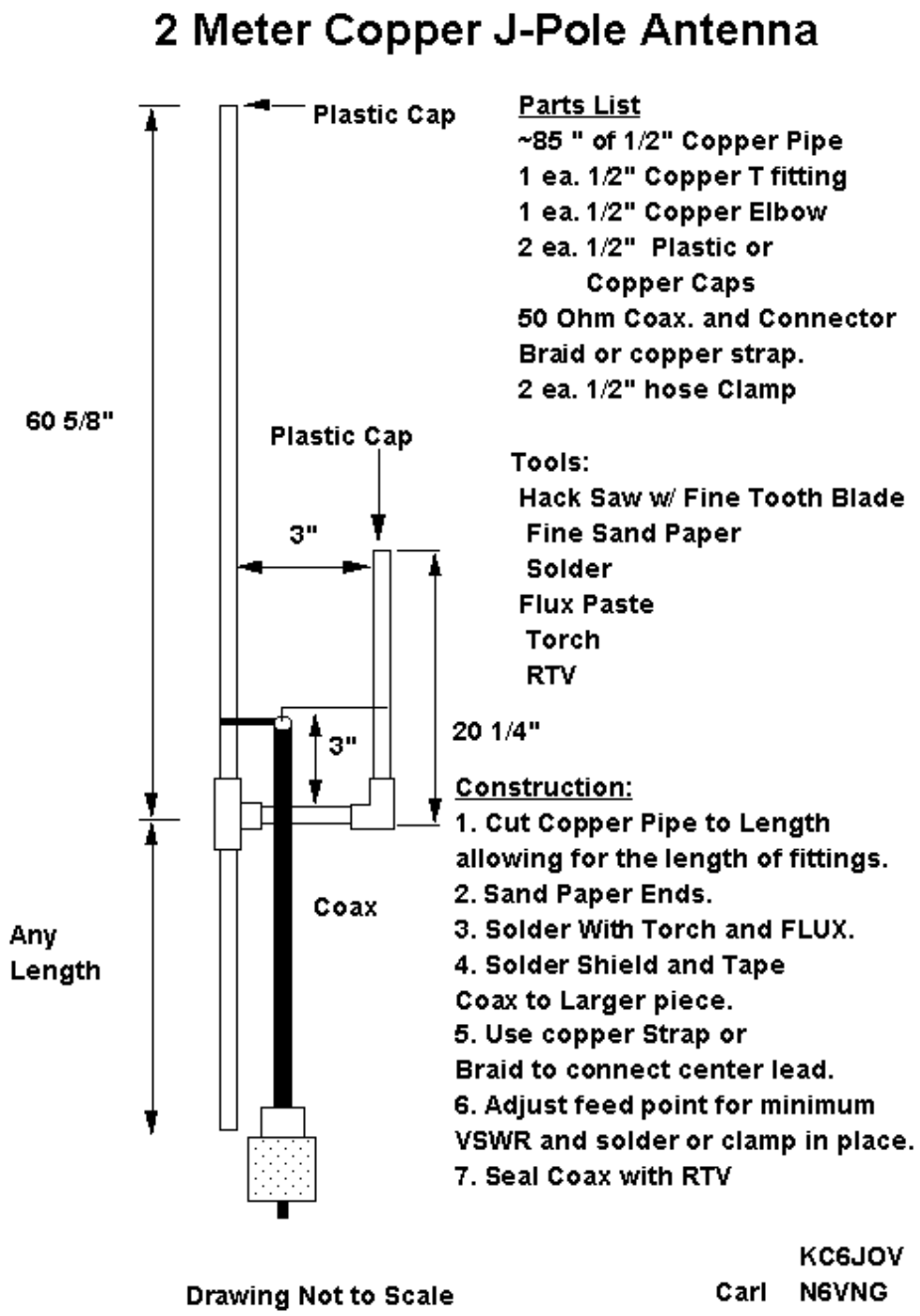
J-Pole Antennas for 2 Meters

By: Dr. Carl O. Jelinek N6VNG

This paper describes two types of 2 meter J-Pole antennas, one made of copper pipe and a roll-up J-pole made of TV twin lead. The figures give the details of the dimensions, components and construction.

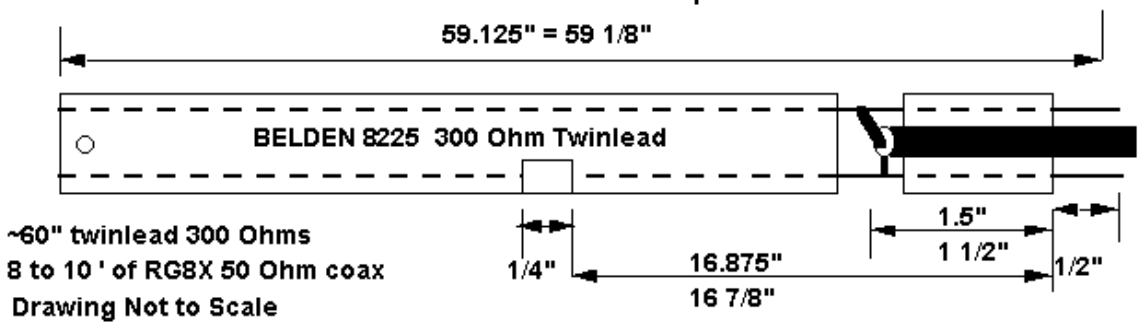


I hope you enjoy these as much as I have. The Roll-Up J-Pole has been in my case on many trips for the company. Its great to contact the local hams from the Motel room to find out what is going on. One night I found a great swap meet in Huntsville AL.

Roll-Up J-Pole Antenna for 2 Meters

KC7NS
WB6ADC
N6VNG

1. Cut a piece of standard 300 Ohm Twin Lead to about 60" long.
2. At one end strip off 1/2" of insolation from both conductors.
3. Twist the ends together and solder them. Insulate with tape.
   The following measurements are from the soldered end .
4. Cut a 1/4" notch in one conductor 16.875"=16 7/8".
   Do Not remove the rest of the conductor.
5. At 1.5" from the shorted end , remove enough insolation from both conductors to connect the coaxial feed line.
6. Connect the coaxial line shield to the 16 7/8" side.
7. Connect the coaxial center conductor to the long side.
8 For support and protection, put a piece of heat shrink or plastic tape over each of the solder connections.
9. Punch a small 1/8" hole in the insolation at the open end to hang the J-Pole. A small string or Tie-wrap works well to pin the J-Pole to a curtain.
10. Tuning: If you use the exact dimensions shown below the antenna will be resonant in the two meter band. Prune the open end a little if not exact with an SWR meter to determine minimum reflected power.



~60" twinlead 300 Ohms
8 to 10 ' of RG8X 50 Ohm coax
Drawing Not to Scale

Table 1. Scaling for other frequencies.

J-Pole Scaling	JPOLESCL.xls				
Dr. Carl O. Jelinek					
2/28/96 20:26					
Roll-up J-Pole					
Frequency {MHz}	147	223	440	28.4	
Total Length {in.}	59.125	38.975	19.753	306.034	
To Notch {in.}	16.875	11.124	5.638	87.346	
Stub {in.}	1.5	0.989	0.501	7.764	
Copper J-Pole					
Frequency {MHz}	146	223	440	28.2	
Total Length {in.}	60.625	39.692	20.116	313.874	
To Notch {in.}	20.25	13.258	6.719	104.84	
Stub {in.}	3	1.964	0.995	15.532	
Spacing {in.}	3	1.964	0.995	15.532	

Frequency: in MHz

73 de Carl N6VNG.