

## GVN 53

### *installation instructions*



#### **WARNING**

**Failure to avoid the following potentially hazardous situations could result in serious injury, fire, or death.**

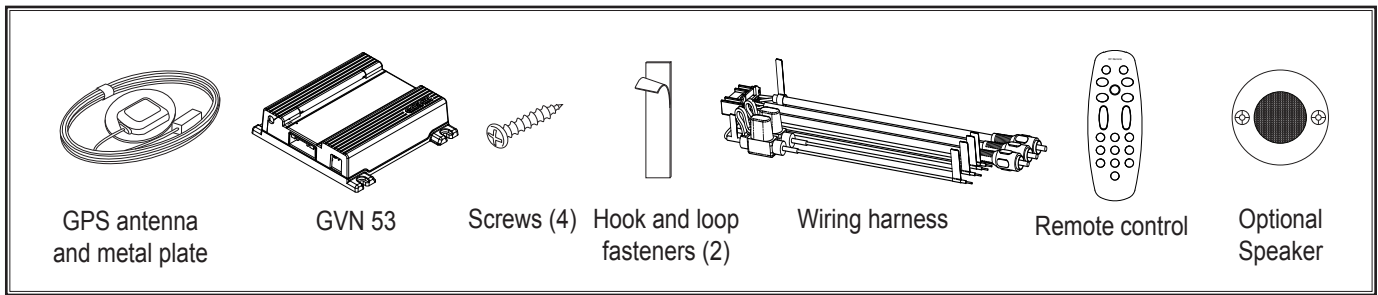
- Do not attempt to install or service the GVN 53 unless you are a professional electronics installer. Installing or servicing the unit without training and experience in electronic equipment and automotive accessories may be dangerous and could expose you to the risk of electric shock or other hazards.
- When extending ignition, battery, or ground wires, use automotive-grade wires or other wires with AWG 18 (0.75 mm<sup>2</sup> gauge) or greater.

#### **CAUTION**

**Failure to avoid the following potentially hazardous situations may result in injury or property damage.**

- Make sure to ground the unit to the chassis of your vehicle.
- Secure all wiring with cable clamps or electrical tape. Insulate unconnected wires; do not allow any bare wiring to remain exposed.
- Do not let unconnected wires or terminals touch metal on the vehicle or anything else that can conduct electricity.
- Do not expose the GVN 53 to water or other liquids. The GVN 53 is not waterproof.

## Getting Started



Before you begin installation, disconnect the negative battery cable. Then follow the steps below to install the GVN 53.

### 1 Install the GPS antenna

Install the GPS antenna on the outside of the vehicle on a metal surface or metal plate. The plate or surface must be at least 3.5 inches by 3.5 inches square. The GPS antenna must have a clear view of the sky and must be placed horizontally for best GPS reception. See the next page for further instructions.

#### ⚠ CAUTION

The **permanent** adhesive on the back of the metal plate is extremely difficult to remove after it is installed.

### 2 Connect the wiring harness

Connect each wire to the appropriate signal in the vehicle. Note that some wires are optional. Refer to the wiring diagram for more information. Wrap any unused wires with electrical tape; do not leave any metal exposed.

### 3 Install the GVN 53

Use the screws or the hook and loop fasteners provided to mount the GVN 53 in the vehicle. Select a location that allows you to access the unit's SD card slot. We recommend installing it under a seat or in another place close to the driver. Do not install the GVN 53 inside a metal housing or where it might be shielded from you by a metal object. If there are large metal objects between you and the GVN 53, the remote control may not work.

#### ⚠ CAUTION

Do not install the unit where it will be exposed to direct sunlight, excessive heat or humidity, or dust as these conditions could damage the unit. Use only the screws provided. If you use the wrong screws, you could damage the unit.

### 4 Install optional accessories

You can install an optional XM Smart Antenna (such as the GXM 30) either inside or outside the vehicle. Like the GPS antenna, it must have a clear view of the sky. If you use an extension cable with the XM antenna, wrap the two connectors with electrical tape. For information on installing an optional FM traffic receiver (such as the GTM 10), refer to the *Installation Guide* included with the traffic receiver.

### 5 Test the installation

Reconnect the negative battery cable, and then turn on the audio/video system to ensure that everything is connected and is functioning properly. Install batteries in the remote. Then test the remote control to ensure that it is working. If the remote control does not work, you may need to move the GVN 53 to a different location in the vehicle.

