

Figure 1 The dimensions of the original 2 meter 300 ohm ribbon J-Pole for insertion into $\frac{3}{4}$ inch 200 psi pvc pipe.

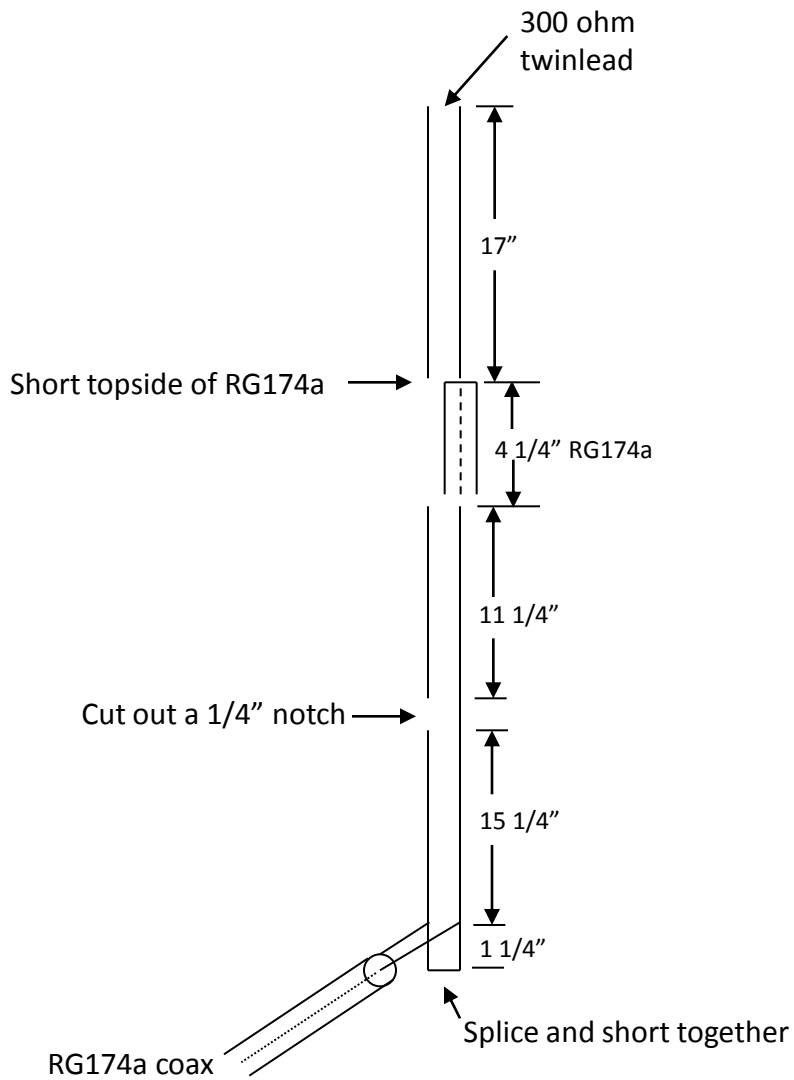


Figure 2 The original DBJ-1 dual band J-pole. with detailed dimensions for insertion into a 3/4 inch Class 200 PVC pipe.

