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Subj: OCCUPATIONAL FIELD 2800 GROUND ELECTRONICS MAINTENANCE TRAINING AND
READINESS MANUAL, (SHORT TITLE: 2800 GROUND T&R MANUAL)

Ref: (a) MCO P3500.72A
(b) MCO 1553.3A
(c) MCO 3400.3F
(d) MCO 3500.27A
(e) MCRP 3-0A
(f) MCRP 3-0B
(g) MCO 1553.2A

1. Purpose. Per reference (a), this T&R Manual establishes Individual Training Standards (ITS) for required events for standardization of training for Marines assigned within the 2800 Military Occupational Specialty (MOS). Additionally, it provides tasking for formal schools preparing personnel for service in the Marine Corps. This NAVMC supersedes MCO 1510.44C, Individual Training Standards (ITS) System for Ground Electronics maintenance Occupational Field (OCCFLD) 28.

2. Scope

a. Per reference (b), commanders will conduct an internal assessment of the individual Marine's MOS proficiency and develop long-, mid-, and short-range training plans to sustain this proficiency. Training plans will incorporate events to standardize training and provide objective assessment of progress toward attaining individual MOS proficiency. Commanders will keep records at the individual level to record training achievements, identify training gaps, and document objective assessments of readiness associated with training Marines. Commanders will use reference (c) to incorporate nuclear, biological, and chemical defense training into training plans, and reference (d) to integrate operational risk management. References (e) and (f) provide amplifying information for effective planning and management of training within the unit.

b. Formal school and training detachment commanders will use references (a) and (g) to ensure programs of instruction meet skill training requirements established in this manual, and provide career-progression training in the events designated for initial training in the formal school environment.

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

3. Information. CG, TECOM will update this T&R Manual as necessary to provide current and relevant training standards to commanders, and to ensure a current ITS is available for use. All questions pertaining to the Marine Corps Ground T&R Program and Unit Training Management should be directed to: Commanding General, TECOM (Ground Training Branch C 469), 1019 Elliot Road, Quantico, VA 22134.
4. Command. This manual is applicable to the Marine Corps Total Force.
5. Certification. Reviewed and approved this date.


GEORGE. J. FLANN
By direction

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2800 GROUND T&R MANUAL

TABLE OF CONTENTS

CHAPTER

1 OVERVIEW
2 INDIVIDUAL EVENTS

APPENDICES

A ACRONYMS AND ABBREVIATIONS
B TERMS AND DEFINITIONS
C REFERENCES

2800 GROUND T&R MANUAL

CHAPTER 1

OVERVIEW

	<u>PARAGRAPH</u>	<u>PAGE</u>
INTRODUCTION.	1000	1-2
UNIT TRAINING	1001	1-2
UNIT TRAINING MANAGEMENT.	1002	1-3
SUSTAINMENT AND EVALUATION OF TRAINING.	1003	1-3
ORGANIZATION.	1004	1-4
T&R EVENT CODING.	1005	1-4
COMBAT READINESS PERCENTAGE.	1006	1-5
EVALUATION-CODED (E-CODED) EVENTS	1007	1-6
CRP CALCULATION	1008	1-6
T&R EVENT COMPOSITION	1009	1-7
CBRNE TRAINING.	1010	1-9
NIGHT TRAINING.	1011	1-10
OPERATIONAL RISK MANAGEMENT (ORM)	1012	1-10
APPLICATION OF SIMULATION	1013	1-10
MARINE CORPS GROUND T&R PROGRAM	1014	1-11

2800 GROUND T&R MANUAL

CHAPTER 1

OVERVIEW

1000. INTRODUCTION

1. The T&R Program is the Corps' primary tool for planning, conducting and evaluating training, and assessing training readiness. Subject matter experts (SMEs) from the operating forces developed core capability Mission Essential Task Lists (METLs) for ground communities derived from the Marine Corps Task List (MCTL). T&R manuals are built around these METLs and all events contained in T&R manuals relate directly to this METL. This comprehensive T&R Program will help to ensure the Marine Corps continues to improve its combat readiness by training more efficiently and effectively. Ultimately, this will enhance the Marine Corps' ability to accomplish real-world missions.

2. The T&R Manual contains the individual and collective training requirements to prepare units to accomplish their combat mission. The T&R Manual is not intended to be an encyclopedia that contains every minute detail of how to accomplish training. Instead, it identifies the minimum standards that Marines must be able to perform in combat. The T&R Manual is a fundamental tool for commanders to build and maintain unit combat readiness. Using this tool, leaders can construct and execute an effective training plan that supports the unit's METL. More detailed information on the Marine Corps Ground T&R Program is found in reference (a).

1001. UNIT TRAINING

1. The training of Marines to perform as an integrated unit in combat lies at the heart of the T&R program. Unit and individual readiness are directly related. Individual training and the mastery of individual core skills serve as the building blocks for unit combat readiness. A Marine's ability to perform critical skills required in combat is essential. However, it is not necessary to have all individuals within a unit fully trained in order for that organization to accomplish its assigned tasks. Manpower shortfalls, temporary assignments, leave, or other factors outside the commander's control, often affect the ability to conduct individual training. During these periods, unit readiness is enhanced if emphasis is placed on the individual training of Marines on-hand. Subsequently, these Marines will be mission ready and capable of executing as part of a team when the full complement of personnel is available.

2. Commanders will ensure that all tactical training is focused on their combat mission. The T&R Manual is a tool to help develop the unit's training plan. In most cases, unit training should focus on achieving unit proficiency in the core capabilities METL. However, commanders will adjust their training focus to support METLs associated with a major OPLAN/CONPLAN or named operation as designated by their higher commander and reported accordingly in the Defense Readiness Reporting System (DRRS). Tactical

training will support the METL in use by the commander and be tailored to meet T&R standards. Commanders at all levels are responsible for effective combat training. The conduct of training in a professional manner consistent with Marine Corps standards cannot be over emphasized.

3. Commanders will provide personnel the opportunity to attend formal and operational level courses of instruction as required by this Manual. Attendance at all formal courses must enhance the warfighting capabilities of the unit as determined by the unit commander.

1002. UNIT TRAINING MANAGEMENT

1. Unit Training Management (UTM) is the application of the Systems Approach to Training (SAT) and the Marine Corps Training Principles. This is accomplished in a manner that maximizes training results and focuses the training priorities of the unit in preparation for the conduct of its wartime mission.

2. UTM techniques, described in references (b) and (e), provide commanders with the requisite tools and techniques to analyze, design, develop, implement, and evaluate the training of their unit. The Marine Corps Training Principles, explained in reference (b), provide sound and proven direction and are flexible enough to accommodate the demands of local conditions. These principles are not inclusive, nor do they guarantee success. They are guides that commanders can use to manage unit-training programs. The Marine Corps training principles are:

- Train as you fight
- Make commanders responsible for training
- Use standards-based training
- Use performance-oriented training
- Use mission-oriented training
- Train the MAGTF to fight as a combined arms team
- Train to sustain proficiency
- Train to challenge

3. To maintain an efficient and effective training program, leaders at every level must understand and implement UTM. Guidance for UTM and the process for establishing effective programs are contained in references (a) through (g).

1003. SUSTAINMENT AND EVALUATION OF TRAINING

1. The evaluation of training is necessary to properly prepare Marines for combat. Evaluations are either formal or informal, and performed by members of the unit (internal evaluation) or from an external command (external evaluation).

2. Marines are expected to maintain proficiency in the training events for their MOS at the appropriate grade or billet to which assigned. Leaders are responsible for recording the training achievements of their Marines. Whether it involves individual or collective training events, they must ensure proficiency is sustained by requiring retraining of each event at or

before expiration of the designated sustainment interval. Performance of the training event, however, is not sufficient to ensure combat readiness. Leaders at all levels must evaluate the performance of their Marines and the unit as they complete training events, and only record successful accomplishment of training based upon the evaluation. The goal of evaluation is to ensure that correct methods are employed to achieve the desired standard, or the Marines understand how they need to improve in order to attain the standard. Leaders must determine whether credit for completing a training event is recorded if the standard was not achieved. While successful accomplishment is desired, debriefing of errors can result in successful learning that will allow ethical recording of training event completion. Evaluation is a continuous process that is integral to training management and is conducted by leaders at every level and during all phases of planning and the conduct of training. To ensure training is efficient and effective, evaluation is an integral part of the training plan. Ultimately, leaders remain responsible for determining if the training was effective.

3. The purpose of formal and informal evaluation is to provide commanders with a process to determine a unit's/Marine's proficiency in the tasks that must be performed in combat. Informal evaluations are conducted during every training evolution. Formal evaluations are often scenario-based, focused on the unit's METs, based on collective training standards, and usually conducted during higher-level collective events. References (a) and (f) provide further guidance on the conduct of informal and formal evaluations using the Marine Corps Ground T&R Program.

1004. ORGANIZATION

1. T&R Manuals are organized in one of two methods: unit-based or community-based. Unit-based T&R Manuals are written to support a type of unit (Infantry, Artillery, Tanks, etc.) and contain both collective and individual training standards. Community-based are written to support an Occupational Field, a group of related Military Occupational Specialties (MOSs), or billets within an organization (EOD, NBC, Intel, etc.), and usually only contain individual training standards. T&R Manuals are comprised of chapters that contain unit METs, collective training standards (CTS), and individual training standards (ITS) for each MOS, billet, etc.

2. The Tank T&R Manual is a unit-based manual comprised of 10 chapters. Chapter 2 lists the Core Capability METs and their related Battalion and Company-level events. Chapters 3 through 8 contain collective events. Chapters 9 and 10 contain individual events.

1005. T&R EVENT CODING

1. T&R events are coded for ease of reference. Each event has a 4-4-4-digit identifier. The first four digits are referred to as a "community" and represent the unit type or occupation (TANK, TOW, 1802, etc.). The second four digits represent the functional or duty area (TAC, CMDC, GNRV, etc.). The last four digits represent the level and sequence of the event.

2. The T&R levels are illustrated in Figure 1. An example of the T&R coding used in this Manual is shown in Figure 2.

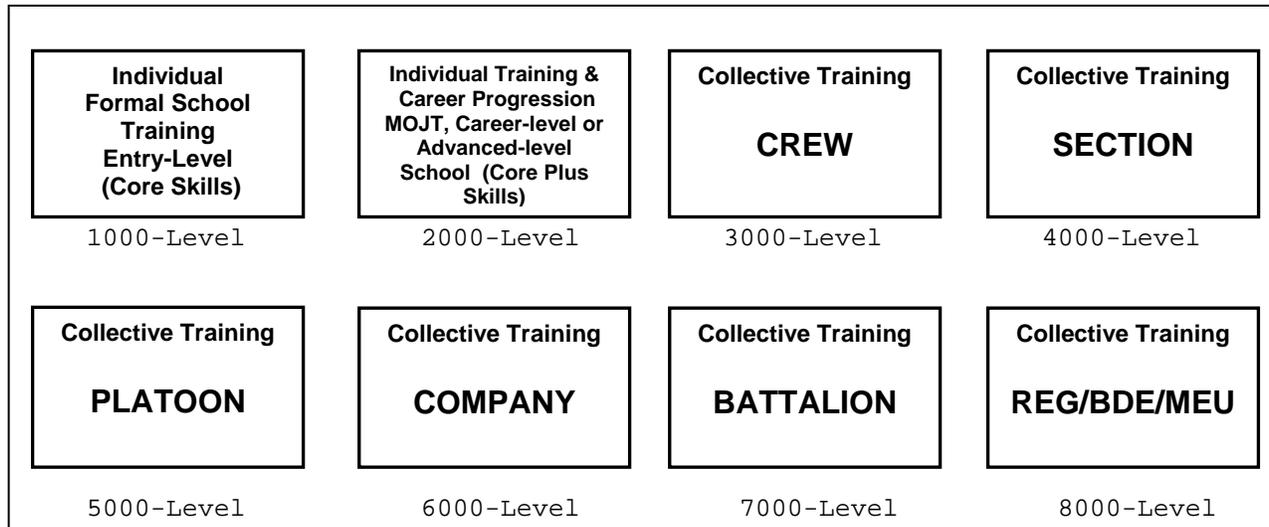


Figure 1: T&R Event Levels

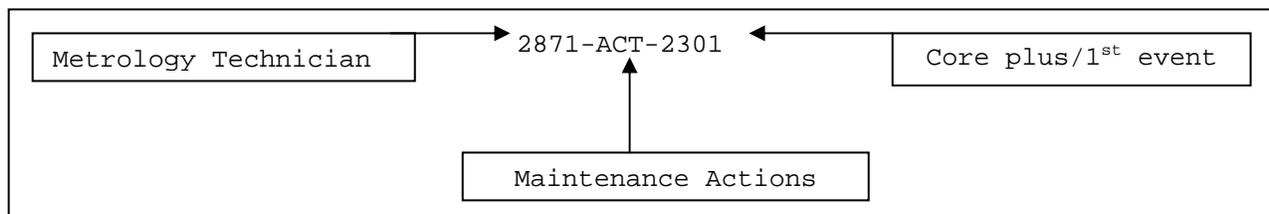


Figure 2: T&R Event Coding

1006. COMBAT READINESS PERCENTAGE

1. The Marine Corps Ground T&R Program includes processes to assess readiness of units and individual Marines. Every unit in the Marine Corps maintains a basic level of readiness based on the training and experience of the Marines in the unit. Even units that never trained together are capable of accomplishing some portion of their missions. Combat readiness assessment does not associate a quantitative value for this baseline of readiness, but uses a "Combat Readiness Percentage", as a method to provide a concise descriptor of the recent training accomplishments of units and Marines.

2. Combat Readiness Percentage (CRP) is the percentage of required training events that a unit or Marine accomplishes within specified sustainment intervals.

3. In unit-based T&R Manuals, unit combat readiness is assessed as a percentage of the successfully completed and current (within sustainment interval) key training events called "Evaluation-Coded" (E-Coded) Events. E-Coded Events and unit CRP calculation are described in follow-on paragraphs. CRP achieved through the completion of E-Coded Events is directly relevant to readiness assessment in DRRS.

4. Individual combat readiness, in both unit-based and community-based T&R Manuals, is assessed as the percentage of required individual events in which a Marine is current. This translates as the percentage of training events for his/her MOS and grade (or billet) that the Marine successfully completes within the directed sustainment interval. Individual skills are developed through a combination of 1000-level training (entry-level formal school courses), individual on-the-job training in 2000-level events, and follow-on formal school training. Skill proficiency is maintained by retraining in each event per the specified sustainment interval.

1007. EVALUATION-CODED (E-CODED) EVENTS

1. Unit-type T&R Manuals can contain numerous unit events, some for the whole unit and others for integral parts that serve as building blocks for training. To simplify training management and readiness assessment, only collective events that are critical components of a mission essential task (MET), or key indicators of a unit's readiness, are used to generate CRP for a MET. These critical or key events are designated in the T&R Manual as Evaluation-Coded (E-Coded) events. Formal evaluation of unit performance in these events is recommended because of their value in assessing combat readiness. Only E-Coded events are used to calculate CRP for each MET.

2. The use of a METL-based training program allows the commander discretion in training. This makes the T&R Manual a training tool rather than a prescriptive checklist.

1008. CRP CALCULATION

1. Collective training begins at the 3000 level (team, crew or equivalent). Unit training plans are designed to accomplish the events that support the unit METL while simultaneously sustaining proficiency in individual core skills. Using the battalion-based (unit) model, the battalion (7000-level) has collective events that directly support a MET on the METL. These collective events are E-Coded and the only events that contribute to unit CRP. This is done to assist commanders in prioritizing the training toward the METL, taking into account resource, time, and personnel constraints.

2. Unit CRP increases after the completion of E-Coded events. The number of E-Coded events for the MET determines the value of each E-Coded event. For example, if there are 4 E-Coded events for a MET, each is worth 25% of MET CRP. MET CRP is calculated by adding the percentage of each completed and current (within sustainment interval) E-Coded training event. The percentage for each MET is calculated the same way and all are added together and divided by the number of METS to determine unit CRP. For ease of calculation, we will say that each MET has 4 E-Coded events, each contributing 25% towards the completion of the MET. If the unit has completed and is current on three of the four E-Coded events for a given MET, then they have completed 75% of the MET. The CRP for each MET is added together and divided by the number of METS to get unit CRP; unit CRP is the average of MET CRP.

For Example:

MET 1: 75% complete (3 of 4 E-Coded events trained)
MET 2: 100% complete (6 of 6 E-Coded events trained)
MET 3: 25% complete (1 of 4 E-Coded events trained)
MET 4: 50% complete (2 of 4 E-Coded events trained)
MET 5: 75% complete (3 of 4 E-Coded events trained)

To get unit CRP, simply add the CRP for each MET and divide by the number of METS:

MET CRP: $75 + 100 + 25 + 50 + 75 = 325$

Unit CRP: $325 \text{ (total MET CRP)} / 5 \text{ (total number of METS)} = 65\%$

1009 T&R EVENT COMPOSITION

1. This section explains each of the components of a T&R event. These items are included in all events in each T&R Manual.

a. Event Code (see Sect 1006). The event code is a 4-4-4 character set. For individual training events, the first 4 characters indicate the occupational function. The second 4 characters indicate functional area (TAC, CBTS, VOPS, etc.). The third 4 characters are simply a numerical designator for the event.

b. Event Title. The event title is the name of the event.

c. E-Coded. This is a "yes/no" category to indicate whether or not the event is E-Coded. If yes, the event contributes toward the CRP of the associated MET. The value of each E-Coded event is based on number of E-Coded events for that MET. Refer to paragraph 1008 for detailed explanation of E-Coded events.

d. Supported MET(s). List all METs that are supported by the training event.

e. Sustainment Interval. This is the period, expressed in number of months, between evaluation or retraining requirements. Skills and capabilities acquired through the accomplishment of training events are refreshed at pre-determined intervals. It is essential that these intervals are adhered to in order to ensure Marines maintain proficiency.

f. Billet. Individual training events may contain a list of billets within the community that are responsible for performing that event. This ensures that the billet's expected tasks are clearly articulated and a Marine's readiness to perform in that billet is measured.

g. Grade. Each individual training event will list the rank(s) at which Marines are required to learn and sustain the training event.

h. Initial Training Setting. For Individual T&R Events only, this specifies the location for initial instruction of the training event in one of three categories (formal school, managed on-the-job training, distance

learning). Regardless of the specified Initial Training Setting, any T&R event may be introduced and evaluated during managed on-the-job training.

(1) "FORMAL" - When the Initial Training Setting of an event is identified as "FORMAL" (formal school), the appropriate formal school or training detachment is required to provide initial training in the event. Conversely, formal schools and training detachments are not authorized to provide training in events designated as Initial Training Setting "MOJT" or "DL." Since the duration of formal school training must be constrained to optimize Operating Forces' manning, this element provides the mechanism for Operating Forces' prioritization of training requirements for both entry-level (1000-level) and career-level (2000-level) T&R Events. For formal schools and training detachments, this element defines the requirements for content of courses.

(2) "DL" - Identifies the training event as a candidate for initial training via a Distance Learning product (correspondence course or MarineNet course).

(3) "MOJT" - Events specified for Managed On-the-Job Training are to be introduced to Marines, and evaluated, as part of training within a unit by supervisory personnel.

i. Event Description. Provide a description of the event purpose, objectives, goals, and requirements. It is a general description of an action requiring learned skills and knowledge (e.g. Camouflage the M1A1 Tank).

j. Condition. Describe the condition(s), under which tasks are performed. Conditions are based on a "real world" operational environment. They indicate what is provided (equipment, materials, manuals, aids, etc.), environmental constraints, conditions under which the task is performed, and any specific cues or indicators to which the performer must respond. When resources or safety requirements limit the conditions, this is stated.

k. Standard. The standard indicates the basis for judging effectiveness of the performance. It consists of a carefully worded statement that identifies the proficiency level expected when the task is performed. The standard provides the minimum acceptable performance parameters and is strictly adhered to. The standard for collective events is general, describing the desired end-state or purpose of the event. While the standard for individual events specifically describe to what proficiency level in terms of accuracy, speed, sequencing, quality of performance, adherence to procedural guidelines, etc., the event is accomplished.

l. Event Components. Describe the actions composing the event and help the user determine what must be accomplished and to properly plan for the event.

m. Prerequisite Events. Prerequisites are academic training or other T&R events that must be completed prior to attempting the task. They are lower-level events or tasks that give the individual/unit the skills required to accomplish the event. They can also be planning steps, administrative requirements, or specific parameters that build toward mission accomplishment.

n. Chained Events. Collective T&R events are supported by lower-level collective and individual T&R events. This enables unit leaders to effectively identify subordinate T&R events that ultimately support specific mission essential tasks. When the accomplishment of any upper-level events, by their nature, result in the performance of certain subordinate and related events, the events are "chained." The completion of chained events will update sustainment interval credit (and CRP for E-Coded events) for the related subordinate level events.

o. Related Events. Provide a list of all Individual Training Standards that support the event.

p. References. The training references are utilized to determine task performance steps, grading criteria, and ensure standardization of training procedures. They assist the trainee in satisfying the performance standards, or the trainer in evaluating the effectiveness of task completion. References are also important to the development of detailed training plans.

q. Distance Learning Products (IMI, CBT, MCI, etc.). Include this component when the event can be taught via one of these media methods vice attending a formal course of instruction or receiving MOJT.

r. Support Requirements. This is a list of the external and internal support the unit and Marines will need to complete the event. The list includes, but is not limited to:

- Range(s)/Training Area
- Ordnance
- Equipment
- Materials
- Other Units/Personnel
- Other Support Requirements

s. Miscellaneous. Provide any additional information that assists in the planning and execution of the event. Miscellaneous information may include, but is not limited to:

- Admin Instructions
- Special Personnel Certifications
- Equipment Operating Hours
- Road Miles

2. Community-based T&R manuals have several additional components not found in unit-based T&R manuals. These additions do not apply to this T&R Manual.

1010. CBRNE TRAINING

1. All personnel assigned to the operating force must be trained in chemical, biological, radiological, nuclear, and explosive incident defense (CBRNE), in order to survive and continue their mission in this environment. Individual proficiency standards are defined as survival and basic operating standards. Survival standards are those that the individual must master in order to survive CBRNE attacks. Basic operating standards are those that the

individual, and collectively the unit, must perform to continue operations in a CBRNE environment.

2. In order to develop and maintain the ability to operate in an CBRNE environment, CBRNE training is an integral part of the training plan and events in this T&R Manual. Units should train under CBRNE conditions whenever possible. Per reference (c), all units must be capable of accomplishing their assigned mission in a contaminated environment.

1011. NIGHT TRAINING

1. While it is understood that all personnel and units of the operating force are capable of performing their assigned mission in "every climate and place," current doctrine emphasizes the requirement to perform assigned missions at night and during periods of limited visibility. Basic skills are significantly more difficult when visibility is limited.

2. To ensure units are capable of accomplishing their mission they must train under the conditions of limited visibility. Units should strive to conduct all events in this T&R Manual during both day and night/limited visibility conditions. When there is limited training time available, night training should take precedence over daylight training, contingent on individual, crew, and unit proficiency.

1012. OPERATIONAL RISK MANAGEMENT (ORM)

1. ORM is a process that enables commanders to plan for and minimize risk while still accomplishing the mission. It is a decision making tool used by Marines at all levels to increase operational effectiveness by anticipating hazards and reducing the potential for loss, thereby increasing the probability of a successful mission. ORM minimizes risks to acceptable levels, commensurate with mission accomplishment.

