

## Section 1

### BASE STATION ANTENNAS

Updated 14 February 2011

## Yagi Y800 Series

**Frequency**  
**700 – 960 MHz**

**Bandwidth**  
**Any 60 MHz**



The Y800 Series of Yagi antennas can be manufactured to cover any 60 MHz bandwidth you require within the frequency range 700 to 960 MHz at better than -15 dB return loss, less than 1.5:1 VSWR.

Constructed from either aluminium or stainless steel, the Yagi Y800 Series consists of 6, 9 and 15 element models varying from 9 dBd up to 14 dBd forward gain. All models have a short 250 mm RG59 cable tail terminated with an N-Female connector rated for up to 50 watts input power.

Fixed frequency models **A**, **B** and **C** are also available to cover the more common 60 MHz segments, particularly the NEXT G and GSM cellular mobile phone networks :

- **Y806A, Y809A or Y815A** : 820 to 880 MHz full band.  
*Suit NEXT G network when mounted vertical.*
- **Y806B, Y809B or Y815B** : 870 to 930 MHz full band.
- **Y806C, Y809C or Y815C** : 900 to 960 MHz full band.  
*Suit GSM network when mounted vertical.*

Add the letters **SS** to the order code for stainless steel models. A mast mounting clamp, feeder cable, connectors and other accessories are all available separately to complete the Yagi antenna installation. For the 15 element Y815 model, a single strut kit is recommended to properly support the long boom.



Yagi model Y809A mounted vertical for NEXT G cellular mobile phone network reception

SPECIFICATIONS	Y806	Y809	Y815
<b>Construction</b>	Aluminium, or add letters <b>SS</b> to the code for Stainless Steel		
<b>Frequency Range</b>	Suitable for use in the frequency range 700 to 960 MHz		
<b>Maximum Bandwidth</b>	Any 60 MHz	Any 60 MHz	Any 60 MHz
	<i>Specify Transmit and Receive frequencies in writing when ordering</i>		
<b>Return Loss, VSWR</b>	Better than -15 dB, < 1.5:1 across the 60 MHz specified		
<b>Tuning</b>	Factory	Factory	Factory
<b>Number Of Elements</b>	<b>6</b>	<b>9</b>	<b>15</b>
<b>Nominal Gain</b>	<b>9 dBd</b>	<b>11.5 dBd</b>	<b>14 dBd</b>
<b>Polarisation</b>	Mount the Yagi either Horizontal or Vertical as required		
<b>Maximum Input Power</b>	50 Watts	50 Watts	50 Watts
<b>Impedance</b>	50 Ohms	50 Ohms	50 Ohms
<b>E-Plane at 3 dB</b>	46°	34°	28°
<b>H-Plane at 3 dB</b>	51°	42°	30°
<b>Front-to-Back Ratio</b>	17.8 dB	15 dB	15 dB
<b>Cable Tail</b>	All models have a 250 mm RG59 cable tail		
<b>Connector</b>	N-Female connector fitted to the cable tail		
<b>Boom Length at 850 MHz</b>	<b>0.6 metre</b>	<b>0.97 metre</b>	<b>1.85 metres</b>
<b>Longest Element</b>	210 mm	210 mm	210 mm
<b>Weight in Aluminium</b>	0.5 kg	0.7 kg	1.0 kg
<b>Weight in Stainless Steel</b>	1.2 kg	1.5 kg	2.6 kg
<b>Projected Area</b>	0.035 m <sup>2</sup>	0.054 m <sup>2</sup>	0.075 m <sup>2</sup>
<b>Wind Load at 160 kph</b>	4.5 kg	6.5 kg	9.5 kg
<b>Strut Kit Recommended</b>	Not required	Not required	<b>YS1-48</b>
<b>Mast Mounting Clamp (Not Supplied)</b>	<b>1 x A48</b> recommended for Aluminium Yagi <b>1 x S48</b> recommended for Stainless Steel Yagi		



The **A48** right-angle clamp has an aluminium plate, galvanised steel vee blocks with stainless steel U bolts, nuts and washers. The **S48** clamp has all stainless steel components.

These clamps mount a 25 mm square boom Yagi to a round mast between 30 and 50 mm in diameter.

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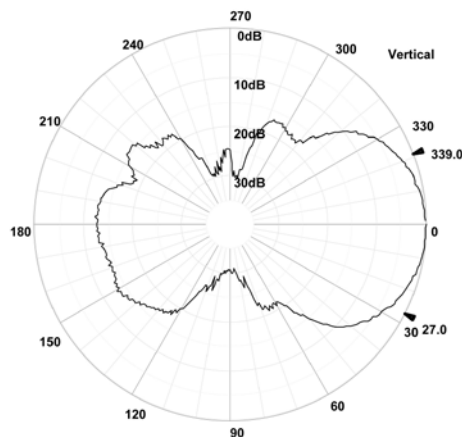
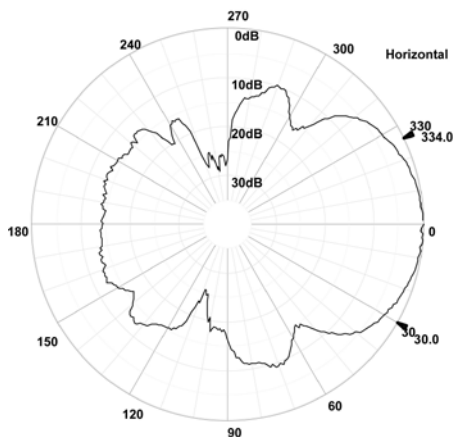
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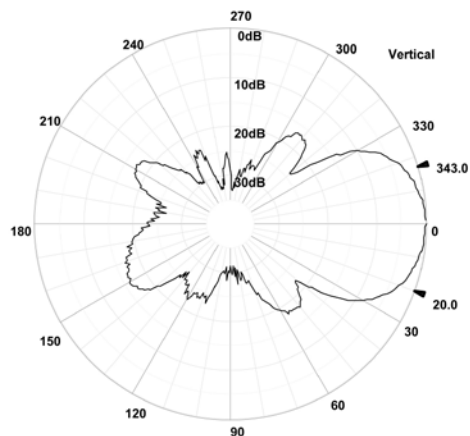
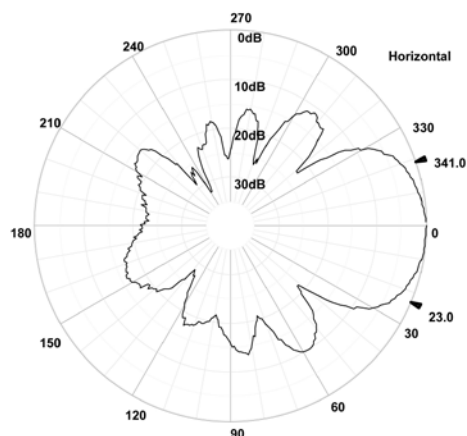


**Sample Radiation Patterns**

**6 element Y806 at 880 MHz**



**9 element Y809 at 880 MHz**



**15 element Y815 at 960 MHz**

