, reconnaissance of the site, issuing the training execution plan, and conducting rehearsals and pre-execution checks. Pre-execution checks are preliminary actions commanders and trainers use to identify responsibility for these and other training support tasks. They are used to monitor preparation activities and to follow up to ensure planned training is conducted to standard. Pre-execution checks are a critical portion of any training meeting. During preparation for training, battalion and company commanders identify and eliminate potential training distracters that develop within their own organizations. They also stress personnel accountability to ensure maximum attendance at training.

(1) Subordinate leaders, as a result of the bottom-up feed from internal training meetings, identify and select the individual tasks necessary to support the identified training objectives. Commanders develop the tentative plan to include requirements for preparatory training, concurrent training, and training resources. At a minimum, the training plan should include confirmation of training areas and locations, training ammunition allocations, training simulations and simulators availability, transportation requirements, soldier support items, a risk management analysis, assignment of responsibility for the training, designation of trainers responsible for approved training, and final coordination. The time and other necessary resources for retraining must also be an integral part of the original training plan.

(2) Leaders, trainers, and evaluators are identified, trained to standard, and rehearsed prior to the conduct of the training. Leaders and trainers are coached on how to train, given time to prepare, and rehearsed so that training will be challenging and doctrinally correct. Commanders ensure that trainers and evaluators are not only tactically and technically competent on their training tasks, but also understand how the training relates to the organization's METL. Properly prepared trainers, evaluators, and leaders project confidence and enthusiasm to those being trained. Trainer and leader training is a critical event in the preparation phase of training. These individuals must demonstrate proficiency on the selected tasks prior to the conduct of training.

(3) Commanders, with their subordinate leaders and trainers, conduct site reconnaissance, identify additional training support requirements, and refine and issue the training execution plan. The training plan should identify all those elements necessary to ensure the conduct of training to standard. Rehearsals are essential to the execution of good training. Realistic, standards-based, performance-oriented training requires rehearsals for trainers, support personnel, and evaluators. Preparing for training in Reserve Component (RC) organizations can require complex pre-execution checks. RC trainers must often conduct detailed coordination to obtain equipment, training support system products, and ammunition from distant locations. In addition, RC pre-execution checks may be required to coordinate Active Component assistance from the numbered CONUSA, training support divisions, and directed training affiliations.

b. Conduct of Training. Ideally, training is executed using the crawl-walk-run approach. This allows and promotes an objective, standards-based approach to training. Training starts at the basic level. Crawl events are relatively simple to conduct and require minimum support from the unit. After the crawl stage, training becomes incrementally more difficult, requiring more resources from the unit and home station, and increasing the level of realism. At the run stage, the level of difficulty for the training event intensifies. Run stage training requires optimum resources and ideally approaches the level of realism expected in combat. Progression from the walk to the run stage for a particular task may occur during a one-day training exercise or may require a succession of training periods over time. Achievement of the Army standard determines progression between stages.

(1) In crawl-walk-run training, the tasks and the standards remain the same; however, the conditions under which they are trained change. Commanders may change the conditions, for example, by increasing the difficulty of the conditions under which the task is being performed, increasing the tempo of the task training, increasing the number of tasks being trained, or by increasing the number of personnel involved in the training. Whichever approach is used, it is important that all leaders and soldiers involved understand in which stage they are currently training and understand the Army standard.

(2) An AAR is immediately conducted and may result in the need for additional training. Any task that was not conducted to standard should be retrained. Retraining should be conducted at the earliest opportunity. Commanders should program time and other resources for retraining as an integral part of their training plan. Training is incomplete until the task is trained to standard. Soldiers will remember the standard enforced, not the one discussed.

c. Recovery from Training. The recovery process is an extension of training, and once completed, it signifies the end of the training event. At a minimum, recovery includes conduct of maintenance training, turn-in of training support items, and the conduct of AARs that review the overall effectiveness of the training just completed.

(1) Maintenance training is the conduct of post-operations preventive maintenance checks and services, accountability of organizational and individual equipment, and final inspections. Class IV, Class V, TADSS and other support items are maintained, accounted for, and turned-in and training sites and facilities are closed out.

(2) AARs conducted during recovery focus on collective, leader, and individual task performance, and on the planning, preparation, and conduct of the training just completed. Unit AARs focus on individual and collective task performance, and identify shortcomings and the training required to correct deficiencies. AARs with leaders focus on tactical judgment. These AARs contribute to leader learning and provide opportunities for leader development. AARs with trainers and evaluators provide additional opportunities for leader development.

1-6. **TRAINING ASSESSMENT**. Assessment is the commander's responsibility. It is the commander's judgment of the organization's ability to accomplish its wartime operational mission. Assessment is a continuous process that includes evaluating individual training, conducting an organizational assessment, and preparing a training assessment. The commander uses his experience, feedback from training evaluations, and other evaluations and reports to arrive at his assessment. Assessment is both the end and the beginning of the training management process. Training assessment is more than just training evaluation, and encompasses a wide variety of inputs. Assessments include such diverse systems as training, force integration, logistics, and personnel, and provide the link between the unit's performance and the Army standard. Evaluation of training is, however, a major component of assessment. Training evaluations provide the commander with feedback on the demonstrated training proficiency of soldiers, leaders, battle staffs, and units. Commanders cannot personally observe all training in their organization and, therefore, gather feedback from their senior staff officers and NCOs.

a. Evaluation of Training. Training evaluations are a critical component of any training assessment. Evaluation measures the demonstrated ability of soldiers, commanders, leaders, battle staffs, and units against the Army standard. Evaluation of training is integral to standards-based training

and is the cornerstone of leader training and leader development. STPs describe standards that must be met for each soldier task.

(1) All training must be evaluated to measure performance levels against the established Army standard. The evaluation can be as fundamental as an informal, internal evaluation performed by the leader conducting the training. Evaluation is conducted specifically to enable the individual undergoing the training to know whether the training standard has been achieved. Commanders must establish a climate that encourages candid and accurate feedback for the purpose of developing leaders and trained soldiers.

(2) Evaluation of training is not a test; it is not used to find reasons to punish leaders and soldiers. Evaluation tells soldiers whether or not they achieved the Army standard and, therefore, assists them in determining the overall effectiveness of their training plans. Evaluation produces disciplined soldiers, leaders, and units. Training without evaluation is a waste of time and resources.

(3) Leaders use evaluations as an opportunity to coach and mentor soldiers. A key element in developing leaders is immediate, positive feedback that coaches and leads subordinate leaders to achieve the Army standard. This is a tested and proven path to develop competent, confident adaptive leaders.

b. Evaluators. Commanders must plan for formal evaluation and must ensure the evaluators are trained. These evaluators must also be trained as facilitators to conduct AARs that elicit maximum participation from those being trained. External evaluators will be certified in the tasks they are evaluating and normally will not be dual-hatted as a participant in the training being executed.

c. Role of Commanders and Leaders. Commanders ensure that evaluations take place at each echelon in the organization. Commanders use this feedback to teach, coach, and mentor their subordinates. They ensure that every training event is evaluated as part of training execution and that every trainer conducts evaluations. Commanders use evaluations to focus command attention by requiring evaluation of specific mission essential and battle tasks. They also take advantage of evaluation information to develop appropriate lessons learned for distribution throughout their commands.

d. After Action Review. The AAR, whether formal or informal, provides feedback for all training. It is a structured review process that allows participating soldiers, leaders, and units to discover for themselves what happened during the training, why it happened, and how it can be done better. The AAR is a professional discussion that requires the active participation of those being trained. FM 7-0 provides detailed instructions for conducting an AAR and detailed guidance on coaching and critiquing during training.

1-7. NCO SELF-DEVELOPMENT AND THE SOLDIER'S MANUAL

a. 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.

b. Another important resource for NCO self-development is the Army Correspondence Course Program (ACCP). Soldiers should refer to DA Pamphlet (PAM) 350-59, *Army Correspondence Course Program Catalog*, for a list of courses and information on enrolling in this program, or contact ACCP Student Support at DSN 826-2127/3322, COML (757) 878-2127/3322, or E-mail at Sectiona@atsc.army.mil. Soldiers can also access the Army Correspondence Course Program online at http://www.atsc.army.mil/accp/aipdnew.asp.

c. General Dennis J. Reimer Training and Doctrine Digital Library is an additional resource for NCO self-development. This electronic library is the single repository of approved Army training and doctrine information. Soldiers can access the library online at http://atiam.train.army.mil/portal/index.jsp.

d. Unit learning centers are valuable resources for planning self-development programs. They can help access enlisted career maps, training support products, and extension training materials, such as field manuals (FMs) and technical manuals (TMs). It is the soldier's responsibility to use these materials to maintain performance.

1-8. **TRAINING SUPPORT**

This manual includes the following appendixes and information that provide additional training support information.

(a) Appendix A, Sample Telecommunications Service Order (TSO).

(b) Glossary. The glossary is a single comprehensive list of acronyms, abbreviations, definitions, and letter symbols.Appendix B, DA Form 5164-R Hands-on Evaluation. This appendix contains the instructions for using DA Form 5164-R and a sample completed form for NCOs to use during evaluation of soldiers' manual tasks.

(c) References. This section contains two lists of references, required and related, 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 that provide more detailed information and a more thorough explanation of task performance.Glossary. The glossary is a single comprehensive list of acronyms, abbreviations, definitions, and letter symbols.

(d) References. This section contains two lists of references, required and related, 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 that provide more detailed information and a more thorough explanation of task performance.

1-9. **FEEDBACK**. Recommendations for improvement of this STP are requested. Feedback will help to ensure that this STP answers the training needs of units in the field.

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CHAPTER 2

Training Guide (TG)

2-1. **GENERAL**. The MOS Training Plan (MTP) 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 MTP should be used as a guide for conducting unit training and not a rigid standard. The MTP 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.

The MTP's Subject Area Codes list subject area numbers and titles used throughout the MTP. These subject areas are used to define the training requirements for each duty position within an MOS.

The Duty Position Training Requirements table identifies the total training requirement for each duty position within an MOS and provides a recommendation for cross training and train-up/merger training.

- **Duty Position column**. This column lists the duty positions of the MOS, by skill level, which have different training requirements.
- **Subject Area column**. This column lists, by numerical key (see Section I), the subject areas a soldier must be proficient in to perform in that duty position.
- **Cross Train column**. This column lists the recommended duty position for which soldiers should be cross trained.
- **Train-up/Merger column**. This column lists the corresponding duty position for the next higher skill level or MOSC the soldier will merge into on promotion.

The Critical Task List table lists, by general subject areas, the critical tasks to be trained in an MOS and the type of training required (resident, integration, or sustainment).

- **Subject Area column**. This column lists the subject area number and title in the same order as Section I, Part One of the MTP.
- **Task Number column**. This column lists the task numbers for all tasks included in the subject area.
- **Title column**. This column lists the task title for each task in the subject area.
- **Training Location column**. This column identifies the training location where the task is first trained to soldier training publications 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, by brevity code (ANCOC, BNCOC, etc.), the resident course where the task was taught. Figure 2-1 contains a list of training locations and their corresponding brevity codes.

UNIT	Trained in the Unit
ANCOC	Advanced NCO Course
AIT	Advanced Individual Training
BNCOC	Basic NCO Course
ASI	Additional Skill Identifier
AFC	Army Functional Course

Figure 2-1. Training Locations

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

BA	- Biannually
AN	- Annually
SA	- Semiannually
QT	- Quarterly
MO	- Monthly
BW	- Biweekly
WK	- Weekly

Figure 2-2. Sustainment Training Frequency Codes

- **Sustainment Training Skill Level Column**. This column lists the skill levels of the MOS for which soldiers must receive sustainment training to ensure they maintain proficiency to soldier's manual standards.

2-2. **SUBJECT AREA CODES**.

Skill Level 1

1 Digital Communications Satellite Subsystem (DCSS)
2 Strategic Satellite Terminal AN/GSC-52(V), AN/GSC-39(V), and AN/FSC-78(V)
3 Tactical Satellite Terminals AN/TSC-85(V) and AN/TSC-93(V)
4 Strategic Satellite Terminal AN/TSC-86A
5 Strategic Satellite Terminal AN/TSC-49(V)
8 ASI-1C
9 MILSTAR
10 Communications Set AN/USC-28(V)
11 Digital Common Core

Skill Level 2

6 SATCOM Terminal Supervision

Skill Level 3

6 SATCOM Terminal Supervision
8 ASI-1C
9 MILSTAR

Skill Level 4

7 SATCOM Terminal Direction

2-3. **CRITICAL TASKS LIST**.

MOS TRAINING PLAN
25S14

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Skill Level 1				
Subject Area 1. Digital Communications Satellite Subsystem (DCSS)				
113-583-2625	Operate Digital Communications Satellite Subsystem (DCSS)	AIT	QT	1-4
113-583-3273	Maintain Digital Communications Satellite Subsystem (DCSS)	AIT	QT	1-4
Subject Area 2. Strategic Satellite Terminal AN/GSC-52(V), AN/GSC-39(V), and AN/FSC-78(V)				
113-590-2135	Operate SATCOM Terminal AN/GSC-52(V)	UNIT	QT	1-4
113-590-2147	Operate SATCOM Terminal AN/FSC-78B or AN/GSC-39B	AIT	QT	1-4
113-590-2151	Operate SATCOM Terminal AN/FSC-78C, AN/GSC-39C, or AN/GSC-52A	AIT	QT	1-4
113-590-3162	Maintain SATCOM Terminal AN/FSC-78B or AN/GSC-39B	AIT	QT	1-4
113-590-3170	Maintain SATCOM Terminal AN/GSC-52(V)	UNIT	QT	1-4
113-590-3171	Maintain SATCOM Terminal AN/GSC-78C, AN/GSC-39C, or AN/GSC-52A	AIT	QT	1-4
Subject Area 3. Tactical Satellite Terminals AN/TSC-85(V) and AN/TSC-93(V)				
113-589-1003	Install SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)	UNIT	QT	1-4
113-589-2008	Operate SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)	AIT	QT	1-4
113-589-3048	Maintain SATCOM Terminal AN/TSC-85( ) or AN/TSC-93( )	AIT	QT	1-4
Subject Area 4. Strategic Satellite Terminal AN/TSC-86A				
113-590-1005	Install SATCOM Terminal AN/TSC-86A	UNIT	QT	1-4
113-590-2047	Operate SATCOM Terminal AN/TSC-86A	UNIT	QT	1-4
113-590-3173	Maintain SATCOM Terminal AN/TSC-86A	UNIT	QT	1-4
Subject Area 5. Strategic Satellite Terminal AN/TSC-49(V)				
113-590-2137	Operate SATCOM Terminal AN/GSC-49(V)	UNIT	QT	1-4
113-590-3174	Maintain SATCOM terminal AN/GSC-49(V)	UNIT	QT	1-4
Subject Area 8. ASI-1C				
113-616-2018	Conduct Electronic Counter-Countermeasures (ECCM) Network Controller (ENC) Operations within the Defense Satellite Communications System (DSCS)	ASI	QT	1-4
113-616-2022	Conduct Frequency Division Multiple Access (FDMA) Network Control (FNC) within the Defense Satellite Communications System (DSCS)	ASI	QT	1-4

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
113-616-2023	Conduct Communications Payload Controller (CPC) Operations within the Defense Satellite Communications System (DSCS)	UNIT	QT	1-4
113-616-2028	Conduct Satellite Network Controller (SNC) Operations within the Defense Satellite Communications System (DSCS)	ASI	QT	1-4
113-616-2029	Conduct Ground Mobile Forces Satellite Communications (GMFSC) Network Controller (GNC) Operations within the Defense Satellite Communications System (DSCS)	ASI	QT	1-4
113-616-2030	Conduct Ancillary Equipment Operations within a Defense Satellite Communications System (DSCS) Operations Center (DSCSOC)	ASI	QT	1-4
113-616-3131	Maintain Defense Satellite Communications Systems (DSCS) Operations Center	ASI	QT	1-4
Subject Area 9. MILSTAR				
113-590-2152	Operate MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V)	AFC	QT	1-4
113-590-3172	Maintain MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V)	AFC	QT	1-4
Subject Area 10. Communications Set AN/USC-28(V)				
113-610-2046	Operate Satellite Communications Set AN/USC-28(V)	AFC	QT	1-4
113-610-3085	Maintain Satellite Communications Set AN/USC-28(V)	UNIT	QT	1-4
Subject Area 11. Digital Common Core*				
113-609-2053*	Operate Automated Net Control Device (ANCD) AN/CYZ-10			
171-147-0001*	PREPARE/SEND COMBAT MESSAGES USING FBCB2 VERSION 3.4			
171-147-0005*	APPLY MESSAGE ADDRESSING FEATURES IN FBCB2 VERSION 3.4			
171-147-0006*	PERFORM MESSAGE MANAGEMENT USING FBCB2 VERSION 3.4			
171-147-0007*	PREPARE/SEND OVERLAYS USING FBCB2 VERSION 3.4			
171-147-0008*	PREPARE/SEND REPORTS USING FBCB2 VERSION 3.4			
171-147-0009*	PREPARE/SEND FIRE/ALERT MESSAGES USING FBCB2 VERSION 3.4			
171-147-0010*	PREPARE/SEND ORDER/REQUEST MESSAGES USING FBCB2 VERSION 3.4			
171-147-0011*	PERFORM BEFORE-OPERATIONS PREVENTIVE MAINTENANCE CHECKS AND SERVICES ON FBCB2 VERSION 3.4			
171-147-0012*	PERFORM SHUT-DOWN PROCEDURES FOR FBCB2 VERSION 3.4			
171-147-0013*	PERFORM DURING-OPERATIONS PREVENTIVE MAINTENANCE CHECKS AND SERVICES ON FBCB2 VERSION 3.4			

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
171-147-0014*	PERFORM AFTER-OPERATIONS PREVENTIVE MAINTENANCE CHECKS AND SERVICES ON FBCB2 VERSION 3.4			
171-147-0015*	PREPARE/SEND A LOGISTICAL STATUS REPORT USING FBCB2 VERSION 3.4			
171-147-0017*	EMPLOY MAP FUNCTIONS USING FBCB2 VERSION 3.4			
171-147-0019*	EMPLOY FIPR FUNCTIONS USING FBCB2 VERSION 3.4			
171-147-0020*	EMPLOY STATUS FUNCTIONS USING FBCB2 VERSION 3.4			
171-147-0021*	EMPLOY ADMIN FUNCTIONS USING FBCB2 VERSION 3.4			
171-147-0022*	EMPLOY APPS FUNCTIONS USING FBCB2 VERSION 3.4			
171-147-0023*	EMPLOY NAV FUNCTIONS USING FBCB2 VERSION 3.4			
171-147-0024*	EMPLOY QUICK SEND FUNCTIONS USING FBCB2 VERSION 3.4			
171-147-0025*	EMPLOY FILTERS FUNCTIONS USING FBCB2 VERSION 3.4			
***These tasks will be trained for familiarization only.**				
Skill Level 2				
Subject Area 6. SATCOM Terminal Supervision				
113-589-7121	Supervise the Maintenance of SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)	BNCOC	QT	2-4
113-589-7122	Supervise the Installation of SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)	BNCOC	QT	2-3
113-589-7123	Supervise the Operation of SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)	BNCOC	QT	2-3
Skill Level 3				
113-583-7095	Supervise the Maintenance of the DCSS	BNCOC	QT	3-4
113-583-7096	Supervise the Operation of the DCSS	BNCOC	QT	3-4
113-590-7001	Supervise the Maintenance of SATCOM Terminal AN/GSC-39, AN/FSC-78, AN/GSC-52, or AN/TSC-86	BNCOC	QT	2-3
113-590-7002	Supervise the Operation of SATCOM Terminal AN/GSC-39, AN/FSC-78, AN/GSC-52, or AN/TSC-86	BNCOC	QT	2-3
113-590-7003	Supervise the Installation of SATCOM Terminal AN/TSC-86	UNIT	QT	3-4
113-610-7001	Supervise the Operation of Satellite Communications Set AN/USC-28(V)	UNIT	QT	3-4
113-610-7002	Supervise the Maintenance of Satellite Communications Set AN/USC-28(V)	UNIT	QT	3-4
113-623-6014	Manage a Maintenance Program	BNCOC	QT	3-4
113-638-6001	Manage a Publications Library	BNCOC	QT	3-4

CRITICAL TASKS

Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Subject Area 8. ASI-1C				
113-616-7035	Direct Satellite Network Control within the Defense Satellite Communications System (DSCS)	BNCOC	QT	3-4
113-616-7036	Supervise the Maintenance of Control Equipment in a Defense Satellite Communications System (DSCS) Operations System (DSCSOC)	BNCOC	QT	3-4
Subject Area 9. MILSTAR				
113-590-7006	Supervise the Operation of MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V)	BNCOC	QT	3-4
113-590-7007	Supervise the Maintenance of MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V)	BNCOC	QT	3-4
Skill Level 4				
Subject Area 7. SATCOM Terminal Direction				
113-573-0006	Prepare Emergency Plan	UNIT	QT	4
113-573-0013	Manage a Facility Physical Security Program	ANCOC	QT	4
113-573-2032	Evaluate Communications Security (COMSEC) for Insecurities	ANCOC	QT	4
113-583-7097	Direct the Maintenance of Defense Communications Satellite Subsystem (DCSS)	ANCOC	QT	4
113-583-7098	Direct the Operation of Defense Communications Satellite Subsystem (DCSS)	ANCOC	QT	4
113-589-6001	Establish Network Plans for GMF	ANCOC	QT	4
113-589-7124	Direct the Maintenance of SATCOM Terminal AN/TSC-85 or AN/TSC-93 (V)	ANCOC	QT	4
113-589-7125	Direct the Operation of SATCOM Terminal AN/TSC-85 or AN/TSC-93 (V)	ANCOC	QT	4
113-590-7004	Direct the Maintenance of SATCOM Terminal AN/GSC-39, AN/FSC-78, AN/GSC-52, or AN/TSC-86	ANCOC	QT	4
113-590-7005	Direct the Operation of SATCOM Terminal AN/GSC-39, AN/FSC-78, AN/GSC-52, or AN/TSC-86	ANCOC	QT	4
113-610-7003	Direct the Operation of Satellite Communications Set AN/USC-28(V)	UNIT	QT	4
113-610-7004	Direct the Maintenance of Satellite Communications Set AN/USC-28(V)	UNIT	QT	4
113-611-1013	Perform Site Reconnaissance	UNIT	QT	4
113-611-5012	Maintain a Situation Map	UNIT	QT	4
113-611-5016	Direct the Establishment of a Signal Site Defense	UNIT	QT	4
113-613-7198	Manage Site Configuration Plans	UNIT	QT	4

CHAPTER 3

MOS/Skill Level Tasks

Skill Level 1

Subject Area 1: Digital Communications Satellite Subsystem (DCSS)

Operate Digital Communications Satellite Subsystem (DCSS)
113-583-2625

Conditions: Given associated DCSS equipment, OSP-1310 Manual, Promina 800 Series Node Configuration Manual, Promina 800 Series Operator Interface, Promina 800 Series Quick Reference Guide, TM 11-5805-795-13&P, TM 11-5895-1215-10, TM 11-5895-1346-13, TM 11-5895-1630-13&P, TM 11-5895-1686-13, TM 11-5895-1687-13, applicable Telecommunications Service Orders (TSOs), Unit standing operating procedures (SOP), and operating requirements.

Standards: The DCSS equipment completed the self-test, passed all operational tests, and was passing communications.

Performance Steps

1. Configure equipment as specified in the TSO.
    a. Patch equipment as specified in the TSO.
    b. Perform in-facility continuity checks.
    c. Perform circuit alignment test.
    d. Notify Circuit Control Office (CCO) or Intermediate Control Office (ICO) that tests are completed.
    e. Support user-to-user testing as directed by the CCO.
2. Operate the FCC-100 IAW TM 11-5805-795-13.
    a. Ensure the FCC-100 is populated with the proper cards.
    b. Configure the FCC-100(V) hardware according to the TSO, Gateway Access Authorization (GAA), or cut sheets.
    c. Configure the FCC-100(V) software with the TSO, GAA, or cut sheets.
    d. Place the FCC-100 off-line Configuration on-line.
    e. Employ FCC-100 loopbacks.
        (1) Aggregate loopback.
        (2) Port loopback.
    f. Monitor for alarms.
3. Operate TD-1389 Low Rate Multiplexer (LRM).
    a. Configure the TD-1389 off-line memory according to the TSO or cut sheets.
    b. Place the TD-1389 off-line memory on-line.
    c. Perform a TD-1389 restart.
        (1) Press RST key.
        (2) Press STEP ADV key.
        (3) Press LIST ADV key.
        (4) Press STEP ADV key.
    d. Perform TD-1389 loopback.
        (1) Perform composite loopback.
        (2) Perform user card loopback.
    e. Monitor the TD-1389 for alarms.

Performance Steps

4. Operate TD-1337 Tactical Satellite Signal Processor (TSSP).
    a. Configure the TD-1337 according to the TSO/GAA or cut sheets.
        (1) Configure orderwire (OW).
        (2) Configure local multiplexer (MUX).
        (3) Configure remote MUX.
    b. Place the TD-1337 configured memory on-line.
    c. Perform the TD-1337 loopback option.
    d. Monitor the TD-1337 for alarms.

5. Operate AN/USC-63 Multiplexer Integration and DCSS Automation System (MIDAS)
    a. Configure the AN/USC-63, MIDAS.

NOTE: The steps below pertain to cards in slots 1-5. In the event this task is performed at a communications facility that is operational, the control cards will already be in place and functioning. There will be no need to configure the chassis with control cards. The following procedure steps may only be used during operations under unusual conditions.

(1) Verify that the MIDAS chassis has a Control Processor (CP) card and Bus Controller card as a minimum.

(2) If the CP is missing, follow replacement instructions outlined in TM 11-5895-1630-13&P, paragraph 4-19.

(3) If the Bus Controller card is missing, follow replacement instructions outlined in TM 11-5895-1630-13&P, paragraph 4-22.

    b. Configure the MIDAS chassis with the input/output (I/O) cards required to support circuits.

NOTE: The procedure steps below pertain to cards in slots 10-23 and are required to support any addition of circuits.

        (1) Determine type of I/O card needed to support user requirements and determine the correct slot for card placement in the chassis. The asynchronous transfer mode (ATM) I/O cards can only be placed in slots 20-23 and the ATM Processor cards are limited to slots 16-23.
        (2) Using replacement instructions outlined in TM 11-5895-1630-13&P, paragraph 4-22, install necessary type and number of I/O cards as needed to support user requirements.
    c. Configure the MIDAS chassis with function cards required by the applicable TSOs, GAA, and/or cut sheets.

NOTE: The steps below pertain to cards in slots 6-23 and are required to support any additional circuits. MIDAS racks with only one chassis may not have a Bus Extender Card installed in slot 24, which will then make that slot available for any Dual Multiplexer/Demultiplexer (DMD) card. Determine type of DMD card needed to support user requirements and determine the correct slot for card placement in the chassis.

        (1) Using replacement instructions outlined in TM 11-5895-1630-13&P, paragraph 4-22, install necessary type and number of DMD cards as needed to support specified user data multiplexing requirements.
    d. Configure MIDAS software at the Operator Interface Unit (OIU) to support TSOs, GAA, and/or cut sheets.

NOTE: Card placement in the chassis is limited by software and hardware limitations. The software on the OIU will only allow card placement in areas designated for the chosen card type.

        (1) On the OIU, log into the Windows NT workstation.
        (2) On the OIU, double-click on the MIDAS icon.
        (3) Enter user name and password, then press enter.

Performance Steps

(4) Load current configuration by selecting "Upload Configuration from OSP" from the pull-down menu "OSP" and select the most current operating configuration.
(5) Using the TSO, determine the number and type of I/O cards needed to support the new configuration.
(6) Click on desired I/O card type located on the Card Pallet and place in specified location on the chassis card complement window.
(7) Double-click on the I/O card and configure the card according to the parameters outlined in the TSO and using Appendix G in the OSP-1310 Software/Operator User's Guide, paragraph 3.6.
(8) Verify the I/O card by clicking on the "Verify" button on the I/O card configuration window.
(9) Correct any errors or discrepancies identified.

NOTE: Card placement in the chassis is limited by software and hardware limitations. The software on the OIU will only allow card placement in areas designated for the chosen card type.

(10) Using the TSO, determine the type of DMD card needed to support specified user data multiplexing requirements.
(11) Select DMD from the Card Pallet and place in specified location on the desired chassis card complement window.
(12) Double-click on the DMD card and configure the card according to the parameters outlined in the TSO and using Appendix G in the OSP-1310 Software/Operator User's Guide, paragraph 3.6.
(13) Verify the DMD card by clicking on the "Verify" button on the DMD card configuration window.
(14) Correct any errors or discrepancies identified.
(15) Once verify is completed on each individual I/O and DMD card, perform a complete configuration verify by clicking on "Tools" (on the Menu tool bar) and choosing "Verify All."
(16) Correct any warnings and errors in the configuration, repeating step (15) above until no errors or warnings remain.
(17) When all errors and warnings are rectified, select "File, Save As" from the Menu tool bar and save the new configuration parameters according to site SOP.

NOTE: The File: Save menu item is only available to users with an Operator or System Administrator access level.

e. Perform MIDAS end-to-end and loopback testing as required.
(1) Select "Change Mode" from "OSP" on the Menu tool bar.
(2) Select the saved file containing the new configuration from the list in the MIDAS Mode Change window.
(3) Verify that the "Operate" radio button is selected under "Mode" and the "Full" radio button is selected under "Type" on the MIDAS Mode Change window.
(4) Click the "OK" button on the MIDAS Mode Change window.
(5) Verify that the new configuration is loaded into the MIDAS.
(6) Begin end-to-end and loopback testing as required until circuit path successfully passes the verification tests as per SOP.

f. Place MIDAS circuits on-line.
(1) Remove all test equipment inputs to user path and ensure that the circuit path is clear from end to end.
(2) Place circuit on-line and monitor status.

6. Operate the OM-73(V)/G.
a. Perform the OM-73 power-up procedures.
(1) Ensure power light emitting diode (LED) illuminates.
(2) Allow module to perform initial self-test, observing results in the Data Rate window after 10 seconds.
(3) Verify that the proper module number is shown in the module window.

Performance Steps

b. Configure the OM-73 Modulator/ Demodulator and Controller IAW the TSO, GAA, and/or cut sheets.
   (1) Press Edit to enter configuration and use the Step MDL to reach the module to be changed.
   (2) Enter correct variables into each selection.

7. Operate MD-1352 Bandwidth Efficient Modem (BEM).
   a. Poll status of all the modems. (Refer to TM 11-5895-1687-13&P, page 3-3, Manual Script/Remote; and Appendix E-1.)
   b. Configure the MD-1352 Modulator card (VLM7650M).
   c. Configure the MD-1352 Demodulator card (VLM7650D).
   d. Configure the MD-1352 Controller.
   e. Access the MD-1352 faults by selecting the Fault Status Screen from the VME controller configuration.
      (1) Monitor the MD-1352 faults and alarms.

8. Operate the Comquest Modem CQM-248A.
   a. Configure the CQM-248A.
   b. Perform CQM-248A loopbacks and utilize the built-in bit-error-rate-tester (BERT).
      (1) Perform CQM-248A intermediate frequency (IF) loopback with BERT.
      (2) Enable IF loopback via the remote control command.
      (3) Enable CQM-248A built-in BERT either by remote or front panel configuration. Verify that the Demodulator locks and that the RxSync lights green.
      (4) Perform CQM-248A Near Data Loopback.
         (a) Select the LB_2 option on the remote control command or the Loopback_Near.
   c. Monitor CQM-248A status reporting of operating parameters and status conditions.
      (1) Front panel monitoring.
      (2) Remote control command monitoring.
         (a) ST query.
         (b) VS query.

9. Operate the Promina.
   a. Occupy the Promina with appropriate trunk and port cards according to the TSO or GAA.
      (1) Determine the type of trunk card needed, along with the interface card, by using the TSO and the Trunk Modules Chart in Chapter 5 of the Promina 800 Series Quick Reference Guide..
      (2) Determine the type of port card needed, along with the interface card, by using the TSO and the Voice Modules Chart located in Chapter 6 and the Data Modules Chart in Chapter 7 of the Promina 800 Series Quick Reference Guide.
      (3) Determine the slot on the Integrated Digital Network Exchange (IDNX) that is used to install the trunk and port cards.
      (4) Use the "Query Card" command to verify that the slot is not configured for another card type.
      (5) Install trunk and port cards according to the card installation procedures outlined in the Promina Card Installation Guide, Release 13.x3.
   b. Configure Promina external equipment to allow the Promina to access the network.
      (1) Ensure the rear interface cards are connected to external equipment via the appropriate type cable.
      (2) Ensure the Promina data path is complete by configuring any external data processing equipment and verifying they are connected via data cables, powered on, and operational.
   c. Configure Promina ports, port cards, voice compression cards, and (if required) trunk cards. (Refer to the Promina 800 Series Operator Interface Manual, Chapter 4 (Operator Interface Commands).)
      (1) Configure card according to the TSO.
      (2) Install the card via the operator interface.

Performance Steps

(3) Query the card via the operator interface to ensure that the card is installed and recognized by the IDNX software.
(4) Modify the card via the operator interface and configure according to parameters outlined in the TSO.

d. Configure Promina trunk cards (if required).
e. Enable Promina ports, port cards, trunk cards, and voice compression (if required). (Refer to the Promina 800 Series Operator Interface Manual, Chapter 4 (Operator Interface Commands).)
(1) Activate ports.
(2) Enable the port via the operator interface.
(3) Activate the port via the operator interface.
(4) Activate port card.
(5) Enable the card via the operator interface to verify configuration and external equipment.
(6) After verifying external equipment and card configuration, activate the card via the operator interface.
f. Verify establishment of the Promina link. (Refer to the Promina 800 Series Operator Interface Manual, Chapter 4 (Operator Interface Commands).)
(1) Query trunk cards and the link.
(2) Query the trunk card via the operator interface.

NOTE: For the trunk module to activate, the operator must verify that the following parameters are configured compatibly on both sides of the link: Neighbor node, Trunk attributes and Encryption, Fiber, Satellite/Terrestrial (set identically).

(3) Query the link.

NOTE: The configuration of the destination port is available only when the link is up and a destination port is defined.

g. Perform Promina loopback testing across the configured circuits. (Refer to the Promina 800 Series Operator Interface Manual, Chapter 4 (Operator Interface Commands).)
(1) Loop the port via the operator interface to verify proper interface performance and to isolate a problem to a specific component or interface.

NOTE: Using the Loop Port command to loop local or remote is independent of setting the loop switch on the card to loop local or remote. This is true for data ports, but not for trunk and voice cards.

(2) Loop the card via the operator interface to verify proper interface performance and to isolate a problem to a specific component or interface.
h. Verify establishment of Promina calls routed through the ports; query the Call Control Block via the operator interface. (Refer to the Promina 800 Series Operator Interface Manual, Chapter 4 (Operator Interface Commands).)

10. Operate the Switch Multiplexer Unit (SMU).
a. Power up the SMU. (Refer to TM 11-5805-802-13&P, Chapter 2 for the SMU operating procedures.
(1) Ensure the SMU is powered and ready for operation.
(a) If the SMU is already powered on, the Automatic SMU Load procedures may be used in place of the manual start-up procedures.
(b) If the SMU is initially being powered up, perform the manual start-up procedures outlined in the TM.
(2) If the SMU is not powered on, follow the start-up procedures outlined in the TM.
(a) Load the database from DBPOS1; this is the only position that the Litton Emulator (LIM) software can load from.
(b) If the redundant SMU is used, ensure that it is powered on and the AUTO/MANUAL switch is set to AUTO.

Performance Steps

b. Configure the SMU. (Refer to the Network Nodal Managers (NNM) Reference Guide, Chapter 2, unless otherwise indicated.)
   (1) Verify that the external communications equipment and encryption devices are on and connected to the SMU. (Refer to applicable equipment manual for any external equipment.)
   (2) Perform the Assign Switch Initialization procedures.
   (3) Perform the Assign Terminal Type (Loop Key Generators and Local/Remote Call Service Positions) procedures.
   (4) Perform the Assign Switch Classmarks procedures.

NOTE: The following steps are for programming the SMU for Digital Trunks to Home Area Code using Flood Search.

   (5) Perform the Assign Digital Transmission Group (DTG) using the NNM Reference Guide, Chapter 2, and the TSO.
   (6) Perform the Assign T1CEPT procedures, if necessary.
   (7) Perform the Assign Trunk Group Cluster command, if necessary.
   (8) Perform the Assign Terminal Service procedures.
   (9) Perform the Assign Multiple Trunks command, if necessary.
   (10) Perform the Assign Interswitch Link Initialization command after the SMU is on-line.

NOTE: The following steps are for programming the SMU for Digital Trunks to Home Area Code using digital in-band trunk signaling (DIBTS) in a small extension node (SEN) or radio access unit (RAU), ADJ area/non-flood, non-flood/DSN, and analog.

   (11) Perform the Assign DTG.
   (12) Perform the Assign SEN/RAU command.
   (13) Perform the Assign Terminal Service command for SEN, RAU, DIBTS, and analog NATO.
   (14) Save the created database according to the procedures outlined in TM 11-5805-802-13&P, Chapter 2.

c. Ensure circuits are operational and passing communications.

11. Operate the AN/USC-64 Integrated Control Console (ICC).
   a. Logon the AN/USC-64 ICC.
      (1) Login as an operator.
      (2) Enter the default mode "AlarmAndICC."
   b. Configure AN/USC-64 equipment.
      (1) Adding/modifying the Alarm Rack type 74.
      (2) Deleting the Alarm Rack type 74.
      (3) Adding/deleting/configuring devices.
   c. Monitor the AN/USC-64 equipment status and faults.
      (1) Viewing current alarms.
      (2) Visual alarm mapping.
      (3) Viewing system configuration.

12. Operate the Timeplex Link/2+ system.
   a. Configure the following Timeplex Link/2+ cards if applicable.
   b. Place the configuration on-line.
   c. Perform software and hardware loopbacks.
   d. Monitor for alarms.

Performance Measures	**GO**	**NO GO**
1. Configured equipment as specified in the TSO.	____	____
2. Operated the FCC-100 IAW TM 11-5805-795-13&P.	____	____
3. Operated the TD-1389 LRM.	____	____

Performance Measures	GO	NO GO
4. Operated the TD-1337.	____	____
5. Operated the AN/USC-63 MIDAS.	____	____
6. Operated the OM-73(V)/G.	____	____
7. Operated the MD-1352 BEM.	____	____
8. Operated the CQM-248A.	____	____
9. Operated the Promina.	____	____
10. Operated the SMU.	____	____
11. Operated the AN/USC-64 ICC.	____	____
12. Operated the Timeplex Link/2+ System.	____	____

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
OSP-1310	PROMINA3
PROMINA	PROMINA4
PROMINA1	PROMINA5
PROMINA2	PROMINA6
TM 11-5805-795-13&P	TM 11-5805-802-13&P
TM 11-5895-1215-10	TM 11-7025-221-10
TM 11-5895-1346-13	TM CQT-6400-IOM-02
TM 11-5895-1630-13&P	
TM 11-5895-1686-13	
TM 11-5895-1687-13	

Maintain Digital Communications Satellite Subsystem (DCSS)

113-583-3273

Conditions: Given associated DCSS equipment, IDNX Manual, TM 11-5805-795-13&P, TM 11-5895-1215-20, TM 11-5895-1346-13, TM 11-5895-1630-13&P, TM 11-5895-1686-13, TM 11-7025-221-20, TM CQT-6400-IOM-02, applicable TSOs, Unit SOP, and operating requirements.

Standards: The DCSS equipment completed the self-test, passed all operational tests, and was passing communications.

Performance Steps

1. Perform equipment power-up procedures.
   a. Configure each piece of equipment according to the TSO, cut sheets, or local SOP.
   b. Patch all equipment and place on-line.
   c. If no alarms or faults are present, go to performance step 14.
   d. If any faults occur, go to performance step 2.

2. Isolate fault to piece of equipment.
   a. Check for alarms on the DCSS equipment. If alarms are found, go to performance step 3.
   b. Perform loop testing to isolate to individual equipment; once isolated go to performance step 3.

NOTE: Performing loop testing may cause loss of communications. Ensure signal flow of each piece of equipment is followed to isolate problems.

3. Troubleshoot the DCSS equipment.

NOTE: Not all DCSS locations are equipped with the following DCSS equipment. If equipment is not listed, reference equipment TM or Manufacturer's Manual.

   a. If an FCC-100 fault is present, go to performance step 4.
   b. If a TD-1389 fault is present, go to performance step 5.
   c. If an SMU fault is present, go to performance step 6.
   d. If a TD-1337 fault is present, go to performance step 7.
   e. If a Promina fault is present, go to performance step 8.
   f. If a MIDAS fault is present, go to performance step 9.
   g. If an OM-73 fault is present, go to performance step 10.
   h. If an MD-1352 fault is present, go to performance step 11.
   i. If a CQM-248A fault is present, go to performance step 12.
   j. If a Timeplex fault is present, go to performance step 13.
   k. If an ICC fault is present, go to performance step 14.

4. Troubleshoot the FCC-100. (Refer to TM 11-5805-795-13.)
   a. Analyze the FCC-100 alarms according to alarm reporting. (Table 5-2 in TM.)
   b. Perform the FCC-100 off-line built-in test equipment (BITE) test. (Chapter 5-9.5.2 in TM.)
   c. Follow the FCC-100 troubleshooting flowchart. (Chapter 5-9.5.3 and Chapter 6-6 in TM.)
   d. Replace failed FCC-100 circuit card module. (Chapter 5-13 in TM.)
   e. Return the FCC-100 to a proper operating condition.

5. Troubleshoot the TD-1389 LRM. (Refer to TM 11-5895-1215-20, unless otherwise indicated.)
   a. Analyze the TD-1389 BITE diagnostic messages shown on the display. (Chapter 2-17 in TM.)
      (1) Line 1, alarm classification.
      (2) Line 2, fault localization.
   b. Follow the TD-1389 Operator's Troubleshooting Flowchart. (Refer to TM 11-5895-1215-10, Chapter 3-3 and TM 11-5895-1215-20, page 2-15.)
   c. Replace the TD-1389 user card. (Refer to TM 11-5895-1215-20, Chapter 2-21.)
   d. Return the TD-1389 equipment to a proper operating condition.

Performance Steps

6. Troubleshoot the TD-1337 TSSP.
    a. Use the TD-1337 alarm recall display to further isolate malfunctioning components. (Refer to TM 11-7025-221-10, Chapter 2-21 and TM 11-7025-221-20, Chapter 2-14.)
    b. Follow the TD-1337 troubleshooting flowchart. (Refer to TM 11-7025-221-10, paragraph 3-2.)
    c. Perform TD-1337 plug-in card replacement instructions. (Refer to TM 11-7025-221-20, Chapter 2-18.)
    d. Return the TD-1337 equipment to a proper operating condition.

7. Troubleshoot the MIDAS. (Refer to TM 11-58995-1630-13&P.)
    a. Select MIDAS Explorer menu option on the OSP Menu to display faults and priorities.
    b. If fault and fault code are Rack faults (Priority 1 fault), use the fault code displayed on the OIU. (Refer to Table 4-2 in TM.)
    c. Follow the corrective actions as outlined and in the prescribed sequence until all faults are cleared and communications are restored.
    d. If fault and fault code are Card faults (Priority 2 fault), use the fault code displayed on the OIU. (Refer to Table 4-2 in TM.)
    e. Follow the corrective actions as outlined and in the prescribed sequence until all faults are cleared and communications are restored.

8. Troubleshoot the OM-73(V)/G. (Refer to TM 11-5895-1346-13.)
    a. Analyze alarms on the controller for the modulator.
    b. Isolate the OM-73 failure code while performing a commanded self-test. Value window will display "None" or give a card fault code. (Refer to Table 3-4 in TM.)
    c. Identify that the controller fails to respond to the remote controller.
        (1) Check controller baud rate. If fault is cleared, go to performance step 15. (Refer to Table 2-4.)
        (2) Replace the digital card. If fault is cleared, go to performance step 15.
        (3) Replace the controller. If fault is cleared, go to performance step 15.
    d. Isolate the OM-73 module's unsuccessful power-up. (Refer to TM 11-5895-1346-13.)
        (1) Verify that power is applied to the module.
        (2) Check fuses.
        (3) Verify that all cables are connected to the module.
        (4) Inspect module pins and modem chassis backplane for bent pins or other mechanical defects.
        (5) Remove the module and ensure that the module's power supply is correctly plugged in. If fault is cleared, go to performance step 15.
        (6) Replace the power supply. If fault is cleared, go to performance step 15.
        (7) Replace the display card. If fault is cleared, go to performance step 15.
        (8) Replace the digital card. If fault is cleared, go to performance step 15.
    e. Isolate the OM-73 controller’s self-test failure.
        (1) Replace the digital card. If fault is cleared, go to performance step 15.
        (2) Replace the display card. If fault is cleared, go to performance step 15.
        (3) Replace the module and refer to a higher maintenance level.
    f. Isolate the OM-73 failure code while performing a commanded self-test. Value window will display "None" or give a card fault code. (Refer to Table 3-4 in TM.)

9. Troubleshoot the MD-1352 BEM. (Refer to TM 11-5895-1687-13&P.)
    a. Isolate the MD-1352 BEM faults by the built-in alarms and status indicators or by evaluating other visual or reported evidence that the MD-1352(P)/U is not functioning in a normal manner. (Refer to Chapter 5 in TM.)
        (1) Alarm condition occurs.
        (2) User or remote terminal operator reports a problem.
        (3) Fault found while performing preventive maintenance.
    b. Query the MD-1352 alarms.
    c. Localize fault to a module. (Refer to Chapter 5 in TM.)

Performance Steps

d. Temporary patch to a different module.
e. Place faulted module in sleep mode.
f. Replace module.
g. Restore the MD-1352 circuit to an operational condition; then go to performance step 15.

10. Troubleshoot the CQM-248A.
    a. Perform the CQM-248A self-test capabilities. (Refer to TM CQT-6400-IOM-02, page 96.)

NOTE: Perform a self-test each time the unit is turned on. (Reference Description of Status Conditions and Faults on page 143 and Command Error Code on page 139 in TM CQT-6400-IOM-02.)

    b. Replace faulted CQM-248A cards. (Refer to TM CQT-6400-IOM-02, page 97.)

NOTE: All CQM-248A cards are static sensitive electronics.

    c. Restore the CQM-248A to an operational condition; then go to performance step 15.

11. Troubleshoot the Promina.
    a. Determine the most probable location of the fault upon any communications failure as indicated by alarm condition or notification of Promina software. (Refer to Chapter 4 in the IDNX Documentation, Master Index R13.x3, Theory of Operation and Diagnostics.)
    b. Ensure that the faulted condition of the Promina is not a result of a faulted user or data equipment that provides any input into the Promina. (Refer to the applicable Promina manual if the fault is the result of a faulted user or data input equipment.)
    c. Begin fault isolation of the Promina if all user or data input equipment is functioning correctly.
    d. Observe the Operator Interface menu screen to determine if the "Alarms Pending" message is displayed.
    e. Access the Event Log, which records specific network events, to determine if any changes are made that might affect the communications path.
    f. Access the Alarm Summary (Network Alarm Summary and Node Alarm Summary) pages to identify alarms tripped by a network resource failure.
    g. Observe the front panel of individual cards for LED indicators of a faulted condition. (Refer to Table 4-1 in the IDNX Documentation, Master Index R13.x3, Theory of Operation and Diagnostics for color descriptions of the LEDs that appear on a front panel.)
    h. Verify that all inputs are correct and there are no problems with external equipment.

NOTE: At the bottom of each card's front panel is the notation REV, meaning Revision. This information is important because enhancements to the system software might require the most current cards for complete operational compatibility.

    i. Determine the specific card that has failed, proceed with loopback procedures as outlined in Chapter 7 of the IDNX Documentation, Master Index R13.x3, Theory of Operation and Diagnostics.
    j. Enter loop command at the operator interface in cooperation with distant end operator. (Refer to the Promina 800 Series Operator Interface manual.)
    k. Replace faulted card.
    l. Restore communications and monitor Promina network for reliable communications; then go to performance step 15.

12. Troubleshoot the SMU.
    a. Upon any communications failure as indicated by alarm condition and error messages on the operator console, begin isolation of probable cause of the fault condition.

NOTE: Ensure that the faulted condition of the SMU is not a result of a faulted user or data equipment that provides any input into the SMU. If the SMU fault is a result of a faulted user or data input equipment, utilize the applicable manual for that piece of equipment to correct deficiency.

    b. Begin fault isolation of the SMU if all user or data input equipment is functioning correctly.

Performance Steps

c. Analyze the SMU error messages on the operator console and fault indicators in conjunction with the SMU system fault isolation chart located in Chapter 3 of TM 11-5805-802-13&P.

NOTE: It is important to determine the software program that is being utilized for interface with the SMU (CSOLOP or SWOLOP) to correctly determine which fault message table to use when attempting to isolate a fault.

d. Determine the SMU fault isolation path using system fault isolation flowchart.
e. Look up all fault messages and/or equipment fault indications, paying attention to their priority.
f. Perform SMU corrective measures based on the highest priority fault.

NOTE: Certain system status messages may occur during normal switch operation. These messages and required operator responses are listed in Tables 3-5 and 3-6 of TM 11-5805-802-13&P.

g. Perform SMU corrective measures outlined in the fault isolation chart and error message tables until the fault is corrected or until all messages are serviced.

NOTE: For card removal and installation procedures, refer to Chapter 3 in TM 11-5805-8002-13&P.

h. Perform any necessary SMU link loops or testing in cooperation with users and the distant end operator to verify correction of faulted component before placing back into an operational status; then go to performance step 15.

13. Troubleshoot the Timeplex. (Refer to the Integrated Connectivity Systems Installation and Maintenance Manual, Chapter 8, page 8-1.)
    a. Perform a self-test of the unit.
    b. Record alarm indicator numbers and messages to help isolate the malfunction. (Refer to troubleshooting procedures in Chapter 8.)
    c. Perform loopback procedures. Channel and/or intermachine link loopbacks to isolate the problem.
    d. Implement replacement procedures.
        (1) Check that the supervisory terminal and or supervisor computer are connected and operating. All cables are correctly and securely connected.
        (2) Replace the following modules as required according to the Manufacturer's Manual (Chapter 9, page 9-1).
            (a) Replace modules using IPR cable.
            (b) Replace modules using IPR power cable.
            (c) Replace modules using the IPR switch.
            (d) Replace line termination modules.
            (e) Replace modules installed on rear of mainframe.
    e. Place unit on-line; then go to performance step 15.
14. Troubleshoot the AN/USC-64 ICC. (Refer to TM 11-5895-1686-13&P.)
    a. Analyze alarms and faults on the AN/USC-64 ICC IAW Chapter 5-7, Table 5-6 in the TM.
    b. Replace faulted AN/USC-64 components IAW Chapter 5-16 in the TM.
    c. Return system to an operational status.
15. Return the DCSS to an operational state.
    a. Monitor for alarms.
    b. Ensure that all communications are passing traffic.

Performance Measures	**GO**	**NO GO**
1. Performed equipment power-up procedures.	____	____
2. Isolated fault to piece of equipment.	____	____
3. Troubleshot DCSS equipment to individual piece of faulted equipment.	____	____

Performance Measures	GO	NO GO
NOTE: Not all DCSS locations are equipped with the following DCSS equipment. If equipment is not listed, reference equipment TM or Manufacturer's Manual.		
4. Troubleshot the FCC-100.	____	____
5. Troubleshot the TD-1389 LRM.	____	____
6. Troubleshot the TD-1337 TSSP.	____	____
7. Troubleshot the MIDAS.	____	____
8. Troubleshot the OM-73(V)/G.	____	____
9. Troubleshot the MD-1352 BEM.	____	____
10. Troubleshot the CQM-248A.	____	____
11. Troubleshot the Promina.	____	____
12. Troubleshot the SMU.	____	____
13. Troubleshot the Timeplex.	____	____
14. Troubleshot the AN/USC-64 ICC.	____	____
15. Returned the DCSS equipment to an operational state.	____	____

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
IDNX MANUAL	
TM 11-5805-795-13&P	
TM 11-5895-1215-20	
TM 11-5895-1346-13	
TM 11-5895-1630-13&P	
TM 11-5895-1686-13	
TM 11-7025-221-20	
TM CQT-6400-IOM-02	

Subject Area 2: Strategic Satellite Terminal AN/GSC-52(V), AN/GSC-39(V), and AN/FSC-78(V)

Operate SATCOM Terminal AN/GSC-52(V)
113-590-2135

Conditions: Given a satellite communications (SATCOM) terminal AN/GSC-52(V) and TM 11-5895-1196-13-2 or TM 11-5895-1197-13-3.

Standards: The terminal was operational.

Performance Steps

1. Ensure alternating current (AC) power is applied to all equipment.
2. Ensure all subsystem controllers are set in the REMOTE position.
   a. Low noise amplifier (LNA).
   b. Transmit.
   c. Frequency.
   d. Control monitor and alarm (CMA).
   e. Antenna (OE-371).
   f. Downconverter.
   g. Upconverter.
   h. Keyboard.
   i. Digital computer (CP-1676/G).
3. Ensure all local equipment is set in the REMOTE position.
4. Bring up earth terminal (ET) display and ensure all subsystems are operational.
5. Bring up performance monitor display and verify all system parameters are within tolerance.

Performance Measures	**GO**	**NO GO**
1. Ensured AC power was applied to all equipment.	____	____
2. Ensured all subsystem controllers were set in the REMOTE position.	____	____
3. Ensured all local equipment was set in the REMOTE position.	____	____
4. Brought up earth terminal (ET) display and ensured all subsystems were operational.	____	____
5. Brought up performance monitor display and verified that all system parameters were within tolerance.	____	____

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 11-5895-1196-13-2	
TM 11-5895-1197-13-3	

Operate SATCOM Terminal AN/FSC-78B or AN/GSC-39B

113-590-2147

Conditions: Given a SATCOM terminal AN/FSC-78B(V) or AN/GSC-39B(V), TSO from the Satellite Network Controller (SNC), ephemeris data, and test, measurement, and diagnostic equipment (TMDE) listed in TM 11-5895-1535-12.

Standards: The SATCOM terminal was operational.

Performance Steps

1. Perform preoperational adjustments. (Follow the appropriate TM procedures for the AN/GSC-39B or AN/FSC-78B.)
2. Perform preoperational checks. (Follow the appropriate TM procedures for the AN/GSC-39B or AN/FSC-78B.)
3. Perform satellite acquisition.
4. Perform satellite tracking.
5. Perform uplink carrier alignment. (Follow the appropriate TM procedures for the AN/GSC-39B or AN/FSC-78B.)
6. Perform uplink carrier level adjustment. (Follow the appropriate TM procedures for the AN/GSC-39B or AN/FSC-78B.)
7. Perform carrier-to-noise density ratio check.
8. Perform manual switchover.
9. Configure terminal equipment for automatic switchover.
10. Perform downlink traffic monitoring.
11. Perform uplink signal and traffic monitoring.
12. Perform terminal equipment selection and status monitoring.

Performance Measures	**GO**	**NO GO**
1. Performed preoperational adjustments.	____	____
2. Performed preoperational checks.	____	____
3. Performed satellite acquisition.	____	____
4. Performed satellite tracking.	____	____
5. Performed uplink carrier alignment.	____	____
6. Performed uplink carrier level adjustment.	____	____
7. Performed carrier-to-noise density ratio check.	____	____
8. Performed manual switchover.	____	____
9. Configured terminal equipment for automatic switchover.	____	____
10. Performed downlink traffic monitoring.	____	____

Performance Measures	GO	NO GO
11. Performed uplink signal and traffic monitoring.	____	____
12. Performed terminal equipment selection and status monitoring.	____	____

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
APPLICABLE TSO	TM 11-5895-1531-30
TM 11-5895-1535-12	TM 11-5895-1532-30
	TM 11-5895-1533-30
	TM 11-5895-1534-30
	TM 11-5895-1536-13
	TM 11-5895-1537-13
	TM 11-5895-1558-13

Operate SATCOM Terminal AN/FSC-78C, AN/GSC-39C, or AN/GSC-52A

113-590-2151

Conditions: Given a SATCOM terminal AN/FSC-78C, AN/GSC-39C, or AN/GSC-52A and appropriate integrated electronic technical manual (IETM/AN/GSC-52A, 78C, 39C).

Standards: SATCOM terminal AN/FSC-78C, AN/GSC-39C, or AN/GSC-52A was operational.

Performance Steps

1. Determine through necessary means that an unusual condition exists.
   a. Extreme weather conditions.
   b. Unusual power conditions.
   c. Unusual equipment conditions.
2. Reference individual unusual conditions in the IETM.
3. Operate the system under unusual conditions per IETM instructions.

Performance Measures	**GO**	**NO GO**
1. Determined through necessary means that an unusual condition existed.	____	____
2. Referenced individual unusual conditions in the IETM.	____	____
3. Operated the system under unusual conditions per IETM instructions.	____	____

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**
IETM/AN/GSC-52A, 78C, 39C	

Maintain SATCOM Terminal AN/FSC-78B or AN/GSC-39B

113-590-3162

Conditions: Given a defective terminal AN/FSC-78B(V) or AN/GSC-39B(V), TMDE listed in appropriate TM, TM 11-5895-1532-30, TM 11-5895-1558-13, DA PAM 738-750, and DA Form 2404 (Equipment Inspection and Maintenance Worksheet), and/or DA Form 2407 (Maintenance Request).

Standards: Restored communications by using spare equipment.

Performance Steps

1. Check the fault and system status panel (FSSP) 14A16 for visual/audible alarm situations.
2. Localize fault to a functional uplink, downlink, and tracking.
3. Determine the defective functional group.
4. Restore communications by using spare equipment.
5. Complete DA Form 2404 and/or DA Form 2407.

Performance Measures	**GO**	**NO GO**
1. Checked the FSSP 14A16 for visual/audible alarm situations.	____	____
2. Localized fault to a functional uplink, downlink, and tracking.	____	____
3. Determined the defective functional group.	____	____
4. Restored communications by using spare equipment.	____	____
5. Completed DA Form 2404 and/or 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. Have the soldier practice until he can correctly perform the task.

References

Required	**Related**
DA FORM 2404	TM 11-5895-1531-30
DA FORM 2407	TM 11-5895-1533-30
DA PAM 738-750	TM 11-5895-1534-30
TM 11-5895-1532-30	TM 11-5895-1535-12
TM 11-5895-1558-13	TM 11-5895-1536-13
	TM 11-5895-1537-13
	TM 11-5895-1557-30-1
	TM 11-5985-359-13

Maintain SATCOM Terminal AN/GSC-52(V)

113-590-3170

Conditions: Given a defective AN/GSC-52(V), TMDE, and tools as listed in appropriate TMs, DA Form 2404, DA Form 2407, DA PAM 738-750, TM 11-5895-1196-13-2, TM 11-5895-1196-13-3, TM 11-5895-1196-13-5, TM 11-5895-1196-13-6, TM 11-5895-1197-13-3, TM 11-5895-1197-13-4, TM 11-5895-1197-13-6, TM 11-5895-1197-13-7.

Standards: The equipment was operational.

Performance Steps

1. Determine if the subsystems are functioning.
   a. LNA.
   b. Transmit.
   c. Frequency.
   d. CMA.
   e. Antenna subsystem (OE-371).
   f. Downconverter.
   g. Upconverter.
   h. Keyboard.
   i. Digital computer (CP-1676/G).
2. Verify any abnormal symptoms.
3. Visually inspect all components and cables.
4. Sectionalize, localize, and/or isolate the trouble to the lowest repairable unit (LRU).
5. Repair by removing/replacing or aligning/adjusting.
6. Test/operate the replaced unit.
7. Complete DA Form 2404 and/or DA Form 2407.

