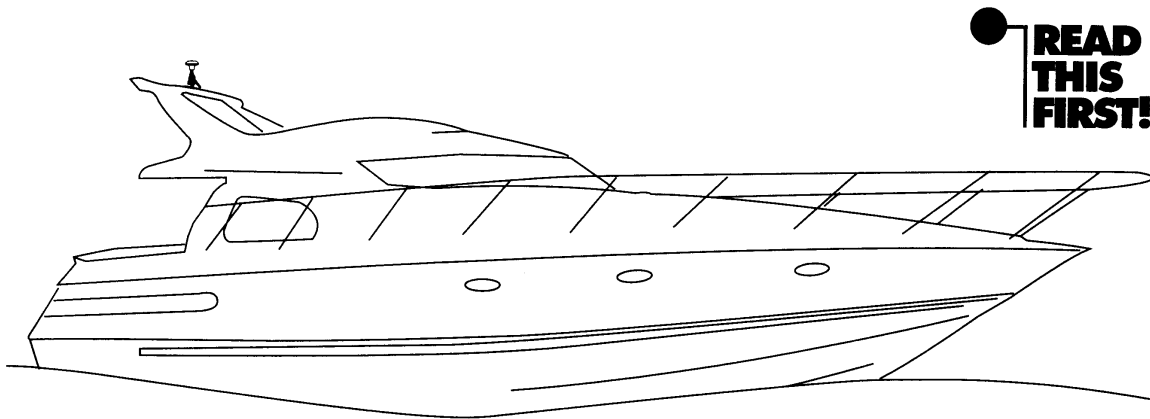


# **TERK**<sup>®</sup>

**OWNER'S MANUAL**



**READ  
THIS  
FIRST!**

## **XMarine**

DUAL MOUNT MARINE XM SATELLITE RADIO ANTENNA

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## About Installation

Installation of marine audio components can require extensive experience with a variety of mechanical and electrical procedures. Although the instructions in this guide explain how to install the TERK XMarine Satellite Radio Antenna in a general sense, they do not show the exact installation methods for your particular boat.

**IMPORTANT: If you are not comfortable performing a complex installation, ask your local marine audio dealer about professional installation options.**

## **Introduction**

The TERK XMarine Satellite Radio Antenna is a high-performance antenna designed specifically for XM Satellite Radio reception on recreational marine craft such as fishing boats, sport boats, yachts, and sailboats. Its features include:

- Rugged antenna to withstand high-vibration salt-water environment
- Dual mounting options:
  - Through hole mounting for deck mount or mounting on any flat surface. Perfect for use on small vessels.
  - Bracket or mast mounting when used with the supplied threaded flange adaptor with the standard 1"-14 marine thread. Perfect for larger vessels and sail boats. (Mounting bracket and mast not included)
- Antenna supplied with 6 inch cable and gold plated TNC connector for ease of mounting. Also includes 25 feet of RG174 coax cable terminated with gold plated TNC and SMB connectors
- Meets or exceeds all XM Satellite Radio mobile-antenna specifications
- Shock- and vibration-proof design

The TERK XMarine Satellite Radio Antenna is easy to install on most recreational marine craft. Remember to save your sales receipt and this guide so both are available for future reference.

*NOTE: To achieve best XM Satellite Radio reception, also refer to your XM radio's owner's manual.*

## Applications

The TERK XMarine Satellite Radio Antenna can be installed on a variety of recreational marine craft, as shown below. For details, see Installation starting on page 6.

