

Saab KENWOOD Infotainment Upgrade

1999-2005 Saab 9-5 Installation Guide for cars without factory Navigation radios



HEDIN PARTS

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Original

Kenwood DMX 7709S

Product highlights: General features:

- 13-band graphic EQ
- digital time alignment
- Drive EQ boosts frequencies that are affected by road noise
- 2- and 3-way crossover

Expandability:

- Optional SiriusXM satellite radio tuner (additional module required)
- Optional Rear, Front Cameras (additional camera(s) required)
- inputs: front- and rear-camera inputs, USB-A cable input, rear micro-HDMI input, rear analog 3.5 mm A/V input (configurable for a third camera input)
- outputs: rear analog video output (RCA), 6-channel preamp outputs (4-volt front, rear, sub)
- digital multimedia player with AM/FM tuner
- plays media loaded with MP3, WMA, and AAC music files (plus high-res WAV and FLAC)
- 6.75" capacitive touchscreen display
- Waze-ready with Apple CarPlay or Android Auto
- electronic viewing angle display adjustment (touchscreen does not physically move)
- front-panel controls with variable color illumination

Smartphone features:

- display and command of select music, navigation, and other apps with iPhone and Android
- wired Android Auto compatible with Google Assistant when using Android Auto
- wired Apple CarPlay compatible Siri Eyes Free control for select iPhones
- wired USB mirroring for select Android devices
- wired micro-HDMI mirroring for select Apple smartphones (cables sold separately)
- built-in Bluetooth with dual phone connection for hands-free calling and music streaming
- built-in iPhone and rapid Android charging via USB port (1.5 amps)

Other information:

- wired connection to parking brake required to access settings and other features on this receiver (the brake must be connected and set for video display)
- built-in amplifier (22 watts RMS/50 peak x 4 channels)
- compatible with most factory steering wheel audio controls



Kenwood DMX 7709S

88800080 1999-2005 OG 9-5 kit Contents:

Kenwood DMX 7709s

9-5 Faceplate with textured surround

Steering wheel control interface Module

CTampassthrough- speaker adapter

CTmultilead - steering adapter

AM/FM Antenna Adapter

Tools Needed for Basic Installation (incl SiriusXM)

Plastic trim tools

Pocket screwdriver (slotted)

#2 Phillips screwdriver

Wire cutters/crimper

Tin snips (straight) or similar needed to modify the basket

Electrical tape/butt connectors

Optional: Flat black spray paint.



Optional Equipment: Available at Crutchfield or other retailers.

SiriusXM Tuner SXV300



Kenwood Rear Camera CMOS-230



USB 3.0 port extension



Optix Camera TLP150HDW

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Radio tools may be in the owner's book or glovebox.



Removal of OEM radio

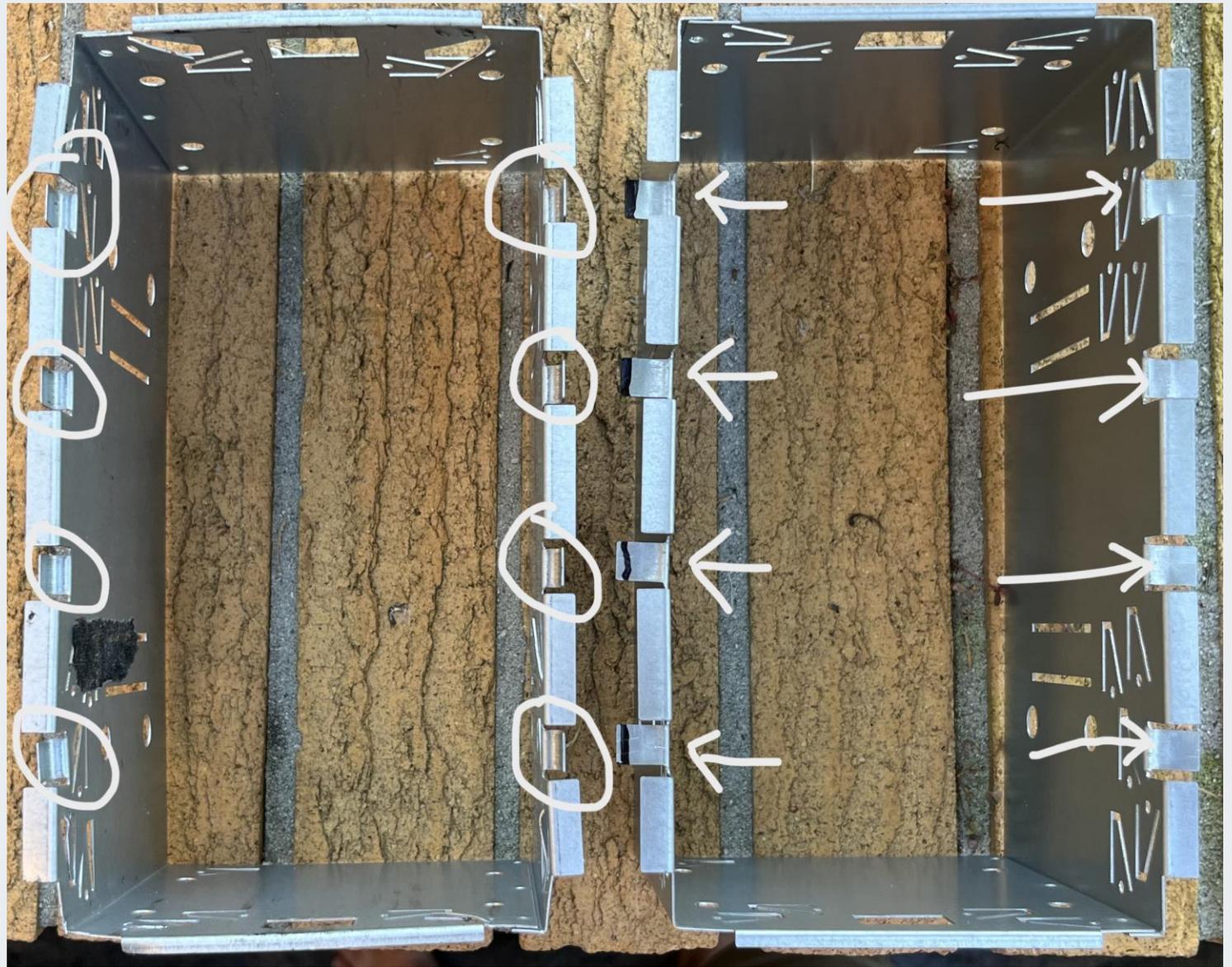
1. The OEM radio does not need to be Divorced from the car prior to installation
2. Start the installation by removing the Radio, ACC and SID panels. In that order.
3. To remove the radio, insert the U-shaped radio tools into the provided holes until a click is heard.
4. Extract the radio using the tool handles. Disconnect all radio wiring. It may help to pull on the radio as you remove it.
5. To remove the ACC panel, insert your hand into the dash and pull towards you. Disconnect the ACC connector
6. To remove the SID panel, insert your hand into the dash and pull towards you. Disconnect the SID connector
7. Remove the radio basket and disconnect the wiring.

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Preparation for Kenwood radio

For the radio to sit flush with the dash panel we need to modify the included radio basket. Start by straightening the small bent over tabs on the basket as shown.

