



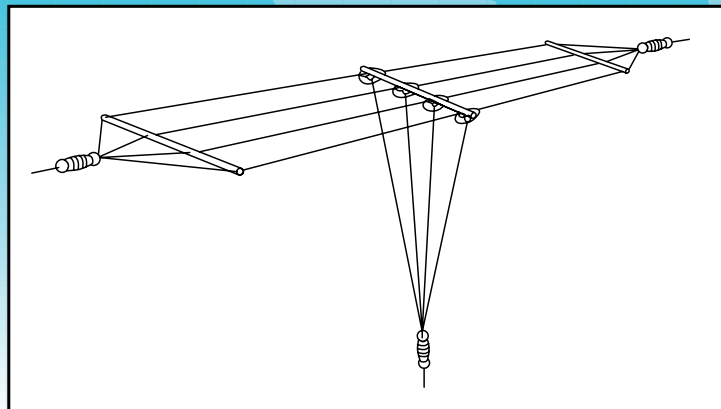
SMC

Communications Solutions
www.smc-comms.com

Terminated Inverted Vee & MF Tee Antennas

MF Tee Antenna

Designed for the MF bands, the MF "T" antenna has omnidirectional characteristics. The inverted "L" antenna is a special type of vertical radiator in which the upper element is bent over. This enables a reasonable length of wire to be used without the need for using high masts. The direction of the electric field is no longer completely vertical but it has a strong horizontal pattern. The "T" antenna may be regarded as an inverted "L" type antenna in which the horizontal portion has been duplicated to increase the top capacitance to earth and keeps the vertical element further from the possible interference of the supporting masts. The length of antenna is not intended to be self resonant, it can be brought to resonance over the MF range using a suitable ATU. SMC manufacture 1, 2, 3 or 4 wire arrays to capacity requirements.



Specs	Information
Design	Top length and number of top conductors to be nominated
Polarisation	Vertical
Horizontal polar diagram	Fig 1
Vertical polar diagram	Fig 2
Power handling capabilities	Up to 10kw or according to design requirements

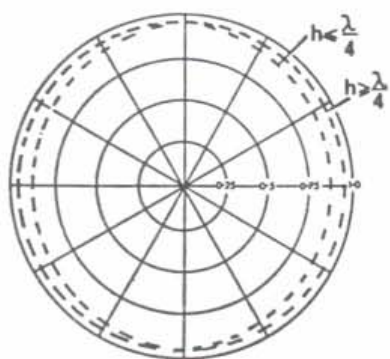


Figure 1

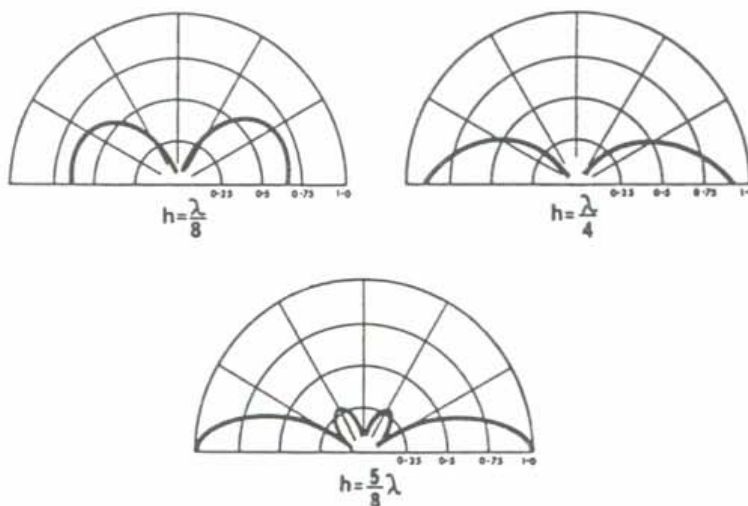


Figure 2

Mechanical Specification

This antenna is constructed from hard drawn cadmium copper strand, fitted porcelain insulators complete with end spreaders. Top and down leads to customers requirements.

NOTE: It is recommended that the MF system be installed in conjunction with a radial earth system.



