

Multi-Band Dipole Construction



Here's what it looks like assembled.

I used 3/8 in PEX for spreaders. I drilled 3 holes in each one. One on center and the other 2 one inch from the ends. The size of the hole depends on the wire used. Make it a tight fit so they stay in place.



Detail of a spreader.



Here is how I store it. Rolled on 1 ½ in PVC forms.



Here is detail of the center . I use a 2 in PVC Cap with stainless hardware.

For lengths I started each one at $468/\text{Freq (MHZ)}$ in feet and folded the ends back to tune it to the desired frequency.

Start tuning with the shorter antenna and work up to the longer one.

EXAMPLE:

Want 7.2Mhz resonant. use $468/7.2 = 65 \text{ ft} / 2 = 32.5 \text{ ft}$ per side.

After building, find resonant point, say 7.1, compute new constant: $7.1 * 65 = 461.5 / 7.2 = 64.1/2 = 32.05 \text{ ft} / \text{side}$ so it needs to be shortened by .5 ft per side. Repeat for other bands.