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AP-49

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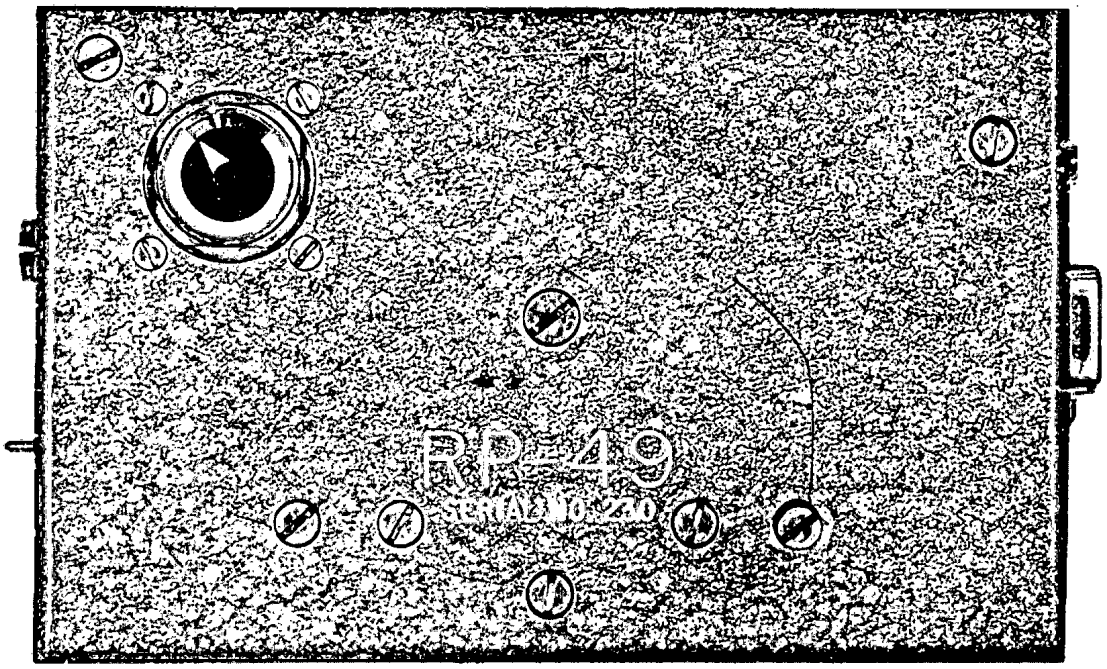


RP-49
Power Supply
Operating Instructions

A. INTRODUCTION

The RP-49 is a miniature power supply designed to permit operation of the RT-49 transmitter from a battery capable of supplying 12 volts at approximately 5.5 amperes.

B. DESCRIPTION OF CONTROLS AND SWITCHES

1. POWER OFF-ON Switch (1)

The Power Off-On switch is used to turn the power to the transmitter on or off. Twelve volts DC is supplied to the receiver power connector (2) and the keyer socket on the transmitter regardless of the switch position.

2. Battery Test Meter (4)

The Battery Test Meter provides an indication of the state of charge of the 12 volt battery. The meter readings are valid only when the transmitter is being keyed and mean the following:

Green:	Battery charged.
Yellow:	Battery voltage is approximately 11 volts and very little transmit time remains.
Red :	Battery is discharged and transmission should cease. NOTE: Continued operation in the "red" seriously endangers battery life and must be avoided.

C. PREPARATION FOR USE

1. Turn the POWER OFF-ON switch (1) off.
2. Connect the battery to the INPUT 12 VDC connector (3) with

the power cable.

3. Connect the transmitter connector (5) to the RT-49 and latch together with the slide latch located on the RT-49.

4. If a common transmit/receive power supply and antenna system is desired, connect the receiver to the receiver power & antenna connector (2) with the auxiliary power & antenna cable.