2. Commanders, leaders, maintainers, planners, and schedulers will integrate risk assessment in the decision-making process and implement hazard controls to reduce risk to acceptable levels. Applying the ORM process will reduce mishaps, lower costs, and provide for more efficient use of resources. ORM assists the commander in conserving lives and resources and avoiding unnecessary risk, making an informed decision to implement a course of action (COA), identifying feasible and effective control measures where specific measures do not exist, and providing reasonable alternatives for mission accomplishment. Most importantly, ORM assists the commander in determining the balance between training realism and unnecessary risks in training, the impact of training operations on the environment, and the adjustment of training plans to fit the level of proficiency and experience of Sailors/Marines and leaders. Further guidance for ORM is found in references (b) and (d).

1013. APPLICATION OF SIMULATION

1. Simulations/Simulators and other training devices shall be used when they are capable of effectively and economically supplementing training on the

identified training task. Particular emphasis shall be placed on simulators that provide training that might be limited by safety considerations or constraints on training space, time, or other resources. When deciding on simulation issues, the primary consideration shall be improving the quality of training and consequently the state of readiness. Potential savings in operating and support costs normally shall be an important secondary consideration.

2. Each training event contains information relating to the applicability of simulation. If simulator training applies to the event, then the applicable simulator(s) is/are listed in the "Simulation" section and the CRP for simulation training is given. This simulation training can either be used in place of live training, at the reduced CRP indicated; or can be used as a precursor training for the live event, i.e., weapons simulators, convoy trainers, observed fire trainers, etc. It is recommended that tasks be performed by simulation prior to being performed in a live-fire environment. However, in the case where simulation is used as a precursor for the live event, then the unit will receive credit for the live event CRP only. If a tactical situation develops that precludes performing the live event, the unit would then receive credit for the simulation CRP.

1014. MARINE CORPS GROUND T&R PROGRAM

1. The Marine Corps Ground T&R Program continues to evolve. The vision for Ground T&R Program is to publish a T&R Manual for every readiness-reporting unit so that core capability METs are clearly defined with supporting collective training standards, and to publish community-based T&R Manuals for all occupational fields whose personnel augment other units to increase their combat and/or logistic capabilities. The vision for this program includes plans to provide a Marine Corps training management information system that enables tracking of unit and individual training accomplishments by unit commanders and small unit leaders, automatically computing CRP for both units and individual Marines based upon MOS and rank (or billet). Linkage of T&R Events to the Marine Corps Task List (MCTL), through the core capability METs, has enabled objective assessment of training readiness in the DRRS.

2. DRRS measures and reports on the readiness of military forces and the supporting infrastructure to meet missions and goals assigned by the Secretary of Defense. With unit CRP based on the unit's training toward its METs, the CRP will provide a more accurate picture of a unit's readiness. This will give fidelity to future funding requests and factor into the allocation of resources. Additionally, the Ground T&R Program will help to ensure training remains focused on mission accomplishment and that training readiness reporting is tied to units' METLs.

2800 GROUND T&R MANUAL

CHAPTER 2

INDIVIDUAL EVENTS

	<u>PARAGRAPH</u>	<u>PAGE</u>
PURPOSE	2000	2-2
INDIVIDUAL SKILLS	2001	2-2
EVENT CODING.	2002	2-2
INDEX OF 1000-LEVEL EVENTS BY FUNCTIONAL AREA	2003	2-4
1000-LEVEL INDIVIDUAL EVENTS.	2004	2-7
INDEX OF 2000-LEVEL EVENTS BY FUNCTIONAL AREA	2005	2-58
2000-LEVEL INDIVIDUAL EVENTS.	2006	2-62

2800 GROUND T&R MANUAL

CHAPTER 2

INDIVIDUAL EVENTS

2000. PURPOSE. This chapter contains individual training events for Occupational Field 28, Ground Electronics Maintenance.

2001. INDIVIDUAL SKILLS

1. Core skills are basic individual skills that make a Marine and qualify them for an MOS. They are the 1000 level skills introduced in the entry level training in the formal schools and refined in operational units.

2. Core Plus Skills are advanced individual skills that are environment, mission, rank or billet specific. They are the 2000 level skills introduced in the entry level managed on the job training in operational units and advanced formal schools training.

2002. EVENT CODING. Events in the T&R Manual are depicted with a 12 field alphanumeric system, i.e. XXXX-XXXX-XXXX. This chapter utilizes the following methodology:

a. Field one - Each event starts with 28XX. 2800 indicates that the event is a core capability for all Marines within the occupational field. 2844 indicates the event is for 2844, Ground Communications Organizational Repairer, etc.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

Functional Area	Field Name	Example
Maintenance Planning	PLAN	2844-PLAN-XXXX
Maintenance Administration	ADMN	2844-ADMN-XXXX
Maintenance Actions	ACT	2844-ACT-XXXX
Maintenance Operations	OPS	2844-OPS-XXXX
Maintenance Training	TRNG	2844-TRNG-XXXX

c. Field three - All individual events within T&R Manuals are either 1000-level events that are taught at MOS-producing formal schools or 2000-level events that are taught at advanced-level schools or are MOJT. The first digit indicates whether it is a core (1) or core plus (2) event. The second digit indicates the associated field and the last two digits indicate the task number. 2303 indicates that it is a core plus task and it is the third task within the Maintenance Actions functional area for that MOS. This chapter contains both level events.

MOS	Field Name	Associated Field Number	Core/ Core Plus	Task	Example
2800	PLAN	101-199	2	1	2800-PLAN-2101
2871	ADMN	201-299	1	4	2871-ADMN-1201
2846	ACT	301-399	2	3	2846-ACT-2303
2821	OPS	401-499	1	2	2821-OPS-1401
2805	TRNG	501-599	2	1	2805-TRNG-2501

2003. INDEX OF 1000-LEVEL EVENTS BY FUNCTIONAL AREA

Event	Event Title	Page
	MAINTENANCE ADMINISTRATION	
2800-ADMN-1201	Complete an equipment repair order.	2-7
2800-ADMN-1202	Requisition parts.	2-7
2871-ADMN-1201	Complete calibration maintenance documents and forms.	2-38
	MAINTENANCE ACTIONS	
2800-ACT-1301	Perform soldering on basic electronic components.	2-8
2800-ACT-1302	Protect electrostatic discharge sensitive devices during handling, storage and transportation.	2-9
2800-ACT-1303	Test ground electronics equipment.	2-9
2800-ACT-1304	Perform corrective maintenance on fiber optic cable.	2-10
2800-ACT-1305	Diagnose basic electronics circuits.	2-11
2800-ACT-1306	Perform corrective maintenance on low density electronic equipment to the piece part component level.	2-12
2800-ACT-1307	Perform corrective maintenance on power supplies to the piece part component level.	2-13
2800-ACT-1308	Maintain an electrostatic sensitive work area.	2-14
2821-ACT-1301	Perform corrective maintenance on Technical Control Facilities to the line replaceable unit.	2-15
2821-ACT-1302	Perform limited corrective maintenance on communication security equipment associated with Technical Control equipment.	2-16
2821-ACT-1303	Perform certification procedures on the KGX-93.	2-17
2822-ACT-1301	Perform corrective maintenance on electronic TRI-TAC switching equipment to the shop replaceable unit level.	2-20
2822-ACT-1302	Perform limited corrective maintenance on communications security equipment used in TRI-TAC switching systems.	2-21
2822-ACT-1303	Perform certification procedures on the KGX-93.	2-22
2831-ACT-1301	Perform corrective maintenance on the AN/TRC-170 to the shop replaceable unit level.	2-23
2831-ACT-1302	Perform limited corrective maintenance on communication security equipment used with multi-channel systems.	2-24
2844-ACT-1301	Perform single channel radio systems restoration.	2-25
2844-ACT-1302	Perform tactical telephone systems restoration.	2-26
2844-ACT-1303	Perform corrective maintenance on tactical switchboards to the line replaceable unit level.	2-27
2844-ACT-1304	Perform corrective maintenance on single channel radios to the line replaceable unit level.	2-28
2844-ACT-1305	Perform corrective maintenance on multi-channel equipment to the line replaceable unit level.	2-29
2846-ACT-1301	Perform corrective maintenance on single channel radio line replaceable units to the shop replaceable	2-31

	unit or chassis mounted component level.	
2846-ACT-1302	Perform corrective maintenance on communication security equipment associated with ground common radio systems.	2-32
2846-ACT-1303	Perform corrective maintenance on AN/MRC-142 line replaceable units to the shop replaceable unit or chassis mounted component level.	2-33
2847-ACT-1301	Perform corrective maintenance on tactical switchboards and telephone line replaceable units to the shop replaceable unit level or chassis mounted component level.	2-34
2847-ACT-1302	Perform corrective maintenance on computer and associated peripheral equipment.	2-35
2847-ACT-1303	Perform corrective maintenance on a fiber optic converter set.	2-36
2847-ACT-1304	Perform limited corrective maintenance on communication security equipment associated with data and switching.	2-37
2871-ACT-1301	Perform corrective maintenance on Test Measurement and Diagnostic Equipment.	2-39
2871-ACT-1302	Calibrate Test Measurement and Diagnostic Equipment.	2-40
2887-ACT-1301	Perform corrective maintenance on artillery ground-based sensors to the piece part component level.	2-41
2887-ACT-1302	Perform corrective maintenance on the Meteorological Measuring Station to the piece part component level.	2-42
2887-ACT-1303	Perform corrective maintenance on artillery fire control electronic systems to the piece part component level.	2-44
8641-ACT-1301	Repair circuit card assembly laminates.	2-47
8641-ACT-1302	Repair circuit card assembly conductors.	2-48
8641-ACT-1303	Repair internal conductors of multilayer circuit card assemblies.	2-48
8641-ACT-1304	Repair stranded wire.	2-49
8641-ACT-1305	Repair flexible flat conductors.	2-50
8641-ACT-1306	Remove components from circuit card assemblies.	2-51
8641-ACT-1307	Install components on circuit card assemblies.	2-51
8641-ACT-1308	Remove surface mounted technology devices.	2-52
8641-ACT-1309	Install surface mount technology devices.	2-53
8641-ACT-1310	Prepare Automated Test Equipment for operation.	2-54
8641-ACT-1311	Perform troubleshooting on circuit card assemblies.	2-54
8641-ACT-1312	Create a test routine.	2-55
8641-ACT-1313	Install wires on connectors/terminals.	2-66
	MAINTENANCE OPERATIONS	
2821-OPS-1401	Install a Technical Control Facility.	2-18
2821-OPS-1402	Conduct circuit/link restoration.	2-18
2821-OPS-1403	Coordinate activation/deactivation of communication circuit/links.	2-19
2831-OPS-1401	Provide technical assistance during the installation of the AN/TRC-170.	2-15
2844-OPS-1401	Verify the installation of ground electronics equipment.	2-30

2887-OPS-1401	Provide technical assistance during the installation of artillery electronic equipment.	2-45
2887-OPS-1402	Perform measurements and diagnostics on artillery electronic equipment.	2-46

2004. 1000-LEVEL INDIVIDUAL EVENTS

2800-ADMN-1201: Complete an equipment repair order.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an equipment repair order, designated equipment and Test Measurement and Diagnostic Equipment.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Open an equipment repair order (ERO).
2. Record job status changes, as required.
3. Record requisitioned parts, as required.
4. Record installed parts, as required.
5. Record category code changes, as required.
6. Record description of work, as required.
7. Close the ERO.

REFERENCES:

1. FEDLOG Federal Logistic Data on Compact Disk
2. MCO P4790.2 MIMMS Field Procedures Manual
3. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
4. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Product Available:

1. MCI 0410B, MIMMS (AIS)
-

2800-ADMN-1202: Requisition parts.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided designated faulty equipment and maintenance information system reports.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Determine authorized echelon of maintenance.
2. Determine appropriate NSN with the use of SL-3, SL-4 and FEDLOG.

3. Check the pre-expanded bin as required.
4. Submit a requisition.

REFERENCES:

1. Applicable technical manuals/publications
2. MCO P4790.2 MIMMS Field Procedures Manual
3. SL-3 Major Components of End Items
4. SL-4 Repair, Maintenance, and Management Lists
5. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
6. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Product Available:

1. MCI 0410B, 1 MIMMS (AIS)
-

2800-ACT-1301: Perform soldering on basic electronic components.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Given an electronic device, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Select appropriate soldering tip for required application.
3. Set soldering iron to correct temperature.
4. Clean intended application area.
5. Tin wire, as required.
6. Solder connectors, as required.
7. Fabricate a cable, as required.
8. Splice a wire cable, as required.
9. Solder components, as required.
10. Clean flux from connection.
11. Visually inspect to verify soldering meets specifications.
12. Perform operational check, as required.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
 2. Applicable technical manuals/publications
 3. MCO P5090.2 Environmental Compliance and Protection Manual
 4. MSDS Material Safety Data Sheets
 5. TM 9999-15/1 ESD Awareness Electro-Static Discharge
-

2800-ACT-1302: Protect electrostatic discharge sensitive devices during handling, storage and transportation.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided electrostatic discharge (ESD) sensitive devices, ESD labels and ESD protection materials.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review references.
2. Identify materials requiring ESD protection.
3. Protect ESD sensitive materials.

REFERENCES:

1. Applicable technical manuals/publications
 2. SI 4400-15/5 SI
 3. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
 4. TM 9406-15 Grounding Procedures
 5. TM 9999-15/1 ESD Awareness Electro-Static Discharge
 6. FEDLOG Federal Logistic Data on Compact Disk
-

2800-ACT-1303: Test ground electronics equipment.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided cables, connectors, Test Measurement and Diagnostic Equipment, tools and a unit under test.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Connect Test Measurement and Diagnostic Equipment (TMDE) to appropriate power source.
3. Perform equipment operational check.
4. Connect TMDE to equipment to be tested, aligned or adjusted.
5. Operate controls of the TMDE to obtain the correct measurement/display.
6. Interpret/calculate measurement obtained.
7. Disconnect TMDE from the circuit undergoing test.
8. Secure unit under test and TMDE, as required.

REFERENCES:

1. Applicable technical manuals/publications
2. MCO P4790.2 MIMMS Field Procedures Manual
3. TM 10510-14/1 Electronic Test Equipment Listing
4. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Products Available:

1. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment
-

2800-ACT-1304: Perform corrective maintenance on fiber optic cable.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, faulty cable, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data.
3. Measure cable performance.
4. Isolate faulty components/areas.
5. Requisition repair parts, as required.
6. Remove/replace faulty components, as required.
7. Splice cable, as required.
8. Research authorized Modifications and Technical Instructions.
9. Perform maintenance closeout procedures to include quality assurance checks.

REFERENCES:

1. Applicable technical manuals/publications/Users Manuals
2. FEDLOG Federal Logistic Data on Compact Disk
3. Understanding Fiber Optics (4th Edition)
4. SL-3-9007A Fiber Optic Cable Repair Kit MK-2495/G
5. SL-3-10156A Optical Time Domain Reflectometer, MW9070NV
6. SL-3-10785A Fiber Optic Tool Kit, Model 0801-8500
7. TM 09008A/09009A-23 Unit and Direct Support Maintenance Manual, CX-13295
8. TM 09010A-__ Test Set, Optical Communications AN/GSM-317
9. TM 10156-14&P Optical Time Domain Reflectometer, MW9070NV
10. TM 11-6625-3252-12&P Optical Fiber Test Set, TS-4335/G
11. TM 6026-220-23&P Fiber Optic Cable, CX-13295/G

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Optical Communications Test Set
2. Visual Fiber Optic Fault Finder
3. Optical Time Domain Reflector (OTDR)
4. Termination Kit
5. Splicing Kit

MISCELLANEOUS:

ADMINISTRATIVE INSTRUCTIONS: This task applies to general fiber optic cable, ST connector, 3M fiber splice, Fusion splice and other specialized connectors as required.

2800-ACT-1305: Diagnose basic electronic circuits.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

MOS PERFORMING: 2821, 2822, 2831, 2846, 2847, 2871, 2887

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Given a faulty electronic device, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams for basic electronic circuits.
4. Calculate basic electronic circuit parameters.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure basic electronic circuit performance.
7. Trace signal paths in basic electronic circuits.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. MSDS Material Safety Data Sheets
4. TM 9999-15/1 ESD Awareness Electro-Static Discharge

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Function Generator
3. Multimeter
4. Signal Generator
5. Power Supply
6. Semiconductor Device Test Set

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
 2. MCI 286G, Fundamentals of Digital Logic
 3. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment
-

2800-ACT-1306: Perform corrective maintenance on low density electronic equipment to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

MOS PERFORMING: 2822, 2831, 2887

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided faulty equipment, assigned maintenance area, tools, TMDE, and references.

STANDARD(S): per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Interpret complex schematic diagrams.
4. Calculate complex circuit parameters.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure complex circuit performance.
7. Perform alignments.
8. Diagnose circuit performance using Automated Test Equipment.
9. Identify faulty component(s).
10. Remove/Replace faulty component(s).
11. Research authorized Modification and Technical Instructions.
12. Perform maintenance close-out procedures to include quality assurance check.

REFERENCES:

1. Applicable Technical Publications/Manuals
2. Maintenance Float Catalog
3. FEDLOG, Federal Logistic Data on Compact Disk
4. MCO P4790.1_, Marine Corps Integrated Maintenance Management System (MIMMS) MANUAL
5. MCO P4790.2_, MIMMS Field Procedures Manual
6. SL 1-2/3, Index of Authorized Publications in Stock
7. SL-4, Repair Parts for End Items
8. TM 9999-15/1, ESD Awareness Electro-Static Discharge
9. UM 4790-5, Users Manual MIMMS

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Digital Multimeter
3. Wattmeter
4. TS-4317/GRM Radio Test Set
5. Signal Generator
6. TA-1042/U Digital Non-Secure Voice Terminal
7. AN/USM-657(V2) Third Echelon Test System (TETS)
8. AN/USM-674 Automated Test Set
9. AN/TTC-42 Automatic Telephone Central Office
10. AN/TRC-170 Radio Terminal Set
11. Artillery Radar

ADMINISTRATIVE INSTRUCTIONS: This task applies to the AN/TTC-42 for MOS 2822, the AN/TRC-170 for MOS 2831, and Artillery Electronic Equipment for MOS 2887.

2800-ACT-1307: Perform corrective maintenance on power supplies to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

MOS PERFORMING: 2846, 2847

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams.
4. Calculate circuit parameters.
5. Measure circuit performance.
6. Ensure proper handling of static sensitive components/printed circuit cards.
7. Isolate faulty components.
8. Perform alignments, as required.
9. Remove/replace faulty components, as required.
10. Research authorized Modification and Technical Instructions.
11. Perform maintenance closeout procedures to include quality assurance.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. Maintenance Float Catalog
4. SL 1-2/3 Index of Authorized Publications in Stock
5. SL-4 Repair, Maintenance, and Management Lists
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge

7. UM 4400-124 Sassy Using Unit Procedures
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
 2. Multimeter
 3. Power supply
 4. Signal Generator
 5. HYP-71 Auxiliary Power Supply
 6. ASAPS-4 Power Supply
 7. DC Power Converter
 8. AC Power Converter
-

2800-ACT-1308: Maintain an electrostatic sensitive work area.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided circuit card assemblies with sensitive devices, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Verify earth ground to workstation ESD desktop/mat.
3. Verify ESD wrist strap is functioning properly.
4. Ensure all personnel in the work area adhere to ESD safety precautions.

REFERENCES:

1. MCO 2410.2_ Electromagnetic Environmental Control Program
2. SI 4400-15/5 SI
3. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
4. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge
6. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. MK-2663/U Electronic Equipment Maintenance Kit
-

2821-ACT-1301: Perform corrective maintenance on Technical Control Facilities to the line replaceable unit.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Research applicable technical data pertaining to faulty equipment.
4. Read schematic diagrams.
5. Ensure proper handling of static sensitive devices.
6. Measure circuit performance.
7. Trace signal paths.
8. Trace voltage paths.
9. Requisition repair parts as required.
10. Isolate faulty line replaceable unit(s) (LRU).
11. Float faulty LRU(s), as required.
12. Replace faulty LRU(s).
13. Apply authorized Modification and Technical instructions.
14. Perform maintenance closeout procedures to include quality assurance checks.

REFERENCES:

1. Applicable technical manuals/publications
2. EKMS-1A CMS Policy and Procedures for Navy EKMS
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.1_ Marine Corps Integrated Maintenance Management System (MIMMS) MANUAL
5. MCO P4790.2 MIMMS Field Procedures Manual
6. Maintenance Float Catalog
7. SECNAVINST 5510.30 Information and Personnel Security Program
8. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
9. SL 1-2/3 Index of Authorized Publications in Stock
10. SL-4 Repair, Maintenance, and Management Lists
11. TM 9999-15/1 ESD Awareness Electro-Static Discharge
12. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Technical Control Facility (DTC, JECCS, DITS)
2. CAT-5 Cable Tester
3. ISDN Test Set
4. Digital Multimeter
5. Data Communication Analyzer

6. Oscilloscope
7. Breakout Box

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
 2. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment
 3. Applicable CBT's from TMDE Branch
-

2821-ACT-1302: Perform limited corrective maintenance on communication security equipment associated with Technical Control equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Ensure proper handling of static sensitive devices.
4. Trace block diagrams as required.
5. Isolate faulty line replaceable unit(s) (LRU)/components.
6. Requisition repair parts, as required.
7. Replace faulty components, as required.
8. Restore equipment to a fully operational status by substitution of LRU, as required.
9. Evacuate to depot maintenance activity, as required.
10. Research modifications, as required.
11. Perform maintenance closeout procedures to include quality assurance checks.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. EKMS-1A CMS Policy and Procedures for Navy EKMS
4. DISA Circulars/Publications
5. FEDLOG Federal Logistic Data on Compact Disk
6. MCO P4790.2 MIMMS Field Procedures Manual
7. SL 1-2/3 Index of Authorized Publications in Stock
8. TM 9999-15/1 ESD Awareness Electro-Static Discharge
9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
10. CMS-5A

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. KIV-19/19A Trunk Encryption Device
 2. TSEC/KGX-93 AKDC
 3. KIV-7HS/HSB Data Encryption Device
 4. ST-58 Fill/Vinson/KG-84
 5. TSEC/KG-82
 6. TSEC/KG-84C General Purpose Encryption Equipment
 7. TSEC/KG-194/194A Trunk Encryption Device
 8. TSEC/KOI-18 General Purpose Tape Reader
 9. TSEC/KY-57 Speech Security Equipment (Vinson)
 10. KY-68 Digital Secure Voice Terminal
 11. TSEC/KYK-13 Electronic Transfer Device
 12. TSEC KYX-15A
 13. AN/CYZ-10 V3 Data Transfer Device
 14. TSEC/STX-34 Test Set
 15. KIV-7M Line Encryption Device
 16. KG-175/250 TACLANE Family
-

2821-ACT-1303: Perform certification procedures the KGX-93.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided an assigned maintenance area, a certified KT-83, a KGX-93 and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Connect equipment to be certified to special test equipment.
3. Ensure proper handling of static sensitive components/printed circuit cards.
4. Perform certification procedures.
5. Ensure certification labels are placed on the KGX-93.
6. Evacuate to higher echelon, as required.
7. Perform maintenance closeout procedures to include quality assurance check, as required.

