NORMAL

MWO Effective Date is January 1993 and Completion Date is January 1997.

MWO 11-5821-259-30-2

MODIFICATION WORK ORDER

MODIFICATION OF RADIO SET AN/ARC-l14A FOR ANVIS

LIGHTING PROGRAM

(NSN 5821-00-165-2970) (EIC: JU2)

Headquarters, Department of the Army, Washington DC

15 July 1994

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Write a letter or complete and mail a DA Form 2028, Recommended Changes to Publications and Blank Forms, to Commander, US Army Communications-Electronics Command and Fort Monmouth, N.J. 07703-5007. A reply will be provided to you.

1. Purpose of Modification.

The purpose of this modification is to replace the existing front panel on the VHF FM Radio Set AN/ARC-l14A with a new panel designed in accordance with the requirements of the ANVIS Lighting Program. The existing panel is not ANVIS compatible and has created a potential safety of flight concern. All changes to the equipment are a result of the following Engineering Change Proposals (ECP): ANVIS Lighting Program in compliance with MIL-L-85762 or as otherwise described in SLPSOW3-Revision 4.

2. Priority

This modification is classified NORMAL.

3. End Item To Be Modified.

Nomenclature	NSN	CAGE	Serial No.
Radio Set AN/ARC-l14A	5821-01-165-2970	80058	All

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

4. Assembly To Be Modified.

Not applicable.

5. Parts To Be Modified.

Not applicable.

6. Abdication.

a. Time Copliance Schedule. The effective date of this MWO is January 1993 and its completion date is January 1997.

b. Level of Maintenance. Aviation Intermediate Maintenance (AVIM) level is authorized to apply this MWO.

c. Applied By. Avionics Repairer (MOS 68L) or equivalent.

d. Time Required. Time required for completion of modification application to one end item:

Work force/skills	Man-hours
1 Avionics Communications Equipment Repairer (MOS 68L) or equivalent to perform the mechanical/electrical modification.	0.5
1 Avionics Communications Equipment Repairer (MOS 68L) or equivalent to perform an operational functional test of the modified end item.	0.5
Total time required for a single application of this MWO is	1.0

7. Technical Publications Affected/Changed.

The following publications are affected by the application of this MWO:

a. TM 11-5821-259-12

b. TM 11-5821-259-30

c. TM 11-5821-259-24P

8. MWO Kits/Parts/and Disposition.

a. Kits/Parts/Required to Accomplish MWO. The kit required to accomplish this MWO is:

(1) NSN: 1680-01-342-6494

(2) CAGE: 80063

(3) Weight: 0.5 lbs.

(4) Dimensions: 7" x 4½" x 1"

(5) Cube: 31½ cubic inches

(6) Security Classification: Unclassified

b. Contents of MWO Kit.

	Item name	Part No./NSN	CAGE	Qty
1.	Panel assembly	A3154359	80063	1
2.	Identification plate	A3154362	80063	1

c. Bulk and Expendable Material. Obtain the following materials from local stock or requisition through normal supply channels, as required:

	Nomenclature	NSN	CAGE	Qty
1.	Lint-free cloth			As required
2.	Lubricant, Silicone			1 pt.
3.	Solder, Type SN60-WRAP-2 (Fed Spec QQ-S-571) AWG 26, QQ-W-00343 Type 2			As required
4.	Cleaning solvent			As required

d. Parts Disposition. The following parts are to be removed from the end item to be modified and returned to the Depot for disposition:

Front panel assembly, P/N SM-E-726697, CAGE 80063, (1 ea)

9. Tools. Special Tools. Jigs. and Fixtures Required.

a. Hand Tools. The following common hand tools are required for this modification:

(1) Allen head wrenches, 5/64 inch and 0.05 inch

(2) Phillips screwdriver

(3) Soldering iron, 30 watt with l/8-inch diameter tip

b. Test Equipment. The following test equipment is required to test the end item after the modification:

(1) Signal Generator AN/USM-44A

(2) Electronic Voltmeter ME-30A/U

(3) Electronic Voltmeter AN/USM-98

(4) Test Facilities Kit MK-994/AR

(5) Headset-Microphone H-101A/U

(6) Digital Readout Electronic Counter AN/USM-207A

(7) Oscilloscope AN/USM-140A

(8) 50-ohm adapter (p/o AN/URM-145)

(9) Wattmeter AN/URM-120

(10) Signal Generator AN/URM-127

(11) Multimeter ME-26B/U

(12) Modulation Meter ME-57/U

(13) Microphone Termination (p/o Test Facilities Kit MK-1191A/R)

(14) Transmitter/regulator radio set assembly A2

c. Special Tools, Jigs, and Fixtures. Special tools, jigs, and fixtures are not required for this modification.

10. Modification Procedure.

Before starting, familiarize yourself with the entire procedures in this paragraph. To minimize equipment off-line time, inventory the kit, identify parts, obtain required tools, and observe the location of parts to be installed.

a. Procedure.