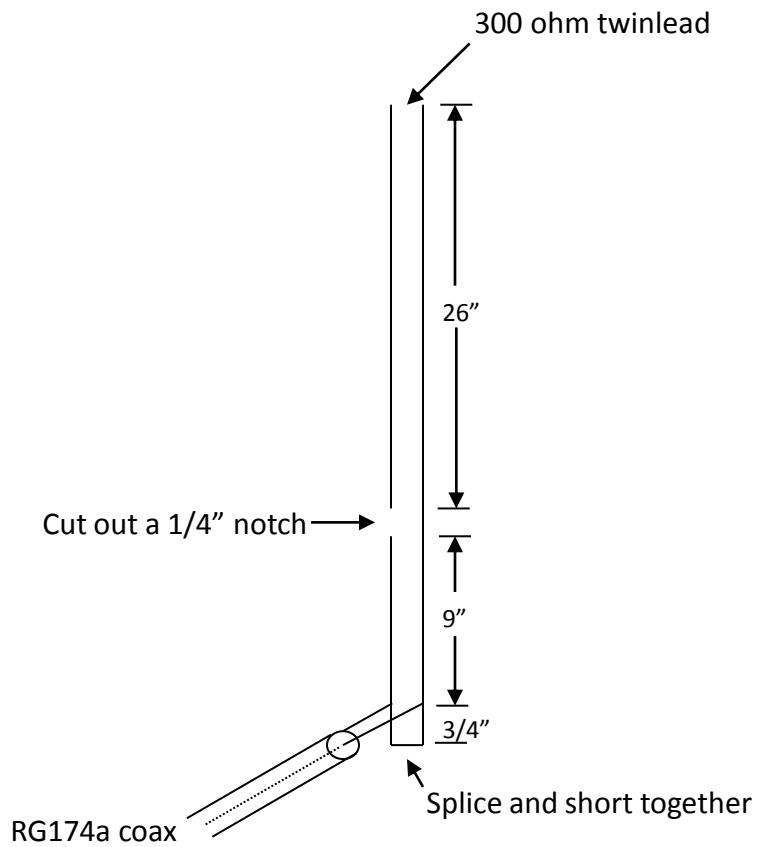


Figure 3 - 220 MHz 300 ohm ribbon J-pole with dimensions for insertion into $\frac{3}{4}$ inch 200 psi pvc pipe.

