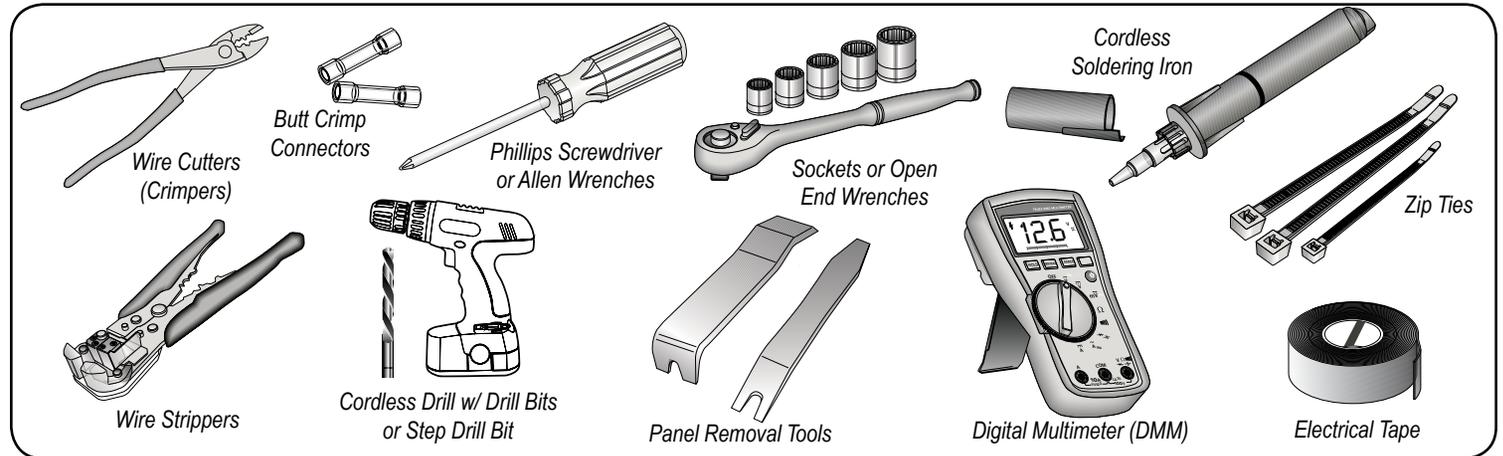


IN-DASH RECEIVER INSTALLATION GUIDE

Difficulty Level: Easy to Moderate

Average Installation Time: 1-2 Hours

Tools and Supplies Needed:

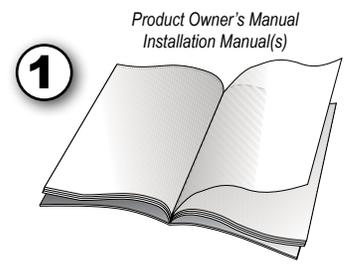


In This Guide: Installation of an in-dash receiver involves three main tasks: 1) disassembly of the dash area and removal of the factory stereo, 2) making electrical connections from the dash area to the new receiver, and 3) testing the receiver and reassembling the dash area. Follow these easy installation guidelines to ensure correct installation of your receiver.

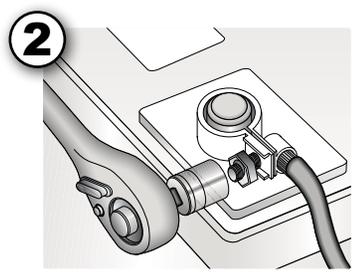
Important

This content has not been verified by Amazon for accuracy, completeness, or otherwise. Consult your vehicle's owner's manual and the product's manual before attempting an installation. Contact the product's manufacturer or consult a Mobile Electronics Certified Professional installer if you are uncertain about how to properly install your product. Amazon attempts to be as accurate as possible, however, because of the number of vehicles and products available to consumers, it is not possible to provide detailed installation steps that apply universally to all vehicles and products. Amazon does not warrant that product descriptions or other content of this site is accurate, complete, reliable, current, or error-free. Further, Amazon disclaims any warranties, express or implied, as further set forth in the 'Conditions of Use' for Amazon.com.

