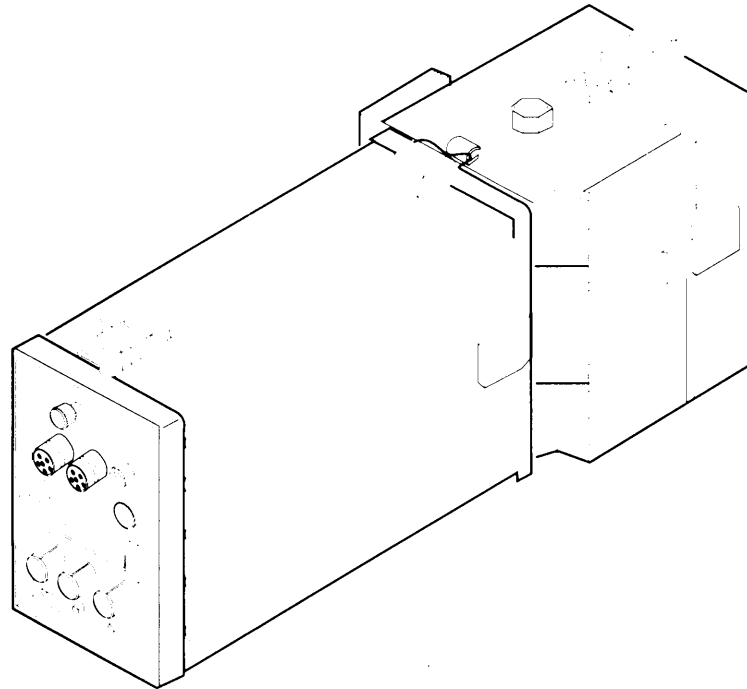


TM 11-5820-1102-12

OPERATOR'S AND UNIT MAINTENANCE MANUAL



**RADIO SET, AN/PRC-132
(NSN 5820-01-320-8831) (EIC: N/A)
CONSISTING OF
RECEIVER-TRANSMITTER, RADIO
RT-1648/PRC-132
(NSN 5820-01-320-3686) (EIC: N/A)
AND
BATTERY BOX
CY-8629/PRC-132
(NSN 6160-01-322-9366) (EIC: N/A)**

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OPERATING INSTRUCTIONS 2-1

OPERATOR MAINTENANCE 3-1

UNIT MAINTENANCE 4-1

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CHANGE
NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY,
Washington, DC, 15 November 1993

**OPERATOR'S AND UNIT MAINTENANCE MANUAL
RADIO SET, AN/PRC-132
(NSN 5820-01-320-8831) (EIC:N/A)
CONSISTING OF
RECEIVER-TRANSMITTER, RADIO
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CY-8629/PRC-132
(NSN 6160-01-322-9366) (EIC:N/A)**

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General, United States Army
Chief of Staff

Official:



MILTON H. HAMILTON
Administrative Assistant to the
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05446

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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 THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A DRY WOODEN POLE OR A DRY 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

**INJURY CAN OCCUR IF THE FOLLOWING ARE NOT OBSERVED
WHEN USING THE RADIO SET**

WARNING

RF VOLTAGE WARNING

Exposed metal transceiver parts can assume an RF potential to ground when antenna is tuned without grounding transceiver. To avoid potential RF burns, tie transceiver GND stud to ground.

WARNING

KEEP AWAY FROM LIVE CIRCUITS

The antenna is a source of electrical and radio frequency energy. NEVER TOUCH THE ANTENNA WHEN THE RADIO SET IS IN USE. An RF burn may occur as a result of contact with an active antenna system.

WARNING

TRANSMIT POWER LIMITATION

Transmit power is limited to a maximum of 20 watts when operating with two BA-5590 batteries. When batteries are combined, transmit power may be limited dependent upon the relative state of the battery charge.

WARNING

DO NOT OPEN TRANSCEIVER CASE

Operator personnel must not remove the transceiver case. Transceiver is not repairable at operator and unit maintenance level.

WARNING

Operator must replace both BA-5590/U with completely new batteries at the same time. Do not mix partially used batteries with new batteries.

If possible, the operator should use two BA-5590 batteries manufactured by the same vendor with the same date code.

WARNING

Do not attempt to transmit when charging batteries.

WARNING

Circuit card A13 contains BERYLLIUM OXIDE (BeO) CERAMICS. The dust or fumes from BERYLLIUM OXIDE CERAMICS are HIGHLY TOXIC and breathing them can result in serious personal injury or DEATH. For local guidance/assistance on disposal of unserviceable circuit card A13, contact your servicing Defense Reutilization and Marketing Office (DRMO).

WARNING

A lithium-sulfur dioxide (Li-SO₂) battery used with the AN/PRC-132 contains pressurized sulfur dioxide (SO₂) gas. The gas is toxic, and the battery MUST NOT be abused in any way which may cause the battery to rupture.

DO NOT heat, short circuit, crush, puncture, mutilate, or disassemble batteries.

DO NOT USE any battery which shows signs of damage, such as bulging, swelling, disfigurement, a brown liquid in the plastic wrap, a swollen plastic wrap, etc.

DO NOT test Li-SO₂ batteries for capacity.

DO NOT recharge Li-SO₂ batteries.

DO NOT dispose of lithium batteries with ordinary trash/refuse. Turn in batteries to your local servicing Defense Reutilization and Marketing Office.

WARNING

If the battery compartment becomes hot to the touch, if you hear a hissing sound (i.e., battery venting), or smell irritating sulfur dioxide gas, IMMEDIATELY Turn Off the equipment and leave the area.

1. Allow the equipment to cool at least one hour.
2. Remove and replace battery after the equipment has cooled to the touch.
3. If there is a safety incident, or if you believe a safety hazard exists, notify your local Safety Office/Officer, file a Quality Deficiency Report, SF Form 368, and notify the CECOM Safety Office, Ft. Monmouth, NJ at AV 995-3112.

WARNING

DO NOT use a Halon type fire extinguisher on a lithium battery fire.

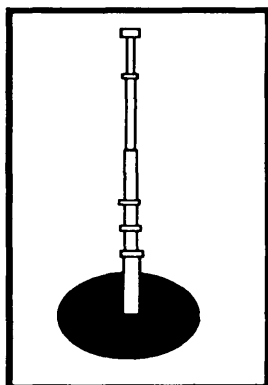
In the event of a fire, near a lithium battery(ies), rapid cooling of the lithium battery(ies) is important. Flood the equipment with water or use a carbon dioxide (CO₂) extinguisher. Control of the equipment fire, and cooling, may prevent the battery from venting and potentially exposing lithium metal. In the event that lithium metal becomes involved in fire, the use of a graphite based Class D fire extinguisher is recommended, such as Lith-X or Met-L-X.

WARNING

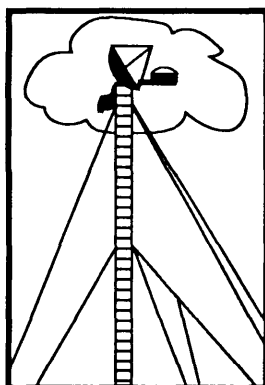
DO NOT store batteries in unused equipment for more than 30 days.

DO NOT store lithium batteries with other hazardous materials and keep them away from open flame or heat

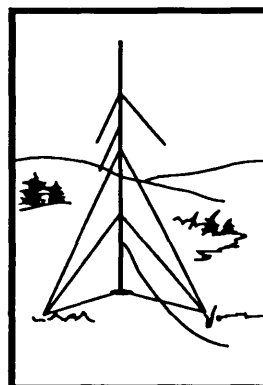
FIXED OPERATION WITH LONG RANGE ANTENNAS

WARNING

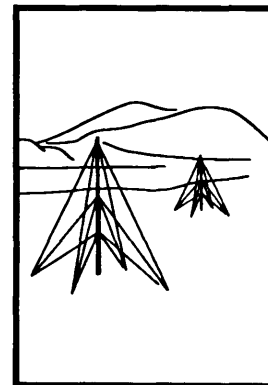
**TELESCOPING
ANTENNA MAST**



TYPICAL TOWER



**EXTENDED RANGE
ANTENNA**



**DOUBLET
ANTENNA**

NEVER ERECT THESE LONG RANGE ANTENNAS DIRECTLY UNDER POWERLINES.

If you must erect these long range antennas near powerlines, powerline poles or towers, or buildings with overhead powerline connections, never put the antenna closer than two times the antenna height from the base of the powerline, pole, tower or buildings.

NEVER ATTEMPT TO ERECT ANY LONG RANGE ANTENNA WITHOUT A FULL TEAM.

Before erecting any long range antenna, inspect all the parts making up the antenna kit. Do not erect the antenna if any parts are missing or damaged.

Do as much of the assembly work as possible on the ground.

When erecting the antenna, allow only team personnel in the erection area.

Make sure that the area for the anchors is firm. If the ground is marshy or sandy, get specific instructions from your crew chief or supervisor on how to reinforce the anchors.

When selecting locations for anchors, avoid traveled areas and roads. If you cannot avoid these areas, get specific instructions from your supervisor as to what clearance your guy wires and ropes must have over the traveled areas and road.

Clearly mark all guy wires and ropes with the warning flags or signs supplied by your unit. If an emergency, use strips of white cloth as warning streamers.

If you suspect that powerlines have made accidental contact with your antenna, stop operating, rope off the antenna area, and notify your superiors.

If the weather in your area can cause ice to form on your long range antenna and its guy wires and ropes, add extra guys to support the system. Rope off the area and post it with warning signs like "BEWARE OF FALLING ICE".

Do not try to erect any antenna during an electrical storm.

Keep a sharp eye on your anchors and guys. Check them daily and immediately before and after bad weather.

HOW TO USE THIS MANUAL

This manual describes the set-up and operation of the AN/PRC-132 radio set.

This manual is arranged in four chapters containing: an introduction to the equipment (Chapter 1), operating instructions (Chapter 2), operator maintenance instructions (Chapter 3), and unit maintenance procedures (Chapter 4).

Manual text is divided into primary and subordinate paragraph structure. Some paragraphs may also be divided into procedural steps.

Throughout the manual there are illustrations that will help you determine how to set-up, operate, and maintain your radio set.

While using this manual, remember that your mission and the situation you may be involved in will determine the type of radio operations you select.

This manual also describes possible trouble situations and the actions you can take to solve a potential radio set problem.

Technical Manual

No. 11-5820-1102-12

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 15 May 1992

**OPERATOR'S AND UNIT
MAINTENANCE MANUAL**

**RADIO SET, AN/PRC-132
(NSN 5820-01-320-8831) (EIC: N/A)**

CONSISTING OF

**RECEIVER-TRANSMITTER, RADIO
RT-1648/PRC-132
(NSN 5820-01-320-3686) (EIC: N/A)**

AND

**BATTERY BOX
CY-8629/PRC-132
(NSN 6160-01-322-9366) (EIC: N/A)**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-LM-LT, Fort Monmouth, New Jersey 07703-5007.

In either case a reply will be furnished direct to you.

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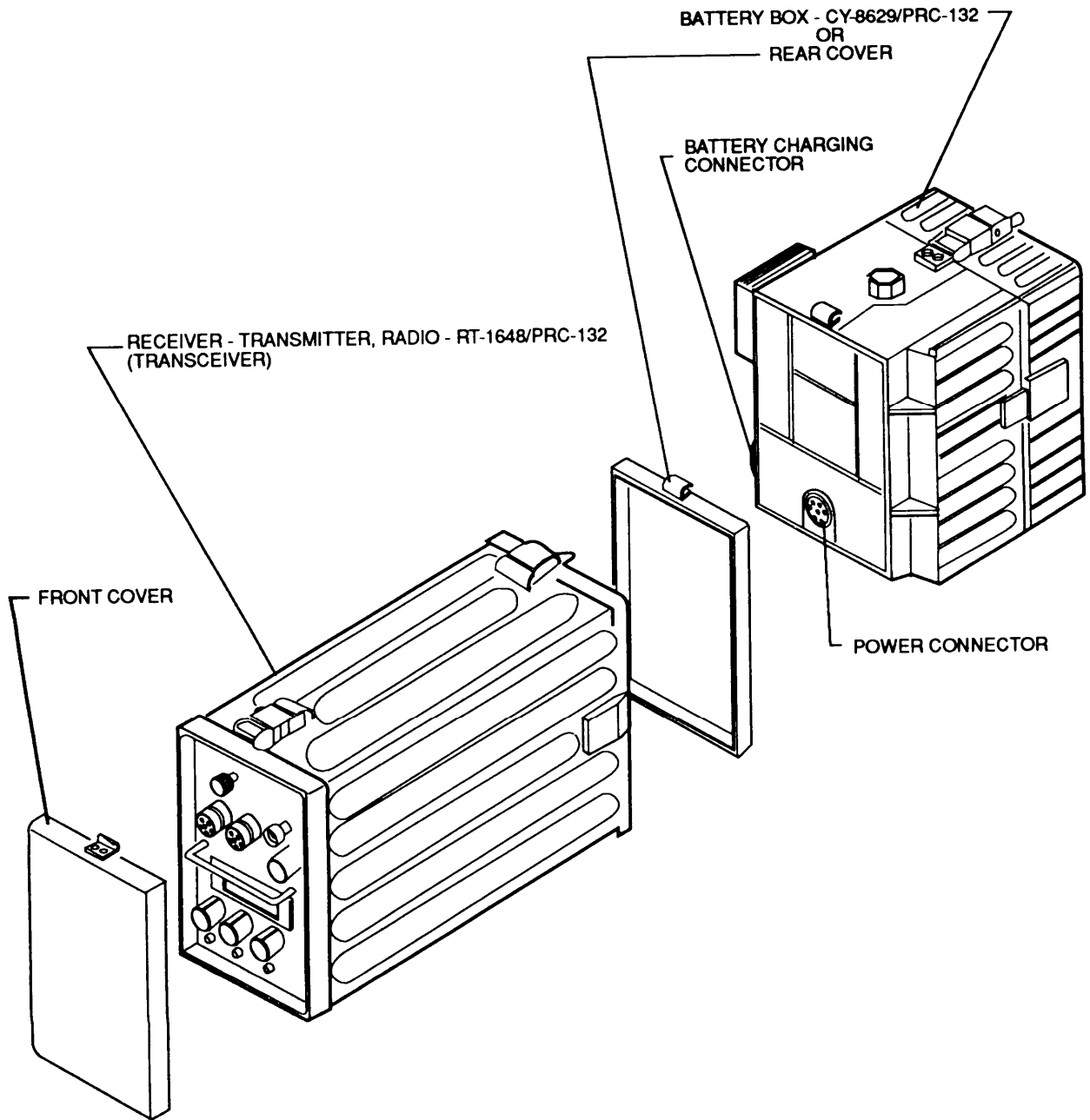
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Radio Set - AN/PRG132

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

INTRODUCTION 1-1

1-1. SCOPE

1-1.1 Type of Manual Direct Support Maintenance Manual.

1-1.2 Model Number and Equipment Name AN/PRC-123 Radio Set.

1-1.3 Purpose of Equipment The AN/PRC-132 manpack High Frequency/Very High Frequency (HF/VHF) (amplitude modulation only) radio set is designed to provide data, voice, and Continuous Wave (CW) communications to support Special operations Forces (SOF) communications requirements.

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

1-2.1 Reports 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.

1-2.2 Reporting of Item and Packaging Discrepancies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/SECNAVINST 4355.18/AFR 400-54/MCO 4430.3J.

