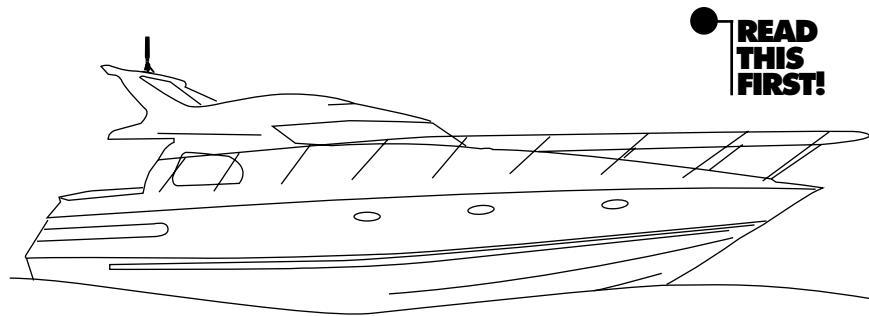


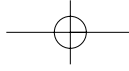
TERK[®]

OWNER'S MANUAL



XM5

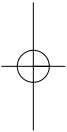
MARINE SATELLITE RADIO ANTENNA



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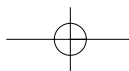
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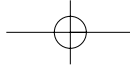


About Installation

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 XM5 Marine 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.





XM5 Owner's Manual

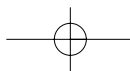
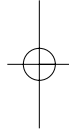
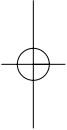
Introduction

The TERK XM5 Marine 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
- High-mount capability on the boat for maximum, line-of-sight, signal path from XM satellites
- Pre-assembled, flange-mount clamp with quick-release adjustable, ratchet lever uses industry-standard 1"-14 threads for easy antenna installation
- 30' of attached, low-loss, coaxial cable and FAKRA connector for extended cable routes and ease of installation
- Cable management system to protect cables
- Meets or exceeds all XM Satellite Radio mobile-antenna specifications
- Shock- and vibration-proof design

The TERK XM5 Marine Satellite Radio Antenna is easy to install on most recreational marine craft. The package includes all the necessary mounting hardware, as well as color-coded cable connectors to ensure complete compatibility with all XM receivers. 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.



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Applications

The TERK XM5 Marine 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

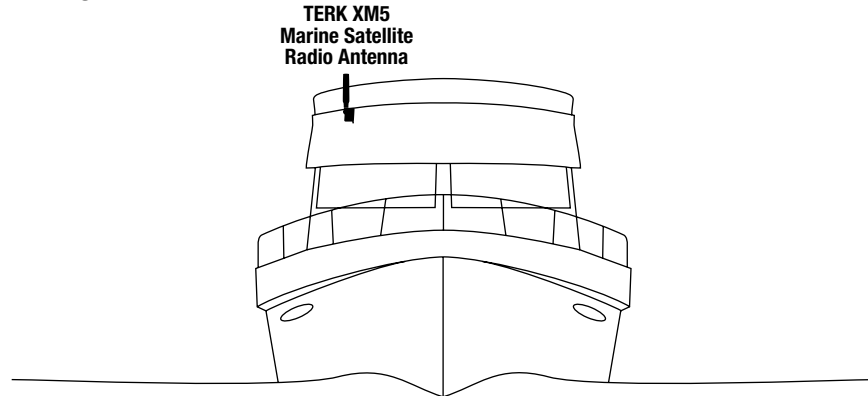


Figure 1. The TERK XM5 is shown installed on the fishing boat's fly bridge.

Sport Boats

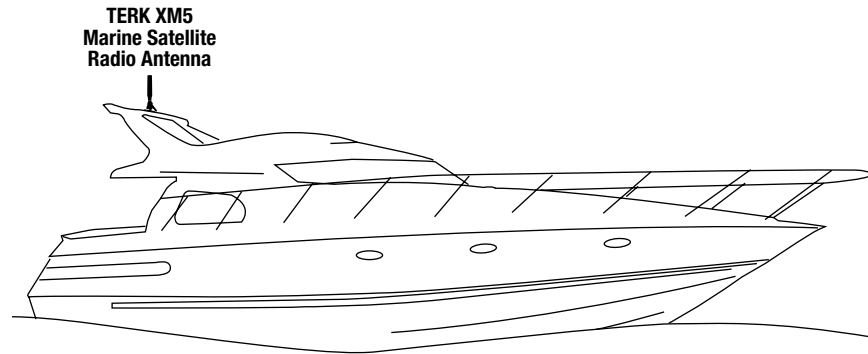
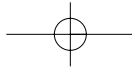


Figure 2. The TERK XM5 is shown mounted on the electronics arch of a sports boat.



