

TERK[®]

TRK-SR1 **Glass-Mount Satellite Radio Antenna** *Installation Guide*





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ABOUT INSTALLATION

Installation of automotive stereo 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 TRK-SR1 Glass-Mount Satellite Radio Antenna in a general sense, they do not show the exact installation methods for your particular vehicle.

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

ABOUT TINTED WINDOWS

Installing the Terk TRK-SR1 Glass-Mount Satellite Radio Antenna on a vehicle with certain types of tinted windows may result in loss of received XM satellite signals. Blacked-out windows with metallic or mirrored finishes will interfere and degrade XM satellite signals.

IMPORTANT: *If your vehicle is equipped with windows that have a metallic or mirrored finish, you will need to scrape off the finish in the installation area before installing the TRK-SR1. If this is not possible, try moving the antenna to an open area or use the Terk TRK-SR2 Roof-Mount Satellite Radio Antenna instead.*

TRK-SR1 INSTALLATION GUIDE

INTRODUCTION

The Terk TRK-SR1 Glass-Mount Satellite Radio Antenna is a high-performance antenna designed specifically for XM Satellite Radio reception. It has dual-mode functionality, receiving simultaneous signals from satellites and terrestrial repeaters, to ensure continuous reception. The result is an antenna that offers all the benefits of satellite radio and complements the appearance of any vehicle. Its features include:

- Aerodynamic glass-mounted design that uses our exclusive ThruGlass technology to eliminate drilling during installation
- Acrylic foam adhesive pads that provide years of worry-free enjoyment, yet are removable if necessary
- Tested and proven to Automotive Environmental Standards
- Shock- and vibration-proof design
- Fully-adjustable hinged mast can be set to any angle for optimum reception on any surface
- Fold-down antenna to avoid damage at car washes and in other low-clearance situations

The TRK-SR1 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 the XM radio's owner's manual.

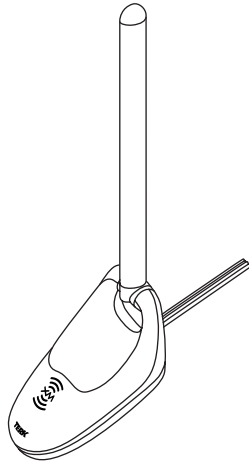


Figure 1. The Terk TRK-SR1 Glass-Mount Satellite Radio Antenna.

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APPLICATIONS

The Terk TRK-SR1 Glass-Mount Satellite Radio Antenna can be installed on a variety of vehicles, as shown below. For details, see *Installation* starting on page 6.

NOTE: The TRK-SR1 is not recommended for use on convertibles. For these vehicles, use the Terk TRK-SR2 Roof-Mount Satellite Radio Antenna.

FOUR-DOOR SEDANS

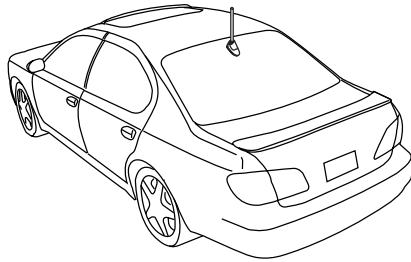


Figure 2. The Terk TRK-SR1 is shown installed on the rear window of a four-door sedan.

SUVs

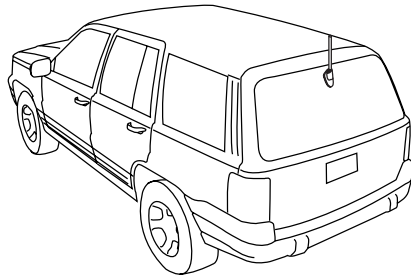


Figure 3. The Terk TRK-SR1 is shown installed on an SUV's rear window. As an alternate site, the antenna can be mounted on a rear side window.

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TWO-DOOR COUPES/HATCHBACKS

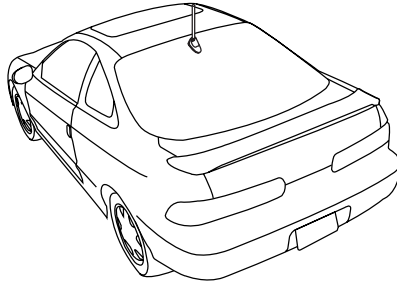


Figure 4. The Terk TRK-SR1 is shown installed on the rear window of a two-door coupe.

