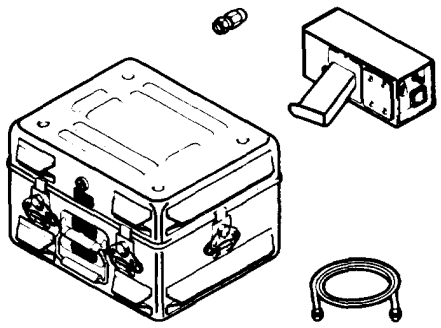
TM 11-6940-214-12

OPERATOR AND ORGANIZATIONAL MAINTENANCE MANUAL

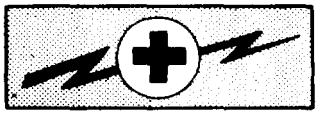


SIMULATOR, RADAR SIGNAL

SM-756/APR-44(V)
(NSN 6940-01-058-1066)

HEADQUARTERS, DEPARTMENT OF THE ARMY
1 JULY 1981

WARNING



Simulator, Radar Signal SM - 757/APR-44(V) generates high frequency radio waves that can be dangerous. When using it, keep the front of it at least 2 inches away from any part of your body .

CAUTION

Do not press on meter face when cleaning. The face can be damaged.

CAUTION

To avoid damaging battery leads, always turn Simulator Radar Signal SM-757/APR-44(V) upside down on a flat work surface when opening battery holder /cover.

HEADQUARTERS
DEPARTMENT OF THE ARMY
1 July 1981

Operator and Organizational
Maintenance Manual

SIMULATOR, RADAR SIGNAL
SM-756/APR-44(V)

(NSN 6940-01-058-1066)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 direct to: Commander, U.S. Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-ME-MQ , Fort Monmouth, NJ 07703. A reply will be furnished to you .

HOW TO USE THIS MANUAL

1. General. The information in this manual is presented in a manner to help you operate and maintain the equipment in the shortest possible time. Read the manual to become familiar with the content before using or working on the equipment. Operating instructions as well as both operator maintenance and organizational maintenance are covered in this manual. Because the equipment is organizational level test equipment, the organizational maintenance technician is assumed to be the operator.

2. Operator and Organizational Maintenance. Information in Chapter 3 is presented to the level necessary for you to perform the authorized tasks. The only maintenance actions authorized at either the operator level or organizational level are preventive maintenance and the replacement of batteries. All corrective maintenance and repair must be accomplished at the depot level.

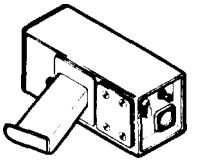
CHAPTER 1

INTRODUCTION

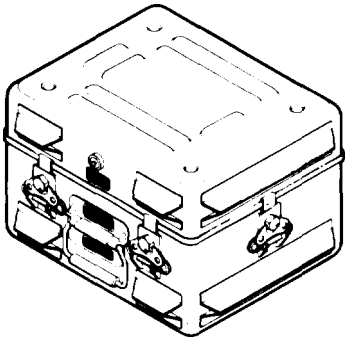
Section I. GENERAL INFORMATION

1-1. Scope. This manual contains operating instructions and organizational maintenance for Simulator, Radar Signal SM-756/APR-44(V). Use it to keep Simulator, Radar Signal SM-756/APR - 44(V) in peak condition, and maintain your proficiency.

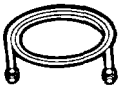
50-OHM
TERMINATION



SIMULATOR
RADAR SIGNAL
SM-7571APR44(V)



CASE, SIMULATOR, RADAR SIGNAL
CY-7714/APR-44(v)



CABLE ASSEMBLY
CG-3827/GR(3'-2")

1-2. Maintenance Forms and Records.

a. Reports of Maintenance and Unsatisfactory Equipment. Maintenance forms, records, and reports are to be used by maintenance personnel at all maintenance levels listed as prescribed by TM 38-750, The Army Maintenance Management System (TAMMS),

b. Report of Packaging and Handling Deficiencies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11 -2/DLAR 4140.55/ NAVMATINST 4355.731AFR 400-541MC0 4430.3E.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR55-38/NAVSUPINST 4610.33B/AFR 75-18/MCO 4610.19C/DLAR 4500.15.

1-3. Destruction of Army Materiel. Destruction of Army materiel to prevent enemy use will be as prescribed in TM 750-244-2.

1-4. Administrative Storage. Repacking of equipment or limited storage normally will be performed at a packing facility, or by a packing team.

