Assembly Instructions for the 10N6RDB Antenna

The 10N6RDB antenna comes from the factory almost completely assembled. All you have to do is install the 1/2 inch Aluminum tubing at both ends of the 10 Meter and 6 Meter antennas, adjust them to the proper length and tighten the hose clamps that hold them in place. The antenna is then ready to install on your vertical pipe.

Assembled 10N6RDB Antenna

You should find the following items when you unpack the antenna:

1. The completely assembled center section
2. Two six foot sections of 1/2 inch Aluminum tubing with rubber cap-plugs installed at one end.
3. Two three foot sections of 1/2 inch Aluminum tubing with rubber cap-plugs installed at one end.
4. Six stainless steel hose clamps
5. Two one inch by four inch Polycarbonate spacers with ½ inch holes
6. Small package of Antiseize Lubricant
7. Piece of Coax-Seal

Tools required;

1. One quarter inch nut driver or a slotted screwdriver
2. Eighteen foot or longer tape measure
3. Wrench or socket in 7/16 inch

Assembly Instructions:

1. Lay out the center section on a table or on horses in an area where you have plenty of room.
2. Each end should look like the picture below:

3. Start at one end of the antenna.
4. Place one hose clamp on the lower 5/8 inch piece of Aluminum Tubing (do not tighten the hose clamp).
5. Place a second hose clamp on the upper 5/8 inch piece of Aluminum Tubing (do not tighten this hose clamp either).
6. Take one of the three foot long pieces of ½ inch Aluminum tubing and slide one end of the Polycarbonate spacer on to it and then slide the tubing into the UPPER 5/8 inch tubing. Use the end away from the rubber cap plug.

The tubing will have a black ring marked around it – slide the tubing into the upper 5/8” tubing till the line is at the edge of the 5/8 inch tubing.

We recommend that you coat all of the aluminum tubes that go inside another tube with an Anti-Oxidant like OX-GARD to prevent the two aluminum pieces from seizing together over time.

7. Take one of the six foot long pieces of one-half inch Aluminum tubing and slide a third hose clamp on to it and then slide the other end of the Polycarbonate spacer that is already on the upper piece of tubing on to it and then slide the tubing into the LOWER 5/8 inch tubing (do not tighten the hose clamp). Use the end away from the rubber cap plug. The tubing will have a black ring marked around it – slide the tubing into the lower 5/8” tubing till the line is at the edge of the 5/8 inch tubing.
8. When you are finished it should look like the picture below:

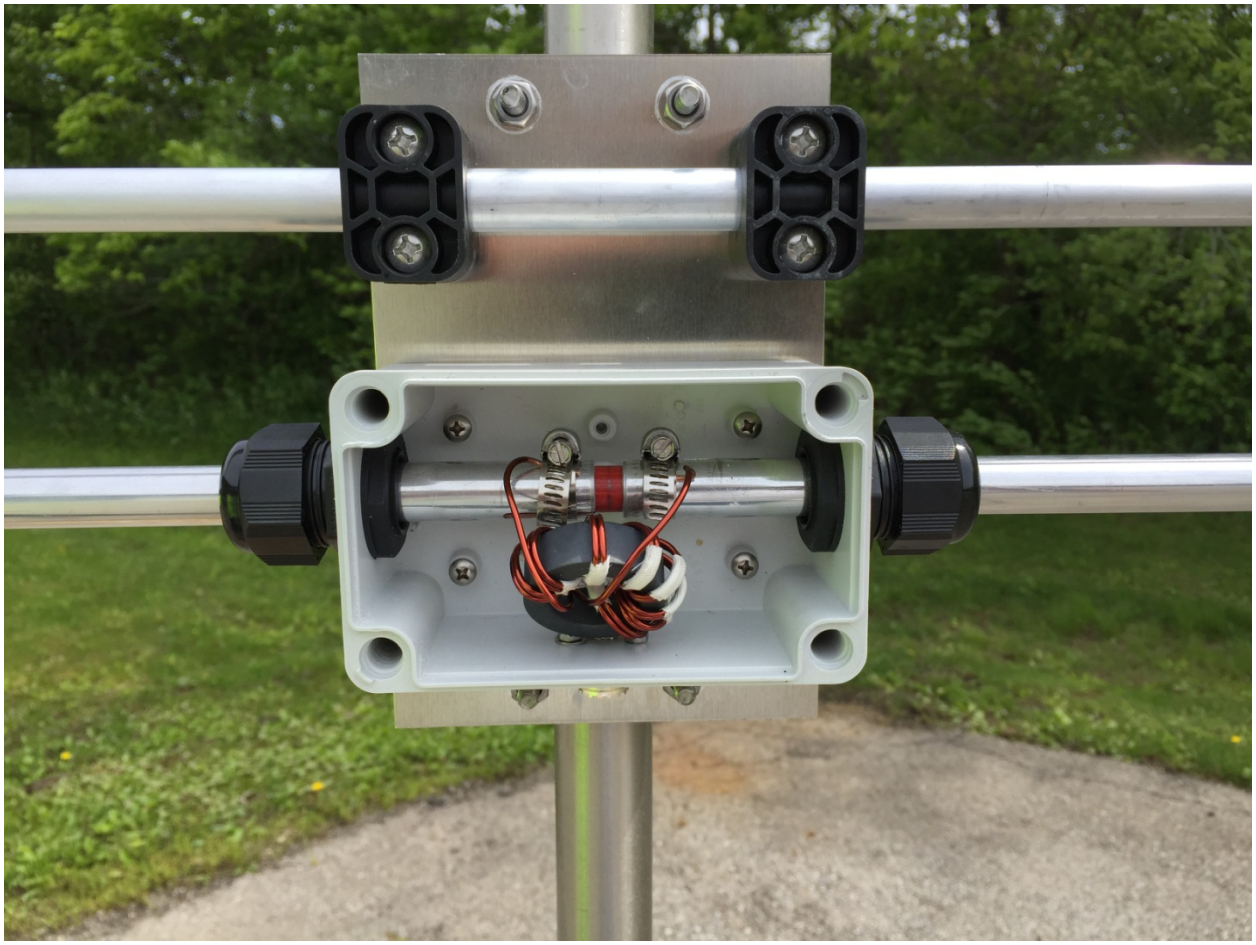
9. Measure the upper six meter antenna length from the center of the antenna and adjust the three foot piece of Aluminum tubing in and out of the antenna