(1) Loosen two setscrews that secure the following knobs to the control shafts. Remove the knobs and associated seals. Refer to figure 1.

NOTE

Seals are located between knobs and front panel.

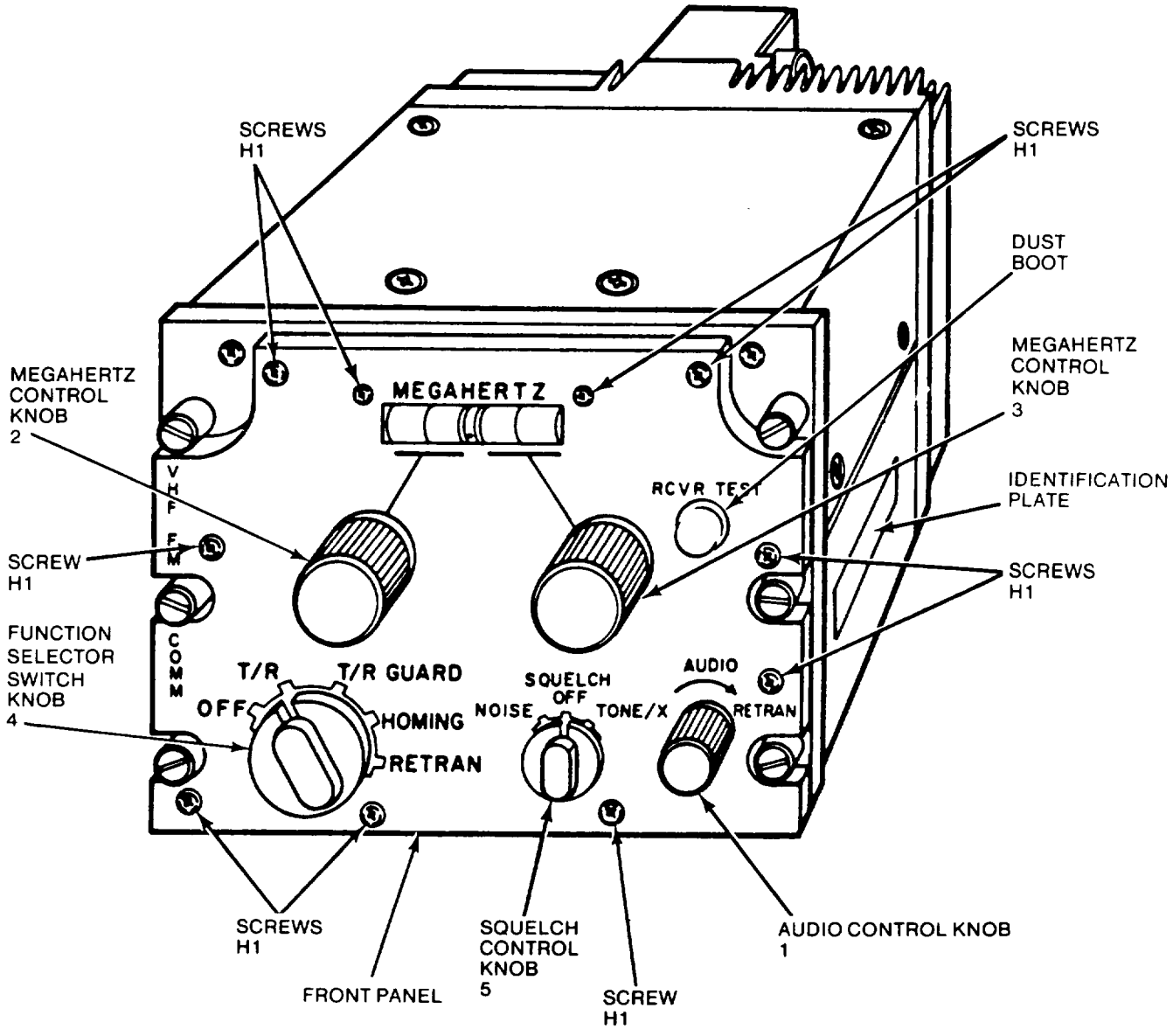

Figure 1. Location of Front Panel Controls Attaching Hardware

(a) AUDIO control knob (item 1)

(b) The left MEGAHERTZ control knob (item 2)

(c) The right MEGAHERTZ control knob (item 3)

(d) The function selector switch knob (item 4)

(e) SQUELCH control knob (item 5)

(2) Inspect all seals for damage. Replace damaged or defective seals.

(3) Clean dirty seals with a clean, lint-free cloth and relubricate with a silicone-type lubricant if required.

(4) Set all knobs and seals aside for reuse during reassembly of the end item.

(5) Remove 10 screws (H1, figure 1) from the front panel. Set all screws aside for reuse during reassembly of the end item.

(6) Carefully remove front panel from radio set to expose internal wiring.