1-5. Reporting Equipment Improvement Recommendations (EIR's). If your equipment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment.

Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at Commander, U.S. Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-ME-MQ , Fort Monmouth, NJ 07703. We'll send you a reply.

1-6. Nomenclature Cross-Reference List.

Common Name	Official Nomenclature
Simulator Set	Simulator, Radar Signal SM-756/APR-44(V)
Gun	Simulator, Radar Signal SM-757/APR-44(v)
Transit Case	Case, Simulator, Radar Signal CY-77141APR-44(V)
Microwave Test Cable	---
50-ohm Termination	---

1-7. List of Abbreviations.

B1	Battery number 1
B2	Battery number 2
BAT	Battery
B ND	Band
CHK	Check
ERP	Effective radiated power

Section II. EQUIPMENT DESCRIPTION AND DATA

1-8. Equipment Characteristics, Capabilities, and Features. The simulator set consists of a gun, a microwave test cable, a 50-ohm termination, and a transit case.

a. Characteristics. Provides signals for testing Radar Warning System(s), AN /APR - 44(V) ; portable, hand-held, easy to use.

b. Capabilities and Features. Powered by two internal batteries; built-in self-test feature.

1-9. Equipment Data.

Output mode	Continuous wave
Power source	Internal batteries
Visual indicators	Two-scale meter

Impedance at rf test jack	50 ohms nominal
Weight :	
Gun	3 pounds
Microwave test cable	4 ounces (est)
50-ohm termination	0. 15 ounces
Transit case	10 pounds
Dimensions :	
Gun	10 in. l by 4 in. w by 8 in. h (approx)
Microwave test cable	3 feet
50-ohm termination	0.63 in. 1 by 0.312 in. across flats
Transit case	10.00 in. d by 12.19 in. w by 14.63 in. 1

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. DESCRIPTION AND USE OF OPERATOR'S CONTROLS, INDICATORS, AND RECEPTACLES

2-1. Controls, Indicators, and Receptacles. table 2-1 explains the function of each control, indicator, and receptacle. Illustrations showing the correct operation of each control, indicator, and receptacle are contained within the table.

Table 2-1. Controls, Indicators, and Receptacles

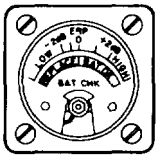
Item	Function
Meter 	Indicates conditions of rf circuits and batteries depending on position of function switch: ERP scale shows rf power level with respect to calibrated reference level. BAT CHK scale shows battery condition: green section indicates good battery, red section indicates weak battery.

Table 2-1, Controls, Indicators, and Receptacles – Continued

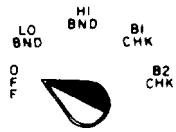
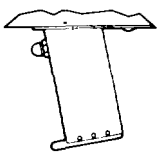
Item	Function
Function Switch 	Five-position rotary switch that selects operating rf band and meter indicating mode: OFF position turns gun off. LO BND position: when trigger switch is squeezed, *energizes* gun for the low rf band; meter indicates rf power level. HI BND position: when trigger switch is squeezed , energizes gun for the high rf band ; meter indicates rf power level. B1 CHK position: when trigger switch is squeezed, meter indicates strength of battery 1. B2 CHK position: when trigger switch is squeezed , meter indicates strength of battery 2.
RF TEST jack 	Makes rf energy generated by gun available for external direct connection.

Table 2-1. Controls, Indicators, and Receptacles - Continued

Item	Function
Trigger switch 	Switches power to gun circuits for operation in modes selected by function switch.

Section 11. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-2. General. To be sure that your radar simulator set is always ready for your mission, you must do scheduled Preventive Maintenance Checks and Services (PMCS) as listed in table 2-2.

a. Before operation, perform your (B) PMCS to be sure that your equipment is ready to go.

b. During operation, perform your (D) PMCS. This should help you spot small troubles before they become big problems.

c. After operation, perform your (A) PMCS. This should help you keep your equipment in top shape.

d. Weekly and monthly, perform your (W) and (M) PMCS. These are important checks you make to keep serious problems from suddenly happening.

CAUTION

Do not press on meter face when cleaning. The face can be damaged.

e. Routine checks such as: cleaning, dusting, washing, checking for frayed cables , stowing items not in use, covering unused receptacles , and checking for loose nuts and bolts are not listed as PMCS checks. Do these things whenever required.

f. If you find a routine check like one of those above listed in your PMCS , it was listed because other operators reported problems with this item.

g. If your equipment fails to operate , request depot maintenance. Report any deficiencies using the proper forms. See TM 38-750.