1-2.3 Transportation Discrepancy Report (TDR) (SF 361). Fill out and forward Transportation Discrepancy Report (TDR) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

1-3. CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS.

Refer to the latest issue of DA Pam 25-30 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

1-4. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your radio set 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 or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to us at:

Commander,
US Army Communications-Electronics Command
and Fort Monmouth
ATTN: AMSEL-ED-PH
Fort Monmouth, NJ 07703-5007.

We'll send you a reply.

1-5. NOMENCLATURE CROSS-REFERENCE LIST.

<u>Common Name</u>	<u>Official Nomenclature</u>
Radio Set	Radio Set-AN/PRC-132
Transceiver	Receiver-Transmitter, Radio-RT-1648/PRC-132
Battery Box	Battery Box - CY-8629/PRC-132

1-6. 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.

1-7. PREPARATION FOR STORAGE OR SHIPMENT.

Equipment issued to and used by Army activities will have preventive maintenance performed before administrative storage. Preventive maintenance should be performed when removing the equipment from administrative storage to ensure operational readiness. Refer to paragraph 2-6 (Preparation for Movement).

1-8. WARRANTY INFORMATION.

The AN/PRC-132 radio set is warranted for a period of 15 months from the date found on the equipment warranty plate. Report all defects in materiel or workmanship to your Direct Support (DS) maintenance facility where appropriate action will be taken.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-9. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

The radio set consists of a transceiver with front and rear covers, and a battery box that is installed in place of the rear cover.

The radio set has an Amplitude Modulation (AM) frequency range of 1.6 to 49.9999 MHz. It provides half-duplex operation in Upper Sideband (USB), Lower Sideband (LSB), and Amplitude Modulation Equivalent (AME) modes. Voice, data, and CW operations are available in all modes. 100 receive and 100 transmit frequencies can be preprogrammed as channels 0-99. Channels are field programmable, with battery backup to prevent loss of memory. Up to 11 channels can be scanned, and receive frequencies can be scanned in 100 Hz increments. A receive only mode of operation can be selected. Four levels of transmit power are available: 5, 10, 15, 20, and 50 watts. All transceiver memory can be cleared by the operator.

Secure lighting allows the illumination of display LCD for night operations.

The radio set will work with dipole or tuned antennas capable of handling 50 watts of Radio Frequency (RF) power. An unbalanced 50-ohm BNC-type antenna connector is provided on the front panel. A BNC-to-binding post adapter is also provided for connection to wire antennas. The radio set can be used with an untuned longwire antenna, although performance will be degraded.

The radio set can interface with a variety of auxiliary equipment necessary for mission performance.

1-10 LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

Refer to Figure 1-1 for location and contents of warranty plates or stencils.

1-10.1 External Components Refer to Figure 1-2. The AN/PRC-132 radio set consists of a transceiver (1) with front and rear covers (2 & 3), and a battery box (4). The transceiver front panel contains operating controls, indicators, and connectors described in Chapter 2.

When in operational mode, the battery box is installed in place of the rear cover.

A battery charging connector (5) is provided on the battery box.

1-10.2 Internal Components Refer to the AN/PRC-132 Radio Set Direct Support Maintenance manual (TM 11-5820-1102-30) for a description of internal components.

1-10.3 Auxiliary Equipment Auxiliary equipment is interfaced to the transceiver through adapter/interface cabling.

Interface cabling is attached at either the AUDIO 1 or AUDIO 2 connector(s) on the transceiver front panel. Interface cabling is provided with the applicable auxiliary equipment.

Refer to Figure 1-3. The radio set is capable of interfacing with the following auxiliary equipment items:

- a. Telegraph key KY-116/U. The telegraph key (with cable assembly CX-13031 or KY-872/PRC-104 for keying transceiver at connector pin E) is used to send CW messages.
- b. Handset H-250. The handset is used to send and receive voice messages.
- c. Headset H-251. The headset is used to receive voice messages.
- d. Handheld Data Terminal OA-8990/G DMDG. The data terminal is used to send and receive messages. It also:
 - o Stores information
 - o Permits burst communication
 - o Minimizes transmission time
 - o Reduces the risk of being located by radio direction-finding
 - o Assures messages are authentic
- e. Hand crank generator G-76/U. The hand crank generator can be used to charge batteries and for transceiver receive operations. The hand crank generator interconnects to the battery box charging connector.
- f. SORAK (Special Operations Radio Antenna Kit). The SORAK contains a variety of antennas for use with the AN/PRC-132. SORAK antennas are connected to the transceiver front panel at the ANT BNC-type connector. Longwire antennas are connected to the ANT BNC-to-binding post adapter (which is connected to the ANT connector) and to the GND binding post for grounding or counterpoise. Refer to Figure 1-4.

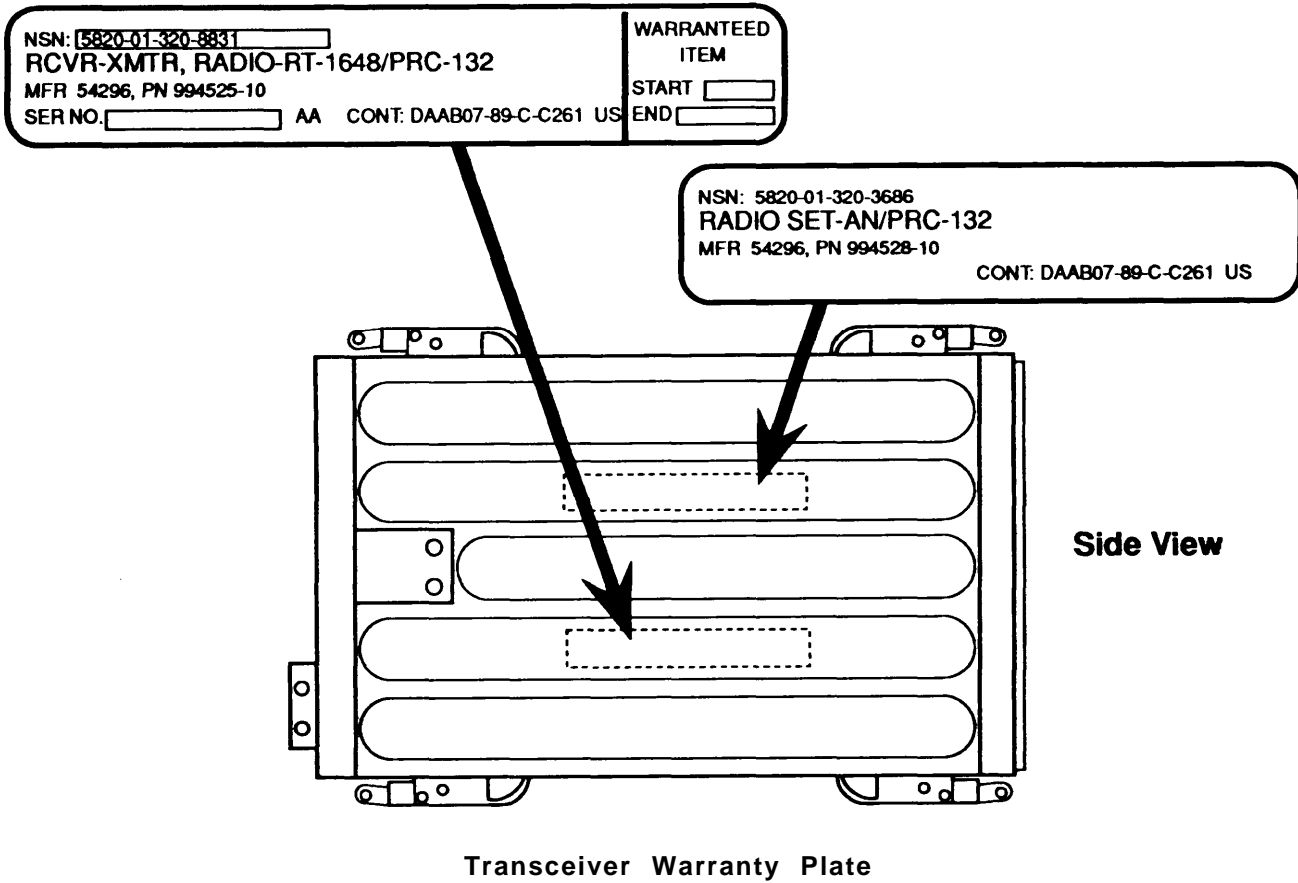
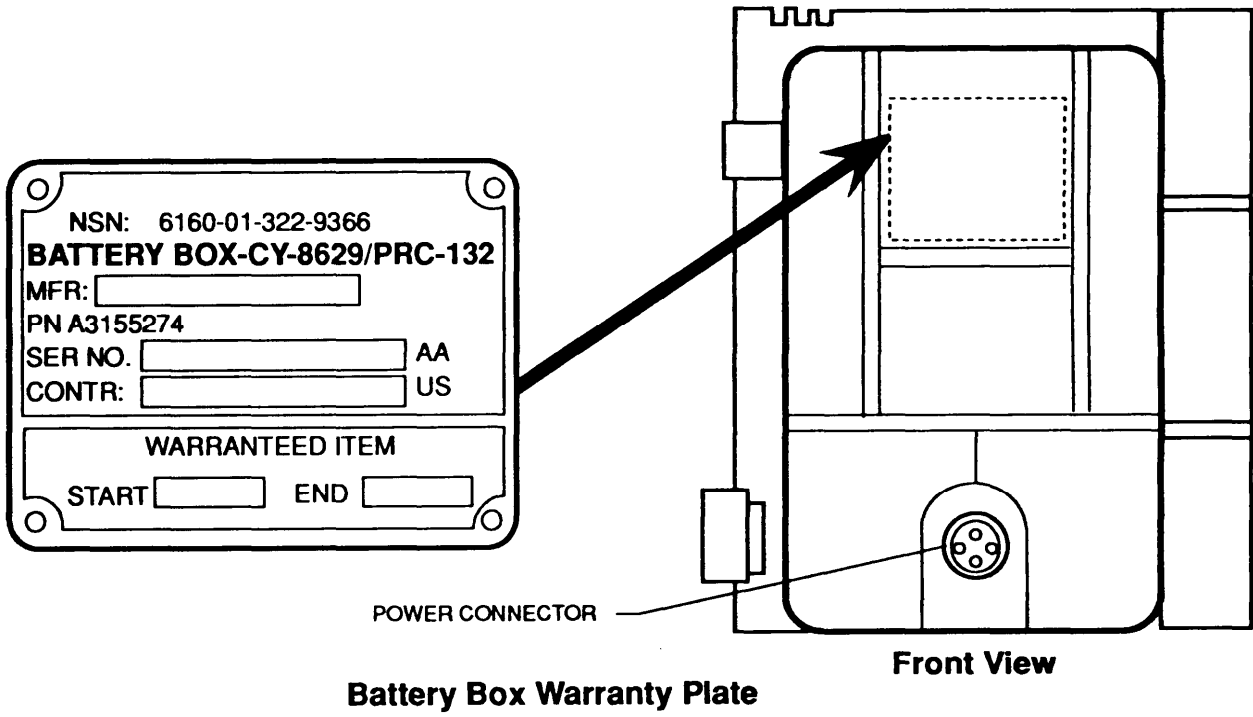