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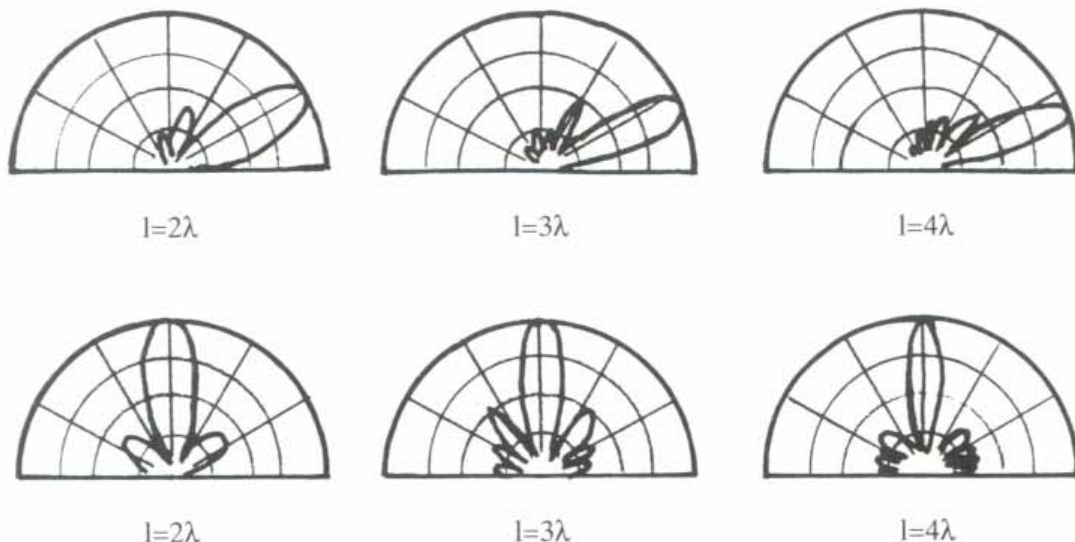
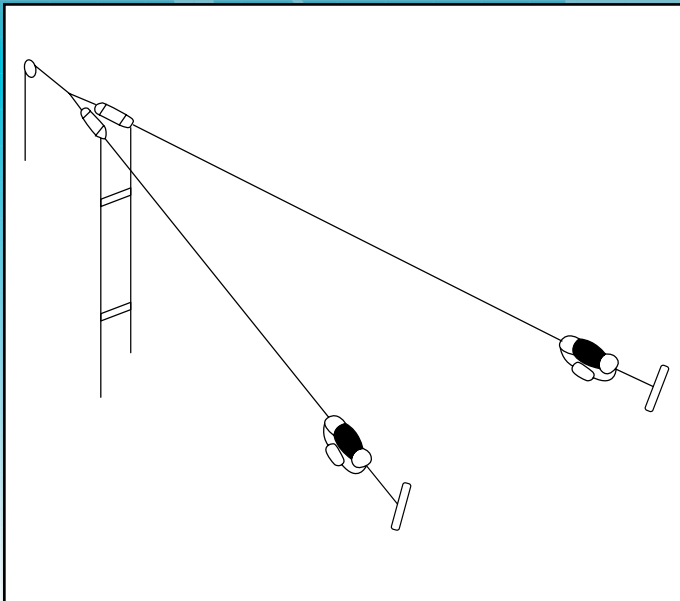
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Terminated Inverted Vee & MF Tee Antennas

Terminated Inverted VEE

The inverted "V" antenna is essentially a half rhombic, whilst the frequency range is restricted to 5-30MHz with a bandwidth of 2:1 for transmission, it has the major advantage of only requiring one mast. The remote ends of the antenna legs are resistively terminated at ground level. The antenna feed point should be at approximately 15 metres while leg lengths are available to suit customers requirements. Where ground conductivity is poor SMC can supply optional ground screens. These antennas can also be supplied as a complete kit including either an aluminium or galvanised steel lattice mast. Transportable versions which require no site foundations are also available.

Specs	Information
Design	Mean frequency of band and angle of fire required
Bandwidth	3:1
Polarisation	Vertical
Horizontal polar diagram	Fig 2
Vertical polar diagram	Fig 1
Input impedance	Normal 600 ohm
VSWR	Better than 2.5:1



Typical polar diagrams

Mechanical Specification

This antenna is constructed from either stranded or single wire hard drawn cadmium copper wire and is fitted with porcelain insulators. Down leads constructed from hard draw coppers, fitted with lightweight spreaders. Complete with terminating resistance units 350 ohm type and copper earth plates



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