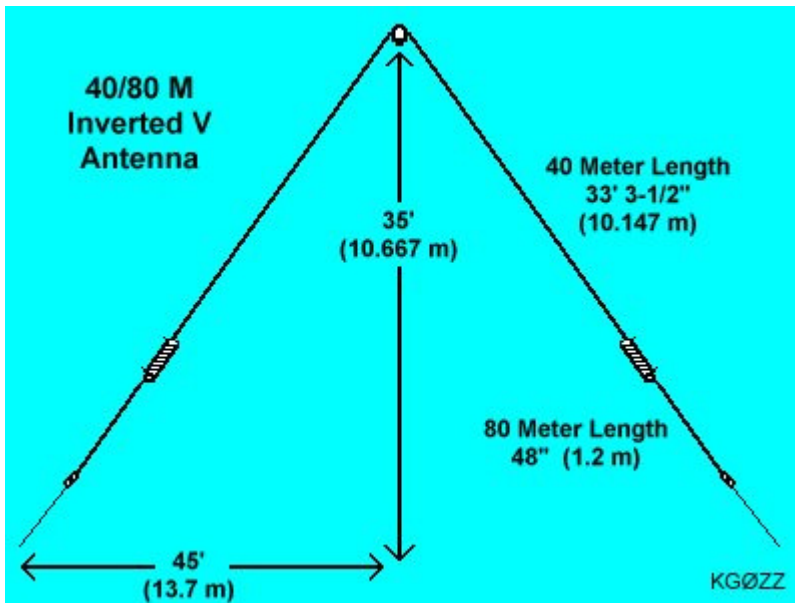


Dipole 40 – 80mts short

The loading coils used in making this antenna are from a [diagram](#) by IK1ZOY based on a project by I2CN. I simply used the dimensions from the diagram, added my own style of making coils and antennas, and turned it into an inverted V antenna.

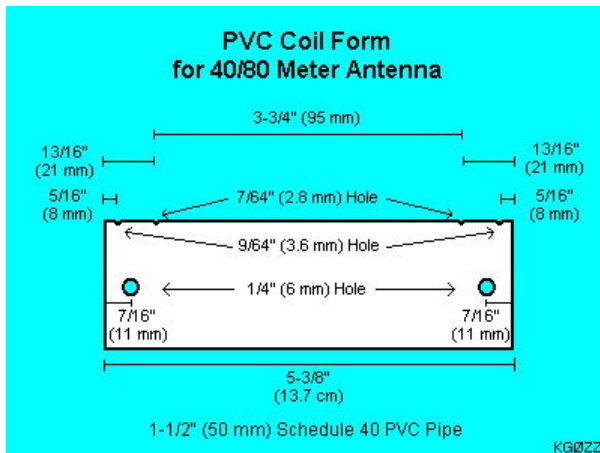
The original diagram is that of a dipole antenna but it does not indicate the use of a balun. If this antenna is to be mounted as a horizontal dipole then I would recommend using a 1:1 air core or current balun for a better impedance match. Mounted as an Inverted V antenna the impedance is near 50 ohms without using a balun.

I did make some changes from the original design to the lengths of the antenna elements. The 40 meter length that I used is 33' 3-1/2" (10.147 m) and the 80 meter length is 48" (or about 1.2 m). In the video I start with a length of 35' (10.668 m) for the 40 meter elements and 5' 4-1/2" (162 cm) for 80 meter elements.



The forms for the loading coils are made of 1-1/2" (50 mm outside diameter) Schedule 40 PVC pipe. You will also need some 18 gauge magnet wire (available on the internet in one pound spools) and some number six stainless steel hardware. There are 78 turns of magnet wire on each loading coil.





Parts List for Loading Coils -- All #6 Stainless Steel Hardware

2 ea. 1-1/2" (50 mm O.D.) Schedule 40 PVC Pipe, 5-3/8" (13.7 cm) long.	4 ea. #6 x 1/2" (13 mm) Pan head screw.
1 ea. 18 Gauge magnet wire (about a half pound).	12 ea. #6 Flat washer.
4 ea. #6 x 32 x 3/4" (20 mm) Machine screw.	4 ea. #6 Split lock washer.
	4 ea. #6 External tooth lock washer.
	8 ea. #6 x 32 Nut.

Tuning

Changes to the 40 meter length should not be necessary. Adjustments to the 80 meter length will affect the 40 meter length but only slightly. Tune 80 meters by adjusting the length of the 80 meter wire sections.

As built above the antenna can be adjusted to work from about 3.650 MHz to 3.700 MHz. To lower the resonate frequency, for working the 80 meter CW portion of the band, the PVC pipe forms will need to be made slightly longer and six extra turns added to each coil. To increase the resonate frequency remove three to six turns from each coil. After adjusting the number of turns on the coils experiment with the 80 meter wire length.