FIGURE 1-1. Radio Set - AN/PRG-132 warranty plate locations

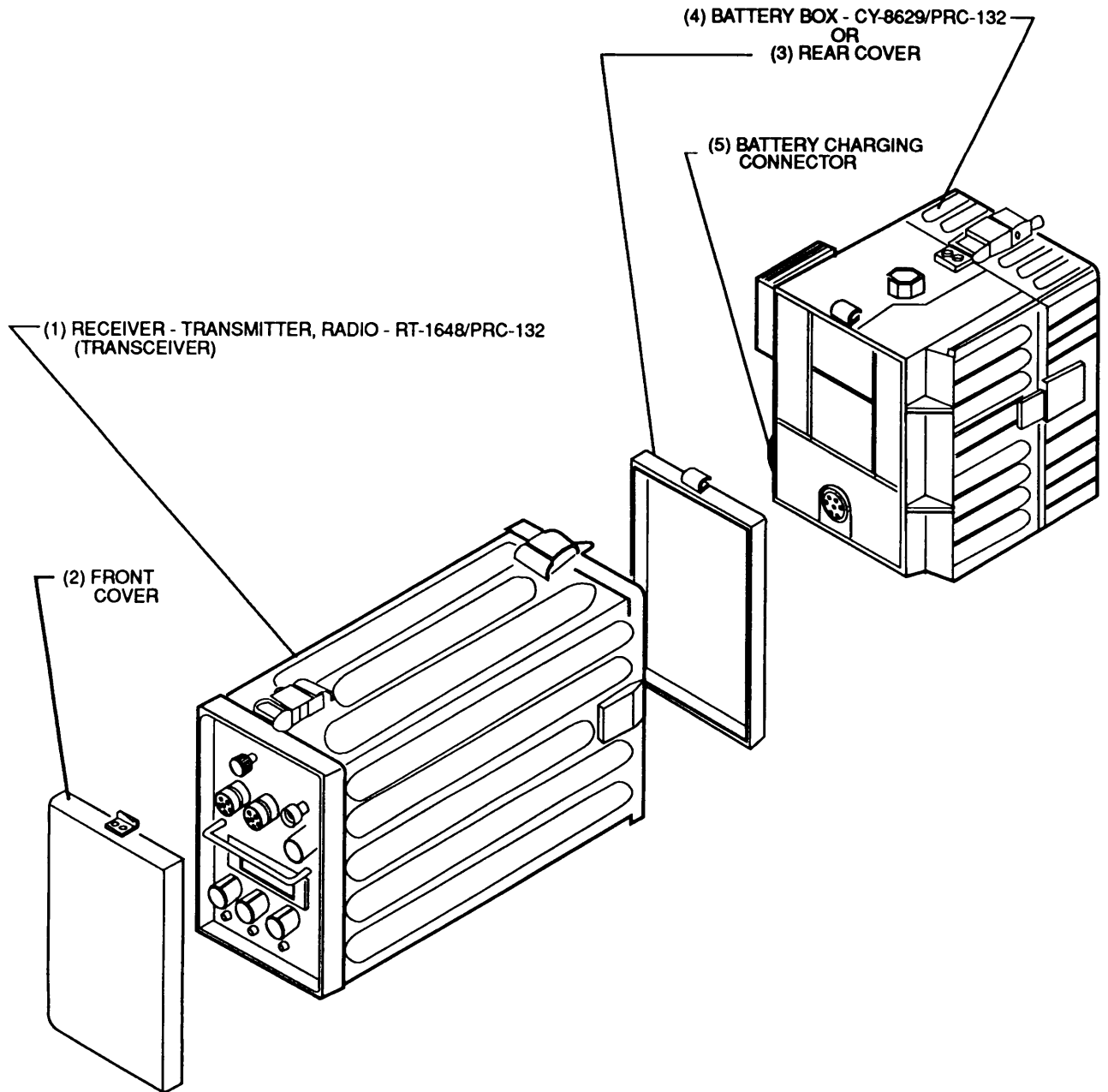


FIGURE 1-2. Radio Set - AN/PRW 32 external components

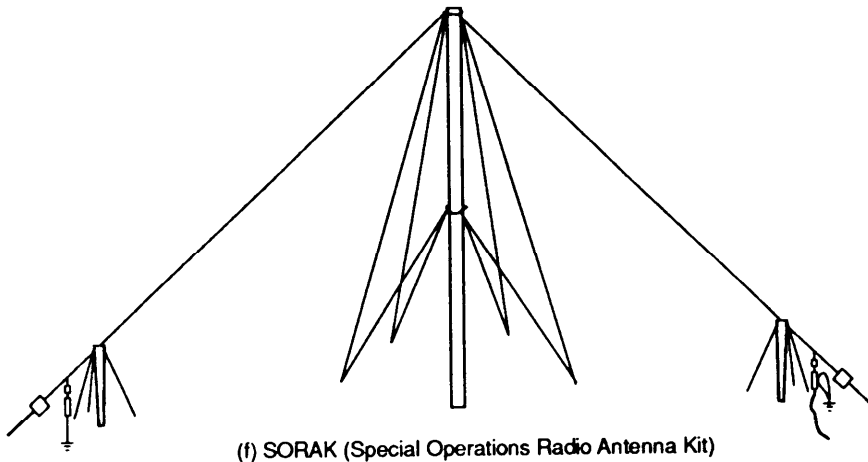
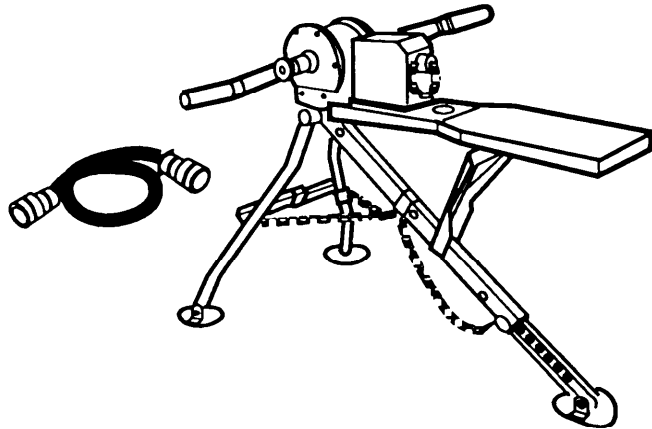
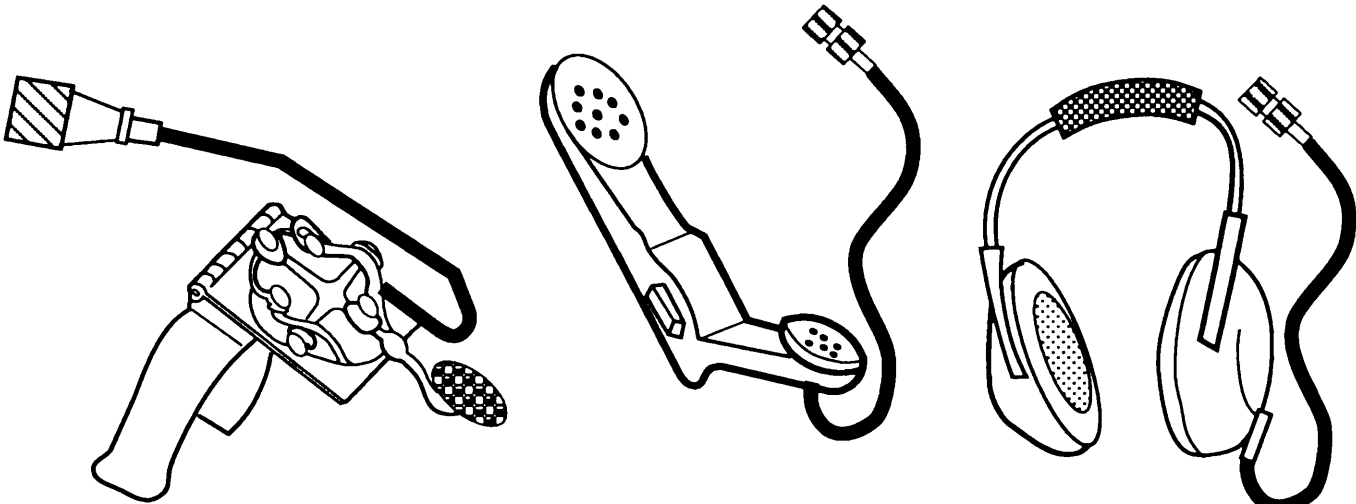


FIGURE 1-3. Radio Set - AN/PRC-132 auxillary equipment

1-10.4 Accessories AN/PRC-132 accessories include the transceiver front and rear covers for use in the transport configuration.

1-11 EQUIPMENT DATA.

1-11.1 Performance Specifications

Frequency range:	1.6 to 49.9999 MHz.
Frequency steps:	100 Hz increments.
Channels:	484,000, synthesized.
Operating modes:	LSB, USB, AME (CW and voice in all modes).
Audio input:	150 ohm impedance with Voice Operated Gain Adjustable Device (VOGAD) for constant audio level.
Duty Cycle:	1:20 transmit to receive. 1 minute maximum continuous transmit time.
Input voltage:	12 VDC nominal.
Battery Life (BB-590) (1 each)	2 hours receive, 6 one-minute transmissions minimum between recharge; at 50 watts.
Battery Life (BA-5590) (2 each)	8 hours receive, 24 one-minute transmissions minimum before battery replacement; at 20 watts.

1-11.2 Microprocessor Capability

Operation:	Simplex, halfduplex.
Number of channels (preprogrammable) stored:	100 transmit, 100 receive.
Scanning:	Up to 11 channels may be scanned manually.
Up-down tuning:	Continuous synthesized tuning in increments of 100 Hz, receive only.

1-11.3 Transmitter

Power output:	Selectable 5, 10, 20, or 50 watts. NOTE: Transmit power is limited to a maximum of 20 watts when operating with two BA-5590 batteries.
Impedance:	50 ohms.
Audio bandwidth:	2.4 kHz, -6 dB bandwidth.
Antenna mismatch:	Protected against mismatch, including open and short circuits.

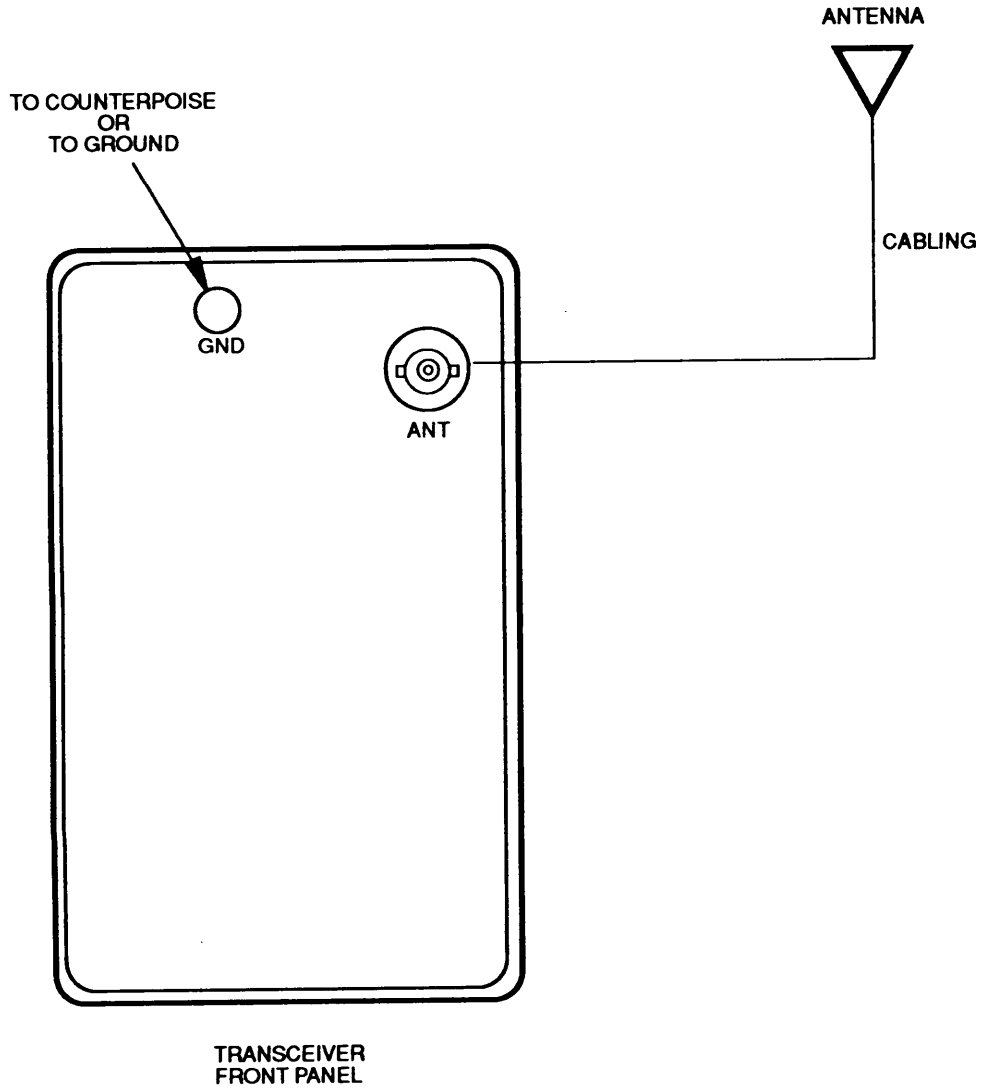


FIGURE 1-4. Radio Set - AN/PRC-132 typical antenna attachment

1-11.4 Receiver

Sensitivity:	-117 dBm maximum for 10 dB SINAD.
Selectivity:	6 dB bandwidth, 2400 Hz; 50 dB bandwidth, 5 kHz.
Audio output power:	10 mW minimum into 500 ohms at less than 5% distortion.

1-11.5 Mechanical

Weight with battery box and cover (with one BB-590 or two BA-5590 batteries):	16 pounds max (7.264 kg).
Displacement volume (with battery box):	350 cubic inches, maximum.

1-12 SAFETLY, CARE, AND HANDLING.

During normal operation, the only exposed voltage exceeding 30 volts root-mean-square (rms) is the antenna voltage during transmit. This voltage is a maximum of 50 volts rms when operating into a 50 ohm antenna. All external surfaces of the radio set other than the antenna terminal are at ground potential when the transceiver GND stud is tied to ground.

It is the operator's responsibility to understand and apply the following safety precautions during all phases of equipment operation, service, and repair. Failure to comply with these precautions, or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use.

WARNING**RF VOLTAGE WARNING**

Exposed metal transceiver parts can assume an RF potential to ground when antenna is tuned without grounding transceiver. To avoid potential RF burns, tie transceiver GND stud to ground.

WARNING**KEEP AWAY FROM LIVE CIRCUITS**

The antenna is a source of electrical and radio frequency energy. NEVER TOUCH THE ANTENNA WHEN THE RADIO SET IS IN USE. An RF burn may occur as a result of contact with an active antenna system.

WARNING

TRANSMIT POWER LIMITATION

Transmit power is limited to a maximum of 20 watts when operating with two BA-5590 batteries. When batteries are combined, transmit power may be limited dependent upon the relative state of the battery charge.

WARNING

DO NOT OPEN TRANSCEIVER CASE

Operator personnel must not remove the transceiver case. Transceiver is not repairable at operator and unit maintenance level.

WARNING

Operator must replace both BA-5590/U with completely new batteries at the same time. Do not mix partially used batteries with brand new batteries.

If possible, the operator should use two BA-5590 batteries manufactured by the same vendor with the same date code.

WARNING

Do not attempt to transmit when charging batteries.

WARNING

A lithium-sulfur dioxide (Li-SO₂) battery used with the AN/PRC-132 contains pressurized sulfur dioxide (SO₂) gas. The gas is toxic, and the battery MUST NOT be abused in any way which may cause the battery to rupture.

DO NOT heat, short circuit, crush, puncture, mutilate, or disassemble batteries.

DO NOT USE any battery which shows signs of damage, such as bulging, swelling, disfigurement, a brown liquid in the plastic wrap, a swollen plastic wrap, etc.

DO NOT test Li-SO₂ batteries for capacity.

DO NOT recharge Li-SO₂ batteries.

DO NOT dispose of lithium batteries with ordinary trash/refuse. Turn in batteries to your local servicing Defense Reutilization and Marketing Office.

WARNING

If the battery compartment becomes hot to the touch, if you hear a hissing sound (i.e., battery venting), or smell irritating sulfur dioxide gas, IMMEDIATELY Turn Off the equipment and leave the area.

1. Allow the equipment to cool at least one hour.
2. Remove and replace battery after the equipment has cooled to the touch.
3. If there is a safety incident, or if you believe a safety hazard exists, notify your local Safety Office/Officer, file a Quality Deficiency Report, SF Form 368, and notify the CECOM Safety Office, Ft. Monmouth, NJ at AV 995-3112.

WARNING

DO NOT use a Halon type fire extinguisher on a lithium battery fire.

In the event of a fire, near a lithium battery (ies), rapid cooling of the lithium battery (ies) is important. Flood the equipment with water or use a carbon dioxide (CO₂) extinguisher. Control of the equipment fire, and cooling, may prevent the battery from venting and potentially exposing lithium metal. In the event that lithium metal becomes involved in fire, the use of a graphite based Class D fire extinguisher is recommended, such as Lith-X or Met-L-X.

Section III. PRINCIPLES OF OPERATION

1-13 GENERAL OPERATION.

Refer to Figure 1-5.

The battery box provides power to the transceiver via a power connector that mates with an external connector located at back of transceiver. Connection is made automatically when battery box is attached to transceiver. The battery box is held onto rear of transceiver with latches attached to the transceiver housing. To preserve battery life, the battery box is disconnected from the transceiver when not in use.

On the transceiver front panel, there are two connections marked AUDIO 1 and AUDIO 2 for auxiliary input/output devices. Operator handsets, headsets, or other applicable devices can be attached at these points to provide operator interface to the transceiver. Refer to paragraph 1-10.3 for a full listing of auxiliary equipment.

Also located on the transceiver front panel is a BNC-type connector marked ANT for use in connecting dipoles and other antennas that use an interconnecting coaxial cable. Antenna signal flow both to and from the transceiver is through this BNC-type connector. For connection to longwire and other antennas with open terminations, a BNC-to-binding post adapter is provided as a standard accessory. A grounded binding post marked GND is also provided on the front panel for attachment to system ground or antenna counterpoise, if required.

1-14 INTERFACES AND CONTROL.

All controls, connectors, and indicators are located on the transceiver front panel. A connector is located on the battery box for interconnection of battery charging equipment. Transceiver functions controlled by the operator include: operating frequency, channel selection, mode, volume, and transmit power output.

Power is applied to the transceiver by setting the POWER switch to the RX position for receive only operation, or to the 5, 10, 20, or 50 positions for transmit/receive operations.

Frequency control capabilities include: half duplex operation with separate receive and transmit frequencies, channel programming with memory for up to 100 separate receive and transmit frequencies, channel scanning, and receiver frequency scanning.

Frequency control and display functions are accomplished using the rotary select switch and three push-button switches (ENTER, FREQ SEL, and CHAN). A Liquid Crystal Display (LCD) displays frequency and channel information. In addition, the LCD will display a "T" when transceiver is transmitting or when a transmit frequency is displayed.

Mode is controlled by the MODE switch.

Transmit power output is controlled by the POWER switch.

Volume is controlled by the VOLUME control. Volume increases with clockwise rotation.