NOTE

When you are doing any PMCS or other check, remember the warnings and cautions.

NOTE

The PROCEDURES column in your PMCS chart instructs you to "Check for and have repaired or adjusted as necessary". Carefully follow these instructions and , when necessary , do the necessary work.

NOTE

If your equipment must be in operation all the time, check and service those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the equipment can be shut down.

NOTE

Use the ITEM NO. column in your PMCS table to get the numbers for the TM ITEM NO. column on DA Form 2404 (Equipment Inspection and Maintenance Worksheet) when you fill out the form.

2-3. PMCS Procedures. Table 2-2 gives simulator set PMC S.

Table 2-2. PMCS Procedures

NOTE: Within designated interval, these checks are to be
B - Before A - After M - Monthly D - During W - Weekly

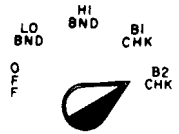
Item no.	Interval B	D	A	W	M	Item to be inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is not ready /available if:
1	●				●	Radar simulator set external surfaces	Inspect external surfaces for damage.	Damage affects perform ante.
2	●		●			External connector	Check for tightness.	Connector cannot be tightened.
3	●	●		●		Battery strength	Test batteries as follow s : a. Set function switch to B1 CHK.	Meter indicates REPLACE for either battery.

b. Observe BAT CHK scale on meter while squeezing trigger switch.

c. Release trigger switch.

d. Set function switch to B2 CHK.

Table 2-2. PMCS Procedures - Continued

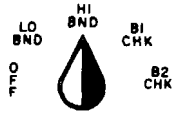
Item no.	Interval B	D	A	W	M	item to be inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is not ready /available if:
							 **e.** Observe BAT CHK scale on meter while squeezing trigger switch. Release trigger switch.	
4	●	●		●		RF power level	Test rf circuits as follows:	Meter indicates left of -2 dB or right of +2 dB.

a. Set function switch to LO BND.

b. Observe ERP scale on meter while squeezing trigger switch.

c. Release trigger switch.

Table 2-2. PMCS Procedures - Continued

Item no.	Interval B	D	A	W	M	Item to be inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is not ready /available if:
							d. Set function switch to HI BND.  e. Observe ERP scale on meter while squeezing trigger switch. Release trigger switch.	

f. Set function switch to OFF.

CAUTION

To avoid damaging battery leads, always turn gun upside down on a flat work surface when opening battery holder/cover.

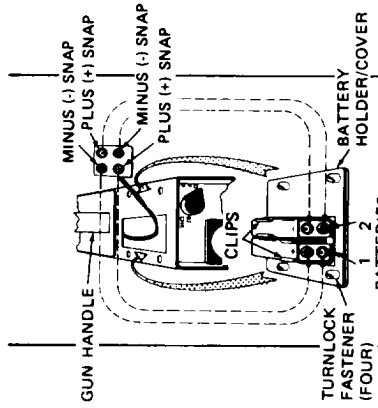
Table 2-2. PMCS Procedures - Continued

Item no.	Interval B	D	A	W	M	tern to-be inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is not ready /available f:
5				●		Battery holder/ cover and snaps.	Check battery holder /cover and snaps for dirt , corrosion, or other foreign matter. If batteries are to be replaced , do it during this PMCS. a. Turn gun upside down and loosen four turnlock fasteners that secure battery holder /cover.	replacement of batteries does not correct deficiency discovered in PMCS Item 3 or 4.

						b. Carefully lift battery holder cover away from gun.	
						c. Remove batteries. Discard them if meter indicated REPLACE in PMCS Item 3.	
						d. If necessary to clean holder/cover and snaps, use cleaning compound with cheese cloth and cotton	

Table 2-2. PMCS Procedures - Continued

Item no.	Interval B	D	A	W	M	Item to be inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is not ready/available if:
							swabs. Wipe everything dry.	
							e. Install both batteries (new if required) into their clips on the battery holder /cover while observing polarity markings as shown.	



f. Connect mating battery lead snaps to battery terminals as shown.

Table 2-2. PMCS Procedures - Continued

Item no.	Interval B	D	A	W	M	Item to be inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is not ready/available if:
							g. Carefully lower battery holder [cover into position on gun and secure with four turnlock fasteners. h. Recheck battery voltage (PMCS Item 3).	

