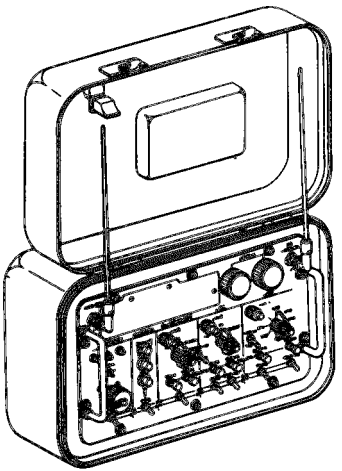
TM 11-6625-2976-12

OPERATOR'S
AND ORGANIZATIONAL
MAINTENANCE MANUAL



TEST SET, RECEIVER
AN/ARM-186
(NSN 6625-00-557-1168)

OPERATION
PAGE 2-1

MAINTENANCE
PAGE 3-1

TROUBLESHOOTING
PAGE 3-7

OPERATIONAL
CHECK
PAGE 3-10

HEADQUARTERS, DEPARTMENT OF THE ARMY

17 SEPTEMBER 1984

5 SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

1. DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

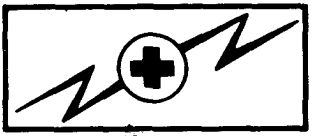
2. IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

3. IF YOU CANNOT TURN OFF OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A WOODEN POLE OR A ROPE OR SOME OTHER INSULATING MATERIAL

4. SEND FOR HELP AS SOON AS POSSIBLE

5. **AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION**

WARNING



DANGEROUS VOLTAGES EXIST IN THIS EQUIPMENT

Dangerous potentials exist at several points throughout this equipment. When the equipment is operated with the covers removed, DO NOT touch exposed connections or components. Some transistors have voltages present on their cases. Disconnect power before cleaning the equipment or replacing parts.

WARNING

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRIFLUOROETHANE. Do not use solvent near heat or open flame. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the gas into poisonous irritating fumes. DO NOT breathe the fumes or vapors. TRICHLOROTRIFLUOROETHANE dissolves natural skin oils. DO NOT get the solvent on your skin. Use gloves, sleeves and an apron which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

TECHNICAL MANUAL

No. 11-6625-2976-12

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 17 September 1984

Operator's and Organizational Maintenance Manual

TEST SET, RECEIVER AN/ARM-186
(NSN 6625-00-557-1168)

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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Cornmunicationa-Electronics Command and Fort Monmouth, AlTN: DRSEL-ME-MP, Fort Monmouth, Forl Monmouth, New Jersey 07703-5007.

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CHAPTER 2 OPERATING INSTRUCTIONS 2-1
Section I Operator's Controls and Indicators.... 2-1

* This manual supersedes so much of TM 11-6625-2976-14, 20 January 1981 as pertains to operator's and organizational maintenace.

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III Operation Under Unusual Conditions 2-37

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Section I Repair Parts, Special Tools, TMDE, and Support Equipment 3-2
II Service Upon Receipt 3-2
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C EXPENDABLE ITEMS SUPPLIES AND MATERIALS LIST C-1

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HOW TO USE THIS MANUAL

This manual is designed to help you operate and maintain the Test Set, Receiver AN/ARM-186. Maintenance of the test set is limited to procedures that do not require it to operate as part of a specific communications system. The front cover boxed entries are provided as quick reference to important information. There is also an alphabetical index located in the final pages for use in finding more specific items of information.

Paragraphs in this manual are numbered by chapter and order of appearance within a chapter. A subject index appears at the beginning of each chapter listing sections that are included in that chapter. A more specific subject index is located at the beginning of each section to help you find the exact paragraph you are looking for.

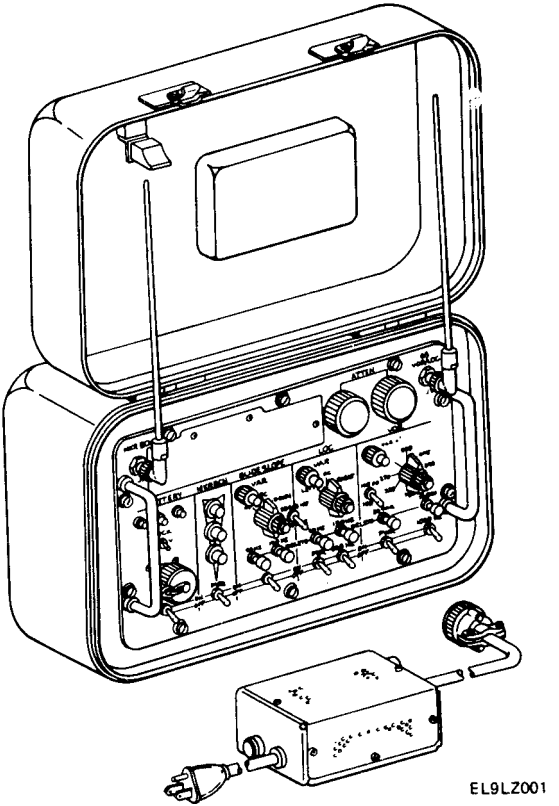
Warning pages are located in the front of this manual. You should learn all warnings before operating or performing maintenance procedures on the equipment.

Read all preliminary material found at the beginning of each task. It contains important information and safety instructions necessary to complete procedures.

Instructions for using troubleshooting chart are located in paragraph 3-8.

There is a Maintenance Allocation Chart (MAC) located in appendix B.

Some measurements in this manual are given in both US standard and metric units.



Test Set, Receiver AN/ARM-186

CHAPTER 1

INTRODUCTION

Subject	Section	Page
General Inforrnation	I	1-1
Equipment Description	II	1-6

OVERVIEW

this chapter supplies both general and specific information about the Test Set, Receiver AN/ARM-I 86, and acquaints the user with characteristics and purpose.

Section I GENERAL INFORMATION

Subject	Para	Page
Scope	1-1	1-2
Maintenance Forms, Records, and Reports	1-2	1-2
Reporting Equipment Improvement Recommendations (EIR)	1-3	1-3
Destruction of Army Electronics Materiel to Prevent Enemy Use	1-4	1-3
Administrative Storage	1-5	1-3
Nomenclature Cross-Reference List	1-6	1-4
Safety, Care, and Handling	1-7	1-4

1-1. **SCOPE.**

This manual covers operation and maintenance of Test Set, Receiver AN/ARM-186. The operator is authorized to do organizational level maintenance.

The purpose of the equipment is to generate both rf and audio signals for use in cockpit checks of VOR, localizer, glideslope, and marker beacon receivers in aircraft.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS.

REPORT OF MAINTENANCE AND UNSATISFACTORY EQUIPMENT

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750 as contained in Maintenance Management Update.

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 4355.73A/ AFR 400-54/MCO 4430.3F.

DISCREPANCY IN SHIPMENT REPORT (DISREP) (SF 361)

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

1-3. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your Test Set, Receiver AN/ARM-l 86 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. Put it on SF 368 (Quality Deficiency Report). Mail it to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703-54307. A reply will be sent to you.

1-4. DESTRUCTION OF ARMY ELECTRONICS MATERIEL TO PREVENT ENEMY USE.

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

1-5. ADMINISTRATIVE STORAGE.

Preventive maintenace, as described in chapter 3, section III, shall be done prior to administrative storage of equipment. When removing the equipment from administrative storage, PMCS shall be done to insure operational readiness.

Administrative storage of equipment shall be done in accordance with TM 740-90-1. Disassembly and repackaging of equipment for shipment or limited storage are covered in paragraphs 3-13, 3-14, and 3-15.

1-8. NOMENCLATURE CROSS-REFERENCE LIST.

This list contains common names used throughout this manual in place of official nomenclature.

COMMON NAME	OFFICIAL NOMENCLATURE
test set	Test Set, Receiver AN/ARM-I 86

1-7. SAFETY, CARE, AND HANDLING.

Be sure to obey all Warnings, Cautions, and Notes in this manual. Failure to follow directions could result in serious injury to personnel and/or damage to equipment.

WARNING

Dangerous voltages exist at several points throughout this equipment. When equipment is operated with covers removed, DO NOT touch exposed connections or components. Some transistors have voltages present on their cases. Disconnect power before cleaning equipment or replacing parts.

The tips of the extended antennas create a potential hazard to the eyes. Take care, when moving or operating test set, to prevent eyes from coming in contact with antennas.

WARNING

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRI-FLUOROETHANE. Do not use solvent near heat or open flame. TRICHLOROTRI-FLUOROETHANE will not bum, but heat changes the gas into poisonous, irritating fumes. DO NOT breathe the fumes or vapors. TRICHLOROTRIFLUOROETHANE dissolves natural skin oils. DO NOT get the solvent on your skin. Uaa gloves, sleeves and an apron which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

When testing aircraft receivers, place test set in a position best suited for use. Be careful not to drop test set. Personal injury, damage to test set, and/or aircraft could result.

Before operating teat set, make sure batteries are installed correctly.

Before installing test set, rotate pressure relief valve located on bottom of test set case to allow case pressure and atmospheric pressure to balance.

Battery charger may be left connected to ramp test set indefinitely without any damage. However, if charger is left connected to test set and power to charger is removed, batteries will discharge through chargercircuitry.

Section II EQUIPMENT DESCRIPTION

Subject	Para	Page
Equipment Characteristics, Capabilities, and Features	1-8	1-6
Location and Description of Major Components	1-9	1-8
Equipment Data	1-10	1-9

1-6. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

PURPOSE OF TEST SET

The AN/ARM-186 is a lightweight, test set usad for portable cockpit checks of the VOR, ILS, and MB avionics systems.

14. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES - CONTINUED.

MAJOR TEST SET COMPONENTS

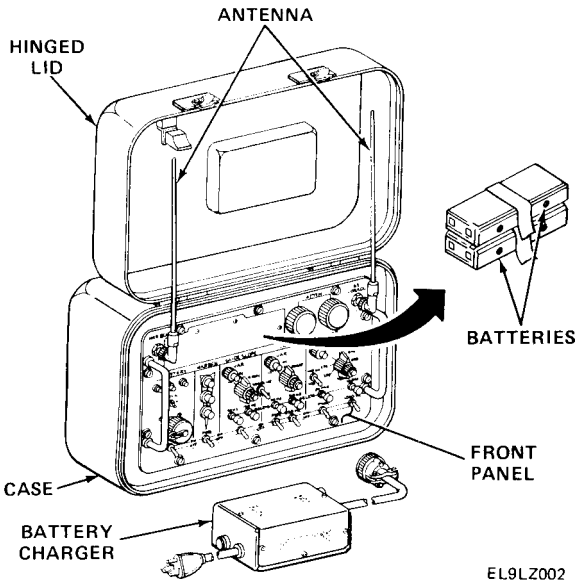
weatherproof case
Pressure relief valve
Removeable, hinged lid
Two antennas
switch actuator
Battery charger

FEATURES

All-weather operations
battery operated
Highly portable
Easy removal from case of operating unit
Safety switch preventing close cover operation
Internal voltage check for testing battery voltages
Selectable VOR bearings from 0 to 315 degrees
Adjustable VOR radials: ±10 degrees
Variable signal strength provision for aircraft navigation flag checks
Selectable carrirr frequencies
Modualtion tone (1020 Hz) for audio receiver circuit checks
Performance of channel/rejection tests

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

TEST SET, RECEIVER AN/ARM-186



Front Panel. All test set controls and indicators are on front panel.

Case and Hinged Lid. The case and hinged lid provide a weatherproof enclosure for test set.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - CONTINUED.

Antenna. Two antennas are used with test set. One antenna is used to radiate marker beacon signals while the other antenna is used for transmission of VOR, LOC, and GS signals. Note that antennas are interchangeable and may be used for either of the rf outputs.

Battery Charger. Generates two 8 vdc output sources used to trickle-charge the two test set batteries.

Batteries. Provide dc power for normal operation.

1-10. EQUIPMENT DATA

Table 1-1 lists the electrical, environmental, and physical specifications for test set and battery charger.

