

Section 1

BASE STATION ANTENNAS

Updated 14 February 2011

UHF Omnidirectional Collinear Antennas

Frequency
380 – 520 MHz

Bandwidth
See table



This range of omnidirectional collinear base station antennas are designed for use within the UHF frequency range 380 to 520 MHz. They feature high quality fibreglass radomes with internal construction to full commercial standard ensuring reliable long term service.

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

An N-Female connector rated for up to 250 watts input power is located at the base of the mount tube.

The **G49R** model is a more robust and rugged design purpose built to survive the most extreme conditions. Alpine regions where storms, high winds, snow and ice are prevalent are typical locations where this ruggedised model is recommended.

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

| SPECIFICATIONS | G45 | G46 | G49 | G49R |
|-------------------------------------------|-------------------------------------------------------------------------------|------------------------|------------------------|------------------------|
| Radome | Single piece, parallel, white fibreglass radome | | | Rugged |
| Mount Tube | Aluminium | Stainless Steel | Stainless Steel | Aluminium |
| Frequency Range | Suitable for use in the UHF frequency range 380 to 520 MHz | | | |
| Maximum Bandwidth | Any 4 % | Any 1.5 % | Any 1.5 % | Any 1.5 % |
| | <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 | 9 dBd | 9 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° | 9° | 9° |
| H Plane | All models are 360° omnidirectional, ± 0.5 dBd | | | |
| Connector | N-Female located at the base of the mount tube | | | |
| Height at lowest frequency 380 MHz | 2.5 metres | 3.0 metres | 3.5 metres | 4.0 metres |
| | <i>At higher frequencies, the collinear antenna height reduces</i> | | | |
| Weight | 2 kg | 3 kg | 4 kg | 7 kg |
| Projected Area | 0.057 m ² | 0.066 m ² | 0.075 m ² | 0.117 m ² |
| Wind Load at 160 kph | 5.7 kg, 0.056kN | 8 kg, 0.079kN | 9.09 kg, 0.089kN | 14.9 kg, 0.14kN |
| Mount Tube Dimensions | 32 mm diam x 450 mm | 32 mm diam x 450 mm | 32 mm diam x 450 mm | 48 mm diam x 400 mm |
| Mast Mount Clamps recommended | 2 x EB1SS | 2 x EB1SS | 2 x EB1SS | 2 x UAM180L |



EB1SS clamps have all stainless steel components and are recommended to mount the **G45**, **G46** or **G49** model collinear antennas parallel to a round mast between 20 mm and 50 mm in diameter.



UAM180L clamps are recommended for mounting the **G49R** rugged design collinear antenna to a round mast between 40 mm and 75 mm in diameter.

These clamps are galvanised steel designed for heavy duty service.