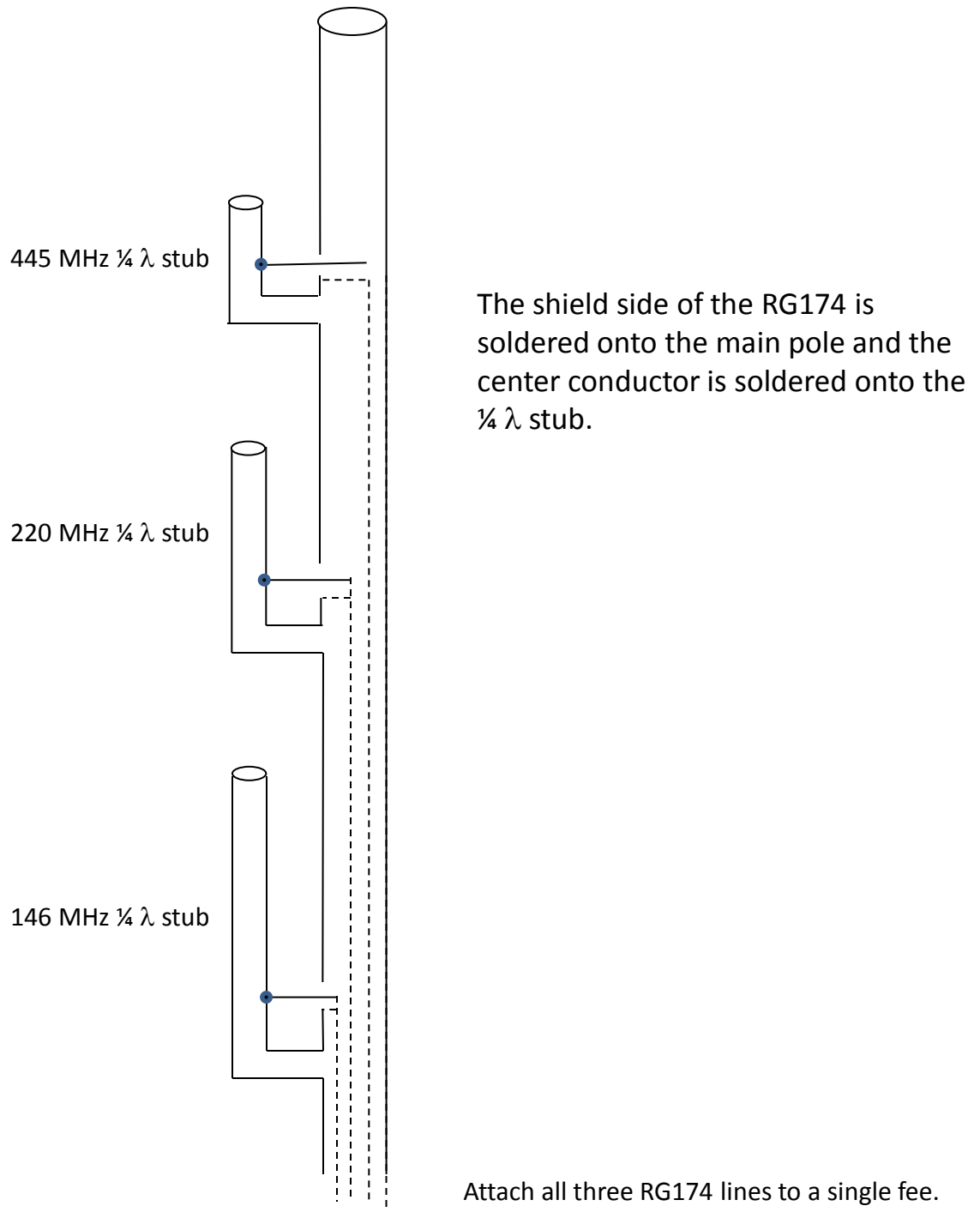
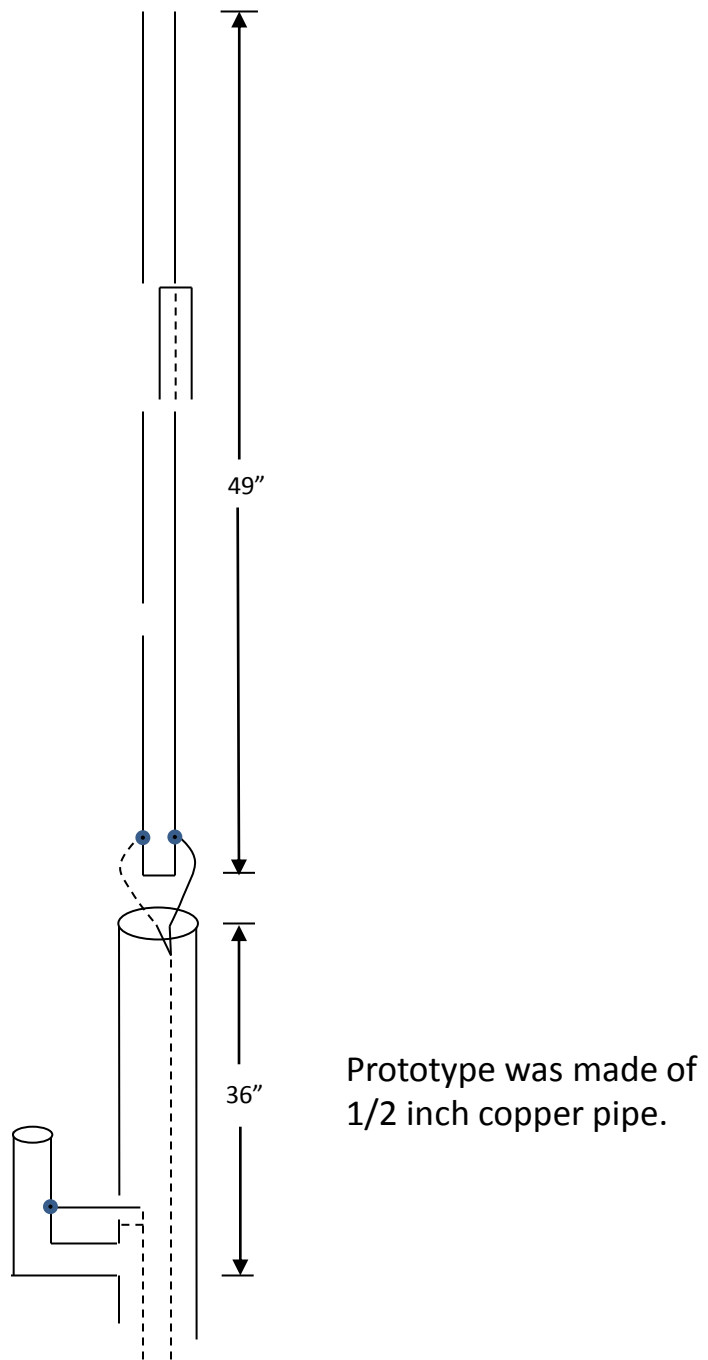


Figure 4 - Tri-band J-pole. The three RG174a cables are combined at the bottom. The shield side of the coax at each of feedpoints is soldered to the main copper pole.



