TM 11-6625-2709-12

TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL

RADIO TEST SET AN/ARM-92B (NSN 6125-00-631-5501)

This copy is a reprint which includes current pages from Changes 1 and 2.

HEADQUARTERS, DEPARTMENT OF THE ARMY
AUGUST 1976

WARNINGS

Be extremely careful with explosives and incendiary devices.

Ensure that all personnel remain clear of area when shelter is hoisted on or of truck. Do not permit personnel to walk or stand under the suspended shelter at any time.

Voltage (+28 V dc, with high current capacity) present on connector pins may be hazardous to human life. Exercise care to avoid contact with exposed pins.

CAUTIONS

Do not press on the face of any indicators or meters when cleaning, as the meter or indicator may be damaged.

Do not use any cleaning solvent on the front panels or anywhere there is silk screening.

CHANGE
No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *25 March 1981*

Operator's and Organizational Maintenance Manual
RADIO TEST SET AN/ARM-92B
(NSN 6625-00-631-5501)

TM 11-6625-2709-12, 31 August 1976, is changed as follows:
1. New or changed material is changed by a vertical bar in the margin.
2. A new or changed illustration is indicated by a vertical bar in the margin.
3. Remove old pages and insert new pages as indicated below

Remove	*Insert*
i and ii	i and ii
1-1 through 1-6	1-1 through 1-6
None	1-9 and 1-10
2-7 through 2-10	2-7 through 2-10
3-1 through 3-4	3-1 through 3-4
A1-(A-2 blank)	A-1 (A-2 blank)
C-1 thru C-4	C-1 thru C-4

4. File this change sheet in front of the manual for reference purposes.

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-36A, Direct and General Support Maintenance requirements for AN/ARM-892.

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *24 June 1980*

Operator's And Organizational Maintenance
RADIO TEST SET AN/ARM-92B
(NSN 6625-00-631-5501)

TM 11-6625-2709-12, 31 August 1976, is changed as follows:
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Remove	*Insert*
i and ii	i and ii
1-1 and 1-2	1-1 and 1-2
2-3 thru 2-10	2-3 thru 2-10
3-7 thru 3-11/(3-12 blank)	3-7 thru 3-10

5. File this change sheet in front of the manual for reference purposes.

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TECHNICAL MANUAL
No. 11-6625-2709-12

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 31 August 1976

OPERATOR AND ORGANIZATIONAL MAINTENANCE MANUAL
RADIO TEST SET AN/ARM-92B
(NSN 6625-00-631-5501)

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 Publication and Blank Forma), or DA Form 2028-2 located in back of this manual direct to Commander, US Army Communication and Electronics Materiel Readiness Command and Fort Monmouth, ATTN: DRSEL-ME-MQ, Fort Monmouth~ NJ 07703. In either case, a reply will be furnished direct to you.

LIST OF ILLUSTRATIONS

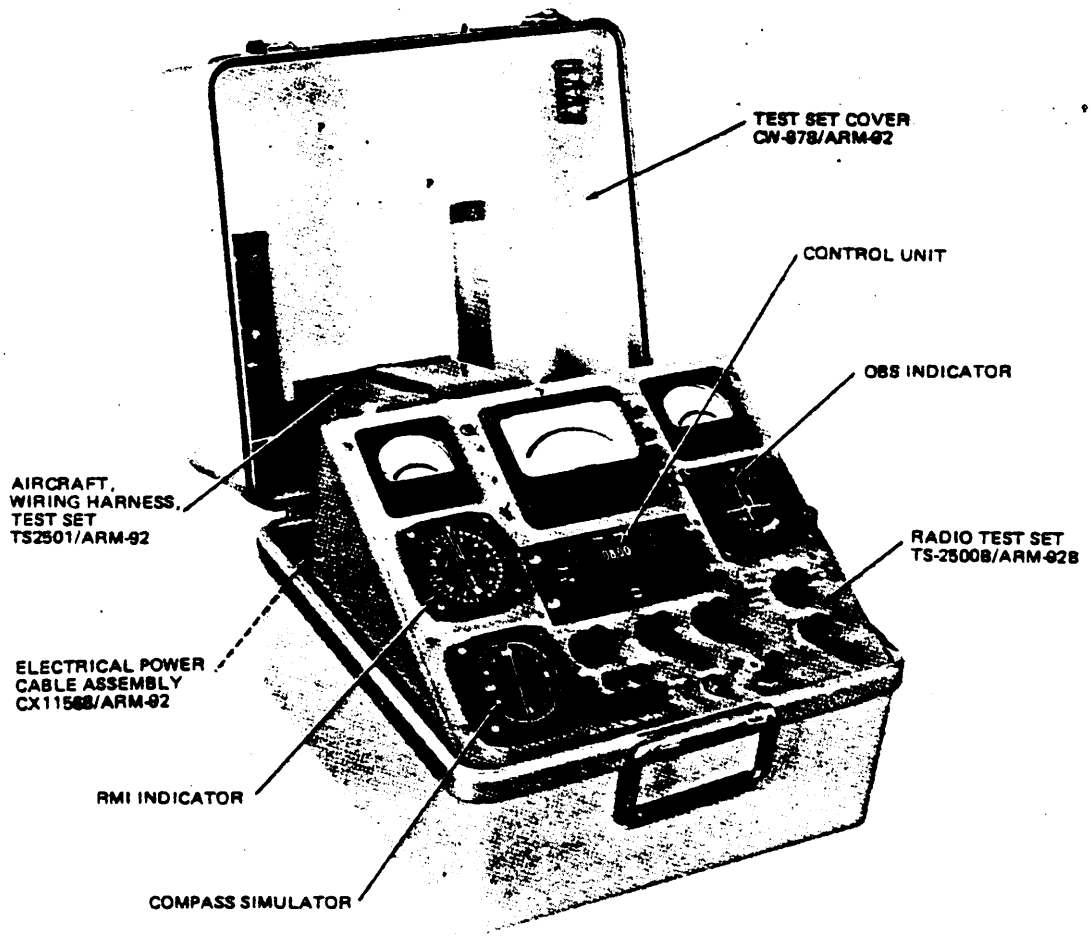

Figure 1-1 Radio Test Set AM/ARM-9B.

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual describes Radio Test Set AN/ARM-92B (fig. 1-1). The manual includes operation, cleaning, and inspection of the equipment, and replacement of parts available to organizational level maintenance.

1-2. Index of Publications

a. DA Pam 310-4. Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

1-3. Maintenance Forms, Records, and Reports

a. *Reports of Maintenance and Unsatisfactory Equipment.* Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System.

b. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 735-11 - 2/NAVSUPINST 4440.127E/AFR 400-54/MCO 4430.3E and DSAR 4140.55.

c. Discrepancy in Shipment Report (DISREP) (SF S61). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33B/AFR 75-18/ MCO P4610.19C and DLAR 4500.15.

1-4. Destruction of Army Electronics Materiel

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

1-5. Administrative Storage

Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the PMCS charts before storing. When removing the equipment from administrative storage, the PMCS should be performed to assure operational readiness. Disassembly and repacking of equipment for shipment or limited storage shall be in accordance with TM 740-90-1.

Section II. DESCRIPTION AND DATA

1-6. Purpose and Use

a. Purpose. Radio Test Set AN/ARM-92B (fig. 1-1) is a bench test set and is comprised of two major units which are Radio Test Set TS-2500B/ARM-92 and Aircraft Test Set Wiring Harness TS-2501/ ARM-92. The purpose and use are as follows.

(1) Radio Test Set TS-2500B/ARM-92, plus the components listed in paragraph 1-8, forms Radio Test Set AN/ARM-92B. The test set, together with adapter cables and appropriate external audio and hf signal generators, provides a means to test VOR/ILS, glideslope, and marker beacon receivers. Interconnections, frequency control, and simulated resolver input signals required by Radio Receiving Set AN/ARN-82B are provided by Radio Test Set TS-2500B/ARM-92. Radio Test Set TS-2500B/ARM-92 also has the capability of testing a glideslope and marker beacon receiver.

(2) Aircraft Test Set Wiring Harness S-2501/ ARM-92 distributes test signals to the meters and audio circuits in Radio Test Set TS-2500B/ARM-92. It also provides a quick test for Radio Set Control G6873B/ARN-82 installed in an aircraft or in Radio Test Set TS-2500B/ARM-92

b. Use. Radio Test Set TS-2500B/ARM-92 is used by the repairman to perform bench

troubleshooting of Radio Receiving Set AN/ARN-82B (VOR) and Radio Receiver R-1041A/ARN (marker beacon). Also, it is designed to test Radio Receiving Set AN/ARN-123 (VOR, ILS glideslope, marker beacon), and Radio Receiver R-1963/ARN (glideslope and marker beacon).

1-7. Technical Characteristics

Line-voltage input

Direct current (de) . . .27.5 volts.

Alternating current (ac) . . . . . .l15volts, 400 Hz.

Power consumption

Dc . . . . . .33watts.

Ac . . . . . 92 watts.

Frequency range . . . . . l08.00 to 126.95 MHz.

COMPASS SIMULATOR . . . . . 3-inch dial with graduation in 2-degree increments through 360 degrees of rotation.

FLAG meter . . . . . A dc ammeter that measures current from 0 to 500 microampere in 10-microampere increments.

DEVIATION meter . . . . . A normally centered dc ammeter that measures current flowing in either direction from 0 to 150 microampere in 5-microampere increments.

TO-FROM meter . . . . . A normally centered dc ammeter that measures current flowing in either direction from 0 to 1000 microampere in 50-microampere increments.

Bearing accuracy

Manual . . . . . +0.15 degree.

Automatic . . . . . ±1.50 degrees.

Weight . . . . . 33.38 pounds.

Dimensions . . . . . 13-1/2 in. high x 15-15/16 in. deep x 15-3/8 in. wide.

1-8. Components of Radio Teat Set AN/ARM-92B.