VANS/MINIVANS

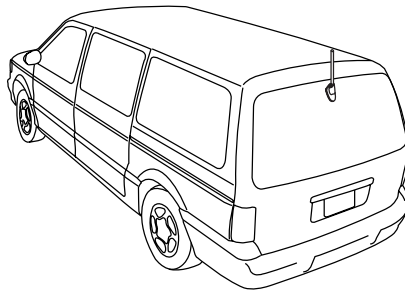


Figure 5. The Terk TRK-SR1 is shown installed on a minivan's rear window. As an alternate site, the antenna can be mounted on a rear side window.

PICKUP TRUCKS

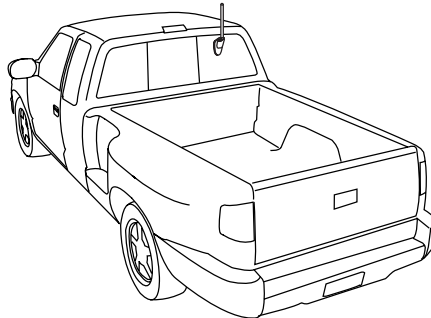


Figure 6. The Terk TRK-SR1 is shown installed on a pickup truck's rear window. The antenna is offset to avoid blocking the third brake light. As an alternate site, the antenna can be mounted on a cab side window.

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INSTALLATION

TRK-SR1 PARTS

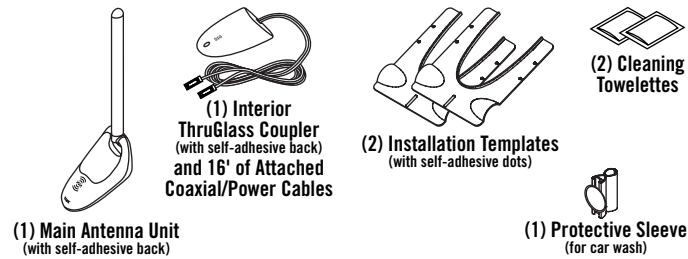


Figure 7. Verify that your TRK-SR1 package includes the above items.

RECOMMENDED TOOLS AND SUPPLIES

Although not necessary, the following tools and supplies may aid in installation:

- Any tool to help cable routing (e.g., flat dental pick, screwdriver, etc.)
- Cable tie wraps and adhesive mounting bases (to manage cable routing)
- Tape measure and level (for positioning the antenna)

INSTALLATION PRECAUTIONS AND TIPS

- When selecting an antenna location, make sure the proposed site meets the following conditions:
 - a. The antenna does not block any part of the vehicle's brake light.
 - b. The coupler core in the ThruGlass Coupler does not cross antenna or defroster lines. Using the enclosed Installation Templates will fulfill this condition (see step 3 on the next page and step 11 on page 10).
 - c. The selected site does not interfere with the driver's visibility during vehicle operation.
 - d. Choose the highest possible location on the vehicle's rear or side window that satisfies the conditions above without the ThruGlass Coupler touching the vehicle's interior headliner.
- At the proposed site, make sure the antenna mast rises above the roofline of the vehicle, as well as any other objects that are typically placed on the roof, to ensure a constant line of sight to the XM satellites.
- At the proposed site, make sure that the vehicle's interior headliner does not prevent the ThruGlass Coupler from aligning with the Main Antenna Unit. Also preview steps 11 through 14 on pages 10 and 11.
- Before attaching the Main Antenna Unit or ThruGlass Coupler, make sure the vehicle's glass is above 60 °F, non-condensing, and dry.

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- Although a center position on a rear window is the most aesthetically pleasing, if there is an obstruction (e.g., brake light) consider offsetting the antenna from the center or use a rear side window as an alternate site. If these locations don't work, use the Terk TRK-SR2 Roof-Mount Satellite Radio Antenna instead.
- When pressing the Main Antenna Unit or ThruGlass Coupler onto the vehicle's glass, apply an initial contact force of 15 to 20 PSI (i.e., steady and firm finger-tip pressure) for 60 seconds. Allow 20 minutes for the self-adhesive backing to set before driving the vehicle.
- If desired, use an externally-applied heat source (e.g., hair dryer) of 120 °F (max.) to pre-warm the glass to aid initial contact strength of the adhesive.
- After installation, avoid running the vehicle through a car wash for 72 hours.