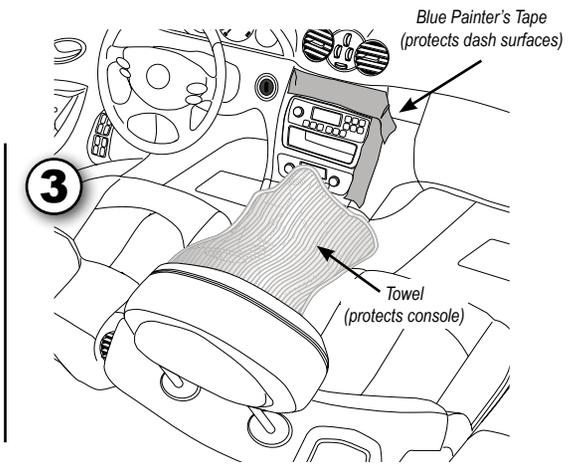
Before You Begin



1 Read all instructions carefully



2 Disconnect the negative battery cable



3 Protect interior surfaces

Note: Additional accessories such as dash kits, mounting brackets, wiring harness adapters, antenna adapters, and steering wheel control interface devices may be required to complete the installation and are available for purchase on Amazon.com.

Installation Accessories - Mounting

Mounting Brackets

Mounting brackets are plastic fittings that provide a hardware mounting point for Single-DIN and Double-DIN receivers. In most cases, mounting brackets include cosmetic front panels to fit the receiver into the factory mounting location when it is larger than the receiver's front panel dimensions. Mounting brackets and front panels are usually black in color and constructed of high-impact ABS plastic. Mounting brackets are specific to vehicle brands and, in some cases, the year, model, and factory options. For example, a different mounting kit may be required depending on whether the vehicle includes a factory navigation option or not. Some vehicles only require new brackets (which attach to the side of the receiver), and reuse the factory dash panel because the opening is a direct fit. Other vehicles require a mounting bracket with a front panel to fit the receiver in an oversized factory dash opening.

Mounting Bracket Examples



Honda Pilot Bracket and Panel with Storage Pocket (2009-2011)



Nissan Cube Bracket and Storage Pocket (2010-2011)



Nissan Altima Bracket and Front Panel (2002-2006)

Dash Panel Kits

Vehicles with complex dashboard layouts often require a complete replacement panel called a dash panel kit. These kits allow the receiver to fit securely into a Single-DIN or Double-DIN opening and provide a factory-like fit and appearance. Dash panel kits are generally constructed of the same plastics as the factory panels and finished in a matching color and texture. Dash panel kits are specific to the vehicle year, make, model, and interior color or trim package. Dash kit manufacturer websites like **Scosche** or **Metra** provide specific information about whether your vehicle requires a dash panel kit.

Dash Panel Kit Example



2010-2011 Chevy Camaro Dash Panel with Integrated Replacement Heater/AC Controls



Factory Stereo



Aftermarket Receiver

Installation Accessories - Wiring

Wiring Harness Adapters

Wiring harness adapters are required to install a receiver into a vehicle without cutting the factory wires. Each vehicle make/model has a specific harness adapter that can be purchased for any receiver installation. To integrate more complex vehicle electronics, such as an OnStar safety system or a factory amplifier, some wiring harness adapters include an interface (small box with electronics inside). These devices ensure there is no loss of factory-installed features.

Antenna Adapters

Many vehicles have a non-standard AM/FM antenna plug that requires an adapter to mate with the standardized AM/FM jack of an aftermarket receiver.

Wiring Harness and Antenna Adapter Examples



2006-2011 Chrysler/Dodge
Wiring Harness Adapter



GM (Select Vehicles) OnStar Retention
Adapter and Interface Harness



Lexus (Select Models)
Antenna Adapter



VW, Audi, BMW (Select Models)
Antenna Adapter



1988-2011 GM
Antenna Adapter

Steering Wheel Control (SWC) Adapters

Retaining steering wheel stereo control functions requires a steering wheel control (SWC) adapter when replacing the factory stereo with a new receiver. The SWC adapter connects to vehicle wiring and the back of the receiver with a mini-jack. Installation may require 'learning' or programming commands from the steering wheel buttons to the adapter in order for the commands to operate the correct functions on the receiver. Some SWC units are pre-programmed or easily matched to the vehicle and receiver via dipswitch selection on the unit.



