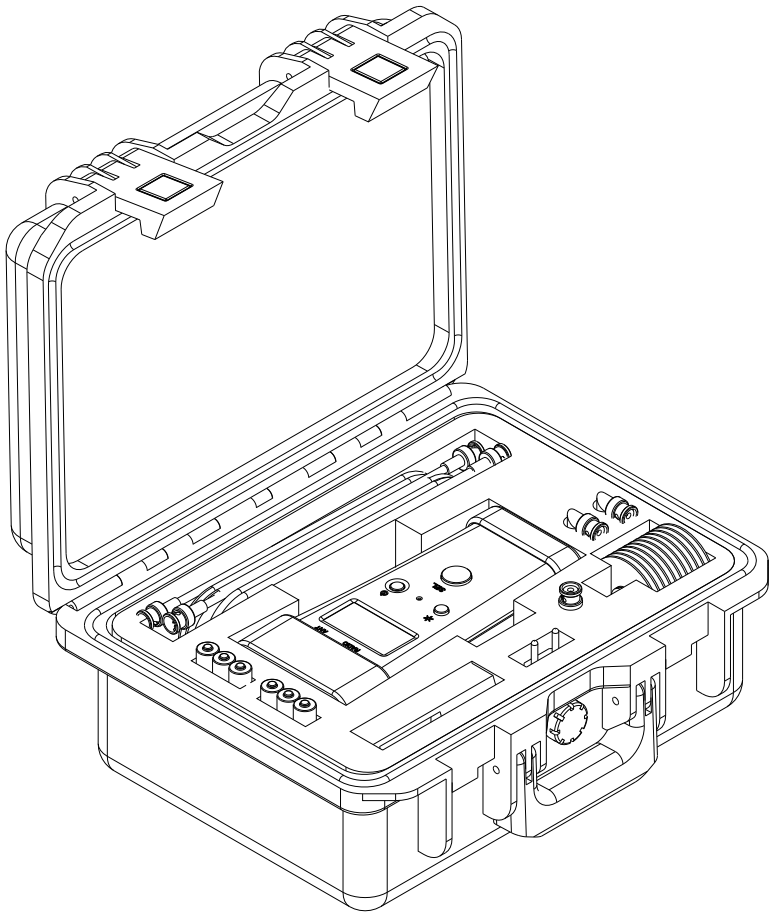
TM 9-6625-1697-23&P

TECHNICAL MANUAL

FIELD MAINTENANCE MANUAL
FOR

AN/PRM-36 RADIO TEST SET
(NSN 6625-01-581-8105)



HEADQUARTERS, DEPARTMENT OF THE ARMY

30 MAY 2014

WARNING SUMMARY

WARNING SUMMARY

This warning summary contains general safety warnings and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel. Also included are explanations of safety and hazardous materials icons used within this technical manual.

FIRST AID

For information on first aid, refer to First Aid Field Manual FM 4-25.11.

ELECTRICAL – Electrical wire to arm with electricity symbol running through human body shows that shock hazard is present.

WARNING

When performing tests in Measurement Mode (Radio Transmitting) be sure to avoid contact with antenna, antenna connectors, or 50 Ω Termination to prevent possible electric shock. Failure to comply may result in injury or death to personnel.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: Zero in the "Change No." column indicates an original page or work package.

Date of issue for original manual is:

Original 30 May 2014

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 22 AND TOTAL NUMBER OF WORK PACKAGES IS 21 CONSISTING OF THE FOLLOWING:

HEADQUARTERS, DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 MAY 2014

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(NSN 6625-01-581-8105)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can improve this manual. If you find any mistakes or if you know of a way to improve these procedures, please let us know.

Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also send in your comments electronically to our E-mail address: 2028@redstone.army.mil or by fax 256-842-6546/DSN 788-6546. For the World Wide Web use: https://amcom2028.redstone.army.mil. Instructions for sending an electronic 2028 can be found at the back of this manual.

TABLE OF CONTENTS

TABLE OF CONTENTS – (Continued)

HOW TO USE THIS MANUAL

HOW TO USE THIS MANUAL

Personnel shall familiarize themselves with the format and contents of this Technical Manual (TM) prior to operating this equipment and performing maintenance procedures. Learning how to use this TM will enable personnel to quickly locate information, gain necessary knowledge of the equipment, and shorten the time necessary to complete the required procedure.

These instructions provide the user with a general knowledge of the equipment, characteristics, and maintenance procedures of the AN/PRM-36 Radio Test Set (RTS). Troubleshooting and maintenance procedures are provided at field maintenance levels.

This manual contains a “References” Work Package (WP). Occasionally a different Technical Manual (TM) will be referenced in the text of this manual. A link will appear in parenthesis along with the manual that is referenced. The link lists the References WP in the manual. This will allow the user to see the TM number and the title.

TABLE OF CONTENTS

The Table of Contents provides a quick reference of each WP by title and WP number and lists each Figure and Table within that WP to assist in finding the required information.

WORK PACKAGE NUMBERS

The WP number is found in the upper right corner and bottom center of every page.

INITIAL SETUP BLOCK

The Initial Setup block contains information vital for the completion of the WP. In some instances, it may contain the words “Not Applicable”.

The following is a list of items found in the initial setup block.

1. TOOLS AND SPECIAL TOOLS: These are all of the tools required to complete the tasks in the WP.
2. MATERIALS/PARTS: Any part to include oil, grease, or rags needed to complete the tasks in the WP.
3. PERSONNEL REQUIRED: Lists the number and Military Occupation Specialty (MOS) required to complete the WP.
4. REFERENCES: When the reference is in the same manual, it will only list the WP number. If the reference is in a different manual, it will list the TM number and will link you to the References WP for additional information.
5. EQUIPMENT CONDITION: This is how the equipment needs to be configured before starting the work.

WARNINGS, CAUTIONS, AND NOTES

Read all WARNINGS, CAUTIONS, and NOTES before performing any procedure.

Warning, caution, and note headings and certain essential information are printed in BOLD type for clarity.

CHAPTER 1 GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION

Chapter 1 presents general information, as well as the characteristics, capabilities, and features of the AN/PRM-36 RTS. Also included in Chapter 1 is AN/PRM-36 RTS theory of operation.

HOW TO USE THIS MANUAL – (Continued)

CHAPTER 2 TROUBLESHOOTING PROCEDURES

Chapter 2 provides field level troubleshooting procedures for various malfunctions that may occur during equipment operation. The Troubleshooting Symptoms Index is a quick reference by WP of the common malfunctions/symptoms which you may find during the operation or maintenance of the equipment.

CHAPTER 3 PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Chapter 3 contains field level PMCS that are performed on equipment. The PMCS table lists the item to be checked or serviced, the check or service procedure, and the criteria for determining whether the equipment being checked is ready for its mission.

CHAPTER 4 MAINTENANCE INSTRUCTIONS

Chapter 4 contains maintenance procedures on the removal, repair, and installation procedures of the equipment components.

CHAPTER 5 REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

Chapter 5 contains RPSTL lists and authorizes spares and repair parts, special tools, special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of field level maintenance. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

CHAPTER 6 SUPPORTING INFORMATION

Chapter 6 contains data that supports maintenance procedures. Included in the data are references, Maintenance Allocation Chart (MAC), and tools and test equipment.

CHAPTER 1

GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION

FOR

AN/PRM-36 RADIO TEST SET (RTS)

CHAPTER 1

GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION

WORK PACKAGE INDEX

FIELD MAINTENANCE

GENERAL INFORMATION (ARMY ONLY)

SCOPE

This manual contains instructions for maintenance on the AN/PRM-36 Radio Test Set (RTS).

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 750-8 WP 0017, The Army Maintenance Management System (TAMMS) Users Manual; DA PAM 738-751 WP 0017, Functional Users Manual for The Army Maintenance Management Systems - Aviation (TAMMS-A); or AR 700-138 WP 0017, Army Logistics Readiness and Sustainability.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your RTS needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you do not like about your equipment. Let us know why you do not like the design or performance. If you have Internet access, the easiest and fastest way to report problems or suggestions is to go to https://www.pdrep.csd.disa.mil/pdrep_files/accessforms/useraccess.htm, click on “Reporting Tools”, under the PDREP Functionality and then click on "Product Quality Deficiency Report (PQDR). The Internet form lets you choose to submit an EIR, a Product Quality Deficiency Report (PQDR), or a Warranty Claim Action (WCA). You may also submit your information using an SF Form 368 (Product Quality Deficiency Report). You can send your SF Form 368 WP 0017 via e-mail, regular mail, or facsimile using the addresses/facsimile numbers specified in DA PAM 750-8 WP 0017, TAMMS Users Manual. We will send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

CPC of Army material is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking.

Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically UV) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking.

SF 368 WP 0017, Product Quality Deficiency Report (PQDR) should be submitted to the address specified in DA PAM 750-8 WP 0017, The Army Maintenance Management System (TAMMS) Users Manual.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Procedures for destruction of Army equipment to prevent enemy use can be found in Procedures for Destruction of Electronic Materiel to Prevent Enemy Use TM 750-244-2 WP 0017 and Procedures for Destruction of Equipment to Prevent Enemy Use TM 750-244-3 WP 0017.

PREPARATION FOR STORAGE OR SHIPMENT

This section contains requirements and procedures for administrative storage of equipment that is issued to and in use by Army activities worldwide.

The requirements specified herein are necessary to maintain equipment in administrative storage in such a way as to achieve the maximum readiness condition.

Equipment that is placed in administrative storage should be capable of being readied to perform its mission within one 24-hour period or as otherwise may be prescribed by the approving authority. Before equipment is placed in administrative storage, a Preventive Maintenance Checks and Services (PMCS) should be completed and deficiencies corrected.

Report equipment in administrative storage as prescribed for all reportable equipment.

Perform inspections, maintenance services, and lubrication as specified herein.

GENERAL INFORMATION - (CONTINUED)

Records and reports to be maintained for equipment in administrative storage are those prescribed by DA PAM 750-8 WP 0017 for equipment in use.

A 10 percent variance is acceptable on time used to determine the required maintenance actions.

Accomplishment of applicable PMCS, as mentioned throughout this chapter, will be on a monthly basis.

DEFINITION OF ADMINISTRATIVE STORAGE

Equipment can be placed in administrative storage for short periods of time when a shortage of maintenance effort exists. Items should be ready for use within the time factors as determined by the directing authority. During the storage period, appropriate maintenance records will be kept.

STORAGE SITE

Select the best available site for administrative storage. Separate stored equipment from equipment in use. Conspicuously mark the area Administrative Storage.

Covered space is preferred.

STORAGE PLAN

Store equipment so as to provide maximum protection from the elements and to provide access for inspection, maintenance, and exercising. Anticipate removal or deployment problems and take suitable precautions.

Take into consideration environmental conditions, such as extreme heat or cold and high humidity. Take adequate precautions.

Establish a fire plan and provide for adequate fire fighting equipment and personnel.

MAINTENANCE SERVICES AND INSPECTIONS

Prior to storage, perform the next scheduled PMCS WP 0006.

Inspect and approve the equipment prior to storage. Do not place nonmission-capable equipment in storage.

If storing equipment for 30 days or more, remove batteries (TM 9-6625-1697-10).

CORRECTIONS OF SHORTCOMINGS AND DEFICIENCIES

Correct all shortcomings and deficiencies prior to storage or obtain a deferment from the approving authority.

REMOVAL OF EQUIPMENT FROM ADMINISTRATIVE STORAGE

ACTIVATION

Restore the equipment to normal operating condition by installing batteries, performing the PMCS, and performing Built in Test (BIT) check.

SERVICING

Resume the maintenance service schedule in effect at the commencement of storage or service the equipment before the scheduled dates in order to produce a staggered maintenance workload.

PREPARATION OF EQUIPMENT FOR SHIPMENT

Refer to FM 55-15 WP 0017 for additional instructions on processing, storage, and shipment of material.

Equipment that has been removed from storage for shipment does not have to be reprocessed if they will reach their destination within the administrative storage period. Reprocess only if inspection reveals any corrosion or if any anticipated in-transit weather conditions make it necessary.

When a piece of equipment is received and has already been processed for domestic shipment, as indicated on DD Form 1397 WP 0017, it does not have to be reprocessed for storage unless corrosion and deterioration are found during the inspection upon receipt. List on SF Form 364 WP 0017 all discrepancies found because of poor preservation packaging, packing, marking, handling, loading, storage, or excessive preservation. Repairs that

GENERAL INFORMATION - (CONTINUED)

cannot be handled by the receiving unit must have tags attached listing the needed repairs. A report of these conditions will be submitted by the unit commander for action by an ordnance maintenance unit.

WARRANTY INFORMATION

NOTE

The Maintainer must verify all faults before proceeding with warranty claim actions.

The AN/PRM-36 Radio Test Set (RTS) is covered by a manufacturer seven (7) year warranty. The warranty expiration date is included on the warranty label affixed to each Radio Tester. The warranty starts on the date found in block 23 of DA Form 2408-9, Equipment Control Record.

The warranty is applicable to the portable hand-held Radio Tester only and not the entire Radio Test Set and accessories. The warranty applies to the Radio Tester materials and workmanship under normal use and approved maintenance practices. The warranty is not voided by organic repair accomplished IAW prescribed maintenance procedures. Prescribed maintenance procedures do not allow for controlled substitution between Radio Tester. The manufacturer assumes no liability for items damaged by improper use or battle damage. Units which are determined to have been subject to induced damage or unauthorized maintenance are not covered by warranty and will be inducted into the normal repair cycle.

Report all defects to your supervisor, who will take appropriate action. Supervisor will execute warranty claim procedures IAW AR 750-1 and AR 700-139.

Warranty coverage applies to the following item:

900858-001 Radio Tester

Warranty Claim Procedure

1. Send an E-mail with the nomenclature, Radio Tester's part number and serial number, description of deficiency, and inventory list of COEI to warranty-prm-36@drs.com. In addition, the e-mail must include a valid return address for the manufacturer to ship back the AN/PRM-36 after warranty repair has been completed.
2. Upon receiving return authorization from the manufacturer, send the failed AN/PRM-36 in the prescribed transit case including COEI and its inventory list to the address below. The manufacturer assumes no risk for damage in transit. The manufacturer will pay return transportation for Radio Test Set repaired or replaced in-warranty. Before making any non-warranty repair, the manufacturer will estimate cost and obtain authorization, then invoice you for repair and return transportation.

   DRS Sustainment Systems, Inc.

   201 Evans Ln

   St Louis Mo, 63121

   ATTN: Contract Administrator, AN/PRM-36 Radio Test Set

LIST OF ABBREVIATIONS/ACRONYMS

Table 1. List of Abbreviations..