The front panel includes connectors for auxiliary equipment interface and antenna connection. Two audio connectors are provided for audio and keying accessories.

Refer to Table 2-1 for a full description of front panel controls, indicators, and connectors.

Secure lighting is provided for the LCD and is operator controlled. Secure lighting is not used during daylight hours since the LCD is easily read in normal lighting.

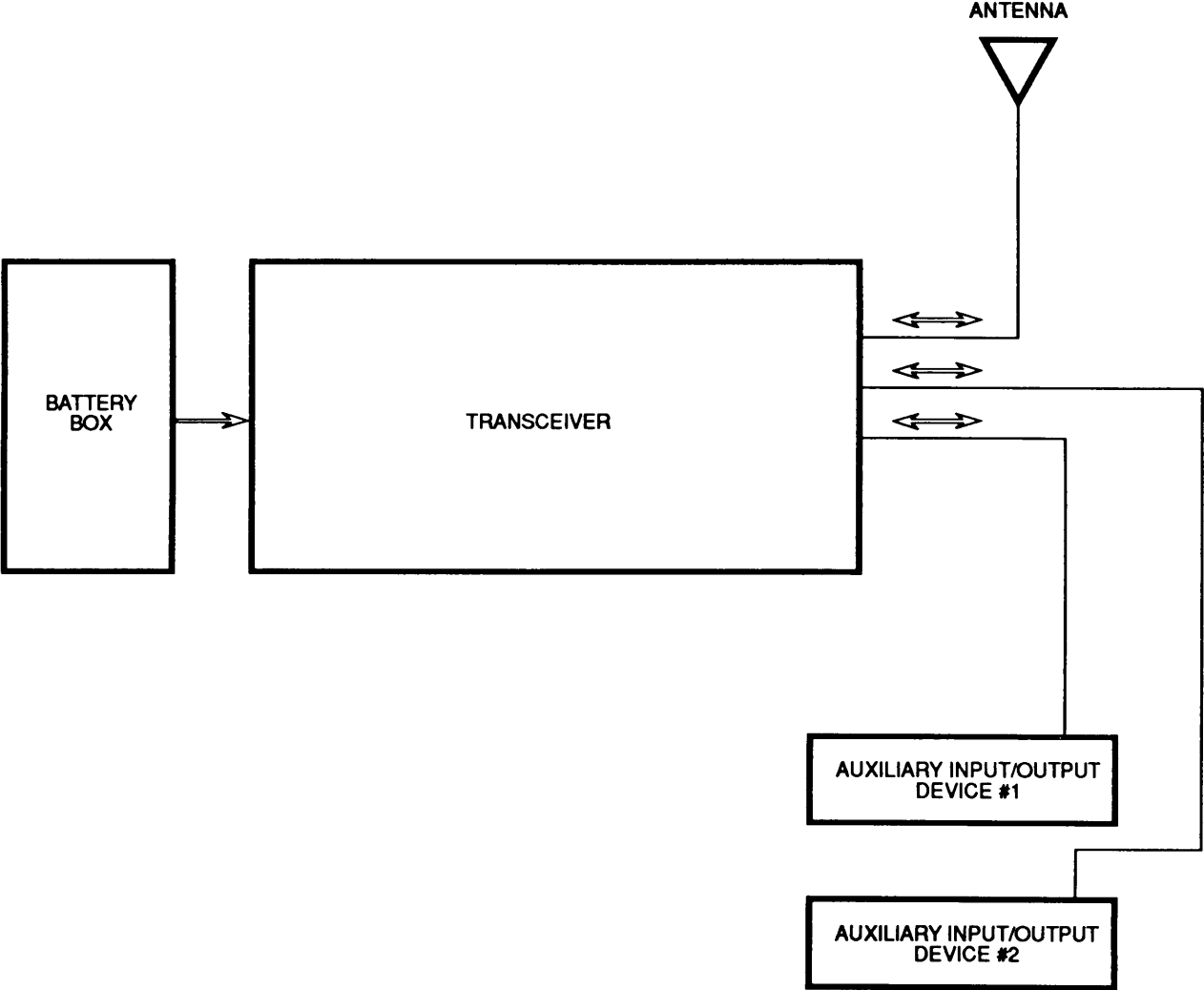


FIGURE 1-5. Radio Set - AN/PRC-132 functional block diagram

1-15 OPERATION IN RECEIVE.

During receive operations, incoming RF signals are picked up by the antenna and channeled to the transceiver. The transceiver processes the signals and sends them to the AUDIO 1 or AUDIO 2 connector and to whatever auxiliary equipment the operator happens to be using.

1-16 OPERATION IN TRANSMIT.

During transmit operations, operator information is channeled into the transceiver from the AUDIO 1 or AUDIO 2 connectors. The transceiver processes the message traffic and passes outgoing RF signals to the antenna for transmission.

CHAPTER 2

OPERATING INSTRUCTIONS

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

OPERATING INSTRUCTIONS	2-1
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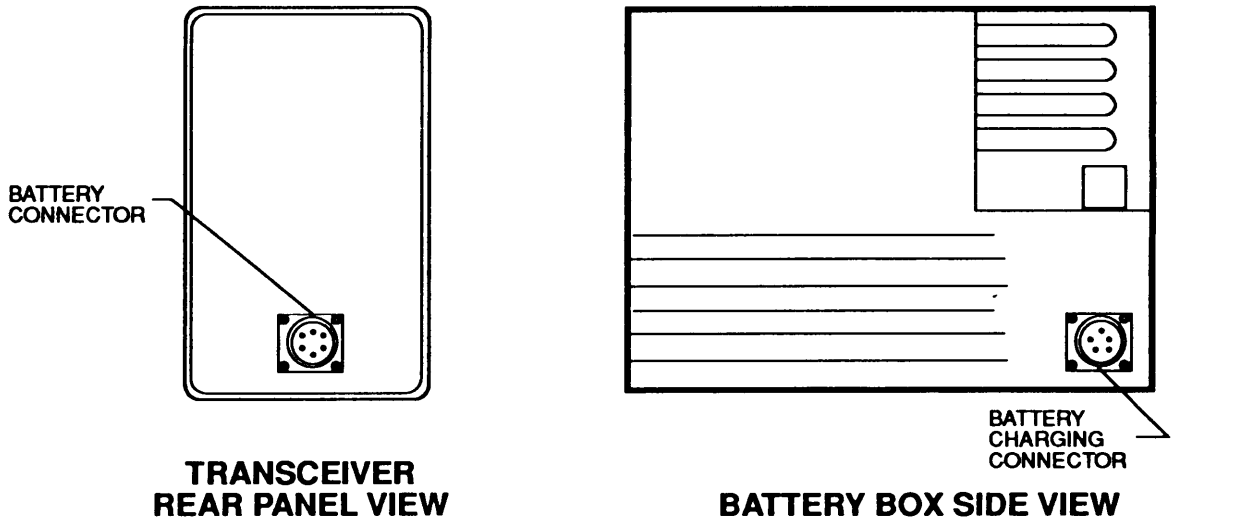
2-1 CONTROLS, INDICATORS, AND CONNECTORS.

Figure 2-1 shows the location of each transceiver control, indicator, and connector. Table 2-1 lists their function.

Front panel control knobs are secured to flatted control shafts by set screws.

Mechanical stops are provided on all controls.

For VOLUME and POWER controls, clockwise rotation increases output levels.



TRANSCEIVER REAR PANEL VIEW

BATTERY BOX SIDE VIEW

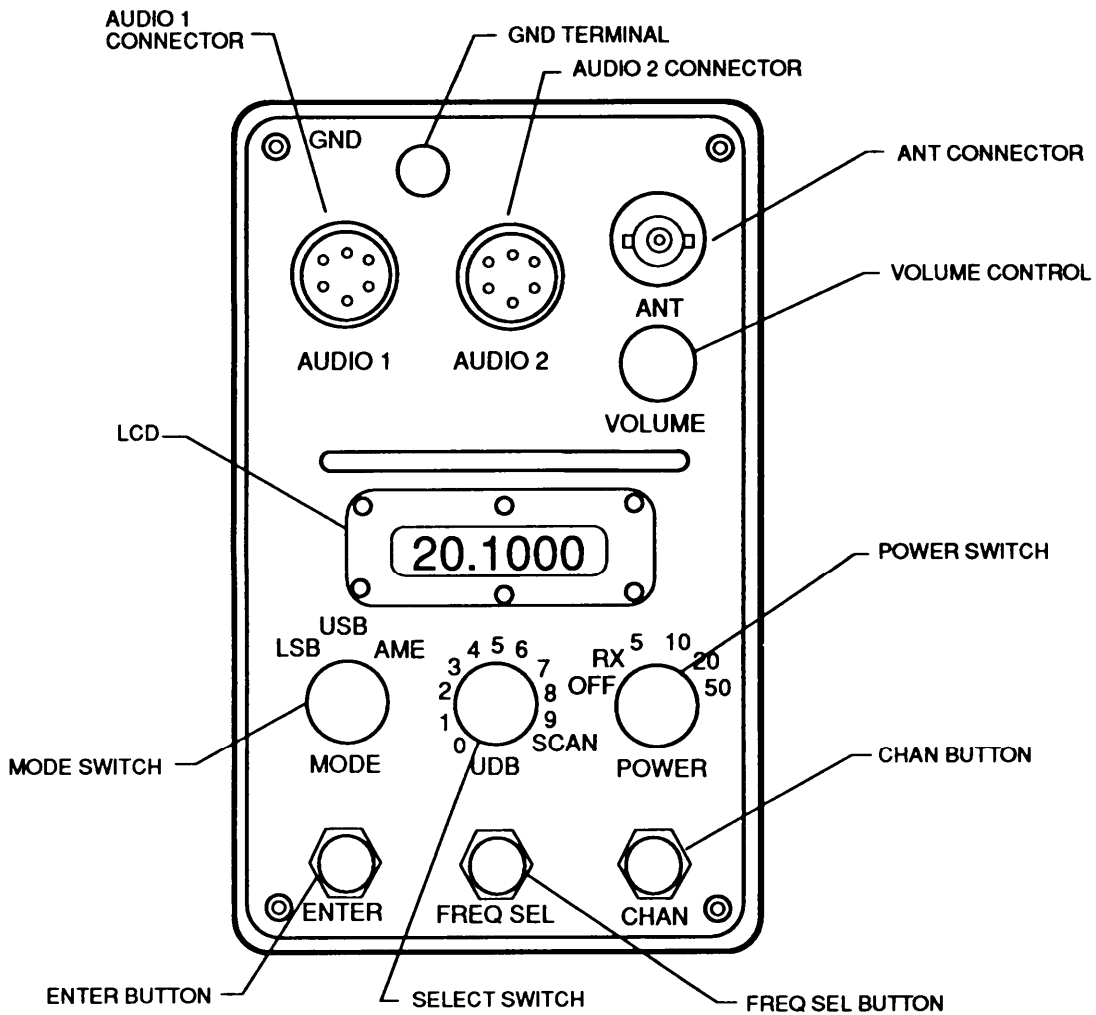


FIGURE 2-1. Controls, indicators and connectors

TABLE 2-1. Controls, Indicators, and Connectors

Name	Function
GND terminal	Ground Connection.
AUDIO 1 and AUDIO 2 connectors	Parallel audio input/output connectors. Can also be used for voice, data and Continuous Wave (CW) inputs.
ANT connector	50-ohm antenna connector.
VOLUME control	Adjusts receive audio volume.
LCD	Depending upon operator selection, displays channel, receive frequency, or transmit frequency. Also displays a "T" to indicate transmit frequency operation.
MODE switch	Selects Lower Sideband (LSB), Upper Sideband (USB), or Amplitude Modulation Equivalent (AME) mode of operation.
Select switch	Allows selection of a channel number or frequency, one digit at a time. Used with FREQ SEL and ENTER buttons. Also used to select SCAN or UDB (Up/Down) functions.
POWER switch	Powers transceiver on and off. Selects receive only operation, or transmit power level for transmit/receive operations.
ENTER button	Performs three functions: <ul style="list-style-type: none"> ○ Displays frequencies currently in memory. ○ Enters new frequencies into memory. ○ Used to scan frequencies down in 100 Hz increments.
FREQ SEL button	Performs three functions: <ul style="list-style-type: none"> ○ Causes selected digit to be displayed on the Liquid Crystal Display (LCD). ○ Used to scan channels. ○ Used to scan frequencies up in 100 Hz increments.
CHAN button	Performs three functions: <ul style="list-style-type: none"> ○ Displays current channel. ○ Enables channel selection. ○ Turns LCD sidelighting on and off.
Battery connector	Allows interconnection to battery pack.
Battery charging connector	Located on battery box. Allows connection of hand crank generator.

Section II. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

There are no operator preventive maintenance checks or services for the AN/PRC-132 radio set.

Section III. OPERATION UNDER USUAL CONDITIONS

2-2 ASSEMBLY AND PREPARATION FOR USE.

The AN/PRC-132 radio set requires a power source (battery box), an antenna, and either a voice, CW, or data input/output device. Refer to paragraph 2-5 for information on your particular auxiliary equipment.

In general, use the following guidelines to prepare the radio set for use:

- o Inspect all equipment and accessories for damage and cleanliness.
- o Inspect connector pins for straightness and cleanliness.
- o Inspect all screws for tightness.
- o Verify that front and rear cover o-rings are in place and lubricated with silicone or an equivalent lubricant. Verify that battery box charging connector cap gasket is in place and lubricated.
- o Ensure that battery box to be used and spare batteries are fully charged.
- o Connect battery box to transceiver. Power connection is made automatically when battery box is attached.
- o Connect antenna to transceiver.
- o Connect auxiliary equipment to transceiver per mission requirements.
- o Perform initial adjustments.

2-3 INITIAL ADJUSTMENTS.

Initial transceiver adjustments consist of the following steps:

- o Check secure lighting.
- o Set receive and transmit frequencies for each channel to be used.
- o (Clear channels as necessary.)

2-3.1 Secure Lighting The CHAN button is used to turn LCD secure lighting on or off. Press CHAN button twice to turn lighting on. Press CHAN button twice to turn lighting off. Be sure to turn secure lighting off when it is not needed to prolong battery life.

2-3.2 Setting Channels Perform the following sequence for each channel to be set.

a. Set POWER switch to RX position.

- (1) Press CHAN to display current channel in the following format: HL XX (XX = two digit channel number). If channel is correct, press enter.
- (2) Perform the following to program a new channel.

NOTE

Leading zeros must be entered. Trailing zeros must be entered for channel. Leading zeros are displayed for channel.

- (a) Turn select switch to the first digit of the desired channel number. Examples: To set channel 10, turn switch to 1. To set channel 09, turn switch to 0.

CAUTION

If the LCD shows a single letter "H" or series of the letter "H" when you press the FREQ SEL button, the transceiver is in the memory clear sequence. Press CHAN or turn the transceiver off to abort the clear operation. Then restart the procedure you were performing.

- (b) Press FREQ SEL to display digit selected.
- (c) Turn select switch to the second digit of the channel number. Examples: To set channel 10, turn switch to 0. To set channel 09, turn switch to 9.
- (d) Press FREQ SEL to display selected channel.
- (e) If the channel displayed is not correct, go back to step a(2)(a).
- (9) Press ENTER to display current receive frequency for selected channel.

b. Program receive frequency as follows:

NOTE

Leading zeros must be entered. Trailing zeros need not be entered for frequency. Leading zeros are not displayed for frequency.