TABLE 1-1. EQUIPMENT DATA

CHARACTERISTIC	SPECIFICATION
Test Set	
RF Output	
Frequencies	
VOR	108.00/108.05 MHz
LOC	108.10/108.15 MHz

TABLE 1-1. EQUIPMENT DATA – CONTINUED

CHARACTERISTIC	SPECIFICATION
GS	334.7/334.55 MHz
MB	75.00 MHz
Frequency Accuracy	
VOR, LOC, GS	±0.0025%
MB	±0.005%
Level into Antenna	
VOR, LOC	Greater than –10 db mW variable, 110 db in 1 db steps
GS	Greater than –20 db mW variable, 110 db in 1 db steps
MB	Greater than –20 db mW fixed
VOR	
Amplitude Modulation	
Modulation depth	30 ± 3%

1-10. EQUIPMENT DATA – CONTINUED.

TABLE 1-1. EQUIPMENT DATA – CONTINUED

CHARACTERISTIC	SPECIFICATION
VOR Bearing	
Range	000 to 315° in 45° increments, variable ± 10° around each increment
Range Accuracy (rf) at 000°	± 1.5° at –40 to + 71°C
LOC/GS	
Amplitude Modulation	
LOC	20 ± 2%
GS	40 ± 4%
DDM Range	
LOC OC, L/R	0,0.220
GS OC, UP/DOWN	0,0.175
DDM Accuracy	
LOC OC, L/R	0.000 ± 0.005 0.220 ± 0.020
GS OC, UP/DOWN	0.000 ± 0.010 0.175 ± 0.025

TABLE 1-1. EQUIPMENT DATA – CONTINUED

CHARACTERISTIC	SPECIFICATION
Environmental	
Temperature (operating)	–40 to + 160°F (–40 to + 71°C)
Humidity	100%
Altitude	10,000 ft (3048 m) max
Power Requirement	
Voltage	+ 8 vdc battery (2)
Capacity	1.0 ampere-hour at a 50 mA rate
Shelf life	82% capacity at room temperature 68°F (20°C) storage for 6 mo
Operating life	8 hours before recharge (68°F (20°C))
Time to Charge (if fully discharged)	36 hours
Antenna	Reinforced fiberglass type TNC male coaxial connectors. Length: 12 in. (305 mm). 50 ohm

1-10. EQUIPMENT DATA – CONTINUED.

TABLE 1-1. EQUIPMENT DATA - CONTINUED

CHARACTERISTIC	SPECIFICATION
Physical	
Height (case closed)	7.0 in. (178 mm)
Height (cover off)	4.0 in. (102 mm)
Width	14.5 in. (368 mm)
Depth	9.0 in. (229 mm)
Weight	Approximately 15 lb (6.8 kg)
Battery Charger	
Electrical	
Input	115/230 vac, 50 to 400 Hz, single phase, 0.5 amp max
Fuse	
115 vac	0.5 amps
230 vac	0.25 amps
Output	+9.2 vdc and –9.2 vdc, ±0.1 v max

1-10. EQUIPMENT DATA – CONTINUED.

TABLE 1-1. EQUIPMENT DATA – CONTINUED

CHARACTERISTIC	SPECIFICATION
Environmental	
Temperature (operating)	0 to + 50°C
Physical	
Height (overall)	1.9 to 2.0 in. (48.3 to 50.8 mm)
Length (overall)	5.8 to 6.0 in. (147.3 to 152.4 mm)
Width (overall)	3.7 to 3.76 in. (94 to 95.5 mm)
Weight	2.3 lb (1.04 kg)

CHAPTER 2

OPERATING INSTRUCTIONS

Subject	Section	Page
Operator's Controls and Indicators	I	2-1
Operation Under Usual Conditions	II	2-12
Operation under Usual Conditions . . .	III	2-37

OVERVIEW

This chapter furnishes test set and battery charge operating instructions. Iformation about the fuction and use of test set controls and indicators, initial adjustments, and operating procedures are included.

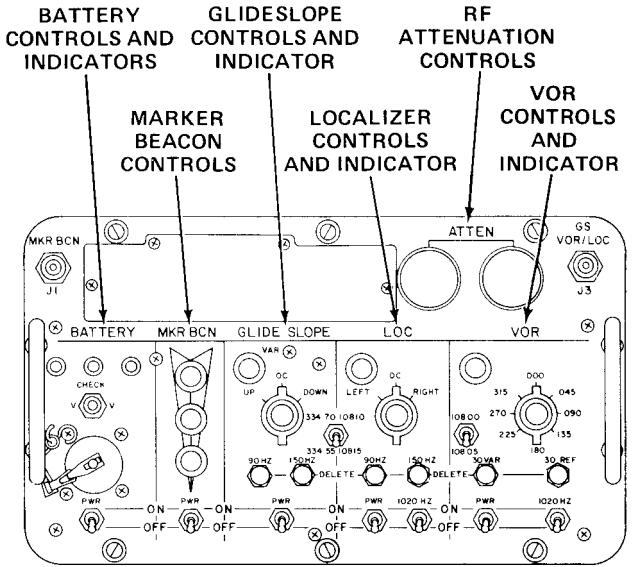
Section I OPERATOR'S CONTROLS AND INDICATORS

Subjust	Para	Page
General	2-1	2-1
Controls and Indicators.	2-2	2-3

2-1. GENERAL

The controls and indicators on the front panel are grouped according to the functions perform. There are six major areas: battery controls and indicators, marker beacon controls, glideslope controls, localizer controls, VOR controls, and rf attenuation controls.

2-1. GENERAL - CONTINUED.

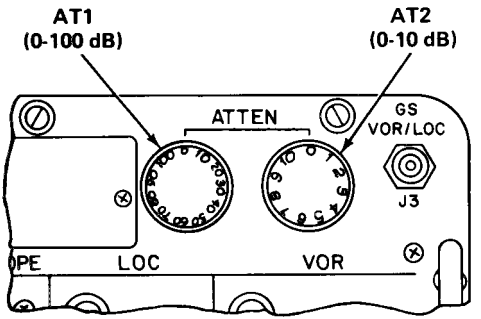


EL9LZ005

Each mode (battery, marker-beacon, glidesl, localizer, and VOR) has its own power switch. A battery power switch controls power to all circuits in the test set.

2-2. CONTROLS AND INDICATORS.

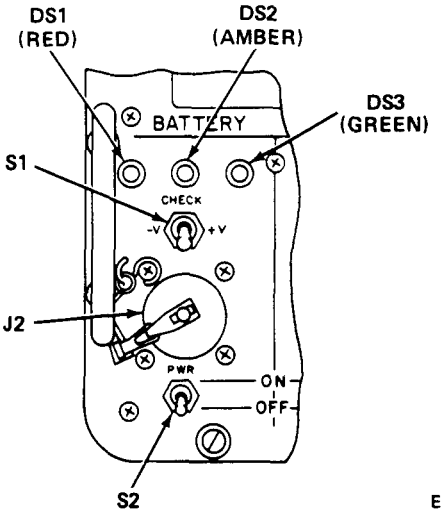
ATTENUATION CONTROLS



EL9LZ006

There are two attenuation controls: AT1 and AT2. They provide rf attenuation of VOR, LOC, and GS signals. Attenuation control AT1 provides rf attenuation of 100 db in 10 db steps. Attenuation control AT2 provides rf attenuation in 1 db steps.

BATTERY CHECK CONTROLS AND INDICATORS

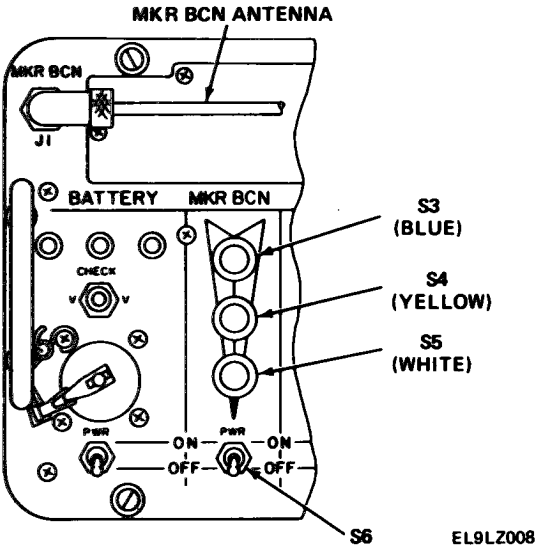


EL9LZ007

1. Lamp indicator DS1 red used in conjunction with BATTERY CHECK -V/ + V switch S1 indicates that batteries need charging.
2. Lamp indicator DS2 amber used in conjunction with BATTERY CHECK -V/+ V switch S1 indicates that leas than one hour of test set operation is available.
3. Lamp indicator DS3 amen used in conjunction with BATTERY CHECK-V/+ V switch S1 Indicates that one to eight hours of test set operation is available.

2-2. CONTROLS AND INDICATORS – CONTINUED.

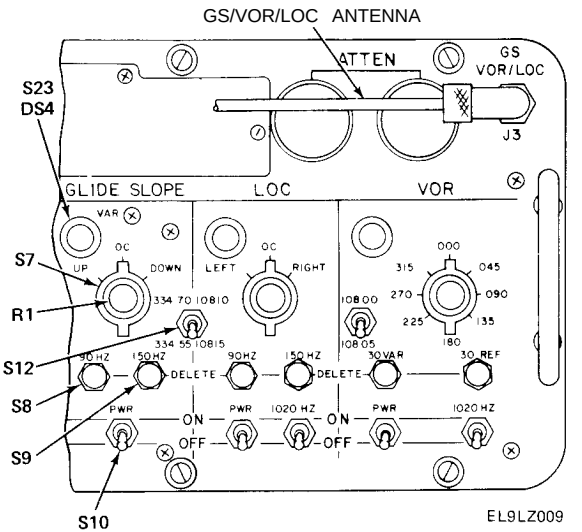
4. BATTERY ON/OFF PWR switch S2 controls primary power to test set and all test set modes.
5. Connector J2 provides a means of connecting a battery charger to the test set for recharging batteries.
6. BATTERY CHECK –V/ + V switch S1 is a three-position switch (on-off-on) used to check the charge remaining on the batteries.



1. MKR BCN antenna is used to transmit marker beacon frequencies when test set is in the marker beacon mode.

2. Blue pushbutton switch S3 when depressed selects the 400 Hz modulation frequency.
3. Yellow pushbutton switch S4 when depressed selects the 1300 Hz modulation frequency.
4. White pushbutton switch S5 when depressed selects the 3000 Hz modulation frequency.
5. PWR ON/OFF switch S6 when set to ON inhibits the 1020 Hz used in VOR and LOC mode and also enables the MB 400, 1300, and 3000 Hz switches.

GLIDESLOPE CONTROLS AND INDICATORS



2-2. CONTROLS AND INDICATORS - CONTINUED.

1. VAR control switch S23/DS4 is a latching switch/lamp assembly that changes function from fixed to variable mode. DS4 lamp blinks Indicating variable mode selection.

2. GS/VOR/LOC antenna is used to transmit frequencies when test set is in GS/VOR or LOC modes.

3. UP/OC/DOWN three-position rotary switch S7 provides the capability of changing glideslope oncourse, up, or down modulation signals.

4. Variable control switch R1 provides the capability of manually changing glideslope signals (when in the variable mode).

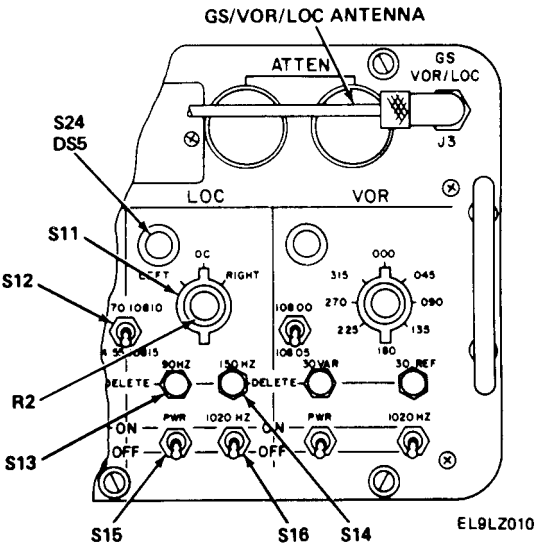
5. LOC/GS frequency control switch S12 is a dual-function switch that selects the frequency pairing used in the test set. it selects GS 334.70 MHz and LOC 108.10 MHz or GS 334.55 MHz and LOC 108.15 MHz frequencies for either glidescope or localizer modes.