INSTALLING THE TRK-SR1

1. At the selected site, use an enclosed Cleaning Towelette to clean the installation area on the vehicle's outside window.

NOTE: For additional cleaning solution, only use isopropyl alcohol. Do not use any commercial glass cleaners.

2. Select an enclosed Installation Template and peel off the protective backing from each of the four adhesive dots.
3. Lightly position an Installation Template on the vehicle's outside window so that no defroster or antenna lines are visible between the registration openings, as shown in Figure 8 below.

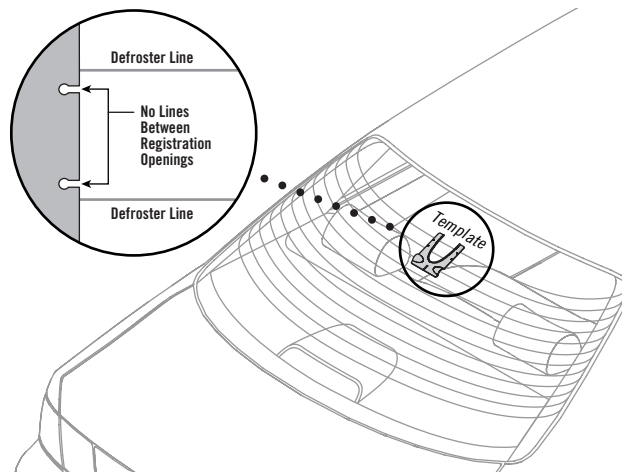


Figure 8. Positioning an Installation Template on a vehicle's outside rear window. Note the orientation and position to avoid defroster lines.

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INSTALLATION

INSTALLING THE TRK-SR1 (CONTINUED)

- When it's properly positioned, press down along the Installation Template's boundary to secure adhesion to the window.

NOTE: The templates use a non-permanent adhesive to allow for easy repositioning and later removal.

- Without removing its protective backing, carefully place the Main Antenna Unit within the template, as shown in Figure 9 below.

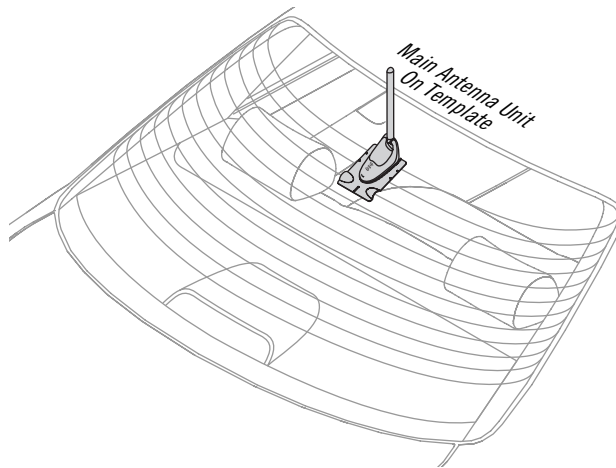


Figure 9. Placing the Main Antenna Unit on an Installation Template.

- Enter the vehicle and verify that the exposed core of the Main Antenna Unit does not cross any defroster or antenna lines, as shown in Figure 10 below. If it does, repeat steps 3 through 6 until the correct position is found. Also verify that the interior headliner does not cover the top of the template. If it does, move the template down to another correct position.

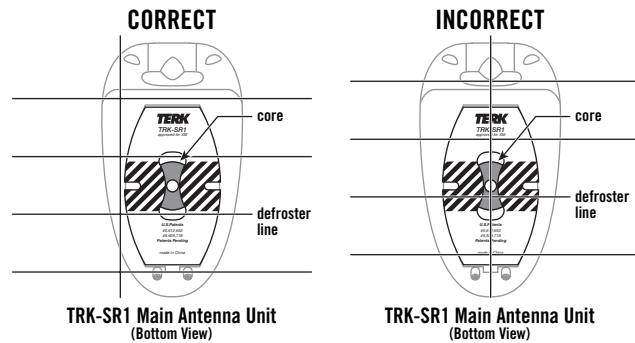


Figure 10. Correct and incorrect placement of the Main Antenna Unit.