Sailboats

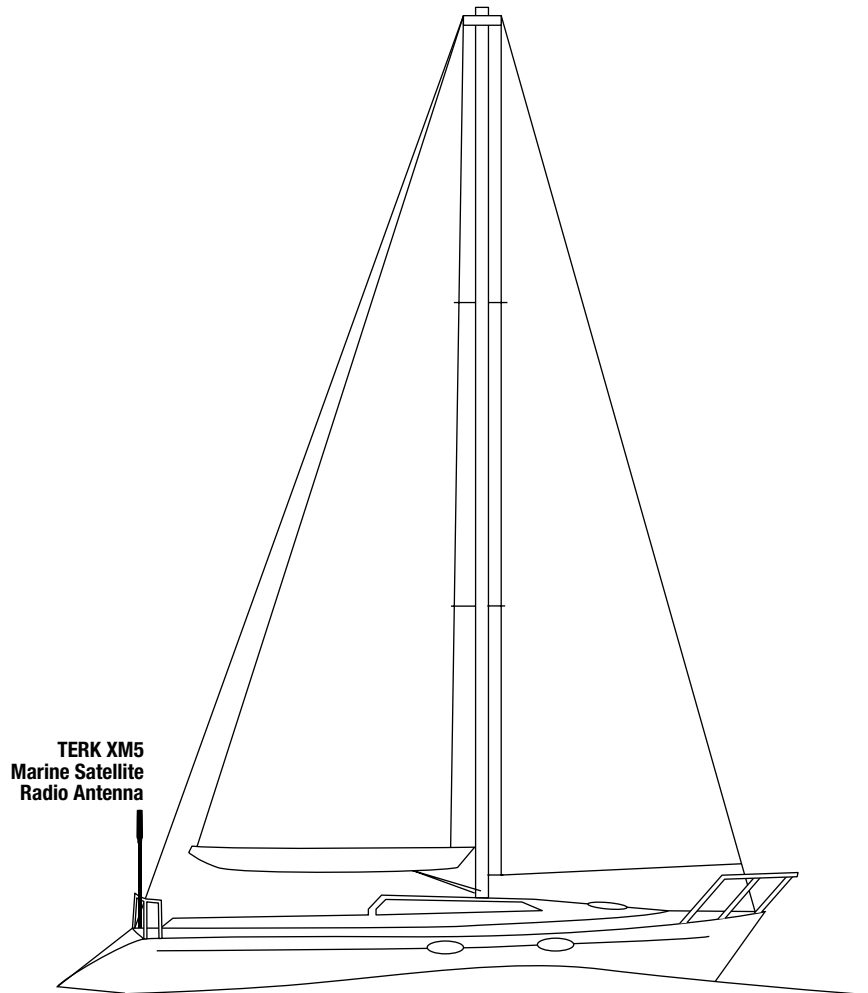
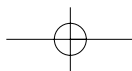


Figure 3. The TERK XM5 is shown installed on an antenna extension on the stern of a sailboat.

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

Parts for TERK XM5 Marine Satellite Radio Antenna

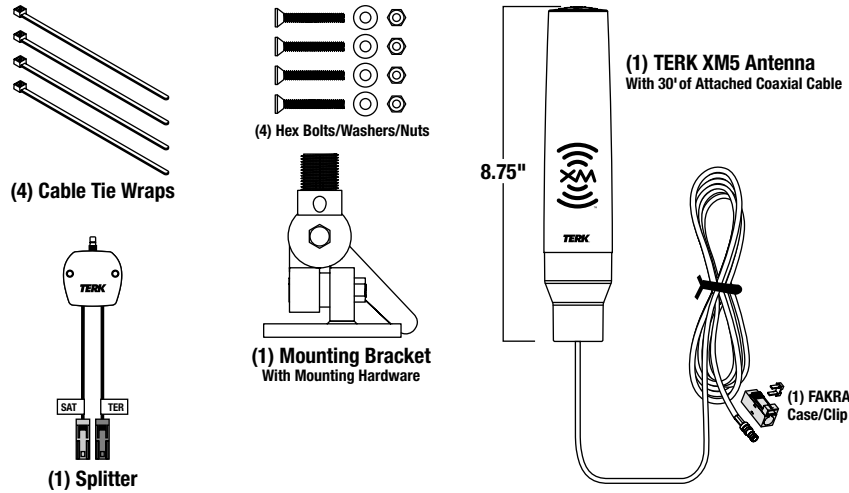


Figure 4. Verify that your TERK XM5 package includes the above items.

