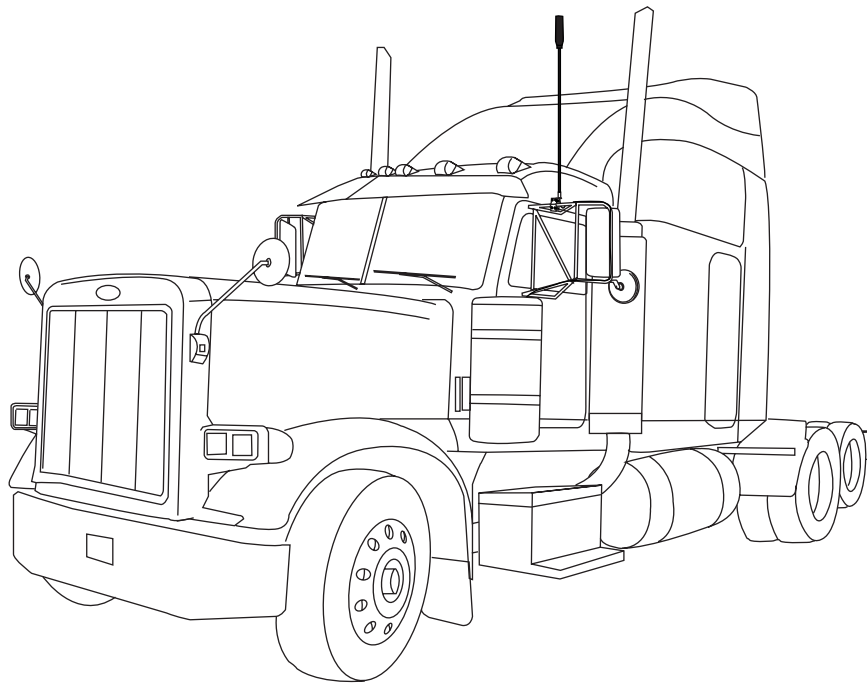


TERK[®]

OWNER'S MANUAL

**READ
THIS
FIRST!**



SR4X-MM

LONG-HAUL TRUCK AND RV
MIRROR-MOUNT SATELLITE RADIO ANTENNA



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About Installation

Installation of automotive 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 SR4X-MM Mirror-Mount Satellite Radio Antenna in a general sense, they do not show the exact installation methods for your particular vehicle.

NOTE: Installing the TERK SR4X-MM Mirror-Mount Satellite Radio Antenna may cause vibration of the mirror and possibly blur the rear-view image.

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





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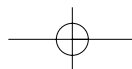
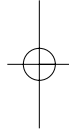
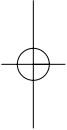
Introduction

The TERK SR4X-MM Mirror-Mount Satellite Radio Antenna is a high-performance antenna designed specifically for XM Satellite Radio reception on long-haul trucks and RVs (recreational vehicles). It has dual-mode functionality, receiving simultaneous signals from satellites and terrestrial repeaters, to ensure continuous reception. Its features include:

- Ground-plane independent design for convenient installation on mirror supports
- Rugged high-impact mast to withstand high-vibration road environment
- Mounts high on the vehicle for maximum, line-of-sight, signal path from XM satellites
- Supplied with 17' of attached low-loss, coaxial cables and FAKRA connectors for extended cable routes and ease of installation
- High performance to meet XM Satellite Radio specifications for mobile antennas
- Shock- and vibration-proof design
- Tested and approved for ice and wind loads according to TERK Specification TRK-10011.a

The TERK SR4X-MM Mirror-Mount Satellite Radio Antenna is easy to install on most vehicles. 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 SR4X-MM Mirror-Mount Satellite Radio Antenna is designed to be installed on either the driver- or passenger-side mirror (or a rear grab bar) of a long-haul truck or RV. Moreover, it can be mounted on a vertical or horizontal bar, as shown in Figure 1.