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7. With the template properly located, peel off the protective backing from the Main Antenna Unit. Starting with the front, carefully place the unit into the template and, using steady pressure, firmly press the Main Antenna Unit down onto the glass for a minimum of 60 seconds, as shown in Figure 11.

NOTE: Do not remove the Installation Template at this time.

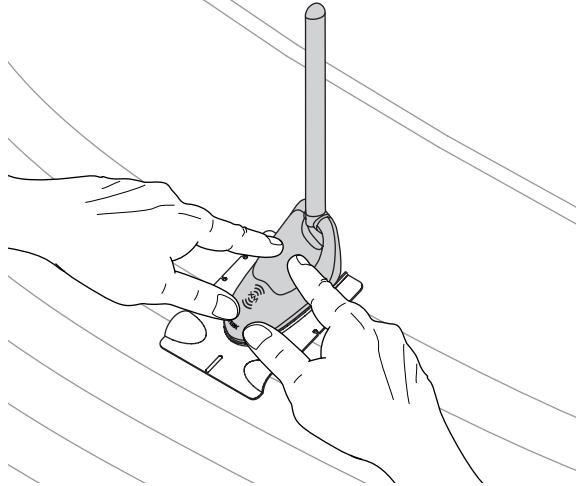


Figure 11. Firmly pressing down on the Main Antenna Unit.

8. Adjust the antenna mast so it is completely vertical (i.e., perpendicular) to the ground, as shown in Figure 12.

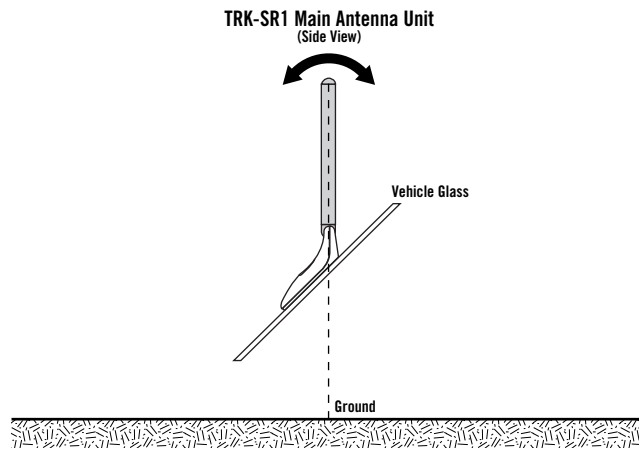


Figure 12. Adjusting the antenna mast so that it's perpendicular to the ground.

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INSTALLATION

INSTALLING THE TRK-SR1 (CONTINUED)

- If the XM system is not already installed, temporarily connect power and ground to the system. Temporarily connect the ThruGlass Coupler to your XM receiver, as directed by the receiver's manufacturer (see Figure 13 below). Set the ThruGlass Coupler aside in a safe area.

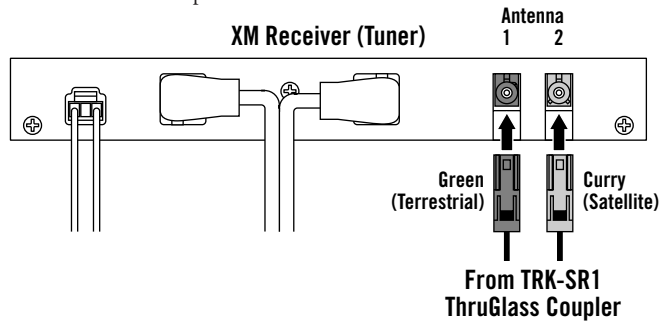


Figure 13. Wiring diagram shows antenna connections to an XM receiver.

NOTE: Do not route the antenna cable at this time. For the Sony DRN-XM01 Digital Audio Receiver, use a small jeweler's screwdriver to remove the plastic case and inserts from each FAKRA-type SMB connector (see Figure 14).

