



Model

ZM21-CELLN

Marine 4G mobile phone

collinear

825-890 MHz

Lower 4G network

8.1 dBi Gain

2.1 metres tall

- Suitable for all carriers utilising 825-890 MHz
- Mounts to MM1 or MM2 using 1"-14 UNS thread
- 5 metres of RG58 low loss stranded cable.
- FME female connector fitted.
- 30 watts maximum input power.

INSTALLATION GUIDE

www.zcg.com.au

ANTENNA DESCRIPTION

Factory tuned for the 825-890 MHz, lower 4G mobile phone frequency with 8.1 dBi gain, the ZM21-CELLN marine mobile phone antenna offers the maximum gain and reception range practical.

All components used in construction are of the highest quality to ensure long term survival in the harsh marine environment. The single piece white fibreglass radome stands 2.1 metres tall, identical to other ZM21 models in the ZCG marine range.

5 metres of MIL-SPEC RG58A/U stranded cable side exits from the chromed brass ferrule. An FME female connector is fitted to the cable for easy installation.

A detailed specification sheet is available to download from www.zcg.com.au

TUNING

The antenna has been factory tuned to cover the 825-890 MHz lower 4G mobile phone cellular network (check carrier compatibility). Return loss has been optimised to better than 1.5:1. This tuning cannot be altered.

SELECTING THE MOUNTING POSITION

No metal ground plane is necessary for the antenna to operate effectively. 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 and metallic objects as possible to avoid interference and distortion of the 360° omnidirectional pattern. At least 350 mm side clearance is desirable, preferably more.**
3. **For optimum performance the antenna must be in a vertical position, not at an angle.**

FOLD DOWN SWIVEL BASE (not included)

You can choose between the MM1 plastic fold down mount or MM2 316 grade stainless steel fold down base. Both of these bases include a 1"-14 UNS thread on the top which mates with the thread in the chrome mount ferrule of your antenna.

Alternatively black versions of both the MM1 and MM2 are available.

Both of these fold down mounts are adjustable in two directions and also swivels in the opposite plane by loosening the stainless steel pivot bolt. This versatility allows the antenna to be mounted in a variety of positions on any flat surface and at any angle using four screws or bolts.

Use the base as a template to mark the position of the 4 holes required to secure the deck mount base.

ZCG recommend using high quality stainless steel fastening screws or bolts, depending on your mounting surface.

ROUTING THE CABLE

IMPORTANT : Leave some slack in the cable at the point where the cable exits the chromed brass ferrule. This will allow the antenna to be folded down flat without placing tension on the cable.

Route the RG58 low loss stranded cable carefully to your phone. Ensure that the cable is not stretched excessively and there are no sharp kinks.

If using cable ties, then we highly recommend the stainless steel type for the harsh marine environment.

Do not pull the cable ties so tight as to crush the cable. A damaged feeder cable is a cause of high VSWR and reduced performance.

Insert the FME female connector into your mobile phone.

Installation is now complete.



The 5 metre cable may be cut shorter if desired. However, a new connector will then need to be fitted using proper tools.

If the FME female connector fitted to the cable does not suit your mobile phone, then any other connector which is suitable for RG58 cable can be fitted.

Alternatively use a suitable adaptor, or a patch lead.

SEALING CONNECTIONS

For the marine environment, it is vital that all connections be well sealed with at least two layers of self-amalgamating tape to prevent ingress of moisture. PVC or electrical tape will not be adequate.

MAINTENANCE

This antenna has been designed for high reliability and low maintenance.

We recommend that you conduct a routine annual mechanical inspection of the antenna, feeder cable and connections.