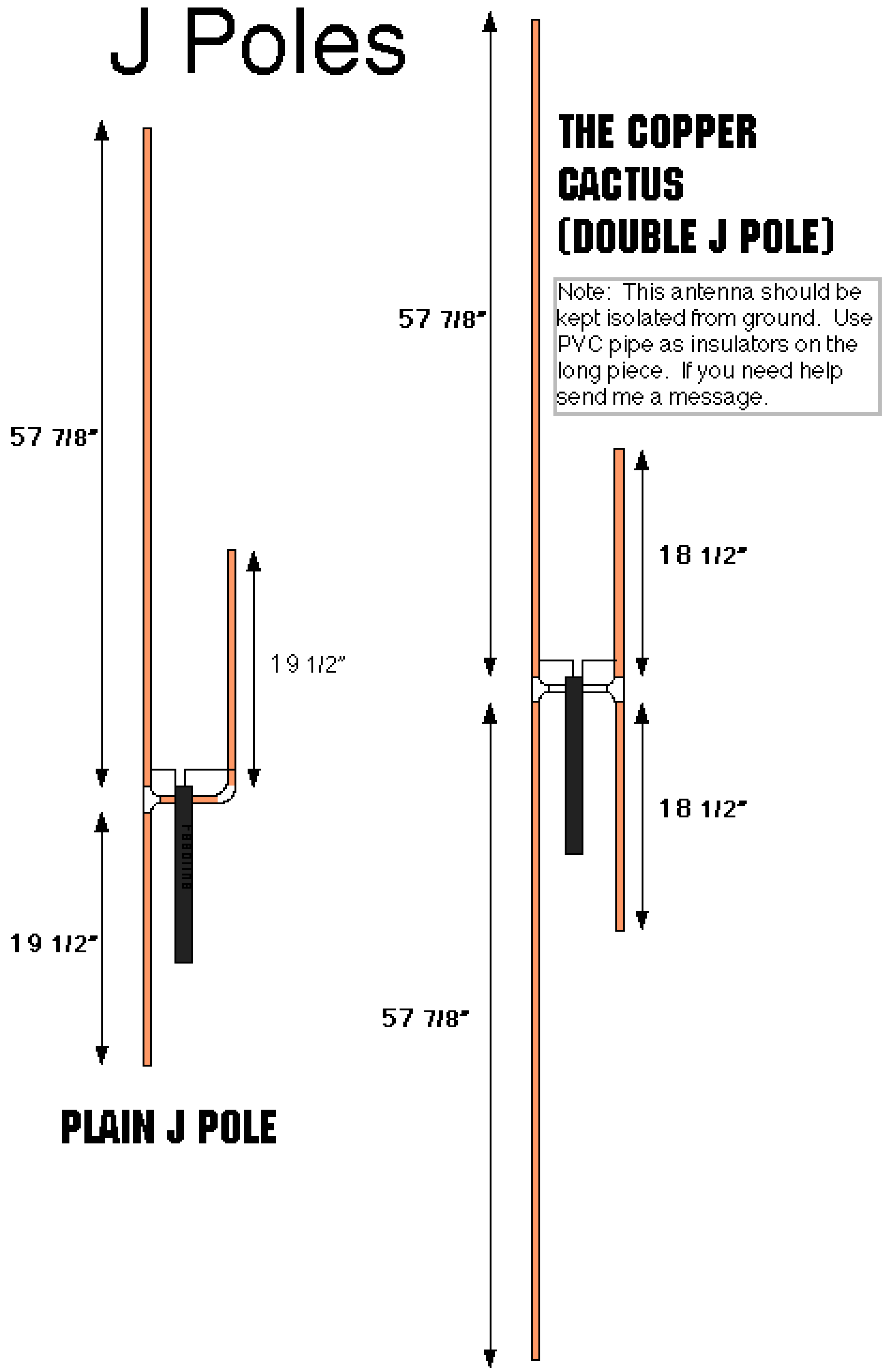