Attach both RG174 cables for single feed.

Figure 5 - Dual band J-pole with a 220 MHz copper pipe J-pole attached at the bottom. With the lead-in coax, total length approaches 8ft. Not practical for implementation although triband operation is achieved.

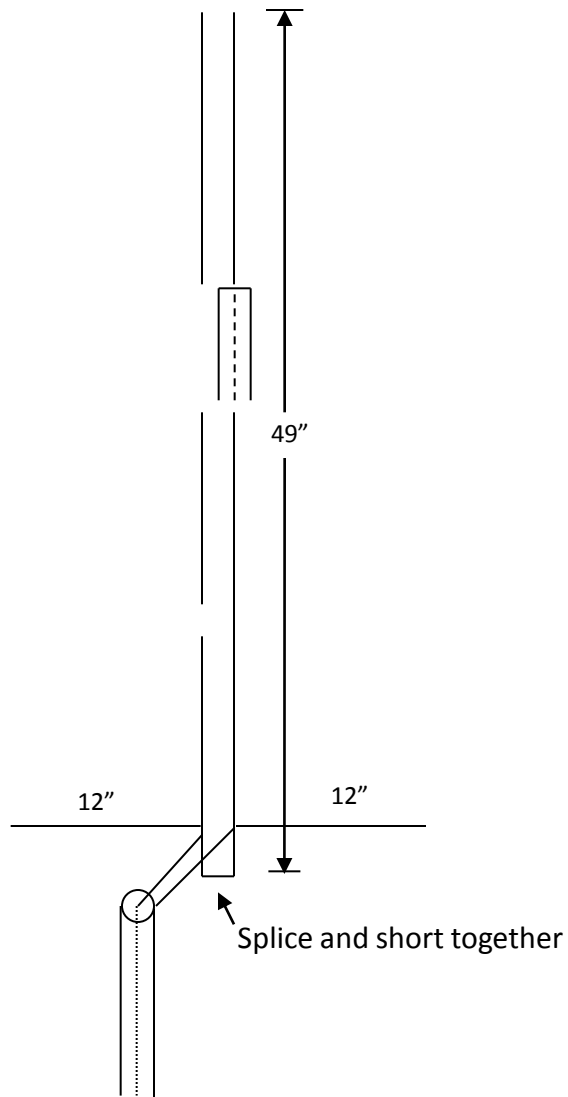


Figure 6 - Dual band J-pole with a 220 MHz horizontal dipole.