Qty	Item	Figure no.	Height (in.)	Depth (in.)	Width (in.)	Unit weight (lb)
1	Radio Test Set TS-2500B/ARM-92	1-1	12-9/16	16-1/16	15-3/8	19.29
1	Radio Set Control C-6873B/ARN-82	1-1	2-5/8	5-13/16	5-3/4	1.5
1	RMI Indicator ID-250A/ARN-82	1-1	3-1/4	6-5/16	3-1/4	2.56
1	Course Indicator XD-1347C/ARN-82B	1-1	3-1/4	4-13/16	3-1/4	3.0
1	Test Set Cover CW-878A/ARM-92B	1-3	6-11/16	15-3/4	15-3/8	5.5
1	Eleotrical Power Cable Assembly CX-11568/ARM-92	1-4				0.34
1	Electrical Cable Assembly W-2/ARM-92B	1-5				1.2
1	Aircraft Test Set Wiring Harness TS-2501/ARM-92	1-2	2-7/16	5-1/8	6-5/8	1.19
1	Special Adapter Cable CX-13034/AR					0.7
1	Special Adapter Cable CX-13035/AR					1.3

1-9. Common Names.

Nomenclature	Common name
Radio Test Set TS-2500B/ARM-92	Test set
Test Set Cover CW-878A/ARM-92B	Test set cover
Aircraft Test Set Wiring Harness TS-250l/ARM-92	Aid box
Radio Set Control C-6873B/ARN-82	Control unit
Course Indicator ID-1347C/ARN-82B	OBS indicator
Electrical Cable Assembly W-2/ARM-92B	Control unit test cable
RMI Indicator ID-250A/ARN-82	Radio magnetic indicator (RMI)
Special Adapter Cable CX-13034/AR	AN/ARN-123 test cable
Electrical Power Cable Assembly CX-11568/ARM-92	Power cable
Special Adapter Cable CX-13035/AR	R-1963/ARN test cable

1-10. Description of Radio Test Set AN/ARM-92B.

Radio Test Set AN/ARM-92B includes a test set (fig. 1-1) and an aid box (fig. 1-2).

a. The test set of Radio Test Set AN/ARM-92B (para 1-6), used without the aid box, performs operational checks on Radio Receiver R-1388A/ARN-82 (receiver), Radio Receiving Set AN/ARN-123, and Radio Receiver R-1963/ARN.

b. The aid box, used without the test set, checks the wiring harness in an aircraft installation.

c. The test set, used with the aid box, provides operational checks for the control unit. When connected to the test set, the aid box allows performance checking of various circuits in the test set.

1-11. Description of Major Assemblies.

a. Radio Test Set TS-2500B/ARM-92. The test set (fig. l-l) is portable and can be used wherever 27.5-volt dc and 115-volt, 400-Hz power is available. When the test set cover is raised or removed, the sloping front panel of the test set is exposed. The test set is used while mounted in the lower half of its fiber-glass case. A pendant cable from the test set provides all circuit connections between the receiver and the test set. A storage compartment for this cable, and for the power cable, is located at the rear of the test set. All operating controls, switches, indicators, and meters are located on the front panel.

Note: A frequency selection switch is located on the rear of the OBS and must be set in proper position (zeroed for R-1388/ARN-82 or R-1388A/ARN-82) before test set is utilized.

b. Control Unit. The control unit (fig. l-l) mounts in the center of the test set front panel. The power switch is concentric with the megahertz selector, and the VOL (volume) control is concentric with the kilohertz selector. These controls, selectors, and switches remotely control the power, frequency, and volume of the receiver. The frequency indicator on the control unit front panel displays the frequency to which the receiver is tuned. All electrical connections between the control unit and the test set are made through a connector on the back of the control unit. This control unit is also a part of Radio Receiving Set AN/ARN-82B.

c. *RMI (Radio Magnetic Indicator).* The RMI (fig. l-l) mounts on the center left-hand side of the test set front panel. The RMI will give three indications, but the test set utilizes only two of the indications. Each of the two needles on the RMI can indicate the bearing signals received from the separate receivers, but when the RMI is used in the test set, both needles indicate the same bearing signal received from one receiver. The entire dial on the RMI rotates to indicate heading. All electrical connections between the RMI and the test set are made through a connector on the back of the RMI.

d. OBS (Omnibearing Selector) Indicator. The OBS indicator (fig. l-l) mounts on the center right-hand side of the test set front panel. It has. a nonreflecting black finish with white markings and pointers, and red warning flags with black markings. The dial glass has an antistatic and antireflective coating. The OBS indicator provides a reference for the receiver under test to select a desired course from a simulated very-high-frequency omnidirectional radio range (VOR) signal.

Figure 1-2. Aircraft Test Set Wiring Harness TS-2501/ARM-92

e. Aircrafl Test Set Wiring Harness TS-2501/ ARM-92. The aid box (fig. 1-2) is removed from its storage place in the test set cover for use. When the protective cover on the aid box is removed, all the connectors and indicators on the top panel are exposed. The connectors provide all the electrical connections required by the aid box. The indicators provide visual checks of various circuits in the control unit and in the glideslope receiver.

1-12. Description of Minor Components.

a. Test Set Cover CW-878A/ARM-92B. The test set cover (fig. 1-3) provides storage space for the aid box, and protects the test set during transit or storage. The test set cover is mounted by two hinges at the rear of the test set. It is secured with two latches located at the front of the test set to form the upper half of the fiber-glass carrying case. With the cover closed, the gasket inserted in the bottom groove of the cover makes the case airtight and moistureproof.

b. Electrical Power Cable Assembly CX-11568/ ARM-92. The power cable (fig. 1-4) *is* used to connect primary power to the test set. The cable is a 4-conductor cable, 8 feet long, with a 5-pin female connector on one end that connects to the test set. On the other end are four color-coded, insulated wires protruding from the cable covering. The red wire is connected to the positive side of a 27.5-volt dc power source. The gray wire is connected to the high side of a 115-volt, 400-Hz power source. Both the white wire and black wire are connected to ground.

c. Special Adapter Cable CX-13034/AR. The AN/ARN-123 test cable (fig. 1-6) is used to connect the test set to the AN/ARN-123. The cable is a 50-conductor cable, 30-inches long, with 5 connectors.

d. Special Adapter Cable CX-13035/AR. The R-1963/ARN test cable (fig. 1-7) is used to connect the test set to the R-1963/ARN. The cable is a 26-conductor cable, 30-inches long, with two connectors.

e. *Electrical Cable Assembly W-2/ARM-92B.* The control unit test cable (fig. 1-5) is used to test the control unit of the AN/AR.M-92B during self-test procedures.

1-13. Additional Equipment Required.

The following equipment is not supplied as part of Radio Test Set AN/ARM-92B, but is required for use with it.

a. DC Power Supply. A- 27.5-volt dc power supply is required to supply a maximum of 33 watts to the test set.

b. AC Power Supply. A 115-volt, 400-Hz power supply is required to supply a maximum of 92 watts to the test set.

c. Headset. A headset with at least 300-ohm impedance (Headset HS-33, or equivalent) is required to monitor the receiver audio output signal.

d. VOR (VHF Omnirange) Signal Generator. A VOR signal generator (Signal Generator SG-1A/ ARN, or equivalent) is required to supply the rf carrier for the VOR signal applied to the receiver.

e. VOR Modulator. A VOR modulator (Modulator MD-83A or equivalent) is required to amplitude modulate the rf carrier from the VOR signal generator with a 30-Hz signal, and with a 9960-Hz signal which is frequency modulated with a 30-Hz signal.

f. Output Meter. An output meter (Output Meter TS-585/U, or equivalent) is required to measure the amplitude of the receiver audio output signal.

g. Multimeter. A multimeter (Multimeter ME-26/U, or equivalent) is required to make the voltage measurements on the test set.

h. Glideslope Generator. A glideslope generator is required to supply modulated rf carrier for the signal applied to the glideslope receiver.

i. Marker Beacon Generator. A marker beacon generator is required to supply modulated rf carrier for the marker beacon signal applied to the receiver.

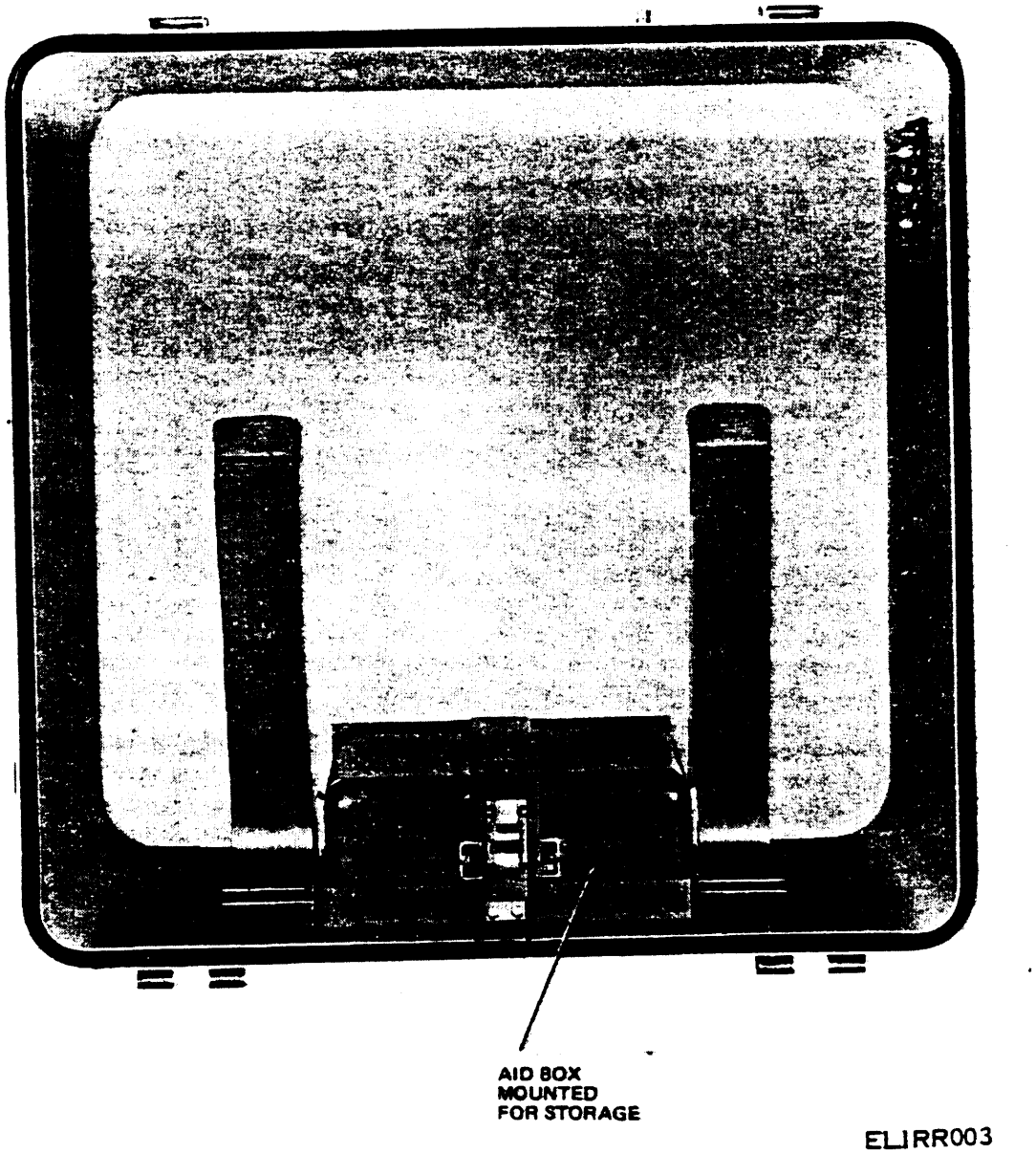

Figure 1-3. Test Set Cover CW-878A/ARM-92B.