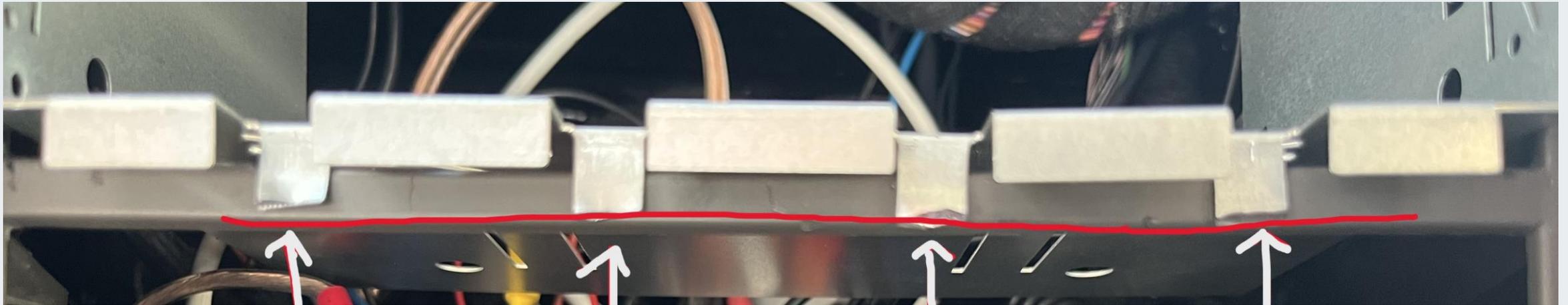
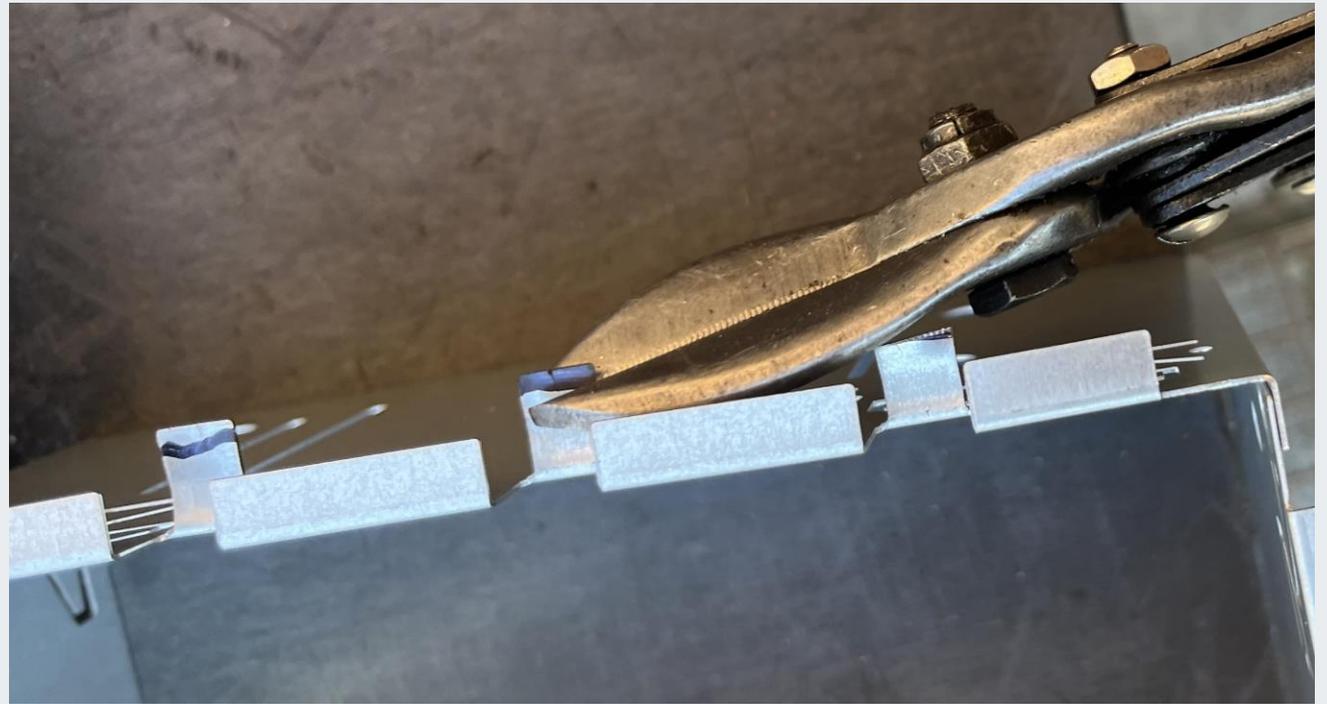
NOTE: If you do not alter the basket, the radio will sit further into the dash opening. This mod is strictly for aesthetics.



Kenwood DMX 7709S

Preparation for Kenwood radio

Using tin snips trim approximately 2 mm. from the top of each tab we bent up. The purpose is to create a small gap so that the ACC and SID panels still fit tightly to the radio. Look at the picture below to see how the trimmed tabs should fit. We cannot have them intruding into the ACC/SID panel slots, but they cannot be too short as to not engage the panel.



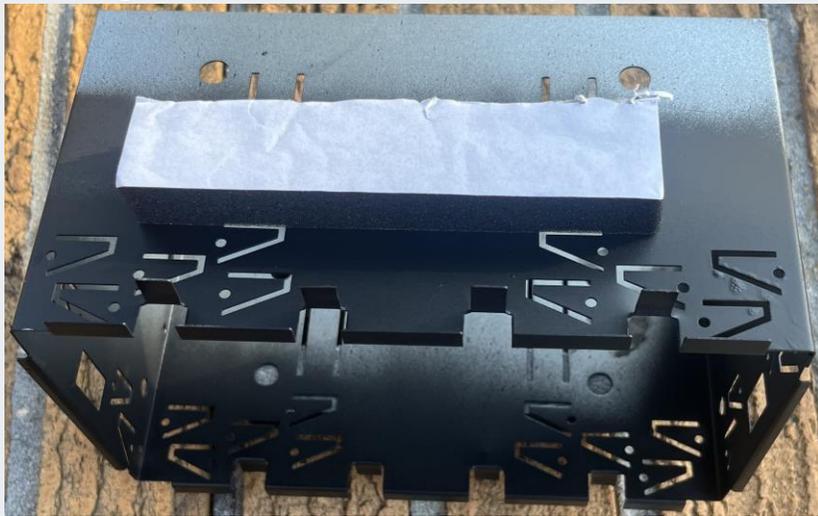
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Preparation for Kenwood radio

Optional: Paint the front of the basket flat black to hide any shiny metal from peaking through around the facia. Attach the foam strips found in the kit to the top and bottom of the basket approximately 2 inches from the front edge. . This mod is strictly for aesthetics.



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Preparation for Kenwood radio

Test fit the basket to make sure the upper and lower tabs are trimmed to the correct length. Test fit the ACC and SID to insure there is enough clearance to be able to fit the modules and clear the basket.

The basket will set forward slightly and we need this clearance to be able to make the radio sit flush.

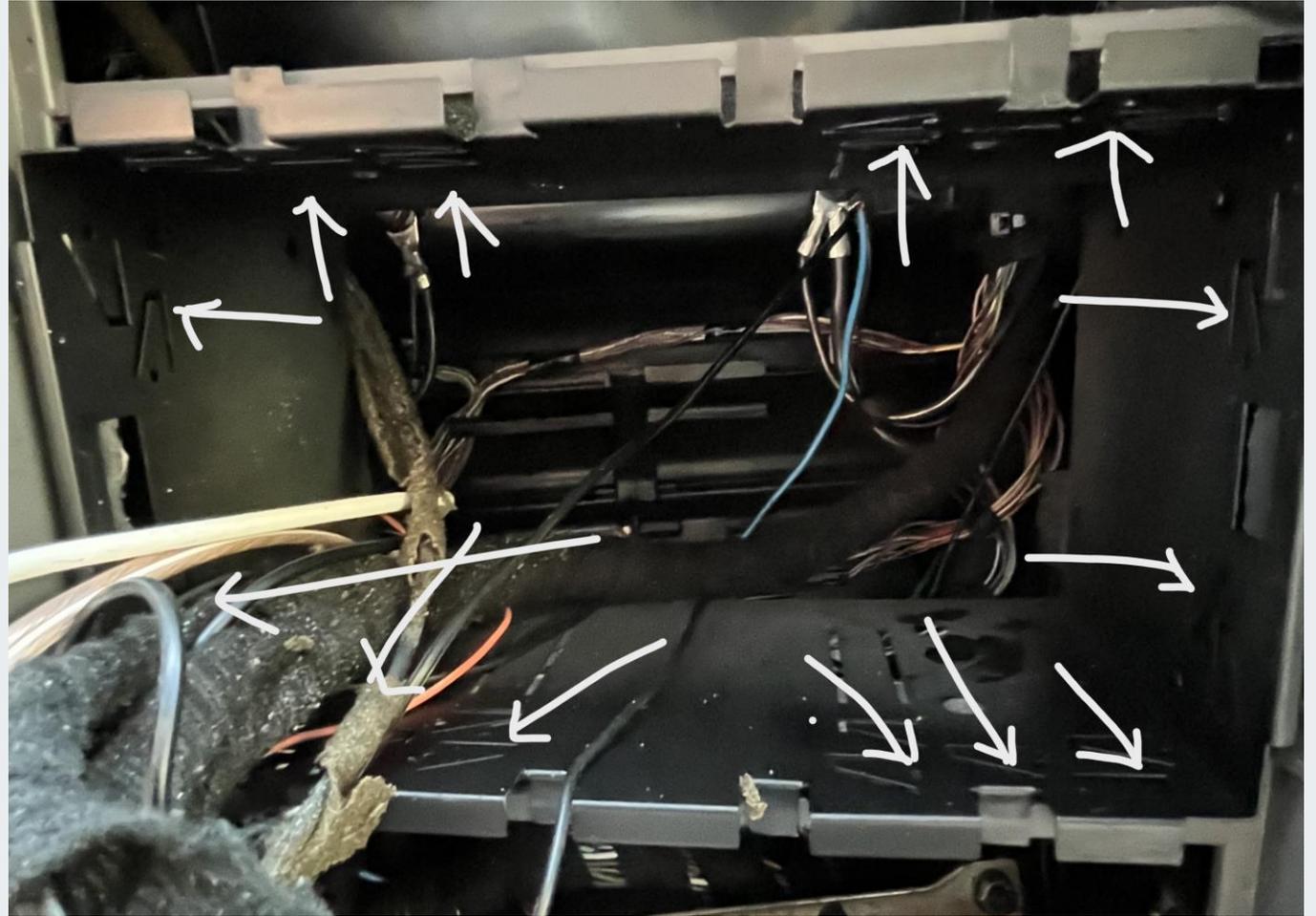
Once the fit has been confirmed bend the tabs on the basket into position to hold the basket in place.