(7) Unsolder the wire from the bottom terminal stud at the back of the panel (see figure 2).

(8) Unsolder the other wire from the top terminal stud at the back of the panel (see figure 2).

(9) Remove dust boot from RCVR TEST and set aside for reuse during reassembly of the end item. Set front panel aside for return to the Depot for disposition.

(lo) Install dust boot in the RCVR TEST recess on the new ANVIS panel assembly. Ensure dust boot is properly seated at the rear of the panel.

(11) Place new ANVIS panel assembly in proximity of radio set to allow resoldering of the wires.

(12) Solder one of the wires to the top terminal stud on the back of the new ANVIS panel assembly.

(13) Solder the other wire to the bottom terminal stud on the back of the new ANVIS panel assembly.

(14) Carefully place or push both wires into the chassis recess as the ANVIS panel assembly is placed on the front chassis.

(15) Install the assembled ANVIS panel assembly to the radio set using 10 screws (H1, figure 1). Replace any missing or damaged screws or lockwashers. The two longer and thinner screws are used on either side of the MEGAHERTZ window.

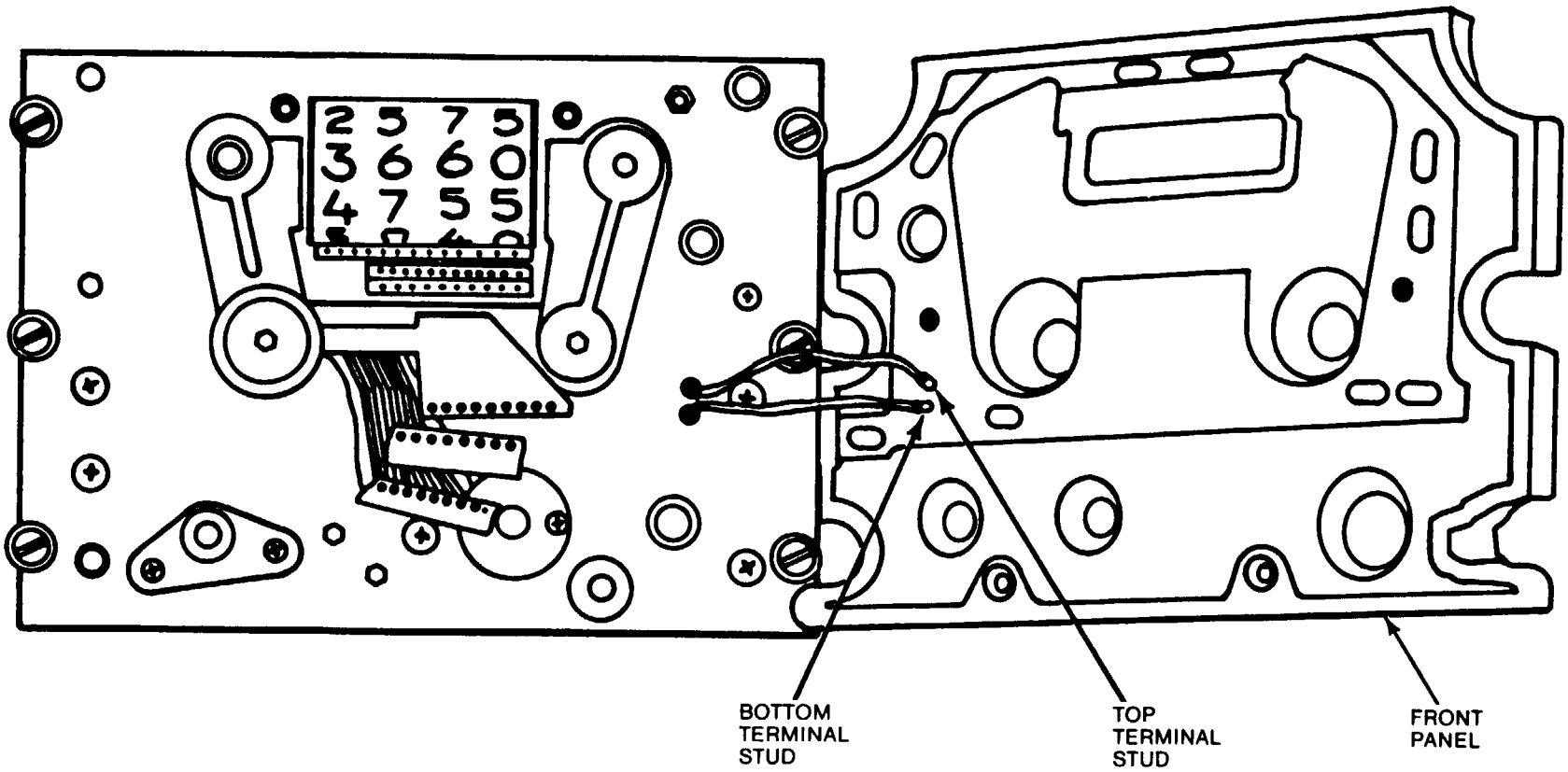

Figure 2. Remove/Install Front Panel From Radio Set

NOTE

Position knobs as close to the panel surface as possible, but not to touch the panel surface nor interfere with knob movement. Ensure all setscrews are tight.