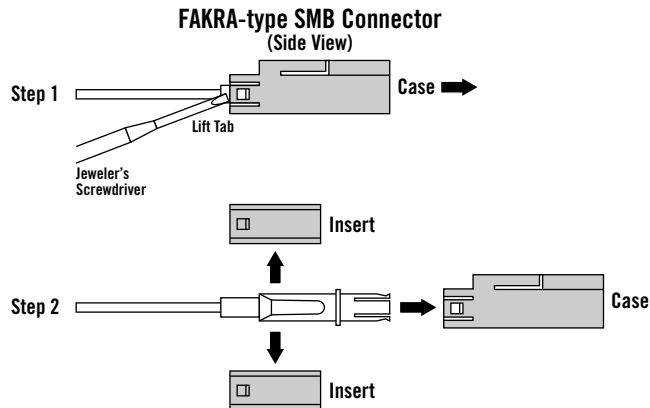


Figure 14. Removing the plastic case and inserts.

- At the corresponding interior site, use the remaining Cleaning Towelette to clean the installation area on the vehicle's inside window.
- Peel off the protective backing from each of the four adhesive dots on the second Installation Template. Lightly position it on the inside window so that its registration marks align with those on the outside template, as shown in Figure 15 on the next page.

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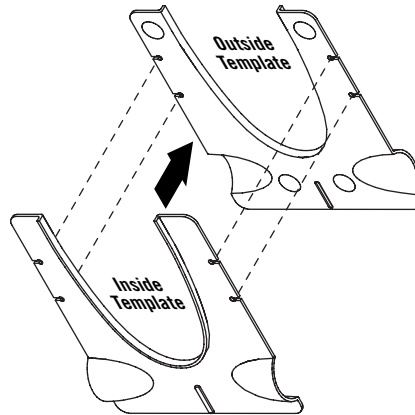


Figure 15. Positioning an Installation Template on a vehicle's inside rear window so it aligns with outside registration marks.

12. When all four registration marks are aligned, press up along the Installation Template's boundary to secure adhesion to the window.
13. Without removing its protective backing, place the ThruGlass Coupler into the template, as shown in Figure 16 below. The LED should turn on to indicate that the antenna is properly passing RF signals and dc current through the glass. If it does not turn on, slightly re-position the template until you find a location that activates the LED.

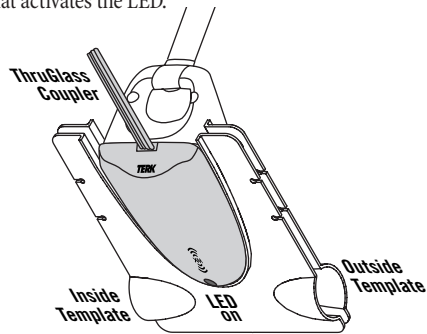


Figure 16. Positioning the ThruGlass Coupler onto the inside Installation Template. The coupler's LED activates when position is correct.

14. With the template properly located, peel off the protective backing from the ThruGlass Coupler. Starting with the front, carefully place the unit into the template and, using steady pressure, firmly press the ThruGlass Coupler down onto the glass for a minimum of 60 seconds, as shown in Figure 17 on the next page.

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INSTALLATION

INSTALLING THE TRK-SR1 (CONTINUED)

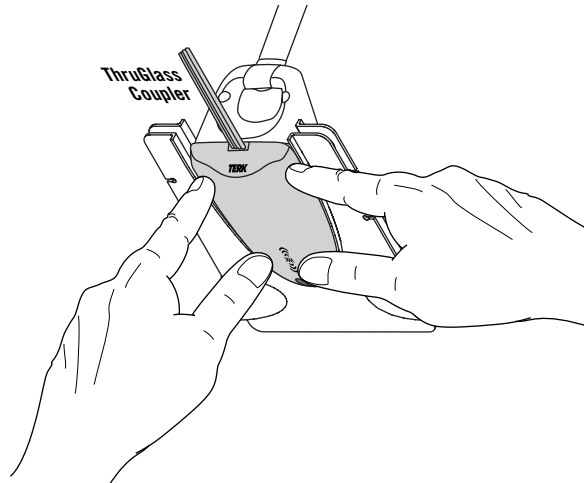


Figure 17. Firmly pressing down on the ThruGlass Coupler.

15. Remove both templates from the inside and outside of the vehicle's window (and save them until XM operation is confirmed in the next step).
16. Turn on the XM system and tune to different XM channels. If there are any problems, review the installation steps and verify that each one was performed correctly. Also see *Troubleshooting* on the next page.
17. After the system has been tested successfully, route the cable from the antenna to the receiver for best appearance and complete the remaining system installation. If desired, discard both templates.