Performance Measures	**GO**	**NO GO**
1. Determined if the subsystems were functioning.	____	____
2. Verified the symptom.	____	____
3. Visually inspected all components and cables.	____	____
4. Sectionalized, localized, and/or isolated the trouble to the LRU.	____	____
5. Repaired by removal/replacement or alignment/adjustment.	____	____
6. Tested/operated the replaced unit.	____	____
7. Completed DA Form 2404 and/or 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. Have the soldier practice until he can correctly perform the task.

References

Required	Related
DA FORM 2404	
DA FORM 2407	
DA PAM 738-750	
TM 11-5895-1196-13-2	
TM 11-5895-1196-13-3	
TM 11-5895-1196-13-5	
TM 11-5895-1196-13-6	
TM 11-5895-1197-13-3	
TM 11-5895-1197-13-4	
TM 11-5895-1197-13-6	
TM 11-5895-1197-13-7	

Maintain SATCOM Terminal AN/GSC-78C, AN/GSC-39C, or AN/GSC-52A

113-590-3171

Conditions: Given a SATCOM terminal AN/GSC-78C, AN/GSC-39C, or AN/GSC-52A and appropriate IETM to conduct the proper procedures to restore the terminal to an operational condition.

Standards: SATCOM terminal AN/GSC-78C, AN/GSC-39C, or AN/GSC-52A was restored to an operational condition.

Performance Steps

1. Determine through necessary means that an unusual condition exists.
   a. Normal weather conditions.
   b. Unusual power conditions.
   c. Unusual equipment conditions.
2. Reference individual unusual condition in the IETM.
3. Perform require steps to operate the system under unusual conditions per IETM instructions.

Performance Measures	**GO**	**NO GO**
1. Determined through necessary means that an unusual condition exists.	____	____
2. Referenced individual unusual conditions on the IETM.	____	____
3. Performed required steps to operate the system under unusual conditions as per the IETM instructions.	____	____

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**
IETM/AN/GSC-52A, 78C, 39C	

Subject Area 3: Tactical Satellite Terminals AN/TSC-85(V) and AN/TSC-93(V)

Install SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)

113-589-1003

Conditions: Given a SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V), antenna group AS-3036/TSC, generator set PU-405A or PU-753/M, predetermined site location, azimuth and elevation, TB 43-0129, TM 9-6115-464-12, TM 5-6115-585-12, TM 11-5895-1433-12-1, TM 11-5895-1433-12-2, TM 11-5895-1434-12-1, TM 11-5895-1434-12-2, and local Unit SOP.

Standards: Installed the AN/TSC-85 (V) or AN/TSC-93 (V) IAW TM 11-5895-1433-12-1 and TM 11-5895-1434-12-1 and met all safety requirements listed in TB 43-0129.

Performance Steps

1. Site selection.
    a. Locate general elevation of satellite.
    b. Select an area that meets topographical standards outlined in the TM.
    c. Check soil conditions for stability, anchoring, and effective grounding.
    d. Ensure the terminal, antenna, and equipment are not hampered by electrical interference.

WARNING: The following performance steps are to be performed during the actual installation by qualified soldiers. All safety considerations should be observed, implemented, and adhered to.

2. Determine antenna-siting points for correct azimuth.
    a. First siting point.
    b. Second siting point.

3. Position generator set.
    a. Place generators in proper location.
    b. Ground generators.
    c. Position and ground transfer box.

CAUTION: One soldier must hold frame members 4b to maintain structure stability until remaining frame members are installed. DO NOT over tighten frame members or they might freeze in place. Face all handles down and to the rear of antenna. DO NOT force the quick release pins into structure or damage and personal injury will occur.

4. Assemble antenna.
    a. Position antenna ground pad.
    b. Connect front and rear leg assemblies.
    c. Connect Center Base Frame Member.
    d. Check azimuth on antenna and move structure to correct azimuth alignment.
    e. Connect right and left Front Base Frame Members.
    f. Connect right and left Base Frame Members (damage will occur if stood on).
    g. Connect right and left side leg assemblies.
    h. Check and level antenna.

WARNING: The antenna center section is heavy and fragile. Special attention must be made to ensure that all portions of the antenna are properly installed, secured, and mounted on the frame assembly. Ensure that proper lifting techniques are used for equipment, especially the center reflector of the antenna, by use of the hoist assembly.

CAUTION: DO NOT step on antenna center section or equipment will be damaged.

    i. Place center section on antenna support structure.
    j. Mount disk drive and left trailing arm.
    k. Check and level antenna.

Performance Steps

CAUTION: When handling actuators, DO NOT turn actuator rod on end or protective boot may be damaged. DO NOT let fingers get in-between cross elevation actuator and its arm or personal injury may occur. Check the actuators and the protective boots to see if damage occurred during installation.

l. Install elevation and cross-elevation actuators to disk drive.
m. Attach antenna pedals and latch/lock in place.
n. Attach lightning rod.

CAUTION: Be careful when handling and working with the feed tube assembly and adaptor. The feed tube adaptor has a thin membrane, which is easily damaged.

DO NOT allow anything that could damage the feed tube, including fingers, to come in contact with it.

o. Install feed tube.
p. Set antenna on the correct elevation as shown in the Satellite Access Authorization (SAA).

5. Position shelter vehicle.

6. Install antenna cables.
   a. Ground antenna.

WARNING: Care must be taken when installing the waveguide. Verify that the O-ring is present and that the waveguide is properly seated against the interlock sensor. Check for cracks and dents in waveguide. Improper installation may inhibit communications, cause serious damage to equipment, or result in injury to personnel.

   b. Attach all cables to both the antenna and shelter.
   c. Install messenger strap/cable between shelter and antenna to support cables.

7. Install site power.
   a. Connect power cables to transfer box.
   b. Install shelter power cable from transfer box to shelter.

8. Perform final antenna adjustments.
   a. Turn elevation vernier dial clockwise and level to correct elevation as indicated on the SAA.

NOTE: The dual capacity servo control unit (DCSCU) elevation readout should be within 2 degrees of the vernier dial setting.

9. Anchor antenna.
   a. Place antenna anchors.
   b. Attach and tighten down anchors.

10. Install hazard fence.
    a. Ensure signs are properly spaced and visible.
    b. Secure hazard fence.

11. Anchor shelter.
    a. Place shelter anchors.
    b. Attach and tighten down shelter tie-downs.

12. Install shelter.
    a. Ground shelter.
    b. Install and secure shelter ladder.
    c. Connect external user cables on curbside interface.
    d. Connect external user cables on roadside interface.
    e. Open all air vents on shelter.

13. Place fire point midway between the generator set and the shelter.

Evaluation Preparation: Setup: Have a copy of the performance steps, appropriate TMs, and local Unit SOP available.

Brief soldier: Not applicable.

Performance Measures	GO	NO GO
1. Selected site. a. Located general elevation of satellite. b. Selected an area that met the topographical standards outlined in the TM. c. Checked soil conditions for stability, anchoring, and effective grounding. d. Ensured that the terminal, antenna, and equipment were not hampered by electrical interference.	____	____
2. Determined antenna siting points for correct azimuth. a. First siting point. b. Second siting point.	____	____
3. Positioned generator set. a. Placed generators in proper location. b. Grounded generators. c. Positioned and grounded transfer box.	____	____
4. Assembled antenna. a. Positioned antenna ground pad. b. Connected front and rear leg assemblies. c. Connected Center Base Frame Member. d. Checked azimuth on antenna and moved structure to correct azimuth alignment. e. Connected right and left Front Base Frame Members. f. Connected right and left Base Frame Members (damage will occur if stood on). g. Connected right and left side leg assemblies. h. Checked and leveled antenna. i. Placed center section on antenna support structure. j. Mounted disk drive and left trailing arm. k. Checked and leveled antenna. l. Installed elevation and cross-elevation actuators to disk drive. m. Attached antenna pedals and latched/locked in place. n. Attached lightning rod. o. Installed feed tube. p. Set antenna on the correct elevation as shown in the SAA.	____	____
5. Positioned shelter vehicle.	____	____
6. Installed antenna cables. a. Grounded antenna. b. Attached all cables to both the antenna and shelter. c. Installed messenger strap/cable between shelter and antenna to support cables.	____	____
7. Installed site power. a. Connected cables to antenna. b. Installed shelter power cable from transfer box to shelter.	____	____

Performance Measures	GO	NO GO
8. Performed final antenna adjustments. a. Turned elevation vernier dial clockwise and leveled to correct elevation as indicated on the SAA.	____	____
9. Anchored antenna. a. Placed antenna anchors. b. Attached and tightened down anchors.	____	____
10. Installed hazard fence. a. Ensured signs were properly spaced and visible. b. Secured hazard fence.	____	____
11. Anchored shelter. a. Placed shelter anchors. b. Attached and tightened down shelter tie-downs.	____	____
12. Installed shelter. a. Grounded shelter. b. Installed and secured shelter ladder. c. Connected external user cables on curbside interface. d. Connected external user cables on roadside interface. e. Opened all air vents on shelter.	____	____
13. Placed fire point midway between the generator set and the 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. Have the soldier practice until he can correctly perform the task.

References

Required	Related
TB 43-0129	
TM 11-5895-1433-12-1	
TM 11-5895-1433-12-2	
TM 11-5895-1434-12-1	
TM 11-5895-1434-12-2	
TM 5-6115-585-12	
TM 9-6115-464-12	
UNIT SOP	

Operate SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)

113-589-2008

Conditions: Given a SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V); installed antenna group AS-3036/TSC; installed generator set PU-405A or PU-753/M; predetermined site location, azimuth, and elevation; TM 9-6115-464-12, TM 5-6115-585-12, TM 11-5895-1433-12-1, TM 11-5895-1433-12-2, TM 11-5895-1433-34, TM 11-5895-1434-12-1, TM 11-5895-1434-12-2, and TM 11-5895-1434-34; L3 Communications Manuals PX19671 Rev A, PX19672 Rev A, and PX19674 Rev B; and cut sheets.

Standards: The AN/TSC-85(V) or AN/TSC-93(V) was fully operational and stopping procedures were completed within 1 hour and 30 minutes.

Performance Steps

NOTE: Perform one or all of the following loopback procedures: equipment, baseband, translator system loop test (not on satellite), and satellite loop (authorized satellite usage).

WARNING: Ensure power and ground cables are properly connected and grounded before turning on equipment. Open all air vents and turn on environmental control units (ECUs) to prevent overheating of equipment.

1. Operate generator set.
   a. Set generator frequency and voltage.
   b. Apply power to the transfer box.
2. Operate transfer box.
   a. Set generator on-line switch to correct generator. If it is necessary to swap generators, follow procedures according to appropriate TM.

NOTE: Located at the left pillow block of the antenna, the antenna elevation safety switch control knob can be found. If elevation is above 20O, the switch must be set to 16O. Set at least 4O less than antenna elevation.

3. Set the antenna elevation safety switch control knob (AN/TSC-93(V) only).

WARNING: DO NOT operate shelter unless all three phases are present and shelter vents are open or damage to equipment may occur.

4. Power up shelter according to appropriate TM.
5. Patch equipment IAW cut sheets.
   a. Patch IF/translator patch panel (AN/TSC-85(V) only).
   b. Patch the modem patch panel.
   c. Patch the orderwire (OW) patch panel (AN/TSC-85(V) only).
   d. Patch baseband patch panel.
   e. Select proper Second Level Multiplexer at the TSSP select panel (AN/TSC-85(V) only).
   f. Patch baseband patch panel.
6. Configure equipment IAW cut sheets.
   a. Configure signal-conditioning equipment.
   b. Configure multiplexer equipment.
   c. Configure modulators and demodulators.
   d. Configure upconverters and downconverters.
   e. Tune Klystron.
7. Operate crypto equipment.
   a. Obtain/sign for communications security (COMSEC) key from COMSEC vault or appropriate facility.
   b. Load fill devices (KOI-18, KYK-15, or KYK-13) with new key.

Performance Steps

c. Load new COMSEC key into secure sets KY-57 and KG-194.
d. Maintain positive COMSEC control and records.

NOTE: The translator system loop test should NOT be performed while tracking the satellite.

8. Perform translator system loop test.

9. Acquire satellite.
   a. Compare DCSCU readings for azimuth and elevation to given azimuth and elevation.
   b. Select and tune the tracking downconverter to the beacon frequency.
   c. Using the DCSCU, slew antenna until maximum receive signal is achieved.
   d. Place the DCSCU into Auto Track mode.

Evaluation Preparation: Setup: Have a copy of the performance steps, appropriate TMs, and local Unit SOP available.

Brief soldier: Not applicable.

Performance Measures	**GO**	**NO GO**
1. Performed operating procedures on generator set. a. Set generator frequency and voltage. b. Applied power to the transfer box.	____	____
2. Operated synchronizing box. a. Set generator on-line switch to correct generator. If it was necessary to swap generators, followed procedures according to appropriate TM.	____	____
3. Set the antenna elevation safety switch control knob (AN/TSC-93(V) only).	____	____
4. Powered up shelter according to appropriate TM.	____	____
5. Patched equipment IAW cut sheets. a. Patched IF/translator patch panel (AN/TSC-85(V) only). b. Patched the modem patch panel. c. Patched the OW patch panel (AN/TSC-85(V) only). d. Patched baseband patch panel. e. Selected proper Second Level Multiplexer at the TSSP select panel (AN/TSC-85(V) only). f. Patched baseband patch panel.	____	____
6. Configured equipment IAW cut sheets. a. Configured signal-conditioning equipment. b. Configured multiplexer equipment. c. Configured modulators and demodulators. d. Configured upconverters and downconverters. e. Tuned Klystron.	____	____
7. Operated crypto equipment. a. Obtained/signed for COMSEC key from COMSEC vault or appropriate facility. b. Loaded fill devices (KOI-18, KYK-15 or KYK-13) with new key. c. Loaded new COMSEC key into secure sets KY-57 and KG-194. d. Maintained positive COMSEC control and records.	____	____
8. Performed translator system loop test.	____	____

Performance Measures	GO	NO GO
9. Acquired the satellite. a. Compared DCSCU readings for azimuth and elevation to given azimuth and elevation. b. Selected and tuned the tracking downconverter to the beacon frequency. c. Used the DCSCU to slew antenna until maximum receive signal was achieved. d. Placed the DCSCU into Auto Track mode.	____	____

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
PX19671 REV A	
PX19672 REV A	
PX19674 REV B	
TM 11-5895-1433-12-1	
TM 11-5895-1433-12-2	
TM 11-5895-1433-34	
TM 11-5895-1434-12-1	
TM 11-5895-1434-12-2	
TM 11-5895-1434-34	
TM 5-6115-585-12	
TM 9-6115-464-12	
UNIT SOP	

Maintain SATCOM Terminal AN/TSC-85 ( ) or AN/TSC-93 ( )

113-589-3048

Conditions: In an operational environment, given SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V); TMDE and tools listed in TMs; dry, clean, lint-free cloth or brush; cleaning compound; DA PAM 738-750, TM 9-6115-464-12, TM 5-6115-585-12, TM 11-5895-1433-12-1, TM 11-5895-1433-12-2, TM 11-5895-1433-34, TM 11-5895-1434-12-1, TM 11-5895-1434-12-2, TM 11-5895-1434-34, and TM 11-5895-1127-20; L3 Communications Manuals PX19671 Rev A, PX19672 Rev A, and PX19674 Rev B; and DA Form 2404 and/or DA Form 2407.

Standards: Completed all PMCS and identified the equipment as ready/available or not ready/available.

Performance Steps

NOTE: Perform "during" operations in one or all of the following loopback procedures: equipment, baseband, translator system loop test (not on satellite), and satellite loop (authorized satellite usage).

WARNING: Ensure power and ground cables are properly connected and grounded before turning on equipment for the "during" portion of the PMCS.

1. Perform before, during, and after PMCS procedures on the following curbside equipment IAW applicable TMs for equipment being inspected.
   a. Generators.
   b. User entry panels.
   c. Signal conditioning equipment.
   d. First level multiplexers.
   e. Second level multiplexers.
   f. Baseband patches and switches.
   g. User interface equipment.
2. Perform before, during, and after PMCS procedures for the following roadside equipment IAW applicable TMs for equipment being inspected.
   a. Modems.
   b. IF translator patch panel (85(V))/modem patch panel (93(V)).
   c. Upconverters.
   d. High power amplifier (HPA).
   e. High voltage power supply (HVPS).
   f. Antenna assembly and antenna mounted electronics (AME).
   g. Downconverters.
   h. Modem patch panel.
   i. DCSCU.
   j. OW unit and patch panel.
   k. Fault alarm monitor unit (FAMU).
3. Perform weekly and semiannual maintenance PMCS procedures on curbside equipment listed in performance step 1 IAW applicable TMs for equipment being inspected.
4. Perform weekly and semiannual maintenance PMCS procedures on roadside equipment listed in performance step 2 IAW applicable TMs for equipment being inspected.
5. Restore equipment after communications failure.
   a. Verify alarm at the FAMU.
      (1) Reset minor alarms (glitches and hits in the network).
      (2) Isolate major alarms (loss of lock/equipment failure).
   b. Notify the SNC/ground mobile forces network controller satellite communications (GMFSC) network controller (GNC) of equipment failure.

Performance Steps

c. Isolate/localize fault to the LRU.
d. Restore communications with redundant equipment.
   (1) Prepare spare equipment for operation IAW unit mission and TSO.
   (2) Make patch connection at IF and/or data patch panels.
e. Verify that communications are restored and all alarm conditions are corrected.

6. Perform maintenance to correct deficiencies.
   a. Perform operator level troubleshooting procedures IAW appropriate TMs.
   b. Isolate/localize fault to the LRU.
   c. Repair/replace fault/LRU above operator/crew level.

7. Complete DA Form 2404 and or DA Form 2407 IAW DA PAM 738-750. Record all deficiencies that cannot be immediately corrected.

8. Schedule next PMCS.

Evaluation Preparation: Setup: Have a copy of the performance steps, appropriate TMs, and local Unit SOP available.

Brief soldier: Not applicable.

Performance Measures	**GO**	**NO GO**
1. Performed before, during, and after PMCS procedures on the following curbside equipment IAW applicable TMs for equipment being inspected. a. Generators. b. User entry panels. c. Signal conditioning equipment. d. First level multiplexers. e. Second level multiplexers. f. Baseband patches and switches. g. User interface equipment.	____	____
2. Performed before, during, and after PMCS procedures for the following roadside equipment IAW applicable TMs for equipment being inspected. a. Modems. b. IF Translator Patch Panel (85(V))/Modem Patch Panel (93(V)). c. Upconverters. d. HPA. e. HVPS. f. Antenna Assembly and AME. g. Downconverters. h. Modem patch panel. i. DCSCU. j. OW unit and patch panel. k. FAMU.	____	____
3. Performed weekly and semiannual maintenance PMCS procedures on curbside equipment listed in performance step 1 IAW applicable TMs for equipment being inspected.	____	____
4. Performed weekly and semiannual maintenance PMCS procedures on roadside equipment listed in performance step 2 IAW applicable TMs for equipment being inspected.	____	____

Performance Measures	GO	NO GO
5. Restored equipment after communications failure. a. Verified alarm at the FAMU. (1) Reset minor alarms (glitches and hits in the network). (2) Isolated major alarms (loss of lock/equipment failure). b. Notified the SNC/GNC of equipment failure. c. Isolated/localized fault to the LRU. d. Restored communications with redundant equipment. (1) Prepared spare equipment for operation IAW unit mission and TSO. (2) Made patch connection at IF and/or data patch panels. e. Verified that communications were restored and all alarm conditions were corrected.	____	____
6. Performed maintenance to correct deficiencies. a. Performed operator level troubleshooting procedures IAW appropriate TM. b. Isolated/localized fault to the LRU. c. Repaired/replaced fault/LRU above operator/crew level.	____	____
7. Completed DA Form 2404 and or DA Form 2407 IAW DA PAM 738-750. Recorded all deficiencies that could not be immediately corrected.	____	____
8. Scheduled next 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. Have the soldier practice until he can correctly perform the task.

References

Required	Related
DA FORM 2404	
DA FORM 2407	
DA PAM 738-750	
PX19671 REV A	
PX19672 REV A	
PX19674 REV B	
TM 11-5895-1127-20	
TM 11-5895-1433-12-1	
TM 11-5895-1433-12-2	
TM 11-5895-1433-34	
TM 11-5895-1434-12-1	
TM 11-5895-1434-12-2	
TM 11-5895-1434-34	
TM 5-6115-585-12	
TM 9-6115-464-12	

Subject Area 4: Strategic Satellite Terminal AN/TSC-86A

Install SATCOM Terminal AN/TSC-86A

113-590-1005

Conditions: Given the requirement to install a transportable satellite terminal at a designated field location and the coordinates of the satellite to be used and TM 11-5895-1162-10 for AN/GSC-49(V) or TM 11-5895-846-14 for AN/TSC-86(V), hand tools and materials as required by TM, and a team of at least four personnel.

NOTE: Winds must be less than 20 MPH during the antenna assembly phase of the task.

Standards: The transportable satellite terminal established site-to-site communications with another terminal. No damage to equipment or injury to personnel resulted from the performance of this task.

WARNING: To prevent any possible injury to personnel or damage to equipment while performing this task, closely follow all warnings and cautions listed in the appropriate TM.

Performance Steps

1. Select site.
    a. Select an area that meets topographical standards as outlined in appropriate TM.
    b. Check soil conditions to ensure that it is conducive to proper and effective grounding as well as stability.
    c. Ensure that the terminal, antenna, and equipment will not be hampered by electrical interference.

NOTE: The following performance steps are to be performed during the actual installation by qualified soldiers. All safety considerations should be observed, implemented, and adhered to. Ensure that proper lifting techniques are used for equipment, especially the center reflector of the antenna, by use of the hoist assembly.

2. Position generator.
    a. Place generators in correct location IAW appropriate TM and SOP.
    b. Ground generators.
    c. Position and ground transfer box.

3. Install shelter.
    a. Anchor shelter.
    b. Install and secure shelter ladder.
    c. Connect external user cables.
    d. Ground shelter.
    e. Open all air vents on shelter.

4. Assemble antenna.
    a. Position antenna ground pad.
    b. Connect front and rear leg assemblies.
    c. Connect base frame members.
    d. Connect side leg assemblies.
    e. Check antenna level.
    f. Place center reflector on antenna support structure.
    g. Attach antenna pedals.

WARNING: The antenna center section is heavy and fragile. Special attention must be made to ensure that all portions of the antenna are properly installed, secured, and mounted on the frame assembly. Check the actuators and the protective boots to see if damage occurred during installation.

Performance Steps

5. Verify siting points.
   a. Set antenna on the correct azimuth as shown in the SAA.
   b. Set antenna on the correct elevation as shown in the SAA.
6. Install antenna cable.
   a. Attach all cables to both the antenna and shelter.
   b. Install cable messenger strap to support cables from shelter to antenna.
   c. Ground antenna.

WARNING: Care must be taken when installing the waveguide. Verify that the O-ring is present and that the waveguide is properly seated against interlock sensor. Check for cracks and dents in waveguide. Improper installation may inhibit communications, cause serious damage to equipment, or result in injury to personnel.

7. Anchor antenna.
   a. Place antenna anchors.
   b. Secure antenna anchors to antenna.
8. Install ground and power cables.
9. Install external user cables.
10. Install sun shade (if appropriate).
11. Install radiation hazard fence.
    a. Install hazard fence; ensure signs are properly spaced and visible.
    b. Secure hazard fence.
12. Site power.
    a. Connect power cables to transfer box.
    b. Install shelter power cable from transfer box to shelter.
13. Position fire point.
    a. Place fire point at midpoint between the generator set and the shelter.
    b. Ensure that the fire point has all necessary items as per SOP.

Performance Measures	**GO**	**NO GO**
1. Performed site selection procedures.	____	____
2. Positioned generator.	____	____
3. Installed shelter.	____	____
4. Assembled antenna.	____	____
5. Verified antenna siting points.	____	____
6. Installed antenna cables	____	____
7. Installed antenna anchors.	____	____
8. Installed ground and power cables.	____	____
9. Installed external user cables.	____	____
10. Installed sun shade (if appropriate).	____	____

Performance Measures	GO	NO GO
11. Installed radiation hazard fence.	____	____
12. Applied site power.	____	____
13. Positioned fire point.	____	____

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 11-5895-1162-10	
TM 11-5895-846-14	
UNIT SOP	

Operate SATCOM Terminal AN/TSC-86A

113-590-2047

Conditions: Given the requirement to establish communications with another terminal using an AN/TSC-86(V) terminal and TM 11-5895-846-14.

Standards: Successfully established communications.

Performance Steps

1. Operate generator set.
   a. Set generator frequency and voltage.
   b. Apply power to the transfer box.
2. Operate transfer box.
   a. Set generator on-line switch to correct generator.
   b. If it is necessary to swap generators, follow procedures according to appropriate TM.
3. Set antenna elevation safety switch.
4. Power up shelter according to TM 11-5895-846-14.
5. Cable patching.
   a. Patch IF/translator patch panel.
   b. Patch the modem patch panel.
   c. Patch the OW patch panel.
   d. Patch multiplexer.
   e. Patch data patch panel.
   f. Patch baseband patch panel.
   g. Patch the KG-194.
6. Configure equipment according to TSO, GAA, SAA, and/or SOP.
7. Access the satellite (with controller's permission) with a single carrier.
   a. Configure equipment for correct frequencies and data rates according to GAA, SAA, TSO, and SOP.
   b. Patch equipment.
   c. Request permission from satellite controller to access the satellite.
8. Verify that the operating data, modes, rates, and inputs are all correct and functional.
9. Repeat performance steps 6 through 8 for each carrier.

Performance Measures	**GO**	**NO GO**
1. Operated generator.	____	____
2. Operated transfer box.	____	____
3. Set antenna elevation safety switch on antenna.	____	____
4. Powered up shelter.	____	____
5. Patched cables.	____	____
6. Configured equipment according to TSO, GAA, SAA, and/or SOP.	____	____
7. Accessed the satellite with a single carrier.	____	____

Performance Measures	GO	NO GO
8. Verified that the operating data, modes, rates, and inputs were all correct and functional.	____	____
9. Repeated performance measures 6 through 8 for each carrier.	____	____

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 11-5895-846-14	

Maintain SATCOM Terminal AN/TSC-86A

113-590-3173

Conditions: Given a defective AN/TSC-86(V), DA PAM 738-750, TM 11-5895-846-14, and DA Form 2404 and/or DA Form 2407.

Standards: The equipment was operational.

Performance Steps

1. Isolate the AN/TSC-86(V) system failure to a faulty unit.
2. Restore communications by performing the following in sequence:
   a. If failed equipment has redundancy, transfer to standby equipment.
   b. If equipment is not totally redundant, the highest priority circuits receive precedence for restored service.
3. Coordinate with the satellite controller if any changes in transmit power are required.
4. Test and verify that communications or other site requirements are restored and fully operational.
5. Complete DA Form 2404 and/or DA Form 2407.

Performance Measures	**GO**	**NO GO**
1. Isolated the AN/TSC-86(V) system failure to a faulty unit.	____	____
2. Restored communications by performing the following in sequence: a. If failed equipment had redundancy, transferred to standby equipment. b. If equipment was not totally redundant, the highest priority circuits received precedence for restored service.	____	____
3. Coordinated with the satellite controller if any changes in transmit power were required.	____	____
4. Tested and verified that communications or other site requirements were restored and fully operational.	____	____
5. Completed DA Form 2404 and/or 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. Have the soldier practice until he can correctly perform the task.

References

Required	**Related**
DA FORM 2404	
DA FORM 2407	
DA PAM 738-750	
TM 11-5895-846-14	

Subject Area 5: Strategic Satellite Terminal AN/TSC-49(V)

Operate SATCOM Terminal AN/GSC-49(V)
113-590-2137

Conditions: Given a SATCOM Terminal AN/GSC-49(V), DA PAM 738-750, DISAC 800-E70-11, TM 5-6115-545-12, TM 11-5895-1162-10, unit SOP, applicable TSOs, DA Form 2404, and DD Form 1970 (Motor Equipment Utilization Record).

Standards: The AN/GSC-49(V) operator powered up, performed day-to-day operations, and shut down the shelter during normal and unusual conditions.

DANGER: HAZARD POTENTIAL. POSSIBILITY OF ELECTRICAL SHOCK, MOVING MACHINERY, FUEL BURNS, OR EXPLOSIONS EXIST WHEN PERFORMING THIS TASK.

Performance Steps

1. Operate generator under unusual conditions.

DANGER: RADIO FREQUENCY (RF) RADIATION HAZARD.

2. Adjust antenna elevation safety switches.
3. Operate power transfer switch.
4. Power up shelter.
5. Operate IF/RF patch panel.
6. Operate frequency standard patch panel.
7. Operate baseband patch panel.
8. Acquire satellite beacon tracking.
9. Acquire satellite power density tracking.
10. Operate transmitter.
11. Operate in combined power.
12. Operate downconverter.
13. Complete DA Form 2404 and DD Form 1970.

Performance Measures	**GO**	**NO GO**
1. Operated generator under unusual conditions.	____	____
DANGER: RF RADIATION HAZARD.		
2. Adjusted antenna elevation safety switches.	____	____
3. Operated power transfer switch.	____	____
4. Powered up shelter.	____	____
5. Operated IF/RF patch panel.	____	____
6. Operated frequency standard patch panel.	____	____
7. Operated baseband patch panel.	____	____

Performance Measures	GO	NO GO
8. Acquired satellite beacon tracking.	____	____
9. Acquired satellite power density tracking.	____	____
10. Operated transmitter.	____	____
11. Operated in combined power.	____	____
12. Operated downconverter.	____	____
13. Completed DA Form 2404 and DD Form 1970.	____	____

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
DA FORM 2404
DA PAM 738-750
DD FORM 1970
DISA CIR 800-E70-11
TM 11-5895-1162-10
TM 5-6115-545-12
UNIT SOP

Related
TM 11-5895-808-13-1

Maintain SATCOM terminal AN/GSC-49(V)

113-590-3174

Conditions: Given a defective AN/GSC-49(V), DA PAM 738-750, TM 11-5895-846-14, and DA Form 2404 and/or DA Form 2407.

Standards: The equipment was operational.

Performance Steps

1. Identify failed unit using BITE and the FAMU.
2. Restore and verify that all communications are correct.
3. Troubleshoot the FAMU using BITE and/or TMDE.

CAUTION: BeCu tools are required to remove and replace Klystron.

DANGER: HIGH VOLTAGES.

4. Troubleshoot the RF HPA using BITE and/or TMDE.
5. Troubleshoot the HVPS using BITE and/or TMDE.
6. Troubleshoot the upconverter using BITE and/or TMDE.
7. Troubleshoot the RF power monitor/power density tracker using BITE and/or TMDE.
8. Troubleshoot the LNA control/translator using BITE and/or TMDE.
9. Troubleshoot the downconverter using BITE and/or TMDE.
10. Troubleshoot the waveguide and combiner assembly using BITE and/or TMDE.
11. Troubleshoot the DCSCU using BITE and/or TMDE.

DANGER: RF RADIATION HAZARD.

12. Troubleshoot the AME using BITE and/or TMDE.
13. Troubleshoot the line conditioner using BITE and/or TMDE.

DANGER: HIGH VOLTAGES.

14. Troubleshoot the power distribution using BITE and/or TMDE.
15. Troubleshoot the frequency standard subgroup using BITE and/or TMDE.
16. Complete DA Form 2404 and/or DA Form 2407.

Performance Measures	**GO**	**NO GO**
1. Identified failed unit using BITE and the FAMU.	____	____
2. Restored and verified that all communications were correct.	____	____
3. Troubleshot the FAMU using BITE and/or TMDE.	____	____

CAUTION: BeCu tools are required to remove and replace Klystron.

DANGER: HIGH VOLTAGES.

4. Troubleshot the RF HPA using BITE and/or TMDE.	____	____

Performance Measures	GO	NO GO
5. Troubleshot the HVPS using BITE and/or TMDE.	____	____
6. Troubleshot the upconverter using BITE and/or TMDE.	____	____
7. Troubleshot the RF power monitor/power density tracker using BITE and/or TMDE.	____	____
8. Troubleshot the LNA control/translator using BITE and/or TMDE.	____	____
9. Troubleshot the downconverter using BITE and/or TMDE.	____	____
10. Troubleshot the waveguide and combiner assembly using BITE and/or TMDE.	____	____
11. Troubleshot the DCSCU using BITE and/or TMDE.	____	____
DANGER: RF RADIATION HAZARD.		
12. Troubleshot the AME using BITE and/or TMDE	____	____
13. Troubleshot the line conditioner using BITE and/or TMDE.	____	____
DANGER: HIGH VOLTAGES.		
14. Troubleshot the power distribution using BITE and/or TMDE.	____	____
15. Troubleshot the frequency standard subgroup using BITE and/or TMDE	____	____
16. Complete DA Form 2404 and/or 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. Have the soldier practice until he can correctly perform the task.

References

Required	Related
DA FORM 2404	TM 11-5895-1162-10
DA FORM 2407	TM 11-5895-1162-24-1
DA PAM 738-750	TM 11-5895-1162-24-2
TM 11-5895-846-14	

Skill Level 2

Subject Area 6: SATCOM Terminal Supervision

Supervise the Maintenance of SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)

113-589-7121

Conditions: Given a Tactical SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V), lint-free cloth or brush; cleaning compound; DA PAM 738-750, TM 9-6115-464-12, TM 5-6115-585-12, TM 11-5895-1433-12-1, TM 11-5895-1433-12-2, TM 11-5895-1433-34, TM 11-5895-1434-12-1, TM 11-5895-1434-12-2, TM 11-5895-1434-34, and TM 11-5895-1127-20; L3 Communications Manuals PX19671 Rev A, PX19672 Rev A, and PX19674 Rev B; DA Form 2404, and Unit SOP.

Standards: Correctly performed all performance measures.

Performance Steps

1. Verify that operational PMCS activities are accomplished for curbside equipment IAW applicable TM for equipment being inspected.
   a. Verify that "before" operation PMCS is accomplished.
   b. Verify that "during" operation PMCS is accomplished.
   c. Verify that "after" operation PMCS is accomplished.
2. Verify that operational PMCS activities are accomplished for roadside equipment IAW applicable TM for equipment being inspected.
   a. Verify that "before" operation PMCS is accomplished.
   b. Verify that "during" operation PMCS is accomplished.
   c. Verify that "after" operation PMCS is accomplished.
3. Verify that maintenance PMCS activities are accomplished on curbside equipment IAW applicable TM for equipment being inspected.
   a. Verify that weekly PMCS is accomplished.
   b. Verify that semiannual PMCS is accomplished.
4. Verify that maintenance PMCS activities are accomplished on roadside equipment IAW applicable TM for equipment being inspected.
   a. Verify that weekly PMCS is accomplished.
   b. Verify that semiannual PMCS is accomplished.
5. Verify that maintenance to correct deficiencies is performed.
   a. Verify that only repairs that can be performed by operator/crew are performed.
   b. Verify that all repairs above operator/crew level are initiated.
6. Verify that proper documentation procedures are followed.
   a. Verify that DA Form 2404 is correctly filled out.
   b. Verify that the tracking system is implemented and updated to maintain accountability of repair services being performed on deficient equipment.
   c. Verify that the tracking system is implemented and maintained for accountability of services conducted on assigned equipment.

Evaluation Preparation: Setup: Have a copy of the performance steps, appropriate TMs, and local Unit SOP available.

Brief soldier: Not applicable.

Performance Measures	GO	NO GO
1. Performed PMCS for curbside equipment.	____	____
2. Performed PMCS for roadside equipment.	____	____
3. Performed maintenance PMCS for curbside equipment.	____	____
4. Performed maintenance PMCS for roadside equipment.	____	____
5. Corrected deficiencies.	____	____
6. Documented 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
DA PAM 738-750	TM 11-5820-1128-34
PX19671 REV A	TM 11-5895-1127-10
PX19672 REV A	TM 11-5895-1127-20
PX19674 REV B	TM 11-5895-1127-34
TM 11-5895-1433-12-1	TM 11-5895-1128-10
TM 11-5895-1433-12-2	TM 11-5895-1128-20
TM 11-5895-1433-34	
TM 11-5895-1434-12-1	
TM 11-5895-1434-12-2	
TM 11-5895-1434-34	
TM 5-6115-585-12	
TM 9-6115-464-12	
UNIT SOP	

Supervise the Installation of SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)

113-589-7122

Conditions: Given a tactical SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V); antenna group AS-3036/TSC; generator set PU-405A or PU-753/M; predetermined site location and predetermined azimuth and elevation; TB 43-0129, TM 9-6115-464-12, TM 5-6115-585-12, TM 11-5895-1433-12-1, TM 11-5895-1433-12-2, TM 11-5895-1433-34, TM 11-5895-1434-12-1, TM 11-5895-1434-12-2, and TM 11-5895-1434-34; L3 Communications Manuals PX19671 Rev A, PX19672 Rev A, and PX19674 Rev B; and Unit SOP.

Standards: Supervised the installation of the AN/TSC-85(V) or AN/TSC-93(V) within 1 hour and 30 minutes IAW appropriate manuals and SOP and observed and implemented all safety requirements listed in TB 43-0129.

Performance Steps

1. Verify site selection.
    a. Select an area that meets topographical standards as outlined in appropriate TM.
    b. Check soil conditions to ensure that it is conducive to proper and effective grounding as well as stability.
    c. Ensure that the terminal, antenna, and equipment are not hampered by electrical interference.

NOTE: Qualified soldiers perform the following performance steps during the actual installation. All safety considerations should be observed, implemented, and adhered to. Ensure that proper lifting techniques are used for equipment, especially the center reflector of the antenna. Verify that soldiers are using the hoist assembly, if applicable.

2. Verify generator positioning.
    a. Ensure generators are correctly located IAW appropriate TM and unit SOP.
    b. Ensure generators are correctly grounded.
    c. Ensure the transfer box is properly positioned and grounded.

3. Verify shelter installation.
    a. Ensure the shelter is properly anchored.
    b. Ensure the shelter ladder is installed and properly secured.
    c. Ensure the external cables are properly connected on curbside interface.
    d. Ensure the external cables are properly connected on roadside interface.
    e. Ensure the shelter is properly grounded.
    f. Ensure all air vents on the shelter are opened.

4. Verify the assembly of the antenna support structure.
    a. Ensure proper antenna ground pad positioning.
    b. Check the installation of front and rear leg assemblies.
    c. Check base frame members.
    d. Check side leg assemblies.
    e. Check antenna level.

WARNING: The antenna center section is heavy and fragile. Special attention must be made to ensure that all portions of the antenna are properly installed, secured, and mounted on the frame assembly. Check the actuators and the protective boots to see if damage occurred during installation.

5. Verify siting points.
    a. Ensure the antenna is on the correct azimuth as shown in the SAA.
    b. Ensure the antenna is on the correct elevation as shown in the SAA.

Performance Steps

6. Ensure proper antenna cable installation.
    a. Verify that all cables are correctly installed and attached to antenna and shelter.
    b. Verify that the cable messenger strap is installed and supports the weight of cables from shelter to antenna.
    c. Verify that the antenna is properly grounded.

WARNING: Care must be taken when checking the waveguide installation. Verify that the O-ring is present and that the waveguide is properly seated against the interlock sensor. Check for cracks and dents in waveguide. Improper installation may inhibit communications, cause serious damage to equipment, or result in injury to personnel.

7. Verify antenna anchor.
    a. Verify that antenna anchors are properly placed.
    b. Verify that antenna anchors are properly secured to the antenna.
8. Ensure proper Radiation Hazard fence placement.
    a. Verify that the hazard fence is properly secured.
    b. Verify that hazard fence signs are properly spaced and visible.
9. Verify site power.
    a. Verify that power cables are connected to the transfer box.
    b. Verify that the shelter power cable is properly installed from the transfer box to the shelter.
10. Verify fire point.
    a. Verify that the fire point is placed at midpoint between the generator set and shelter.
    b. Verify that the fire point has all necessary items per SOP.

Evaluation Preparation: Setup: Have a copy of the performance steps, appropriate TMs, and local Unit SOP available.

Brief soldier: Not applicable.

Performance Measures	**GO**	**NO GO**
1. Verified selected site.	____	____
2. Verified generator.	____	____
3. Verified shelter.	____	____
4. Verified the assembly of the antenna support structure.	____	____
5. Verified siting points.	____	____
6. Installed antenna cable.	____	____
7. Verified antenna anchor.	____	____
8. Verified that radiation hazard fence was in place.	____	____
9. Verified site power.	____	____
10. Verified fire point.	____	____

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
PX19671 REV A	
PX19674 REV B	
TB 43-0129	
TM 11-5895-1433-12-1	
TM 11-5895-1433-12-2	
TM 11-5895-1433-34	
TM 11-5895-1434-12-1	
TM 11-5895-1434-12-2	
TM 11-5895-1434-34	
TM 5-6115-585-12	
TM 9-6115-464-12	
UNIT SOP	

Supervise the Operation of SATCOM Terminal AN/TSC-85(V) or AN/TSC-93(V)

113-589-7123

Conditions: Given a SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V); installed antenna group AS-3036/TSC; installed generator set PU-405A or PU-753/M on a predetermined site and on correct azimuth and elevation; TM 9-6115-464-12, TM 5-6115-585-12, TM 11-5895-1433-12-1, TM 11-5895-1433-12-2, TM 11-5895-1433-34, TM 11-5895-1434-12-1, TM 11-5895-1434-12-2, and TM 11-5895-1434-34; L3 Communications Manuals PX19671 Rev A, PX19672 Rev A, and PX19674 Rev B; and unit SOP.

Standards: Powered up, placed into a fully operational condition, and powered down the AN/TSC-85(V) or AN/TSC-93(V) within a time limit of 1 hour and 30 minutes.

Performance Steps

1. Verify that generator is set for operation.
    a. Ensure generator is set at proper frequency and voltage.
    b. Ensure power is made available to the transfer box.
2. Verify transfer box operation.
    a. Verify that the generator on-line switch is set to correct generator.
    b. If it is necessary to swap generators, ensure that procedures are followed according to appropriate TM.
3. Verify that the antenna elevation safety switch is correctly set.
4. Ensure the power-up procedures for the shelter are followed according to appropriate TM.
5. Ensure proper cable patching.
    a. Check for proper patching on IF/translator patch panel (AN/TSC-85(V) only).
    b. Check for proper patching on the modem patch panel.
    c. Check for proper patching on the OW patch panel (AN/TSC-85(V) only).
    d. Check for proper patching on the TSSP patch panel (AN/TSC-85(V) only).
    e. Check for proper patching on the data patch panel.
    f. Check for proper patching on baseband patch panel.
    g. Check for proper patching for the KG-194.
6. Verify equipment configuration.
    a. Check multiplexer equipment for proper configuration.
    b. Check modulators and demodulators for proper configuration.
    c. Check upconverters and downconverters for proper configuration.
    d. Check the tuning of Klystron tube.
7. Verify that the translator system loop test is successful.

NOTE: The translator system loop test should not be performed while tracking the satellite (performance step 8).

8. Ensure satellite acquisition and tracking.
    a. Verify that DCSCU readings for azimuth and elevation are accurate when compared to given azimuth and elevation.
    b. Verify that the downconverter that is tuned to the beacon frequency is receiving good signal strength.
9. Verify equipment operation.
    a. Verify that the group modem (if used) is operating correctly (AN/TSC-85(V) only).
    b. Verify that OW is operational and communications is established with GMF control.
    c. Verify that the ring converter and echo suppressor (if used) are operating correctly.
    d. Verify that multiplexing equipment is operating correctly.

Performance Steps

e. Verify that the upconverter and downconverter are operating correctly.
f. Verify that the transmitter is operating correctly and within the power restraints as set forth in the SAA.

NOTE: The following procedures outline the steps that must be supervised for the shutdown of the terminal (performance steps 10 and 11).

10. Verify termination of communications.
    a. Verify that all users are notified of termination of communications.
    b. Verify that permission to deaccess is obtained from the GMF control before termination of communications.

11. Ensure equipment shutdown.
    a. Verify that the HVPS operation switch is set to STANDBY and HVPS and Klystron are allowed to cool for five minutes before being turned off.
    b. Verify that the shutdown procedures are followed IAW appropriate TM for the shelter.
    c. Verify that the shutdown procedures are followed IAW appropriate TM for generators.

Evaluation Preparation: Setup: Have a copy of the performance steps, appropriate TMs, and local Unit SOP available.

Brief soldier: Not applicable.

Performance Measures	**GO**	**NO GO**
1. Verified that the generator was set for operation.	____	____
2. Verified that the transfer box was operational.	____	____
3. Verified that the antenna elevation safety switch was correctly set.	____	____
4. Ensured power-up procedures for the shelter were followed IAW appropriate TM.	____	____
5. Ensured proper cable patching.	____	____
6. Verified equipment configuration.	____	____
7. Verified that the translator system loop test was successful and was not accomplished while the tracking the satellite.	____	____
8. Ensured satellite acquisition and tracking.	____	____
9. Verified equipment operation.	____	____
10. Verified termination of communications.	____	____
11. Ensured equipment shutdown.	____	____

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
PX19671 REV A	11-10-14
PX19672 REV A	201-113-0321-B
PX19674 REV B	
TM 11-5895-1433-12-1	
TM 11-5895-1433-12-2	
TM 11-5895-1433-34	
TM 11-5895-1434-12-1	
TM 11-5895-1434-12-2	
TM 11-5895-1434-34	
TM 5-6115-585-12	
TM 9-6115-464-12	
UNIT SOP	

Skill Level 3

Subject Area 6: SATCOM Terminal Supervision

Supervise the Maintenance of the DCSS

113-583-7095

Conditions: Given associated DCSS equipment, applicable TMs, applicable TSOs, Unit SOP, and operating requirements.

Standards: Supervised the restoral of the DCSS to include that the equipment completed the self-test, passed all operational tests, and was passing communications.

Performance Steps

1. Ensure the operator monitors the DCSS for faulted/degraded condition.

NOTE: For a detailed checklist of all steps at the operator level for maintaining the DCSS, reference Task Number 113-583-3273 (Maintain Digital Communications Satellite Subsystem).

2. At first indication of fault/degradation to equipment within the DCSS, ensure operator isolates the faults to the correct piece of equipment.
   a. Verify that the operator checks alarms on the individual pieces of equipment contained within the DCSS.
   b. Verify that the operator performs loop testing to isolate to the individual piece of faulted/degraded equipment.
3. Ensure the operator performs the correct troubleshooting procedures on the faulted/degraded equipment.

NOTE: The following performance steps are not an all inclusive list of possible equipment for the DCSS. Individual sites may have varying configurations containing additional equipment not listed here. In the event that is the case, reference the appropriate TM or manufacturer's manual for that specific piece of equipment for troubleshooting, removal, and replacement procedures and fault isolation.

4. Ensure the operator correctly troubleshoots and restores the FCC-100 IAW appropriate TM/manufacturer's manual.
5. Ensure the operator correctly troubleshoots and restores the TD-1389 LRM IAW appropriate TM/manufacturer's manual.
6. Ensure the operator correctly troubleshoots and restores the TD-1337 TSSP IAW appropriate TM/manufacturer's manual.
7. Ensure the operator correctly troubleshoots and restores the MIDAS IAW appropriate TM/manufacturer's manual.
8. Ensure the operator correctly troubleshoots and restores the OM-73 IAW appropriate TM/manufacturer's manual.
9. Ensure the operator correctly troubleshoots and restores the MD-1352 BEM IAW appropriate TM/manufacturer's manual.
10. Ensure the operator correctly troubleshoots and restores the CQM-248A IAW appropriate TM/manufacturer's manual.
11. Ensure the operator correctly troubleshoots and restores the Promina IAW appropriate TM/manufacturer's manual.

Performance Steps

12. Ensure the operator correctly troubleshoots and restores the SMU IAW appropriate TM/manufacturer's manual.
13. Ensure the operator correctly troubleshoots and restores the Timeplex Link2+ IAW appropriate TM/manufacturer's manual.
14. Ensure the operator correctly troubleshoots and restores the ICC IAW appropriate TM/manufacturer's manual.
15. Verify that the operator returns the DCSS to an operational state.
    a. Ensure the operator continues to monitor for further alarms.
    b. Verify that all pieces of equipment are passing reliable communications traffic.

Performance Measures	**GO**	**NO GO**
1. Ensured the operator monitored the DCSS for faulted/degraded equipment.	____	____
2. At first indication of fault/degradation to equipment within the DCSS, ensured the operator isolated the faults to the correct piece of equipment.	____	____
3. Ensured the operator performed the correct troubleshooting procedures on the faulted/degraded equipment.	____	____
4. Ensured the operator correctly troubleshot and restored the FCC-100 IAW appropriate TM/manufacturer's manual.	____	____
5. Ensured the operator correctly troubleshot and restored the TD-1389 LRM IAW appropriate TM/manufacturer's manual.	____	____
6. Ensured the operator correctly troubleshot and restored the TD-1337 TSSP IAW appropriate TM/manufacturer's manual.	____	____
7. Ensured the operator correctly troubleshot and restored the MIDAS IAW appropriate TM/manufacturer's manual.	____	____
8. Ensured the operator correctly troubleshot and restored the OM-73 IAW appropriate TM/manufacturer's manual.	____	____
9. Ensured the operator correctly troubleshot and restored the MD-1352 BEM IAW appropriate TM/manufacturer's manual.	____	____
10. Ensured the operator correctly troubleshot and restored the CQM-248A IAW appropriate TM/manufacturer's manual.	____	____
11. Ensured the operator correctly troubleshot and restored the Promina IAW appropriate TM/manufacturer's manual.	____	____
12. Ensured the operator correctly troubleshot and restored the SMU IAW appropriate TM/manufacturer's manual.	____	____
13. Ensured the operator correctly troubleshot and restored the Timeplex Link2+ IAW appropriate TM/manufacturer's manual.	____	____
14. Ensured the operator correctly troubleshot and restored the ICC IAW appropriate TM/manufacturer's manual.	____	____
15. Verified that the operator returned the DCSS to an operational state.	____	____

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**
IDNX MANUAL	
TM 11-5805-795-13	
TM 11-5895-1215-20	
TM 11-5895-1346-13	
TM 11-5895-1630-13&P	
TM 11-5895-1686-13	
TM 11-7025-221-20	
TM CQT-6400-IOM-02	

Supervise the Operation of the DCSS

113-583-7096

Conditions: Given associated DCSS equipment, applicable TMs, applicable TSOs, Unit SOP, and operating requirements.

Standards: Successfully completed all supervisory performance tasks.

Performance Steps

1. Verify that equipment is configured according to appropriate TSO.
   a. Verify equipment settings and parameters.
   b. Verify equipment patching.
2. Ensure the FCC-100 operates IAW TM 11-5805-795-13.
   a. Verify that operators populate and configure the FCC-100 IAW the TSO.
   b. Verify that operators monitor the FCC-100 for alarms.
3. Ensure the TD-1389 LRM operates IAW TM 11-5895-1215-10.
   a. Verify that operators configure the LRM IAW the TSO.
   b. Verify that operators monitor the LRM for alarms.
4. Ensure the TD-1337 TSSP operates IAW TM 11-7025-221-10.
   a. Verify that operators configure the TSSP IAW the TSO.
   b. Verify that operators monitor the TSSP for alarms.
5. Ensure the AN/USC-63 MIDAS operates IAW TM 11-5895-1630-13&P.
   a. Verify that operators configure the MIDAS IAW the TSO.

NOTE: Reference Task Number 113-583-2625 (Operate Digital Communications Satellite Subsystem) as well as the TM for specific steps/procedures in configuring the MIDAS.

   b. Verify that operators monitor the MIDAS for alarms.

6. Ensure the OM-73 modulator/demodulator operates IAW TM 11-5895-1346-10.
   a. Verify that operators configure the OM-73 IAW the TSO.
   b. Verify that operators monitor the OM-73 for alarms.
7. Ensure the MD-1352 BEM operates IAW TM 11-5895-1687-13&P.
   a. Verify that operators configure the BEM IAW the TSO.
   b. Verify that operators monitor the BEM for alarms.
8. Ensure the CQM-248A operates IAW applicable operator's manuals.
   a. Verify that operators configure the CQM-248A IAW the TSO.
   b. Verify that operators monitor the CQM-248A for alarms.
9. Ensure the Promina operates IAW applicable operator's manuals.
   a. Verify that operators configure the Promina IAW the TSO.

NOTE: Reference Task Number 113-583-2625 (Operate Digital Communications Satellite Subsystem) as well as applicable operator's manuals for specific steps/procedures in configuring the Promina.

   b. Verify that operators monitor the Promina for alarms.

Performance Steps

10. Ensure the SMU operates IAW TM 11-5805-802-13&P, NNM Reference Guide, and the Global Circuit Switch Quick Reference Guide.
    a. Verify that operators configure the SMU IAW the TSO.

NOTE: Reference Task Number 113-583-2625 (Operate Digital Communications Satellite Subsystem) as well as applicable manuals for specific steps/procedures in configuring the SMU.

    b. Verify that operators monitor the SMU for alarms.

11. Ensure the AN/USC-64 ICC operates IAW the applicable manuals.
    a. Verify that ICC equipment is configured to monitor correct devices.
    b. Verify that operators monitor the ICC for alarms.

12. Ensure the Timeplex Link 2+ operates IAW the applicable operator's manuals.
    a. Verify that the Timeplex Link 2+ is configured IAW the TSO.
    b. Verify that operators monitor the Timeplex Link 2+ for alarms.

Performance Measures	**GO**	**NO GO**
1. Verified that equipment was configured according to appropriate TSO.	____	____
2. Ensured the FCC-100 operated IAW applicable TM.	____	____
3. Ensured the LRM operated IAW applicable TM.	____	____
4. Ensured the TSSP operated IAW applicable TM.	____	____
5. Ensured the MIDAS operated IAW applicable TM.	____	____
6. Ensured the OM-73 operated IAW applicable TM.	____	____
7. Ensured the BEM operated IAW applicable TM.	____	____
8. Ensured the CQM-248A operated IAW applicable manuals.	____	____
9. Ensured the Promina operated IAW applicable operator's manuals.	____	____
10. Ensured the SMU operated IAW applicable operator's manuals.	____	____
11. Ensured the ICC operated IAW applicable manuals.	____	____
12. Ensured the Timeplex Link 2+ operated IAW applicable operator's manuals.	____	____

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**
IDNX MANUAL	PROMINA2
OSP-1310	PROMINA3
PROMINA	PROMINA4
PROMINA1	PROMINA5
TM 11-5805-795-13	PROMINA6
TM 11-5895-1215-10	TM 11-5805-802-13&P
TM 11-5895-1346-13	TM 11-7025-221-10
TM 11-5895-1630-13&P	TM CQT-6400-IOM-02

Supervise the Maintenance of SATCOM Terminal AN/GSC-39, AN/FSC-78, AN/GSC-52, or AN/TSC-86

113-590-7001

Conditions: As a section chief, SATCOM systems supervisor, SATCOM maintenance NCO, SATCOM operations NCO, or SATCOM chief, given AN/GSC-52 SATCOM terminal, AN/FSC-78 heavy SATCOM terminal, AN/GSC-39 medium SATCOM terminal, or SATCOM terminal AN/TSC-86 in a defective condition, DA Form 2404, DA Form 2407, DA PAM 738-750, applicable TMs, and unit SOP; supervise soldiers to maintain the appropriate terminal and restore communications.

Standards: Successfully supervised the restoral of a defective SATCOM terminal and completed the appropriate maintenance documentation.

Performance Steps

NOTE: The following performance steps are for the initial assessment of a failure in SATCOM strategic terminals (AN/FSC-78, AN/GSC-39, AN/GSC-52). The supervisor will ensure the operators take appropriate actions as directed in the operator level critical tasks that cover the specific piece of equipment and IAW governing regulations (TMs/SOPs). When the functional group in which the fault is located has been determined, find the appropriate section of this task for further steps in restoral of faulted equipment. For maintaining the AN/TSC-86, see performance steps 30 through 34.

1. Verify that the operator checks the alarm monitoring subsystem for visual/audible alarm situations.
2. Verify that the operator localizes the fault to a functional uplink, downlink, or tracking failure.
3. Verify that the operator determines the correct functional group.
   a. Alarm Monitor Group (AMG)/CMA subsystem: See performance steps 5 through 9.
   b. Signal Generator Group (SGG): See performance steps 10 through 14.
   c. Frequency Conversion Group (FCG): See performance steps 15 through 19.
   d. Transmitter Group: See performance steps 20 through 24.
   e. Antenna Group: See performance steps 25 through 29.
4. Verify that the operator restores communications, by using spare equipment, before beginning repair and replacement procedures on defective equipment.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the AMG.

5. Verify that the operator determines the faulted portion in the AMG.
6. Ensure the operator inspects all components and cables for defects and proper connections.
7. Verify that the operator isolates fault to the correct LRU of defective equipment.
8. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
9. Ensure the operator verifies the successful repair of the AMG by testing/operating.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the SGG.

10. Verify that the operator determines the faulted portion of the SGG.
11. Ensure the operator inspects all components and cables for defects and proper connections.
12. Verify that the operator isolates the fault to the correct LRU of defective equipment.

Performance Steps

13. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
14. Ensure the operator verifies the successful repair of the SGG by testing/operating.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the FCG.

15. Verify that the operator determines the faulted portion of the FCG.
16. Ensure the operator inspects all components and cables for defects and proper connections.
17. Verify that the operator isolates the fault to the correct LRU of defective equipment.
18. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
19. Ensure the operator verifies the successful repair of the FCG by testing/operating.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the Transmitter Group.

20. Verify that the operator determines the faulted portion of the Transmitter Group.
21. Ensure the operator inspects all components and cables for defects and proper connections.
22. Verify that the operator isolates the fault to the correct LRU of defective equipment.
23. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
24. Ensure the operator verifies the successful repair of the Transmitter Group by testing/operating.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the Antenna Group.

25. Verify that the operator determines the faulted portion of the Antenna Group.
26. Ensure the operator inspects all components and cables for defects and proper connections.
27. Verify that the operator isolates the fault to the correct LRU of defective equipment.
28. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
29. Ensure the operator verifies the successful repair of the Antenna Group by testing/operating

NOTE: The following performance steps are for the AN/TSC-86 only.

30. Verify that the operator isolates the failure to correct faulted equipment.
31. Verify that the operator transfers to standby equipment if available. If standby equipment is not available, ensure that the soldier prioritizes circuits to receive restored service.
32. Ensure the operator isolates the fault to the correct LRU of defective equipment.
33. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
34. Ensure the operator verifies the successful repair of the system by testing/operating.

NOTE: The following performance step is completed after communications are completely restored.