(16) Install the following knobs onto the associated control shafts. Be sure to install a seal on each shaft before installing each knob. Use two setscrews per knob.

(a) SQUELCH control knob (item 5)

(b) The function selector switch knob (item 4)

(c) The right MEGAHERTZ control knob (item 3)

(d) The left MEGAHERTZ control knob (item 2)

(e) AUDIO control knob (item 1)

(17) Be sure that the index marks on the knobs correspond to the switch positions or control ranges as stenciled on the front panel. Rotate switches or controls to verify correction indications.

(18) Install new ANVIS identification plate to side of radio set. Install new plate aft of old identification plate. Do not remove old plate.

b. Operational Functional Tests. After the radio set has been modified, perform an operational functional test of the end item.

(1) Mate the transmitter/regulator radio set subassembly A2 to the radio set.

(2) Connect the test equipment as shown in figure 3.

(3) Adjust the dc power input to J28 on the test facilities kit to 28 Vdc ±0.5.

(4) Perform the test procedures given in table 1.

NOTE

Steps 1 through 20 of the test procedure must be performed in the noise squelch mode of operation with the SQUELCH control properly setup and adjusted. Steps 21 and 22 require tone squelch setup to verify tone squelch operation. Steps 23 and 24 test receiver distortion and the squelch adjustment need not be changed.

11. Calibration Requirements.

Not applicable.

12. Weight and Balance Data.

Weight and balance are not significantly affected.