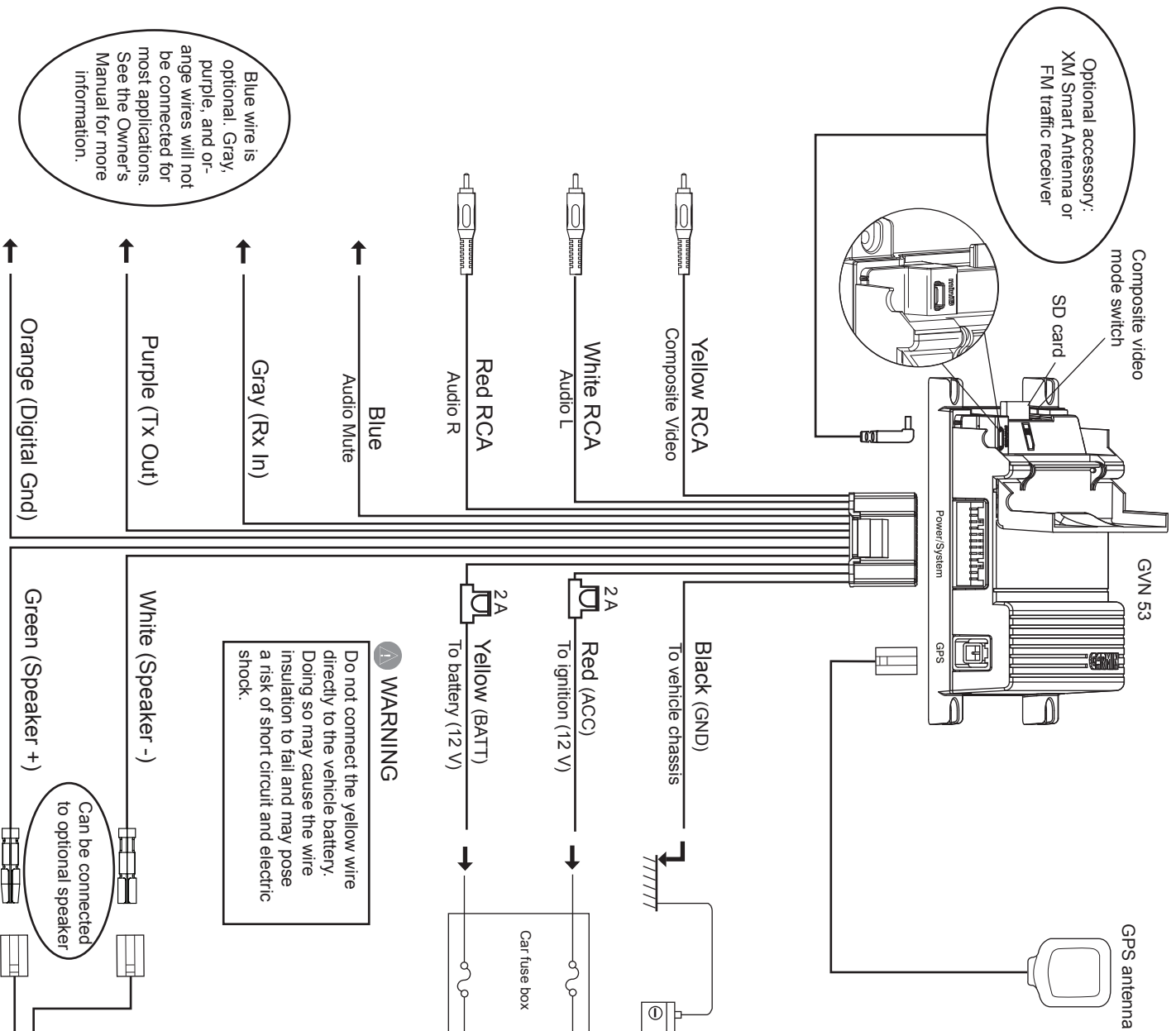
Optional accessory:  
XM Smart Antenna or  
FM traffic receiver

Composite video  
mode switch

SD card

GVN 53

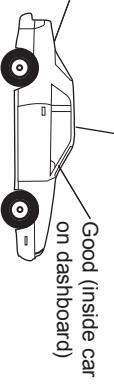
GPS antenna



Blue wire is optional. Gray, purple, and orange wires will not be connected for most applications. See the Owner's Manual for more information.

