

## Section 2

# BROADCAST ANTENNAS

Updated 16 February 2011

## FM Radio Yagi Y200B Series

**Frequency**  
88 – 108 MHz

**Bandwidth**  
Specify 4 MHz



The Yagi Y200B Series antennas are specifically designed for FM radio broadcast or receive. They can be manufactured to cover any 4 MHz bandwidth you require within the FM Band 88 to 108 MHz. Specify transmit and receive frequencies when ordering and your Yagi will be tuned accordingly at better than -20 dB return loss, less than 1.2:1 VSWR.

The range includes 2, 3, 4 and 6 element models with gain varying from 3 dBd up to 9 dBd.

Available in either Aluminium or Stainless Steel, all models have a stainless steel dipole with stainless steel saddles and fixing bolts. When ordering a fully stainless steel model, simply add the letters 'SS' to the Model Order Code. e.g. Y206BSS.

Due to their large size, a strut kit is highly recommended to support the antenna boom. Either a Single or 2-Way Strut Kit and heavy duty right-angle mounting clamp are available to order separately.

Mount the Yagi either Horizontal or Vertical as required. For higher gain and power, mount Yagi's in stack array formations.



Yagi Y206B supported by YS1-23 single strut kit

| SPECIFICATIONS                       | Y202B   | Y203B               | Y204B               | Y206B               |
|--------------------------------------|---|---------------------|---------------------|---------------------|
| <b>Construction</b>                  | Aluminium, or add letters <b>SS</b> for the fully Stainless Steel model   |                     |                     |                     |
| <b>Frequency Range and Bandwidth</b> | Specify any 4 MHz bandwidth within the range 88 to 108 MHz and advise transmit and receive frequencies in writing when ordering   |                     |                     |                     |
| <b>Tuning</b>                        | All models are tuned in the factory   |                     |                     |                     |
| <b>Return Loss, VSWR</b>             | Better than -20 dB, < 1.2:1 across the 4 MHz bandwidth specified  |                     |                     |                     |
| <b>Number of Elements</b>            | 2   | 3                   | 4                   | 6                   |
| <b>Nominal Gain</b>                  | 3 dBd   | 6 dBd               | 7.5 dBd             | 9 dBd               |
| <b>Polarisation</b>                  | All models can be mount either Horizontal or Vertical as required   |                     |                     |                     |
| <b>Maximum Power</b>                 | 250 Watts   | 250 Watts           | 250 Watts           | 250 Watts           |
| <b>Impedance</b>                     | 50 Ohms   | 50 Ohms             | 50 Ohms             | 50 Ohms             |
| <b>E-Plane at 3 dB</b>               | 70°   | 57°                 | 54°                 | 46°                 |
| <b>H-Plane at 3 dB</b>               | 135°  | 76°                 | 62°                 | 50°                 |
| <b>Front-to-Back Ratio</b>           | 15 dB   | 14 dB               | 14 dB               | 16 dB               |
| <b>Cable Tail</b>                    | All models have a 1.4 metre RG213 cable tail  |                     |                     |                     |
| <b>Connector</b>                     | An N-Female connector is fitted to the cable tail   |                     |                     |                     |
| <b>Max Boom Length at low 88 MHz</b> | 1.8 metres  | 2.7 metres          | 3.5 metres          | 5.0 metres          |
| <b>Max Element Length</b>            | 2.2 metres  | 2.2 metres          | 2.2 metres          | 2.2 metres          |
| <b>Weight in Aluminium</b>           | 3.2 kg  | 4.0 kg              | 5.5 kg              | 7.0 kg              |
| <b>Weight in S/Steel</b>             | 4.0 kg  | 5.0 kg              | 6.9 kg              | 8.8 kg              |
| <b>Projected Area</b>                | 0.137 m <sup>2</sup>  | 0.28 m <sup>2</sup> | 0.30 m <sup>2</sup> | 0.34 m <sup>2</sup> |
| <b>Wind Load 160 kph</b>             | 16 kg   | 33 kg               | 36 kg               | 41 kg               |
| <b>Strut Kit (Not supplied)</b>      | Highly recommended to support boom. Either the <b>YS1-23</b> single strut kit or <b>YS2-23</b> 2-way strut kit are available to order separately.   |                     |                     |                     |
| <b>Mounting Clamp (Not supplied)</b> | <b>Y2300</b> heavy duty galvanised steel right angle clamp recommended for Aluminium models. <b>Y2300SS</b> heavy duty stainless steel right angle clamp recommended for Stainless Steel models. Suit masts 30 to 50 mm diam. |                     |                     |                     |

All Yagi Y200B Series Broadcast Antennas are covered by a 2 YEAR Warranty.

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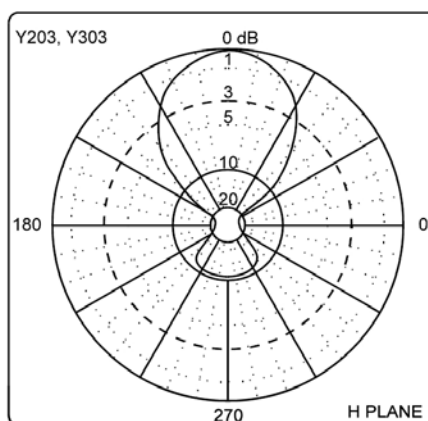
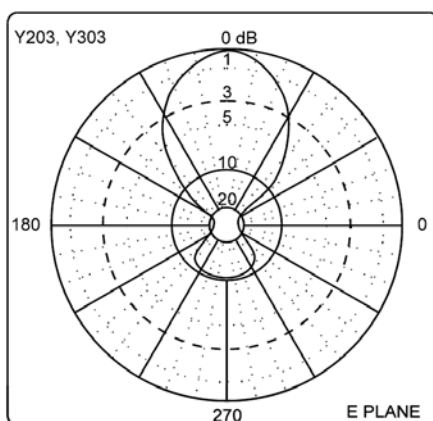
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**Sample Radiation Patterns**

**Y203B, 3 Element**



**Y206B, 6 Element**