REFERENCES:

1. Applicable technical manuals/publications
2. CMS-21 COMSEC Material System Policy and Procedures
3. CMS-5_ COMSEC Material System Policy & Procedures Manual
4. MCO P4790.2 MIMMS Field Procedures Manual
5. SECNAVINST 5510.30 Information and Personnel Security Program
6. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. TSEC/KGX-93 Automatic Key Distribution Center
 2. KT-83
-

2821-OPS-1401: Install a Technical Control Facility.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment and an operations plan.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Verify power source.
3. Perform electromagnetic interference checks to include proper grounding, cable connections and power connections.
4. Perform power-up procedures as described in applicable technical manual.
5. Verify equipment operation.

REFERENCES:

1. Applicable technical manuals/publications
2. EKMS-1A CMS Policy and Procedures for Navy EKMS
3. MCWP 3-40.3 Communications and Information Systems
4. Operational Order
5. Programming Cut Sheets
6. SECNAVINST 5510.30 Information and Personnel Security Program
7. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
8. SL 1-2/3 Index of Authorized Publications in Stock
9. TM 09999-15/1 ESD Awareness
10. TM 9406-15 Grounding Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Technical Control Facility (DTC, JECCS, DITS)
 2. Power Source
 3. Ground Tester
-

2821-OPS-1402: Conduct circuit/link restoration.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided a circuit/link outage, a communications network, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Ensure SYSCON/TECHCON is aware of circuit/link outage.
3. If there are multiple circuit/link outages, check with SYSCON/TECHCON for priority of restoration.
4. Coordinate with circuit users to determine status of terminal devices.
5. Conduct fault isolation procedures.
6. Coordinate restoration efforts with transmission system operators.
7. Condition circuits, as required.
8. Maintain log entries for all circuit/link actions.
9. Notify SYSCON/TECHCON with reason for outage and corrective actions taken.

REFERENCES:

1. Applicable technical manuals/publications
2. CJCSM 6231 Manual for Employed Joint Communications
3. FM 24-16 Communication-Electronic Operations Orders, Records and Reports
4. MCWP 3-40.3 Communications and Information Systems
5. Operational Order
6. Programming Cut Sheets

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Analog Test Set
3. Cable Tester
4. Data Communication Analyzer
5. Digital Multimeter
6. Break-out box
7. Associated Tools
8. Associated Communications Equipment
9. Loop back plugs

2821-OPS-1403: Coordinate activation/deactivation of communication circuits/links.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment and an operations plan.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Verify circuit requirements with SYSCON/TECHCON.
2. Notify SYSCON/TECHCON on circuit/link status.
3. Verify incoming and outgoing signals for each circuit/link.
4. Coordinate and activate/deactivate circuits/links in prioritized fashion as dictated by SYSCON/TECHCON.
5. Validate circuit connectivity.
6. Maintain log entries on the activation/deactivation for all circuits and links.
7. Read/interpret COMSEC callout.

REFERENCES:

1. Applicable technical manuals/publications
2. CJCSM 6231 Manual for Employed Joint Communications
3. FM 24-16 Communication-Electronic Operations Orders, Records and Reports
4. MCWP 3-40.3 Communications and Information Systems
5. Operational Order
6. Programming Cut Sheets

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Associated Communication Systems
-

2822-ACT-1301: Perform corrective maintenance on electronic TRI-TAC switching equipment to the secondary repairable unit level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Read schematic diagrams.
3. Calculate circuit parameters.
4. Ensure proper handling of static sensitive components/printed circuit cards.
5. Measure basic circuit performance.
6. Perform alignments.
7. Trace signal paths.
8. Trace current/voltage paths.
9. Identify faulty line replaceable unit (LRU)/secondary replaceable unit (SRU).
10. Remove/replace faulty LRU/SRU.
11. Research authorized Modification and Technical Instructions.

12. Perform maintenance closeout procedures to include quality assurance check.
13. Research applicable technical data pertaining to faulty equipment.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.2 MIMMS Field Procedures Manual
5. MCO P5090.2 Environmental Compliance and Protection Manual
6. MSDS Material Safety Data Sheets
7. SL 1-2/3 Index of Authorized Publications in Stock
8. SL-4 Repair, Maintenance, and Management Lists
9. TM 9999-15/1 ESD Awareness Electro-Static Discharge
10. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Semiconductor Device Test Set
3. Function Generator
4. Wattmeter
5. Digital Multimeter
6. AN/TTC-42 Automatic Telephone Central Office
7. AN/USM-675 (V2) Third Echelon Test System
8. TA-1042/U Digital Non-secure Voice Terminal
9. TSEC/KY-68 Digital Subscriber Voice Terminal

2822-ACT-1302: Perform limited corrective maintenance on communications security equipment used in electronic TRI-TAC switching systems.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, faulty communications security equipment, spare kits, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Connect faulty equipment to special test equipment.
4. Ensure proper handling of static sensitive components/printed circuit cards.
5. Trace functional block diagrams.
6. Isolate fault to the line replaceable unit (LRU).
7. Restore equipment to a fully operational status by substitution of LRU.

8. Research authorized Modifications and Technical Instructions.
9. Evacuate to higher echelon, as required.
10. Perform maintenance closeout procedures to include quality assurance check, as required.

REFERENCES :

1. Applicable maintenance CAMS
2. EKMS-1A CMS Policy and Procedures for Navy EKMS
3. CMS-5_ COMSEC Material System Policy & Procedures Manual
4. FEDLOG Federal Logistic Data on Compact Disk
5. MCO P4790.2 MIMMS Field Procedures Manual
6. SL 1-2/3 Index of Authorized Publications in Stock
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
8. Mandatory Maintenance Modification Guide

SUPPORT REQUIREMENTS :

EQUIPMENT: Training Equipment:

1. TSEC/KG-82 Loop Key Generator
2. TSEC/KGX-93 Automatic Key Distribution Center
3. TSEC/KY-57 Speech Security Equipment (VINSON)
4. TSEC/KY-68 Digital Subscriber Voice Terminal (DSVT)
5. TSEC/KG-94/94A/194/194A Trunk Encryption Device

2822-ACT-1303: Perform certification procedures the KGX-93.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided an assigned maintenance area, a certified KT-83, a KGX-93 and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Connect equipment to be certified to special test equipment.
3. Ensure proper handling of static sensitive components/printed circuit cards.
4. Perform certification procedures.
5. Ensure certification labels are placed on the KGX-93.
6. Evacuate to higher echelon, as required.
7. Perform maintenance closeout procedures to include quality assurance check, as required.

REFERENCES :

1. Applicable technical manuals/publications
2. CMS-21 COMSEC Material System Policy and Procedures
3. CMS-5_ COMSEC Material System Policy & Procedures Manual
4. MCO P4790.2 MIMMS Field Procedures Manual

5. SECNAVINST 5510.30 Information and Personnel Security Program
6. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. TSEC/KGX-93 Automatic Key Distribution Center
 2. KT-83
-

2831-ACT-1301: Perform corrective maintenance on the AN/TRC-170 to the secondary replaceable unit level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams.
4. Calculate basic circuit parameters.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure circuit performance.
7. Perform alignments, as required.
8. Trace signal paths.
9. Trace current/voltage paths.
10. Isolate faulty line replaceable unit (LRU)/secondary replaceable unit (SRU), as required.
11. Requisition repair parts, as required.
12. Remove/replace faulty LRU/SRU.
13. Research authorized Modification and Technical Instructions.
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock
5. SL-4 Repair, Maintenance, and Management Lists
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
 2. Multimeter
 3. Signal Generator
 4. Power Supply
 5. AN/TRC-170 Radio Terminal Set
 6. Data Analyzer
 7. Spectrum Analyzer
 8. Frequency Counter
-

2831-ACT-1302: Perform limited maintenance on communication security equipment used in multi-channel systems.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, faulty COMSEC equipment, spare kits, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Connect faulty equipment to special test equipment.
4. Ensure proper handling of static sensitive components/printed circuit cards.
5. Trace functional block diagrams.
6. Isolate fault to the LRU/chassis mounted components.
7. Requisition repair parts, as required.
8. Remove/replace faulty components.
9. Evacuate to higher echelon, as required.
10. Research modifications both mandatory and optional and repair actions.
11. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. EKMS-1A CMS Policy and Procedures for Navy EKMS
3. CMS-5_ COMSEC Material System Policy & Procedures Manual
4. FEDLOG Federal Logistic Data on Compact Disk
5. MCO P4790.2 MIMMS Field Procedures Manual
6. SECNAVINST 5510.30 Information and Personnel Security Program
7. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
8. TM 9999-15/1 ESD Awareness Electro-Static Discharge
9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. TSEC/KG-194/194A Trunk Encryption Device
 2. TSEC/KY-58 Speech Security Equipment (VINSON)
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2831-OPS-1401: Provide technical assistance during the installation of the AN/TRC-170.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided a equipment, a mission and Test Measurement and Diagnostic Equipment.

STANDARD: To ensure the AN/TRC-170 is installed and operates, per the reference.

PERFORMANCE STEPS:

1. Verify equipment is properly grounded.
2. Verify power source.
3. Verify antenna installation.
4. Verify remote capabilities, as required.
5. Verify COMSEC connection, as required.
6. Verify equipment operation (configuration and programming).
7. Verify equipment operating procedures to include COMSEC.
8. Perform electromagnetic interference troubleshooting.
9. Provide technical assistance to correct discrepancies, as required.

REFERENCES:

1. Applicable technical manuals/publications
2. EKMS-1A CMS Policy and Procedures for Navy EKMS
3. Operational Order
4. TM 9406-15 Grounding Procedures
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
 2. Multimeter
 3. Signal Generator
 4. Power Supply
 5. AN/TRC-170 Radio Terminal Set
 6. Data Analyzer
 7. Spectrum Analyzer
 8. Frequency Counter
-

2844-ACT-1301: Perform single channel radio systems restoration.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Research applicable technical data pertaining to faulty equipment.
4. Read basic systems diagrams.
5. Measure basic circuit performance.
6. Perform alignments, as required.
7. Isolate faulty systems component.
8. Remove/replace faulty systems component, as required.
9. Research authorized Modification and Technical Instructions.
10. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock
5. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
6. Operational Order (Annex K)

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Wattmeter
2. AN/CYZ-10 Digital Transfer Device
3. Multimeter
4. Ground Common Radio Set
5. HYP-57/TSEC Wireline Adapter
6. J-1077A Distribution Box
7. TSEC/KY-99 Advanced Narrowband Digital Voice Terminal (ANDVT/MINTERM)
8. HYP-57/TSEC Vehicular Power Adapter
9. Mobile Intercom System
10. Organizational Test Set
11. Organizational Tool Box

2844-ACT-1302: Perform tactical telephone systems restoration.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Research applicable technical data pertaining to faulty equipment.
4. Read basic systems diagrams.
5. Measure basic circuit performance.
6. Perform alignments, as required.
7. Isolate faulty systems components.
8. Remove/replace faulty system components, as required.
9. Research authorized Modification and Technical Instructions.
10. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. MCO P4790.2 MIMMS Field Procedures Manual
4. MCWP 3-40.3 Communications and Information Systems
5. Operational Order (Annex K)
6. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. TA-977/PT Tone Signaling Adapter
2. Power Supply
3. Multimeter
4. Ground Common Telephone Set
5. Ground Common Telephone Switchboard
6. DEOS (TSM)
7. RSAM (TSM)

2844-ACT-1303: Perform corrective maintenance on tactical switchboards to the line replaceable unit level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read basic schematic diagrams.
4. Measure basic circuit performance.
5. Perform alignments, as required.
6. Isolate faulty line replaceable unit (LRU).
7. Remove/replace faulty LRU, as required.
8. Research authorized Modification and Technical Instructions.
9. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.2 MIMMS Field Procedures Manual
5. SL 1-2/3 Index of Authorized Publications in Stock
6. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Material:

1. TA-977/PT Tone Signaling Adapter
 2. Power Supply
 3. Multimeter
 4. Ground Common Telephone Set
 5. Ground Common Telephone Switchboard
 6. DEOS (TSM)
 7. RSAM (TSM)
-

2844-ACT-1304: Perform corrective maintenance on single channel radios to the line replaceable unit level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read basic schematic diagrams.
4. Measure basic circuit performance.
5. Perform alignments, as required.

6. Verify firmware/software, as required.
7. Isolate faulty line replaceable unit (LRU).
8. Remove/replace faulty LRU, as required.
9. Research authorized Modification and Technical Instructions.
10. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock
5. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Wattmeter
2. Power Supply
3. Multimeter
4. Ground Common Radio Set
5. DAGR

2844-ACT-1305: Perform corrective maintenance on multi-channel equipment to the line replaceable unit level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided designated faulty equipment, Test Measurement and Diagnostic Equipment (TMDE) and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Research applicable technical data pertaining to faulty equipment.
4. Read basic schematic diagrams.
5. Measure basic circuit performance.
6. Perform alignments, as required.
7. Isolate faulty LRU.
8. Remove/replace faulty LRU, as required.
9. Research authorized Modification and Technical Instructions (MI's and TI's).
10. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications

2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock
5. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/MRC-142 Radio Set
2. TSSR
3. TSEC/KY-57

MATERIAL: Distance Learning Products Available:

1. AN/MRC-142 Maintenance Course
-

2844-OPS-1401: Verify the installation of ground electronics equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Verify power source.
4. Verify antenna installation, as required.
5. Verify remote capabilities, as required.
6. Verify communications security (COMSEC) connection, as required
7. Verify equipment operation.
8. Verify equipment operating procedures to include COMSEC.
9. Perform electromagnetic interference troubleshooting to include checking for proper grounding, cable connection, and perform corrective action when applicable.
10. Provide guidance to correct discrepancies.

REFERENCES:

1. Applicable technical manuals/publications
2. MCRP 6-22A Multi-Service Communications Procedures for the Single-Channel Ground Radio
3. TI-5820-25/22 Electromagnetic Environmental Effects (E3) Procedures
4. TM 9406-15 Grounding Procedures
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/GRA-39 Radio Set Control Group

2. Ground Common Radio Set
 3. AN/MRC-142 Radio Set
 4. Ground Tester
 5. SB-3614TT Telephone Switchboard
 6. SB-3865 (P)/TTC Telephone Switchboard
 7. SB-4097/U Communication Patching Panel
 8. TSEC/KY-57 Speech Security Equipment (VINSON)
 9. TSEC/KY-65 Tactical Speech Security Equipment (Parkhill)
 10. TSEC/KY-99 Advanced Narrowband Digital Voice Terminal
(ANDVT/MINTERM)
 11. TSEC/KYK-13 Electronic Transfer Device
 12. TSEC/KYX-15 Net Control Device
-

2846-ACT-1301: Perform corrective maintenance on single channel radio line replaceable units to the shop replaceable unit or chassis mounted component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Research applicable technical data pertaining to faulty equipment.
4. Verify firmware/software, as required.
5. Upgrade/reinstall firmware/software, as required.
6. Read schematic diagrams.
7. Calculate circuit parameters.
8. Ensure proper handling of static sensitive components/printed circuit cards.
9. Measure circuit performance.
10. Perform alignments, as required.
11. Trace signal paths.
12. Trace current/voltage paths.
13. Identify faulty secondary replaceable unit/chassis mounted components.
14. Replace faulty components, as required.
15. Research authorized Modification and Technical Instructions.
16. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.1_ Marine Corps Integrated Maintenance Management System (MIMMS) MANUAL

4. MCO P4790.2 MIMMS Field Procedures Manual
5. Maintenance Float Catalog
6. SL 1-2/3 Index of Authorized Publications in Stock
7. SL-4 Repair, Maintenance, and Management Lists
8. TM 9999-15/1 ESD Awareness Electro-Static Discharge

9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
10. EKMS-1A CMS Policy and Procedures for Navy EKMS

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Wattmeter
2. AN/CYZ-10 Digital Transfer Device
3. Power Supply
4. ON-373A/GRC Interconnecting Group
5. Ground Common Radio Set
6. ATE
7. Multimeter
8. Signal Generator
9. Function Generator
10. Oscilloscope
11. Radio Test Set
12. Laptop Computer

2846-ACT-1302: Perform limited corrective maintenance on communication security equipment associated with ground common radio systems.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the standard.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Connect faulty equipment to special test equipment, as required.
4. Ensure proper handling of static sensitive components/printed circuit cards, as required.
5. Trace functional block diagrams, as required.
6. Isolate faulty line replaceable unit (LRU)/chassis mounted components as required.
7. Requisition repair part, as required.
8. Remove/replace faulty components, as required.
9. Restore equipment to a fully operational status by substitution of LRU, as required.
10. Evacuate inoperative equipment to higher echelon, as required.

11. Research authorized Modifications.
12. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. EKMS-1A CMS Policy and Procedures for Navy EKMS
4. CMS-5_ COMSEC Material System Policy & Procedures Manual
5. FEDLOG Federal Logistic Data on Compact Disk
6. MCO P4790.2 MIMMS Field Procedures Manual
7. SL 1-2/3 Index of Authorized Publications in Stock
8. TM 9999-15/1 ESD Awareness Electro-Static Discharge
9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. TSEC/KG-194A Trunk Encryption Device
2. TSEC/KY-57 Speech Security Equipment (VINSON)
3. AN/CYZ-10 V3 Data Transfer Device
4. TSEC/KY-99 Advanced Narrowband Digital Voice Terminal (ANDVT/MINTERM)
5. TSEC/KYK-13 Electronic Transfer Device
6. TSEC/KYX-15 Net Control Device
7. HYP-57/TSEC Vehicular Power Adapter
8. HYX-57/TSEC Wireline Adapter
9. ST-58 Fill/Vunson/KG-84
10. TSEC/KOI-18 General Purpose Tape Reader
11. RYQ-99 Maintenance Kit

2846-ACT-1303: Perform corrective maintenance on AN/MRC-142 line replaceable units to the shop replaceable unit or chassis mounted component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance, equipment, a mission and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams.
4. Calculate circuit parameters.
5. Measure circuit performance.
6. Ensure proper handling of static sensitive components/printed circuit cards.

7. Perform alignments, as required.
8. Trace signal paths.
9. Trace current/voltage paths.
10. Identify faulty SRU's/chassis mounted devices.
11. Remove/replace faulty components, as required.

12. Research authorized Modification and Technical Instructions (MI's and TI's).
13. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. CMR Consolidated Memorandum Report
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4400.150E Consumer Level Supply Manual
5. MCO P4790.1_ Marine Corps Integrated Maintenance Management System (MIMMS) MANUAL
6. MCO P4790.2 MIMMS Field Procedures Manual
7. Maintenance Float Catalog
8. SL 1-2/3 Index of Authorized Publications in Stock
9. SL-4 Repair, Maintenance, and Management Lists
10. TM 9406-15 Grounding Procedures
11. UM 4400-124 Sassy Using Unit Procedures
12. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
 2. Function Generator
-

2847-ACT-1301: Perform corrective maintenance on tactical switchboards and telephone line replaceable units to the shop replaceable unit level or chassis mounted component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Verify firmware/software, as required.
4. Upgrade/reinstall firmware/software, as required.
5. Read schematic diagrams.

6. Calculate circuit parameters.
7. Ensure proper handling of static sensitive components/printed circuit cards.
8. Measure circuit performance.
9. Perform alignments, as required.
10. Identify faulty secondary replaceable unit/chassis mounted components.
11. Remove/replace faulty components, as required.
12. Research authorized Modification and Technical Instructions.
13. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. Maintenance Float Catalog
4. SL 1-2/3 Index of Authorized Publications in Stock
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge
6. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Function Generator
2. Digital Multimeter
3. Signal Generator
4. AN/CYZ-10 Digital Transfer Device
5. CX-11230 AG CX-11230A/G Special Cable Assembly (100 FT)
6. Laptop Computer
7. SB-22/PT Manual Telephone Switchboard
8. SB-3614/TT Telephone Switch
9. SB-3865 (P)/TTC Telephone Switchboard
10. SB-4097/U Communication Patching Panel
11. DEOS (TSM)
12. RSAM (TSM)
13. TA-312/PT Telephone Set
14. TA-838 TT Telephone Set
15. TA-938G Telephone Set
16. TSEC/KG-94/94A/194/194A Trunk Encryption Device
17. TSEC/KY-68 Digital Subscriber Voice Terminal (DSVT)
18. TSEC/KY-90
19. Oscilloscope
20. Power Supply

2847-ACT-1302: Perform corrective maintenance on computer and associated peripheral equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Research applicable technical data pertaining to faulty equipment.
4. Read schematic diagram.
5. Calculate circuit parameters.
6. Measure circuit performance.
7. Ensure proper handling of static sensitive components/printed circuit cards.
8. Identify faulty components.
9. Follow prescribed warranty procedures.
10. Remove/replace faulty components, as required.
11. Research authorized Modification and Technical Instructions.
12. Research upgrades and drivers.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. SL 1-2/3 Index of Authorized Publications in Stock
4. SL-4 Repair, Maintenance, and Management Lists
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge
6. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Computer Suite
2. Network HUB
3. Network Server
4. Printers
5. Multimeter
6. Maintenance Kit
7. Peripheral Devices
8. Network Switch
9. Network Router

2847-ACT-1303: Perform corrective maintenance on a fiber optic converter set.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, a faulty converter set, fiber optic cable, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety regulations.
2. Research appropriate technical data.
3. Read basic schematic diagrams.
4. Perform alignments, as required.
5. Isolate faulty line replaceable unit (LRU).
6. Remove/replace faulty LRU as required.

7. Research authorized Modification and Technical Instructions.
8. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Digital Multimeter
 2. Programmable signal Generator
 3. AN/GSM-317 Optical Communications Test Set
 4. Fiber Optic Loss Test Set
 5. Visual Fault Finder
 6. Oscilloscope
 7. Torque Screwdriver
 8. Test Adapter (FOC) P/N 1320568 NSN: 5995013641216
 9. DC Power Supply
 10. AN/GSC-54
-

2847-ACT-1304: Perform limited corrective maintenance on communication security equipment associated with data and switching.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Connect faulty equipment to special test equipment, as required.
4. Ensure proper handling of static sensitive components/printed circuit cards, as required.
5. Trace functional block diagrams, as required.
6. Isolate faulty line replaceable unit (LRU)/chassis mounted components, as required.
7. Requisition repair parts, as required.

8. Remove/replace faulty components, as required.
9. Restore equipment to a fully operation status by substitution of LRU, as required.
10. Evacuate to higher echelon, as required.
11. Research authorized modifications, both mandatory and optional (CMS-5).
12. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. EKMS-1A CMS Policy and Procedures for Navy EKMS
4. CMS-5_ COMSEC Material System Policy & Procedures Manual
5. FEDLOG Federal Logistic Data on Compact Disk
6. MCO P4790.2 MIMMS Field Procedures Manual
7. SL 1-2/3 Index of Authorized Publications in Stock
8. TM 9999-15/1 ESD Awareness Electro-Static Discharge
9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. KG-194A
2. TSEC/KY-90
3. KIV-7
4. KIV-19
5. TSEC/KY-68 Digital Subscriber Voice Terminal
6. TSEC/KYK-13 Electronic Transfer Device
7. AN/CYZ-10 V3 Data Transfer Device
8. TSEC/ST-34 DSVT Test Set

2871-ADMN-1201: Complete calibration maintenance documents and forms.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided documents, equipment, applicable maintenance management forms and software.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Input information into the automated calibration information system.
2. Reconcile calibration information.
3. Produce induction label(s).
4. Perform maintenance closeout procedures to include quality assurance.