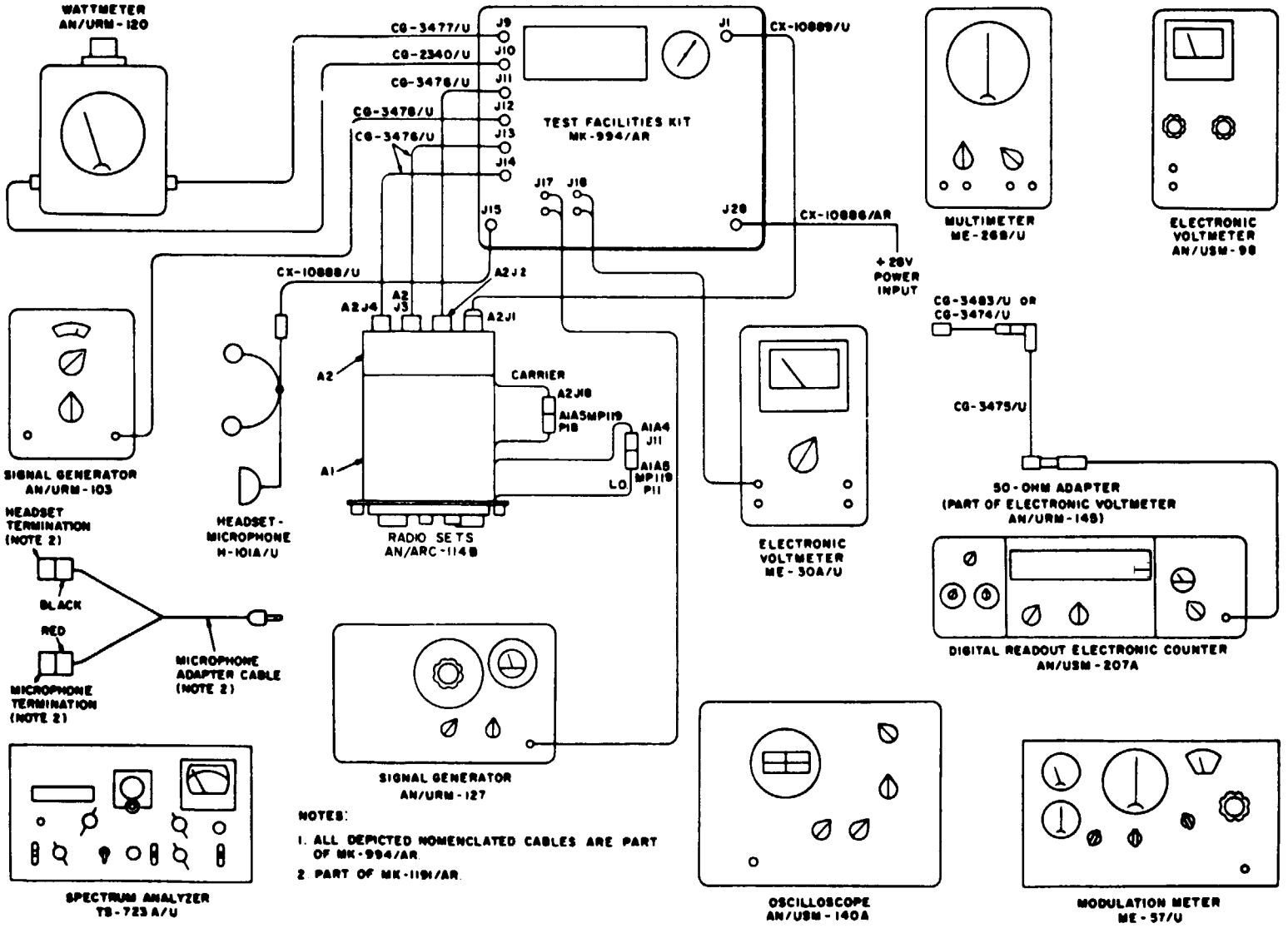

Figure 3. Radio Set Test Setup Diagram

Table 1. Radio Set Electrical Test

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
1	Set maintenance kit switches as follows: ANTENNA FUNCTION switch: XCVR RADIO TEST switch: 6 COMM CONT NO. 1 selector switch: 1 COMM CONT NO. 1 selector switch: ON COMM CONT NO. 1 VOL control: set to comfortable level DC POWER circuit breaker: ON	Tune radio set to 30.00 MHz and set radio set function switch to T/R.	**A.** Set radio function switch to T/R GUARD, and adjust fm generator for the following signal applied to maintenance kit J12, and listen to headset: Frequency: 40.50 MHz Amplitude: 9.6 μVrms Frequency deviation: $\pm$8 kHz Adjust radio set AUDIO control for 2.75 Vrms at maintenance kit J18, and listen for 1-kHz tone in headset.	**A.** A 1-kHz modulating tone is heard in the headset. **NOTE** In some cases, the test facility kit does not apply a full 28 Vdc to the panel lighting circuits. Because of this it may not be possible to see the panel light up ANVIS green under normal shop lighting conditions. It may be necessary to cover or shroud the equipment to verify the panel lighting circuit. Front panel lights up ANVIS green.
			B. Set fm generator output to 0 V.	**B.** None.
2	Same as step 1.	Same as step 1.	Listen to headset, and observe voltmeter connected to maintenance kit J18 while depressing RCVR TEST push button and tuning radio set from 30.00 MHz to 75.95 MHz.	A tone is heard in headset, and voltmeter indicates 0.3 to 3 Vrms throughout radio set tuning range.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
3	Same as step 1.	Same as step 1.	**A.** While holding maintenance kit HEADSETS 1 switch in TRANSMIT, speak into microphone, listen to headset earphone, and observe wattmeter.	**A.** Speaking sound is heard in earphone, and wattmeter indicates 9 watts minimum.
			B. Tune radio set to 50.00 MHz, and repeat **A**.	**B.** Same as **A** above.
			NOTE 28 ±0.5 volts minimum must be applied to maintenance kit J28 for this measurement.	
4	Same as step 1.	Same as step 1.	Measure the dc power supply voltages at the following points:	
			A. A1A5MP119TB1-6.	**A.** +5 Vdc ±0.5 V.
			B. A1A5MP119TB1-5.	**B.** +9 Vdc ±0.9 V.
			C. A1A5MP119TB1-7 with maintenance kit HEADSETS 1 switch in TRANSMIT.	**C.** +9 Vdc ±0.9 V.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
4 (Cont)			**D.** A1A5MP119TB-1.	**D.** +15 Vdc ±0.1 V.
			E. A1A4MP119TB1-13.	**E.** +18 Vdc ±1.8 V.
			F. A1A5MP119TB1-14 with maintenance kit HEADSETS 1 switch in TRANSMIT.	**F.** +18 Vdc ±1.8 V.
5	Same as step 1.	Same as step 1.	**A.** Set maintenance kit ANTENNA FUNCTION switch to HOMING BALANCE, set radio set function switch to HOMING, and adjust fm generator for the following output applied to maintenance kit J12: Frequency: 30.00 MHz Amplitude: 16 μVrms.	**A.** None.
			B. Observe the fm homing on-off indicator in the lower left-hand corner of the maintenance kit HOMING/ADF/ GYRO indicator.	**B.** The homing on-off indicator indicates all black.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
5 (Cont)			C. Reduce fm generator amplitude to 0 μVrms, and observe the homing on-off indicator.	C. The homing on-off indicator displays three orange sections.
6	Same as step 1.	Same as step 1.	Set maintenance kit ANTENNA FUNCTION switch to HOMING BALANCE, set radio set function switch to HOMING, and adjust fm generator for 30.00 MHz. While observing station passage meter in the left-hand portion of the maintenance kit HOMING/ADF/GYRO meter, adjust fm generator from 16 μV to 6 mVrms.	Station passage meter pointer is in its maximum downward position or moves downward as fm generator amplitude is increased.
7	Same as step 1.	Same as step 1.	A. Set maintenance kit ANTENNA FUNCTION switch to HOMING BALANCE, set radio set function switch to HOMING, and adjust fm generator for the following output to maintenance kit J12: Frequency: 30.00 MHz Amplitude: 32 μVrms	A. None.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
7 (Cont)			**B.** Observe the steering meter indicator on the maintenance kit HOMING/ADF/ GYRO indicator.	**B.** The indicator is centered within ±2 dots.
			C. Increase in generator amplitude to 45 μV. Set maintenance kit ANTENNA FUNCTION switch to HOMING RIGHT, and observe the steering meter.	**C.** The indicator points to the right of center, two dots or more.
			D. Set maintenance kit ANTENNA FUNCTION switch to HOMING LEFT, and observe the steering meter.	**D.** The indicator points to the left of center, two dots or more.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
8	Same as step 1.	Same as step 1.	**A.** Set maintenance kit RADIO TEST switch to position 2, and radio set function switch to RETRAN. Adjust fm generator for the following output to maintenance kit J12: Frequency: 30.00 MHz Amplitude: 120 μVrms Modulation: 1 kHz Frequency deviation: $\pm$8 kHz	**A.** None.
