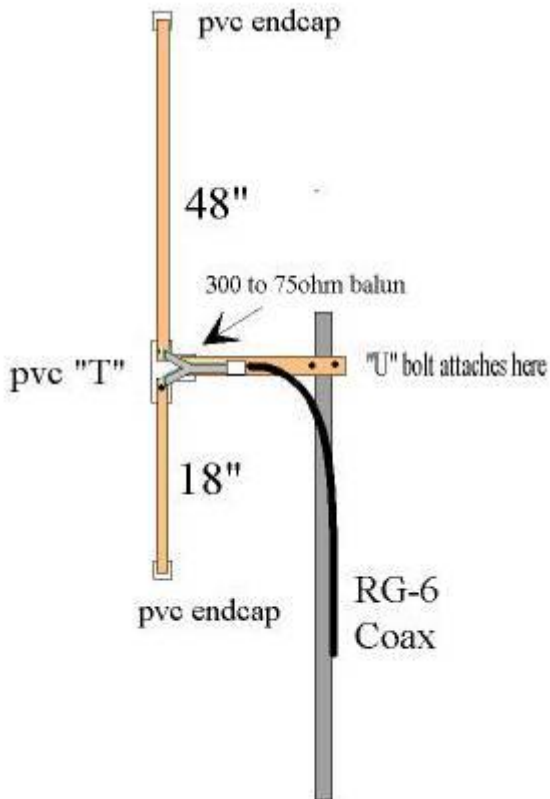


Homebrewed Off-Center Fed Dipole

From The RadioReference Wiki



Building A Homebrewed Off-Center Fed Dipole Scanner Antenna.

Aluminum/copper tubing construction:

You will need to check the fit of the tubing with the T connector and the caps while you are at the store. One combination that fits nicely is 3/4" copper pipe with 3/4" CPVC fittings (not to be confused with 3/4" PVC fittings which will be too large). The tubing/connector is held in place with 2 stainless steel sheet metal screws for connecting the balun to each element.

Find a "U" bolt to fit your mast. Drill two holes in the support pipe to fit the U bolt. The support pipe is 18" from the "T" to the mast.

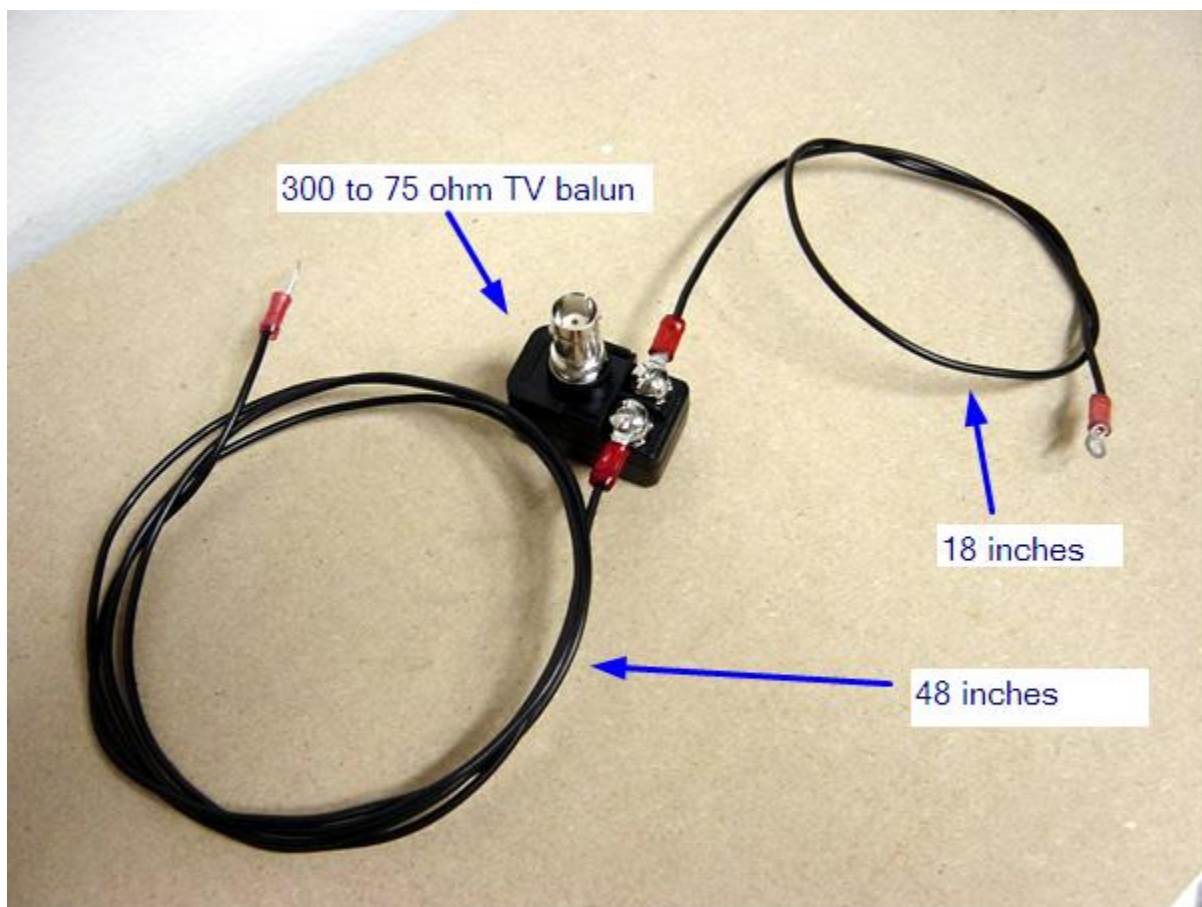
Remember, bandwidth increases as diameter of the elements increases. I think, if I remember correctly, at the hardware store, that a few CPVC fittings will fit copper tubing perfectly!