6. 150 HZ DELETE pushbutton switch S9, when depressed, inhibits the signal providing a flag response (loss of signal) at the aircraft instrument panel.

7. PWR ON/OFF switch S 10 applies power for the test set glidescope mode.

8. 90 HZ DELETE pushbutton switch S8, when depressed, inhibits the signal providing a flag response (loss of signal) at thr aircraft instrument panel.

LOCALIZER CONTROLS AND INDICATORS



1. VAR control switchS24/DS5 is a latching switch/lamp assembly that changes function from fixed to variable mode. DS5 lamp blinks indicating variable mode selection.

3. 150 HZ DELETE pushbutton switch S14, when depressed, inhibits the 160 Hz signal providing a flag response (loss of signal) at the aircraft instrument panel.

4. 1020 HZ ON/OFF switch S16, when set to ON, provides a 1020 Hz modulation signal to check the audio portion of LOC receivers.

5. PWR ON/OFF switch S15 applies power for the test set glidescope mode.

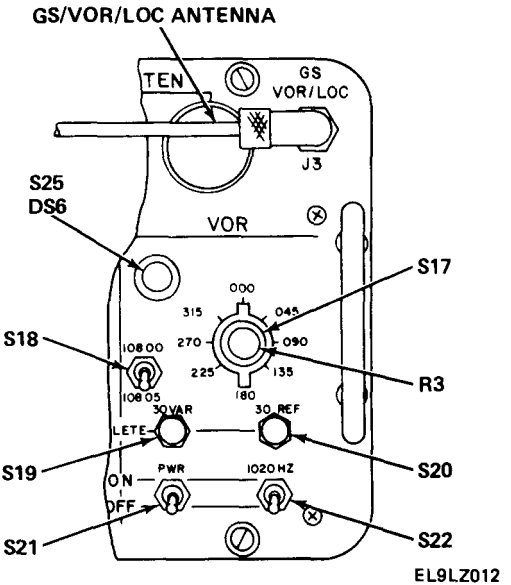
6. 90 HZ DELETE pushbutton switch S13, when depressed, inhibits the 90 Hz signal providing a flag response (loss of signal) at the aircraft instrument panel.

7. Variable control switch R2 provides the capability of manually changing localizer signals (when in the variable mode).

8. LEFT/OC/RIGHT three-position rotary switch S11 provides the capability of changing localizer left, oncourse, and right modulation signals.

2-2. CONTROLS AND INDICATORS – CONTINUED.

VOR CONTROLS AND INDICATORS



1. VAR ± 10° control switch S25/DS6 is a latching switch/lamp assembly that, when pressed, charges from fixed to variable mode. Lamp will blink to indicate variable mode selection.

2-2. CONTROLS AND INDICATORS – CONTINUED.

2. GS/VOR/LOC antenna is used for transmitting frequencies when test set is in the GS, VOR, or LOC modes.

3. VOR bearing select switch S17 is an eight-position rotary switch that selects one of eight bearing signals (000 thru 315 degrees in 45-degree increments).

4. Variable control R3 provides the means to manually vary the VOR signal.

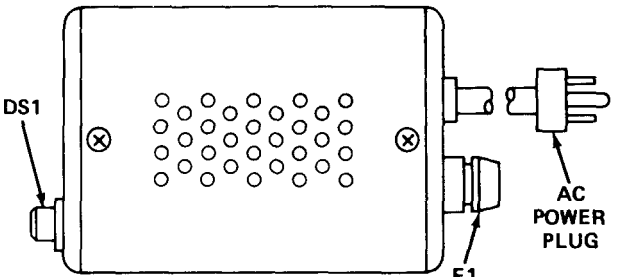
5. 30 REF DELETE control pushbutton switch S20, when depressed, creates a flag response (loss of signal) in the receiving aircraft navigational system.

6. 1020 HZ ON/OFF switch S22, when set to ON, provides a 1020 Hz signal to check the audio VOR receiver.

7. PWR ON/OFF switch S21 applies power to the test set VOR mode.

8. 30 VAR DELETE control pushbutton switch S19, when depressed, creates a flag response (loss of signal) in the receiving aircraft navigational system.

BATTERY CHARGER CONTROLS AND INDICATORS



TOP VIEW

1. DS1 lamp, when lit, indicates that ac power has been applied to charger.

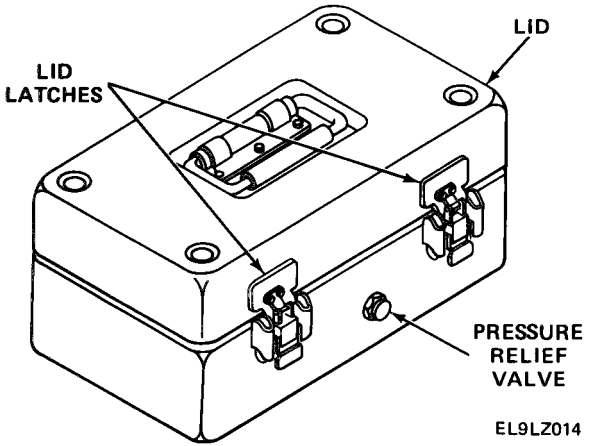
2. Ac power plug provides the means for applying ac power to the battery charger.

3. F1 fuse provides protection for the battery charger.

Section II OPERATION UNDER USUAL CONDITIONS

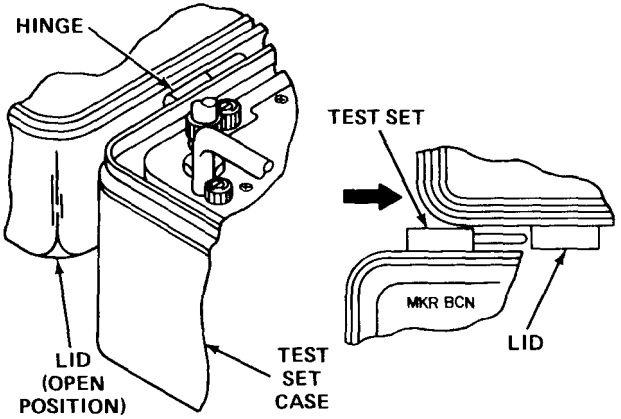
Subject	Para	page
Initial Adjustments	2-3	2-13
Operating Procedures	2-4	2-19
Battery Charger Operation	2-5	2-32
Preparation for Movement	2-6	2-34

2-2. INITIAL ADJUSTMENTS.



1. Rotate pressure relief valve two turns in a counterclockwise direction.

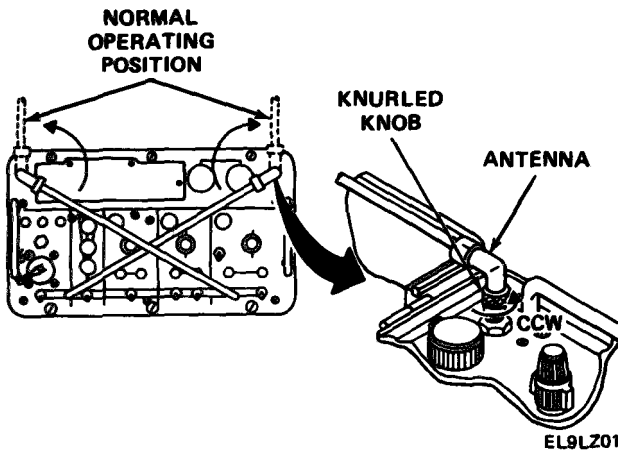
2. Release the two lid latches and carefully raise lid.



3. Slide lid (in the direction of the GS/VOR/LOC antenna) until it is free of test case.

4. Remove lid and set it aside.

2-3. INITIAL ADJUSTMENTS – CONTINUED.



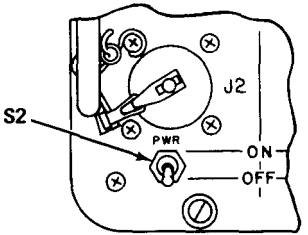
5. Rotate knurled knob of top antenna in a counterclockwise direction until antenna can move freely.

6. Slightly raise and turn antenna until it is in its normal operating position.

7. Turn knurled knob in a clockwise direotion to secure antenna.

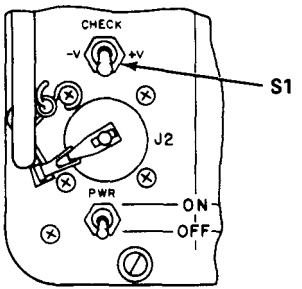
8. Repeat steps 5,6, and 7 for other antenna.

9. Make sure that all PWR switches are in OFF position.



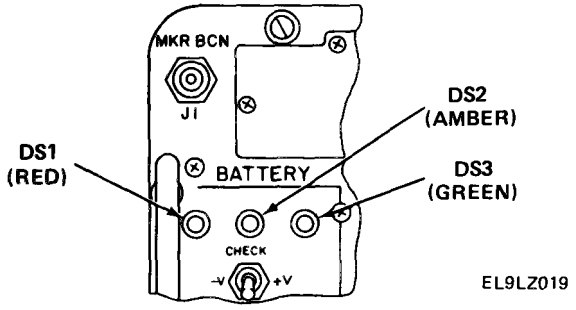
EL9LZ017

10. Set BATTERY PWR switch (S2) to ON position.



EL9LZ018

11. Set and hold BATTERY CHECK –V, + V switch (S1) to + V position.



12. Observe battery indicator lamps DS1, DS2, and DS3. One or more of these lamps should be lit.

13. See table 2-1 Battery Lamp Indications, for an explanation of lamp indications.

14. Release BATTERY CHECK –V, + V switch (S1).

15. Set and hold BATTERY CHECK –V, + V switch (S1) to –V position.

16. Repeat steps 12, 13, and 14.

TABLE 2-1. BATTERY LAMP INDICATIONS

LAMP CONDITION			MEANING	ACTION
RED	AMB	GRN		
OFF	OFF	OFF	Possible circuit/ lamp malfunction	See troubleshooting section
OFF	OFF	ON	1 to 8 hours of charge remain	Charge batteries when required
OFF	ON	OFF	0 to 1 hours of charge remain	Charge batteries when required
ON	OFF	OFF	Batteries need charging	Charge batteries
OFF	ON	ON	0 to 1 hours of charge remain	Charge batteries when required
ON	OFF	ON	Batteries need charging	Charge batteries
ON	ON	OFF	Batteries need charging	Charge batteries
ON	ON	ON	Equipment malfunction	Refer equipment to next higher level of maintenance

NOTE

If all lamps are off for either + V check or –V check, see the troubleshooting section. If only a red lamp-on condition occurs for either + V check or –V check, test set batteries must be charged (para 2-5) before further operation.. If all lamps are on for either + V or –V checks, refer equipment to next higher level of maintenance.

17. Set BATTERY PWR switch (S2) to OFF position.

2-4. OPERATfNG PROCEDURES.

NOTE

Aircraft navigational system must be turned on.

Operation of test set is accomplished by selecting the mode of operation (MB, GS, LOC, or VOR) and setting controls for a given aircraft navigational condition. The response of the various aircraft navigation instruments to the simulated ground station signals (generated by test set) is then examined on a go, no-go basis. That is, either the instrument responds correctly or incorrectly. Simultaneous operation of all modes is possible. However, glideslope/localizer simultaneous operation is most likely.

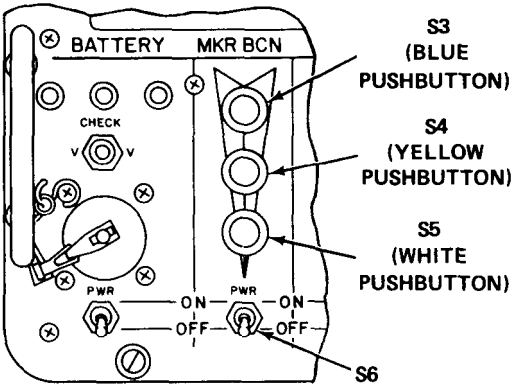
NOTE

Make sure all PWR switches and 1020 HZ switch are set to the OFF position.