### Fishing Boats

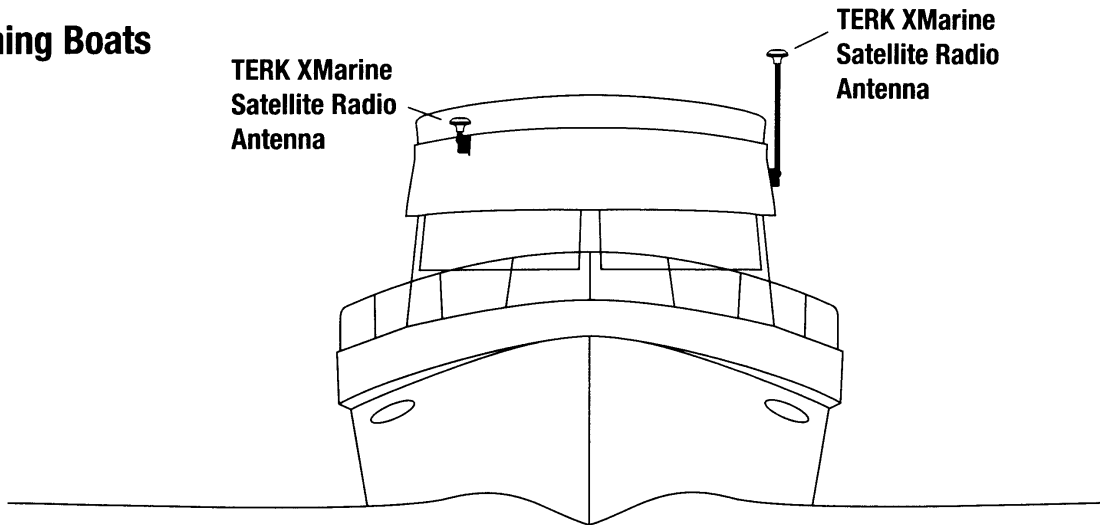


Figure 1. The TERK XMarine is shown installed on the fishing boat's fly bridge, both with a bracket and a mast mount

### Sport Boats

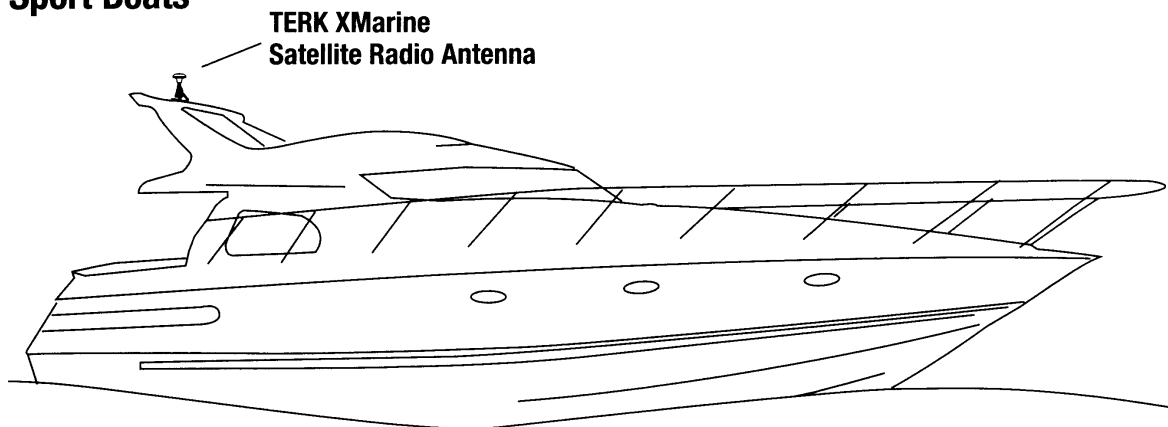


Figure 2. The TERK XMarine is shown mounted on the electronics arch of a sports boat.

