



# CM162-AIS-SS

Model

Marine Deck Mount Antenna  
1.4 metres tall

AIS Automatic Identification  
System Class A and Class B  
161.9 to 162.1 MHz  
2.1 dBi Gain

**Includes the MM2 stainless steel  
folding deck mount swivel base**

- Mounts to any flat surface at any angle using 4 stainless steel screws or bolts.
- 300 mm white RG58 low loss cable with N-Type Female connector fitted
- 50 watts maximum input power.

## INSTALLATION GUIDE

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

### ANTENNA DESCRIPTION

**CM162-AIS-SS** is a marine deck mount antenna factory tuned for the AIS Automatic Identification System.

The antenna has a chromed brass ferrule and the **MM2** folding deck mount base constructed entirely from stainless steel for the ultimate in quality, durability and strength.

The single piece white fibreglass radome stands 1.4 metres tall and the antenna delivers 2.1 dBi gain.

300 mm of white RG58 low loss cable side exits from the folding deck mount base and an N-Type Female connector is fitted to the cable for easy installation.

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

### AIS AUTOMATIC IDENTIFICATION SYSTEM

The marine AIS Automatic Identification System is a Very High Frequency (VHF) radio broadcasting system that transfers packets of data over the VHF data link (VDL) and enables AIS equipped vessels and shore-based stations to send and receive identification information that can be displayed on an electronic chart, computer display or compatible radar.

This information can help in situational awareness and provide a means to assist in collision avoidance. AIS can be used as an aid to navigation by providing location and additional information on buoys and lights.

The AIS Class A system is mandatory for vessels over 300 gross tonnage, whereas Class B has been developed for vessels such as work craft and pleasure craft with limited functionality.

### TUNING

This deck mount antenna has been tuned in the factory to operate with both AIS Class A and Class B systems across the VHF frequency range 161.9 to 162.1 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:

- Mount the antenna in as high a place as possible.**
- 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.**
- For optimum performance the antenna must be in a vertical position, not at an angle.**

### FOLDING DECK MOUNT SWIVEL BASE

The **MM2** stainless steel folding deck mount base supplied folds down 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.

If mounting to a solid wooden surface, you will require 4 stainless steel 6 mm countersunk heavy gauge wood screws which are at least 40 mm long. Use a good sealant, such as silicon, to reduce the likelihood of rot or osmosis setting in.

Otherwise use 4 stainless steel 6 mm bolts with stainless steel spring washers and nuts, or flat washers if using nyloc nuts.

The antenna can be folded down flat when not required.

### PATCH LEAD and ROUTING THE CABLE

An N-Female connector is fitted to the 300 mm RG58 white low loss cable. When assembling a patch lead for connection to your AIS device, ensure connectors each end are fitted correctly using proper tools.

**IMPORTANT : Leave some slack in the cable at the point where the cable exits the deck mount base. This will allow the antenna to be folded down flat without placing tension on the cable.**

Route the cable carefully to your AIS device. 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.

### SEALING CONNECTIONS

**IMPORTANT : 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 AIS device. 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.