NOTE

One or more of the VAR pushbutton switch/ lamps may begin to blink. If this happens, press the one(s) that are blinking.

MARKER BEACON (MKR BCN) MODE



EL9LZ020

NOTE

On some larger aircraft a marker beacon reading cannot be obtained because the aircraft antenna ia too distant from the test set. if a reading is not obtained install an extender cable between test set and test set antenna. See paragraph 3-13 for extender cable installation.

1. Sae BATTERY PWR switch (S2) and MKR BCN PWR switch (S6) to ON position.

2. Press and hold blue pushbutton (S3) and observe aircraft navaigation instruments for an outer marker indication. Then, release pushbutton.

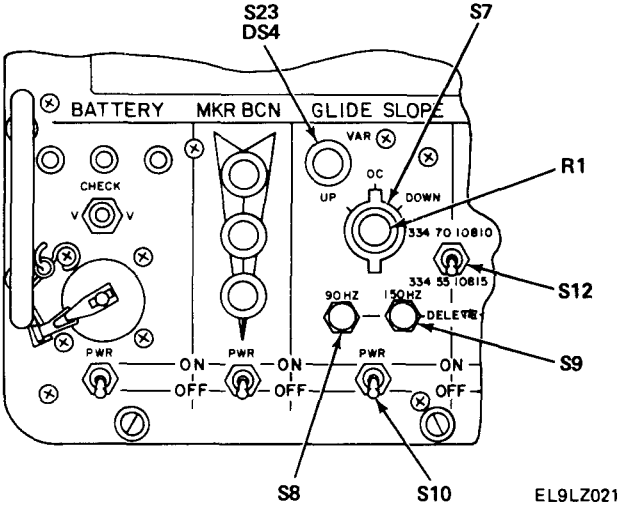
3. Press and hold yellow pushbutton (S4) and observe aircraft navigation instruments for a middle marker indication. Then, release pushbutton

4. Press and hold while pushbutton (S5) and observe aircraft navigation instruments for an inner marker indication. Then, release pushbutton

5. Set BATTERY PWR switch (S2) and MKR BCN PWR switch (S6) to OFF position.

6. Disconnect extender cable if being used (para 3-13).

GLIDESLOPE (GS) MODE



1. Select proper operating frequency by setting localizer/ glideslope frequency control switch (S12) to desired position on test set and aircraft.

2. Set UP/OC/DOWN switch (S7) to OC position.

3. Set both ATTEN controls (AT1 and AT2) to O.

4. Set BATTERY PWR switch (S2) and GLIDESLOPE PWR switch (S10) to ON position.

2-4. OPERATING PROCEDURES - CONTINUED.

5. Observe aircraft navigational system for oncourse indications.

6. For flag check, set ATTEN controls (in 10 and 1 db steps) to attenuate rf output signal until flag appears. Reset ATTEN controls to 0 attenuation.

7. Set UP/OC/DOWN switch (S7 to UP position for an up-needle deflection.

8. Set UP/OC/DOWN switch (S7) to DOWN position for a down-needle deflection.

9. Press VAR pushbutton switch/lamp (S23/DS4). Variable mode has been selected when lamp (DS4) begins to blink.

NOTE

When GS is in variable mode, UP/OC/DOWN switch is bypassed and aircraft navigation needle deflection indication is controlled only by variable control knob (R1).

10. Rotate variable control knob (R1) (on UP/OC/DOWN switch) fully clockwise and then fully counterclockwise.

11. Observe glidescope indicator for full-scale needle hang up.

NOTE

Glidescope indicator should not hang up in either direction.

12. Press VAR pushbutton switch/lamp (S23/DS4). Lamp (DS4) will stop blinking (variable mode released).

NOTE

Rf otput signal is again controlled by UP/OC/ DOWN switch.

13.. Press and hold 90 HZ DELETE switch (S8) for an aircraft NAV flag condition (loss of signal).

14. Release 90 HZ DELETE switch

15. Press and hold 150 HZ DELETE switch (S9) for an aircraft NAV flag condition (loss of signal).

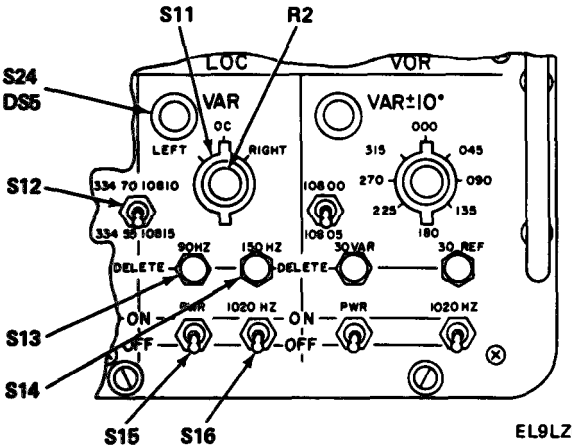
16. Release 150 HZ DELETE switch

17. Change localizer/glideslope frequency control switch (S12) setting and observe aircraft navigational system for channel rejection.

18. Set BATTERY PWR switch (S2) and GLIDESLOPE PWR switch(S10) to OFF position.

2-4. OPERATING PROCEDURES – CONTINUED.

LOCALIZER (LOC) MODE



1. Set localizer/glideslope frequency control switch (S12) (labeled 334.70-108.10/334.55-108.15) to desired position on test set and aircraft. This selects operating frequency.

2. Set LEFT/OC/RIGHT switch (S11) to OC position.

3. Set both ATTEN controls (AT1 and AT2) to 0.

4. Make sure that 1020 HZ switch (S16) is set to OFF position.

5. Set BATTERY PWR switch (S2) and LOC PWR switch (S15) to ON position.

2-4. OPERATING PROCEDURES – CONTINUED.

6. Observe oncourse indications given by aircraft navigational system.

7. For flag check, set ATTEN controls (in 10 and 1 db steps) to attenuate rf output signal until flag appears. Reset ATTEN controls to O attenuation.

8. Set LETF/OC/RIGHT switch (S11) to LEFl position for a left-needle deflection.

9. Set LEFT/OC/RIGHT switch (S11) to RIGHT position for a right-needle deflection.

10. Press VAR pushbutton switch/lamp (S24/DS5). Variable mode has been selected when lamp (DS5) begins to blink.

NOTE

When LOC is in variable mode, LEFT/OC/ RIGHT switch is bypassed and aircraft navigation needle deflection indication is controlled only by variable control knob (R1).

11. Rotate variable control knob (R1) (on LEFT/OC/RIGHT switch) fully clockwise and then fully counterclockwise.

12. Observe localizer indicator for full-scale needle hang up.

NOTE

Localizer indicator should not hangup in either direction,

2-4. OPERATING PROCEDURES – CONTINUED.

13. Press VAR pushbutton switch/lamp (S24/DS5). Lamp (DS4) will stop blinking (variable mode released).

NOTE

Rf output signal is again controlled by LEFT/ OC/RIGHT switch.

14. Press and hold 90 HZ DELETE switch (S13) for an aircraft NAV flag condition (loss of signal).

15. Release 90 HZ DELETE switch.

16. Press end hold 150 HZ DELETE switch (S14) for an aircraft NAV flag condition (loss of signal).

17. Release 150 HZ DELETE switch.

18. Set 1020 HZ DELETE switch (S16) to ON position.

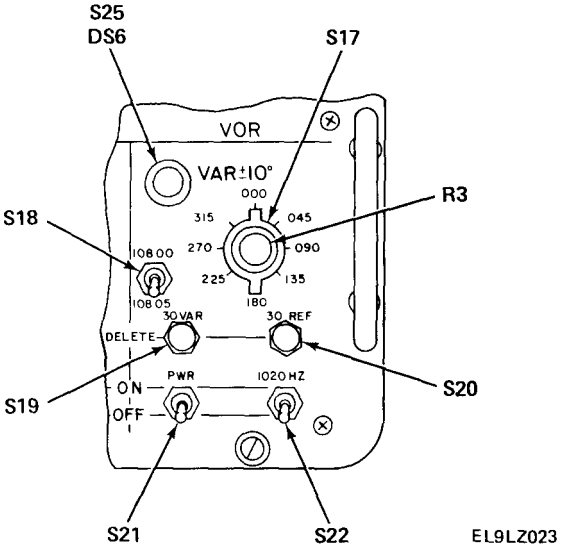
19 Listen for aircraft system localizer audio tone.

20. Set 1020 HZ switch to OFF position.

21. Change localizer/glideslope frequency control switch (S12) setting end observe aircraft navigational system for channel rejection.

22. Set BATTERY PWR switch (S2) and LOC PWR switch(S15) to OFF position.

VHF OMNIDIRECTIONAL RANGE (VOR) MODE



1. Set 108.00/108.05 switch (S18) to desired position operating frequency on test set and aircraft.

2. Set radial select switch(S17) to 000.

3. Set both ATTEN controls (AT1 and AT2) to 0.

4. Make sure that 1020 HZ (S16) switch is set to OFF position,

5. Set BATTERY PWR switch (S2) and VOR PWR switch (S21) to ON position.

6. Observe aircraft HSI or RMI for a 180-dagree bearing FROM indication with no flag displayed or a 000-degree bearing TO indication with no flag displayed.

NOTE

Teat aet simulates a VOR ground station and as such generates radials. Setting radial select switch (S17) to 045 will cause bearing pointer of HSI or RMI to indicate 225 degrees or 045 degrees. Setting switch to 090 will cause bearing pointer of HSI or RMI to indicate 270 degrees or 090 degrees. This principle applies to all chosen radials.

7. For flag check, set ATTEN controls (in 10 and 1 db steps) to attenuate rf output Signal until flag appears. Reset ATTEN controls to 0 attenuation.

8. Set radial select switch (S17) to each position (045 through 315).

NOTE

Aircraft bearing indications should be 180 degrees from each switch setting as noted above. For settings of 180 degrees and higher, the aircraft navigational system should give a TO indication.

9. Press VAR ± 10° pushbutton switch/lamp(S25/DS6). Variable mode has been selected when lamp (DS6) begins to blink.

NOTE

Aircraft bearing indication can be varied by ± 10 degrees for any switch-selected radial. This is accomplished by using variable control knob (R3) on radial select switch (S17). For example, for a switch-selected radial of 045 degrees, aircraft indicator maybe varied from 035 to 055 degrees. When variable control knob (R3) is turned clockwise, generated radial is increased. If receiver remains set at the corresponding fixed radial (000°, 045°, etc.) needle will deflect to left. Turning variable control knob (R3) counterclockwise will cause needle to deflect to right (radial is decreased).

10. Set radial select switch (S17) to desired position.

11. Turn variable control, knob (R3) in a clockwise direction Radial indication should increase.

12. Turn variable control knob (R3) in a counterclockwise direction. Radial indication should decrease.

13. Press VAR ± 10° pushbutton switch/lamp (S25/DS6). Lamp (DS6) will stop blinking (variable mode released)

NOTE

Rf output signal is again controlled by radial select switch (S17).

14. Press and hold 30 VAR DELETEswitch(S19) for an aircraft NAV flag condition (loss of signal).

15. Release 30 VAR DELETE switch.

16. Press and hold 30 REF DELETE switch (S20) for an aircrafl NAV flag condition (loss of signal).

17. Release 30 REF DELETE switch.

16. Set 1020 HZ switch (S22) to ON position.

19. Listen for aircraft system VOR audio tone.

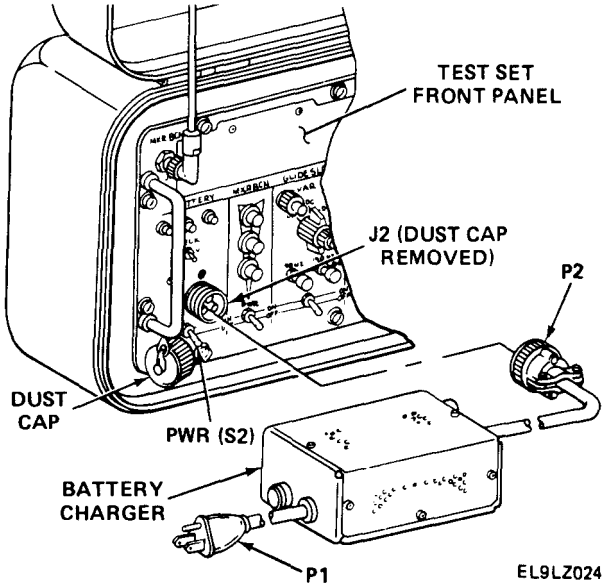
20. Set 1020 HZ switch to OFF position.

