

OPERATING INSTRUCTIONS FOR
ADF 210 POWER SUPPLY AND BATTERY SUPPLY

The ADF power supply is designed to operate an O.A.R. Automatic Direction Finder from a 115V AC line, and, in the event of a power failure, to switch over automatically to battery operation. The battery is contained within the power supply unit and is a 12V Ni-cad with a 4 amp-hour rating.

The power supply, when connected to a 115V AC outlet accomplishes the following:

1. Supplies 12V DC @ 1.5 amp to the ADF
2. Charges the self-contained battery. If the battery is in partially discharged state, it will be recharged at a maximum of approximately 400ma. If the battery is fully charged, it will be maintained at full charge by reduced charge rate.

The power supply is "ON" whenever the line cord is plugged into a 115V AC outlet. The battery is thus charged and maintained at full charge under these conditions.

In normal use, the power supply can be left plugged into the 115V AC outlet to maintain the battery at full charge. Whenever the ADF is turned on, it will get its power from the power supply. The battery will remain at full charge. The only time the battery supplies power is with the ADF "ON" and the power supply either disconnected from the 115V AC line or in the event of a power failure.

BLANKING CONTROL

ADDENDUM OPERATING INSTRUCTIONS

The adjustment described on page 4 under Rear Panel Control has been moved to the front panel on later model ADF-210's. Access to it is gained by removing the black plastic screw immediately to the right of the BFO switch under the speaker. A small screw driver is used to adjust the potentiometer. The instructions on page 4 still pertain with one exception: The range of the front panel control is approximately twice the rear panel control. It is therefore possible to have the blanking 180° off, giving a directional indication opposite to what is correct. Be sure it is set correctly.

BEAT FREQUENCY OSCILLATOR CIRCUIT

ADDENDUM OPERATING INSTRUCTIONS

Later model ADF-210's incorporate as standard equipment a beat frequency oscillator (BFO) to help in identifying signals which consist of an RF carrier only, without audio modulation. The BFO switch is located at the front panel below the speaker.

Signal sources consisting of only RF carrier will be inaudible or will appear as a slight rushing or hissing sound in the receiver. By switching on the BFO, the signal will appear as a steady tone; or if the carrier of the transmitter is pulsed, it will be heard as a beep - beep - beep. Very strong RF signals may appear as a rushing or hissing sound even though the BFO is on. This is normal and even though there is no tone as such, the signal can readily be distinguished from other noise on the channel.

The BFO affects only the audio portion of the ADF-210 and has no effect on the visual display.

ANTENNA CABLE INSTALLATION AND WEATHER-PROOFING INSTRUCTIONS

A. GENERAL INFORMATION

The ADF-210 Antenna System is connected to the Receiver/Indicator Unit by 3 coaxial cables of up to 200' in length, depending on the particular installation. Within the cable system itself are 5 BNC type connections which are normally exposed to the elements. Two of these connections are located at the loop antenna where the cables attach to the loop assembly. Three pairs of mating connectors are located at the base of the mast where the long cables going from the Indicator Unit are hooked up with the short cables installed inside the antenna mast.

IT IS IMPERATIVE THAT THESE POINTS BE WEATHER-PROOFED TO INSURE PROPER OPERATION OF THE SYSTEM.

B. WEATHER-PROOFING PROCEDURE

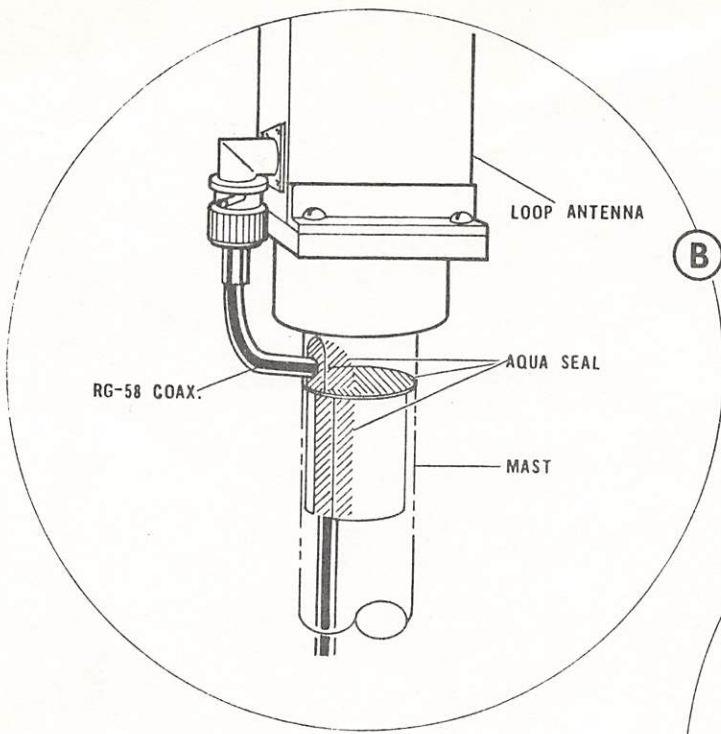
O.A.R. supplies sufficient "Aqua Seal" to weather-proof a typical installation. (See accompanying sketches for clarification of instructions.)