Performance Steps

35. Ensure the operator completes DA Form 2404 and/or DA Form 2407.

Performance Measures	**GO**	**NO GO**
1. Verified that the operator checked the alarm monitoring subsystem for visual/audible alarm situations.	____	____
2. Verified that the operator localized fault to a functional uplink, downlink, or tracking failure.	____	____
3. Verified that the operator determined the correct functional group. a. AMG/CMA subsystem: See performance measures 5 through 9. b. SGG: See performance measures 10 through 14. c. FCG: See performance measures 15 through 19. d. Transmitter Group: See performance measures 20 through 24. e. Antenna Group: See performance measures 25 through 29.	____	____
4. Verified that the operator restored communications, by using spare equipment, before beginning repair and replacement procedures on defective equipment.	____	____
NOTE: The following performance measures are performed for repair and replacement of defective equipment located in the AMG.		
5. Verified that the operator determined the faulted portion in the AMG.	____	____
6. Ensured the operator inspected all components and cables for defects and proper connections.	____	____
7. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
8. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
9. Ensured the operator verified the successful repair of the AMG by testing/operating.	____	____
NOTE: The following performance measures are performed for repair and replacement of defective equipment located in the SGG.		
10. Verified that the operator determined the faulted portion of the SGG.	____	____
11. Ensured the operator inspected all components and cables for defects and proper connections.	____	____
12. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
13. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
14. Ensured the operator verified the successful repair of the SGG by testing/operating.	____	____
NOTE: The following performance measures are performed for repair and replacement of defective equipment located in the FCG.		
15. Verified that the operator determined the faulted portion of the FCG.	____	____
16. Ensured the operator inspected all components and cables for defects and proper connections.	____	____
17. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____

Performance Measures	GO	NO GO
18. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
19. Ensured the operator verified the successful repair of the FCG by testing/operating.	____	____
NOTE: The following performance measures are performed for repair and replacement of defective equipment located in the Transmitter Group.		
20. Verified that the operator determined the faulted portion of the Transmitter Group.	____	____
21. Ensured the operator inspected all components and cables for defects and proper connections.	____	____
22. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
23. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
24. Ensured the operator verified the successful repair of the Transmitter Group by testing/operating.	____	____
NOTE: The following performance measures are performed for repair and replacement of defective equipment located in the Antenna Group.		
25. Verified that the operator determined the faulted portion of the Antenna Group.	____	____
26. Ensured the operator inspected all components and cables for defects and proper connections.	____	____
27. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
28. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
29. Ensured the operator verified the successful repair of the Antenna Group by testing/operating	____	____
NOTE: The following performance measures are for the AN/TSC-86 only.		
30. Verified that the operator isolated failure to correct faulted equipment.	____	____
31. Verified that the operator transferred to standby equipment if available. If standby equipment was not available, ensured that the soldier prioritized circuits to receive restored service.	____	____
32. Ensured the operator isolated fault to the correct LRU of defective equipment.	____	____
33. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
34. Ensured the operator verified the successful repair of the system by testing/operating.	____	____
NOTE: The following performance measure was completed after communications was completely restored.		
35. Verified that the operator completed DA Form 2404 and/or 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. Have the soldier practice until he can correctly perform the task.

References

Required	Related
DA FORM 2404	
DA FORM 2407	
DA PAM 738-750	
TM 11-5895-1196-13-2	
TM 11-5895-1196-13-3	
TM 11-5895-1196-13-4	
TM 11-5895-1196-13-5	
TM 11-5895-1196-13-6	
TM 11-5895-1196-13-7	
TM 11-5895-1196-13-8	
TM 11-5895-1196-13-9	
TM 11-5895-1197-13-1	
TM 11-5895-1197-13-10	
TM 11-5895-1197-13-11	
TM 11-5895-1197-13-3	
TM 11-5895-1197-13-4	
TM 11-5895-1197-13-5	
TM 11-5895-1197-13-6	
TM 11-5895-1197-13-7	
TM 11-5895-1197-13-8	
TM 11-5895-1197-13-9	
TM 11-5895-1531-30	
TM 11-5895-1532-30	
TM 11-5895-1533-30	
TM 11-5895-1534-30	
TM 11-5895-1535-12	
TM 11-5895-1536-13	
TM 11-5895-846-14	
TM 11-5985-398-13	
UNIT SOP	

Supervise the Operation of SATCOM Terminal AN/GSC-39, AN/FSC-78, AN/GSC-52, or AN/TSC-86

113-590-7002

Conditions: As a section chief, SATCOM systems supervisor, SATCOM maintenance NCO, SATCOM operations NCO, or SATCOM chief, given AN/GSC-52 SATCOM terminal, AN/FSC-78 heavy SATCOM terminal, AN/GSC-39 medium SATCOM terminal, or SATCOM terminal AN/TSC-86 in an operating condition, TM 11-5895-1196-13-2 through TM 11-5895-1196-13-9, TM 11-5895-1197-13-1 through TM 11-5895-1197-13-11, TM 11-5895-1531-30, TM 11-5895-1532-30, TM 11-5895-1533-30, TM 11-5895-1534-30, TM 11-5895-1535-12, TM 11-5895-1536-13, TM 11-5895-846-14, and unit SOP; supervise soldiers to operate appropriate terminal.

Standards: Successfully supervised the operation of the AN/FSC-78, AN/GSC-39, AN/GSC-52, or AN/TSC-86 SATCOM terminal.

Performance Steps

NOTE: The following performance steps are for strategic terminals (AN/FSC-78, AN/GSC-39, AN/GSC-52).

1. Verify that the operator performs preoperational adjustments and setup IAW appropriate TM and applicable TSO.
2. Verify that the operator performs satellite acquisition IAW with appropriate TM and governing SOP.
3. Verify that the operator performs satellite tracking and ensures that appropriate satellite is acquired by contacting the Defense Satellite Communications System Operations Center (DSCSOC).
4. Verify that the operator performs uplink carrier alignment in conjunction with the DSCSOC and IAW appropriate governing regulations (TMs/SOPs).
5. Verify that the operator performs uplink carrier level adjustments in conjunction with the DSCSOC and IAW appropriate governing regulations (TMs/SOPs).
6. Verify that the operator performs carrier-to-noise density ration check.
7. Verify that the operator configures equipment for automatic switchover as applicable.
8. Verify that the operator performs uplink and downlink signal traffic monitoring.
9. Verify that the operator performs terminal equipment selection and status monitoring.

NOTE: The following performance steps are for the AN/TSC-86 terminal.

10. Verify that the operator correctly configures equipment according to the cut sheet provided and IAW governing regulations (TMs/SOPs).
11. Verify that the operator acquires and tracks appropriate satellite and that the HPA is in standby.
12. Verify that the operator accesses satellite IAW with governing regulations in conjunction with the GMF controller at the DSCSOC.
13. Verify that the operator monitors communications status of equipment and passes appropriate reports at the designated time IAW governing regulations (SOPs/TMs).

Performance Measures	GO	NO GO
NOTE: The following performance measures are for strategic terminals (AN/FSC-78, AN/GSC-39, AN/GSC-52).		
1. Verified that the operator performed preoperational adjustments and setup IAW appropriate TM and applicable TSO.	____	____
2. Verified that the operator performed satellite acquisition IAW with appropriate TM and governing SOP.	____	____
3. Verified that the operator performed satellite tracking and ensured appropriate satellite was acquired by contacting the DSCSOC.	____	____
4. Verified that the operator performed uplink carrier alignment in conjunction with the DSCSOC and IAW appropriate governing regulations (TMs/SOPs).	____	____
5. Verified that the operator performed uplink carrier level adjustments in conjunction with the DSCSOC and IAW appropriate governing regulations (TMs/SOPs).	____	____
6. Verified that the operator performed carrier-to-noise density ration check.	____	____
7. Verified that the operator configured equipment for automatic switchover as applicable.	____	____
8. Verified that the operator performed uplink and downlink signal traffic monitoring.	____	____
9. Verified that the operator performed terminal equipment selection and status monitoring.	____	____
NOTE: The following performance measures are for the AN/TSC-86 terminal.		
10. Verified that the operator correctly configured equipment according to the cut sheet provided and IAW governing regulations (TMs/SOPs).	____	____
11. Verified that the operator acquired and tracked the appropriate satellite and the HPA was in standby.	____	____
12. Verified that the operator accessed the satellite IAW with governing regulations in conjunction with the GMF controller at the DSCSOC.	____	____
13. Verified that the operator monitored communications status of equipment and passed appropriate reports at the designated time IAW governing regulations (SOPs/TMs).	____	____

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 11-5895-1196-13-2	
TM 11-5895-1196-13-3	
TM 11-5895-1196-13-4	
TM 11-5895-1196-13-5	
TM 11-5895-1196-13-6	
TM 11-5895-1196-13-7	
TM 11-5895-1196-13-8	
TM 11-5895-1196-13-9	
TM 11-5895-1197-13-1	
TM 11-5895-1197-13-10	

References

Required	Related
TM 11-5895-1197-13-11	
TM 11-5895-1197-13-3	
TM 11-5895-1197-13-4	
TM 11-5895-1197-13-5	
TM 11-5895-1197-13-6	
TM 11-5895-1197-13-7	
TM 11-5895-1197-13-8	
TM 11-5895-1197-13-9	
TM 11-5895-1531-30	
TM 11-5895-1532-30	
TM 11-5895-1533-30	
TM 11-5895-1534-30	
TM 11-5895-1535-12	
TM 11-5895-1536-13	
TM 11-5895-846-14	
UNIT SOP	

Supervise the Installation of SATCOM Terminal AN/TSC-86

113-590-7003

Conditions: Given a tactical SATCOM terminal AN/TSC-86(V), antenna group AS-3036/TSC, generator set PU-405A, predetermined site location, predetermined azimuth and elevation, TB 43-0129, TM 9-6115-464-12, and TM 11-5895-846-14.

Standards: Supervised the installation of the AN/TSC-86(V) within 1 hour and 30 minutes IAW appropriate manuals and SOP and observed and implemented all safety requirements listed in TB 43-0129.

Performance Steps

1. Verify site selection.
    a. Ensure soldiers select an area that meets topographical standards as outlined in the appropriate TM.
    b. Check soil conditions to ensure that it is conducive to proper and effective grounding as well as stability.
    c. Ensure the terminal, antenna, and equipment are not hampered by electrical interference.

NOTE: The following performance steps are to be performed during the actual installation by qualified soldiers. All safety considerations should be observed, implemented, and adhered to. Ensure that proper lifting techniques are used for equipment, especially the center reflector of the antenna. Verify that soldiers are using the hoist assembly if applicable.

2. Verify generator positioning.
    a. Ensure generators are correctly located IAW the appropriate TM and SOP.
    b. Ensure generators are correctly grounded.
    c. Ensure that the transfer box is properly positioned and grounded.

3. Verify shelter installation.
    a. Ensure the shelter is properly anchored.
    b. Ensure the shelter ladder is installed and properly secured.
    c. Ensure external user cables are properly connected on curbside interface.
    d. Ensure external user cables are properly connected on roadside interface.
    e. Ensure the shelter is properly grounded.
    f. Ensure all air vents on the shelter are opened.

4. Verify proper antenna support structure assembly.
    a. Ensure proper antenna ground pad positioning.
    b. Check installation of front and rear leg assemblies.
    c. Check base frame members.
    d. Check side leg assemblies.
    e. Check antenna level.

WARNING: The antenna center section is heavy and fragile. Special attention must be made to ensure that all portions of the antenna are properly installed, secured, and mounted on the frame assembly. Check the actuators and the protective boots to see if damage occurred during installation.

5. Verify siting points.
    a. Ensure antenna is on the correct azimuth as shown in the SAA.
    b. Ensure antenna is on the correct elevation as shown in the SAA.

6. Ensure proper antenna cable installation.
    a. Verify that all cables are correctly installed and attached to the antenna and shelter.
    b. Verify that the cable messenger strap is installed and supports the weight of cables from the shelter to the antenna.

Performance Steps

c. Verify that the antenna is properly grounded.

WARNING: Care must be taken when checking the waveguide installation. Verify that the O-ring is present and that the waveguide is properly seated against the interlock sensor. Check for cracks and dents in the waveguide. Improper installation may inhibit communications, cause serious damage to the equipment, or result in injury to personnel.

7. Verify antenna anchors.
   a. Verify that antenna anchors are properly placed.
   b. Verify that antenna anchors are properly secured to the antenna.
8. Verify proper radiation hazard fence placement.
   a. Verify that the hazard fence is properly secured.
   b. Verify that the hazard fence signs are properly spaced and visible.
9. Verify site power.
   a. Verify that power cables are connected to the transfer box.
   b. Verify that the shelter power cable is properly installed from the transfer box to the shelter.
10. Verify fire point.
    a. Verify that the fire point is placed at midpoint between the generator set and the shelter.
    b. Verify that the fire point has all necessary items as per SOP.

Evaluation Preparation: Setup: Have a copy of the performance steps, appropriate TMs, and local Unit SOP available.

Brief soldier: Not applicable.

Performance Measures	**GO**	**NO GO**
1. Verified site selection.	____	____
2. Verified generator positioning.	____	____
3. Verified shelter installation.	____	____
4. Verified proper antenna support structure assembly.	____	____
5. Verified siting points.	____	____
6. Ensured proper antenna cable installation.	____	____
7. Verified antenna anchors.	____	____
8. Verified proper radiation hazard fence placement.	____	____
9. Verified site power.	____	____
10. Verified fire point.	____	____

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
TB 43-0129	
TM 11-5895-846-14	
TM 9-6115-464-12	

Supervise the Operation of Satellite Communications Set AN/USC-28(V)

113-610-7001

Conditions: Given an AN/USC-28(V); Network Control Book (NCB) (SECRET); keying materials (SECRET); KAO-184A/TSEC; KYK-13/KOI-18; fill cable; DISA circulars 800-E70-7 for the network control terminal (NCT), 800-E70-8 for the alternate network control terminal (ALTNCT), 800-E70-9 for the network terminal (NT), and 800-E70-11 for AN/GSC-49 terminals; TM 11-5895-808-13-1, TM 11-5895-808-13-10, and TM 11-5895-1179-13 (KY-883); and unit SOP.

Standards: Correctly configured all equipment and equipment was operational.

Performance Steps

1. Verify that the AN/USC-28(V) is powered on IAW the procedures outlined in the applicable TM.
2. Verify that the program tape loading procedures are accomplished IAW the procedures outlined in the applicable TM.
3. Verify that the initialization procedures are performed IAW the applicable TM.

NOTE: Performance steps 4 through 10 pertain to configuration and operation of the control synchronization unit (CSU).

4. Verify that the CSU is configured as the NCT or NT, as applicable.
5. Verify that the unit test equipment (UTE) is configured and operating for critical control circuit (CCC)/terrestrial critical control (TCC) unit operation.
6. Verify that the TSEC/KG-84 CCC/TCC is configured and loaded for network operations.
7. Ensure the operator enters the electronic counter-countermeasures (ECCM) network in TDI or TIME APPROX.
   a. Ensure the operator performs time entries
   b. Ensure the operator schedules the CSU.
   c. Ensure the operator loads range data and code-of-the-day (COD) entries.
   d. Ensure the operator loads and initializes the KGV-9.
   e. Ensure the operator corrects for time offset as required.
   f. Ensure the operator makes initial status report to the NCT.
8. Ensure the operator exits the ECCM network and re-enters in standard time.
   a. Ensure the operator makes a full status report as required by DISA circulars to the NCT upon re-entry into the ECCM network.
   b. Ensure the operator performs time entries as required.
   c. Ensure the operator loads range data and COD entries as required.
   d. Ensure the operator loads and initializes the KGV-9s as required.
   e. Ensure the operator corrects for time offset as required.

NOTE: Performance step 9 is an NCT and ALTNCT function only.

9. Ensure the operator performs a coordinated ECCM network control transfer IAW SOP and appropriate TM, as required.
   a. Ensure the operator polls terminals for status as required.
   b. Ensure the operator monitors the probes and controls the network as required.

NOTE: Performance steps 10 through 14 pertain to the configuration and operation of the communications receiver/transmitter (COMM RT).

10. Verify the patching/connectivity of equipment.
    a. Verify IF/RF patching.
    b. Verify KY-883 configuration.

Performance Steps

11. Verify that the operator configures the COMM RT IAW applicable TM and NCB, and that the COMM RT is scheduled.
12. Verify that the UTE is configured and operating in the link orderwire (LOW) mode.
13. Verify that the KG-84 is configured and loaded for LOW network operations.
14. Verify that the user communications data is established.
    a. Ensure the operator loads and initializes the KGV-9.
    b. Verify the performance of the user data links.
15. Verify that the operator sends the proper status reports as required by DISA circulars to the NCT as scheduled or requested.

Performance Measures	**GO**	**NO GO**
1. Verified that the AN/USC-28(V) was powered on IAW procedures outlined in the applicable TM.	____	____
2. Verified that the program tape loading procedures were accomplished IAW procedures outlined in the applicable TM.	____	____
3. Verified that initialization procedures were performed IAW the applicable TM.	____	____
NOTE: Performance measures 4 through 10 pertain to the configuration and operation of the CSU.		
4. Verified that the CSU was configured as NCT or NT, as applicable.	____	____
5. Verified that the UTE was configured and operated for CCC/TCC unit operation.	____	____
6. Verified that the TSEC/KG-84 CCC/TCC was configured and loaded for network operations.	____	____
7. Ensured the operator entered the ECCM network in TDI or TIME APPROX.	____	____
8. Ensured the operator exited the ECCM network and re-entered in standard time.	____	____
NOTE: Performance measure 9 in an NCT and ALTNCT function only.		
9. Ensured the operator performed a coordinated ECCM network control transfer IAW the SOP and appropriate TM, as required.	____	____
10. Verified the patching and connectivity of equipment.	____	____
11. Verified that the operator configured the COMM RT IAW the applicable TM and NCB, and that the COMM RT was scheduled.	____	____
12. Verified that the UTE was configured and operated in the LOW mode.	____	____
13. Verified that the KG-84 was configured and loaded for LOW network operations.	____	____
14. Verified that the user communications data was established.	____	____
15. Verified that the operator made status reports as required by DISA circulars to the NCT as scheduled or requested.	____	____

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
DISA CIR 800-E70-11	
DISA CIR 800-E70-7	
DISA CIR 800-E70-8	
DISA CIR 800-E70-9	
NCB	
TM 11-5895-1179-13	
TM 11-5895-808-13-1	
TM 11-5895-808-13-10	
UNIT SOP	

Supervise the Maintenance of Satellite Communications Set AN/USC-28(V)

113-610-7002

Conditions: Given an AN/USC-28(V); NCB (SECRET); keying material (SECRET); KAO-184A.TSEC; KYK-13/KOI-18; fill cable; DISA circulars 800-E70-7 for the NCT, 800-E70-8 for the ALTNCT, 800-E70-9 for the NT, and 800-E70-11 for AN/GSC-49 terminals; TM 11-5895-808-13--1, TM 11-5895-808-13-10, and TM 11-5895-1179-13 (KY-883); DA Form 2404, DA Form 2407, and unit SOP.

Standards: Correctly configured all equipment and equipment was operational.

Performance Steps

1. Verify that operational PMCS activities are accomplished.
   a. Verify that "daily" PMCS are accomplished and spot-checked for accuracy.
   b. Verify that results are recorded on appropriate forms/records.

NOTE: The following performance steps are performed when the operator discovers a failure or degradation in equipment during the performance of PMCS or during normal operation.

2. Verify that the operator does an initial assessment of failure identifications and determines if failure affects entire system or is a localized failure.
3. Verify that the operator localizes failure to a specific area.
   a. Verify that the operator identifies the correct rack that contains the failure.
   b. Verify that the operator identifies the correct half-rack drawer that contains the failure.
   c. Verify that the operator identifies the correct half drawer that contains the failure.
4. Ensure the operator restores communications on redundant equipment/alternate path prior to commencing detailed fault isolation.
5. Ensure the operator localizes failure using the directed alarm fault isolation (AFI), verify, BITE, or IZAP IAW the appropriate TM.
6. Ensure the operator removes and replaces failed card or module IAW with the repair and replacement procedures outlined in the appropriate TM.
7. Verify that communications are restored and verified by the operator, using the digital data test set.
8. Verify that the operator properly prepares and submits appropriate maintenance forms for replacement parts or to request a higher maintenance level.

Performance Measures	**GO**	**NO GO**
1. Verified that operational PMCS activities were accomplished.	____	____
2. Verified that the operator did an initial assessment of failure identifications and determined if failure affected entire system or was a localized failure?	____	____
3. Verified that the operator localized failure to a specific area.	____	____
4. Ensured the operator restored communications on redundant equipment/alternate path prior to commencing detailed fault isolation.	____	____
5. Ensured the operator localized failure using directed AFI, verify, BITE, or IZAP IAW the appropriate TM.	____	____
6. Ensured the operator removed and replaced the failed card or module IAW the repair and replacement procedures outlined in the appropriate TM.	____	____

Performance Measures	GO	NO GO
7. Verified that communications was restored and verified by the operator, using the digital data test set.	____	____
8. Verified that the operator properly prepared and submitted appropriate maintenance forms for replacement parts or to request a higher maintenance 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. Have the soldier practice until he can correctly perform the task.

References

Required
DA FORM 2404
DA FORM 2407
DA PAM 738-750
DISA CIR 800-E70-11
DISA CIR 800-E70-7
DISA CIR 800-E70-8
DISA CIR 800-E70-9
NCB
TM 11-5895-1179-13
TM 11-5895-808-13-1
TM 11-5895-808-13-10

Related
TM 11-5895-808-13-2

Manage a Maintenance Program

113-623-6014

Conditions: Given communications systems TMs listed in DA PAM 25-30, TMDE listed in appropriate TMs, DA PAM 710-2-1, DA PAM 738-750, and DD Form 314 (Preventive Maintenance Schedule and Record).

Standards: Scheduled and performed PMCS, properly completed all maintenance forms, and initiated all required corrective actions or reports.

Performance Steps

1. Determine maintenance requirements.
   a. Determine equipment requiring preventive maintenance (PM).
   b. Determine frequency of required PM.
   c. Determine tools, TMDE, and materials necessary to perform PM.
   d. Determine level of PM to perform.
   e. Determine personnel available to perform PM.
2. Schedule PM.
   a. Coordinate with training officer/NCO.
   b. Coordinate with higher headquarters.
   c. Coordinate with applicable section for technical assistance when needed.
   d. Prepare DD Form 314.
3. Specify duties and responsibilities for personnel performing PM.
4. Establish SOP.
   a. Establish SOP for ordering repair parts.
   b. Establish SOP for ordering supplies.
   c. Establish SOP for use of tools and TMDE.
   d. Establish SOP for performance of PM.
5. Observe/assist/train personnel in performing PM.
   a. Ensure correct procedures are followed.
   b. Ensure correct level of PM is performed.
   c. Assist personnel during PMCS.
   d. Train personnel in conducting PM.
6. Evaluate PM performed.
   a. Check maintenance forms. (Refer to DA PAM 738-750.)
   b. Check prescribed load list (PLL) usage. (Refer to DA PAM 710-2-1.)
   c. Check equipment logbook for accuracy.
   d. Check readiness report.
7. Initiate/evaluate corrective actions/PM update.

Performance Measures	**GO**	**NO GO**
1. Determined maintenance requirements.	____	____
2. Scheduled PM.	____	____
3. Specified duties and responsibilities for personnel performing PM.	____	____
4. Established SOP.	____	____
5. Observed/assisted/trained personnel in performing PM.	____	____

Performance Measures	GO	NO GO
6. Evaluated PM performed.	____	____
7. Initiated/evaluated corrective actions/PM update.	____	____

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 PAM 25-30	
DA PAM 710-2-1	
DA PAM 738-750	
DD FORM 314	

Manage a Publications Library

113-638-6001

Conditions: Given AR 25-11, AR 25-400-2, DISA Notice 210-0-1, DA PAM 25-30, DA PAM 25-33, DA PAM -25-40, local and higher headquarters' publications indexes and publications procedures, DA Form 12-R (Request for Establishment of a Publications Account (LRA), DA Form 17 (Requisition for Publications and Blank Forms, and DA Form 17-1 (Requisition for Publications and Blank Forms [Continuation Sheet]).

Standards: Established a publications library in the maintenance area with required publications on hand or on order.

Performance Steps

(Refer to DA PAM 25-30 for performance steps 1 through 4; refer to DA PAM 25-33 for performance steps 6 through 8; refer to DA PAM 25-40 for performance steps 9 through 11; unless otherwise indicated.)

1. Determine publications required by shop or section.
2. Ensure technical publications on hand or on order are current.
3. Ensure doctrinal, training, and organizational publications on hand or on order are current.
4. Ensure administrative publications on hand or on order are current.
5. Ensure local and higher headquarters' publications are current. (Refer to local and higher headquarters' publications indexes.)
6. Prepare the required transmittal form.
7. Prepare DA Form 17 and DA Form 17-1 to request local and higher headquarters' publications. (Refer to DA PAM 25-33 and local/higher headquarters' publications requisitioning procedures.)
8. Ensure published changes are posted to appropriate publications. (Refer to DA PAM 25-40 and publication change instructions.)
9. Remove obsolete/rescinded/superseded publications from the library. (Refer to DA PAM 25-40 and publication change instructions.)
10. Arrange publications in proper order and in a suitable location.
11. Label binders used for storing library publications. (Refer to AR 25-400-2 and DA PAM 25-40.)
12. Notify personnel to return loaned publications to the library in a timely manner.
13. Update the United States Army Printing Agency (USAPA), local and higher headquarters' publications accounts as required. (Refer to DA PAM 25-33 and local/higher headquarters' publications account instructions.)

Evaluation Preparation: Setup: A supervisor in a support maintenance unit or activity is required to establish a publications library to support the maintenance activity. If equipment listings of the unit and supported units are not available, the applicable table of organization and equipment/modified table of organization and equipment (TOE/MTOE) should be used. Have unit equipment listing and supported units' equipment listings available. Have available file copies of publications requests (DA Forms 4569, 17-series, and 12-series) previously submitted by your unit.

Brief soldier: Tell the soldier the ability to establish a publications library will be evaluated according to the performance measures.

Performance Measures	GO	NO GO
1. Determined publications required by shop or section.	____	____
2. Ensured technical publications on hand or on order were current.	____	____
3. Ensured doctrinal, training, and organizational publications on hand or on order were current.	____	____
4. Ensured administrative publications on hand or on order were current.	____	____
5. Ensured local and higher headquarters' publications were current.	____	____
6. Prepared the required transmittal form.	____	____
7. Prepared DA Form 17 and DA Form 17-1 to request local and higher headquarters' publications.	____	____
8. Ensured published changes were posted to appropriate publications.	____	____
9. Removed obsolete/rescinded/superseded publications from the library.	____	____
10. Arranged publications in proper order and in a suitable location.	____	____
11. Labeled binders used for storing library publications.	____	____
12. Notified personnel to return loaned publications to the library in a timely manner.	____	____
13. Updated USAPA, local, and higher headquarters' publications accounts 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. Have the soldier practice until he can correctly perform the task.

References

Required	Related
AR 25-11	
AR 25-400-2	
DA FORM 12-R	
DA FORM 17	
DA FORM 17-1	
DA PAM 25-30	
DA PAM 25-33	
DA PAM 25-40	
DA PAM 25-33	
DA PAM 25-40	

Subject Area 9: MILSTAR

Skill Level 4

Subject Area 7: SATCOM Terminal Direction

Prepare Emergency Plan

113-573-0006

Conditions: Given a requirement to prepare an emergency plan, AR 380-40, AR 380-5, and TB 380-41.

Standards: Prepared an emergency plan.

NOTE: Due to the nature of this task, a time limit is not established.

Performance Steps

1. Coordination and planning are vital to effective emergency procedures. Emergency plans involving COMSEC material are coordinated with or incorporated into command emergency plans. This ensures evacuation, storage, and/or destruction is effectively and securely performed in the event of an actual emergency.
2. Emergency measures are taken in the event of an emergency and include evacuation, secure storage, and destruction. The commander decides which measures are taken and indicates those measures not considered feasible.
    a. Evacuation and/or secure storage are considered before destruction. However, simultaneous implementation of any two or all three measures may be necessary. For example, if it appears a civil uprising will be of short duration and the cryptofacility will be abandoned for only a short period of time, destroy superseded key, evacuate future and current key, and store all equipment.
    b. Evacuation is the removal of COMSEC material to a safe location. During evacuation, make every effort to prevent loss or unauthorized access from the time of evacuation to the subsequent return of the material to its original location or relocation to a new secure area.
    c. Several factors which influence the decision to store or evacuate COMSEC material are the time available, the future requirements for the COMSEC material, and the bulk and weight of the material.
    d. Secure storage during a emergency.
        (1) Secure storage during an emergency is achieved by using authorized vaults, safes, or a secure room. If a secure room is used, all classified boards must be removed from nonsecured COMSEC equipment and stored in approved security containers along with classified components and other classified COMSEC material.
        (2) If possible, a guard should remain in or near the storage area. The presence of a guard does not satisfy the emergency storage requirement; it is desirable as a secondary barrier.
        (3) Secure storage is not an effective emergency measure while under the threat of enemy attack.
3. Destruction priorities for emergency destruction of COMSEC material are:
    a. Priority 1: Used superseded classified key marked CRYPTO is the most sensitive COMSEC material. It must be given the highest priority to prevent compromise. All superseded and current classified key marked CRYPTO except authenticators, CONFIDENTIAL tactical operations codes, unused OTP and OTT, and unused point-to-point (two copy) key.
    b. Priority 2: Superseded, current, and future card reader insert boards (CRIBs).
    c. Priority 3: TOP SECRET multiholder key, which will be effective within the next 30 days.
    d. Priority 4: Superseded tactical operations codes.

Performance Steps

e. Priority 5: SECRET and CONFIDENTIAL multiholder key, which will be effective within the next 30 days.
f. Priority 6: Sensitive pages of cryptoequipment maintenance manuals or the complete manual.
g. Priority 7: Classified COMSEC equipment elements or subassemblies, such as printed circuit boards and module boards, in the order listed in the appropriate maintenance manuals.
h. Priority 8: The remaining COMSEC equipment maintenance manuals and classified operating instructions.
i. Priority 9: All remaining classified COMSEC material and unclassified key marked CRYPTO. If time permits, destroy superseded authenticators and unused two-copy key.

4. Destruction methods and materials.
   a. Shredders: Any type shredder may be used when other methods of destruction are not available and the key is mixed with an equal amount of other similar material. Shredders are also a supplementary method to speed destruction, when necessary. Shredded key larger than 1.2mm (0.05 inches) wide and 13mm (0.5 inches) long or as an alternative, 0.73mm (0.03 inches) wide and 22.2mm (0.87 inches) long are scattered or dispersed over a wide area.
   b. Document destroyer kits: Use document destroyer kit M4 or other prepared kits for document destruction.
   c. Incendiary file destroyer: Use incendiary file destroyer ABC-M4. Two incendiary file destroyers are required for a four-drawer file cabinet.
   d. Fuels: Use kerosene, gasoline, and sodium nitrate to expedite burning. Use extreme care for personal safety.

5. Destruction of COMSEC equipment is the last resort to prevent it from falling into unauthorized hands. Destruction is any method that renders the equipment unusable and unrepairable. Destruction is accomplished to a degree that logic reconstruction is not possible. Do this by removing and destroying the classified assemblies within the equipment, including classified printed circuit boards and multilayer boards.
   a. Thermite incendiaries provide effective and total destruction (not authorized for use within the continental United States except for training purposes).
   b. Incinerators are used to destroy printed circuit boards. If necessary, break up the boards after they are removed from the incinerator.
   c. Printed circuit boards may be destroyed by hacking with an ax and scattering the pieces.
   d. CRIBs are destroyed by first peeling off the metal backing plate, and then cutting the CRIB into pieces using heavy scissors or tin snips. Use an acetylene torch, if available, to completely destroy the circuitry on the remaining pieces.

6. Emergency task cards are used for carrying out emergency plans. They identify each specific task that will be done. Record each task and the approximate completion time on a separate 5 X 8 card. Ensure the task cards are in the priority order in paragraph 3.
   a. In an emergency, personnel will report to a predesignated location. A COMSEC officer or other designated individual issues the task cards, one at a time, to individuals. Each individual will carry out the designated task as written on the card and return to the person in charge to report the task is completed. The individual is then given the next task. This continues until all tasks are completed.
   b. Under this system, many tasks are completed at the same time, maximum personnel are employed, and the emergency action progress is known at all times.

7. Reporting measures.
   a. Whenever emergency plans are executed, message reports are sent to CDR USACSLA, FT HUACHUCA AZ //SELCL-PP// and CDR INSCOM, AHS VA //IAOPS-CI-P//. In addition, an information copy is sent to the activity providing COMSEC support and to the unit's next higher headquarters.
   b. A report of an emergency incident, which did not result in insecurity, will include, as a minimum, a list of the material destroyed or relocated and the method and degree of destruction, and will indicate the circumstances that caused the execution of emergency plans.

Performance Measures	GO	NO GO
1. Developed emergency evacuation measures.	____	____
2. Developed secure storage measures.	____	____
3. Developed precautionary action measures.	____	____
4. Developed emergency destruction measures.	____	____
5. Developed reporting measures.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
AR 380-40	
AR 380-5	
TB 380-41	

Manage a Facility Physical Security Program

113-573-0013

Conditions: You will need a facility, AR 190-13, and FM 3-19.30.

Standards: Completed all performance measures.

Performance Steps
(Refer to AR 190-13 and FM 3-19.30 for all performance steps.)

1. Ensure appropriate checklist is completed and current for type of facility IAW regulations and SOPs.
2. Ensure physical security inspections are performed IAW proper regulations and SOPs.
3. Report all discrepancies to appropriate authority and ensure discrepancies are recorded and corrected.
4. Ensure follow-up inspections are conducted to make sure discrepancies are corrected.
5. Ensure the site has all regulations that support the physical security program.

Performance Measures (Refer to AR 190-13 and FM 3-19.30 for all PMs.)	**GO**	**NO GO**
1. Ensured appropriate checklist was completed and current for type of facility IAW regulations and SOPs.	____	____
2. Ensured physical security inspections were performed IAW proper regulations and SOPs.	____	____
3. Reported all discrepancies to appropriate authority and ensured discrepancies were recorded and corrected.	____	____
4. Ensured follow-up inspections were conducted to make sure discrepancies were corrected.	____	____
5. Ensured the site had all regulations that support the physical security program.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
AR 190-13	AR 380-5
FM 3-19.30	TB 380-41

Evaluate Communications Security (COMSEC) for Insecurities

113-573-2032

Conditions: Given AR 380-5 and TB 380-41.

Standards: Evaluated facility COMSEC and noted discrepancies.

Performance Steps

1. Determine if COMSEC insecurity exists.
2. Identify type of COMSEC insecurity.
3. Report the COMSEC insecurity IAW AR 380-5.

Performance Measures	**GO**	**NO GO**
1. Leader determined if COMSEC insecurity existed.	____	____
2. Leader identified type of COMSEC insecurity.	____	____
3. Leader reported the COMSEC insecurity IAW AR 380-5.	____	____

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**
AR 380-5	
TB 380-41	

Direct the Maintenance of Defense Communications Satellite Subsystem (DCSS)

113-583-7097

Conditions: As a SATCOM system chief in a strategic environment and given associated equipment, IDNX Manual, TM 11-5805-795-13, TM 11-5895-1215-20, TM 11-5895-1346-13, TM 11-5895-1630-13&P, TM 11-5895-1686-13, TM 11-7025-221-20, TM CQT-6400-IOM-02, unit SOP, and operating requirements.

Standards: Directed the restoral of the DCSS into an operational mode.

Performance Steps

1. Ensure personnel monitor the DCSS for faulty or degrading conditions.

NOTE: For a more detailed list, refer to Task Number 113-583-7095 (Supervise the Maintenance of DCSS).

2. Ensure supervisors utilize the troubleshooting techniques that are IAW appropriate TMs/equipment.
3. Once a fault is identified on the equipment with the DCSS, direct personnel to isolate the fault.
4. Ensure supervisors notify higher headquarters IAW DISA regulations of extended outages or hazardous conditions (HAZCON).
5. Ensure supervisors/operators return the DCSS to an operational state.

Performance Measures	**GO**	**NO GO**
1. Verified that supervisors ensured that soldiers monitored the DCSS for faulty or degrading conditions.	____	____
2. Verified that supervisors ensured personnel utilized the appropriate troubleshooting techniques IAW with TMs and equipment.	____	____
3. Verified that supervisors ensured soldiers isolated the fault.	____	____
4. Verified that the soldier ensured appropriate headquarters and personnel were notified of extended outages or HAZCON.	____	____
5. Verified that supervisors ensured that the DCSS was returned to an operational status.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
IDNX MANUAL	
TM 11-5805-795-13	
TM 11-5895-1215-20	
TM 11-5895-1346-13	
TM 11-5895-1630-13&P	
TM 11-5895-1686-13	
TM 11-7025-221-20	
TM CQT-6400-IOM-02	

Direct the Operation of Defense Communications Satellite Subsystem (DCSS)

113-583-7098

Conditions: Given associated DCSS equipment, Promina 800 Series Node Configuration Manual, Promina 800 Series Operator Interface, Promina 800 Series Quick Reference Guide, Promina 800 Series Common Equipment Modules Manual, Promina 800 Series Trunk Modules Manual, Promina 800 Series Voice Modules Manual, Promina 800 Series Data Modules Manual, TM 11-5805-795-13, TM 11-5805-802-13&P, TM 11-5895-1215-10, TM 11-5895-1630-13&P, TM 11-7025-221-10, TM CQT-6400-IOM-02, applicable TSOs, Unit SOP, and operating requirements.

Standards: Successfully completed all managerial performance measures.

Performance Steps

1. Ensure that all site personnel are appropriately trained on all DCSS equipment prior to operating and configuring identified equipment.
2. Ensure that site personnel and supervisors have appropriate configuration paperwork, aka TSOs and Telecommunications Service Requests (TSRs), to verify equipment settings.
3. Ensure that all equipment has associated TMs and commercial manuals that support its operations and configurations. (Reference Task Number 113-583-7096 (Supervise the Operation of DCSS) for specific equipment.)
4. Ensure that supervisors track any problems that may occur with equipment setup or operation.

Performance Measures	**GO**	**NO GO**
1. Ensured that personnel were appropriately trained on all DCSS equipment prior to operating and configuring identified equipment.	____	____
2. Ensured that personnel and supervisors had appropriate configuration paperwork, aka TSOs and TSRs, to verify equipment settings.	____	____
3. Ensured that all equipment had associated TMs and commercial manuals that supported its operations and configurations. (Reference Task Number 113-583-7096 (Supervise the Operation of DCSS) for specific equipment.)	____	____
4. Ensured that supervisors tracked any problems that may have occurred with equipment setup or operation.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
PROMINA	
PROMINA1	
PROMINA2	
PROMINA3	
PROMINA4	
PROMINA5	
PROMINA6	
TM 11-5805-795-13	
TM 11-5805-802-13&P	
TM 11-5895-1215-10	
TM 11-5895-1346-13	

References

Required	Related
TM 11-5895-1630-13&P	
TM 11-7025-221-10	
TM CQT-6400-IOM-02	

Establish Network Plans for GMF

113-589-6001

Conditions: Given the requirement to plan a communications network, DISAC 800-70-1, ASC-1, TM 11-5895-1448-10, LRM Configuration Worksheet, Terminal Configuration Worksheet, and current Key List from local COMSEC custodian.

Standards: Issued the Terminal Deployment Orders, successfully passed communications, and submitted the After Actions Report.

Performance Steps

1. Identify and determine terminal assets and configurations required for mission support. (Refer to TM 11-5895-1448-10; paragraph numbers are identified at the end of each subtask.)
   a. Determine data rate requirement for the exercise (paragraph 6-2).
   b. Determine method of communication to utilize (paragraph 6-4).
   c. Prepare the LRM Configuration Worksheet (paragraph 6-10).
   d. Prepare the Terminal Configuration Worksheet (paragraph 6-9).
   e. Prepare the Terminal Deployment Authorization (paragraph 6-12).
2. Submit communications requirements to DISA Military Satellite Communications (MILSATCOM) Systems Office (MSO) for approval and assignment of a user requirements database (URDB) number.
3. Coordinate the DSCS GMF gateway assignment with the appropriate DISA element prior to formally submitting the satellite access request (SAR).
4. Prepare the SAR IAW ASC-1.
5. Generate and submit the SAR to the appropriate Regional Signal Support Center (RSSC).
6. Coordinate between the RSSC and the mission/area commander to modify mission plans when DSCS satellite resources are not available for the desired mission support.
7. Develop modified SARs as necessary to respond to user request for changes in SATCOM services during a mission.
8. Coordinate with the local frequency manager to obtain frequency clearance for each GMF terminal location.
9. Prepare and issue to each GMF terminal and DSCS gateway (if applicable) terminal deployment orders consistent with the SAA and the circuit level communications requirements.
10. Assist in contingency planning exercises as necessary.
11. Provide the RSSC after-action reports for each mission.

Performance Measures	**GO**	**NO GO**
1. Identified and determined terminal assets and configurations required for mission support. (Refer to TM 11-5895-1448-10; paragraph numbers are identified at the end of each subtask.) a. Determined data rate requirement for the exercise (paragraph 6-2). b. Determined method of communication to be utilized (paragraph 6-4). c. Prepared the LRM Configuration Worksheet (paragraph 6-10). d. Prepared the Terminal Configuration Worksheet (paragraph 6-9). e. Prepared the Terminal Deployment Authorization (paragraph 6-12).	____	____

Performance Measures	GO	NO GO
2. Submitted communications requirements to DISA MSO for approval and assignment of a URDB number.	____	____
3. Coordinated DSCS GMF gateway assignment with the appropriate DISA element prior to formally submitting the SAR.	____	____
4. Prepared the SAR IAW ASC-1.	____	____
5. Generated and submitted the SAR to the appropriate RSSC.	____	____
6. Coordinated between the RSSC and the mission/area commander to modify mission plans when DSCS satellite resources were not available for the desired mission support.	____	____
7. Developed modified SARs as necessary to respond to user request for changes in SATCOM services during a mission.	____	____
8. Coordinated with the local frequency manager to obtain frequency clearance for each GMF terminal location.	____	____
9. Prepared and issued to each GMF terminal and DSCS gateway (if applicable) terminal deployment orders consistent with the SAA and the circuit level communications requirements.	____	____
10. Assisted in contingency planning exercises as necessary.	____	____
11. Provided the RSSC after-action reports for each mission.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
ASC-1	
DISA CIR 800-70-1	
TM 11-5895-1448-10	

Direct the Maintenance of SATCOM Terminal AN/TSC-85 or AN/TSC-93 (V)

113-589-7124

Conditions: Given a tactical SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V), lint-free cloth or brush; cleaning compound; DA PAM 738-750, TM 9-6115-464-12, TM 5-6115-585-12, TM 11-5895-1433-12-1, TM 11-5895-1433-12-2, TM 11-5895-1433-34, TM 11-5895-1434-12-1, TM 11-5895-1434-12-2, TM 11-5895-1434-34, and TM 11-5895-1127-20; L3 Communications Manuals PX19671 Rev. A, PX19672 Rev A, and PX19674 Rev B; and DA Form 2404.

Standards: Directed the restoral of SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V).

Performance Steps

1. Direct personnel that PMCS activities are accomplished for curbside equipment IAW appropriate TMs for "Before Operation," "During Operation," and "After Operation."
2. Direct personnel that PMCS activities are accomplished for roadside equipment IAW appropriate TMs for "Before Operation," "During Operation," and "After Operation."
3. Direct personnel that maintenance PMCS activities are completed on curbside equipment IAW applicable TMs. Ensure weekly and semiannual are completed.
4. Direct personnel that maintenance PMCS activities are completed on roadside equipment IAW applicable TMs. Ensure weekly and semiannual are completed.
5. Ensure that supervisors keep track of corrected deficiencies.
   a. Repairs that are made at unit level are accomplished.
   b. All repairs that are above unit level have the appropriate paperwork initiated to have repairs done.

Performance Measures	**GO**	**NO GO**
1. Directed personnel that PMCS activities on curbside equipment were accomplished. a. Supervisor verified that before, during, and after operation checks were performed IAW appropriate TMs.	____	____
2. Directed personnel that PMCS activities on roadside equipment were accomplished. a. Supervisor verified that before, during, and after operation checks were performed IAW appropriate TMs.	____	____
3. Directed personnel that maintenance PMCS was completed on curbside equipment. a. Supervisor verified that weekly and semiannual maintenance was completed IAW appropriate TMs.	____	____
4. Directed personnel that maintenance PMCS was completed on roadside equipment. a. Supervisor verified that weekly and semiannual maintenance was completed IAW appropriate TMs.	____	____
5. Supervisors verified that all repairs were made and appropriately annotated IAW TMs, and that the appropriate paperwork was completed on equipment that had to go to higher maintenance level.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
DA FORM 2404	TM 11-5820-1128-34
DA PAM 738-750	TM 11-5895-1127-20
PX19671 REV A	TM 11-5895-1127-34
PX19672 REV A	TM 11-5895-1128-10
PX19674 REV B	TM 11-5895-1128-20
TM 11-5895-1433-12-1	
TM 11-5895-1433-12-2	
TM 11-5895-1433-34	
TM 11-5895-1434-12-1	
TM 11-5895-1434-12-2	
TM 11-5895-1434-34	
TM 5-6115-585-12	
TM 9-6115-464-12	

Direct the Operation of SATCOM Terminal AN/TSC-85 or AN/TSC-93 (V)

113-589-7125

Conditions: Given a SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V); installed antenna group AS-3036/TSC; installed generator set PU-405A or PU-753/M on a predetermined site on correct azimuth and elevation; TM 9-6115-464-12, TM 5-6115-585-12, TM 11-5895-1433-12-1, TM 11-5895-1433-12-2, TM 11-5895-1433-34, TM 11-5895-1434-12-1, TM 11-5895-1434-12-2, and TM 11-5895-1434-34; L3 Communications Manuals PX19671 Rev A, PX19672 Rev A, and PX 19674 Rev B.

Standards: Directed the operation of SATCOM terminal AN/TSC-85(V) or AN/TSC-93(V).

Performance Steps

1. Ensure the terminals are assigned generators that supply the proper power requirements for operation.
2. Ensure the supervisors accounted for all assigned equipment and personnel.
3. Ensure the supervisors completed PMCS and safety checks of all assigned equipment.
4. Advise appropriate supervisors of equipment configurations.
5. Direct the supervisors to keep you informed on system status until continuity is established with interfacing media.
6. Direct the supervisors to keep you informed on any system failures or HAZCON that may affect the operation of the system on a case-by-case basis.

Performance Measures	**GO**	**NO GO**
1. Ensured terminals were assigned generators that supplied the proper power requirements for operation.	____	____
2. Ensured the supervisors accounted for all assigned equipment and personnel.	____	____
3. Ensured the supervisors completed PMCS and safety checks of all assigned equipment.	____	____
4. Advised appropriate supervisors of equipment configurations.	____	____
5. Directed the supervisors to keep manager informed on system status until continuity was established with interfacing media.	____	____
6. Directed the supervisors to keep manager informed on any system failures or HAZCON that may affect the operation of the system.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
PX19671 REV A	11-10-14
PX19672 REV A	201-113-0321-B
PX19674 REV B	
TM 11-5895-1433-12-1	
TM 11-5895-1433-12-2	
TM 11-5895-1433-34	
TM 11-5895-1434-12-1	
TM 11-5895-1434-12-2	
TM 11-5895-1434-34	
TM 5-6115-585-12	
TM 9-6115-464-12	

Direct the Maintenance of SATCOM Terminal AN/GSC-39, AN/FSC-78, AN/GSC-52, or AN/TSC-86
113-590-7004

Conditions: As a section chief, given an AN/GSC-52A(V3) SATCOM terminal, AN/FSC-78C(V2) heavy SATCOM terminal, AN/GSC-39C medium SATCOM terminal, or AN/TSC-86 SATCOM terminal in a defective condition; TM 11-5895-1196-13-2 through TM 11-5895-1196-13-9, TM 11-5895-1197-13-1 through TM 11-5895-1197-13-11, TM 11-5895-1531-30, TM 11-5895-1532-30, TM 11-5895-1533-30, TM 11-5895-1535-12, TM 11-5895-1536-13, TM 11-5895-846-14, and TM 11-5985-398-13; direct the maintenance of the appropriate terminals and restore communications.

Standards: Successfully directed the restoral of the defective SATCOM terminal and completed and forwarded the correct maintenance documentation.

Performance Steps

NOTE: The following performance steps are for the initial assessment of a failure in the SATCOM strategic terminals (AN/FSC-78, AN-GSC-39, AN/GSC-52). The supervisor will ensure that the operators take appropriate actions as directed in the operator level critical tasks that cover the specific piece of equipment and IAW governing regulations (TMs/SOPs). When the functional group in which the fault is located has been determined, find the appropriate section of this task for further steps in restoral of faulted equipment. For maintaining the AN/TSC-86, see performance steps 30 through 34.

1. Ensure the supervisor verifies the alarm monitoring subsystem for visual/audible alarm situations.
2. Ensure the supervisor verifies localized fault to a functional uplink, downlink, or tracking failure.
3. Ensure the supervisor verifies what the correct functional group is.
   a. AMG/CMA subsystem: See performance steps 5 through 9.
   b. SGG: See performance steps 10 through 14.
   c. FCG: See performance steps 15 through 19.
   d. Transmitter Group: See performance steps 20 through 24.
   e. Antenna Group: See performance steps 25 through 29.
4. Ensure the supervisor verifies that using spare equipment, before beginning the repair and replacement procedures on defective equipment, restores communications.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the AMG. Ensure the supervisor verifies the following performance steps.

5. Verify that the operator determines the faulted portion in the AMG.
6. Ensure the operator inspects all components and cables for defects and proper connections.
7. Verify that the operator isolates fault to the correct LRU of defective equipment.
8. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
9. Ensure the operator verifies the successful repair of the AMG by testing/operating.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the SGG. Ensure the supervisor verifies the following performance steps.

10. Verify that the operator determines the faulted portion of the SGG.
11. Ensure the operator inspects all components and cables for defects and proper connections.
12. Verify that the operator isolates fault to the correct LRU of defective equipment.

Performance Steps

13. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
14. Ensure the operator verifies the successful repair of the SGG by testing/operating.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the FCG. Ensure the supervisor verifies the following performance steps.

15. Verify that the operator determines the faulted portion of the FCG.
16. Ensure the operator inspects all components and cables for defects and proper connections.
17. Verify that the operator isolates fault to the correct LRU of defective equipment.
18. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
19. Ensure the operator verifies the successful repair of the FCG by testing/operating.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the Transmitter Group. Ensure the supervisor verifies the following performance steps.

20. Verify that the operator determines the faulted portion of the Transmitter Group.
21. Ensure the operator inspects all components and cables for defects and proper connections.
22. Verify that the operator isolates fault to the correct LRU of defective equipment.
23. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.
24. Ensure the operator verifies the successful repair of the Transmitter Group by testing/operating.

NOTE: The following performance steps are performed for repair and replacement of defective equipment located in the Antenna Group. Ensure the supervisor verifies the following performance steps.

25. Verify that the operator determines the faulted portion of the Antenna Group.
26. Ensure the operator inspects all components and cables for defects and proper connections.
27. Verify that operator isolates fault to the correct LRU of defective equipment.
28. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in appropriate TM.
29. Ensure the operator verifies the successful repair of the Antenna Group by testing/operating

NOTE: The following performance steps are for the AN/TSC-86 only. Ensure the supervisor verifies the following performance steps.

30. Verify that that operator isolates failure to correct faulted equipment.
31. Verify that the operator transfers to standby equipment if available. If standby equipment is not available, ensure the soldier prioritizes circuits to receive restored service.
32. Verify that the operator isolates fault to the correct LRU of defective equipment.
33. Verify that the operator correctly repairs the LRU IAW the removal and replacement or alignment/adjustment procedures in appropriate TM.

Performance Steps

34. Ensure the operator verifies the successful repair of the system by testing/operating.

NOTE: The following performance step is completed after communications has been completely restored.

35. Review both DA Form 2404 and/or DA Form 2407 for accuracy and forward the paperwork and defective equipment to the appropriate maintenance level.

Performance Measures	**GO**	**NO GO**
NOTE: The following performance steps are for the initial assessment of a failure in the SATCOM strategic terminals (AN/FSC-78, AN-GSC-39, AN/GSC-52). The supervisor will ensure that the operators take appropriate actions as directed in the operator level critical tasks that cover the specific piece of equipment and IAW governing regulations (TMs/SOPs). When the functional group in which the fault is located has been determined, find the appropriate section of this task for further steps in restoral of faulted equipment. For maintaining the AN/TSC-86, see performance steps 30 through 34.		
1. Soldier ensured that the supervisor verified the alarm monitoring subsystem for visual/audible alarm situations.	____	____
2. Soldier ensured that the supervisor verified localized fault to a functional uplink, downlink, or tracking failure.	____	____
3. Soldier ensured that the supervisor verified what the correct functional group was. a. AMG/CMA subsystem: See performance measures 5 through 9. b. SGG: See performance measures 10 through 14. c. FCG: See performance measures 15 through 19. d. Transmitter Group: See performance measures 20 through 24. e. Antenna Group: See performance measures 25 through 29.	____	____
4. Soldier ensured that the supervisor verified that using spare equipment, before beginning repair and replacement procedures on defective equipment, restored communications.	____	____
NOTE: The following performance measures were performed for repair and replacement of defective equipment located in the AMG. Did the soldier ensure that the supervisor verified the following performance measures?		
5. Verified that the operator determined the faulted portion in the AMG.	____	____
6. Ensured that the operator inspected all components and cables for defects and proper connections.	____	____
7. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
8. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
9. Ensured that the operator verified the successful repair of the AMG by testing/operating.	____	____
NOTE: The following performance measures were performed for repair and replacement of defective equipment located in the SGG. Did the soldier ensure that the supervisor verified the following performance measures?		
10. Verified that the operator determined the faulted portion of the SGG.	____	____

Performance Measures	GO	NO GO
11. Ensured that the operator inspected all components and cables for defects and proper connections.	____	____
12. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
13. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
14. Ensured that the operator verified the successful repair of the SGG by testing/operating.	____	____
NOTE: The following performance measures were performed for repair and replacement of defective equipment located in the FCG. Did the soldier ensure that the supervisor verified the following performance measures?		
15. Verified that the operator determined the faulted portion of the FCG.	____	____
16. Ensured that the operator inspected all components and cables for defects and proper connections.	____	____
17. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
18. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
19. Ensured that the operator verified the successful repair of the FCG by testing/operating.	____	____
NOTE: The following performance measures were performed for repair and replacement of defective equipment located in the Transmitter Group. Did the soldier ensure that the supervisor verified the following performance measures?		
20. Verified that the operator determined the faulted portion of the Transmitter Group.	____	____
21. Ensured that the operator inspected all components and cables for defects and proper connections.	____	____
22. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
23. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
24. Ensured that the operator verified the successful repair of the Transmitter Group by testing/operating.	____	____
NOTE: The following performance measures were performed for repair and replacement of defective equipment located in the Antenna Group. Did the soldier ensure that the supervisor verified the following performance measures?		
25. Verified that the operator determined the faulted portion of the Antenna Group.	____	____
26. Ensured that the operator inspected all components and cables for defects and proper connections.	____	____
27. Verified that the operator isolated fault to the correct LRU of defective equipment.	____	____
28. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
29. Ensured that the operator verified the successful repair of the Antenna Group by testing/operating.	____	____

Performance Measures	GO	NO GO
NOTE: The following performance measures were for the AN/TSC-86 only. Did the soldier ensure that the supervisor verified the following performance measures?		
30. Verified that the operator isolated failure to correct faulted equipment.	____	____
31. Verified that the operator transferred to standby equipment if available. If standby equipment was not available, ensured that the soldier prioritized circuits to receive restored service.	____	____
32. Ensured that the operator isolated fault to the correct LRU of defective equipment.	____	____
33. Verified that the operator correctly repaired the LRU IAW the removal and replacement or alignment/adjustment procedures in the appropriate TM.	____	____
34. Ensured that the operator verified the successful repair of the system by testing/operating.	____	____
35. Soldier reviewed both DA Form 2404 and/or DA Form 2407 for accuracy and forwarded paperwork and defective equipment to the appropriate maintenance level.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
TM 11-5895-1196-13-2	DA PAM 738-750
TM 11-5895-1196-13-3	
TM 11-5895-1196-13-4	
TM 11-5895-1196-13-5	
TM 11-5895-1196-13-6	
TM 11-5895-1196-13-7	
TM 11-5895-1196-13-8	
TM 11-5895-1196-13-9	
TM 11-5895-1197-13-1	
TM 11-5895-1197-13-10	
TM 11-5895-1197-13-11	
TM 11-5895-1197-13-3	
TM 11-5895-1197-13-4	
TM 11-5895-1197-13-5	
TM 11-5895-1197-13-6	
TM 11-5895-1197-13-7	
TM 11-5895-1197-13-8	
TM 11-5895-1197-13-9	
TM 11-5895-1531-30	
TM 11-5895-1532-30	
TM 11-5895-1533-30	
TM 11-5895-1534-30	
TM 11-5895-1535-12	
TM 11-5895-1536-13	
TM 11-5895-846-14	
TM 11-5985-398-13	

Direct the Operation of SATCOM Terminal AN/GSC-39, AN/FSC-78, AN/GSC-52, or AN/TSC-86
113-590-7005

Conditions: As a section chief, given an AN/GSC-52A(V3) SATCOM terminal, AN/FSC-78C(V2) heavy SATCOM terminal, AN/GSC-39C medium SATCOM terminal, SATCOM terminal: AN/TSC-86, TM 11-5895-1196-13-2 through TM 11-5895-1196-13-9, TM 11-5895-1197-13-1 through TM 11-5895-1197-13-11, TM 11-5895-1531-30, TM 11-5895-1532-30, TM 11-5895-1533-30, TM 11-5895-1535-12, TM 11-5895-1536-13, and TM 11-5895-846-14; direct the operation of SATCOM equipment and ensure supervisors complete their tasks as indicated.

Standards: Directed the operation of appropriately identified SATCOM terminal(s).

Performance Steps

NOTE: The following performance steps are for the AN/GSC-39, AN/FSC-78, and AN/GSC-52

1. Ensure the supervisor verifies that the operator performs preoperational adjustments and setup IAW appropriate TM and applicable TSO.
2. Ensure the supervisor verifies that the operator performs satellite acquisition IAW with appropriate TM and governing SOP.
3. Ensure the supervisor verifies that the operator performs satellite tracking and ensures that the appropriate satellite is acquired by contacting the DSCSOC.
4. Ensure the supervisor verifies that the operator performs uplink carrier alignment in conjunction with the DSCSOC and IAW appropriate governing regulations (TMs/SOPs).
5. Ensure the supervisor verifies that the operator performs uplink carrier level adjustments in conjunction with the DSCSOC and IAW appropriate governing regulations (TMs/SOPs).
6. Ensure the supervisor verifies that the operator performs carrier-to-noise density ration check.
7. Ensure the supervisor verifies that the operator configures equipment for automatic switchover as applicable.
8. Ensure the supervisor verifies that the operator performs uplink and downlink signal traffic monitoring.
9. Ensure the supervisor verifies that the operator performs terminal equipment selection and status monitoring.

NOTE: The following performance steps are for the AN/TSC-86 terminal.