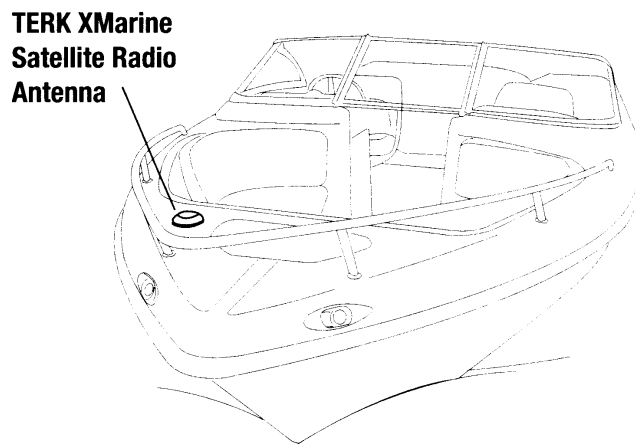
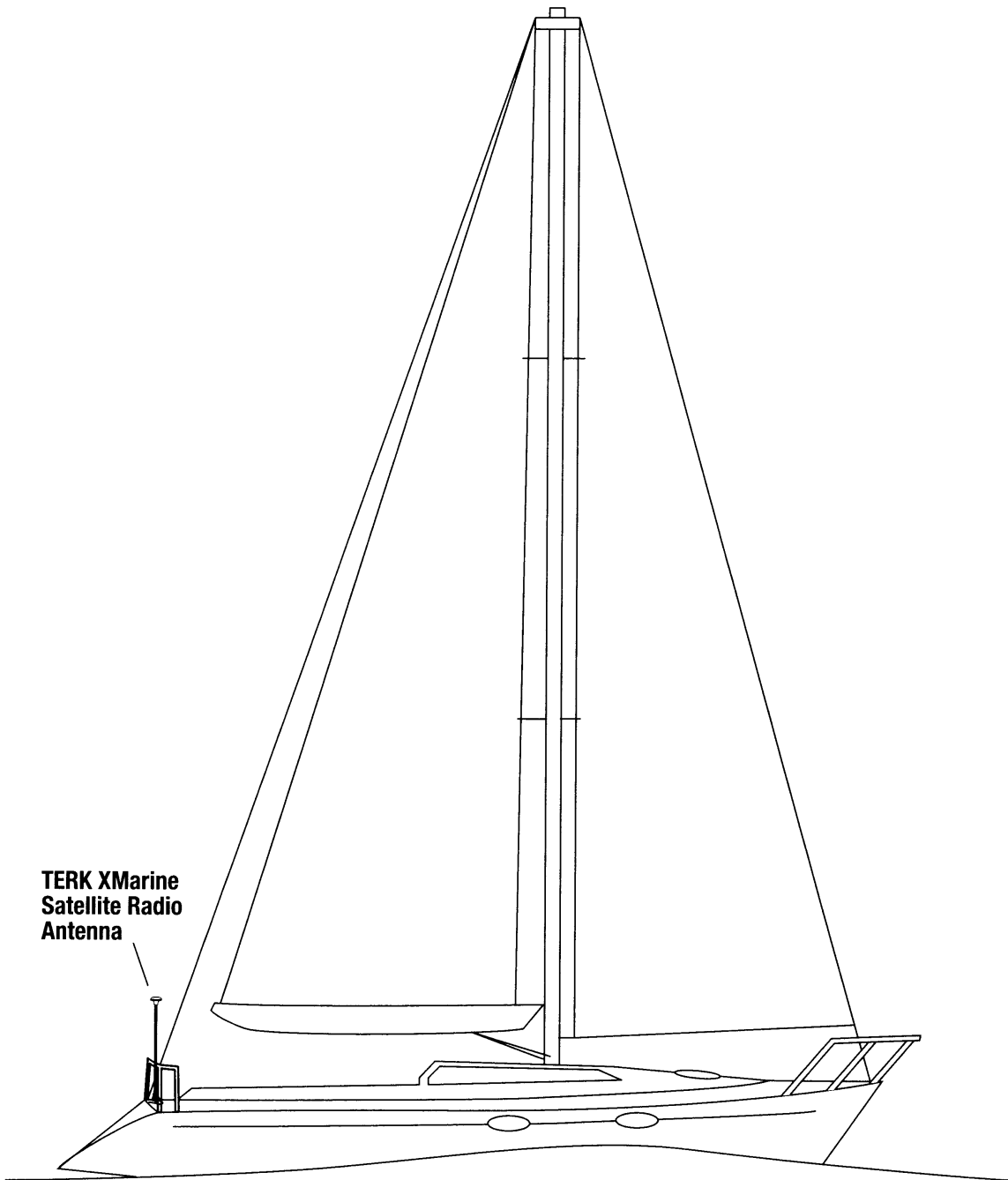


Figure 3. The TERK XMarine is shown mounted on a deck or flat surface of a small boat.