AC	Alternating Current
AEPS	Army Electronic Product Support
BIT	Built In Test
BNC	Bayonet Neill-Concelman
BOI	Basis of Issue
C	Celsius
CAGEC	Commercial and Government Entity Code
CCA	Circuit Card Assembly
COEI	Components of End Item
CPC	Corrosion Prevention Control

GENERAL INFORMATION - (CONTINUED)

CW	Continuous Wave
DA	Department of the Army
dBm	Decibels per milli-watt
DC	Direct Current
DMM	Digital Multimeter
DRS SSI	DRS Sustainment Systems, Inc.
EDRS	Electronic Deficiency Reporting System
EIR	Equipment Improvement Recommendation
EMP	Electromagnetic Pulse
ESD	Electrostatic Discharge
ESDS	Electrostatic Discharge Sensitive
F	Fahrenheit
f	Female
FM	Frequency Modulation
Freq	Frequency
FWD Port	Forward Port
GHz	Giga Hertz
HCI	Hardness Critical Item
Hz	Hertz
IAW	In Accordance With
kg	Kilo-gram
kHz	Kilo Hertz
m	Male
mA	milli-Amp
MAC	Maintenance Allocation Chart
Max	Maximum
MEAS	Measurement
MHz	Mega Hertz
Min	Minimum
mm	Millimeter
MOS	Military Occupation Specialty
MRP	Mandatory Replacement Parts
NIIN	National Item Identification Number
NiMH	Nickel Metal Hydride
NSN	National Stock Number
OEM	Original Equipment Manufacturer
PAM	Pamphlet
PMCS	Preventive Maintenance Checks and Services
P/N	Part Number
POC	Point of Contact
PQDR	Product Quality Deficiency Report
PWR	Power
QDR	Quality Deficiency Report
QTY	Quantity
REV Port	Reverse/Reflected Port
RF	Radio Frequency
RFI	Radio Frequency Interference
RPSTL	Repair Parts and Special Tools List
RTS	Radio Test Set
SEL	Select
SMR	Source, Maintenance, and Recoverability
STIM	Stimulus
TAMMS	The Army Maintenance Management System
TASMG	Theater Aviation Sustainment Maintenance Group
TB	Technical Bulletin
TM	Technical Manual

GENERAL INFORMATION - (CONTINUED)

TMDE	Test, Measurement and Diagnostic Equipment
Typ	Typical
U/I	Unit of Issue
UOC	Usable On Code
UUT	Unit Under Test
UV	Ultraviolet
V	Volts
Vdc	Volts Direct Current
W	Watts
WARCO	Warranty Coordinators
WP	Work Package
±	Plus or Minus

QUALITY OF MATERIAL

Material used for replacement, repair, or modification must meet the requirements of this Maintenance Manual for AN/PRM-36 Radio Test Set (TM 9-6625-1697-23&P). If quality of material requirements are not stated in this Maintenance Manual for AN/PRM-36 Radio Test Set (TM 9-6625-1697-23&P), the material must meet the requirements of the drawings, standards, specifications, or approved engineering change proposals applicable to the subject equipment.

SAFETY, CARE, AND HANDLING

ELECTROSTATIC DISCHARGE (ESD)

During maintenance tasks such as preshop analysis, inspection, removal, disassembly, repair/replace, assembly, testing, or packaging of any Circuit Card Assembly (CCA) or integrated circuit component, ESD protection and control measures must be taken. Protection and control requirements for ESD devices are specified in MIL-STD-1686 and MIL-HDBK-263.

GENERAL GUIDELINES FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) ITEMS

The use of an ESD wrist strap is required for many replacement procedures. Replacement procedures requiring the use of a wrist strap will contain a caution identifying units containing ESDS components. Before the wrist strap is used it must pass a test easily performed using a wrist strap tester. It is recommended users familiarize themselves with the information located in this section.

The general guidelines for handling ESDS items should be followed when handling all classes of ESDS items. For specific instructions for handling ESDS items, refer to MIL-STD-1686 and MIL-HDBK-263.

1. People handling ESDS items should be trained in ESD precautionary procedures and tested for competency.
2. When not actively working with ESDS items such as using the terminals for testing or inserting the terminals of an ESDS item in a printed wiring board or electrical socket, shunts such as bars or clips, noncorrosive conductive foam, or protective covering should be used to protect the item.
3. People maintaining ESDS equipment where personae ground straps cannot be used should ground themselves prior to removing ESDS items from their protective packaging. When being handled out of their protective packaging, ESDS items should be handled by the shunting device, without touching ESDS parts or electrical runs.
4. The leads or connector terminals of ESDS items should not be probed by multimeters. If this is not practical, touch ground with the electrical test equipment probes before probing the ESDS item.
5. Tools and test equipment used in ESD-protected areas should be properly grounded; hand tools should not contain insulation on the handles; or if used, tools with insulated handles should be treated with a topical antistat.
6. Power should not be applied to equipment or assemblies while ESDS items are being removed or inserted.

GENERAL INFORMATION - (CONTINUED)

7. Ensure all containers, tools, test equipment, and fixtures used in ESD-protected areas are grounded before and during use, either directly or by contacting with a grounded surface. Grounding of electrical test equipment should be with a grounded plug, not through the conductive surface of the ESD-grounded work station.
8. Neutralize charges of ESD protective packaging containing an ESDS item by placing the packaged item on an ESD-grounded workbench surface to remove any charge prior to opening the packaging material. Alternately, charges can be removed by grounded personnel touching the package.
9. Remove ESDS items from ESD protective packaging using your fingers or metal grasping tool only after grounding, and then placing ESDS items on the ESD-grounded workbench surface.
10. The cases or chassis grounds of test equipment and ESDS items being tested should be electrically connected prior to connecting or disconnecting any test cables. When connecting test cables, shunting bars should remain in place until chassis grounds are shorted. Shunting bars should be replaced upon removal of test cables.

END OF WORK PACKAGE

FIELD MAINTENANCE

EQUIPMENT DESCRIPTION AND DATA

CHARACTERISTICS, CAPABILITIES, AND FEATURES

The Radio Tester included in the Radio Test Set (RTS) is a battery operated, lightweight portable test device used to provide quick diagnostics of many Frequency Modulated (FM) Receiver/Transmitter Communication Radios including the associated antenna. The Radio Tester has two functional modes; Measurement (MEAS) Mode, and Stimulus (STIM) Mode. Using these two functional modes, the Radio Tester and its accessories accurately test the following parameters of FM Receiver/Transmitter Radios operating over a frequency range of 30 MHz to 512 MHz:

IN MEASUREMENT MODE (RADIO TRANSMITTING):

- Frequency Measurement Accuracy
- Forward Power (received power at Radio Tester)
- Reverse Power (reflected power at antenna)

IN STIMULUS MODE (RADIO RECEIVING):

- Receiver Sensitivity
- Squelch Sensitivity

LOCATION AND DESCRIPTION OF COMPONENTS OF THE RADIO TEST SET

The Radio Test Set consists of the following:

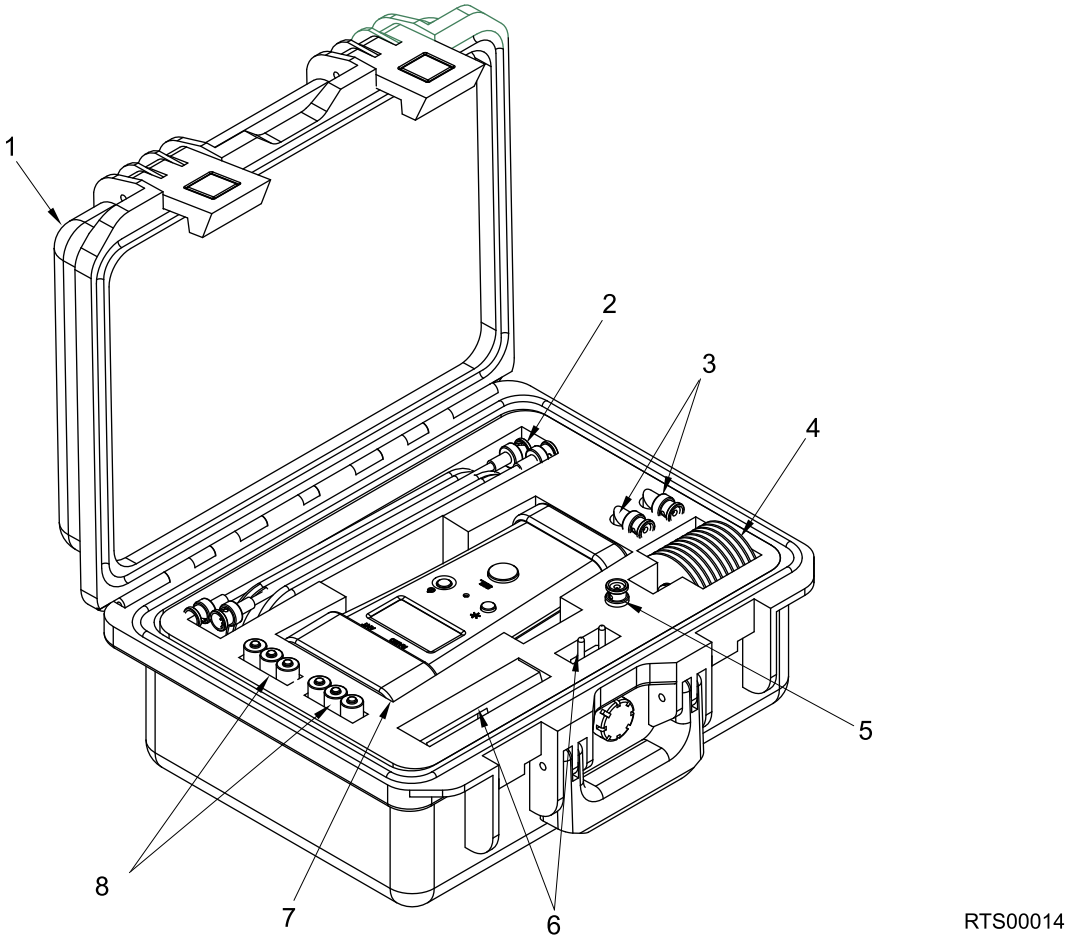


Figure 1. RTS Location of Components..

EQUIPMENT DESCRIPTION AND DATA - (CONTINUED)

Table 1. RTS Description of Components..

1	Case, Transit, used to store and ship the Radio Test Set.
2	Cable, BNC Male, RG-58C/U, 48 Inch (2 ea) provides interconnection between the Radio Tester and the radio UUT.
3	Adapter, BNC(m) to BNC(f), 90 Deg. (2 ea) used as needed to complete test set ups.
4	Termination, RF, DC-1 GHz, 50W provides a dummy load for radio testing without an antenna.
5	Adapter, BNC(m) to BNC(m), Straight used as needed to complete test set ups.
6	Charger, Battery, AC (with 220V Adapter Plug) used to recharge NiMH rechargeable batteries.
7	Radio Tester used to provide quick diagnostics of FM Receiver-Transmitter Radios.
8	Battery, NiMH, 1.25V, Size AA, Rechargeable High Capacity Type NH15 (6 ea) used to provide power to operate the Radio Tester (3 Spares).

EQUIPMENT DATA

Table 2. RTS Specifications..

Performance:	**MEASUREMENT MODE** (Transmitter Test)	
	Frequency Range	30 - 512 MHz
	Frequency Accuracy	± 2 kHz
	Forward Power	1 to 50 W (0.1 to 50 W usable)
	Forward Power Accuracy	± 20%
	Maximum Input Power	60 W
	Reverse Power	1 W to 20 W (0.1 to 50 W usable)
	Reverse Power Accuracy	± 20%
	Measurement Resolution	500 Hz
	Display Resolution	1 kHz
	STIMULUS MODE (Receiver Test)	
	Output Carrier Frequency Range	30 - 512 MHz
	Output Frequency Accuracy	± 2 kHz
	RF Modulation	
	Output Level	-97 dBm at Carrier Frequency
	Output Level Accuracy	± 3 dBm
	Tones	150 Hz Squelch Tone. 900 Hz Audio Tone.
	Tone Accuracy	± 2 Hz
	FM Deviation	Min. Composite: ± 1.75 kHz Max. Composite: ± 3.5 kHz (for each Carrier Frequency)
Operating Power:	DC Input Range	+3.9 Vdc to +4.2 Vdc
	Battery Type	1.25V Size AA Rechargeable, NiMH
	Current Draw (typical at 4.5V @ 25°C)	OFF < 1 mA; MEAS Mode< 60 mA; STIM Mode < 150 mA
	Battery Life (typical)	30 Hours
	Battery Charge Indicator (typical)	Full Charge = Full Indicator No Battery Charge = Empty Indicator
	Low Battery Warning	Visual indication when 12.5% or less of battery life remaining
	Auto Power Down	After 4 minutes of inactivity
	Fuse Protection	Internal Auto-Resetting fuse
	Reverse Battery Protection	Built in reverse battery protection
RF Connectors:	2 BNC (f) Connectors	For Radio and Antenna
Controls:	On / Off Power Button	

EQUIPMENT DESCRIPTION AND DATA - (CONTINUED)

	Display Backlight Button	
	SEL Button for menu options	
Dimensions:	Radio Tester Overall Dimensions	8.4 x 3.8 x 2.0 in. (L x W x D) (213 x 97 x 51 mm)
	Weight (Radio Tester only)	< 1.5 lbs (< 0.7 kg)
	Weight (all components in Case)	7.5 lbs (3.4 kg)
Environment:	Operating Temperature	-4°F to 122°F (-20°C to 50°C)
	Operating Humidity	MIL-PRF-28800F, Section 3.8.2.3.2, Class 3
	Storage Temperature	-67°F to 185°F (-55°C to 85°C)
	Storage Humidity	100% (in Transit Case)
	Altitude	16,000 ft

END OF WORK PACKAGE

FIELD MAINTENANCE

THEORY OF OPERATION

Radio Tester

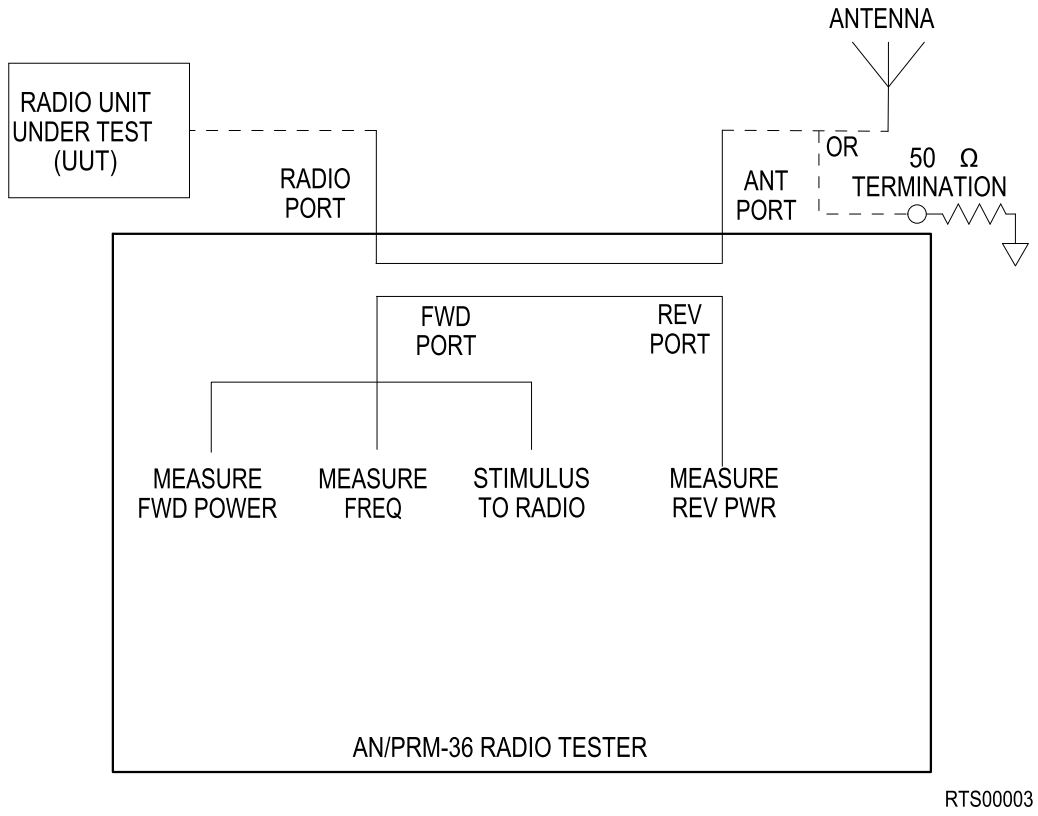


Figure 1. RTS Simplified Diagram..