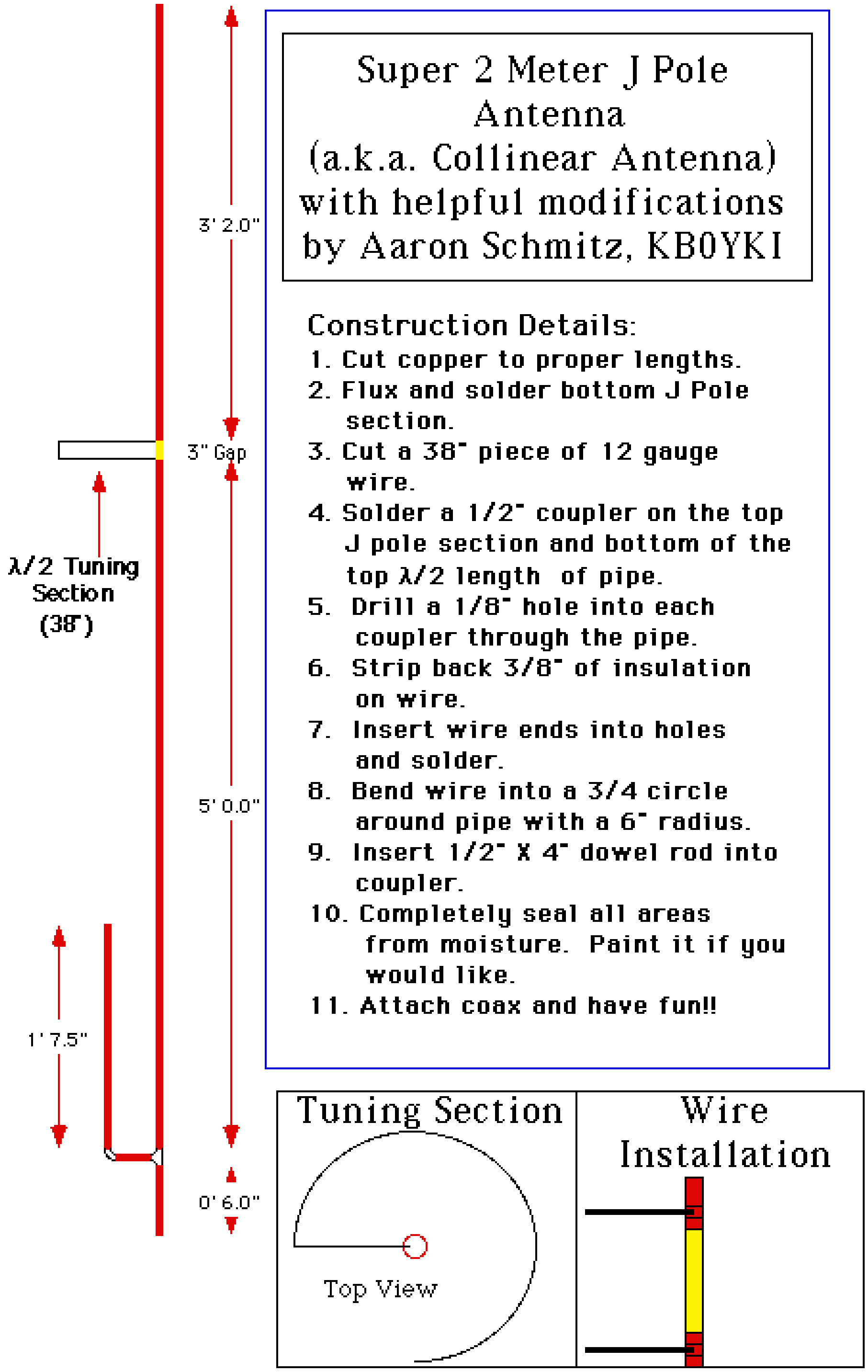
The J Pole