21. Change localizer/glideslope frequency control switch (S12) setting and observe aircraft navigational system for channel rejection.

22. Set VOR PWR switch (S21) to OFF position.

23. Set BATTERY PWR switch (S2) to OFF position.

2-5. BATTERY CHARGER OPERATION.



1. Unscrew dust cap from connector J2.

2. Connect battery charger plug (P2) to test set front panel CONNECTOR J2.

3. Insure that BATTERY PWR switch (S2) is set to OFF position.

CAUTION

If battery charger is left connected to test set and power to battery charger is removed, test set batteries will discharge through battery charger.

NOTE

Charging time for a fully discharged battery is 36 hours.

Battery charger should be left connected to test sat to insure maximum battery lie.

4. Connect battery charger connector (P1) to a standard 115 vac power outlet.

NOTE

230 vac operation is possible by rewiring transformer. This is done at the next higher level of maintenance.

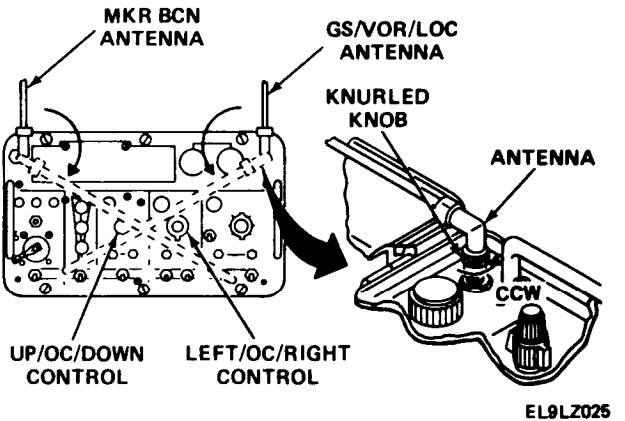
5. After completion of charging period, disconnect battery charger connector (P1) from power outlet (if applicable).

6. Remove battery chager plug (P2) from test set front panel connector J2.

7. Replace dust cap on connector J2.

8. Perform test set battery check procedure (para 2-3).

2-6. PREPARATION FOR MOVEMENT.



1. Clean equipment (para 3-7) to remove any foreign substance such as oil, stains, water, etc.

2. Make sure that all PWR switches are in OFF position.

3. If battery charger is connected to test set, disconnect it (para 2-5, steps 5,6, and 7).

4. If test set will not be used for 30 days or more, charge batteries fully (para 2-5).

5. **If test set will not be used for 30 days or more, remove batteries from test set (para 3-12).**

6. Loosen knurled knob of each antenna with one or two turns in a counterclockwise direction.

7. Slightlly raise MKR SCN antanna. Rotate if in a clockwise direction until if is positioned between UP/OC/DOWN and LEFT/OC/RIGHT CONTROLS.

8. Slightlly raise GS/VOR/LOC antanna. Rotate it in a counter-clockwise direction until if is positioned between UP/OC/ DOWN and LEFT/OC/RIGHT controls and above MKR BCN antenna.

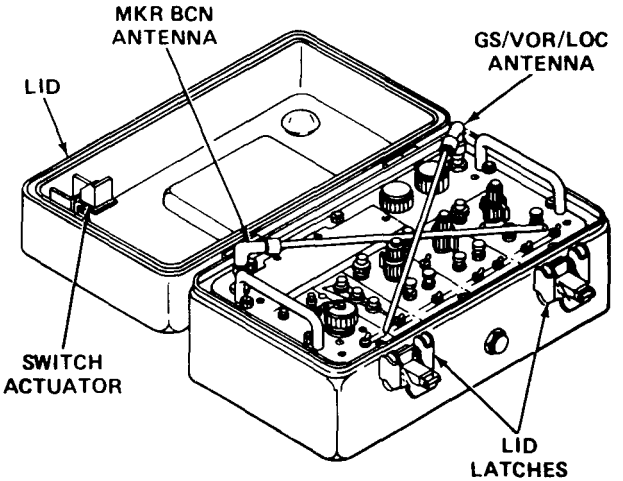
NOTE

Do not apply excessive force when securing test set antennaa.

9. Secure the MKR SCN antenna by rotating its knurled knob in a clockwise direction.

10. Secure GS/VOR/LOC antenna by rotating its knurled knob in a clockwise direction.

2-6. PREPARATION FOR MOVEMENT – CONTINUED.



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CAUTION

Make sure antennas are positioned properly so they will not be damaged while closing lid.

NOTE

Make sure that GS/VOR/LOC antenna does not interfere with switch actuator whan Closing lid.

11. Close lid slowly.

12. Secure lid by using lid latches.

NOTE

Case-closed operation of test set is prevented by the action of switch actuator as lid is closed. That is, if BATTERY PWR switch (S2) is left in ON position, switch actuator will make physical contact with PWR switch (as the lid is closed) and will set it to OFF position.

Section III OPERATION UNDER UNUSUAL CONDITIONS

Subject	Para	Page
Operation in Unusual Weather	2-7	2-38
Interference and ECM Procedures	2-8	2-38

2-7. OPERATION IN UNUSUAL WEATHER.

Test set is housed in weatherproof case allowing the transportation and operation of unit in poor weather conditions (rain, snow, etc). In addition, test set can operate over a wide temperature range. See paragraph 1-10, table 1-1.

Battery charger is housed in a perforated aluminum case, and should not be operated under wet weather conditions.

2-8. INTERFERENCE AND ECMPROCEDURES.

In some cases, false aircraft receiver test responses can occur if test set is used in the vicinity of a powerful broadcast transmitter, Relocate maintenance operations to an area where transmitter is no longer affecting test set.

CHAPTER 3

ORGANIZATIONAL MAINTENANCE

Subject	Section	Page
Repair Parts, Special Tools, TMDE, and Support Equipment	I	3-2
Service Upon Receipt	II	3-2
Organizational Preventive Maintenance Checks and Services (PMCS)	III	3-5
Troubleshooting	IV	3-7
Maintenance	V	3-10

OVERVIEW

This chapter refers the reader to the RPSTL (repair parts and special tools list) and maintenance allocation chart regarding repair parts, special tools, TMDE (test, measurement, and diagnostic equipment), and support equipment. This chapter also supplies information (or will reference applicable documentation) about unpacking and inspection of equipment, checking unpacked equipment, installation of parts, calibration, and installation of battery charger. In addition, organizational preventive maintenance checks and services, troubleshooting, and maintenance information is provided.

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

Subject	Para	Page
Special tools	3-1	3-2
Repair parts	3-2	3-2

3-1. SPECIAL TOOLS.

Fabrication of MB extender-cable antenna: see appendix D

3-2. REPAIR PARTS.

Repair parts are listed in the repair parts and special tools list TM 11-6625-2976-24P covering organizational maintenance of this equipment,

Section II SERVICE UPON RECEIPT

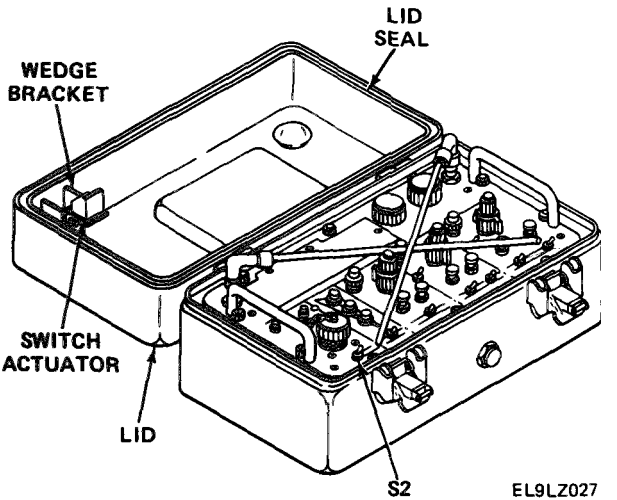
Subject	Para	Page
Unpacking and Inspection.....	3-3	3-2
Checking Unpacked Equipment	3-4	3-4
Installation	3-5	3-4

3-3. UNPACKING AND INSPECTION.

Carefully remove packing material from equipment and save it for repacking. Check unpacked equipment against packing list to insure that equipment is complete, See paragraph 1-2 for procedure to be followed in reporting missing items.

3-3. UNPACKING AND INSPECTION – CONTINUED.

Inspect cases for scratches, dents, or any other signs of damage that may have occurred during storage or shipment.



Perform steps 1,2, and 3 in paragraph 2-3, then proceed as follows:

Observe lid hinge action and lid fit as cover is being raised and inspect for signs of damage. inspect lid seal for damage. Raise lid to a position that allowds inspection of switch actuator and wedge bracket. Check for looseness or damage to these parts. Slowly lower lid and make sure switch actuator is positioned to operate BATTERY PWR switch (S2) to OFF position as lid is closed.

3-3. UNPACKING AND INSPECTION - CONTINUED.

NOTE

Make sure BATTERY PWR switch (S2) is set to OFF position and remains in OFF position until otherwise instructed.

Visually inspect controls and indicators located on front panel. Check for damaged, missing, or loose parts. Check for bent, broken, or missing antennas. Check battery charger for damaged or missing lamp lens, fuse holder, cables, and connectors.

NOTE

When shipped from the factory, battery charger is wired for use with 115 vac power.

3-4. CHECKING UNPACKED EQUIPMENT.

Check BATTERY PWR switch (S2) for positive action in each position. Set switch to OFF position when done. Check other PWR switches, dials, and pushbuttons in a similar manner. Set all PWR switches and other switches to OFF position when done.

Inspect batteries and battery compartment for signs of damage.

3-5. INSTALLATION

See paragraph 3-12 for installation procedures of two 8-volt rechargeable batteries and two antennas. Check condition of batteries (para 2-3, steps 11 thru 16). Battery charger installation procedures are found in paragraph 2-5.

Refer to TB 43-180 for calibration requirements. (See appendix A).

Refer to higher level of maintenance for conversion of battery charger to 230 vac use.

Section III ORGANIZATIONAL,PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Subject	Para	Page
General	3-6	3-5
Cleaning and Touchup Painting	3-7	3-6

3-6. GENERAL

To keep test sat and battery charger in proper operating condition, the following checks must be performed:

1. Inspect equipment for scratches and worn or bare spots (para 3-7).

2. Clean equipment on a routine basis if whenever cleaning becomes necessary (para 3-7).

3. Check for frayed cables, loose, missing, or damaged parts before and after operation.

4. Perform operational check (para 3-11) on a monthly basis using an aircraft with a known good operational navigational system.

3-7. CLEANING AND TOUCHUP PAINTING.

WARNING

Fumes of TRICHLOROTRIFLUOHOETHANE are poisonous. Provide adequate ventilation whenever you use TRICHLOROTRI-FLUOROETHANE. Do not use solvent near heat or open flame. TRICHLOROTRI-FLUOROETHANE will not burn, but heat changes the gas into poisonous, irritating fumes. DO NOT breathe the fumes or vapors. TRICHLOROTRIFLUOROETHANE dissolves natural skin oils. DO NOT get the solvent on your skin. Use gloves, sleeves and and apron which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

1. Remove dust and loose dirt from exterior of test set and battery charger with a clean, soft cloth.

2. Use a cloth dampened (not wet) with TRICHLOROTRI-FLUOROETHANE to remove grease, fungus, and ground-in dirt.

3. Remove dust ordirtfrom cable and equipment connectors with a soft brush. Remove grease or grime with a lint-free cloth moistened with TRICHLOROTRIFLUOROETHANE.

