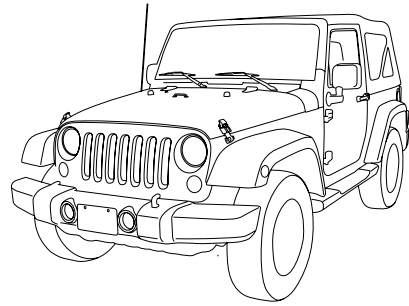


Jeep Wrangler

i509-WRA-JK

9" Restyle Installation Manual



- Model: Wrangler JK
- Model Year: 2011-2018

Jeep	Model	Year
	Wrangler JK	2011 - 2018

* The specified vehicles have been tested and have met compatibility specs at the time of testing. Compatibility is not guaranteed if the manufacturer has made production changes to the listed vehicles above.

⚠ Warning: Before you begin wiring, remove the ground wire from the negative terminal of the battery. Failing to do so can lead to electric shock, injury or damage to equipment.

Introduction

- Congratulations on purchasing the i509-WRA-JK. This installation manual is designed to take you through the step-by-step installation of the i509-WRA-JK into a 2011-2018 Jeep Wrangler. Please familiarize yourself with the owners manual and if you still have additional questions please call 1-800-TECH-101.



Note:

- Design and specifications are subject to change without notice for improvement.





To Ensure Safe Use, Always Follow These Precautions

- The installation of this product requires specialized skills and experience. We recommend that you have the product installed by an Alpine authorized dealer.
- Before you use this product, be sure to carefully read this installation manual and the separate user's manual so that you can use the product correctly. Alpine Electronics bears no responsibility for problems that arise as a result of failure to follow the instructions in the manuals.
- This manual includes a number of symbols that are intended to help you use the product safely, to prevent harm to you and others, and to protect against damage to property. These symbols and their meanings are listed below. Make sure you fully understand these symbols before you begin reading the main text.


Explanations of Injury and Damage That May Result from Incorrect Use


 Warning	Ignoring the content marked by this indication and using the product incorrectly is expected to lead to death or serious injury.
 Caution	Ignoring the content marked by this indication and using the product incorrectly is only expected to lead to injury or property damage.



Types of Precautions


 Forbidden	Indicates actions that are forbidden (must not be performed)
 Forbidden	Indicates that disassembly is forbidden.
 Mandatory	Indicates actions that are mandatory (must be performed)
	Marks content that should receive your full attention.


 **Warning**

Do not disassemble or modify the product. Doing so could lead to an accident, fire, or electric shock.  Forbidden


Store screws and other small objects where children cannot reach them. If one of these small objects is swallowed, consult with a doctor immediately. 


When replacing fuses be sure to use the fuses with the specified current rating. Failing to do so could lead to an accident or fire.   Mandatory Forbidden


Only connect the product to a 12 VDC negative ground car. Failing to do so could lead to an accident or fire.  Mandatory


Before you begin wiring, remove the ground wire from the negative terminal of the battery. Failing to do so could lead to electric shock or injury. 


Do not cut the insulation on a cord and take power from another device. Doing so could lead to fire or electric shock.  Forbidden

Do not install the product in a location where it will obstruct the driver's forward view; interfere with the operation of the steering wheel, gear shift, or the like; or pose a threat to passengers. Doing so could lead to an accident or injury.  Forbidden

When making a hole in the vehicle body, be careful to avoid damaging pipes, the fuel tank, electrical wiring, and the like. This kind of damage could lead to an accident or fire. 

When installing and grounding the product, do not use any of the bolts or nuts of the steering wheel, brakes, fuel tank, or the like. Doing so could make the brakes stop working or could lead to fire.  Forbidden

Do not install the product near the passenger-side airbag. Doing so could interfere with the operation of the airbag and lead to an accident or injury.  Forbidden


Bundle cords so that they don't interfere with driving. Wrapping cords around the steering wheel, gearshift, brake pedal, or the like could lead to an accident or damage equipment. 


 **Caution**


Connect the product properly according to the instructions. Failing to do so could lead to fire or an accident.  Forbidden

Do not sandwich cords between the seat railing or allow them to touch protrusions. Resulting breaks or shorts could lead to electric shock or fire. 



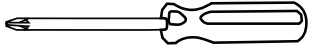

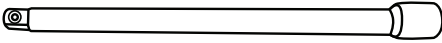
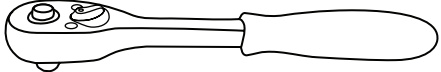
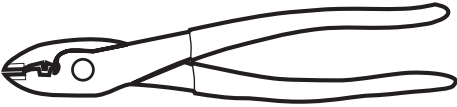
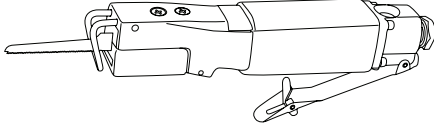

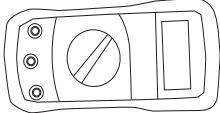
Do not block vents or heat sinks. Doing so could lead to fire or damage equipment. 