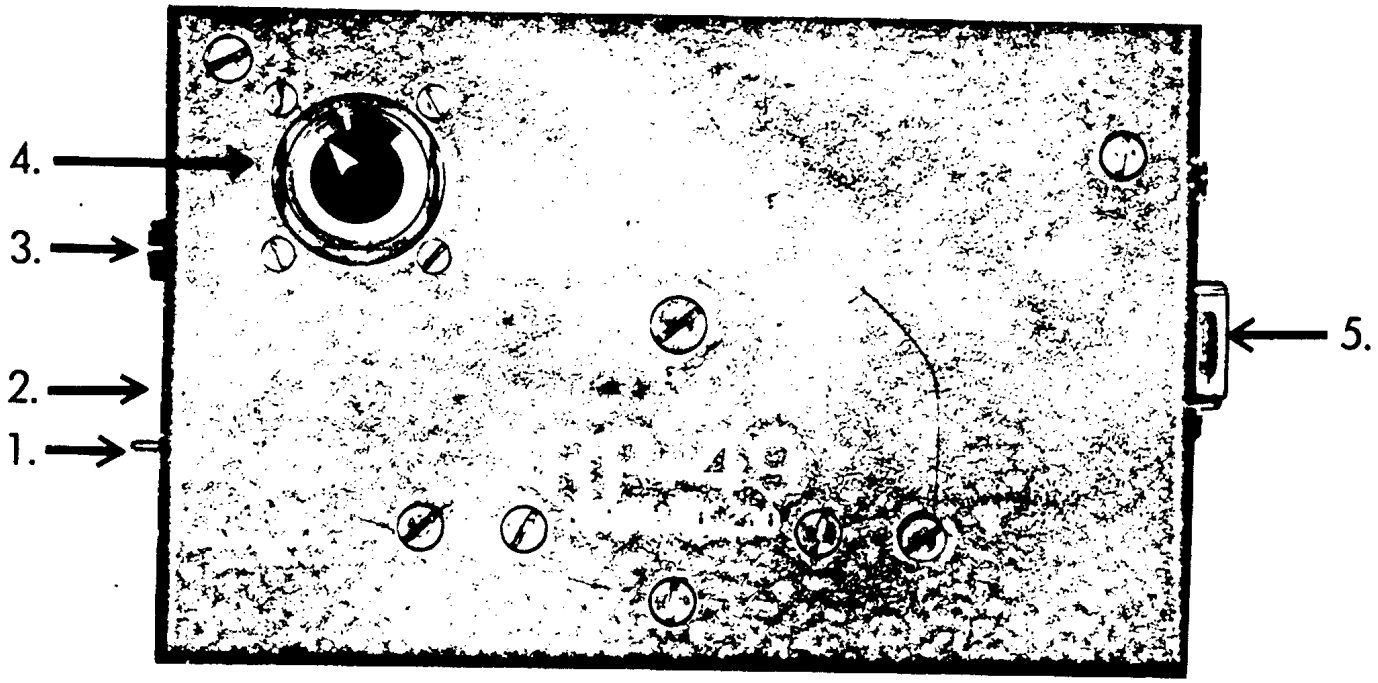
D. USE

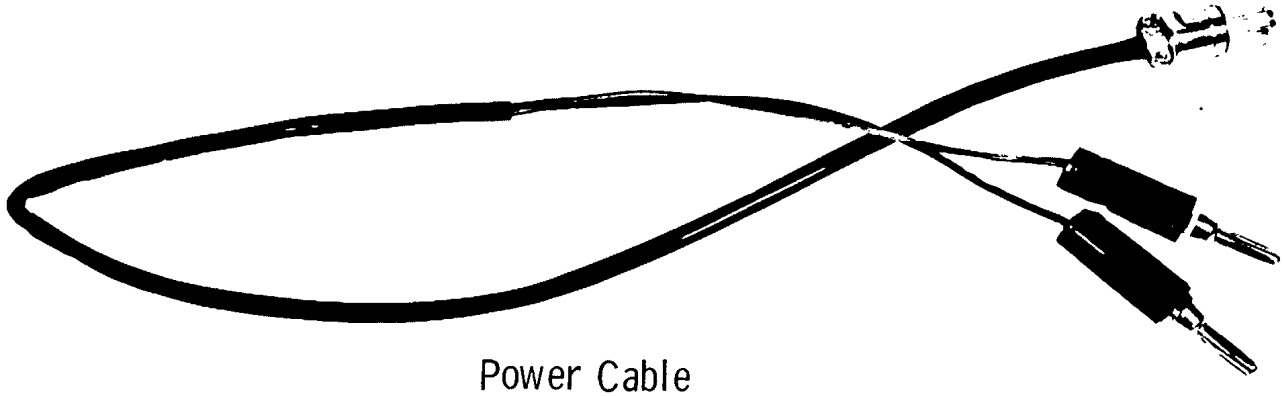
1. After completion of the steps in paragraph C, turn the POWER OFF-ON switch (1) on prior to transmitting.

2. This switch should be turned to the OFF position to conserve battery power when the transmitter is not actually being keyed. The automatic keyer and receiver will still be operative.

E. MAINTENANCE

Due to the miniaturized construction of the power supply, no maintenance should be attempted. The power supply should be returned to base for exchange.





Power Cable

Auxilliary Power & Antenna Cable

Alligator Clips

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RR-48A Receiver

A. INTRODUCTION

The RR-48A is a four-channel, crystal-controlled radio receiver operating in the frequency range of 3.5 to 12 megacycles. Crystal-controlled means that crystals must be used to receive signals; four-channel operation means that any one of four channels may be used by the adjustment of the channel selector switch. The RR-48A will receive Morse code, tone, or voice signals. The receiver is powered by a single 1.5 volt AA type (PENLITE) battery.