REFERENCES:

1. Technical Instruction Series 4733 Marine Corps Calibration and Maintenance Programs

2. UM 4400-124 Sassy Using Unit Procedures
3. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
4. TM 10811A-3/5 Visual Labmate User's Manual
5. 17-35MTL-1 Electronic Version of METRL (METPRO)

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment

1. A7400 Data Acquisition Control Group
-

2871-ACT-1301: Perform corrective maintenance on Test Measurement and Diagnostic Equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to equipment.
3. Read schematic diagrams.
4. Verify configurations, as required.
5. Calculate basic electronic circuit performance.
6. Ensure proper handling of static sensitive components/printed circuit cards.
7. Measure circuit performance.
8. Trace signal paths in basic electronic circuits.
9. Trace current/voltage paths in basic electronic circuits.
10. Perform alignments, as required.
11. Isolate faulty components, as required.
12. Requisition repair parts.
13. Replace faulty components.
14. Perform authorized modification and technical instructions.
15. Perform maintenance closeout procedures to include quality assurance.

REFERENCES:

1. Applicable equipment technical manuals
2. TM 10510-14/1 Electronic Test Equipment Listing
3. FEDLOG Federal Logistic Data on Compact Disk
4. TM 9999-15/1 ESD Awareness Electro-Static Discharge
5. Digital Fundamentals 4th Edition ISBN 0-675-21217-0
6. Electronics Principles and Applications 4th Edition ISBN 0-02-801845-1
7. Electricity One-Seven 2nd Edition ISBN 0-13-889585-6
8. Electronics with Digital and Analog ISBN 0-13-250704-8
9. GROB Basic Electronics 7th Edition ISBN 0-02-800762-X

10. Mathematics Applied to Electronics 2nd Edition ISBN 0-8359-4283-X

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Function Generator
2. Digital Multimeter
3. Digital Oscilloscope
4. Signal Generator
5. Universal Counter
6. Automated Test System
7. Communication Test Set
8. Power Supply
9. A7400 Data Acquisition Control Group
10. A7811 Low Frequency Repair Station
11. A7812 Communication Repair Station
12. Computer Assisted Basic Electronics Training System
13. Power Supply Load
14. Variable Isolation Transformer and Safety Analyzer

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
2. MCI 286G, Fundamentals of Digital Logic
3. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment

2871-ACT-1302: Calibrate Test Measurement and Diagnostic Equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment, materials and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to connector care requirements.
3. Adhere to quality requirements.
4. Perform operational check.
5. Verify accuracy of TMDE utilizing appropriate calibration procedure.
6. Verify authorized modification and technical instructions.
7. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable equipment technical manuals
2. Technical Instruction Series 4733 Marine Corps Calibration and Maintenance Programs
3. FEDLOG Federal Logistic Data on Compact Disk
4. TM 10510-14/1 Electronic Test Equipment Listing

5. TM 9999-15/1 ESD Awareness Electro-Static Discharge
6. 17-35FR-06 Facilities Requirements
7. Technical Instruction 4733-35/24 Quality Manual
8. 17-35MTL-1 Electronic Version of METRL (METPRO)

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Function Generator
2. Digital Multimeter
3. Digital Oscilloscope
4. Signal Generator
5. Universal Counter
6. Automated Test Set
7. Communication Test Set
8. Torque Wrench
9. Torque Multiplier
10. Tachometer
11. Tensiometer
12. Spring Scale
13. Platform Scale
14. Pressure Gauge
15. Vacuum Gauge
16. Compound Gauge
17. Torque Screwdrivers
18. Wheel Scales
19. Thermometer
20. A7816 Force/Mass Standard Station
21. A7817 Torque Standard Station
22. A7807 Oscilloscope Station
23. A7818 Temperature Standard Station
24. A7820 Pressure Standard Station
25. A7800 Automotive Standard Station
26. A7805 Multimeter Station
27. A7400 Data Acquisition Control Group
28. A7806 Signal Generator Standard Station
29. A7804 Low Frequency Station
30. A7808 On Site Station
31. A7801 Communication Standard Station
32. A7803 High Frequency Shared Station
33. A7819 Mechanical Shared Station

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
2. MCI 286G, Fundamentals of Digital Logic
3. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment

2887-ACT-1301: Perform corrective maintenance on artillery ground-based sensors to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided appropriate equipment, materials and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Read schematic diagrams.
3. Calculate circuit parameters.
4. Ensure proper handling of static sensitive components/printed circuit cards.
5. Measure basic circuit performance.
6. Perform alignments, as required.
7. Trace signal paths.
8. Trace current/voltage paths.
9. Isolate faulty component.
10. Requisition repair parts, as required.
11. Remove/repair faulty components, as required.
12. Research authorized Modification and Technical Instructions.
13. Perform PMCS.
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. Maintenance Float Catalog
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. AN/TPQ-46A Firefinder Radar Set
3. Power Supply
4. Signal Generator
5. Spectrum Analyzer
6. Direct Maintenance Tool Kit
7. General Maintenance Tool Kit and Adaptors
8. Power Meter
9. Digital Multimeter
10. Test Adapter Kit
11. Comm-Elect Common Tool Kit
12. Third Echelon Test Set (TETS)
13. Automatic Test Set
14. Lightweight Counter Mortar Radar
15. Ground Counter Fire Sensor

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
 2. MCI 286G, Fundamentals of Digital Logic
 3. MCI 287A, Introduction to Test Measurements and Diagnostics Equipment
 4. MCI 1142B, Solid State Devices
-

2887-ACT-1302: Perform corrective maintenance on the Meteorological Measuring Station to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided appropriate equipment, materials and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Read schematic diagrams.
3. Calculate circuit parameters.
4. Ensure proper handling of static sensitive components/printed circuit cards.
5. Measure basic circuit performance.
6. Perform alignments, as required.
7. Trace signal paths.
8. Trace current/voltage paths.
9. Isolate faulty component.
10. Remove/replace faulty component as required.
11. Requisition repair parts, as required.
12. Research authorized Modification and Technical Instructions.
13. Perform PMCS.
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock
5. SL-4 Repair, Maintenance, and Management Lists
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Power Supply
2. Oscilloscope
3. AN/TMQ-41A MMS
4. 28V Power Supply

5. Signal Generator
6. Comm-Elect Common Tool Kit
7. Spectrum Analyzer
8. Direct Maintenance Tool Kit
9. General Maintenance Tool Kit
10. Power Meter
11. Digital Multi-meter
12. Test Adapter Kit
13. Automated Test Equipment

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
 2. MCI 286G, Fundamentals of Digital Logic
 3. MCI 287A, Introduction to Test Measurements and Diagnostics Equipment
 4. MCI 1142B, Solid State Devices
-

2887-ACT-1303: Perform corrective maintenance on the artillery fire control electronic systems to piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided appropriate equipment, materials and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Read schematic diagrams.
3. Calculate circuit parameters.
4. Ensure proper handling of static sensitive components/printed circuit cards.
5. Measure basic circuit performance.
6. Perform alignments, as required.
7. Trace signal paths.
8. Trace current/voltage paths.
9. Isolate faulty component.
10. Remove/repair faulty component, as required.
11. Requisition repair parts, as required.
12. Research authorized Modification and Technical instructions.
13. Perform PMCS.
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock

5. SL-4 Repair, Maintenance, and Management Lists
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Digital Fire Control System
2. Oscilloscope
3. M-94 MVS
4. 28V Power Supply
5. Signal Generator
6. Function Generator
7. Digital Multimeter
8. OD-144 Gun Direction Unit
9. Spectrum Analyzer
10. Direct Maintenance Tool Kit
11. General Maintenance Tool Kit
12. Power Meter
13. Test Adapter Kit
14. Comm-Elect Tool Kit
15. Automated Test Equipment
16. DFCS Test Set

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
2. MCI 286G, Fundamentals of Digital Logic
3. MCI 287A, Introduction to Test Measurements and Diagnostics Equipment
4. MCI 1142B, Solid State Devices

2887-OPS-1401: Provide technical assistance during the installation of artillery electronic equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Verify equipment is properly grounded.
2. Verify power source.
3. Verify antenna installation, as required.
4. Verify remote capabilities, as required.
5. Verify software applications.
6. Verify equipment operation.
7. Verify equipment operating procedures.
8. Perform electromagnetic interference troubleshooting, as required.

9. Provide guidance to correct discrepancies as noted.
10. Assist in the operation of the Firefinder Radar Set
11. Assist in the operation of the Meteorological Measuring Station.

REFERENCES:

1. Applicable technical manuals/publications
2. TM 9406-15 Grounding Procedures
3. TM 9999-15/1 ESD Awareness Electro-Static Discharge

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/TMQ-41A MMS
 2. Ground Tester
 3. AN/TPQ-46A Firefinder Radar Set
 4. M-94 MVS
 5. OD-144 Gun Directional Unit
-

2887-OPS-1402: Perform measurements and diagnostics on artillery electronic equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided connectors, Test Measurement and Diagnostic Equipment, tools, and a Unit Under Test.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Connect TMDE to appropriate power source.
3. Perform equipment operational test.
4. Connect TMDE to equipment.
5. Operate controls of TMDE to obtain the correct display/measurement.
6. Calculate/interpret measurement obtained.
7. Disconnect TMDE from the circuit undergoing test.
8. Secure TMDE and UUT, as required.

REFERENCES:

1. Applicable technical manuals/publications
2. TM 9406-15 Grounding Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/TPQ-46A Firefinder Radar Set
2. M111 iPADS
3. AN/TMQ-41A MMS
4. M-94 MVS

5. Digital Fire Control System
6. Lightweight Counter Mortar Radar
7. Ground Counter Fire Sensor
8. OD-144 Gun Direction Unit
9. Oscilloscope
10. Power Supply
11. Signal Generator
12. Spectrum Analyzer
13. Direct Maintenance Tool Kit
14. General Maintenance Tool Kit
15. Power Meter
16. Digital Multi-meter
17. Test Adapter Kit
18. Comm-Elect Tool Kit
19. Automated Test Equipment

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
2. MCI 286G, Fundamentals of Digital Logic
3. MCI 287A, Introduction to Test Measurements and Diagnostics Equipment
4. MCI 1142B, Solid State Devices

8641-ACT-1301: Repair circuit card assembly laminates.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided damaged circuit card assemblies and a circuit card repair station.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify types of laminate damage.
3. Identify the repair methods.
4. Repair the damaged laminate.
5. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM-646 and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair
4. MCO 2410.2_ Electromagnetic Environmental Control Program

5. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
2. MK-2663/U Electronic Equipment Maintenance Kit

8641-ACT-1302: Repair circuit card assembly conductors.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided damaged circuit card assemblies and a circuit card repair station.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify types of conductor damage.
3. Identify the repair methods
4. Repair the damaged conductor(s).
5. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM-646 and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair
4. MCO 2410.2_ Electromagnetic Environmental Control Program
5. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
 2. MK-2663/U Electronic Equipment Maintenance Kit
-

8641-ACT-1303: Repair internal conductors of multilayer circuit card assemblies.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided a circuit card repair station and damaged multilayer circuit card assemblies.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify the types of internal conductor damage.
3. Identify the repair methods.
4. Repair the damaged internal conductor(s).
5. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 2005-35/7 Repair open subsurface circuit runs in multilayer circuit card assemblies utilizing jumper wires
3. TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk and Silver Disk Program
4. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair
5. MCO 2410.2_ Electromagnetic Environmental Control Program
6. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. MK-2663/U Electronic Equipment Maintenance Kit
2. Automated Test Set

8641-ACT-1304: Repair stranded wire.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided a circuit card repair station and damaged stranded wire.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify stranded wire damage.
3. Identify the repair method.
4. Repair the damaged stranded wire.
5. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
 2. MK-2663/U Electronic Equipment Maintenance Kit
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8641-ACT-1305: Repair flexible flat conductors.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided a circuit card repair station and damaged flexible flat conductors.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify types of flexible flat conductor damage.
3. Repair the damaged flexible flat conductor.
4. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
 2. MK-2663/U Electronic Equipment Maintenance Kit
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8641-ACT-1306: Remove components from circuit card assemblies.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided a circuit card repair station and damaged circuit card assemblies with faulty components.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify faulty component(s) on a circuit card assembly.
3. Remove conformal coating, as required.
4. Remove component(s).
5. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair
4. MCO 2410.2_ Electromagnetic Environmental Control Program
5. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
 2. MK-2663/U Electronic Equipment Maintenance Kit
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8641-ACT-1307: Install components on circuit card assemblies.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided circuit card assemblies with faulty components and a circuit card repair station.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Install components.
3. Replace formal coating, as required.
4. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair
4. MCO 2410.2_ Electromagnetic Environmental Control Program
5. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
2. MK-2663/U Electronic Equipment Maintenance Kit

8641-ACT-1308: Remove surface mounted technology devices.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided circuit card assemblies with surface mounted devices and a circuit card repair station.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify the surface mount component(s) to be removed.
3. Remove the surface mount component.
4. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair
4. MCO 2410.2_ Electromagnetic Environmental Control Program
5. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
2. MK-2663/U Electronic Equipment Maintenance Kit

8641-ACT-1309: Install surface mount technology devices.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided circuit card assemblies with surface mounted devices and a circuit card repair station.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify the installation method.
3. Install the surface mounted component(s).
4. Perform quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair
4. MCO 2410.2_ Electromagnetic Environmental Control Program

5. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
2. MK-2663/U Electronic Equipment Maintenance Kit

8641-ACT-1310: Prepare Automated Test Equipment for operation.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Given an Automated Test Equipment station, circuit card assemblies and software.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Perform equipment inspections/inventories.
3. Perform preventive maintenance on ATE, as required.
4. Perform preventive maintenance on a circuit card repair station.
5. Identify equipment malfunctions, as required.
6. Replace damaged or missing tools/equipment, as required.
7. Verify equipment operation.
8. Load appropriate programs.
9. Verify software operation.

REFERENCES:

1. Marine Corps Module Test Repair Tracking System User's Manual Marine Corps Module Test Repair Tracking System User's Manual
2. SL-3-10793 AN/USM-674
3. ST-90 Shortrak 90 User's Manual
4. ST900-HN-GPT-020 Protrack I Model 20A Technical and Operations Manual
5. TM-09810A-40/6 Gold and Silver Disk User's Manual
6. TM-09810A-50/4 ATR Tutorial

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
2. AN/USM-657 (V2) Third Echelon Test Set (TETS)

8641-ACT-1311: Perform troubleshooting on circuit card assemblies.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Given an Automated Test Equipment station and circuit card assemblies.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Ensure proper handling of static sensitive devices.
3. Locate test routine.
4. Execute test routine according to instructions.
5. Isolate faulty component(s).
6. Perform maintenance closeout procedures to include quality assurance checks, as required.

REFERENCES:

1. ST-90 Shortrak 90 User's Manual
2. TM-09810A-40/6 Gold and Silver Disk User's Manual
3. TM-09810A-50/4 ATR Tutorial
4. TM-10793A-10/1 MTR User's Manual
5. MCO 2410.2_ Electromagnetic Environmental Control Program
6. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
2. AN/USM-657 (V2) Third Echelon Test Set (TETS)

8641-ACT-1312: Create a test routine.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided Automated Test Equipment, Application Program Set and known good circuit card assemblies.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Develop test routine instructions.
3. Store component signatures.
4. Develop test routine illustrations.
5. Develop test routine database.
6. Verify test routine.

REFERENCES:

1. ST-90 Shortrak 90 User's Manual
2. TM 09810A-50/5 Department of Defense AN/USM-646 Gold/Silver disk; Test Station Electrical/Electronic; Development Procedure Manual
3. MCO 2410.2_ Electromagnetic Environmental Control Program
4. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge
6. TM 9999-15/2 ESD Electro-static Discharge Management

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Automated Test Set
 2. Applicable APS
 3. AN/USM-657 (V2) Third Echelon Test Set (TETS)
-

8641-ACT-1313: Install wires on connectors/terminals.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This is an additional MOS only, assigned to eligible Marines who have completed the Circuit Card Repair Course at MCCES, 29 Palms, CA.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided a circuit card repair station, connectors and terminals and wire.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Prepare a wire lead.
3. Install a wire lead.
4. Replace conformal coating, as required.
5. Perform maintenance closeout procedures to include quality assurance checks, as required.

REFERENCES:

1. MSDS Material Safety Data Sheets
2. TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk and Silver Disk Program
3. TM 5895-45/1 Standard Miniature/2M Maintenance Practices for Electronic Assembly Repair

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/USM-646 or AN/USM-674 Automated Test Set
2. MK-2663/U Electronic Equipment Maintenance Kit

2005. INDEX OF 2000-LEVEL EVENTS BY FUNCTIONAL AREA.

Event Code	Event Title	Page
	MAINTENANCE PLANNING	
2800-PLAN-2101	Recommend table of organization/equipment changes.	2-62
2800-PLAN-2102	Plan for the deployment/installation of a field maintenance facility.	2-62
2800-PLAN-2103	Draft unit's maintenance policy letters.	2-63
2802-PLAN-2101	Plan for the deployment of a maintenance unit.	2-78
2802-PLAN-2102	Manage C4 Contractor Logistical Support (CLS) program for the Marine Corps.	2-79
2802-PLAN-2103	Perform the duties of an Electronics Maintenance Officer for a Marine Expeditionary Force/Major Subordinate Command Headquarters.	2-80
2802-PLAN-2104	Manage a staff of acquisition and equipment specialists when assigned to Marine Corps Systems Command.	2-81
2802-PLAN-2105	Perform the duties of an Electronics Maintenance Management Officer for Installations & Logistics.	2-81
2802-PLAN-2106	Perform the duties of an Electronic Maintenance Requirements Officer.	2-82
2802-PLAN-2107	Command Electronics Maintenance Company, Repairables Maintenance Company or a Service Company.	2-83
2802-PLAN-2108	Sponsor the 2800 Occupational Field.	2-83
2802-PLAN-2109	Command a Training Company/Detachment.	2-84
2805-PLAN-2101	Write maintenance SOP.	2-86
2805-PLAN-2102	Perform the duties of Training Analyst for the 2800 Occupational Field.	2-86
2821-PLAN-2101	Provide technical data for a regimental level communications plan.	2-91
2823-PLAN-2101	Develop detailed system level data for a MAGTF or Joint level communications plan.	2-93
2874-PLAN-2101	Plan Test Measurement and Diagnostic Equipment maintenance support.	2-110
2874-PLAN-2102	Manage Laboratory Standards Traceability.	2-111
2874-PLAN-2103	Manage Laboratory Quality Program.	2-112
2874-PLAN-2104	Manage calibration automated information system.	2-112
2891-PLAN-2101	Execute the plan for the deployment of a field maintenance activity.	2-121
2891-PLAN-2102	Draft ground electronics maintenance SOP.	2-122
	MAINTENANCE ADMINISTRATION	
2800-ADMN-2201	Manage maintenance shop programs.	2-64
2800-ADMN-2202	Analyze maintenance information system data.	2-65
2800-ADMN-2203	Administer pre-expended bin control program.	2-65
2800-ADMN-2204	Administer calibration control program.	2-66
2800-ADMN-2205	Administer modification control program.	2-66
2800-ADMN-2206	Administer tool control program.	2-67
2800-ADMN-2207	Administer publication control program.	2-68

2800-ADMN-2208	Maintain equipment records on organic maintenance equipment.	2-68
2800-ADMN-2209	Report quality deficiency.	2-69
2800-ADMN-2210	Manage ground electronics maintenance shop procedures.	2-69
2800-ADMN-2211	Administer quality control program.	2-70
2800-ADMN-2212	Submit changes to technical publications.	2-71
2800-ADMN-2213	Administer electromagnetic environmental effects (E3) program.	2-71
2802-ADMN-2201	Supervise maintenance production.	2-84
2802-ADMN-2202	Provide fiscal analysis and control.	2-85
2805-ADMN-2201	Direct ground electronics maintenance support programs.	2-87
2805-ADMN-2202	Coordinate/supervise requirements for support programs of a maintenance facility.	2-87
2805-ADMN-2203	Direct low density communication-electronic maintenance shop procedures.	2-88
2805-ADMN-2204	Prepare a budget.	2-88
2891-ADMN-2201	Manage maintenance production.	2-122
	MAINTENANCE ACTIONS	
2800-ACT-2301	Perform limited technical inspections on ground electronics equipment.	2-72
2800-ACT-2302	Deploy a field maintenance activity.	2-72
2800-ACT-2303	Determine organizational maintenance support requirements.	2-73
2800-ACT-2304	Supervise maintenance actions.	2-74
2800-ACT-2305	Prepare organic equipment for embarkation.	2-74
2800-ACT-2306	Verify the operation of an analog electronic circuit.	2-75
2800-ACT-2307	Verify the operation of a digital electronic circuit.	2-76
2800-ACT-2308	Isolate faulty components in a complex analog or digital circuit.	2-76
2805-ACT-2301	Direct ground electronics maintenance.	2-89
2805-ACT-2302	Brief the Commander on equipment readiness.	2-90
2822-ACT-2301	Perform corrective maintenance on electronic TRI-TAC switching equipment to the piece part component level.	2-91
2822-ACT-2302	Perform corrective maintenance on commercial electronic digital switching equipment.	2-92
2823-ACT-2301	Assess, evaluate and re-engineer complex circuit/link restoration accommodating critical communication architectural requirements.	2-94
2823-ACT-2302	Perform advanced corrective maintenance on Technical Control Facilities to the chassis mounted component level.	2-95
2823-ACT-2303	Utilize network management tools to maintain/validate quality of service and efficiency of the network.	2-96
2827-ACT-2301	Perform corrective maintenance on the Tactical Electronic Reconnaissance Processing Evaluation System.	2-98
2831-ACT-2301	Perform corrective maintenance on the AN/TRC-170 to the piece part component level.	2-99

2834-ACT-2301	Perform corrective maintenance on satellite communication terminals.	2-101
2834-ACT-2302	Perform corrective maintenance on satellite communication antennas.	2-102
2848-ACT-2301	Perform corrective maintenance on the Tactical Remote Sensor System.	2-105
2848-ACT-2302	Repair Tactical Remote Sensor System line replaceable units to the shop replaceable unit or chassis mounted component level.	2-106
2862-ACT-2301	Perform advanced corrective maintenance on ground common radios and associated ancillary equipment to the piece part component level.	2-107
2862-ACT-2302	Perform advanced corrective maintenance on tactical switchboards, telephones and associated ancillary equipment to the piece part component level.	2-108
2862-ACT-2303	Perform advanced corrective maintenance on computers and associated peripheral equipment to the piece part component level.	2-109
2874-ACT-2301	Calibrate Laboratory Standards.	2-113
2874-ACT-2302	Perform corrective maintenance on Laboratory Standards.	2-113
2874-ACT-2303	Provide Metrology guidance during the calibration of Test Measurement and Diagnostic Equipment.	2-114
2887-ACT-2301	Perform corrective maintenance on the Position Azimuth Determining System to the piece part component level.	2-115
2887-ACT-2302	Perform advanced corrective maintenance on artillery ground-based sensors to the piece part component level.	2-117
2887-ACT-2303	Perform advanced corrective maintenance on the Meteorological Measuring Station to the piece part component level.	2-118
2887-ACT-2304	Perform advanced corrective maintenance on artillery fire control electronic systems to the piece part component level.	2-119
2887-ACT-2305	Determine low density maintenance support requirements for artillery electronic equipment.	2-120
2891-ACT-2301	Supervise maintenance actions.	2-123
	MAINTENANCE OPERATIONS	
2800-OPS-2401	Install an Electromagnetic Interference maintenance shelter for field use.	2-77
2805-OPS-2401	Direct the deployment of a field maintenance activity.	2-90
2823-OPS-2401	Coordinate activation/deactivation of communications circuits and links connecting to the Defense Information Services Agency.	2-97
2827-OPS-2401	Provide technical assistance during the installation of the Tactical Electronic Reconnaissance Processing Evaluation System.	2-99
2834-OPS-2401	Provide technical assistance during the installation of satellite communication systems.	2-103
2834-OPS-2401	Provide technical assistance during the restoration	2-104

	of satellite communication systems.	
2874-OPS-2401	Deploy a Calibration Maintenance Facility.	2-115
	MAINTENANCE TRAINING	
2800-TRNG-2501	Manage training for ground electronics maintenance personnel.	2-78

2006. 2000-LEVEL INDIVIDUAL EVENTS

2800-PLAN-2101: Recommend table of organization/equipment changes.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

MOS PERFORMING: 2802, 2805, 2822, 2831, 2834. 2862, 2874, 2887, 2891

GRADES: SSGT, GYSGT, MSGT, MGYSGT, WO-1, CWO-2, CWO-3, CAPT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided a concept of employment, a mission and a table of organization/equipment.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review mission statement.
2. Review table of organization/equipment.
3. Review concept of employment.
4. Review appropriate Material Fielding Plan.
5. Determine any special allowances, as required.
6. Identify required changes.
7. Submit for approval.