Section III. OPERATION UNDER USUAL CONDITIONS

2-4. Operating Procedure. Operation of the gun is done when organizational-level testing of the radar warning system is done . Even though you can operate the gun yourself, another technician must be in the aircraft cockpit during the tests. This lets you operate the gun while the other technician checks for test results in the cockpit. Both of you must consult TM 11-5841-291-12 to find out what the correct test results should be before doing the following procedures.

WARNING

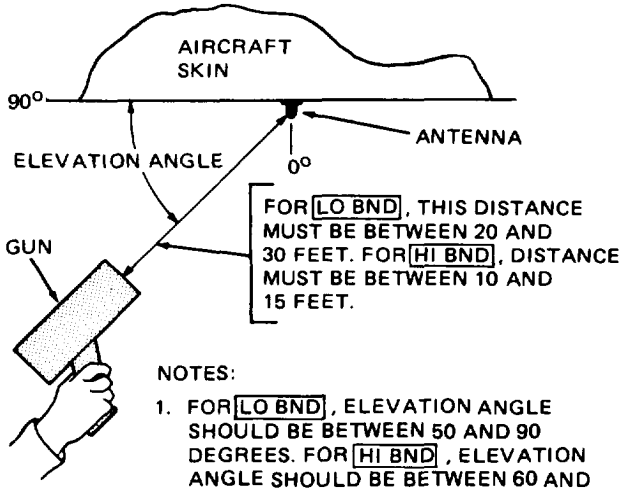
The gun generates high frequency radio waves that can be dangerous. When using gun, keep front of gun at least 2 inches away from any part of your body.

a. Radar Warning System Test.

(1) Consult aircraft technical manual to find out what particular system you have to test and where antennas are located for low and /or high bands.

(2) Choose one antenna to start with and set gun's function switch to LO BND or HI BND , as applicable.

(3) Make sure that nothing is between you and antenna. Then, hold gun within the distance from antenna as shown in the illustration and aim directly at antenna. The illustration also shows you what elevation angles are preferred and that any azimuth angle will do.



NOTES:

1. FOR LO BND, ELEVATION ANGLE SHOULD BE BETWEEN 50 AND 90 DEGREES. FOR HI BND, ELEVATION ANGLE SHOULD BE BETWEEN 60 AND 90 DEGREES.
2. ANY AZIMUTH ANGLE THAT WILL GET YOU WITHIN DISTANCE IS OK.

(4) Squeeze trigger switch and observe that meter indicates between -2 and +2 dB. At this time, ask technician in cockpit to verify that proper indicator light is on and that warning tone can be heard in headset.

(5) Release trigger switch and check with other technician that indicator light goes out and that warning tone stops.

(6) Repeat steps (3), (4), and (5) above for each antenna of particular radar warning system. Make sure that gun's function switch is set to LO BND or HI BND , as applicable, each time you go on to another antenna.

b. Radar Receiver Threshold Test (Low Pass Filter in Circuit).

NOTE

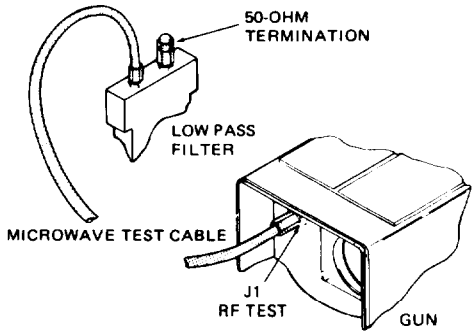
On aircraft where low pass filter is connected in rf path between antennas and receiver, use this procedure to test receiver threshold level.

(1) Consult aircraft technical manual to find out where low pass filter is located.

NOTE

Microwave test cable and 50-ohm termination are components of your simulator set.

(2) Make test connections shown here to one input rf connector on low pass filter.



(3) Set function switch to LO BND.

(4) Squeeze trigger and observe that meter indicates between -2 and +2 dB. At this time, ask technician in cockpit to verify that proper indicator light is on and that warning tone can be heard in headset.

(5) Release trigger switch and check with other technician that indicator light goes out and that warning tone stops.

(6) Repeat steps (2) through (5) above at other input rf connector on low pass filter.

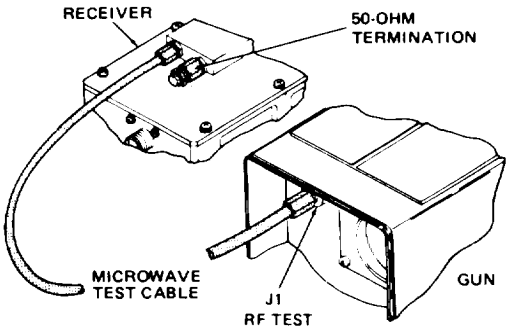
c. Radar Receiver Threshold Test (Low Pass Filter Not in Circuit) .