10. Ensure the supervisor verifies that the operator correctly configures equipment according to the cut sheet provided and IAW governing regulations (TMs/SOPs).
11. Ensure the supervisor verifies that the operator acquires and tracks the appropriate satellite and that the HPA is in standby.
12. Ensure the supervisor verifies that the operator accesses the satellite IAW with governing regulations in conjunction with the GMF controller at the DSCSOC.
13. Ensure the supervisor verifies that the operator monitors communications status of equipment and passes the appropriate reports at the designated time IAW governing regulations (SOPs/TMs)

Performance Measures	GO	NO GO
1. Ensured the supervisor verified that the operator performed preoperational adjustments and setup IAW appropriate TM and applicable TSO.	____	____
2. Ensured the supervisor verified that the operator performed satellite acquisition IAW the appropriate TM and governing SOP.	____	____
3. Ensured the supervisor verified that the operator performed satellite tracking and ensured that the appropriate satellite was acquired by contacting the DSCSOC.	____	____
4. Ensured the supervisor verified that the operator performed uplink carrier alignment in conjunction with the DSCSOC and IAW appropriate governing regulations (TMs/SOPs).	____	____
5. Ensured the supervisor verified that the operator performed uplink carrier level adjustments in conjunction with the DSCSOC and IAW appropriate governing regulations (TMs/SOPs).	____	____
6. Ensured the supervisor verified that the operator performed carrier-to-noise density ration check.	____	____
7. Ensured the supervisor verified that the operator configured equipment for automatic switchover as applicable.	____	____
8. Ensured the supervisor verified that the operator preformed uplink and downlink signal traffic monitoring.	____	____
9. Ensured the supervisor verified that the operator performed terminal equipment selection and status monitoring.	____	____
NOTE: The following performance measures were for the AN/TSC-86 terminal.		
10. Ensured the supervisor verified that the operator correctly configured equipment according to the cut sheet provided and IAW governing regulations (TMs/SOPs).	____	____
11. Ensured the supervisor verified that the operator acquired and tracked the appropriate satellite and that the HPA was in standby.	____	____
12. Ensured the supervisor verified that the operator accessed the satellite IAW with governing regulations in conjunction with the GMF controller at the DSCSOC.	____	____
13. Ensured the supervisor verified that the operator monitored communications status of equipment and passed the appropriate reports at the designated time IAW governing regulations (SOPs/TMs).	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
TM 11-5895-1196-13-2	
TM 11-5895-1196-13-3	
TM 11-5895-1196-13-4	
TM 11-5895-1196-13-5	
TM 11-5895-1196-13-6	
TM 11-5895-1196-13-7	
TM 11-5895-1196-13-8	
TM 11-5895-1196-13-9	

References

Required	Related
TM 11-5895-1197-13-1	
TM 11-5895-1197-13-10	
TM 11-5895-1197-13-11	
TM 11-5895-1197-13-3	
TM 11-5895-1197-13-4	
TM 11-5895-1197-13-5	
TM 11-5895-1197-13-6	
TM 11-5895-1197-13-7	
TM 11-5895-1197-13-8	
TM 11-5895-1197-13-9	
TM 11-5895-1531-30	
TM 11-5895-1532-30	
TM 11-5895-1533-30	
TM 11-5895-1534-30	
TM 11-5895-1535-12	
TM 11-5895-1536-13	
TM 11-5895-846-14	

Direct the Operation of Satellite Communications Set AN/USC-28(V)

113-610-7003

Conditions: Given an AN/USC-28(V); NCB (SECRET); keying materials (SECRET); KAO-184A/TSEC; KYK-13/KOI-18; fill cable; DISAC 800-E70-7 for the NCT, DISAC 800-E70-8 for the ALTNCT, DISAC 800-E70-9 for the NT, and DISAC 800-E70-11 for AN/GSC-49 terminals; TM 11-5895-808-13-1, TM 11-5895-808-13-10, and TM 11-5895-1179-13 (KY-883); and site SOP.

Standards: Correctly configured all equipment and equipment was operational.

Performance Steps

1. Ensure the AN/USC-28(V) is powered on IAW procedures outlined in the applicable TM. (Refer to Task Number 113-610-7001 (Supervise the Operation of Satellite Communications Set AN/USC-28(V)) for further breakdown of performance steps.)
2. Ensure correct COMSEC material is on hand for personnel to conduct operations.
3. Ensure the CSU is configured and operating properly.
4. Ensure coordinated ECCM is conducted IAW SOP and appropriate TM(s).
5. Ensure the COMM RT is configured and operating properly.

Performance Measures	**GO**	**NO GO**
1. Ensured the AN/USC-28(V) was powered on IAW procedures outlined in the applicable TM.	____	____
2. Ensured correct COMSEC material was on hand for personnel to conduct operations.	____	____
3. Ensured the CSU was configured and operated properly.	____	____
4. Ensured coordinated ECCM was conducted IAW SOP and appropriate TM(s).	____	____
5. Ensured the COMM RT was configured and operated properly.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
DISA CIR 800-E70-11	
DISA CIR 800-E70-7	
DISA CIR 800-E70-8	
DISA CIR 800-E70-9	
NCB	
TM 11-5895-1179-13	
TM 11-5895-808-13-1	
TM 11-5895-808-13-10	
UNIT SOP	

Direct the Maintenance of Satellite Communications Set AN/USC-28(V)

113-610-7004

Conditions: Given an AN/USC-28(V); NCB (SECRET); keying materials (SECRET); KAO-184A/TSEC; KYK-13/KOI-18; fill cable; DISAC 800-E70-7 for the NCT, DISAC 800-E70-8 for the ALTNCT, DISAC 800-E70-9 for the NT, and DISAC 800-E70-11 for AN/GSC-49 terminals; TM 11-5895-808-13-1, TM 11-5895-808-13-10, and TM 11-5895-1179-13 (KY-883); and site SOP.

Standards: Correctly completed all performances measures.

Performance Steps

1. Ensured PMCS are accomplished IAW appropriate TMs.
2. Ensured supervisor(s) apply proper fault isolation techniques upon recognition of equipment and/or system failure.
3. Ensured communications is restored as quickly as possible either via replacing faulty equipment or establishing an alternate route IAW appropriate regulations and TMs.
4. Ensured correct paperwork is initiated for repair of faulty equipment and equipment is sent through appropriate channels for repair.

Performance Measures	**GO**	**NO GO**
1. Soldier ensured PMCS were accomplished IAW appropriate TMs.	____	____
2. Soldier ensured supervisor(s) applied proper fault isolation techniques upon recognition of equipment and/or system failure.	____	____
3. Soldier ensured communications were restored as quickly as possible either via replacing faulty equipment or establishing an alternate route IAW appropriate regulations and TMs.	____	____
4. Soldier ensured correct paperwork was initiated for repair of faulty equipment and equipment is sent through appropriate channels for repair.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
DISA CIR 800-E70-11	DA FORM 2407
DISA CIR 800-E70-7	DA PAM 738-750
DISA CIR 800-E70-8	
DISA CIR 800-E70-9	
TM 11-5895-808-13-1	
TM 11-5895-808-13-10	
TM 11-5895-808-13-2	

Perform Site Reconnaissance

113-611-1013

Conditions: Given unit standing operating procedure (SOP), unit OPORD/OPLAN, and appropriate map(s) with areas marked to indicate equipment location.

Standards: Selected Signal site, which met requirements specified in the unit OPORD/OPLAN; placed stakes to indicate equipment location; and prepared the site layout and strip maps.

Performance Steps

1. Determine specific site requirements.
   a. Logistics.
   b. Equipment.
   c. Personnel.
2. Conduct preliminary site selection using map.
3. Determine site suitability.
   a. Accessibility (i.e., Can the site be reached regardless of the weather or time of year? What must travel the roads/paths? What is the condition of those roads/paths?).
   b. Terrain (i.e., Is it relatively flat and well drained?).
   c. Camouflage/concealment (i.e., Does the potential site provide overhead camouflage and concealment?).
   d. Technical suitability (i.e., Is the site location within the range, capabilities, and limitations of equipment to be deployed?).
   e. Dependability.
4. Stake equipment locations, time permitting.
5. Prepare strip maps to indicate route of travel to site.

Evaluation Preparation: Setup: The unit OPORD/OPLAN, appropriate maps, and transportation will be provided.

Brief Soldier: You will select a site, drive and mark stakes to indicate equipment locations at the site, and prepare strip maps.

Performance Measures	**GO**	**NO GO**
1. Determined specific site requirements. a. Logistics. b. Equipment. c. Personnel.	____	____
2. Conducted preliminary site selection using maps.	____	____
3. Determined site suitability. a. Accessibility. b. Relative flatness. c. Natural cover/concealment. d. Within equipment range. e. Dependability.	____	____
4. Staked equipment locations, time permitting (optional).	____	____
5. Prepared strip maps to indicate route of travel to site.	____	____

Evaluation Guidance: Score the soldier a GO if all PMs are passed. Score the soldier a NO-GO if any PM is failed. If the soldier fails any PM, show what was done wrong and how to do it correctly. Have the soldier perform the PMs until they are done correctly.

References

Required	**Related**
UNIT OPLAN	FM 11-55
UNIT OPORD	TM 11-5895-1544-13&P
UNIT SOP	

Maintain a Situation Map

113-611-5012

Conditions: As a communications systems supervisor, you are required to maintain a situation map. Given unit operation order/operation plan (OPORD/OPLAN), unit SOP, a map of the area of operation, situation reports from S2, FM 24-16, and FM 101-5.

Standards: Posted the situation map with current information and met the requirement of your unit OPORD/OPLAN.

NOTE: This task is performed on a continuous basis.

Performance Steps

1. Review the mission/SOP.
2. Review the data to be posted on situation map.
   a. Tactical situation.
   b. Location of the headquarters for major elements of the command.
   c. Deployment of signal facilities.
   d. Lists and locations of reserve equipment.
3. Review the situation map for correct tactical data.
4. Update the situation map.
   a. Remove obsolete data.
   b. Post new data.
   c. Update security classifications, as required.
   d. Record time period covered or time posted.

Evaluation Preparation: Setup: OPORD, map of area of operation, and situation reports will be available.

Brief soldier: You will maintain a map and post current information.

Performance Measures	**GO**	**NO GO**
1. Leader reviewed the mission/SOP.	____	____
2. Leader reviewed the data to be posted on situation map. a. Tactical situation. b. Location of the headquarters for major elements of the command. c. Deployment of signal facilities. d. Lists and locations of reserve equipment.	____	____
3. Leaded reviewed the situation map for correct tactical data.	____	____
4. Leader updated the situation map. a. Removed obsolete data. b. Posted new data. c. Updated security classifications, as required. d. Recorded time period covered or time posted.	____	____

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
FM 101-5	IT0588
FM 24-16	
UNIT OPLAN	
UNIT OPORD	
UNIT SOP	

Direct the Establishment of a Signal Site Defense

113-611-5016

Conditions: Given a specified area to defend, a Signal platoon, the unit SOP, map, protractor, OPORD, a requirement to defend that area, STP 21-1-SMCT, and STP 21-24-SMCT.

Standards: Planned and established site defense and prepared site defense overlay.

Performance Steps

1. Design a tentative site-defense plan.

NOTE: A well-prepared site defense plan gives advance warning of attackers, reduces the number of possible approach routes, and assists in denying or delaying penetration by the enemy.

2. Position security outposts around the site to provide early warning of an enemy approach.

NOTE: Listening and observation posts should be established and manned as personnel and mission requirements permit.

   a. Establish posts outside the security zone in protected locations.
   b. Establish posts in locations that provide an unobstructed view of possible avenues of enemy approach.

3. Establish entrance/exit points and lanes for traffic flow within the site.

NOTE: Protective physical barriers must be established to provide security for the security zone.

   a. Determine the size of the area by the complexity of the site and the degree of compartmentalization required.
   b. Establish positive barriers to:
      (1) Control vehicular and pedestrian traffic flow.
      (2) Check identification of personnel entering or departing.
      (3) Define a buffer zone for more highly classified areas.

4. Coordinate with engineer elements for assistance in establishing field fortifications for communication assemblages, as required.

5. Direct the location and construction of individual and crew-served fighting positions.
   a. Locate these positions to take maximum advantage of natural cover and concealment.
   b. Locate these positions to provide good, clear fields of fire so a credible defense of the site is accomplished.
   c. Construct individual fighting positions as small as possible, but large enough for individual soldiers in full combat gear.
   d. Construct overhead protection if time and the tactical situation permit.
   e. Construct crew-served weapons fighting positions larger than individual fighting positions due to the requirements for two or more soldiers to man the weapons.
   f. Construct crew-served weapons fighting positions to provide for firing positions for both the crew-served weapons and the individual weapons of the soldiers.

6. Direct the installation of artificial obstacles, as required.

NOTE: Use concertina wire when it is available, especially around areas where classified information or materials is located. The unit SOP will provide additional guidance on the use of the barrier material.

7. Identify and locate focal points for command and control of the site defense.

Performance Steps

8. Plan for orderly withdrawal, to include:
    a. Specific instructions for destruction of material, which cannot be evacuated.

NOTE: In the event it becomes necessary to withdraw from a location, materials ranging from classified papers to equipment may have to be destroyed in place. The unit SOP will contain instructions for the implementation of site destruction plans. The procedures to follow for the destruction of classified material are contained in the performance steps of task 113-573-0001.

    b. Positive controls for implementation of the destruction plan.

Evaluation Preparation: Setup: You are provided with an operational tactical signal site, equipment, and personnel.

Brief Soldier: You will direct the establishment of a site defense.

Performance Measures	**GO**	**NO GO**
1. Designed a tentative site-defense plan.	____	____
NOTE: A well-prepared site defense plan gives advance warning of attackers, reduces the number of possible approach routes, and assists in denying or delaying penetration by the enemy.		
2. Positioned security outposts around the site to provide early warning of an enemy approach.	____	____
NOTE: Listening and observation posts should be established and manned as personnel and mission requirements permit.		
a. Established posts outside the security zone in protected locations. b. Established posts in locations that provide an unobstructed view of possible avenues of enemy approach.		
3. Established entrance/exit points and lanes for traffic flow within the site.	____	____
NOTE: Protective physical barriers must be established to provide security for the security zone.		
a. Determined the size of the area by the complexity of the site and the degree of compartmentalization required. b. Established positive barriers to: (1) Controlled vehicular and pedestrian traffic flow. (2) Checked identification of personnel entering or departing. (3) Defined a buffer zone for more highly classified areas.		
4. Coordinated with engineer elements for assistance in establishing field fortifications for communication assemblages, as required.	____	____
5. Directed the location and construction of individual and crew-served fighting positions. a. Located these positions to take maximum advantage of natural cover and concealment. b. Located these positions to provide good, clear fields of fire so a credible defense of the site is accomplished. c. Constructed individual fighting positions as small as possible, but large enough for individual soldiers in full combat gear. d. Constructed overhead protection if time and the tactical situation permit.	____	____

Performance Measures	**GO**	**NO GO**
e. Constructed crew-served weapons fighting positions larger than individual fighting positions due to the requirements for two or more soldiers to man the weapons.		
f. Constructed crew-served weapons fighting positions to provide for firing positions for both the crew-served weapons and the individual weapons of the soldiers.		
6. Directed the installation of artificial obstacles, as required.	____	____
NOTE: Use concertina wire when it is available, especially around areas where classified information or materials is located. The unit SOP will provide additional guidance on the use of the barrier material.		
7. Identified and locate focal points for command and control of the site defense.	____	____
8. Planned for orderly withdrawal, to include:	____	____
a. Specified instructions for destruction of material, which cannot be evacuated.		
NOTE: In the event it becomes necessary to withdraw from a location, materials ranging from classified papers to equipment may have to be destroyed in place. The unit SOP will contain instructions for the implementation of site destruction plans. The procedures to follow for the destruction of classified material are contained in the performance steps of task 113-573-0001.		
b. Positive controls for implementation of the destruction plan.		

Evaluation Guidance: Score the soldier a GO if all PMs are passed. Score the soldier a NO-GO if any PM is failed. If the soldier fails any PM, show what was done wrong and how to do it correctly. Have the soldier perform the PMs until they are done correctly.

References

Required	**Related**
STP 21-1-SMCT	FM 21-75
STP 21-24-SMCT	TC 24-21
UNIT OPORD	
UNIT SOP	

Manage Site Configuration Plans

113-613-7198

Conditions: Given AR 70-1, site configuration plans that require reviewing/updating, work area, ruler, and colored pencil markers (red, blue, and yellow).

Standards: Reviewed and evaluated changes.

Performance Steps

1. Review configuration plans/blueprints ensuring drawings are as follows:
   a. Complete.
   b. Accurate.
   c. Correct..
2. Match existing actual site/equipment layout with the configuration plans and drawings.
3. Annotate changes in colored ink.
   a. Additions in red ink.
   b. Deletions in yellow ink.
   c. Notes in blue ink.
4. Make distribution of annotated drawings.
   a. Forward one copy to the Configuration Management Office for updates.
   b. Retain and file one copy for local reference and use.

Performance Measures	**GO**	**NO GO**
1. Reviewed configuration plans/blueprints ensuring drawings are as follows: a. Complete. b. Accurate. c. Correct.	____	____
2. Matched existing actual site/equipment layout with the configuration plans and drawings.	____	____
3. Annotated changes in colored ink. a. Additions in red ink. b. Deletions in yellow ink. c. Notes in blue ink.	____	____
4. Made distribution of annotated drawings. a. Forwarded one copy to the Configuration Management Office for updates. b. Retained and filed one copy for local reference and use.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
AR 70-1	

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CHAPTER 4

Duty Position Tasks

ASI-1C
Communications Set AN/USC-28
MILSTAR

Subject Area 8: ASI-1C

Conduct Electronic Counter-Countermeasures (ECCM) Network Controller (ENC) Operations within the Defense Satellite Communications System (DSCS)

113-616-2018

Conditions: Given the terrestrial critical control circuit (TCCC), DSCS ECCM Control Subsystem (DECS), and SATCOM Set AN/USC-28 while working as the ENC in a DSCSOC and DISAC 800-70-1, DISAC 800-E70-7, DISAC 800-E70-8, TM 11-5895-1399-13, and TM 11-5895-808-13-1.

Standards: The ENC demonstrated how to monitor and establish networks, performed network analysis, and conducted transfer control operations utilizing the TCCC, DECS, and SATCOM Set AN/USC-28 IAW published procedures.

Performance Steps

1. Prepare operational logs.
2. Establish ECCM networks.
   a. Establish a connection to the AN/USC-28 from the central component (CC) operations terminal.
   b. Accept the NCB at the CC operations terminal.
   c. Reconfigure the CSU using the new NCB.
   d. Enter the mode of entry.
   e. Verify CSU parameters.
   f. Verify the COD list.
   g. Load the KGV-9 cryptographic segments.
   h. Schedule KGV-9 crypto updates.
   i. Enter the network in STD.
   j. Transfer DECS-CC control to the Objective DSCS Operations Center's (ODOC) workstation on the Operations floor.
   k. Start link power monitor (LPM).
   l. Start polling.
   m. Notify the Global Network Operations and Security Center (GNOSC) and network terminals.
3. Maintain ECCM networks.
   a. Perform ECCM special terminal access procedures.
      (1) Perform ENC pre-network coordination.
      (2) Disable polling and LPM.
      (3) Perform monitoring of terminals.
      (4) Perform normal subnetwork transition.
      (5) Conduct abnormal network entry and transition.
   b. Perform ECCM network communications.
      (1) Perform free-text CCC message (NCT configuration).
      (2) Perform predefined CCC message (NCT configuration).
      (3) Perform free-text return CCC (RCCC) message (ALTNCT configuration).
      (4) Perform predefined RCCC message (ALTNCT configuration).
      (5) Perform operator to operator communication (NCT configuration).

Performance Steps

(6) Perform operator to operator communication with the NCT (ALTNCT configuration).
(7) Receive CCC/emergency receiver (ER) messages.

c. Execute a network reconfiguration.
(1) Coordination with DECS sites.
(2) Coordination with manual sites.
(3) Download NCB files.
(4) Perform network reconfiguration.
(5) Remove power from printers.

d. Perform power balancing of the ECCM network.

4. Perform ECCM network analysis.

5. Perform ECCM control transfer operations.

6. Identify the control hierarchy.

7. Perform TCCC operations.
a. Perform reporting and notification procedures.
(1) Perform ENC reporting procedures.
(a) Prepare ECCM 8-hour S-NET report.
(b) Prepare SATCOM equipment report (SER).
(c) Prepare HAZCON report.
(d) Prepare site status report (SSR).
(2) Perform operational reporting to the SNC and senior DSCS controller (SDC).

8. Perform DECS operations.
a. Initialize the DECS-CC.
(1) Check the terminal connections.
(2) Apply power to the terminal.
(3) Apply power to the printer.
(4) Apply power to the MICROVAX II computer.
(5) Initialize the MICROVAX II computer.
(6) Establish a connection to the AN/USC-28 from the CC operations terminal.
(7) Perform NCB transfer from CC maintenance account to operational system.
b. Perform an orderly shutdown of the DECS-CC.
(1) Perform notification procedures.
(2) Disable polling and LPM.
(3) Terminate DECS-CC operations.
(4) Remove power from the MICROVAX-II computer.
(5) Remove removable disk drives.
(6) Store removable disk drives.
(7) Remove power from printers.
(8) Remove power from terminals.
(9) Perform notification procedures.
c. Verify CSU parameters.
(1) Verify CSU parameters for normal mode of operations.
(2) Verify CSU parameters for dual mode of operations.
(3) Perform DECS-CC control transfer to the ODOC's workstation on the Operations floor.
(4) Assign the SPR function.
d. Perform polling operations.
(1) Copy a polling schedule.
(2) Delete a polling schedule.
(3) Perform a polling download.
(4) Receive a polling download.
(5) Set polling alarm levels.

Performance Steps

(6) Perform polling on a non-DECS site.
(7) Display complete pollback data from a DECS site.

e. Perform LPM operations.
(1) Create a new LPM schedule.
(2) Modify an LPM schedule.
(3) Copy an LPM schedule.
(4) Delete an LPM schedule.
(5) Edit the current LPM schedule.
(6) Perform an LPM download.
(7) Receive an LPM download.
(8) Set LPM alarm levels.

f. Perform high power link (HPL) operations.
(1) Verify HPL parameters.
(2) Dwell on the HPL.

g. Schedule an NCB download to an NT.
(1) Schedule a background download to a terminal.
(2) Modify the background download schedule.
(3) Start the background download.
(4) Schedule a high priority download to a terminal.
(5) Verify that the download is completed.
(6) Verify the acceptance of the NCB.
(7) Verify the implementation of the NCB.
(9) Perform notification procedures.

h. Schedule a background download to an ALTNCT.
(1) Create a background download schedule.
(2) Modify the background download schedule.
(3) Start the background download.
(4) Verify the download is completed.
(8) Remove power from terminals.

9. Perform AN/USC-28 operations.
a. Initialize the AN/USC-28 system.
(1) Apply power to the interface unit (IU).
(2) Apply power to the CSU power supplies.
(3) Apply power to the CSU cabinet.
(4) Apply power to the COMM RT unit power supplies.
(5) Apply power to the COMM RT cabinet.
(6) Apply power to the programmable controller.
(7) Verify the position of all KGV-9 switches.
(8) Set the IU switches.
(9) Load the programmable controller with the operating program.

b. Perform an orderly shutdown of the AN/USC-28.
(1) Perform notification procedures.
(2) Terminate network operations.
(3) Zeroize KGV-9s.
(4) Remove power from the COMM RT cabinet.
(5) Remove power from the COMM RT unit power supplies.
(6) Remove power from the CSU cabinet.
(7) Remove power from the CSU power supplies.
(8) Remove power from the programmable controller.
(9) Remove power from the IU.
(10) Perform notification procedures.

Performance Steps

c. Assign COMM RT functions.
   (1) Assign the mitigated polling receiver (MPR) function.
   (2) Assign the mitigated control transmitter/mitigated emergency receiver (MCT/MER) function.
   (3) Assign the LPM function.
   (4) Assign the SPR function.
d. Perform cryptographic updates.
e. Perform time offset management.
f. Perform initial entry transmitter (IET) verification.
g. Perform a transmit IF output variation test.
   (1) AN/USC-28 initialization.
   (2) Test setup.
   (3) Perform control transmitter break point determination.
   (4) Perform IET break point determination.
   (5) Remove removable disk drives.
   (5) Perform COMM RT break point determination.
   (6) Determine the reference break point for the IF channels.
   (7) Determine the AN/USC-28 transmitter IF output power variation.
   (8) Correction of transmit attenuator settings.
   (9) Perform notification procedures.

Performance Measures	**GO**	**NO GO**
1. Performed notification procedures.	____	____
2. Established ECCM networks.	____	____
3. Maintained ECCM networks.	____	____
4. Performed ECCM network analysis.	____	____
5. Performed ECCM control transfer operations.	____	____
6. Identified the control hierarchy.	____	____
7. Performed TCCC operations.	____	____
8. Performed DECS operations.	____	____
9. Performed AN/USC-28 operations.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
DISA CIR 800-70-1	
DISA CIR 800-E70-7	
DISA CIR 800-E70-8	
TM 11-5895-1399-13	
TM 11-5895-808-13-1	

Conduct Frequency Division Multiple Access (FDMA) Network Control (FNC) within the Defense Satellite Communications System (DSCS)

113-616-2022

Conditions: Given the TCCC, DSCS FDMA control subsystem (DFCS)-NCT, and DSCS operational support system (DOSS) while working as the FNC in a DSCSOC and DISAC 800-70-1, TM 11-5895-1357-13-1, and TM 11-5895-1357-13-2.

Standards: The FNC demonstrated how to monitor and establish networks, performed network analysis, and conducted transfer control operations utilizing the TCCC, DFCS-NCT, and DOSS IAW published procedures.

Performance Steps

1. Prepare operational logs.
2. Establish DFCS networks.
3. Maintain DFCS networks.
    a. Perform a database download to the standby NCT.
    b. Administer links in the DFCS database.
        (1) Define a new carrier uplink.
        (2) Define a new carrier downlink.
        (3) Delete a link from the DFCS database.
    c. Perform an off-line characterization using the DFCS.
    d. Perform an on-line characterization using the DFCS.
    e. Perform a link nominalization.
        (1) Perform NT transmit power calibration.
        (2) Select carrier to be nominalized.
        (3) Set carrier to nominal Eb/No.
        (4) Set number of samples.
        (5) Perform nominalization.
        (6) Return carrier to Auto control.
    f. Perform manual noise slot assignment.
        (1) Determine the lower noise slot.
        (2) Determine the upper noise slot.
        (3) Input noise slots into the DFCS.
    g. Perform manual control of a DFCS link.
    h. Perform manual database functions.
    i. Conduct an NT transmit power calibration.
    j. Perform OM-73 remote control with the DFCS.
    k. Administer the DFCS poll.
        (1) Integrate an NT to the DFCS poll.
        (2) Change the transmit carrier to the Auto control mode or NCT-Manual mode.
        (3) Remove an NT from the DFCS poll.
4. Perform DFCS network analysis.
5. Perform DFCS control transfer operations.
    a. Perform notification procedures.
    b. Perform switchover.
    c. Enable polling and auto power control.
    d. Assign console in control (CIC).
    e. Perform notification procedures.
6. Identify control hierarchy.

Performance Steps

7. Perform TCCC operations.
    a. Perform reporting and notification procedures.
        (1) Perform FNC reporting procedures
            (a) Prepare detailed outage reports (DOR).
            (b) Prepare SER.
            (c) Prepare quicklook report.
            (d) Prepare site status report.
        (2) Perform operational reporting to the SNC and SDC.
8. Perform DOSS operations.
9. Perform DFCS operations.
    a. Initialize DFCS control equipment.
        (1) Apply power on control data link (CDL) modems.
        (2) Apply power on the inter-NCT CDL modem.
        (3) Apply power on disk drives.
        (4) Apply power on central processing units (CPUs).
        (5) Perform NCT initialization.
        (6) Change to on-line NCT.
        (7) Perform notification procedures.
    b. Perform archival disk operations.
        (1) Perform disk mounting.
        (2) Enable archiving.
        (3) Dismount disk.
    c. Assign the DFCS CIC function.
        (1) Release CIC.
        (2) Assign CIC to an alternate display terminal at the NCT.
        (3) Assign CIC to a standby NCT display terminal.
    d. Perform a DFCS system reboot.
        (1) Perform a reboot on the network control processor (NCP).
        (2) Perform a reboot on the display processor unit (DPU).
        (3) Select the on-line or standby mode.
        (4) Configure the DFCS as an NCT.
        (5) Configure the DFCS as a standby NCT.
        (6) Restore archival activities.
    e. Perform DFCS control equipment shutdown.
        (1) Perform notification procedures.
        (2) Perform control transfer.
        (3) Perform disk dismount.
        (4) Remove power from the CPUs.
        (5) Remove power from the CDL modems.
        (6) Perform notification procedures.

Performance Measures	**GO**	**NO GO**
1. Prepared operational logs.	____	____
2. Established DFCS networks.	____	____
3. Maintained DFCS networks.	____	____
4. Performed DFCS network analysis.	____	____
5. Performed DFCS control transfer operations.	____	____
6. Identified control hierarchy.	____	____

Performance Measures	GO	NO GO
7. Performed TCCC operations.	____	____
8. Performed DOSS operations.	____	____
9. Performed DFCS operations.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
DISA CIR 800-70-1	GSD-TR-5644
TM 11-5895-1357-13-1	GSD-TR-5645
TM 11-5895-1357-13-2	

Conduct Communications Payload Controller (CPC) Operations within the Defense Satellite Communications System (DSCS)

113-616-2023

Conditions: Given the TCCC, DOSS, and Satellite Configuration Control Element (SCCE) while working as the CPC in a DSCSOC and DISAC 800-70-1, GSD-TR-5644, and TM 11-5895-1214-10-1.

Standards: The CPC demonstrated how to monitor and establish communication payload configurations, performed communication payload analysis, and conducted transfer control operations utilizing the TCCC, DOSS, and SCCE IAW published procedures.

Performance Steps

1. Prepare operational logs.
2. Establish communications payload configurations.
    a. Configure multibeam antenna (MBA).
    b. Perform gimballed dish antenna pointing.
    c. Perform transponder channel gain state change.
    d. Perform transponder PMAX test procedures.
    e. Change antenna connectivity.
3. Maintain communications payload configurations.
    a. Monitor the telemetry stream.
    b. Collect system status data.
    c. Frequency standard adjustment.
    d. Perform single-channel transponder commanding.
    e. Perform word of the day procedure.
    f. Perform battery data collection.
    g. Perform orbit vector/ephemeris generation.
    h. Perform jammer location electronics calibration.
    i. Perform RAMPATCH data procedures.
4. Perform communications payload analysis.
    a. React to a jammer.
        (1) Verify unauthorized access (U/A) or jammer.
        (2) Read the telemetry data.
        (3) Obtain hardcopies.
        (4) Report data.
    b. Interpret transmit level sensor data.
    c. React to anomaly/out-of-tolerance conditions.
    d. React to HESSA failures.
5. Perform CPC control transfer operations.
6. Identify control hierarchy.
7. Perform TCCC operations.
    a. Perform reporting and notification procedures.
        (1) Perform CPC reporting procedures.
            (a) Prepare out of limits (OOL) report.
            (b) Prepare receive level monitor/transmit level sensor (RLM/TLS) report.
            (c) Prepare battery reconditioning reports.
            (d) Prepare eclipse reports.
            (e) Prepare site status report.
        (2) Perform operational reporting to the SNC and SDC.
        (3) Perform operational reporting to the 3SOPS.

Performance Steps

8. Perform DOSS operations.
9. Perform SCCE operations.
    a. Initialize system.
        (1) Apply power.
        (2) Reinitialization system.
        (3) Restart telemetry processing.
        (4) Select dataspan wrap-up reports.
        (5) Configure the SCCE equipment.
    b. Perform archival activities.
        (1) Mount tapes.
        (2) Label tapes.
        (3) Perform dataspan archive at wrap-up.
        (4) Perform dataspan archive after scheduled wrap-up.
        (5) Replace closed archive tape.
        (6) Perform tape closeout activities.
        (7) Perform DSPAN.
    c. Perform report generation.
        (1) Configure strip chart recorder.
        (2) Analyze dataspan wrap-up reports.
        (3) Perform analysis file data plots.
        (4) Obtain telemetry graphic measures and data displays.
    d. Reinitialize the SCCE.
    e. Perform SCCE shutdown.

Performance Measures	**GO**	**NO GO**
1. Prepared operational logs.	____	____
2. Established communications payload configurations.	____	____
3. Maintained communications payload configurations.	____	____
4. Performed communications payload analysis.	____	____
5. Performed CPC control transfer operations.	____	____
6. Identified control hierarchy.	____	____
7. Performed TCCC operations.	____	____
8. Performed DOSS operations.	____	____
9. Performed SCCE operations.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
DISA CIR 800-70-1	
GSD-TR-5644	
TM 11-5895-1214-10-1	

Conduct Satellite Network Controller (SNC) Operations within the Defense Satellite Communications System (DSCS)

113-616-2028

Conditions: Given the Smart Multi-Circuit Terminal II (SMCT II), DOSS, DSCS Automatic Spectrum Analyzer (DASA), Spectrum Plot Utility (SPU), and DSCS Integrated Management System (DIMS) while working as the SNC in a DSCSOC and DISAC 800-70-1, GSD-TR-5644, GSD-TR-5645, Standford Telecom 1, Standford Telecom 2, STI-UN-45005, STI-UM-65026, and TM 11-5895-1410-13.

Standards: The SNC demonstrated how to monitor and establish networks, performed network analysis, and conducted transfer control operations utilizing the SMCT II, DOSS, DASA, SPU, and DIMS IAW published procedures.

Performance Steps

1. Prepare operational logs.
2. Establish networks.
    a. Direct the access of a strategic communications link.
        (1) Direct earth terminals to conduct the modem performance test; once completed, fax or e-mail the results to the DSCSOC for review.
        (2) Review modem performance test data.
        (3) Direct transmit and receive terminals to conduct in-house IF to IF characterizations; once completed, fax or e-mail the results to the DSCSOC for review.
        (4) Review in-house IF to IF characterization data.
        (5) Direct transmit and receive terminals to conduct in-house RF to RF characterizations; once completed, fax or e-mail the results to the Wideband SATCOM Operations Center (WSOC) for review.
        (6) Review in-house RF to RF characterization data.
        (7) Direct the terminal to commence with the RF translator loopback 24-hour stability test.
        (8) Monitor in-house 24-hour stability test.
        (9) Direct the receive terminal to prepare the downlink equipment for carrier access.
        (10) Direct the transmit terminal to prepare the uplink equipment for carrier access.
        (11) Create and implement an operational database (ODB) change for a primary satellite.
        (12) Determine authorized (C+N)/N.
        (13) Direct the transmit terminal to access the carrier.
        (14) Analyze the transmit carrier.
        (15) Verify end-to-end connectivity with the terminals.
        (16) Perform over-the-satellite characterization.
        (17) Perform notification procedures.
3. Maintain networks.
    a. Perform satellite link characterization of a non-DFCS link.
        (1) Direct earth terminals to conduct the modem performance test; once completed, fax or e-mail the results to the DSCSOC for review.
        (2) Review modem performance test data.
        (3) Direct transmit and receive terminals to conduct in-house IF to IF characterizations; once completed, fax or e-mail the results to the DSCSOC for review.
        (4) Review in-house IF to IF characterization data.
        (5) Direct transmit and receive terminals to conduct in-house RF to RF characterizations; once completed, fax or e-mail the results to the WSOC for review.
        (6) Review in-house RF to RF characterization data.
        (7) Direct the terminal to commence with the RF translator loopback 24-hour stability test.
        (8) Monitor in-house 24-hour stability test.
        (9) Direct the receive terminal to prepare the downlink equipment for carrier access.
        (10) Direct the transmit terminal to prepare the uplink equipment for carrier access.

Performance Steps

(11) Create and implement an ODB change for a primary satellite.
(12) Determine authorized (C+N)/N.
(13) Direct the transmit terminal to access the carrier.
(14) Analyze the transmit carrier.
(15) Verify end-to-end connectivity with the terminals.
(16) Perform over-the-satellite characterization.
(17) Perform notification procedures.

b. Perform power balancing on a DSCS SATCOM network.
(1) Determine the need to power balance.
(2) Perform notification procedures.
(3) Retrieve RLM/TLS readings.
(4) Analyze DASA link and channel alarms.
(5) Perform carrier power adjustments.
(6) Retrieve/analyze new RLM/TLS readings.
(7) Analyze DASA link and channel alarms.
(8) Perform carrier power adjustments.
(9) Retrieve new RLM/TLS readings.
(10) Analyze DASA link and channel alarms.
(11) Perform notification procedures.

4. Perform DSCS satellite and network analysis.
a. Perform U/A evaluation and reporting.
(1) Perform U/A initial assessment.
(2) Prepare U/A quicklook.
(3) Perform notification and logging procedures.

5. Perform network control transfer.
a. Perform notification procedures.
b. Pre-handover activities.
(1) Download to DASA from DIMS the current ODB for the inter-range operation number (IRON) to be handed over.
(2) Use the DASA in instrument remote control (immediately after download) to display the measured 500 MHz downlink.
(3) Configure the RF interface subsystem (RFIS) for appropriate earth terminal downlink to the appropriate DASA.
(4) Verify that the correct amplifier/attenuator setting with the DASA by matching the lowest point on the measured spectrum with the center horizontal line of the spectrum analyzer. Adjust if necessary and approval has been granted by the GNOSC.
(5) Return the DASA to the monitor mode and allow a few sweeps to be completed to ensure the correctness of the DASA download.
(6) Using the instrument remote control, display each channel of the satellite to visually verify the correct download and to observe any obvious network problems in respect to carrier-to-noise density ratio (C/kT) or spectral shape.
(7) Request any ongoing network information from the relinquishing SNC. The relinquishing SNC must provide the assuming SNC with any ongoing network problems or any upcoming network events.
(8) Advise the GNOSC, appropriate Regional Network Operations and Security Center (RNOSC), ARSPOC, and the assuming SNC that they are ready to assume network control.
c. Enter the time and initials of all agencies authorizing the network handover into the operational log.
d. Perform post-handover activities.

6. Identify control hierarchy.

Performance Steps

7. Perform SMCT II operations.
    a. Perform reporting and notification procedures.
        (1) Perform SNC reporting procedures.
            (a) Prepare FDMA 8-hour status report.
            (b) Prepare DOR.
            (c) Prepare U/A report.
            (d) Prepare SER.
            (e) Prepare quicklook report.
            (f) Prepare HAZCON report.
            (g) Prepare site status report.
        (2) Perform operational reporting to the SDC and DISA.

8. Perform DOSS operations.
    a. Perform manual DSCS network planning software (DNPS) processing.
        (1) Save the active database.
        (2) Perform analysis support.
        (3) Perform allocation.
        (4) Perform network performance.
        (5) Save the active database.
    b. ODB change for a prime DSCSOC.
        (1) Receive ODM and supporting documents.
        (2) Modify a scenario in analyst account.
        (3) Perform manual DNPS processing.
        (4) Analyze the scenario for supportability.
        (5) Save the scenario in the analyst account.
        (6) Perform scenario compares.
        (7) Retrieve the scenario into the SATCOM3 control account.
        (8) Perform DNPS processing.
        (9) Print database reports.
        (10) Review database reports.
        (11) Save the scenario in the control account.
        (12) Download the ODB to the DASA.
        (13) Verify the ODB download.
        (14) Annotate changes in the database log.
        (15) Perform notification procedures.
    c. ODB change for an alternate DSCSOC.
        (1) Receive ODM and supporting documents.
        (2) Retrieve the scenario into the analyst account.
        (3) Review database reports.
        (4) Perform DNPS processing.
        (5) Analyze the scenario for supportability.
        (6) Save the scenario in the analyst account.
        (7) Perform scenario compares.
        (8) Retrieve the scenario into the SATCOM3 control account.
        (9) Perform DNPS processing.
        (10) Review database reports.
        (11) Save the scenario in the control account.
    d. Update DNPS orbit vectors.
        (1) Receive orbit vectors from the CPC.
        (2) Input vectors using the on-line static database loader.
        (3) Analyze satellite subpoint for orbit vector correctness.
        (4) Perform DNPS processing.
        (5) Analyze the range rate summary for orbit vector correctness.

Performance Steps

(6) Update control account scenarios.
(7) Annotate changes in the database log.

e. Perform an SCCE inter-site data transfer
(1) Retrieve scenario from the control account.
(2) Perform DNPS processing.
(3) Review scenario.
(4) Retrieve required reports.
(5) Prepare/select configuration data.

9. Perform DASA operations.

10. Perform DIMS operations.
a. Download (disseminate) ODB to the DASA with the DIMS.
(1) Verify ODB is ready for downloading.
(2) Retrieve the ODB from the control account.
(3) Perform DNPS processing.
(4) Review scenario for supportability.
(5) Logon to the DIMS from a VXT terminal.
(6) Create a future ODB (FODB).
(7) FODB verification and ODB comparison.
(8) FODB to ODB transition in preparation for dissemination.
(9) Configure the RFIS.
(10) Enable the DOSS/DASA link.
(11) ODB to DASA dissemination.
(12) Display the 500 MHz downlink spectrum.
(13) Verify ODB download.
(14) Start DASA monitoring.

Performance Measures	**GO**	**NO GO**
1. Prepared operational logs.	____	____
2. Established networks.	____	____
3. Maintained networks.	____	____
4. Performed DSCS satellite and network analysis.	____	____
5. Controlled transfer operations.	____	____
6. Identified control hierarchy.	____	____
7. Performed SMCT II operations.	____	____
8. Performed DOSS operations.	____	____
9. Performed DASA operations.	____	____
10. Performed DIMS operations.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
DISA CIR 800-70-1	
GSD-TR-5644	
GSD-TR-5645	
STANFORD TELECOM 1	
STANFORD TELECOM 2	
STI-UM-45005	
STI-UM-65026	
TM 11-5895-1410-13	

Conduct Ground Mobile Forces Satellite Communications (GMFSC) Network Controller (GNC) Operations within the Defense Satellite Communications System (DSCS)

113-616-2029

Conditions: Given the TCCC, DOSS, DASA, frequency modulation orderwire (FMOW), and interim tactical orderwire subsystem (ITOS) while working as the GNC in a DSCSOC and ASC-1, DISAC 800-70-1, GNCC Users Manual, ITOS O&M Manual, and TM 11-5895-1188-12..

Standards: The GNC demonstrated how to monitor and establish networks, performed network analysis, and conducted transfer control operations utilizing the TCCC, DOSS, DASA, FMOW, and ITOS IAW published procedures.

Performance Steps

1. Prepare operational logs.
2. Establish GMFSC networks.
   a. Administer a satellite access via the FMOW.
      (1) Retrieve required reports from the DOSS.
      (2) Enter configuration data into the GMF Network Control Center (GNCC).
      (3) Download the FMOW.
      (4) Analyze the OW carrier.
      (5) Receive initial terminal operating parameters.
      (6) Direct terminal to data mode.
      (7) Analyze the transmit carrier.
      (8) Perform power adjustments.
      (9) Perform IF attenuation adjustments.
      (10) Verify terminal is operating according to the SAA.
      (11) Receive the status report from the terminal.
      (12) Verify carrier transmit performance with the GNCC.
   b. Conduct GMFSC test frequency access.
3. Maintain GMFSC networks.
   a. Perform power balancing on an NATO Air Base System (NABS) terminal after network entry.
      (1) Determine the need for uplink power balancing.
      (2) Power balance the NT uplink.
      (3) Determine the need for downlink power balancing.
      (4) Power balance the NT downlink.
   b. Perform power balancing on a lightweight multi-band satellite terminal (LMST) after network entry.
      (1) Determine the need for uplink power balancing.
      (2) Power balance the NT communications modem.
      (3) Power balance the NT ITOS modem.
      (4) Determine the need for downlink power balancing.
      (5) Power balance the NT downlink.
   c. Maintain positive control of GMFSC terminals.
      (1) React to the GMFSC terminal equipment failure.
      (2) Perform directed deaccess.

NOTE: Directing a GMFSC terminal to deaccess the satellite is a serious issue and will impact mission communications. The GNCC will ensure that they have exhausted all efforts to restore positive control communications and that deaccess is in the best interest of all parties and concurrence is received from the SNC, SDC, and DISA.

      (3) React to negative contact with the GMFSC terminal.

4. Perform GMFSC network analysis.

Performance Steps

5. Perform GMFSC control transfer operations.
    a. Perform notification procedures.
    b. Perform pre-handover activities.
        (1) Verify the GNCC database.
        (2) Configure the RFIS for appropriate earth terminal downlink to the GNCC.
        (3) Monitor the GNCC to ensure the correctness of the GNCC database.
        (4) Display each channel of the satellite using the GNCC to visually verify the correct database and to observe any obvious network problems in respect to C/kT.
        (5) Exchange any ongoing network information from the relinquishing GNC to the assuming GNC.
        (6) Perform FMOW checks with the GMFSC terminals.
        (7) Advise the GNOSC, the appropriate RNOSC, and the relinquishing GNC that they are ready to assume network control.
    c. Perform handover.
    d. Perform post-handover activities.
    e. Perform notification procedures.
6. Identify control hierarchy.
7. Perform TCCC operations.
    a. Perform reporting and notification procedures.
        (1) Prepare GMFSC 8-hour status report.
        (2) Prepare AAR.
        (3) Prepare DOR.
        (4) Prepare SER.
        (5) Prepare quicklook report.
        (6) Prepare HAZCON report.
        (7) Prepare site status report.
    b. Perform operational reporting to the SNC and SDC.
    c. Perform operational reporting to the RSSC.
8. Perform DOSS operations.
9. Perform DASA operations.
10. Perform GNCC operations.
    a. Modify GNCC configuration data.
        (1) Receive the ODM report from the SNC.
        (2) Enter the configuration data.
        (3) Validate the plan.
        (4) Save the plan.
        (5) Upload the plan.
        (6) Verify the plan.
11. Perform FMOW operations.
    a. Load the FMOW using the GNCC.
        (1) Validate the plan.
        (2) Save the plan.
        (3) Configure the FMOW modem.
        (4) Verify the FMOW load.
    b. Load the FMOW using the UTE.
        (1) Open the UTE application.
        (2) Decide on the link identification (ID) to be used.
        (3) Enter the FMOW link data.
        (4) Activate entered links.

Performance Steps

(5) Verify entries.
(6) Close the UTE program.

c. Communicate using the FMOW.
(1) Determine terminal ID.
(2) Select terminal ID.
(3) Initiate CT ring.
(4) Communicate with the terminal operator.
(5) Terminate the OW call.

d. Perform power balancing on the FMOW.
(1) Display the GMFSC carrier on the DASA.
(2) Transmit OW spike to satellite.
(3) Annotate attenuation adjustments.
(4) Enter new attenuation values in the GNCC.
(5) Download new configuration data to the FMOW.
(6) Verify the new OW spike power level.

12. Perform ITOS operations.
a. Operate the ITOS non-secure text OW.
(1) Send a text OW message.
(2) Receive text messages.
(3) Review archived text OW messages.

b. Place a secure call using the ITOS.
(1) Initiate a secure voice call.
(2) Receive a secure voice request.

c. Remove an NT from the ITOS network.
(1) Perform a requested NT logout.
(2) Perform a forced NT logout.

d. Correct receive OW jamming.
(1) Identify that receive OW jamming is occurring.
(2) Suspend the network.
(3) Change the receive OW frequency.
(4) Remove the NT jamming the receive OW.
(5) Restore receive OW frequency.

Performance Measures	**GO**	**NO GO**
1. Prepared operational logs.	____	____
2. Established GMFSC networks.	____	____
3. Maintained GMFSC networks.	____	____
4. Performed GMFSC network analysis.	____	____
5. Performed GMFSC control transfer operations.	____	____
6. Identified control hierarchy.	____	____
7. Performed TCCC operations.	____	____
8. Performed DOSS operations.	____	____
9. Performed DASA operations.	____	____
10. Performed GNCC operations.	____	____
11. Performed FMOW operations.	____	____
12. Performed ITOS operations.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
ASC-1	
DISA CIR 800-70-1	
GNCC USERS MANUAL	
ITOS O&M MANUAL	
TM 11-5895-1188-12	

Conduct Ancillary Equipment Operations within a Defense Satellite Communications System (DSCS) Operations Center (DSCSOC)

113-616-2030

Conditions: Given RFIS, Frequency Conversion Subsystem (FCS), and Patch and Test Facility (PTF) in a DSCSOC and TM 11-5895-1328-13, TM 11-5895-1328-23P, TM 11-5895-1338-13, and TM 11-5895-1368-13.

Standards: Maintained network control, prevented or minimized network outages, and conducted transfer control operations IAW published procedures.

Performance Steps

1. Operate the RFIS AN/FSQ-150.
   a. Perform RFIS power-on procedures.
   b. Perform initial checks.
   c. Perform operating procedures.
   d. Perform stopping procedure.
   e. Perform emergency shutdown.
2. Operate the PTF AN/FSC-160(V).
   a. Perform system power-up procedures.
   b. Perform initial patching and configuration setup as required.
   c. Initialize and load keying material.
   d. Perform system shutdown procedures.
3. Operate the FCS AN/FSQ-158(V).
   a. Perform system power-up procedures.
   b. Perform initial patching and configuration of the 5 MHz distribution amplifiers as required.
   c. Perform initial patching and switching of downconverters and upconverters.
   d. Tune and adjust correct uplink and downlink frequencies.
   e. Set correct RF transmit power levels.
   f. Perform system shutdown procedures.
4. Operate a spectrum analyzer.
   a. Perform a manual spectrum analyzer calibration.
   b. Perform manual C/kT measurement.
   c. Determine link Eb/No using a spectrum analyzer.

Performance Measures	**GO**	**NO GO**
1. Operated the RFIS AN/FSQ-150.	____	____
2. Operated the PTF AN/FSC-160(V).	____	____
3. Operated the FCS AN/FSQ-158(V).	____	____
4. Operated a spectrum analyzer.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
TM 11-5895-1328-13	
TM 11-5895-1328-23P	
TM 11-5895-1338-13	
TM 11-5895-1368-13	

Maintain Defense Satellite Communications Systems (DSCS) Operations Center

113-616-3131

Conditions: Given DECS, DFCS, RFIS, FCS, PTF, SATCOM Set AN/USC-28, FMOW, and TMDE while working in a DSCSOC and DA Form 2407, DA Form 5988-E, DA PAM 738-750, TM 11-5895-1188-12, TM 11-5895-1188-34, TM 11-5895-1328-13, TM 11-5895-1328-23P, TM 11-5895-1338-13, TM 11-5895-1357-13-1, TM 11-5895-1357-13-2, TM 11-5895-1368-13, TM 11-5895-1399-13, TM 11-5895-808-13-1 through TM 11-5895-808-11, TM 11-5895-808-13-9, and TM 11-5895-808-23P.

Standards: Correctly performed PMCS procedures, identified and annotated deficiencies on the correct maintenance forms, and performed proper corrective action IAW published procedures.

Performance Steps

1. Maintain the Satellite Monitoring System, DFCS-NCT, AN/FSC-96.
   a. Troubleshoot the DFCS-NCT to the LRU.
   b. Remove and replace the LRU.
   c. Verify repair and return to an operational condition.
   d. Complete DA Form 5988-E and DA Form 2407.
2. Maintain the RFIS AN/FSQ-150.
   a. Troubleshoot the RFIS to the LRU.
   b. Remove and replace the LRU.
   c. Verify repair and return to an operational condition.
   d. Complete DA Form 5988-E and DA Form 2407.
3. Maintain the FCS AN/FSQ-158(V).
   a. Troubleshoot the FCS to the LRU.
   b. Remove and replace the LRU.
   c. Verify repair and return to an operational condition.
   d. Complete DA Form 5988-E and DA Form 2407.
4. Maintain the PTF AN/FSC-160(V).
   a. Identify faulty unit and reconfigure the PTF to restore communications to an operational condition.
   b. Troubleshoot failed unit to the LRU.
   c. Remove and replace the LRU.
   d. Verify repair and return to an operational condition.
   e. Complete DA Form 5988-E and DA Form 2407.
5. Maintain the SATCOM Set AN/USC-28.
   a. Troubleshoot the AN/USM-28 to the LRU.
   b. Remove and replace the LRU.
   c. Verify repair and return to an operational condition.
   d. Complete DA Form 5988-E and DA Form 2407.
6. Maintain the RT Group, OW, OZ-52/G.
   a. Troubleshoot the OZ-52/G to the LRU.
   b. Remove and replace the LRU.
   c. Verify repair and return to an operational condition.
   d. Complete DA Form 5988-E and DA Form 2407.
7. Maintain the ITOS.
   a. Troubleshoot the ITOS to the LRU.
   b. Remove and replace the LRU.
   c. Verify repair and return to an operational condition.
   d. Complete DA Form 5988-E and DA Form 2407.

Performance Measures	GO	NO GO
1. Maintained the Satellite Monitoring System, DFCS-NCT, AN/FSC-96.	____	____
2. Maintained the RFIS AN/FSQ-150.	____	____
3. Maintained the FCS AN/FSQ-158(V).	____	____
4. Maintained the PTF AN/FSC-160(V).	____	____
5. Maintained the SATCOM Set AN/USC-28.	____	____
6. Maintained the RT Group, OW, OZ-52/G.	____	____
7. Maintained the ITOS.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
DA FORM 2407	
DA FORM 5988-E	
DA PAM 738-750	
TM 11-5895-1188-12	
TM 11-5895-1188-34	
TM 11-5895-1328-13	
TM 11-5895-1328-23P	
TM 11-5895-1338-13	
TM 11-5895-1357-13-1	
TM 11-5895-1357-13-2	
TM 11-5895-1368-13	
TM 11-5895-1399-13	
TM 11-5895-808-13-1	
TM 11-5895-808-13-10	
TM 11-5895-808-13-11	
TM 11-5895-808-13-2	
TM 11-5895-808-13-3	
TM 11-5895-808-13-4	
TM 11-5895-808-13-5	
TM 11-5895-808-13-6	
TM 11-5895-808-13-7	
TM 11-5895-808-13-8	
TM 11-5895-808-13-9	
TM 11-5895-808-23P	

Direct Satellite Network Control within the Defense Satellite Communications System (DSCS)

113-616-7035

Conditions: Given shift personnel to operate the SNC, FNC, GNC, ENC, and CPC positions while working as the SDC in a DSCSOC and DIMS Manual and DISAC 800-70-1.

Standards: The SDC ensured qualified personnel were operating the positions, created shift schedules, and supervised personnel on assigned duties IAW published procedures.

Performance Steps

1. Prepare master station log.
2. Perform SNC operations.
3. Perform CPC operations.
4. Perform ENC operations.
5. Perform GNC operations.
6. Perform FNC operations.
7. Perform DSCSOC operations.
    a. Restore host earth terminal communications after the DASA monitoring terminal (DMT) failure.
        (1) Coordinate with the DSCS Global SATCOM Support Center (GSSC) Support Element, GNOSC, or RNOSC for implementation of an operational direction message (ODM) to modify ODBs or, in the absence of an ODB, use an alpha scenario to support an interim restoral.
        (2) Ensure the host earth terminal supervisor coordinates with users of links to be restored and advises them of the restoral actions. This includes providing contact information for the DSCSOC.
        (3) If applicable, coordinate handover of networks or monitoring of spacecraft payloads. Resolve conflicts with the Operations NCO, Office Automation (OA), and the DSCS GSSC Support Element.
        (4) Ensure the ODB is modified and downloaded 30 minutes prior to restoral.
        (5) Direct the SNC to notify all terminals involved, to include the DSCS GSSC Support Element, GNOSC, RNOSC, and ARSPOC of the pending restoral.
        (6) Confirm preliminary user release for restoral through the host earth terminal supervisor.
        (7) Ensure all connections between the DSCSOC and earth terminal are properly marked.
    b. Perform 8-hour report analysis.
    c. Perform unauthorized user alarm analysis.
        (1) Direct the SNC to take immediate action when a U/A is detected by the DASA or another control subsystem.
        (2) Ensure the U/A signature is captured and recorded in the DASA spectrum library. This information will be used by the DSCS GSSC Support Element, GSSC, GNOSC, and RNOSC to assist the DSCSOC in resolving and identifying the source of the U/A.
        (3) Record and document U/A characteristics in SDC CPL.
        (4) Coordinate with DISA elements to assess the impact of the U/A.
        (5) Direct the SNC to initiate a quicklook IAW step 5 of the Operating Instructions.
        (6) Inform DISA elements of all actions taken to resolve U/A.
    d. Direct network and payload control handovers.
        (1) Evaluate channel spectrum.
        (2) Initiate immediate action to resolve discrepancies.
        (3) Immediately notify the DSCS GSSC Support Element, GNOSC, and RNOSC of noticeable degradations, unauthorized users, intermodulation, and carrier problems.
        (4) Analyze channel spectrum plots.

Performance Steps

e. Evaluate histograms of Beacon 1 and Beacon 2.
   (1) Ensure Beacon 1 and 2 histograms are printed and evaluated every 24 hours IAW DISAC 800-70-1, Chapter 10.
   (2) Review and evaluate histograms for anomalies.
   (3) Initiate immediate action to resolve discrepancies.
   (4) Immediately notify the DSCS GSSC Support Element, GSSC, GNOSC, and RNOSC of noticeable degradations to Beacon 1 or Beacon 2.
f. Perform trend analysis using the DIMS.
   (1) Ensure the DIMS is collecting and monitoring control subsystems for the designated satellite.
   (2) Operate the DIMS to consolidate and correlate network data from DSCSOC control subsystems (DASA, DECS, DFCS, SCCE, and ODBs). Review and evaluate the quality and performance of networks controlled and monitored.
   (3) Immediately direct network and payload controllers to troubleshoot and resolve problems identified during trend analysis evaluations.
   (4) Notify the DSCS GSSC Support Element, GSSC, GNOSC, RNOSC, ARSPOC, and 1st SATCON Battalion of anomalies that cannot be resolved at the DSCSOC level.
g. Evaluate the implementation of a new ODB.
h. Analyze non-DFCS earth terminal for tracking problems.

8. Maintain COMSEC operations.

Performance Measures	**GO**	**NO GO**
1. Prepared master station log.	____	____
2. Performed SNC operations.	____	____
3. Performed CPC operations.	____	____
4. Performed ENC operations.	____	____
5. Performed GNC operations.	____	____
6. Performed FNC operations.	____	____
7. Performed DSCSOC operations.	____	____
8. Maintained COMSEC operations.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
DIMS MANUAL	
DISA CIR 800-70-1	

Supervise the Maintenance of Control Equipment in a Defense Satellite Communications System (DSCS) Operations System (DSCSOC)

113-616-7036

Conditions: Given shift personnel to maintain the DECS, DFCS, RFIS, FCS, PTF, SATCOM Set AN/USC-28, FMOW, and TMDE while working in a DSCSOC and DA Form 2407, DA Form 5988-E, DA PAM 738-750, TM-5895-1188-12, TM 11-5895-1188-34, TM 11-5895-1328-13, TM 11-5895-1328-23P, TM 11-5895-1357-1, TM 11-5895-1357-2, TM 11-5895-1368-13, TM 11-5895-1399-13, TM 11-5895-808-13-1 through TM 11-5895-808-13-11, and TM 11-5895-808-23P.

Standards: Successfully supervised operators while any of the DSCSOC equipment that was faulted was restored to an operational condition, repaired/replaced equipment, and completed the appropriate maintenance forms.

Performance Steps

NOTE: The following performance steps are initiated upon recognition by the operator of a faulted condition in one of the major components at the DSCSOC. The supervisor will ensure that the operators take appropriate actions as directed in the operator level critical tasks that cover the specific piece of equipment and IAW governing regulations (TMs/SOPs).

1. Ensure operators properly maintain the RFIS.
    a. Verify that operators route signals to redundant/spare equipment or path to restore communications before attempting to repair/replace faulted portion of the RFIS.
    b. Verify that operators isolate the faulty component of the RFIS and perform repair/replacement as dictated in the appropriate TM.
    c. Verify that operators complete DA Form 5988-E and DA Form 2407.
2. Ensure operators properly maintain the PTF.
    a. Verify that operators identify faulty unit and reconfigure the PTF to restore communications to an operational condition.
    b. Verify that operators isolate failed unit to LRU and perform repair/replacement as dictated in appropriate TM.
    c. Verify that operators complete DA Form 5988-E and DA Form 2407.
3. Ensure operators properly maintain the FCS.
    a. Verify that operators isolate faulty component of the FCS and perform repair/replacement as dictated in the appropriate TM.
    b. Verify that operators complete DA Form 5988-E and DA Form 2407.
4. Ensure operators properly maintain the Satellite Monitoring System, DFCS-NCT.
    a. Verify that operators conduct a handover of network control IAW SOP, if applicable.
    b. Verify that operators isolate the faulty component and perform repair/replacement as dictated in the appropriate TM.
    c. Verify that operators complete DA Form 5988-E and DA Form 2407.
5. Ensure operators properly maintain the RT Group OW (OZ-52/G).
    a. Verify that operators isolate the faulty component and perform repair/replacement as dictated in the appropriate TM.
    b. Verify that operators complete DA Form 5988-E and DA Form 2407.
6. Ensure operators properly maintain SATCOM Set AN/USC-28.
    a. Verify that operators isolate the faulty component and perform repair/replacement as dictated in the appropriate TM.
    b. Verify that operators complete DA Form 5988-E and DA Form 2407.