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Preparation for Kenwood radio

Once the fit has been confirmed bend the triangle shaped retention tabs in the basket into position against the backside of the dash panel to hold the basket in place.



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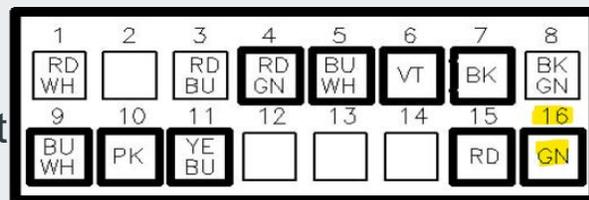
Installation Tips

Optional: Not part of the standard installation.

To use the auto dimming feature to dim the display when the headlights are on. Locate the orange wire marked ILLUMI on the Kenwood pigtail. Tap the orange ILLUMI wire into the cigarette lighter illumination circuit in the center console below the ACC panel. The Radio display setting will need to be changed in the radio as the auto dimming default is OFF.

It is possible to have the radio play with the key in the OFF position as to not drain the battery as fast as the ON position. This requires locating the RED +15 (switched 12V) wire in the C2 harness going to the radio. Cut that wire and splice it to run a new wire to the headlamp switch to access +X power at pin 16 GN (green wire) +X on the OG9-5 is hot in all positions except LOCK. The headlamps must be turned off or they will drain the battery. +X is also at pin 2 at the ignition switch. This wire can be ran when you are installing the microphone wiring. NOTE: THE STEERING WHEEL CONTROLS DO NOT WORK WITH THE IGNITION SWITCH IN THE OFF POSITION

Headlamp switch pin out



When installing the rear-view camera, the wiring can be run to the rear of the car under the headliner

Saab background screens can be found in the reference library or this

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picture could be saved and used

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Preparation for Kenwood radio Installation Notes:

The **USB port** can be left hanging in the cubby below the ACC, out the front of the console buttons or ran to the center console using an extension cable.

The **microphone** wire can be run across the MIU, behind the A pillar and mounted to the top using the clip.

SiriusXM users install the **XM module and antenna** into dash area behind radio. Use double face tape to secure the antenna to the top of one of the climate ducts

When installing the optional Rear Camera those harness need to be installed before the radio is mounted.

The Reverse Camera signal enable could be taken off one of the reverse lights. Run a wire lead from the reverse lamps to the radio when you are installing the camera harness to the (purple/white) labeled REVERSE. To provide power to the camera use the 12v switched power (+15) from fuse 21 in the dash fuse panel. This voltage is also found at pin 2 (RD/BU wire) at the large connector on the back of the radio harness.

The camera harness can be routed across the MIU, up the drivers A pillar and along/under the headliner to the back of the car with minimal work.

The rear camera can be mounted to the bottom of the rear trunk handle area in a suitable location.

If no camera is installed connect the light green PRK SW wire to a constant ground. If a camera is used run that wire to the emergency brake switch.

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WIRING KEY Connects2

IN WIRING HARNESS

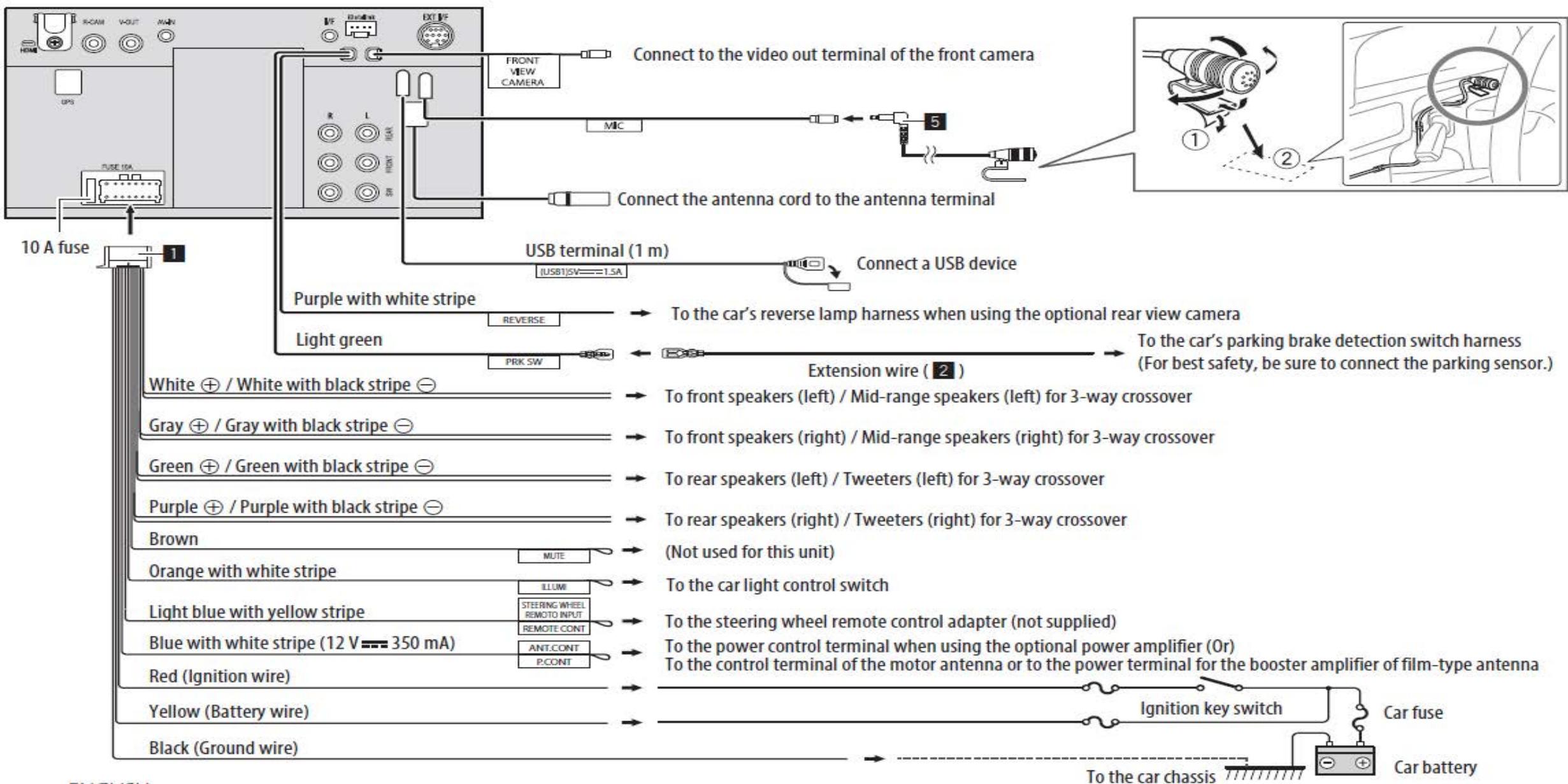
Purple	Right Rear Speaker +	Yellow	Permanent 12V
Purple/Black	Right Rear Speaker -	Black	Ground
Green	Left Rear Speaker +	Red	Ignition 12V
Green/Black	Left Rear Speaker -	Orange	Illumination
Grey	Right Front Speaker +		
Grey/Black	Right Front Speaker -		
White	Left Front Speaker +		
White/Black	Left Front Speaker -		