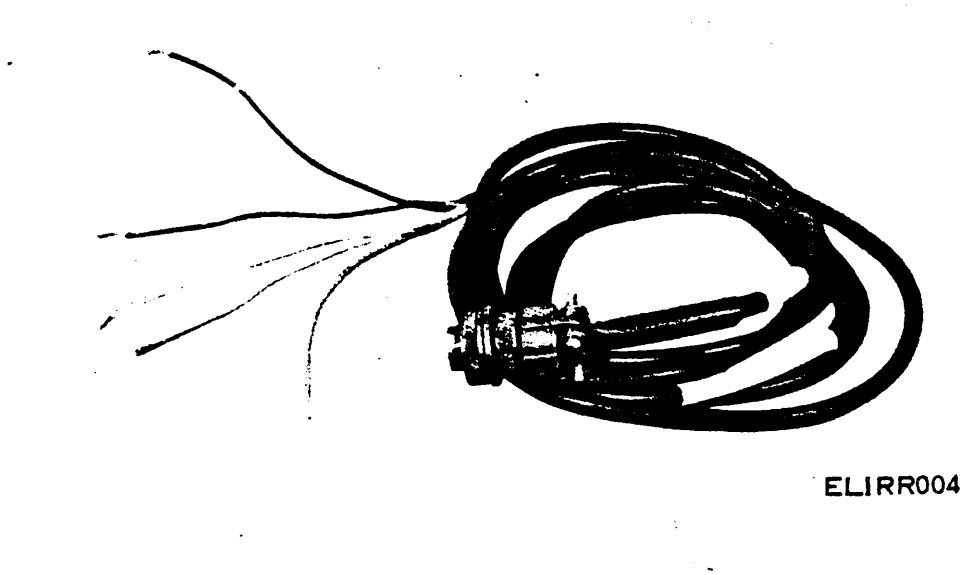

Figure 1-4. Electrical Power Cable Assembly CX-11568/ARMV-92.

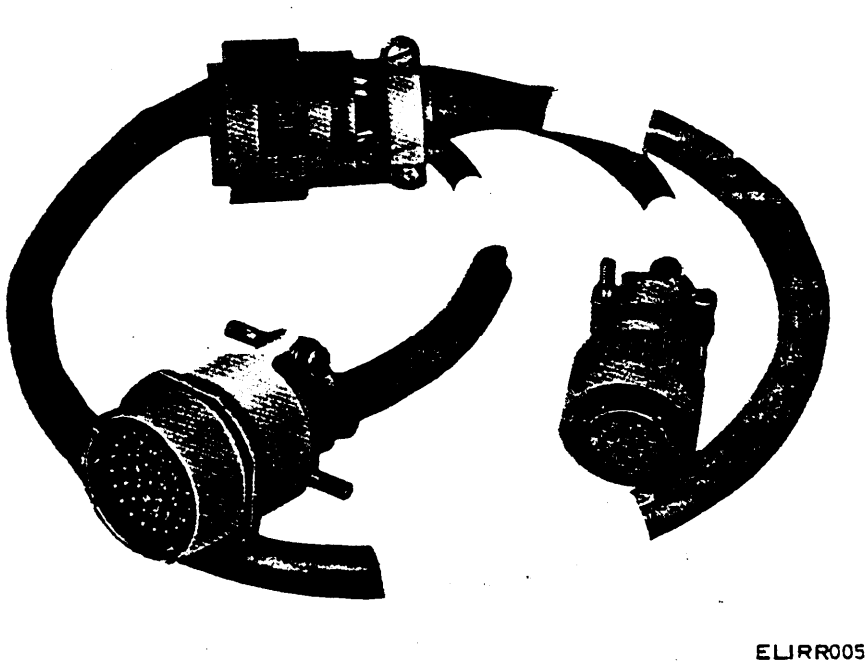

Figure 1-5. Electrical Cable Assembly W-2/ARM-92B.

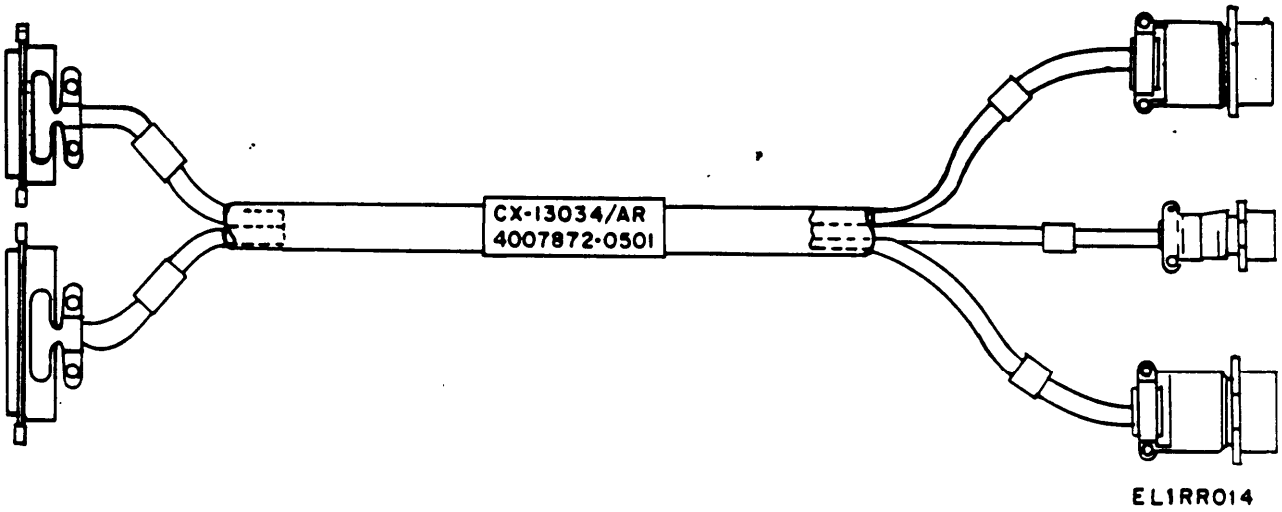

Figure 1-6. Special Adapter Cable CX-13034/AR.

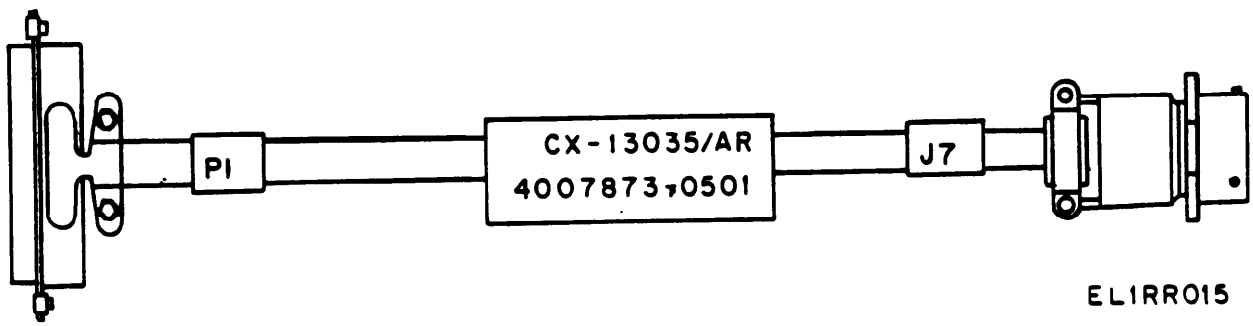

Figure 1-7. Special Adapter Cable CX-13035/AR.

CHAPTER 2

OPERATION

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2-1. Unpacking.

a. Packaging Data. All components of the test set are contained in the carrying case. When packed for shipment, the air vent on the carrying case is opened. The carrying case is placed on four polystyrene corner blocks that are in the four bottom corners of a triple-wall fiberboard box. Four more corner blocks are then placed on the top four corners of the carrying case. The box is then closed and taped shut. The box is 25 x 22 x 18 inches, the corner blocks are 6 x 6 x 6 inches with cutouts 4 x 4 x 4 inches. The total weight of the box is 43 pounds, and the volume is 5.7 cubic feet. .4 typical shipping box and its components are shown in figure 2-1.

b. Removing Contents.

(1) Use a knife to cut the tape on the box. Open the four flaps.

(2) Remove the four corner blocks from the top of the carrying case. Remove the carrying case from the box.

(3) Disengage the two twist-lock clamps and open the carrying case.

(4) Remove the technical manual from the lid of the carrying case.

(5) Remove the aid box from its storage compartment in the lid of the carrying case.

(6) Open the storage compartment lid and take the pendant cables from their storage compartment.

2-2. Checking Unpacked Equipment.

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, refer to paragraph *1-3b.*

b. Check the equipment against the packing list. If no packing list accompanies the equipment, check the equipment against the list of equipment supplied (para 1-6) and report any overages or shortages on DD Form 6 (para *1-3b).*

c. If the equipment has been used or reconditioned, see whether it has been changed by a modification work order (MWO). If modified, an MWO number will appear on the iront panel near the nomenclature plate. Check to see whether the MWO number and the appropriate notations concerning the modification have been entered in this manual.

Note: Current MWO's applicable to the equipment are listed in DA Pam 310-4.