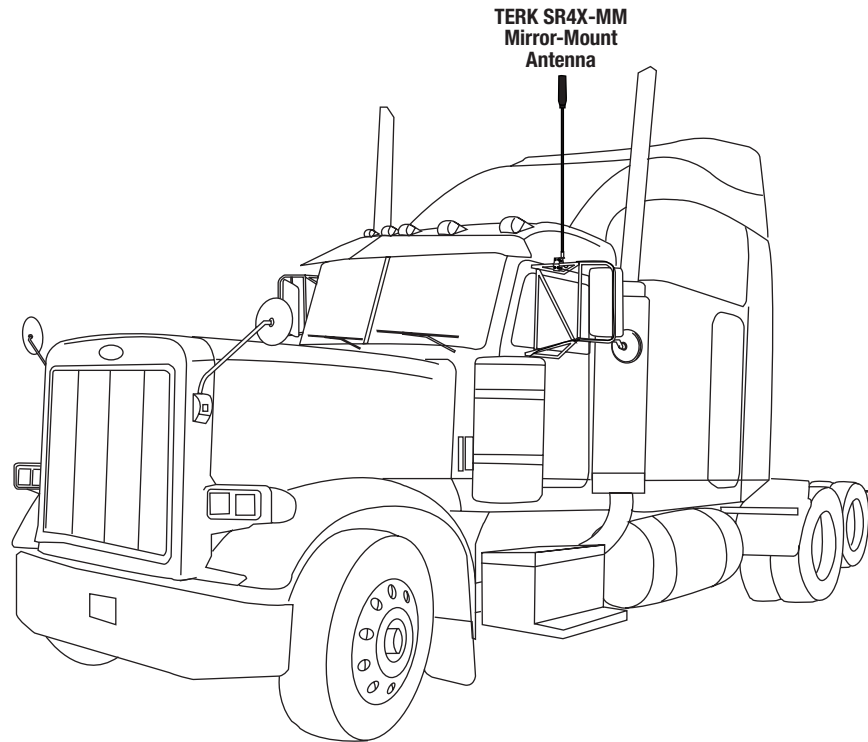


Figure 1. The TERK SR4X-MM Mirror-Mount Satellite Radio Antenna is shown installed horizontally on the driver's mirror support of a long-haul truck.

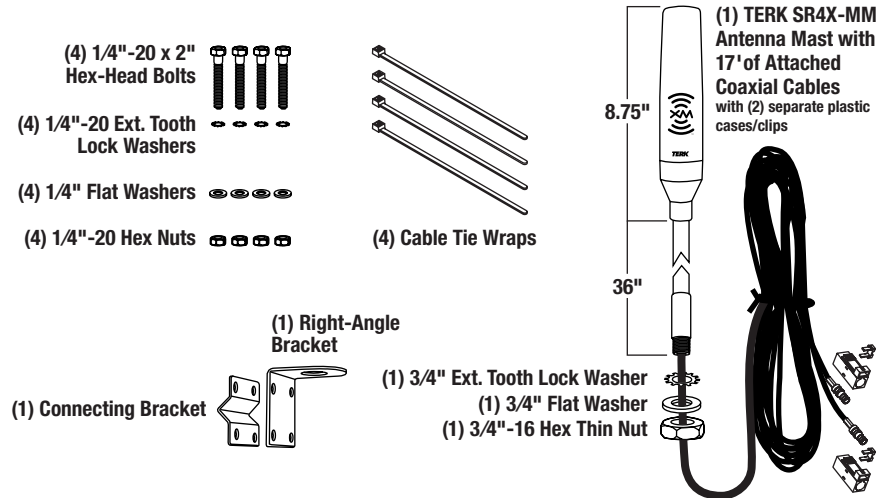
SR4X-MM Mirror-Mount Owner's Manual
Installation
Parts for TERK SR4X-MM Mirror-Mount Antenna


Figure 2. Verify that your TERK SR4X-MM Mirror-Mount package includes the above items.
NOTE: All metal mounting hardware is stainless steel.

Recommended Tools and Supplies

- 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)

Installation Precautions and Tips

- When selecting an antenna location, make sure the proposed site is the highest possible and does not interfere with the driver's visibility of the road during vehicle operation.
- Also, at the proposed site, verify that there is at least a 20-degree clearance from any obstruction on all sides, including any metal hardware and exhaust stacks. Installation near fiberglass wind fairings is acceptable with minimal signal blockage.
- Prior to installation, turn off all audio systems and other electrical devices. Disconnect the (-) negative lead from the vehicle's battery.
- At the installation site, locate and make a note of all fuel lines, hydraulic brake lines, and electrical wiring. Use extreme caution when cutting or drilling in and around these areas. Always wear protective eyewear when using tools.

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Installation

Installation Precautions and Tips (continued)

- As you plan the cable route, avoid running cables through components that may cause excessive chafing. Doing so may erode the jacket and break signal continuity. Also, avoid kinking, pinching, excessive bending, or twisting a 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 SR4X-MM Mirror-Mount Antenna

1. At the chosen site, attach the right-angle bracket and connecting bracket to the mirror's bar using the enclosed hardware, as shown in Figure 3.