ADDITIONAL CONNECTIONS

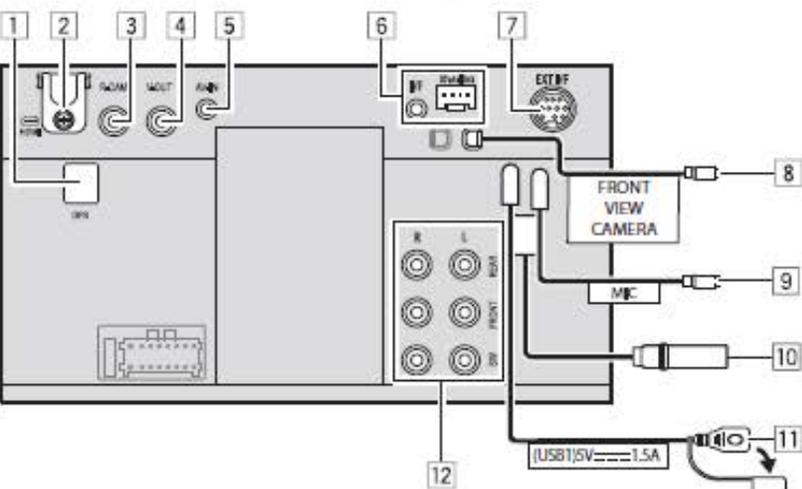
Pink	Speed Pulse
Green	Park Brake
Purple	Reverse Gear
Blue	Amp Remote

Installation and Connection

Wiring connection



Connecting external components



- 1 GPS antenna input (GPS) (page 56)
- 2 HDMI terminal
- 3 Rear view camera input (R-CAM)
- 4 Video output (V-OUT)
- 5 Audio video input (AV-IN)
- 6 iDatalink input for connecting an ADS adapter (commercially available)
- 7 Expansion port for connecting SiriusXM Connect Vehicle Tuner (EXT I/F) (commercially available)
- 8 Front view camera input
- 9 Microphone input (MIC) (page 58)
- 10 Antenna terminal
- 11 USB terminal
- 12 Output terminals*
 - Left output (White)
 - Right output (Red)

REAR: Rear speaker preouts

FRONT: Front speaker preouts

SW: Subwoofer preouts

For 3-way crossover:

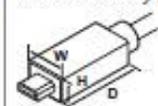
REAR: Tweeter preouts

FRONT: Mid range speaker preouts

SW: Subwoofer preouts

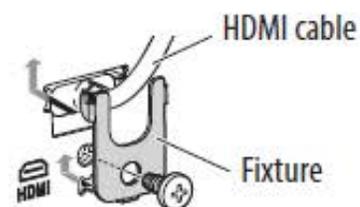
* When connecting an external amplifier, connect its ground wire to the chassis of the car; otherwise the unit may be damaged.

- 2 Use HDMI cable KCA-HD200 (optional accessory).

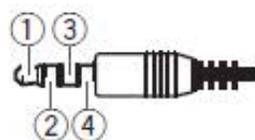


W: 11.1 mm or less
H: 7.7 mm or less
D: 21.5 mm or less

When you connect the cable to HDMI terminal, detach the fixture. After connecting the cable, attach the fixture back using the screw.

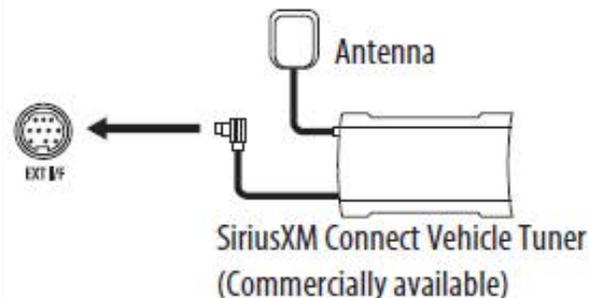


- 5 Connect the following type of 4-pole mini plug:



- 1 Left audio
- 2 Right audio
- 3 Ground
- 4 Composite video

- 7



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Installation of Kenwood radio

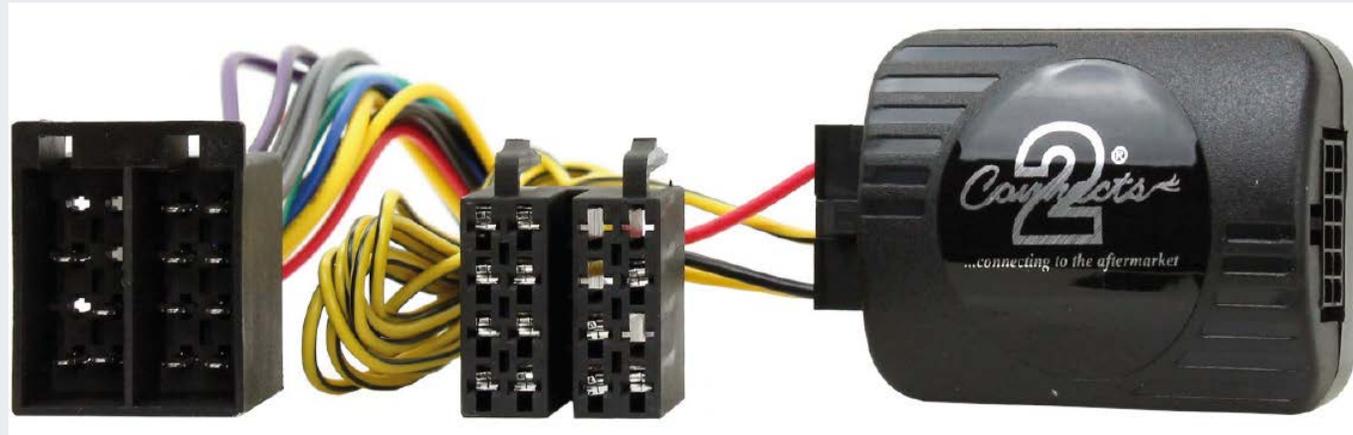
The CTAMPPASSTHROUGH amplifier adapter converts the Kenwood head unit's high-level audio output to a low-level audio signal which will work with the vehicle's original amplifier (reduces the output volume from the aftermarket stereo to the factory amp).

Not needed with non amplified vehicle.



The ISO 8 pin connectors will match up to the vehicles harness after our modifications.

Note the male and female sides



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Installation of Kenwood radio

Grab the CTMULTILEAD.2 harness and modify it as shown.

