

913 Series Helical Dipoles

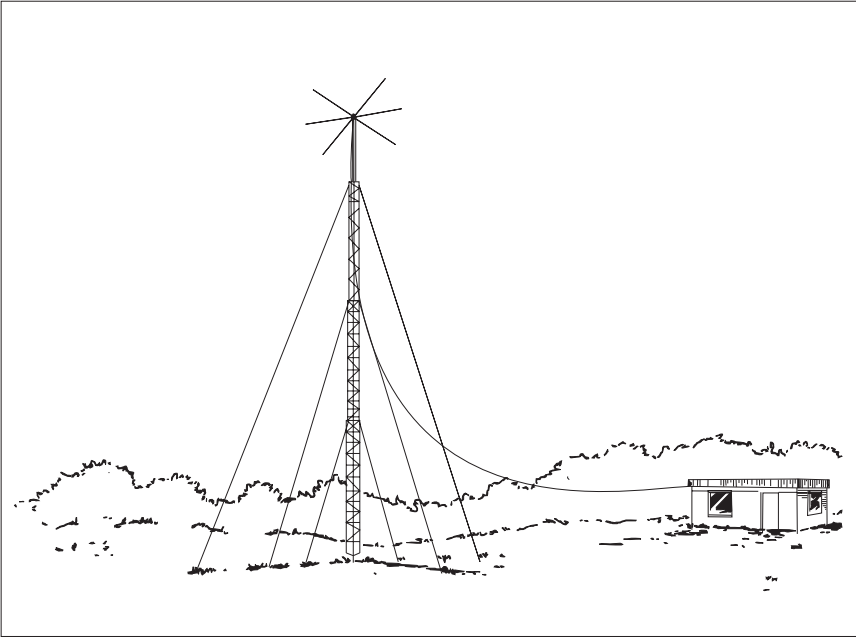
913 Series Helical Dipole Antennas are compact and easily installed, having extremely narrow bandwidth characteristics and a performance approaching that of a wire dipole when used at frequencies over 4.5 MHz. The helical dipole antenna is fed by a single coaxial feeder and can accommodate up to 5 frequencies.

The 913 Helical Dipole requires a 50mm diameter mounting pole. This pole should be long enough to place the helical dipole at least 5 metres above any obstruction. Alternatively the helical dipole can be mounted on top of a mast or tower. Make sure that the site selected for the antenna is as far from any source of electrical interference as possible and that under no circumstances it can come in contact with high tension power lines.

After mounting the helical dipole hub on the mounting pole, remove the front circular cover, pass the coaxial cable through the hole at the bottom of the hub. Screw the UHF connector into the balun. Now screw the helical dipole elements onto the hub. Each element has its frequency marked on the brass ferrule used to screw the element onto the hub. Assemble the helical dipole elements in the positions on the hub as indicated by the diagram enclosed in the hub. Failure to assemble the helical dipole as indicated in this diagram will cause tuning problems.

Helical dipoles are manufactured to specific frequencies, but may require fine tuning after installation. To enable this the dipole elements have an adjustable length tip to allow fine tuning for optimum SWR during installation. Install the antenna in its final position and check the SWR on each of the frequencies that the antenna was manufactured for. Should the SWR be greater than 1.5:1 the antenna will require adjustment. If a tunable transmitter is available, determine on each frequency the helical dipole was manufactured for, at what frequency the best SWR is obtained. If this occurs at a frequency below the required frequency then the tips will have to be shortened on the pair of elements corresponding to that frequency. If the best SWR occurs on a frequency higher than the required frequency then the tips will have to be lengthened. Adjust both ends by an equal amount and repeat the above sequence until an optimum SWR is obtained. If a tunable transmitter is not available use a method of trial and error to adjust the length of the tips, a little at a time, until an optimum SWR is obtained. Remember always adjust each pair of elements by the same amount at each adjustment.

Typical Installations



Hub Details