NOTE

On aircraft where low pass filter is either not connected in rf path between antenna and receiver, or is not installed, use this procedure to test receiver threshold level.

(1) Consult aircraft technical manual to find out where the receiver is located for low and /or high bands.

(2) Make test connections shown here to one input rf connector on receiver. Connections are the same for low and high band receivers.



NOTE

Microwave test cable and 50-ohm termination are components of your simulator set.

(3) Set function switch to LO BND or HI BND , as applicable.

(4) Squeeze trigger switch and observe that meter indicates between -2 and +2 dB. At this time, ask technician in cockpit to verify that proper indicator light is on and that warning tone can be heard in the headset.

(5) Release trigger switch and check with other technician that indicator light goes out and that warning tone stops.

(6) Repeat steps (2) through (5) above at other input rf connector on receiver.

(7) Repeat steps (2) through (5) above at both input rf connectors of each receiver installed.

CHAPTER 3

OPERATOR AND ORGANIZATIONAL MAINTENANCE

Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

3-1. Common tools and Equipment. For authorized common tools and equipment refer to the Modified Table or Organization and Equipment (MTOE) applicable to your unit.

3-2. Special Teds, TMDE, and Support Equipment. No special tools, TMDE, or support equipment are required for maintenance at the operator or organizational level.

3-3. Repair Parts. No repair parts are required for maintenance at the operator or organizational level.

WARNING

Adequate ventilation should be provided while using TRICHLOROTRIFLUOROETHANE. Prolonged breathing of vapor should be avoided. The solvent should not be usedl near heat or open flame; the products of decomposition are toxic and irritating. Since TRICHLOROTRIFLUOROETHANE dissolve natural oils, prolonged contact with skin should be avoided. When necessary, use gloves which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

Section II. SERVICE UPON RECEIPT

3-4. Service Upon Receipt of Materiel. This is how the simulator set is packed for shipment. When you get it , carefully remove items from containers so as not to cause damage. Do the actions given in table 3-1.

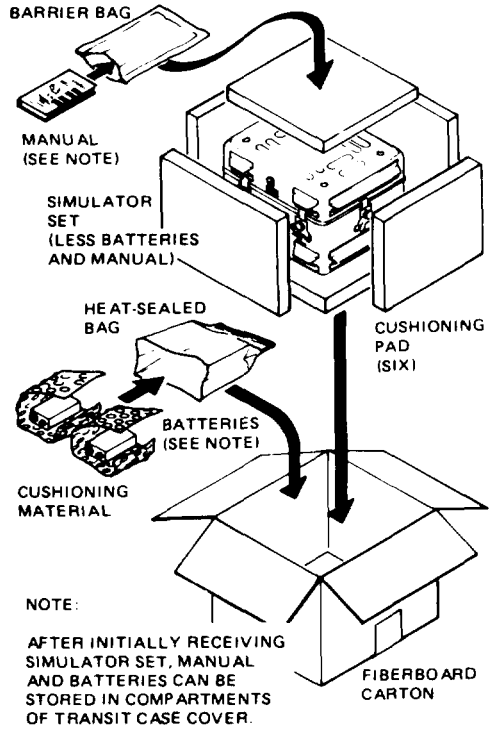


Table 3-1. Service Upon Receipt of Materiel

Location	Item	Action	Remarks
1. Gun	Components	Inspect for dents, missing hardware, and damaged switches , connector, or meter.	
2. Transit case	Components	Inspect for dents, damaged hinges, latches, and protective padding.	
3. Microwave test cable	Assembly	Inspect for frayed cable, damaged or missing connectors.	
4. 50-ohm termination	----	Inspect for general condition.	
5. Batteries	----	Inspect for general condition.	

3-5. Checking Unpacked Equipment.

a. Damage. Inspect equipment for damage incurred during shipment. If equipment has been damaged, report damage on DD Form 6, Packing Improvement Report.

b. Completeness. Check equipment against packing slip or Appendix B to see if shipment is complete. Report all discrepancies in accordance with instructions of TM 38-750.