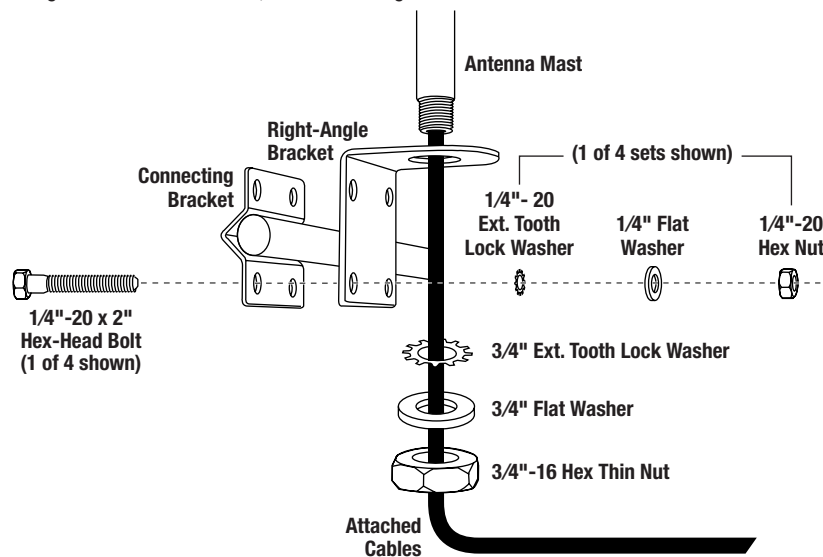


Figure 3. Assembling the brackets and antenna mast.

2. Thread the coaxial cables through the right-angle bracket's opening and tighten the antenna mast to the mounting assembly (see Figure 3 above).
3. Route the cables through an existing access hole or vent window (see Figure 4 on the next page) to the back of the XM receiver.
4. Use the color codes in Figure 5 (on the next page) to insert the FAKRA SMB connectors into the supplied plastic cases. Then lock them with the supplied clips.

NOTE: Do not install the plastic cases if you are using a Sony XM Radio Receiver.

5. If the XM system is not already installed, temporarily connect power and ground. Then connect the SR4X-MM antenna cables to your XM receiver, as directed by the receiver's manufacturer (see Figure 6 on page 8).

6 Installation

SR4X-MM Mirror-Mount Owner's Manual

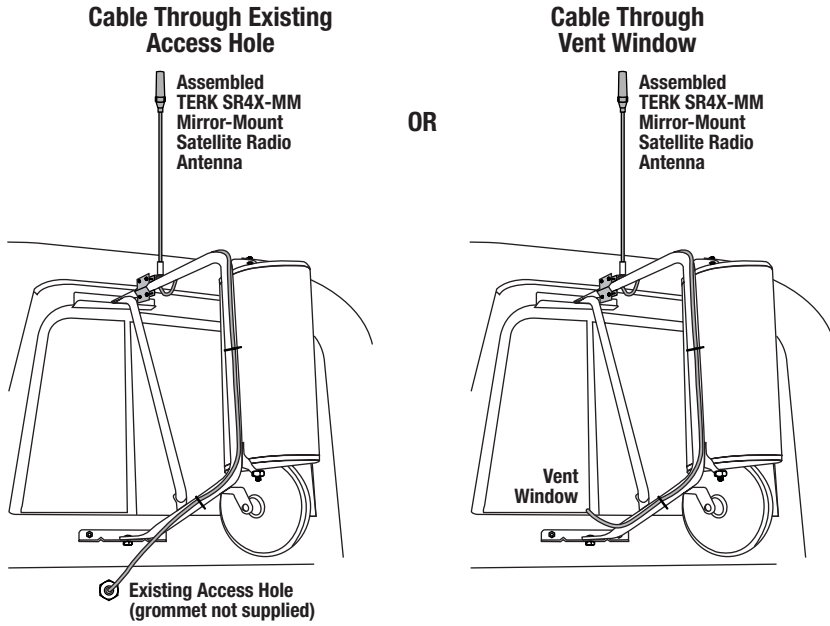


Figure 4. Examples of an installed TERK SR4X-MM Mirror-Mount Antenna.

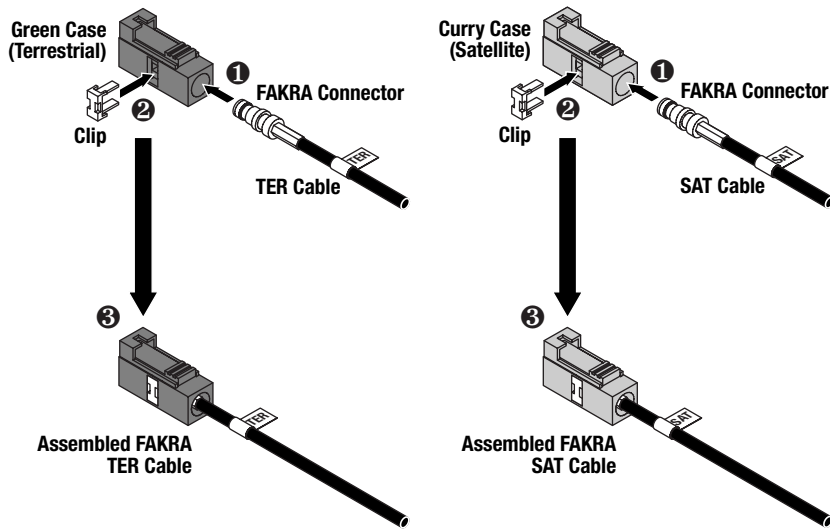


Figure 5. Inserting the FAKRA SMB connectors into plastic cases.