1. Loop Antenna Connections:

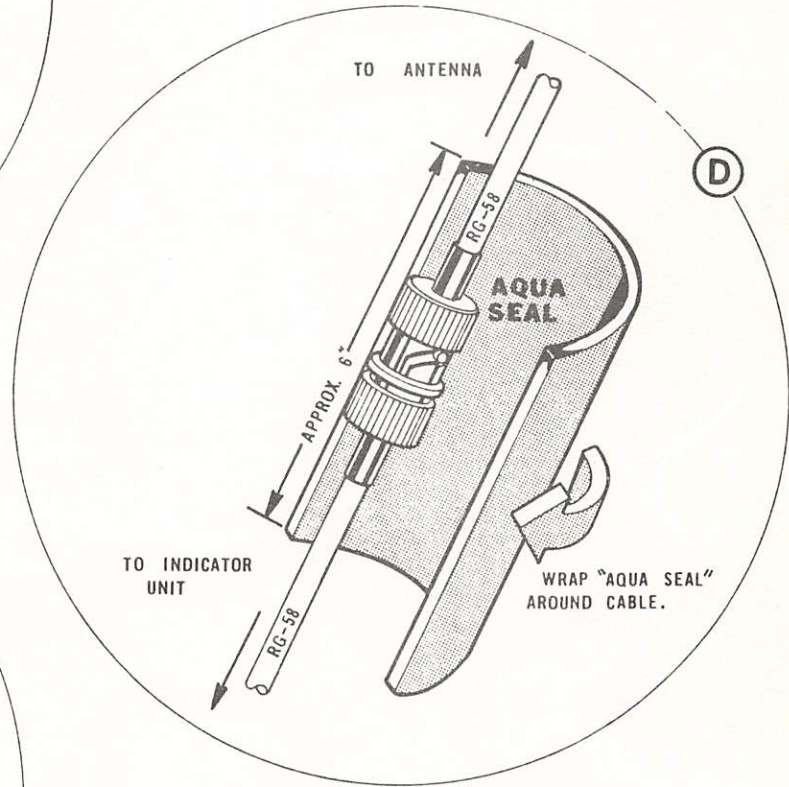
To seal the connectors at the loop antenna, begin by assembling the loop, mounting plate, and Delrin mast mount as outlined in the instruction manual. Attach one end of cables to loop antenna (use 2 short 22' cables, red to red, brown to brown). Slip guy ring over unconnected ends of both cables, then feed these cable ends down through top portion of antenna mast and out through the opening in the base. Cut a piece of Aqua Seal about 1-1/2" long by 3/8" wide and lay it in bottom of slot in shaft on black Delrin mast mount. Bend cables from loop antenna and lay them in slot, side by side. Cut another piece of Aqua Seal 1-1/2" x 3/8" and lay on top of cables in slot. Press the Aqua Seal and cables down firmly in the slot. Slide the slotted shaft of the mast mount (and attached cables) into top portion of mast. Leave gap of about 1/4" between shoulder of mast mount shaft and top edge of mast. Take a small string of Aqua Seal and wrap once around bottom of mast mount shaft between shoulder and mast. Slide mast mount shaft rest of way into antenna mast. Secure with 6-32 x 3/8" flat head screw. Cut two pieces of Aqua Seal about 1-1/2" x 2-1/2". Wrap each connector securely and completely. See sketch. Add Aqua Seal around cables where they enter top of mast to prevent water from entering mast. Starting about 1" below 6-32 x 3/8" screw, wrap electrical tape around mast, stopping where cables enter mast. Overlap tape approximately 1/4" on each wrap.