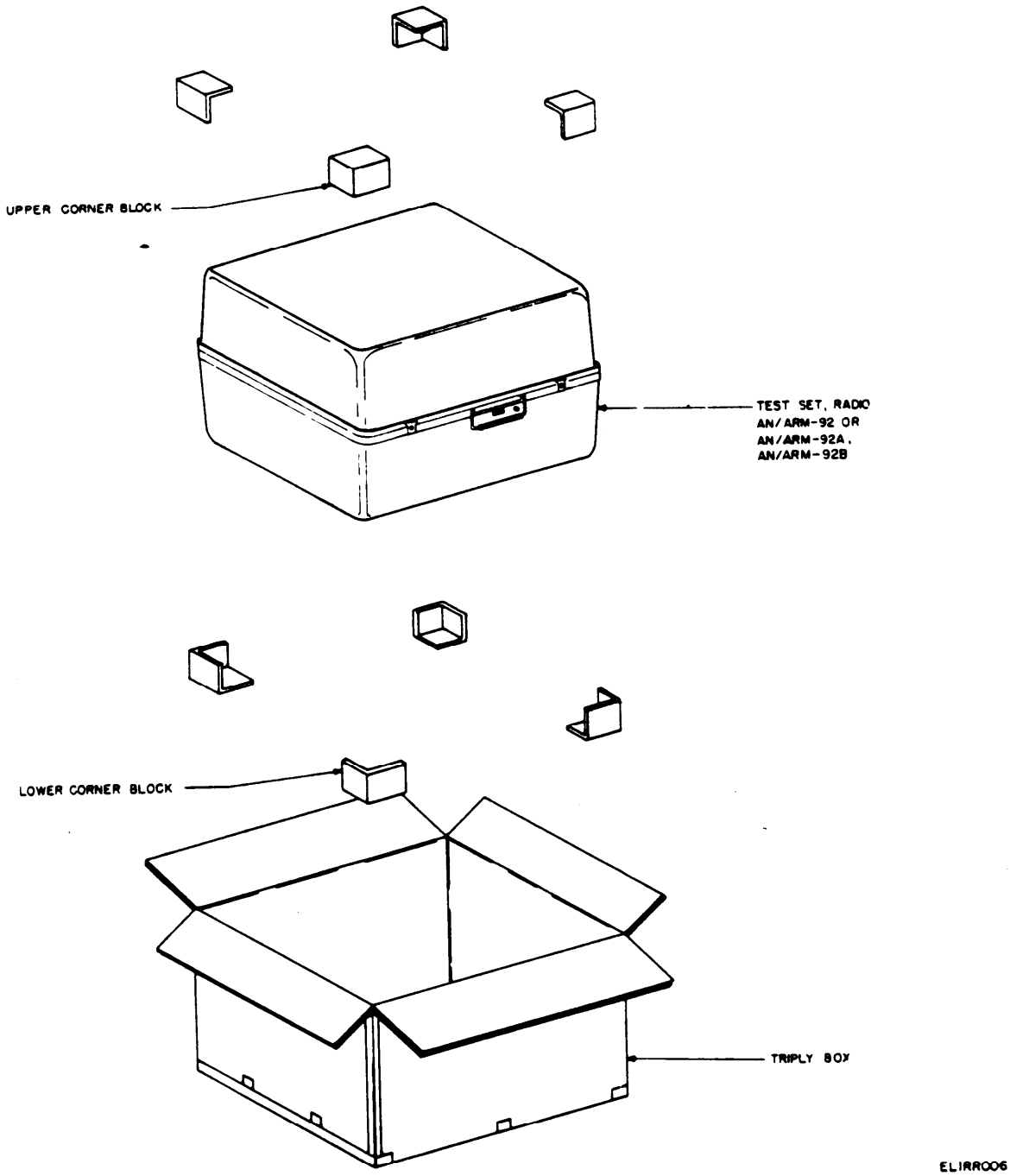

Figure 2-1. Typical packaging.

Section II. OPERATING INSTRUCTIONS

2-3. Controls, Indicators, and Connectors.

The charts in (a) through (e) below list and indicate the functions of the controls, indicators, and connectors. Figure 2-2 illustrates the test set front-panel (with the control unit, OBS indicator. and RMI) controls, indicators, and connectors.

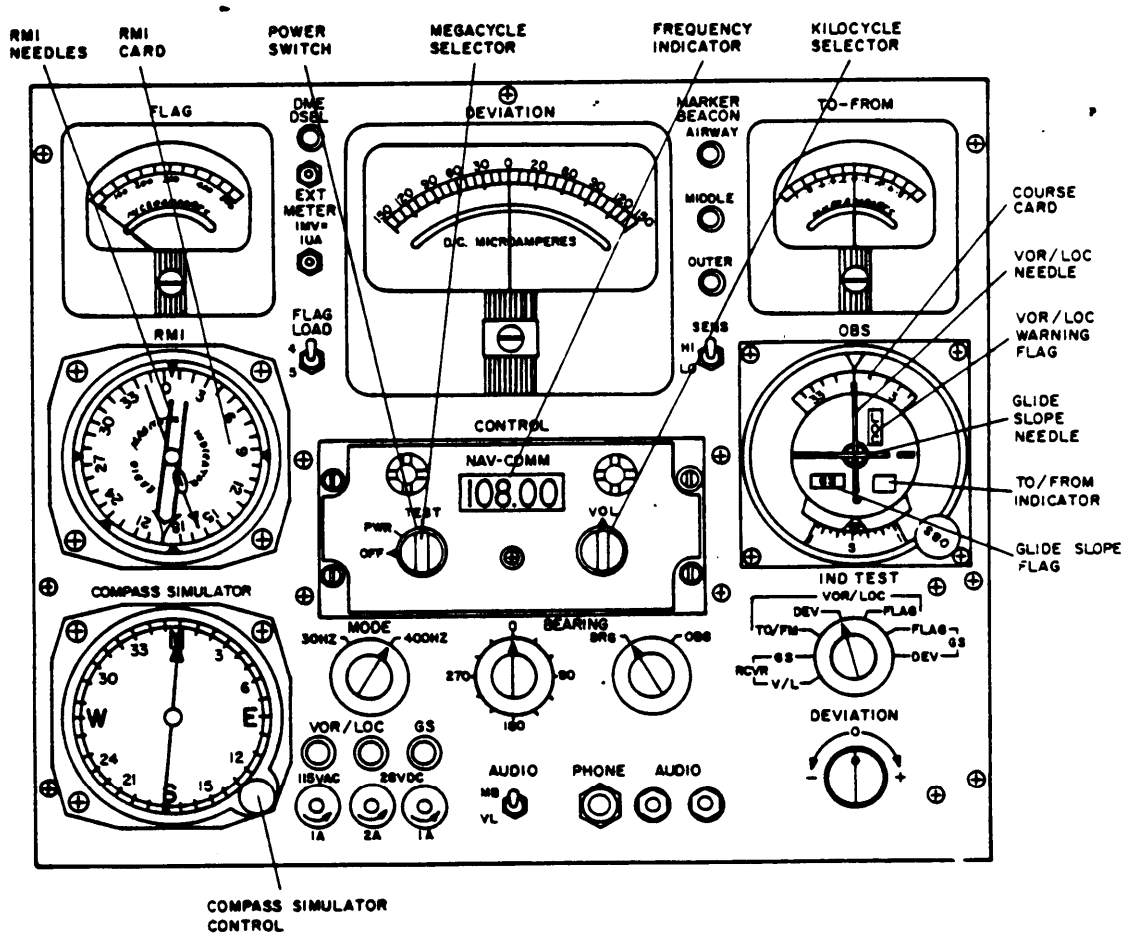

Figure 2-2. Radio Test Set TS-2500B/ARM-92, controls, indicators, and connectors

a. Test Set.

Control, indicator, or connector	Function
IND TEST Switch (7-position rotary switch, selects UUT)	
RCVR-V/L	Connects test set circuits for monitoring of outputs from a VOR/LOC receiver.
RCVR-GS	Connects test set circuits for monitoring of outputs from a glideslope receiver.
VOR/LOC-TO/FM	Provides for test of the TO/FM meter movement of the ID-1347C/ARN-82B.
COR/LOC-DEV	Provides for test of the R-L deviation meter movement of the ID-1347C/ARN-82B.
VOR/LOC-FLAG	Provides for test of the LOC flag meter movement of the ID-1347C/ARN-82B.
GS-FLAG	provides for test of the GS flag meter movement of the ID-1347C/ARN-82B.
GS-DEV	Provides for test of the glideslope deviation meter movement of the ID-1347C/ARN-82B.
COMPASS SIMULATOR indicator	Provides observation of the direction of the simulated magnetic heading signal.
Compass simulator control	Provides manual control of the direction of the simulated magnetic heading signal.
MODE	Selects internal circuit of test set to allow testing of either radio operating at 30 or 400 Hz.
VOR/LOC 28VDC lamp	When illuminated, it indicates the presence of the 27.5 volts dc used by the receiver.
VOR/WC 115VAC lamp	When illuminated, it Indicates the presence of the 115 volts. 400 Hz used by the receiver.
GS 28VDC lamp	When illuminated, it indicates the presence of the 27.5 volts dc used by a glideslope receiver.
BEARING selector switch (12-position rotary)	Selects simulated bearing signals from 0 to 360 degrees in 30-degree increments. These signals are used to accurately calibrate and test the receiver, and to check the accuracy of the OBS indicator.
BRG-OBS switch (2-position rotary)	Selects either the precision BEARING selector or the OBS indicator to supply course selector information to the receiver.
BRG (bearing)	Places the precision BEARING selector in the test set circuit.
OBS /omnibearing selector)	Places the OBS indicator in the test set circuit.
AUDIO (switch)	Selects marker beacon or VOR/LOC audio output during meter tests.