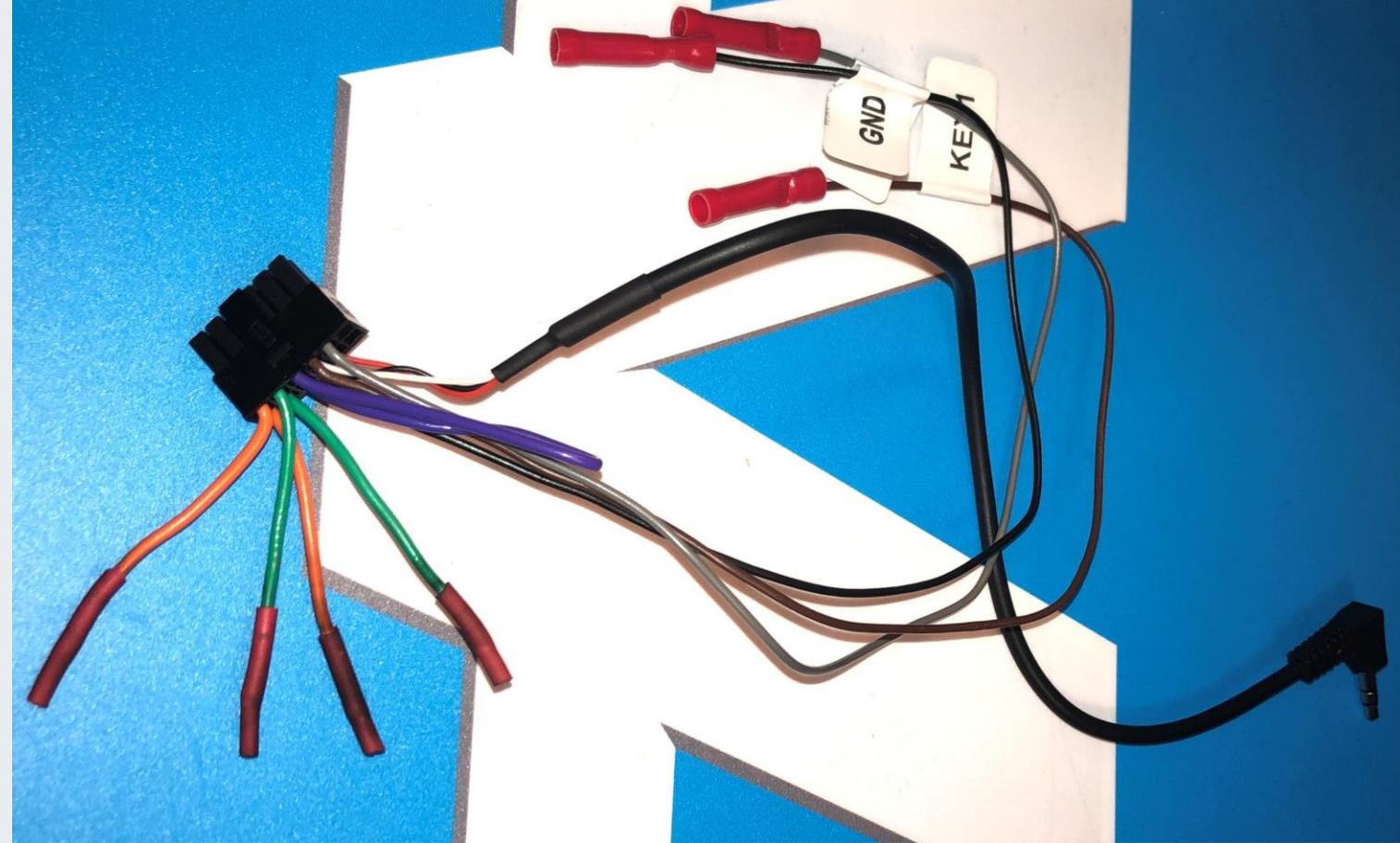
1. Snip the orange and green loops and cover the ends with tape.

Do not cut the purple wire loop

2. Cover the phono jack with tape

We only use the **KEY1** wire, it goes to the light blue with yellow stripe wire on the back of the radio harness labeled **STEERING WHEEL REMOTE INPUT**.

3. Tape up the remaining wires they are not used.



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Installation of Kenwood radio

Connect The C2 box last or the steering controls will not work.

1. SiriusXM install module and antenna into dash area behind radio. Use double face tape to secure to antenna to the top of one of the dash vents
2. **Navigation antenna** install into dash area behind radio. **Do not mount the antennas under any metal surface.** Use double face tape to secure. Mount the antenna on top of the plastic vent inside the dash.
3. Plug the radio side harness into the radio
4. Make sure both ISO connectors are connected.
5. Route the USB port harness into the dash cavity to the desired location or connect to an optional USB extension cable
6. Connect the brown wire labeled KEY1 in the CTMULTILEAD.2 harness to the light blue/yellow striped wire on the back of the radio harness labeled STEERING WHEEL REMOTE INPUT.
7. Connect any optional camera wiring before installing radio. **If no camera is installed connect the light green PRK SW wire to a constant ground. If a camera is used run that wire to the emergency brake switch.**

Plug the harness into the radio and the vehicle plug in the C2 box. The connectors are unique for each side.

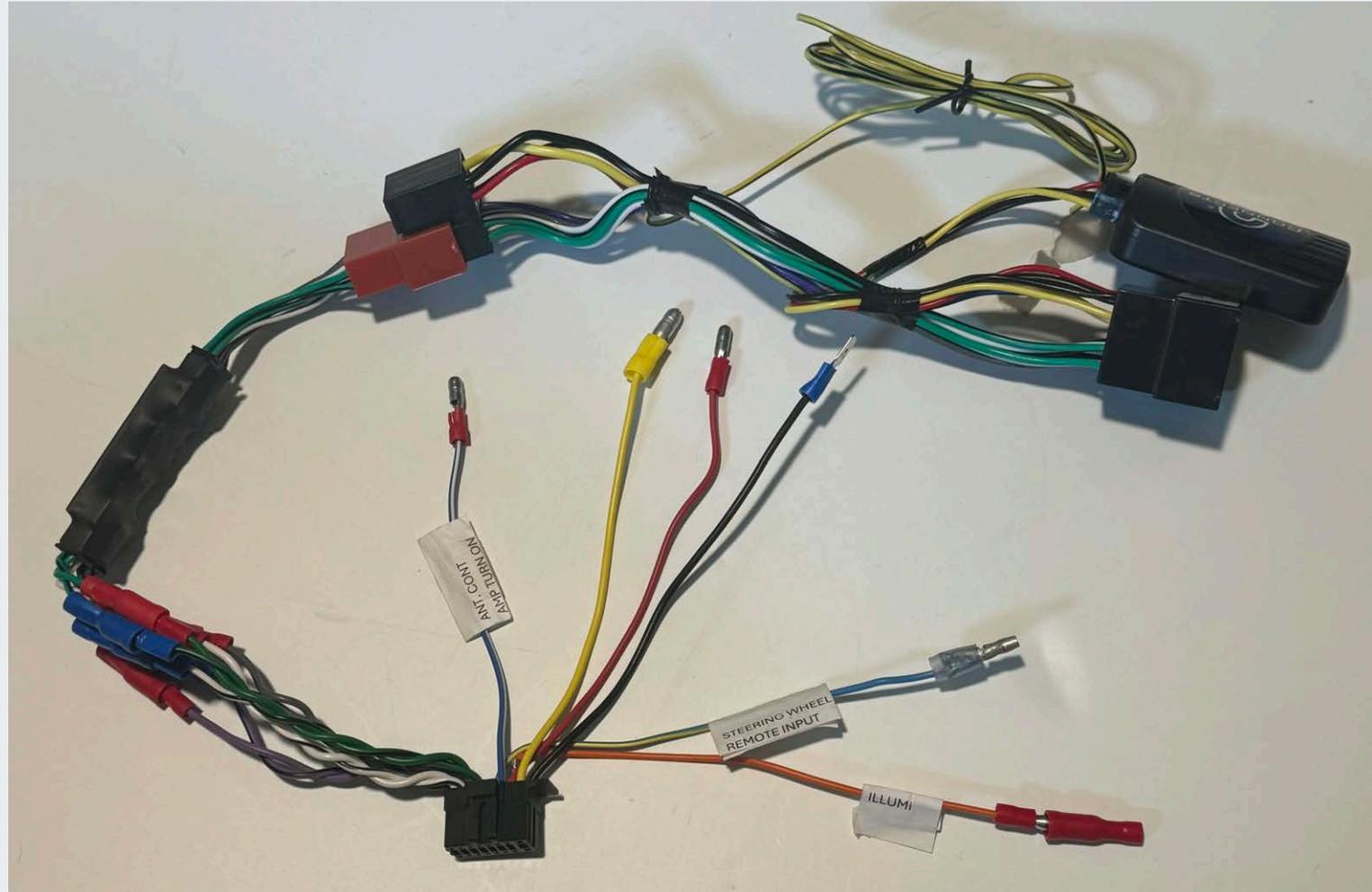
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Installation of Kenwood radio

Harness Preparation

Modifying the adapter harness to fit the 16 pin Kenwood connector-**speaker side**

- 1.Plug the MALE red CTAMPPASSTHROUGH amplifier adapter connector labeled LEAD 217BV2 into the unlabeled 8 pin female ISO connector. The wire colors should match.
- 2.Then cut off the FEMALE red connector labeled LEAD 217AV2.
- 3.Join those speaker wires color to color to the 16 pin Kenwood connector.



