



Model

ZM21-VHF

Marine VHF collinear

2.1 metres tall

VHF 156-162 MHz

Full frequency range

2.1 dBi Gain

- ↳ Mounts to MM1 or MM2 using 1"-14 UNS thread
- ↳ 4.5 metres of white RG58 stranded cable.
- ↳ UHF male solder connector supplied, not fitted.
- ↳ 50 watts maximum input power.

INSTALLATION GUIDE

www.zcg.com.au

ANTENNA DESCRIPTION

Ground independent and factory tuned to cover the VHF marine band 156-162 MHz. The ZM21-VHF ground independent antenna is a single piece construction and matches the height and appearance of other models in the ZM21 marine range.

All components used in construction are of the highest quality to ensure long term survival in the harsh marine environment. The antenna will deliver reliable performance for many years.

Rated for up to 50 watts input power, 4.5 metres of white RG58 low loss stranded cable side exits from the chromed brass ferrule. Cut the cable to the shortest length necessary prior to fitting the UHF male solder connector provided.

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

TUNING

The antenna has been tuned in the factory to cover the full VHF Marine Band 156-162 MHz, including the marine emergency channel operating at 157 MHz. VSWR 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.

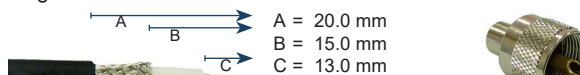
Route the RG58 low loss stranded cable carefully to your radio. Ensure that the cable is not stretched excessively and there are no sharp kinks.

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.

FITTING THE CONNECTOR

We recommend that you cut the cable to the shortest length necessary, prior to fitting the UHF male connector provided. Carefully strip the end of the coaxial cable as shown in the diagram.



1. Fold back the uncovered braid over the outer jacket.
2. Screw the UHF male connector over the braid until tight. Trim any exposed braid.
3. Solder the centre core of the cable to the connector pin. Remove any excess solder.

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.

Attach the connector to your radio. The maximum input power rating is 50 watts.

Installation is now complete.

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.