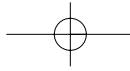
Recommended Tools and Supplies

- Any electric drill and bits (to drill mounting holes for the mounting bracket)
- Any socket tool/wrench set (to tighten machine bolts and hex nuts)
- Any tool to help cable routing (e.g., flat dental pick, screwdriver, etc.)
- Grommets and silicone sealer (for cable routes)
- (Optional) Antenna Extension with 1"-14 threads
- (Optional) Substitute any mounting bracket with 1"-14 threads for the supplied bracket

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 5 (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 eyewear when using tools.

6 Installation



XM5 Owner's Manual

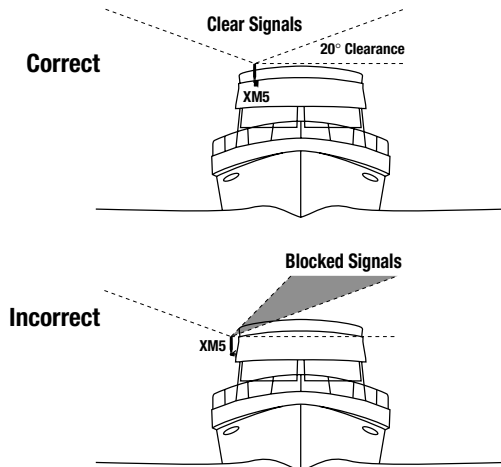


Figure 5. Correct and incorrect TERK XM5 locations on a fishing boat.

- 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.

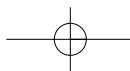
Installing the TERK XM5 Marine Satellite Radio Antenna

1. At the chosen site, install the mounting bracket, as shown in figure 6 (on the next page).
2. Route the antenna cable through the (optional) antenna extension and out through the access hole on the mounting bracket (see figure 6 on the next page). Firmly tighten the antenna to the extension and then the extension to the bracket. If an antenna extension is not used, firmly tighten the antenna directly to the bracket.
3. Route the antenna cable to the back of the XM receiver using any or all of the following ways:
 - Through existing access holes in the boat's hull
 - Along or behind interior walls below deck
 - Through a cabin window opening
4. On the antenna cable's end, insert the FAKRA SMB connector into the supplied plastic case, as shown in figure 7 on page 9. Then lock it with the supplied clip.
5. When using an XM receiver that has dual-antenna inputs, install the splitter (mounting hardware not supplied) near the back of the installed XM receiver.

NOTE: For convenience, fasten the splitter with a tie wrap to a nearby access hole (if available).

6. Connect the antenna cable to the input on the splitter. Then connect TER and SAT cables from it to the XM receiver, as shown in figure 8 on page 9. If your receiver has a single antenna input, do not use the splitter. Instead, plug the antenna cable directly to the XM receiver's input.

Continued on next page...



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Installation

Installing the TERK XM5 Marine Satellite Radio Antenna (continued)