Sailboats



*Figure 4. The TERK XMarine is shown installed on an antenna extension on the stern of a sailboat.*

*NOTE: When mounted in this configuration, the mast and sails may interfere with reception when the craft is at certain angles to the satellite.*

## Installation

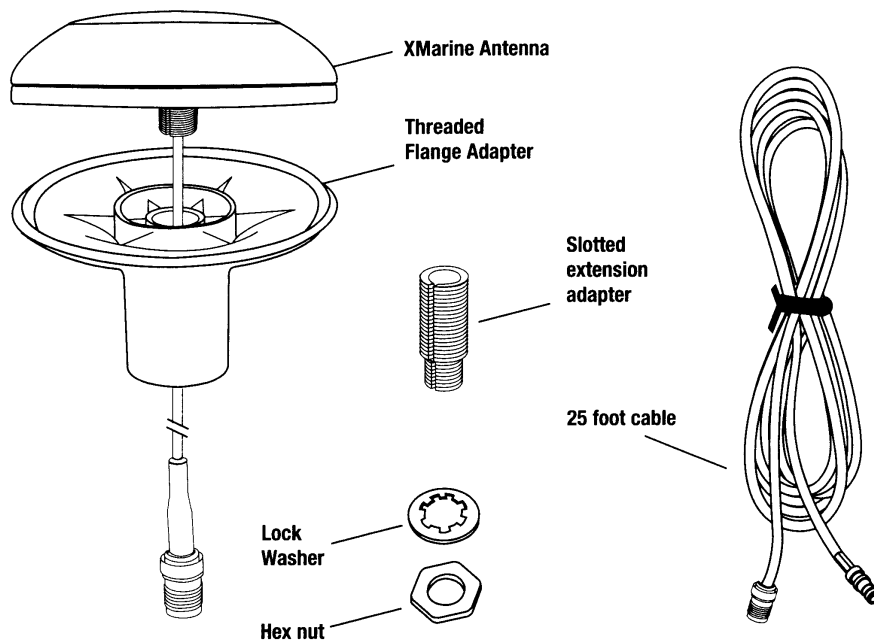


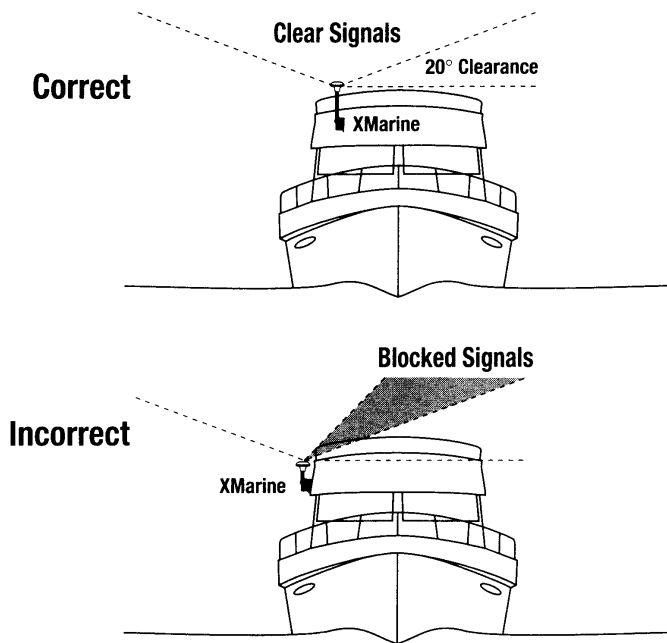
Figure 5. Verify that your TERK XMarine package includes the above items.

### Recommended Tools and Supplies

- Any electric drill and a 9/16 inch drill bit
- A 24mm open end or adjustable wrench to tighten hex nut when deck mounting
- Any tool to help cable routing (e.g., flat dental pick, screwdriver, etc.)
- Grommet and silicone sealer (for cable routes)
- (Optional) Antenna Extension with 1"-14 threads
- (Optional) Any mounting bracket with 1"-14 threads

### Installation Precautions and Tips

- When selecting an antenna location, make sure the antenna is not enclosed by any metal material. If a metal fly bridge is to be used, the antenna must protrude at least 5 inches above the bridge's top edge. Consider using an antenna extension to increase the height above the boat.
- Also, at the proposed site, verify that there is at least a 20-degree clearance from any metallic obstruction on all sides, as shown in figure 6 (on the next page).
- Prior to installation, turn off all audio systems and other electrical devices. Disconnect the (-) negative lead from the boat's battery.
- At the installation site, locate and make a note of all fuel lines, cables, and electrical wiring. Use extreme caution when cutting or drilling in and around these areas. Always wear protective eye wear when using tools.
- When drilling fiberglass surfaces, use a small backup block of wood to help control splintering.