Control, indicator, or connector	Function
AUDIO (two jacks)	Provides a connection for an audio output meter.
PHONE jack	Provides a connection for headphones. When the headphone plug is connected, the PHONE jack disconnects the AUDIO jacks to eliminate double loading of the audio output circuit of the receiver.
DEVIATION control	Used for test and adjustment of the flag and meter movements.
DEVIATION (meter)	Indicates the direction and amplitude of the deviation current from the receiver.
FLAG LOAD (switch)	Used to test flag load on glidescope and VOR/LOC tests.
NOTE **The normal switch position for VOR/LOC testing is position 4. Position 5 is wed when checking the FLAG LOAD output of the R-1388A/ARN-82**	
FLAG meter	Normally indicates the amount of flag current from the receiver.
VOR/LOC 2A fuse	Provides 2-ampere protection for the 27.5-volt dc line to the receiver.
VOR/LOV lA fuse	Provides l-ampere protection for the 115-volt, 400-Hz line to the receiver.
GS lA fuse	Provides l-ampere protection for the 27.5-volt dc line to the glideslope receiver.
TO-FROM meter	Indicates the direction and amplitude of the to-from current of the receiver.
MARKER BEACON (lights)	
MIDDLE (amber)	Checks the circuits for the middle marker beacon.
OUTER (blue)	Checks the circuits for the outer marker beacon.
AIRWAY (white)	Checks the circuits for the airway marker beacon.
MARKER BEACON (SENS)	Selects marker beacon rf input sensitivity.

b. Control Unit

Control or indicator	Function
Power switch (2-position rotary concentric with megahertz selector)	
OFF	Removes primary power from the receiver.
PWR	Applies primary power to the receiver.
TEST	Sets the receiver in a self-test mode.
Megahertz selector	Tunes the receiver in l-MHz increments.
Kilohertz selector	Tunes the receiver in 50-kHz increments
Frequency indicator	Indicates the frequency to which the receiver is tuned.
VOL control	Controls the audio output level of the receiver.

c. OBS *Indicator.*

Control or Indicator	Function
OBS control	Provides manual control of the direction of the bearing signal from the OBS indicator.
Course card	Indicates the direction of the bearing signal from the OBS indicator.
To/from indicator	Used to test ID-1347C/A~-82B when tested on AN/ARM-92B when IND/TEST switch is properly positioned.
VOR/localizer needle	
VOR/localizer warning flag	
Glideslope needle	
Glideslope flag	

d. RMI.

Control or indicator	Function
RMI needle	Indicates the radio bearing signal obtained from the receiver.
RMI card	Indicates the simulated magnetic heading signal obtained from the COMPASS SIMULATOR.

e. Aid Box. Figure 2-3 illustrates the aid box front panel indicator and controls.

Indicator or connector	Function
FREQ SELECT (MHz) (12 lamps)	Provides indicators to check the frequency control information from the control unit.
26 V AC PWR lamp	When illuminated, indicates the presence of the 26 volts, 400 Hz used by the receiver.
LOC PWR lamp	When illuminated, indicates the presence of the 27.5 volts dc used by the receiver.
GS-PWR	When illuminated, indicates the presence of the 27.5 volts dc used by the glideslope receiver.
PWR connector	Provides all power connectious between the aid box and the test set, or the aircraft wiring.
INST connector	Provides all instrument connection between the aid box and the test set, or the aircraft wiring.
TEST lamp	When illuminated, indicates the presence of a ground used to set the receiver in a self-test mode.

Indicator or connector	Function
GS/LOC ON lamp	When illuminated, indicates the presence of a ground used to turn on a glideslope receiver by completing its primary power circuit as to provide a ground to indicate C-6873B/ARN-82 for testing DME disable.

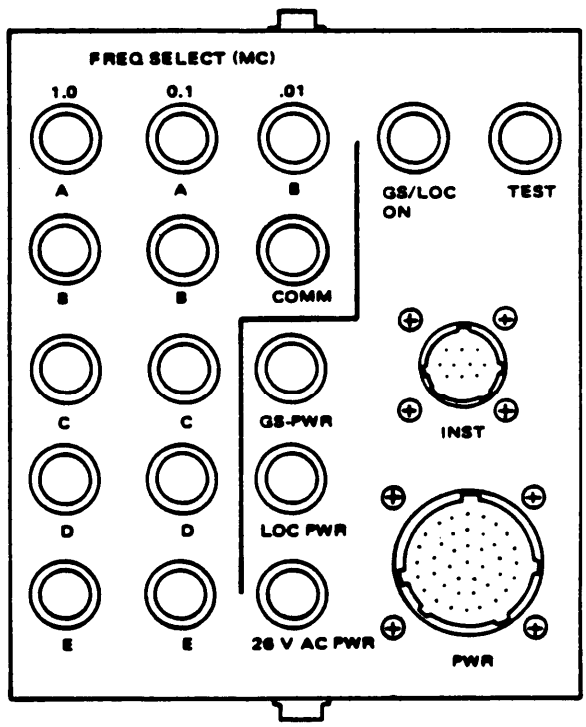

Figure 2-3. Aid box. indicator and connectors.

2-4. Preliminary Starting Procedures.

a. Control Settings. Set the controls on the test set and the control unit to the positions listed in the following charts.

b. Bench Test Connections.

(1) Testing the receivers. Figures 2-4, 2-5, and 2-6 show typical bench test connections for testing the receivers. The operating procedures to test the AN/ARN-82B Radio Receiving Set are contained in TM 11-5826-226-34. The operating procedures to test the R-1963/ARN Radio Receiver are contained in TM 11-5826-257-24, and the operating procedures to test the AN/ARN-123 Radio Receiving Set are found in TM 11-5826258-24. In order to test the R-l963/ARN, special Adapter Cable CX-13035/AR is required, and to test the AN/ARN-123, Special Adapter Cable CX-13034/ AR is required.

(2) *Testing the control unit.* Figure 2-7 shows typical bench test connections for testing the control unit. The operating procedures to test the control unit are contained in TM 11-5826-226-34 for Radio Receiving Set AN/ARN-82B.

2-5. Stopping Procedures.

Perform the following steps to remove the test set from operation.

a. Set the power switch on the control unit to OFF.

b Disconnect the test set from the 27.5-volt dc and 115-volt, 400-Hz power sources.

(1) *Test set*

Control	Position
COMPASS SIMULATOR	N (0 degree).
IND TEST	VOR/LOC if testing Radio Receiver R-1388A/ARN-82. RCVR if testing a glideslope receiver.
DEVIATION	0.
BRG-OBS	Either position.
BEARING	0.
OBS	N (0 degree).
BEARING	0.

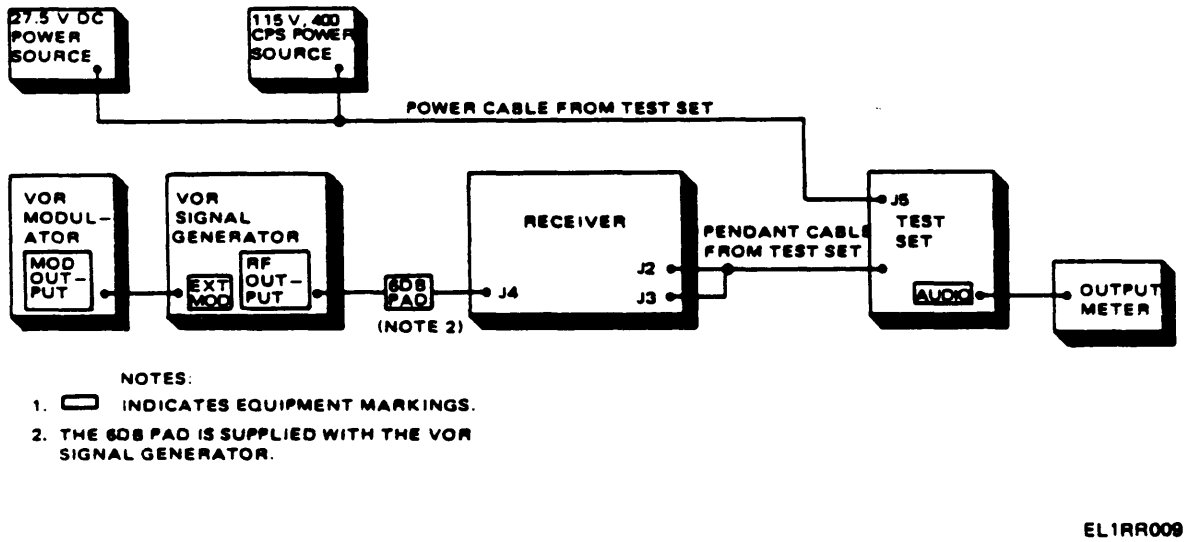

Figure 2-4. Bench test connections to test Radio Receiver R-1388A/ARN-82, VOR/LOC tests.

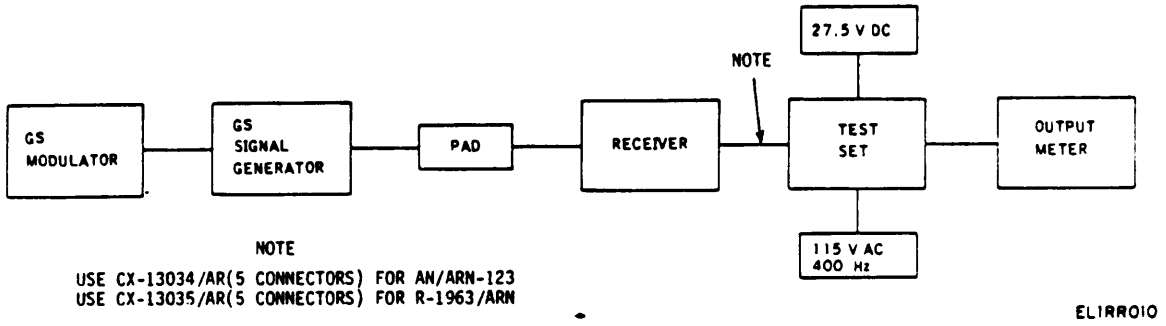

FIGURE 2-5. BENCH TEST CONNECTIONS TO TEST RADIO RECEIVER R-1963/ARN (GLIDESLOPE), OR AN/ARN-123

(2) *Control unit*

Control	Position
Power Switch	OFF.
Megahertz selector	Set to desired frequency.
Kilohertz selector	Set to desired frequency.
VOL	Maximum counterclockwise.

c. Disconnect the test set cables from any external equipment.