The radio tester has two modes of testing the parameters of Frequency Modulated (FM) receiver-transmitter radios. The two modes are: a Measurement mode for testing radio transmitting and a Stimulus mode for testing radio receiving.

In the Measurement mode, the Unit Under Test (UUT) transmits Radio Frequency (RF) energy into the RADIO port on the radio tester. This energy is coupled, using a 4-port coupler, to the Forward Port (FWD Port) where frequency and Forward Power from the UUT are measured and displayed. RF energy also continues along the internal coupler to the ANT port, and directed to an antenna or 50 Ω Termination. Reflected RF energy from the antenna or 50 Ω Termination is coupled into the Reverse/Reflected Port (REV Port) of the internal 4-port coupler where Reflected Power is measured and displayed.

In the Stimulus mode, the radio tester emits RF energy at the same frequency measured during Measurement mode. This RF energy is coupled across the internal 4-way coupler out through the RADIO port and into the UUT. The emitted frequency and power level is displayed.

END OF WORK PACKAGE

CHAPTER 2

TROUBLESHOOTING PROCEDURES

FOR

AN/PRM-36 RADIO TEST SET (RTS)

CHAPTER 2

TROUBLESHOOTING PROCEDURES

WORK PACKAGE INDEX

FIELD MAINTENANCE

RADIO TESTER DOES NOT POWER ON

INITIAL SETUP:

NOT APPLICABLE

TROUBLESHOOTING PROCEDURE

RADIO TESTER DOES NOT POWER ON

SYMPTOM

Radio tester does not power on.

MALFUNCTION

Battery pack cable or controller circuit card assembly (CCA) is bad.

CORRECTIVE ACTION

STEP 1. Separate front and rear enclosures WP 0009.

STEP 2. Verify battery pack cable is not worn, nicked, or broken

a. If battery pack cable is worn, nicked, or broken, replace rear enclosure WP 0009.

STEP 3. Disconnect battery pack cable from controller CCA.

STEP 4. Install charged batteries (TM 9-6625-1697-10).

STEP 5. Measure voltage on battery pack cable connector contact using Digital Multimeter (DMM).

a. If voltage reads 3.3 to 6.0 Vdc, replace controller CCA WP 0011.

b. If voltage does not read 3.3 to 6.0 Vdc, replace rear enclosure WP 0009.

STEP 6. Remove batteries (TM 9-6625-1697-10).

STEP 7. Assemble front and rear enclosures WP 0009.

END OF WORK PACKAGE

FIELD MAINTENANCE

RADIO TESTER DOES NOT PASS BIT

INITIAL SETUP:

NOT APPLICABLE

TROUBLESHOOTING PROCEDURE

RADIO TESTER DOES NOT PASS BUILT IN TEST (BIT)

SYMPTOM

BIT fail fault exists.

MALFUNCTION

Abnormal display on Radio Tester LCD Display.

CORRECTIVE ACTION

STEP 1. Power Radio Tester off (TM 9-6625-1697-10).

STEP 2. Power Radio Tester on (TM 9-6625-1697-10).

STEP 3. Verify Radio Tester LCD Display message is correct.

a. If Radio Tester LCD Display is correct, proceed to Step 9.

b. If Radio Tester LCD Display is abnormal, proceed to Step 4.

STEP 4. Remove charged batteries (TM 9-6625-1697-10).

STEP 5. Install charged batteries (TM 9-6625-1697-10).

STEP 6. Verify Radio Tester LCD Display message is correct.

a. If Radio Tester LCD Display is correct, proceed to Step 9.

b. If Radio Tester LCD Display is abnormal, proceed to Step 7.

STEP 7. Press the Manual Reset button by means of front panel access hole (TM 9-6625-1697-10).

STEP 8. Verify Radio Tester LCD Display message is correct.

a. If Radio Tester LCD Display is correct, proceed to Step 9.

b. If Radio Tester LCD Display is abnormal, proceed to BIT test displays fault CONTRL: FAIL malfunction.

STEP 9. Perform BIT procedure (TM 9-6625-1697-10).

a. If BIT displays fault RF MOD: FAIL, proceed to BIT test displays fault RF MOD: FAIL malfunction.

b. If BIT displays fault CONTRL: FAIL, proceed to BIT test displays fault CONTRL: FAIL malfunction.

RADIO TESTER DOES NOT PASS BIT - (CONTINUED)

MALFUNCTION

BIT displays fault **RF MOD: FAIL** .

CORRECTIVE ACTION

STEP 1. Verify fault on LCD Display and replace RF module card WP 0012.

STEP 2. Verify Radio Tester passes BIT (TM 9-6625-1697-10).

a. If BIT continues to display fault RF MOD: FAIL, replace ribbon cable WP 0011.

MALFUNCTION

BIT displays fault **CONTRL: FAIL**.

CORRECTIVE ACTION

STEP 1. Verify fault on LCD Display and replace controller circuit card assembly card (CCA) WP 0011.

STEP 2. Verify Radio Tester passes BIT (TM 9-6625-1697-10).

END OF WORK PACKAGE

CHAPTER 3

MAINTENANCE INSTRUCTIONS

FOR

AN/PRM-36 RADIO TEST SET (RTS)

CHAPTER 3

MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

FIELD MAINTENANCE

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

PMCS INTRODUCTION

This section provides information to guide the AN/PRM-36 Radio Test Set (RTS) maintainer in performing required Preventive Maintenance Checks and Services (PMCS) functions. The PMCS tables contain checks and services necessary to ensure that the RTS is ready for operation. Using PMCS tables, perform maintenance at specified intervals.

EXPLANATION OF COLUMNS

- **Item Number Column.** Numbers in this column shall be used as a source of item numbers for the TM Number Column on DA Form 2404 WP 0017 (Equipment Inspection and Maintenance Worksheet) or DA Form 5988-E WP 0017 (Equipment Inspection and Maintenance Worksheet (Automated)), in recording results of PMCS.
- **Interval Column.** The interval column tells you when to do a certain check or service. Semiannual PMCS must be performed every 6 months, and annual PMCS must be performed every 12 months.
- **Item to be Inspected Column.** This column tells you the item to be checked/serviced.
- **Procedure Column.** The procedure column of your PMCS table tells you how to do the required checks and services.
- **Not Fully Mission Capable If: Column.** This column tells you what faults will keep your AN/PRM-36 RTS from being capable of performing its primary mission. If you perform check and service procedures that show faults listed in this column, do not operate the AN/PRM-36 RTS. Follow standard operating procedures for maintaining the AN/PRM-36 RTS or reporting equipment failure.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES

- Do the MONTHLY (M) PREVENTIVE MAINTENANCE once a month. Pay attention to the WARNINGS and CAUTIONS.
- If something does not work, troubleshoot and notify the supervisor.
- Always do PREVENTIVE MAINTENANCE in the same order until it becomes a habit. Once practiced, problems can be spotted quickly.
- If something looks wrong and cannot be fixed immediately, write it on DA Form 2404 WP 0017 or DA Form 5988-E WP 0017. If something seems seriously wrong, report it to Field Maintenance as soon as possible.
- When doing PREVENTIVE MAINTENANCE, take along the tools needed and a rag or two to make all the checks.

GENERAL MAINTENANCE PROCEDURE

During PMCS, keep the following general maintenance procedures in mind:

- **Screws:** Check screws for obvious looseness, missing, bent, or broken condition. If any of these conditions are found, notify Field Maintenance.
- **Electrical Wires and Connectors:** Look for loose or broken electrical connectors. Make sure connectors are serviceable. If a connector is loose or damaged, notify Field Maintenance.
- **Damage is defined as:** Any conditions that affect safety or would render the AN/PRM-36 RTS unserviceable per applicable procedure.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - (CONTINUED)

Listed below are the sections of the PMCS.

PMCS - MONTHLY WP 0007

END OF WORK PACKAGE

FIELD MAINTENANCE

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - MONTHLY.

INITIAL SETUP:

NOT APPLICABLE

Table 1. PMCS - Monthly.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly	Accessory Batteries	1. Inspect batteries for damage (TM 9-6625-1697-10).	Batteries are damaged or missing.
			2. Charge batteries (TM 9-6625-1697-10).	
			3. Install batteries (TM 9-6625-1697-10).	
			4. Perform Built in Test (BIT) procedure (TM 9-6625-1697-10).	Low battery indicator.

END OF WORK PACKAGE

CHAPTER 4

MAINTENANCE INSTRUCTIONS

FOR

AN/PRM-36 RADIO TEST SET (RTS)

CHAPTER 4

MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

FIELD MAINTENANCE

SERVICE UPON RECEIPT

INITIAL SETUP:

NOT APPLICABLE

Unpacking

Upon receipt of new equipment, the receiving organization must see if equipment has been properly prepared for service and is in good condition. Inspect all assemblies, subassemblies, and accessories to be sure they are in proper working order. Check all equipment to be sure every item is accounted for in the Hand Receipt (DA Form 2062 WP 0017) and is in good condition, clean, and properly stowed. Remove any tape, seals, wrapping or any other shipping and protective items. Inspect equipment for damage incurred during shipping.

Processing Unpacked Equipment

Perform the Preventive Maintenance Checks and Services (PMCS) in TM 9-6625-1697-10 and WP 0006. Schedule the next Preventive Maintenance Checks and Services on DA Form 2404 WP 0017, Equipment Inspection and Maintenance Worksheet. Report all deficiencies on DA Form 2407 WP 0017, Maintenance Request if the deficiencies appear to involve unsatisfactory design.

Checking Unpacked Equipment

Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 361 WP 0017, Transportation Discrepancy Report (TDR). Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with applicable service instructions (e.g., for Army instructions, see DA PAM 750-8 WP 0017). Check to see whether the equipment has been modified.

END OF TASK

INSTALLATION

1. Verify that all six NiMH batteries will accept full charge TM 9-6625-1697-10.
2. Install three fully charged NiMH batteries TM 9-6625-1697-10.
3. Perform BIT procedure TM 9-6625-1697-10.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FRONT AND REAR ENCLOSURE SEPARATION/ASSEMBLY

INITIAL SETUP:

Tools and Special Tools
Tool Kit, Electronic System (WP 0019, Table 2, Item 3)
Wrist Strap, Electrical

Materials/Parts
Rag, Wiping (WP 0020, Item 2)

References
WP 0014, Figure 2

Equipment Condition
Radio tester powered off (TM 9-6625-1697-10)
Batteries removed (TM 9-6625-1697-10)
Cover enclosure assembly and bottom bumper removed (WP 0010)

FRONT AND REAR ENCLOSURE SEPARATION/ASSEMBLY - (CONTINUED)

(ESD) FRONT AND REAR ENCLOSURE SEPARATION

CAUTION

Follow ESD precautions when separating the front and rear enclosure assemblies of the radio tester. Failure to comply may result in damage to equipment.

1. Remove six screws (Figure 1, Item 3) from rear of radio tester (Figure 1, Item 1).

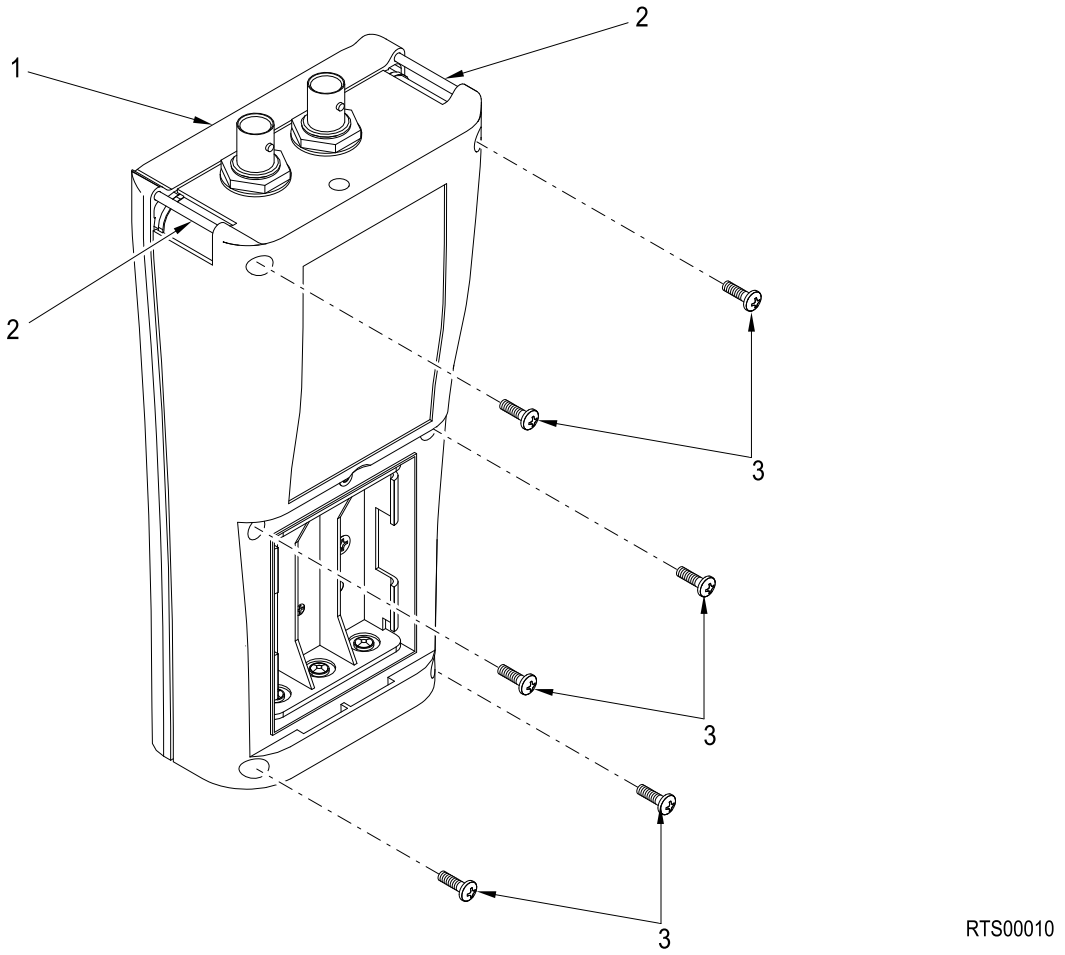


Figure 1. Front and Rear Enclosure Hardware Separation..