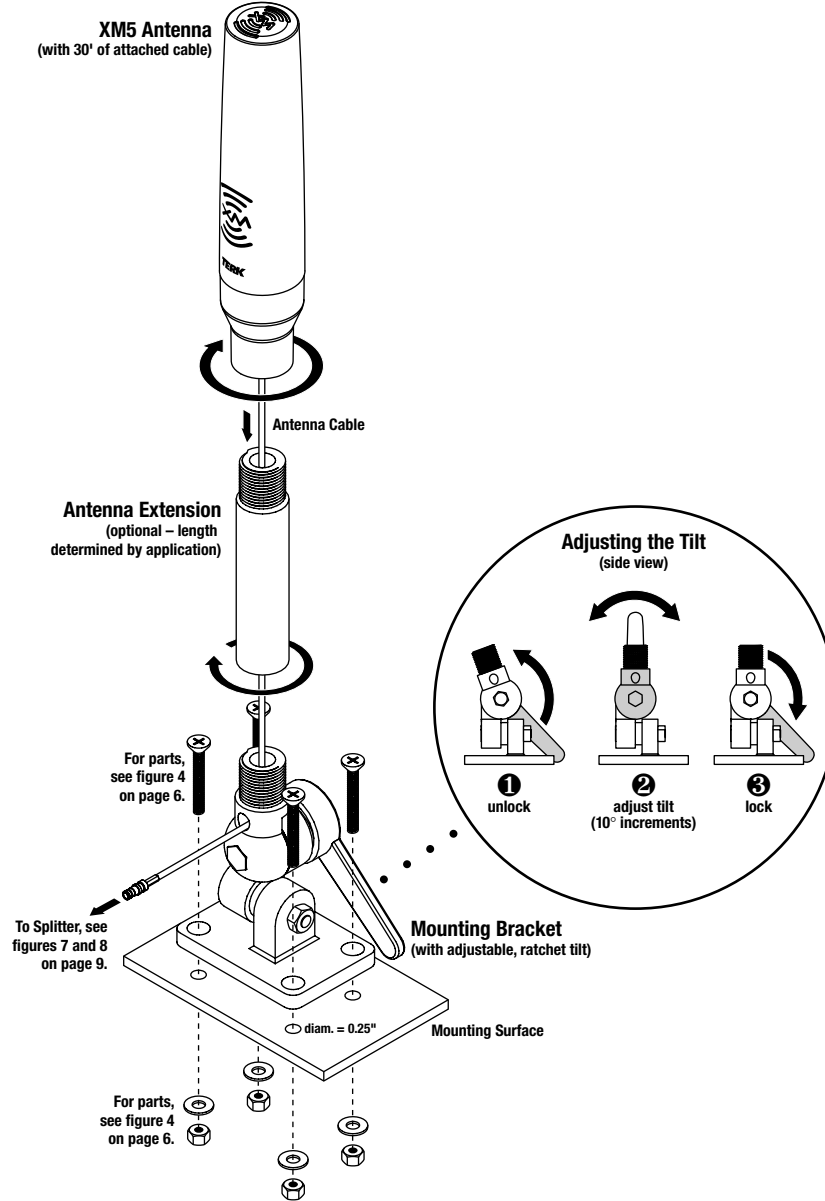


Figure 6. Installing the TERK XM5 antenna and bracket.

8 Installation

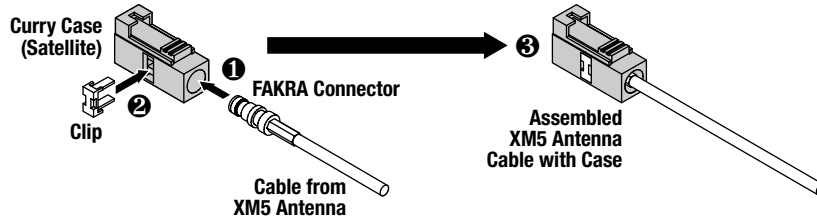


Figure 7. Inserting the FAKRA SMB connector into the plastic case.

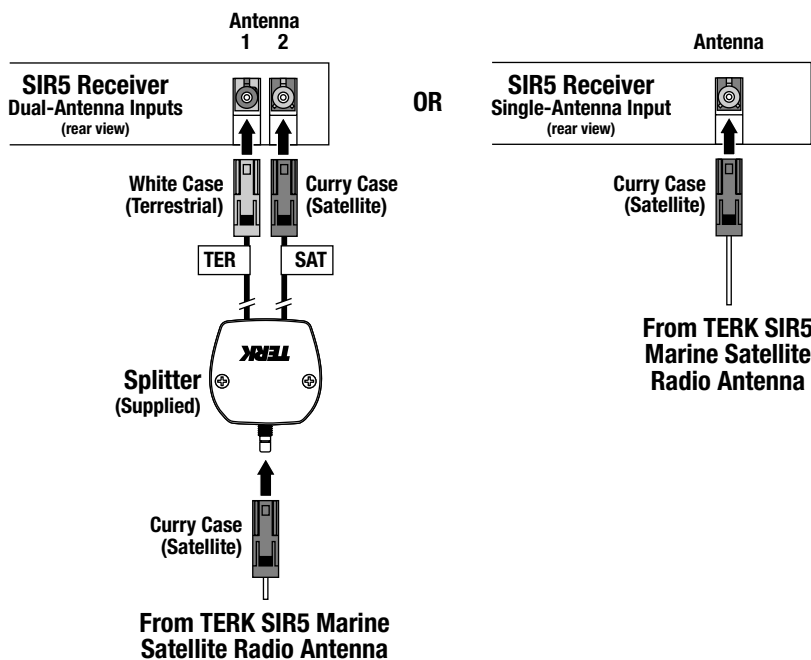
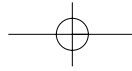


