

Section 1

BASE STATION ANTENNAS

Updated 14 February 2011

Yagi Y400 Series

Frequency
380 – 520 MHz

Bandwidth
Any 20 MHz



Available in either aluminium or stainless steel, the Yagi Y400 Series of directional base station antennas can be manufactured to cover any 20 MHz bandwidth you require within the frequency range 380 to 520 MHz.

Specify transmit and receive frequencies when ordering and your Yagi will be tuned accordingly at better than -15 dB return loss, less than 1.5:1 VSWR.

The Y400 series includes models ranging from 2 to 15 elements. Forward gain varies accordingly from 3 dBd up to 14 dBd. The N-Female connector fitted to the cable tail is rated for up to 150 watts input power.

“Fixed Frequency” models A, B, C, D and E are also available, some of which are held in stock. (See the following page.)



For the 15 element models **Y415** and **Y415SS**, a strut kit is highly recommended to properly support the long boom.

A right-angle mast mounting clamp, coaxial feeder cable, connectors and other accessories are all available separately to complete the installation.

For higher gain and power, mount Yagi's in stack array formations using a phasing harness or power divider.

SPECIFICATIONS	Y402	Y403	Y404	Y406	Y409	Y415
Construction	Aluminium, or add the letters 'SS' to the order code for fully Stainless Steel models					
Frequency Range and Bandwidth	Specify any 20 MHz bandwidth within the frequency range 380 to 520 MHz and advise your transmit and receive frequencies in writing when ordering					
Tuning	All models are tuned in the factory					
Return Loss, VSWR	Better than -15 dB, less than 1.5:1 across the 20 MHz bandwidth specified					
Number of Elements	2	3	4	6	9	15
Nominal Gain	3 dBd	6 dBd	7.5 dBd	9 dBd	11.5 dBd	14 dBd
Polarisation	All models can be mount either Horizontal or Vertical as required					
Maximum Power	150 Watts	150 Watts	150 Watts	150 Watts	150 Watts	150 Watts
Impedance	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
E-Plane at 3 dB	60°	57°	54°	46°	36°	33°
H-Plane at 3 dB	99°	76°	62°	50°	44°	37°
Front-to-Back Ratio	15 dB	15 dB	17 dB	17 dB	17 dB	17 dB
Cable Tail	All models have a 250 mm RG59 cable tail					
Connector	All models have an N-Female connector fitted to the cable tail					
Max Boom Length at low 380 MHz	0.5 metres	0.7 metres	0.9 metres	1.2 metres	1.7 metres	2.1 metres
Longest Element	400 mm	400 mm	400 mm	400 mm	400 mm	400 mm
Weight in Aluminium	0.3 kg	0.4 kg	0.5 kg	0.7 kg	1.0 kg	1.3 kg
Weight in S/Steel	0.7 kg	0.9 kg	1.2 kg	1.6 kg	2.3 kg	3.0 kg
Projected Area	0.02 m ²	0.03 m ²	0.04 m ²	0.06 m ²	0.09 m ²	0.125 m ²
Wind Load 160 kph	3.0 kg	3.8 kg	5.0 kg	7.0 kg	9.0 kg	16 kg
Strut Kit Recommended	Not required	Not required	Not required	Not required	Not required	YS1-48 or YS2-48
Mounting Clamp (Not supplied)	1 x A48 aluminium and galvanised steel right-angle clamp recommended for Aluminium Yagi's. 1 x S48 stainless steel right-angle clamp recommended for Stainless Steel Yagi's.					

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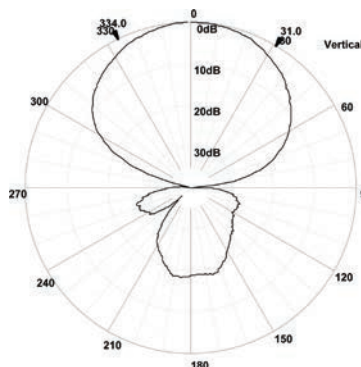
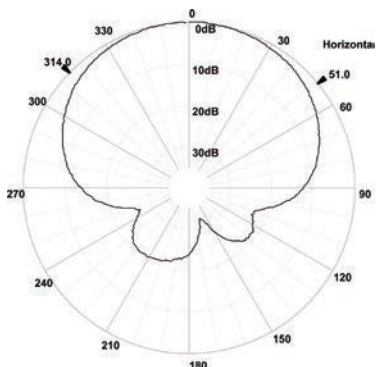
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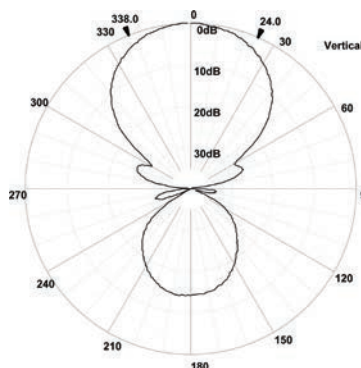
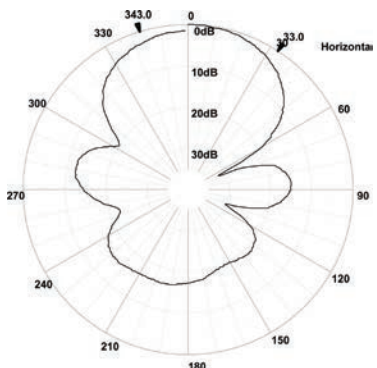


Sample Radiation Patterns

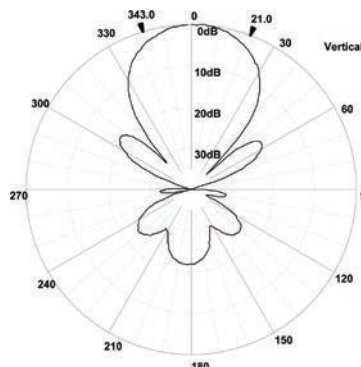
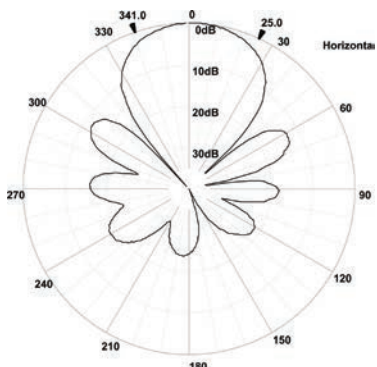
3 element Y403 at 520 MHz



6 element Y406 at 470 MHz



9 element Y409 at 420 MHz



15 element Y415 at 450 MHz