4. Clean test set front panel and control knobs with a soft, clean, lint-free cloth.

5. Clean batteries and battery box electrical contacts with a pencil eraser.

After cleaning, remove corrosion from metal surfaces by lightly sanding area with fine sandpaper. Brush two thin coats of paint on the bare metal to protect it from further corrosion. Refer to TB 43-0118, Field Instructions for Painting and Preserving Electronics Command Equipment Including Camouflage Pattern painting of Electrical Equipment Shelters.

Section IV TROUBLESHOOTING

Subject	Para	Page
General	3-8	3-7
Troubleshooting Procedures	3-9	3-8

3-8. GENERAL

The troubleshooting chart presented in thes section furnishes the operator with a list of malfunctions and the appropriate test(s) or inspection(s) of the most likely faulty part. A corrective action is then specified to correct the fault. After the fault is corrected, an operational check must be performed to insure correct operation of the equipment. If the check fails, refer the equipment to the next higher level of maintenance.

If you find a malfunction that is not covered in the troubleshooting chart, refer the equipment to the next higher level of maintenance.

Note that each malfunction listed in the troubleshooting chart is assigned an item number.

3-9. TROUBLESHOOTING PROCEDURES.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

BATTERY CHARGER

1. Battery charger lamp does not light.

Inspect fuse,

Replace fuse (para 3-12)

TEST SET

1. All battery lamps do not light.

Check batteries (para 2-3).

Replace batteries (para 3-12),

2. Marker beacon indication(s) on aircraft navigational system are not present or are incorrect.

Inspect marker beacon antenna connections.

Make proper connections.

Check the distance from the aircraft marker beacon antenna and the test set marker beacon antenna.

Install extender cable (para 3-13)

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
3. Glideslope indication(s) on aircraft navigational system are not present or are incorrect.
Inspect VOR/LOC/GS antenna connection.
Make propar connections.
4. VAR lamps (DS4, DS5, or DS6) do not blink.
Inspect lamp.
Replace lamp (para 3-12).
5. Localizer indication(s) on aircraft navigational system are not present or incorrect.
Inspect VOR/LOC/GS antenna connection.
Make proper connection.
6. VOR indication(s) on aircraft navigational system are not present or are incorrect.
Inspect VOR/LOC/GS antenna connection.
Make proper connection.

Section V MAINTENANCE

Subject	Para	Page
General	3-10	3-10
Operational Check	3-11	3-10
Repair or Replacement	3-12	3-24
Installation of Marker Beacon Extender Cable	3-13	3-34

3-10. GENERAL.

Refer to appropriate aircraft manual for correct control settings of onboard navigational equipment while doing performance tests on test set.

The performance of test set and battery charger is tested during operational check of this equipment. If a malfunction is found during a step in operational check, the operator is referred to appropriate troubleshooting item numbers in the troubleshoofing chart. The most likely faulty part can then be tested or inspected and corrected. The operational check of equipment is then performed again.

If the check fails, equipment is referred to the next higher level of maintenance. If the check passes, the next step in the operational check is performed and the procedure is repeated.

3-11. OPERATIONAL CHECK.

Make sure that an aircraft with a known good navigational system is used on this test.

When checking marker beacon, glideslope, localizer, and VOR modes of operation, begin each test by setting the controls of the aircraft navigational equipment for the reception of signals in the proper mode.

The following provides an operational check or performance test of the test set and battery charger equipment. If a malfunction is found while performing these checks, the operator should then perform the applicable troubleshooting procedure referenced in the check

BATTERY CHARGER

BATTERY CHARGER OPERATION

SETUP:

If battery charger is connected to test set, disconnect it (para 2-5).

ACTION	RESULT
Connect battery charger to known good 115 vac power outlet.	Battery charger lamp should light. If lamp does not light, see paragraph 3-9, BATTERY CHARGER, item 1.

TEST SET

INITIAL ADJUSTMENTS:

Perform initial adjustments given in paragraph 2-3, then proceed to next step (if applicable).

MARKER BEACON MODE OPERATION

SETUP:

1. Use marker beacon extender-cable antenna forthese checks (para 3-13).

2. Set BATTERY PWR switch (S2) and MKR BCN PWR switch (S6) to ON position.

ACTION	RESULT
a. Press blue pushbutton (S3) for outer marker indication.	a. Audio is heard in headset and/or MB indicator is lit. If outer marker indication is not observed or is incorrect, see paragraph 3-9, item 2.
b. Press yellow pushbutton (S4) for middle marker indication.	b. Audio is heard in headset and/or MB indicator is lit. If middle marker indication is not observed or is incorrect, see paragraph 3-9, item 2.
c. Press white pushbutton (S5) for inner marker indication.	c. Audio is heard in headset and/or MB indicator is lit. If inner marker indication is not observed, or is incorrect, see paragraph 3-9, item 2.
d. Set BATTERY PWR switch (S2) and MKR BCN PWR switch (S6) to OFF position.	

GLIDESLOPE

SETUP:

1. Set localizer/glideslope frequency control switch (S12) to 334.7-108.1 position on test set and aircraft.

2. Set UP/OC/DOWN control S7 to (OC position.

3. Set both ATTEN controls to 0.

ACTION	RESULT
a. Set BATTERY PWR switch (S2) and GLIDE-SLOPE PWR switch (S10) to ON position.	a. Oncourse indications should be given by the aircraft navigational system. If indications are not correct or not observed, see paragraph 3-9, item 3.
b. Set ATTEN controls (in 10 and 1 db steps) to attenuate rf output signal.	b NAV flagon aircraft instrument panel will appear.
c. Reset both AITEN controls (AT1 and AT2) to 0.	c. NAV flagon aircraft instrument panel will disappear.

ACTION	RESULT
d. Set UP/OC/DOWN switch (S7) to UP position,	d. An up-needle deflection should occur. If deflection is not observed or is incorrect, see paragraph 3-9, item 3.
e. Press VAR pushbutton switch/lamp (S23/DS4).	e. Lamp DS4 should start blinking. If not, see paragraph 3-9 item 4.
f. Rotate variable control knob (Rl) on UP/OC/DOWN switch fully clockwise, then fully counterclockwise.	f. If glideslope indicator meter needle hangs up in either direction, see paragraph 3-9 item 3.
9. Press VAR pushbutton, switch/lamp (S23/DS4).	g. Observe that DS4 lamp stops blinking.
h. Set UP/OC/DOWN switch (S7) to down position.	h. A down-needle deflection should occur. If deflection is not observed or is incorrect, see pargraph 3-9, item 3.
i. Set UP/OC/DOWN switch (S7) to the OC position.	i. Needle should be centered. If deflection is not observed or is incorrect, see paragraph 3-9, item 3.

3-11. OPERATIONAL CHECK – CONTINUED.

ACTION	RESULT
j. Press and hold 90 HZ DELETE switch. Release 90 HZ DELETE switch.	j. An aircraft NAV flag should be observed. If not, see paragraph 3-9, item 3.
k. Press and hold 150 HZ DELETE switch. Release 150 HZ DELETE switch.	k. An aircraft NAV flag should be observed. If not, see paragraph 3-9, item 3.
l. Set localizer glideslope frequency control switch (S12) to 334.55-108 15 position.	l. An aircraft NAV flag should be displayed, if not, refer to higher level of maintenance for repair.
m. Set aircraft receiver to 334.55 MHz.	m. Observe that NAV flag disappears.
n. Sat BATTERY PWR switch (S2) and GLIDE-SLOPE PWR switch (S10)toOFF position.	

LOCALIZER

SETUP:

1. Set localizer/glideslope frequency control switch (S12) to 334.7-108.1 position on test set and aircraft.
2. Set LEFT/OC/RIGHT control (S11)to Opposition.
3. Set both ATTENcontrols(AT1 and AT2)to 0.
4. Set 1020 Hz switch to OFF position.

ACTION	RESULT
a. Set BATTERY PWR switch (S2) and LOC PWR switch (S15) to ON position.	a. Oncourse indications should be given by the aircraft navigational system. If indications are not correct or not observed, see paragraph 3-9, item 5.
b. Set ATTEN controls (in 10 and 1 db steps) to attenuate rf output signal.	b. NAV flagon aircraft instrument panel will appear.
c. Reset both ATTEN controls (AT1 and AT2) to 0.	c. NAV flagon aircraft instrument panel will disappear.

3-11. OPERATIONAL CHECK – CONTINUED.

ACTION	RESULT
d. Set LEFT/OC/RIGHT switch (S11) to LEFT position.	d. A left-needle deflection should occur.
e. Set LEFT/OC/RIGHT switch (S11) to RIGHT position.	e. A right-needle deflection should occur.
f. Set LEFT/OC/RIGHT switch (S11) to OC position.	f. Needle should be centered. If deflection is not observed, see paragraph 3-9, item 5.
g. Press VARpushbutton switch/lamp (S24/DS5).	g. Lamp DS5 should start blinking. If not, see paragraph 3-9, item 5.
h. Rotate variable control knob (R2 on LEFT/OC/RIGHT switch) fully clockwise, then fully counterwise.	h. If localizer indicator meter needle hangs up in either direction, see paragraph 3-9, item 5.
Press VAR pushbutton switch/lamp (S24/DS5).	i. Observe that lamp DS5 stops blinking and needle is cantered.

ACTION	RESULT
j. Press and hold 90 HZ DELETE switch.	NAV flag should be observed.
k. Release 90 HZ DELETE switch.	NAV flag disappears.
l. Press and hold 150 HZ DELETE switch.	NAV flag should be observed.
m. Release 150 HZ DELETE switch.	NAV flag disappears.
n. Set localizer 1020 HZ switch to ON.	1020 HZ tone is heard in headset.
o. Set localizer/glideslope frequency control switch (S12) on test set and on aircraft to 334.55-108.15 position.	1020 HZ tone is removed and NAV flag appears.
p. Set LOC receiver to 108.15.	1020 HZ tone is heard in headset, NAV flag disappears, and on-course indication is observed on indicator.

ACTION	RESULT
q. Set LOC PWR, switch, LOC 1020 HZ switch, and BATTERY PWR switch (S2) to OFF position.	

VOR

NOTE

The test set generates radials. As such, all aircraft bearing indications will be 180 or 000 degrees from switch settings.

SETUP:

1. Set 108.00/108.05 switch (S18) to 108.00 on test set.
2. Set VOR bearing select switch(S17) to 000.
3. Set both ATTEN controls (AT1 and AT2) to 0.
4. Set VOR 1020 HZ switch to OFF position.

3-11. OPERATIONAL CHECK - CONTINUED.

ACTION	RESULT
a. Set BATTERY PWR switch (S2) and VOR PWR switch (S21) to ON position.	a. With VOR bearing select switch (S17) set to 000, a 180 degree bearing will be indicated on the aircraft HSI or RMI. If not, see paragraph 3-9, item 6.
b. Set ATTEN controls (in 10 and 1 db steps) to attenuate rf output signal.	b. NAV flag on aircraft instrument panel will appear.
c. Reset both ATTEN controls (AT1 and AT2) to 0.	c. NAV flagon aircraft instrument panel will disappear.

ACTION	RESULT
d. Set the radial select switch to each position (045 through 315).	d. Aircraft bearing indications should correspond to switch settings.
e. Press the VAR ± 10° pushbutton switch/lamp.	e. Lamp DS6 should start blinking. If not, see paragraph 3-9, item 4.
f. Rotate variable control knob (R3) (on VOR bearing select switch) fully clockwise, then fully counterclockwise.	f. Bearing indication should varyby + 10 degrees (needle should deflect to left) when variable control knob (R3) is rotated clockwise and -10 degrees (needle should deflect to right) when variable control knob is rotated counterclockwise. If there is no deflection or incorrect deflection is observed, see paragraph 3-9, item 6.