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Installation of Kenwood radio

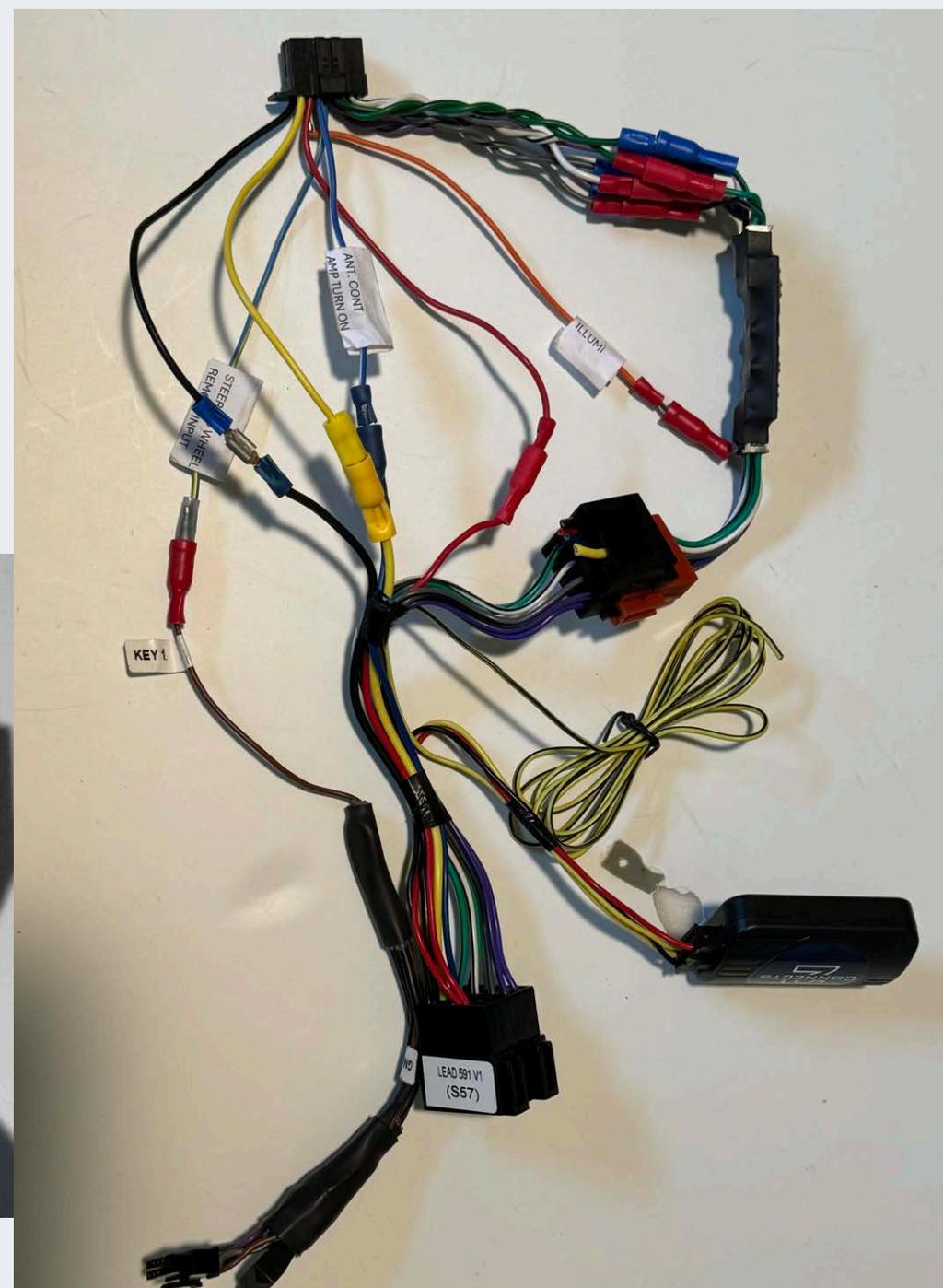
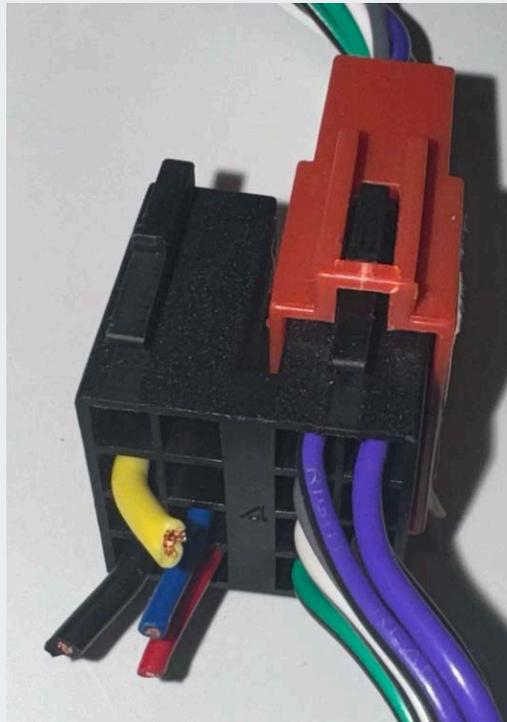
Harness Preparation

Modifying the adapter harness to fit the 16 pin Kenwood connector-**Power side**

Cut the Red, Yellow, Blue/White and Black wires from the other side of the same black ISO connector and splice those to the Kenwood connector

1. Yellow to Yellow Constant Power (+30)
2. Red to Red Switched power (+15)
3. Black to Black Ground
4. Blue to Blue/White ANT. CONTROL/AMP
5. Blue/Yellow Steering Wheel Remote Input to Brown Key 1 wire of the CTMULTILEAD harness we modified earlier.
6. **OPTIONAL** ILLUMI(Orange) dimmer to lighter illumination circuit (enables auto dimming)

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Installation of Kenwood radio

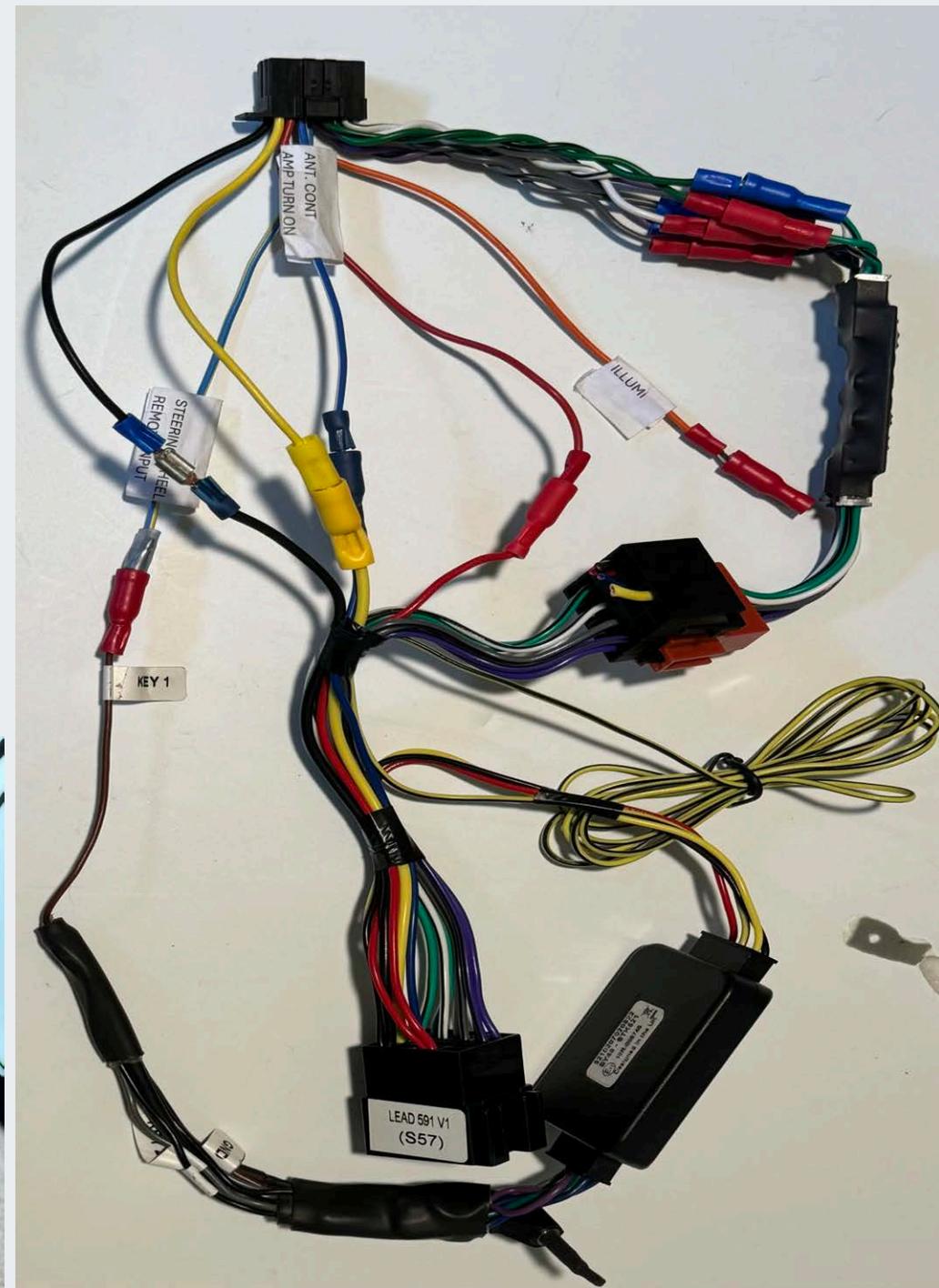
Connect the C2 box last or the steering controls will not work.

