

MAJESTIC[®]

Marine Satellite Antenna for TV

SATMAR37



Installation & User Manual

This manual contains important product information on the use and maintenance of your SATMAR37 marine satellite system. Please refer this manual for installation, operation, maintenance and contact information. Prior to contacting the manufacturer or dealer, have this manual and serial number available for reference.

ELECTRICAL HAZARD WARNING

THE COAXIAL CABLE THAT CONNECTS THE OUTDOOR ANTENNA CARRIES ELECTRICAL CURRENT. EXERCISE EXTREME CAUTION WHEN HANDLING THIS CABLE. DO NOT CUT, BREAK OR SPLICE THIS LINE. DO NOT INSEERT OR CONNECT ANY DEVICES SUCH AS SPLITTERS OR ANY OTHER DEVICE FOR ANY REASON. THIS LINE IS NOT COMPATIBLE WITH ANY OTHER EQUIPMENT. DAMAGE WILL OCCUR TO ANY DEVICE OTHER THAN THE SATMAR-45 OUTDOOR ANTENNA IF CONNECTED TO THE ANTENNA PORT.

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1 Introduction

The SATMAR37 satellite system is the innovative and a technologically advanced satellite antenna system for marine applications. The SATMAR37 has a unique combination of state-of-the-art components with the most sophisticated satellite acquisition and tracking programs to provide the following features:

- Fast satellite acquisition
- Compatible with any Satellite Receiver
- Compatible with all Direct Broadcast Satellites (DBS)
- Built-in Digital Broadcast Receiver (DVB)
- Capable of High Definition receiving

1.1 SATMAR37 System Overview

A complete satellite TV system, illustrated in Figure 1-1, includes the SATMAR37 antenna connected to a control box (IDU), a satellite TV receiver, and a television set.