*Figure 6. Correct and incorrect TERK XMarine locations on a fishing boat.*

- As you plan the cable route, avoid running the cable through any component that may cause excessive chafing. Doing so may erode the jacket and break signal continuity. Also, avoid kinking, pinching, excessive bending, or twisting of the cable during a run.
- Do not trim the cable length. It is optimized for best signal reception. Coil and store any excess cable behind the XM receiver.
- Do not remove the connectors from the cables.

## **Installing the TERK XMarine Satellite Radio Antenna**

### **Deck or Flat Surface Mounting**

1. At the chosen site, drill a 9/16 inch mounting hole. For mounting surfaces thicker than 1/4 inch you will need to attach the supplied slotted extension adapter to the XMarine antenna. Simply route the 6 inch long antenna cable through the slot and thread the extension adapter onto the existing antenna shaft and tighten.
2. Pass the TNC connector and the 6 inch antenna cable through the hole in the mounting surface.
3. Install the lock washer and hex nut onto the antenna shaft and tighten securely assuring that the antenna is seated properly.
4. Attach the 25 foot coax cable to the 6 inch antenna cable by connecting the TNC connectors securely. See figures 7 and 8 on the next page.

Continue to the “Connecting To Your XM Radio” section on the next page.

*Continued on next page...*

## Installation (continued)

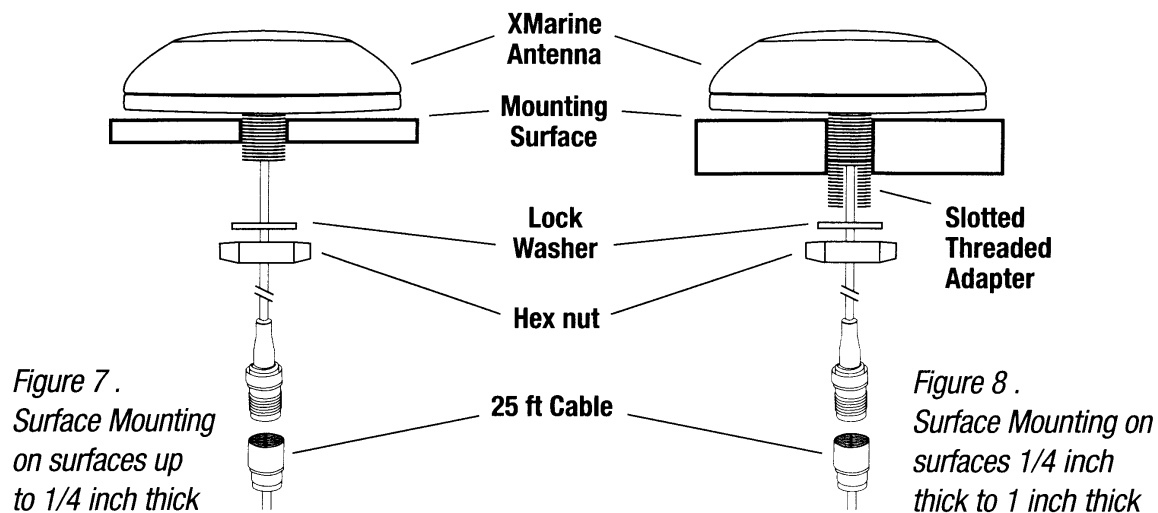


Figure 7 .  
Surface Mounting  
on surfaces up  
to 1/4 inch thick

Figure 8 .  
Surface Mounting on  
surfaces 1/4 inch  
thick to 1 inch thick

### Mast or Bracket Mounting

The Terk XMarine Satellite Radio Antenna is easy to install on any standard mast or brackets that have a 1"-14 thread.