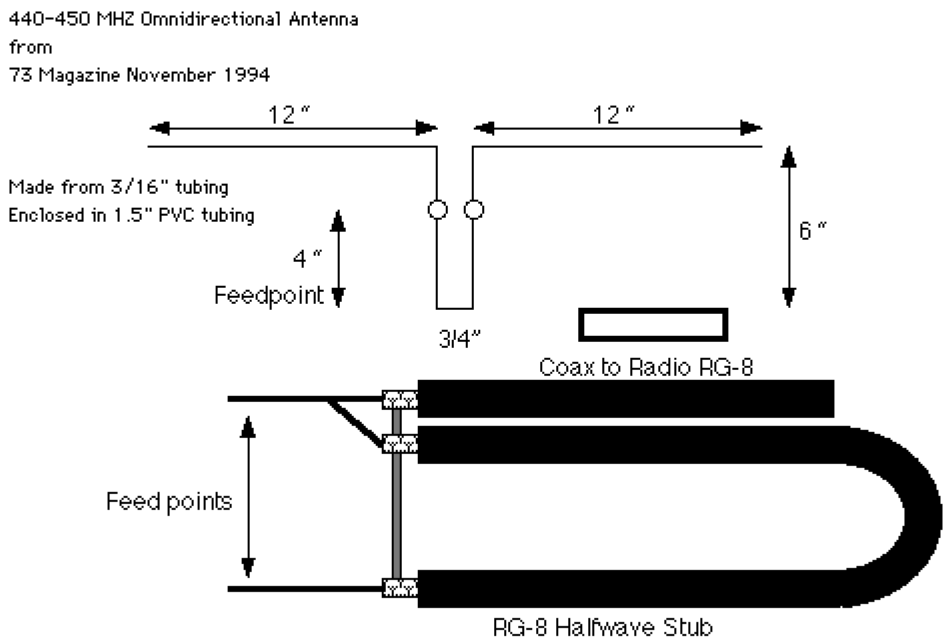


J Poles
57 7/8"
19 1/2"
19 1/2"
PLAIN J POLE
THE COPPER CACTUS (DOUBLE J POLE)
Note: This antenna should be kept isolated from ground. Use PVC pipe as insulators on the long piece. If you need help send me a message.
57 7/8"
18 1/2"
18 1/2"
57 7/8"

The Super J Pole

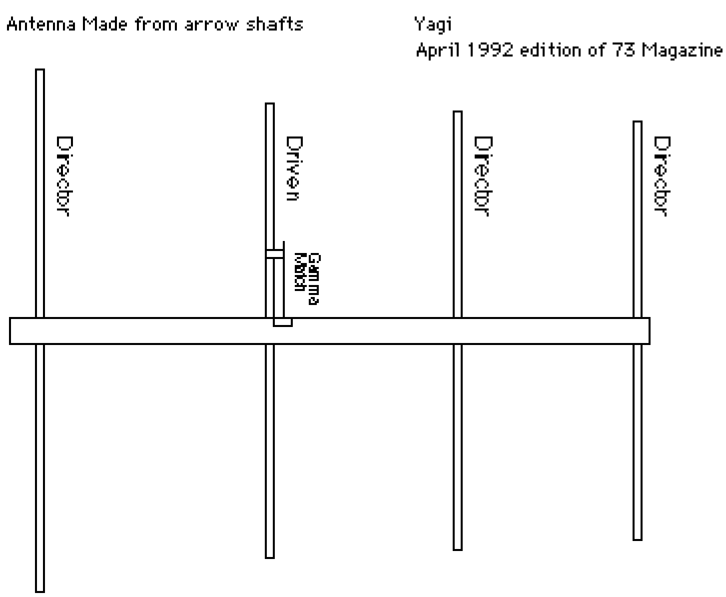


Omnidirectional



Yagi

Element	Length	Spacing
Reflector	19.78*2	
Driven	19.25*2	15 5/16"
Director 1	18.25*2	15 5/16"
Director 2	17.125*2	15 5/16"



Quads

VHF AND UHF QUAD ANTENNAS

Plumber's Quad (4 Element

	146.000 Element Length (cm)	Element Spacing (cm)	146.000 Element Length (in)	Spacing (in)	446.00 MHz Element Length (in)	Element Spacing (in)
Reflector	216.000	40.000	85.039	15.748	27.983	5.182
Driven	206.800		81.417		26.791	
Director	200.700	39.600	79.016	15.591	26.001	5.130
Director	200.000	41.000	78.740	16.142	25.910	5.312