Performance Measures	GO	NO GO
1. Ensured operators properly maintained the RFIS.	____	____
2. Ensured operators properly maintained the PTF.	____	____
3. Ensured operators properly maintained the FCS.	____	____
4. Ensured operators properly maintained the Satellite Monitoring System, DFCS-NCT.	____	____
5. Ensured operators properly maintained the RT Group OW (OZ-52/G).	____	____
6. Ensured operators properly maintained SATCOM Set AN/USC-28.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
DA FORM 2407	
DA FORM 5988-E	
DA PAM 738-750	
TM 11-5895-1188-12	
TM 11-5895-1188-34	
TM 11-5895-1328-13	
TM 11-5895-1328-23P	
TM 11-5895-1357-13-1	
TM 11-5895-1357-13-2	
TM 11-5895-1368-13	
TM 11-5895-1399-13	
TM 11-5895-808-13-1	
TM 11-5895-808-13-10	
TM 11-5895-808-13-11	
TM 11-5895-808-13-2	
TM 11-5895-808-13-3	
TM 11-5895-808-13-4	
TM 11-5895-808-13-5	
TM 11-5895-808-13-6	
TM 11-5895-808-13-7	
TM 11-5895-808-13-8	
TM 11-5895-808-13-9	
TM 11-5895-808-23P	

Subject Area 9: MILSTAR

Operate MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V)

113-590-2152

Conditions: Given an AN/FRC-181(V) or AN/TRC-194(V), DISAC 310-70-1, MILSTAR Terminal Positional Handbook (MTPH) Volume I, TM 11-5820-1105-12&P, applicable TSOs, and operating requirements.

Standards: The MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V), passed all operational tests and was passing communications.

Performance Steps

1. Set up baseband and COMSEC equipment IAW the MTPH, Volume 1, Procedures 3.1.1, 3.1.2, and 3.1.3.
2. Power up/reset the terminal IAW TM 11-5820-1105-12&P, Terminal Power-Up/Reset Checkout Procedures (13 sheets), Figure 4-27; or the MTPH, Volume 1, Procedures 3.2.2 or 3.2.3 and 3.3.1.
3. Perform simplified Terminal Initialization Procedures IAW the MTPH, Volume 1, Procedures 3.4.1, 3.4.2, 3.4.3, and 3.4.4.
4. Load terminal COMSEC/transmission security (TRANSEC) keys IAW the MTPH, Volume 1, Procedures 3.5.1, 3.5.2, 3.5.3, 3.5.4, and 3.5.5.
5. Perform Terminal Control Procedures IAW the MTPH, Volume 1, Procedures 3.6.1, 3.6.2, 3.6.3, 3.6.4, and 3.6.5.
6. Perform message processing procedures IAW the MTPH, Volume 1, Procedures 3.7.1, 3.7.2, 3.7.3, and 3.7.4.
7. Perform extremely high frequency (EHF) acquisition and logon procedures IAW the MTPH, Volume 1, Procedures 3.8.1, 3.8.2, 3.8.3, 3.8.4, 3.8.5, 3.8.6, 3.8.7, and 3.8.8.
8. Perform EHF logoff procedure IAW the MTPH, Volume 1, Procedure 3.9.1.
9. Power down the terminal IAW TM 11-5820-1105-12&P, Terminal Shutdown Procedures (5 sheets), Figure 4-39 or the MTPH, Volume 1, Procedure 3.2.2 or 3.2.3, Figure 4-29.

Performance Measures	**GO**	**NO GO**
1. Set up baseband and COMSEC equipment IAW the MTPH, Volume 1, Procedures 3.1.1, 3.1.2, and 3.1.3.	____	____
2. Powered up/reset the terminal IAW TM 11-5820-1105-12&P, Terminal Power-Up/Reset Checkout Procedures (13 sheets), Figure 4-27 or the MTPH, Volume 1, Procedures 3.2.2 or 3.2.3 and 3.3.1.	____	____
3. Performed simplified terminal initialization procedures IAW the MTPH, Volume 1, Procedures 3.4.1, 3.4.2, 3.4.3, and 3.4.4.	____	____
4. Loaded terminal COMSEC/TRANSEC keys IAW the MTPH, Volume 1, Procedures 3.5.1, 3.5.2, 3.5.3, 3.5.4, and 3.5.5.	____	____
5. Performed terminal control procedures IAW the MTPH, Volume 1, Procedures 3.6.1, 3.6.2, 3.6.3, 3.6.4, and 3.6.5.	____	____

Performance Measures	GO	NO GO
6. Performed message processing procedures IAW the MTPH, Volume 1, Procedures 3.7.1, 3.7.2, 3.7.3, and 3.7.4.	____	____
7. Performed EHF acquisition and logon procedures IAW the MTPH, Volume 1, Procedures 3.8.1, 3.8.2, 3.8.3, 3.8.4, 3.8.5, 3.8.6, 3.8.7, and 3.8.8.	____	____
8. Performed EHF logoff procedure IAW the MTPH, Volume 1, Procedure 3.9.1.	____	____
9. Powered down the terminal IAW TM 11-5820-1105-12&P, Terminal Shutdown Procedures (5 sheets), Figure 4-39 or the MTPH, Volume 1, Procedure 3.2.2 or 3.2.3, Figure 4-29.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
DISAC 310-70-1	CPS2L3
MTPH VOLUME 1	CPS2L4
TM 11-5820-1105-12&P	CPS2L5
	DA PAM 738-750

Maintain MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V)

113-590-3172

Conditions: Given a faulted AN/FRC-181(V) or AN/TRC-194(V); DISAC 310-70-1, TM 11-5820-1105-12&P, MTPH Volume 1, MTPH Volume 2; Time Distribution Subsystem Preprocessor (TDSPP) Positional Handbooks (TPH), Volumes 1 and 2; Computer Program Development Specification for Terminal Control Processing Software (CPCI-2) User's Manual, Volumes 1 and 2; applicable TSOs, and operating requirements.

Standards: Restored the MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V), to Fully Mission Capable (FMC) status.

Performance Steps
(Refer to TM 11-5820-1105-12&P; MTPH, Volumes 1 and 2; Time Distribution Subsystem Preprocessor (TDSPP) Positional Handbooks (TPH), Volumes 1 and 2; and Computer Program Development Specification for Terminal Control Processing Software (CPCI-2) User's Manual, Volumes 1 and 2.)

1. Identify failed LRU using on-line built-in test indications or IAW the MTPH, Volume 1, Procedure 4.6.1 (Initiate a Nondisruptive Test) or Procedure 4.7.1 (Initiate a Disruptive Test) or Procedure 4.8.1 (Initiate a Loopback Test) in MTPH, Volume 1; using CPCI-2 User's Manual, Volumes 1 and 2; and Chapter 6 in TM 11-5820-1105-12&P.
2. Restore and verify all communications are correct.
3. Complete all applicable maintenance forms IAW DA PAM 738-750 or similar reference.

Performance Measures (Refer to TM 11-5820-1105-12&P; MTPH, Volumes 1 and 2; Time Distribution Subsystem Preprocessor (TDSPP) Positional Handbooks (TPH), Volumes 1 and 2; and Computer Program Development Specification for Terminal Control Processing Software (CPCI-2) User's Manual, Volumes 1 and 2.)	**GO**	**NO GO**
1. Identified failed LRU using on-line built-in test indications or IAW TM procedures.	____	____
2. Restored and verified all communications were correct.	____	____
3. Completed all applicable maintenance forms IAW DA PAM 738-750 or similar reference.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
CPCI-2 UM VOL 1	CPS2L3
CPCI-2 UM VOL 2	CPS2L4
DISAC 310-70-1	CPS2L5
MTPH VOL 1	DA PAM 738-750
MTPH VOL 2	
TM 11-5820-1105-12&P	
TPH VOL 1	
TPH VOL 2	

Supervise the Operation of MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V)
113-590-7006

Conditions: Given an AN/FRC-181(V) or AN/TRC-194(V), TM 11-5820-1105-12&P, MTPH Volumes 1 and 2, applicable TSOs, and operating requirements.

Standards: Supervised that all requirements for the operational direction of the MILSTAR Command Post Terminal were promptly completed or resolved and communications traffic was passed.

Performance Steps

1. Verify that the operator properly set up baseband and COMSEC equipment IAW the MTPH.
2. Verify that the operator follows the power up/reset terminal procedures IAW the MTPH.
3. Verify that the operator correctly performs the simplified terminal initialization procedures IAW the MTPH.
4. Verify that the operator correctly loads the terminal COMSEC/TRANSEC keys IAW procedures in the MTPH.
5. Verify that the operator performs the terminal control procedures IAW the MTPH.
6. Verify that the operator conducts the message processing procedures IAW the MTPH.
7. Verify that the operator performs the EHF acquisition and logon procedures IAW the MTPH.
8. Verify that the operator adheres to the EHF logoff procedures IAW the MTPH.
9. Verify that the operator powers down the terminal IAW the Terminal Shutdown Procedures in the MTPH.

Performance Measures	**GO**	**NO GO**
1. Verified that the operator properly set up baseband and COMSEC equipment IAW the MTPH.	____	____
2. Verified that the operator followed the power up/reset terminal procedures IAW the MTPH.	____	____
3. Verified that the operator correctly performed the simplified terminal initialization procedures IAW the MTPH.	____	____
4. Verified that the operator correctly loaded the terminal COMSEC/TRANSEC keys IAW the procedures in the MTPH.	____	____
5. Verified that the operator performed the terminal control procedures IAW the MTPH.	____	____
6. Verified that the operator conducted the message processing procedures IAW the MTPH.	____	____
7. Verified that the operator performed the EHF acquisition and logon procedures IAW the MTPH.	____	____
8. Verified that the operator adhered to the EHF logoff procedures IAW the MTPH.	____	____
9. Verified that the operator powered down the terminal IAW the Terminal Shutdown Procedures in the MTPH.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
DISAC 310-70-1	CPS2L3
MTPH VOL 1	CPS2L4
MTPH VOL 2	CPS2L5
	DA PAM 738-750

Supervise the Maintenance of MILSTAR Command Post Terminal, AN/FRC-181(V) or AN/TRC-194(V)

113-590-7007

Conditions: Given a faulted AN/FRC-181(V) or AN/TRC-194(V), TM 11-5820-1105-12&P, DISAC 310-70-1, DA PAM 738-750, applicable TSOs, and operating requirements.

Standards: Successfully supervised the preventive maintenance or restoral of the MILSTAR Command Post Terminal.

Performance Steps

1. Ensure the operator monitors equipment for faulted/degraded condition.
2. Verify that the operator correctly identifies the faulted/degraded piece of equipment.
3. Verify that the operator troubleshoots equipment IAW the applicable TM.
   a. Verify that the operator replaces and/or repairs faulted equipment IAW the applicable TM.
   b. Verify that the operator restores the faulted piece of equipment.
4. Verify that the operator restores and verifies communications traffic.
5. Verify that the operator completes all equipment turn-in/maintenance forms IAW DA PAM 738-750 or similar reference.

Performance Measures	**GO**	**NO GO**
1. Ensured the operator monitored equipment for faulted/degraded condition.	____	____
2. Verified that the operator correctly identified the faulted/degraded piece of equipment.	____	____
3. Verified that the operator troubleshot equipment IAW the applicable TM.	____	____
4. Verified that the operator restored and verified communications traffic.	____	____
5. Verified that the operator completed all equipment turn-in/maintenance forms IAW DA PAM 738-750 or similar reference.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	**Related**
DA PAM 738-750	CPS2L3
DISAC 310-70-1	CPS2L4
TM 11-5805-1105-12&P	CPS2L5

Subject Area 10: Communications Set AN/USC-28(V)

Operate Satellite Communications Set AN/USC-28(V)
113-610-2046

Conditions: Given an AN/USC-28(V); TMDE and tools as required by DISA circulars; DISAC 800-E70-7 for the NCT, DISAC 800-E70-8 for the ALTNCT, DISAC 800-E70-9 for the NT, and DISAC 800-E70-11 for AN/GSC-49 terminals; TM 11-5895-808-13-1 through TM 11-5895-808-13-11 and TM 11-5895-808-23P; and JS test set recommended for the characterization test.

SECURITY NOTE: The E70 series DISA circulars and test results are classified SECRET.

NOTE: The site configuration determines which DISA circular is required.

Standards: The equipment was operational and the data was recorded and forwarded to the appropriate authorities.

Performance Steps

1. Power on the AN/USC-28(V) IAW procedures outlined in the applicable TM.
2. Load the program disc IAW procedures outlined in the applicable TM.
3. Perform the initialization procedures IAW the applicable TM.

NOTE: Performance steps 4 through 10 pertain to configuration and operation of the CSU.

4. Configure the CSU as a NCT or NT, as applicable.
5. Configure the UTE for the CCC/TCC unit for operation.
6. Configure the TSEC/KG-84 CCC/TCC.
7. Load the TSEC/KG-84 CCC/TCC for network operations.
8. Enter the ECCM network in time-date initialization (TDI) or TIME APPROX.
   a. Perform time entries.
   b. Perform CSU schedules.
   c. Load the range data and COD.
   d. Load and initialize the KGV-9.
   e. Adjust for time offset as required.
   f. Send initial status report to the NCT.
9. Exit from the ECCM network.
10. Enter the ECCM in standard time.
    a. Send full status report as required by DISA circulars to the NCT upon re-entry into the ECCM network.
    b. Perform time entries as required.
    c. Load range data and COD entries as required
    d. Load and initialize the KGV-9s as required
    e. Adjust for time offset as required

NOTE: Performance step 11 is an NCT and ALTNCT function only.

11. Perform a coordinated ECCM network control transfer IAW SOP and appropriate TM, as required.
    a. Poll terminals for status as required
    b. Monitor probes and control the network as required

Performance Steps

NOTE: Performance steps 10 through 14 pertain to configuration and operation of the COMM RT.

12. Perform necessary patching of the equipment.
    a. Perform IF/RF patching.
    b. Perform KY-883 configuration.
13. Configure the COMM RT IAW applicable TM and NCB and schedule the COMM RT.
14. Configure the UTE.
15. Place the UTE in LOW mode.
16. Configure the KG-84 and load for LOW network operations.
17. Ensure the user communications data is established.
    a. Load and initialize the KGV-9.
    b. Verify the performance of user data links.

Performance Measures	**GO**	**NO GO**
1. Powered on the AN/USC-28(V).	____	____
2. Loaded the program disc.	____	____
3. Performed the initialization procedures.	____	____
NOTE: Performance measures 4 through 10 pertain to configuration and operation of the CSU.		
4. Configured the CSU as an NCT or NT, as applicable.	____	____
5. Configured the UTE for CCC/TCC unit for operation.	____	____
6. Configured the TSEC/KG-84 CCC/TCC.	____	____
7. Loaded the TSEC/KG-84 CCC/TCC for network operations.	____	____
8. Entered the ECCM network in TDI or TIME APPROX.	____	____
9. Exited the ECCM network.	____	____
10. Entered the ECCM in standard time.	____	____
11. Performed a coordinated ECCM network control transfer SOP and appropriate TM, as required.	____	____
NOTE: Performance measures 12 through 17 pertain to configuration and operation of the COMM RT.		
12. Performed necessary patching of the equipment.	____	____
13. Configured the COMM RT IAW applicable TM and NCB and scheduled the COMM RT.	____	____
14. Configured the UTE.	____	____
15. Placed the UTE in LOW mode.	____	____
16. Configured the KG-84 and loaded for LOW network operations.	____	____
17. Ensured user communications data was established.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
DISA CIR 800-E70-11	
DISA CIR 800-E70-7	
DISA CIR 800-E70-8	
DISA CIR 800-E70-9	
TM 11-5895-808-13-1	
TM 11-5895-808-13-10	
TM 11-5895-808-13-11	
TM 11-5895-808-13-2	
TM 11-5895-808-13-3	
TM 11-5895-808-13-4	
TM 11-5895-808-13-5	
TM 11-5895-808-13-6	
TM 11-5895-808-13-7	
TM 11-5895-808-13-8	
TM 11-5895-808-13-9	
TM 11-5895-808-23P	

Maintain Satellite Communications Set AN/USC-28(V)

113-610-3085

Conditions: Given an AN/USC-28(V); NCB (SECRET); keying materials (SECRET); KAO-184A/TSEC; KYK-13/KOI-18; fill cable; DISAC 800-E70-7 for the NCT, DISAC 800-E70-8 for the ALTNCT, DISAC 800-E70-9 for the NT, and DISAC 800-E70-11 for AN/GSC-49 terminals; TM 11-5895-808-13-1 through TM 11-5895-808-13-11, TM 11-5895-1179-13 (KY-883), and TM 11-5895-808-23P; and site SOP.

Standards: All equipment was configured correctly and operational.

Performance Steps

1. Conduct operational PMCS activities.
   a. Perform "daily" PMCS.
   b. Record results on appropriate forms/records.

NOTE: The following performance steps are performed when the operator discovers a failure or degradation in equipment during the performance of PMCS or during normal operation.

2. Conduct an initial assessment of failure identifications and determine if failure affects entire system or is a localized failure.
3. Localize the failure to a specific area.
   a. Identify the correct rack that contains the failure.
   b. Identify the correct half-rack drawer that contains the failure.
   c. Identify the correct half drawer that contains the failure.
4. Restore communications on redundant equipment/alternate path prior to commencing detailed fault isolation.
5. Localize the failure using the directed AFI, verify, BITE, or IZAP IAW the appropriate TM.
6. Remove and replace failed card or module IAW with the repair and replacement procedures outlined in the appropriate TM.
7. Verify that communications are restored using the digital data test set.
8. Complete all maintenance forms for replacement parts or to request a higher maintenance level.

Performance Measures	**GO**	**NO GO**
1. Conducted operational PMCS activities.	____	____
NOTE: The following performance measures were performed when the operator discovered a failure or degradation in equipment during the performance of PMCS or during normal operation.		
2. Conducted an initial assessment of failure identifications and determined if failure affected the entire system or was a localized failure.	____	____
3. Localized the failure to a specific area.	____	____
4. Restored communications on redundant equipment/alternate path prior to commencing detailed fault isolation.	____	____
5. Localized the failure using the directed AFI, verify, BITE, or IZAP IAW the appropriate TM.	____	____
6. Removed and replaced failed card or module IAW with the repair and replacement procedures outlined in the appropriate TM.	____	____

Performance Measures	GO	NO GO
7. Verified that using the digital data test set restored communications.	____	____
8. Completed all maintenance forms for replacement parts or to request a higher maintenance level.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier a 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 tasks.

References

Required	Related
DISA CIR 800-E70-11	
DISA CIR 800-E70-7	
DISA CIR 800-E70-8	
DISA CIR 800-E70-9	
TM 11-5895-1179-13	
TM 11-5895-808-13-1	
TM 11-5895-808-13-11	
TM 11-5895-808-13-2	
TM 11-5895-808-13-3	
TM 11-5895-808-13-4	
TM 11-5895-808-13-5	
TM 11-5895-808-13-6	
TM 11-5895-808-13-7	
TM 11-5895-808-13-8	
TM 11-5895-808-13-9	
TM 11-5895-808-23P	
UNIT SOP	

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CHAPTER 5

Digital Common Core

Subject Area 11: Digital Common Core

Operate Automated Net Control Device (ANCD) AN/CYZ-10

113-609-2053

Conditions: As a radio operator in a field environment, given data transfer device AN/CYZ-10 (C) and TB 11-5820-890-12, TM 11-5820-890-10-8, and DA Form 2404. Given a requirement to operate the AN/CYZ-10.

Standards: Performed in sequence the transfer of COMSEC keys and SOI information from ANCD to ANCD; loaded SINCGARS radio with COMSEC variables using ANCD; and obtained SOI information from ANCD, corrected all errors within 15 minutes.

Performance Steps

1. Transfer COMSEC keys and SOI information from ANCD to ANCD.
   a. Turn on both ANCDs.
   b. Make main menu selection (ANCD).
   c. Make source ANCD menu selections.
   d. Make target ANCD menu selections.
   e. Transfer data from ANCD to ANCD.
   f. Turn OFF / disconnect ANCDs.
2. Load radio from ANCD using Mode 2 fill.
   a. Turn radio and ANCD power ON.
   b. Make main menu selection on ANCD
   c. Make application menu selection on ANCD
   d. Set controls of radio and connect to ANCD with fill cable.
   e. Transfer Mode 2 fill from ANCD to radio.
   f. Disconnect ANCD from radio and turn ANCD power OFF.
3. Obtain SOI information from ANCD
   a. Turn ANCD power ON.
   b. Make main menu selection.
   c. Make SOI menu selection
   d. Turn ANCD power OFF.
4. Perform PMCS on ANCD.
   a. Make a visual inspection of the ANCD.
   b. Check the battery.
   c. Check the fill port / CIK port.
   d. Record entries on DA form 2404.

Performance Measures	**GO**	**NO GO**
1. Transferred COMSEC data and SOI information from ANCD to ANCD.	____	____
2. Loaded radio from ANCD using Mode 2 fill.	____	____
3. Obtained SOI information from the ANCD.	____	____
4. Performed PMCS on ANCD.	____	____

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 the task can be performed correctly.

References

Required	**Related**
DA FORM 2404	
TB 11-5820-890-12	
TM 11-5820-890-10-8	

PREPARE/SEND COMBAT MESSAGES USING FBCB2 VERSION 3.4

171-147-0001

Conditions: Given a vehicle with an operational AN/UYK-128 Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, SINCGARS, GPS and EPLRS (if equipped), and tactical situation requiring you to prepare and send combat messages. Default Message Addressing settings have already been set.

Standards: As a minimum, you must prepare and send one of each of the Combat Messages (SALT, MEDEVAC, NBC 1, FIRE MISSION, CHECK FIRE ALL, and SITREP) using FBCB2.

Performance Steps

1. Select the Combat Msgs button from the Function bar or the F3 button on the keyboard. The system will display the Combat Messages dialog box.

NOTE: Combat Messages are designed to quickly create and send mission essential messages during combat operations. Combat Messages are easier and require fewer steps than Long Form Messages. Use the Touch screen or embedded pointing device to make the entries. Combat Messages do not require keystrokes to make the entries. Combat Messages with programmed transmission settings provide the capability to build and send a message within 10 seconds. The Combat Msgs Function has six tabs which include: SALT = Size, Activity, Location, and Time. MEDEVAC = Medical Evacuation. NBC1 = Nuclear, Biological, Chemical. Fire Mission. Check Fire All. SITREP = Situations Report. The system defaults to the SALT tab or the last tab selected when using Combat Messages.

2. Prepare and send a SALT message.

NOTE: Subordinate units use the SALT message to provide combat intelligence information on enemy units to higher echelons. The user can initiate a call-for-fire message from within this template. The SALT message automatically generates and broadcasts enemy georeference icons to friendly platforms throughout the Brigade. The user can submit an abbreviated Call for Fire Message using the information entered in the SALT Message. The dual message capability saves the user time and eliminates repetitive data input.

   a. Select the SALT tab. The system displays the combat messages SALT template.
   b. Select the equipment pull-down arrow. The system will display the equipment options list.

NOTE: If there is more than one different type of equipment, put the most dangerous target in the first equipment text box.

   c. Select an option from the list. The system displays the selection in the equipment combo box.
   d. Select the + or - button to the right of the Equipment pull-down arrow. Select the + button to increase the number or the - button to decrease the number.

NOTE: There is two additional Equipment Combo boxes if there is more than one type of equipment that is observed.

   e. Select the activity pull-down arrow. The system will display the activity options list.
   f. Select an option from the list. The system displays the selection in the activity combo box.
   g. Select the Map button. The Combat Messages dialog box will disappear and the mouse cursor will be replaced with the cross hair.
   h. Select a location on the map where the target is located. The Combat Messages dialog box will reappear with the location in the location text box or select LRF if the user's platform has a Laser Range Finder and Laser the target. The location will appear in the Location text box.
   i. Select the NOW button, Or the DTG button to update the Date Time Group.

Performance Steps

NOTE: The Date Time Group auto-fills when the user opens a message but does not update automatically. Selecting the NOW button enters the current DTG. Selecting the DTG button makes the user manually enter the DTG.

j. Select the Speed pull-down arrow. The system will display the Speed options list.

NOTE: If you picked stationary for the Activity field, then you would select None for speed.

k. Make a selection from the list. The system will display the selection in the Speed text box.
l. Select the Course pull-down arrow. The system will display the Course option list.
m. Select the direction that the equipment is moving or oriented in. The system will display the selection in the Course text box.
n. Select the CFF Msgs Check box. The system will display a check mark in the box, which will give access to the Method Of Engagement window.

NOTE: This function enables a request for fire support when sending a SALT message.

o. Select the Method of Engagement combo box down arrow button. The system will display the Fire Request Type options list.
p. Select an option from the list. The system displays the selection in the Method Of Engagement text box.
q. Select the Save button to save the message. The system will save the message and display Message saved to file Spot with the DTG after it.
r. Select the Send button to send the message. The system will transmit the message and display "Last SALT message sent at DTG."
s. Select the Close button to close the Combat Messages dialog box. The system will close the combat messages dialog box.

3. Prepare and send a fire mission message.
   a. Select the Combat Msgs. button on the Function Bar or the F3 button on the keyboard.
   b. Select the Fire Mission tab. The system displays the Fire Mission tab group.

NOTE: The Fire Mission template is used to request indirect fire support from supporting fire support units. The Fire Mission Tab group consists of: Summary, CFF, Subsequent Adjust, Check Fire, On Call Fire Cmd, and EOM tabs. The Summary and CFF tabs are enabled at all times. The Subsequent Adjust, Check Fire, On Call Fire Command, and End of Mission tabs are grayed out. These tabs only become active when a Fire Mission is approved by the Advanced Field Artillery Tactical Data System (AFATDS).

c. Select the CFF tab to access the Call For Fire message template.
d. Select the Type of Mission pull-down arrow. Select an option from the list. The system will display the Type of Mission in the Type of Mission text box.
e. Select the equipment pull-down arrow. The system will display the equipment options list.
f. Select an option from the list. The system displays the selection in the Equipment text box.
g. Enter the quantity by selecting the + or - button for the amount of equipment that the user observes or select the text box and enter the amount with the keyboard. The system will display the amount in the text box.
h. Select the Map button. The Combat Messages dialog box will disappear and the mouse cursor will be replaced with the cross hair.
i. Select the location on the map where the target is observed. The Combat Messages dialog box reappears and displays the location in the Target Location text box.
j. Select the Fill LRF button. The system will input the location provided by the laser range finder (LRF).

NOTE: The LRF button only works with vehicles equipped with a Laser Range Finder.

k. Select the Protection Level pull-down arrow. The system will display the Protection Level options list. Select an option from the list. The system displays the selection in the Protection Level text box.

Performance Steps

NOTE: The Protection Level combo box is grayed out and only becomes active when Dismounted Personnel is selected in the Equipment combo box.

l. Select the Method of Control pull-down arrow. The system will display the Method of Control options list. Select an option from the list. The system displays the selection in the Method of Control text box.

NOTE: The Timed Time On Target (Zulu) field only becomes active if the Timed Time on Target is selected in the Method Of Control field.

m. Select the Save button if you desire to save the message. The system will save the message.
n. Select the Send button if you desire to send the message. The system will transmit the message.
o. Select the Summary tab, to display the Summary tab group.

NOTE: The Summary tab displays a list of all fire missions received along with their current status. You can access additional fire support messages from the Summary tab group after a Call For Fire message has been sent and a Message to Observer (read only) message has been received.

p. Select the Close button. The system will return to the Ops screen.

4. Prepare and send a medical evacuation (MEDEVAC) request.

NOTE: Use the MEDEVAC request message to request ground or aircraft support to evacuate friendly and/or enemy casualties. The MEDAVAC tab group is accessed from Combat Msgs button on the Function Bar or the F3 button on the keyboard.

a. Select the Combat Msgs button on the Function Bar or the F3 button on the keyboard.
b. Select the MEDEVAC tab. The system will display the MEDEVAC template.
c. Select the Map button. The Combat Messages dialog box will disappear and the mouse cursor will be replaced with a cross hair.
d. Select a location on the map and the grid location will appear in the Pick Up Location text box.
e. Or Select the LRF button. The system will input the location provided by the Laser Range Finder.

NOTE: This function only works if your vehicle is equipped with the Laser Range finder.

f. Select the Amb Patients + or - buttons to input the amount of Amb patients or place the cursor in the Amb Patients text box and enter the amount with the keyboard.

NOTE: Holding down on the + or - button will scroll through the numbers at a fast pace.

g. Select the Ltr Patients + or - buttons to input the amount of Litter patients or place the cursor in the Litter Patients text box and enter the amount with the keyboard.
h. Select the Marking pull-down arrow. The system will display the Marking options list.
i. Select an option from the list. The system displays the selection in the Marking text box.
j. Select the Color pull-down arrow. The system will display the Color options list.
k. Select an option from the list. The system displays the selection in the Color text box.
l. Select the Pickup Zone Hot check box. The system will display a check mark in the Pickup Zone Hot text box.

NOTE: If the area is not Hot, then do not check this box. Hot means that the area has hostiles in the vicinity.

m. Select the MEDAVAC Priority pull-down arrow. The system will display the MEDAVAC Priority options list.
n. Select and option from the list. The system will display the selection in the MEDEVAC Priority text box.
o. Select the NBC Contamination pull-down arrow if there is any type of contamination in the area. The system will display the NBC Contamination option list.

Performance Steps

p. Make a selection from the option list. The selection will display in the NBC Contamination Type text box.
q. Select the Security pull-down arrow. The system will display the Security option list.
r. Make a selection from the option list. The selection will display in the Security text box.
s. Select the Save button if you desire to save the message. The system will save the message and display the Message saved to file spot DTG.
t. Select the Send button if you desire to send the message. The system will display the Last MEDEVAC message sent with the DTG.
u. Select the Close button when you desire to close the message box. The system will close the Combat Messages dialog box.

5. Prepare and send a nuclear, biological, chemical (NBC 1) message.

NOTE: NBC 1 is accessed from Combat Msgs button on the Function Bar or the F3 button on the keyboard. The Nuclear, Biological, Chemical (NBC 1) message allows the user to transmit observer's basic data on a single NBC attack. The message will automatically create a georeference location on the SA Display.

a. Select the Combat Msgs button on the Function Bar or the F3 button on the keyboard.
b. Select the NBC 1 tab. The system will display the NBC 1 template.
c. Select the NBC Event Type pull-down arrow. The system will display the NBC Event Type options list.
d. Select an option from the list. The system displays the selection in NBC Event Type text box.
e. Select the Delivery Means pull-down arrow. The system will display the Delivery Means option list.
f. Make a selection from the option list. The system will display the selection in the text box.
g. Select the first Map button to the right of the Attack Location 1 text box. The Combat Messages dialog box will disappear and the cursor will be replaced with a cross hair.

NOTE: There are two Attack Location fields. Do the same for the second Attack Location.

h. Select a location on the map and the system will display the location in the Attack Location 1 text box.
i. Or select the LRF button and laser the location. The location will appear in the Attack Location 1 text box.
j. Enter the Attack Time 1(Zulu) data by selecting the NOW button Or, Selecting the plus + or - buttons to increase or decrease the Day, Hour and Minute.
k. Enter the Attack Time 2(Zulu) data by selecting the NOW button Or, Selecting the plus + or - buttons to increase or decrease the Day, Hour and Minute.
l. Select the Save button if you desire to save the message.
m. Select the Send button if you desire to send the message. The system will transmit the message.
n. Select the Close button. The system will close the Combat Messages dialog box.

6. Prepare and send a Check Fire message.
   a. Select the Combat Msgs button on the Function Bar or the F3 button on the keyboard.
   b. Select the Check Fire All tab. The system will display the Check Fire All template.

NOTES:

(1) The Check Fire All tab allows the user to send an immediate Check Fire command for all active fire missions in the Summary tab group.

(2) To cancel a Check Fire All, just select the Cancel Check Fire All radio button.

(3) The Cancel Check Fire All radio button will be grayed out until the Check Fire All radio button is selected.

Performance Steps

c. Select the Check Fire All radio button. The system will Highlight the Check Fire All radio button.
d. Select the Send button if you desire to send the message. The system will transmit the message.
e. Select the Close button. The system will close the Combat Messages dialog box.

7. Prepare and send a SITREP Message.

NOTE: SITREP is a dual-purpose message that generates a situation report message and displays the status of subordinate units. The SITREP displays a table format for ease of entry and a correlated view of received reports. The SITREP table graphically depicts the status of five critical categories that the commander uses to determine the units' status. The SITREP message displays subordinate unit status, or provides a detail view of individual platform status two levels down.

a. Select the Combat Msgs button on the Function Bar or the F3 button on the keyboard.
b. Select the SITREP tab. The system will display the SITREP template.

NOTE: The combat messages SITREP template displays a color-coded graphical representation of your own situation and the situation of those units/platforms subordinate to you. The color key is as follows: black (not mission capable), red (marginally mission capable with major deficiencies), amber (mission capable with only minor deficiencies), green (full strength), and White (no report received). The SELF-tab displays a color-coded graphical representation of your own situation. The Unit tab displays a color-coded graphical representation of your subordinate platforms situation.

c. Select the Self-tab if not already selected to EDIT your status. The system will display seven headings and what they represent under each: Self, which is your platform name, Fuel which is the status of your fuel, Mun which is the status of you ammunition, Pers which is status of your personnel, Eqmt which is status of your Equipment, Unit which is status of your unit, and DTG which is the date time group.
d. Select your Unit/role name which is the name that is under the heading Self. The system will display the Situation Report Details dialog box.

NOTE: The Unit/Role is a dual-purpose button that identifies the Unit/Role associated with the report and displays the Situation Report details. There are three push buttons in this dialog box which are: Edit which displays the SITREP long form message template, the Close button which closes the dialog box, and the Help button which gives help on the Situation Report Details dialog box.

e. Select Close. The system will close the dialog box and display the Ops (Map) Screen.
f. Select the Combat Msgs button on the Function Bar or the F3 button on the keyboard. The system will display the Combat Messages dialog box.
g. Select the SITREP Tab. The system will display the SITREP tab group.
h. Select the White box with a W in it under the heading Fuel. The box will turn Black with a B in it.

NOTE: Each time you click on that box it will change color. Select the color to indicate what the status is for that category. Each Category is done the same way.

i. Select the Unit Tab. The system will display the Unit Situation.

NOTE: If you are the Platoon Sergeant or Platoon Leader you will have your subordinate platform's status under your own.

j. Select the Save button. The system will display Sit Rep saved at and the DTG.
k. Select the Send button if you desire to send the message. The system will transmit the message.
l. Select the Close button. The system will close the Combat Messages dialog box and return to the Ops screen.

Performance Measures	GO	NO GO
1. Select the Combat Msgs button.	____	____
2. Prepare and send a SALT message.	____	____
3. Prepare and send a fire mission message.	____	____
4. Prepare and send a MEDEVAC message.	____	____
5. Prepare and send an NBC 1 message.	____	____
6. Prepare and send a Check Fire message.	____	____
7. Prepare and send a SITREP 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 scores NO-GO, show him what was done wrong and how to do it correctly.

APPLY MESSAGE ADDRESSING FEATURES IN FBCB2 VERSION 3.4

171-147-0005

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with all of it's components with software version 3.4 loaded, and a completed message.

Standards: As a minimum: You must apply the Message Addressing settings so that the message can be transmitted to other platforms.

Performance Steps

NOTE: Message Addressing allow the operator to set the default message options for each message subtype. These default message options should be standardized and included in the unit's TACSOP. This will help speed the message sending process. If the settings and addresses for each message subtype are set ahead of time, that is one less thing that the operator to do prior to sending the message. To take advantage of this capability, the default settings should be set for each type of message that the operator is going to use, especially for Combat Messages. Even if the Default Message addressing has been set for all the message types, the message address can be changes from within the Message itself by selecting the Message Addressing button. Operators should not change the default settings unless the unit TACSOP directs it.

1. Set the Default Message Addressing settings.
    a. Select the Messages... button from the Function bar or the F4 button on the keyboard. The Messages dialog box will display.
    b. Select the Create tab.

NOTE: The Create tab group contains the following options: (1) Message Type Radio buttons, which include Orders/Requests, Fires/Alerts, Reports, and Overlays. (2) Message Sub Type panel, which shows a list of the message subtypes. (3) Set Default Message Addressing button for setting the default message options for message sub types. (4) Edit Address Groups button for creating and editing their own address groups. (5) Execute, Close, and Help buttons

    c. Select a Message Type Radio button. (Orders/Requests, Fires/Alerts, Reports, Overlays) The radio button will highlight for the message type that was selected and a list of message subtypes will appear in a panel to the right.
    d. Select a message subtype from the list by left clicking on the subtype. The subtype will highlight.

NOTE: If there is a scroll bar on the right of the panel, then there is more subtypes below.

    e. Select the Default Message Addressing... button. The Message Addressing dialog box will display.

NOTE: This Message Addressing dialog box contains two tabs: The Message Settings tab and the Addresses tab.

    f. Select the Message Settings tab.

Performance Steps

NOTES:

(1) This tab contains four areas: (1) Precedence for Emergency Cmd, Flash, Immediate, Priority, and Routine. (2) Acknowledge- Check boxes for "MA" (Machine Acknowledge), "OA" (Operator Acknowledge) and "OR" (Operator Response). "MA," "OA," and "OR" may be grayed out depending on the message subtype that was selected. (3) Security Level- Sets the Security level of an outgoing message. (Grayed out . Only available when FBCB2 System is in the Classified mode). (4) Perishability DTG- Indicates when the message is no longer valid and is not a function of the "Default Message Addressing settings.

(2) The "Precedence" radio button allows the user to set the message precedence for the selected message subtype. The system places the selected precedence in the message header of the outgoing messages. This directs the receiving FBCB2 System to place the message into the appropriate incoming message queue. The message precedence also ties to the priority the INC uses to forward the message for delivery.

g. Select Precedence radio button. The radio button will highlight.
h. Select an Acknowledge check box. The checkmark will appear in the box.

NOTES:

(1) Use the Acknowledge function if the user wants the receiving station to confirm receipt of the message, or if you want the operator to respond to the message. The Acknowledge function also activates the incoming message queue of the receiving station.

(2) "MA" - Machine Acknowledge - The receiving system transmits an automatic response to the sending system when the message is received. "OA" - Operator Acknowledge - The receiving system transmits an automatic response to the sending system when the operator opens the message. There is an audible alert associated with this type of response as long as it is not muted. "OR" - Operator response - The operator is required to indicate compliance and give a short written reply. There is an audible alert associated with this type of response.

i. Select the Security level radio button associated with the message. The radio button will highlight. (If in Secret mode).

NOTE: The "Security Level" allows the user to select the classification of an outgoing message. This only works on a system that is configured as Secret. An unclassified user cannot send a secret message.

j. Select the Addresses tab. The Addresses tab options will display.

NOTE: This tab contains the following options: (Add) - adds addresses, (Delete) - deletes selected addresses, (Delete All) - deletes all selected addresses, (Search) - Executes a search for entered text, (Keypad) - Access a victual keyboard, (OK) - Accepts changes and closes the dialog box, (Apply) - Applies changes and keeps the dialog box open, (Restore Defaults) - Restores message addressing settings back to original defaults, (Close) - Closes the dialog box without saving changes, (Help) - Accesses context sensitive Help.

k. Select the Select From: pull-down arrow. The system will display the Select From menu.

NOTE: This menu contains three options: (1) Master Address Book- contains the addresses of all units in the current UTO, the user cannot add or delete addresses from the Master address Book, (2) User Address Groups - Groups created by the user, Battalion Address Book - Contains the addresses within the units platform.

l. Select the Master Address Book. The Master Address Book will Highlight and display in the Select From: text box and all the addresses in the current UTO will appear in the pane below.

Performance Steps

NOTE: The user can select an address by selecting it from the list or by typing the name in the search text box.

m. Select a unit from the pane by left clicking on the + sign to expand the major unit and left clicking on the unit, or type the name in the Search text box and select the Search button. The name will highlight in the Select From: pane.
n. Select the Add button. The name will appear in the Address pane on the right.

NOTE: Do the same for each address that needs to be added.

o. Select the Add Addresses pull-down arrow under the Addresses tab name. The system will display Action Addresses and Info Addresses.

NOTE: Action addresses are addresses that need to respond in some way. Info Addresses are addresses that are getting the message as information and do not include an acknowledgement. The default is Action Addresses.

p. Select either Action or Info addresses. The option will highlight and appear in the Add Addresses text box.

NOTE: An address cannot exist in Action Addresses and Information Addresses simultaneously.

q. Select the Apply button. The system will apply the entries and keep the dialog box open.
r. Select the close button. The system will return to the Messages dialog box.

2. Create Address Groups.

NOTE: Each platform has several predefined user address groups. The platform's role determines which groups exist, and the addresses in each group. The address groups consist of groups that the platform belongs to by doctrine, groups that the platform's echelon owns, and groups that that the platform's parent organization owns. This does not prevent the operator from generating additional groups to fit specific needs. The operator has the ability to add or delete an address, or delete an entire group.

a. Select the Create tab.
b. Select the Edit Address Groups button. The Edit Address Groups dialog box displays.

NOTE: The following functions are: (New Group) - Adds a new group to the right hand window, (Rename Group) - Renames the selected group in the right hand window to the new name, (Delete Group) - Deletes the selected group from the right hand window, (Add Address) - Adds the address from the left hand window to the selected group in the right hand window, (Delete Address) - Deletes the selected address from the right hand window, (Search) - Executes a search for entered text. Data can be entered using either the virtual keyboard or the computer keyboard, (Name Text Box) - Allows the user to manually type text. The left window displays a listing of all addresses. The right window displays the folder list. If there are no user address groups, there are no folders listed.

c. Select the Name text box by placing the cursor in the text box and left clicking and typing the name that the user wants to call the folder, or Select the Virtual Keyboard and type the name using the mouse pointer and select OK. The name will appear in the text box and the New Group button will become active.
d. Select the New Group button. The folder will be created in the window on the right side.
e. Select the Folder that was just created by highlighting it. The Delete Group button will become active.
f. Select the Search text box and type the name of the unit that the user wants to add to the new group, or select the Virtual Keyboard and type the name and select the OK button. The Name will highlight on the left window and the Add Addresses button will become active.

NOTE: If the Add Addresses button does not become active, click on another name then back on the correct name in the left window and the button should become active.

Performance Steps

g. Select the Add Address button. The address will be added to the Folder on the right side window.

NOTE: Continue these same steps until all of the addresses are added.

h. Select the Folder that was created with all the addresses in it.

NOTE: If there is a plus sign next to the folder, click on it to open the folder to view all of the addresses within the folder.

i. Select a name that is in the folder by highlighting it. The Delete Address button becomes active.
j. Select the Delete Address button. The address is deleted from the window on the right.

NOTE: Continue this until all the addresses that the user wants to delete are deleted. If the user wants to delete a whole group, it is done the same way. Highlight the folder name and the Delete Group button becomes active. The user just selects the Delete Group button to delete the whole group.

k. Select the OK button. The system will save and exit the Edit Address Groups dialog box and return to the Messages dialog box.
l. Select the Close button. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Set the Default Message Addressing settings.	____	____
2. Create Address Groups.	____	____

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

PERFORM MESSAGE MANAGEMENT USING FBCB2 VERSION 3.4

171-147-0006

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded. To better organize FBCB2 information you have received, you need to manage your messages.

Standards: As a minimum: you must rename, delete files and folders, and move files from one folder to another by using the Manage tab on the Messages function.

Performance Steps

1. Select the Messages button from the Function Bar or the F4 button on the keyboard.
2. Select the Manage Tab. The system will display the Manage fields and push buttons.

NOTE: The Manage tab allows the user to create, delete, move and rename folders and delete messages. There are eight push buttons consisting of: (New Folder) which creates a folder, (Delete) which deletes folders and files, (Rename) which rename folders and files, (Move) which moves files from one folder to another, (Execute) which activates a message (Grayed Out), (Close) which closes the Messages dialog box, and (Help) which gives help on the Manage Tab, and a Virtual Keyboard.

   a. Ensure that all of the message type boxes are checked under the Msg Type so that all the folders and files will be displayed in the folder window on the right.
   b. Select the + sign next to a folder that the user wants to manage or double-click the folder name, which will also open the folder. The folder will open and display all the files within that folder.

3. Rename a file.
   a. Select one of the files listed under the folder that needs to be renamed. The file will be highlighted.
   b. Select the Name: text box at the bottom of the Messages dialog box. The cursor will be blinking inside the text box
   c. Type the new name. The name will display in the text box.
   d. Select the Rename button. The file name will be changed and displayed under the folder in Alphabetical / Numerical order by file names.

NOTE: If the user typed a name that is not valid, a Rename Error dialog box saying, "This name is not valid, please re-enter the new message name!" with an OK button will appear.

4. Rename a folder.
   a. Select the Folder name from the folders window. The folder name will be highlighted.
   b. Select the Name: text box at the bottom of the Messages dialog box. The cursor will be blinking inside the text box.
   c. Type the new name for the folder. The name will display in the text box.
   d. Select the Rename button. The Folder name will change and be displayed in Alphabetical / Numerical order by Folders.

5. Delete a file or folder.

NOTE: The steps for deleting a file or folder are the same.

   a. Select a file from one of the folders. The file will be highlighted.
   b. Select the Delete button. The Delete File dialog box will be displayed saying "You are about to delete message "name of File or Folder" and its associations, continue with this action?" with a OK and Cancel button.
   c. Select the OK button. The file or Folder that the user selected will be deleted.

Performance Steps

6. Move a file from one folder to another folder.
    a. Select a file from one folder. The file will be highlighted.
    b. Select the Move button. The Choose Destination Folder dialog box will display with all the folders that have been saved.
    c. Select the folder that the user wants to move the file to. The Folder will be highlighted.
    d. Select the OK button. The file will be displayed in the new folder.
    e. Select the Close button. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Select the Messages button from the Function Bar or the F4 button on the keyboard.	____	____
2. Select the Manage Tab. The system will display the Manage fields and push buttons.	____	____
3. Rename a file.	____	____
4. Rename a folder.	____	____
5. Delete a file or folder.	____	____
6. Move a file from one folder to another folder.	____	____

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

PREPARE/SEND OVERLAYS USING FBCB2 VERSION 3.4

171-147-0007

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, an operation order (OPORD), and the commander's guidance. Default Message Addressing settings have been set.

Standards: As a minimum, you must: create an overlay or select an overlay, change or edit an overlay, save the overlay, and send an overlay.

Performance Steps

NOTE: Operational plans, operational concepts, units and weapon symbols, objectives, boundaries, routes of march, and other control measures can be created in a digital overlay to provide command and control. Digital Overlays can be created faster with greater degree of accuracy and can be edited and quickly disseminated to other members in the BDE. Some overlays automatically post to the map SA area and generate an audible alert when they are received which is designed to prompt the operator to look at their display for life threatening obstacles. The SA display on the FBCB2 system can be tailored to show up to four distinct layers of information. Any combination of these layers can appear on the SA display simultaneously. The Four electronic layers consist of the currently displayed overlay, previously loaded overlay, any SA elements that the system has been set to display, and the map which forms the base of the display. Layer 1 is the Map Display. Layer 2 is the SA display. Layer 3 is the Loaded Overlays. Layer 4 is the current overlay.

1. Select the Messages button from the Function Bar or the F4 button on the keyboard. The system will display the Message dialog box.
    a. Select the Create tab. The system will display the Create Tab options.
    b. Select the Overlays radio button under the Msg Type field. The Overlays radio button will highlight and show a list of available Overlay types.

NOTE: If there is a scroll bar to the right of the list, then there are more types of overlays to view.

    c. Select an Overlay type from the list by highlighting it.

NOTE: If the user doesn't set the Default Message Addressing Settings at this time, then the user can set them before the message is sent.

    d. Select the Execute button. The system will display the Overlay Toolbox dialog box.

NOTE: The system will display Three tabs: the Overlay, Object, and Group Setup tab. The Overlay tab is used to select the Overlay type, save an overlay, and reference specific information about the overlay. The Object tab is used to add and edit symbology to the map SA area. The Group Setup tab allows the operator to create a customized group of icons for specific missions, e.g. Operations symbology or Fire Coordination symbology.

Performance Steps

2. Select the Overlay tab if it is not already selected. The system will display the Overlay tab fields.

NOTE: The Overlay tab allows the user to set the basic information for the overlay. This is where the overlay type, Operations Order or Operations Plan reference, storage data, version, message size, statistics and additional comments are set for the overlay. There are eight push buttons at the bottom of the Overlay tab: Save button, which saves the overlay, Delete, which deletes the overlay, Message Addressing, which is used to set the address where the overlay will be sent, Save As, which is used to save the overlay initially, Print (unavailable), Send, which is used to send the overlay, Keep overlay displayed, which is used to keep the overlay displayed on the map when you close the Overlay toolbox, Close, which is used to close the Toolbox, and Help for help on the overlay toolbox.

a. Select the Overlay Type pull-down arrow to display the different overlay types. The system will display the Overlay type list.

NOTE: The user may have to scroll up to view the Overlay Type pull down arrow. The Overlay type that was selected in step 4 should be displayed in the Overlay Type text box. If not then select it now.

b. Use the Scroll bar on the right side of the Overlay Toolbox and scroll down to the Operation field.
c. Select the Operation Set radio button. The system will display the DTG text box, DTG button, and Identification text box.

NOTE: The Operation option button is used to enter/change the Operation DTG and Identification number.

d. Place the cursor in the DTG text box and type the date time group in with the keyboard or select the DTG button and use the + or - keys to enter the DTG or select the NOW button for the current DTG and select the OK button. The system will display the DTG in the DTG text box.
e. Place the cursor in the Identification Num text box and enter the Identification number (numeric 00 to 99) in the text box. The system will display the number in the Identification Num: text box.

NOTE: This number ties the overlay to an Operations Order or an Operations Plan.

f. Scroll down and select the Recalc Size button to calculate the size in bytes and display the overlay file size in the Message Size information box.

NOTE: This function only works after you have placed symbols on the overlay. This is to inform the operator of how large the overlay size is in Bytes. See the equipment operator's manual or pocket guide for maximum overlay size that can be transmitted.

g. Scroll down and select the Details button under the Statistics field. The system will display the Objects Details dialog box.

NOTE: There will not be data in the Object Details dialog box until the operator has placed objects on the overlay. This function is used to quickly center on an object and view it's attributes.

h. Select the Close button to close the Objects Details dialog box. The system will go back to the Overlay Toolbox.
i. Select the Comment Set radio button to activate the comments field. The system will display the Comment text box and make the Virtual Keyboard button become active.

NOTE: The comments field is limited to a maximum of 200 alphanumeric characters that is used to make comments about the overlay. To add comments, just left click in the text box and type the comment.

j. Select the Save As button. The system will display the Save As dialog box.
k. Highlight the folder that the overlay will be saved to, or create a folder with the New folder button.

Performance Steps

l. Type the name of the overlay in the File text box at the bottom of the Save AS dialog box.
m. Select the OK button. The system will display an Information dialog box stating "The message was saved" with an OK button.
n. Select the OK button. The system will return to the Overlay Toolbox.

3. Select the Object tab. The system will display the Object tab group consisting of: Group, 2525B, and UTO tabs.

NOTE: The Object tab selects an object, identifies its attributes, (friend, foe, or unknown), and adds it to an overlay. The Object tab displays all the object information and is used to add graphical objects, (create) or revise (edit) a graphical objects attributes, textual labels, or location on the current overlay.

4. Select the Group Sub tab (Default). The system will display the Group sub tab group.

NOTE: The Group Sub tab displays graphic symbol files and sub-files and is used to select and add icons to the Map SA area. The Graphic symbol files are: Areas, Equipment, Equipment-Air, Fire Support, Lines, Obstacles, Points, Units, and any groups that the user created.

a. Select the Group pull down arrow. The system will display the graphic symbol types.
b. Select a graphic type from the list by highlighting it with the mouse pointer. The graphic type will display in the Group text box and a list of graphic sub types will display in the preview windowpane below.
c. Select a graphic sub type from the list. The selection will highlight and the Add button will become active.
d. Select the Add button. The system will display the Map with the Create Object function bar to the right and the cursor will become a cross-hair.

NOTE: Some objects require more than one point on the map to be inserted. If more than one point is required and the user selects the OK button without selecting the required amount of points, the system will display a Warning dialog box saying " Requires at least Three points." When adding objects that require more then one point, a solid white circle will represent each point.

e. Select a location on the map where the object will be inserted. The object will appear on the map.
f. Select the OK button. The Overlay Toolbox will be displayed.

NOTE: Continue steps (1) through (6) for all the graphics that need to be inserted.

g. Select the Grab button. The Overlay Toolbox dialog box will disappear and the cursor will be replaced with the pencil pointer.
h. Place the pointer on the map to the top left of the object that the user wants to grab and left click the mouse.
i. Move the pointer to the bottom right of the object and left click the mouse. A box will appear over the object and the Overlay Toolbox will reappear.

NOTE: The user can select more than one object by dragging the box over several objects.

j. Select the Edit button. The system will display the Overlay Edit dialog box with three sub tabs containing: Attributes, Labels, and Location.

NOTE: This function is used to modify a graphical object's characteristics, including affiliation, status, color, mobility, size, and designation. Some of these areas will be grayed out depending on the selected object. There is a preview window to view the selected object. The two arrows pointing to the left and right are the scroll arrows to move through the selected objects that were grabbed earlier. The number on the left of the / is the object that is selected for edit and the number on the right of the / is the amount of objects that were grabbed.

Performance Steps

5. Select the Attributes tab. The system will display the Attributes sub tab group.

NOTE: Some functions may be grayed out depending on the object that is selected for edit.

a. Select the Status pull down arrow. The system will display the Status menu.

NOTE: This refers to whether an object currently exists at the location (Present) or in the future could reside at the location (Planned).

b. Select the status from the list. The selection will appear in the Status text box.
c. Select the color pull down arrow. The system will display the colors that can be selected.
d. Select the Affiliation pull down arrow. The system will display the Affiliation menu.

NOTE: The Affiliation field allows the user to set the affiliation that is associated with the selected object.

e. Select an affiliation from the menu. The affiliation will display in the Affiliation text box.
f. Select the Mobility pull down arrow. The system will display the Mobility menu.

NOTE: The Mobility field allows the user to set what type of mobility (if any) the object is.

g. Select the Size pull down arrow. The system will display the Size menu.

NOTE: The Size field allows the user to set the size of the object.

h. Select a size from the menu. The Size will display in the Size text box.
i. Place a Checkmark in the Check box next to either HQ, Task Force, Feint, or Installation depending on what the Icon represents. The user can place checkmarks in more than one check box.
j. Select the Apply button. The changes will apply and return to the Overlay Edit dialog box.

6. Select the Labels tab. The system will display the Labels tab group.

NOTE: The Labels function allows the user to modify an objects icon labels.

a. Select the First DTG button. The system will display the DTG keypad.

NOTE: The DTG button allows the user to enter the Date, Time group associated with the object.

b. Select the Year text box by selecting it with the mouse pointer .
c. Select the OK button. The system will return to the Overlay Edit dialog box.
d. Select the + or - key to increase or decrease the year or select the NOW button.

NOTE: Do the same for the Month, Day , Hour, and Minute for each object that is entered on the overlay.

e. Select the Additional Information text box and type the information or select the virtual keyboard by entering the information with the mouse pointer.

NOTE: The Additional Information function allows the user to enter supplementary facts about the object.

f. Select the Unique Designation text box and type the specification, or select the virtual keyboard and enter the specification with the mouse pointer and select OK.
g. Select the Apply button. The system will apply the entries and keep the Overlay Edit dialog box open.

Performance Steps

7. Select the Location tab. The system will display the Location Tab group.

NOTE: The Location Tab displays the Current Grid Points of a selected object, whether it is a single point object or a multi-point object. The Location tab facilitates moving single point objects, such as a unit and modifying the points of multi-point objects such as routes. The user can move an object to another location on the map by using the Fill Location button and modify the dimensions of a multi-point object.

a. Select the right arrow at the bottom left of the Overlay Edit dialog box. The system will cycle to the next object and display the grid coordinates of the object.

NOTE: Each time the user selects the right arrow, it will cycle to the next object.

b. Select a grid from the list by highlighting it with the mouse pointer. The grid will highlight.
c. Select the Fill Location button. The Overlay Edit dialog box will disappear and the pointer will become a cross-hair.
d. Select a spot on the map where the user wants to move the object for a single points or a dimension of a multi-point object. The Overlay Edit dialog box will reappear.
e. Select the Apply button. The object or dimension will move to the new location.

NOTE: Do the same for all the objects or dimensions that need to be moved or modified.

f. Select the OK button. The system will return to the Overlay toolbox.

8. Select the 2525B. The system will display the 2525B tab group.

NOTE: The 2525B sub-tab function allows the user to acquire Warfighting symbols, Tactical graphics, weather, and signal intelligence symbols. The 2525B sub tab works in the same way as the Group sub tab. Choose from the Dimension, Type, and Sub-type menus in order to select the desired symbol.

a. Select the Dimension pull down arrow. The system will display the Dimension menu.
b. Select a symbol from the list. The symbol name will display in the Dimension text box.
c. Select the Type pull down arrow. The system will display the Type menu.
d. Select a type from the menu. The Type name will display in the Type text box.
e. Select the Subtype pull down arrow. The Subtype menu will display.

NOTE: The Subtype menu may or may not be available depending on the Dimension or type that was selected in steps 2 and 4.

f. Select a Subtype from the list. The name will appear in the Subtype menu.
g. Select the Attributes button. The Symbol Attributes dialog box will display.

NOTE: The Attributes button is done exactly like the Attributes Tab in step a. sub step 11 through 20.

h. Select the OK button after completing the Attributes. The Overlay Toolbox will reappear.

NOTE: Do the same for all the symbol that are placed on the overlay.

9. Select the UTO sub-tab. The UTO sub tab group will display.

NOTE: The UTO sub tab allows the user to select unit symbols from various Unit Task Organizations (UTO) for inclusion in the overlay.

a. Select the Search button. The system will display the UTO Search dialog box.
b. Type the Name of the unit in the search text box with the keyboard or the virtual keyboard. The name will display in the search text box.
c. Select the Search button. The unit will be highlighted.
d. Select an Organization in the Unit column. The Organization will be highlighted and the unit symbol appears in the Preview pane in the bottom left hand corner.

Performance Steps

e. Select the OK button. The system will return to the UTO sub tab with the unit name under the Unit field and the symbol in the preview pane.
f. Select the Attributes button and enter the attributes for the symbol and select OK. The system will return to the Overlay Toolbox.
g. Select the Add button. The system will display the unit symbol on the overlay.
h. Select the OK button. The system will return to the Overlay Toolbox.

NOTE: Continue sub steps (1) through (8) until all symbols are on the overlay.