- (1) If frequency shown on LCD is the desired receive frequency, press ENTER. Go to step c.
- (2) If frequency shown is not the desired receive frequency, proceed as follows:

- (a) Turn select switch to the first digit of the receive frequency. Examples: To set 20 MHz, turn switch to 2. To set 9.9999 MHz, turn switch to 0. In this second example, you are really setting 09.9999 MHz.

CAUTION

If the LCD shows a single letter "H" or series of the letter 'H' when you press the **FREQ SEL** button, the transceiver is in the memory clear sequence. Press **CHAN** or turn the transceiver off to abort the clear operation. Then restart the procedure you were performing.

- (b) Press **FREQ SEL** to display digit selected. If display is incorrect, press **CHAN**, then **ENTER**, and go back to step b(2)(a).
- (c) Turn select switch to the next digit of the receive frequency and press the **FREQ SEL** button. LCD will show digit selected. Repeat this step until the required digits have been entered. If any entries are incorrect, press **CHAN**, then **ENTER**, and go back to step b(2)(a).
- (d) When you have entered the required digits, press **ENTER** to store receive frequency in memory.

NOTE

At this point, LCD shows a small "T" above the decimal point of the frequency display. This indicates that frequency shown is the transmit frequency

c. Program transmit frequency as follows:

- (1) If frequency shown on LCD is the desired transmit frequency, press **ENTER**.
- (2) If frequency shown is not the desired transmit frequency, enter a new transmit frequency in the same manner as you would a new receive frequency. When you have entered transmit frequency, press **ENTER**. Transmit frequency is now stored in memory.

2-3.3 Checking a Channel To check the receive and transmit frequencies programmed for a channel, proceed as follows.

a. With transceiver in any operating position, select a channel as follows:

- (1) Press **CHAN** to display current channel in the following format: "HL XX" (XX = two-digit channel number). If channel is correct, press **ENTER**.
- (2) If you want to check a channel other than the current channel:
 - (a) Turn the select switch to the first digit of the desired channel number. Examples: To set channel 10, turn switch to 1. To set channel 09, turn switch to 0.

CAUTION

If the LCD shows a single letter "H" or series of the letter "H" when you press the FREQ SEL button, the transceiver is in the memory clear sequence. Press CHAN or turn the transceiver off to abort the clear operation. Then restart the procedure you were performing.

- (b) Press FREQ SEL to display digit selected.
- (c) Turn the select switch to the second digit of the channel number. Examples: To set channel 10, turn switch to 0. To set channel 09, turn switch to 9.
- (d) Press FREQ SEL to display selected channel.
- (e) If channel displayed is not correct, go back to step a(2)(a).
- b. Press ENTER to display the receive frequency for the selected channel.
- c. Press ENTER again to display the transmit frequency for the selected channel.
- d. Press ENTER to return to the receive frequency display.

2-3.4 Clearing All Channels To clear all channels to the default of 10.0000 MHz set in memory, proceed as follows.

- a. Turn POWER switch to OFF, then to RX. This clears any functions in progress.
- b. Set select switch to any number.

CAUTION

The following step clears all channels in memory. Ensure that this is your intention before pressing FREQ SEL the sixth time. To abort the operation, press CHAN button or turn POWER switch OFF.

- c. Press FREQ SEL six times. LCD will show an "H" each time FREQ SEL is pressed. After the sixth time FREQ SEL is pressed, all frequencies of all channels are reset to 10 MHz.

2-3.5 Clearing a Single Channel Single channels are cleared by setting them to the default frequency of 10.0000 MHz.

2-4 OPERATING PROCEDURE.

During setup, the operator must:

- o Select power setting
- o Select mode
- o Select channel
- o Adjust volume

CAUTION

If LCD shows a single letter "H" or series of the letter "H" when you press the **FREQ SEL** button, the transceiver is in the memory clear sequence. Press **CHAN** or turn the transceiver off to abort the clear operation. Then restart the procedure you were performing.

Radio operations consist of the following procedures:

- o Powering up
- o Selecting operating mode
- o Selecting a channel
- o Scanning frequencies
- o Scanning channels
- o Going to standby
- o Shutdown

24.1 Powering Up For receive only operation, set **POWER** switch to **RX**. For transmit/receive operations and corresponding transmit power in watts, set **POWER** switch to 5, 10, 20, or 50.

2-4.2 Selecting Operating Mode Set **MODE** switch to:

- o **LSB** - for lower sideband operation.
- o **USB** - for upper sideband operation.
- o **AME** - for amplitude modulation equivalent operation.

Any setting may be used for voice, data, or **CW** operation.

24.3 Selecting a Channel Select a channel as follows.

- a. Press **CHAN** to display current channel in the following format: "HL XX" (XX = two-digit channel number).
- b. If a different channel is required, proceed as follows:
 - (1) Turn select switch to the first digit of the desired channel number. Examples: To set channel 10, turn switch to 1. To set channel 09, turn switch to 0.

CAUTION

If LCD shows a single letter 'H' or series of the letter "H" when you press the **FREQ SEL** button, the transceiver is in the memory clear sequence. Press **CHAN** or turn the transceiver off to abort the clear operation. Then restart the procedure you were performing.

- (2) Press **FREQ SEL** to display digit selected.

- (3) Turn select switch to the second digit of the channel number. Examples: To set channel 10, turn switch to 0. To set channel 09, turn switch to 9.
 - (4) Press **FREQ SEL** to display the channel selected. If channel displayed is not correct, go back to step b(1).
- c. Press **ENTER** to display the receive frequency.

NOTE

To display the transmit frequency, press **ENTER** again. Transmit frequency is also displayed when transmitter is keyed. A small **T** above the decimal point indicates transmit frequency.

24.4 Scanning Frequencies To scan receive frequencies in steps of 100 Hz, proceed as follows.

- a. Set **POWER** switch to any operating position and select operating mode.
- b. Turn select switch to **UDB** position.
- c. Press **FREQ SEL** to display the current channel in the following format: "PL XX" (XX = two-digit channel number).
- d. If a different channel is required, proceed as follows:
 - (1) Turn select switch to the first digit of the desired channel number. Examples: To set channel 10, turn switch to 1. To set channel 09, turn switch to 0.

CAUTION

If LCD shows a single letter "H" or series of the letter "H" when you press the **FREQ SEL** button, the transceiver is in the memory clear sequence. Press **CHAN** or turn the transceiver off to abort the clear operation. Then restart the procedure you were performing.

- (2) Press **FREQ SEL** to display the digit selected.
 - (3) Turn select switch to the second digit of the channel number. Examples: To set channel 10, turn switch to 0. To set channel 09, turn switch to 9.
 - (4) Press **FREQ SEL** to display channel selected. If channel displayed is not correct, go back to step d(1).
- e. Press **ENTER** to display the receive frequency,
- f. At this point, frequency scan operation is enabled. To increase frequency, press **FREQ SEL**. To decrease frequency, press **ENTER**.
- g. To exit frequency scan, turn select switch to any number and press **CHAN**.

2-4.5 Scanning Channels To scan through 11 channels, proceed as follows.

- a. Set POWER switch to any operating position and select operating mode.
- b. Press CHAN to display current channel in the following format: "HL XX" (XX = two-digit channel number).

NOTE

Receive frequency, not channel number, is displayed during scan.

- c. If a different starting channel is required, proceed as follows:
 - (1) Turn select switch to the first digit of the desired channel number. Examples: To set channel 10, turn switch to 1. To set channel 09, turn switch to 0.

CAUTION

If LCD shows a single letter "H" or series of the letter "H" when you press the FREQ SEL button, the transceiver is in the memory clear sequence. Press CHAN or turn the transceiver off to abort the clear operation. Then restart the procedure you were performing.

- (2) Press FREQ SEL to display the digit selected.
 - (3) Turn select switch to the second digit of the channel number. Examples: To set channel 10, turn switch to 0. To set channel 09, turn switch to 9.
 - (4) Press FREQ SEL to display both digits selected. If the channel displayed is not correct, go back to step c(1).
- d. Press ENTER. The receive frequency will be displayed.
 - e. Turn select switch to SCAN.
 - f. At this point, channel scan is enabled. Press FREQ SEL to increase the channel.

NOTE

Channel scan cycles through 11 channels. Each time FREQ SEL is pressed, one is added to the current channel until the eleventh channel is reached. After the eleventh channel, the scan returns to the first channel. For example, if the starting channel is 10, scan will be as follows: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 10, 11, etc.

Scanning stops at channel 99 even if fewer than eleven channels have been scanned. For example, if the starting channel is 95, scan will be as follows: 95, 96, 97, 98, 99, 95, 96, etc.

- g. To exit channel scan, turn select switch to any number and press CHAN.

2-4.6 Going To Standby There is no standby operation for the AN/PRC-132. Turn POWER OFF when radio set is not in use.

2-4.7 Shutdown To shut down the AN/PRC-132, turn POWER switch to the OFF position. The radio set can now be disassembled for movement or left as is for use at a later time.

NOTE

Shutdown does not clear channels and frequencies programmed in memory.

2-5 OPERATION OF AUXILIARY EQUIPMENT.

For auxiliary equipment operations, refer to the applicable manual(s) for equipment to be used with the radio set.

2-6 PREPARATION FOR MOVEMENT.

Typically, the battery box is removed from the transceiver and front and rear panels are attached to the transceiver for transport and storage.

To prepare radio set for movement, first shut down transceiver. Remove antenna and other attached auxiliary equipment. Latch transceiver front cover in place. Remove battery box. Latch rear cover in place.

Front and rear panel covers attach to the transceiver and provide protection for the transport configuration. Figure 2-2 illustrates the transport configuration. Normally, the transceiver is carried in the standard SOF rucksack.

Before subjecting the radio set to extreme environmental conditions such as caching or immersion, ensure that front and rear cover o-rings are in place and lubricated, and install front and rear covers.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

The AN/PRC-132 radio set is designed to operate in all types of weather and terrain, and to withstand exposure to severe environmental extremes. The radio set can withstand shock and vibration.

2-7 OPERATION IN UNUSUAL WEATHER.

There are no special procedures for operations in unusual weather.

The AN/PRC-132 radio set can withstand the following conditions for limited periods of time:

HUMIDITY: The radio set can withstand (with seals opened) exposure to constant high humidity conditions such as those found in tropical areas, and cyclical high humidity conditions such as those found in open tropical areas where solar radiation is a factor. The radio set will resist fungus growth.

TEMPERATURE: The radio set will operate over a temperature range of 30 to +65 degrees C (-22 to +149 degrees F), and can withstand storage over a temperature range of -40 to +85 degrees C (-40 to +185 degrees F). The LCD may respond sluggishly in extremely cold temperatures. Most LCDS exhibit sluggish

response times at lower temperatures, some taking up to .5 second to respond to a change at -30 degrees C (-22 degrees F). If this does occur, it is a normal response.

SALT AIR: The radio set can resist the effects of exposure to marine atmosphere.

DUST and SAND: The radio set can withstand the effects of blowing dust and sand. The LCD window is made of a high strength polycarbonate. Skirted knobs or boots are used on front panel controls to protect seals and moving parts. All mating surfaces are sealed to prevent sand or dust from penetrating into the equipment.

ALTITUDE: The radio set will operate at ground elevation sites up to 15,000 feet (4572 meters), and can be stored at elevations up to 30,000 feet (9144 meters), The radio set can be air-transported in non-pressurized cabins. In addition, the radio set was designed to survive rapid decompression without damage or degradation in performance.

2-8. FORDING AND SWIMMING.

When fording or swimming, configure the transceiver for transport.

The transceiver can be immersed to depths up to 3 feet. Note that front and rear covers must be on for any immersion of the transceiver.

Sealing of the transceiver in the transport configuration is accomplished with front and rear panel covers. Each cover contains a groove for an o-ring. The o-ring mates with the edges of the front and rear of the transceiver housing. Latches are provided on the housing to pull the covers tight and form a high pressure seal.

The battery box is waterproof to depths up to 3 feet.

2-9. JAMMING AND ECM PROCEDURES.

Follow current military guidelines for operation in an environment where jamming and ECM may be present.

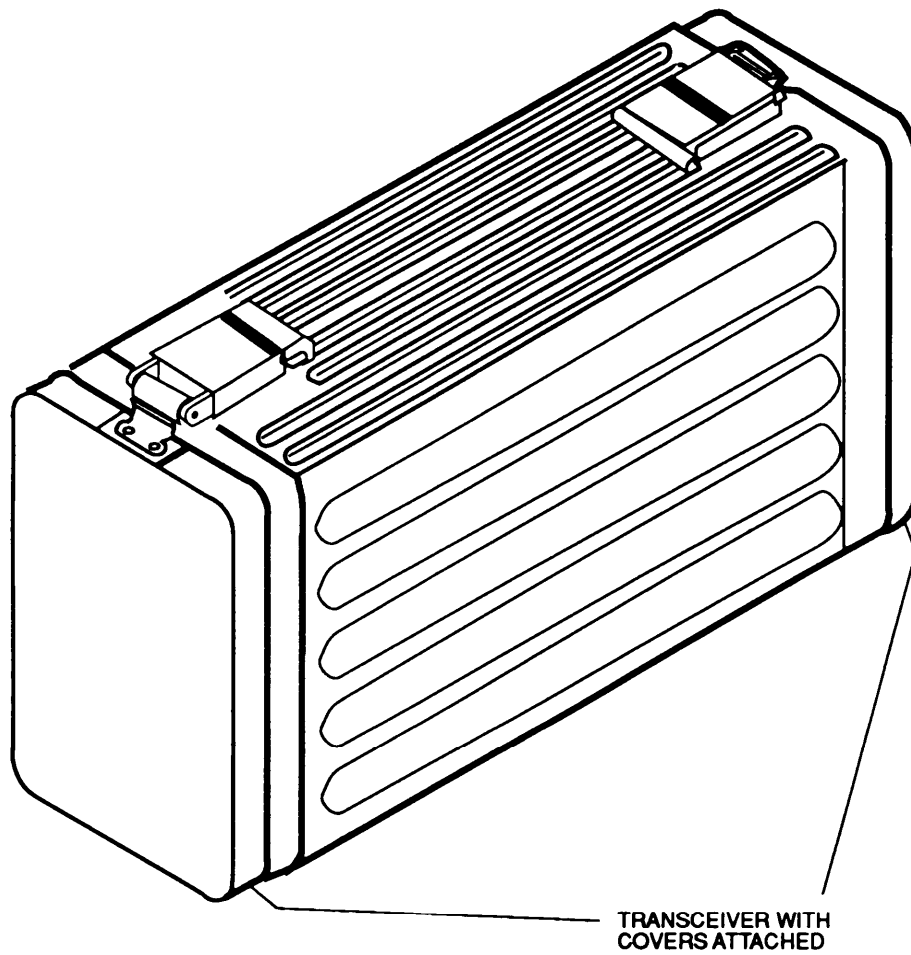


FIGURE 2-2. Transceiver transport configuration

CHAPTER 3
OPERATOR MAINTENANCE

Section I. LUBRICATION INSTRUCTIONS

Lubrication is performed at the unit maintenance level.

Section II. TROUBLESHOOTING PROCEDURES

Refer to paragraph 4-11 for troubleshooting procedures.

Section III. MAINTENANCE PROCEDURES

There are no operator maintenance procedures for the AN/PRC-132 radio set.