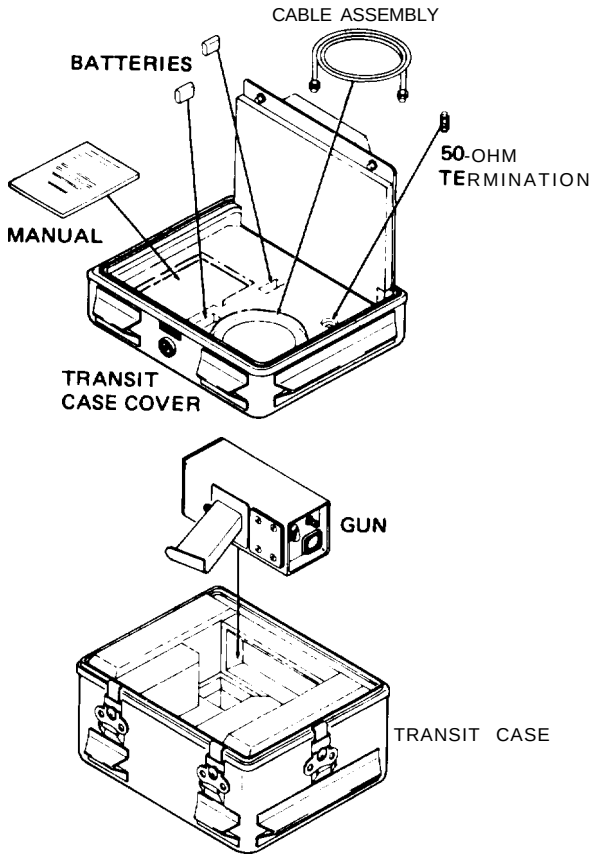
c. Modifications. Check to see whether equipment has been modified.

3-6. Assembly of Equipment. When equipment has been unpacked, store all components, including a copy of this manual and two batteries, in the transit case until needed. Everything fits into compartments of the transit case and its cover as shown here. You should use this illustration to help you keep track of things before and after use.

3-7. Installation of Batteries. To install batteries in the gun, proceed as follows:

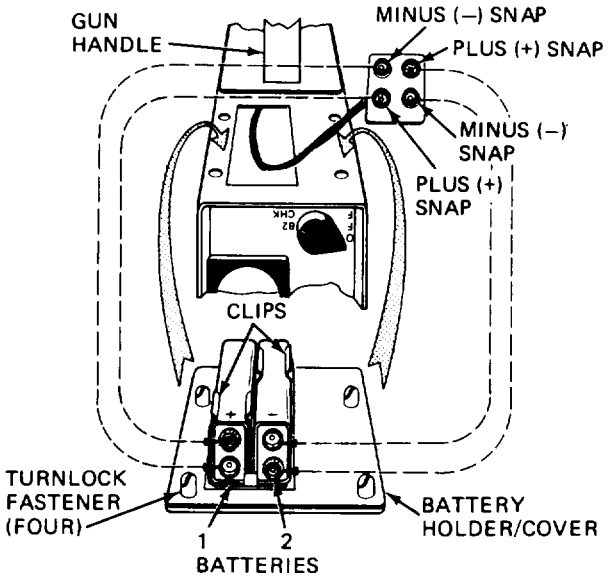
a. Turn gun upside down and loosen four turnlock fasteners that secure battery holder /cover.

b. Carefully lift battery holder /cover away from gun.


CABLE ASSEMBLY
BATTERIES
50-OHM
TERMINATION
MANUAL
TRANSIT
CASE COVER
GUN
TRANSIT CASE

c. Install both batteries into their clips on the battery holder/cover while observing polarity markings as shown.

d. Connect mating battery lead snaps to battery terminals as shown.



e. Carefully lower battery holder /cover into position on gun and secure with four turn-lock fasteners.

f. Perform battery test in PMCS procedures (table 2-2).

3-8. .Preparation for Administrative Storage.

a. Security of the stored equipment is required. The area used for storage must protect the equipment from being stolen.

b. The equipment in storage must be protected from the weather. Covered storage is required.

c. The equipment to be stored must be in good working order. Perform the PMCS procedures (table 2-2) on the equipment prior to storage.

d. When putting the equipment into administrative storage (1 to 45 days) use a storage area that is accessible. Equipment in administrative storage must be able to be removed from storage and put into operation on 24-hour notice.

Section 111. EQUIPMENT CHECK PROCEDURES

3-9. Before Operation, If the microwave test cable is used , be certain that it is securely connected to the radar gun. Be certain that the other end is securely connected to the equipment being tested.

3-10. Rf Test. Refer to PMCS procedures (table 2-2).