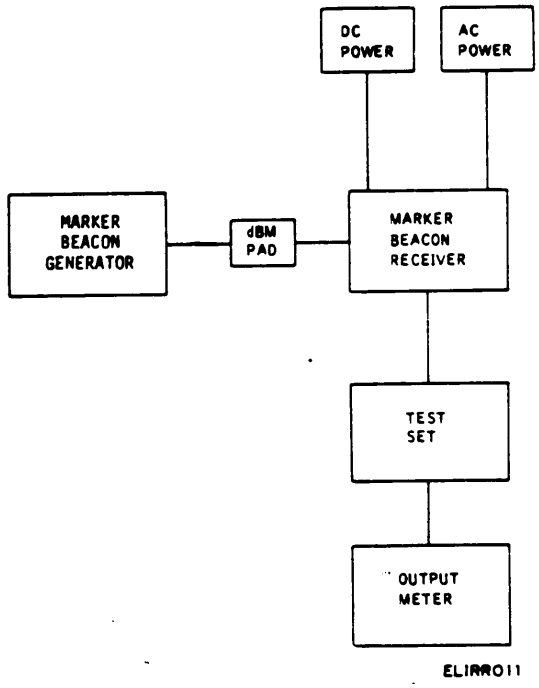

Figure 2-6. Bench test connections to test Radio Receiver R-1963/ARN (marker beacon).

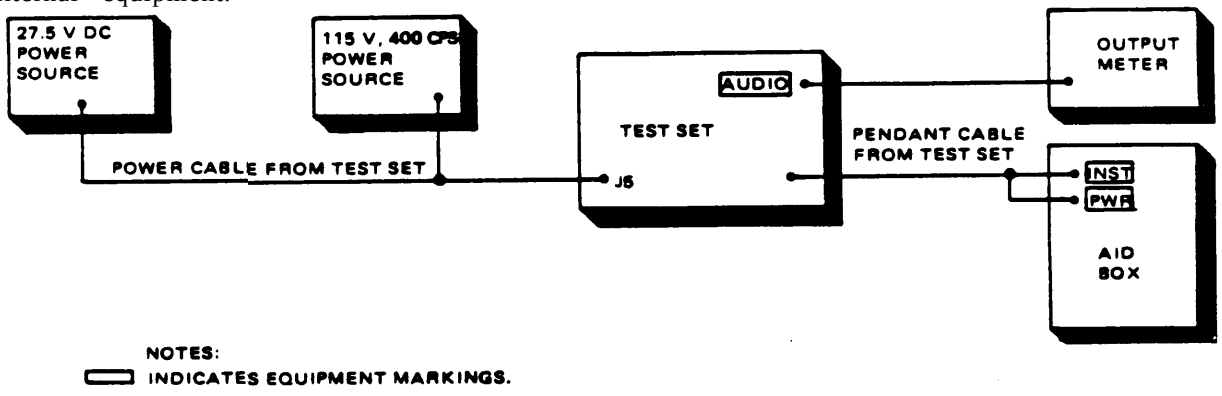

Figure 2-7. Bench teat connections to test Radio Set Control C-6873/ARN-82 (flagmeter, deviation meter, and TO-FROM meter tests).

EL1RR012

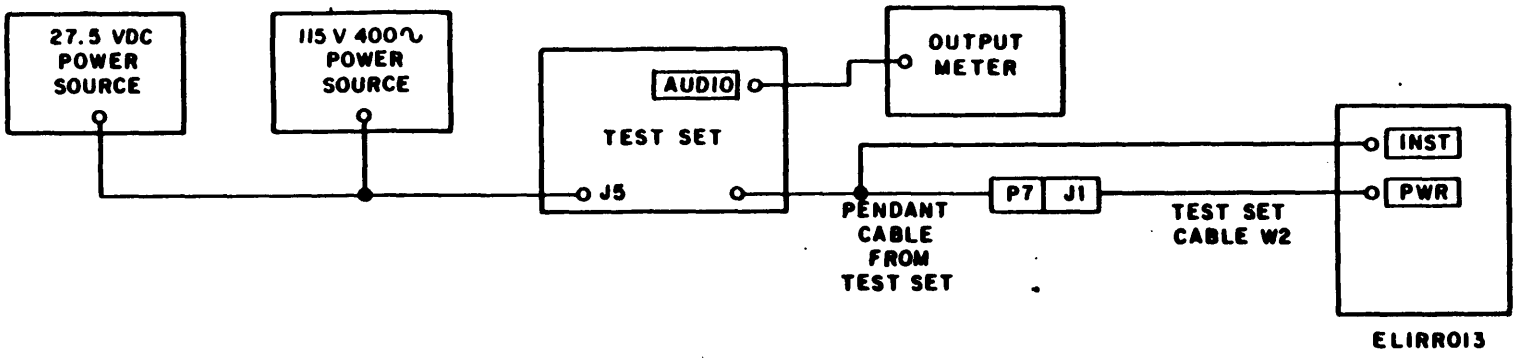

Figure 2-8. Bench test connections for G/S-VIL test of Radio Set *Control C-6873/ARN-82.*

CHAPTER 3

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Note: The operator will perform organizational maintenance.

3-1. Scope of Maintenance.

The maintenance duties assigned to the operator are listed below, together with a reference to the paragraphs covering the specific maintenance functions. The paragraphs include instructions for performing preventive and corrective maintenance. The tools, materials, and test equipment are listed in paragraph 3-2.

a. Daily preventive maintenance checks and services (para 3-4).

b. Cleaning (para 3-6).

c. Monthly preventive maintenance checks and services (para 3-7).

d. Preservation (para 3-9).

e. Quarterly preventive maintenance checks and services (para 3-10).

3-2. Tools, Materials, and Test Equipment Required for Maintenance.

The tools and materials required for organizational maintenance are listed below.

a. Electrical Equipment Tool Kit TK-105/G.

b. Multimeter ME-26/U.

c. Lint-free cloth.

d. Sandpaper, extra fine #000.

e. Brush, MIL-G-7241.

f Rubber electrician's tape.

g. Signal Generator SG-1A/ARN.

h. VOR Modulator MD-83A.

i. Materials for repairing (TB 43-0118).

j. Output meter (audio).

3-3. Preventive Maintenance.

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

a. Systematic Care. The procedures given in paragraphs 3-4 through 3-11 cover routine systematic care and cleaning essential to proper upkeep and operation of the equipment.

b. Preventive Maintenance Checks and Services. The preventive maintenance checks and services charts (para 3-5, 3-8, and 3-11) outline functions to be performed at specific intervals. These checks and services maintain Army electronic equipment in a serviceable condition; that is, in good general physical condition and in good operating condition. To assist operators in maintaining serviceability, the charts indicate what to check, how to check, and what the normal conditions are; the References column lists the illustrations, paragraphs, or manuals that contain supplementary information. If the defect cannot be remedied by performing the corrective action indicated, higher level maintenance or repair is required. Records and reports of these checks and services must be made in accordance with the requirements set forth in TM 38-750.

3-4. Daily Preventive Maintenance Checks and Services.

Preventive maintenance checks and services of the test set are required daily. A daily period is defined as 8 hours of equipment operation. Paragraph 3-5 specifies checks and services that must be accomplished daily or under the special conditions listed below.

a. When the equipment is initially installed.

b. When the equipment is reinstalled after removal for any reason.

c. At least once each week if the equipment is maintained in a standby condition.

3-5. Daily Preventive Maintenance Checks and Services Chart.

Req no.	Item	Procedure	References
1	Exterior surfaces	Clean the test set panel and indicator glasses. Check for broken indicator and meter glass.	Para 3-6.
2	Knobs, switches, and lamps	*a.* During operation see that the knobe, switches, and lamps operate properly. *b.* Tighten any loose knobs. *c.* If trouble remains, contact higher level maintenance for repair.	None.
3	Operational test	During operation, be alert for any Unusual operating indication. If any unusual indication occur, remove all power and contact higher level maintenance for repair.	Para 3-4 to 3-11.

3-6. Cleaning.

Inspect the exterior of the test set and the carrying case. The exterior surface should be free of dirt, grease, and fungus.

Caution: **Do not press on the face of any indicators or meters when cleaning. as the meter or indicator may be damaged.**

a. Remove all loose foreign material with a clean lint-free cloth.

b. Remove grease, fungus, and ground-in dirt with a cloth dampened (not wet) with water and a mild soap.

Caution: **Do not use any cleaning solvent on the front panels or anywhere there is silk screening.**

C. Remove dust or dirt from the connectors with a . soft-bristled brush.

3-7. Monthly Preventive Maintenance Checks and Services.

Perform the maintenance functions indicated in the monthly preventive maintenance checks and services chart (para 3-8) once each month in addition to the daily preventive maintenance checks and services (para 3-5). A month is defined as approximately 30 calendar days of 8-hour-per-day operation. Adjustment of the maintenance interval must be made to compensate for unusual operating conditions. Equipment maintained in a standby (ready for immediate operation) condition must have monthly preventive maintenance checks and services performed on it. Equipment in limited storage requires service before operation, but does not require monthly preventive maintenance.

3-8. Monthly Preventive Maintenance Checks and Services Chart.

Seq no.	Item	Procedure	References
1	Cables	Inspect the cables for deterioration and damage, such as cuts, cracks, or frayed insulation. Repair minor damage to insulation by covering the damaged area with rubber electrician's tape. Replace defective cables.	None.
2	Connectors, jacks, and screws	*a.* Had check these exterior items for looseness. Tighten all loose exterior items. *b.* See that there are no loose or missing screws.	None.
3	Exterior surfaces	Inspect all exposed metal surfaces for rust and corrosion. Touch up surfaces.	Para 3-9.

3-9. Preservation.

Remove rust and corrosion from metal surfaces by lightly sanding them with #000 sandpaper. Brush two thin coats of paint on the bare metal to protect it from further corrosion. Refer to the applicable cleaning and refinishing practices specified in TB 43-0118.

3-10. Quarterly Preventive Maintenance Checks and Services.

Perform the maintenance functions indicated in the quarterly preventive maintenance checks and services chart (para 3-11) once each 3 months (quarterly interval) in addition to the daily (para 3-5) and monthly (para 3-8) preventive maintenance checks and services. A quarterly interval is defined as 90 calendar days of 8-hour-per-day operation. All deficiencies or shortcomings will be recorded, and those not corrected during the maintenance service and inspection will be immediately reported to higher echelon by the use of forms and procedures specified in TM 38-750. Equipment with a deficiency that cannot be corrected at the organizational level should be deadlined in accordance with TM 38-750.

3-11. Quarterly Preventive Maintenance Checks and Services Chart.