### Installing the GPS antenna

Best (roof of vehicle)



Better (trunk of vehicle)

Good (inside car on dashboard)

#### To mount the GPS antenna inside your vehicle:

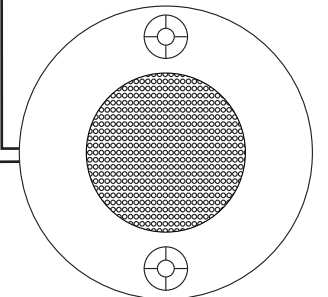
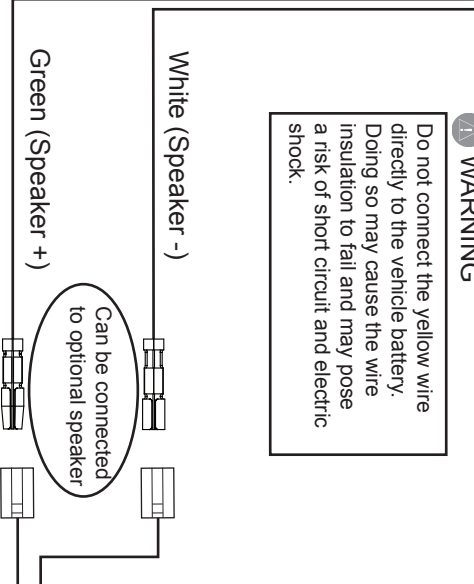
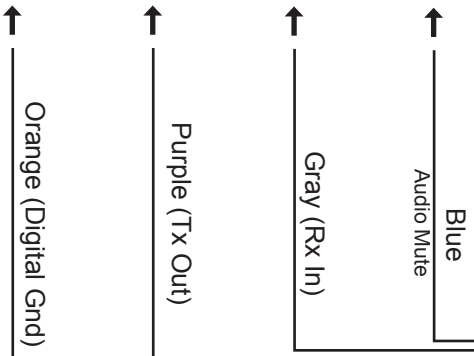
1. Clean your dashboard or other surface.
2. Peel the backing off of the adhesive on the bottom of the metal plate.
3. Press the metal plate down firmly on your dashboard or other mounting surface. You can bend the metal plate to conform to a curved surface, if necessary.
4. Place the GPS antenna on top of the metal plate.

#### ⚠ WARNING

Do not connect the yellow wire directly to the vehicle battery. Doing so may cause the wire insulation to fail and may pose a risk of short circuit and electric shock.

#### ⚠ CAUTION

Connect the ignition wires to a power source that can be turned on and off with the ignition key. If you connect the ignition wire to a power source with a constant voltage supply, such as a battery wires, the vehicle's battery may die.



Optional Speaker

## Acquiring GPS Signals

The first time you turn on the GVN 53, you must wait while the system acquires satellite signals for the first time. This process could take up to several minutes. Make sure your vehicle is outdoors in an open area away from tall buildings and trees for fastest acquisition. After the system acquires satellites for the first time, it will acquire satellites quickly each time thereafter.

## Changing the Fuses

If you need to replace a fuse on the red or yellow wires, make sure the wires are not touching to prevent a short circuit. Then replace the old fuse with a new 2 Amp fuse.

### CAUTION

## Specifications

### General

<b>Operating Temperature:</b>	5°F to 158°F (0°C to 70°C)
<b>Storage Temperature:</b>	-40°F to 185°F (-40°C to 85°C)
<b>Operating Voltage:</b>	9.5 V to 25 V
<b>Current Consumption:</b>	0.13 A typical at 13 V (Max 1.0 A at 13 V)
<b>ACC off Current:</b>	60 uA typical at 13 V
<b>Dimensions:</b>	1 <sup>3</sup> / <sub>16</sub> " H x 4 <sup>3</sup> / <sub>4</sub> " W x 4 <sup>5</sup> / <sub>8</sub> " L (30 mm x 120 mm x 117 mm)
<b>Weight:</b>	0.41 lb (184 g)
<b>Map Storage:</b>	Internal non-removable memory (pre-loaded City Navigator map data on European and North American units) and optional removable SD card
<b>Connectors:</b>	System/power, GPS antenna, SD card slot, Mini-B for optional XM (only on the U.S. version) or FM traffic receivers

### Navigation

<b>Receiver:</b>	SiRF STAR III high-sensitivity GPS receiver
<b>Frequency:</b>	1,575.42 MHz
<b>Acquisition Times*:</b>	
<b>Warm:</b>	< 1 second
<b>Cold:</b>	< 38 seconds
<b>AutoLocate®:</b>	< 45 seconds
	*On average for a stationary receiver with an open sky view
<b>Update Rate:</b>	1/second, continuous
<b>GPS Accuracy:</b>	Position: < 10 meters, typical Velocity: 0.05 meter/sec RMS
<b>DGPS (WAAS) Accuracy:</b>	Position: < 5 meters, typical Velocity: 0.05 meter/sec RMS
<b>Antenna:</b>	External GPS antenna, requires metal surface, such as a car roof or the included metal plate. A larger metal mounting surface improves GPS reception.

### Composite Video Switch

<b>Left:</b>	NTSC (default)
<b>Middle:</b>	NTSC
<b>Right:</b>	PAL
	Video switch not applicable in North America

### NOTE

Video quality varies depending on the display.