			B. Measure the amplitude of the retransmit audio output signal at maintenance kit J18.	**B.** 2.75 Vrms $\pm$0.15. **NOTE** Adjust AUDIO control for the normal indication if required.
			C. Observe maintenance kit CONTROL SIGNAL lamp.	**C.** The CONTROL SIGNAL lamp lights.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
9	Same as step 1.	Same as step 1.	**A.** Set radio set function switch to RETRAN, and adjust audio generator for the following signal to maintenance kit J17: Frequency: 1 kHz Amplitude: 2.75 Vrms.	**A.** None.
			B. Set maintenance kit switches as follows and listen to headset: COMM CONT NO. 1 selector switch: ICS Receiver monitor switch 1: ON RADIO TEST switch: 4	**B.** A tone is heard in the headset.
10	Same as step 1.	Same as step 1.	Measure the main receiver local oscillator frequency at radio set A1A5MP119P11 with radio set tuned to the following frequencies:	
			A. 30.05 MHz	**A.** 39.95 MHz ±2.5 kHz.
			B. 45.30 MHz	**B.** 55.20 MHz ±2.5 kHz.
			C. 69.70 MHz	**C.** 79.60 MHz ±2.5 kHz.
			D. 72.90 MHz	**D.** 82.80 MHz ±2.5 kHz.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
11	Same as step 1.	Same as step 1.	**CAUTION** Maintenance kit RADIO TEST switch position 4 keys the transmitter on. Do not tune the radio set while the transmitter is keyed on. Leave RADIO TEST switch in position 5 while tuning the radio set.	
			A. Set radio set function switch to RETRAN. Connect the modulation meter to radio set connector A1A5MP119P18. Measure the carrier frequency deviation as indicated on the modulation meter, while the transmitter is keyed and the radio set is tuned to 30.05, 40.05, 50.05, 60.05, and 70.05 MHz. Key the transmitter by setting maintenance kit RADIO TEST switch to position 4.	**A.** Carrier frequency tone deviation: 2.5 to 4.5 kHz.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
11 (Cont)			**B.** Set maintenance kit RADIO TEST switch to OFF. Reconnect radio set connectors A1A5MP119P18 to A2J18. Disconnect cable CG-2340/U from maintenance kit connector J10 and connect modulation meter rf input through GS accessories kit 30 dB attenuator to J10. Disconnect the headset from maintenance kit cable CX-10888/U. Connect microphone adapter cable to cable CX-10888/U.	**B.** None.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
11 (Cont)			C. Disconnect audio generator from maintenance kit connector J17. Connect the audio generator output to the microphone termination. Connect the distortion analyzer to the modulation meter AUDIO output terminals. Adjust audio generator for the following output applied through maintenance kit cable CX-10888/U to maintenance kit HEADSETS 1 connector J15: Frequency: 1 kHz Amplitude: 0.6 Vrms.	C. None.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
11 (Cont)			D. Set the RADIO TEST switch to position 5. Measure the frequency deviation on modulation meter, and percent of distortion of the modulated carrier on distortion analyzer while keying the transmitter on by holding the HEADSETS 1 switch in TRANSMIT, with the radio set tuned to 30.05, 40.05, 50.05, 60.05, and 70.05 MHz.	D. Carrier frequency deviation: 8 ±2 kHz minimum. Percent distortion: 7% maximum.
			E. Set maintenance kit RADIO TEST switch to OFF. Disconnect modulation meter, 30 dB attenuator, microphone adapter headset termination and microphone termination from maintenance kit. Reconnect audio generator to maintenance kit connector J17 cable CG-2340/U to J10 and headset to cable CX-10888/U.	E. None.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
12	Same as step 1.	Same as step 1.	**A.** Set maintenance kit RADIO TEST switch to position 3, and adjust fm generator for the following output applied to maintenance kit J12: Frequency: 30.00 MHz Amplitude: 9.6 μVrms Modulation: 1 kHz Frequency deviation: $\pm$8 kHz.	**A.** None.
			B. Measure the peak-to-peak amplitude of the main X-mode receive audio signal at maintenance kit J18.	**B.** 1 Vpp min.
13	Same as step 1.	Same as step 1.	**A.** Set maintenance kit RADIO TEST switch to position 5, and adjust audio generator for the following output applied to maintenance kit J17: Frequency: 1 kHz Amplitude: 4.25 Vrms.	**A.** None.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
13 (Cont)			**B.** Key the radio set transmitter and observe the X-mode transmit audio signal at A1A1A1E5. The transmitter is keyed by holding maintenance kit HEADSETS 1 switch in TRANSMIT.	**B.** A 1-kHz signal with 0.8 Vpp amplitude min is observed.
14	Same as step 1.	Same as step 1.	**A.** Set radio set function switch to HOMING. Set maintenance kit RADIO TEST switch to position 8. Measure homing control dc voltage at maintenance kit J18.	**A.** +27.5 Vdc ±2 V.