B. DESCRIPTION OF CONTROLS AND SWITCHES

1. Channel Selector Switch (3).

a. The channel selector switch is used to receive any one of the four channels. The red tip of the switch is positioned directly underneath the number of the desired channel.

b. Channel 1 is normally used with separate crystals that are inserted into the crystal socket (8) on top of the receiver.

c. Channels 2, 3, and 4 are used with crystals that are installed inside the receiver casing.

d. You may be issued an RR-48A that has had the crystal socket (8) removed and the small holes plugged. If so, channel 1 has a crystal installed inside the receiver and channel 1 is then used in the same manner as channels 2 through 4. When all four channels have crystals installed inside the receiver, separate crystals will not be provided.

2. BFO Control (6).

The BFO control is used to receive Morse code signals. The index marker on the control is adjusted to the right or left of the center BFO marker to receive Morse code signals. The control is turned OFF to receive tone or voice signals.

3. ON-OFF and Gain Control (9).

The ON-OFF and Gain control is turned in the direction of the MAX GAIN arrow to turn the receive ON, and is adjusted to its full stop to receive the loudest signal. The control is colored black in the OFF position and yellow in the ON position.

4. Tuning Dial (10) and Tuning Control (11).

a. For a desired channel of operation, the tuning control is adjusted until one of the numbered segments of the tuning dial is positioned underneath the hairline indicator. Numbers 20 through 25 are shown in the tuning dial window, and each number is divided into four segments.

b. You will be provided with the tuning dial numbers corresponding to channels 2, 3, and 4, and to additional crystals that may be used in channel 1.

C. TO INSERT THE BATTERY

Unscrew the battery cap (5) and insert the battery with the plus (+) side facing the front of the receiver. The minus (-) side of the battery is placed against the spring inside the battery compartment. After inserting the battery, replace the battery cap.

D. OPERATING THE RECEIVER.

1. Depress the white ANT button and insert the antenna wire in the antenna terminal (1). Depress the black GND button and insert the ground wire in the ground terminal (2). A ground wire is not necessary to operate the receiver, but is often helpful.

2. Plug the headphones to the phones terminals (4).

3. Set the channel control switch to the desired channel. If channel 1 is used, select the desired crystal and insert it into the crystal socket (8).

4. Adjust the tuning control (11) until the tuning number of the desired channel (or crystal) appears below the hairline indicator in the tuning dial window. For instance, channel 2 may be assigned the tuning number 22.5. Therefore, set the tuning control mid-way between 22 and 23.

5. Set the BFO control to OFF to receive voice or tone signals. Set the control to the BFO index mark to receive Morse code signals.

6. Turn the ON-OFF control in the direction of the MAX GAIN arrow until a rushing noise is heard in the headphones.

7. Adjust the gain control to a comfortable listening level, then slowly rotate the tuning control to the right and to the left until the desired signal is heard the loudest and clearest. For Morse code signals, the BFO control may be adjusted to the right or left to change the pitch of the signal.

E. TO TURN THE RECEIVER OFF.

To turn the receiver off, rotate the ON-OFF switch in the direction of the OFF arrow until a click is heard. When the receiver is OFF, the ON-OFF control will be colored black. For storage periods of over one week, remove the battery from the receiver battery compartment.

F. MAINTENANCE

There are no component spare parts supplied with, nor is there any maintenance to be performed for, the RR-48A. Most of the circuits are on printed boards and the set is fully transistorized. If the simple trouble checks given below do not clear a trouble, any repairs deemed necessary may be performed.

G. CHECKING TROUBLES.

1. No sound is heard in the headphones.

a. Check to determine that the battery cap is screwed firmly in place and that the battery is making a good connection. Check to determine that the battery is correctly inserted in the battery compartment.

b. Replace the battery.

c. Check the headphones by momentarily touching the phone cord tips to the terminals of the receiver battery. When the phones are momentarily touched across the battery, a click in the headphones indicates that the phones are not defective.

2. The receiver operates, but the signals are weak.

a. Replace the battery.

b. Check the complete antenna system to insure that no part of the antenna or lead-in wire is grounded. (Grounded means making an electrical connection with the earth.) Also, check to insure that all antenna connections are making good electrical contact.

RR-48A Receiver

1. Antenna Terminal
2. Ground Terminal
3. Channel Selector Switch
4. Phones Terminals
5. Battery Cap
6. BFO Control
7. AA (PENLITE) Type Battery
8. Crystal Socket
9. ON-OFF and Gain Control
10. Tuning Dial
11. Tuning Control