Seq no.	Item	Procedure			References
1	Completeness	See that Radio Test Set AN/ARM-92B is complete.			Para 1-8.
2	Publications	Check to see that all pertinent publications are available. The technical manuals must be complete and in usable condition without missing pages. All changes pertinent to the publications must be on had.			DA Pam 310-4.
3	Modification work orders	Check to see that all urgent MWO's have been applied to the equipment and that all routine MWO's have been scheduled.			DA Pam 310-4.
4	Operational checks	Connect the equipment as shown in the block diagram (fig. 24) for this test.			
		Equipment control setting	Test procedure	Performance standard	
	a. Power test	Set the power switch on the control unit to PWR (all other switches and controls may be in any position) .	*a* Observe VOR/LOC 28VDC and 115VAC lamps, and the GS 28VDC lamp.	*a.* All three lamps should light.	Para 3-5.
			b. Insert the probe of the multimeter into the test point provided in the center of the VOR/LOC 2A fuse cap.	*b.* Multimeter should indicate 27.5 ± 0.5 V dc.	TM 11-5826-226-34 for Radio Receiving Sets AN/ARN-82/ A/B.
			Insert the probe of the multimeter into the test point provided in the center of the VOR/LOC 1A fuse cap.	*c.* Multimeter should indicate 115 ± 5 V ac.	TM 11-5826-226-34 for Radio Receiving Sets AN/ARN-82/ A/B.
			c. Insert the probe of the multimeter into the test point provided in the center of the GS 1A fuse cap.	*d.* Multimeter should indicate 27.5 ±0.5 V dc.	TM 11-5826-226-34 for Radio Receiving Sets AN/ARN-82/ A/B.
	b. BEARING selector switch test	On Radio Test Set TS-2500B/ ARM-92B only, set the IND TEST switch to RCVR V/L. Set the MODE switch to 400HZ . Set the BRG-OBS switch to BRG. Set the BEARING selector switch to 0. Set the	*d.* Observe the indication on the DEVIATION meter.	*a* DEVIATION meter should indicate 0 ±15 microamperes.	TM 11-5826-226-34 for Radio Receiving Sets AN/ARN-82/ A/B.
			e. Observe the indication on the FLAG meter.	*b.* FUG meter should indicate 300 ±5.0 microamperes.	
(Cont)			*f.* Observe the indication on the TO-FROM meter.	*c.* TO- FROM meter should give a from indication (needle to the right of 0).	

Seq no.	Item	Procedure			References
		Equipment control setting	Test procedure	Performance standard	
4 (Cont)		COMPASS SIMULATOR to N (0 degree). Set FLAG LOAD switch to position 5. Must the control unit to indicate 114.90 MHz. Adjust the frequency of the VOR signal generator to 114.9 MHz.	d. Observe the indication on the RMI.	d. RMI needle should indicate 360 ±2.O degrees.	
			e. Set the BEARING selector switch to 180.	e. TO-FROM meter should give a FROM indication (needle to the left of 0). RMI needle should indicate 0 ±2 degrees. DEVIATION meter should indicate 0 ±15 microampere. FLAG meter should indicate 300 ±5.0 microampere.	Higher level maintenance for test set.
			f. Set the BEARING selector switch to 210. Set the PHASE ANGLE SELECTOR on the VOR modulator to 30.	f. Performance standard is the same as in step *e* above. RMI needle should indicate 30 ±2 degrees.	Higher level maintenance for test set.
			g. Set the test set BEARING selector switch to 240. Set the PHASE ANGLE SELECTOR on the VOR modulator to 60.	g. RMI needle should indicate 60 ±2 degrees.	Higher level maintenance for test set.
(Cont)			h. Set the BEARING selector switch to 270. Set PHASE ANGLE SELECTOR to 90.	h. RMI needle should indicate 90 ±2 degrees.	Higher level maintenance for test set.

Seq no.	Item	Procedure			References
		Equipment control setting	Test procedure	Performance standard	
4 (Cont)		Set the VOR signal generator to 100 microvolt.	*i.* Set the BEARING selector switch to 300. Set PHASE ANGLE SELECTOR to 120.	*i.* RMI needle should indicate 120 ±2 degrees.	Higher level maintenance for test set.
		Note: On the VOR modulator, set the 1000 switch to OFF. Set the PHASE ANGLE SELECTOR on the VOR modulator to 0. Set the FUNCTION SELECTOR on the VOR modulator to CAL. Set the SPECIFIC SIGNAL SELECTOR the VOR modulator to 30 VAR. On the VOR modulator, adjust the 30 VAR potentiometer (located behind the hinged door on the front panel) for a l-volt indication on the OUTPUT meter. On the VOR signal generator. adjust the MOD LEVEL control for 30-percent indication on the PERCENT MODULATION meter. Set the SPECIFIC SIGNAL SELECTOR on the VOR modulator to 9960 FM. Adjust the 9960 FM potentiometer (located behind the hinged door on the VOR modulator front panel) for a 30-percent indication on the VOR signal generator PERCENT MODULATION meter. Set the FUNCTION SELECTOR switch on the VOR modulator to ODR. When the FUNCTION SELECTOR switch is set to ODR. the indication on the VOR signal generator PERCENT MODULATION meter will increase to approximately 52 percent.			
			j. Set the BEARING selector switch to 330. Set the PHASE ANGLE SELECTOR in the VOR modulator to 150.	*j.* RMI needle should indicate 150 ± 2 degrees.	Higher level maintenance for test set.
			k. Set the BEARING selector switch to 30. Set the PHASE ANGLE SELECTOR on the VOR modulator to 210.	*k.* RMI needle should indicate 210 ±2 degrees.	Higher level maintenance for test set.
			l. Set -the BEARING selector switch to 60. Set the PHASE ANGLE SELECTOR on the VOR modulator to 240.	*l.* RMI needle should indicate 24.0 ±2 degrees.	Higher level maintenance for test set.
			m. Set the BEARING selector switch to 90. Set the PHASE ANGLE SELECTOR on the VOR modulator to 270.	*m* RMI needle should indicate 270 ±2 degrees.	Higher level maintenance for test set.
(Cont)			*n.* Set the BEARING selector switch to 120. Set the PHASE ANGLE SELECTOR on the VOR modulator to 300.	*n.* RMI needle should indicate 300 ±2 degrees.	Higher level maintenance for test set.

Seq no.	Item	Procedure			References
		Equipment control setting	Test procedure	Performance standard	
4 (Cont)			*o.* Set the BEARING selector switch to 150. Set the PHASE ANGLE SELECTOR on the VOR modulator to 330.	*o.* RMI needle should indicate 330 ±2 degrees.	Higher level maintenance for test set.
	c. OBS test	Set the BRG-OBS switch on the teat set to OBS. Set PHASE ANGLE SELECTOR on the VOR modulator to 0.	Repeat the test procedure In seq no. *e* through *o* in Test procedure column, above, but adjust the course card on the OBS indicator in place of the BEARING selector switch settings.	TO-FROM meter should give a FROM indication (needle to the right of 0). The RMI needle should indicate 0 ±2 degrees. The DEVIATION meter should indicate 0 ±15 microampere. The FLAG meter should indicate 300 ±5 microampere.	Higher level maintenance for test set.
	d. COMPASS SIMULATOR test	Leave the equipment settings the same as in item *b* above. Disconnect and remove test equipment.	With the compass simulator control, rotate the COMPASS SIMULATOR 360. degrees.	RMI card should follow the COMPASS SIMULATOR indication within 2 degrees.	Higher level maintenance for test set.
		Note: Conncct the equipment as shown in this block diagram (fig. 2-7) for the following test.			
	e. FLAG meter, DEVIATION meter, TO-FROM meter, and control unit check	Set the BRG-OBS switch on the test set to BRG.	*a.* Set the power switch on the control unit to PWR.	*a.* 26 VAC PWR lamp on the aid box should light. Output meter should indicate 100 ± 15 milliwatts.	TM 11-5826-226-34 for Radio Receiving Sets AN/ARN-82/ A/B.
(Cont)			*b.* Set the IND TEST switch on the test set to V/L. **Set the Audio Switch on the test set to V/L. Set the FLAG LOAD switch on the test set to position 5.**	*b.* LOC PWR and GS-PWR lamps on the aid box should light. FLAG meter should indicate 250 ± 15.0 microampere. DEVIATION meter should indicate 75 ±10 microamperes to the right of 0. TO-FROM meter should indicate 500 ±50 microampere to the left of 0.	TM 11-5825-226-34 for Radio Receiving Sets AN/ARN-82/ A/B.

Seq no.	Item	Equipment control setting	Procedure: Test procedure	Procedure: Performance standard	Procedure: References
4 (cont)			c. Set the power switch on the control unit to TEST.	c. Test lamp on the aid box should light .	TM 11-5826-2S34 for Radio Receiving Sets AN/ARN-82/ A\B.
			d. Set the megahertz selector on the control unit in 1-MHZ steps from 108.00 to 126.00 MHz	d. The 1.0 FREQ SELECT lamps on the aid box should light in the combination listed in the chart in paragraph 3-12.	TM 11-5826-226-34 for Radio Receiving Sets AN/ARN-82 A/B.
			e. Use the kilohertz selector on the control unit to set the frequency in 0.05-MHz steps from 108.00 to 108.95 MHz.	e. The 0.1 and .01 FREQ SELECT (MHz) lamps on the aid box should light in the combinations listed in the chart in paragraph 3-13.	TM 11-5826226-34 for Radio Receiving Sets AN/ARN-82 A/B.
			f. Set the power switch on the control unit to OFF.		
			Note		
	Connect the equipment a		shown in the block diagram (fig. 2-8) for the following test.		
			g. Set the power switch on the control unit to PWR.		
			h. Set the IND TEST switch on the test set to GS.		
			i. Set the AUDIO switch on the test set to MB.		
			j. Set the FLAG LOAD switch on the test set to position 5.	26 VAC PWR LOC PWR, and GS PWR lamps on the aid box should light DEVIATION meter should indicate 75 ±10 microampere to the right of 0. FLAG meter should indicate 250 ±15 microampere.	TM 11-5826226-34 for Radio Receiving Set AN/ARN-82 A/B.
			k. Set the megahertz selector on the control unit in 1 MHz steps from 108.00 to 126.00 MHz.	The 1.0 FREQ SELECT lamps on the aid box should light in the combination listed in the chart in paragraph 3-14.	TM 11-5826-226-34 for Radio Receiving Set ANARN-82 A/B.
			l. Use the kilohertz selector on the control unit to set the frequency in 0.05 MHz steps from 108.00 to 108.95 MHz	The 0.1 and .01 FREQ SELECT lights on the aid box should light in the combination listed in the chart in paragraph 3-15.	TM 11-5826-226-34 for Radio Receiving Set AN/ARN-82 A/B.