1. Attach the Threaded Flange Adapter to the XMarine by first passing the TNC connector on the 6 inch antenna cable lead through the adapter as shown in Figure 9 on the next page. Next thread the adapter on to the threaded extension of the XMarine and tighten securely. (Note: do not use the supplied Slotted Threaded Adaptor in this application.)
2. Connect the TNC connector on the 6 inch antenna cable lead to the mating TNC connector on the 25 foot cable and tighten securely. The 25 foot cable can be routed through the provided access holes and grommet that are located on the mast or bracket. Since the SMB connector has a much smaller diameter it is recommended that you route this connector through any access hole necessary. Many masts have grommets that can be removed which makes it easier to route the cable through the access hole. The grommet can be placed over the SMB connector and put back in place for a neat install.
3. Secure the XMarine antenna and adapter to the mast or bracket by tightening onto the 1"-14 thread securely. All mast and brackets should be installed on the boat per manufacturers specifications. If needed, adjust the tilt so that the antenna is perpendicular to the horizon.

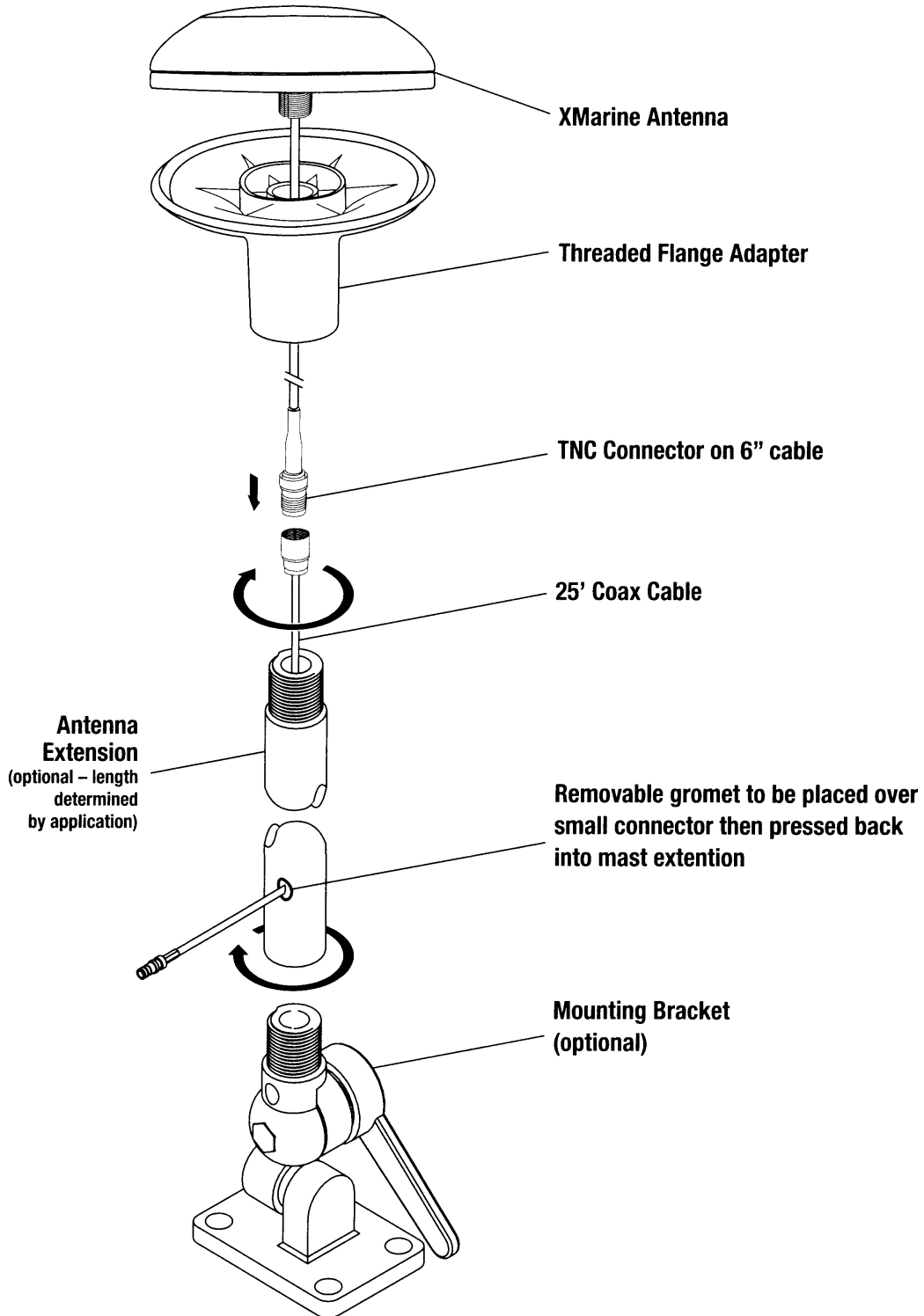
### Connecting to your XM Radio

1. Connect the SMB connector to the XM Satellite Receiver. Turn on the XM system and tune the radio to channel 1 (i.e., the preview channel) to verify that the antenna is properly installed. If there are any problems, review the installation steps and verify that each one was performed correctly. Also see *Troubleshooting* on the next page.
2. After the system has been tested successfully, continue dressing the cable from the antenna to the receiver for best appearance and complete any remaining installation. Use cable tie wraps where needed to secure cables from flagging in the wind and catching on objects. Seal any holes in the bulkheads with a marine grade RTV or silicon adhesive.

*Note: For additional help with cable routing, consult your local marine audio dealer.*



*Figure 9. XMarine Antenna with Threaded Flange Adapter for Mast mounting.*



## Use and Care

In normal daily use, the TERK XMarine Satellite Radio Antenna is a rugged, high-performance antenna that does not require any special attention.

## Troubleshooting

### Symptom

### Solutions

XM radio displays “Antenna” or “Check Antenna” message

- Check antenna connections to the XM receiver.

XM radio displays “No Signal” message

- Boat may be in an area where the XM signal is obstructed. Move the boat to more open surroundings.

