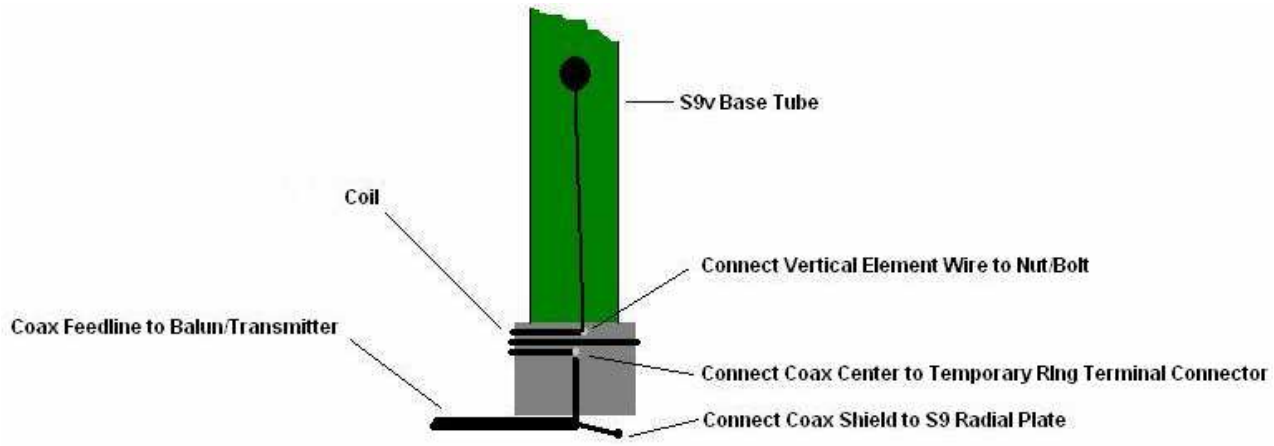
40 Meter Monoband Conversion Kit

Thank you for purchasing our 40 Meter Monoband Conversion Kit for the S9v 31' vertical antenna. The kit consists of a tuned coil that slips over the S9v base tube and connects between the S9v vertical element wire and your coax cable center connection. The coil is shipped resonant near the bottom (CW portion) of the 40 meter band and may be shortened, if desired, to raise the resonant frequency. To install the coil:

1. Temporarily hand-twist one of the provided ring terminal connectors over the bare end of the coil wire. (You will solder this connection after you have fine-tuned the coil.)
2. Remove the S9v from the ground mount pipe.
3. Slip the coil over your ground mount pipe.
4. Slip the S9v over the ground mount pipe and inside the coil.
5. Connect the S9v vertical element wire to the nut and bolt connection on the top of the coil.
6. Connect the ring terminal connector you temporarily installed in step 1 to the coax center connection.



7. Check your SWR at various points across the 40 meter band. The SWR should be at or below 1.5:1 near the center of the band (7.150 MHz). To raise the resonant frequency, remove the ring terminal connector you temporarily installed in step one and trim the coil wire by 1/2". (If required, poke the coil wire through the zip tie - do not remove the zip tie). Re-attach the ring terminal connector and re-check the SWR. If required, repeat this step by trimming in 1/2" increments until the SWR is at or below 1.5:1 at 7.15 or the desired frequency.

8. Solder the ring terminal connector after you have finished fine-tuning the coil.

When properly tuned for the center of the 40 meter band (7.150 MHz), the coil provides full 40 Meter band coverage within a 2:1 (or less) SWR curve. Your SWR is determined by the efficiency of your ground radial system. A poor ground system will actually yield a low SWR reading. As ground radials are added, the SWR increases because the impedance of the antenna is lowered by the radials – this is normal!

A perfect RF ground (approximately 120, 1/5-wavelength or longer radials) will lower the impedance of the antenna to around 36 Ohms. The SWR under this scenario will be high, but the antenna will perform at maximum efficiency.

We have seen little "real world" performance improvement with more than 32 radials. Our test field has 84, 33.5' radials and the SWR with the coil ranges from 1.5:1 near the center of the 40 Meter band to 1.8:1 at the extreme upper and lower edges of the band. If you have a less efficient radial system, you will experience lower SWR readings.

Thanks again for your purchase and good DXing!