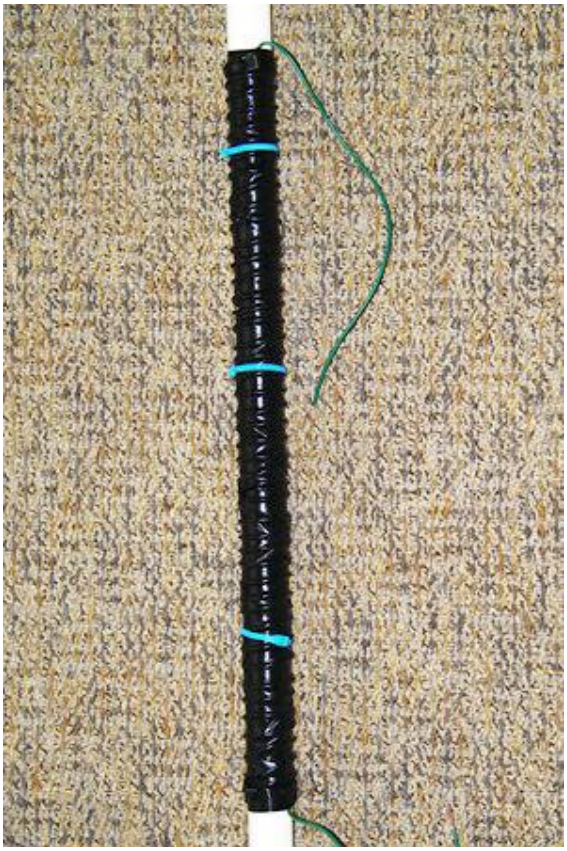
# A 28Mhz through 7 MHz Vertical Portable Dipole

**by Yukon John - KL7JR**

**This design is really a spin off of my first vertical dipole, see ( "KL7JR VERTICAL DIPOLE and Novel Matching Method") at Hamuniverse.com for more details of this homebrew idea. This design does not take up much space especially for a multi-band antenna.**

40 - 10 meter vertical dipole ready for action!

To make this antenna more portable, I used 1 1/4 inch PVC schedule 40 water pipe in 4 or 6 ft lengths for ease of stowing inside my pick up truck and erecting. I also used #14 solid house wire (but just about any wire #18 and larger should work) wound as a coil on 3 ft sections of the PVC pipe (one per dipole leg) held in place by black electrical tape. Photo below...

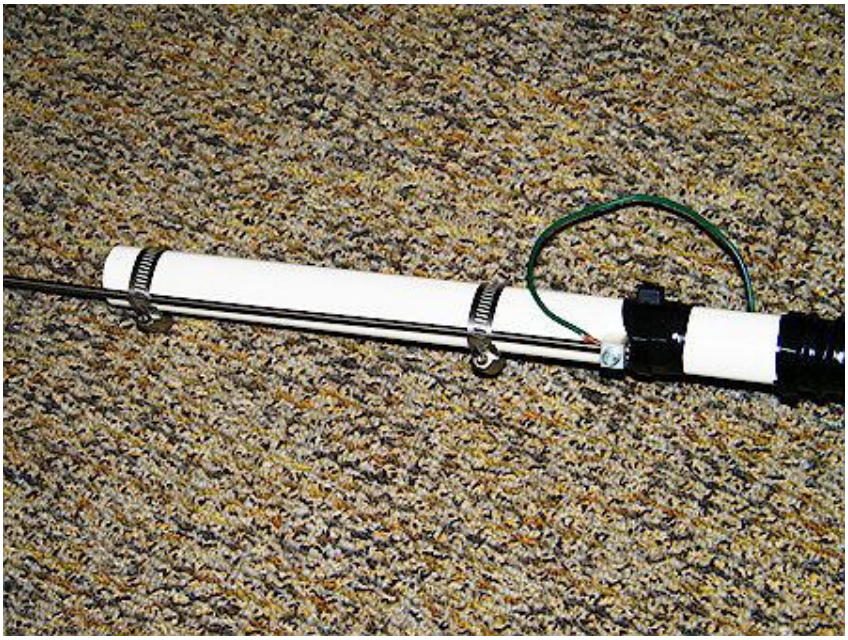


Coil closeup (2 required)

Approximately 18 feet of wire can be coiled with a spacing of 1/2 inch. I left 6 inches of wire at each end for connecting to a 102 inch steel whip and to the coax (top leg) and for the bottom leg I just used more #14 wire pulled out at a 45 degree angle (you could use another steel whip provided your mast is longer).
Each leg of the vertical dipole was about 26 feet long. I mounted the PVC mast (about 10 feet long) to the side wall of my truck. (see 1st photo above).