OPERATOR MAINTENANCE	3-1
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CHAPTER 4

UNIT MAINTENANCE

Section I. REPAIR PARTS AND SPECIAL TOOLS

4-1 COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment refer to the Modified Table of Organizational Equipment (MTOE) applicable to your unit.

UNIT MAINTENANCE	4-1
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4-2 SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

Refer to the Repair Parts and Special Tools List (TM 11-5820-1102-23P) and to the Maintenance Allocation Chart (Appendix B) for information concerning special tool requirements, TMDE, and support equipment requirements for unit maintenance actions.

No special tools or equipment are required.

4-3 REPAIR PARTS.

Repair parts are listed and illustrated in the Repair Parts and Special Tools List (TM 11-5820-1102-23P).

Section II. SERVICE UPON RECEIPT

4-4 CHECKING UNPACKED EQUIPMENT.

- a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage to the Property Accounting Officer.
- b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies to the Property Accounting Officer.

4-5 INSTALLATION.

4-5.1 Tools and Materials Required for Installation No tools, test equipment, or special materials are required for installation.

4-5.2 Assembly of Equipment The AN/PRC-132 radio set is shipped fully assembled. The only initial action necessary before installing the radio set in its operational configuration is to put batteries in the battery box.

The battery box includes a rear cover and a housing with mating connectors for 99-590 or BA-5590 batteries. Performance is obtained with the following configurations:

- o A single BB-590 battery (50 watts transmit power).
- o Two 99-590 batteries (50 watts transmit power).
- o Two BA-5590 batteries (20 watts transmit power).
- o A combination of one 99-590 and one BA-5590 battery may also be used.

WARNING

TRANSMIT POWER LIMITATION

Transmit power is limited to a maximum of 20 watts when operating with two BA-5590 batteries. When batteries are combined, transmit power may be limited dependent upon the relative state of the battery charge.

When used in combination, the BA-5590 will tend to keep the BB-590 charged, whether the radio is in operation or not. Only the 99-590 nickel cadmium battery is rechargeable.

Transmit operation with 89-590 and BA-5590 batteries used in combination may result in reduced transmit power output.

4-6 PRELIMINARY SERVICING AND ADJUSTMENT OF EQUIPMENT.

Preliminary actions include:

- o Verify that battery box will accept batteries.
- o Verify that battery box will attach to transceiver.
- o Verify that transceiver will power on.
- o For transport configuration, verify that front and rear cover o-rings are in place and lubricated with silicon or an equivalent lubricant. Verify that transceiver front and rear covers fit and latch properly.
- o Verify that all external connectors and connector pins are in good condition and that no pins are bent or broken.
- o Verify that all switches and controls are present and function properly.

4-7 CIRCUIT ALINEMENT.

Circuit alinement is not required.

Section III. UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

4-8 GENERAL.

PMCS are essential to the efficient operation of the system and to prevent possible damage that might occur through neglect or failure to observe warning symptoms in a timely manner. PMCS performed by unit maintenance personnel are limited to those functions accomplished from outside the equipment housing.

4-8.1 Maintenance Forms and Records The forms and records have several uses including:

- (1) a permanent record of the services, repairs and modifications made on the equipment.
- (2) reports to the next level of maintenance and the commander.
- (3) a checklist of the equipment status after its last use, and whether any faults have been fixed.

For more information on forms and records, see DA PAM 738-750.

4-8.2 Routine Checks Routine checks such as cleaning, dusting, washing, stowing items not in use, covering unused receptacles, and checking for damage are not covered in the PMCS checks. They are things which should be done any time they are noticed. Ensure all discrepancies are noted and corrected.

4-8.3 PMCS Unit maintenance PMCS are the required periodic inspections and actions necessary to keep the equipment in good operating condition

4-8.4 System Readiness Criteria System Readiness Criteria are those standard, specified requirements the system must meet to be mission-capable.

4-9 PMCS TABLE.

PMCS Table 4-1 lists all the scheduled maintenance tasks required for the radio set. The columns of the table are as follows:

- a. Item No. This column contains a number for each procedure to be performed. when reporting malfunctions or failures on DA Form 2404, Equipment Inspection and Maintenance Worksheet, enter this number in the TM Item No. column.
- b. Interval. These columns tell when to do a procedure. A letter in a column tells which procedures apply. Some procedures will have more than one letter.
- c. Item To Be Inspected/Procedure. This column has the name of the item to be inspected and tells how to do the required checks and services on it. Carefully perform these instructions in the order listed.
- d. Equipment Is Not Ready/Available If:. This column tells the conditions which will cause the equipment not to be ready (RED) for readiness reporting.

4-10 PMCS PROCEDURES.

NOTE

Within designated intervals, these checks are to be performed in the order listed. If the equipment must be kept in continuous operation, check and service only those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the equipment can be shut down.

4-10.1 Before You Operate Always keep in mind and observe the WARNINGS and CAUTIONS contained in this technical manual (TM) and plates installed on the equipment. Perform the before (B) PMCS from Table 4-1.

4-10.2 While You Operate Always keep in mind and observe the WARNINGS and CAUTIONS contained in this technical manual (TM) and plates installed on the equipment. Perform the during (D) PMCS from Table 4-1.

4-10.3 After You Operate Perform the after (A) PMCS from Table 4-1.

4-10.4 Weekly Perform the Weekly (W) PMCS from Table 4-1.

4-10.5 Monthly Perform the monthly (M) PMCS from Table 4-1.

4-10.6 If Something Doesn't Work Troubleshoot with the instructions in this manual and notify the supervisor.

4-10.7 Order Always do the preventive maintenance in the same order.

4-10.8 Reporting If anything goes wrong that cannot be fixed, write it on the DA Form 2404, or other applicable form. If something is seriously wrong, report it to the next highest maintenance level IMMEDIATELY.

WARNING

RF VOLTAGE WARNING

Exposed metal transceiver parts can assume an RF potential to ground when antenna is tuned without grounding transceiver. To avoid potential RF burns, tie transceiver GND stud to ground.

WARNING

KEEP AWAY FROM LIVE CIRCUITS

The antenna is a source of electrical and radio frequency energy. NEVER TOUCH THE ANTENNA WHEN THE RADIO SET IS IN USE. An RF burn may occur as a result of contact with an active antenna system.

WARNING**DO NOT OPEN TRANSCEIVER CASE**

Operator and unit maintenance personnel must not remove the transceiver case. Transceiver is not repairable at operator and unit maintenance level.

WARNING

Operator must replace both BA-5990/U with completely new batteries at the same time. Do not mix partially used batteries with brand new batteries.

If possible, the operator should use two BA-5590 batteries manufactured by the same vendor with the same date code.

WARNING

Do not attempt to transmit when charging batteries.

WARNING

A lithium-sulfur dioxide (LiSO₂) battery used with the AN/PRC-132 contains pressurized sulfur dioxide (SO₂) gas. The gas is toxic, and the battery **MUST NOT** be abused in any way which may cause the battery to rupture.

DO NOT heat, short circuit, crush, puncture, mutilate, or disassemble batteries.

DO NOT USE any battery which shows signs of damage, such as bulging, swelling, disfigurement, a brown liquid in the plastic wrap, a swollen plastic wrap, etc.

DO NOT test Li-SO₂ batteries for capacity.

DO NOT recharge Li-SO₂ batteries.

DO NOT dispose of lithium batteries with ordinary trash/refuse. Turn in batteries to your local servicing Defense Reutilization and Marketing Office.

WARNING

If the battery compartment becomes hot to the touch, if you hear a hissing sound (i.e., battery venting), or smell irritating sulfur dioxide gas, IMMEDIATELY Turn Off the equipment and leave the area.

1. Allow the equipment to cool at least one hour.
2. Remove and replace battery after the equipment has cooled to the touch.
3. If there is a safety incident, or if you believe a safety hazard exists, notify your local Safety Office/Officer, file a Quality Deficiency Report, SF Form 368, and notify the CECOM Safety Office, Ft. Monmouth, NJ at AV 995312.

WARNING

DO NOT use a Halon type fire extinguisher on a lithium battery fire.

In the event of a fire, near a lithium battery(ies), rapid cooling of the lithium battery(ies) is important. Flood the equipment with water or use a carbon dioxide (CO₂) extinguisher. Control of the equipment fire, and cooling, may prevent the battery from venting and potentially exposing lithium metal. In the event that lithium metal becomes involved in fire, the use of a graphite based Class D fire extinguisher is recommended, such as Lith-X or Met-L-X.

WARNING

DO NOT store batteries in unused equipment for more than 30 days.

DO NOT store lithium batteries with other hazardous materials and keep them away from open flame or heat.

TABLE 4-1. Unit Preventive Maintenance Checks and Services

NOTE

For interval; B = before, D = during, A = after, W = weekly, and M = monthly.

Item No.	Interval BDAWM	Item to be Inspected Procedure	Equipment is not Ready/Available if:
1	B A	Check for cleanliness.	
2	B A	Check all knobs and controls for damage and correct freedom of movement. All hardware should be checked for tightness.	Knobs missing or broken, or incorrect freedom of movement.
3	B A	Check front panel lens to be sure it has not been cracked.	Lens cracked.
4	B A	Check all connectors for damaged pins.	Bent or missing pins.
5	B A	Check for broken latches or latch hooks.	
6	M	Check for o-ring and its lubrication.	
7	B	Be sure that transceiver and battery box mate properly.	Transceiver and battery box do not mate.
8	A	Be sure that transceiver front and rear covers mate properly.	
9	B D A	Check screws for tightness.	
10	B D A	Check battery box vent to be sure it is not clogged with mud or dirt.	Unable to clean vent.
11	B D A	Check hexseal on ENTER, FREQ SEL and CHAN buttons for tears, cracks, or holes. Forward transceiver to Direct Support Maintenance facility for repair if damaged.	Boots torn.

NOTE

Spot paint as necessary.

Section IV. TROUBLESHOOTING

Troubleshooting procedures are the same for both the operator and unit maintenance.

The component most likely to cause a given failure is listed first and should be substituted first. If the replacement does not correct the failure, leave it attached to the transceiver and substitute the next component on the list. Continue substitution, in the order listed in Table 4-2, until failure is corrected.

When a substitution corrects a failure, assume the component replaced is defective and set it aside for repair, leaving the substituted component in the system. Replace previously substituted components one at a time, in reverse order of removal.

After each replacement, recheck the radio set to ensure that the original failure has not returned.

After completion of this procedure, perform general operational tests before returning the radio set to service. Forward defective component(s) to the Direct Support Maintenance facility for repair.

4-11 TROUBLESHOOTING PROCEDURE.

If the AN/PRC-132 radio set fails any of the following tests, refer to Table 4-2 for replacement sequence.

TABLE 4-2 Symptom Index

Failed Test	Replacement Sequence	Troubleshooting Procedure (para.)
Unable to power on transceiver.	Batteries	4-12.1
Unable to power on transceiver.	Battery Box	4-12.1
Unable to power on transceiver.	Transceiver	4-12.1
Unable to program frequencies.	Transceiver	4-12.2
Unable to scan.	Transceiver	4-12.2
Unable to communicate with known good radio set.	Transceiver	4-12.3
Unable to communicate with known good radio set.	Auxiliary equipment	4-12.3
Unable to communicate with known good radio set.	Antenna	4-12.3

4-12 GENERAL OPERATIONAL TESTS.

4-12.1 Power On Test Ensure that transceiver will power on.

4-12.2 Programming Test Ensure that receive and transmit frequencies can be programmed and that frequency scan and channel scan work correctly.

4-12.3 Operational Test Attempt communications with a known good radio set.

Perform all communications operations (both transmit and receive) to verify that radio set under test is fully operational.

Section V. MAINTENANCE PROCEDURES

Refer to Appendix B, Maintenance Allocation Chart, for maintenance times and limitations.

4-13 AN/PRC-132 UNIT MAINTENANCE.

Radio set unit maintenance includes:

- o Inspection
- o Service
- o Test

4-13.1 AN/PRC-132 Inspection After each use, perform an external visual inspection of the radio set. Refer to the PMCS chart.

4-13.2 AN/PRC-132 Service. The only service required is to maintain cleanliness of the radio set, replace batteries when necessary, lubricate o-rings, and repair when damaged.

The radio set and its accessories should be cleaned as required. Remove dust and dirt from surfaces with a cloth or a soft bristle brush. Isopropyl alcohol or mild soapy water may be used as required. Rinse by wiping with a clean cloth moistened in water. Dry using a cloth.

Remove dust and dirt from connectors with a soft, dry, bristle brush.

Lubrication applies to the transceiver front and rear cover o-rings which must be lubricated as required to maintain watertight integrity.

- o Check front and rear cover o-rings for damage or dirt. Clean or replace as required. Coat o-rings with silicon or an equivalent lubricant.
- o Check battery box charging connector cap gasket for proper lubrication.

4-13.3 AN/PRC-132 Test Radio set testing is limited to a functional verification that transceiver and battery box work together, and that all transceiver functions can be performed.

Refer to paragraphs 4-12.1 and 4-12.2 for functional testing.

4-14 CY-862WPRC-132 UNIT MAINTENANCE.

Battery box unit maintenance includes:

- o Inspection
- o Service
- o Test
- o Repair

4-14.1 CY-8629/PRC-132 Inspection After each use, perform an external visual inspection of the battery box. Refer to PMCS chart.

4-14.2 CY-8629/PRC-132 Service The only service required is to maintain battery box cleanliness, change batteries when necessary, and repair when damaged.

The battery box should be cleaned as required. Remove dust and dirt from surfaces with a cloth or a soft bristle brush. Isopropyl alcohol or mild soapy water may be used as required. Rinse by wiping with a clean cloth moistened in water. Dry using a cloth.

Use a dry bristle brush to remove mud or dirt from the vent screen.

Remove dust and dirt from connectors with a soft, dry, bristle brush.

4-14.3 CY-8629/PRC-132 Test Battery box testing is limited to a functional verification that transceiver and battery box work together, and that all transceiver functions can be performed.

Refer to paragraph 4-12 for functional and performance testing.

4-14.4 CY-8629/PRC-132 Repair Battery box repair is limited to battery replacement.

The battery box does not have to be separated from the transceiver during battery replacement. Batteries can be installed or replaced by disengaging latches that hold rear cover of battery box to the battery box housing. Ensure transceiver is in OFF position. Remove cover. Grasp exposed batteries and remove them from battery box. Refer to Figure 4-1. Turn batteries so battery connectors will mate with connectors in the battery box housing. Install batteries. Within battery box housing, guide pins will position batteries for proper connector alignment. Mating connectors inside housing will engage battery connectors as batteries are installed. Replace battery box cover and latch in place.

4-14.5 CY-8629/PRC-132 Battery Charging BB-590 batter(ies) can be recharged with the handcrank generator. The generator interconnection cable is connected to the battery box battery charging connector. Fully discharged batteries take approximately 6 hours to recharge.

WARNING

Do not attempt to transmit when charging batteries.

4-15 RT-1648/PRC-132 UNIT MAINTENANCE.

Transceiver unit maintenance includes:

- Inspection
- Repair
- Test

4-15.1 RT-1648/PRC-132 Inspection After each use, perform an external visual inspection of the transceiver. Refer to PMCS chart.

4-15.2 RT-1648/PRC-132 Repair Transceiver repair is limited to the replacement of knobs.

To remove knobs: Rotate knob (or shaft if knob is missing) fully counterclockwise (CCW). Use an allen wrench to loosen set screw. Remove knob.