NOTE: Depending on the vehicle, the antenna cable is typically routed up under and around the glass headliner to the XM receiver located in the trunk or cargo area. For additional help with cable routing, consult your local mobile audio dealer.

USE AND CARE

In normal daily use, the Terk TRK-SR1 Glass-Mount Satellite Radio Antenna is a rugged, high-performance antenna that does not require any special attention. However, for best reception and extended care, keep the following in mind:

- For best reception, always position the antenna mast so that it is completely vertical to the ground (see Figure 12 on page 9).

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- For extended care, before running the vehicle through a car wash, use the enclosed protective sleeve to protect the antenna mast, as shown in Figure 18.

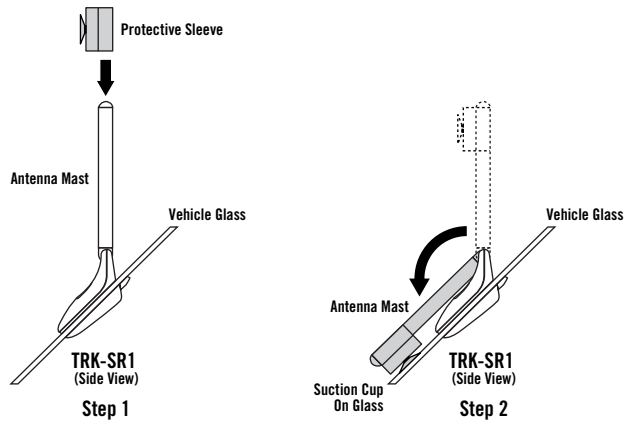


Figure 18. Placing the Protective Sleeve over the antenna mast before a car wash.

TROUBLESHOOTING

SYMPTOM

XM radio is on, but no channels are being received.

SOLUTIONS

- ThruGlass Coupler may be misaligned. Review *Installation* section, starting on page 6.
- Check the Coaxial and Power Cables for continuity from the ThruGlass Coupler to the XM receiver.
- Call us 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.

XM radio displays "Antenna" or "Check Antenna" message.

- Check antenna connections to the XM receiver.
- Vehicle may be in an area where there is no line of sight to satellite or ground repeater.

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SPECIFICATIONS

Frequency:	2332.5 to 2345.0 MHz
Bandwidth:	12.5 MHz
VSWR:	1.5:1
Dual Antenna –	
Terrestrial Reception:	Linear polarization
Satellite Reception:	Circular polarization
Coupling Unit –	
Input Voltage from 12 Vdc Adapter:	12 Vdc min., 15 Vdc max.
Current Draw:	70 mA max.
Coupling Loss:	3 dB max.
Input Impedance:	50 ohms
Coverage from Tuner:	Terrestrial antenna is omnidirectional
Input Voltage:	3.6 Vdc min., 4.5 Vdc typical, 5.5 Vdc max.
Current Draw:	45 mA typical, 50 mA max. per antenna LNA
LNA Noise Figure:	1.4 dB max.
Terrestrial Noise Figure:	1.3 dB max.
Total Active LNA Gain –	
Terrestrial Reception:	18 - 22 dB
Satellite Reception:	20 - 24 dB
Out of Band Filter Attenuation:	25 dB min.
Cables:	16 feet coaxial
Connectors:	FAKRA-type SMB (color coded)
Mounting Material:	Adhesive pads (3M 5356 acrylic foam)
Weight:	1.1 lbs.
Base Footprint:	2 x 5 in.
Antenna Dimensions:	10 in.(height), 3/8 in. (diameter)
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
AES Approved:	Tested and proven to AES
Terk QA:	Shock and Vibration Proof

Terk Technologies strives to maintain and exceed the highest consumer standards. Due to these ongoing efforts, modifications may be made from time to time to existing products without any prior notice. Specifications and appearance may differ from those listed or shown in this manual. The XM name and related logos are trademarks of XM Satellite Radio, Inc. Terk and Terk Technologies are trademarks of Terk Technologies Corp., Commack, NY.

Part # 04P005

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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



TERK[®]

Terk Technologies Corporation
63 Mall Drive
Commack, NY 11725

VOICE: (631) 543-1900
FAX: (631) 543-8088
INTERNET: www.terk.com