2. Remove two dowel pins (Figure 1, Item 2) from radio tester (Figure 1, Item 1).
3. Carefully separate front enclosure (Figure 2, Item 1) from rear enclosure (Figure 2, Item 2) and set on Electrostatic Discharge Sensitive (ESDS)-approved workspace.

FRONT AND REAR ENCLOSURE SEPARATION/ASSEMBLY - (CONTINUED)

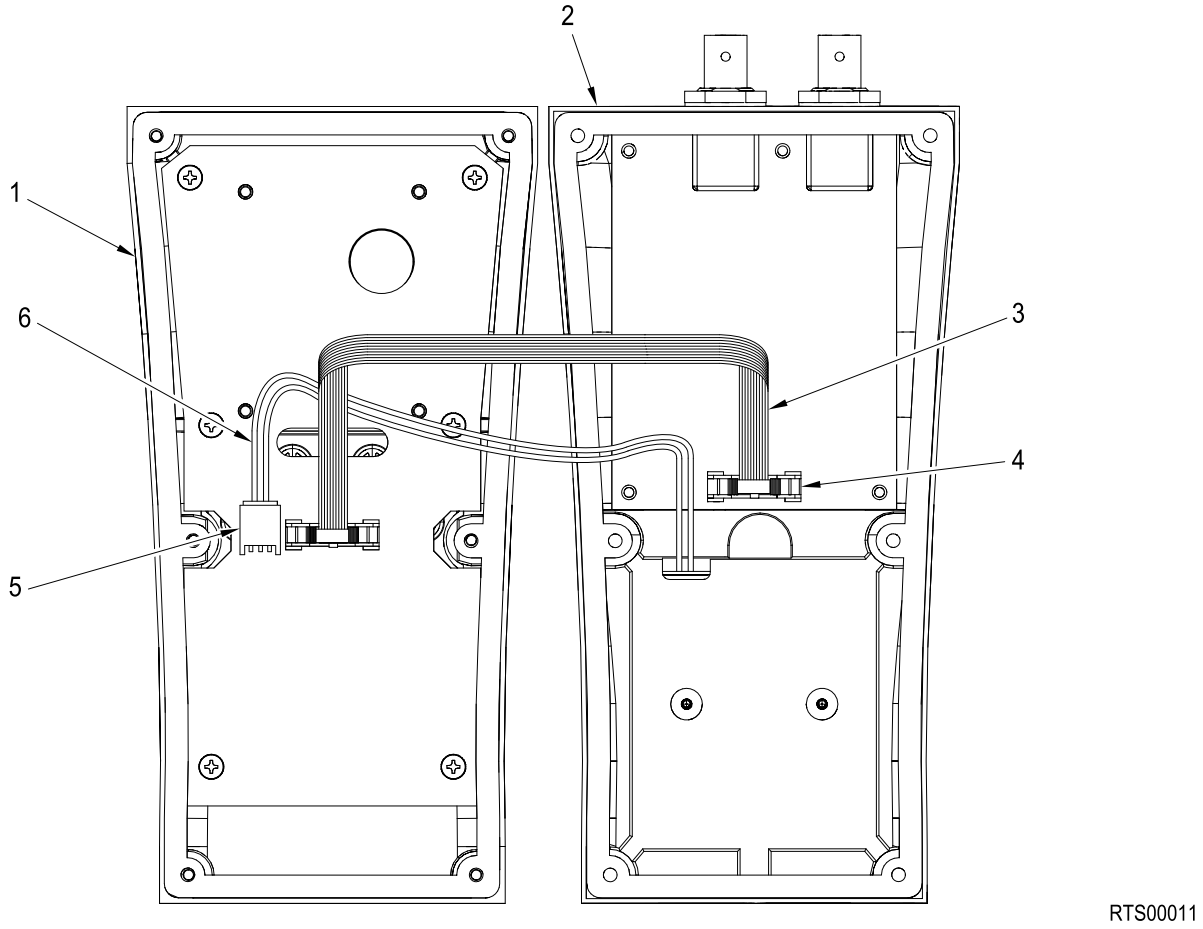


Figure 2. Front and Rear Enclosure Hardware Separation..

NOTE

Use care when spreading connector tabs securing ribbon cable.

4. Spread connector tabs and disconnect ribbon cable (Figure 2, Item 3) from radio frequency (RF) module connector J5 (Figure 2, Item 4).
5. Disconnect the battery power cable (Figure 2, Item 6) from controller circuit card assembly (CCA) connection J4 (Figure 2, Item 5).

NOTE

If necessary, perform Step 6 to replace front enclosure.

If necessary, perform Step 7 to replace rear enclosure.

6. Remove controller (CCA) WP 0011.
7. Remove RF module CCA WP 0012.

END OF TASK

FRONT AND REAR ENCLOSURE SEPARATION/ASSEMBLY - (CONTINUED)

(ESD) FRONT AND REAR ENCLOSURE ASSEMBLY

CAUTION

Follow ESD precautions when reassembling the front and rear enclosure assemblies of the radio tester. Failure to comply may result in damage to equipment.

NOTE

If controller CCA was removed, perform Step 1.

If RF module CCA was removed, perform Step 2.

1. Install controller CCA WP 0011.
2. Install RF module CCA WP 0012.
3. Connect the battery power cable (Figure 3, Item 6) to controller CCA connector J4 (Figure 3, Item 5).

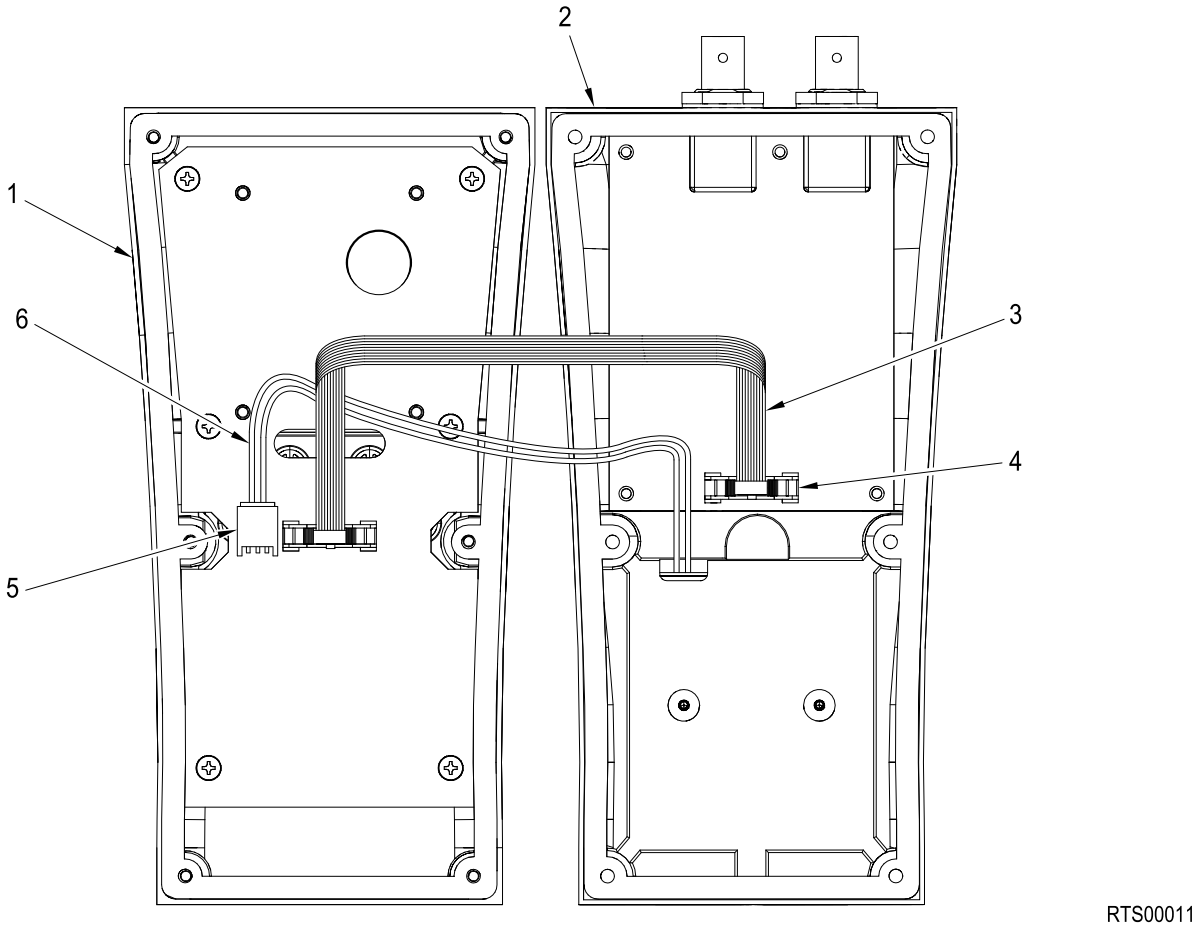


Figure 3. Front and Rear Enclosure Hardware Assembly..

4. Connect ribbon cable (Figure 3, Item 3) to RF module connector J5 (Figure 3, Item 4).
5. Position front enclosure assembly (Figure 3, Item 1) over rear enclosure assembly (Figure 3, Item 2).

FRONT AND REAR ENCLOSURE SEPARATION/ASSEMBLY - (CONTINUED)

NOTE

Battery and ribbon cables must be guided into position when front and rear enclosure assemblies are assembled.

6. Fold ribbon cable (Figure 3, Item 3) and position ribbon cable between two Bayonet Neill-Concelman (BNC) connectors on RF module.
7. Insert and align two dowel pins (Figure 4, Item 2) with mounting holes on rear enclosure assembly (Figure 3, Item 2).
8. Place front enclosure assembly (Figure 3, Item 1) on rear enclosure assembly (Figure 3, Item 2).
9. Position radio tester (Figure 4, Item 1) face down.

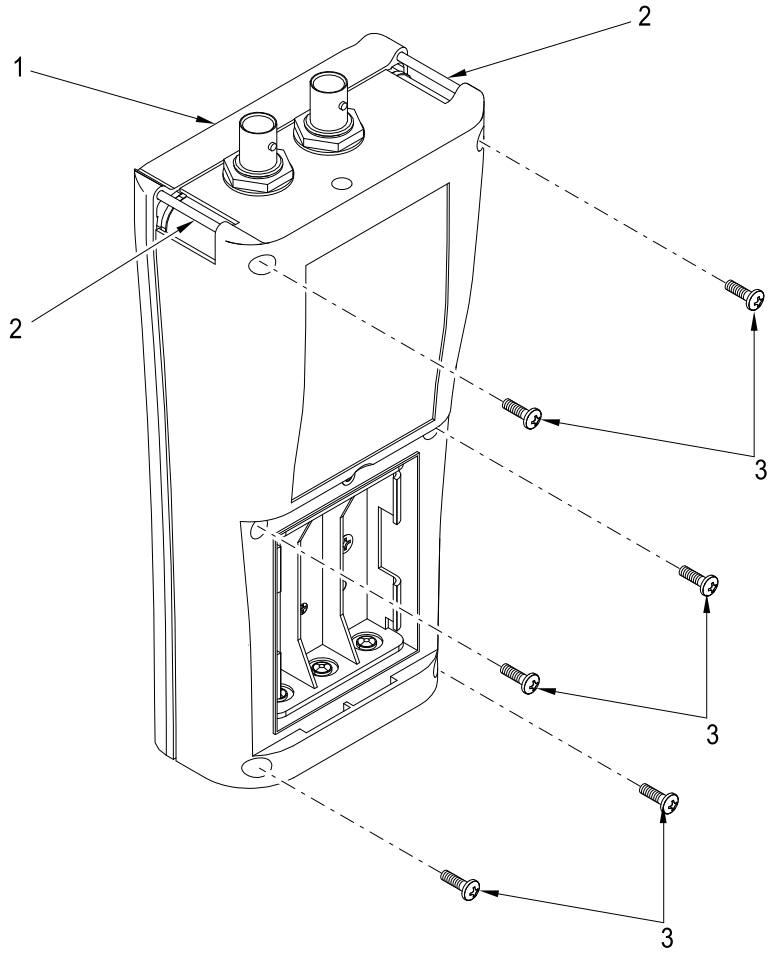


Figure 4. Front and Rear Enclosure Hardware Assembly..

10. Position six screws (Figure 4, Item 3) on front and rear enclosure; partially tighten screws.

FRONT AND REAR ENCLOSURE SEPARATION/ASSEMBLY - (CONTINUED)

CAUTION

Do not overtighten screws. Failure to comply may result in damage to equipment.

NOTE

To prevent damage to enclosure gasket and ensure proper seal, tighten screws in a diagonal sequence beginning with the corner screws then going to the center screws.

11. In a diagonal sequence, completely tighten six screws (Figure 4, Item 3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install batteries (TM 9-6625-1697-10).
2. Install cover enclosure assembly and bottom bumper WP 0010.
3. Power on radio tester (TM 9-6625-1697-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

COVER ENCLOSURE ASSEMBLY AND BOTTOM BUMPER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, Electronic System (WP 0019, Table 2, Item 3)

Materials/Parts
Rag, Wiping (WP 0020, Item 2)

References
WP 0014, Figure 2

Equipment Condition
Radio tester powered off (TM 9-6625-1697-10)
Batteries removed (TM 9-6625-1697-10)

COVER ENCLOSURE REMOVAL

1. Push cover enclosure (Figure 1, Item 1) to either side to release clip and lift and remove cover enclosure from enclosure assembly (Figure 1, Item 5). Let cover enclosure hang by lanyard (Figure 1, Item 4).