Harness shown ready to be installed into vehicle.

Leave the black module unplugged until the radio and vehicle side ISO connector is plugged in

Install the supplied (adapter for) AM/FM antenna.

The microphone wire can be run across the MIU, behind the A pillar and mounted to the top of the a pillar using the clip.



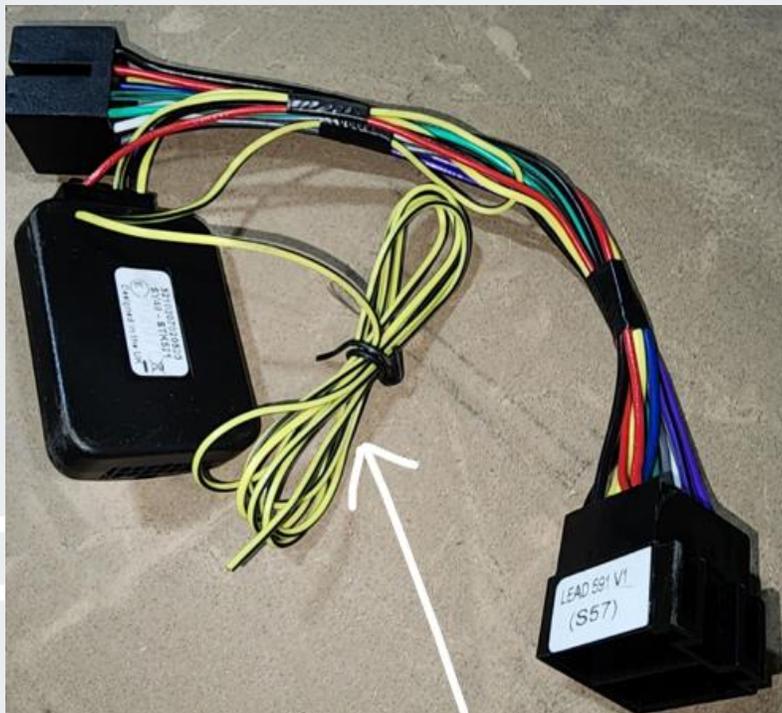
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Installation of Kenwood radio

Connect the LONG yellow/black wire of the C2 harness to the yellow/black wire at the base of the steering wheel. **Do not shorten this wire.**

Failure to follow this will cause the wrong action from the steering wheel controls when pressed.

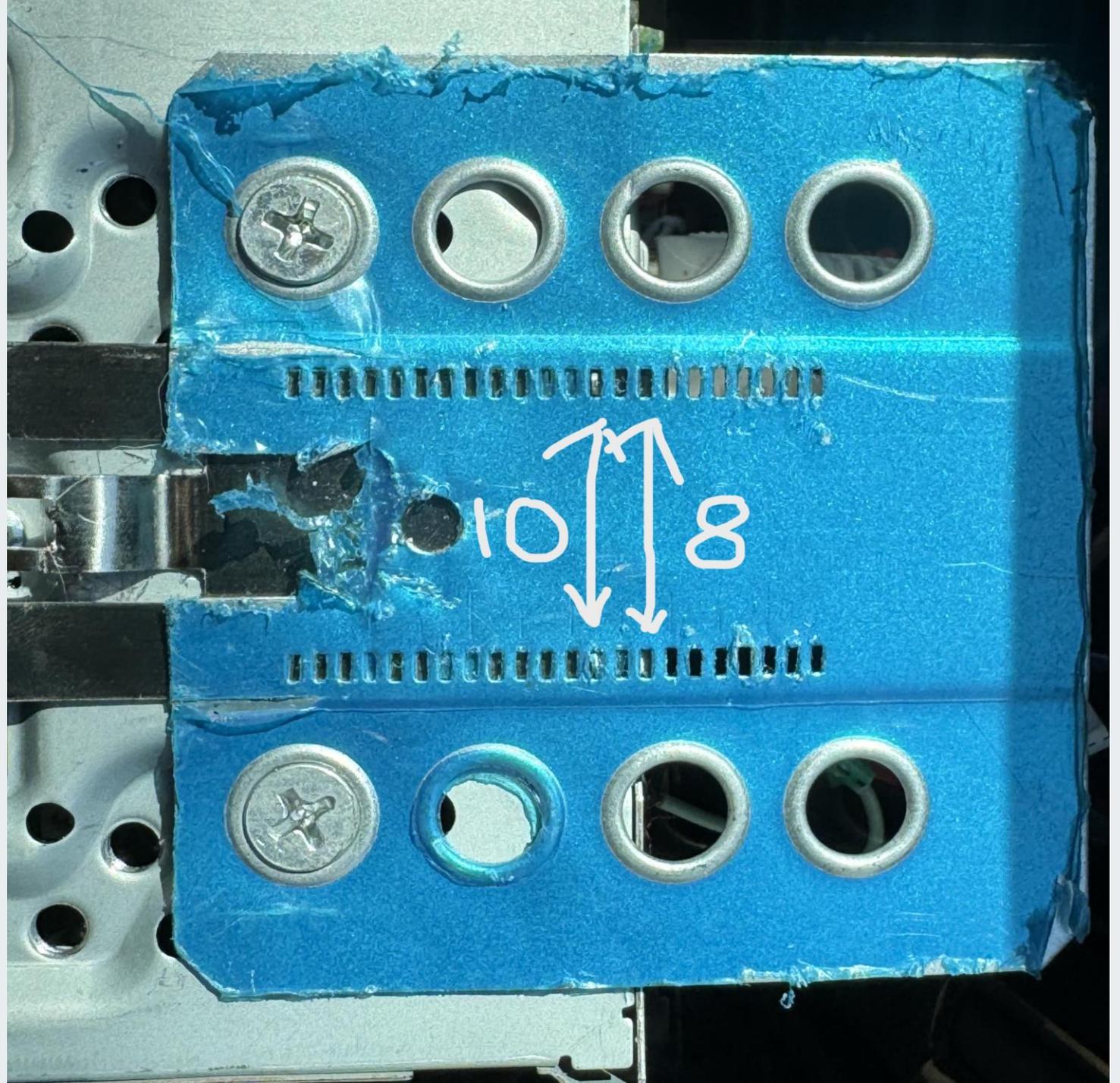


HEC

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Installation of Kenwood radio

Install the brackets onto the radio.
You may have to test fit to get the
right depth, so the radio sits flush.



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Installation of Kenwood radio: USB PORT

1. The USB port can be let hanging in the cubby hole area (cars w/o ashtray)
2. Through one of the blank plugs, (drilling/trimming required)
3. **OPTIONAL** Use an optional 3.0 extension to install a port in the center console area (cutting/drilling required)



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Installation of Kenwood radio

Once the ACC, SID and radio have been installed carefully attach the front faceplate to the radio. Be careful not to break any of the 4 retention tabs found on the faceplate. You may have to position the radio in the center of the SID/ACC somewhat to install flush. Insert the radio into the bracket before the ACC and SID

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Installation of Kenwood radio

Rear camera installation example.

The camera harness can be routed to the rear of the car underneath the edge of the headliner, then under/through the hinge cover and up into the rear panel. There is plenty of length.

The Reverse Camera signal enable could be taken off one of the reverse lights. Run a wire lead from the reverse lamps to the radio when you are installing the camera harness to the (purple/white) labeled REVERSE. To provide power to the camera use the 12v switched power (+15) from fuse 21 in the dash fuse panel. This voltage is also found at pin 2 (RD/BU wire) at the large connector on the back of the radio harness.