until it is 4 foot 8-1/4 inches long. Tighten the hose clamp on the upper 5/8 inch piece of tubing. Make sure you have the hose clamp near the end of the 5/8 inch piece of tubing where the tubing is slit so that it will clamp down tightly on the inner ½ inch tubing. You should not have to move the inner tubing much away from the black lines to get the length correct.

10. Measure the lower 10 meter antenna length from the center of the antenna and adjust the six foot piece of Aluminum tubing in and out of the antenna until it is 8 foot 2 inches long. Tighten the hose clamp on the lower 5/8 inch piece of tubing. Make sure you have the hose clamp near the end of the 5/8 inch piece of tubing where the tubing is slit so that it will clamp down tightly on the inner ½ inch tubing. You should not have to move the inner tubing much away from the black lines to get the length correct.
11. Adjust the Polycarbonate spacer until it is positioned like the above picture and tighten the third hose clamp on the lower ½ inch piece of tubing to keep the spacer from moving. The spacer is used to keep the same spacing between the two half-wave sections for best coupling.
12. Repeat steps 4 through 11 for the other side of the antenna.
13. Measure the tip-to-tip distance of the two half-wave dipoles.
14. The 10 Meter half-wave dipole should be about 16 foot 4 inches. If not adjust the two ends until it is correct. It must be balanced so that the two sides are the same length. You will have to loosen the hose clamps and re-tighten them to move the inner tubing.
15. The 6 Meter half-wave dipole should be about 9 foot 4-1/2 inches. If not adjust the two ends until it is correct. It must be balanced so that the two sides are the same length. You will have to loosen the hose clamps and re-tighten them to move the inner tubing.
16. Install the antenna using the top and bottom U bolts and your 7/16” wrench. Put a small dab of antiseize (included from the factory) on the threads of the U bolt before tightening. The coax connector should be at the bottom of the antenna when mounted.
17. We recommend you use a low loss coax to connect the antenna to your radio. We have included a piece of Coax-Seal you can use to make the coax connection on the antenna water tight.
18. Test the antenna on both 10 Meters and 6 Meters. The SWR should be below 3:1 across the entire 10 Meter band and the bottom 2 MHz of the 6 Meter band.

If you want to operate on different frequencies you will need to adjust the length of that half-wave dipole. Making the antenna length longer lowers the resonant frequency and making the antenna shorter raises the antenna resonant

frequency. The two half-wave dipoles have almost no effect on each other and can be adjusted independently.



If you are curious as to what is inside the box here is a picture of the Balun and the driven element. If you take the cover off of the box, be sure you put it back correctly. The top is keyed and only goes back only one way. It needs to be on correctly to maintain water tight integrity.

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