

## Section 1

### BASE STATION ANTENNAS

Updated 14 February 2011

### B13 and B13SS VHF Coaxial Dipoles

**Frequency**  
70 – 118 MHz

**Bandwidth**  
Any 3 %



The B13 and B13SS omnidirectional coaxial dipoles are effective and economical VHF base station antennas. For use in the 70 to 118 MHz frequency range, specify any 3% bandwidth you require and your dipole will be manufactured and tuned accordingly at better than 1.5:1 VSWR.

At the lowest frequency 70 MHz the coaxial dipole will stand 3 metres tall. When manufactured for higher frequencies, the fibreglass radome height reduces slightly.

- B13 has an aluminium mount tube.
- B13SS has a higher quality stainless steel mount tube more suitable for harsh environments and locations where extreme weather conditions prevail.

An N-Female connector rated for up to 100 watts input power is located at the base of the mount tube.

Mast mounting clamps, coaxial feeder cable, connectors and other installation accessories are all available separately.

SPECIFICATIONS	B13	B13SS
<b>Construction</b>	Aluminium mount tube Aluminium internals and white fibreglass radome	Stainless Steel mount tube
<b>Frequency Range</b>	Suitable for use in the VHF frequency range 70 to 118 MHz	
<b>Maximum Bandwidth</b>	Any 3 %. Specify your Transmit and Receive frequencies in writing when ordering.	
<b>Return Loss, VSWR</b>	Better than -15 dB, < 1.5:1 across the 3% bandwidth specified	
<b>Tuning</b>	Factory	
<b>Gain</b>	0 dBd	
<b>Maximum Power</b>	100 Watts	
<b>Impedance (Nom.)</b>	50 Ohms	
<b>DC Grounding</b>	Yes	
<b>Polarisation</b>	Vertical	
<b>H Plane</b>	360° omnidirectional, ± 0.5 dBd	
<b>E Plane</b>	46°	
<b>Cable Tail</b>	None	
<b>Connector</b>	N-Female connector located at the base of the mount tube	
<b>Height at lowest frequency 70 MHz</b>	3 metres. At higher frequencies the coaxial dipole antenna height reduces	
<b>Weight</b>	1.0 kg	1.9 kg
<b>Projected Area</b>	0.05 m <sup>2</sup>	
<b>Wind Load at 160 kph</b>	6.0 kg, 0.08 kN	
<b>Mount Tube</b>	32 mm diameter x 500 mm long	
<b>Mounting Situation</b>	At 70 MHz the antenna must be more than 2 metres away from the nearest vertical structure	
<b>Mast Mount Clamps recommended</b>	2 x EB1SS clamps are available to order separately	



EB1SS clamps have all stainless steel components and are recommended to mount the B13 or B13SS coaxial dipole antenna parallel to a round mast between 20 mm and 50 mm in diameter.

Two clamps will be required.

*FM Radio Broadcasters should refer to the "Broadcast" section of this catalogue where antennas can be found optimised for better than -20 dB return loss in the 88 to 108 MHz FM Radio Band.*