**If no camera is installed connect the light green PRK SW wire to a constant ground.
If a camera is used run that wire to the emergency brake switch.**

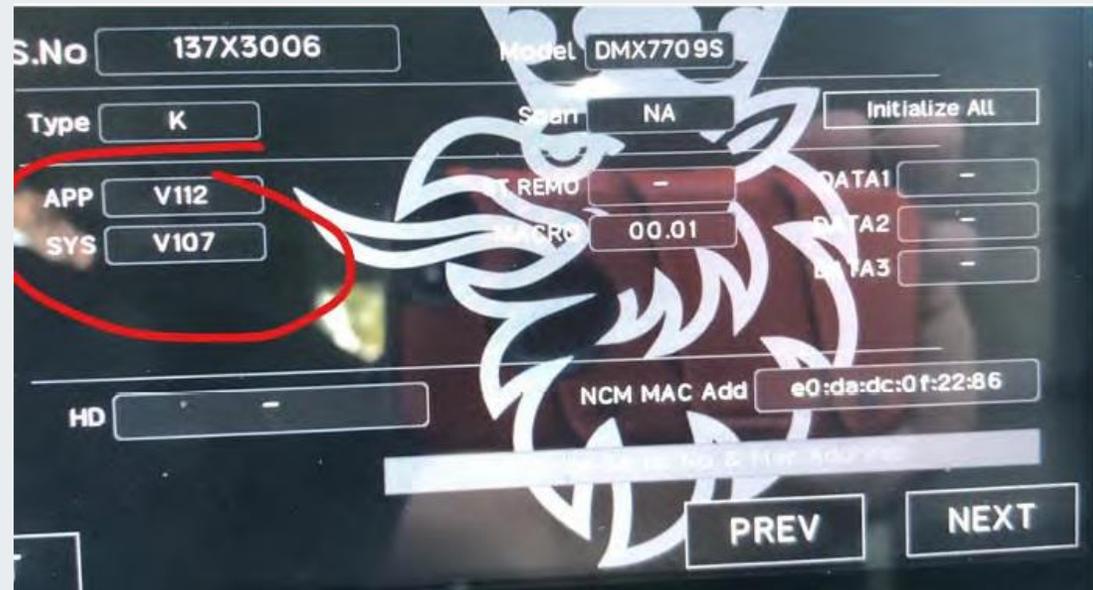


Kenwood DMX 7709S

Software check:

Make sure the radio is updated with the latest software and firmware.

1. Press the <HOME>. 🏠 icon
2. Touch the <Source> 📶 icon
3. Touch the <SETUP> ⚙️ icon
4. Touch the [System] tab
5. Enter the System Information screen. Always install the latest versions. Current APP is **V116** and SYS is **V112**
6. **ALWAYS INSTALL THE SYS UPDATE FIRST**



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Software check

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Firmware Reference April 2023

April 1, 2023 - Firmware Update Reference Guide

This is a simple chart & guide to help in identifying if a receiver has already been updated with the latest firmware as of 4-1-2023.

The below firmware versions can be referenced from the receiver's software information screen.

Receiver	Application Version	System Version	MCU Version
DMX8709S/809S	V115	No Updates	n/a
DMX7709S/709S	V114	V111	n/a
DDX5707S/57S	220124-V1.6.*.****	n/a	210521_1A or 210521_1B or 221207_1E
DMX4707S/47S	220121-V1.6.*.****	n/a	210521_1A or 210521_1B or 221207_1E

The below chart indicates any visible markings/indications on product or packaging.

Receiver	Serial #'s with Updated Firmware	Receiver Indication	Product Carton Indication	Master Pack Indication
DMX8709S/809S	088XXXXX +	None	Blue Dot / None*	Blue Dot / None*
DMX7709S/709S	078X0181 +	None	None	None
DDX5707S/57S	0770XXXX - 1770XXXX & 0680XXXX +	Yellow or Green Dot	Yellow or Green Dot	Yellow or Green Dot
DMX4707S/47S	0770XXXX - 1770XXXX & 0680XXXX +	Yellow or Green Dot	Yellow or Green Dot	Yellow or Green Dot

DMX4707S, DMX47S, DDX5707S, & DDX57S ONLY

These models WILL HAVE a yellow or green dot applied to the receiver, carton, and master pack.



DMX7709S & DMX709S ONLY

These models WILL NOT have any markings. Please reference the above firmware versions from the receiver's software info screen.

DMX8709S & DMX809S ONLY

*The updates applied to these models vary based upon production date. A blue dot applied to the carton and master pack indicates it's updated. No blue dot indicates it may or may not be updated, so you must verify by the receiver's serial # or software info screen.



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Software check

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2022 NAVIGATION/MULTIMEDIA Receiver Firmware Update Guide

Introduction

- This document describes the procedure and precautions for upgrading the 2022 NAVIGATION/MULTIMEDIA receiver firmware.
- If an error occurs while you are updating the firmware, the 2022 NAVIGATION/MULTIMEDIA receiver may become unusable. Be sure to read the following procedure and precautions carefully before updating the firmware.

Target Model and Firmware Version

The updater can be used for the firmware versions of the models shown below.

Target models	Target firmware versions → Updated versions	Updater file name (size)
DMX7095, DMX77095, DMX70225	Ver 110 or earlier → V111	22ENT_SYS.upd, upd_info.dat (1.7 MB)



- For how to check your firmware version, refer to "Checking the Firmware Version".

Work Flow

- Download the firmware files, and copy them to USB memory.
- Update the firmware. (It takes about 5 minutes.)
- Check that the firmware has been updated.

Creating the Update Media

Create the update media on your PC.

- Download the Updates from the Web site.
- Decompress the downloaded file.
- Copy the decompressed file to the top of hierarchy in USB memory.

Caution

- For updating, use a USB memory device with the specifications shown below. Updating is not possible on USB memory devices with other specifications.
USB Standard: USB 2.0
Capacity: 8 GB to 32 GB
File system: FAT 32



- Do not copy the updater to a device containing audio files. Blank USB memory is highly recommended.
- Update cannot be performed if it is copied inside a folder.
- If the updater file name is changed, update cannot be performed.

Checking the Firmware Version

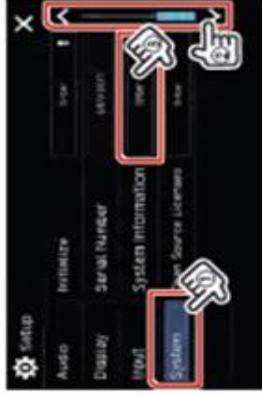
- Press the <HOME> button.
- Touch the [] button.



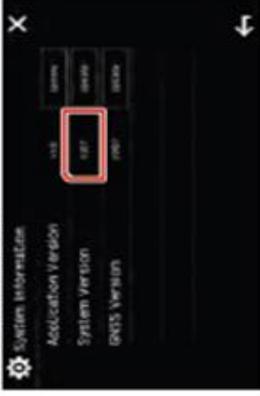
- Touch the [SETUP ()] button.



- Touch the [System Information] to display the System Information screen.



- Check the version.



Updating the Program

- Press the <HOME> button.
- Touch the [] button.
- Touch the [SETUP ()] button.
- Touch the [System Information] to display the System Information screen.
- Touch the [Update] button.



- Connect the USB memory to update starts. (It takes about 5 minutes.)

Caution: The screen may go blank for a few seconds. Do not unplug the USB memory or Power Off the unit during the Update Procedure.

- Once the "Update completed" screen is displayed.
- Remove the USB memory.
- Turn the power off and on again.



- Check that the firmware version is updated, by referring to "Checking the Firmware Version".

Precautions

- Be sure to park the vehicle in a safe place before updating. Keep the engine running in order to prevent battery from running out.
- Do not turn off the engine or Navigation/Multimedia receiver power while updating. Update cannot be performed correctly and the Navigation/Multimedia receiver may become unusable.

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Final checks.

If the receiver is stuck on a black screen during the update, then it more than likely froze mid update. This can happen for a variety of reasons but most commonly is caused by a USB that was not the proper size or had something else on the file structure.

This can be fixed. Load the update on to several different drives (2 or 3) and turn the receiver off. Swap the USB with a different one. Power the receiver back on. Then wait about 15-30 seconds. If nothing happens repeat process of switching drive until receiver reboots.

For updating, use a USB memory device with the specifications shown below.

Updating is not possible on USB memory devices with other specifications.

USB Standard: USB 2.0

Capacity: 8 GB to 32 GB

File system: FAT 32

Saab KENWOOD Infotainment Upgrade

1999-2005 Saab 9-5 Installation Guide for cars without factory Navigation radios



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