2. Antenna Base Connections:

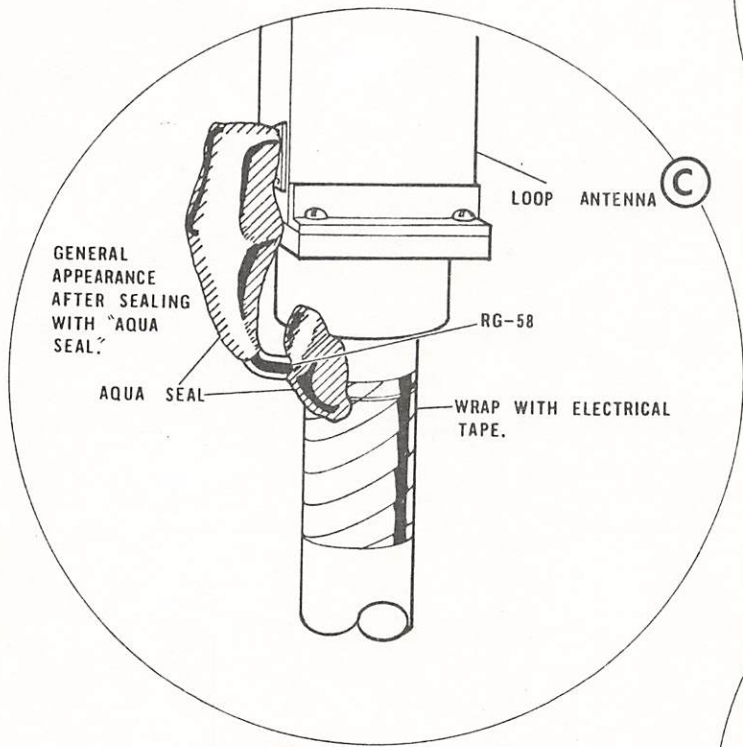
To seal the connectors at the base of the antenna, start by cutting three pieces of Aqua Seal approximately 6" long. Wrap each pair of mating connectors so that the Aqua Seal extends approximately 2" either side of the connectors. Be sure before beginning that the cables and connectors are clean and free of oil, water, or other substances which might prevent the Aqua Seal from adhering to the cables and allow water to seep inside to the connectors. Press the Aqua Seal firmly on to the cables. After applying Aqua Seal, wrap each cable with electrical tape (Scotch 33 or equivalent). Start about 1 or 2 inches below the Aqua Seal and work towards top, overlapping tape approximately 1/4". This will prevent the cables from sticking to each other.



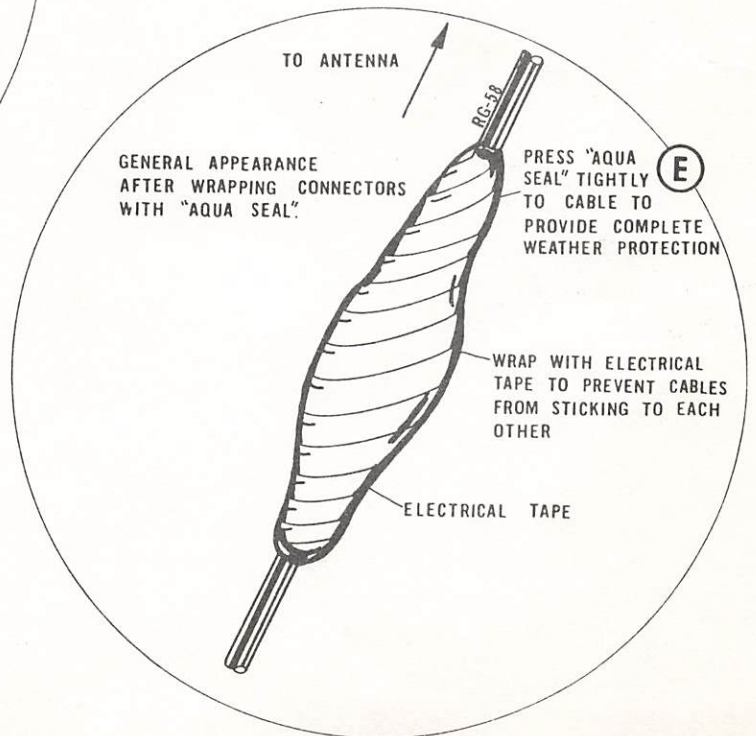
B



D



C



E

2. SECURE LOOP ASSY.
TO MOUNTING PLATE
AFTER FASTENING PLATE
TO MAST MOUNT.

(4) 8-32 x $\frac{1}{2}$ " PAN Hd. SS SCREWS
LOCK WASHERS, & NUTS.

1. SECURE MOUNTING PLATE TO
MAST MOUNT USING (2)
10-32 x $\frac{5}{8}$ " FLAT HEAD SCREWS.

NOTE:
LOOP ASSY., MTG. PLATE MAST
MOUNT ARE NORMALLY SHIPPED
ALREADY ASSEMBLED

USE 6-32 x $\frac{3}{8}$ " FLAT HEAD
SCREW TO SECURE MAST
MOUNT TO MAST.

LOOP ASSY.
ADFA 266

MOUNTING PLATE
ADFA 266-008

MAST MOUNT
ADFA 266-009

TOP OF MAST

A

