



# Model CFD620

Broadband

UHF Collinear Antenna  
700mm

600 □ 650 MHz

2.1 dBi Gain

- Ground independent - doesn't require a ground plane for stated performance levels
- Mounts into any bracket with minimum 12.7 mm (□) diameter hole.
- 6 metres of RG58 low loss solid core, foam PE dielectric coaxial cable.
- SMA male connector fitted.
- 30 Watts maximum input power.

## INSTALLATION GUIDE

[www.zcg.com.au](http://www.zcg.com.au)

### ANTENNA DESCRIPTION

The CFD620 broadband UHF/Wireless Microphone collinear antenna is factory tuned to cover the full frequency range 600-650 MHz, centred for 620 MHz and delivers 2.1 dBi gain.

Construction consists of silver soldered robust brass radiating internals, clear anodised aluminium threaded mount ferrule and cap and a black fibreglass parallel radome standing at an overall height combined of 700mm tall.

6 metres of MIL-SPEC RG58 low loss, solid copper core, foam PE dielectric coaxial cable side exits from the mount ferrule.

Rated for up to 30 Watts input power, a gold plated SMA male connector is fitted to the cable for easy installation. Alternate connectors can be fitted to suit your requirements.

A detailed specification sheet is available to download from our website: [www.zcg.com.au](http://www.zcg.com.au)

### TUNING

The antenna has been tuned in the factory to cover the full frequency range 600 to 650 MHz, centred for 620 MHz (utilised for wireless microphone applications). VSWR has been optimised to better than 1.8:1.

This tuning cannot be altered.

### SELECTING THE MOUNTING POSITION

No metal ground plane is necessary for the antenna to operate effectively. Potential mount positions therefore include vehicles and numerous fixed locations where no metal exists.

The dipole can be secured into any bracket with a 12.7 mm (□) minimum diameter hole using the stainless steel nut and washer at the base.

A variety of mounting brackets are available separately.

To achieve best performance from your antenna, these are the important principles you should consider when selecting the mounting point :

1. **Mount the antenna in as high a place as possible.**
2. **Mount the antenna as far away from other antennas, especially antennas of the same or harmonic frequencies. Mount as far away from metallic objects as possible to avoid interference and distortion of the 360° omnidirectional pattern. At least 350mm side clearance is desirable, preferably more.**
3. **Mount the antenna vertical, not at an angle. Angled mounting will result in reduced lobe propagation leading to reduced coverage.**

### INSTALLATION GUIDE

Remove the nut and washer from the antenna mount ferrule.

Insert the threaded mount ferrule into the mounting bracket or mount hole.

From underneath, thread the washer onto the ferrule and tighten the nut to firmly secure the antenna to the bracket.

**Recommended :** Leave some slack in the cable at the point where the cable exits the mount ferrule, form a sideways question mark. This will allow any moisture/water propagation to go to the lowest point of the cable and reduce the possibility of ingress into your antenna.

Route the MIL-SPEC RG58 low loss cable carefully to your device. Ensure that the cable is not under any tension, stretched excessively and there are no sharp kinks. All of this may lead to stress of the coaxial cable internals and may cause loss in performance or complete failure of your system.

We strongly recommend cable management utilising uPVC cable ties for internal use or 316 stainless steel for external use. Do not tighten your cable ties so as to crush the cable. A damaged/crushed feeder cable is a cause of high VSWR and reduced performance, which may lead to loss of performance or complete failure of your system.

Connect the SMA male connector into your data device.

### SEALING CONNECTIONS

**It is vital that all connections be well sealed with at least two layers of self-amalgamating tape followed by a layer of uPVC to prevent ingress of moisture. uPVC or electrical tape alone will not be adequate.**

**Installation is now complete.**



**A SMA male connector is fitted to the 6 metre RG58 cable.**

### MAINTENANCE

We manufacture our CFD620 broadband UHF collinear antenna to ISO accredited standards to ensure a long service life with minimum maintenance requirements.

We recommend a yearly inspection of your entire RF system to ensure condition, performance and longevity of your system. The yearly inspection should include visual check of the antenna and coaxial cable run, ensuring secure fitment of your antenna base and connector, along with performance check of your device.