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Installation

Installing The TERK SR4X-MM Mirror-Mount Antenna (continued)

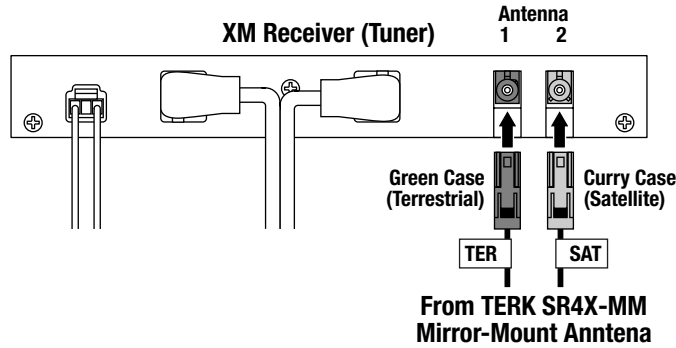


Figure 6. Wiring diagram shows antenna connections to an XM receiver.

6. 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* below.
7. After the system has been tested successfully, continue routing the cables from the antenna to the receiver for best appearance and complete the 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 mobile audio dealer.

Use and Care

In normal daily use, the TERK SR4X-MM Mirror-Mount 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"> • Vehicle may be in an area where the XM signal may be too weak. Move the vehicle outdoors or to a location which has fewer buildings.
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.



SR4X-MM Mirror-Mount Owner's Manual

Specifications

Electrical Specifications

Passive Satellite and Terrestrial Antenna Element –

Frequency:	2332.5 to 2345.0 MHz
Gain –	
Terrestrial:	- 1 dBi
Satellite:	2 dBic
Bandwidth:	12.5 MHz
Impedance:	50 ohms
Vertical Plane Field of View –	
Terrestrial:	0°, elevation
Satellite:	20° to 60°, elevation
Horizontal Plane Field of View:	Omnidirectional
Polarization –	
Terrestrial:	LHCP
Satellite:	Linear Vertical

LNA for Both Satellite and Terrestrial 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 (for Terrestrial and Satellite) –

Type:	Coaxial
Length:	17 feet
Connectors –	
Terrestrial:	FAKRA/SMB (Key Code: E, Color: Green)
Satellite:	FAKRA/SMB (Key Code: K, Color: Curry)

Mechanical Specifications

Mast –

Total Height (includes antenna and bases):	3.65 feet
Mast Height:	2.90 feet
Material:	Glass-filled ABS Plastic
Diameter (outside):	0.625 inches

Antenna –

Radome Height:	6.37 inches
Radome Diameter:	1.50 to 1.75 inches
Radome Material:	Black Polycarbonate

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Specifications

Mechanical Specifications (continued)

Antenna Base –

Height:	2.46 inches
Diameter:	0.875 to 1.875 inches
Material:	Aluminum

Mast Base –

Height:	2.0 inches (plus 0.75 inches for threaded portion)
Diameter:	0.875 inches
Material:	Aluminum

Mounting Hardware –

Right Angle Bracket:	Stainless Steel
Connecting Bracket:	Stainless Steel
Screws, Nuts, and Washers:	Stainless Steel

Rated Wind Velocity: 100 mph, fatal velocity

Weight: 3.4 lbs

Other Specifications

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

Quality and Performance Tests –

XM Approved:	Per Specification XM-TEC-3-0009-RD
TERK Approved:	Per Environmental Specification TERK TRK-10011.a
TERK QA:	Shock and Vibration Proof

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SR4X-MM Mirror-Mount Owner's Manual

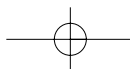
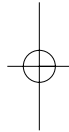
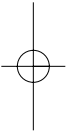
Limited Warranty

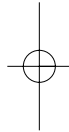
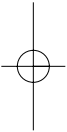
TERK Technologies Corp. (Terk) warrants this product against defects in materials or workmanship for 1 year from the date of purchase. During this warranty period this product will be replaced without charge. This warranty does not cover any damage due to act of God, commercial use, accident, misuse,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



*Visit our web site for information
about our full product line*

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