**I didn't have to drill any holes either. I used the existing 1 inch diameter holes in the bed wall near the end gate to install two toggle bolts and EMT conduit straps to hold the base of my mast.**

**For the 102 inch steel whip to wire coil connection, (see photo below),**

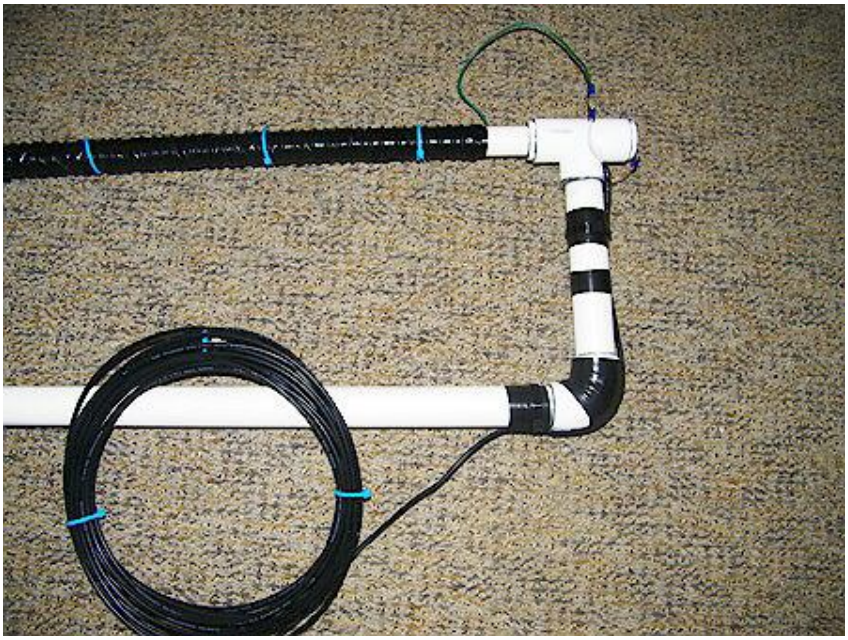


**Whip to coil connection**

**I used an electrical connector, Catalog #, T&B ADR2-B2 which is rated for copper and aluminum both. I merely taped and ty-wrapped it to the PVC pipe coil framework.** ***(Editor's note: The catalog # used above may have changed. Try the ADR2 catalog number or similar connector)***

**For the coax connections I used soldered lugs, the kind that slip inside one another for ease of antenna hook up in cold weather.**

**Assorted additional pictures below:**



**Center support attachment using pvc "T" and 90 degree "elbow"**

**The "workbench"**

**All ready for the cold Alaska WX!**

**Set up was easy and fast (about 10 minutes) on a bright sunny February Alaska morning.**
**I first loaded on 20 meters and immediately KE6ZLY then KE6YNH came back to me. We traded 5x7 reports.**
**Next I dropped to 40 meters and my LDG Z-100 tuner quickly tuned there, but propagation wasn't that great as I traded 5x5 reports with another W6.**

**Next I QSY'd to 17, 15, 12 and 10 meters and again the bands tuned easy but there was no propagation so I dropped back to 20 meters to work KE6YNH again and K7CTR in Washington state. Tom and Tim both asked about my antenna and we ragchewed for about 10 minutes then signed. The bands just were not in all that good of shape. The guys down south reported heavy QRM and QSB. The bands were quiet up here....too quiet I guess.**
**The wind now was starting to pick up from my perch on a pull out about 3000 feet up overlooking Anchorage .**
**Much to my surprise, H44MS in the Solomon Islands called me (he was 5x9 and I was 5x6) for a short QSO. Then 20 meters took a dive so I pulled the plug on this antenna experiment fully satisfied that the antenna worked out. This was the first time I used long coils such as these for an antenna. In the future I will use them again I'm sure.**