

Section 1

BASE STATION ANTENNAS

Updated 14 February 2011

VHF Omnidirectional Collinear Antennas

Frequency
70 – 140 MHz

Bandwidth
See table



These VHF omnidirectional collinear base station antennas are suitable for two-way radio and other systems operating within the 70 to 140 MHz frequency range.

Built to full commercial standard, the radiating elements are enclosed within a robust fibreglass radome providing full protection against the elements and minimal wind loading.

- The **G11** model is for the 70 to 85 MHz range. Specify any 3% bandwidth.
- The **G12** is capable of a 5% bandwidth within the range 85 to 140 MHz.

Specify your transmit and receive frequencies within the bandwidth limitations indicated when ordering and your collinear antenna will be manufactured and tuned accordingly at better than 1.5:1 VSWR.

Both collinear models deliver 3 dBd gain. An N-Female connector rated for up to 250 watts power is located at the base of the aluminium mount tube. Clients requiring a power rating higher than 250 Watts should contact ZCG for advice.

Mast mounting clamps, feeder cable, connectors and other accessories are available separately to complete the installation.

SPECIFICATIONS	G11	G12
Construction	Aluminium internals, white fibreglass tapered radome and aluminium mount tube	
Frequency Range	70 to 85 MHz	85 to 140 MHz
Maximum Bandwidth	Any 3 % <i>Specify your Transmit and Receive frequencies in writing when ordering</i>	Any 5 %
Return Loss, VSWR	Better than -15 dB, < 1.5:1 across the bandwidth specified	
Tuning	Factory	Factory
Gain	3 dBd	3 dBd
Maximum Power	250 Watts	250 Watts
Impedance (Nom.)	50 Ohms	50 Ohms
DC Grounding	Yes	Yes
Polarisation	Vertical	Vertical
E Plane	32°	32°
H Plane	All models are 360° omnidirectional, ± 0.5 dBd	
Cable Tail	None	None
Connector	N-Female connector located at the base of the mount tube	
Height at lowest frequency	5.6 metres (at 70 MHz) <i>At higher frequencies, the collinear antenna height reduces</i>	4.8 metres (at 85 MHz)
Weight (Bare)	10 kg	9 kg
Projected Area	0.15 m ²	0.14 m ²
Wind Load at 160 kph	23 kg, 0.230 kN	17 kg, 0.170 kN
Aluminium Mount Tube Dimensions	48 mm diameter x 600 mm	48 mm diameter x 600 mm
Mast Mount Clamps recommended	2 x UAM180L	2 x UAM180L

UAM180L clamps are recommended for mounting these collinear antennas to a round mast between 40 mm and 75 mm in diameter. These clamps are galvanised steel designed for heavy duty service.

For larger diameter masts up to 115 mm, **UAM180UNI** and **UAM180UNIL** parallel clamps are available.

FM Radio Broadcasters should use the **G12HP** collinear antenna model specifically designed for the purpose and optimised for better than -20 dB return loss.

See the "Broadcast" section of this catalogue.