3-11. Battery Test. Refer to PMCS procedures (table 2-2).

Section IV. TROUBLESHOOTING

3-12. Troubleshooting. Troubleshooting the gun is based on using the PMCS procedures contained in table 2-2. If a trouble occurs, do the checks and services which apply. If the trouble cannot be corrected by using the PMCS procedures, request depot maintenance.

Section V. MAINTENANCE PROCEDURES

3-13. Maintenance, No corrective measures not found in the PMCS procedures (table 2-2) may be undertaken at the operator or organizational level.

APPENDIX A

REFERENCES

A-1. Scope. This appendix lists forms and publications which you can use as reference material.

A-2. Forms.

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2407	Maintenance Request
SF 368	Quality Deficiency Report (Category II)

A-3. Technical Manuals.

TM 11-5841-291-12	Operator and Organizational Maintenance Manual, Radar Warning System AN/APR-44(V) 1

APPENDIX A - Continued

REFERENCES

TM 38-230-1	Packaging of Materiel-Preservation (Vol I)
TM 38.230-2	Preservation, Packaging, and Packing of Military Supplies and Equipment, Packing (Vol II)
TM 38-260	Preparation of Industrial Plant Equipment for Storage or Shipment
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 740-90-1	Administrative Storage Of Equipment

A-4. Miscellaneous Publications.

DA Pam 310-4	Index of Technical Publications (Includes Modification Work Orders)

APPENDIX B

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS

Section I. INTRODUCTION

B-1. Scope. This appendix identifies integral components of and basic issue items for the radar simulator set to help you inventory items required for safe and efficient operation.

B-2. General. This appendix is divided into the following sections:

a. Section 11, Integral Components of the End Item. These items, when assembled, make up the radar simulator set and must accompany it whenever it is transferred or turned in .

b. Section III, Basic Issue Items (BII) . These are the minimum essential items required to place the radar simulator set in operation, to operate it , and to perform emergency repairs. They must accompany the radar simulator set during operation and whenever it is transferred between accountable officers. This manual is your authority to requisition replacement BII.

B-3. Explanation of Columns.

a. Illustration Number. This column indicates the number of the illustration in which the item is shown.

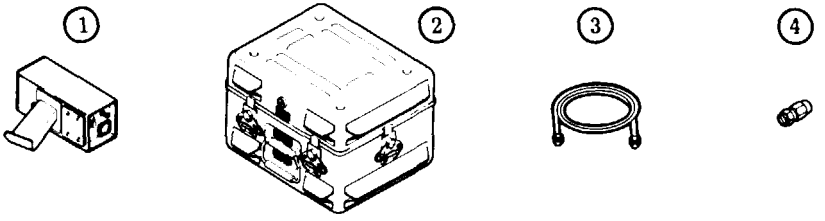
b. National Stock Number. Indicates the National stock number assigned to the item. This number will be used for requisitioning the item.

c. Description. Indicates the National item name and, if required , a minimum description to identify and locate the item. The last line for each item indicates the FSCM (in parenthesis) followed by the part number. If item needed differs for different models of the radar simulator set, the model is given under the "Usable on code" heading in this column.

d. Unit of Measure. Indicates the measure used in performing the actual operational /maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e. g. , ea, in. , pr).

e. Quantity Required (Qty Reqd). This column lists the quantity of each item required for a complete radar simulator set.

Section II. COMPONENTS OF END ITEM



(1) Illus number	(2) National stock number	(3) Description FSCM and part number Usable on code	(4) Unit of mess	(5) Qty reqd
1	6940-01-061-8907	Simulator, Radar Signal SM-757/APR- 44(93346) 4256475-501	Ea	1
2	6940-01-058-0960	Case, Simulator, Radar Signal CY-77141APR-44(V) (93346) 5253102-501	Ea	1

Section II. COMPONENTS OF END ITEM Continued

(1) Illus number	(2) National stock number	(3) Description FSCM and part number Usable on code	(4) Unit of mess	(5) Qty reqd
3	**Cable Assembly, Radio Frequency CG-3827/GR(3'-2") 5985-00-256-9354**	Microwave Test **Cable** (93346) 2252262-502	Ea	**1**
4		50-ohm Termination (16179) 2001-6100-00	Ea	1

Section III. BASIC ISSUE ITEMS

(1) Illus number	(2) National stock number	(3) Description FSCM and part number Usable on code	(4) Unit of mess	(5) Qty reqd
1	---	Battery , Dry , 9-Volt (81349)	Ea	2

APPENDIX C

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

C-1. General.

a. This section gives you a general explanation of all maintenance functions that are authorized at various maintenance categories on the radar simulator set.

b. The maintenance allocation chart (MAC) in section II designates overall responsibility for doing the maintenance functions on the radar simulator set or its components. Carrying out the maintenance functions on the radar simulator set or its components will be done to agree with the assigned maintenance functions.