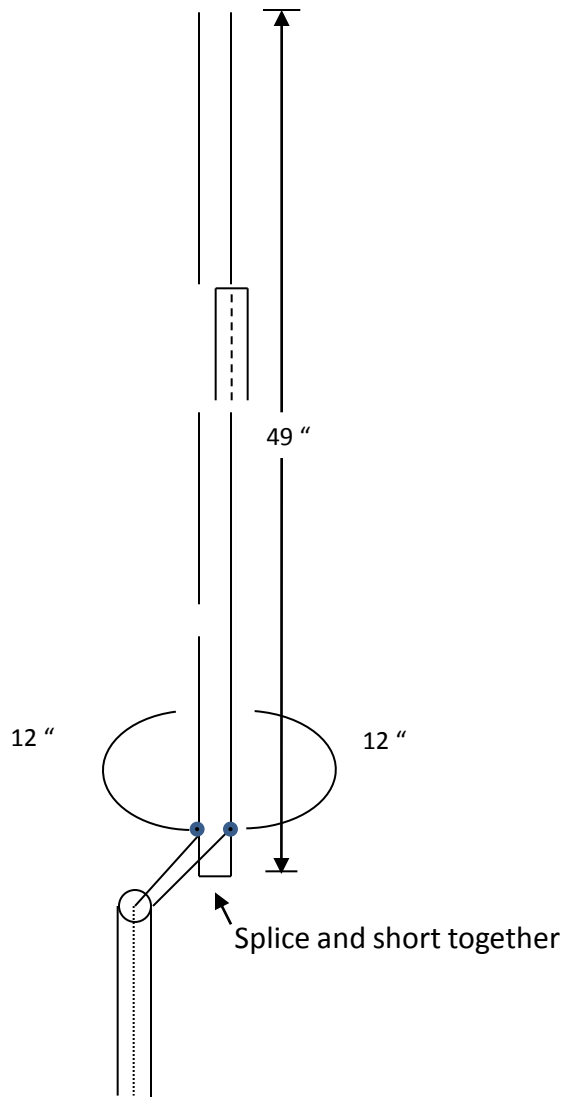


Figure 7 - Tri band antenna with semi vertical polarization. Not practical for implementation.

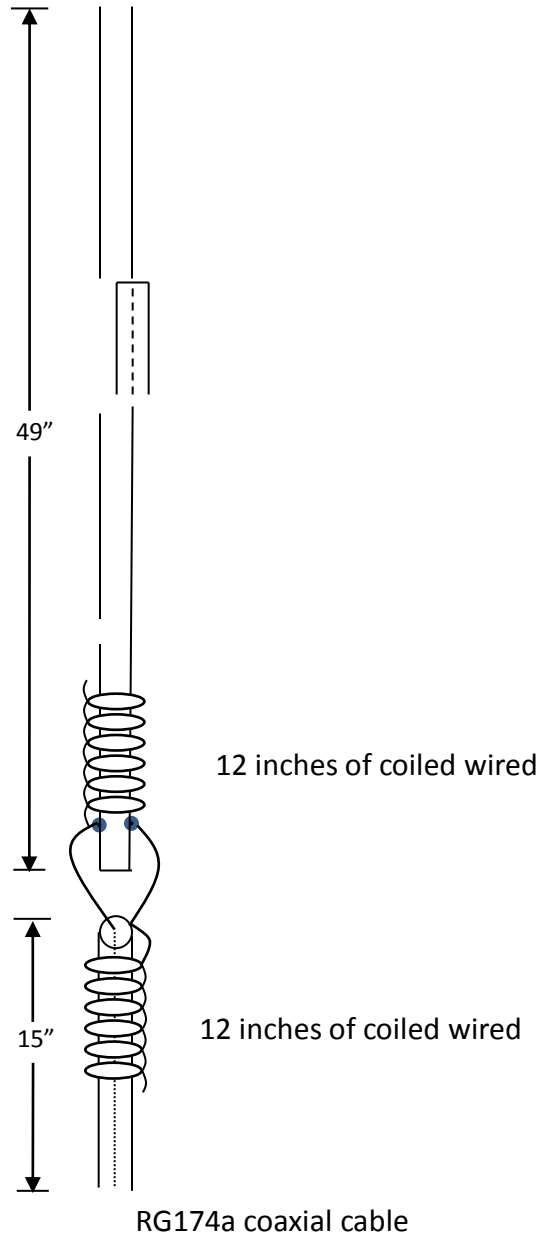


Figure 8 - Tri band antenna with helical loop which allows for insertion into a $\frac{3}{4}$ inch pvc pipe. Total length is $5 \frac{1}{2}$ feet which is a practical length for $\frac{3}{4}$ inch 200 psi pvc pipe.

