

2 Meter Dipole Solid Rod & PVC

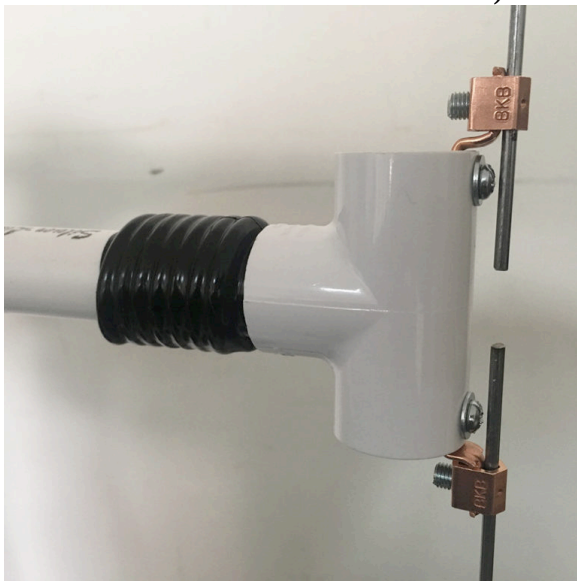
Materials

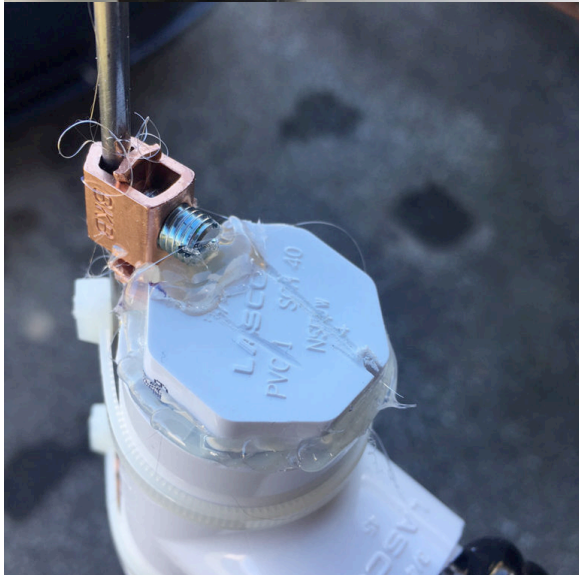
- 3/4" PVC pipe (I grabbed one 5 foot length)
- 1" PVC pipe (I grabbed one 5 foot length)
- 3/4" PVC Slip 90
- 3/4" PVC Slip Tee
- 3/4" x 1" PVC Slip Tee
- 3/4" PVC slip plugs
- steel rods roughly 1/8" and about 19" -20" long (I cut longer pieces down)
- Copper Terminal Lugs (I used Thomas & Betts pn: BTC0614-B2)
- small ring terminals (anything 12 to 16 AWG should work)
- 4 or 5 wire ties
- Electrical Tape
- About 3 foot of your favorite flavor of feedline(I used RG58)
- RF connector of your choice (I used a BNC for RG58)
- Nuts and bolts that fit your lugs and ring terminals

Procedure

- Step 1. Align terminal lugs to outer edges of tee, drill holes through pipe and bolt in place loosely.
- Step 2. Flip heads around 180 degrees.
- Step 3. Cut a length of 3/4" pipe a touch longer than 1/4 wavelength, about 20 inches long and lightly push it into the remaining hole on that same tee.
- Step 4. Coming back an extra half inch or so and drill a hole the size of your chosen feedline into the pipe. Test wrap about 5-7 wraps of your feedline around the pipe starting at the hole, then mark for a second hole along the same line as the first and drill one there.
- Step 5. Push a few inches of feedline through the hole closest to the end of the pipe, and prepare the shield and center conductor for ring terminals. Leave enough insulation off to reach both bolts on the tee.
- Step 6. Crimp a ring terminal on the center conductor and one on the shielding. At this point I soldered the ring terminals in place for added strength, and covered them in heat shrink tubing with only the ring exposed.
- Step 7. Take the nuts off of the bolts on the terminal lugs, push on the ring terminals, and replace the nuts. Tighten them down really good until the nuts start to pull into the PVC. You may opt for washers on the outside of the tee.
- Step 8. push the 1/4 wavelength piece of pipe into the tee very tight, and pull the excess feedline back through the hole you drilled so no excess is in the end of the antenna.

- Step 9. Wrap 5-7 wraps and push the feedline in the second hole and out the long end of the pipe. You'll need about 8-15 inches or so of feedline sticking out the far end. Of the pipe, for your RF Connection.
- Step 10. Place the 3/4" X 1" Tee on the other end of the pipe. Throughout the rest of this process make sure the center conductor is attached to the element sticking up and the sheilding to the counterpoise sticking down.
- Step 11. Take the two 3/4" caps and notch them out as shown and push them on over the terminal lugs. I used a dremel tool with grinding wheel for this but you may have a better option available.
- Step 12. Cut the steel rods down to 1/4 wavelength for 2 meters. This runs between 19 and 20 inches. Because we are using an inch or so of the feedline as part of the radiating element(inside the tee) I simply cut mine down to 19 inches. Do this with a dremel tool, or a file, or other tool of your choice.
- Step 13. Run a steel rod into each of the terminal lugs and out the other side a half inch or so then tighten the lugs.
- Step 14. Cut 1-2 inches of 3/4" pipe and put it on the opposite end of the tee with a 3/4" 90 off of it and push your feedline through all this as you do it.
- Step 15. Cut a section of 1" pipe long enough to mount the antenna where you want and push it into the bottom of the 3/4" X 1" tee.
- Step 16. Cut one last 3/4" piece of pipe about a foot or so long and hold on to it for use later.
- Step 17. Glue parts together.
- Step 18. Cut your feedline down so only 3 or 4 inches are coming out of the antenna and put on your RF connector of choice find a temporary stand for your antenna.(I used the base and stand of an old house fan). Using an SWR meter or an antenna analyzer, test for a good SWR on the two meter band.(I tried to center around 146MHz).





Article

<http://wi9ll.com/2-meter-vertical-dipole-build/>