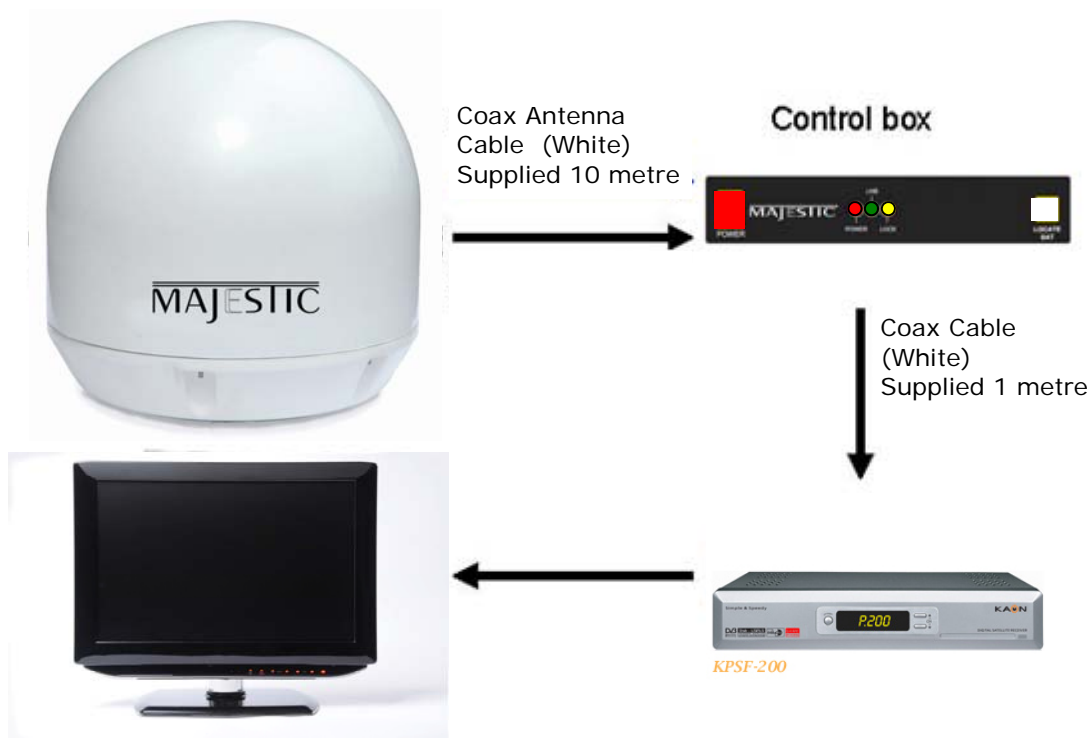


Figure 1-1

1.2 System Compatibility

The SATMAR37 satellite antenna is fully compatible with Digital Video Broadcasting (DVB) satellites, as well as OPTUS D1 satellite. At present, there is one Direct Broadcast Satellite position over New Zealand.

1.3 Direct Broadcast Satellite Overview

Direct Broadcast Service (DBS) satellites broadcast audio, video and data information from satellites located 22,000 miles in space. A receiving station, such as the SATMAR37, should include a dish and satellite receiver to receive the signals and process them for use by the consumer audio and video equipment. The system requires a clear view of the satellite in the sky to maximize the signal reception.

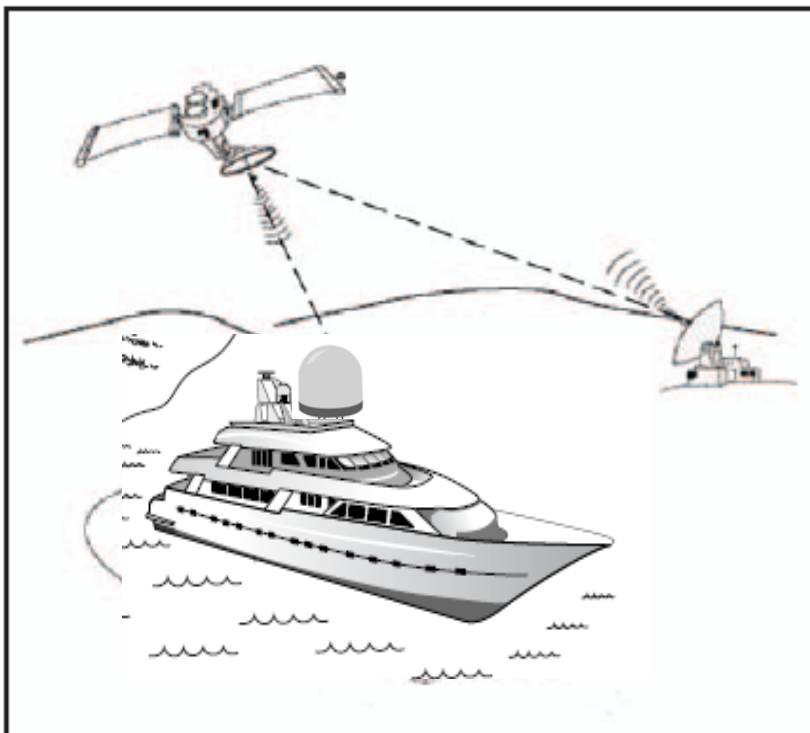


Figure 1-2

1.4 Line of Sight (LOS) Interruption

The SATMAR37 needs a clear line of sight (LOS), view to the satellite for uninterrupted reception. Objects such as tall buildings, bridges, tunnels and trees that block this view will cause a loss of signal. The signal will be quickly restored once the antenna has a clear line of sight again.

Heavy rain, cloud, snow or ice may also interfere with the signal reception quality. If the satellite signal is lost due to blockage or severe weather condition, services from the receiver will be lost (picture will freeze frame and may disappear). When the satellite signal strength is again high enough, then the receiver will resume providing desired programming services.

1.5 System Components

The standard SATMAR37 antenna system consists of the Outdoor Unit (ODU, dome antenna), the Indoor Unit (IDU), which includes the Power Supply.

SATMAR45 Outdoor Unit (ODU):

The Outdoor Unit houses the electronics, dish, LNB within a radome.