Caution:

Always ensure that your brand and model of receiver supports an SWC adapter, as well as the specific brand and model of steering wheel control adapter you plan to use. Most major brands allow SWC adapters.

Steering Wheel Control (SWC) Adapter Example



Steering Wheel Control (SWC) Adapter with mini jack output and a wired mini-jack adapter for SWC capable receivers lacking an SWC plug

Dash Disassembly

Dash kits and mounting brackets often include dash disassembly instructions. If specific disassembly instructions do not exist, follow the guidelines in this section.

Safe Storage and Hardware Management

Prior to dash disassembly, choose a safe place to store the panel pieces you will remove to avoid scratches or other panel damage. Do not store panels underneath the car or on the roof. Keep screws and hardware in clearly marked plastic bags or containers. Labels should indicate where the hardware came from, such as the driver's side under dash panel or center console. This ensures that each part goes back in the right place during reassembly.

Removing Dash Panels

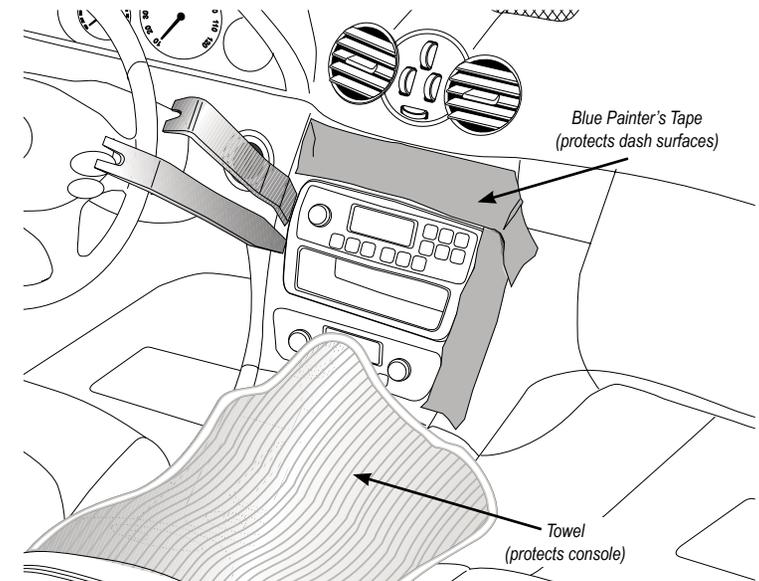
Observe these guidelines when removing hardware that attaches the dash panel and/or stereo trim:

- Do not use screwdrivers to pry off plastic and upholstered panels. This will scratch or gouge the panels.
- Always use a plastic pry tool to remove panels. Wedge the pry tool into the panel seam and gently pry to release the panel clip(s).
- Determine which panel is underneath, or on top, or if the panels are fit together with hidden clips. Look for seams between panels where one panel ends and another begins. This may require disassembly of one or more surrounding panels before you can remove the main factory stereo panel.
- Look for hidden hardware behind switch panels, ashtrays, or in A/C vents. When prying the panel off, be aware of any panel areas that are still attached. There may be hidden screws in place.
- Wherever possible, use the manufacturer supplied dash kit or mounting bracket instructions that describe the specific steps to remove the dash panel.
- Review the product installation instructions for additional information about vehicle disassembly requirements, such as a GPS antenna for navigation receivers or satellite radio antenna for "SAT Ready" or "SiriusXM Ready" receivers.

Note: Note: Most mounting brackets and dash kits include instructions for dash disassembly for the specific makes and models of cars. This is the best resource for specific instructions for dash disassembly of your vehicle. Dash kit manufacturer websites like **Scosche** or **Metra** provide information on dash panel kits and vehicles that require these devices.



Plastic storage bags provide an easy method to keep track of all hardware removed from vehicle panels.



Carefully pry panels with plastic (non-scratching) pry tools after all hardware securing dash panels is removed.