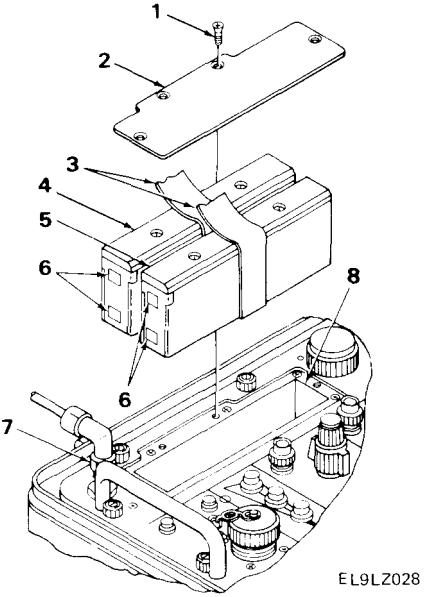
ACTION	RESULT
g. Press VAR ± 10° push-button switch/lamp (S25/DS6).	g. Lamp DS6 should stop blinking. If not, see paragraph 3-9, item 6.
h. Press and hold 30 VAR DELETE switch (S19). Release 30 VAR DELETE switch.	h. An aircraft NAV flag should be obtained.
i. Press and hold 30 REF DELETE switch (S20). Release 30 REF DELETE switch.	i. An aircraft NAV flag should be obtained.

3-11. OPERATIONAL CHECK – CONTINUED.

ACTION	RESULT
j. Set 1020 HZ switch (S22) to ON position.	j. 1020 HZ tone should be heard in headset. If not, see paragraph 3-9, item 6.
k. Set VOR 1020 HZ and PWR switch to OFF position.	
l. Set BATTERY PWR switch (S2) to OFF position.	

3-12. REPAIR OR REPLACEMENT.

REPLACEMENT OF BATTERIES



Removal of Batteries

TOOLS: Tool Kit, Electronic Equipment TK-101/G

MATERIALSPARTS: Batteries, two, P/N 6140-01-040-1774
Tape, P/N 7510-00-290-8036

PRELIMINARY PROCEDURE: If the battery charger is connected to the test set, remove it (para 2-5).

Removal

1. Remove four mounting screws (1) and battery plate (2).

2. Carefully pull on tape (3) and remove batteries (4 and 5).

installation

CAUTION

Follow directions on battery warning label to prevent damage to equipment.

1. Wrap tape (3) or equivalent around batteries (4 and 5) leaving tab on top as shown in illustration.

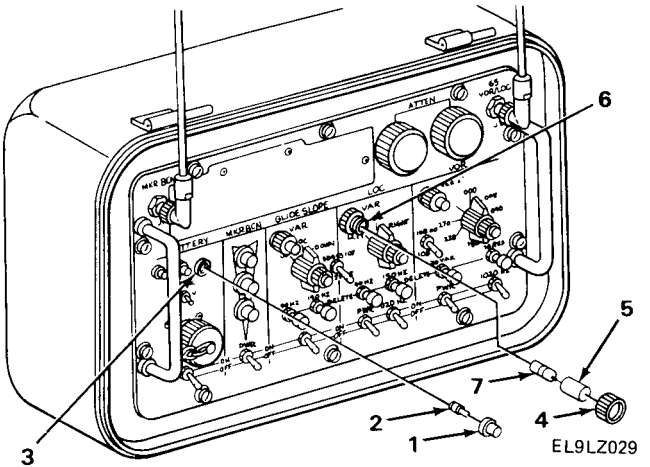
2. Position batteries (4 and 5) with warning labels and tape tabs facing up and contacts (6) facing marker beacon jack (7).

3. Lower one battery into battery compartment (8) and slide to bottom of battery compartment making sure tab on tape (3) is accessible.

4. Lower other battery into battery compartment (8) making sure tab on tape (3) is accessible.

5. Install battery plate (2) and secure with four mounting screws (1).

REPLACEMENT OF BATTERY VOLTAGE INDICATOR LAMPS AND VARIABLE INDICATOR LAMPS



Removal of Battery Voltage Indicator Lamps

1. Unscrew indicator cap (1) (red, green, or amber) by turning counterclockwise, Set cap aside.

2. Remove lamp (2) from indicator lamp receptacle (3).

installation of Battery Voltage Indicator Lamps

1. Install replacement lamp (2) into lamp receptacle (3).

2. Install indicator cap (1) into lamp receptacle (3) and tighten by turning clockwise.

Removal of Variable Indicator Lamps

1. Unscrew lens cap retaining ring (4) from applicable VAR mode switch.

2. Remove lens cap (5) from VAR mode switch (6).

3. Twist and pull lamp (7) from lens cap (5)

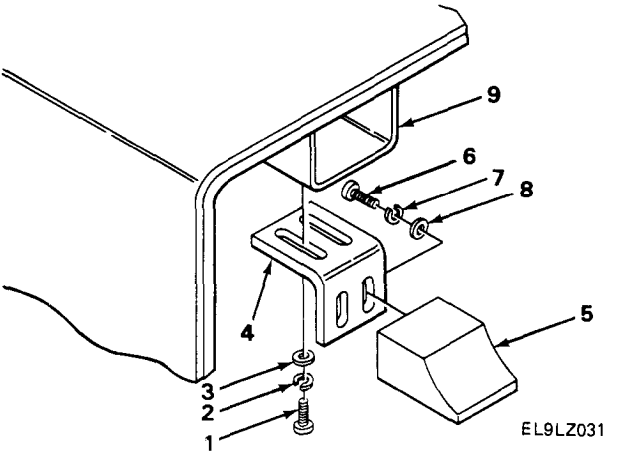
Installation of Variable Indicator Lamps

1. Install replacement lamp into lens cap (5).

2. Reinstall lens cap (5) into applicable VAR mode switch (6)

3. Reinstall lens cap retaining ring (4) and secure lens cap (5) to VAR mode switch (6) by turning retaining ring in a clockwise direction. Do not overtighten.

REPLACEMENT OF BATTERY POWER SWITCH ACTUATOR



Removal of Battery Switch Actuator/Wedge Bracket

TOOLS: Tool Kit, Electronic Equipment TK-101/G

1. Remove two screws (1), lockwashers (2), and flat washers (3).

2. Remove wedge bracket (4) and attached switch actuator (5).

3. Remove two screws (6), lockwashers (7), and flat washers (8).

4. Remove switch actuator(5).

Installation of Battery Power Switch Actuator/wedge Bracket

A replacement switch actuator, wedge bracket, or both can now be installed.

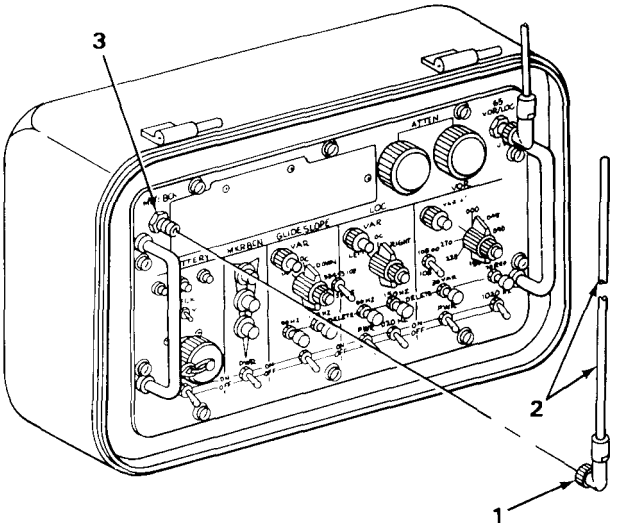
1. Position switch actuator (5) on wedge bracket (4).

2. Attach switch actuator (5) to wedge bracket (4) using two screws (6), lockwashers (7), and flat washers (8).

3. Attach wedge bracket to wedge bracket support (9) using two screws (1), lockwashers (2), and flat washers (3).

4. Adjust switch actuator (5) and wedge bracket (4) with adjusting screws (1 and 6) to set the power switch to the OFF position when lid is closed.

REPLACEMENT OF ANTENNAS



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Removal of Antennas

NOTE

Only one antenna is shown. Procedure is typical for both.

1. Turn knurled knob (1) of top antenna in counterclockwise direction until antenna (2) is free of jack (3).

2. Remove antenna (2).

3 Repeat steps 1 and 2 for other antenna.

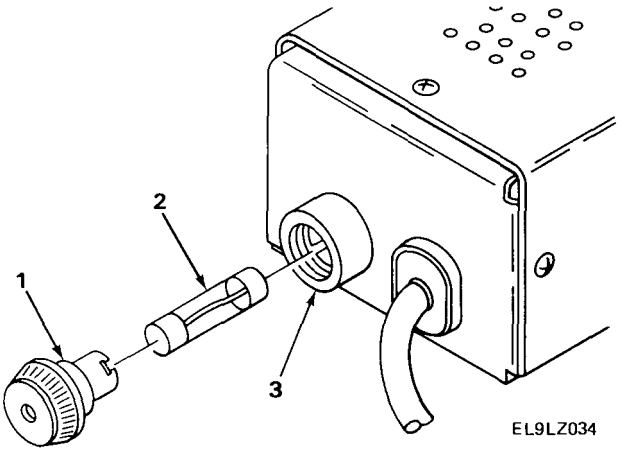
Installation of Antennas

1. Install replacement antenna (2) by positioning antenna on jaok (3). Press down slightly.

2. Secure antenna by turning knurled knob (1) two or three turns in clockwise direction.

3. Hand tighten knurled knob (1) until antenna(2) is firmly in place. Do not overtighten.

REPLACEMENT OF BATTERY CHARGER FUSE



Removal of Battery Charger Fuse

1. Press inonfuse holder cap(1) and rotate counterclockwise to unlock.

2. Pull fuse holder cap (1) and fuse (2) out of fuse holder (3).

3. Remove defective fuse (2) from fuse holder cap (1).

Installation of Battery Charger Fuse

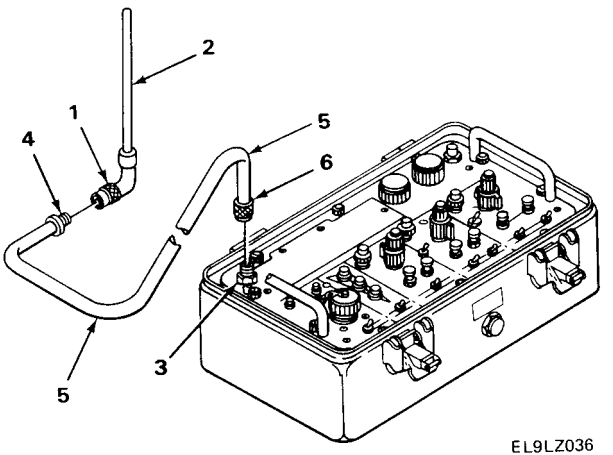
1. Install replacement fuse in fuse holder cap (1).

2. Insert fuse (2) and fuse holder cap (1) in fuse holder (3).

3. Push in on fuse holder cap (1) and rotate in clockwise direction to lock in place.

3-13. INSTALLATION OF MARKER BEACON EXTENDER CABLE.

MATERIALS/PARTS: Extender cable (see appendix D)



NOTE

If an extender cable is not available, cable may have to remanufactured. Instructions for manufacturing are given in appendix D.

Installation

1. Turn knurled knob (1) on MKR BCN antenna (2) counterclockwise until antenna is free of jack (3) and remove antenna.

2. Position antenna knurled knob (1) on outside threaded end (4) of extender cable (5) and press in lightly.

3. Hand tighten knurled knob (1) until antenna (2) is firmly seated on extender cable (5). **Do not overtighen.**

4. Position knurled knob end (6) on extender cable (5) over jack (3) and press in lightly.

5. Hand tighten knurled knob (6) until extender cable (5) is firmly seated on jack (3). **Do not overtighten.**

Removal

1. Turn knurled knob (6) on extender cable (5) counterclockwise until extender cable is free of jack (3).

2. Turn antenna knurled knob (1) counterclockwise until antenna (2) is free of extender cable (5).

3. Position antenna (2) on jack (3) and press in antenna lightly

4. Secure antenna (2) by hand tightening knurled knob(1) clockwise until antenna is firmly seated. Do not overtighten.

5. Store extender cable (5) for future use.

Section Vi PREPARATION FOR STORAGE OR SHIPMENT

Subject	Section	Page
General	3-14	3-36
Administrative Storage	3-15	3-36
Intermediate Storage	3-16	3-36

3-14. GENERAL.