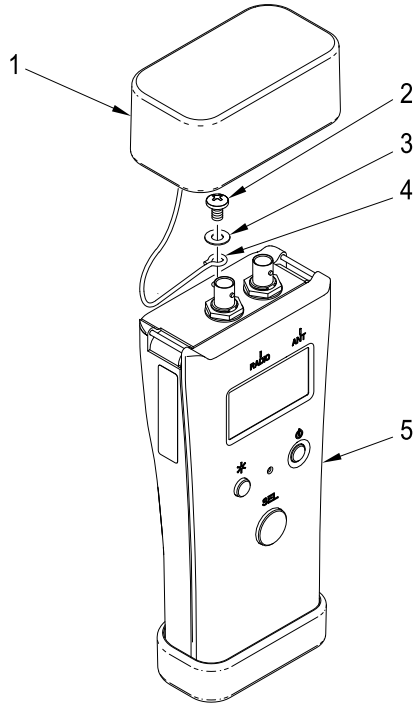


Figure 1. Cover Enclosure Assembly Removal..

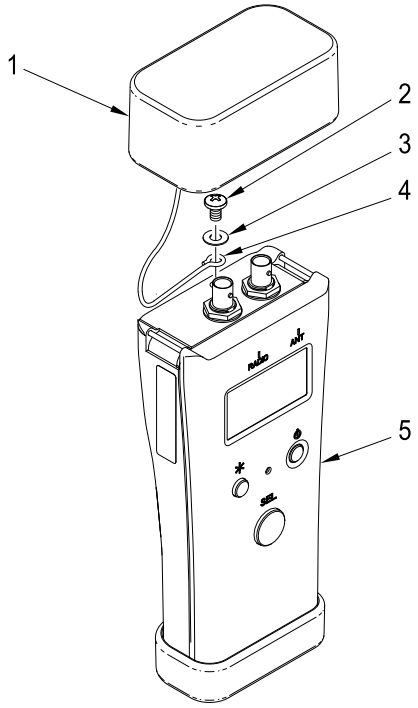
2. Remove screw (Figure 1, Item 2) and washer (Figure 1, Item 3) securing lanyard (Figure 1, Item 4) to enclosure assembly (Figure 1, Item 5). Remove cover enclosure (Figure 1, Item 1).

END OF TASK

COVER ENCLOSURE INSTALLATION

1. Position cover enclosure (Figure 2, Item 1) so lanyard (Figure 2, Item 4) can reach top of enclosure assembly (Figure 2, Item 5).

COVER ENCLOSURE ASSEMBLY AND BOTTOM BUMPER REPLACEMENT - (CONTINUED)



RTS00031

Figure 2. Cover Enclosure Assembly Installation..

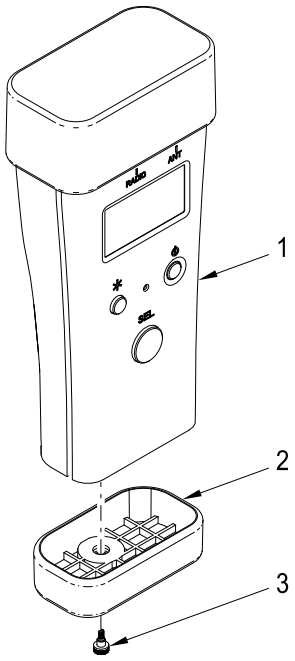
2. Secure lanyard (Figure 2, Item 4) to enclosure assembly (Figure 2, Item 5) with screw (Figure 2, Item 2) and washer (Figure 2, Item 3).
3. Install cover enclosure (Figure 2, Item 1) on enclosure assembly (Figure 2, Item 5).

END OF TASK

COVER ENCLOSURE ASSEMBLY AND BOTTOM BUMPER REPLACEMENT - (CONTINUED)

BOTTOM BUMPER REMOVAL

1. Remove shoulder screw (Figure 3, Item 3) securing bottom bumper (Figure 3, Item 2) to enclosure assembly (Figure 3, Item 1).



RTS00023

Figure 3. Bottom Bumper Removal..

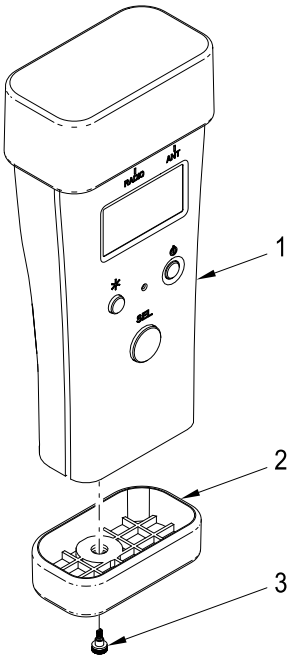
2. Remove bottom bumper (Figure 3, Item 2).

END OF TASK

COVER ENCLOSURE ASSEMBLY AND BOTTOM BUMPER REPLACEMENT - (CONTINUED)

BOTTOM BUMPER INSTALLATION

1. Position bottom bumper (Figure 4, Item 2) on assembled enclosure assembly (Figure 4, Item 1).



RTS00023

Figure 4. Bottom Bumper Installation..

CAUTION

Do not overtighten shoulder screw. Failure to comply may result in damage to equipment.

2. Secure bottom bumper (Figure 4, Item 2) with shoulder screw (Figure 4, Item 3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install batteries (TM 9-6625-1697-10).
2. Power on radio tester (TM 9-6625-1697-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

CONTROLLER CIRCUIT CARD ASSEMBLY (CCA) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, Electronic System (WP 0019, Table 2, Item 3)
Wrist Strap, Electrical

Materials/Parts
Bag, Antistatic (WP 0020, Item 1)
Rag, Wiping (WP 0020, Item 2)

References
WP 0014, Figure 2

Equipment Condition
Front and rear enclosure separated (WP 0009)

CONTROLLER CIRCUIT CARD ASSEMBLY (CCA) REPLACEMENT - (CONTINUED)

CONTROLLER CCA REMOVAL

WARNING

The solder on the CCA contains lead, which may cause skin irritation. After handling the CCA, wash your hands with plenty of soap and water. Failure to comply may result in injury to personnel.

CAUTION

Follow electrostatic discharge (ESD) precautions when handling the controller CCA. Failure to comply may result in damage to equipment.

NOTE

The ribbon cable will still be connected to controller CCA during removal.

1. Remove six screws (Figure 1, Item 3) from controller CCA (Figure 1, Item 2) and front enclosure (Figure 1, Item 1).

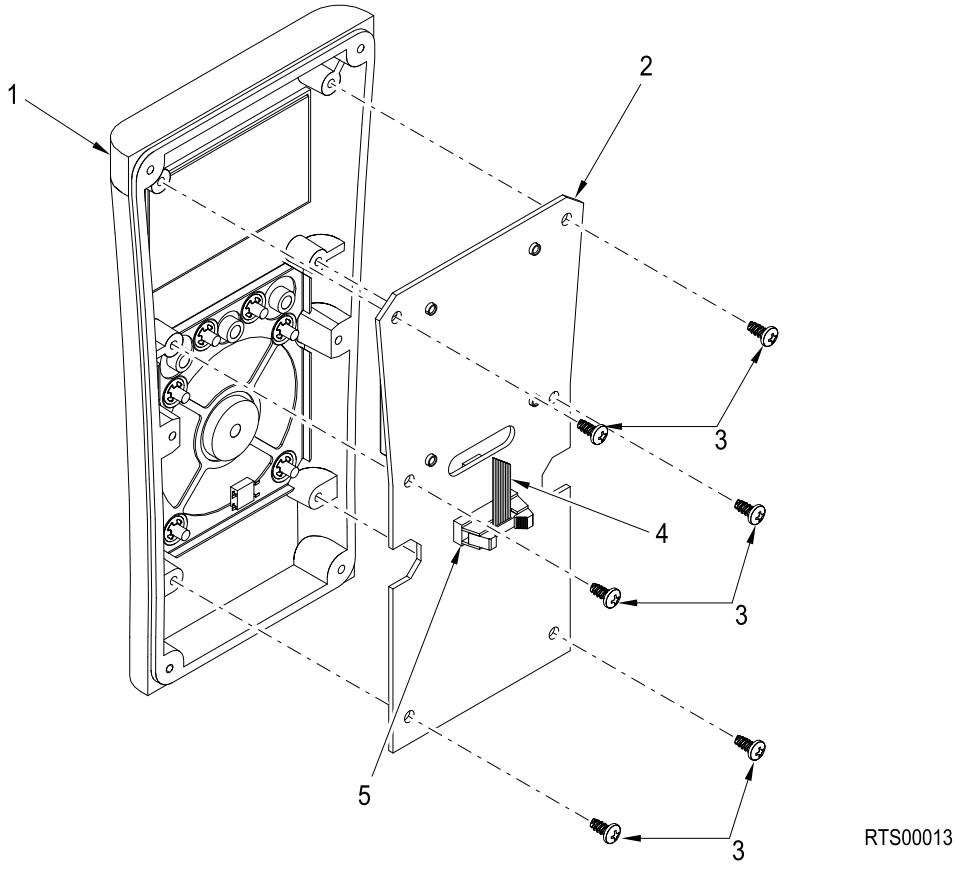


Figure 1. Controller CCA Removal..

2. Carefully grasp edges of controller CCA (Figure 1, Item 2) and remove controller CCA (Figure 1, Item 2).
3. Place controller CCA (Figure 1, Item 2) with ribbon cable (Figure 1, Item 4) in ESD protective bag.

END OF TASK

CONTROLLER CIRCUIT CARD ASSEMBLY (CCA) REPLACEMENT - (CONTINUED)

CONTROLLER CCA INSTALLATION

WARNING

The solder on the CCA contains lead, which may cause skin irritation. After handling the CCA, wash your hands with plenty of soap and water. Failure to comply may result in injury to personnel.

CAUTION

Follow ESD precautions when handling the controller CCA. Failure to comply may result in damage to equipment.

1. Remove controller CCA (Figure 2, Item 2) from ESD protective bag.

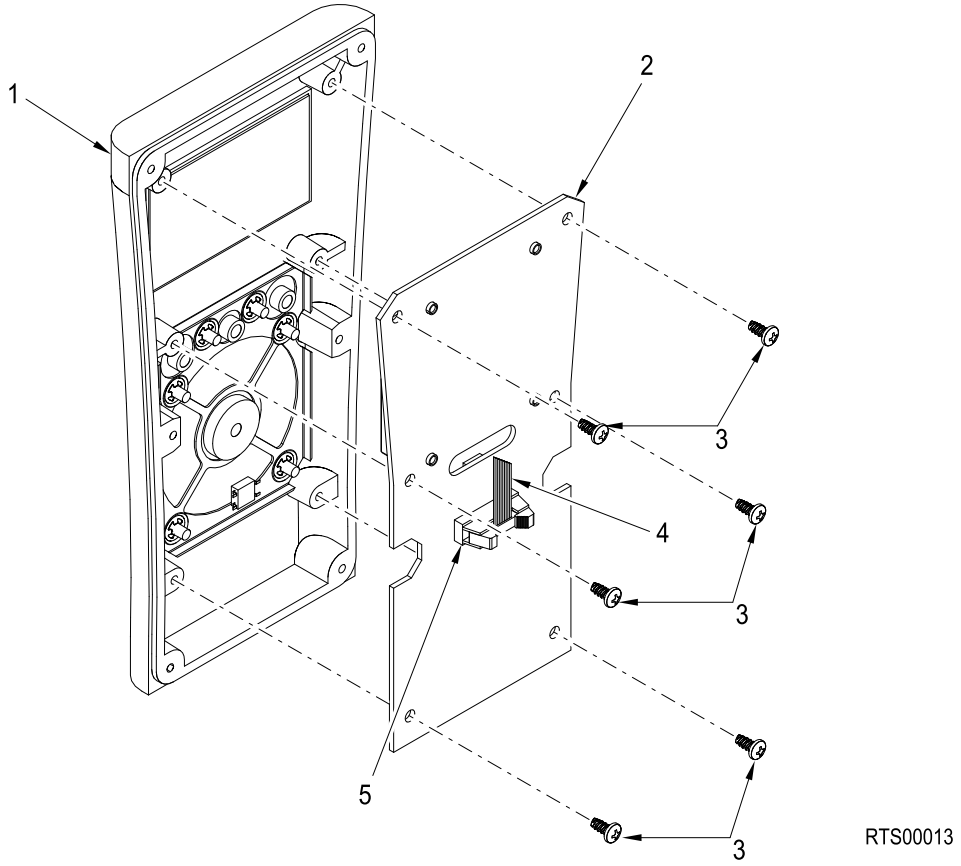


Figure 2. Controller CCA Installation..

NOTE

The ribbon cable provided with the controller CCA may or may not be connected to the controller CCA. If connected, exercise care during CCA installation.

2. Position replacement controller CCA (Figure 2, Item 2) on front enclosure assembly (Figure 2, Item 1).

CONTROLLER CIRCUIT CARD ASSEMBLY (CCA) REPLACEMENT - (CONTINUED)

CAUTION

Do not overtighten screws. Failure to comply may result in damage to equipment.

3. Install controller CCA (Figure 2, Item 2) to front enclosure assembly (Figure 2, Item 1) with six screws (Figure 2, Item 3).
4. Connect ribbon cable (Figure 2, Item 4) to controller CCA connector J3 (Figure 2, Item 5), if not previously installed.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Reassemble front and rear enclosure assemblies WP 0009.
2. Perform BIT procedure (TM 9-6625-1697-10).
3. Calibrate radio tester (TB 43-180).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

RADIO FREQUENCY (RF) MODULE CIRCUIT CARD ASSEMBLY (CCA) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, Electronic System (WP 0019, Table 2, Item 3)
Wrist Strap, Electrical

Materials/Parts
Bag, Antistatic (WP 0020, Item 1)
Rag, Wiping (WP 0020, Item 2)
Washer, Lock (WP 0021, Item 1)

References
WP 0014, Figure 2

Equipment Condition
Front and rear enclosure separated (WP 0009)

RADIO FREQUENCY (RF) MODULE CIRCUIT CARD ASSEMBLY (CCA) REPLACEMENT - (CONTINUED)

RF MODULE CCA REMOVAL

WARNING

The solder on the CCA contains lead, which may cause skin irritation. After handling the CCA, wash your hands with plenty of soap and water. Failure to comply may result in injury to personnel.

CAUTION

Follow electrostatic discharge (ESD) precautions when handling the RF module CCA. Failure to comply may result in damage to equipment.

1. Remove two nuts (Figure 1, Item 2) and lockwashers (Figure 1, Item 1) from the “RADIO” and “ANT” RF connectors (Figure 1, Item 6). Discard lockwashers for reassembly.