10. Select the Overlay tab. The system will display the overlay tab fields.

NOTE: Scroll up to the Overlay Type. Ensure that it still shows the Overlay type that was selected at the beginning. Scroll down to the Storage field. Ensure that the Folder and File display the correct name. Scroll down to Version to view the Creation DTG, Revision DTG, and Revision. Scroll down to the Recalc Size button under the Message Size field. Select the Recalc button to display the size of the overlay in bytes. The user can center on an object by selecting the Details button, then highlighting the object from the list and selecting the Center on Object button. The user can set the Message Addressing settings and re save the overlay from here.

11. Select the Group Setup Tab. The system will display the Group Setup tab fields and buttons.

NOTE: The Group Setup Tab creates user-defined object group files and sub-files. User-defined object groups can be developed and used to expedite the creation of overlays.

a. Select the Group down arrow. The system will display the Group menu including the user-defined groups if there were any created.
b. Select the Group Name text box. The text box will highlight.
c. Type a name for the new group folder. The name will appear in the Group Name text box.
d. Select the New Group button. The system will display the newly created folder in the Group text box.

12. Select the Object tab then the Group sub tab.
    a. Select the Group down arrow. The system will display the Group Menu including the group folder that was just created.
    b. Select a group folder from the list. The sub file names will display in the Group window.
    c. Select a group sub file from the list of sub files. The sub file will be highlighted and the icon will be displayed in the preview window.

13. Select the Group Setup tab. The newly created folder should still be in the Group text box.

NOTE: The Add Icon button will be active now.

a. Select the Add Icon button. The sub file will be displayed under the New folder.

NOTE: Repeat this process until all desired icons are in the new Group folder. After saving Object Groups, they remain in the system until the user deletes them from within the Group Setup tab or by clearing Logs and Queues.

b. Select the new folder that was created by highlighting it in the Group text box.
c. Select the Save Groups button. The system saves the Group.

NOTE: If the user wants to delete a group sub file, highlight the sub file and select the Delete Icon button. If the user wants to delete a group, highlight the Group name and select the Delete Group button.

d. Select the Close button. The system returns to the Ops screen.

Performance Measures	GO	NO GO
1. Select the Messages button from the Function Bar or the F4 button on the keyboard.	____	____
2. Select the Overlay tab if it is not already selected.	____	____
3. Select the Object tab.	____	____
4. Select the Group Sub tab (default).	____	____
5. Select the Attributes tab.	____	____
6. Select the Labels tab.	____	____
7. Select the Location tab.	____	____
8. Select the 2525B.	____	____
9. Select the UTO sub-tab.	____	____
10. Select the Overlay tab.	____	____
11. Select the Group Setup Tab.	____	____
12. Select the Object tab then the Group sub tab.	____	____
13. Select the Group Setup tab.	____	____

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

PREPARE/SEND REPORTS USING FBCB2 VERSION 3.4

171-147-0008

Conditions: Given an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded. You have received an operation order (OPORD) or fragmentary order (FRAGO) to conduct a tactical operation. Default Message Addressing settings have been set.

Standards: As a minimum: you must prepare and send one each of the following reports: Airborne Artillery, Personnel Status Report and a Free text message. All mandatory fields must be completed.

Performance Steps

NOTE: The Airborne Artillery FCR, Bridge Report, Chemical Downwind Report, Contact Report, Effective Downwind Message, Engagement Report, Initial Airborne Artillery FCR, Land Minefield Laying Report, Medical SITREP, Mortuary Affairs, NBC3, NBC4, Obstacle Report, Position Report, and Supply Point Status Report are all done the same as the Airborne Artillery FCR. For LOG Report, refer to task 171-147-0004 (Prepare/Send a Platoon Logistical Status Reports Using FBCB2 Version 3.4) and task 171-147-0015 (Prepare/Send a Vehicle Logistical Status Reports Using FBCB2 Version 3.4). The Land Route is done the same as task 171-147-0023 (Employ NAV Functions Using FBCB2 Version 3.4). NBC1 is done the same as task 171-147-0001step 5(Prepare/Send Combat Messages Using FBCB2 Version 3.4). The Personnel Status Report is done the same as task 171-147-0022 sub- step f. (Employ Apps Functions Using FBCB2 Version 3.4). The Situation Report is done the same as task 171-147-0001 step 7 (Prepare/Send Combat Messages Using FBCB2 Version 3.4). The Spot Report is done the same as task 171-147-0001 step 2 (Prepare/Send Combat Messages Using FBCB2 Version 3.4).

1. Prepare and send an Airborne Artillery FCR Report.
    a. Select the Messages button on the Function Bar or the (F4) button on the keyboard. The system will display the Message dialog box.
    b. Select the Create tab.

NOTE: Default Message Addressing Settings for all the Reports should be set prior to the PCC/PCIs. Refer to Task 171-147-0005 Apply Message Addressing Features in FBCB2 Version 3.4.

    c. Select the Reports radio button form the Msg Type Field. The Reports radio button will highlight.

NOTE: The radio buttons are the diamond shaped boxes under the Msg Type field.

    d. Select the Airborne Artillery FCR option from the Message window pane. The Airborne Artillery FCR message will highlight.
    e. Select the Execute button. The system will display the Create: Airborne Artillery FCR Template
    f. Select the Outline Tab.

NOTE: All of the fields that are red in color and have an "M" in front of them are mandatory fields. These fields must be completed in order for the message to be sent. If the user tries to save or send the message without entering data into the mandatory fields, they will get the error message: "The mandatory field Scan URN is not complete" with an OK button. All the fields in Black are optional. Some Black fields may be mandatory per SOP.

    g. Select the "M" Mission Selection field from the Outline window pane by highlighting the field. The Mission Selection in the right window pane will also highlight.

NOTE: The Outline window pane is a quick way of getting to the option that the user wants to enter data.

    h. Select the Mission Selection pull-down arrow in the right window pane. The options will be displayed.
    i. Select an option from the list. The option will be displayed in the text box.

Performance Steps

j. Select the mandatory field Scan URN from the Outline tab. The option will highlight in the Outline window pane as well as the right window pane.
k. Select the pull-down arrow. The system will display the Unit Name dialog box.
l. Select a Unit Name from the list or type it in the search text box to find the Unit, then select it from the list. The Unit name will be displayed in the text box.
m. Select the mandatory field Scan Time from the Outline window pane.
n. Select the Scan Time DTG button. The DTG Keypad dialog box will be displayed.
o. Select the + or - buttons to increase or decrease the Day, Hour, and Minute or select the NOW button and OK button.
p. Select the mandatory field Location from the Outline window pane.
q. Select the Location pull-down arrow. The system will display the Location menu.

NOTE: This function allows the user to enter the location using the Keyboard (Kbd), Laser Range Finder (LRF), Map by using the mouse pointer (Map), Virtual Keyboard (Vkb), The user's location (Own), A named location from a list, (Name).

r. Select an option from the list. The option is displayed in the text box.
s. Select the mandatory field Altitude from the Outline window pane.
t. Select the Altitude Virtual Keypad and enter the altitude or select the text box and enter the altitude with the keyboard.
u. Select the Save As button. The Save As dialog box will be displayed.
v. Select the Folder Text box and type the name for the folder that the message will be saved in and select the New Folder button. The new folder will be displayed in the Folders window pane.

NOTE: If a folder was created earlier, then the user can highlight the folder and save the file to that folder.

w. Select the File text box at the bottom of the Save As dialog box.
x. Type the name for the message. The name will appear in the File text box.
y. Select the OK button. The Save As Confirmation dialog box will be displayed.
z. Select the OK button. The system will return to the Create: Airborne Artillery FCR Template.
aa. Select the Send button. The Message Sent dialog box will appear stating "The message was sent " with an OK button.

NOTE: If the Default Message Addressing Settings or Message Addressing Settings within the message were not set prior to sending the message, the user would receive a Send Error dialog box saying No addressee selected with an OK button. The user would select the OK button and select the Message Addressing button and set the address.

ab. Select the OK button. The system will return to the Create: Airborne Artillery FCR template.
ac. Select the Close button. The system will return to the Ops screen.

2. Prepare and send a Personnel Status Report.
   a. Select the Messages button on the function bar or the F4 button on the keyboard. The Messages dialog box will display.
   b. Select the Create tab. The system will display the Create tab group.
   c. Select the Reports radio button. The Report types will display in the Message type window pane.
   d. Select the Personnel Report. The option will be highlighted.
   e. Select the Default Message Addressing button. The system will display the Message Addressing dialog box.
   f. Select the Message Settings Tab.
   g. Select the Precedence of the message. The proper radio button will highlight.
   h. Select the desired acknowledge radio button. The proper radio button will highlight.
   i. Select the Addresses Tab. The system will display the Addresses tab group.
   j. Select the Select From: pull-down arrow. The system will display the three Address Books: Master, User, and Battalion.

Performance Steps

k. Select the Address Book that contains the Unit/Platform name that the message will be sent to. The Address Book will appear in the Select From: text box and all the units in that Address Book will appear in the Select From: window pane.
l. Select the name of the Unit/Platform that the message needs to go to by selecting it from the Select From: window pane on the left. The Unit/Platform name will be highlighted.
m. Select the Add button. The Unit/Platform name will appear in the Address window pane on the right side of the dialog box.

NOTE: If the user cannot find the Unit/Platform name, use the search button by selecting the search text box, typing the name, and selecting the Search button. If the name was spelled exactly the way it is in the UTO, then the name would highlight in the Select From: window pane. The user can then select the Add button, which would place the Unit/Platform name in the Addresses window pane. Do the same for all the unit/platform names that the message will go to.

n. Select the OK button. The system will return to the Messages dialog box.
o. Select the Execute button. The system will display the Personnel Status Report dialog box.
p. Select the New button. The system will display the Add Personnel Record dialog box.
q. Select the (Last Name): text box or the virtual keyboard and type the last name of the individual that the user is entering data for.

NOTE: Do the same for the First Name, Middle Name, Suffix, and SSN.

r. Select the Nationality pull-down arrow. The system will display the available options.
s. Select the Nationality of the individual. The system will display the Nationality in the text box.

NOTE: Do the same for Religion, Blood type, Unit Name, Role ID, Grade, MOS, and Status.

t. Select the Male or Female radio button for the individual you are entering data for.
u. Select the Apply button. The system will apply the data and present a new Add Personnel Record dialog box.

NOTE: Complete a record for each individual. After a record is done on each individual, select the Close button to get back to the Personnel Status Report dialog box.

v. Select the SEARCH BY: pull down arrow at the bottom of the Personnel Status Report dialog box. The system will display the list of option that can be searched by.
w. Select an option from the list. The option will display in the SEARCH BY text box.

NOTE: If the user selects Last Name, then the user will have to type the Last Name in the Search text box.

x. Select the Search text box to the right of the SEARCH BY: pull down arrow. The cursor will blink inside the text box.
y. Type the Last name of the individual that the user is looking for. The name will appear in the Search text box.
z. Select the Search button. The system will highlight the record in the Personnel Status Report list at the top of the dialog box and activate the Modify button.
aa. Select the Modify button. The system will display the Modify Personnel Record dialog box with the information on the individual being searched.

NOTE: The user can make changes to the record and apply them.

ab. Select the Cancel button. The system will return to the Personnel Status Report dialog box.
ac. Select the Close button. The system will return to the Ops screen.

3. Prepare and send a Freetext message.
   a. Select the Messages button on the function bar or the F4 button on the keyboard. The Messages dialog box will display.
   b. Select the Create tab. The system will display the Create tab group.
   c. Select the Reports radio button under the Msg Type field. The Reports radio button will highlight.

Performance Steps

d. Scroll to the Freetext Message in the Msg Type window pane. The message will highlight.
e. Select the Execute button. The Create Free Text dialog box will display.
f. Type a message in the text window pane with the keyboard or the Virtual keyboard.

NOTE: The user can save the message before being sent or just send it without saving. The user can also change the address where the message will be sent by selecting the Message Addressing button.

g. Select the Save As button. The system will display the Save As dialog box on top of the Create Free Text dialog box.
h. Select a folder in the window pane to save the message to by highlighting it or create a new folder by selecting the Folder text box and type a name for the new folder and select the Folder button. The folder will appear in the Folders window pane.
i. Highlight the new folder and select the File text box and type a name for the message that will be save to the folder.
j. Select the OK button. The Save As Confirmation dialog box will appear stating "Message was saved" with an OK button.
k. Select the OK button. The system will return to the Create Freetext dialog box.
l. Select the Close button. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Prepare and send an Airborne Artillery FCR Report.	____	____
2. Prepare and send a Personnel Status Report.	____	____
3. Prepare and send a Freetext 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 scores NO-GO, show him what was done wrong and how to do it correctly.

PREPARE/SEND FIRE/ALERT MESSAGES USING FBCB2 VERSION 3.4

171-147-0009

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system loaded with software version 3.4, you have received an operation order (OPORD) or fragmentary order (FRAGO) to conduct a tactical operation. Default Message Addressing settings have been set.

Standards: You must create and send a fire/alert message with significant and immediate information both horizontally and vertically on the battlefield. As a minimum, you must create and send: an Airborne Fire Mission, Subsequent Adjust, Check Fire, On Call Fire Cmd, and an End of Mission.

Performance Steps

NOTE: The Fire Support Coord Measures, MAYDAY Message, MOPP Alert, Observer Readiness Report, RECON Report, Threat Warning, and Strike Warning are done exactly the same way as the Airborne Fire Mission. The Call For Fire (CFF) is done exactly like task 171-147-0001 Step 3 sub-step c. Subsequent Adjust, Check Fire, On Call Fire Cmd, and EOM messages are grayed out until a Fire mission is received from the Advanced Field Artillery Tactical Data System (AFATDS).

1. Prepare and send a Airborne Fire Mission.
    a. Select the Messages button on the Function Bar or the (F4) button on the Keyboard. The system will display the Message dialog box.
    b. Select the Create tab box.

NOTE: Default Transmission Settings should have been completed prior to PCC/PCIs. You cannot send or save a message until you have set your Default Transmission settings for each type of message or set the Transmission settings from within the message.

    c. Select the Fires/Alerts from the Msg Types field. The Fires/Alerts radio button will highlight.

NOTE: The Fires/Alerts function contains message templates for: Airborne Fire Mission, Call for Fire, Check Fire, EOM & Surveillance, Fire Support Coord Measures, Free Text Message, MAYDAY Message, MOPP Alert, Observer Readiness Report, On Call Fire Cmd, REDCON, and Strike Warning

    d. Select the Airborne Fire Mission. The System will highlight the Airborne Fire Mission.
    e. Select the Execute button. The system will display the Create: Airborne Fire Mission Template.
    f. Select the Outline Tab. The system will display the (M) Mandatory, (O) Optional, and (OG) Optional Group fields for this particular message.

NOTE: All of the fields with an M in front of them and are Red in color are mandatory fields and must be entered in order to be sent or saved. If you try to send or save the message before the mandatory fields are entered, you will get an error message saying, " The mandatory field Scan URN is not complete," with an OK button.

    g. Select the first mandatory field (Fire Mission Designator) by selecting the field name in the Outline windowpane. The option will be highlighted as well as the Fire Mission Designator in the right windowpane.
    h. Select the Fire Mission Designator pull-down arrow. The system will display a list of options.
    i. Select an option. The option will display in the text box.

NOTE: Once the mandatory fields are completed, you may send the message. You may also select optional fields such as Observer ID or Optional groups such as Target Location and enter the data. However, if you select an optional group, you will have to complete the mandatory fields from within that group.

    j. Select the Save As button. The system will display the Save As dialog box.
    k. Select the Folder text box. The cursor will blink in the text box.
    l. Type the Name you want to call the Folder. The name will be displayed in the text box
    m. Select the New Folder button. The new folder will be displayed in the Folder's windowpane.

Performance Steps

n. Select the Folder that you created by highlighting it.
o. Select the File text box. The cursor will be blinking in the text box.
p. Type the name that you want to call the message. It will be displayed in the text box
q. Select the OK button. The Save As Confirmation dialog box will be displayed saying, "Message was saved."
r. Select the OK button. The system will return to the Create: Airborne Fire Mission Template.
s. Select the Send button. The system will display the Message Sent dialog box saying, "The message was sent."
t. Select the OK button. The system will return to the Airborne Fire Mission Template.
u. Select the Close button. The system will return to the Ops (MAP) screen.

NOTE: You must select the Messages button on the Function Bar or the F4 button on the keyboard and the Fires/Alerts radio button each time to get to the next Fires and alerts message.

2. Perform a Subsequent Adjust.

NOTE: Subsequent Adjust Fire message is used to adjust fall of shot against an area target or for a registration fire mission. A Message to Observer (MTO) must be received by the users system from Advanced Field Artillery Tactical Data System (AFATDS) before the user can access the Subsequent Adjust, Check Fire, On Call Fire Cmd, and EOM tabs.

a. Select the FIPR button. The FIPR dialog box will be displayed.
b. Select the tab that has the MTO message.
c. Highlight the MTO Message by selecting it from the list.
d. Select the Display button at the bottom of the FIPR dialog box. The system will display the Combat Messages dialog box with Fire Mission Tab and Summary Sub-Tab selected.

NOTE: The Subsequent Adjust, Check Fire , On Call Fire Cmd, and EOM tabs are now active.

e. Select the Subsequent Adjust Tab. The system will display the Subsequent Adjust Template.

NOTE: If the Subsequent Adjust template does not have all the desired options, the user can select the Long Form Message button at the bottom of the Combat Messages dialog box. This will bring up the Long Form template, which has more options. The Long Form is completed the same as all the Combat Messages.

f. Select the Left or Right Radio button for the direction that the round needs to move. The radio button will highlight.
g. Select the + button to increase or the - button to decrease the direction. The number will display in the text box.
h. Select the Add or Drop Radio button for the distance the round needs to move. The Radio button will highlight.
i. Select the + button to increase the distance or the - button to decrease the distance.
j. Select the Up or Down radio button for the altitude. The Radio button will highlight.
k. Select the + button to increase the height or the - button to decrease the height.
l. Select the Method of Control pull-down arrow. The system will display the options.
m. Select the desired option. The option will appear in the Text box.

NOTE: The Time On Target (Zulu) field will be Grayed out unless Timed Time on Target is selected in the Method of Control.

n. Select the save button. The message stating "Message saved to file Subseq_DTG will be displayed in the Text window towards the bottom of the Combat messages dialog box.
o. Select the send button. The message " Last Subsequent Adjust message sent at Date, Time Group (DTG)"
p. Select the close button. The system will return to the FIPR button.
q. Select the Close button. The system will return to the Ops screen.
r. Select the FIPR button. The system will display the FIPR dialog box.

Performance Steps

s. Select the Tab that has the MTO in it. The system will display the list of Messages under the Tab that you selected.
t. Highlight the MTO message.
u. Select the Display button. The system will display the Combat Messages dialog box with the Fire Mission Tab and the Summary Sub-Tab displayed.
v. Select the Mission that you want to put the Check Fire on. The mission will be highlighted.
w. Select the Check Fire Tab. The Check Fire Template will be displayed.
x. Select the proper Check Fire Radio button for the action that you want to do.

NOTE: Check Fire Order is for Checking a certain mission, Check Fire All is for checking all missions, and Cancel Check Fire is for canceling the Check Fire command.

y. Select the send button. The system will display "Last Check Fire Message sent at DTG" in the Message window.
z. Select the Close button. The system will return to the FIPR dialog box.
aa. Select the Close button. The system will return to the Ops screen.

3. Perform the Check Fire Function.

NOTE: Remember that an MTO must be received by the users system from AFATDS to get access to this tab.

a. Select the FIPR button. The FIPR dialog box will be displayed.
b. Select the tab that has the MTO message.
c. Highlight the MTO Message by selecting it from the list.
d. Select the Display button at the bottom of the FIPR dialog box. The system will display the Combat Messages dialog box with Fire Mission Tab and Summary Sub-Tab selected.
e. Select the Check Fire tab. The system will display the Check Fire tab group.
f. Select the radio button for the desired option under the Check Fire/Cancel Check Fire Cmd field. The radio button will highlight.
g. Select the Send button. The system will display "Message sent at DTG" in the message pane.
h. Select the Close button. The system will return to the FIPR Queue.

4. Perform the On Call Fire Cmd function.

NOTE: The On Call Fire Command " message is used by friendly units to send Fire commands to the Fire support unit for the Fire mission selected from the Summary tag group. An MTO must be received before the "On Call Fire Cmd" tab can be activated.

a. Select the FIPR button. The system will display the FIPR dialog box.
b. Select the Tab that has the mission that you want to call the indirect fires on.
c. Select the Mission by highlighting the Originator and DTG of the mission.
d. Select the display button. The system will display the Combat Messages dialog box with the Fire Mission Tab and the Summary Sub-tab selected.
e. Select the On call Fire Cmd Tab. The On Call Fire Cmd Template will be displayed with a message saying, " An "FO Command" to fire the mission will be transmitted by sending this message!"
f. Select the Send button if the user wants the mission to fire. The message " Last On Call Fire Cmd message sent at DTG" will be displayed in the message window pane Or select the Cancel button to the right of the message window.
g. Select the Close button. The system will return to the FIPR dialog box.
h. Select the Close button. The system will return to the Ops screen.

Performance Steps

5. Perform the End of Mission (EOM) function.

NOTE: The End of Mission function is used to direct the end of mission processing of a fire mission, selected from the Summary tab group and to provide target surveillance and provide Fire mission refinement data.

a. Select the FIPR button. The system will display the FIPR dialog box.
b. Select the Tab that has the mission that the user wants to associate the EOM to.
c. Select the mission from the list by highlighting it.
d. Select the Display button. The system will display the Combat messages dialog box with the Fire Mission Tab and the Summary Sub-tab.
e. Select the EOM Tab. The system will display the EOM Template.
f. Select the EOM Type pull-down arrow. The system will display End of Mission and End of Mission & Surveillance.
g. Select the desired option from the list. The option will be displayed in the text box.

NOTE: The Surveillance Info field will be grayed out unless the user selects the End of Mission & Surveillance option from the EOM Type field.

h. Select the Effect Achieved: pull-down arrow. The system will display the options list.
i. Select the desired option from the list. The option will be displayed in the text box.
j. Select the + button to increase or the - button to decrease the number of Enemy Casualties.
k. Select the send button. The message "Last EOM message sent at DTG"
l. Select the Close button. The system will return to the FIPR dialog box.
m. Select the Close button. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Prepare and send an Airborne Fire Mission.	____	____
2. Perform a Subsequent Adjust.	____	____
3. Perform the Check Fire Function.	____	____
4. Perform the On Call Fire Cmd function.	____	____
5. Perform the End of Mission (EOM) function.	____	____

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

PREPARE/SEND ORDER/REQUEST MESSAGES USING FBCB2 VERSION 3.4

171-147-0010

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade and-Below (FBCB2) system loaded with software version 3.4, you have received an operation order (OPORD) to conduct a tactical operation. Default Message Addressing settings have been set.

Standards: You must create and send a Orders/Requests message with significant and immediate information both horizontally and vertically on the battlefield. As a minimum, you must create and send: an Fragmentary Order, Freetext Message, MEDEVAC Request, CTIL Action, and a LOG Call for Support.

Performance Steps

NOTE: The LOG Call for Support, Operation Order, Operations Plan, Unit Ref Query, and the Warning Order are completed the same way as the Fragmentary Order. For each message type that the user wants to complete, the user will need to select the Messages button, Create tab, Orders/Requests radio button, and then the Message type for each message.

1. Prepare and send a Fragmentary Order.

NOTE: Fragmentary Order is an abbreviated version of the Operations Order and is used by the Commander / Staff to issue plans/orders to subordinate units to effect the coordinated execution of an operation.

a. Select the Messages button on the Function Bar or the (F4) button on the Keyboard. The system displays the Messages dialog box.

NOTE: The Messages function displays six tabs: Send, Create, Edit, Print, Manage, and Sent Queue.

b. Select the Create tab. The system will display the Create tab group.

NOTE: All the Tabs in the Messages dialog box have three common push buttons at the bottom of the Tab which consists of: Execute, which activates the selection, Close which closes the dialog box, and Help which gives help on that tab.

c. Select the Orders/Requests radio button from the Msg Type Field. The radio button will highlight.
d. Select the Fragmentary Order from the Message windowpane. The Fragmentary Order will be highlighted.

NOTE: The Default Transmission Settings should be completed prior to the PCC/PCIs. You cannot send or save a message until you have set the Default Transmission Settings for each type of message or the Transmission Settings from within the Message.

e. Select the Execute button. The system will display the Create: FRAGO Template.
f. Select the Outline tab. The system will display the (M) Mandatory, (O) Optional, (OG) Optional Groups fields.

NOTE: All the Fields with the M in front of them and are red in color must be completed in order for the message to be sent or saved. If you try to send or save the file without entering data into the mandatory fields, an error message saying " The Mandatory field Scan URN is not complete" with an OK button. If this happens, select the OK button and go back and enter the Mandatory fields that were missed.

g. Select the mandatory field (OPORD Name) from the Outline windowpane. The option will be highlighted.
h. Select the OPORD Name text box from the window on the right of the Create: FRAGO Template. The OPORD Name text box will activate and the cursor will blink.
i. Type the Name that you want to call the OPORD. The Name will be displayed in the text box.

Performance Steps

NOTE: Once the mandatory fields are completed, you may send the Order or Request. You may also select optional fields like FRAGO ID Number and optional groups like Annex Data (0/20) and enter them. However, if you select an optional group, you will need to enter the mandatory fields from within that group.

j. Select the Save As button. The system will display the Save As dialog box.
k. Select the Folder text box and type the Folder Name and select the New Folder button or select a folder that was already created by highlighting the folder name in the folders window.
l. Select the File text box and type the name that you want to call the Order or Request.
m. Select the Ok button. The system will display the Save As Confirmation dialog box saying, "Message was saved," with the OK button.
n. Select the OK button. The system will return to the Create: FRAGO Template.
o. Select the Send button. The message "The Message was sent" with an OK button will be displayed.

NOTE: If the Default Transmission Settings or Transmission Settings were not set prior to sending this Order or request, you would receive an Error message saying, "No addressee selected," with an OK button. You would have to select the OK button and select the Transmission Settings button and set the address that you want the message to go to.

p. Select the Close button. The system will return to the Ops Screen.

2. Prepare and send a Free Text Message.

NOTE: A Free Text Message is used to send information that is not covered in the other message types in FBCB2. It also is used to send a plain text message.

a. Select the Create tab. The Create tab fields will display.
b. Select the Orders/Requests radio button. The radio button will highlight.
c. Select the Free Text Message from the Message type windowpane. The message will be highlighted.
d. Select the Set Default Transmission Settings button. The Transmission Settings dialog box will be displayed.
e. Select the Settings Tab.
f. Enter the Precedence, Acknowledgement, Retries, and Perishability DTG.
g. Select the Add Addresses tab.
h. Select the Address that you want to send the message to and add it to the right window pane as an action or info address.
i. Select the OK button. The Apply dialog box will display.
j. Select the OK button. The system will return back to the Message dialog box with the Free Text Message still highlighted.
k. Select the Execute button. The system will display the Create: Free Text dialog box.
l. Type the message that you want to send in the text window pane.
m. Select the Save As button. The Save As dialog box will be displayed.
n. Select the Folder from the Folders window that you want to save the message to or Create a new folder by selecting the Folder text box and typing the name that you want to call it and selecting the New Folder button. This will create a new folder in the Folders windowpane.
o. Highlight the new folder in the Folders windowpane.
p. Select the File text box and type the name that you want to call the message.
q. Select the OK button. The Save As dialog box will be displayed saying, "Message was saved," with an OK button.
r. Select the OK button. The system will return to the Create: Free text dialog box with the new name at the top.
s. Select the Send button. The system will display the Message Sent dialog box.
t. Select the OK button. The system will return to the Create: Free Text dialog box.
u. Select the Close button. The system will return to the Ops screen.

Performance Steps

3. Prepare and send a MEDEVAC Request.

NOTES:

(1) Use the MEDEVAC request message to request ground or aircraft support to evacuate friendly and/or enemy casualties. The MEDAVAC tab group is accessed from Combat Msgs button on the Function Bar or the F3 button on the keyboard, or from the Messages button under Orders/Request.

(2) The MEDEVAC Request is also addressed as part of the task 171-146-0001 "Prepare/Send Combat Messages Using FBCB2 Version 3.3."

a. Select the Messages button on the Function Bar or the F4 button on the keyboard.
b. Select the MEDAVAC Request. The system will highlight the MEDAVAC Request.
c. INSERT DEFAULT TRANS.
d. Select the Execute button. The system will display the Combat Messages dialog box.
e. Select the Fill Loc button. The Combat Messages dialog box will disappear and the mouse cursor will be replaced with a cross hair.
f. Select a location on the map where the pick up site will be. The system displays the location in the Location text box.
g. Or Select the Fill LRF button. The system will input the location provided by the laser range finder.

NOTE: This function works if your vehicle is equipped with the Laser Range finder.

h. Select the Amb Patients + or - button to increase or decrease the number of Ambulatory patients.
i. Select the Ltr Patients + or - button to increase or decrease the number of Litter Patients.
j. Select the Marking pull-down arrow. The system will display the Marking options list. Select an option from the list. The system displays the selection in the Marking text box.
k. Select the Color pull-down arrow. The system will display the Color options list. Select an option from the list. The system displays the selection in the Color text box.
l. Select the Pickup Zone Hot check box. The system will display a check mark in the Pickup Zone Hot text box.

NOTE: If the area is not Hot, then do not check this box. Hot meaning that the area has hostiles.

m. Select the MEDAVAC Priority pull-down arrow. The system will display the MEDAVAC Priority options list. Select and option from the list. The system will display the selection in the MEDEVAC Priority text box.
n. Select the NBC Contamination pull-down arrow. The system will display the NBC Contamination option list. Make a selection

4. Prepare and send a CTIL Action.

NOTE: The CTIL Action message allows the authorized user (Access Level 4) to modify the Commander's Tracked Items List (CTIL) to meet the Unit's specific requirements. Upon receipt and acceptance by the receiver, this message overwrites the previously received CTIL. FBCB2 user should validate the message sender prior to accepting the new CTIL message. If an errant CTIL message is loaded, the only way to replace it is to call for another CTIL message from the proper logistic source.

a. Select the Messages button on the Function Bar, or the F4 button on the keyboard. The Messages dialog box will display.
b. Select the Create tab. The system will display the Create tab group.
c. Select the Orders/Request radio button from the Msg Type field. The button will highlight.
d. Select the CTIL Action message by highlighting it. The message will highlight.
e. Select the Execute button. The system will display the Using Default CTILS dialog box.

Performance Steps

f. Place a checkmark in the box to the left of each item that is specific to the unit. A checkmark will display in each box that was selected.
g. Select the Message Addressing button. The system will display the Message Addressing dialog box.

NOTE: If the Default Message Addressing settings for the CTIL Action message were completed prior to preparing this message, then the Message addressing can be skipped.

h. Select the Message Settings tab. The Message Settings tab group will display.
i. Select the desired Precedence. The selected radio button will highlight.
j. Select the desired Acknowledge option. A checkmark will be displayed in the selected box.

NOTE: Some Acknowledge options will be grayed out depending on the selected message.

k. Select the proper Security Level.

NOTE: The Security level can only be changed by authorized personnel only. The Security Level may be grayed out.

l. Select the DTG button under the Perishability DTG: field. The DTG Keypad dialog box will display.
m. Enter the proper DTG by selecting the + or - buttons to increase or decrease the number. The numbers will display in the text boxes.
n. Select the OK button. The system will return to the Message Addressing dialog box.
o. Select the Addresses tab. The system will display the Addresses tab group.
p. Select the Selected From: pulldown arrow. The system will display the three types of users groups.
q. Select the desired user's group. The selected user group will display in the Selected From: text box with a list of the units in the user's group.
r. Select the unit by either highlighting it in the Selected From: windowpane, or selecting the Search text box and typing the name of the unit and selecting the search button. The unit will highlight in the Selected From: windowpane.
s. Select the Add button. The unit will display in the right window pane under the Addresses tab.

NOTE: Do the same for all the Unit/Platforms that the user wants the message to go to.

t. Select the OK button. The system will return to the Using Default CTILS dialog box.
u. Select the Send CTILs button. The system will display a CTILs Sent dialog box.
v. Select the OK button. The system will return to the Using Default CTILS dialog box.
w. Select the Close button. The system will return to the Ops screen.

5. Create and send a LOG Call for Support.

NOTE: The LOG Call for Support is threaded messages that the operator can send to request logistic support. Typically a call for support is sent through the chain of command to the supporting unit using the LOG Call for Support message "Orders/Requests."

a. Select the Messages button on the Function Bar, or the F4 button on the keyboard.
b. Select the Create tab. The system will display the Create tab group.
c. Select the Orders/Requests radio button. The radio button will highlight.
d. Select the LOG Call for Support message. The message will highlight.
e. Select the Execute button. The Create: LOG Call for Support dialog box will display.

NOTE: The fields with red fonts with an "M" in front of them under the Outline tab are the mandatory fields that must be entered in order to send the message. The message will not send unless these fields are completed. Unit SOPs may require more fields to be completed. There is a short cut the user can use to quickly get to the field to enter data. By selecting the field in the Outline tab, it will highlight the text box for the field that was selected. The user can now enter the data for that field.

f. Select the "Request Type pull down arrow. The system will display the available options.

Performance Steps

g. Select the desired option. The option will display in the text box.
h. Select the Action pull down arrow. The system will display the available options.
i. Select the desired option. The option will be displayed in the text box.
j. Select the Supporting Unit pull down arrow. The system displays the Unit Name dialog box.
k. Select the Name of the Unit that needs the support. The Unit Name will display in the text box.
l. Select the Point of Contact pull down arrow. The Unit Name dialog box will display.
m. Select the Name of the Unit that was selected in the Supporting Unit text box. The Unit name will display in the text box.
n. Select the Mission Location pull down arrow. The available options will display.
o. Select the desired option. The option will display in the text box.

NOTE: If available options are: Map, which is selecting a location on the map, (LRF), which is using a Laser Range Finder, (Kbd), which is using the Keyboard to enter the location, (Vkb), which is using the Virtual Keyboard, Own, which is selecting your own location, and Name, which is selecting from a list of names.

p. Scroll down to the Comments field and select the Edit/View button. The system will display the Edit/View Text dialog box.
q. Type the comments that will transmit with the message. The comment will display in the text box.
r. Select the OK button. The system will return to the Create: LOG Call for Support dialog box.
s. Select the Save As button. The system will display the Save As dialog box.
t. Select the Folder that the message will be saved to, or create a new folder and then highlight the folder. The folder will be highlighted.
u. Select the File text box and type the name that the user wants to call the message.
v. Select the OK button. The system will display the Save AS Confirmation dialog box with an OK button.
w. Select the OK button. The system will return to the Create: LOG Call for Support dialog box.

NOTE: The user can send the message if the Message Addressing settings were completed earlier or the user can select the Message Addressing button and enter the address the same way it was done earlier in the task.

x. Select the Send button. The system will display the Message Sent dialog box with an OK button.
y. Select the OK button. The system will return to the Create: LOG Call for Support dialog box.
z. Select the Close button. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Prepare and send a Fragmentary Order.	____	____
2. Perform a Free Text Message.	____	____
3. Prepare and send a MEDEVAC Request.	____	____
4. Prepare and send a CTIL Action.	____	____
5. Create and send a LOG Call for Support.	____	____

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

PERFORM BEFORE-OPERATIONS PREVENTIVE MAINTENANCE CHECKS AND SERVICES ON FBCB2 VERSION 3.4

171-147-0011

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded and a TM 11-7010-326-10.

Standards: As a minimum you must: Make sure that the vehicle's MASTER POWER has been turned off. Check the following components for damage: AN/UYK-128 (V) Computer, Display Unit, Processor unit, Keyboard unit, and Cables and Connector's. Notify unit maintenance of any damaged or missing parts. Follow all warnings and cautions in the TM to prevent injury to personnel and or damage to equipment.

Performance Steps

NOTE: The Appliqué+ V4 computer requires daily and weekly checks. Daily checks are to be performed before operation, during operation, and after operation as indicated in the "Service Interval" column.

1. Check the AN/UYK-128(V) Computer.
    a. Ensure all computer components, accessories, and cables are present, secured and properly stowed to avoid damage.
    b. Check mounting bolts before extensive equipment use.
    c. Check the ram ball mount assembly for tightness, if equipped.

NOTE: If the processor unit (PU), display unit (DU), keyboard unit (KU), or connecting cables are missing/damaged, they are not fully mission capable. The system is degraded if: PLGR, SINCGARS, or EPLRS (if so equipped) are missing/damaged.

2. Check the Touch screen on display unit (DU).
    a. Check for cracks, severe scratches, or other damage to the screen.

NOTE: The touch screen is degraded if: Touch screen is cracked or has severe scratches that would prevent its proper operation.

3. Check the Grounding strap on display unit (DU) chassis.
    a. Conduct visual check to see if the grounding strap is present and tight on the bottom of the DU.

NOTE: The equipment is not fully mission capable if the grounding strap for the DU chassis is missing, frayed, or disconnected.

4. Check the processor unit (PU).
    a. Check the battery tray/battery box inside the PU for charge.

NOTE: The Processor Unit is degraded if: Battery charge indicators show that battery(s) have a low charge/ no charge. For PU with NSN 7025-01-474-3793, press button twice on front of battery box to display diagnostic codes. Ensure that code "05" (i.e., Back-up Battery Low) is not displayed. For PU with NSN 7025-01-475-0217, check front of battery tray to ensure that the charge indicator displays at least three (3) LCD bars.

5. Check the Grounding strap on Processor Unit (PU) chassis.
    a. Check to make sure that the Grounding strap is present, not frayed or disconnected.

NOTE: The Processor Unit is not mission capable if: the Grounding strap is missing, frayed or disconnected or the Grounding strap cannot be fastened securely

6. Check the keyboard unit (KU).
    a. Check KU for non-functioning/missing alphanumeric or Enter keys.

NOTE: The keyboard unit is not mission capable if it has missing keys or alphanumeric, or Enter keys that do not function.

Performance Steps

7. Check the cables and connectors.
    a. Check for cables with frayed, broken, or bare wires.
    b. Check to see that all cable connectors are properly mated (i.e., only the blue band should be visible).

NOTE: Cables and Connectors are not mission capable if wires or cables are damaged (i.e., frayed, broken, or bare). Connector(s) are not properly mated and any red band is visible on connector(s).

Performance Measures	**GO**	**NO GO**
1. Check the AN/UYK-128(V) computer.	____	____
2. Check the touch screen on display unit (DU).	____	____
3. Check the grounding strap on display unit (DU) chassis.	____	____
4. Check the processor unit (PU).	____	____
5. Check the grounding strap on processor unit (PU) chassis.	____	____
6. Check the keyboard unit (KU).	____	____
7. Check the cables and connectors.	____	____

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

PERFORM SHUT-DOWN PROCEDURES FOR FBCB2 VERSION 3.4

171-147-0012

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system loaded with software version 3.4, TM 11-7010-326-10, precision lightweight Global Positioning System receiver (PLGR), enhanced position location reporting system (EPLRS) if equipped, Single-channel Ground and Airborne Radio System (SINCGARS) with internet controller (INC).

Standards: As a minimum you must: Shut down the FBCB2 computer, PLGR, SINCGARS, and EPLRS. Perform all steps in sequence. Follow the warnings and cautions in the TM to prevent injury to personnel and or damage to equipment.

Performance Steps

NOTE: This task describes shutdown procedures for the AN/UYK-128(V) computer. The AN/UYK-128(V) computer must be shutdown first before the PLGR, EPLRS (if equipped) and SINCGARS ASIP (if equipped)

CAUTION: Do not shutdown power to the computer without first following software shutdown procedures. Failure to comply may cause the loss of program data.

CAUTION: Leaving the Processor Unit (PU) circuit breaker/switch set to "ON" will enable the battery pack to continuously charge as long as there is 18-33 Volts Direct Current (VDC) power available. This could possibly result in a dead vehicle battery if left in this condition over an extended period.

CAUTION: The keyboard should be disconnected and properly stowed when not in use to prevent it from causing equipment damage.

1. Perform AN/UYK-128(V) computer shutdown.
    a. Select the F6 Admin button. The Admin dialog box is displayed.
    b. Select the Exit Ops button. The Exit Ops confirmation dialog box is displayed.
    c. Select the Yes button. Exit Ops confirmation dialog box closes. The Ops Auto-Log in dialog box opens with countdown timer started.
    d. Select Cancel Time out button. The Ops Auto-Log in dialog box closes.
    e. Select the Start button. The Start button option menu is displayed.
    f. Select the Shutdown option. The Shut down option menu is displayed.
    g. Select the Shutdown option. Shut down confirmation dialog box is displayed
    h. Select the Yes button. Screen displays: Shutting Down the System. Safe to power off when the screen message says, Type any key to continue or approximately 10 seconds after syncing file systems...done is displayed.
    i. Press DU PWR button for up to 4 seconds and release after DU PWR LED goes dark.
    j. Set the circuit breaker/switch on the PU to the "OFF" position. The circuit breaker/switch is pointed toward the outside edge of the PU.
    k. Ensure system is properly secured (e.g., PU, DU and KU locked and secured).
2. Perform PLGR shutdown.
    a. Press the OFF (0) button for two seconds. PLGR displays: Unit Turning OFF in __seconds ON: to cancel OFF: quick off.
3. Perform SINCGARS ASIP shutdown.
    a. Place the function switch to STBY or OFF per SOP. The SINCGARS display goes blank (i.e., dark).

Performance Steps

4. Perform INC shutdown.
   a. At the VAA set the CB1 POWER toggle switch to OFF (i.e., down position). The DS1 green POWER light goes off.
5. Perform EPLRS shutdown.
   a. Turn POWER switch to the OFF position. Green POWER indicator LED goes off.

Performance Measures	**GO**	**NO GO**
1. Perform AN/UYK-128(V) computer shutdown.	____	____
2. Perform PLGR shutdown.	____	____
3. Perform SINCGARS ASIP shutdown.	____	____
4. Perform INC shutdown.	____	____
5. Perform EPLRS shutdown.	____	____

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

PERFORM DURING-OPERATIONS PREVENTIVE MAINTENANCE CHECKS AND SERVICES ON FBCB2 VERSION 3.4

171-147-0013

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded and TM 11-7010-326-10. The Before checks have been completed.

Standards: As a minimum you must: Perform the During Preventive Maintenance Checks and Services on the FBCB2 system in sequence with the TM. The Before checks have been completed.

Performance Steps

1. Verify that the green LEDs are illuminated for PWR (Power), DISP (Display), and CPU (Processor Unit) on the DU Controls and Indicators Panel.

NOTE: Equipment is not fully mission capable if any red LED remains continuously lit when operating. Shutdown the AN/UYK-128(V) immediately. Perform Troubleshooting procedures. The red and/or amber LEDs may Illuminate briefly during initial power application.

2. Verify that the Local Comm status is "G" (green) which is the first gumball from the left on the Classification/Status Bar on the FBCB2 Ops Main screen.

NOTE: The equipment is degraded if: Local Comm status gumball is "A" (Amber). Status is Unknown if gumball is "W" (White).

3. Verify that the Global Positioning System (GPS) status is "G" (green) on the FBCB2 Ops Main screen, which is the second gumball from the left on the Classification/Status Bar.

NOTE: The equipment is degraded if: GPS status gumball is "R" (red) or "A" (amber). Status is Unknown if gumball is "W" (white).

4. If so equipped, verify that the Battlefield Combat Identification System (BCIS) status is "G" (green) on the FBCB2 Ops Main screen.

NOTE: The Equipment is degraded if: BCIS status gumball is "R" (red) or "A" (amber), which is the third gumball from the left on the Classification/Status Bar. Status is Unknown if gumball is "W" (white).

Performance Measures	**GO**	**NO GO**
1. Verify that the green LEDs are illuminated for PWR (Power), DISP (Display), and CPU (Processor Unit) on the DU Controls and Indicators Panel.	____	____
2. Verify that the Local Comm status is "G" (green) which is the first gumball from the left on the Classification/Status Bar on the FBCB2 Ops Main screen.	____	____
3. Verify that the Global Positioning System (GPS) status is "G" (green) on the FBCB2 Ops Main screen, which is the second gumball from the left on the Classification/Status Bar.	____	____
4. If so equipped, verify that the Battlefield Combat Identification System (BCIS) status is "G" (green) on the FBCB2 Ops Main screen.	____	____

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

PERFORM AFTER-OPERATIONS PREVENTIVE MAINTENANCE CHECKS AND SERVICES ON FBCB2 VERSION 3.4

171-147-0014

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, and a TM 11-7010-326-10. The Before and During checks have been completed.

Standards: As a minimum you must: Perform the After Preventive Maintenance Checks and Services on the FBCB2 system in sequence with the TM. The Before and During checks have been completed.

Performance Steps

1. Check the AN/UYK-128 (V) Computer.
    a. Ensure all computer components, accessories, and cables are present, secured and properly stowed to avoid damage.
    b. Check mounting bolts before extensive equipment use.
    c. Check Ram Ball assembly for tightness, if equipped.

NOTE: Equipment is degraded if: PLGR, SINCGARS, or EPLRS (if so equipped) are missing/damaged and if Processor Unit (PU), Display Unit (DU), Keyboard Unit (KU), or connecting cables are missing/damaged, and thereby prevent proper equipment operation.

2. Check the Processor Unit (PU).
    a. Securely fasten the Removable Hard Disk Cartridge (RHDDC) access door. All four (or all six) captive fasteners must be evenly and securely tightened.

NOTE: Equipment is not fully mission capable if RHDDC access door is not properly closed due to obstructions, bad seal, and broken/missing/loose captive fastener(s).

3. Check the Processor Unit (PU), Display Unit (DU), and Keyboard Unit (KU).
    a. Safeguard with 5200 series lock(s)/cables to secure PU, DU, and KU as applicable to your platform.

NOTE: Equipment is not fully mission capable if PU, Hard Disk Drive Door, DU, and/or KU are not secured and cables and/or locks are missing/damaged.

4. Set Circuit Breaker (CB) toggle switch to OFF position.

NOTE: Equipment is degraded if: CB toggle switch is not set to OFF position or CB switch is broken/damaged.

Performance Measures	**GO**	**NO GO**
1. Check the AN/UYK-128 (V) Computer.	____	____
2. Check the Processor Unit (PU).	____	____
3. Check the Processor Unit (PU), Display Unit (DU), and Keyboard Unit (KU).	____	____
4. Set Circuit Breaker (CB) toggle 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 scores NO-GO, show him what was done wrong and how to do it correctly.

PREPARE/SEND A LOGISTICAL STATUS REPORT USING FBCB2 VERSION 3.4

171-147-0015

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded. You are in an assembly area or battle position; you have received a platoon operation order (OPORD) or fragmentary order (FRAGO) for a resupply operation. The default Message Addressing settings for this report have been set.

Standards: As a minimum you must: Select the LOG Report on FBCB2 and enter your logistical data in the on-hand column. Save the updated information and send the report to higher.

Performance Steps

1. Select the Apps button from the Function bar or select the F7 button from the keyboard. The system will display the Apps dialog box.
2. Select the FBCB2 tab which should be the Defaulted Tab. The system will display the FBCB2 tab group.
3. Select LOG Report under the FBCB2 Tab. The system will highlight the LOG Report.

NOTE: The LOG Report can also be accessed through the Messages button, Create tab, and Reports radio button. The Logistics Status Report message is used to report an individual unit's, multiple units', or a compilation of the units' commander's tracked items list (CTIL) and basic required items list (BRIL) on-hand quantities. FBCB2 receives LOGSITREP data from other single FBCB2 platforms. FBCB2 will not automatically save multiple LOGSITREPs associated with the same unit or operational facility (OPFAC); new reports will overwrite old ones. If the logistics application is active when a "Logistics" Report message arrives, a flag icon appears on the [Redisplay] button highlighted in yellow.

4. Select the Execute button. The system will display the LOG Report dialog box with a Roll up tab and a Single tab.

NOTE: The Roll up tab is divided into three areas: (1) The operational Information, which includes the Reporting DTG, Roll up Unit, Quantity Displayed, Roll up Check box, Roll up Comments button, and the Subordinate Unit Information. (2) The CTIL Data display, which includes the Individual items of the CTIL and the Class of supply on the left side. (3) The push buttons, which include the Roll up, Message Addressing, Tailor CTILs, Select All, Send, Redisplay, Deselect All, Save, Close, Delete, Print, and Help. There will be from two columns to several columns on the Roll up tab depending on the user's duty position. The first column is the Roll up column, which is the column below the Roll up Comments button. The user's column is the column just to the right of the Roll up column. If subordinate platforms will be sending their LOG Report to this platform, then there will be several more columns to the right of the user's column.

5. Select the Single tab. The system displays the Single tab group.

NOTE: The Single Tab is similar to the Roll up tab. The Single tab is the tab that the quantities will be entered into.

6. Select the text box under the On-Hand/Operational Item Count column for the first item. The system will display NS highlighted in black.
7. Enter the amount that the user has on-hand in the text box. The system will display the amount in the text box.

NOTE: If the number will not enter in the text box, then go back to he Roll up Tab and uncheck the User's column, then go back to the Single tab and enter the number.

8. Select the text box under the Authorized Item Count column. The system will display the NS highlighted in black.

Performance Steps

9. Enter the amount that the user is authorized. The system will display the amount in the text box.
10. Place the cursor in the text box under the Required Item Count Column for the first item and click the left mouse button. The system will automatically calculate the difference.
11. Select the Save button. The system will display a Successful Save dialog box stating "Saved the logistics record for (the user's platform name)" with an OK button.
12. Select the OK button. The system will return to the Single tab.

NOTE: Complete steps 6 through 12 for each item in the CTIL.

13. Select the Roll up Tab. The system will display the Roll up tab group with the quantities entered in the Single tab.
14. Place a checkmark in the checkbox above the user's column next to the word Selected and any column to the right of the user's column.

NOTE: Before selecting the Roll up button, ensure that the Selected Checkbox above the Roll up column are check marked and all the columns to the right of the user's column to include the user's column are check marked.

15. Select the Roll up button. The system will roll up all the quantities for all the columns into the Roll up column.
16. Select the Roll up Comments button. The system will display the Comments: dialog box.
17. Type a comment that the user wants to send with the keyboard or the virtual keyboard.
18. Select the OK button. The system will return to the Roll up tab with a checkmark on the Roll up Comments button.

NOTE: If the LOG Report needs to be sent higher, then the user would check the Redisplay button if there was a Black flag highlighted in yellow to update the Log Report, Roll up the new data and send it to higher.

19. Select the Close button. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Select the Apps button from the Function bar or select the F7 button from the keyboard.	____	____
2. Select the FBCB2 tab which should be the Defaulted Tab.	____	____
3. Select LOG Report under the FBCB2 Tab.	____	____
4. Select the Execute button.	____	____
5. Select the Single tab.	____	____
6. Select the text box under the On-Hand/Operational Item Count column for the first item.	____	____
7. Enter the amount that the user has on-hand in the text box.	____	____
8. Select the text box under the Authorized Item Count column.	____	____
9. Enter the amount that the user is authorized.	____	____
10. Place the cursor in the text box under the Required Item Count Column for the first item and click the left mouse button.	____	____

Performance Measures	GO	NO GO
11. Select the Save button.	____	____
12. Select the OK button.	____	____
13. Select the Rollup Tab.	____	____
14. Place a checkmark in the checkbox above the user's column next to the word Selected and any column to the right of the user's column.	____	____
15. Select the Rollup button.	____	____
16. Select the Rollup Comments button.	____	____
17. Type a comment that the user wants to send with the keyboard or the virtual keyboard.	____	____
18. Select the OK button.	____	____
19. Select the Close button.	____	____

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

EMPLOY MAP FUNCTIONS USING FBCB2 VERSION 3.4

171-147-0017

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, precision lightweight global positioning system receiver (PLGR), enhanced position location radio system (EPLRS), and single-channel ground air radio system (SINCGARS) with internet controller (INC).

Standards: As a minimum you must: Employ Map functions to manage and exchange information, to include: Background type, Map scale, Zoom, Brightness, Contrast, Grid Coordinate type, MGRS accuracy, Grid line spacing, Grid line color, Center on a Unit/Platform, Center on a location, Edit a location, View a location in the World map, and scroll with the scroll function.

Performance Steps

1. Select the Map button from the Function Bar or press the F1 key on the keyboard. The system will display the Map Control dialog box.

NOTE: The Map Button allows the user to change the background which gives the user more of less detail of the battlefield, add grid lines with different color and spacing, and center on a known point, platform or georeference. The Background Tab group is used to choose the Type, Scale, Zoom magnification, and appearance (brightness/Contrast) of the Map display. The Four background types are: (1) (CADRG) Compressed Arc Digital Raster Graphics, which is the Joint services standard map background product, (2) (VPF) Vector Product Format which is the map that displays major man-made and natural features on the SA screen such as cities, railroads, major roads, rivers, and lakes, (3) (DTED) Digital Terrain Elevation Data which is the uniform matrix of terrain elevation values, and provides basic quantitative data for all Military systems that require terrain elevation, slope, and surface roughness, and (4) (Imagery) which is Reconnaissance Imagery that can be sent to the FBCB2 and displayed. The Map Control dialog box has standard push buttons at the bottom of each tab: Set Defaults, which sets the current settings as the Map default settings; Restore Defaults, which changes the current settings to the map default settings; the OK button, which applies the changes and closes the dialog box; the Apply button, which applies the changes and keeps the dialog box open; the Close button, which closes the dialog box; and the Help button, which provides help on the background tab.

2. Select the Background tab if it is not selected. The system will display the Background tab group.
    a. Deselect CADRG by unchecking the box to the left of CADRG.

NOTE: You must deselect one background type before you select another due to the fact that if you have more then on type selected, you might cover information from one map with the other.

    b. Select the VPF by placing your cursor in the box to the left of VPF and clicking, which will put a checkmark in the box.
    c. Select Apply. The system will display a light tan colored map with Cities, Lakes, Rivers, Railroads, Names, and Roads if they are on the map.
    d. Select the edit button to the right of the VPF. The system will display a VPF dialog box.

NOTE: From here you can turn off one or more of the attributes by deselecting whatever one the user don't want displayed.

    e. Deselect the names and select apply.

NOTE: Notice how the Names that were displayed on the map are no longer displayed. If the user wants it back on the map then all the user needs to do is select the box next to the attribute and select apply.

    f. Select close. The system will redisplay the Map Control dialog box.
    g. Deselect the VPF and select DTED.
    h. Select the apply button. The system will display a Dark green, Light green and Brown map.

Performance Steps

NOTE: There are no edit functions for the CADRG, DTED, or Imagery.

i. Deselect the DTED and select the Imagery and select apply. The system will display an aerial photograph of the earth surface as seen from above.
j. Deselect the Imagery and select the CADRG and select apply. The system will display the standard map.
k. Select the Scale pull-down button. The system will display the different scales that can be selected between 1 meter and 10 kilometers.
l. Select 250K and select apply. The system will display a tannish colored map in a scale of 250K.

NOTE: Notice that it is hard to read. You can use the zoom button to enlarge the image.

m. Select the Zoom pull-down button. The system will display the different zoom magnifications between 1/4X to 8X.
n. Select the 2X and select the apply button. The system will display the map in 2X magnification.
o. Select the Brightness slide bar and drag it left or right to adjust the brightness of the map display.
p. Select the Contrast slide bar and drag it left or right to adjust the Contrast.
q. Select the Zoom pull-down menu and select 50K and select apply.
r. Select the Zoom pull-down button and select 1X and select apply. The system will display the standard map.

3. Select the Grid tab. The system will display the Grid tab group.

NOTE: The Grid tab allows the user to customize the map display grid lines. The Grid tab contains two areas: Grid type and Grid Lines. The Grid Type area includes two combo boxes: Coordinate Type and MGRS Accuracy.

a. Select the Coordinate pull-down arrow. The system will display the coordinate types.

NOTE: The four Coordinate types are: Military Grid Reference System (MGRS), Longitude and Latitude (LAT/LON), Degrees, Minutes , Seconds (DMS), Universal Traverse Mercator (UTM).

b. Select the MGRS if it is not already set to that type, which is the standard, coordinate type for the military. The system will display the MGRS in the Coordinate type text box.
c. Select MGRS Accuracy pull-down arrow. The system will display 1, 10, and 100 meters.
d. Select 1m. The system will display 1m in the MGRS Accuracy text box.
e. Select the box to the left of Show Grid to check the box. The system will show a checkmark in the box and activate two additional pull down arrows: Grid line Spacing and Grid line color.

NOTE: Grid line Spacing provides the user options based on the Coordinate type selected. The Grid line Color gives the user the option of changing the color of the grid lines.

f. Select the Grid line spacing pull-down arrow. The system will show the different selections for spacing.
g. Select 1km which is the standard distance that the Military uses between grid squares
h. Select the Grid line color pull-down arrow. The system will show the different colors for the grid lines.
i. Select black, which is the standard, color the Military uses for a Map.
j. Select Apply. The system will display the grid lines in the color and distance that the user chose.
k. Deselect the Show grid lines.
l. Select Apply.

4. Select the Center tab. The system will display the Center tab group.

NOTE: The Center Tab will display three additional tabs: the Unit/Platform tab, Location tab, and the Scroll tab. The Center tab gives the user the ability to move quickly around the map. The Center function allows the user to move the map around to a specific unit or a general location.

Performance Steps

5. Select the Unit/Platform tab if it is not already selected. The system will display the Unit/Platform tab group.

NOTE: The Unit/Platform Tab allows the user to center the map on any units, platforms, or georeference that exist as SA within the visible battle space. The Unit/Platform tab contains Refresh button, which refreshes or updates the unit platform options. The Search box allows the user to find the desired unit in a quick manner. The Details button allows the user to get information about a selected icon. The pull-down arrow allows the user the ability to center on Friendly, Observed, Air and Georeference one time unlike the Auto Center button which continually keeps the user's own platform centered. If no units of the type exist, the system does not display any units.

   a. Select the Unit/Platform pull down arrow just under the virtual keyboard. The system will display four selections.

NOTE: There must be some friendly, observed, Air and georeference on the map in order to see how the next steps work. The user can place some of these on the map by the SALT report in Combat Messages. See Task 171-147-0001 Step 2. After putting some icons on the map go back to the Map button, Center tab, Unit/Platform tab and select the refresh button.

   b. Make a selection from the list such as Observed. The system will display the observed/hostile/unknown units and platforms available to the user in the window under the Unit/Platform tab.
   c. Select one of the available Units or platforms from the window under the Unit/Platform tab. The system will highlight that selection.
   d. Select the Apply button. The system will center on the Unit/Platform that the user selected.
   e. Select the Unit/Platform pull down arrow. The system will display the same four selections.
   f. Select Friendly. The system will display Friendly in the text box and display all the friendly Units/Platforms that are on the map in the window below the Unit/Platform tab.
   g. Select one of the Unit/Platforms from the list. The system will highlight the selection.
   h. Select the Apply button. The system will center on that Unit/Platform.

6. Select the Location tab. The system will display the Location tab group with a list of all the available, pre-loaded, Map Data Groups and Georeference.

NOTE: The Location tab gives the user five methods of changing the map display area: Map data groups/Georeference which is the window with the list of all the available, pre-loaded, map data groups and georeference, Fill Location button which allows the user to pick a location using the mouse cursor, Manual Fill location text box which allow the user to type in the Location, The Edit Locations button which allows the user to create and modify a desired map data group, and World Coverage button which allows the user to choose and load a SA map anywhere in the world provided that the map area is loaded into the software.

   a. Select the Fill Loc button. The Map control dialog box will disappear and the mouse cursor will be replaced with a cross hair.
   b. Select a location on the map. The system will display the Map control dialog box with the location in the Location text box.
   c. Select apply. The map will center on the location that you picked.

NOTE: Move the Map Control dialog box to the side if it is in the way to see that it centered on the location that the user picked.

   d. Select the Edit Locations button. The system will display the Edit Map Locations dialog box.