General Wiring Information

Connect Wiring Harness Adapter to Receiver Harness

A wiring harness adapter provides a plug-in connection to the vehicle's wiring. This step requires crimping or soldering to connect the receiver's wiring harness to the wiring harness adapter. Standardized color coding makes this process easy. Be sure to follow the directions included with the wiring harness adapter and receiver installation instructions. Ensure that you have the correct wiring harness adapter for the specific year, make, and model of your vehicle. Use the chart below to reference standardized colors of wiring harness adapters with the functions of your receiver wiring harness colors. In most instances, the colors match.

Color	Function	Polarity	Description
Yellow	Constant Power	Positive (+)	Supplies 12 volt power when the ignition switch is in the off position
Red	Accessory Power +	Positive (+)	Supplies 12 volt power when the ignition switch is in the accessory position
Black	Chassis Ground -	Negative (-)	Connected to chassis ground through a metal part of the vehicle
Gray	Right Front +	Speaker +	Connected to the positive terminal on the Right Front speaker
Gray/Black	Right Front -	Speaker -	Connected to the negative terminal on the Right Front speaker
White	Left Front +	Speaker +	Connected to the positive terminal on the Left Front speaker
White/Black	Left Front -	Speaker -	Connected to the negative terminal on the Left Front speaker
Violet	Right Rear +	Speaker +	Connected to the positive terminal on the Right Rear speaker
Violet/Black	Right Rear -	Speaker -	Connected to the negative terminal on the Right Rear speaker
Green	Left Rear +	Speaker +	Connected to the positive terminal on the Left Rear speaker
Green/Black	Left Rear -	Speaker -	Connected to the negative terminal on the Left Rear speaker
Blue	Power Antenna +	Positive (+)	Supplies 12 volt power whenever the AM/FM tuner is on
Blue/White	Remote turn on +	Positive (+)	Supplies 12 volt power whenever the receiver is on (connect to amplifier turn on wire)
Orange	Illumination +	Positive (+)	12 volts are supplied to the receiver when the parking lights are on
Orange/White	Dimmer +	Positive (+)	1-12 volts are supplied to the receiver lighting following the dash light dimmer control position
Yellow/Black	Mute -	Negative (-)	Mutes the radio when a ground is applied
No Color Standard	Parking Brake -	Negative (-)	Supplies a ground signal when the parking brake is set to disable viewing video content on receiver

Connect Antenna Adapter

Most vehicles require an antenna adapter to adapt the vehicle's AM/FM antenna plug to the receiver's AM/FM antenna input plug. Installation is straightforward; however, always ensure you have the correct antenna adapter for the specific year, make, and model of your vehicle.

- 1) Connect the antenna adapter to the vehicle's AM/FM antenna connector. Use the instructions supplied with the antenna adapter to identify the appropriate factory plug among the existing wiring.
- 2) The opposite end of the antenna adapter provides a standard AM/FM connector that will connect to the receiver when it goes into the dash.

Connect Steering Wheel Control (SWC) Adapter

Vehicles with factory steering wheel control buttons that perform audio functions require a steering wheel control (SWC) adapter and a compatible receiver to retain factory-like functionality. The SWC adapter can be specific to a vehicle and receiver brand or programmable to a specific vehicle and receiver brand. Most receivers allow external SWC command input via mini-jack input on the back of the receiver. Always ensure that you have the correct SWC adapter for the specific year, make, and model of your vehicle, or that a multi-vehicle, multi-brand receiver SWC unit covers your vehicle and receiver brand.