REFERENCES:

1. CMR Consolidated Memorandum Report
 2. MCO 5311.1_ Table of Manpower Requirements
 3. MCO P4400.150E Consumer Level Supply Manual
 4. Unit TO/E Table of Organization/Equipment
-

2800-PLAN-2102: Plan for the deployment/installation of a field maintenance facility.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

MOS PERFORMING: 2802, 2805, 2822, 2831, 2834. 2862, 2874, 2887, 2891

GRADES: SSGT, GYSGT, MSGT, MGYSGT, WO-1, CWO-2, CWO-3, CAPT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided equipment, a mission and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Analyze Mission/Operations plan.
2. Record: safety procedures, test equipment requirements, maintenance facility requirements/space, power requirements, organic transportation requirements, external transportation, security requirements, reporting

- requirements, supply support requirements.
3. Submit plan for approval.

REFERENCES:

1. MCO P4790.2 MIMMS Field Procedures Manual
2. MCWP 3-40.3 Communications and Information Systems
3. MCWP 5-1 Marine Corps Planning Process
4. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Product Available:

1. MCI 0414B, Ground Maintenance Management Procedures for Supervisors

2800-PLAN-2103: Draft unit's maintenance policy letters.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

MOS PERFORMING: 2802, 2805, 2822, 2831, 2834. 2862, 2874, 2887, 2891

GRADES: SSGT, GYSGT, MSGT, MGYSGT, WO-1, CWO-2, CWO-3, CAPT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance, a mission and table of organization/equipment, directives from higher headquarters.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Analyze mission, directives, policy guidance and references.
2. Record/state as required: safety procedures, maintenance procedures, training procedures, physical security procedures, transmission/emission security, cryptographic (COMSEC) procedures, command and control procedures, operational procedures, embarkation procedures, reports (administrative/operational), continuing actions of Marines, ECCM, and Emergency Action Plan.
3. Staff policy letters for review.

REFERENCES:

1. MCBUL 1200 MOS Manual
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. MCWP 3-40.3 Communications and Information Systems
 4. MCWP 5-1 Marine Corps Planning Process
 5. TM 9999-15/1 ESD Awareness Electro-Static Discharge
 6. Unit Standing Operating Procedures (SOP)
-

2800-ADMN-2201: Manage maintenance shop programs.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT, MSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment, personnel and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Supervise the following programs: calibration control, publication control, quality control, modification control, tool control, pre-expend bin control, product quality deficiency report (PQDR) procedures, LTI procedures, recoverable items report (WIR) procedures, training procedures, deployment/retrograde procedures, readiness reporting procedures, turn-over procedures, desk top procedures.
2. Supervise MIMMS/AIS procedures, e.g. analyze data: Basic statistical procedures (identify trends), database and spreadsheet utilization in the analysis of information using Marine Corps standard software.
3. Supervise supply support procedures and special programs, e.g. SMU-credit card/PE/RA budgets, TO/E reviews, WIR's/LUP's and capabilities of Depot/MCCES/warranty administration.
4. Conduct inspections.
5. Correct discrepancies.
6. Request external staff assistance or training, as required.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. CMR Consolidated Memorandum Report
4. FEDLOG Federal Logistic Data on Compact Disk
5. MCO 4733.1_ Marine Corps TMDE Camp
6. MCO P4400.150E Consumer Level Supply Manual
7. MCO P4790.2 MIMMS Field Procedures Manual
8. Maintenance Float Catalog
9. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
10. UM 4400-124 Sassy Using Unit Procedures
11. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
12. UNIT SOP Unit's Standing Operating Procedures
13. Unit TO/E Table of Organization/Equipment
14. MCO 4400.82_ Marine Corps Supply Procedures

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Product Available:

1. MCI 0414B, Ground Maintenance Management Procedures for Supervisors

2800-ADMN-2202: Analyze maintenance information system data.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided maintenance information system data.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Verify recent changes.
2. Manage MIS data.
3. Manage exceptions listing, as required.
4. Submit corrections and new changes.
5. Validate MIMMS and ERO's to equipment, as required.

REFERENCES:

1. Applicable technical manuals/publications
2. MCO 3000.11_ Marine Corps Ground Equipment Resources Reporting
3. MCO P4790.2 MIMMS Field Procedures Manual
4. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
5. UNIT CMR Consolidated Memorandum Report
6. UNIT SOP Unit's Standing Operating Procedures
7. Unit TO/E Table of Organization/Equipment

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Product Available:

1. MCI 0414B, Ground Maintenance Management Procedures for Supervisors

2800-ADMN-2203: Administer pre-expended bin control program.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's authorization, the requirement and unit SOP.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Determine parts requirements.
2. Issue parts.
3. Inventory PEB.
4. Requisition replacement parts, as required.

5. Reconcile requisitions, as required.
6. Update desktop procedures.

REFERENCES:

1. MCO P4400.150E Consumer Level Supply Manual
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. UM 4400-124 Sassy Using Unit Procedures
 4. UM 4400-15 Organic Property Control
 5. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 6. Unit TO/E Table of Organization/Equipment
 7. Higher Headquarters Directives
-

2800-ADMN-2204: Administer calibration control program.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided equipment requiring calibration and unit SOP.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify all items of TMDE requiring calibration.
3. Induct equipment for calibration
4. Maintain calibration control records for all items of TMDE.
5. Update desktop procedures folder.

REFERENCES:

1. Applicable technical manuals/publications
 2. CMR Consolidated Memorandum Report
 3. MCO 4733.1_ Marine Corps TMDE CAMP
 4. MCO P4790.2 MIMMS Field Procedures Manual
 5. SL 1-2/3 Index of Authorized Publications in Stock
 6. TM 10510-14/1 Electronic Test Equipment Listing
 7. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 9. UNIT SOP Unit's Standing Operating Procedures
 10. Unit TO/E Table of Organization/Equipment
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2800-ADMN-2205: Administer modification control program.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided designated equipment and unit SOP.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify equipment requiring modification.
3. Update modification control records.
4. Record required modifications to equipment.
5. Update desktop procedures.

REFERENCES:

1. CMR Consolidated Memorandum Report
 2. CMS-5_ COMSEC Material System Policy & Procedures Manual
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. SL 1-2/3 Index of Authorized Publications in Stock
 5. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 6. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 7. Unit TO/E Table of Organization/Equipment
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2800-ADMN-2206: Administer tool control program.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided designated tool kits, tool sets, chests and unit SOP.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Identify all assigned tool sets, kits, and chests.
3. Identify inventory requirements.
4. Verify record of tool inventory.
5. Requisition replacements, as required.
6. Update desktop procedures.

REFERENCES:

1. Applicable technical manuals/publications
2. CMR Consolidated Memorandum Report
3. MCO 4733.1_ Marine Corps TMDE CAMP
4. MCO P4400.150E Consumer Level Supply Manual
5. MCO P4790.2 MIMMS Field Procedures Manual
6. SL 1-2/3 Index of Authorized Publications in Stock
7. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
8. UM 4400-124 Sassy Using Unit Procedures
9. UM 4400-15 Organic Property Control
10. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

11. UNIT SOP Unit's Standing Operating Procedures
 12. Unit TO/E Table of Organization/Equipment
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2800-ADMN-2207: Administer publication control program.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided designated publications and unit SOP.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Identify all required publications.
2. Inventory publications.
3. Requisition publications.
4. Incorporate required changes.
5. Destroy obsolete publications.
6. Update inventory records.
7. Update Publication Control Records.
8. Update desktop procedures.

REFERENCES:

1. Applicable technical manuals/publications
2. MCBUL 5600 Series
3. MCO 5215.12 Managing and Maintaining Navy Directives Files and Establishing "Must Hold" Lists
4. MCO 5215.1J Marine Corps Directives System
5. MCO P4790.2 MIMMS Field Procedures Manual
6. MCO P5215.17_ USMC Tech Pub System
7. NAVMC 2761 Catalog of Publications
8. SL 1-2/3 Index of Authorized Publications in Stock
9. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
10. UNIT SOP Unit's Standing Operating Procedures
11. Unit TO/E Table of Organization/Equipment

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Product Available:

1. MCI 0416A, Marine Corps Publications and Directives System
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2800-ADMN-2208: Maintain equipment records on organic maintenance equipment.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided equipment and records.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Identify equipment requiring records.
2. Create records.
3. Update records, as required.

REFERENCES:

1. CMR Consolidated Memorandum Report
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. SL 1-2/3 Index of Authorized Publications in Stock
 4. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 5. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 6. Unit TO/E Table of Organization/Equipment
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2800-ADMN-2209: Report quality deficiency.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided defective equipment and a Product Quality Deficiency Report.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Identify deficiencies in material.
2. Prepare a PQDR.
3. Submit the PQDR.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCO 4855.10_ Product Quality Deficiency Report (PQDR)
 3. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 4. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
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2800-ADMN-2210: Manage ground electronics maintenance shop procedures.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided appropriate equipment, Commander's guidance, a ground electronics maintenance shop for an infantry battalion or comparable size

unit and required personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review unit SOP, T/O and mission statement.
2. Institute procedures for the following: Corrective maintenance, Preventive maintenance, Supply support, Maintenance related programs, MIMMS, Safety, Shipping and Receiving, Field operations, Training, Equipment accountability, Embarkation and Hazmat.

REFERENCES:

1. MCO P4400.150E Consumer Level Supply Manual
2. MCO P4790.2 MIMMS Field Procedures Manual
3. MCWP 3-40.3 Communications and Information Systems
4. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
5. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
6. UNIT CMR Consolidated Memorandum Report
7. UNIT SOP Unit's Standing Operating Procedures
8. Unit TO/E Table of Organization/Equipment

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Product Available:

1. MCI 0414B, Ground Maintenance Management Procedures for Supervisors

MISCELLANEOUS:

ADMINISTRATIVE INSTRUCTIONS: A detailed description of maintenance shop procedures can be found in MCO P4790.2_, Appendix E, shop administration procedures.

2800-ADMN-2211: Administer quality control program.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided designated equipment and Test Measurement and Diagnostic Equipment.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Determine performance standards.
2. Verify completion of maintenance actions.
3. Verify operational condition.
4. Reject faulty equipment.
5. Verify equipment closeout.
6. Update desktop procedures.

REFERENCES :

1. Applicable technical manuals/publications
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 4. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 5. Unit TO/E Table of Organization/Equipment
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2800-ADMN-2212: Submit changes to technical publications.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided a NAVMC 10772 Recommended Changes to Publications/Logistics-Maintenance Data Coding Sheet and technical publications requiring a change.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Identify required changes.
2. Prepare NAVMC 10772 recommending change.
3. Submit the NAVMC 10772.

REFERENCES :

1. Applicable technical manuals/publications
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 4. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 5. Unit TO/E Table of Organization/Equipment
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2800-ADMN-2213: Administer electromagnetic environmental effects (E3) program.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: CPL, SGT, SSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided a mission, personnel and Test Measurement and Diagnostic Equipment.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Develop/design installation techniques that cover the following areas:
indirect coupling, shielding, grounding, bonding, filtering and corrosion control.

2. Develop maintenance standards.
3. Identify E3 problems to the unit E3 coordinator.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCWP 3-40.3 Communications and Information Systems
 3. TM 9406-15 Grounding Procedures
 4. TM 9999-15/1 ESD Awareness Electro-Static Discharge
-

2800-ACT-2301: Perform limited technical inspections on ground electronics equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL, SGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided equipment and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Inventory equipment.
3. Check for SL-3 completeness and annotate as required.
4. Connect equipment to TMDE, as required.
5. Ensure proper handling of static sensitive components.
6. Record findings, as required.
7. Determine appropriate maintenance actions, as required.
8. Verify authorized modifications.
9. Perform maintenance closeout procedures to include quality control check.

REFERENCES:

1. Applicable technical manuals/publications
 2. CMS-5_ COMSEC Material System Policy & Procedures Manual
 3. FEDLOG Federal Logistic Data on Compact Disk
 4. MCO P4790.2 MIMMS Field Procedures Manual
 5. SL 1-2/3 Index of Authorized Publications in Stock
 6. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 7. DOD-STD-1686 Electrostatic Discharge Control
 8. TM 9999-15/1 ESD Awareness Electro-Static Discharge
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2800-ACT-2302: Deploy a field maintenance activity.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided equipment, a mission and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to the safety requirements.
2. Ensure personnel are prepared for deployment, as required.
3. Establish load plans for personnel and equipment.
4. Arrange for special material handling and transportation equipment.
5. Select site location after considering: Space requirements, Terrain features, Access routes, Proximity to supported units, Proximity to logistic support.
6. Determine power requirements, as required.
7. Install the maintenance facility.
8. Determine logistics/support procedures.
9. Maintain logistics/support procedures.
10. Maintain security.

REFERENCES:

1. Applicable technical manuals/publications
 2. CMR Consolidated Memorandum Report
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
 5. SECNAVINST P5530.13 Security Instruction F/SEN Convention (AA&E)
 6. UNIT SOP Unit's Standing Operating Procedures
 7. Unit TO/E Table of Organization/Equipment
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2800-ACT-2303: Determine organizational maintenance support requirements.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT, MSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an equipment list, a mission and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review Unit SOP
2. Evaluate unit's support requirements.
3. Define supply support requirements.
4. Submit support requirements.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. Maintenance Float Catalog
 4. Operational Order
 5. Higher Headquarters Directives
-

2800-ACT-2304: Supervise maintenance actions.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided equipment and maintenance personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Supervise maintenance personnel.
2. Manage maintenance resources, e.g. CommElect, CLS
3. Analyze data: Basic statistical procedures (identify trends), Database and spreadsheet utilization in the analysis of information.
4. Control maintenance production.
5. Maintain reports and records.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. UNIT SOP Unit's Standing Operating Procedures
 4. Unit TO/E Table of Organization/Equipment
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2800-ACT-2305: Prepare organic equipment for embarkation.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: CPL, SGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided equipment, a mission and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Inspect SL-3 completeness of maintenance/maintenance support equipment.
2. Determine requirements for embarkation materials, boxes, strapping, etc.
3. Inspect tactical marking of maintenance/maintenance support equipment.
4. Inspect packing and embark lists upon completion.
5. Inspect weather/waterproofing of maintenance/maintenance support equipment.
6. Determine special lifting/handling requirements for maintenance/maintenance support equipment.
7. Determine special security requirements for maintenance/maintenance support equipment.
8. Embark equipment.

REFERENCES:

1. Applicable technical manuals/publications
2. CMR Consolidated Memorandum Report

3. MCO P4790.2 MIMMS Field Procedures Manual
4. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
5. SECNAVINST P5530.13 Security Instruction F/SEN Convention (AA&E)
6. UNIT SOP Unit's Standing Operating Procedures
7. Unit TO/E Table of Organization/Equipment

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Products Available:

1. MCI 045C, The Logistics/Embarkation Specialist
 2. MCI 047D, Introduction to Amphibious Embarkation
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2800-ACT-2306: Verify the operation of an analog electronic circuit.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

MOS PERFORMING: 2822, 2831, 2834, 2862 2874, 2887

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Given a complex analog electronic circuit, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Perform alignments.
3. Interpret block diagrams.
4. Research and interpret data from the appropriate technical publications pertaining to the circuit.
5. Identify proper/improper operation.

REFERENCES:

1. Applicable technical manuals/publications
2. Electronic Devices and Circuits, Robert T. Paynter
3. Introductory Electric Circuits, Robert T. Paynter

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
 2. Scope Meter
-

2800-ACT-2307: Verify the operation of a digital electronic circuit.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

MOS PERFORMING: 2822, 2831, 2834, 2862 2874, 2887

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Given a complex digital electronic circuit, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the reference.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research and interpret data from the appropriate technical publications pertaining to the theory of operation for the equipment, associated components, ancillary devices and TMDE.
3. Interpret schematic diagrams for complex electronic circuits.
4. List possible faulty functions.
5. Perform input/output tests on possible faulty functions.
6. Record symptoms.
7. Localize the fault to a circuit.

REFERENCES:

1. Applicable technical manuals/publications
2. Digital Electronics, A Practical Approach, William Kleitz
3. Digital Principles and Applications, Malvino and Leach

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
 2. Scope Meter
-

2800-ACT-2308: Isolate faulty components in a complex analog or digital circuit.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

MOS PERFORMING: 2822, 2831, 2834, 2862 2874, 2887

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Given a complex electronic circuit, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research and interpret data from the appropriate technical publications pertaining to the circuit.

3. Interpret schematic diagrams for complex electronic circuits.
4. Calculate complex electronic circuit parameters.
5. Trace signal paths in complex electronic circuits.
6. Trace current/voltage paths in complex electronic circuits.
7. Measure circuit performance.
8. Analyze measured and calculated data.
9. Localize the fault to the component(s).
10. Ensure proper handling of static sensitive components/printed circuit cards.

REFERENCES :

1. Applicable technical manuals/publications
2. Electronic Devices and Circuits, Robert T. Paynter
3. Introductory Electric Circuits, Robert T. Paynter

SUPPORT REQUIREMENTS :

EQUIPMENT: Training Equipment:

1. Oscilloscope
 2. Scope Meter
-

2800-OPS-2401: Install an Electromagnetic Interference maintenance shelter for field use.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: PVT, PFC, LCPL, CPL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided an Electromagnetic Interference maintenance shelter and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Site the equipment.
3. Anchor the shelter.
4. Ground shelter.
5. Apply power.
6. Camouflage equipment.
7. Verify EMI procedures are adhered to.
8. Verify cable connections.
9. Verify antenna installation, as required.
10. Verify equipment operation.
11. Provide local security.

REFERENCES :

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. MCO P5090.2 Environmental Compliance and Protection Manual
4. MCWP 3-40.3 Communications and Information Systems

5. TM 9406-15 Grounding Procedures
 6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
-

2800-TRNG-2501: Manage training for ground electronics maintenance personnel.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: SSGT, GYSGT, MSGT, MGYSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided equipment, personnel, training records and the unit's training plan.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Identify training strengths and weaknesses of unit personnel.
2. Establish training priorities: mission oriented training, Skill progression training, Professional development training.
3. Devise training plan to increase skill level of personnel/unit: Communication security, mission and organization of command, Maintenance of files and logs, troubleshooting.
4. Determine type and frequency of training to be conducted on an individual/unit basis.
5. Supervise required training.
6. Provide training, as required.
7. Provide supervision at all levels during conduct of training.
8. Evaluate skill levels attained against those established.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCBUL 1200 MOS Manual
 3. MCO 5390.2_ Leadership Training and Education
 4. MCO P1500.40_ Marine Corps Training Philosophy and Requirements
 5. MCO P4790.2 MIMMS Field Procedures Manual
 6. MCRP 3-0A Unit Training Management Guide
 7. MCRP 3-0B How to Conduct Training
 8. MCWP 3-40.3 Communications and Information Systems
 9. UNIT SOP Unit's Standing Operating Procedures
 10. Higher Headquarters Directives
 11. Unit Training Plan
-

2802-PLAN-2101: Plan for deployment of a maintenance unit.

EVALUATION-CODED: NO **SUSTAINMENT INTERVAL:** 12 months

GRADES: CAPT, MAJ

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review warning order.
2. Review Commander's guidance.
3. Review supported equipment density list.
4. Identify support requirements.
5. Identify CLS requirements.
6. Recommend class 9 supply block, as required.
7. Recommend float, CLS spares block as required.
8. Submit embarkation requirements.
9. Provide input for Operational Plan.
10. Determine and submit power requirements.
11. Provide input for load plans for personnel and equipment.
12. Arrange for special material handling and transportation of equipment, as required.
13. Project site requirements.
14. Determine Security/Defense requirements.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
 2. Applicable technical manuals/publications
 3. MCO P4400.150E Consumer Level Supply Manual
 4. MCO P4790.2 MIMMS Field Procedures Manual
 5. MCWP 3-40.3 Communications and Information Systems
 6. MCWP 5-1 Marine Corps Planning Process
 7. MPS Load Plan
 8. Operational Order
 9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 10. UNIT SOP Unit's Standing Operating Procedures
 11. Unit TO/E Table of Organization/Equipment
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2802-PLAN-2102: Manage C4 Contractor Logistical Support program for the Marine Corps.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: CAPT, MAJ

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review TO/E, C4 systems supported and billet description.
2. Attend meetings/conferences.
3. Manage the maintenance contract as the ICE2 Funding Manager for the Marine Corps.
4. Brief the Branch Head Manager on C4 supply support issues/challenges.

5. Provide guidance on C4 supply support.
6. Draft official message traffic.
7. Manage government employees.
8. Brief C4 supply support issues/challenges.

REFERENCES :

1. Applicable technical manuals/publications
 2. MCO P4400.150E Consumer Level Supply Manual
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 5. Higher Headquarters Directives
 6. ICE2 Contract
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2802-PLAN-2103: Perform the duties of an Electronics Maintenance Officer for a Marine Expeditionary Force/Major Subordinate Command Headquarters.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MAJ

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS :

1. Advise the Commander/ACIS G-6 on the readiness and maintenance status of ground electronics equipment.
2. Coordinate with MARCORSYSCOM on the fielding and sustaining of ground electronics equipment.
3. Advise and facilitate MarCorLogCom on the maintenance/supply support and life-cycle management of ground electronics equipment.
4. Facilitate the ACIS G-4 and higher headquarters as the Alpha TAMCN commodity manager.
5. Direct and facilitate appropriate unit inspections and training as required.
6. Coordinate with the 2800 Occ Fld sponsor and the 2800 MOS monitor on the proper assignment of officer and enlisted personnel.