NOTE: The Edit Locations button allows the user to make a map data group for ease of movement on any loaded map.

   e. Select the Group Name text box and type a name that the user wants to call the folder or select the virtual keyboard and type the name using the mouse and select OK.

Performance Steps

NOTE: The group name is limited to 20 characters.

f. Select the Location Label text box and type the name that the user wants to call the location or select the virtual keyboard and use the mouse to type the name and select the OK button.

NOTE: The Location Label is limited to 20 characters.

g. Select the Fill Loc button and select a location on the map. The Edit Map Locations dialog box will reappear with the location in the Location text box.
h. Select the Apply button. The Edit Map Location dialog box will display the new group folder in the window with the Location name under the folder.

NOTE: Now all the user has to do is select the group from the Location tab and center on it.

i. Select close. The system will display the Location Tab group.
j. Select the World Coverage button. The system will display the World Coverage dialog box.

NOTE: The World Coverage allows the user to choose and load a SA map anywhere in the world provided the map area is loaded in the software. Currently all maps are not loaded. There are two tabs in the World Coverage dialog box: Background and Scroll. There are several common push buttons that appear in each of the two tabs. They do the same thing in both tabs. They consist of: Zoom Out, which zooms the map back out once you have zoomed in on a portion of the map, Previous View which lets the user go back one view at a time, Set Center which allows the user to quickly set center anywhere in the world, World View which quickly displays the world map, Close which closes the World Coverage dialog box, and Help which give the user help on the World Coverage dialog box.

k. Select the Background tab which has two groups: Types and Scales.
l. Select the type of map that you want to see (CADRG, DTED, IMAGERY) by checking the box next to the name.

NOTE: If the User wants to see the World map in the Imagery mode, the user must go to the Background tab in the Map Control dialog box and uncheck the map type that it is in and then check the Imagery type and select OK and then go back to the Center tab, Location tab and select the World Coverage button.

m. Select the scale by checking the box next to the scale that you want. The system will display a checkmark in the box and a yellow blotch on the map where that scale applies.

NOTE: The user can only have one scale checked at once so the user must uncheck the scale that the user doesn't want.

n. Select Set Center button and move your cursor over the world map. The cursor changes to a square box.
o. Place the cursor over the area on the map that the user wants to center on and click the left mouse button. The system will center the SA map on that location.
p. Select the Close button. The system will display the Map Control dialog box.
q. Double-click on the Defaults folder on the Location Tab, Or select the + sign to the left of the Defaults folder to open the folder.

NOTE: Notice the list of Different areas that you can center on.

r. Select a location from the list. The system will highlight the selection.
s. Select the Apply button. The system will center the map on that area and leave the Map Control dialog box open.
t. Select the Close button. This will close the Map Control dialog box.

Performance Steps

7. Select the Scroll Tab. The system will display the Scroll Tab group.

NOTE: This function allows the user to scroll the map display in the direction of the arrow one full screen at a time. This is used when the user needs to view an area close by.

a. Select any arrow and watch the map move one screen in the direction that was selected.
b. Select the Close button. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Select the Map button from the Function Bar or press the F1 key on the keyboard.	____	____
2. Select the Background tab if it is not selected.	____	____
3. Select the Grid tab.	____	____
4. Select the Center tab.	____	____
5. Select the Unit/Platform tab if it is not already selected.	____	____
6. Select the Location tab.	____	____
7. Select the Scroll Tab.	____	____

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

EMPLOY FIPR FUNCTIONS USING FBCB2 VERSION 3.4

171-147-0019

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, precision lightweight global positioning system receiver (PLGR), enhanced position location radio system (EPLRS) if equipped, and single-channel ground air radio system (SINCGARS) with Internet controller (INC).

Standards: As a minimum you must: Employ screen operations functions to manage and exchange information, to include: Displaying messages in the FIPR queue, Identifying if the message is an Alert, the time the message was sent, the Message type, if an Operator response is required, who the Source Originator is, the Address type, type of Danger Zone, distance to the danger zone, direction to the danger zone, location of the danger zone, Originator of the danger zone, and view the alerts in the marquee.

Performance Steps

NOTE: Messages of each precedence must be received in the FIPR Queue before this task can be accomplished.

1. Select the FIPR (flash, immediate, priority, routine) button on the Function bar. The system will display the FIPR dialog box.

NOTES:

(1) The FIPR button allows the user to check messages that the system receives. An audible alarm of short duration alerts the user to incoming messages. The number at the end of the "FIPR" button represents the total number of messages in the queue. The system ranks messages by precedence as set by VMF (variable message format). A black exclamation mark (!) highlighted in yellow on the FIPR button informs the user that one or more warning messages are on the queue. A black plus (+) mark highlighted in yellow informs the user that an operator response is requested.

(2) There are six buttons on the FIPR Queue no matter what tab the user is in. The Display button, which allows the user to display the message, the Delete button, which allows the user to delete the message that is highlighted, the Delete All in Tab, which allows the user to delete all messages in the tab that is selected, the Refresh button, which allows the user to refresh the FIPR queue if a message arrived while viewing other messages, which is indicated by a black flag highlighted in yellow, the Close button which closes the FIPR Queue, and the Help button, which allows the user to get help on the FIPR function.

Performance Steps

2. Select the FLASH tab if it is not selected already. The system will display the Flash tab group.

NOTES:

(1) The FIPR dialog box contains five tabs. Each tab represents message precedence in their order of rank. The number on each tab indicates the number of messages for that level of precedence. Flash is the highest, then Immediate, Priority, Routine, and Warnings, which contains Warnings/Alerts, Cautions, and Danger Zones. If no messages have been sent to the system, a 0 will be displayed on the FIPR button.

(2) Each tab in the FIPR queue (Flash, Immediate, Priority, Routine) has six message headers which include: (1) Alert—informs the user if the message is an Alert or not, (2) Time—informs the user of the time that the message was sent, (3) Sec—informs the user of the Security classification of the message, (4) Msg Type—informs the user of the Type of message, (5) OR—informs the user that an operator's response is required. (This column will display a Y when a response is required), and (6) Source Originator—informs the user who sent the message. The last tab, which is the Warnings tab, contains information on Warnings/Alerts, Cautions, and Danger Zones.

   a. Select the message from the list by left clicking it with the mouse pointer. The message will highlight.
   b. Select the Display button. The dialog box for the type of message that was selected will display.

NOTE: If a LOG Report was selected in sub-step a., then the LOG Report dialog box will display.

   c. Select the Close button for the message that was displayed. The system will return to the FIPR Queue on the same tab that the user was on.

3. Select the Immediate tab when you want to read an immediate (second highest precedence) message.

NOTE: The system displays the exact same dialog box except that you are in the Immediate tab now. All functions are the same for each of the tabs except for the Warnings Tab.

   a. Select the message from the list by left clicking it with the mouse pointer. The message will highlight.
   b. Select the Display button. The dialog box for the type of message that was selected will display.
   c. Select the Close button for the message that was displayed. The system will return to the FIPR Queue on the same tab that the user was on.

4. Select Priority tab when you want to read a priority (third highest precedence) message.
   a. Select the message from the list by left clicking it with the mouse pointer. The message will highlight.
   b. Select the Display button. The dialog box for the type of message that was selected will display.
   c. Select the Close button for the message that was displayed. The system will return to the FIPR Queue on the same tab that the user was on.

5. Select the Routine tab when you want to read a routine (lowest precedence) message.
   a. Select the message from the list by left clicking it with the mouse pointer. The message will highlight.
   b. Select the Display button. The dialog box for the type of message that was selected will display.
   c. Select the Close button for the message that was displayed. The system will return to the FIPR Queue on the same tab that the user was on.

Performance Steps

6. Select the Warning tab. The system will display the Danger Zones and Marquee tabs.

NOTE: The Warnings Tab contains a window that displays the warnings received by the system. Under the Warnings Tab, on the FIPR dialog box is a Danger Zones Tab. The FBCB2 system creates these zones when the operator receives certain messages. As the operator's vehicle approaches these danger zones, the FBCB2 system warns the operator with an audible tone and displays the alert on the Warnings/Alerts marquee. The Danger Zones tab has five columns. (1) Type, which contains the type of Danger Zone. (2) Dist, which contains the distance to the Danger zone from the Platforms location. (3) Dir, which contains the direction to the Danger zone. (4) Location, which contains the grid location of the Danger zone. (5) Originator, which contains the name of the message originator.

a. Select the Danger Zones tab if it is not selected. The system will display the Danger Zones tab group.

NOTES:

(1) A Warning/Alert must first be sent to the users system that is close to it's platform's location before the next step can be performed such as a MOPP alert. Once the user's platform gets that warning, it should show in the FIPR Queue and on the Warnings/Alert Marquee.

(2) All of the Tab groups in the FIPR dialog box have common push buttons at the bottom of the box. Display button shows the highlighted message. Delete button deletes the highlighted message, Delete all in tab button deletes all the messages in the tab, Refresh button updates the Queue when the system receives a new message while the user was viewing the messages by showing a black flag highlighted in yellow on the Refresh button, Close button closes the dialog box and Help button helps the user with the FIPR Queue button.

b. Select the Danger Zones tab. The system will display the Danger Zones tab group.

NOTE: If there are no warnings such as an NBC1 report listed in the Danger Zones tab then go to the Messages Button and create a NBC1 and locate it close to your platform icon on the map then send it out. Once this happens it should show in the Danger Zones tab.

c. Select one of the danger zone messages in the Danger Zones tab by highlighting it. The system will show the message highlighted in black.
d. Select the Details button at the bottom of the Danger Zones tab. The system will display the Hook dialog box, which shows the content of the danger zone.

NOTE: From the Hook dialog box the user can delete, and edit the message.

e. Select the Close button. The system will return to the ops screen.
f. Reselect the FIPR button and then the Warnings tab. The system will display the Warnings tab group.
g. Select the Marquee tab. The system will display the Marquee tab group.

NOTE: The Marquee tab allows the user to view all the warnings and alerts together on one page.

h. Select the Close button. The system will return to the ops screen.

Performance Measures	**GO**	**NO GO**
1. Select the FIPR (flash, immediate, priority, routine) button on the Function bar.	____	____
2. Select the FLASH tab if it is not selected already.	____	____
3. Select the Immediate tab when you want to read an immediate (second highest precedence) message.	____	____

Performance Measures	GO	NO GO
4. Select Priority tab when you want to read a priority (third highest precedence) message.	____	____
5. Select the Routine tab when you want to read a routine (lowest precedence) message.	____	____
6. Select the Warning tab.	____	____

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

EMPLOY STATUS FUNCTIONS USING FBCB2 VERSION 3.4

171-147-0020

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, precision lightweight global positioning system receiver (PLGR), enhanced position location radio system (EPLRS) if equipped, and single-channel ground air radio system (SINCGARS) with Internet controller (INC).

Standards: As a minimum you must: Employ screen operations functions to manage and exchange information, to include: Determine if a component is degraded, determine the status of the network, Situational awareness data, the count of Observed and Friendly icons, and the status of the Hard drive.

Performance Steps

1. Select the Status button from the Function Bar or the F5 button on the Keyboard. The system will display the Status tab group.

NOTE: The Status function provides a means for the user to observe the operational status of the Platform's communications systems, the Tactical internet (TI), and the general disk employment. The Status tool should also be used as a quick reference and troubleshooting tool when it is noticed that the system is not operating at its optimal level. The Status Dialog box contains three Sub-tabs: the Systems, SA, and General tab. The Status button contains read-only information.

2. Select the Systems tab. The systems tab displays two columns of information: Systems Name and Status.

NOTE: System Name has small file folders that represent the user platform's Global Positioning System (GPS), Local Communications (LOCAL COMM), and other associated systems connected to the platform, to include the Laser Range Finder (if applicable). The second tab is the Status tab which displays the diagnostic details for the associated component, which are: Go (Green) diagnostic test indicated that the component is operative at the optimal level, Degraded (Amber) diagnostic test indicated that the test is operative at an acceptable level, No GO (RED) diagnostic test indicated that the component is inoperative or not operative within acceptable parameters, Not Tested (WHITE) device unavailable or not configured for the system.

   a. Select the + sign to the immediate left of the GPS folder symbol, Or double-click on the folder symbol itself to open the contents. You should see the associated sub-components and their corresponding status indications. If there is no + sign showing then there is no information available for that component.

NOTE: You should see the following status indications: TIME- displays the Time Figure of Merit (TFOM) quality, HEADING- displays the quality of the heading received from the GPS, POSITION- displays the Figure of Merit (FOM) quality

   b. Close the GPS Component by selecting the - sign to the immediate left of the GPS folder symbol, Or double-click the GPS folder symbol.
   c. Open the LOCAL COMM folder by selecting the + sign, or double-clicking the LOCAL COMM folder.

Performance Steps

NOTE: The Local Comm status tells the user how the communication devices located on the platform are functioning. The List of devices and interfaces will vary based on the platform role and configuration. Opening the LOCAL COMM displays the sub files with the diagnostic results for that system. The sub files reveal the names of the pertinent devices. The devices you should see are: Local Area Network (LAN) used to connect local FBCB2 systems by way of a continuous cable, REMOTE DISPLAY which is a remote that can be dismounted. Router_1, which is a special-purpose computer (or software package) that transfers data between two or more networks that use the same protocols. Routers look at the destination addresses of the information packets and route them to the proper FBCB2 system. The FBCB2 uses the INC to perform the duties of the router.

d. Select the + sign next to the Router_1 folder, or double-click the Router_1 folder to open it.

NOTE: Router_1, which is a special-purpose computer (or software package) that transfers data between two or more networks that use the same protocols. Routers look at the destination addresses of the information packets and route them to the proper FBCB2 system. The FBCB2 uses the INC to perform the duties of the router. Router_1_PPP is Point-to-Point Protocol. It allows a computer to use TCP/IP (Internet) protocols. A protocol is a definition of how computers will act when talking to each other.

e. Open the R1_SINCGARS1 folder by selecting the + sign or double-clicking the folder.

NOTE: R1_SINCGARS1 and R1_SINCGARS2 are the radios that are connected to the FBCB2 system. The sub-components are Interface which is an expansion board within the radio system that permits connection of the external devices, the Net_ID/Frequency which is the Network identification numbers and or frequency, the Pckt_Mode which enables the transmission and reception of data blocks containing control information- such as routing, address, and error control, as well as data.

f. Open the R1 EPLRS_Radio by selecting the + sign or double-clicking the folder.

NOTE: The R1 EPLRS_Radio is the Enhanced Position Location Reporting System which is an integrated Command, Control, and Communications (C3) system that provides near real-time data communications, position/location, navigation, identification and reporting information on the modern battlefield. The sub-components are R1 EPLRS_LCN_1, LCN_2, and so on depending on how many channels. The Logical Channel Number (LCN) packet switched networks allocate a number at the time a call is set up, which distinguishes packets belonging to one call on a link from all others.

3. Select the SA Tab. The system will display the SA tab group.

NOTE: The SA Tab function is used to give the user information on the Current SA server, the Broadcast net, SA net member count, switching of nets 1,2, and CSMA, Server connectivity and status on TI location quality.

a. Select the Net 2 radio button. The system will switch to that net if your platform has that capability.

NOTE: When you switch the net, all the information on the SA tab also switches.

b. Select the Net 1 radio button to switch back.

4. Select the General Tab. The system will display the status of the Disk Utilization.

NOTE: The General tab displays a pie chart of the system's disk utilization in percentages and total disk capacity. Percentages of disk space used and free indications appear to the right of the pie chart.

a. Select the refresh button to refresh the Information.
b. Select the Close button to close the dialog box.

Performance Measures	GO	NO GO
1. Select the Status button from the Function Bar or the F5 button on the Keyboard.	____	____
2. Select the Systems tab.	____	____
3. Select the SA Tab.	____	____
4. Select the General Tab.	____	____

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

EMPLOY ADMIN FUNCTIONS USING FBCB2 VERSION 3.4

171-147-0021

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, precision lightweight global positioning system receiver (PLGR), enhanced position location radio system (EPLRS) if equipped, and single-channel ground air radio system (SINCGARS) with Internet controller (INC).

Standards: As a minimum you must Employ screen operations functions to manage and exchange information, to include setting the Platform location and Quality manually; setting the Course, Speed, Elevation, and Altitude if applicable manually; Determine if the proper Data Net Frequency and Radio Set ID is set; setting the Requesters call sign and Medevac Voice Net Frequency; setting the Display/Message and audio settings, Local time zone, Time and Motion filters, and the Reporting mode.

Performance Steps

1. Select the Admin Button (F6). The system will display the Admin dialog box.

NOTE: The Exit Ops, Destroy FBCB2, OK, Apply, Close, and Help buttons at the bottom of the Admin dialog box stay displayed when cycling through each of the tabs in the Admin dialog box. Those buttons do the same thing in each tab.

(1) The Exit Ops button allows the user to exit the Ops screen and go back to the session manager screen.

(2) The Destroy FBCB2 button allows the user to destroy the FBCB2 by overwriting the files.

(3) The Ok button allows the user to make the changes and closes the dialog box.

(4) The Apply button allows the user to make the changes and keeps the dialog box open.

(5) The Help button allows the user to get help on the Admin function.

2. Select the Platform Settings Tab. The system will display two additional tabs, the Location and the Misc tab.

NOTE: This function allows the user to manually enter the vehicle/platform location. The PLGR usually provides this information. If the PLGR is inoperable, the user can manually enter the required settings. If the platform is fitted with an EPLRS, the Net Control Station reports the EPLRS location and compares the quality of SA on the Tactical Internet.

3. Select the Location tab. The system will display the Location tab group.
    a. Select the Location text box and type in the grid where you want your platform to be, or select the Fill Loc Button and select a position on the Map. The system will display your icon on the map.

NOTE: If the Admin dialog box is in the way of your icon, left click the dark gray area at the top of the Admin dialog box and drag it to the side.

    b. Select the Quality Down arrow and make a selection from the list.

NOTE: If a PLGR was connected to the FBCB2 and functioning correctly, this information would be entered automatically. The Quality is the degree of accuracy, which is the Figure of Merit on the PLGR.

    c. Select the Course text box and type in a direction in degrees or select the virtual keypad and type the degrees in using the mouse pointer select any degree between 0 and 359 and select OK. The system will return to the Admin dialog box.
    d. Select the Speed text box and type in the speed in Kph between 0 and 2047 or use the virtual keypad as before.

Performance Steps

e. Select the Elevation text box and type in the elevation in feet between 1 and 65536 or use the virtual keypad.
f. Select the Apply button. The system will apply the entries.

NOTE: Notice how your Platform icon is displayed on the map.

4. Select the Misc tab. The system will display the Misc tab group.

NOTE: If the Requester's Call sign and MEDEVAC Voice Net Frequency are not entered before attempting to utilize the MEDEVAC Combat message, the user will be unable to send a MEDEVAC Combat massage. The Data Net Frequency field is a view only field containing the programmed SINCGARS frequency for the Tactical Internet. This Frequency will vary from unit to unit. The Radio Set ID is a view only field containing the programmed EPLRS radio frequency.

a. Select the Requester's Call Sign text box and type in the Call sign, Or select the virtual keyboard and type the call sign in.

NOTE: When typing the call sign, it must be at least 17 characters long or it will not accept it. If your call sign is only 3 characters then type those 3 characters and hit the space bar 14 more times.

b. Select the MEDEVAC Voice Net Frequency text box and type the frequency, Or select the virtual keyboard and type the frequency and select OK.

NOTE: When typing the MEDEVAC Voice Net Frequency, it must be at least 8 characters long or it will not accept it. If the frequency is only 5 characters long, then type the 5 characters and select the space bar 3 more times.

c. Select the apply button.

NOTE: If the entries were entered correctly it would apply them. If they were entered incorrectly an error message would appear explaining what the problem is.

5. Select the Local Settings tab. The system will display Two additional tabs, the Display/Message, and the Audio tabs.
   a. Select the Display/Message Tab. The system will display the Display/Message tab group.
   b. Select the Chembio Auto Send radio button On/Off.

NOTE: This function will be grayed out if your vehicle is not equipped with the (MICAD) Multipurpose Integrated Chemical Agent Detector or the (LRBSDS) Long Range Biological Stand-Off Detection System.

c. Select the Reminder Dialog radio On button. The On button will highlight.

NOTE: The Reminder Dialog function toggles all Periodic Reminders and Voice on/off.

d. Select the Warning Time Interval pull down arrow. Make a selection from the list between 3 seconds and 10 seconds.

NOTE: This is the time that each Alert/Warning message will be displayed in the Alert/Warning Marquee on the Classification/Status Bar.

e. Select the Local Time Zone pull down arrow and scroll to your time zone.
f. Select the Apply button to make the changes.

6. Select the Audio tab. The system will display the Audio tab group.

NOTE: The Audio button allows the user to set Alerts, Notices, and Reminder's to Tone, Voice, or Off. It also sets the voice volume, and to mute alerts or preview a voice alert.

a. Select the Tone, Voice, or Off radio button under Alerts depending on if you want to hear a tone, voice or nothing on the speaker.
b. Select the Tone or Off radio button under Notices if you want to hear Notices.

Performance Steps

c. Select the Tone1, Tone2, or Off radio button under the Reminders.

NOTE: There are two different tones that you can hear for Reminders.

d. Select the Voice volume slider by left clicking and holding. Move the slider right to increase and left to decrease the volume.
e. Check the Mute all box if you don't want to hear anything.

NOTE: Mute All is not recommended.

f. Select the Preview Voice pull-down arrow. Make a selection from the list.
g. Select the Play button and listen to the speaker.

NOTE: If you want to hear a voice, make sure that Alerts is set to voice.

h. Select the Apply button to make the changes.

7. Select the SA Settings Tab. The system will display the SA Tab Group.

8. Select the Own tab. The System will display the Own Tab Group.

NOTE: This feature allows the user to set their own Time and Motion filters and the reporting Mode settings.

a. Select the Time Filter pull down arrow and make a selection from the list between 10 seconds and 60 minutes.
b. Select the Motion Filter pull down arrow and make a selection from the list between 50 meters and 2500 meters.
c. Select the Reporting Mode radio button: Auto, Manual, or Off.
d. Select the Apply button.

9. Select the Friendly Tab. The system will display the Friendly Tab Group.
   a. Select the Stale pull down arrow and make a selection from the list between 5 minutes and 2 hours. The system will display the time in the Stale text box.
   b. Select the Old pull down arrow and make a selection from the list between 10 minutes and 4 hours.

NOTE: The Old feature allows the user to set the elapse time before a friendly SA symbol becomes old (grays out on the map). If the system does not update its position report in the prescribed time, the system marks the last position as old.

c. Select the Purge pull down arrow and make a selection from the list between 1 hour and 20 hours. The system will display the time in the Purge text box.

NOTES:

(1) The Purge Time is the elapse time before your system purges the symbol from your map (deletes it off your map) if the friendly system doesn't send its position report.

(2) You must select the settings according to your SOP.

(3) Restore all SA Default settings allows the user to restore the settings back to the default

d. Select the Apply button.

10. Select the Observed Tab. The system displays the Observed Tab group. Complete the Observed tab exactly like the Friendly tab.

11. Select the Air tab. The system will display the Air tab group. Complete the Air tab exactly like the Observed tab.
    a. Select the Apply button. The system will save the settings.
    b. Select the OK button. The system will return to the Ops screen.

Performance Measures	GO	NO GO
1. Select the Admin Button (F6).	____	____
2. Select the Platform Settings Tab.	____	____
3. Select the Location tab.	____	____
4. Select the Misc tab.	____	____
5. Select the Local Settings tab.	____	____
6. Select the Audio tab.	____	____
7. Select the SA Settings Tab.	____	____
8. Select the Own tab.	____	____
9. Select the Friendly Tab.	____	____
10. Select the Observed Tab.	____	____
11. Select the Air tab.	____	____

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

EMPLOY APPS FUNCTIONS USING FBCB2 VERSION 3.4

171-147-0022

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, precision lightweight global positioning system receiver (PLGR), enhanced position location radio system (EPLRS) if equipped, and single-channel ground air radio system (SINCGARS) with Internet controller (INC).

Standards: As a minimum you must: Employ screen operations functions to manage and exchange information, to include: Driver's Display, Line of Sight, Periodic Reminders, Personnel Status Report, and Radio Net Join.

Performance Steps

1. Perform Driver's Display Function.
    a. Select the Apps button from the Function Bar or select the F7 button from the keyboard. The system will display the Apps dialog box.

NOTES:

(1) The Apps function provides the user with many unique applications and tools.

(2) The Apps dialog box has Two sub-tabs: the FBCB2 tab and the Misc tab which is not available.

    b. Select the FBCB2 tab if it is not already selected. The system will display the FBCB2 Applications list.
    c. Select Driver's Display and select the execute button. The system will display the Driver's Display: Compass dialog box.

NOTE: The Driver's Display gives the user the ability to turn the compass on for the driver to follow. The dialog box has two push buttons: The Navigation button, which allows the user to switch to the Navigation Dialog Box, and the Close button, which closes the dialog box. The Nav button does the same thing as the Navigation function learned earlier in the task.

    d. Select the Close button. The system will return to the Ops screen.
    e. Select the Apps button on the Function bar or select the F7 button on the keyboard. The system will display the Apps dialog box.
    f. Select the Close button. The system will return to the Ops screen.

2. Perform the Line of Sight Function.

NOTE: The Line of Sight function allows the user to draw a line on the SA display map from the Start (S) point to the End (E) point and view a graphic representation of the topography between the two points. The Function bar has several push buttons consisting of: Coordinate button which is a toggle button that shows the different types of coordinates, OK button which is used once you have selected your start and end points, Cancel to cancel the last action, Delete to delete the Start and end point, Help to get help on the Line of Sight tool, Virtual keyboard to type the coordinates in the Location text box, Add which is used to add point if you are using the type mode to enter coordinates, Named button which is for selecting pre-loaded locations.

    a. Select the Apps button from the Function Bar or select the F7 key from the keyboard. The system will display the Apps dialog box.
    b. Select the Line Of Sight function and select the Execute button. The system will display the Select 2 Points function bar on the right side of the map and the cursor as a cross hair.
    c. Select a start point on the map by left clicking a spot on the map. The system will display a white circle on that point.
    d. Select a second point on the map. The system will display a blue line connecting both of the points.
    e. Select OK. The system will remove the function bar and display the Line Of Sight dialog box.

Performance Steps

NOTE: The LOS dialog box displays the range, bearing, Start location, and end location of the line that you selected. It also has three push buttons consisting of Close to close the dialog box, Profile (SHOW) that brings up the Profile dialog box, and Help.

f. Select the Profile (SHOW) button. The system will display the LOS Profile dialog box on top of the Line Of Sight dialog box.

NOTE: If the LOS dialog box is on top of the Line Of Sight dialog box, just drag the LOS dialog box over so both dialog boxes can be seen. The dialog box displays the Line of sight in the form of a graph from the start to the end point. Anything above the yellow line is dead space. It shows the distance in (Km) along the bottom and the Height in (Ft) on the left side of the dialog box.

g. Select the Start point on the map by placing the cursor over the White circle with an S in it and left clicking the mouse, holding it and dragging the Start point around.

NOTE: Notice how the view changes on the LOS dialog box as the Start point is moved.

h. Select the Close button. The system will return to the Ops screen.

3. Perform the Periodic Reminders function.

NOTE: The "Periodic Reminders" tool allows the user to create and store message reminders that will, at a users determined date and time, display a reminder dialog box with a user created text message. d time. There is an option to trigger an audio alert when the reminder is displayed. Zulu time (Greenwich Mean Time (GMT)) is the standard.

a. Select the Apps button from the Function bar or the F7 key on the keyboard. The system will display the Apps dialog box with the FBCB2 tab selected.

NOTE: The Reminders dialog box has six common push buttons that are in each of the five tabs consisting of: OK which applies the changes and closes the dialog box, Apply which applies the changes and keeps the dialog box open, Defaults which sets the settings back to the original settings, Close which closes the dialog box, List which brings up a list of all reminders that have been set, and Help which gives the user help on the tab that is displayed.

b. Select the Periodic Reminders by highlighting the name.
c. Select the Execute button. The system will display the Periodic Reminders dialog box.

NOTE: The Periodic Reminders dialog box contains the following tabs, which is based on the frequency of the reminder: Once, which is used to create a one-time reminder; Daily, which is used to create a reminder for each day; Weekly, which is used to create a reminder for once a week; Monthly, which is used to create a reminder for once a month; and Floating, which is used to create a reminder for a particular time, day, and week among a range of months.

d. Select the Once tab. The system will display the Once tab fields.
e. Select the Reminder month radio button for the month that you want the reminder.

NOTE: The system defaults to the current month.

f. Select the Reminder Time Hour slide button and hold the left mouse button and drag left to decrease the hour and right to increase the hour.
g. Select the Reminder Time Minute slide button and hold the left mouse button and drag left to decrease the minute and right to increase the minute.
h. Select the Reminder Day slide button and hold the left mouse button and drag left to decrease the day and right to increase the day.
i. Select the Reminder Audio Yes/No radio button.

NOTE: Select Yes if you want to hear an audible tone when you are reminded or No if you don't want to hear a tone.

j. Place your mouse pointer inside the Reminder Text box and click the left mouse button and type the text that you want to be reminded of.

Performance Steps

k. Select the Daily tab. The system will display the Daily tab fields.

NOTE: The Daily tab is done just like the Once tab. The only difference is there is no Month and Day field.

l. Select the Weekly tab. The system displays the Weekly tab fields.

NOTE: The Weekly tab is done just like the Once tab. The only difference is there is you can select more than one day.

m. Select the Monthly tab. the system will display the Monthly tab fields.

NOTE: The Monthly tab is done just like the Once tab. The only difference is that you can select more than one month to have the reminder.

n. Select the Floating tab. The system will display the Floating tab fields.

NOTE: The Floating tab is done just like the Once tab. The only difference is you can select more than one month and you can select which week of the month to get the reminder.

o. Select the Close button. The system closes the Create Reminders dialog box and displays the Ops screen.

4. Perform The Personnel Status Report.

NOTE: This function allows the user to update the Personnel Status Report and send it to higher Headquarters. At Battalion S1, the Personnel Status Report interfaces with the Combat Service Support Control System (CSSCS), which transmits personnel reports to higher echelons.

a. Select the Apps button from the Function Bar or the F7 button from the keyboard. The system will display the Apps dialog box.
b. Select the Personnel Status Report from the list with the mouse pointer. The system will highlight the Personnel Status Report.
c. Select the Execute button. The system will display the Personnel Status Report dialog box.

NOTE: The Personnel Status Report dialog box has eight common push buttons which consist of: Message Addressing, which allows the user to set how and who they will send the message to, New which brings up a new Add personnel Record, Delete which deletes a record, Refresh, which refreshes the Data Display Area, Send which sends the report, Modify which allows the user to edit a record, Close which closes the Personnel Status Report, and Help which gives the user help on Personnel Status Reports. There is also a SEARCH BY pull-down arrow which allows the user to search for a record by: Last name, SSN number, Status, Unit name, Role ID, Grade, MOS, Gender, Nationality, Religion, Blood type and Effective DTG. There is also a search text box that allows the user to search for a record by typing the information in the text box and selecting the search button.

d. Select the Message Addressing button. The system will display the Message Addressing dialog box.
e. Enter the Message settings and Addresses as in task 171-147-0005, Apply Message Addressing features in FBCB2 Version 3.4
f. After setting the Message Addressing settings, select the New button on the Personnel Status Report dialog box. The system will display the Add Personnel Record dialog box.

NOTE: The New button allows the user to enter information on new personnel by using the Virtual keyboard, Computer keyboard, Drop down arrows, and Radio buttons. Notice how the OK and Apply buttons at the bottom of the Add Personnel Record dialog box are grayed out. All the fields must be filled out before the buttons will become available.

g. Select the Last Name text box with the mouse pointer or select the virtual keyboard and enter the last name in the text box.

Performance Steps

NOTE: If you select the text box, you can enter the information with the computer keyboard. If you select the virtual keyboard you must type the information by selecting the characters with the mouse pointer. The Last Name must not be more than 20 characters long.

h. Select the First Name text box and enter the name.

NOTE: The First Name cannot be more than 10 characters long.

i. Select the Middle Name text box and enter the name if applicable.

NOTE: The Middle name cannot be more than ten characters long.

j. Select the Suffix text box and enter the suffix if applicable.

NOTE: The Suffix cannot be more than three characters long.

k. Select the SSN text box and enter the Social Security Number.

NOTE: You do not have to enter the dashes in the Social Security Number. The numbers will automatically move to the proper digit.

l. Select the Nationality pull-down arrow and select the Nationality of the person that the user is entering the information for. The Nationality will display in the text box.
m. Select the Religion pull-down arrow and select the Religion of the person.
n. Select the proper radio button, either Male or Female for the person you entering information on. The radio button will highlight.
o. Select the Blood Type pull-down arrow and select the Blood type for the person you entering information about.

NOTE: You must select the Whole Blood type, not the Platelet type.

p. Select the Unit Name pull-down arrow and select the Unit that the person is in by highlighting the unit or by typing in the unit in the text box and selecting the search button.

NOTE: You must enter the Unit name exactly as it is displayed on the computer or it will not find the unit in the list.

q. Select the Role/ID pull-down arrow and select the Role/ID from the list.
r. Select the Grade pull-down arrow and select the grade of the person.
s. Select the MOS pull-down arrow and select the MOS of the person.
t. Select the Status pull-down arrow and select what the persons status is from the list.
u. Select the Apply button to apply the new record. The system will display a new Add Personnel Record dialog box, Or Select OK, which will complete the record and return to the Personnel Status Report dialog box.

NOTE: Continue to do this until you have a record for all the personnel.

v. Modify a Personnel Status Report.
w. Select a record from the list on the Personnel Status Report dialog box. The record will highlight.
x. Select the Modify button. The system will display the Modify Personnel Record(s) dialog box.
y. Select the field that you want to edit or modify and make the changes.
z. Select the OK button. The system will make the changes and display the Personnel Status Report dialog box.
aa. Select the Send button to send the Report to the address that you entered in the Message addressing settings. The system will display a Personnel Report Sent dialog box stating that "THE Personnel Report was Sent."
ab. Select the OK button. The system will return to the Personnel Status Report dialog box.
ac. Select the Close button. The system will display the Ops screen.

Performance Steps

5. Perform the Radio Net Join function.

NOTE: DO NOT select a new Network unless you intend to switch Networks because this function will reboot the computer and assume the new Network. The Radio Net Join function allows the user to re configure the communication subsystems on their own platform. Radio Net Join will automatically re configure the FBCB2 database, INC router, SINCGARS-ASIP and EPLRS. This is used when the user's platform travels outside its SINCGARS or EPLRS network and must join a different network in order to continue to receive SA and C2 data. There are two areas in the Radio Net Join function: the SINCGARS Hop set and the EPLRS Configuration. The SINCGARS Hop set displays the current description and frequency identification. The EPLRS Configuration changes the network to a different unit's configuration.

a. Select the Apps button from the Function Bar or the F7 key on the keyboard. The system will display the Apps dialog box.
b. Select the Radio Net Join function from the list. The Radio Net Join will highlight.
c. Select the Execute button. The system will display the Radio Net Join dialog box.
d. Select the New FREQ_ID pull-down arrow under the SINCGARS Hop set. The system will display the SINCGARS Agent Table dialog box with the available Units and Net ID frequencies.
e. Select the Network that you want.
f. Select the Change pull-down arrow under the EPLRS Configuration. The system will display the Unit Name dialog box.

NOTE: Here the user can select a new EPLRS network for FBCB2 communication purposes.

g. Select the Network that the user wants to change to.
h. Select OK if you actually want to switch networks or Close to stay in the same configuration.

Performance Measures	**GO**	**NO GO**
1. Perform Drivers Display Function.	____	____
2. Perform the Line of Sight Function.	____	____
3. Perform the Periodic Reminders function.	____	____
4. Perform The Personnel Status Report.	____	____
5. Perform the Radio Net Join function.	____	____

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

EMPLOY NAV FUNCTIONS USING FBCB2 VERSION 3.4

171-147-0023

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, precision lightweight global positioning system receiver (PLGR), enhanced position location radio system (EPLRS) if equipped, and single-channel ground air radio system (SINCGARS) with Internet controller (INC).

Standards: As a minimum you must: Employ screen operations functions to manage and exchange information, to include: Creating a route, reversing the way points, setting Route Attributes and Analyze Route settings, Editing a route, Center on a route, Apply the Roll over Mode, turn on the Driver's display, and Select a Single point to navigate to.

Performance Steps

1. Select the NAV button. The system will display the Navigation dialog box.

NOTE: The Navigation function allows the user to create a new Route of March (ROM), select and edit a previously created ROM, reverse the direction of march on a selected route, set route attributes, analyze a route, center the SA map on the selected ROM, and transmit the Land Route Report. The "Roll over Mode" option when used with the driver's display will display the bearing and distance to the next way point as each way point is passed.

2. Select the Route Tab if it is not already selected. The system will display the Route Tab group.

NOTE: The Route ID function allows the user to select and display a route that has been previously created and saved by selecting the drop down arrow and highlighting the saved route. Once a saved route is selected, all of the other function buttons on the "Route" dialog box become active.

   a. Select the create button. The system will display the Create New Route dialog box.

NOTE: The Create New Route dialog box has three buttons: Map, List, and Cancel. The Map button allows the user to select locations on the map. The list button displays the Create Waypoints dialog box and allows the user to enter waypoints by typing them in the Enter Way point combo box.

   b. Place the cursor in the Enter New Route Name text box and select the back space key to delete the name that appears then type the name that you want to call the route up to 9 characters.

NOTE: You can also type the name by selecting the Virtual Keyboard and using the mouse to select the keys on the Virtual Keyboard or your fingers on the touch screen.

   c. Select the Map button. The system will display the Map with the Create Route Function Bar to the right and the cursor becomes a cross hair.
   d. Create the route by clicking a spot on the map where you want the route to start, and then continue to click along the route creating waypoints each time the mouse is clicked until you have plotted the route.

NOTES:

(1) Notice on the map that the points where you selected when creating the route have checkpoint symbols with the first one highlighted in white. You can move to the next waypoint by selecting the right arrow in the Navigation Dialog box.

(2) If the Navigation dialog box is in front of the route that you created, you can move the box by placing the cursor in the dark gray area of the Navigation dialog box and left clicking and holding the button and dragging the box to the side.

Performance Steps

e. Select the OK button. The system will display the Navigation dialog box with the new name in the Route ID text box and all the buttons in the Navigation dialog box are active now.

3. Select the Manage button. The system will display the Edit Route dialog box.

NOTE: The Manage button allows the user to rename, copy, or delete a route and modify an existing route. The user can rename a route by typing the name in the Name text box and selecting the Rename button. The user can delete a route by typing the name of the route that you want to delete in the Name text box and selecting the Delete button. The user can copy a route with a new name by typing the new name of the route in the Name text box and selecting the Copy button.

a. Select the Map button. The system will display the Edit Route function bar with the route highlighted in blue with a white circle on waypoint one.

NOTE: If the user wanted to modify a different route then the one they are currently on then they would have to go back to the Navigation dialog box and select the route from the pull down arrow then select the Manage button.

b. Place the cursor on a spot on the map after the last way point and left click the mouse. The system will add a waypoint to the existing route.
c. Select the Delete button. The system will delete the last waypoint.

NOTE: Every time the user clicks on the map a new waypoint is added. If the user makes a mistake, they can select the delete button and delete the last waypoint.

d. Select the OK button when finished with the modification. The system will display the Edit Route dialog box.

4. Select the List button. The system will display the Edit waypoints dialog box with all the way points in the Way point List text box that you created earlier.

NOTE: The List button allows the user to delete a single waypoint, delete all waypoints from the list, or add additional waypoints to the list. Notice that some of the buttons are not active until a waypoint is selected for deletion or a waypoint is entered in the Enter Way point text box.

a. Select the last waypoint in the list. The waypoint will be highlighted.
b. Select the Delete button. The waypoint will be deleted from the list but not from the route on the map.
c. Select the Save button. The system will delete the waypoint from the route on the map and return to the Edit Route dialog box.
d. Select the List button. The system will display the Edit Way point dialog box.
e. Place the cursor in the Enter Way point text box and left click the mouse.
f. Enter a grid close to the grid of the last waypoint in the list.

NOTE: Ensure that you type the grid just like the waypoints that are in the list with the Grid Zone designator.

g. Select the Insert button. The system will add the waypoint to the list but not to the route.
h. Select the Save button. The system will add the waypoint to the Route and return to the Edit route dialog box.

Performance Steps

NOTES:

(1) If the user wants to delete all the way points, the user would highlight one of the way points in the list and select the Delete All button and select the Yes button on the Confirm Deletion dialog box.

(2) The user can add way points by selecting the pull down arrow on the Edit Way points dialog box and select either Keyboard (Kbd), Laser Range Finder (LRF), Map, Own, Name, and Virtual Keyboard (Vkb).

i. Select the close button from the Edit Route dialog box. The system will display the Navigation dialog box.

5. Select the Reverse button several times.

NOTE: Notice how the Start Point on the route becomes the new Release point and the Release point becomes the new Start point.

6. Select the Route Attributes button. The system will display the Route Attributes dialog box.

NOTE: The Route Attributes allows the user to describe the aspects of the route.

a. Select the Route Description pull down arrow. The system will display a list.
b. Select an option from the list. The option will be displayed in the text box.

NOTE: Do the same for the Route Classification, Movement Rate, Open/Concealed Indicator, and Route type.

c. Select the Virtual Keypad to the right of the Overhead Clearance/Height (m) text box. The system will display the Virtual Keypad on the screen.
d. Enter the Height in meters by selecting the appropriate keys and selecting the OK button. The system will display the Height in the text box.

NOTES:

(1) Notice in the Virtual Keypad at the bottom that there is a number that the user must stay within when entering a number.

(2) Do the same for Traveled Way Width (m), and Weight Classification (tons).

e. Place the cursor in the Comments text box and left click the mouse.
f. Type any comments that pertain to the Route Attributes if applicable.
g. Select the OK button. The system will display the Navigation dialog box.

Performance Steps

7. Select the Analyze Route button. The system will display the Analyze Route dialog box.

NOTES:

(1) Analyze Route button allows the user to analyze an existing Route of March to determine the Flank Line of Sight, areas that exceed the vehicles maximum uphill and downhill degree of grade, degree of side slope for each segment of the route, the 360 degree Line of Sight at any point along the route, the travel time of each leg of the route and show a graphical profile of each segment of the route.

(2) The Route Data on the right side of the Analyze Route dialog box shows the name of the route, how many waypoints are on the route, and the length of the route in Km. The Segment Data shows the grid of the Start point and End point and the Segment length. To find out what the length of the other segments just click on the right arrow underneath the Show Segment Profile. Each time the arrow is selected, it will show the next segment.

a. Select the Virtual Keypad under the Flank Line of Sight Data for the Range. The system will display the Virtual Keypad on the screen.
b. Enter the appropriate range in meters between 1 and 100000 by selecting the numbers with the mouse and selecting the OK button. The system will display the numbers in the text box.

NOTE: Do the same for the Distance Above Ground (m), Maximum Uphill Grade (%), Maximum Downhill Grade (%), Max Slope (%), and Rte Width (m).

c. Select the Color pull down arrow and select a color from the list. The color will be displayed in the Color text box.

NOTE: The color is the color that the shading will be on the screen when the line of sight is displayed on the map.

d. Select the box next to the Show Segment Profiles. The system will display the Segment Profile dialog box showing the line of sight for that particular segment. To show the next segment profile, just select the right arrow underneath the Show Segment Profile.
e. Select the box to the left of the Show Segment Profile to uncheck it. The Segment Profile dialog box will disappear.
f. Select the Execute button. The system will re display the route with red for the areas that have difficulty due to the side slope and Green in areas that are Passable.
g. Select the Show Segment Details button. The system will display the Segment Details dialog box on top of the Analyze Route dialog box.

NOTES:

(1) If the dialog box is in the way of the Analyze Route dialog box and the route itself then left click on the dark gray area of the dialog box and drag it out of the way. The user should be able to have both the Segment Details and the Analyze Route dialog boxes on the screen and still view part of the route.

(2) The Segment Details dialog box will appear with the side slopes and grids of the difficulty areas of the first segment unless the first segment is passable without difficulty. If the segment is passable without difficulty then the Segment Details dialog box will display Segment is passable. If the Segment is not passable or has difficulty then the dialog box will display the side slope percentage and the grid of each area that has some difficulty.

(3) If the Segment Details dialog box has grids and percentages displayed in it, then the user can highlight the grid and a white dot will appear on the route to show the user where the difficult area is.

Performance Steps

h. Select the first grid on the Segment Detail dialog box. The system will display a white circle on the route where the difficult area is. Each grid that the user highlights, it will display the white circle on that grid.

NOTE: If the first segment is passable, then select the right arrow on the Analyze Route dialog box under the Show Segment Details until the Segment Details dialog box displays grids and percentages of the difficult areas.

i. Select the Show All button on the Segment Details dialog box. The system will display the white circles on all the grids for that particular segment of the route that are difficult.
j. Select the close button. The system will close the Segment Details dialog box and return to the Analyze Route dialog box as long as the user didn't close it earlier.
k. Select the right arrow under the Show Segment Profile to move to the next waypoint.

NOTE: The number should have changed in between the arrows. It should show a number with a / and another number representing how many way points that are in the whole route. Each time the user select the right arrow, The number on the left of the / should change to the number of the next waypoint.

l. Select the Show Segment Details button again. The Segment Details dialog box will display with the side slopes and grids of the next segment.

NOTE: Again the Segment Details dialog box will display either Segment is Passable or it will display all the side slope percentages and grids of each point on the route that has some difficulty in travel.

m. Select the close button. The system will return to the Analyze Route dialog box.

8. Select the Circular Line of Sight button on the bottom of the Analyze Route dialog box. The system will display the Circular Line of Sight dialog box.

NOTE: The Circular Line of Sight button allows the user to analyze a 360-degree line of sight from any point on the map. The user can control the analysis by entering the desired radius of the circle, the "Spacing" (distance between center points along a route), and the "Vertical Offset" (height from the ground to the desired eye level at the circle center) in the appropriate text box.

a. Select the Points along a route button if the user wants to check the circular line of sight along the route, otherwise select the select points from map button to check the circular line of sight anywhere on the map.
b. Select the Virtual Keypad next the Line of Sight Radius (m) text box and use the mouse pointer to enter the radius in meters between 1 and 10000 or place the cursor inside the text box and enter the number from the keyboard.

NOTE: Do the same for the Spacing (m) and the Vertical Offset (m) text boxes. If the user needs to know what the limits are that can be entered, the user can select the virtual keypad and look at the bottom of the keypad to see the limit.

c. Select the Execute button. The system will display the Circular line of Sight on the first waypoint.

NOTE: If the user chose Points along route, the user would be able to just select the right arrow on the Circular line of Sight dialog box and the system would display the circular line of sight on the next way point. If the user chose Select points from map, the user can choose any point on the map or route.

d. Select the Close button. The system will display the Analyze Route dialog box.

Performance Steps

9. Select the Travel Time button. The system will display the Travel time dialog box.

NOTES:

(1) The Travel Time button allows the user to compute the time of each segment and the entire route based on the average speed factor.

(2) The Travel Time dialog box shows the Route length and the first segment length and the Estimated time under each that is blank until the user enters Average speed in Kilometers per hour and selects the Execute button.

a. Select the Virtual keypad. Enter the speed between 1 and 200 by using the mouse pointer and selecting the OK button or enter the speed by placing the cursor in the Avg Speed (Kph) text box and type it in with the keyboard.
b. Select the Execute button. The system will display the Estimated times under the Route Data and Segment Data.
c. Select the Minimize button. The system will display the Minimize dialog box over the Analyze Route dialog box with the Travel Time dialog button with arrows facing left and right and two numbers with a / between them. The left number represents the waypoint that the data is displayed for and the number on the right represents the total number of waypoints.
d. Select the Right arrow. The number on the left of the / should change to 2 and the number on the right should stay the same.
e. Select the Travel Time Dialog button. The system will display the Travel Time dialog box with the new Estimated times for the second segment.

NOTE: The user will need to select Minimize each time that the user wants to move to the next way point then select the Travel Time dialog button to see the Estimated times.

f. Select the Close button. The system will return to the Analyze Route Dialog box.

10. Select the Edit Route button. The system will display the Map with the Edit Route Function bar on the right of the map and the route highlighted in blue with the last way point highlighted with a white circle.

NOTE: The Edit Route Button allows the user to edit the route on the map graphically. It also allows the user to grab, zoom, and view draw description, delete, and target a location route by name.

a. Place the cursor at a spot on the map after the last way point and left click the mouse. The system will add a segment to the route. Each time the user selects a spot on the map, it will add a segment to the route.

NOTE: If the user added a way point on the map by mistake, just select the delete button and the system will delete the last segment added to the map and each time the delete button is selected, it will delete a segment of the route, Or select a way point on the route and move it to the desired location.

b. Select the OK button. The system will return to the Analyze Route dialog box.
c. Select the Close button. The system will display the Navigation dialog box.

11. Select the Manage button. The system will display the Edit Route dialog box.

NOTE: The Manage button allows the user to edit, rename, copy, or delete the route of march.

a. Place the cursor in the Name text box and type a new name for the route using the keyboard and select the Rename button. The system will display the new name in the Name text box, or select the Virtual Keypad and enter the new name using the Mouse pointer and select the OK button. The name will display in the Name text box.

Performance Steps

NOTE: To copy the route and add a new name, the user would type a new name in the Name text box and select the Copy button. The system would save a copy of the route with the new name in the Navigation dialog box. To delete a route, the user would type the name of the route that needs to be deleted and select the Delete button. The system would delete the route.

b. Select the Map button. The system will display the Edit Route function bar with the route displayed on the map.

NOTE: From here the user can add or delete segments of the route.

c. Select the OK button. The system will return to the Edit Route dialog box.
d. Select the List button. The system will display the Edit way points dialog box with all the grids to the waypoints in the route.

NOTE: From here the user can add, modify, and delete waypoints and save the route.

e. Scroll down and select the last way point in the list and then select the delete button. The system will delete the last waypoint.
f. Select the Save button. The system will redisplay the route with the last way point deleted and return to the Edit Route dialog box.
g. Select the Close button. The system will return to the Navigation dialog box.

12. Select the Center On button. The system will center on the route.
    a. Select the Msg Addressing button. The system will display the Message Addressing dialog box.

NOTE: Refer to Task 171-147-0005 to address and send the route.

b. Select the Close button on the Navigation dialog box. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Select the NAV button.	____	____
2. Select the Route Tab if it is not already selected.	____	____
3. Select the Manage button.	____	____
4. Select the List button.	____	____
5. Select the Reverse button.	____	____
6. Select the Route Attributes button.	____	____
7. Select the Analyze Route button.	____	____
8. Select the Circular Line of Sight button on the bottom of the Analyze Route dialog box.	____	____
9. Select the Travel Time button.	____	____
10. Select the Edit Route button.	____	____
11. Select the Manage button.	____	____
12. Select the Center On button.	____	____

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

EMPLOY QUICK SEND FUNCTIONS USING FBCB2 VERSION 3.4

171-147-0024

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, precision lightweight global positioning system receiver (PLGR), enhanced position location radio system (EPLRS) if equipped, and single-channel ground air radio system (SINCGARS) with Internet controller (INC).

Standards: As a minimum you must: Employ screen operations functions to manage and exchange information, to include: Applying a message to the Quick Send button, naming the Button label, and naming the Balloon label.

Performance Steps

NOTE: The operator must create, and save a message to associate this button to before this task can be accomplished.

1. Select the Quick Send button. The Quick Send Button Setup dialog box will display.

NOTE: The Quick Send button allows the user to send a pertinent message in an expedient manner. The operator creates, and saves the message, then associates it with the Quick Send button. The Quick Send button has three dashes on it (---) and is located to the right of the NAV button.

2. Click the "+" sign to the left of the folder that contains the message that the user wants to associate to the Quick Send button. The will open and display all the messages in the folder.
3. Left-click on the message that will be associated to the Quick send button. The message will highlight.
4. Select the Button label text box and type a three-letter abbreviation that you want to apply to the button. Or select the virtual keyboard and type the abbreviation.

NOTE: The abbreviation is what you will see on the Quick Send button on the Function Bar.

5. Select the Balloon Label text box and type a short description of what the message is about, or select the virtual keyboard and type the description.

NOTE: The Balloon label is what the user will see when the cursor is placed over the Quick Send button; it will display what you typed in the Balloon Label text box.

6. Select the Apply button. The three-letter abbreviation will appear on the Quick Send button.

NOTE: Notice that the three letters that you typed in the Button Label text box appears on the Quick send Button on the function bar. If the user did not highlight a message to apply to the button, a selection error message would appear stating, "No message has been associated with this message."

7. Select the Display button. The system will display the message.

NOTE: From here the user can change the message address, forward the message, and save the message.

8. Select the Close button. The system will return to the Quick Send Button Setup dialog box.
9. Select OK. The system will return to the Ops screen.

Performance Steps

NOTES:

(1) Place the cursor over the Quick Send Button for a couple of seconds and the short message that the user typed in the Balloon Label text box will appear.

(2) The message can now be sent by selecting the button.

Performance Measures	**GO**	**NO GO**
1. Select the Quick Send button.	____	____
2. Click the "+" sign to the left of the folder that contains the message that the user wants to associate to the Quick Send button.	____	____
3. Left-click on the message that will be associated to the Quick send button.	____	____
4. Select the Button label text box and type a three letter abbreviation that you want to apply to the button.	____	____
5. Select the Balloon Label text box and type a short description of what the message is about, or select the virtual keyboard and type the description.	____	____
6. Select the Apply button.	____	____
7. Select the Display button.	____	____
8. Select the Close button.	____	____
9. Select OK.	____	____

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

EMPLOY FILTERS FUNCTIONS USING FBCB2 VERSION 3.4

171-147-0025

Conditions: Given a vehicle with an operational Force XXI Battle Command Brigade-and-Below (FBCB2) system with software version 3.4 loaded, precision lightweight global positioning system receiver (PLGR), enhanced position location radio system (EPLRS) if equipped, and single-channel ground air radio system (SINCGARS) with Internet controller (INC).

Standards: As a minimum you must: Employ screen operations functions to manage and exchange information, to include: Select the desired radio button for the Labels, Friendly, Enemy, Unknown, and Georeference for the SA tab. Select Units to Collapse or Expand. Select the desired radio button for the labels for the Overlays tab. Load and Unload an overlay. Display and Hide an Overlay.

Performance Steps

NOTE: The FBCB2 system maintains near real-time data for friendly/enemy/unknown unit positions, and targets. The FBCB2 system also maintains data for fixed Geo-references such as bridges, mountains, and rivers. The "Filters" function permits the user to view or filter out friendly and enemy platforms or units according to currency, dimension, unit type, and echelon. Additionally, it loads, unloads, and displays overlays. This function also provides the user with the capability to monitor Geo-references and to filter overlays. The Unit Standard Operating Procedures (SOP) determines filter use. Before this task can be completed, one or more of the following types of messages must be sent to the user's system first: Spot Report, Obstacle Report, Bridge Report, Position Report, and NBC1 Report. An Obstacle Overlay and one of any other type of Overlay should also be sent to the user's system. These reports generate the graphical images necessary to use all the Filter functions. Once the Messages and Overlays have been received, they must be saved to the user's system. Once the messages have been saved, the overlays can be displayed by opening the overlays and check the Keep Overlay displayed check box.

1. Select the Filters button on the Function bar or the F2 button on the keyboard. The system will display the Filters dialog box.

NOTE: The "Filters" function permit the user to view or filter out friendly and enemy platforms or units according to currency, dimension, unit type, and echelon. Additionally, it loads, unloads, and displays overlays. This function also provides the user with the capability to monitor Geo-references and to filter overlays. The Unit Standard Operating Procedures (SOP) determines filter use. The Filters dialog box contains four tabs: SA (Situational Awareness), Collapse/Expand, Overlays, and Obstacle Overlays. If the user moves the Filters dialog box to the side, the user can view the labels, icons, and symbols appear and disappear from the screen as some of the functions are selected.

2. Select the SA tab if it is not already selected. The system will display the SA tab group.

NOTE: The SA tab group allows the user to access and filter SA data with the following functions: (All On), which displays all of the SA data that has been sent or received, on the SA display area.(All Off), which filters out everything on the SA display area except the map, overlays, overlay objects and the platforms' own position. (Labels), which filters the labels that are attached to the SA data. (Friendly), which enables the user to display or hide designated friendly platforms. (Enemy), which enables the user to display or hide designated enemy platforms. (Unknown), which displays or hides unidentified units, and Georef, which displays or hides geographical references.

   a. Select the None radio button under the Labels field. The labels for all SA on the map will disappear.

Performance Steps

NOTE: Notice how the word SET highlighted in yellow appeared on the Filters button on the function bar. This is to inform the user that filters have been set. By selecting the All button, the labels will reappear.

b. Select the Select radio button under the Friendly field. The Currency, Dimension, Type, and Echelon fields will display.

NOTE: These functions allow the user to display or hide friendly SA according to their Current, Stale or Old settings, and Air or Ground units, or by Branch or affiliation, and by type of Echelon. The user can uncheck any field that he or she does not want to see.

c. Select the All button under the Friendly field. The all friendly SA will reappear on the map.
d. Select the Select radio button under the Enemy field. The Currency, Dimension, Type, and Source of Info fields will appear.

NOTE: The only difference between Friendly and Enemy is Echelon was replaced with Source of Info, which allows the user to filter enemy icons based on its source. The Three sources are: ASAS (All Source Analysis System), FAAD (Forward Area Air Defense), and Spot Rprt (Spot Report). Deselect the check box of the source that the user does not want. Users should avoid having both the ASAS and Spot Rprt checked at the same time. This can cause a distorted picture because enemy icons may be depicted twice.

e. Select the All radio button under the Enemy field. The system will redisplay all the enemy icons.
f. Select the None radio button under the Unknown field. Al of the Unidentified icon will disappear off the map.
g. Select the All radio button under the Unknown field. The system will display all the unidentified icons.
h. Select the None radio button under the Georef field. All of the Geographical references will disappear.
i. Select the All radio button under the Georef field. The system will redisplay the Geographical Geo-references.

3. Select the Collapse/Expand tab. The system will display the Collapse/Expand tab group.

NOTE: This function allows the user to collapse and expand the elements of a combat unit on the local display to a single Center of Mass (CM). This function collapses multiple unit icons under a single unit icon. Units collapse IAW the current UTO.

a. Select the Search text box by placing the cursor in the text box and left clicking. The text box will become active.

NOTE: The Search text box is used as an expedient way of finding a unit to expand or collapse.

b. Type the name of the unit that needs expanding or collapsing.

NOTE The name must be spelled and spaced exactly the way it is in the UTO in order for the search function to find the unit. If the name was spelled and spaced right, the name will be highlighted when the search button is pushed.

c. Select the "+" or "-" sign next to the unit.

NOTE: Selecting the "-" sign expands the unit selected into specific level. Selecting the "+"sign collapses the unit into one icon.

4. Select the Overlays tab. The system will display the Overlays tab group.

NOTE: This function allows the user to display or hide labels on the Overlay and Load and unloads Overlays.

a. Select the None radio button under the Labels field. All the Labels that are on the overlays will disappear.
b. Select the All radio button under the Labels field. The system will redisplay the Labels.

Performance Steps

c. Select the Selected radio button under the Overlays field. The system will display the names of all the overlays that have been created, received, and saved on the system along with the Load, Unload Selected, and Unload All buttons.

