ZCG

Model

ZM53

Omnidirectional 5-piece, telescopic VHF collinear Antenna

3.55 metres tall

53 MHz

2.1 dBi Gain

- 5 piece anodised aluminium telescopic tube.
- N-type female connector at base of the mount tube.
- 50 watts maximum input power.
- Order 2 x EB1-SS parallel clamps for mounting

INSTALLATION GUIDE

www.zcg.com.au

ANTENNA DESCRIPTION

Factory tuned for 53 MHz, the **ZM53** 5-piece, telescopic collinear antenna offers an economical and light-weight solution for omnidirectional transmit and receive within the VHF frequency range.

This end fed half wave base station antenna consists of a 5-piece aluminium telescopic tube which stands 3.55 metres tall when fully assembled and delivers 2.1 dBi gain.

An N-type female connector rated for up to 50 watts input power is located at the base of the mount tube.

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

TUNING

The antenna has been tuned in the factory for 53 MHz.

VSWR has been optimised to less than 1.5:1.

This tuning cannot be altered.

ANTENNA ASSEMBLY

With the drilled hole at the top, insert each of the 5 aluminium tube sections into each other in the correct order.

Joining screws are provided.

Line up the holes in each section and drive the screws fully home through inner and outer tube sections.

SELECTING THE MOUNTING POSITION

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 radiation pattern.***
3. ***For optimum performance the antenna must be mounted in a vertical position, not at an angle.***

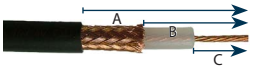
For mounting to a mast, **2 x EB1SS** stainless steel parallel clamps are recommended and will suit a round mast between 20 mm and 50 mm in diameter.

Take care not to over-tighten the clamps beyond reason.

PREPARE THE FEEDER CABLE

RG213 is recommended for use as a feeder cable. To reduce signal loss, the cable should be kept to the shortest length necessary.

The "**7937**" N-Male crimp connector is available to fit RG213 cable. The proper trim dimensions are :



A = 15.4 mm
B = 7.9 mm
C = 4.0 mm

Attach the N-Male connector to the antenna's N-Female connector located at the base of the mount tube.

Route the feeder cable to your radio. Ensure that the cable is not stretched excessively and there are no sharp kinks.

IMPORTANT : Secure the cable properly so as it does not flap in the wind and no stress is placed upon any connections.

Use cable ties, but do not pull them so tight as to crush the cable. A damaged feeder cable is a cause of high VSWR and reduced performance.

Cut the cable to the shortest length necessary, prior to fitting the appropriate connector for your radio using proper tools.

SEALING CONNECTIONS

IMPORTANT : 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.

RETURN LOSS TEST

Following installation of the feeder cable, connect an SWR meter between the antenna cable and your radio.

Tune your radio to 53 MHz and set the SWR meter to the correct frequency and power ranges.

Press and hold the transmit button on the microphone of your radio and check the SWR reading on the meter. The return loss should be better than 1.5:1, as per the factory specification.

Disconnect the SWR meter and attach the feeder cable to your radio.

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.

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