Quad Antenna 7 Element

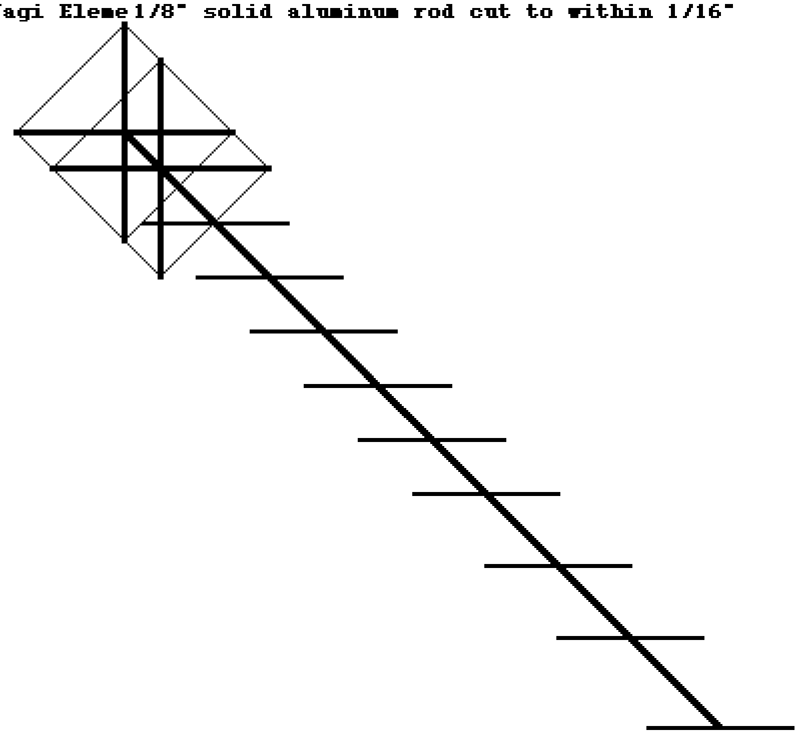
	Element Spacing 18" 146.3 MHz Element Length (in)	Cross Piece (in)	Element Spacing 6 in 446.00 MHz Element Length (in)	Cross Piece (in)
Reflector	86.000	30.000	28.206	9.839
Driven	82.000	28.500	26.894	9.347
Director	78.000	27.125	25.582	8.896
Director	77.500	27.000	25.418	8.855
Director	77.000	26.750	25.254	8.773
Director	76.500	26.625	25.090	8.732
Director	76.000	26.500	24.926	8.691

Quagi

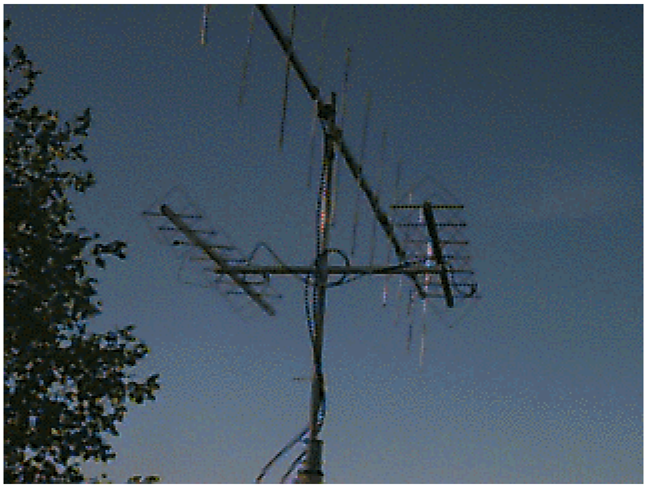
Modified W5UN Quagi Design
Optimized for 144.050 MHz