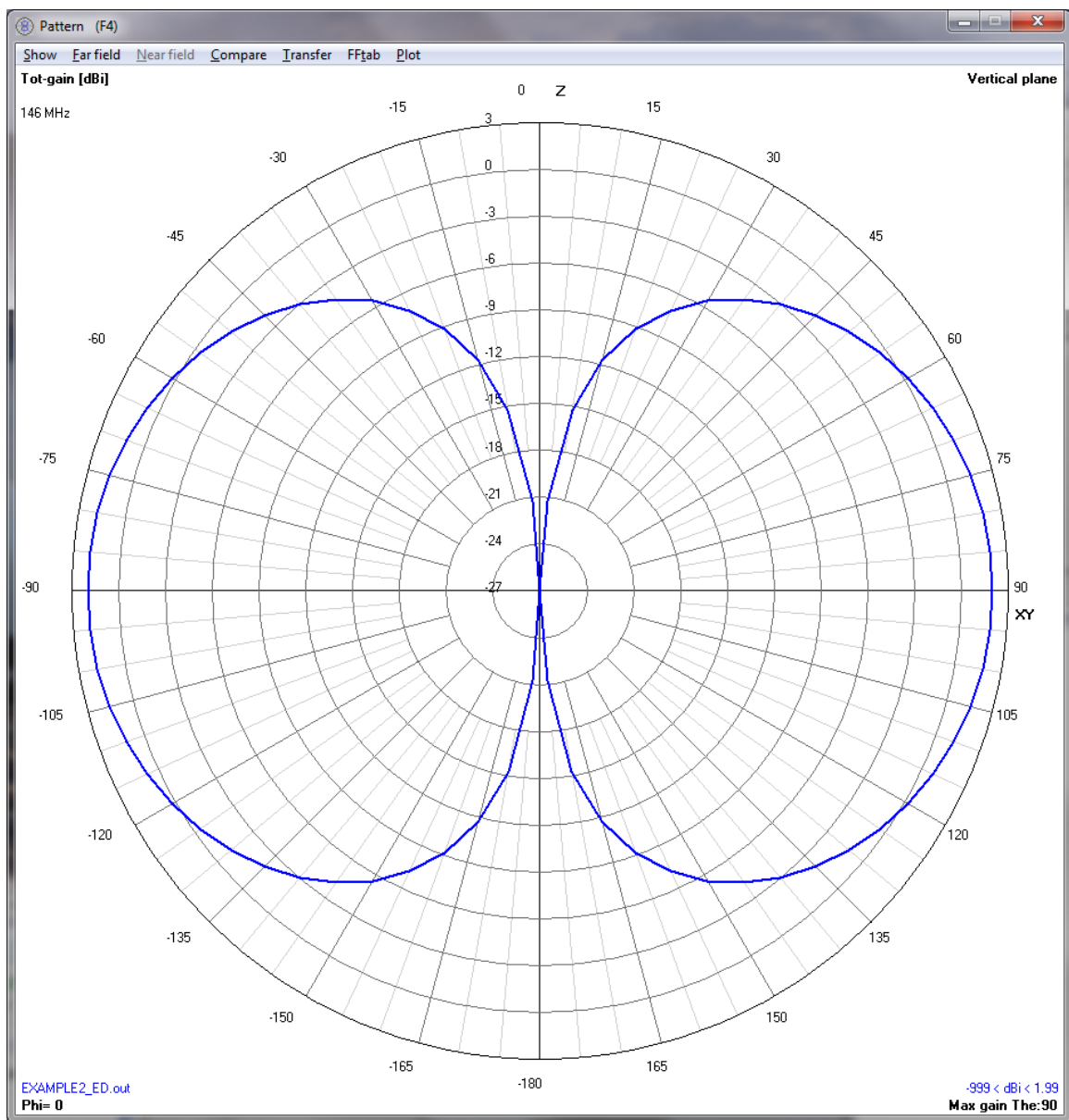


Figure 9 - Elevation pattern of a $\frac{1}{2}$ dipole at its fundamental frequency.