To install knobs: Replace knob, being careful to align knob marker with appropriate markings on transceiver front panel. Use an allen wrench to tighten set screw.

4-15.3 RT-1648/PRC-132 Test Transceiver testing covers both functional and performance testing. Refer to paragraph 4-12.

Section VI. PREPARATION FOR STORAGE OR SHIPMENT

Refer to paragraph 2-6 to prepare the AN/PRC-132 radio set for storage or shipment.

NOTE

Clear radio memory before storage or shipment.

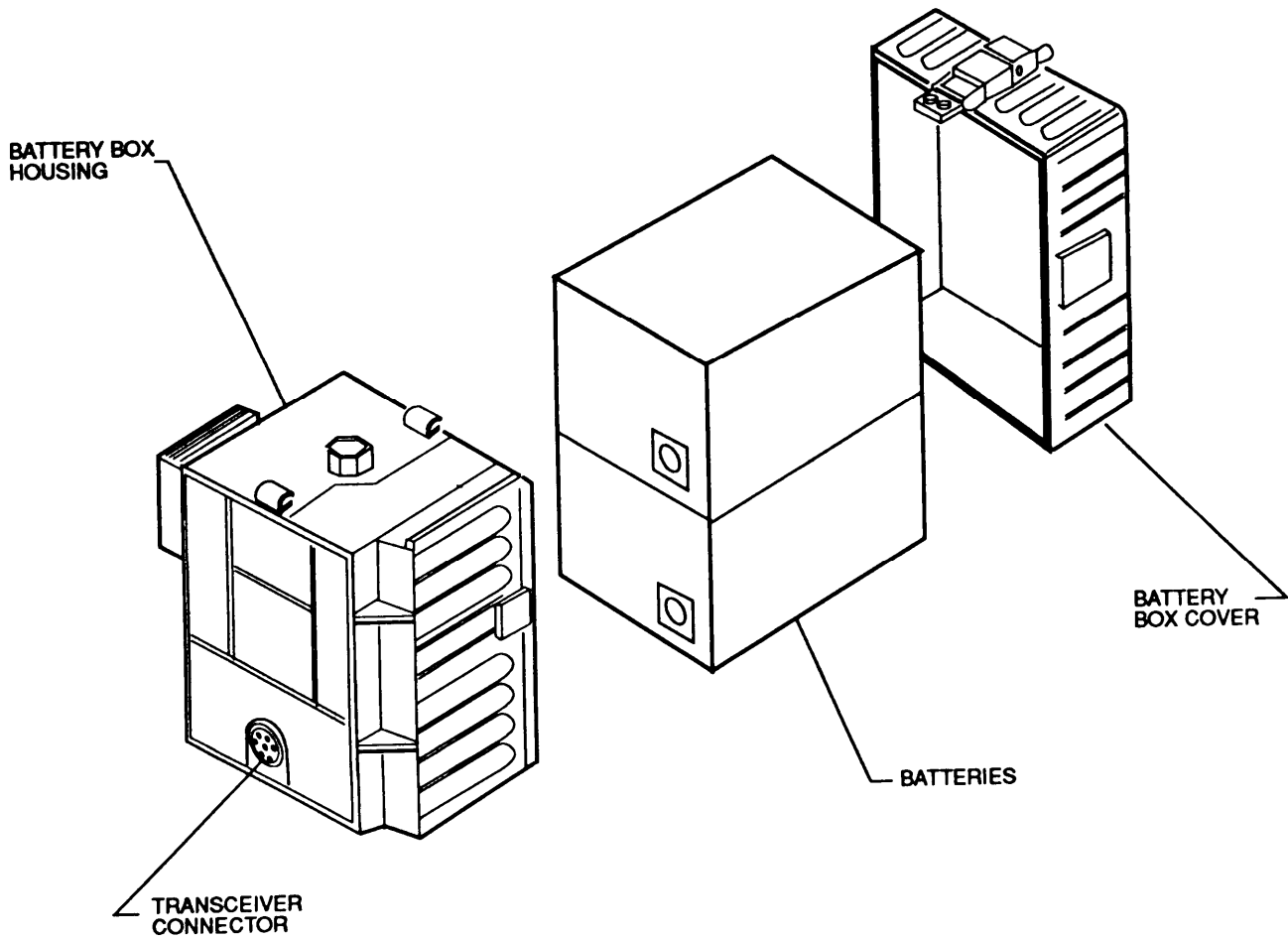


FIGURE 4-1. Battery installation

APPENDIX A - REFERENCES

A-1. SCOPE

This appendix lists all forms, field manuals, technical manuals, and miscellaneous publications referenced in this manual.

A-2. FORMS

DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2028-2	Recommended Changes to Publications and Blank Forms
SF 361	Transportation Discrepancy Report
SF 364	Report of Discrepancy
SF 368	Product Quality Deficiency Report

APPENDIX A REFERENCES	A-1
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A-3. TECHNICAL MANUALS

TM 11-5820-1102-23P	Repair Parts and Special Tools List
TM 11-5820-1102-30	AN/PRC-132 Radio Set Direct Support Maintenance
TM 750-244-2	Destruction of Army Electronics Materiel to Prevent Enemy Use
TM 11-6115-470-10	Generator, G-76/U

A-4. MISCELLANEOUS PUBLICATIONS

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
DA PAM 738-750	The Army Maintenance Management System (TAMMS)
Supply Bulletin 11-628	Headset, H-251

APPENDIX B - MAINTENANCE ALLOCATION CHART (MAC)

Section I. INTRODUCTION

1-1 GENERAL

This Maintenance Allocation Chart (MAC) provides a summary of the maintenance operations for the AN/PRC-132. It authorizes categories of maintenance for specific maintenance functions on repairable items and lists the tools and equipment required to perform each function.

1-2. 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 and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.
- c. Service. Operations required periodically to keep an item in proper operating condition.
- d. Install. The act of emplacing, seating or fixing into position an item, part or module in a manner to allow proper function of an equipment or system.
- e. Replace. The act of substituting a serviceable like type part, subassembly, or module for an unserviceable counterpart.
- f. Repair. The application of maintenance services or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfunction in a part, subassembly, module, end item or system.
- g. Overhaul. That maintenance effort necessary to restore an item to a completely serviceable/operational condition.

APPENDIX B	B-1
MAINTENANCE	
ALLOCATION CHART	
(MAC)	

1-3. COLUMN ENTRIES

- a. 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. Component/Assembly. Column 2 contains the names of components, assemblies, subassemblies and modules for which maintenance is authorized.
- c. Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2.

d. Maintenance Category. Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumn(s) the lowest level of maintenance authorized to perform the maintenance function listed in column 3. This figure represents the active time required to perform the maintenance function at the indicated category of maintenance. Subcolumns of column 4 are as follows:

- C Operator/Crew
- O Unit
- F Direct Support
- H General support
- D Depot

e. Tools and Equipment. Column 5 specifies, by code, those common tool sets and special tools, test and support equipment required to perform the designated function.

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

14. TOOLS AND TEST EQUIPMENT REQUIREMENTS (SECTION III)

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

b. Maintenance Category. The codes in this column indicate the maintenance category allocated the tools 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.

1-5. REMARKS

a. Reference Code. The code refers to the appropriate item in Section II, Column 6.

b. Remarks. This column provides the required explanatory information necessary to clarify items appearing in Section II.

SECTION II - MAINTENANCE ALLOCATION CHART FOR RADIO SET, AN/PRC-132

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
00	AN/PRC-132 994528-10	INSPECT		.2					A
		SERVICE		.4				18	B
		TEST		.1					C
		INSTALL		.3					M
		REPLACE		.1					D
		TEST			.4				E
		REPAIR			.5				F
		OVERHAUL					30.0	1,2,3,6-9,12, 13,15,18	
01	RT-1648/PRC-132 994525-10	INSPECT		.2					
		TEST		.3					C
		REPAIR		.3				18	H
		TEST			.4			1,3,12	
		REPAIR			.6			18	I
		REPLACE		.1					D
0101	RADIO FINAL ASSY. 994500-10	INSPECT		.2					
		TEST		.3					C
		REPAIR		.3				18	H
		TEST			.4			1,3,12	
		REPAIR			.6			18	I
		REPLACE		.1					D
010101	CONTROL PANEL COVER ASSY. 994519-10	REPAIR			.7			18	
		REPLACE			.1			18	
010102	REAR PANEL COVER ASSY. 994529-10	REPAIR			.7			18	
		REPLACE			.1			18	
010103	HOUSING ASSY. 994517-10	TEST			.4			1,3,6-9,12, 13,15,18	J
		REPLACE			.1			18	
		REPAIR					3.0	1,2,3,8,12, 13,15,18	
01010301	POWER AMP A13 994513-10	TEST			.4			1,3,6-9,12, 13,15,18	
		REPLACE			.1			18	
		REPAIR					2.0	1,2,3,8,12, 13,15,18	

SECTION II - MAINTENANCE ALLOCATION CHART FOR RADIO SET, AN/PRC-132

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
010104	CHASSIS ASSY. 994518-10	TEST			.4				C
		REPAIR			.8			18	K
		REPLACE			.5			18	
		REPAIR					20.0	1,2,3,6-9,12, 13,15,18	
01010401	PROCESSOR A1 994501-10	TEST			.6			1,3,6-9,12,13, 13,15,18	
		REPLACE			.3				
		REPAIR					3.0	2,3,18	
01010402	1ST LO A2 994502-10	TEST			.6			1,3,6-9,12,13, 15,18	
		REPLACE			.3				
		REPAIR					3.0	2,3,6,7,13,15, 18	
01010403	2ND LO A3 994503-10	TEST			.6			1,3,6-9,12,13, 15,18	
		REPLACE			.3				
		REPAIR					3.0	2,3,6,7,13,15, 18	
01010404	PROD. DETECTOR A7 994507-10	TEST			.6			1,3,6-9,12,13, 15,18	
		REPLACE			.3				
		REPAIR					4.0	2,3,8,9,11,15, 18	
01010405	2ND IF A8 994508-10	TEST			.6			1,3,6-9,12,13, 15,18	
		REPLACE			.3				
		REPAIR					3.5	2,3,15,18	
01010406	1ST IF A9 994509-10	TEST			.6			1,3,6-9,12,13, 15,18	
		REPLACE			.3				
		REPAIR					3.0	2,3,8,15,18	
01010407	1ST MIXER A10 994510-10	TEST			.6			1,3,6-9,12,13, 15,18	
		REPLACE			.3				
		REPAIR					3.0	2,3,6,8,15,16, 18	
01010408	1ST FILTER A11 994511-10	TEST			.6			1,3,6-9,12,13, 15,18	
		REPLACE			.3				
		REPAIR					3.5	2,3,15,18	

SECTION II - MAINTENANCE ALLOCATION CHART FOR RADIO SET, AN/PRC-132

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE	
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT			
			C	O	F	H	D			
01010409	2ND FILTER A12 994512-10	TEST			.6			1,3,6-9,12,13, 15,18		
		REPLACE			.3					
		REPAIR					3.5			2,3,6,8,17,18
01010410	MAIN BD. ASSY. A14 994514-10	TEST			.6			1,3,6-9,12,13, 15,18		
		REPLACE			.3					
		REPAIR					3.5			2,3,6,8,17,18
01010411	CARD CAGE ASSY. 994521-10	REPAIR					1.0	18	D	
		REPLACE		0.1						
01010412	CONTROL PANEL 994522-10	TEST			.6			1,3,6-9,12,13, 15,18	L	
		REPLACE			.3					
		REPAIR					5.0			2,3,18
0101041201	FRONT PANEL BD. ASSY. A16 994516-10	TEST			.6			1,3,6-9,12,13, 15,18		
		REPLACE			.3					
		REPAIR					5.0			2,3,18
02	CY-8629/PRC-132 A3155274	SERVICE			.4			18	C G	
		TEST			.1					
		REPAIR			.4					
		REPLACE			.1					
		TEST					.5			3,18
0201	COVER ASSY. A3155282	REPAIR			.7			18		
		REPLACE			.1			18		
0202	HOUSING A3155275	REPLACE			.4			18	N	
		REPAIR			1.0			18		
020201	PC SUBASSY. A3155276	TEST					.5	1,3,6-9,12,13, 15,18		
		REPAIR					4.0			2,3,6,12,13, 18-21
		REPLACE					.8			18

SECTION III - TOOLS AND TEST EQUIPMENT REQUIREMENTS FOR RADIO SET, AN/PRC-132

TOOL OR TEST EQUIPMENT REFERENCE CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NSN
001	F,D	PP7545 B/U POWER SUPPLY	6130-01-238-8240
002	D	PP 7548/U POWER SUPPLY	
003	F,D	AN/USM-486 DMM	6625-01-145-2430
004	D	HP 34301A RF PROBE	6625-01-312-8810
005	D	HP 34401 RF VOLTMETER	
006	F,D	AN/USM-491 POWER METER	6625-01-191-7679
007	F,D	AN/USM-459A FREQ. COUNTER	6625-01-271-3012
008	F,D	SG-1170/U SIGNAL GEN.	6625-01-120-3501
009	F,D	TS-4084/G DIST. ANALYZER	6625-01-217-0054
010	D	COMBINER, ANZAC HH108	
011	D	AN/USM-488, OSCILLOSCOPE	6625-01-187-7847
012	D	JFW 50H-30-100 ATTEN. OR EQUIVALENT	6625-01-136-3170
013	F,D	KAY 839 STEP ATTEN. OR EQUIVALENT	5895-01-119-1180
014	D	T PROBE CONNECTOR HP 11042A	5985-00-713-4356
015	D	HP 3577B NETWORK ANALYZER	
016	D	HP 35677A S PARA. TEST SET	6625-01-257-5604
017	D	ENI AMPLIFIER 325 LA	6625-01-264-5552
018	O,F,D	TK-101/G TOOL KIT	5180-00-064-5178
019	D	SIMPSON 375 (1216)	6625-01-021-0236
020	D	CAEN 102010 DC DUMMY LOAD	
021	D	RESISTOR, RE75G15RO, 50 WATTS, 15 OHMS - SEE REMARK O	MIL-STD-RE75G15 RO

SECTION IV - REMARKS FOR RADIO SET, AN/PRC-132

REFERENCE CODE	REMARKS
A	EXTERNAL VISUAL INSPECTION
B	SERVICE CONSISTS OF CLEANING EXTERIOR, LUBRICATION OF O-RINGS (812386-00,812229-00, CAGE 54296) AND TIGHTENING OF KNOBS (KN-500B-1/8, CAGE 95146)
C	FUNCTIONAL TEST
D	REPLACE TIME IS FOR PROVISIONING PURPOSES ONLY
E	PERFORMANCE TEST
F	REPAIR BY REMOVAL AND REPLACEMENT OF RT-1648/PRC-132 (994525-10, CAGE 54296) AND CY-8629/PRC-132(A3155274, CAGE 80063)
G	REPAIR BY REPLACEMENT OF BATTERY (BB590/U, NSN 6140-01-063-3918 OR BB-5590/U, NSN 6135-01-036-3495, CAGE 31586) AND COVER ASSY. (A3155282, CAGE 80063). NOTE: BATTERIES ARE GFE
H	REPAIR BY REPLACEMENT OF KNOBS (KN-500B-1/8, CAGE 95146), FRONT PANEL COVER ASSY. (994519-10, CAGE 54296), REAR PANEL COVER ASSY. (994529-10, CAGE 54296) AND O-RINGS (812386-00, 812229-00, CAGE 54296)
I	REPAIR BY REPLACEMENT OF O-RINGS (812386-00, 812229-00, CAGE 54296) AND HEXSEALS (812230-0, CAGE 54296)
J	REPAIR BY REPLACEMENT OF LATCHES (821997-00, CAGE 54296), RADIO HOUSING (994517-10, CAGE 54296) AND POWER AMP ASSEMBLY A13 (994513-10, CAGE 54296)
K	REPAIR BY REPLACEMENT OF SUBORDINATE SUBASSEMBLIES, CARD CAGE ASSY. (994521-10, CAGE 54296) OR THE MAIN BOARD A14 (994514-10, CAGE 54296)
L	REPAIR BY REPLACEMENT OF BEZEL (426-0001-010, CAGE 54296), GROUND TERMINAL (816309-00, CAGE 54296), THE DISPLAY BOARD A15 (994515-10, CAGE 54296) OR THE FRONT PANEL BOARD A16 (994516-10, CAGE 54296)
M	RECEIVER TRANSMITTER BNC CONNECTOR (119-1007-001, CAGE 54296) IS LOCATED IN THE RADIO ACCESSORY KIT (994526-10, CAGE 54296)
N	REPAIR BY REPLACEMENT OF POWER TRANSISTOR Q1 (JAN2N6052, CAGE 81349) CONNECTORS J1 AND J2 (MS3112E14-5S, CAGE 96906 AND A3155285, CAGE 80063), DIODES A1A2A1CR1 AND A1A2A1CR2 (1N6034R, CAGE 80131), PC SUBASSEMBLY (A3155276, CAGE 80063) AND CONNECTORS P1 AND P2 (SM-D-687888-1, CAGE 80063)
O	THIS PART IS DEFINED BY MIL-STD RE75G15RO

APPENDIX C - COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS

Section 1. INTRODUCTION

C-1 . SCOPE

This appendix lists Components of End Item and Basic Issue Items (BII) for the AN/PRC-132 to help you inventory items required for safe and efficient operation.