NOTE: The Load button will load the overlays that have been check marked. The Unload Selected will unload all the overlays that have been check marked. The Unload All button will unload all overlays that have been saved on the system. If the user received any overlays from other platforms, they must be saved to a folder on the user's computer before the system will load them. The overlays that the user creates and saves can also be loaded and unloaded.

d. Select the Load button. The system will display the Overlay Loader dialog box with all the folders that have been created on the system.
e. Select the folder that has the overlay(s) that the user wants to load by double-clicking the folder or selecting the "+" sign. The system will highlight the overlay name.
f. Select the OK button. The system will return to the Filters dialog box with the name of the overlay displayed.

NOTE: If there are more overlays that the user wants to load, then the user will have to do the same steps to load them.

g. Select the overlay that was just loaded by left clicking on the name. The overlay name will be highlighted.
h. Select the Unload Selected button. The system will display the Unload Selected Overlay dialog box stating "You are about to unload overlay with the 'name' Continue with this action? with an OK button.
i. Select the OK button. The system will unload the overlay and return to the Overlays tab.

5. Select the Obstacle Overlays tab. The system will display the Obstacle Overlays tab group with a All and None radio button and the names of the Originators and DTG of all the Obstacle Overlays that have been created, received and saved on the system.

NOTE: An Obstacle overlay must be loaded in order to view this function.

a. Select the None button. All the Obstacle Overlays that are displayed on the map will disappear.
b. Select the All radio button. The Obstacle overlays will reappear on the map.
c. Select an Obstacle Overlay by highlighting the Originator. The name of the Originator will highlight.
d. Select the Delete Selected button. The system will remove the Obstacle Overlay from the Obstacle Overlays tab group but not from the system.
e. Select the Close button. The system will return to the Ops screen.

Performance Measures	**GO**	**NO GO**
1. Select the Filters button on the Function bar or the F2 button on the keyboard.	____	____
2. Select the SA tab if it is not already selected.	____	____
3. Select the Collapse/Expand tab.	____	____
4. Select the Overlays tab.	____	____
5. Select the Obstacle Overlays tab.	____	____

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

APPENDIX A - SAMPLE TELECOMMUNICATIONS SERVICE ORDER (TSO)

ROUTINE

R 140717Z JUL 98

FM DISA EUR TSR-TSO-CRP TRAFFIC VAIHINGEN GE//EU8//

TO 886CS RAMSTEIN AB SEMBACH ANNEX GE//SCST/SCSD//
CDR OPMAS-E DCS STA LANDSTUHL GE//AFSE-F-ITT-LDL//
DCS STA LANDSTUHL GE//AFSE-XB-HSC//
86CS RAMSTEIN AB GE//SCMTU/SCMTI//
CDROPMAS-E DCS STA DONNERSBERG GE//AFSE-F-ITT-DON//

INFO USAFE CSS CMO RAMSTEIN AB GE//SCBM//
4ASOS MANNHEIM GE//LGSS//
DISA EUR VAIHINGEN GE//EU31CONT//
DISA TCO RFS-TSR TRAFFIC VAIHINGEN GE//EU8//

THIS IS A 3 SECTIONED MSG COLLATED BY MDS
UNCLAS
TSO E81929/W0U4-01
REF:

A. DISA-EUR TCO MSG DTG 291103Z JUN 98 (START TSR BF17JUN988097)

1. PURPOSE
 A. THIS TSO IS ISSUED IAW REFERENCE "A" TO START A TEMPORARY 1.2KB IN- DIRECT AUTODIN CIRCUIT BETWEEN POINTS DEPICTED.

2. GENERAL CIRCUIT/TRUNK INFORMATION
 A. JEXDW0U4
 B. NA
 C. TEMPORARY
 D. 200800Z JUL 98 THRU 242359Z JUL 98
 E. (1) SEMBACH BCO GE/4 CONTACT: SUPERVISOR, DSN: 496-7176, CML: 06302-47-7176
 (2) UNDTMNDL TAC ZV/0 CONTACT: HOME BASE SUPVR, DSN: 385-2115/2195, CML: 06217-302115/2195
 F. C1 4C G. FULL DUPLEX
 H. CCO SEMBACH/GE/TCF/DSN: 496-6620 CML 06302-67-6620
 I. 1.2KB J. SECURED K. TEMP-EXEC
 L NO SIGNALING
 M. NA N. BF17JUN988097 O. NA P. A Q. A
 R. NA S. DF T. NA
 U. (1) N/A
 (2) N/A
 (3) N/A
 V. NA
 W. NA X. NA Y. D Z. NA AA. NA AB. NA AC. NA
 AD. NA AE. NA AF. NA AG. NA AH. NA
 AI. NA AJ. NA AK. NA
 AL. NA AM. NA AN. NA
 AO. NA AP. NA AQ. NA AR. NA AS. NA AT. NA
 AU. NA AV. NA AW. NA AX. NA

3. FACILITY AND EQUIPMENT INFORMATION

A. SEMBACH GE4BCO
BLDG/DIRECTIONS/ADDRESS: 203
RM/FL: COMM CENTER
CONTACT: SUPERVISOR, DSN: 496-7176, CML: 06302-47-7176
MAIL ADDRESS: 886CS/SCSD, UNIT 10300, APO AE 09136
(1) (A) MESSAGE DISTRIBUTION TERMINAL
(B) TERM: 4W
(C) CABLE CROSS-CONNECT
(D) RED DC PATCH / CONNECTOR
(E) KG-84A
(F) BLACK DC PATCH / CONNECTOR
(G) CABLE CROSS-CONNECT
(H) INTERFACE: FREDRICKS 1280A MODEM, FSK, 44 CABLE, 22 GA, 200 FT, 0.0 DB LOSS
(I) CABLE CROSS-CONNECT
(2) (A) 44 C NO SIG Z

B. SEMBACH GE4TCF
BLDG/DIRECTIONS/ADDRESS: 114
RM/FL: 1
CONTACT: SUPERVISOR, DSN: 496-6620, CML: 06371-67-6620
MAIL ADDRESS: 886CS/SCST, UNIT 10300, APO AE 09136
(1) (A) CABLE CROSS-CONNECT
(B) MAIN DISTRIBUTION FRAME, 44 CABLE, 22 GA, 30 FT, 0.0 DB LOSS
(C) TERM: 4W
(D) INTERFACE: AN/FCC-98 TDM MULTIPLEXER
(E) CABLE CROSS-CONNECT
(2) (A) 44JND6 0A0T NO SIG Z

C. SEMBACH GE4DP1
BLDG/DIRECTIONS/ADDRESS: 114
RM/FL: R-1
CONTACT: SUPERVISOR, COMM: 06302-67-6816, DSN: 496-6816
MAIL ADDRESS: 886CS
SCST
UNIT 10300
APO AE 09136
(1) (A) TDM MULTIPLEX
(B) DIGITAL T1 PATCH
(C) DIGITAL PATCH AND ACCESS SYSTEM (DPAS)
DPASMML CMD: CONN-CRS-TO: SEMBACH01:031-001, 044-001
TC(0011,0011),TRB
DPAS DATA:
CKT TYP OPER: FDX DPAS FRAME ID: SEMBACH01
DPAS NPC FM PORT/CHNL:031-001
DPAS NPC TO PORT/CHNL:044-001
DPAS TRUNK CONDITIONING: NO SIG, FULL DUPLEX
DPAS CONTROL TERMINAL (DCT) DATA
CKT ID:W0U4 TSP: CONDITIONING CODE: C1 4C
STATUS: TEMP-EXEC CKT TYPE:C

TRUNK CHN	RANGE	END STA	NEXT STA	LINK	MUX PORT	DACS PORT
44JND6	001	NA	SHE	SBC	CABLE	NA	031
44JK97	001	NA	SBC	BNN	M0851	A4	044

(D) DIGITAL T1 PATCH
(E) TDM MULTIPLEX
(2) (A) 4JK97 0A0T NO SIG Z

D. BANN GE4DP1
BLDG/DIRECTIONS/ADDRESS: 9
RM/FL: R-2
CONTACT: SUPERVISOR, COMM: 06371-86-8645, DSN: 480-6881
781-8689
MAIL ADDRESS: OL-A, 86TH COMM SQ
/SCMT/
APO AE
091261385

(1) (A) TDM MULTIPLEX
(B) DIGITAL T1 PATCH
(C) DIGITAL PATCH AND ACCESS SYSTEM (DPAS)
DPASMML CMD: CONN-CRS-TO: BANN01:060-001, 022-001:
TC (0011,0011),TRB;
DPAS DATA:
CKT TYP OPER: FDX DPAS FRAME ID: BANN01
DPAS NPC FM PORT/CHNL:060-001
DPAS NPC TO PORT/CHNL:022-001
DPAS TRUNK CONDITIONING: NO SIG, FULL DUPLEX
DPAS CONTROL TERMINAL (DCT) DATA
CKT ID:W0U4 TSP: CONDITIONING CODE: C1 4C
STATUS: TEMP-EXEC CKT TYPE:C

TRUNK	CHN RANGE	END STA	NEXT STA	LINK	MUX PORT	DACS PORT
44JK97	001	NA	SBC	BNN	M0851	A4 060
44CK31	001	NA	BNN	LSL	M0712	A6 022

(D) DIGITAL T1 PATCH
(E) TDM MULTIPLEX
(2) (A) 44CK31 0A0T NO SIG Z

E. LANDSTHL GE4DP1
BLDG/DIRECTIONS/ADDRESS: 3377
RM/FL: R-2
CONTACT: SUPERVISOR COMM 06371-86-829-5/7382; DSN 486-8295/7382
MAIL ADDRESS: COMMANDER OPMAS-E
SITE CHIEF
DCS SITE LANDSTUHL
CMR 402APO AE 09180

(1) (A) TDM MULTIPLEX
(B) DIGITAL T1 PATCH
(C) DIGITAL PATCH AND ACCESS SYSTEM (DPAS)
DPASMML CMD: CONN-CRS-TO: LANDSTHL01: 022-001, 115-011::
TC(0011,0011),TRB:::;
DPAS DATA:
CKT TYP OPER: FDX DPAS FRAME ID: LANDSTHL01
DPAS NPC FM PORT/CHNL: 022-001
DPAS NPC TO PORT/CHNL: 115-011
DPAS TRUNK CONDITIONING: NO SIG, FULL DUPLEX
DPAS CONTROL TERMINAL (DCT) DATA
CKT ID: W0U4 TSP: CONDITIONING CODE: C1 4C
SATUS: TEMP-EXEC CKT TYPE: C

TRUNK	CHN RANGE	END STA	NEXT STA	LINK	MUX PORT	DACS PORT
44CK31	001	NA	BNN	LSL	M0712	A6 022
44UNC8	011	NA	LSL	LDL	CABLE	NA 115

(D) DIGITAL T1 PATCH
(E) TDM MULTIPLEX
(2) (A) 44UNC8 0K0T NO SIG Z

F. LANDSTHL GE4TCG

BLDG/DIRECTIONS/ADDRESS: 3377
RM/FL: 2
CONTACT: SUPERVISOR, DSN: 486-8295, CML: 06371-86-8295
MAIL ADDRESS: ITT/DCS STA LANDSTUHL, APO AE 09180
(1) (A) AN/FCC-98 TDM MULTIPLEXER
(B) TERM: 4W
(C) CABLE CROSS CONNECT, 44 CABLE,
(2) (A) 44 C NO SIG Z

G. LANDSTHL GE4NM1
BLDG/DIRECTIONS/ADDRESS: 3377
RM/FL: 2
CONTACT: SUPERVISOR, DSN: 486-8295, CML: 06371-86-8295
MAIL ADDRESS: ITT/DCS STA LANDSTUHL, APO AE 09180
(1) (A) CABLE CROSS-CONNECT
(B) ADNX-48 130A
(C) 2WFXS SLOT 13A
(D) REAR CARD INTERFACE: I/F
(E) INTERFACE: PRC FRONT CARD
(F) FRONT CARD INTERFACE: PRC
(G) INDX T-BUSS CROSS-CONNECT
(2) (A) 44 Z NO SIG Z
(B) N130C113P24

H. LANDSTHL GE4NM2
BLDG/DIRECTIONS/ADDRESS: 3383
RM/FL: 1
CONTACT: SUPERVISOR, DSN: 486-8604, CML: 06371-86-8604
MAIL ADDRESS: CDR181SIGCO, CMR 402, APO AE 09180
(1) (A) INDX T-BUSS CROSS-CONNECT
(B) FRONT CARD INTERFACE: PRC
(C) INTERFACE: PRC FRONT CARD
(D) REAR CARD INTERFACE: I/F
(E) 2WFXS SLOT 15A
(F) ADNX-48 12B
(G) CABLE CROSS-CONNECT
(2) (A) 44 C NO SIG Z
(B) N12C35P28

I. LANDSTHL GE41IO
BLDG/DIRECTIONS/ADDRESS: 3383
RM/FL: 1
CONTACT: SUPERVISOR, DSN: 486-8604, CML: 06371-86-8604
MAIL ADDRESS: CDR181SIGCO, CMR 402, APO AE 09180
(1) (A) INTERFACE: CABLE CROSS-CONNECT
(B) TERM: 4W
(C) TD-1389 LOW RATE MULTIPLEXER (LRM)
(2) (A) 44 R NO SIG Z

J. UNDTMNDL ZV0TS1
BLDG/DIRECTIONS/ADDRESS: DEPLOYED SATCOM VAN
RM/FL: 1
CONTACT: HOME BASE SUPVR, DSN: 385-2115/2195, CML: 06217-302115/2195
MAIL ADDRESS: HOME BASE: 4ASOS/LGS, UNIT 29903 BOX 135, APO AE 09086
(1) (A) TD-1389 LOW RATE MULTIPLEXER (LRM)
(B) TERM: 4W
(C) INTERFACE: CABLE CROSS-CONNECT
(2) (A) 44 R NO SIG Z

K. UNDTMNDL ZV0TAC
BLDG/DIRECTIONS/ADDRESS: COMMUNICATIONS VAN
RM/FL: 1
CONTACT: HOME BASE SUPVR, DSN: 385-2115/2195, CML: 06217-302115/2195
MAIL ADDRESS: HOME BASE: 4ASOS/LGS, UNIT 29903 BOX 135, APO AE 09086
(1) (A) CABLE CROSS-CONNECT
(B) BLACK DC PATCH / CONNECTOR
(C) CABLE CROSS-CONNECT
(D) KG-84A
(E) RED DC PATCH / CONNECTOR
(F) CABLE CROSS-CONNECT
(G) INTERFACE: FREDRICKS 1280A MODEM, FSK, 44 CABLE, 22 GA, 200 FT, 0.0 DB LOSS
(H) CABLE CROSS-CONNECT
(I) TERM: 4W
(J) UGC-144 TERMINAL

4. NUMBER CONTROL
A. N/A
B. N/A
C. N/A

5. OTHER SPECIFIC DIRECTIONS
A. COMMERCIAL/GFE DATE: 200800Z JUL 98
B. NETWORK SVC: IN-DIRECT AUTODIN
C. TSR CONTACT: MR. HENRY CARTER, DISA EUR/EU8, DSN: 430-6111, CML: 0711-680-6111, EMAIL: CARTERH@EUR.DISA.MIL
D. WARNER EXEMPTION: NA
E. IN-EFFECT REPORTS FOR EITHER ACTIVATION OR DEACTIVATION OF TEMPORARY SERVICE ARE NOT REQUIRED WHENEVER THE CIRCUIT IS ACTIVATED OR DEACTIVATED AS DIRECTED IN THE TSO. IF TEMPORARY CIRCUIT ACTIVATION/ DEACTIVATION IS DELAYED, OR IF THE CIRCUIT IS ACTIVATED WITH EXCEPTION(S), THEN A DELAYED SERVICE AND/OR AN EXCEPTION REPORT MUST BE SUBMITTED. THIS REPORT MUST THEN BE FOLLOWED BY THE APPROPRIATE COMPLETION REPORT SUBMITTED TO ALL ADDRESSEES OF THE TSO.
F. T&A IS REQUIRED, UNLESS OTHERWISE INDICATED. CIRCUIT WILL BE TESTED IAW ESTABLISHED TEST SCHEDULES IN DISAC 310-70-1. TEST RESULTS WILL BE MAINTAINED IN THE CIRCUIT HISTORY FOLDER AT SERVING TECH CONTROLS. TEST RESULTS WILL NOT BE SUBMITTED TO HIGHER ACTIVITIES UNLESS SPECIFICALLY REQUESTED.
G. THIS TSO IS IN SUPPORT OF EXERCISE/PROJECT: CAS SCRAMBLE 98
H. COST THRESHOLD/DISN ESTIMATED COST: NO FUNDS INVOLVED.
I. TSR REMARKS:
(1) THIS CIRCUIT SUPPORTS THE 4ASOS IN THEIR UNIT LEVEL EXERCISE CAS SCRAMBLE 98.
(2) IF SERVICE CANNOT BE PROVIDED AS REQUESTED USER WILL ACCEPT SERVICE AS SOON AS POSSIBLE THEREAFTER. HOWEVER, DO NOT PROVIDE SERVICE AFTER 24 JUL 98.
J. RFS NO: USAFE15JUN983214 / 4ASOS01MAY980009
K. ANY ADDRESSEE HAVING ACTION ON THIS TSO. WILL NOTIFY THE DISA ACTIVITY, CCO/CMO, AND TSR POINT OF CONTACT. IMMEDIATELY OF PROBLEMS, WHICH MAY AFFECT THE SPECIFIED ACTION. ALL STATIONS WILL REVIEW THE CONFIGURATION, EQUIPMENT, CONTACT NUMBERS AND ADDRESSES CONTAINED IN THIS TSO ON ANY ERRORS SO THAT SUBSEQUENT TSOs MAY BE UPDATED.

L. DATA BASE ACTION WILL BE TAKEN BY **DISA-EUROPE**
M. TSO CONTACT: MR. CLAYTON PETERS EU8, ML, DSN: 430-6112;
CML: 0711-680-6112;
EMAIL: PETERSC@EUR.DISA.MIL

6. SWITCHED RECORD NETWORK INFO (AUTODIN)
A. NA B. NA C. NA
D. NA E. NA
F. NA G. NATO-SECRET
H. NA I. NA
J. A K. NA L. NA M. NA
N. ALT NARRATIVE RI: , ,
ALT DATA RI: , ,
ALT MAG TAPE RI: , ,
ALT Q/R HOST RI: , ,
O. NA
P. NA
Q. NA
R. NA S. NA T. NO U. NA V. NA
W. NA X. NA
Y. NA
Z. N AA. NO

BT
NNNN

APPENDIX B - DA FORM 5164-R (HANDS-ON EVALUATION)

B-1. Introduction.

The DA Form 5164-R (Hands-On Evaluation) allows the trainer to keep a record of the performance measures a soldier passes or fails on each task. Instructions for using this form follow.

B-2. Prior to evaluating the soldier.

a. A blank copy of DA Form 5164-R is located at the back of this manual, which you may locally reproduce on 8 ½ by 11-inch paper. An electronic copy is available at http://www.apd.army.mil.

b. Enter the task title and 10-digit task number from the soldier's manual task summary in Chapter 3.

c. In column a, enter the number of each performance measure listed under the Performance Measures section in the task summary.

d. In column b, enter the performance measure corresponding to the performance measure number in column a. (You may abbreviate this information if necessary.)

e. Enter the Evaluation Guidance statement from the soldier's manual task summary just below the last performance measure.

f. Locally reproduce the partially completed form if you are evaluating more than one soldier on the task or the same soldier on more than one task.

B-3. During the evaluation.

a. Enter the date just before evaluating the soldier's task performance.

b. Enter the evaluator's name and the soldier's name and unit.

c. For each performance measure, column b, enter a check in column c *(PASS)* or column d *(FAIL)*, as appropriate.

d. Compare the number of performance measures the soldier passes (and if applicable, which ones) against the task standard shown in the Evaluation Guidance statement. If the standard is met or exceeded, check the *GO* block under *STATUS*; otherwise check the *NO-GO* block.

Figure B-1 is a sample of a completed DA Form 5164-R.

HANDS-ON EVALUATION

For use of this form, see AR 350-57. The proponent agency is ODCSOPS.

DATE: **2 FEB 2004**

TASK TITLE: **PERFORM SYSTEM SHUTDOWN FOR SEN SYSTEM AN/TTC-48(V)**

TASK NUMBER: **113-625-2090**

ITEM a	PERFORMANCE STEP b	SCORE (Check One) PASS c	SCORE (Check One) FAIL d
1	PERFORMED OPERATIONAL SHUTDOWN PROCEDURES	☑ P	☐ F
2	PERFORMED STORAGE PROCEDURES	☑ P	☐ F
3	PERFORMED POWER CABLING REMOVAL/ STORAGE PROCEDURES	☑ P	☐ F
4	PERFORMED SHELTER FIELD CABLE REMOVAL/STORAGE PROCEDURES	☑ P	☐ F
5	PERFORMED GROUNDED STRAP AND ROD REMOVAL PROCEDURES	☐ P	☑ F
6	SECURED THE SHELTER DOOR AND ALL EXTERNAL COVERS	☑ P	☐ F

SAMPLE

EVALUATOR'S NAME: **SFC WHITMAN**

UNIT: **A CO 369TH**

SOLDIER'S NAME: **SPC ANDERSON**

STATUS: ☐ GO ☑ NO GO

DA FORM 5164-R, SEP 85 (EDITION OF DEC 82 IS OBSOLETE)

Figure B-1. Sample DA Form 5164-R

GLOSSARY

Section I
Acronyms & Abbreviations

SPU	spectrum plot utility; Switch Processing Unit
(C)	CONFIDENTIAL
(O)	FOR OFFICIAL USE ONLY
(U)	Unclassified
(V)	version
1SG	First Sergeant
AAR	after action review
AC	alternating current/Active Component/assistant commandant
ACCP	Army Correspondence Course Program
AFATDS	Advanced Field Artillery Tactical Data System
AFC	automatic frequency control; Army functional course
AFI	automatic fault isolation
AIT	Advanced Individual Training
ALTNCT	alternate network control terminal
AME	antenna-mounted electronics
AN	Annually (frequency code)
ANCD	automated net control device
ANCOC	Advanced Noncommissioned Officer Course
AR	Army Regulation/Army Reserve
ARSPOC	Army space operations center
ARTEP	Army Training and Evaluation Program
ASC	AUTODIN switching center; Army Service Center; assigned switch classmarks
ASI	Additional Skill Identifier; alarm status indicator
ASIP	Advanced System Improvement Plan or Program

ATM	Asynchronous Transfer Mode; Adobe Type Manager
ATTN/attn	attention
BA	biannually (frequency code)
BCIS	Battlefield Combat Identification System
Bde	Brigade
BITE	built-in test equipment
BNCOC	Basic Noncommissioned Officer Course
BRIL	basic required items list
BW	Biweekly (frequency code)
C/KT	carrier-to-noise density ratio
C2	command and control
C3	command, control, and communications
CADRG	Compressed Arc Digital Raster Graphic
CB	circuit breaker; chemical, biological; common battery; citizens band; common base transistor; color bars
CCC	critical control circuit
CCO	circuit control officer
CFF	call for fire
CIC	console-in-control
CIK	crypto/cryptographic ignition key
CMA	control monitor and alarm
CMD	command; color monitor device
COD	code of the day
COML	commercial
COMM	communications
COMM R/T	communications receiver-transmitter
COMSEC	communications security
CONUS	Continental United States
CP	control processor; Command Post

CPU	central processing unit
CSM	Command Sergeant Major
CSSCS	Combat Service Support Control System
CSU	control synchronization unit
CT	control terminal; control transmitter
CTC	Combat Training Centers
CTIL	commander's traced items list
DA	Department of the Army; distribution amplifier
DA Form	Department of the Army Form
DA PAM	Department of the Army Pamphlet
DASA	DSCS auto/automatic spectrum analyzer
DCSCU	dual capacity servo control unit
DCSS	Digital Communications Satellite Subsystem
DD Form	Department of Defense Form
DECS	DSCS ECCM control subsystem
DIBTS	digital in-band trunk signaling
DISA	Defense Information Systems Agency
DISAC	Defense Information Systems Agency Circular
DMD	digital message device
DMS	Defense Message System; degrees, minutes, seconds
DMT	disaster management team (UN)
DNPS	DSCS network planning software
DOR	detailed outage report; domain of responsibility
DOSS	DSCS operational support system
DSCS	Defense Satellite Communications System
DSCSOC	DSCS operations center
DTED	digital terrain elevation data
DTG	date-time group; digital transmission group

DU	display unit
e.g.	for example
ECCM	electronic counter-counter measures
ECU	environmental control unit
EOM	end of message; end of mission
EPLRS	Enhanced Position Location Reporting System
ER	emergency receiver; evaluation report
ET	earth terminal
etc.	et cetera (and so forth)
FAMU	fault alarm monitor unit
FBCB2	Force XXI Battle Command Brigade and Below
FCG	foreign clearance guide
FCS	frequency conversion system
FDMA	frequency division multiple access
FM	field manual; frequency modulation; file maintenance
FRAGO	fragmentary order
FSSP	fault and system status panel
FT/ft	foot/feet
GAA	Gateway Access Authorization; grease, automotive and artillery
GMF	ground mobile force
GMT	Greenwich Mean Time
GNC	GMFSC network controller; GMF network controller
GPS	Global Positioning System
GSSC	Global Satellite Communications Support Center
HAZCON	hazardous condition
HPA	high power amplifier
HVPS	high voltage power supply
i.e.	that is

I/O	input/output
IAW	in accordance with
ICC	information coordination center; intelligence coordination center (USCG); Interstate Commerce Commission
ID	identification
IDNX	Integrated Digital Network Exchange
IET	Initial Entry Training
IF	intermediate frequency
INC	Internet Controller - part of the SINCGARS SIP program. The INC is mounted in the SINCGARS SIP vehicle amplifier-adapter (VAA)
IRON	inter-range operation number
JS	joint staff
Kbd	keyboard
km	kilometer
KU	keyboard unit
LAN	local area network
LAT/LONG	latitude/longitude
LCN	logical channel number
LED	light emitting diode
LNA	low noise amplifier
LOS	line of sight
LOW	link orderwire
LRBSDS	Long-Range Biological Standoff Detection System
LRF	laser range finder
LRM	low rate multiplexer
LRU	lowest repairable unit
LTR/ltr	letter; litter
MA/ma	machine acknowledge/milliampere
MACOM	major Army command

MBA	multibeam antenna; Main Battle Area
MCT	movement control team
MEDEVAC	Medical Evacuation
METL	mission essential task list
MGRS	Military Grid Reference System
MICAD	multipurpose integrated chemical agent detector
MIDAS	Multiplexer Integration and DCSS Automation System
MILSATCOM	military satellite communications
MILSTAR	military strategic and tactical relay system
MO	Monthly (frequency code)
MOOTW	military operations other than war
MOPP	mission-oriented protection posture
MOS	Military Occupational Specialty
MPH	miles per hour
MSG	message
MSO	MILSATCOM Systems Office
MTO	message to observe
MTOE	Modified Table of Organization and Equipment
MTP	Mission Training Plan; MOS Training Plan
MUX	multiplex
NATO	North Atlantic Treaty Organization
NAV	navigation
NBC	nuclear, biological, chemical
NCB	Network Configuration/Control Book
NCO	noncommissioned officer
NNM	network node/nodal manager
NT	network terminal; New Technology (Microsoft Windows Operating System)

OA	operator acknowledge
ODB	operational detachment-Bravo
OPLAN	operation plan
OPORD	operation order
OPS/Ops	operations
OR	Ocean Region, operator response
OTP	one-time pad
OTT	one-time tape
OW	orderwire
PCC	printed circuit card
PCI	peripheral component interconnect
PLGR	Precision Lightweight Global Positioning System Receiver
PLL	prescribed load list
PM	preventive maintenance; performance measure(s)
PMCS	preventive maintenance checks and services
PPP	Point-to-Point Protocol
PTF	patch and test facility
PU	power unit, processor unit
PWR	power
QT	Quarterly (frequency code)
RAU	radio access unit
RC	Reserve Component; remote control; resistance-capacitance
RF	Reserve Forces; radio frequency
RFIS	radio frequency interface subsystem
RHDDC	removable hard disk cartridge
RSSC	Regional Signal Support Center
SA	situational awareness; semiannually (frequency code)
SAA/GAA	Satellite Access Approval/Gateway Access Approval

SALT	size, activity, location, and time
SAR	satellite access request
SAR/GAR	Satellite Access Request/Gateway Access Request
SATCOM	satellite communication(s)
SCCE	satellite configuration control element
SDC	senior DSCS controller; signal data converter
SEN	small extension node; Satellite Education Network
SER	SATCOM equipment report
SINCGARS	Single-Channel Ground and Airborne Radio System
SITREP	Situation Report
SM	soldier's manual
SMCT	Soldier's Manual of Common Tasks
SMU	switch multiplex unit; SCC memory unit
SNC	satellite network controller
SOI	signal operation instructions
SPR	shadow polling receiver; Systems Program Review
SSN	Social Security Number
STBY	standby
STD	sexually transmitted disease; standard
TACSOP	tactical standard operating procedure
TADSS	Training Aids, Devices, Simulators, and Simulations
TCC	telecommunications center; terrestrial critical control
TDI	time-date initializer
TFOM	time figure of merit
TG	trainer's guide
TI	Tactical Internet; test instrument; technical inspection

Section II
Terms

MOS training plan (MTP)
The MTP is a guide for the conduct of individual training in units. The MTP is developed for each MOS/AOC and addresses all skill levels of an MOS/AOC and all duty positions. The MTP lists all MOS/AOC-specific and shared critical tasks for which the MOS/AOC is responsible. It will not include common tasks.

performance measures (PM)
Those behavior or product characteristics which the trainer observes/checks to determine if the soldier has performed the task correctly.

Performance step
A single discrete operation, movement, or action that comprises part of a task.

shared task
A critical task performed by soldiers from two or more MOSs.

skill level (SL)
A number that denotes the level of qualification within the total MOS. Characters 0 through 5 in the position of the MOS code identify levels of qualification.

Soldier training publication (STP)
Publications that contain critical tasks and other training information used to train soldiers and serve to standardize individual training for the whole Army; provide information and guidance in conducting individual training in the unit; and aid the soldier, officer, noncommissioned officer (NCO), and commander in training critical tasks. They consist of Soldier's Manuals, Trainer's Guides, Military Qualification Standards Manuals, and Officer Foundation Standards System manuals.

Soldier's manual (SM)
List critical task summaries for a specific MOS and skill level (SL); provide conditions, standards, and performance measures for each critical task.; and are the base documents for all MOS-specific individual task training and evaluation.

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AR 70-1	Army Acquisition Policy (Item only produced in electronic media and included on EM 0001). 15 December 1997
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DA FORM 2404	Equipment Inspection and Maintenance Worksheet (Item only available in electronic media).
DA FORM 2407	Maintenance Request.
DA FORM 5988-E	Equipment Inspection Maintenance worksheet (EGA) (Only available in electronic media).
DD FORM 314	Preventive Maintenance Schedule and Record (Available through normal publishing channels and included on EM 0001).

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DA PAM 25-33	User's Guide for Army Publications and Forms (Item only produced in electronic media and included on EM 0001). 15 September 1996
DA PAM 25-40	Administrative Publications: Action Officers Guide (Item only produced in electronic media and included on EM 0001). 30 April 2002
DA PAM 710-2-1	Using Unit Supply System (Manual Procedures) (Standalone Pub). (Item only produced in electronic media and included on EM 0001.) 31 December 1997
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FM 7-0	Training the Force (Item also produced in electronic media). 22 October 2002

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CPCI-2 VOL 1	Computer Program Development Specification for Terminal Control Processing Software (CPCI-2) User’s Manual, Volume 1
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GNCC USERS MANUAL	Ground Mobile Forces (GMF) Network Control Center User's Manual
GSD-TR-5644	DOSS User Manual. 1 May 1995
GSD-TR-5645	DASA User Manual
IDNX MANUAL	IDNX Contractor Manual
IETM/AN/GSC-52A, 78C, 39C	Interactive Electronic Technical Manual AN/GSC-52A, AN/FSC-78C, AN/GSC-39C
ITOS O&M MANUAL	Intermediate Tactical Orderwire System Operation and Maintenance (O&M) Manual
MTPH VOLUME 1	MILSTAR Terminal Positional Handbook, Volume 1
MTPH VOLUME 2	MILSTAR Terminal Positional Handbook, Volume 2
NCB	Network Control Book (NCB) (SECRET)
OSP-1310	Software/Operator User's Guide (MIDAS)
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PROMINA1	Promina 800 Series Operator Interface
PROMINA2	Promina 800 Series quick Reference Guide
PROMINA3	Promina 800 Series Common Equipment Modules Manual
PROMINA4	Promina 800 Series Trunk Modules Manual
PROMINA5	Promina 800 Series Voice Modules Manual
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TM 11-5805-705-12	Operator's and Unit Maintenance Manual for Digital Data Modem MD-1026(P)/G (Reprinted w/Basic Incl C1-2). 17 September 1984
TM 11-5805-705-34	Direct Support and General Support Maintenance Manual for Digital Data Modem, MD-1026(P)/G (Reprinted w/Basic Incl C1). 9 July 1985
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TM 11-5895-1358-13-1	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Satellite Network Monitoring Subsystem AN/GSC-51(V)1 and AN/GSC-51(V)2. 15 September 1993

TM 11-5895-1358-13-2	Operator's, Unit, and Direct Support Maintenance Manual for Satellite Network Monitoring Subsystem AN/GSC-51(V)1 and AN/GSC-51(V)2 (Reprinted w/Basic Incl C1-3). 15 September 1993
TM 11-5895-1368-13	Operator's, Unit, and Direct Support Maintenance Manual Control, Communication System AN/FSC-160(V) (P/O DSCS Operations Center). 15 October 1993
TM 11-5895-1398-13	Operator's, Unit, and Direct Support Maintenance Manual for Communication System AN/GSC-63 (Reprinted w/Basic Incl C1). 15 September 1991
TM 11-5895-1399-13	Operator's, Unit, and Direct Support Maintenance Manual for Control, Communication System AN/FSC-115 (Reprinted w/Basic Incl C1). (Item also produced in electronic media and included on EM 0169.) 15 September 1991
TM 11-5895-1401-34	Direct Support and General Support Maintenance Manual for Amplifier, Radio Frequency AM-6701/TSC (NSN 5895-01-042-3421) and Power Supply PP-7920/TSC-94A(V) (5895-01-164-0587). 1 August 1990.
TM 11-5895-1402-34	Direct Support and General Support Maintenance Manual for Converters, Frequency Electronic CV-3198B/TSC and CV-3201B/TSC. 1 October 1990
TM 11-5895-1410-13	Operator, Organizational, and Direct Support Maintenance for Smart Multi-Circuit Terminal (SMCT) II AN/FGQ-13. (Item also produced in electronic media and included on EM 0169.) 15 May 1992
TM 11-5895-1433-12-1	Operator's and Organizational Maintenance Manual for Satellite Communications Terminals AN/TSC-85B(V)1 and AN/TSC-85B(V)2 Operation and.....(Reprinted w/Basic Incl C1). (Item also produced in electronic media and included on EM 0169.) 15 September 1991
TM 11-5895-1433-12-2	Operator's and Organizational Maintenance Manual for Satellite Communications Terminals AN/TSC-85B(V)1 and AN/TSC-85B(V)2 (Reprinted w/Basic Incl C1-2). (Item also produced in electronic media and included on EM 0169.) 15 September 1991
TM 11-5895-1433-34	Direct Support and General Support Maintenance Manual for Satellite Communications Terminals AN/TSC-85B(V)1 and AN/TSC-85B(V)2 (Reprinted w/Basic Incl C1-2). (Item also produced in electronic media and included on EM 0169.) 15 September 1991
TM 11-5895-1434-12-1	Operator's and Organizational Maintenance Manual for Satellite Communications Terminals AN/TSC-93B(V)1 and AN/TSC-93B(V)2 (Reprinted w/Basic Incl C1). (Item also produced in electronic media and included on EM 0169.) 15 September 1991
TM 11-5895-1434-12-2	Operator's and Organizational Maintenance Manual for Satellite Communications Terminals AN/TSC-93B(V)1 and AN/TSC-93B(V)2 Organizational.....(Reprinted w/Basic Incl C1-2). (Item also produced in electronic media and included on EM 0169.) 15 September 1991
TM 11-5895-1434-34	Direct Support and General Support Maintenance Manual for Satellite Communications Terminals AN/TSC-93B(V)1 and AN/TSC-93B(V)2 (Reprinted w/Basic Incl C1-2). (Item also produced in electronic media and included on EM 0169.) 15 September 1991
TM 11-5895-1448-10	Operator's System Manual for Ground Mobile Forces Satellite Communications Systems. (Item also produced in electronic media and included on EM 0169.) 1 September 1992
TM 11-5895-1531-30	Operator's Unit and Direct Support Maintenance Manual, Signal Generator Group. 23 November 1994

TM 11-5895-1532-30	Operator's Unit and Direct Support Maintenance Manual, Alarm Monitor Group. 23 November 1994
TM 11-5895-1533-30	Operator's Unit and Direct Support Maintenance Manual, Frequency Transmitter Group. 23 November 1994
TM 11-5895-1534-30	Operator's Unit and Direct Support Maintenance Manual, Frequency Converter Group. 23 November 1994
TM 11-5895-1535-12	Operator's and Unit Maintenance Manual for Satellite Communications Terminal AN/FSC-78B. 23 November 1994
TM 11-5895-1536-13	Operator's Unit and Direct Support Maintenance Manual, RF Amplifier. 23 November 1994
TM 11-5895-1537-13	Operator's Unit and Direct Support Maintenance Manual, Up/Down Converter. 23 November 1994
TM 11-5895-1557-30-1	Direct Support Maintenance Manual for Satellite Communications Terminals AN/FSC-78B(V)1/(V)2/(V)3/(V)4/(V)5, AN/FSC-79A(V)1/(V)2, and AN/GSC-39B Ancillary Equipment
TM 11-5895-1558-13	Operator's Unit and Direct Support Maintenance Manual, Reference Signal Generator. 23 November 1994
TM 11-5895-1630-13&P	Operator’s, Unit and Direct Support Maintenance Manual: Communication Subsystem AN/USC-63 (MIDAS). 14 March 2002
TM 11-5895-1686-13	Integrated Control Console
TM 11-5895-1687-13	Operators, Unit, and Direct Support Maintenance Manual
TM 11-5895-797-14	Operator's, Organizational, Direct Support, and General Support Maintenance Manual: Analog-Digital Converter CV-3034/G. 11 March 1977
TM 11-5895-808-13-1	Operator's, Unit, and Direct Support Maintenance Manual for Satellite Communications Set, AN/USC-28(V). (Item also produced in electronic media and included on EM 0169.) 1 May 1994
TM 11-5895-808-13-10	Operator's, Unit, and Direct Support Maintenance Manual for Satellite Communications Set AN/USC-28(V). (Item also produced in electronic media and included on EM 0169.) 1 May 1994
TM 11-5895-808-13-11	Operator's, Organizational, and Direct Support Maintenance Manual Satellite Communications Set AN/USC-28(V) (Reprinted w/Basic Incl C1-2). (Item also produced in electronic media and included on EM 0169.) 15 August 1988
TM 11-5895-808-13-2	Operator's, Organizational and Direct Support Maintenance Manual for Satellite Communications Set, AN/USC-28(V) (Reprinted w/Basic Incl C1-7). (Item also produced in electronic media and included on EM 0169.) 21 November 1983
TM 11-5895-808-13-3	Operator's, Organizational and Direct Support Maintenance for Satellite Communications Set, AN/USC-28(V) (Reprinted w/Basic Incl C1-6). (Item also produced in electronic media and included on EM 0169.) 26 October 1983
TM 11-5895-808-13-4	Operator's, Organizational and Direct Support Maintenance for Satellite Communications Set, AN/USC-28(V). 4 October 1983
TM 11-5895-808-13-5	Operator's, Unit and Direct Support Maintenance Manual for Satellite Communications Set, AN/USC-28(V). (Item also produced in electronic media and included on EM 0169.) 1 May 1994
TM 11-5895-808-13-6	Operator's, Organizational and Direct Support Maintenance Manual for Satellite Communications Set, AN/USC-28(V) (Reprinted w/Basic Incl C1-3). (Item also produced in electronic media and included on EM 0169.) 14 October 1983

TM 11-5895-808-13-7	Operator's, Organizational, and Direct Support Maintenance Manual for Satellite Communications Set, AN/USC-28(V) (Reprinted w/Basic Incl C1-3). (Item also produced in electronic media and included on EM 0169.) 14 October 1983
TM 11-5895-808-13-8	Operator's, Organizational, and Direct Support Maintenance Manual for Satellite Communications Set, AN/USC-28(V) (Reprinted w/Basic Incl C1-4). (Item also produced in electronic media and included on EM 0169.) 4 October 1983
TM 11-5895-808-13-9	Operator's, Organizational, and Direct Support Maintenance Manual for Satellite Communications Set, AN/USC-28(V) (Reprinted w/Basic Incl C1-6). (Item also produced in electronic media and included on EM 0169.) 9 November 1983
TM 11-5895-808-23P	Unit and Direct Support Maintenance Repair Parts and Special Tools List for Satellite Communications Set AN/USC-28(V). (Item also produced in electronic media and included on EM 0169.) 1 May 1994
TM 11-5895-843-14	Operator, Organizational, Direct Support and General Support Maintenance Manual for Echo Suppressor, MX-9635/TSC and MX-9635A/TSC (Reprinted w/Basic Incl C1-3). 30 August 1979
TM 11-5895-846-14	Operator's, Organization, Direct Support, and General Support Maintenance Manual for Satellite Communications Terminal, AN/TSC-86. 13 May 1983
TM 11-5895-898-12-1	Operator and Organizational Maintenance Manual: Satellite Communication Terminal AN/FSC-78(V) (Reprinted w/Basic Incl C1-2). 25 September 1978
TM 11-5895-900-34	Direct Support and General Support Maintenance Manual for Antenna and Microwave Equipment Including Feed Assembly, AS-2941( )/FSC; Dehumidifier, Desiccant, Electric HD-988/G for Satellite Communication Terminals (Reprinted w/Basic Incl C1-2). 8 September 1978
TM 11-5985-359-13	Operator's, 0rganizational, and Direct Support Maintenance Manual for Antenna AS-3199/TSC (Reprinted w/Basic Incl C1-3). (Item also produced in electronic media and included on EM 0169.) 2 June 1981
TM 11-5985-372-13-1	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Quick Reaction Satellite Antenna Group Single Carrier Feed OE-361(V)1/G and Multiple Carrier Feed OE-361(V)2/G (Reprinted w/Basic Incl C1-2). 15 October 1988
TM 11-5985-398-13	Antenna Groups OE-170E(V)1/FSC, OE-170E(V)2/FSC, OE-170E(V)3/FSC, OE-170E(V)4/FSC, and OE-215A/FSC
TM 11-7025-221-10	Operator's Manual for Multiplexer, Digital, TD-1337(V)1/G, TD-1337(V)2/G, TD-1337(V)3/G, and TD-1337(V)4/G. (Item also produced in electronic media.) 20 August 1982
TM 11-7025-221-20	Organizational Maintenance Manual for Multiplexers, Digital, TD-1337(V)1/G Through TD-1337(V)4/G. (Item also produced in electronic media.) 1 November 1982
TM 11-7025-221-34	Direct Support and General Support Maintenance Manual for Multiplexer, Digital, TD-1337(V)1/G Through TD-1337(V)4/G. 23 June 1983
TM 38-L32-11	Functional User's Manual for Direct Support Unit Standard Supply System (DS4): Customer (User) Procedures (Divisional and Nondivisional). 1 June 1989

TM 5-4120-243-14	Operator's, Organizational, Direct Support, General Support and Depot Maintenance Manual for air Conditioner, Horizontal, Compact, 18,000 BTU, 208 V, 3 Phase, 50-60 Hertz; Harvey W. Hottel Model CH20-6-08; American Air Filter Mod.... 28 October 1971
TM 5-6115-545-12	Operator's and Organizational Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical, Skid Mtd, 60 KW, 3 Phase, 4 Wire 120/...(Reprinted w/Basic Incl C1-18). (Item also produced in electronic media and included on EM 0086.) 10 June 1973
TM 5-6115-585-12	Operator and Organizational Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical Skid Mtd 10 KW, 1 Phase, 2 Wire...(Reprinted w/Basic Incl C1-12). (Item also produced in electronic media and included on EM 0086.) 25 July 1977
TM 9-4120-360-14	Operator, Unit, Direct Support and General Support Maintenance Manual for Air Conditioner, Vertical Compact Type 1, Vertical, Size C: 18,000 BTU/HR, Class 1, 208 Volt, 3 Phase, 50/60 Hertz KECO Model F18T 2 (Reprinted w/Basic Incl C1-6). 16 September 1993
TM 9-6115-464-12	Operator and Unit Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical Skid Mtd 15 KW, 3 Phase, 4 Wire, 120/208 and 240/416...(Reprinted w/Basic Incl C1). (Item also produced in electronic media and included on EM 0086.) 30 July 1993
TM CQT-6400-IOM-02	CQM-248A, PSK Digital Satellite Modem, Installation and Operation Manual

Training Support Packages

CPS2L3	Introduction to the MILSTAR System. 1 December 2003
CPS2L4	MILSTAR Resource Management. 1 December 2003
CPS2L5	MILSTAR Cryptographic Management. 1 October 2002

Related Publications

Related publications are sources of additional information. They are not required in order to understand this publication.

Army Correspondence Course Program Subcourses

AG0104	Administrative Forms Management Program
AG0218	Using Military Publications and Establishing File
AG0404	Modern Army Recordkeeping System (MARKS)
AR0603	Maintenance Service Records
AR0606	Repair Parts Supply
AR0609	The Unit Maintenance Program
AV0584	Safety Programs
IT0588	Prepare and Maintain Intelligence Situation Map and Associated Overlays
MP1000	Physical Security Training
OD1403	Shop Safely
QM2010	Check the Accuracy of Prescribed Load List (PLL) Records
QM2386	Establish a Fire Preventive and Safety Program
QM3069	Evaluate Prescribed Load List (PLL) Procedures
QM6155	Maintain Files of Accounting Records
SS0651	Shop Practices and Safety.

SUBCOURSE AG 0404	The Army Functional Files System
SUBCOURSE AG 0409	Freedom of Information and Privacy Acts

Army Regulations

AR 380-15	Safeguarding Classified NATO Information (U). 1 March 1984
AR 380-5	Department of the Army Information Security Program (Item only produced in electronic media and included on EM 0001). 29 September 2000
AR 385-10	The Army Safety Program. 23 May 1988
AR 385-40	Accident Reporting and Records. 1 November 1994.
AR 750-1	Army Materiel Maintenance Policy and Retail Maintenance Operations (Only available in electronic media on EM 0001). 1 August 1994

Department of Army Forms

DA FORM 2402	Exchange Tag (Only available in electronic media).
DA FORM 2405	Maintenance Request Register (Only available in electronic media).
DA FORM 2406	Materiel Condition Status Report (Available through normal publishing channels and included on EM 0001).
DA FORM 2407	Maintenance Request.
DA FORM 2407-1	Maintenance Request - Continuation Sheet.
DA FORM 5164-R	Hands-On Evaluation (LRA) (This item is included on EM 0001).

Department of Army Pamphlets

DA PAM 25-40	Administrative Publications: Action Officers Guide (Item only produced in electronic media and included on EM 0001). 30 April 2002
DA PAM 351-20	Army Correspondence Course Program Catalog. 1 October 1999
DA PAM 710-2-2	Supply Support Activity Supply System: Manual Procedures. (Only available in electronic media.) 30 September 1998
DA PAM 738-750	Functional Users Manual for the Army Maintenance Management System (TAMMS) (Item only produced in electronic media and included on EM 0001). 1 August 1994

Department of Army Visual Information Production and Distribution Program

201-113-0321-B	Introduction to Satellite Communications

Department of Defense Publications

DD FORM 1970	Motor Equipment Utilization Record.
DD FORM 2332	Materiel Deficiency Exhibit.

Field Manuals

FM 11-43	The Signal Leader's Guide. 12 June 1995
FM 11-55	Mobile Subscriber Equipment (MSE) Operations (This item is included on EM 0205). 22 June 1999
FM 21-75	Combat Skills of the Soldier (Item also produced in electronic media and included on EM 0205). 3 August 1984
FM 9-43-1	Maintenance Operations and Procedures. 21 February 1997

Graphic Training Aids

11-10-14	Operation, Converter Telephone Signal

Other Product Types

APPENDIX A (25S)	Sample TSO
APPLICABLE TSO	Telecommunications Service Order
GSD-TR-5644	DOSS User Manual. 1 May 1995
GSD-TR-5645	DASA User Manual
HP MANUAL 02100-90157	Diagnostic Configuration Reference Manual. March 1980
HP MANUAL 02109-90015	Installation and Service Manual HP-1000 E-Series Computer HP-2109B and HP-2113B. February 1983
HP MANUAL 02631-90909	Operator's Manual HP-263VG Graphics Printer. December 1978
HP MANUAL 02648-90001	Graphics Terminal User Manual. January 1979
HP MANUAL 02648-90002	Graphics Terminal 2648A Reference Manual. August 1979
HP MANUAL 02648-90003	Service Manual Model 2648A Graphics Terminal. April 1979
HP MANUAL 07906-90902	Installation Manual 7906 Disc Drive. March 1982
HP MANUAL 07906-90903	Service Manual 7906 Disc Drive. July 1983
HP MANUAL 13037-90006	Operating and Service Manual 13037 Disc Controller. March 1982
HP MANUAL 13037-90015	Installation and Service Manual 13175/13178 Disc Controller Interface Kits. March 1982
IDNX MANUAL	IDNX Contractor Manual
PROMINA2	Promina 800 Series quick Reference Guide
PROMINA3	Promina 800 Series Common Equipment Modules Manual
PROMINA4	Promina 800 Series Trunk Modules Manual
PROMINA5	Promina 800 Series Voice Modules Manual
PROMINA6	Promina 800 Series Data Modules Manual
SAT REF DATA HANDBOOK	Satellite (SAT) Reference (REF) Data Handbook (Volume 2)

Technical Bulletins

TB 380-41	Security: Procedures for Safeguarding, Accounting, and Supply Control of COMSEC Material. (Item only produced in electronic media and included on EM 0248.) 3 July 2003

Technical Manuals

TM 11-5805-795-13	Time Division Multiplexer Group OB-119/FCC-100 (V)7
TM 11-5805-802-13&P	Operator's, Unit, and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for Communications Subsystem ON-505(V)1(P)T; ..... ON-505(V)5(P)T (Item also produced in electronic media and included on EM 0059). 15 December 2000
TM 11-5895-1127-10	Operator's Manual for Satellite Communications Terminals AN/TSC-93B(V)1 and AN/TSC-93B(V)2. (Item also produced in electronic media and included on EM 0169 (NG).) 15 April 1986

TM 11-5895-1127-20	Organizational Maintenance Manual for Satellite Communications Terminal AN/TSC-93A. (Item also produced in electronic media and included on EM 0169 (NG).) 15 April 1986
TM 11-5895-1127-34	DS and GS Maintenance Manual for SATCOM Terminal, AN/TSC-93B(V)1 and AN/TSC-93B(V)2 (Reprinted w/Basic Incl C1-2). (Item also produced in electronic media and included on EM 0169 (NG).) 1 September 1986
TM 11-5895-1128-10	Operator's Manual for SATCOM Terminals, AN/TSC-85B(V)1 and AN/TSC-85B(V)2. (Item also produced in electronic media and included on EM 0169) (NG). 15 April 1986
TM 11-5895-1128-20	Organizational Maintenance Satellite Communications Terminal, AN/TSC-85A. (Item also produced in electronic media and included on EM 0169) (NG). 15 April 1986
TM 11-5895-1162-10	Operator's Manual for Satellite Communications Terminals AN/GSC-49(V)1, AN/GSC-49(V)2, and AN/GSC-49(V)3. (Item also produced in electronic media and included on EM 0169.) 1 September 1987
TM 11-5895-1162-24-1	Organizational, Direct Support, and General Support Maintenance Manual for Satellite Communications Terminals AN/GSC-49(V)1, AN/GSC-49(V)2, and AN/GSC-49(V)3. (Item also produced in electronic media and included on EM 0169.) 1 September 1987
TM 11-5895-1162-24-2	Organizational, Direct Support, and General Support Maintenance Manual for Satellite Communications Terminals AN/GSC-49(V)1, AN/GSC-49(V)2, Volume 2 of 2. (Item also produced in electronic media and included on EM 0169.) 15 September 1987
TM 11-5895-1196-13-2	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium SATCOM Terminal AN/GSC-52(V)1, Fixed (Earth Terminal) (Reprinted w/Basic Incl C1-3). (Item also produced in electronic media and included on EM 0169.) 15 March 1990
TM 11-5895-1196-13-3	Operator's, Unit, and Intermediate DS Maintenance Manual for Medium SATCOM Terminal AN/GSC-52(V)1, Fixed (Earth Terminal) (Reprinted w/Basic Incl C1-3). (Item also produced in electronic media and included on EM 0169.) 15 March 1990
TM 11-5895-1196-13-4	Operator's, Unit, and Intermediate DS Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)1, Fixed (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 March 1990
TM 11-5895-1196-13-5	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)1, Fixed (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 March 1990
TM 11-5895-1196-13-6	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)1, Fixed (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 March 1990
TM 11-5895-1196-13-7	Operator's, Unit, and Intermediate DS Maintenance Manual for Medium SATCOM Terminal AN/GSC-52(V)1, Fixed (Earth Terminal) (Reprinted w/Basic Incl C1-3). (Item also produced in electronic media and included on EM 0169.) 15 March 1990

TM 11-5895-1196-13-8	Operator's, Unit, and Intermediate DS Maintenance Manual for Medium SATCOM Terminal AN/GSC-52(V)1, Fixed (Earth Terminal) (Reprinted w/Basic Incl C1-2). (Item also produced in electronic media and included on EM 0169.) 15 March 1990
TM 11-5895-1196-13-9	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)1, Fixed (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 March 1990
TM 11-5895-1197-13-1	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium SATCOM Terminal AN/GSC-52(V)2, Vanized (Earth Terminal) (Reprinted w/Basic Incl C1). 15 February 1990
TM 11-5895-1197-13-10	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1197-13-11	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1197-13-3	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1197-13-4	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1197-13-5	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1197-13-6	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1197-13-7	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1197-13-8	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1197-13-9	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Medium Satellite Communications Terminal AN/GSC-52(V)2, Vanized (Earth Terminal). (Item also produced in electronic media and included on EM 0169.) 15 February 1990
TM 11-5895-1215-20	Organizational Maintenance Manual for Multiplexers/Demultiplexers, TD-1389(P)(V)1/G and TD-1389(P)(V)2/G. (Item also produced in electronic media and included on EM 0169.) 15 May 1992
TM 11-5895-1223-34	Direct Support and General Support Maintenance Manual for High Voltage Power Supply PP-7712(V)2/G. 15 April 1986 (C1-3)

TM 11-5895-1346-13	Operator's, Organizational, and Direct Support Maintenance Manual for Modem Group OM-73(V)G, Electronic Equipment Frame MT-6446/G, Modem Controller C-11640/G..... (Item also produced in electronic media and included on EM 0169.) 1 October 1989
TM 11-5895-1357-13-1	Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Satellite Network Control Subsystem AN/FSC-96. (Item also produced in electronic media.) 15 September 1993
TM 11-5895-1531-30	Operator's Unit and Direct Support Maintenance Manual, Signal Generator Group. 23 November 1994
TM 11-5895-1532-30	Operator's Unit and Direct Support Maintenance Manual, Alarm Monitor Group. 23 November 1994
TM 11-5895-1533-30	Operator's Unit and Direct Support Maintenance Manual, Frequency Transmitter Group. 23 November 1994
TM 11-5895-1534-30	Operator's Unit and Direct Support Maintenance Manual, Frequency Converter Group. 23 November 1994
TM 11-5895-1535-12	Operator's and Unit Maintenance Manual for Satellite Communications Terminal AN/FSC-78B 23 November 1994
TM 11-5895-1536-13	Operator's Unit and Direct Support Maintenance Manual, RF Amplifier. 23 November 1994
TM 11-5895-1537-13	Operator's Unit and Direct Support Maintenance Manual, Up/Down Converter. 23 November 1994
TM 11-5895-1544-13&P	Operator's, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Network Planning Terminal AN/UYK-100 MSE (This item is included on EM 0075). 1 September 1997
TM 11-5895-1557-30-1	Direct Support Maintenance Manual for Satellite Communications Terminals AN/FSC-78B(V)1/(V)2/(V)3/(V)4/(V)5, AN/FSC-79A(V)1/(V)2, & AN/GSC-39B Ancillary Equipment
TM 11-5895-1558-13	Operator's Unit and Direct Support Maintenance Manual, Reference Signal Generator. 23 November 1994
TM 11-5895-1630-13&P	Operator's, Unit and Direct Support Maintenance Manual; Communication Subsystem AN/USC-63 (MIDAS). 14 March 2002
TM 11-5895-1686-13	Integrated Control Console
TM 11-5895-808-13-1	Operator's, Unit, and Direct Support Maintenance Manual for Satellite Communications Set, AN/USC-28(V). (Item also produced in electronic media and included on EM 0169.) 1 May 1994
TM 11-5895-846-14	Operator's, Organization, Direct Support, and General Support Maintenance Manual for Satellite Communications Terminal, AN/TSC-86. 13 May 1983
TM 11-5985-359-13	Operator's, 0rganizational, and Direct Support Maintenance Manual for Antenna AS-3199/TSC (Reprinted w/Basic Incl C1-3). (Item also produced in electronic media and included on EM 0169.) 2 June 1981
TM 11-7025-221-10	Operator's Manual for Multiplexer, Digital, TD-1337(V)1/G, TD-1337(V)2/G, TD-1337(V)3/G, and TD-1337(V)4/G. (Item also produced in electronic media.) 20 August 1982
TM 11-7025-221-20	Organizational Maintenance Manual for Multiplexers, Digital, TD-1337(V)1/G Through TD-1337(V)4/G. (Item also produced in electronic media.) 1 November 1982
TM 5-4120-222-14	Operator's, Organizational, Direct Support and General Support Maintenance Manual: Air Conditioner, Compact Vertical, 208V, 3 Phase, 18,000 BTUH Cooling; 12,000 BTUH Heating (Trane Models); 50/60 Hz (Model CE20VAL6) and 400 Hz (Model CE20VA

TM 5-4120-222-24P	Organizational, Direct and General Support Maintenance Repair Parts and Special Tools List for Air Conditioner, Compact Vertical, 208 V, 3 Phase, 18,000 BTU Cooling; 12,000 BTU Heating (Trane Models), 50/60 Hz (Model CE20VAL6) and 400 Hz (M
TM CQT-6400-IOM-02	CQM-248A, PSK Digital Satellite Modem, Installation and Operation Manual

Training Circulars

TC 24-21	Tactical Multichannel Radio Communications Techniques. (Item also produced in electronic media.) 3 October 1988

Training Support Packages

CPS2L3	Introduction to the MILSTAR System. 1 December 2003
CPS2L4	MILSTAR Resource Management. 1 December 2003
CPS2L5	MILSTAR Cryptographic Management. 1 October 2002

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HANDS-ON EVALUATION For use of this form, see STP 11-25S14-SM-TG; the proponent agency is TRADOC		DATE	
TASK TITLE		TASK NUMBER	
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EVALUATOR'S NAME		UNIT	
SOLDIER'S NAME		STATUS ☐ GO	☐ NO GO

DA FORM 5164-R, SEP 85 EDITION OF DEC 82 IS OBSOLETE APD V2.01

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STP 11-25S14-SM-TG
19 MAY 2005

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:

SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army
0511807

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