Figure 1-3

SATMAR37 Indoor Unit (IDU):

The IDU supplies power and commands to the SATMAR37. This device allows for selection of the satellite from which you wish to receive a signal.



Figure 1-4

SATMAR37 Indoor Unit (IDU):

The IDU supplies power and commands to the SATMAR37. This device allows for selection of the satellite from which you wish to receive a signal.

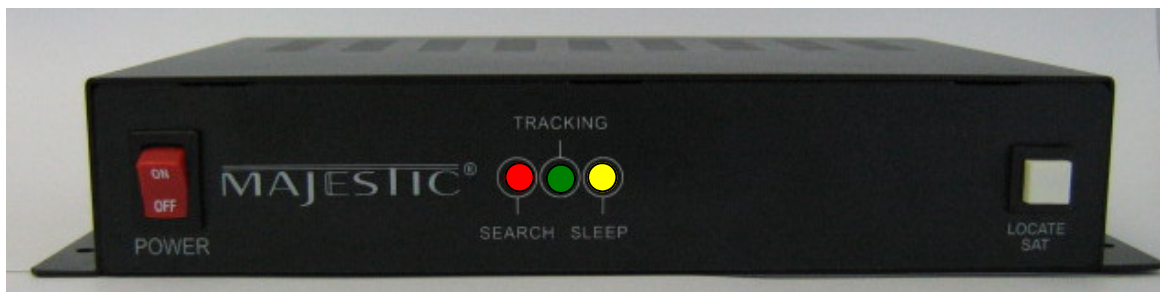


Figure 1-5

2 Installation

This section offers a general explanation of how properly to install the SATMAR37 antenna. Installation of the SATMAR37 must be accomplished by or under the supervision of an authorized dealer for the Limited Warranty to be valid and in force. The steps in the installation and setup process are as follows:

1. Preparing for the installation
2. Select location
 - Mount the antenna (ODU) on top of the vessel
3. Equipment and cable installation
 - Install the Indoor Unit (IDU), Power Supply near the Satellite Receiver (Decoder) and TV
 - Connect the cables

2.1 Unpacking the SATMAR37

The following items are included in the packaging of the SATMAR37:

Item	Description	Quantity
1	Outdoor Antenna Assembly (ODU)	1 each
2	Indoor Unit (IDU)- Control box	1 each
3	Power Cable	1 each
4	Coax Cable (10m)	1 each
5	Coax Cable (1m)	1 each
6	Installation & User Manual	1 set

Be sure to verify the complete shipment of your system before beginning the installation.

2.1.1 Preparing the SATMAR37 Antenna for Installation

1. Upon opening the shipping container remove the items listed in the table on the previous page.

2.1.2 Installation Tools and Materials

The SATMAR37 system is designed for simple installation and setup. However, the following list of equipment or items should be available during installation of the SATMAR37:

- Electric drill and drill bits (Define the size?) eg. 5mm & 2mm
- Philips and flat tip screwdrivers (Define the size?) eg. #2 & #0
- Socket wrench
- Silicon sealant
- Fastener suitable for specific application

2.2 Antenna Installation

2.2.1 Select Location

Perform a through site inspection for the antenna to be mounted. There are several factors to consider when choosing the location for the SATMAR37 antenna.

1. The antenna must have a clear view of the sky and horizon at all the direction
to avoid blockage of the satellite signal.
2. Keep the antenna clear of any obstructions above decks. The antenna requires a 10 to 80 degree look angle to receive satellite signals.
3. To minimize tracking errors, place the antenna unit as close as possible to the intersection of the vessel's fore-and aft centerline and midships
4. Using two people, place the antenna onto the vessel platform. Do not try to install the antenna by yourself.
 - The mounting surface should be flat and strong enough to support the complete assembly.
 - Make sure that the mounting surface is rigid.

2.2.2 Equipment and cable installation

This offers a general explanation of how to install the Indoor Unit and satellite receiver properly to the inside of vessel connecting with coax cable.