C-2. GENERAL

The Components of End Item and Basic Issue Lists are divided into the following sections:

- a. Section II. Components of End Item. This listing is for informational purposes only, and is not authority to requisition replacements. These items are part of the end item, but are removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts: Illustrations are furnished to assist you in identifying the items.
- b. Section III. Basic Issue Items. These are the minimum essential items required to place the AN/PRC-132 in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the AN/PRC-132 during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to request/requisition replacement BII, based on TOE/MTOE authorization of the end item.

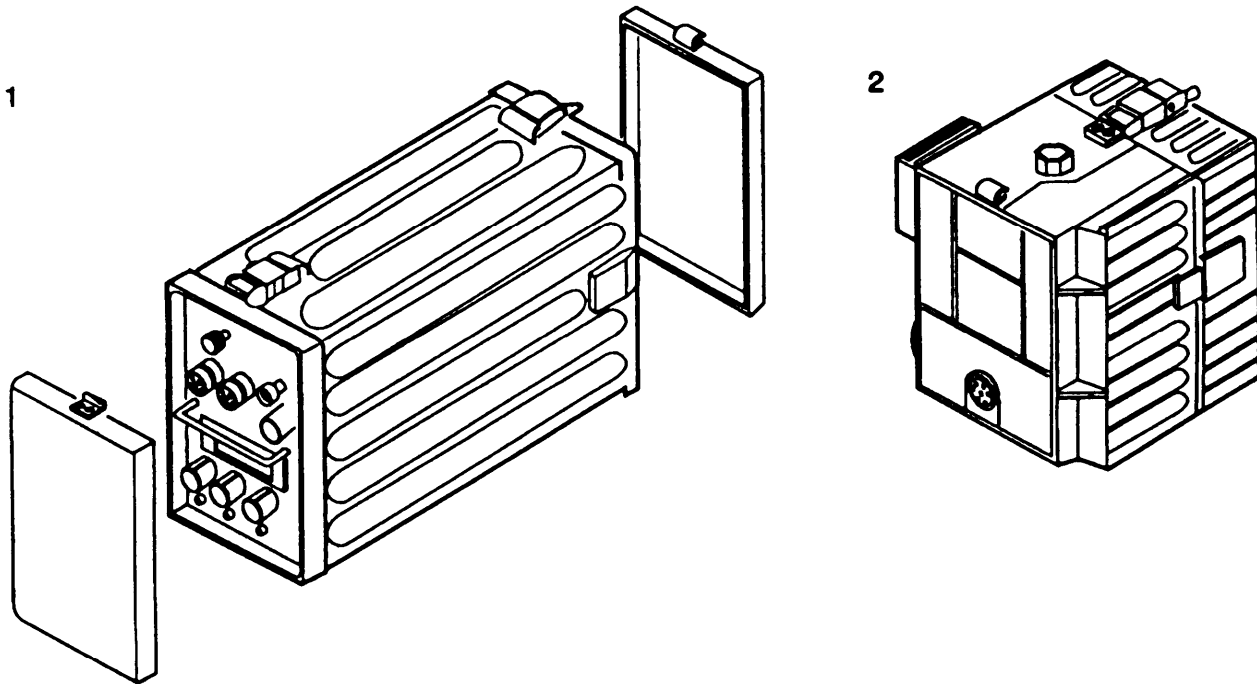
C-3. EXPLANATION OF COLUMNS

The following provides an explanation of columns found in the tabular listings:

APPENDIX C	C-1
COMPONENTS OF	
END ITEM AND	
BASIC ISSUE ITEMS	

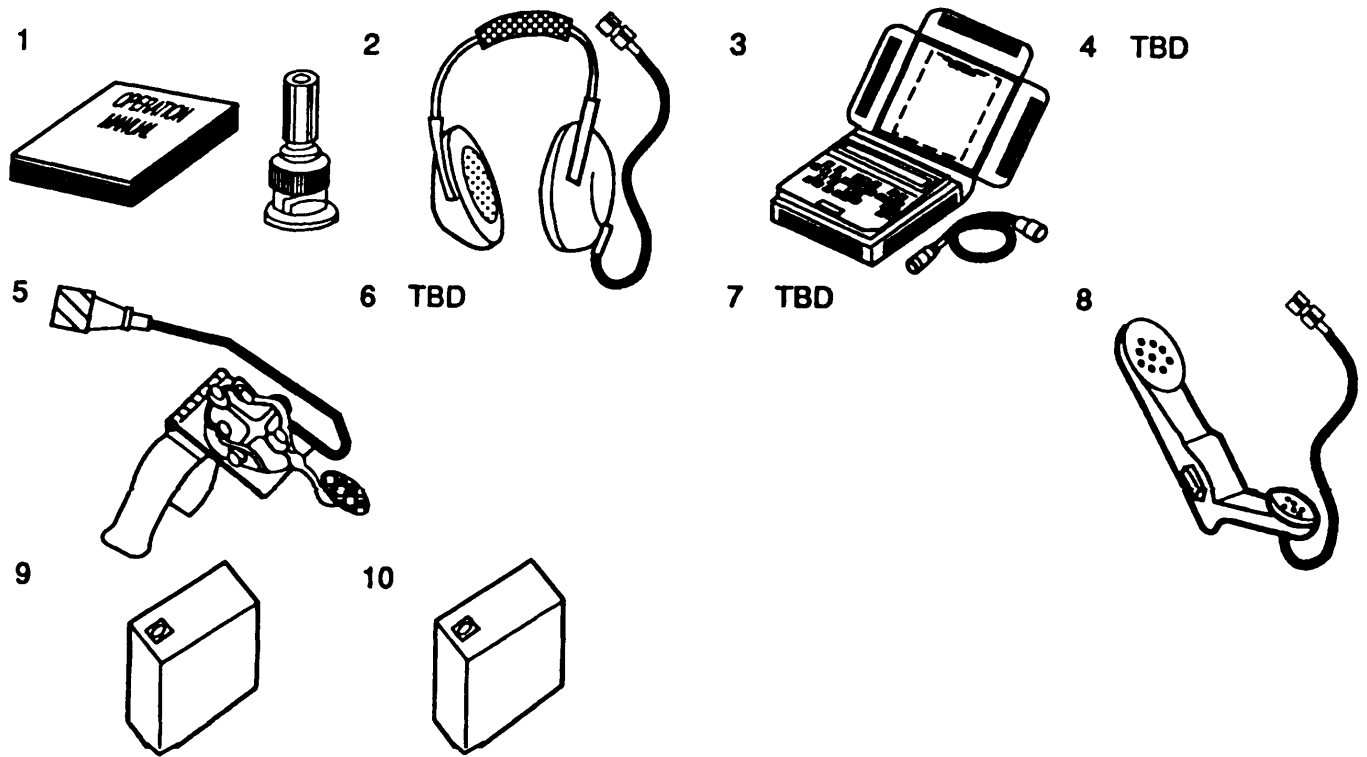
- a. Column (1) - Illustration Number (Illus Number). This column indicates the number of the illustration in which the item is shown.
- b. Column (2) - National Stock Number. Indicates the National stock number assigned to the item and will be used for requisitioning purposes.
- c. Column (3) - Description. Indicates the Federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the CAGEC (in parentheses) followed by the part number.
- d. Column (4) - Unit of Measure (U/M). Indicates the measure used in performing the actual operational/maintenance function. This measure is expressed by a two-character alphabetical abbreviation (eg., ea, in, pr).
- e. Column (5) - Quantity required (Qty rqr). Indicates the quantity of the item authorized to be used with/on the equipment.

SECTION II. COMPONENTS OF END ITEM



(1) Illus number	(2) National Stock number	(3) Description CAGEC and Part number	(4) Usable On Code	(5) U/M	Qty rqr
1	5820-01-320-3686	Receiver-Transmitter, Radio- RT-1648/PRC-132	TBD	EA	1
2	6160-01-322-9366	Battery Box - CY-8629/PRC-132	TBD	EA	1

SECTION III. BASIC ISSUE ITEMS



(1) Illus number	(2) National Stock number	(3) Description CAGEC and Part number	(4) Usable On Code	(5) U/M	Qty rqr
1	N/A	Accessory Kit, (Loral TerraCom) with BNC-to-Binding Post Connectors	JNM	EA	1
(The following are OPTIONAL BASIC ISSUE ITEMS)					
2	5965-00-043-3460	Headset, Electrical, H-251/U	JNM	EA	1
3	5820-01-102-3921	Digital Message Device Group OA-8990/G	JNM	EA	1
4	TBD	Antenna Group OT-445/PRC	JNM	EA	1
5	5805-00-503-3395	Telegraph Key, KY-116/U (with cable assy CX-13031 or KY-872/PRC-104	JNM	EA	1
6	5985-00-831-5991	Attenuator, 30 dB	JNM	EA	1
7	6625-01-136-3170	Attenuator, 100 dB	JNM	EA	1
8	5965-00-043-3463	Handset, H-250/U	JNM	EA	1
9	6140-01-063-3918	Battery, BB-590	JNM	EA	2
10	6135-01-036-3495	Battery, BA-5590	JNM	EA	2

APPENDIX D - ADDITIONAL AUTHORIZATION LIST (AAL) ITEMS

Section I. INTRODUCTION

D-1 . SCOPE

This appendix lists additional items you are authorized for the support of the AN/PRC-132.

D-2. GENERAL

This list identifies items that do not have to accompany the AN/PRC-132 and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, TDA, or JTA.

D-3. EXPLANATION OF LISTING

National stock numbers, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment. The items are listed in alphabetical sequence by item name under the type document (ie., CTA, MTOE, TDA, or JTA) which authorizes the item(s) to you.

Section II. ADDITIONAL AUTHORIZATION LIST

(1) National Stock Number	(2) Description CAGEC & Part Number	(3) U/M	(4) Qty Auth	Usable on Code
---------------------------------	---	------------	--------------------	----------------

MTOE AUTHORIZED ITEMS

(To Be Determined)

CTA AUTHORIZED ITEMS

(To Be Determined)

APPENDIX E-EXPENDABLE SUPPLIES AND MATERIELS LIST**Section I. INTRODUCTION**

E-1. SCOPE. This appendix lists expendable supplies and materiel you will need to operate and maintain the AN/PRC-132. This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (except Medical, Class V, Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

E-2. EXPLANATION OF COLUMNS

a. Column (1) - Item number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the materiel (eg., "Use cleaning compound, item 5, app. D").

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

- C - Operator/Crew
- U - Unit Maintenance
- F - Direct Support Maintenance
- H - General Support Maintenance

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

d. Column (4) - Description. Indicates the Federal item name and, if required, a description to identify the item, The last line for each item indicates the Commercial and Government Entity Code (CAGEC) in parentheses followed by the part number.

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 alphabetical 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/DURABLE SUPPLIES AND MATERIELS LIST

(1) Item	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
1	C/U	TBD	Paint, color 24084	TBD
2	C/U	TBD	Isopropyl Alcohol	TBD
3	C/U	TBD	Lubricant	TBD
4	C/U	TBD	Camel Hair Brush	Ea
5	C/U	TBD	Non-abrasive Cloth	Ea
6	C/U	TBD	Cotton Swabs	TBD
7	C/U	5430-00-906-3666	Brush, Soft-bristled, 153350, 01099	Ea
8	C/U	8305-00-205-3496	Cloth, Cotton Cheesecloth, CC 440, 81348	Ea

GLOSSARY

Section I. ABBREVIATIONS

AM	Amplitude Modulation
AME	Amplitude Modulation Equivalent
ANT	Antenna
CAGEC	Commercial and Government Entity Code
CW	Continuous Wave
DS	Direct Support
ECM	Electronic Counter Measures
GND	Ground (electrical)
HF/VHF	High Frequency/Very High Frequency
LCD	Liquid Crystal Display
LSB	Lower Sideband
RF	Radio Frequency
rms	root-mean-square
SOF	Special Operations Forces
TBD	To Be Determined
UDB	Up/Down Button
USB	Upper Sideband
VOGAD	Voice Operated Gain Adjustable Device

Section II. DEFINITION OF UNUSUAL TERMS

Counterpoise: A system of wires or other conductors, elevated above and insulated from ground, forming a lower system of conductors of an antenna.

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		F03	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°.

REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.

Item 5, Function column. Change "2 db" to "3db."

REASON: The adjustment procedure for the TRANS POWER FAULT indicator calls for a 3 db (500 watts) adjustment to light the TRANS POWER FAULT indicator.

Add new step f.1 to read, "Replace cover plate removed in step e.1, above."

REASON: To replace the cover plate.

Zone C 3. On J1-2, change "+24 VDC to "+5 VDC."

REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.

TEAR ALONG PERFORATED LINE

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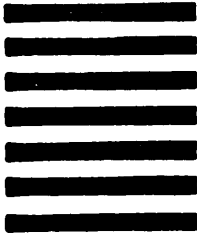
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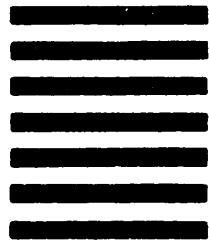
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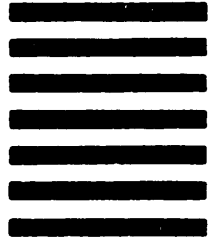
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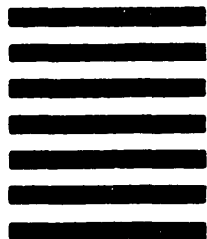
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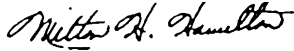
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