REFERENCES :

1. Applicable technical manuals/publications
 2. MCO P4400.150E Consumer Level Supply Manual
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. MCWP 4-24 Commander's Guide to Maintenance
 5. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 6. Unit TO/E Table of Organization/Equipment
 7. Higher Headquarters Directives
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2802-PLAN-2104: Manage a staff of acquisition and equipment specialists when assigned to Marine Corps Systems Command.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: LTCOL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review duties.
2. Supervise staff of acquisition and equipment specialists.
3. Provide training to units.
4. Brief Commander on TMDE and maintenance issues/challenges.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCO 4733.1_ Marine Corps TMDE CAMP
 3. MCO P4400.150E Consumer Level Supply Manual
 4. MCO P4790.2 MIMMS Field Procedures Manual
 5. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 6. Higher Headquarters Directives
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2802-PLAN-2105: Perform the duties of an Electronics Maintenance Management Officer for Installations & Logistics.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MAJ

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review duties.
2. Review issues and policy.
3. Provide input on equipment requirements and maintenance capabilities.
4. Provide maintenance policies.
5. Attend meetings/conferences.
6. Brief OSD/Joint Staff/ACMC/DC, I&L/Department Head on maintenance issues/equipment/capabilities.
7. Provide guidance on electronics maintenance and systems related issues.

REFERENCES:

1. Applicable technical manuals/publications
2. MCO P4400.150E Consumer Level Supply Manual

3. MCO P4790.2 MIMMS Field Procedures Manual
 4. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 5. Higher Headquarters Directives
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2802-PLAN-2106: Perform the duties of an Electronics Maintenance Requirements Officer.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MAJ

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review duties.
2. Review issues and policies.
3. Coordinate and manage the Marine Corps position on the operational requirements for communication-electronic maintenance related systems and maintenance aspects of other C4 systems.
4. Serve as the operating force sponsor and MCCDC liaison to MARCORSSYSCOM in matters of electronic maintenance and appropriate C4 operational requirements.
5. Coordinate with counterparts in other MCCDC divisions when C4 equipment requirements have implications for doctrine, training and force structure.
6. Participate in the development of concepts of employment for C4 operational requirements documents.
7. Assist in Mission Area Analysis for mission areas impacted by communication-electronic maintenance.
8. Coordinate the staffing of Marine Corps and other service C4 requirements documents.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCO P4400.150E Consumer Level Supply Manual
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 5. Higher Headquarters Directives
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2802-PLAN-2107: Command Electronics Maintenance Company, Repairables Maintenance Company, or Service Company.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MAJ

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided a command, Commander's guidance and a table of organization and equipment.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review TO/E.
2. Review Commander's guidance.
3. Review present policies and procedures.
4. Establish policies and procedures, as required.
5. Revise policies and procedures, as required
6. Supervise personnel and equipment maintenance.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCO P4400.150E Consumer Level Supply Manual
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. MCWP 3-40.3 Communications and Information Systems
 5. TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
 6. Unit TO/E Table of Organization/Equipment
 7. Higher Headquarters Directives
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2802-PLAN-2108: Sponsor the 2800 Occupational Field.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: LTCOL

INITIAL TRAINING SETTING: MOJT

CONDITION: When assigned to the billet.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review duties.
2. Attend meetings/conferences.
3. Review strengths/weaknesses and issues of individual MOS's in the 2800 OccFld.
4. Manage strengths/weaknesses and issues of individual MOS's in the 2800 OccFld.
5. Brief 2800 issues to HQMC.
6. Provide guidance to the officer and enlisted monitors for 2800 Marines.
7. Brief the promotion boards on 2800 Marines.
8. Brief the Vice Commandant for C4 on maintenance issues/challenges.

REFERENCES:

1. MCO 5311.1_ Table of Manpower Requirements
 2. Unit TO/E Table of Organization/Equipment
 3. Higher Headquarters Directives
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2802-PLAN-2109: Command a Training Company/Detachment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MAJ

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided a command, Commander's guidance, and a table of organization and equipment.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review present TO/E, and policies/procedures.
2. Develop/revise policies and procedures, as required.
3. Direct the establishment/revision of formal courses, as required.
4. Manage formal student training.
5. Determine resource requirements to meet the current/future formal training requirements.
6. Review/submit Programs of Instruction (POI's) and Course Descriptive Data (CDD) for formal training.
7. Review/approve Course Content Review Board (CCRB) recommendations, as required.
8. Coordinate issues requiring approval of higher headquarters, as required.
9. Direct course/curriculum evaluation, as required.

REFERENCES:

1. MCO 1553.2_ Management of Marine Corps Formal Schools and Training Detachments
 2. MCO 1553.1_ The Marine Corps Training and Education System
 3. MCO 1553.5_ Marine Corps Training and Education Evaluation
 4. NAVMC 3500.6 2800 Ground T&R Manual
 5. Systems Approach to Training (SAT) Manual
 6. Applicable technical manuals/publications
 7. Unit TO/E Table of Organization/Equipment
 8. Applicable Unit policies and procedures
 9. Higher Headquarters Directives
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2802-ADMN-2201: Supervise maintenance production.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: CAPT, MAJ

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance, an electronic maintenance unit, an assigned maintenance area and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Conduct internal review.
2. Evaluate external analysis.
3. Determine action required.
4. Develop POA&M.
5. Execute plan.
6. Evaluate results.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCBUL 3000.11_ MARES Introduction Policy Manual
 3. MCO 4400.82_ MIMMS Controlled Item Management Manual
 4. MCO 4733.1_ Marine Corps TMDE Camp
 5. MCO 5215.1J Marine Corps Directives System
 6. MCO P4105.3_ ILS Manual
 7. MCO P4400.150E Consumer Level Supply Manual
 8. MCO P4790.2 MIMMS Field Procedures Manual
 9. MCO P5215.17_ USMC Tech Pub System
 10. SECNAVINST 5510.30 Information and Personnel Security Program
 11. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
 12. SI 4400-15/5 SI
 13. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
 14. TM 9999-15/1 ESD Awareness Electro-Static Discharge
 15. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 16. Unit TO/E Table of Organization/Equipment
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2802-ADMN-2202: Provide fiscal analysis and control.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: CAPT, MAJ, LTCOL

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided with Commander's guidance, maintenance contracts, personnel and training requirements.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review mission.
2. Determine operational and maintenance requirements.
3. Identify new project requirements.
4. Determine funding category (PMC or O&M).
5. Review maintenance contracts.
6. Determine cost for training for personnel.
7. Review existing funds available.
8. Determine installation/construction dates for new projects.
9. Develop cost estimates for projects, maintenance, and training.
10. Develop/plan a budget based on preceding requirements.

2. Supervise warranty/CLS process.

REFERENCES :

1. MCO 3000.11_ Marine Corps Ground Equipment Resources Reporting
 2. MCO 4733.1_ Marine Corps TMDE CAMP
 3. MCO P4105.3_ ILS Manual
 4. MCO P4400.150E Consumer Level Supply Manual
 5. MCO P4790.2 MIMMS Field Procedures Manual
 6. MCWP 4-24 Commander's Guide to Maintenance
 7. UM 4400-124 Sassy Using Unit Procedures
 8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
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2805-ADMN-2203: Direct low density communication-electronics maintenance shop procedures.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: WO-1, CWO-2, CWO-3, CWO-4

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance, a communication-electronic maintenance platoon/section, a mission statement and program reports.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Manage secondary Depot Level Repairables (DLR).
2. Review/validate the low density (LD) secondary reparable (SECREP) Float
3. Supervise item review/stockage computation.
4. Monitor redistribution of reparable issue points assets.
5. Manage the materials return program.

REFERENCES :

1. MCO 3000.11_ Marine Corps Ground Equipment Resources Reporting
 2. MCO 4733.1_ Marine Corps TMDE Camp
 3. MCO P4400.150E Consumer Level Supply Manual
 4. MCO P4790.2 MIMMS Field Procedures Manual
 5. MCWP 4-24 Commander's Guide to Maintenance
 6. UM 4400-124 Sassy Using Unit Procedures
 7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
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2805-ADMN-2204: Prepare a budget.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: WO-1, CWO-2, CWO-3, CWO-4

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance, maintenance contracts and personnel training requirements.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review mission.
 2. Determine operational and maintenance requirements.
 3. Identify new project requirements.
 4. Determine funding category (PMC or O&M).
 5. Review maintenance contracts.
 6. Determine costs for training personnel.
 7. Review existing funds available.
 8. Determine installation/construction dates for new projects.
 9. Develop cost estimates for projects, maintenance and training.
 10. Develop/plan a budget based on preceding requirements
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2805-ACT-2301: Direct ground electronics maintenance.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: WO-1, CWO-2, CWO-3, CWO-4

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment, a maintenance area and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Determine maintenance capabilities.
2. Evaluate available personnel.
3. Evaluate organic equipment.
4. Develop shop procedures.
5. Analyze workload.
6. Establish maintenance priorities.
7. Assign individual maintenance actions.
8. Inspect completed maintenance actions.
9. Supervise maintenance readiness inspections.
10. Assist in the process of placing new equipment in service.
11. Conduct inspections of functional areas.
12. Assign corrective actions as required.
13. Follow up corrective actions.
14. Update turnover folder.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. MCWP 4-24 Commander's Guide to Maintenance
 4. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
 5. UNIT SOP Unit's Standing Operating Procedures
 6. Unit TO/E Table of Organization/Equipment
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2805-ACT-2302: Brief the Commander on equipment readiness.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: WO-1, CWO-2, CWO-3, CWO-4

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance and maintenance reports.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review Commander's guidance.
2. Review MARES management reports.
3. Gather required information.
4. Evaluate equipment readiness.
5. Prepare/deliver the brief.
6. Brief C3 report, as required.

REFERENCES:

1. FMFM 3-1 Command and Staff Action
 2. MCO P4790.2 MIMMS Field Procedures Manual
 3. MCWP 4-24 Commander's Guide to Maintenance
 4. Unit TO/E Table of Organization/Equipment
 5. LM-2 Report
 6. MCBul 3000
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2805-OPS-2401: Direct the deployment of a field maintenance activity.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: WO-1, CWO-2, CWO-3, CWO-4

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment, a mission and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Verify security.
3. Conduct pre-deployment inspection.
4. Verify load plans.
5. Verify special material handling and transportation.
6. Validate logistics support items. (i.e. Float Blocks)
7. Verify data requirements.
8. Deploy maintenance contact teams.

REFERENCES:

1. Applicable technical manuals/publications
2. EKMS-1A CMS Policy and Procedures for Navy EKMS

3. Read schematic diagrams.
4. Calculate circuit parameters.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure complex circuit performance.
7. Perform alignments.
8. Trace signal paths.
9. Trace current/voltage paths.
10. Identify faulty component(s).
11. Replace faulty component(s).
12. Research authorized Modification and Technical Instructions (MI's and TI's).
13. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES :

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.1_ Marine Corps Integrated Maintenance Management System (MIMMS) MANUAL
4. MCO P4790.2 MIMMS Field Procedures Manual
5. Maintenance Float Catalog
6. SL 1-2/3 Index of Authorized Publications in Stock
7. SL-4 Repair, Maintenance, and Management Lists
8. TM 9999-15/1 ESD Awareness Electro-Static Discharge
9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS :

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Digital Multimeter
3. Signal Generator
4. TA-1042/U Digital Non-Secure Voice Terminal
5. AN/TTC-42 Automatic Telephone Central Office
6. AN/USM-657 (V2) Third Echelon Test Set
7. AN/USM-674 Automated Test Set

2822-ACT-2302: Perform corrective maintenance on commercial electronic switching equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: This task is applicable to Marines serving as commercial switch operator/maintainers assigned to Bases, Posts and Stations.

GRADES: LCPL, CPL, SGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams.
4. Calculate circuit parameters.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure basic circuit performance.
7. Perform alignments.
8. Trace signal paths.
9. Trace current/voltage paths.
10. Identify faulty SRU's.
11. Remove/replace faulty SRU's.
12. Research authorized Modification and Technical Instructions (MI's and TI's).
13. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. MCO P5090.2 Environmental Compliance and Protection Manual
4. MSDS Material Safety Data Sheets

ADMINISTRATIVE NOTE: Training for this event is provided by the Advanced Digital Voice Switching Course at Sheppard AFB, TX.

2823-PLAN-2101: Develop detailed system level data for a MAGTF or Joint level communications plan.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT, MSGT, MGYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance, equipment, a mission and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Assess higher/supported/adjacent unit's communication capabilities and requirements for integration and implementation.
2. Draft required technical data for the communication plan.
3. Coordinate with external agencies and elements associated with Communications Control.
4. Coordinate the assignment of designations for transmission links and circuits.
5. Identify technical deficiencies in the communications plan, as required.
6. Review required messages or requests prior to submission.
7. Verify circuit and link priority with external agencies.
8. Verify circuit requirements with subscribers.

REFERENCES:

1. Applicable technical manuals/publications
 2. CJCSM 6231 Manual for Employed Joint Communications
 3. MCWP 3-40.3 Communications and Information Systems
 4. Operational Order
 5. DoD 8570.01-M Information Assurance Workforce Improvement Program
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2823-ACT-2301: Assess, evaluate and re-engineer complex circuit/link restoration accommodating critical communication architectural requirements.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT, MSGT, MGYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided a communication network, designated circuit outage, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Analyze network status.
3. Assess critical architectural requirements.
4. Use network management tools to ensure quality of service and efficiency of the network.
5. Reroute or activate backup circuit/link according to priority dictated by SYSCON/TECHCON.
6. Re-engineer complex circuits/links accommodating changes in architectural requirements.

REFERENCES:

1. Applicable technical manuals/publications
2. Operational Order
3. Programming Cut Sheets
4. DoD 8570.01-M Information Assurance Workforce Improvement Program

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Analog Test Set
3. Data Communication Analyzer
4. Digital Multimeter
5. Break-out Box
6. Associated Tools
7. Associated Communications Equipment
8. Loop back plugs

MATERIAL: Distance Learning Products Available:

1. MCI 286G, Fundamentals of Digital Logic

2. ISDN Test Set
3. Cat-5 Cable Tester

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
2. MCI 286G, Fundamentals of Digital Logic
3. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment

2823-ACT-2303: Utilize network management tools to validate/maintain quality of service and efficiency of the network.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT, MSGT, MGYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated circuit requirements, network management tools.

STANDARD: Per the reference.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Research applicable technical data pertaining to faulty equipment.
4. Read architectural diagrams.
5. Measure circuit performance.
6. Trace signal paths.
7. Assess and evaluate the efficiency of the configured network.
8. Quality of service.

REFERENCES:

1. Applicable technical manuals/publications
2. EKMS-1A CMS Policy and Procedures for Navy EKMS
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.1_ Marine Corps Integrated Maintenance Management System (MIMMS) MANUAL
5. MCO P4790.2 MIMMS Field Procedures Manual
6. Maintenance Float Catalog
7. SECNAVINST 5510.30 Information and Personnel Security Program
8. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
9. SL 1-2/3 Index of Authorized Publications in Stock
10. SL-4 Repair, Maintenance, and Management Lists
11. TM 9999-15/1 ESD Awareness Electro-Static Discharge
12. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
13. DoD 8570.01-M Information Assurance Workforce Improvement Program

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Technical Control Facility

2. IDSN Test Set
3. CAT-5 Cable Tester

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
2. MCI 286G, Fundamentals of Digital Logic
3. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment

2823-OPS-2401: Coordinate activation/deactivation of communications circuits and links connecting to the Defense Information Services Agency.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT, MSGT, MGYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment and an operational plan.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Verify circuit parameters with DISA.
2. Update SYSCON/TECHCON continually throughout installation of communications system.
3. Verify correct incoming and outgoing signaling for each circuit.
4. Coordinate activation of circuits once communications links test reliable as prioritized by SYSCON/TECHCON.
5. Coordinate deactivation of circuits upon completion of communications requirements as prioritized by SYSCON/TECHCON.
6. Maintain records on activation/deactivation of links and circuits.

REFERENCES:

1. Applicable technical manuals/publications
2. CJCSM 6231 Manual for Employed Joint Communications
3. DISA Circulars/Publications
4. FM 24-16 Communication-Electronic Operations Orders, Records and Reports
5. MCWP 3-40.3 Communications and Information Systems
6. Operational Order
7. Programming Cut Sheets
8. DoD 8570.01-M Information Assurance Workforce Improvement Program

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Associated Communication Systems

9. J-4843A/GRM Test Adapter
10. TS-4291/P Radio Test Set
11. TS-4317/GRM Radio Test Set
12. Power Supply

MATERIAL: Distance Learning Products Available:

1. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment

2827-OPS-2401: Provide technical assistance during the installation of the Tactical Electronic Reconnaissance Processing Evaluation System.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: MOS 2827 is an additional MOS only, assigned to qualified Marines with a primary MOS of 2847 or 2862.

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment and an operational plan.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Verify equipment is properly grounded.
3. Verify power source.
4. Verify remote capabilities, as required.
5. Verify equipment operation.
6. Verify equipment operating procedures.
7. Perform Electromagnetic Interference (EMI) troubleshooting to include checking for proper ground, cable connection, power connections, etc.
8. Provide guidance to correct any discrepancies noted.

REFERENCES:

1. Applicable technical manuals/publications
2. TI-5820-25/22 Electromagnetic Environmental Effects (E3) Procedures
3. TM 9406-15 Grounding Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/TSQ-90 Tactical Electronic Reconnaissance Processing & Evaluation System (TERPES)

2831-ACT-2301: Perform corrective maintenance on the AN/TRC-170 to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams.
4. Calculate complex circuit parameters.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure complex circuit performance.
7. Perform alignments.
8. Trace signal paths.
9. Trace current/voltage paths.
10. Identify faulty component(s).
11. Remove/replace faulty component(s).
12. Research authorized Modification and Technical Instructions (MI's and TI's)
13. Perform maintenance close-out procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock
5. SL-4 Repair, Maintenance, and Management Lists
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Semiconductor Device Test Set
 2. Oscilloscope
 3. Multimeter
 4. Signal Generator
 5. Power Supply
 6. AN/USM-657 (V2) Third Echelon Test Set
 7. AN/USM-674 Automated Test Set
 8. AN/TRC-170 Radio Terminal Set
 9. Data Analyzer
 10. Spectrum Analyzer
 11. Frequency Counter
-

2834-ACT-2301: Perform corrective maintenance on satellite communication terminals.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams.
4. Ensure proper handling of static sensitive components/printed circuit cards.
5. Measure system performance.
6. Perform alignments.
7. Trace signal paths (signal flow).
8. Trace current/voltage paths.
9. Isolate faulty components.
10. Follow the prescribed warranty procedures for inoperative LRU/SRU.
11. Remove/replace faulty components.
12. Requisition repair parts, as required.
13. Research authorized Modification and Technical Instructions (MI's and TI's).
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.1_ Marine Corps Integrated Maintenance Management System (MIMMS) MANUAL
4. MCO P4790.2 MIMMS Field Procedures Manual
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/TSC-85D GMF Satellite Terminal
2. AN/TSC-93D GMF Satellite Terminal
3. AN/TSC-154 SMART-T Satellite Terminal
4. AN/TSC-156B Satellite Terminal
5. AN/USC-65 LMST Satellite Terminal
6. Oscilloscope
7. Fireberd 6000 Data Analyzer with all modules

8. Multimeter
9. Dummy Load
10. Wattmeter
11. Spectrum Analyzer

2834-ACT-2302: Perform corrective maintenance on satellite communication antennas.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Research authorized Modification and Technical Instructions.
4. Read schematic diagrams.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure antenna performance.
7. Perform antenna alignments.
8. Trace signal paths (signal flow).
9. Trace current/voltage paths were applicable.
10. Isolate faulty components.
11. Follow the prescribed warranty procedures for inoperative LRU/SRU.
12. Requisition repair parts, as required.
13. Remove/replace faulty components.
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.1_ Marine Corps Integrated Maintenance Management System (MIMMS) MANUAL
4. MCO P4790.2 MIMMS Field Procedures Manual
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Digital Multimeter
2. Wattmeter
3. Dummy Load

4. AN/TSC-85D GMF SATCOM Terminal
 5. AN/TSC-93D GMF SATCOM Terminal
 6. AN/TSC-154 SMART-T SATCOM Terminal
 7. AN/TSC-156B Phoenix SATCOM Terminal
 8. AN/USC-65 LMST SATCOM Terminal
 9. AS-3036 2.4 Meter X-Band Antenna
 10. AS-4429 4.9 Meter Lightweight High Gain X-Band Antenna (LHGXA)
 11. AS-4429 4.9 Meter Large Aperture Multi-Band Antenna (LAMDA)
 12. Radiation Meter
 13. Quad Band Satellite Emulator
-

2834-OPS-2401: Provide technical assistance during the installation of satellite communication systems.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided satellite communications equipment and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Verify equipment is properly grounded.
4. Verify power source, proper phase and voltage levels.
5. Verify antenna installation, as required.
6. Verify remote capabilities, as required.
7. Verify COMSEC connection, as required.
8. Verify equipment operation to include equipment configuration and programming.
9. Verify equipment operating procedures to include COMSEC.
10. Perform Electromagnetic Interference troubleshooting.
11. Provide guidance to correct discrepancies noted.

REFERENCES:

1. Applicable technical manuals/publications
2. EKMS-1A CMS Policy and Procedures for Navy EKMS
3. Operational Order
4. TM 9406-15 Grounding Procedures
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/TSC-85D GMF Satellite Terminal
2. AN/TSC-93D GMF Satellite Terminal
3. AN/TSC-154 SMART-T Satellite Terminal
4. AN/TSC-156B Satellite Terminal
5. AN/USC-65 LMST Satellite Terminal

6. AS-3036 2.4 Meter X-Band Antenna
 7. AS-4429 4.9 Meter Lightweight High Gain X-Band Antenna (LHGXA)
 8. AS-4429 4.9 Meter Large Aperture Multi-Band Antenna (LAMDA)
 9. Digital Oscilloscope
 10. Fireberd 6000 Data Analyzer with all modules
 11. Multimeter
 12. Dummy Load
 13. Wattmeter
 14. AN/GSC-54 Fiber Optic Converter
 15. Power Supply
 16. Signal Generator
-

2834-OPS-2402: Provide technical assistance during the restoration of satellite communication systems.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided satellite communications equipment and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Verify equipment is properly grounded.
3. Verify power source, proper phase and voltage levels.
4. Verify antenna installation, as required.
5. Verify remote capabilities, as required.
6. Verify COMSEC connection, as required.
7. Verify equipment operation to include equipment configuration and programming.
8. Verify equipment operating procedures to include COMSEC.
9. Perform Electromagnetic Interference troubleshooting.
10. Provide guidance to correct discrepancies noted.

REFERENCES:

1. Applicable technical manuals/publications
2. EKMS-1A CMS Policy and Procedures for Navy EKMS
3. Operational Order
4. TM 9406-15 Grounding Procedures
5. TM 9999-15/1 ESD Awareness Electro-Static Discharge

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/TSC-85D GMF Satellite Terminal
2. AN/TSC-93D GMF Satellite Terminal
3. AN/TSC-154 SMART-T Satellite Terminal
4. AN/TSC-156B Satellite Terminal
5. AN/USC-65 LMST Satellite Terminal

6. Digital Oscilloscope
 7. Fireberd 6000 Data Analyzer with all modules
 8. Multimeter
 9. Dummy Load
 10. Wattmeter
 11. AN/GSC-54 Fiber Optic Converter
 12. Power Supply
 13. Signal Generator
 14. Spectrum Analyzer
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2848-ACT-2301: Perform corrective maintenance on the Tactical Remote Sensor System.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: MOS 2848 is an additional MOS only, assigned to qualified Marines with a primary MOS of 2846 or 2862.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, special test equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams.
4. Calculate circuit parameters.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure basic circuit performance.
7. Perform alignments, as required.
8. Trace signal paths.
9. Trace current/voltage paths.
10. Isolate faulty component(s).
11. Requisition repair parts, as required.
12. Remove/replace faulty component(s), as required.
13. Research authorized Modification and Technical Instructions (MI's and TI's).
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. Maintenance Float Catalog
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists

7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Semiconductor Device Test Set
 2. Oscilloscope
 3. Function Generator
 4. Digital Multimeter
 5. Wattmeter
 6. Signal Generator
 7. AN/GSQ-261 Tactical Remote Sensor System (TRSS)
 8. AN/USM-657(V2) Third Echelon Test System (TETS)
 9. Spectrum Analyzer
 10. J-4843A/GRM Test Adapter
 11. TS-4317/GRM Radio Test Set
-

2848-ACT-2302: Repair Tactical Remote Sensor System line replaceable units to the secondary replaceable unit or chassis mounted component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

DESCRIPTION: MOS 2848 is an additional MOS only, assigned to qualified Marines with a primary MOS of 2846 or 2862.