Figure 8. Wiring diagram shows antenna connections to an XM receiver.

7. If needed, adjust the tilt so the antenna is perpendicular to the horizon (see figure 6 on the previous page). Turn on the XM system and tune the radio to channel one (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.
8. 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 the supplied cable tie wraps to secure cables from flagging in the wind and catching on objects.

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



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Use and Care

In normal daily use, the TERK XM5 Marine 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 | <ul style="list-style-type: none"> Check antenna connections to the XM receiver. |
| XM radio displays "No Signal" message | <ul style="list-style-type: none"> Boat may be in an area where the XM signal is obstructed. Move the boat to more open surroundings. |
| Other symptoms | <ul style="list-style-type: none"> 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 Specifications

Passive Satellite Antenna Element –

| | |
|--------------------------------|-----------------------|
| Frequency: | 2332.5 to 2345.0 MHz |
| Gain: | 2 dBic |
| Bandwidth: | 12.5 MHz |
| Impedance: | 50 ohms |
| Elevation Plane Field of View: | 25° to 60°, elevation |
| Azimuth Plane Field of View: | Omnidirectional |
| Polarization: | LHCP (Circular) |

LNA for Satellite Signals –

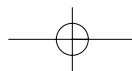
| | |
|----------------|------------------|
| Gain: | 30 dB, typical |
| Noise Figure: | 1.2 dB, maximum |
| Dc Bias: | 4.5 Vdc, nominal |
| Current Drain: | 55 mA, maximum |

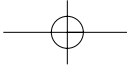
Filter Attenuation: 25 dB, minimum

Cable –

| | |
|------------|---------------------------------------|
| Type: | Coaxial |
| Length: | 30 feet |
| Connector: | FAKRA/SMB (Key Code: K, Color: Curry) |

10 Use and Care/Troubleshooting/Specifications





XM5 Owner's Manual

Mechanical Specifications

Antenna –

| | |
|-------------------------|---------------------|
| Radome Height: | 6.25 inches |
| Radome Diameter: | 1.50 to 1.75 inches |
| Radome Material: | White Polycarbonate |

Antenna Base –

| | |
|------------------|---------------------|
| Height: | 2.50 inches |
| Diameter: | Up to 1.875 inches |
| Material: | White Polycarbonate |

Flange Mount Hardware –

| | |
|-----------------------------------|-----------------|
| Screws, Nuts, and Washers: | Stainless Steel |
| Weight (All Parts): | 2.1 lbs |

Other Specifications

| | |
|---------------------|--|
| Temperature: | -40 °C to +105 °C, operating -45 °C to +120 °C, storage |
|---------------------|--|

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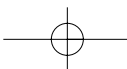
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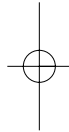
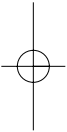
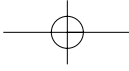
TERK Technologies Corp. (TERK) warrants this product against defects in materials or workmanship for 1 year from the date of purchase. During this warranty period, this product will be replaced without charge. This warranty does not cover any damage due to act of God, commercial use, accident, misuse, abuse or negligence.

This warranty is only valid in the USA. Replacement as provided under this warranty is the exclusive remedy of the consumer. TERK shall not be liable for any incidental or consequential damages for breach of any expressed or implied warranty on this product, except to the extent prohibited by applicable law. Any implied warranty or merchantability or fitness for a particular purchase on this product is limited to the duration of this warranty.

About XM Satellite Radio

For more information about XM Satellite Radio service, visit their web site at: www.xmradio.com





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*For Technical Support:
1.800.942.TERK (8375)*

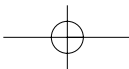


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