AT HF RA Rhombic Antenna

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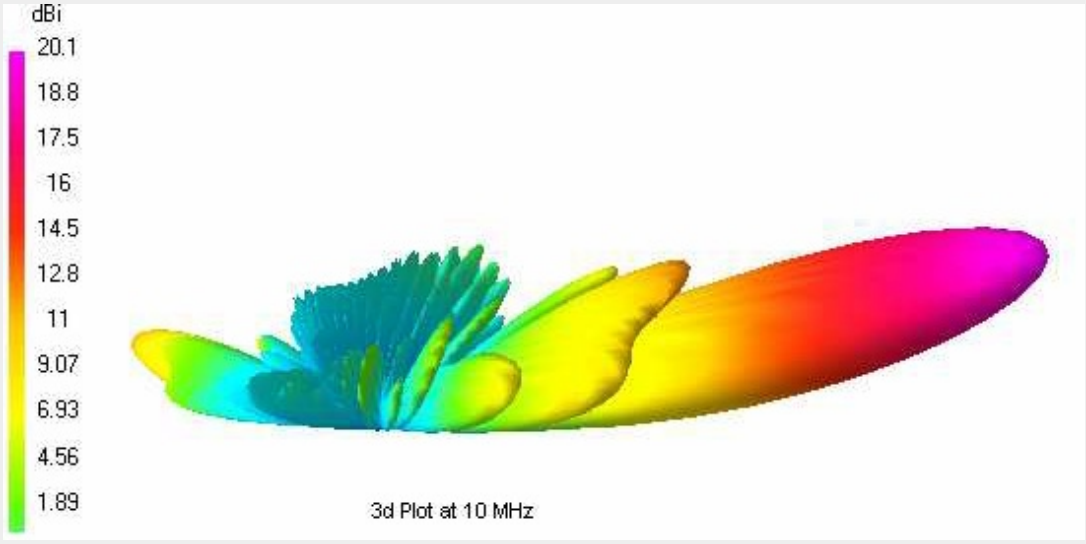
Rhombic antennas have high directional gain and low take-off angles and are best suited to long distance, point to point communications. Rhombic antennas suited to operation down as low as 1.6 MHz are large.
The AT RA -1.6-30 requires four masts but installation of the antenna itself Is simple and can be carried out
without specialist skills. Long term maintenance requirements are low. Our HF Rhombic range offer a cost effective answer for permanent base stations where low take-off angle, and high directional gain is needed, with good radiation efficiency.



Specifications

Electrical

Frequency Range:	1.6-30 MHz
VSWR:	Better than 2.0 : 1 across band

Main Lobe

Freq. MHz	Gain dBi	Take-off Angle °	Power Efficiency %
1.6	3.0	38	47
2	5.2	35	79
5	13.9	20	79
10	20.1	12	81
15	22.0	8	82
20	23.9	6	80
25	23.0	5	79
30	20.5	4	79

Polarisation:	Horizontal
Power Rating:	Antenna only, Max. 30 kW Average, 60 kW PEP, Overall rating dependant on ratings of Balun and Termination pair Which are available from 1-20 kW
Input Impedance:	50 ohms
Input connection:	Dependant on balun power rating