1. The RF cable is routed from the antenna to the IDU inside the vessel.
2. Once decide where to place the IDU and satellite receiver, and make sure that both units are placed in a dry and protected area.
3. The IDU and satellite receiver should be placed away from any heat source and in an area with proper ventilation.
4. Ensure that there are at least 3cm of space around both units for ventilation and connection of cables. **Do not stack the units on top of each other.**
5. The following describes the basic wiring configurations for the SATMAR37 antenna system.
 - Connect the RF cable to the SATMAR37 port (antenna) on the back of the IDU
 - Connect one end of the supplied coax cable to the receiver port on the back of the IDU
 - Connect the other end of the coax cable to the satellite receiver in the LNB INPUT



Figure 2-1

2.2.3 Initial power-up and system checkout

Once all of the system cables have been connected, and when the Power Supply is connected to the IDU then the antenna will have power applied and it should be ready to checkout the system.

The light indicators on the IDU have three different modes of operation.

- Once the power switch is turned on the SATMAR37 will go into a search mode and look for the Optus D1 satellite. The **Red** light will come up and indicate "searching"
- Once the SATMAR37 has located the Optus D1 satellite, it will proceed to track this satellite. The **Green** "tracking" light will come on.
- Should the vessel be stationary for more than 5 minutes the SATMAR37 will place itself into a sleep mode whilst tracking and the **Yellow** "sleep" light will come on with the **Green** 'tracking' light
- If the vessel is permanently stationary, you can choose to put the SATMAR37 into permanent sleep mode so that the unit will not wake up. To do this you PUSH the "Locate Sat" White button on the IDU and the "tracking" **Green** light will go out and the "sleep" **Yellow** light will stay on.
- To get the SATMAR37 operating normally again, the power switch must be turned off and on again to reset the system

Power can be turned off by pressing the POWER button as shown in Figure 2-2

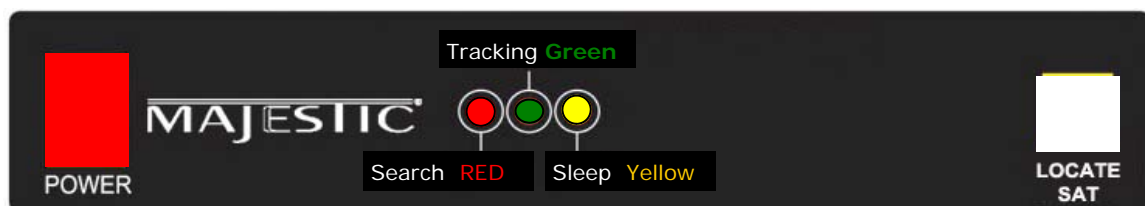


Figure 2-2

3 Operation

3.1 Operating the SATMAR37

The SATMAR37 system is easy to use. Under normal conditions, operation of the SATMAR37 requires no intervention from the user. Antenna unit initialization and satellite acquisition is completely automatic.

3.2 The Satellite Acquisition with the SATMAR37 system

3.2.1 Power on

- Turn on the power to the TV and satellite receiver
- Turn on the receiver using the POWER switch
 - ☺ Under normal conditions, the SATMAR37 will acquire the correct satellite and produce television programming in less than 1 minute.

To minimize the time it takes the antenna system acquiring the satellite, do not change the channel during the startup process.

3.2.2 Changing Channels

If you have followed the installation instructions, your system should be set to the satellite of your choice and the system should have downloaded the appropriate channel guides. When the SATMAR37 system and satellite receiver is properly configured, it is easy to change the channel using the remote control that normally comes with the receiver unit.

4 Troubleshooting

4.1 Causes and Remedies for Operational Issues

There are a number of common issues that can affect the signal quality and/or the operation of the SATMAR37 antenna system. The following sections address these issues and potential solutions.

