

CWA-125 HF-SSB NVIS Antenna System with Auto Tuner



1.1 GENERAL

The antenna should be installed clear of any buildings, power lines, or any other antennas. All holes for assembly have been pre drilled for your convenience.

1.2 ASSEMBLING THE ANTENNA SYSTEM

1.2.1 Tools and Accessories

You will need the following:

- RF coax cable
- Ground braid strap (PN FKN4314), supplied with the Tuner
- 2ea Open end wrench 1/2"
- 1ea Open end wrench 3/4"
- 1ea Open end wrench 11mm

1.2.2 Assembly Instructions

Step 1. Remove all hardware from packaging as shown in Figure 1.



Figure 1.

Step 2. To simplify installation, both mast sections have the same number and spacing of holes. Insert the white insulator in the end of one of the mast sections.

Step 3. Line up the hole in the white insulator with the hole in the mast.

Step 3. Install the ground braid that is included with the tuner between the tuner mounting bracket and mast. (Refer to figure 2) Ensure the locating pin on the white insulator is facing the same side of the mast that the tuner will be installed.

Step 4. Install the tuner over the ground strap using the center holes on the tuner mounting brackets and secure with the provided bolts, nuts and washers. Ensure the High Voltage connector of the tuner is pointing in the direction of the white insulator and is on the same side of the mast as the locating pin in the top of the white insulator. Attach grounding braid to ATU Ground Terminal (Refer to figure 2)

Step 5. Attach the smaller ring terminal of the high voltage cable provided with this antenna kit to the ATU RF output. While holding the high voltage cable, push the rubber yoke cover (provided with tuner) until it slips on the yoke. Ensure High Voltage cable does not come in contact with the mast. (Refer to figure 2)

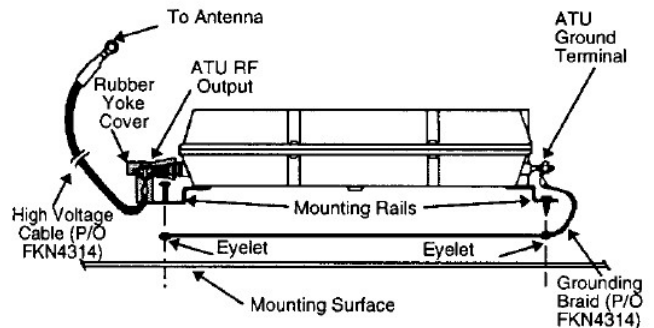


Figure 2.

Step 6. Install the round stainless steel plate on top of the white insulator, ensure the locking pin lines up with the hole in the steel plate. Secure with 1/2" bolt and washer. To avoid stripping the threads, do not over tighten the bolt. (Refer to figure 3)

Step 7. Attach eyelet at end of High Voltage Cable to the 3/8" hole in the side of the steel Mounting Plate and secure with the provided 3/8" bolt, and lock washer. (Refer to figure 3)



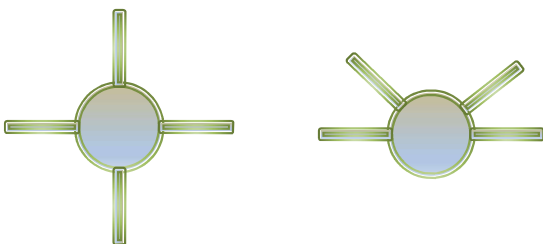
Figure 3.

Step 8. Insert the joining-tube into either end of the bottom mast section. Rotate until the holes align with the holes in the mast section. Secure with provided bolt, washers and nut. Insert the top of the joining-tube into the bottom of the top mast section. Rotate sections until holes align with the holes in the mast section and secure with provided bolt, washer and nut. (Refer to figure 4)



Figure 4.

Step 9. Install the whip antennas to the round steel whip mounting plate and tighten with ½” wrench. The plate has a number of possible configurations.



Cable Interconnections

Step 1. Route the RF cable between the ATU and the radio.

Step 2. Connect the RF coaxial cable to the ATU's RF input.

Step 3. Connect the RF cable to the radio.

Erecting Antenna Assembly

Step 1. Locate Antenna in an open area, ensure to avoid locations close to buildings, power lines, and other antennas.

Step 2. Install antenna with the whip antennas and tuner at the top. Secure mast to mounting location (pipe, railing, post...)

OPERATIONAL CHECK

When the system installation is completed, perform the following operational check:

Step 1. Install an in-line wattmeter between the radio and the ATU.

Step 2. Turn on the radio.

Step 3. Ensure the Antenna Tuner is enabled in the transceiver. Refer to transceiver operating instructions.

Step 4. Key the radio and whistle into the microphone; observe the forward and reverse power reading on the wattmeter. The forward power should be at least three times greater than the reverse power.

Step 5. Perform step 4 for each channel used.

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