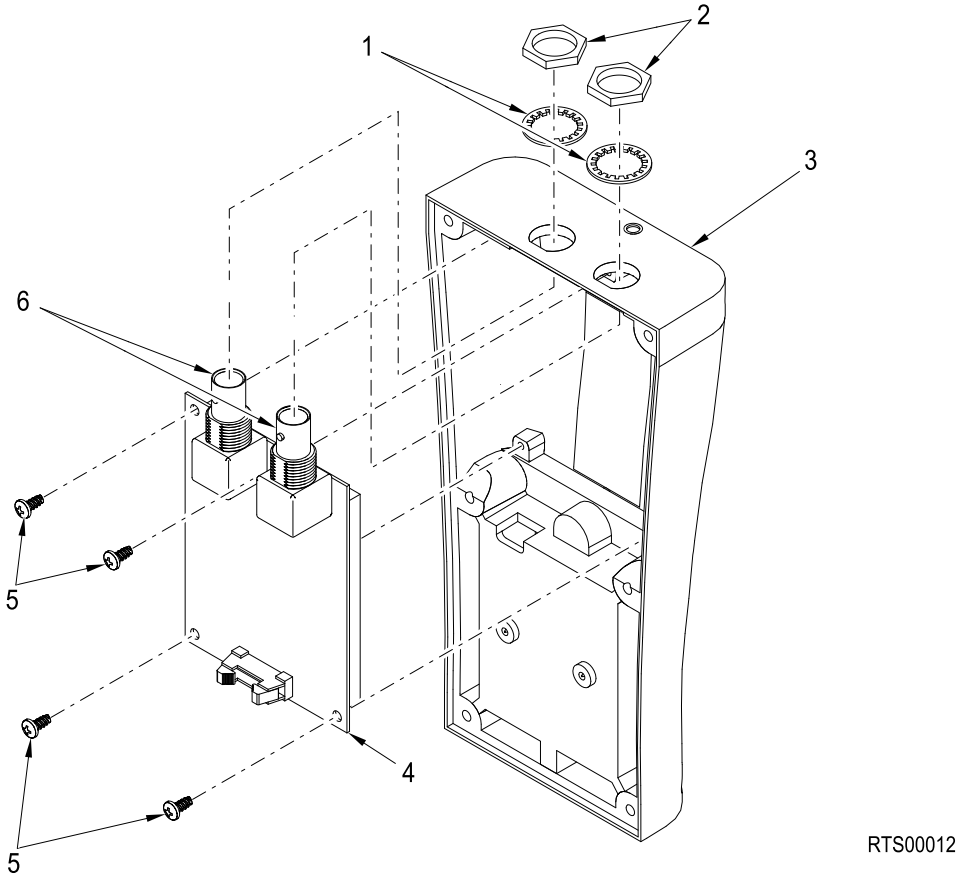


Figure 1. RF Module CCA Removal..

2. Remove four screws (Figure 1, Item 5) from RF module CCA (Figure 1, Item 4) and rear enclosure (Figure 1, Item 3).
3. Carefully remove RF module CCA (Figure 1, Item 4) from rear enclosure (Figure 1, Item 3) by sliding RF connectors (Figure 1, Item 6) from RF connector holes on rear enclosure.
4. Place RF module CCA (Figure 1, Item 4) in an ESD-protective bag.

END OF TASK

RADIO FREQUENCY (RF) MODULE CIRCUIT CARD ASSEMBLY (CCA) REPLACEMENT - (CONTINUED)

RF MODULE CCA INSTALLATION

WARNING

The solder on the CCA contains lead, which may cause skin irritation. After handling the CCA, wash your hands with plenty of soap and water. Failure to comply may result in injury to personnel.

CAUTION

Follow ESD precautions when handling the RF module CCA. Failure to comply may result in damage to equipment.

1. Remove RF module CCA (Figure 2, Item 4) from ESD-protective bag.

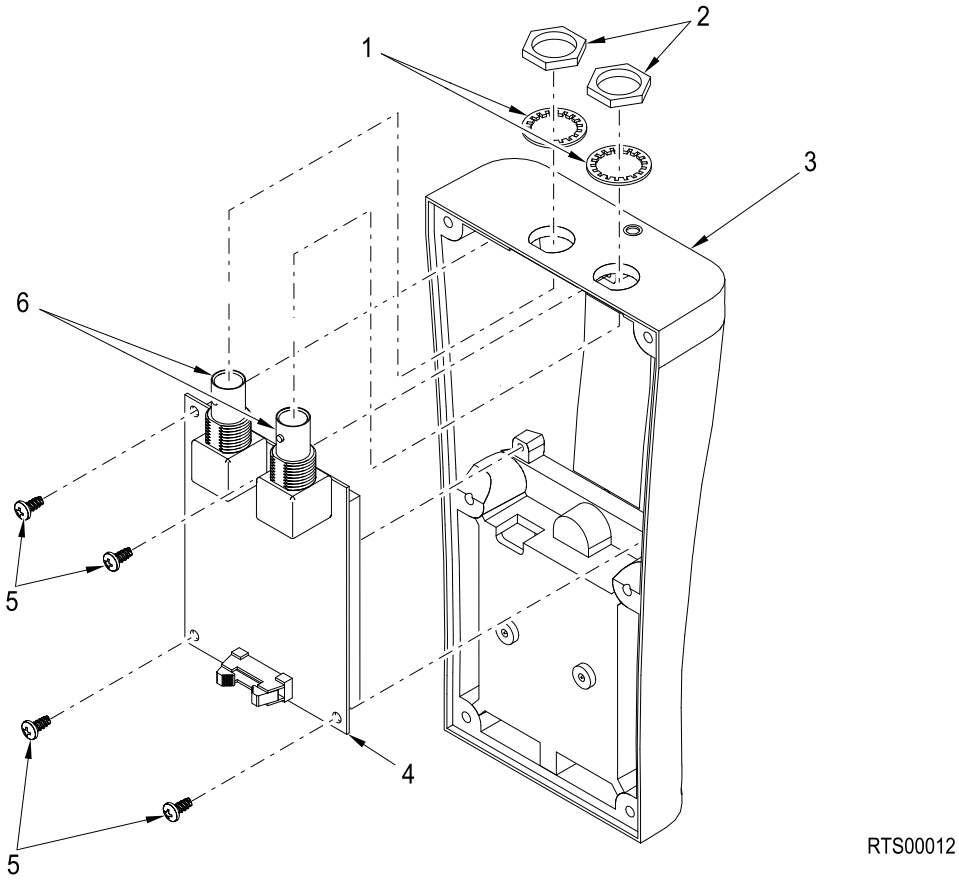


Figure 2. RF Module CCA Installation..

2. Carefully, slide RF module CCA (Figure 2, Item 4) in two RF connector holes on rear enclosure (Figure 2, Item 3).

CAUTION

Do not overtighten nuts. Failure to comply may result in damage to equipment.

3. Install two lockwashers (Figure 2, Item 1) and nuts (Figure 2, Item 2) on “RADIO” and “ANT” RF connectors (Figure 2, Item 6).

RADIO FREQUENCY (RF) MODULE CIRCUIT CARD ASSEMBLY (CCA) REPLACEMENT - (CONTINUED)

CAUTION

Do not overtighten rear enclosure assembly screws. Failure to comply may result in damage to equipment.

4. Install RF module CCA (Figure 2, Item 4) on rear enclosure assembly (Figure 2, Item 3) with four screws (Figure 2, Item 5).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Reassemble front and rear enclosure assemblies WP 0009.
2. Perform BIT procedure (TM 9-6625-1697-10).
3. Calibrate radio tester (TB 43-180).

END OF TASK

END OF WORK PACKAGE

CHAPTER 5

PARTS INFORMATION

FOR

AN/PRM-36 RADIO TEST SET (RTS)

CHAPTER 5

PARTS INFORMATION

WORK PACKAGE INDEX

FIELD MAINTENANCE

PARTS INFORMATION

INTRODUCTION

SCOPE

This RPSTL lists and authorizes spares and repair parts, special tools, special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of field and sustainment maintenance of the AN/PRM-36 Radio Test Set (RTS). It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

GENERAL

In addition to the Introduction work package, this RPSTL is divided into the following work packages:

1. Repair Parts List Work Packages. Work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Sending units, brackets, filters, and bolts are listed with the components they mount on. Bulk materials are listed by item name in FIG. BULK at the end of the work packages. Repair parts kits are listed separately in their own functional group and work package. Repair parts for reparable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.
2. Special Tools List Work Packages. Work packages containing lists of special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column). Tools that are components of common tool sets and/or Class VII are not listed.
3. Cross-Reference Indexes Work Packages. There are two cross-reference indexes work packages in this RPSTL: the National Stock Number (NSN) Index work package, and the Part Number (P/N) Index work package. The National Stock Number Index work package refers you to the figure and item number. The Part Number Index work package refers you to the figure and item number.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES

ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

SMR CODE (Column (2)). The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout. This entry may be subdivided into 4 subentries, one for each service.

Table 1. SMR Codes..

Source Code	Maintenance Code		Recoverability Code
xx	xx		x
1st two positions: How do you get an item	3rd position: Who can install, replace, use the item	4th position: Who can do complete repair* on the item	5th position: Who determines disposition action on an unserviceable item
*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.			

Source Code. The source code tells you how to obtain an item needed for maintenance, repair, or overhaul of an end item or equipment. Explanation of source codes follows:

PARTS INFORMATION - (CONTINUED)

Table 2. Source Code 1st and 2nd Positions..

Code	Application/Explanation
PA	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3rd position of the SMR code.
PB	
PC**	
PD	
PE	
PF	
PG	
PH	
PR	
PZ	
KD	Items with these codes are not to be requested/requisitioned individually. They are part of a kit, which is authorized to the maintenance category in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.
KF	
KB	
MF (Made at Field level)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material, which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3rd position of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.
MH (Made at Sustainment level)	
ML (Made at Specialized Repair Activity SRA)	
MD (Made at Sustainment level)	
AF (Assembled by Field level)	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3rd position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.
AH (Assembled by Sustainment level)	
AL (Assembled by SRA)	
AD (Assembled by Sustainment level)	
XA	Do not requisition an "XA" coded item. Order its next higher assembly.
XB***	If an "XB" item is not available from salvage; order it using the CAGEC and part number given.
XC***	Installation drawing, diagram, instruction sheet and field service drawing that is identified by manufacturer's part number.
XD***	Item is not stocked. Order an "XD" coded item through normal supply channels using the CAGEC and part number given, if no NSN is available.
**NOTE: Items coded PC are subject to deterioration.	
***NOTE: Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with this source code.	

Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the 3rd and 4th positions of the SMR code as follows:

Table 3. Maintenance Code 3rd Position..

Code	Application/Explanation
F	Field level can remove, replace, and use the item.
H	Sustainment level can remove, replace, and use the item.
L	Specialized repair activity can remove, replace, and use the item.
K	Contractor facility can remove, replace and use the item.
Z	Item is not authorized to be removed, replaced, or used at any maintenance level.

PARTS INFORMATION - (CONTINUED)

Code	Application/Explanation
D	Depot level can remove, replace, and use the item.
*NOTE: Army may use C in the third position. However, for joint service publications, Army will use O.	

The maintenance code entered in the 4th position tells whether or not the item is to be repaired, and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions). (NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.) This position will contain one of the following maintenance codes:

Table 4. Maintenance Code 4th Position..

Code	Application/Explanation
F	Field is the lowest level that can do complete repair of the item.
H	Sustainment is the lowest level that can do complete repair of the item.
L	Specialized repair activity (enter specialized repair activity or TASMG designator) is the lowest level that can do complete repair or the item.
D	Sustainment is the lowest level that can do complete repair of the item.
K	Complete repair is done at contractor facility.
Z	Nonrepairable. No repair is authorized.
B	No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item). However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the 5th position of the SMR Code as follows:

Table 5. Recoverability Code 5th Position..

Code	Application/Explanation
Z	Nonrepairable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the 3rd position of SMR Code.
F	Repairable item. When uneconomically repairable, condemn and dispose of the item at Field level.
H	Repairable item. When uneconomically repairable, condemn and dispose of the item at Sustainment level.
D	Repairable item. When beyond lower level repair capability, return to Sustainment. Condemnation and disposal of item not authorized below Sustainment level.
L	Repairable item. Condemnation and disposal of item not authorized below SRA.
A	Item requires handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.
K	Repairable Item. Condemnation and disposal to be performed at contractor facility.

NSN (Column (3)). The NSN for the item is listed in this column.

CAGEC (Column (4)). The Commercial and Government Entity Code (CAGEC) is a 5-digit alphanumeric code, which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

PART NUMBER (Column (5)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

PARTS INFORMATION - (CONTINUED)

NOTE

When you use an NSN to requisition an item, the item you receive may have a different part number from the number listed.

DESCRIPTION AND USABLE ON CODE (UOC) (Column (6)). This column includes the following information:

1. The federal item name, and when required, a minimum description to identify the item.
2. Part numbers of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description in column (6) for a given figure in both the repair parts list and special tools list work packages.

QTY (Column (7)). The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration/figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column instead of a quantity indicates that the quantity is variable and quantity may change from application to application.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

1. National Stock Number (NSN) Index Work Package. NSNs in this index are listed in National Item Identification Number (NIIN) sequence.
   a. STOCK NUMBER Column. This column lists the NSN in NIIN sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number. For example, if the NSN is 5385-01-574-1476, the NIIN is 01-574-1476.
   b. FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.
   c. ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.
2. Part Number (P/N) Index Work Package. Part numbers in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combinations which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).
   a. PART NUMBER Column. Indicates the part number assigned to the item.
   b. FIG. Column. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.
   c. ITEM Column. The item number is the number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

SPECIAL INFORMATION

Usable On Code (UOC). UOC appears in the lower left corner of the Description Column heading. UOCs are shown as "UOC:" in the Description Column (justified left) on the first line under the applicable item/nomenclature. Uncoded items are applicable to all models. Identification of the UOCs used in the RPSTL are shown in Table 6.

Table 6. Usable On Code.

Code	Used On
RAE	AN/PRM-36 Radio Test Set (RTS)

Fabrication Instructions. Bulk materials required to manufacture items are listed in the bulk material functional group of this RPSTL. Part numbers for bulk material are also referenced in the Description Column of the line item entry for the item to be manufactured/fabricated.

PARTS INFORMATION - (CONTINUED)

Index Numbers. Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the NSN / Part Number (P/N) Index work packages and the bulk material list in the repair parts list work package.

ASSOCIATED PUBLICATIONS.

The publication(s) listed in Table 7 pertains to the AN/PRM-36 Radio Test Set (RTS).

Table 7. Associated Publications.