Other symptoms

- Call TERK for help at 1-800-942-TERK (8375) on any business day, between 9 A.M. and 5:30 P.M., EST and ask for Technical Support.

## Specifications

### Electrical

#### Passive Satellite Antenna Element –

Frequency	2332.5 to 2345.0 MHz
Gain	2 to 7 dBi from 30 to 90 deg.
Bandwidth	12.5 MHz
Impedance	50 ohms
Polarization	LHCP (Circular)

#### LNA for Satellite Signals –

Gain	35.5 dB, typical
Noise Figure	0.8 dB, maximum
Cable Loss	-12.0 dB
Current Draw	160 mA, maximum
Output VSWR	1.5:1
Input P1dB	-14

### Mechanical

Total Height	Deck Mount -1.08 inches Mast Mount - 3.13 inches
Max Diameter	3.75 inches (outside)
Coax Cable	25 ft RG-174

#### Quality and Performance –

Temperature	-40° to + 185° F (operating)
XM Approved	Per XM Satellite Radio Specifications

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## **About XM Satellite Radio**

For more information about XM Satellite Radio service, visit their web site at: [www.xmradio.com](http://www.xmradio.com)

## 12 Month Limited Warranty

AUDIOVOX ELECTRONICS CORPORATION (the Company) warrants to the original retail purchaser of this product that should this product or any part thereof, under normal use and conditions, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be repaired or replaced with new or reconditioned product (at the Company's option) without charge for parts and repair labor. To obtain repair or replacement within the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), specification of defect(s), transportation prepaid, to an approved warranty station or the Company at the address shown below. This Warranty does not extend to the elimination of externally generated static or noise, to costs incurred for installation, removal or reinstallation of the product, damage to speakers, accessories, or vehicle and home electrical systems, malfunction of satellite transmissions, repeater signal or receiver unit. This Warranty does not apply to any product or part thereof which, in the opinion of the Company, has suffered or been damaged through alteration, improper installation, mishandling, misuse, neglect, accident, or by removal or defacement of the factory serial number/bar code label(s). THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT. This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HERE UNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY MUST BE BROUGHT WITHIN A PERIOD OF 48 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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