			B. Measure homing control dc voltage at maintenance kit J18 while the transmitter is keyed on. Key the transmitter on by holding maintenance kit HEADSETS 1 switch at TRANSMIT.	**B.** +0.1 Vdc max.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
15	Same as step 1.	Same as step 1.	Set maintenance kit RADIO TEST switch to position 9, and measure the band switch dc voltage at maintenance kit J18 with the radio set tuned to each of the following frequencies:	
			A. 30.00 MHz.	A. +3 Vdc ±0.68 V.
			B. 36.00 MHz.	B. +6 Vdc ±1.28 V.
			C. 46.00 MHz.	C. +9 Vdc ±1.92 V.
			D. 56.00 MHz.	D. +12 Vdc ±2.6 V.
			E. 66.00 MHz.	E. +15 Vdc ±3.2 V.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
16	Same as step 1.	Same as step 1.	**NOTE** Steps 16 and 17 may only be performed when the radio set contains A1 subassembly part No. SM-B-692582 and A2 subassembly part No. SM-B-692584, and with subsequent part numbers. Set maintenance kit RADIO TEST switch in position 10, and measure the 1-MHz antenna tuning control voltage at maintenance kit J18 with the radio set tuned to the following frequencies:	
			A. 31.00 MHz.	**A.** +3 Vdc ±1 V.
			B. 32.00 MHz.	**B.** +6 Vdc ±1 V.
			C. 33.00 MHz.	**C.** +9 Vdc ±1 V.
			D. 34.00 MHz.	**D.** +12 Vdc ±1 V.
			E. 35.00 MHz.	**E.** +15 Vdc ±1 V.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
17	Same as step 1.	Same as step 1.	Set maintenance kit RADIO TEST switch to position 11, and measure the 1-MHz antenna tuning control voltage at maintenance kit J18 with the radio set tuned to the following frequencies:	
			A. 36.00 MHz.	**A.** +3 Vdc ±1 V.
			B. 37.00 MHz.	**B.** +6 Vdc ±1 V.
			C. 38.00 MHz.	**C.** +9 Vdc ±1 V.
			D. 39.00 MHz.	**D.** +12 Vdc ±1 V.
			E. 40.00 MHz.	**E.** +15 Vdc ±1 V.
18	Same as step 1.	Same as step 1.	**A.** Adjust fm generator for the following output applied at maintenance kit J12: Frequency: 30.00 MHz Amplitude: 9.6 μVrms Modulation: 1 kHz Frequency deviation: ±8 kHz. Observe voltmeter and record indication (signal plus noise).	**A.** 2.75 Vrms ±0.15. Adjust radio set AUDIO control for the normal indication, if required.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
18 (Cont)			**B.** Remove modulation from the fm generator output signal in **A** above. Observe voltmeter and record indication (noise).	**B.** None.
			C. Divide the voltage indication obtained in **A** by that obtained in **B**.	**C.** 3.1 to 1 voltage ratio min (10 dB).
19	Same as step 1.	Same as step 1.	**A.** Set radio set function switch to T/R GUARD, and adjust fm generator for the following output applied at maintenance kit J12: Frequency: 40.50 MHz Amplitude: 9.6 μVrms Modulation: 1 kHz Frequency deviation: $\pm$8 kHz. Observe voltmeter, and record indication (signal plus noise).	**A.** 2.75 Vrms $\pm$0.15. **NOTE** Adjust radio set AUDIO control for the normal indication, if required.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
19 (Cont)			**B.** Remove modulation from the fm generator output signal in **A** above. Observe voltmeter and record indication (noise).	**B.** None.
			C. Divide the indication obtained in **A** by that obtained in **B**.	**C.** 3.1 to 1 voltage ratio minimum (10 dB).
			NOTE Perform step 20 only if the main receiver is to be operated in tone squelch.	
20	Same as step 1.	Same as step 1.	**A.** Set and adjust main receiver for tone squelch operation.	**A.** None.
			B. Set SQUELCH switch to TONE/X on AN/ARC-114A.	**B.** None.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
20 (Cont)			C. Adjust audio and fm generators for the following output signal applied to maintenance kit J12 and listen to headset: Frequency: 30.00 MHz Amplitude: 9.6 μVrms Modulation: 150 Hz Frequency deviation: $\pm$3 kHz.	C. A rushing noise is heard in the headset.
			D. Tune radio set to 30.05 MHz and listen to headset.	D. Rushing noise is not heard.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
21	Same as step 1.	Same as step 1.	Set maintenance kit RADIO TEST switch to position 5. Connect the modulation meter to radio set connector A1A5MP119P18. Adjust audio generator for the following output to maintenance kit J17: Frequency: 1 kHz Amplitude: 4.15 Vrms Measure the frequency deviation of the modulated carrier, as indicated on the modulation meter, while holding the HEADSETS 1 switch in TRANSMIT, with the radio set tuned to the following frequencies: 30.05, 40.05, 50.05, 60.05, and 70.05 MHz.	Carrier frequency deviation: 8 kHz ±2.
22	Same as step 1.	Same as step 1.	Adjust the fm generator for the following signal to maintenance kit J12: Frequency: 30.00 MHz Amplitude: 10 mVrms Modulation: 1 kHz Frequency deviation: ±8 kHz. Measure the percent distortion of the received audio signal at maintenance kit J18.	7% max.