Some say that the 18" element on top mounted works best, Some like the 48" element on top. It doesn't matter, it works the same.

If you use the copper tubing, be sure to paint it with some good, non-conductive paint. I used to paint mine light grey. -Have fun! (Teraycoda)

For an alternate/temporary mounting option, drill a hole in one of the end caps and put in an eye bolt with a nut on the underside of the cap to secure. Be sure to secure this end cap to the copper tubing somehow, perhaps with an additional small stainless sheet metal screw. Be sure that the eye bolt itself doesn't make electrical contact with the tubing. Also, drill a small weep hole in the bottom end cap to allow any moisture to escape that may accumulate inside. Use the eye bolt and some rope to pulley the antenna up high in a tree, or use a hook to hang it somewhere. Give careful consideration to safety and grounding depending on your particular usage scenario. (Qdude)

Variation for Off-Center Fed Dipole Using Simple Wire and 75 to 300 ohm TV Balun Transformer



Electrically, this version is the same as the one using copper tubing (above) but can be assembled quickly and is quite portable. While not as broadbanded as an OCFD using copper tubing or

other metal with a larger diameter, the OCFD made from simple wire turns in great receive performance in all the commonly scanned bands, as reported here on RR in multiple message threads. Makes a great indoor scanner antenna and can be hung in the attic, an upstairs window, or sliding door and hidden in the curtains.

The legs/ends of the dipole are simple bell wire and shown here coiled up. Uncoil them and hang them vertically; doesn't matter if the long or short leg is at the top... works the same either way. The wire terminal lugs shown at the end of the legs of the dipole antenna should NOT be connected electrically to the wires - just crimp them on over the wire insulation. They are used as convenient hangers for the antenna, and not meant for electrical connection. Obviously, the lugs at the TV transformer/balun ends of the wire should be stripped before crimping on the terminal lugs to ensure electrical contact with the antenna wires when you attach the TV transformer. Ensure the 75 ohm coax feedline that you connect from the balun/transformer runs away from the antenna at as near a 90 degree angle as possible. Use an F-female adapter to whatever type connector your radio uses to make the connection to the radio's antenna jack.