GRADES: PVT, PFC, LCPL, CPL, SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided an assigned maintenance area, designated faulty equipment, special test equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to faulty equipment.
3. Read schematic diagrams.
4. Calculate circuit parameters.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure circuit performance.
7. Perform alignments, as required.
8. Trace signal paths.
9. Trace current/voltage paths.
10. Isolate faulty SRU's/chassis mounted components.
11. Requisition repair parts, as required.
12. Replace faulty components, as required.

13. Research authorized Modification and Technical Instructions (MI's and TI's).
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock
5. SL-4 Repair, Maintenance, and Management Lists
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Digital Multimeter
3. Multimeter
4. Signal Generator
5. AN/GSQ-261 Tactical Remote Sensor System (TRSS)
6. Spectrum Analyzer
7. J-4843A/GRM Test Adapter
8. TS-4317/GRM Radio Test Set
9. Power Supply

2862-ACT-2301: Perform advanced corrective maintenance on ground common radios and associated ancillary equipment to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided faulty equipment, assigned maintenance area, tools and Test Measurement and Diagnostic Equipment (TMDE).

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Ensure proper handling of static sensitive components/printed circuit cards.
4. Conduct system fault analysis.
5. Research applicable technical data pertaining to faulty equipment.
6. Interpret complex schematic diagrams.
7. Calculate complex electronic circuit parameters.
8. Measure complex electronic circuit performance.
9. Trace signal paths, e.g., current/voltage.
10. Develop troubleshooting tools utilizing ATE as required.

11. Isolate faulty components.
12. Determine acquisition method for repair parts.
13. Remove/replace faulty components, as required.
14. Research authorized Modification and Technical Instructions.
15. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.2_ MIMMS Field Procedures Manual
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Multimeter
3. Wattmeter
4. Dummy Load
5. Function Generator
6. PSN-13
7. DAGR
8. Power Supply
9. Frequency Counter
10. Spectrum Analyzer
11. Ground Common Digital Transfer Device
12. Ground Common Radio Set
13. Fireberd
14. ATE

2862-ACT-2302: Perform advanced corrective maintenance on tactical switchboards, telephones and associated ancillary equipment to the piece part component level

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided faulty equipment, assigned maintenance area, tools and Test Measurement and Diagnostic Equipment (TMDE).

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.

3. Ensure proper handling of static sensitive components/printed circuit cards.
4. Conduct system fault analysis.
5. Research applicable technical data pertaining to faulty equipment.
6. Validate firmware/software, as required.
7. Upgrade/reinstall firmware/software, as required.
8. Interpret complex schematic diagrams.
9. Calculate complex electronic circuit parameters.
10. Measure complex electronic circuit performance.
11. Trace signal paths, e.g., current/voltage.
12. Develop trouble shooting tools utilizing ATE as required.
13. Isolate faulty components.
14. Determine acquisition method for repair parts.
15. Remove/replace faulty components, as required.
16. Research authorized Modification and Technical Instructions.
17. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES :

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.2_ MIMMS Field Procedures Manual
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
9. EKMS-1A CMS Policy and Procedures for Navy EKMS

SUPPORT REQUIREMENTS :

EQUIPMENT: Training Equipment:

1. Oscilloscope
2. Multimeter
3. Function Generator
4. Power Supply
5. Ground Common Telephone Switch
6. Ground Common Tactical Telephone
7. TA-977/PT Tone Signaling Adapter
8. TD-1234 Multiplexer Combiner
9. ATE
10. DAGR
11. Data Analyzer
12. Power Meter

2862-ACT-2303: Perform advanced corrective maintenance on computers and associated peripheral equipment to the piece part component level

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided faulty equipment, assigned maintenance area, tools and Test Measurement and Diagnostic equipment (TMDE).

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Adhere to cryptographic security regulations.
3. Ensure proper handling of static sensitive components/printed circuit cards.
4. Conduct system fault analysis.
5. Research applicable technical data pertaining to faulty equipment.
6. Validate firmware/software, as required.
7. Upgrade/reinstall firmware/software, as required.
8. Measure electronic circuit performance.
9. Troubleshoot using PC diagnostic tools as required.
10. Isolate faulty components.
11. Determine acquisition method for repair parts.
12. Remove/replace faulty components, as required.
13. Research authorized Modification and Technical Instructions.
14. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.2_ MIMMS Field Procedures Manual
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
9. EKMS-1A CMS Policy and Procedures for Navy EKMS

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. PC Diagnostic Tool Kit
2. Desktop Computer
3. Laptop Computer
4. Network Router
5. Network Hub
6. Network Server
7. Tactical Data Network (TDN)
8. DDS

2874-PLAN-2101: Plan Test Measurement and Diagnostic Equipment maintenance support.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT, MSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance, equipment, a mission and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Determine unit capabilities.
2. Determine supported unit requirements.
3. Determine locations of supported equipment.
4. Determine supply support.
5. Determine maintenance float support.
6. Determine logistical support.
7. Determine personnel requirements.
8. Determine facility requirements (consider environmental considerations).
9. Determine security requirements.
10. Determine fiscal requirements.

REFERENCES:

1. Applicable technical manuals/publications
 2. CMR Consolidated Memorandum Report
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. MCO P5090.2 Environmental Compliance and Protection Manual
 5. MCWP 5-1 Marine Corps Planning Process
 6. TM 9406-15 Grounding Procedures
 7. UNIT SOP Unit's Standing Operating Procedures
 8. Unit TO/E Table of Organization/Equipment
-

2874-PLAN-2102: Manage Laboratory Standards Traceability.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT, MSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment, materials and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Coordinate receipt of standards.
2. Schedule laboratory standards for calibration.
3. Schedule personnel to perform maintenance action.
4. Coordinate shipment of standards.
5. Maintain laboratory standards.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. MCO 4733.1_ Marine Corps TMDE CAMP
3. MCO P4790.2 MIMMS Field Procedures Manual
4. MSDS Material Safety Data Sheets

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Research applicable technical data pertaining to equipment.
3. Read schematic diagrams.
4. Verify configurations.
5. Ensure proper handling of static sensitive components/printed circuit cards.
6. Measure circuit performance.
7. Trace signal paths in basic electronic circuits.
8. Trace current/voltage paths in basic electronic circuits.
9. Perform alignments.
10. Isolate faulty components.
11. Requisition repair parts.
12. Replace faulty components.
13. Perform authorized modification and technical instructions.
14. Perform maintenance closeout procedures.

REFERENCES:

1. Applicable technical manuals/publications
 2. MCO 4733.1_ Marine Corps TMDE CAMP
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. MCWP 3-40.3 Communications and Information Systems
 5. TM 10510-14/1 Electronic Test Equipment Listing
 6. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
-

2874-ACT-2303: Provide Metrology guidance during the calibration of Test Measurement and Diagnostic Equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

MOS PERFORMING: 2874

GRADES: SGT, SSGT, GYSGT, MSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided equipment and maintenance personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Verify procedural accuracy.
2. Research metrology standard specifications.
3. Research TMDE specifications.
4. Verify test accuracy ratios.
5. Perform standard substitutions.
6. Perform environmental condition corrections.
7. Identify/report calibration issues/trends.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided appropriate equipment, materials and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Read schematic diagrams.
3. Calculate circuit parameters.
4. Ensure proper handling of static sensitive components/printed circuit cards.
5. Measure basic circuit performance.
6. Perform alignments.
7. Trace signal paths.
8. Trace current/voltage paths.
9. Isolate faulty components.
10. Requisition repair parts, as required.
11. Remove/replace faulty components, as required.
12. Research authorized Modification and Technical Instructions.
13. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. Applicable technical manuals/publications
2. FEDLOG Federal Logistic Data on Compact Disk
3. MCO P4790.2 MIMMS Field Procedures Manual
4. SL 1-2/3 Index of Authorized Publications in Stock
5. SL-4 Repair, Maintenance, and Management Lists
6. TM 9999-15/1 ESD Awareness Electro-Static Discharge
7. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. M111 iPads
2. Oscilloscope
3. Power Supply
4. Signal Generator
5. Spectrum Analyzer
6. Direct Maintenance Tool Kit
7. General Maintenance Tool Kit
8. Power meter
9. Digital Multi-meter
10. Test Adapter Kit
11. Comm-Elect Tool Kit
12. Automated Test Equipment

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
 2. MCI 286G, Fundamentals of Digital Logic
 3. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment
 4. MCI 1142B, Solid State Devices
-

2887-ACT-2302: Perform advanced corrective maintenance on artillery ground-based sensors to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided an assigned maintenance area, faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Ensure proper handling of static sensitive components/printed circuit cards.
3. Research applicable technical data pertaining to faulty equipment.
4. Read schematic diagrams.
5. Calculate circuit parameters.
6. Measure circuit performance.
7. Trace signal paths.
8. Perform alignments, as required.
9. Isolate faulty components.
10. Requisition repair parts, as required.
11. Replace faulty components, as required.
12. Research authorized Modification and Technical Instructions.
13. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.2 MIMMS Field Procedures Manual
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Test Adapter Kit
2. Oscilloscope
3. Lightweight Counter Mortar Radar
4. Power Supply
5. Signal Generator
6. Automatic Test Set
7. Digital Multimeter
8. AN/TPQ-46A Firefinder Radar Set
9. Ground Counter Fire Sensor
10. Power Meter
11. Spectrum Analyzer

12. Comm-Elect Common Tool Kit
13. Direct Maintenance Tool Kit
14. General Maintenance Tool Kit and Adapter

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
 2. MCI 286G, Fundamentals of Digital Logic
 3. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment
 4. MCI 1142B, Solid State Devices
-

2887-ACT-2303: Perform advanced corrective maintenance on the Meteorological Measuring Station to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided an assigned maintenance area, faulty equipment, Test Measurement and Diagnostic Equipment and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Ensure proper handling of static sensitive components/printed circuit boards.
3. Research applicable technical data pertaining to faulty equipment.
4. Read schematic diagrams.
5. Calculate circuit parameters.
6. Measure circuit performance.
7. Trace signal paths.
8. Perform alignments, as required.
9. Isolate faulty components.
10. Requisition repair parts, as required.
11. Remove/repair faulty components.
12. Research authorized Modification and Technical Instructions.
13. Perform maintenance closeout procedures to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.2 MIMMS Field Procedures Manual
5. MCWP 4-11 Tactical-Level Logistics
6. SL 1-2/3 Index of Authorized Publications in Stock
7. SL-4 Repair, Maintenance, and Management Lists
8. TM 9999-15/1 ESD Awareness Electro-Static Discharge
9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

10. UNIT SOP Unit's Standing Operating Procedures
11. Unit TO/E Table of Organization/Equipment

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. AN/TMQ-41A MMS
2. Oscilloscope
3. Power Supply
4. Signal Generator
5. Spectrum Analyzer
6. Direct Maintenance Tool Kit
7. General Maintenance Tool Kit
8. Power Meter
9. Digital Multi-meter
10. Test Adapter Kit
11. Comm-Elect Tool Kit
12. Automated Test Equipment

MATERIAL: Distance Learning Products Available:

1. MCI 0414B, Ground Maintenance Management Procedures for Supervisors

2887-ACT-2304: Perform advanced corrective maintenance on artillery fire control electronic systems to the piece part component level.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SGT, SSGT, GYSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided an assigned maintenance area, faulty equipment, Test Measurement and Diagnostic Equipment, and tools.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Adhere to safety requirements.
2. Ensure proper handling of static sensitive components/printed circuit boards.
3. Research applicable technical data pertaining to faulty equipment.
4. Read schematic diagrams.
5. Calculate circuit parameters.
6. Measure circuit performance.
7. Trace signal paths.
8. Perform alignments, as required.
9. Isolate faulty components.
10. Requisition repair parts, as required.
11. Remove/repair faulty components, as required.
12. Research authorized Modification and Technical Instructions.
13. Perform maintenance closeout procedures, to include quality assurance check.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. FEDLOG Federal Logistic Data on Compact Disk
4. MCO P4790.2 MIMMS Field Procedures Manual
5. SL 1-2/3 Index of Authorized Publications in Stock
6. SL-4 Repair, Maintenance, and Management Lists
7. TM 9999-15/1 ESD Awareness Electro-Static Discharge
8. UM 4790-5 MIMMS AIS, Field Maintenance Procedures

SUPPORT REQUIREMENTS:

EQUIPMENT: Training Equipment:

1. Digital Fire Control System
2. M-94 Muzzle Velocity System
3. OD-144 Gun Direction Unit
4. Oscilloscope
5. Power Supply
6. Signal Generator
7. Spectrum Analyzer
8. Direct Maintenance Tool Kit
9. General Maintenance Tool Kit
10. Power Meter
11. Digital Multi-meter
12. Test Adapter Kit
13. Comm-Elect Tool Kit
14. Automated Test Equipment

MATERIAL: Distance Learning Products Available:

1. MCI 2820, Electronics Mathematics for Marines
2. MCI 286G, Fundamentals of Digital Logic
3. MCI 287A, Introduction to Test Measurement and Diagnostic Equipment
4. MCI 1142B, Solid State Devices

2887-ACT-2305: Determine low density maintenance support requirements for artillery electronic equipment.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: SSGT, GYSGT

INITIAL TRAINING SETTING: MOJT

CONDITION: Provided appropriate equipment, a mission, and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Evaluate unit's support requirements.
2. Define supply support requirements.
3. Define float support requirements.
4. Submit support requirements.

REFERENCES :

1. Applicable technical manuals/publications
 2. CAL and LUBF
 3. Operational Order
 4. Higher Headquarters Directives
-

2891-PLAN-2101: Execute the plan for the deployment of a field maintenance activity.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MSGT, MGYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance, a mission and a warning order.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Review warning order.
2. Review Commander's guidance.
3. Review supported equipment density list.
4. Review deployed Contractor Logistic Support (CLS) requirements.
5. Identify support requirements.
6. Make recommended changes to class IX supply block, as required.
7. Make recommended changes to float block, as required.
8. Submit embarkation requirements.
9. Project site requirements.
10. Determine security/defense requirements.
11. Draft the plan for deployment.

REFERENCES :

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. MCO P4400.150E Consumer Level Supply Manual
4. MCO P4790.2 MIMMS Field Procedures Manual
5. MCWP 3-40.3 Communications and Information Systems
6. MCWP 4-24 Commander's Guide to Maintenance
7. MCWP 5-1 Marine Corps Planning Process
8. MPS Load Plan
9. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
10. UNIT SOP Unit's Standing Operating Procedures
11. Unit TO/E Table of Organization/Equipment
12. EKMS-1A CMS Policy and Procedures for Navy EKMS -1
13. Statement of Work for contractors

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Products Available:

1. MCI 0414B, Ground Maintenance Management Procedures for Supervisors
-

2891-PLAN-2102: Draft ground electronics maintenance SOP.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MSGT, MGYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance, a mission and a table of organization/equipment.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Analyze mission, directives, policy guidance and references.
2. Develop a draft SOP.
3. Staff SOP within unit for review.
4. Submit for approval.

REFERENCES:

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
 2. Applicable technical manuals/publications
 3. MCO P4790.2 MIMMS Field Procedures Manual
 4. MCWP 3-40.3 Communications and Information Systems
 5. MCWP 4-24 Commander's Guide to Maintenance
 6. MCWP 5-1 Marine Corps Planning Process
 7. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
 8. UNIT SOP Unit's Standing Operating Procedures
-

2891-ADMN-2201: Manage maintenance production.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MSGT, MGYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided with Commander's guidance, an electronic maintenance unit, an assigned maintenance area and a mission.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Conduct internal review.
2. Evaluate external analysis.
3. Determine action required.
4. Develop POA&M.
5. Execute plan.
6. Evaluate results.

REFERENCES:

1. Applicable technical manuals/publications

2. MCO 3000.11_ Marine Corps Ground Equipment Resources Reporting
3. MCO 4400.82_ MIMMS Controlled Item Management Manual
4. MCO 4733.1_ Marine Corps TMDE CAMP
5. MCO 5215.1J Marine Corps Directives System
6. MCO P4105.3_ ILS Manual
7. MCO P4400.150E Consumer Level Supply Manual
8. MCO P4790.2 MIMMS Field Procedures Manual
9. MCO P5215.17_ USMC Tech Pub System
10. MCWP 4-24 Commander's Guide to Maintenance
11. SECNAVINST 5510.30 Information and Personnel Security Program
12. SECNAVINST 5510.36 Dept of the Navy Information and Personnel Security Program Regulations
13. SI 4400-15/5 SI
14. TI 4400-15/5 Packaging, Handling, Storage, and Transportation of Electrostatic Discharge Sensitive Items
15. TM 9999-15/1 ESD Awareness Electro-Static Discharge
16. UM 4790-5 MIMMS AIS, Field Maintenance Procedures
17. Unit TO/E Table of Organization/Equipment

SUPPORT REQUIREMENTS:

MATERIAL: Distance Learning Products Available:

1. MCI 0414B, Ground Maintenance Management Procedures for Supervisors

2891-ACT-2301: Supervise maintenance actions.

EVALUATION-CODED: NO

SUSTAINMENT INTERVAL: 12 months

GRADES: MSGT, MGYSGT

INITIAL TRAINING SETTING: FORMAL

CONDITION: Provided maintenance equipment and personnel.

STANDARD: Per the references.

PERFORMANCE STEPS:

1. Determine maintenance capabilities.
2. Evaluate available personnel
3. Evaluate available equipment.
4. Ensure maintenance is performed in compliance with unit E3 program.
5. Analyze workload.
6. Establish maintenance priorities.
7. Assign special projects, as required.
8. Inspect completed maintenance actions.
9. Conduct maintenance readiness inspections.
10. Assign corrective actions, as required.
11. Establish shop organization.
12. Evaluate contractor logistical support requirements and warranty programs.
13. Provide input on financial issues.

REFERENCES :

1. 29 CFR1910.1200 Title 29 Code of Federal Regulations, Hazard Communication
2. Applicable technical manuals/publications
3. MCO P4790.2 MIMMS Field Procedures Manual
4. MCO P5090.2 Environmental Compliance and Protection Manual
5. MCWP 3-40.3 Communications and Information Systems
6. MCWP 4-11 Tactical-Level Logistics
7. MCWP 4-24 Commander's Guide to Maintenance
8. MCWP 5-1 Marine Corps Planning Process
9. UNIT SOP Unit's Standing Operating Procedures
10. Unit TO/E Table of Organization/Equipment

2800 GROUND T&R MANUAL

APPENDIX A

ACRONYMS AND ABBREVIATIONS

ATE	Automated Test Equipment
BDA	battle damage assessment
C2	command and control
C2W	command and control warfare
C4	command, control, communications, and computers
C4I	command, control, communications, computers and intelligence
C4ISR	command, control, communications, computers, intelligence, surveillance and reconnaissance
CA	civil affairs
CAG	civil affairs group
CCIR	commander's critical information requirements
CE	command element
CI	counterintelligence
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff instruction
CJCSM	Chairman of the Joint Chiefs of Staff manual
CLS	Contractor Logistical Support
COA	course of action
COG	centers of gravity
COMSEC	communications security
CONOPS	contingency operations
CP	counter-propaganda
DCID	Director of Center Intelligence Directive
DISA	Defense Information Systems Agency
DLR	Depot Level Repairables
DITS	Deployable Integrated Transport Suite
DoD	Department of Defense
DTC	Digital Technical Control Facility
E3	electromagnetic environmental effects
EA	electronic attack
ELMACO	Electronics Maintenance Company
EMI	electromagnetic interference
EMO	Electronics Maintenance Officer
EPLRS	Enhanced Position Reporting System
ERO	equipment repair order
ES	electronic support
ESD	electrostatic discharge
FFR	Firefinder Radar
FM	field manual (army)
GDU	Gun Direction Unit
GIG	Global Information Grid
GMF	Ground Mobile Forces
GPTE	General Purpose Test Equipment
INFOSEC	information security
JCMA	joint COMSEC monitoring activity
JCS	Joint Chiefs of Staff
JCSE	joint communications support element

JEECS Joint Enhanced Core Communication System
LD low density
LRU line replaceable unit
LTI limited technical inspection
MAGTF Marine air-ground task force
MEE Mission Essential Equipment
MEF Marine Expeditionary Force
MEU Marine Expeditionary Unit
MIMMS Marine Corps Integrated Maintenance Management System
MI modification instruction
MIS maintenance information systems
MMS Meteorological Measuring Station
MSC Major Subordinate Command
MVS Muzzle Velocity System
NCS Net Control Station
OPLAN operation plan
OPORD operation order
OPSEC operations security
PADS Position Azimuth Determining System
PAO public affairs officer
PEB pre-extend bin
PQDR Product Quality Deficiency Report
RadBn radio battalion
RMC Repairables Maintenance Company
SATCOM satellite communications
SCR single channel radio
SECREP secondary repairable
SOP standing operating procedures
SRU secondary repairable unit
T/E Table of Equipment
TERPES Tactical Electronic Reconnaissance Processing Evaluation System
TETS Third Echelon Test Set
TI technical instruction
TMDE test measurement and diagnostic equipment
T/O Table of Organization
T/O&E Table of Organization and Equipment
TRSS Tactical Remote Sensor System
TSM Transition Switch Module
UUT Unit Under Test
WIR Recoverable Items Report

2800 GROUND T&R MANUAL

APPENDIX B

TERMS AND DEFINITIONS

Terms in this glossary are subject to change as applicable orders and directives are revised. Terms established by Marine Corps orders or directives take precedence after definitions found in Joint Pub 1-02, DOD Dictionary of Military and Associated Terms.

A

After Action Review (AAR). A professional discussion of training events conducted after all training to promote learning among training participants. The formality and scope increase with the command level and size of the training evolution. For longer exercises, they should be planned for at predetermined times during an exercise. The results of the AAR shall be recorded on an after action report and forwarded to higher headquarters. The commander and higher headquarters use the results of an AAR to reallocate resources, reprioritize their training plan, and plan for future training.

Assessment. An informal judgment of the unit's proficiency and resources made by a commander or trainer to gain insight into the unit's overall condition. It serves as the basis for the midrange plan. Commanders make frequent use of these determinations during the course of the combat readiness cycle in order to adjust, prioritize or modify training events and plans.

C

Chaining. A process that enables unit leaders to effectively identify subordinate collective events and individual events that support a specific collective event. For example, collective training events at the 4000-level are directly supported by collective events at the 3000-level. Utilizing the building block approach to progressive training, these collective events are further supported by individual training events at the 1000 and 2000-levels. When a higher-level event by its nature requires the completion of lower level events, they are "chained"; sustainment credit is given for all lower level events chained to a higher event.

