

J-POLE, W4LJL Style

2 Meters

- I. BUY 10 ft length of 3/4" copper pipe \$5-10
1 ea 3/4" copper tee 54c
* 1 ea 3/4" STREET ELBOW 30c
2 ea 3/4" copper pipe caps @11c 22c
RG-8, RG-58, whatever.

drawing is not to scale

- II. BUILD
1. Cut pipe at 56" and 20 1/8"
That is the antenna. Rest is the base.
 2. Clean, solder 56" to end of Tee
 3. Clean, solder 20 1/8" to St.Elbow
 4. Using 1-1/8" spacers, solder St El into side of Tee. Keep space uniform along pipe
 5. Solder caps on top of pipes
 6. Solder base pipe into other end of Tee

Antenna is now complete, except for tuning
Building it is easy. Tuning is VERY CRITICAL

56"

- III. TUNE
1. Separate braid and center wire about 3"
 2. Twist braid into single wire.
 3. Slip tight rubber bands around pipes about 3" above El-Tee connection
 4. Stand antenna up vertically in open area
 5. Tune transmitter to 146 Mhz (center of band)
Stand at least 6 ft from antenna when tuning as
Zero reflected is moved by body capacity.
 6. Slip braid under rubberbands on one pipe, center conductor under bands on other pipe. Either way.
Bend both wires into vee to minimize contact area.
It is vital to pinpoint the resonant point.
 7. Slide the co-ax contact points up or down 1/8" at a time, and read reflected power. This antenna should tune to ZERO reflected, and hold almost zero 144-148 mhz
 8. When zero point is found, mark it, drill and insert wires and solder in place. OPTION: drill holes 1/2" high, and solder wires down to resonant point

space 1 1/8"

20 1/8"

ST el

IV. USE IT

Properly built and tuned, SWR reflected will be near Zero across 2 meter band.
Gain to the horizon is very high. Radiation pattern has been described as resembling a phonograph record with antenna in center hole.

The J-Pole has been around for many years. Properly made and tuned, it's performance is better than most high-priced fancy antennas. It is cheap and ugly, and works.

W4-LJL

* A STREET-ELBOW has a male diameter (pipe size) on one end, and a female (pipe will fit into it) on the other end. A regular elbow wont work, as the two pipes would be about 2" apart.