4.1.1 System Not Power-On

- Verify that the Indoor Unit (IDU) and receiver are powered on
- Check the blown fuses
- Verify vessel battery has been connected properly

4.1.2 Improper Wiring

- Check the system is properly wired
- Verify that the IDU, ODU, and receiver units are properly connected
- Check the antenna unit cable connections with proper RF connectors

4.1.3 Incorrect Satellite or LNB Configuration

- Check the satellite trying to acquire
 - Select receiver menu, set the correct LNB frequency setting
 - Check the LNB skew angle

4.1.4 Search Failure

- Move the vessel to clear location from obstruction
- Check the satellite coverage area

NOTE: The SATMAR37 has a 37cm Reflector. This is below the minimum size required in NZ (45cm) The SATMAR37 may be affected by Heavy Weather, this may result in signal loss

4.1.5 Snow, Rain or Dew pooling on Dome

- Check the satellite trying to acquire
- Select receiver menu, set the correct LNB frequency setting
- Check the LNB skew angle

4.1.6 Satellite Receiver

- Check the satellite trying to acquire
- Select receiver menu, set the correct LNB frequency setting
- Check the LNB skew angle

5 Maintenance

The SATMAR37 Satellite System has been designed to be maintenance and trouble free. For optimum signal strength, keep the dome clean from dirt, bugs, and other debris. Periodic washing and cleaning of the dome with mild soap and water is recommended.

If you have any comments or questions, please contact the Majestic Service Department.

Appendix A - System Specification

Frequency Band	Ku Band
Operating Frequency	12.25GHz ~ 12.75GHz
LNB Local Frequency	11.3GHz
Dish Diameter	37cm
Radome Height	47cm
Antenna Weight	9kg
Antenna Gain	32dBi
Polarization Type	V/H
Stabilization Type	2-Axis DC Motor
Elevation Range	15° ~ 62°(selectable)
Tracking Rate	<50°/sec
Azimuth Range	370°
Temp Range	-22°C ~ 55°C
Humidity	95%@40°C
Power	12VDC@3A(Max)
Target Satellite	Optus D1

Appendix B - Glossary

Azimuth: The horizontal angle of observer's bearing measured clockwise from a reference direction. It is circular rotation around the vehicle hereby.

Elevation: Angle in degrees measured from the ground level.

Signal Strength: Intensity of electronic signal received from the satellite transmission.

Limited Product Warranty

Majestic warrants the SATMAR37 product purchased against defects in materials for a period of ONE (1) years and against labour costs for a period of ONE (1) year from the date of original retail purchase by the original purchase. It is the customer's responsibility to verify the date of purchase returning the warranty card included with the product to Majestic within 30 days of purchase, or by providing a dated sales receipt for the Majestic product under warranty with the warranty claim. If this date cannot be verified, the warranty period will begin 30days after the date of manufacture of the original product purchased.

If you discover a defect, Majestic will, at its option, replace or repair the product at no charge to you, provided you return it during the warranty period. This is a return to base warranty. Please attach your name, address, telephone number, a description of the problem and a copy of sales receipt as proof of date of original retail purchase, to each product returned to warranty service. Alternatively, you may bring the product to an Authorized Majestic dealer/distributor for repair. If the product was installed by an Authorized Majestic dealer/distributor, Majestic will cover the dealer's/distributor's labour charges for warranty repairs, provided that the dealer/distributor contacts Majestic for pre-approval of the charges.

This Limited Warranty does not apply if the product has been damaged by accident, abuse, misuse or misapplication or has been modified without the written permission of Majestic; if the unit has not been installed by an authorized installer; if any Majestic serial number has been removed or defaced; or if any factory-sealed part of the system has been opened without authorization.

THE EXPRESS WARRANTIES SET FORTH ABOVE ARE THE ONLY WARRANTIES GIVEN BY MAJESTIC WITH RESPECT TO ANY PRODUCT FURNISHED HEREUNDER; MAJESTIC MAKES NO OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY CUSTOM OR TRADE USAGE, AND SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, SAID EXPRESS WARRANTIES SHALL NOT BE ENLARGED OR OTHERWISE AFFECTED BY TECHNICAL OR OTHER ADVICE OR SERVICE PROVIDED BY MAJESTIC

Notes
