
 * 934MHz Horizontal Antenna *
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The backbone of the antenna is a lazy "I" made from plastic tube or wooden dowelling. At the top and bottom of the vertical boom is a "vee" made from brass or copper welding rod or similar strong material.

To make the elements cut four pieces of rod about 12 cms. long and bend to form an eye at one end of each piece large enough for the screws that will hold them to the boom. Do not use screws that are so long that they will touch when screwed into the boom from opposite sides.

If using round dowelling file two flats at both ends to form right angles. The right angles should be line vertically. The vertical and horizontal booms can now be glued and screwed together. When dry the four elements can be screwed into position using short brass screws.

Wiring it up: Ideally the phasing harness between the upper and lower vee's should be made of 75 ohm coax - not the TV downlead type - but it can be built using 50 ohm cable.

Cut two 16 cm. lengths and terminate one end of each with a "BNC" or "N" type connector. Bare approximately 1 cm at the other end of each and twist the braid to make a tail ensuring that no strands can short against the centre. Apply a small amount of solder to the ends of the cable and the heads of the brass screws. Now solder the cables to the brass screws but ensure that if you solder the braid to the left element of

the top vee you do likewise on the bottom vee. When the above is completed connect the "T" piece and carefully stick the coax to the boom using "superglue" to provide strain relief for the soldered joints.

Now measure from the point where the coax is stripped to a position 8 cm down each element and make a cut at this point. This is because when you divide coax in this way it ceases to be feeder and becomes part of the elements and, as such, must be taken into account if a high SWR is to be avoided.

On the subject of SWR it is suggested that you firstly mount the antenna a few feet up the mast, connect the length of feeder you will be using in the final installation and check the SWR. A reading of 1.5:1 should be obtained. If the reading is much higher strip a couple of mm from each element and check again. Should this fail shorten the coax feeder by about 12 mm repeat this operation about two or three times.

All that remains to be done is to waterproof the assembly. If using wooden dowelling then varnish it and cover the open end of the coax with silicon rubber compound.

It is suggested that if you find it difficult to obtain a "BNC" or "N" type "T" piece it is possible to use coax by splicing in the feeder. Remove and slice off the dielectric and fold back the braiding. Carefully solder the centre conductors together making sure that there is no contact with the outer braidings and cover with Araldite.