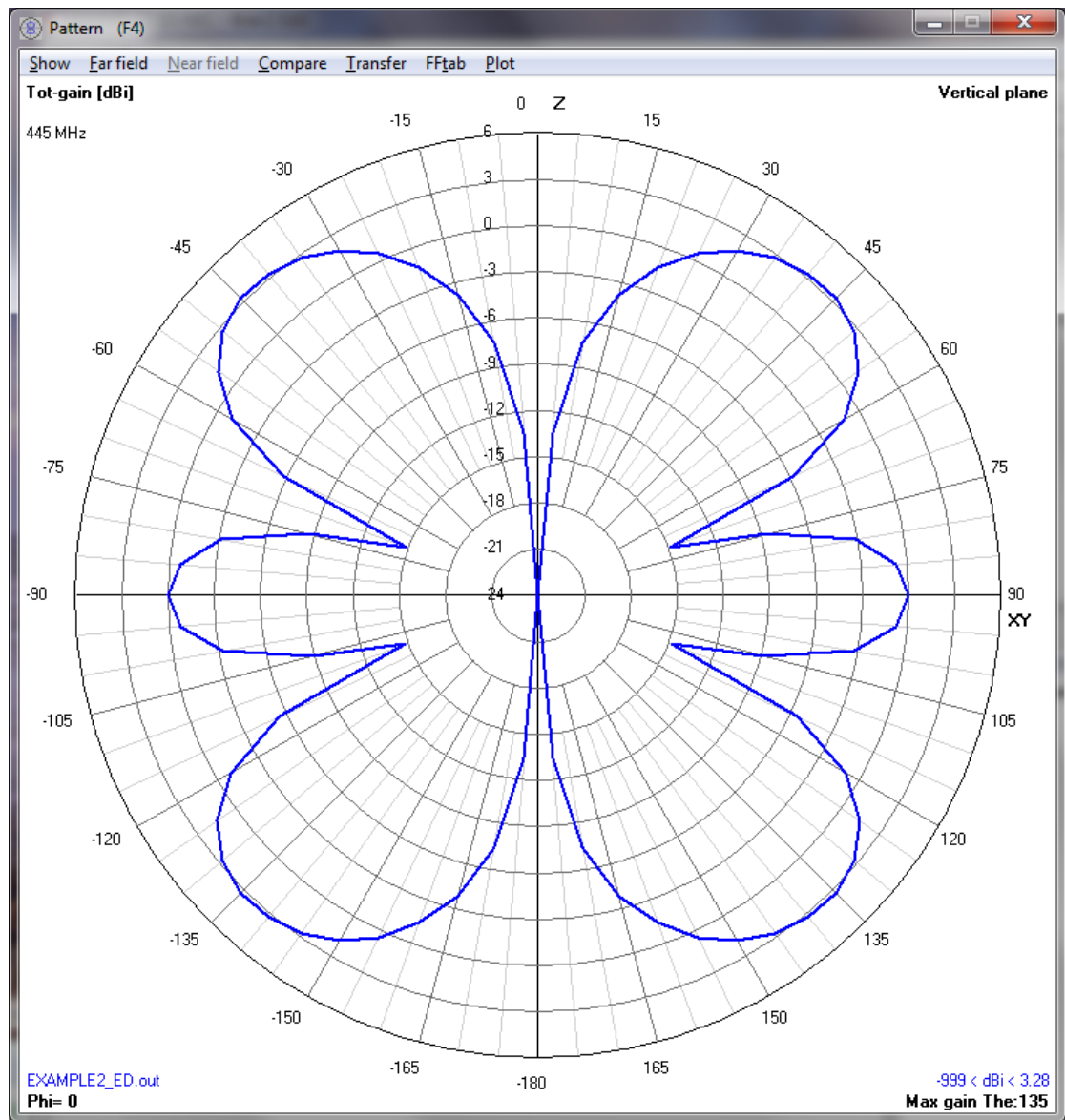


Figure 10 - Elevation pattern of a $\frac{1}{2}$ pole resonating at its 3rd harmonic.

