T-Lamda Vertical Antenna

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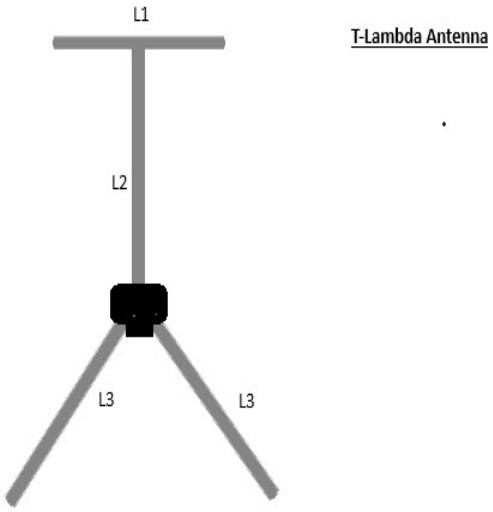

	50MHz	145MHz	430MHz
L1	1.061m	0.360m	0.122m
L2	0.790m	0.274m	0.09
L3	1.329m	0.459m	0.153m

Table 1.

In the interest of having an antenna for one of the main VHF or UHF bands, I investigated the T-Lambda as a possibility for loft or covert installation. The elements for both the 2m and 70cm versions were constructed from 3/16" (4.76mm)* copper tubing – the sort you can get from model shops or small hardware stores. However, for the 6m version I used heavy duty copper wire as it is stronger (and a little lighter in weight).

The horizontal top part of this antenna (L1) is, in effect, the top part of a centre fed Marconi T antenna which acts as a capacitive cap and does not radiate. It does, however enable a shorter radiating vertical element to be used.

The other end of L2 should be connected to the centre pin of a SO239 or a N-Type Socket depending on your preference. The legs (there are only 2, not 3 or 4) should be connected to the outer of the socket at an angle of 45º to the vertical and 90º between them. They should also be in the same plane as the top (L1). These also act as a capacitive section to enable the short radiator to perform as a full ¼ wave.

To fine tune the antenna, place it in your required operating position and slightly adjust the angle of the legs (L3). Feed with 50Ohm coax – RG58, RG8 or whatever you choose.

*If you increase the diameter of the tubes it will increase the bandwidth of the antenna.