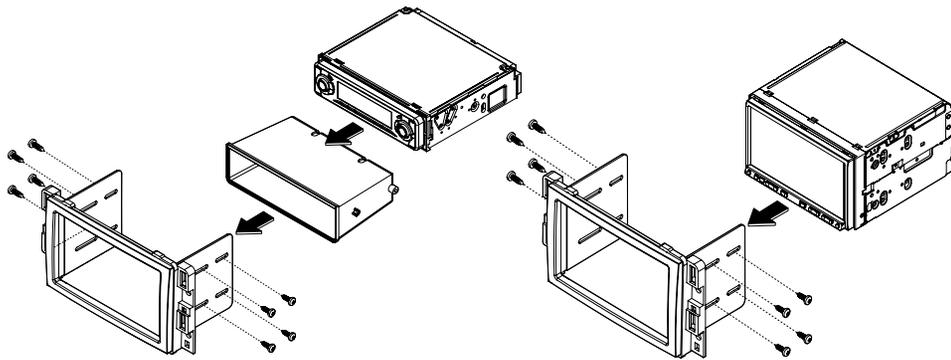
- 1) Connect power to the SWC adapter as indicated in the instructions. This connection often shares the same (red) accessory wire provided in the factory wiring harness adapter.
- 2) Connect chassis ground to the SWC adapter as indicated. This connection often shares the same (black) chassis ground wire provided in the factory wiring harness adapter.
- 3) Connect the SWC adapter's input wires to the vehicle following the supplied instructions. Depending on the vehicle, this may be one or two wires.
- 4) Connect the SWC adapter's output to the receiver. Refer to the receiver's installation manual to determine which input the receiver includes.
 - a. *If a mini-jack is present:* Plug in the mini-jack connector from the SWC adapter to the receiver's SWC/remote control input on the back panel.
 - b. *If a wired input is present:* Connect the SWC output wiring to a wire on the receiver's wiring harness labeled "Remote Control," "EXT Control," or "Steering Wheel Control."
- 5) Keep the SWC interface accessible to program or verify operation by visually identifying any flashing LED lights on the unit. Refer to the SWC installation manual for specific details about programming or 'learning' procedures. This allows the SWC interface to match the vehicle's SWC commands with the receiver's corresponding functions.

Mounting Bracket or Dash Kit Assembly

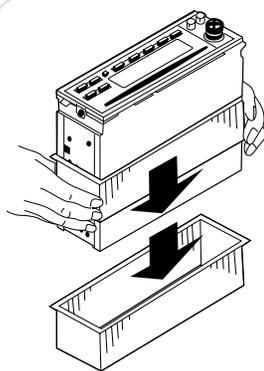
In most installations, the new receiver mounts the same way, or similarly, to the factory stereo mounts. Review these guidelines on mounting with brackets and dash kits.

Mounting Bracket Assembly

Many import vehicles such as Toyota, Nissan, Kia, Isuzu, and Mitsubishi have factory Single-DIN or Double-DIN stereos with removable factory mounting brackets that easily attach to a new receiver. If an accessory mounting bracket/kit assembly is needed, follow the instructions provided with the bracket or kit. These accessory brackets often combine side mounting tabs with a front panel assembly to mount the supplied rectangular Single-DIN or Double-DIN bracket into the oversized dash opening and provide the necessary support for the receiver.



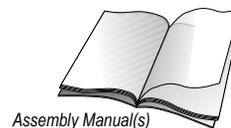
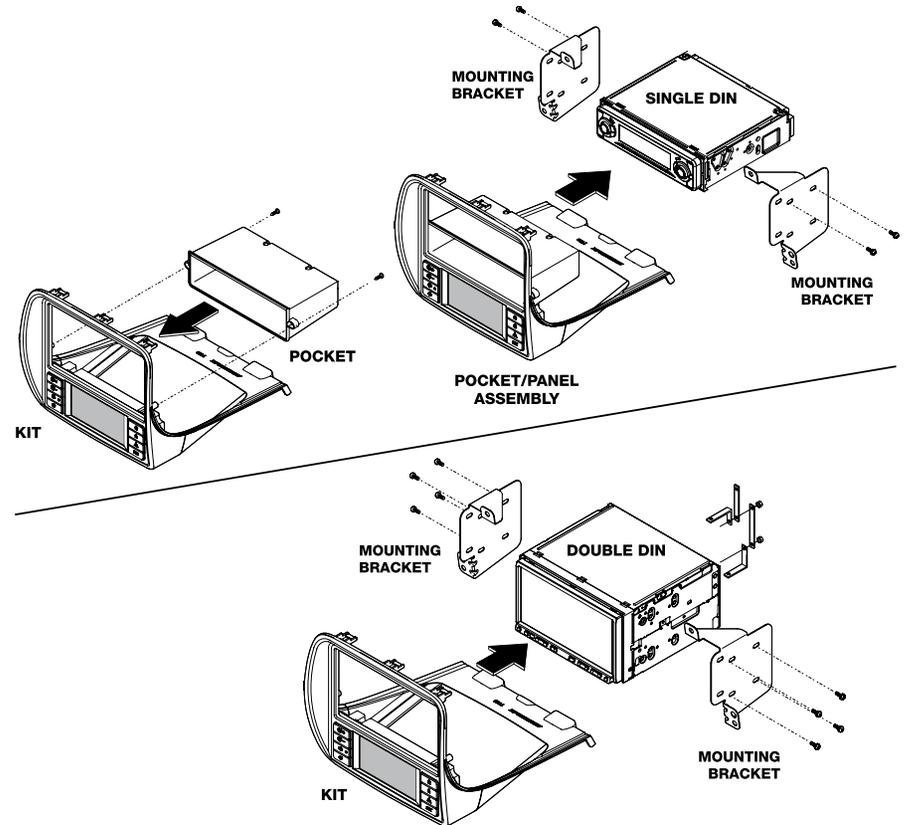
Examples of Single-DIN and Double-DIN receivers installing into a mounting bracket and securing with side-mounted hardware.