3-12. Aid BOX Light Combination for 1-MHz Steps on Control Unit (V/L Test)

The X indicates which lamps on the aid box should light for each 1-MHz step on the control unit.

Frequency (MHz)	108.00	109.00	110.00	111.00	112.00	113.00	114.00	115.00	116.00	117.00	118.00	119.00	120.00	121.00	122.00	123.00	124.00	125.00	126.00
1.0 FREQ SELECT (MHz) lamps A	X	X		X	X						X	X		X	X				
B			X	X		X	X						X	X		X	X		
C					X	X		X	X						X	X		X	X
D	X						X	X		X	X						X	X	
E		X	X						X	X		X	X						X
COMM											X	X	X	X	X	X	X	X	X

3-13. Aid Box Light Combinations for 0.05-MHz Steps on Control Unit (V/L) Test)

The X indicates which lamps on the aid box should light for each 0.05-MHz step on the control unit.

Frequency (MHz)	108.00	108.05	108.10	108.15	108.20	108.25	108.30	108.35	108.40	108.45	108.50	108.55	108.60	108.65	108.70	108.75	108.80	108.85	108.90	108.95
0.1 FREQ SELECT (MHz) lamps A			X	X	X	X											X	X	X	X
B	X	X	X	X			X	X	X	X										
C					X	X	X	X			X	X	X							
D									X	X	X	X			X	X	X	X		
E	X	X											X	X	X	X			X	X
.01 FREQ SELECT (MHz) lamp	X		X		X		X		X		X		X		X		X		X	
GS/LOC ON Lamp			X	X			X	X			X	X			X	X			X	X

3-14 Aid Box Light Combinations for l-MHz Steps on Control Unit (G/S-V/L TEST)

The X indicates which lamps on the aid box should light for each 1-MHz step on the control unit.

Frequency (MHz)	108.00	109.00	110.00	111.00	112.00	113.00	114.00	115.00	116.00	117.00	118.00	119.00	120.00	121.00	122.00	123.00	124.00	125.00	126.00
1.0 FREQ SELECT (MHz) lamps A	X	X		X	X						X	X		X	X				
B			X	X		X	X						X	X		X	X		
C					X	X		X	X						X	X		X	X
D	X						X	X		X	X						X	X	
E		X	X						X	X		X	X						X
COMM											X	X	X	X	X	X	X	X	X

3-15. Aid Box Light Combinations for 0.05-MHz Steps

The X indicates which lamps on the aid box should light for each 0.05-MHz step on the control unit.

Frequency (MHz)	108.00	108.05	108.10	108.15	108.20	108.25	108.30	108.35	108.40	108.45	108.50	108.55	108.60	108.65	108.70	108.75	108.80	108.85	108.90	108.95
0.1 FREQ SELECT (MHz) lamps A			X	X	X	X											X	X	X	X
B	X	X	X	X			X	X	X	X										
C					X	X	X	X			X	X	X	X						
D									X	X	X	X			X	X	X	X		
E	X	X											X	X	X	X			X	X
.01 FREQ SELECT (MHz) lamp		X		X		X		X		X		X		X		X		X		X
GS/LOC ON Lamp			X	X			X	X			X	X			X	X			X	X
TEST			X	X			X	X			X	X			X	X			X	X

APPENDIX A
REFERENCES

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7,8, and 9), Supply Bulletins and Lubrication Orders.
DA Pam 310-7	US Army Index of Modification Work Orders.
TB 43-0018	Field Instructions for Painting and Preserving Electronic Command Equipment Including Camouflage Pattern Painting of Electrical Equipment Shelters.
TM 11-5826-226-34	Direct Support, General Support, and Depot Maintenance Manual: Radio Receiving Sets AN/ARN-82 (NSN 5825-00-402-5318), AN/ARN-82A and AN/ARN-82B (NSN 5826-00-168-8699).
TM 11-5826-257-24	Organizational, Direct Support, and General Support Maintenance: Radio Receiver R-1963/ARN (NSN 5826-01-015-1574).
TM 11-5826-258-24	Organizational, Direct Support, and General Support Maintenance Manual: Radio Receiving Sets AN/ARN-123(V)1 (NSN 5826-01-016-2762), AN/ARN-123(V)2 (NSN 5826-01-016-2761), AN/ARN-123(V)3 (NSN 5826-01-058-6800), and AN/ARN-123(V) (NSN 5826-01-070-4067)
TM 38-750	The Army Maintenance Management System (TAMMS).
TM 740-90-1	Administrative Storage of Equipment.
TM 750-244-2	Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

APPENDIX C
MAINTENANCE ALLOCATION

Section I. INTRODUCTION

C-1. General

This appendix provides a summary of the maintenance operations for AN/ARM-92B. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

C-2. Maintenance Function

Maintenance functions will be limited to and 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 and to detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

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

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

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipments 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.

g. Install. The act of emplacing, seating, or fixing into position an item, part, module (component or assembly) in a manner to allow. the proper functioning of the equipment or system.

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

i. *Repair.* The application of maintenance services (inspect, test, service, adjust, align, calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to 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.

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) 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.

k. Rebui/d. 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 materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipments/components.

C-3. Column Entries

a. *Column 1, Group Number.* Column 1 lists group 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 noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. When items are listed without maintenance functions, it is solely for purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a “work time” figure in the appropriate subcolumn(s), the lowest level 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 number of task-hours specified by 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. Subcolumns of column 4 are as follows:

C — Operator/Crew
O — Organizational
F — Direct Support
H — General Support
D — Depot

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

f. Column 6, *Remarks.* Column 6 contains an alphabetic code which leads to the remarks in Section IV, Remarks, which is pertinent to the item opposite the particular code.

C-4. Tool and Test Equipment Requirements (Sec III)

a. Tool or Test Equipment Reference Code. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool or test equipment for the maintenance functions.

b. Maintenance Category. The codes in this column indicate the maintenance category allocated the tool or test equipment.

c. Nomenclature. This column lists the noun name and nomenclature of the tools and test equipment required to perform the maintenance functions.

d. National/NATO Stock Number. This column lists the National/NATO stock number of the specific tool or test equipment.

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code for manufacturers (5-digit) in parentheses.

(Next printed page is C-3)

SECTION II MAINTENANCE ALLOCATION CHART
FOR

RADIO TEST SET AN/ARM-92B

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT.	(6) REMARKS
			C	O	F	H	D		
00	RADIO TEST SET AN/ARM-92B	Inspect		0.2				1,2	
		Test		0.2				1,2	
		Replace		0.2				3 thru 12	
		Repair				1.5	3.0	3 thru 12	
01	RADIO TEST SET TS-2500B/ARM-92	Inspect		0.2				1,2	
		Test		0.5				1,2	
		Replace		1.5				3 thru 12	
		Repair				3.0	5.0	3 thru 12	
0101	RADIO SET CONTROL C-6873/ARN-82	Inspect		0.2				1,2	
		Test		0.3				2	
		Replace				1.0			
0102	COMPASS SIMULATOR CONTROL (DS4)	Inspect		0.1				1,2	
		Test		0.2				3	
		Replace				1.2			
0103	COURSE INDICATOR ID-250A/ARN	Inspect		0.1				1,2	
		Test		0.2				3	
		Replace				1.2			
0104	COURSE INDICATOR ID-;347C/ARN-82B	Inspect		0.1				1,2	
		Test		0.2				3	
		Replace				1.5			
0105	FLAG METER (M2)	Inspect		0.1				1,2	
		Test		0.2				3	
		Replace				1.2			
0106	DEVIATION METER (M1)	Inspect		0.1				1,2	
		Test		0.2				3	
		Replace				1.5			
0107	TO-FROM METER (M3)	Inspect		0.1				1,2	
		Test		0.2				3	
		Replace				1.5			
02	TEST SET, WIRING HARNESS TS-2501/ARM-92	Inspect		0.1				1,2	
		Test		0.3				2	
		Replace		0.5				3	
		Repair				1.5			
0201	TEST SET COVER CW-878/ARM-92B	Inspect						2	
		Replace							
0202	POWER CABLE ASSEMBLY CX-11568/ARM-92	Inspect		0.1				1,2	
		Test		0.3				2	
		Replace		0.3				2	
		Repair		0.5					
03	ELECTRICAL CABLE ASSEMBLY W-2/ARM-92B	Inspect		0.1					
		Test		0.3					
		Replace		0.3					
		Repair				1.5			
04	SPECIAL ADAPTER CABLE CX-13034/AR	Inspect		0.1					
		Test		0.3					
		Replace		0.3					
		Repair				1.5			
05	SPECIAL ADAPTER CABLE CX-13035/AR	Inspect		0.1					
		Test		0.3					
		Replace		0.3					
		Repair				1.5			

SECTION III TOOL AND TEST EQUIPMENT REQUIREMENTS FOR

RADIO TEST SET AN/ARM-923

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	O	MULTIMETER AN/URM-105	6625-00-581-2036	
2	O	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-00-610-8177	
3	F,H,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-100/G	5180-00-605-0079	
4	H,D	VOLTMETER, METER ME-30A/U	6625-00-443-1670	
5	H,D	SIGNAL GENERATOR AN/USM-44	6625-00-669-4031	
6	H,D	MODULATOR MD-83/ARN	6625-00-539-8563	
7	H,D	AUDIO LEVEL METER TS-585( )/U	6625-00-244-0501	
8	H,D	OSCILLOSCOPE AN/USM-281 OR OSCILLOSCOPE AN/USM-140, OR EQUIVALENT	6625-00-053-3112 6625-00-987-6603	
9	H,D	MULTIMETER ME-26( )/U	6625-00-646-9409	
10	H,D	TEST SET, RESOLVER AN/ASM-101	6625-00-086-7840	
11	H,D	OHMMETER ZM-21( )/U	6625-00-581-2466	
12	H,D	METER TEST SET TS-682/GSM-1	6625-00-669-0747	

By Order of the Secretary of the Army:

FRED C. WEYLAND
General, United States Army
Chief of Staff

Official

PAUL T. SMITH
Major General United States Army
The Adjutant General

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