TM	Publication
TM 9-6625-1697-10	Technical Operator Manual for AN/PRM-36 Radio Test Set (RTS)

END OF WORK PACKAGE

FIELD MAINTENANCE

REPAIR PARTS AND SPECIAL TOOLS LIST

REPAIR PARTS AND SPECIAL TOOLS LIST - (CONTINUED)

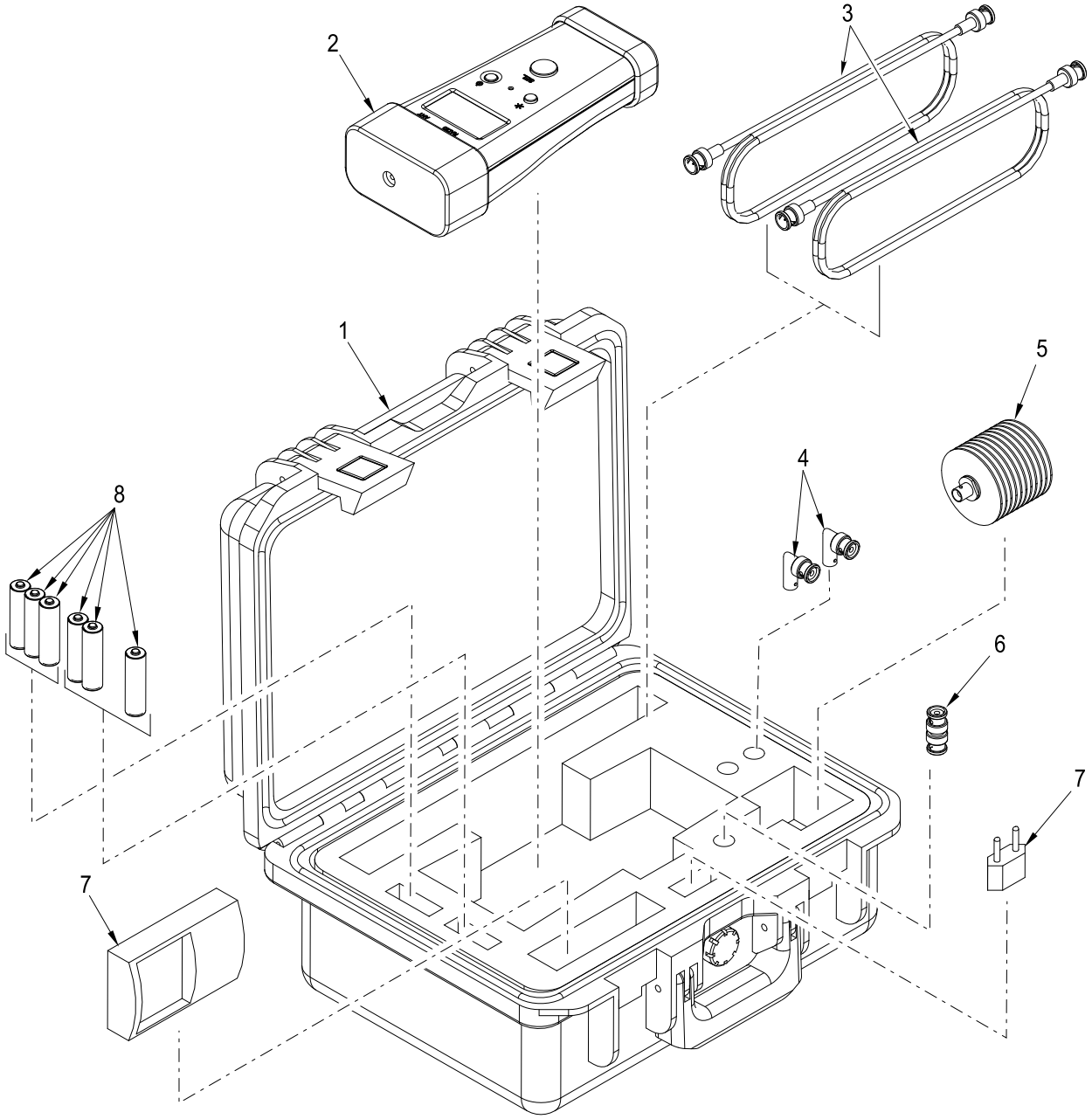


Figure 1. AN/PRM-36 RADIO TEST SET..

REPAIR PARTS AND SPECIAL TOOLS LIST - (CONTINUED)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 0001 0001 RADIO EQUIPMENT FIGURE 1 AN/PRM-36 RADIO TEST SET.	
1	PAFZZ	6625-01-621-3672	98255	350043-001	CASE TRANSIT	1
2	PAFDD	6625-01-621-3733	98255	900858-001	TESTER, RADIO.....	1
3	PAFZZ	5995-00-724-4232	05276	2249-C-48	CABLE ASSEMBLY, RADIO.....	2
4	PAFZZ	5935-01-507-1731	53919	PE9085	ADAPTER, CONNECTOR	2
5	PAFZZ	6625-01-621-3761	61162	50T-334-1.0 B F	TERMINATION, RF	1
6	PAFZZ	5935-01-109-6079	4U744	3533	ADAPTER, CONNECTOR	1
7	PAFZZ	6625-01-621-5665	56NS8	XP-555NB	CHARGER, BATTERY	1
8	PAFZZ	6140-01-537-5244	83740	NH15	CELL, BATTERY	6
					END OF FIGURE	

REPAIR PARTS AND SPECIAL TOOLS LIST - (CONTINUED)

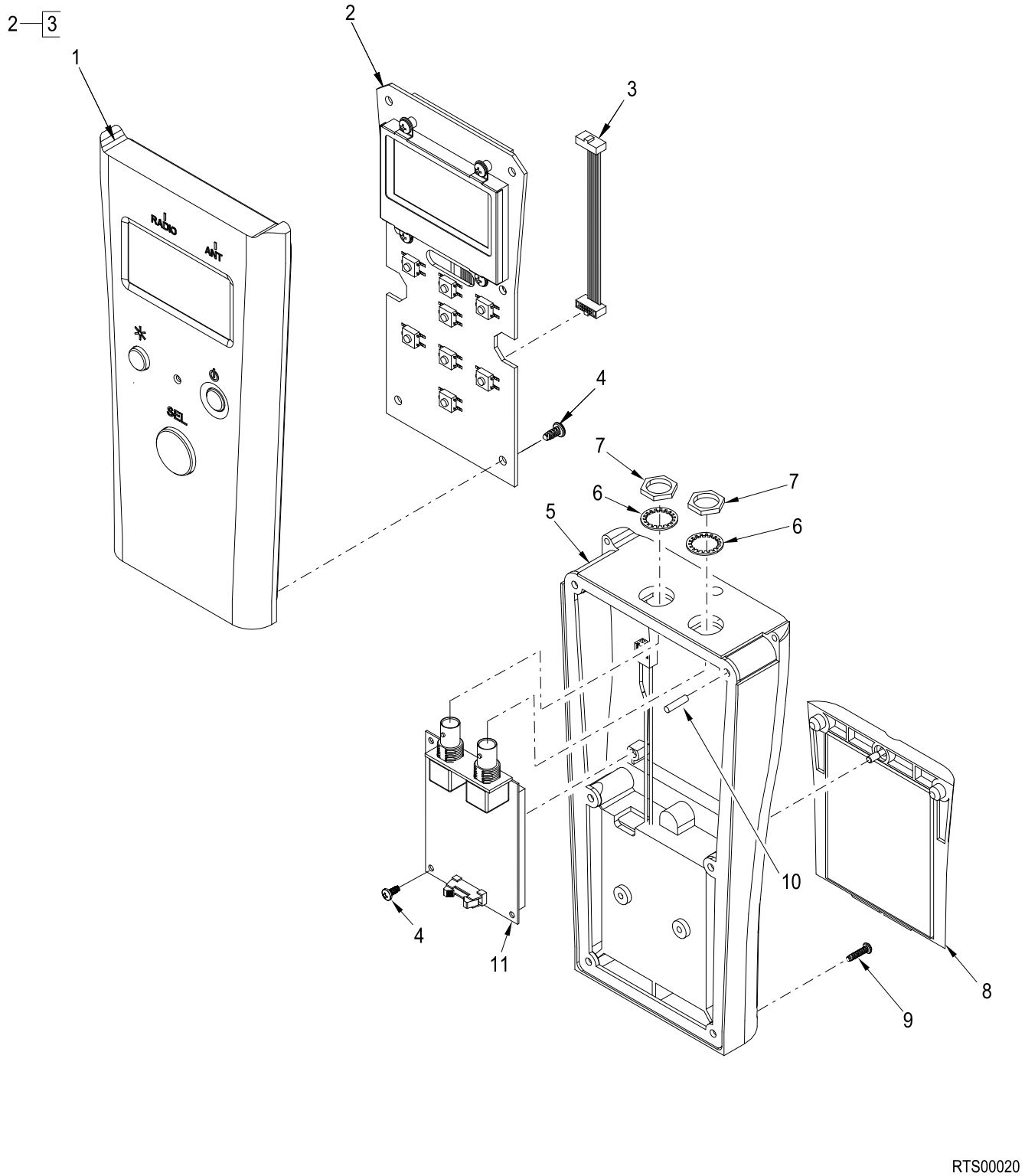


Figure 2. RADIO TESTER. – (Sheet 1 of 2).

REPAIR PARTS AND SPECIAL TOOLS LIST - (CONTINUED)

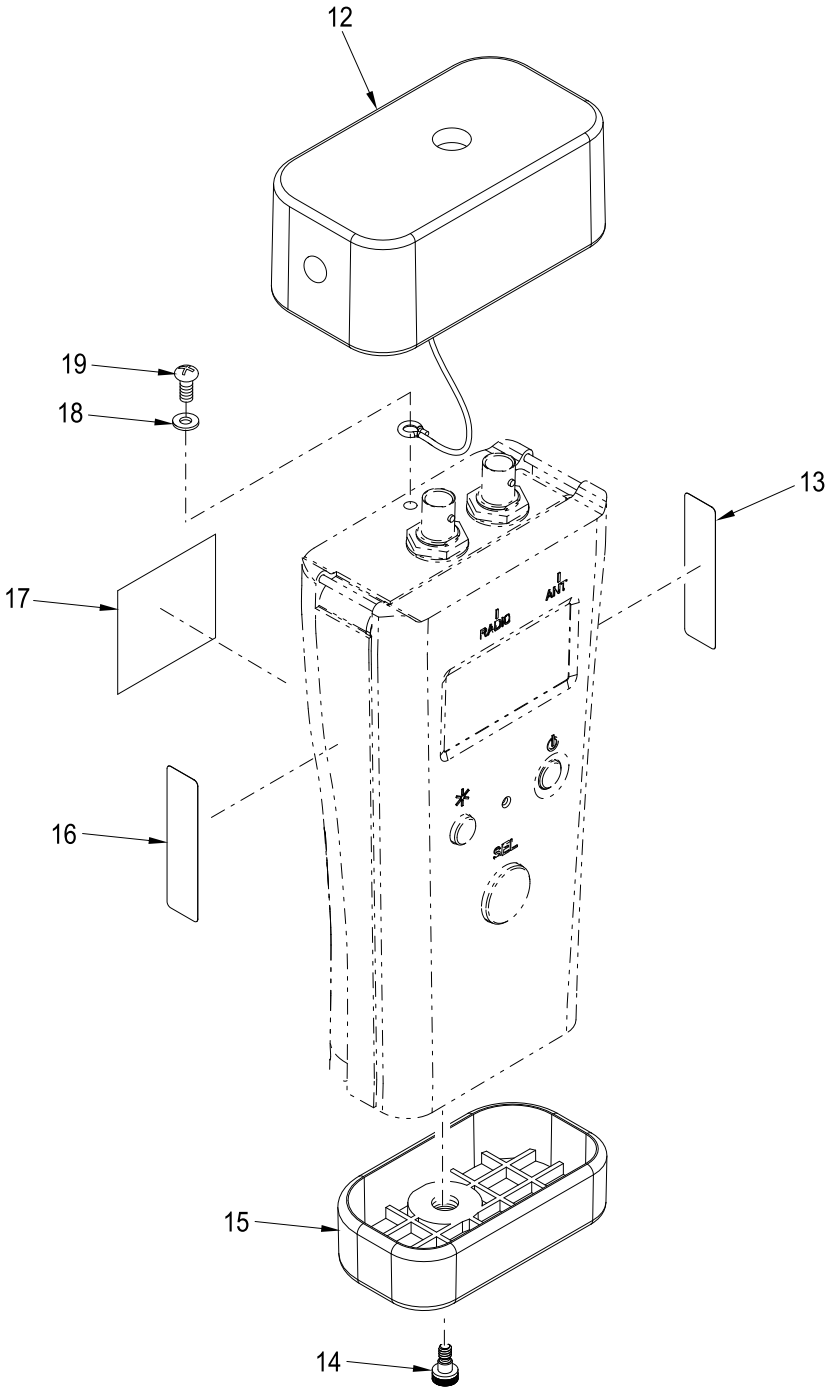


Figure 2. RADIO TESTER. – (Sheet 2 of 2).