	Element Le (inch)	Spacing to element (inch)
Reflector	86.7500	
Driven Ele	82.0000	21.0000
Director 1	35.9375	15.5000
Director 2	35.7500	33.0000
Director 3	35.3750	31.0000
Director 4	35.2500	33.0000
Director 5	35.0000	31.6250
Director 6	34.8125	36.0000
Director 7	34.6250	36.0000
Director 8	34.6250	34.0000
Director 9	34.5000	34.5000

Boom-	Nonconductive material such as wood or fiberglass
Quad Eleme	made from 12 guage insulated copper wire
Yagi Eleme	1/8" solid aluminum rod cut to within 1/16"

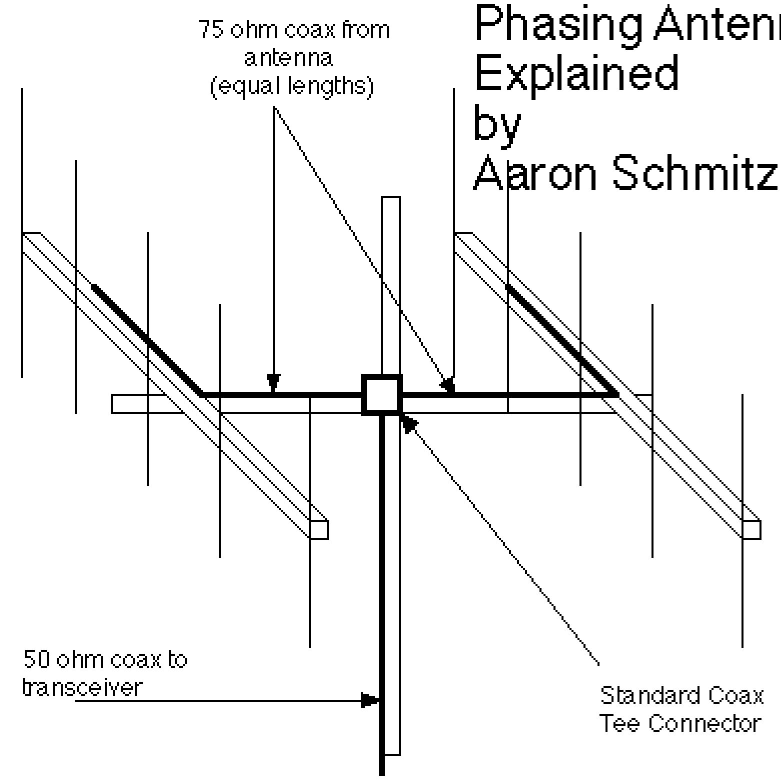


My Stacked Quads



The picture above is of my 440 MHz stacked quads. The spacing between the antennas is approximately 80-90% of the boom length. RG-59 (75 ohm) cable was used on the phasing harness. An almost perfect 1:1 SWR was achieved at 446 MHz after installation. Any other questions on this can be forwarded to me.

Phasing Antennas Explained by Aaron Schmitz, KB0YKI



Steps to build a Phasing Harness
1) Build the antenna and cross support
2) Determine the length of coax that you need to run from the antenna feedpoint to the connector.
3) See how much coax will work for the phasing harness.
f=146.520 MHz
$\lambda/4$=234/f=234/146.52=1.5 ft=18 inches (Physical $\lambda/4$)
RG-59 Coax Velocity factor is 66% the speed of light.
(18 inches)X(0.66)=12 inches (Electrical $\lambda/4$)

Example: Your setup needs approximately 6 feet of cable to get from the feedpoint to the Tee connector.
The only problem is that 6 ft would be an even quarter wavelength (not good). All you have to do is go to 7 feet of RG-59 coax and you have 7 electrical quarter wavelengths(Fantastic). You should be pretty close to having a low SWR reading. That is not guaranteed, but it should be close.

4) Get your 75 ohm coax and cut it off pretty close to amount of coax needed(in this case 7 feet for each side.)
5) Solder on your PL-259 connectors with the appropriate reducer to the 75 ohm coax coax.
6) Hook everything up. If you are using a gamma matched antenna, adjust the gammas to get a low SWR reading.
7) Get on the air and have fun!!!

Dipole Feedpoint