Mechanical

Mast Height:	30m
Overall length:	620m
Overall Width:	135m
Wind Rating:	150 km/hr

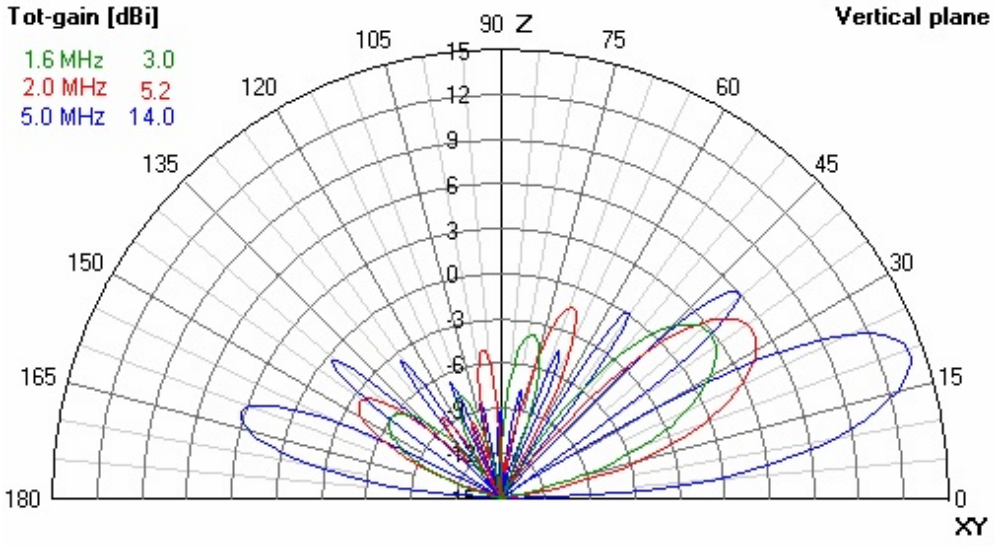
Construction

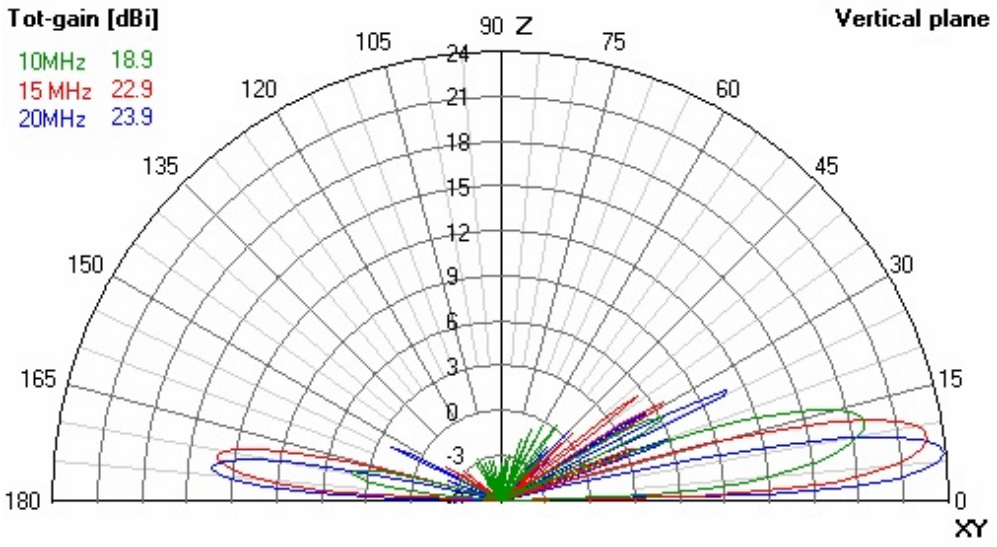
All metal materials are of high grade stainless steel or hot-dip galvanised steel. Ceramic insulators used throughout.

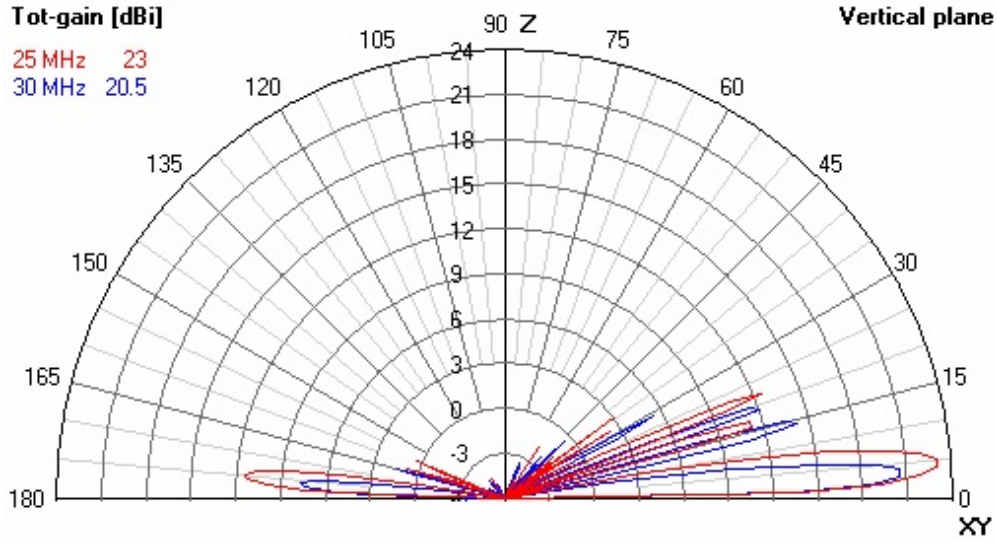
General

The antenna is supplied with all fittings required for installation, masts are not included. Masts may be quoted separately if you would like us to supply these also. The antenna may be fed via coaxial cable to the tower mounted balun or can be fed via suitable balanced open wire line from the transmitter “hut”. Balun and termination requirements are dependant on the power rating require for the installation and are available from 1-20 kW.

VERTICAL RADIATION PATTERNS







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