Table 1. Radio Set Electrical Test — Continued

Step No.	Test equipment control settings	Equipment under test control settings	Test procedure	Performance standard
23	Same as step 1.	Same as step 1.	Set radio set function switch to T/R GUARD. Adjust the fm generator for the following signal to maintenance kit J12: Frequency: 40.05 MHz Amplitude: 10 mVrms Modulation: 1 kHz Frequency deviation: ±8 kHz. Measure the percent distortion of the guard received audio signal at maintenance kit J18.	7% max.

13. Quality Assurance Requirements.

The MWO must satisfy the quality assurance requirements of the following:

TM 750-245-4	Direct Support, General Support: Quality Control Inspector's Inspection Criteria

14. Recording and Reporting of the Modification.

a. DA Form 2408-5. DA Form 2408-17. or DA Form 2409. Record the modification on DA Form 2408-5, Equipment Modification Record, when multiple form assembled Equipment Logbook is applicable, or DA Form 2409, Equipment Maintenance Log (Consolidated), or DA Form 2408-17, Aircraft Inventory Record, as indicated in DA Pam 738-750.

b. Completion of DA Form 2407. Maintenance Request.

(1) The serial number to be reported in block 2 must be in the serial range stated in paragraph 3 above.

(2) The NSN for the end items to be reported in block 6 and block 20h must be the same as the NSN shown in paragraph 3 above.

(3) The Unit Identification Code (UIC) to be reported in block lc must be the six character code that is put on the Unit/Organization shown in block la. (Normally, this will be the code that is put on the Unit/Organization Morning Report.)

(4) List by NSN the number of kits used to accomplish this MWO using block 20 and/or block 35. If more space is needed, use DA Form 2407-1 Continuation Sheet.

(5) After completing the form, mail the NMP copy (Copy 2) to: Commander, US Army Communications-Electronics Command, ATTN: AMSEL-LC-ME-MP, Fort Monmouth, NJ 07703-5000 (MWO Coordinator). Mail the Control Copy (Copy 3) to: Commander, US Army Depot System Command, ATTN: DRSDS-PM, Chambersburgh, PA 17201, for PAC 98 (Non-AIF Field Activities). Forward the Organizational Copy (Copy 4) as directed by the local commander.

c. DA Forms 2408 and 2408-9. When the application of this MWO results in the change of NSN to an end item designated in paragraph 3 of this MWO, Loss and Gain Form 2408-9 will be initiated. After completing the forms, mail the NMP copy (Copy 1) to: Commander, US Army Communications-Electronics Command, ATTN: AMSEL-LC-ME-MP, Fort Monmouth, NJ 07703-5000 (MWO Coordinator). Mail the Control Copy (Copy 2) to: Commander, US Army Maintenance Management Center, ATTN: DRXMD-MD, Lexington, KY 40511. The logbook copy (Copy 3) will be placed in the logbook per DA Pam 738-750.

d. Identification Data. The NSN of this equipment becomes NSN 5821-01-325-8773. The nomenclature of this equipment becomes Radio Set AN/ARC-l14B.

15. Product Improvement Proposal Number (PIP).

This MWO is authorized by PIP number (N/A).

16. Modification Identification.

Not applicable.

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
06878

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