

Section 1

BASE STATION ANTENNAS

Updated 14 February 2011

VHF Omnidirectional Collinear Antennas

Frequency
148 – 174 MHz

Bandwidth
See table



These VHF omnidirectional collinear base station antennas are designed for commercial, paging, trunking and general communication systems operating within the 148 to 174 MHz frequency range.

The radiating elements are enclosed within a robust fibreglass radome providing full protection against the elements. Mount tubes are aluminium.

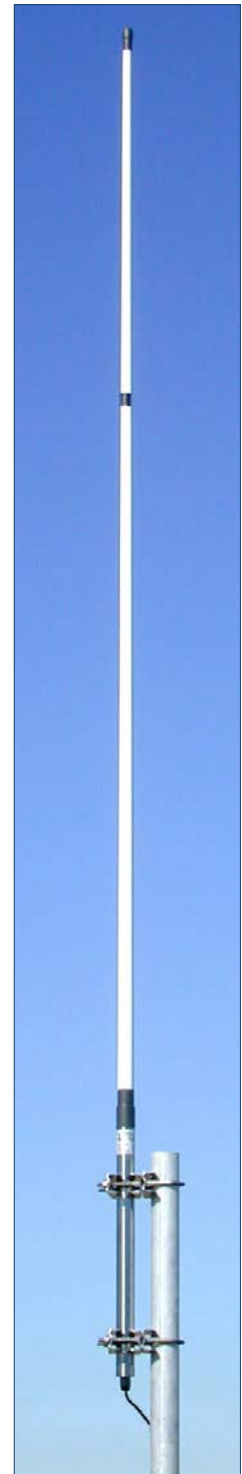
- The **G21** model is of a lightweight construction suitable only for areas where extreme conditions are unlikely.
- The **G22**, **G23** and **G25** models are built for severe commercial service.

Specify your transmit and receive frequencies within the bandwidth limitations indicated when ordering and your collinear antenna will be manufactured and tuned accordingly.

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

Clients requiring a power rating higher than 250 Watts should contact ZCG for advice.

SPECIFICATIONS	G21	G22	G23	G25
Construction	White fibreglass tapered radome and aluminium mount tube			
Service	Light	Commercial	Commercial	Commercial
Frequency Range	Suitable for use in the VHF frequency range 148 to 174 MHz			
Maximum Bandwidth	Any 1 %	Any 3 %	Any 4 %	Any 3 %
	<i>Specify your Transmit and Receive frequencies in writing when ordering</i>			
Return Loss, VSWR	Better than -15 dB, < 1.5:1 across the bandwidth specified			
Tuning	Factory	Factory	Factory	Factory
Gain	3 dBd	6 dBd	3 dBd	4.5 dBd
Maximum Power	250 Watts	250 Watts	250 Watts	250 Watts
Impedance (Nom.)	50 Ohms	50 Ohms	50 Ohms	50 Ohms
DC Grounding	Yes	Yes	Yes	Yes
Polarisation	Vertical	Vertical	Vertical	Vertical
E Plane	32°	16°	32°	25°
H Plane	All models are 360° omnidirectional, ± 0.5 dBd			
Cable Tail	None	None	None	None
Connector	N-Female connector located at the base of the mount tube			
Height at lowest frequency 148 MHz	3.5 metres	5.6 metres	3.5 metres	4.5 metres
	<i>At higher frequencies, the collinear antenna height reduces</i>			
Weight (Bare)	4 kg	13 kg	4.5 kg	9 kg
Projected Area	0.05 m ²	0.16 m ²	0.11 m ²	0.135 m ²
Wind Load at 160 kph	6 kg, 0.06 kN	19 kg, 0.19 kN	10 kg, 0.13 kN	16 kg, 0.16 kN
Aluminium Mount Tube Dimensions	40 mm diam x 500 mm	48 mm diam x 600 mm	48 mm diam x 600 mm	48 mm diam x 600 mm
Mast Mount Clamps recommended	2 x EB1SS	2 x UAM180L	2 x UAM180L	2 x UAM180L



EB1SS clamps have all stainless steel components and will secure the **G21** collinear antenna parallel to a round mast between 20 mm and 50 mm in diameter.



UAM180L clamps are recommended for mounting the **G22**, **G23** and **G25** collinear antennas to a round mast between 40 mm and 75 mm in diameter.

These clamps are galvanised steel designed for heavy duty service.