Some mounting brackets with front panels may specify the DIN or Double-DIN mounting 'cage' install into the front panel opening of the bracket and then the receiver slides and locks into the cage. Once complete, the mounting bracket with receiver installs in the dash securing to factory mounting points similar to the factory stereo.

Dash Kit Assembly

Most vehicles with an irregularly shaped factory stereo or integrated dash panel require a vehicle specific dash kit assembly to complete the receiver mounting. Matching the new receiver's faceplate to the factory panel Single-DIN or Double-DIN opening may require specific mounting brackets and a cosmetic dash panel.



Assembly Manual(s)

Note: Follow the specific instructions included with the mounting bracket or dash panel for best results.

Finishing the Installation

Connect the Receiver

With tools and installation accessories prepared, you are ready to connect the receiver.

- 1) Plug the connected wiring/receiver harness into the receiver and plug the other end into the factory wiring.
- 2) Connect the vehicle's AM/FM antenna into the AM/FM antenna input on the receiver.
- 3) If connecting amplifiers, connect RCA audio cables to the corresponding 'FRONT', 'REAR' and/or 'SUB' preamp outputs.
Note: If a subwoofer amplifier is used, use the 'SUB OUT' of the receiver unless you are using a low pass crossover already built into the amplifier, in which case use the FRONT, REAR or NON-FADING (if equipped) preamp output to provide input signal to the subwoofer amplifier.
- 4) If adding satellite radio, connect satellite radio tuner data cables.
- 5) If connecting an SWC adapter, connect the SWC adapter output to the back of receiver. Leave enough wire on the adapter so that the SWC module is accessible to validate programming once the receiver is powered up.
- 6) Set the receiver in the dash location, but do not permanently mount it yet. Inspect any wiring or plugs in the testing process before permanently mounting the receiver.

Test the Receiver

- 1) Turn the key to the ACC position and turn on the receiver.
- 2) Play a source such as a CD or the AM/FM radio.
- 3) Check the audio balance left to right to ensure it is working. When balanced to the left, only the left speaker(s) should play. When balanced to the right, only the right speaker(s) should play. In the center position, both left and right speakers should play.
- 4) If using both front and rear speakers, check the fader front to rear and ensure it is working. When faded to the front, only the front speakers should play. When faded to the rear, only the rear speakers should play. In the center position, both front and rear speakers should play.
- 5) Switch sources, such as from CD to AM/FM to ensure sound plays from a different source.
- 6) If a steering wheel control (SWC) adapter is installed, program the adapter according to the manufacturer's instructions.

Review the receiver owner's manual for specific instructions on settings such as sound enhancement features, built-in crossovers, or subwoofer output settings.

Mounting and Reassembly

Once testing verifies proper receiver operation, finish mounting the receiver, and reassemble the dash area.

- 1) Mount the receiver with brackets or dash kit assembly (if applicable), or slide the receiver into the supplied Single-DIN or Double-DIN bracket until it locks into place.
- 2) Attach the supplied cosmetic trim ring around the receiver (if applicable).
- 3) Reassemble any parts of the vehicle removed during the receiver installation including all dash panels and cosmetic trim.
- 4) Verify that all wiring is securely tied down with zip ties and routed away from moving parts or heat sources.