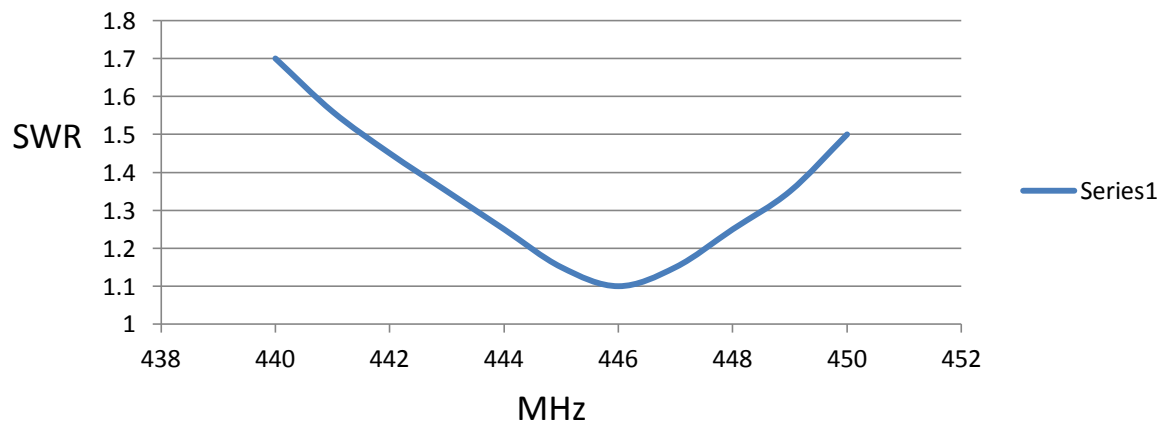
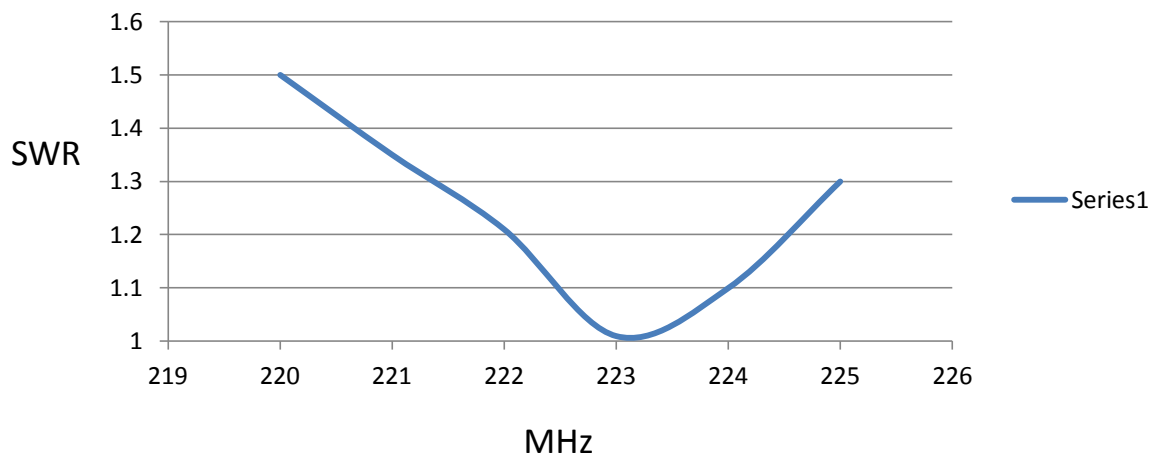
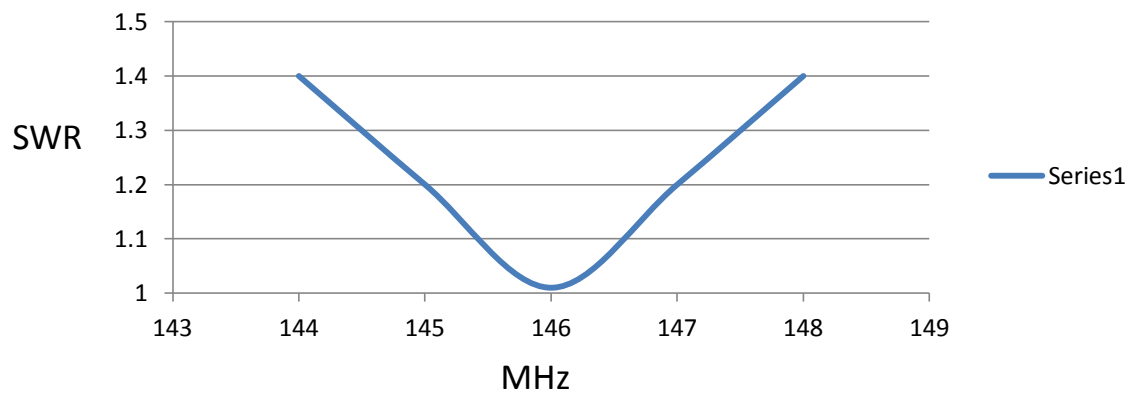


Figure 11 - SWR measurements on 2 meters, 220 MHz and 70cm. All within acceptable limits.