Civil Affairs. Designated Active and Reserve component forces and units organized, trained, and equipped specifically to conduct civil affairs activities and to support civil-military operations. See also civil affairs activities; civil-military operations. Also called CA. (JP 1-02)

Civil Military Operations. The activities of a commander that establish, maintain, influence, or exploit relations between military forces, governmental and nongovernmental civilian organizations and authorities, and the civilian populace in a friendly, neutral, or hostile operational area in order to facilitate military operations, to consolidate and achieve operational US objectives. Civil Military Operations may include performance by military forces of activities and functions normally the responsibility of

the local, regional, or national government. These activities may occur prior to, during, or subsequent to other military actions. They may also occur, if directed, in the absence of other military operations. Civil military operations may be performed by designated civil affairs, by other military forces, or by a combination of civil affairs and other forces. Also called CMO. (JP 1-02)

Collective Event. A clearly defined, discrete, and measurable activity, action, or event (i.e., task) that requires organized team or unit performance and leads to accomplishment of a mission or function. A collective task is derived from unit missions or higher-level collective tasks. Task accomplishment requires performance of procedures composed of supporting collective or individual tasks. A collective task describes the exact performance a group must perform in the field under actual operational conditions. The term "collective" does not necessarily infer that a unit accomplishes the event. A unit, such as a squad or platoon conducting an attack; may accomplish a collective event or, it may be accomplished by an individual to accomplish a unit mission, such as a battalion supply officer completing a reconciliation of the battalion's CMR. Thus, many collective events will have titles that are the same as individual events; however, the standard and condition will be different because the scope of the collective event is broader.

Collective Training Standards (CTS). Criteria that specify mission and functional area unit proficiency standards for combat, combat support, and combat service support units. They include tasks, conditions, standards, evaluator instruction, and key indicators. CTS are found within collective training events in T&R manuals.

Combat Readiness Cycle. The combat readiness cycle depicts the relationships within the building block approach to training. The combat readiness cycle progresses from T&R Manual individual core skills training, to the accomplishment of collective training events, and finally, to a unit's participation in a contingency or actual combat. The combat readiness cycle demonstrates the relationship of core capabilities to unit combat readiness. Individual core skills training and the training of collective events lead to unit proficiency and the ability to accomplish the unit's stated mission.

Combat Readiness Percentage (CRP). The CRP is a quantitative numerical value used in calculating collective training readiness based on the E-coded events that support the unit METL. CRP is a concise measure of unit training accomplishments. This numerical value is only a snapshot of training readiness at a specific time. As training is conducted, unit CRP will continuously change.

Component Events. Component events are the major tasks involved in accomplishing a collective event. Listing these tasks guide Marines toward the accomplishment of the event and help evaluators determine if the task has been done to standard. These events may be lower-level collective or individual events that must be accomplished.

Computer Network Attack. Operations to disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computers and networks themselves. Electronic attack (EA) can be used against a computer, but it is not computer network attack (CNA). CNA relies on the data stream

to execute the attack while EA relies on the electromagnetic spectrum. An example of the two operations is the following: sending a code or instruction to a central processing unit that causes the computer to short out the power supply is CNA. Using an electromagnetic pulse device to destroy a computer's electronics and causing the same result is EA. Also called CNA. (JP 1-02)

Computer Network Defense. Defensive measures to protect and defend information, computers, and networks from disruption, denial, degradation, or destruction. Also called CND. (JP 1-02).

Computer Network Exploitation. Enabling operations and intelligence collection to gather data from target or adversary automated information systems or networks. (DoDI 3600.1)

Computer Network Operations. Comprised of CNA, CND, and related CNE enabling operations. (DoDI 3600.1)

Condition. The condition describes the training situation or environment under which the training event or task will take place. Expands on the information in the title by identifying when, where, and why the event or task will occur and what materials, personnel, equipment, environmental provisions, and safety constraints must be present to perform the event or task in a real-world environment. Commanders can modify the conditions of the event to best prepare their Marines to accomplish the assigned mission (e.g.; in a desert environment; in a mountain environment; etc.).

Core Competency. Core competency is the comprehensive measure of a unit's ability to accomplish its assigned MET. It serves as the foundation of the T&R Program. Core competencies are those unit core capabilities and individual core skills that support the commander's METL and T/O mission statement. Individual competency is exhibited through demonstration of proficiency in specified core tasks and core plus tasks. Unit proficiency is measured through collective tasks.

Core Capabilities. Core capabilities are the essential functions a unit must be capable of performing during extended contingency/combat operations. Core unit capabilities are based upon mission essential tasks derived from operational plans; doctrine and established tactics; techniques and procedures.

Core Plus Capabilities. Core plus capabilities are advanced capabilities that are environment, mission, or theater specific. Core plus capabilities may entail high-risk, high-cost training for missions that are less likely to be assigned in combat.

Core Plus Skills. Core plus skills are those advanced skills that are environment, mission, rank, or billet specific. 2000-level training is designed to make Marines proficient in core skills in a specific billet or at a specified rank at the Combat Ready level. 3000-8000-level training produces combat leaders and fully qualified section members at the Combat Qualified level. Marines trained at the Combat Qualified level are those the commanding officer feels are capable of accomplishing unit-level missions and of directing the actions of subordinates. Many core plus tasks are learned

via MOJT, while others form the base for curriculum in career level MOS courses taught by the formal school.

Core Skills. Core skills are those essential basic skills that "make" a Marine and qualify that Marine for an MOS. They are the 1000-level skills introduced in entry-level training at formal schools and refined in operational units.

Counter-Intelligence. Information gathered and activities conducted to protect against espionage, other intelligence activities, sabotage, or assassinations conducted by or on behalf of foreign governments or elements thereof, foreign organizations, or foreign persons, or international terrorist activities. Also called CI. (JP 1-02)

D

Deception. Those measures designed to mislead the enemy by manipulation, distortion, or falsification of evidence to induce the enemy to react in a manner prejudicial to the enemy's interests. (JP 1-02)

Defense Readiness Reporting System (DRRS). A comprehensive readiness reporting system that evaluates readiness on the basis of the actual missions and capabilities assigned to the forces. It is a capabilities-based, adaptive, near real-time reporting system for the entire Department of Defense.

Deferred Event. A T&R event that a commanding officer may postpone when in his or her judgment, a lack of logistic support, ammo, ranges, or other training assets requires a temporary exemption. CRP cannot be accrued for deferred "E-coded" events.

Delinquent Event. An event becomes delinquent when a Marine or unit exceeds the sustainment interval for that particular event. The individual or unit must update the delinquent event by first performing all prerequisite events. When the unit commander deems that performing all prerequisite is unattainable, then the delinquent event will be re-demonstrated under the supervision of the appropriate evaluation authority.

E

E-Coded Event. An "E-Coded" event is a collective T&R event that is a noted indicator of capability or, a noted Collective skill that contributes to the unit's ability to perform the supported MET. As such, only "E-Coded" events are assigned a CRP value and used to calculate a unit's CRP.

Electronic Warfare. Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. Also called EW. The three major subdivisions within electronic warfare are: electronic attack, electronic protection, and electronic warfare support. (a) electronic attack. That division of electronic warfare involving the use of electromagnetic energy, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability and is considered a form of fires. Also called EA. EA includes: (1) actions taken to prevent or reduce an enemy's effective use of the electromagnetic

spectrum, such as jamming and electromagnetic deception, and (2) employment of weapons that use either electromagnetic or directed energy as their primary destructive mechanism (lasers, radio frequency weapons, particle beams). (b) electronic protection. That division of electronic warfare involving passive and active means taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability. Also called EP. (c) electronic warfare support. That division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition, targeting, planning and conduct of future operations. Thus, electronic warfare support provides information required for decisions involving electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Also called ES. Electronic warfare support data can be used to produce signals intelligence, provide targeting for electronic or destructive attack, and produce measurement and signature intelligence. (JP 1-02)

Entry-level Training. Pipeline training that equips students for service with the Marine operating forces.

Evaluation. Evaluation is a continuous process that occurs at all echelons, during every phase of training and can be both formal and informal. Evaluations ensure that Marines and units are capable of conducting their combat mission. Evaluation results are used to reallocate resources, reprioritize the training plan, and plan for future training.

Event (Training). An event is a significant training occurrence that is identified, expanded and used as a building block and potential milestone for a unit's training. An event may include formal evaluations. An event within the T&R Program can be an individual training evolution, a collective training evolution or both. Through T&R events, the unit commander ensures that individual Marines and the unit progress from a combat capable status to a Fully Combat Qualified (FCQ) status.

Event Component. The major procedures (i.e., actions) that must occur to perform a collective event to standard.

Exercise Commander (EC). The Commanding General, Marine Expeditionary Force or his appointee will fill this role, unless authority is delegated to the respective commander of the Division, Wing, or FSSG. Responsibilities and functions of the EC include: (1) designate unit(s) to be evaluated, (2) may designate an exercise director, (3) prescribe exercise objectives and T&R events to be evaluated, (4) coordinate with commands or agencies external to the Marine Corps and adjacent Marine Corps commands, when required.

Exercise Director (ED). Designated by the EC to prepare, conduct, and report all evaluation results. Responsibilities and functions of the ED include: (1) Publish a letter of instruction (LOI) that: delineates the T&R events to be evaluated, establishes timeframe of the exercise, lists responsibilities of various elements participating in the exercise, establishes safety requirements/guidelines, and lists coordinating instructions. (2) Designate the TEC and TECG to operate as the central control agency for the exercise. (3) Assign evaluators, to include the senior evaluator, and ensure that those

evaluators are properly trained. (4) Develop the general exercise scenario taking into account any objectives/ events prescribed by the EC. (5) Arrange for all resources to include: training areas, airspace, aggressor forces, and other required support.

I

Individual Readiness. The individual training readiness of each Marine is measured by the number of individual events required and completed for the rank or billet currently held.

Individual Training. Training that applies to individual Marines. Examples include rifle qualifications and HMMWV driver licensing.

Individual Training Standards (ITS). Specifies training tasks and standards for each MOS or specialty within the Marine Corps. In most cases, once an MOS or community develops a T&R, the ITS order will be cancelled. However, most communities will probably fold a large portion of their ITS into their new T&R manual.

Information Assurance. Information operations that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and nonrepudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. Also called IA. (JP 1-02)

M

Marine Corps Combat Readiness and Evaluation System (MCCRES). An evaluation system designed to provide commanders with a comprehensive set of mission performance standards from which training programs can be developed; and through which the efficiency and effectiveness of training can be evaluated. The Ground T&R Program will eventually replace MCCRES.

Marine Corps Ground Training and Readiness (T&R) Program. The T&R Program is the Marine Corps' primary tool for planning and conducting training, for planning and conducting training evaluation, and for assessing training readiness. The program will provide the commander with standardized programs of instruction for units within the ground combat, combat support, and combat service support communities. It consolidates the ITS, CTS, METL and other individual and unit training management tools. T&R is a program of standards that systematizes commonly accepted skills, is open to innovative change, and above all, tailors the training effort to the unit's mission. Further, T&R serves as a training guide and provides commanders an immediate assessment of unit combat readiness by assigning a CRP to key training events. In short, the T&R Program is a building block approach to training that maximizes flexibility and produces the best-trained Marines possible.

Mission Essential Task(s) MET(s). A MET is a collective task in which an organization must be proficient in order to accomplish an appropriate portion of its wartime mission(s). MET listings are the foundation for the T&R manual; all events in the T&R manual support a MET.

Mission Essential Task List (METL). Descriptive training document that provides units a clear, war fighting focused description of collective

actions necessary to achieve wartime mission proficiency. The service-level METL, that which is used as the foundation of the T&R manual, is developed using Marine Corps doctrine, Operational Plans, T/Os, UJTL, UNTL, and MCTL. For community based T&R Manuals, an occupational field METL is developed to focus the community's collective training standards. Commanders develop their unit METL from the service-level METL, operational plans, contingency plans, and SOPs.

Mission Performance Standards (MPS). Criteria that specify mission and functional area unit proficiency standards for combat, combat support and combat service support units. They include tasks, conditions, standards, evaluator instruction, and key indicators. MPS are contained within the MCCRES volumes. The MCCRES volumes are being replaced by T&R Manuals. Collective events will replace MPS.

O

Operational Readiness (OR). (DoD or NATO) OR is the capability of a unit/formation, ship, weapon system, or equipment to perform the missions or functions for which it is organized or designed. May be used in a general sense or to express a level or degree of readiness.

Operations Security. A process of identifying critical information and subsequently analyzing friendly actions attendant to military operations and other activities to: a. identify those actions that can be observed by adversary intelligence systems; b. determine indicators that hostile intelligence systems might obtain that could be interpreted or pieced together to derive critical information in time to be useful to adversaries; and c. select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation. (JP 1-02)

P

Performance Step. Performance steps are included in the components of an Individual T&R Event. They are the major procedures (i.e., actions) a Marine unit must accomplish to perform an individual event to standard. They describe the procedure the task performer must take to perform the task under operational conditions and provide sufficient information for a task performer to perform the procedure (may necessitate identification of supporting steps, procedures, or actions in outline form). Performance steps follow a logical progression and should be followed sequentially, unless otherwise stated. Normally, performance steps are listed only for 1000-level individual events (those that are taught in the entry-level MOS school). Listing performance steps is optional if the steps are already specified in a published reference.

Physical Security. (DoD, NATO) That part of security concerned with physical measures designed to safeguard personnel; to prevent unauthorized access to equipment, installations, material, and documents; and to safeguard them against espionage, sabotage, damage, and theft. (JP 1-02)

Prerequisite Event. Prerequisites are the academic training and/or T&R events that must be completed prior to attempting the event.

Psychological Operations. Planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of psychological operations is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives. Also called PSYOP. (JP 1-02)

Public Affairs. The use of command information, community relations activities and public information directed to various national and international publics, in support of combatant commander public information needs at all operational levels. Also called PA.

R

Readiness. (DoD) Readiness is the ability of U.S. military forces to fight and meet the demands of the national military strategy. Readiness is the synthesis of two distinct but interrelated levels: (a) Unit readiness – The ability to provide capabilities required by combatant commanders to execute assigned missions. This is derived from the ability of each unit to deliver the outputs for which it was designed. (b) Joint readiness--The combatant commander's ability to integrate and synchronize ready combat and support forces to execute assigned missions.

S

Section Skill Tasks. Section skills are those competencies directly related to unit functioning. They are group rather than individual in nature, and require participation by a section (S-1, S-2, S-3, etc).

Simulation Training. Simulators provide the additional capability to develop and hone core and core plus skills. Accordingly, the development of simulator training events for appropriate T&R syllabi can help maintain valuable combat resources while reducing training time and cost. Therefore, in cases where simulator fidelity and capabilities are such that simulator training closely matches that of actual training events, T&R Manual developers may include the option of using simulators to accomplish the training. CRP credit will be earned for E-Coded simulator events based on assessment of relative training event performance.

Standard. A standard is a statement that establishes criteria for how well a task or learning objective must be performed. The standard specifies how well, completely, or accurately a process must be performed or product produced. For higher-level collective events, it describes why the event is being done and the desired end-state of the event. Standards become more specific for lower-level events and outline the accuracy, time limits, sequencing, quality, product, process, restrictions, etc., that indicate the minimum acceptable level of performance required of the event. At a minimum, both collective and individual training standards consist of a task, the condition under which the task is to be performed, and the evaluation criteria that will be used to verify that the task has been performed to a satisfactory level.

Sustainment Training. Periodic retraining or demonstration of an event required maintaining the minimum acceptable level of proficiency or capability required to accomplish a training objective. Sustainment training

goes beyond the entry-level and is designed to maintain or further develop proficiency in a given set of skills.

Systems Approach to Training (SAT). An orderly process for analyzing, designing, developing, implementing, and evaluating a unit's training program to ensure the unit, and the Marines of that unit acquire the knowledge and skills essential for the successful conduct of the unit's wartime missions.

T

Training Task. This describes a direct training activity that pertains to an individual Marine. A task is composed of 3 major components: a description of what is to be done, a condition, and a standard.

Technical Exercise Controller (TEC). The TEC is appointed by the ED, and usually comes from his staff or a subordinate command. The TEC is the senior evaluator within the TECG and should be of equal or higher grade than the commander(s) of the unit(s) being evaluated. The TEC is responsible for ensuring that the evaluation is conducted following the instructions contained in this directive and MCO 1553.3A. Specific T&R Manuals are used as the source for evaluation criteria.

Tactical Exercise Control Group (TECG). A TECG is formed to provide subject matter experts in the functional areas being evaluated. The benefit of establishing a permanent TECG is to have resident, dedicated evaluation authority experience, and knowledgeable in evaluation technique. The responsibilities and functions of the TECG include: (1) developing a detailed exercise scenario to include the objectives and events prescribed by the EC/ED in the exercise LOI; (2) conducting detailed evaluator training prior to the exercise; (3) coordinating and controlling role players and aggressors; (4) compiling the evaluation data submitted by the evaluators and submitting required results to the ED; (5) preparing and conducting a detailed exercise debrief for the evaluated unit(s).

Training Plan. Training document that outlines the general plan for the conduct of individual and collective training in an organization for specified periods of time.

U

Unit CRP. Unit CRP is a percentage of the E-coded collective events that support the unit METL accomplished by the unit. Unit CRP is the average of all MET CRP.

Unit Evaluation. All units in the Marine Corps must be evaluated, either formally or informally, to ensure they are capable of conducting their combat mission. Informal evaluations should take place during all training events. The timing of formal evaluations is critical and should, when appropriate, be directly related to the units' operational deployment cycle. Formal evaluations should take place after the unit has been staffed with the majority of its personnel, has had sufficient time to train to individual and collective standards, and early enough in the training cycle so there is sufficient time to correctly identified weaknesses prior to deployment. All combat units, and units task organized for combat require formal evaluations prior to operational deployments.

Unit Training Management (UTM). Unit training management is the use of the SAT and Marine Corps training principles in a manner that maximizes training results and focuses the training priorities of the unit on its wartime mission. UTM governs the major peacetime training activity of the Marine Corps and applies to all echelons of the Total Force.

W

Waived Event. An event that is waived by a commanding officer when in his or her judgment, previous experience or related performance satisfies the requirement of a particular event.

2800 GROUND T&R MANUAL

APPENDIX C

REFERENCES

Army Field Manual (FM)

11-55 Mobile Subscriber Equipment (MSE) Operations
24-16 Communication-Electronic Operations Orders, Records and Reports
34-130 Intelligence Preparation of the Battlefield

Department of Defense Directive (DODD)

S-3600.1 Information Operations

Department of Defense Instruction (DODI)

5200.40 DOD Information Technology Security Certification
and Accreditation Process (DITSCAP)

Chairman of the Joint Chiefs of Staff Manual (CJCSM)

3122.03 Joint Operational Planning and Execution System Volume II,
Planning Formats and Guidance
CJCSM 6231 Manual for Employed Joint Communications

Chairman of the Joint Chiefs of Staff Instruction (CJCSI)

6510.01 Information Assurance (IA) and Computer Network Defense (CND)

Joint Publications (JPs)

1-02 Department of Defense Dictionary of Military and Associated Terms
3-13 Joint Doctrine for Information Operations
3-54 Joint Doctrine for Operations Security

Marine Corps Bulletin (MCBuL)

MCBUL 1200 MOS Manual
MCBUL 5600 Series

Marine Corps Orders (MCO'S)

MCO 3000.11_ Marine Corps Ground Equipment Resources Reporting
MCO 4400.82_ MIMMS Controlled Item Management Manual
MCO 4733.1_ Marine Corps TMDE CAMP
MCO 4855.10_ Product Quality Deficiency Report (PQDR)
MCO 5215.1J Marine Corps Directives System
MCO 5215.12 Managing and Maintaining Navy Directives Files
and Establishing "Must Hold" Lists
MCO 5390.2_ Leadership Training and Education
MCO 5311.1_ Table of Manpower Requirements

Marine Corps Order "P" Directives (MCO P)

MCO P4105.3_ ILS Manual
MCO P4200.15 Marine Corps Purchasing Procedures Manual
MCO P4400.150E Consumer Level Supply Manual
MCO P4400.84_ Special Programs Manual
MCO P4790.1_ Marine Corps Integrated Maintenance Management
System (MIMMS) MANUAL

MCO P4790.2 MIMMS Field Procedures Manual
MCO P5090.2 Environmental Compliance and Protection Manual
MCO P5215.17_ USMC Tech Pub System
MCO P7100.8 Field Budget Guidance Manual
MCO P1500.40_ Marine Corps Training Philosophy and Requirements

Marine Corps Reference Publications (MCRP's)

MCRP 3-0A Unit Training Management Guide
MCRP 3-0B How to Conduct Training
MCRP 6-22A Multi-Service Communications Procedures for the
Single-Channel Ground Radio

Marine Corps Warfighting Publications (MCWP's)

2-1 Intelligence Operations
2-6 Counterintelligence
2-22 Signals Intelligence
3-40.2 Information Management
3-40.3 Communications and Information Systems
3-40.4 MAGTF Information Operations
4-24 Commanders' Guide to Maintenance
5-1 Marine Corps Planning Process

Miscellaneous

CMS-5_ COMSEC Material System Policy & Procedures Manual
CMS-21 COMSEC Material System Policy & Procedures
CMR Consolidated Memorandum Report
Computer Security Act of 1987
DISA Circulars/Publications
29 CFR1910.1200 Title 29 Code of Federal Regulations,
Hazard Communication
Maintenance Float Catalog
MPS Load Plan
MSDS Material Safety Data Sheets
FEDLOG Federal Logistic Data on Compact Disk

Secretary of the Navy Instructions (SECNAVINST)

SECNAVINST 5510.30 Information and Personnel Security Program
SECNAVINST 5510.36 Dept of the Navy Information and Personnel
Security Program Regulations
SECNAVINST P5530.13 Security Instruction F/SEN Convention (AA&E)

Supply Instructions (SI's)

SI 4400-15/5 SI

Technical Instructions (TI'S)

TI 4400-15/5 Packaging, Handling, Storage, and Transportation of
Electrostatic Discharge Sensitive Items
TI-5820-25/22 Electromagnetic Environmental Effects (E3) Procedures
TI 5895-45/1 AN/USM and AN/USM-674 Test Station Gold Disk
and Silver Disk Program

Technical Manuals (TM'S)

SL 1-2/3 Index of Authorized Publications in Stock
SL-3 Major Components of End Items
SL-4 Repair, Maintenance, and Management Lists

ST-90 Shortrak 90 User's Manual
TM-09810A-40/6 Gold and Silver Disk User's Manual
TM-09810A-50/4 ATR Tutorial
TM 09810A-50/5 Department of Defense AN/USM-646 Gold/Silver Disk;
Test Station Electrical/Electronic; Development
Procedure Manual
TM 4700-15/1 Marine Corps Ground Equipment Record Procedures
TM 5895-45/1 Standard Miniature/2M Maintenance Practices for
Electronic Assembly Repair
TM 9406-15 Grounding Procedures
TM 9999-15/1 ESD Awareness Electro-Static Discharge
TM 10510-14/1 Electronic Test Equipment Listing
TM-10793A-10/1 MTR User's Manual

Users Manual (UM's)

UM 4400-15 Organic Property Control
UM 4400-124 Sassy Using Unit Procedures
UM 4790-5 MIMMS AIS, Field Maintenance Procedures