C-2. Maintenance Functions. The maintenance functions on the radar simulator set are limited to those given on the MAC. These are defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and /or electrical characteristics with established standards through examination.

b. Test. To verify serviceability by measuring the mechanical or electrical characteristics of an item and comparing those characteristics wit h prescribed standards.

c. Service. Operations required periodically to keep .an item in proper operating condition, i .e. , to clean (includes decontaminate, when required) , to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Replace. The act of substituting a serviceable like type part , subassembly, or module (component or assembly) for an unserviceable counterpart.

e. Repair. The application of maintenance services* or other maintenance actions ** to restore serviceability y to an item by correcting specific damage , fault , malfunction, or failure in a part , subassembly, module (component or assembly) , end item, or system.

C-3. Explanation of Columns in the MAC.

a. Column 1, Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

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

c. Column 3, Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2.

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*Services - inspect, test, service, adjust, align, calibrate, or replace.

**Actions - welding, grinding, riveting, straightening, facing, remachining, or resurfacing.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. 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, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows :

C . . . Operator or crew . . . . . not applicable

O . . . Organizational /aviation unit maintenance (AVUM)

F . . . Direct support maintenance /aviation intermediate maintenance (AVIM) . . . . not applicable

H . . . General support maintenance /aviation intermediate maintenance (AVIM) . . . . not applicable

D . . . Depot maintenance

e. Column 5, Tools and Equipment. Column 5 specifies, by code when applicable, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

Section II. MAINTENANCE ALLOCATION CHART FOR SIMULATOR, RADAR SIGNAL SM-756/APR-44(V)

(1) Group number	(2) Component Assembly	(3) Maintenance Function	(4) Maintenance Category C	O	F	H	D	(5) Tools and eqpt
00	Radar Signal Simulator SM-7561APR-44(V)	Inspect		0.1				
		Test		0.1				
		Repair					1.0	

Section II. MAINTENANCE ALLOCATION CHART FOR SIMULATOR. RADAR SIGNAL SMl-756/APR-44(V) - Continued

(1) Group number	(2) Component Assembly	(3) Maintenance Function	(4) Maintenance Category C	O	F	H	D	(5) Tools and eqpt
01	Radar Signal Simulate] SM-757/APR-44(V)	Inspect		0.1				
		Test		0.1				
		Replace		0.1				
		Service		0.1				
		Repair					1.0	
02	Case, Radar Signal Simulator CY-7714/APR-44	Inspect		0.1				
		Replace		0.1				
		Repair					1.0	
03	Microwave Cable	Inspect		0.1				
		Replace		0.1				
04	50-Ohm Termination	Inspect		0.1				
		Replace		0.1				

APPENDIX D

EXPENDABLE SUPPLIES AND MATERIALS

Section I. INTRODUCTION

D-1. Scope. This appendix identifies expendable supplies and materials you will need to operate and maintain the radar simulator set. These items are authorized to you by Common Table of Allowances (CTA) 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

D-2. Explanation of Columns,

a. Column 1, Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g. , "Use cleaning compound, item 1, 'App D").

b. Column 2, Level. This column identifies the lowest level of maintenance that requires the listed item as follows:

C - Operator /crew

O - Organizational /aviation unit maintenance

F - Direct support maintenance

H - General support maintenance

c. Column 3, National Stock Number. This is the National stock number assigned to the item ; use it to request or requisition the item.

d. Column 4, Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

Column 5, Unit of Measure. Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e. g. , ea. - each; in. - inch: pr. - pair). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) Item no.	(2) Level	(3) National stock number	Part no. and FSCM	(4) Description	(5) Unit of meas
1	0	6850-00-597-9765	---	Cleaning compound	GL
2	0	8305-00-267-3015	---	Cheese clot h	A/R
3	0	6510-00-303-8250	---	Cotton swabs	A/R
4	0			Trichlorotri-fluoroethane	A/R

By Order of the Secretary of the Army:

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Chief of Staff

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ROBERT M. JOYCE
Brigadier General, United States Army
The Adjutant General

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