REPAIR PARTS AND SPECIAL TOOLS LIST - (CONTINUED)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 0001 0002 RADIO EQUIPMENT	
					FIGURE 2 RADIO TESTER.	
1	PAFZZ	6625-01-624-9677	98255	900858-002	ENCLOSURE ASSEMBLY, FRONT	1
2	PAFDD	6625-01-621-3775	98255	900857-002	CONTROLLER ASSEMBLY	1
3	PAFFZ	6150-01-559-6798	55322	FFSD-05-D-05.00-01-N	CABLE, ASSEMBLY, SPECIAL PURPOSE	1
4	PAFZZ	5305-01-622-5129	39428	99461A110	SCREW, THREAD-FORMING	10
5	PAFZZ	5895-01-622-8532	98255	900858-003	ENCLOSURE ASSEMBLY, BACK	1
					Must order Item No. 16 and 17 when ordering Item No. 5.	
6	PAFZZ	5310-01-217-2107	00779	1-329632-2	WASHER, LOCK	2
7	PAFZZ	5310-01-213-4831	00779	1-329631-2	NUT, PLAIN HEX	2
8	PAFZZ	5895-01-622-7054	98255	900858-004	ENCLOSURE ASSEMBLY, BATTERY DOOR	1
9	PAFZZ	5305-01-622-5130	39428	99461A130	SCREW, THREAD-FORMING	6
10	PAFZZ	5315-01-621-3916	39428	90145A444	PIN, DOWEL	2
11	PAFDD	5895-01-622-7057	98255	230149-001	RF MODULE	1
12	PAFZZ	5895-01-622-8552	98255	900858-005	ENCLOSURE ASSEMBLY, COVER	1
13	XDFZZ		98255	600133-003	LABEL, CALIBRATION	1
14	PAFZZ	5305-01-622-5193	39428	93996A202	SCREW, SHOULDER	1
15	PAFZZ	6625-01-626-0039	98255	401848-001	BUMPER, BOTTOM	1
16	XDFZZ		98255	600133-002	LABEL, WARRANTY	1
17	XDHZZ		98255	600133-001	LABEL, IDENTIFICATION	1
18	PAFZZ	5310-01-352-9588	80205	NAS1149CN632R	WASHER, FLAT	1
19	PAFZZ	5305-01-621-1705	61KM5	JITMS123791	SCREW, MACHINE, SELF-LOCKING	1
					END OF FIGURE	

FIELD MAINTENANCE

NSN INDEX

STOCK NUMBER	FIG.	ITEM
6625-01-581-8105	1	1
5995-00-724-4232	1	4
5935-01-507-1731	1	5
5935-01-109-6079	1	7
6140-01-537-5244	1	9
6150-01-559-6798	2	3
5310-01-217-2107	2	6
5310-01-213-4831	2	7
5310-01-352-9588		7

END OF WORK PACKAGE

FIELD MAINTENANCE

PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
900859-001	1	1
350043-001	1	2
900858-001	1	3
2249-C-48	1	4
PE9085	1	5
50T-334-1.0 B F	1	6
3533	1	7
XP-555NB	1	8
NH15	1	9
900858-002	2	1
900857-002	2	2
FFSD-05-D-06.00-01-N	2	3
99461A110	2	4
900858-003	2	5

PART NUMBER	FIG.	ITEM
1-329632-2	2	6
1-329631-2	2	7
900858-004	2	8
99461A130	2	9
90145A444	2	10
230149-001	2	11
900858-005		1
600133-003		2
93996A202		3
401848-001		4
600133-002		5
600133-001		6
NAS1149CN632R		7
JITMS123791		8

END OF WORK PACKAGE

CHAPTER 6

SUPPORTING INFORMATION

FOR

AN/PRM-36 RADIO TEST SET (RTS)

CHAPTER 6

SUPPORTING INFORMATION

WORK PACKAGE INDEX

FIELD MAINTENANCE

REFERENCES

SCOPE

This section lists the all publication indexes, forms, field manuals, technical bulletins, technical manuals, and other publications referenced in this manual and which apply to the operation and operator maintenance of the AN/PRM-36 Radio Test Set (RTS).

ARMY REGULATIONS

AR 700-138	Army Logistics Readiness and Sustainability

DEPARTMENT OF ARMY PAMPHLETS (DA PAM)

DA PAM 738-751	Functional Users Manual for The Army Maintenance Management Systems - Aviation (TAMMS-A)
DA PAM 750-8	Department of Army Pamphlets (DA PAM)

FORMS

DA FORM 2062	Hand Receipt
DA FORM 2404	Equipment Inspection and Maintenance Worksheet
DA FORM 2407	Maintenance Request
DA FORM 2028	Recommended Changes to Publications and Blank Forms
DA FORM 5988-E	Equipment Inspection and Maintenance (Electronic) Worksheet
DD FORM 361	Transportation Discrepancy Report (TDR)
SF FORM 368	Product Quality Deficiency Report

FIELD MANUALS

FM 55-15	Transportation Reference Data
FM 4-25.11	First Aid

TECHNICAL BULLETIN

TB 43-180	Calibration and Repair Requirements For The Maintenance Of Army Materiel

TECHNICAL PUBLICATIONS

CTA 50-970	Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)
CTA 8-100	Army Medical Department Expendable/Durable Items
TM 750-244-2	Procedures for Destruction of Electronic Materiel to Prevent Enemy Use
TM 750-244-3	Procedures for Destruction of Equipment to Prevent Enemy Use
TM 9-6625-1697-10	Operator Technical Manual for AN/PRM-36 Radio Test Set
TM 9-6625-1697-23&P	Maintenance Technical Manual for AN/PRM-36 Radio Test Set

OTHER PUBLICATIONS

MIL-STD-1686	Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment
MIL-HDBK-263	Electrostatic Discharge Control Handbook for Protection of Electrical and Electronic Parts, Assemblies and Equipment

END OF WORK PACKAGE

FIELD MAINTENANCE

MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION

INTRODUCTION

The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept.

This MAC (immediately following the introduction) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Field - Includes three subcolumns, Crew (C), and Maintainer (F).

Sustainment - includes two subcolumns, Below Depot (H) and Depot (D).

The maintenance to be performed at field and sustainment levels is described as follows:

1. Crew maintenance. The responsibility of a using organization to perform maintenance on its assigned equipment. It normally consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies. The replace function for this level of maintenance is indicated by the letter “C” in the third position of the SMR code. A “C” appearing in the fourth position of the SMR code indicates complete repair is possible at the crew maintenance level.
2. Maintainer maintenance. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter “F” appearing in the third position of the SMR code. An “F” appearing in the fourth position of the SMR code indicates complete repair is possible at the field maintenance level. Items are returned to the user after maintenance is performed at this level.
3. Below depot sustainment. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter “H” appearing in the third position of the SMR code. An “H” appearing in the fourth position of the SMR code indicates complete repair is possible at the below depot sustainment maintenance level. Items are returned to the supply system after maintenance is performed at this level.
4. Depot sustainment. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter “D” or “K” appearing in the third position of the SMR code. Depot sustainment maintenance can be performed by either depot personnel or contractor personnel. A “D” or K” appearing in the fourth position of the SMR code indicates complete repair is possible at the depot sustainment maintenance level. Items are returned to the supply systems after maintenance is performed at this level.

The tools and test equipment requirements table (immediately following the MAC) lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks table (immediately following the tools and test equipment requirements) contains supplemental instructions and explanatory notes for a particular maintenance function.

Maintenance Functions

Maintenance functions are limited to and defined as follows:

1. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel). This includes scheduled inspection and gaugings and evaluation of cannon tubes.
2. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, i.e., load testing of lift devices and hydrostatic testing of pressure hoses.
3. Service. Operations required periodically to keep an item in proper operating condition; e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants,

chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms. The following are examples of service functions:

a. Unpack. To remove from packing box for service or when required for the performance of maintenance operations.

b. Repack. To return item to packing box after service and other maintenance operations.

c. Clean. To rid the item of contamination.

d. Touch up. To spot paint scratched or blistered surfaces.

e. Mark. To restore obliterated identification.

4. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.

5. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

6. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

7. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

8. Paint (ammunition only). To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper ammunition identification.

9. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. “Replace” is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance and Recoverability (SMR) code.

10. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

NOTE

The following definitions are applicable to the “repair” maintenance function: Services. Inspect, test, service, adjust, align, calibrate, and/or replace.

Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).

Disassembly/assembly. The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

11. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

12. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of

material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

Explanation Of Columns In The Mac

Column (1) Group Number. Column (1) lists Functional Group Code (FGC) numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (3) Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to “Maintenance Functions” outlined above).

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are to be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

Column (2) Component/Assembly. Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to “Maintenance Functions” outlined above).

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are to be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

Field:

C Crew maintenance

F Maintainer maintenance

Sustainment:

L Specialized Repair Activity (SRA)

H Below depot maintenance

D Depot maintenance

NOTE

The "L" maintenance level is not included in column (4) of the MAC. Functions at this level of maintenance are identified by a work time figure in the "H" column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks and the SRA complete repair application is explained there.

Column (5) Tools and Equipment Reference Code. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE

and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) Remarks Code. When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks table entries.

Explanation Of Columns In The Tools And Test Equipment Requirements

Column (1) - Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) - Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) - Nomenclature. Name or identification of the tool or test equipment.

Column (4) - National Stock Number (NSN). The NSN of the tool or test equipment.

Column (5) - Tool Number. The manufacturer's part number.

Explanation Of Columns In The Remarks

Column (1) - Remarks Code. The code recorded in column (6) of the MAC.

Column (2) - Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

END OF WORK PACKAGE

FIELD MAINTENANCE

MAINTENANCE ALLOCATION CHART FOR AN/PRM-36 RADIO TEST SET

Table 1. Maintenance Allocation Chart For AN/PRM-36 Radio Test Set.

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW C	MAIN-TAINER F	BELOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
00	Assembly, Radio Test Set	Inspect	0.1	0.1				A
		Service	0.1				1	B
		Test	0.1				2	F, J
		Test	0.1				3, 4	F, J
		Replace		0.1			1	C, D
0001	Radio Tester	Inspect	0.1					A
		Inspect		0.1			3	K
		Service	0.1				1	C
		Service		0.1			3	C
		Replace	0.1					E
		Replace		0.2				H
		Test	0.1					E, F
		Test		0.1				F
		Repair		0.2			3, 4	H, I
		Calibrate		0.5				G
0002	RF Module - Radio Tester	Inspect		0.1				A
		Test		0.1				F
		Replace		0.3			3	H
0003	Controller Assembly - Radio Tester	Inspect		0.1				A
		Test		0.1				F
		Replace		0.3			3	H
000301	Assembly, Cable SP	Inspect		0.1				A
		Test		0.1			4	F, J
		Replace		0.1			3	H

MAINTENANCE ALLOCATION CHART FOR AN/PRM-36 RADIO TEST SET - (CONTINUED)

Table 2. Tools and Test Equiment.

TOOLS OR TEST EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	C	Screwdriver, Cross	5120-00-820-2995	SDEP20
2	C	Multimeter		
3	F	Tool Kit, Electronic System	5180-01-195-0855	TK-17/G
4	F	Multimeter	6625-01-565-4819	8846A

Table 3. Remarks.

REMARKS CODE	REMARKS
A	Perform thorough external inspection of all components.
B	IAW Preventive Maintenance, Checks,and Services (PMCS).
C	Replace Batteries.
D	Replace accessories as required IAW the Components Of End Item List (COEI).
E	IAW Troubleshooting and maintenance procedures outlined in TM 9-6625-1697-10.
F	Perform BIT/Self Test.
G	Calibrate Radio Tester IAW TB 43-180 after replacement of internal circuit cards.
H	Within warranty period return to OEM, if after warranty period repair IAW TM 9-6625-1697-23&P.
I	Warranty replacement of tester within warranty period as indicated on label.
J	Fault Isolate using multimeter to check for continuity, open or short.
K	Perform thorough external and internal inspection of all components.

END OF WORK PACKAGE

OPERATOR INSTRUCTIONS

EXPENDABLE/DURABLE ITEMS LIST

INTRODUCTION

Scope

This work package lists expendable and durable items that you will need to operate and maintain the AN/PRM-36 RTS. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanation Of Columns In The Expendable/Durable Items List

Column (1) - Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use brake fluid (WP 0098, item 5)).

Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item. (F = Maintainer).

Column (3) - National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) - Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (5) - U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable and Durable Items.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER AND (CAGEC)	(5) U/I
1	F	8105-01-124-2645	Bag, Antistatic 3271576 (10001)	TB
2	F	7920-00-205-1711	Rag, Wiping 7920-00-205-1711 (60467)	BE

END OF WORK PACKAGE

FIELD MAINTENANCE

MANDATORY REPLACEMENT PARTS (MRP) LIST

GENERAL

This list identifies the mandatory replacement parts required to be replaced when removed as part of AN/PRM-36 RTS maintenance activities.

EXPLANATION OF COLUMNS

Column (1) - Item Number (No.). Number is assigned to each component/part and is referenced in each work package initial setup “Materials/Parts" heading.

Column (2) - Part Number. The manufacturer's part number.

Column (3) - National Stock Number. The national stock number of the part number.

Column (4) - Nomenclature. Name or identification.

Column (5) - Quantity (Qty.). Total number of that specific part required in this work package.

Table 1. Mandatory Replacement Parts

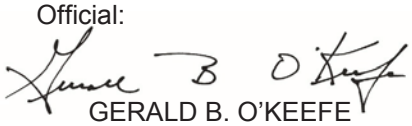
ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
1	1-329632-2 00779	5310-01-217-2107	Washer, Lock	2

END OF WORK PACKAGE

By Order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:



GERALD B. O'KEEFE
Administrative Assistant to the
Secretary of the Army
1407901

Distribution:
"To be distributed in Electronic Media Only (EMO)"

These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: “Whomever” whomever@wherever.army.mil
To: 2028@redstone.army.mil

Subject: DA Form 2028

1 ***From: Joe Smith***
2 *Unit: home*
3 ***Address: 4300 Park***
4 ***City***: Hometown
5 ***St: MO***
6 ***Zip: 77777***
7 ***Date Sent***: 19--OCT--93
8 ***Pub no***: 55--2840--229--23
9 ***Pub Title: TM***
10 ***Publication Date***: 04--JUL--85
11 *Change Number*: 7
12 *Submitter Rank*: MSG
13 ***Submitter FName***: Joe
14 *Submitter MName*: T
15 ***Submitter LName***: Smith
16 ***Submitter Phone***: 123--123--1234
17 ***Problem: 1***
18 *Page: 2*
19 *Paragraph: 3*
20 *Line: 4*
21 *NSN: 5*
22 *Reference: 6*
23 *Figure: 7*
24 *Table: 8*
25 *Item: 9*
26 *Total: 123*

27 ***Text***:
This is the text for the problem below line 27.

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS

For use of this form, see AR 25--30; the proponent agency is ODISC4.

Use Part II (*reverse*) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)

DATE
8/30/02

TO: (*Forward to proponent of publication or form)(Include ZIP Code*)
Commander, U.S. Army Aviation and Missile Command
ATTN: AMSAM--MMA--NP
Redstone Arsenal, AL 35898

FROM: (*Activity and location)(Include ZIP Code*)
MSG, Jane Q. Doe
1234 Any Street
Nowhere Town, AL 34565

PART 1 - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 9-1005-433-24	16 Sep 2002	Organizational, Direct Support, And General Support Maintenance Manual for Machine Gun, .50 Caliber M3P and M3P Machine Gun Electrical Test Set Used On Avenger Air Defense Weapon System

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON
1	WP0005 PG 3		2			Test or Corrective Action column should identify a different WP number.

* *Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION	SIGNATURE
MSG, Jane Q. Doe, SFC	788-1234	

TO: (Forward direct to addressee listed in publication)	FROM: (Activity and location) (Include ZIP Code)	DATE
Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMA-NP Redstone Arsenal, AL 35898	MSG, Jane Q. Doe 1234 Any Street Nowhere Town, AL 34565	8/30/02

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS (*Any general remarks or recommendations or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.*)

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
MSG, Jane Q. Doe, SFC	788-1234	

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS **For use of this form, see AR 25--30; the proponent agency is ODISC4.**	Use PartII(*reverse*) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)	DATE
TO*: (Forward to proponent of publication or form)(Include ZIP Code)* Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMA-NP Redstone Arsenal, AL 35898	FROM*: (Activity and location)(Include ZIP Code)*	

PART 1 --ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON

* *Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION	SIGNATURE

TO: *(Forward direct to addressee listed in publication)* Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMA-NP Redstone Arsenal, AL 35898	**FROM:** *(Activity and location) (Include ZIP Code)*	**DATE**

PART II --REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

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PART III --REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. Ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. Inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. Inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 087690-000