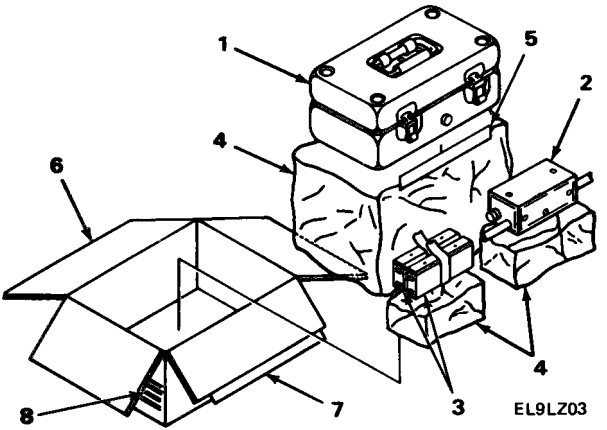
This section provides procedures for repacking the test set and battery charger. Before repacking, the next scheduled PMCS should be performed. All known problems should be corrected and all current Modification Work Orders (MWO's) applied.

3-15. ADMINISTRATIVE STORAGE.

Administrative storage refers to storage from 1 to 45 days.

PRELIMINARY PROCEDURE: Perform the procedures given in paragraph 2-6.
Remove batteries (para 3-12).

MATERIALS: Double thick cardboard box
Tape
Three heavy plastic bags



PACKING

1. Encase test set (1), battery charger (2), and batteries (3) in separate heavy plastic bags (4). Close with tape (5) to seal against moisture.

2. Pack units in double thick cardboard box (6).

3. Seal box (6) with tape (7).

4. Mark box with appropriate nomenclature (8) ie, model identification and serial number.

5. Place box in secure storage area.

3-16 INTERMEDIATE STORAGE.

Intermediate storage means storage between 46 and 180 days.

Pack equipment as for administrative storage (para 3-14).

APPENDIX A

REFERENCES

A-1. SCOPE.

The following is a list of all pamphlets, forms, service bulletins, and technical manuals referenced in or related to this manual.

A-2 PAMPHLETS.

Consolidated Index of Army publications and Blank Forms. . . . . .DA PAM 310-1

The Army Maintenance Managerment System (TAMMS). . . . . .DA PAM 736-750

A-3. FORMS.

Recommended Changes to Publications and Blank Forms . . . . . DA FORM 2028

Recommended Changes to Equipment Technical Publications . . . . . DA FORM 2028-2

Equipment Inspection and Maintenance Worksheet . . . . . DA FORM 2404

Discrepancy in Shipment Report (DISREP) SF361

Report of Discrepancy (ROD) SF364

Quality Deficiency Report SF368

A-4. SERVICE AND TECHNICAL BULLETINS.

Preservation, Packaging, Packing and Marking Materials, Supplies and Equipment Used bythe Army , ... SB 38-1OO
Field instructions for Painting and Preserving Electronics Command Equipment Including Camouflage Pattern Painting of Electrical Equipment Shelters . . . . . TB 43-0118
Calibration Requirements . . . . . TB 43-18O

A-5. TECHNICAL MANUALS.

Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics) Command . . . . . TM 750-244-2

APPENDIX B

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

B-1. GENERAL

This appendix provides the Maintenance Allocation Chart (MAC) for the test act. Section I explains the items and column entries that make up the MAC, while section II furnishes the MAC.

B-2. MAINTENANCE FUNCTIONS.

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 by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

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

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

B-2. MAINTENANCE FUNCTIONS-CONTINUED.

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

f. Replace. To substitute serviceable like-type part subassembly or module (component or assembly) for an unserviceable counterpart.

g. Repair. To apply maintenance services (inspect, test, service, adjust, aline, 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 part, subassembly, module (component or assemby), end item or system.

h. Overhaul. To restore an item to a completely serviceable/ operational condition as required by maintenance standards in appropriate technical publications (ie, DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

B-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 Function. 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 the purpose of having the group numbers in the MAC and RPSTL agree.

cf. Column 4, Maintenance Category. Column 4 specifies, by the listing of a worktime 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 varies at different maintenance categories, appropriate worktime figures will be shown for each category. The number of task-hours specified by the worktime 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 condition. 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

B-3. COLUMN ENTRIES – CONTINUED.

e. Column 5, Tools and Eqpt. 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 remark in section IV, Remarks, which is pertinent to the item opposite the particular code.

B-4. TOOL AND TEST EQUIPMENT REQUIREMENTS.

a. Tool or Test Equipment Reference (Ref) 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 to 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.

B-5. REMARKS.

a. Reference Code.This code refers to the appropriate item(a) in column 6 of the MAC.

b. Remarks. This column provides the required explanatory information necessary to clarify the items in column 6 of the MAC.

Section II MAINTENANCE ALLOCATION CHART FOR AN/ARM-186

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQPT	(6) REMARKS
00	TEST SET, RECEIVER AN/ARM-186	Inspect		0.2					
		Test		0.1				11	A
		Test				2.2		2 thru 10	B
		Aline				0.8		2 thru 10	B, C
		Calibrate				2.5			B, D
		Replace		0.1					
		Repair		0.1				1	B, E
		Repair				1.5		2	B, F
		Repair					3.5		G
01	ELECTRONIC COMPONENT ASSEMBLY	Inspect				0.2			
		Test				2.0		2 thru 10	B
		Replace				0.2			
		Repair				1.2		2	B, F
		Repair					3.0		G

0101	FRONT PANEL ASSEMBLY	Inspect Test Repair Repair				0.1 0.3 0.5	 2.0	3 2	B B B, H G
0102	MARKER BEACON ASSEMBLY A1	Test Aline Replace Repair				 0.2	0.4 0.4 0.7	 2	G G B G
0103	UHF GLIDESLOPE ASSEMBLY A2	Test Aline Replace Repair				 0.2	0.4 0.5 0.7	 2	G G B G
0104	VHF GLIDESLOPE ASSEMBLY A3	Test Aline Replace Repair				 0.2	0.4 0.5 0.7	 2	G G B G
0105	LOCALIZER ASSEMBLY A4	Test Aline Replace Repair				 0.2	0.4 0.5 0.7	 2	G G B G

Section II MAINTENANCE ALLOCATION CHART FOR AN/ARM-186–CONTINUED

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQPT	(6) REMARKS
0106	VOR ASSEMBLY A5	Test					0.4		G
		Aline					0.5		G
		Replace				0.2		2	B
		Repair					0.7		G
0107	CIRCUIT CARD ASSEMBLY A6	Test					0.6		G
		Adjust				0.5		2 thru 10	B
		Replace				0.3		2	B
		Repair					0.9		G
02	BATTERY CHARGER	Inspect		0.1					
		Test				0.2		2, 3	B
		Replace		0.1					
		Repair		0.1					I
		Repair				0.4		2	B

Section III TOOL AND TEST EQUIPMENT REQUIRED FOR AN/ARM-186

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	O	TOOL KIT, ELECTRONIC EQUIPMENT TK-101/G	5180-00-064-5178	
2	H	CALIBRATION AND REPAIR KIT	5180-00-670-7123	
3	H	DIGITAL VOLTMETER, HP 3490A	6625-00-557-8305	
4	H	OSCILLOSCOPE, TEK R5440	6625-01-102-8145	
5	H	POWER METER, HP 432A WITH THERMISTER 487A	6625-00-148-8069	
6	H	ZIFOR, COLLINS MODEL 478A-2,3	6625-00-150-6977 4931-01-106-8642	

Section III TOOL AND TEST EQUIPMENT REQUIRED FOR AN/ARM-186 – CONTINUED

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
7	H	FREQUENCY COUNTER, HP 5345A	6625-00-531-4752	
8	H	DUAL VOLT POWER SUPPLY, HP PS503A	6130-01-004-6705	
9	H	DISTORTION ANALYZER, HP C41-334A	4931-00-987-9002	
10	H	MODULATION METER, HP 8901A	6625-01-097-6010	
11	O	MARKER BEACON ANTENNA EXTENDER CABLE	FABRICATE	
12	H	TEST FIXTURE, BATTERY SIMULATOR	FABRICATE	

Section IV REMARKS

REFERENCE CODE	REMARKS
A	Battery test and fuse continuity test.
B	All GS maintenance is performed by technical support group (TSG).
C	Adjust LOC, GS, VOR and MB modes and operative voltage. Aline VOR bearing control and attenuator controls.
D	See TB 9-6625-2052-35, Section II.
E	Repair by replacement of battery charger, throwaway batteries, lamps, antenna, fuse, and actuator.
F	Repair by replacement of modules A1-A7, front panel and/or piece parts and transit case.
G	Depot maintenance is performed by the Air Force.

Section IV REMARKS – CONTINUED

REFERENCE CODE	REMARKS
H	Repair by replacement of piece parts.
I	Replace fuse.

APPENDIX C

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

C-1. SCOPE.

This appendix lists expendable supplies and materials you will need to operate and maintain the test set and battery charger. These items are authorized to you by CTA 50-970, Expandable kerns (except medical, class V, repair parts, and heraldic items).

C-2. EXPLANATION OF COLUMNS.

a. Column 1, Item Number. This number is assignad to the entry in the listing and is referenced in the narrative instructions to identify the material (eg, use cleaning compound, item 1, appendix C).

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

C — Operator/Crew
O — Organizational

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

C-2. EXPLANATION OF COLUMNS - CONTINUED.

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 Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. Column 5, Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character abbreviation (eg, ea, in., pr). 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 NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION (FSCM)	(5) U/M
1	O	8305-00-267-3015	Lint-Free Cloth (81348)	yd
2	O	6850-00-105-3084	TRICHLOROTRI-FLUOROETHANE (80244)	qt
3	O	8020-00-205-6512	Brush (96906)	ea
4	O	5350-00-598-5908	Sandpaper, Fine, No. 000	sh
5	O	7510-00-290-8036	Pressure Sensitive Tape, Filament Reinforced	yd (60)

APPENDIX D

MANUFACTURED/FABRICATED ITEMS

D-1. INTRODUCTION.

This appendix includes instructions for making items authorized to be manufactured or fabricated at the organizational maintenance level.

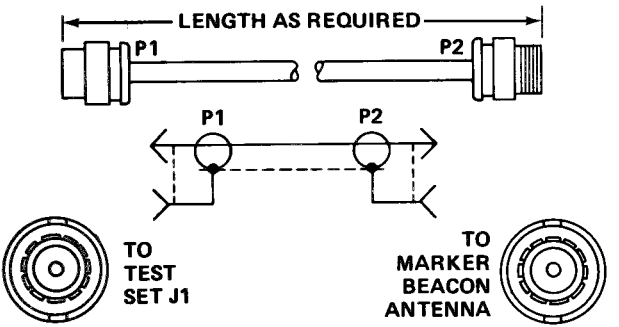
D-2. FABRICATED MARKER BEACON EXTENDER CABLE.

A fabricated marker beacon extender cable is required to perform operational checks of aircraft navigational equipment on the marker beacon mode of operation and to perform operational checks on the test set.

Parts Needed:

TNC Male Connector, Receptacle, NSN5935-01-022-9082
TNC Female Connector, NSN 5935-00-701-2215
BNCFemole Connector, NSN 5935-00-135-9159
RF Cable RG-58/U, NSN 6145-00-542-6092

Connect parts as shown in the following diagram



NOTE:
LENGTH MAY BE 10, 15, OR 25 FEET.
MANUFACTURE TO THE CLOSEST LENGTH
THAT WILL ACCOMPLISH THE JOB.

EL9LZ037

GLOSSARY

Section I ABBREVIATIONS

ATTEN	attenuator
db	decibel
GS	glideslope
Hz	Hertz
ILS	instrument landing system
LOC	localizer
MHz	megahertz
MKR BCN (MB)	marker beacon
OC	on course
PWR	power
rf	radio frequency
VAR	variable
VHF	very high frequency
VCR	VHF omnirange

Section II DEFINITION OF UNUSUAL TERMS

CHANNEL REJECT. Rejection of radio frequency by navigational equipment.

OMNIRANGE. A radio facility providing bearing information to or from such facilities at all azimuth within its service area.

By Order of the Secretary of the Army:

JOHN A. WICKHAM JR.
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
MajorGeneral, United States Army
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