Use the accessories according to the instructions, and attach them securely. Failing to do so could lead to an accident or damage equipment.  Forbidden

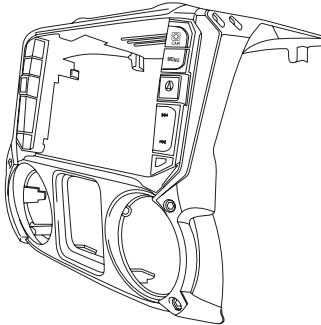
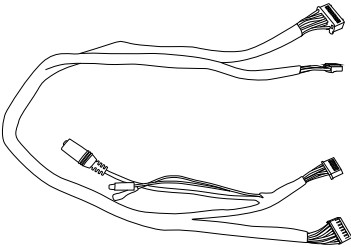
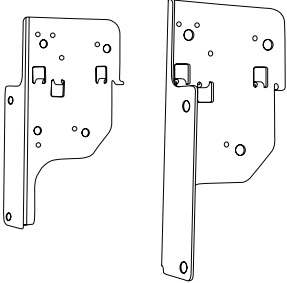
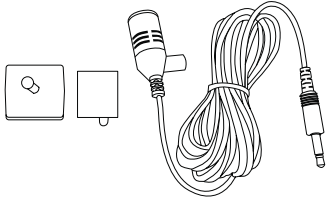
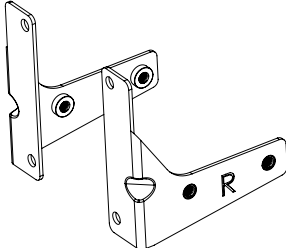
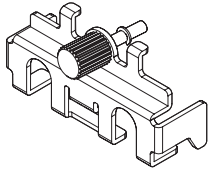
Do not install the product where it may be exposed to water or in a place with high levels of humidity or dust. Doing so could lead to fire or damage equipment.  Forbidden

The installation and wiring of this product requires specialized skills and experience. Have the product installed by an Alpine authorized dealer. 

Tools Required

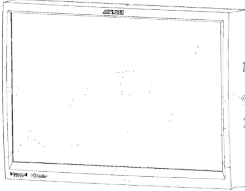
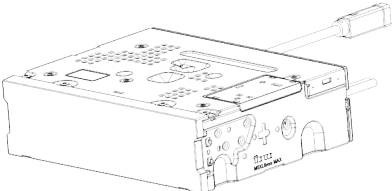
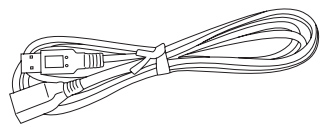
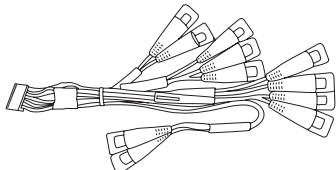
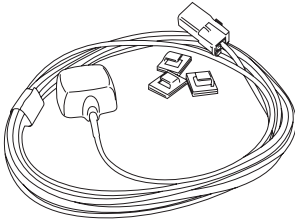
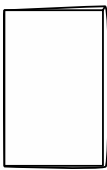


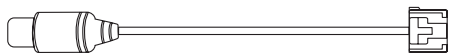
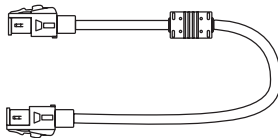


Panel Removing Tool	7mm Sockets	#2 Phillips Screwdriver
		
10mm Sockets	Extension	Ratchet
		
Wire Cutters	Air Saw	T20 Torx
		
Digital Multimeter		
		

Accessory List


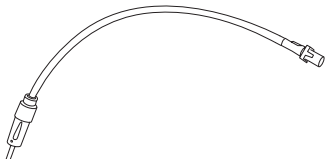

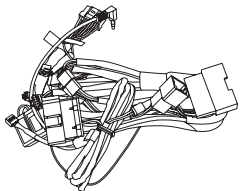
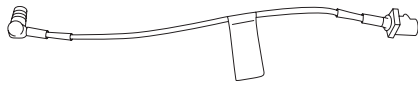
Installation Kit Parts		
i509-WRA-JK Radio Dash Bezel	Display Power/Key Harness	Side Mounting Brackets
		
Microphone	Display Mounting Brackets	Source Unit HDMI Bracket
		

Accessory List

Head Unit Box Parts (i509)

i509 Display Unit	i509 Source Unit	USB Extension Cable
		
AUX/Pre Out Harness	GPS Antenna	Documents
		   Alpine Registration Card QRG Navigation
Direct Camera Adapter	Display Cable	Screws (12pcs)
		
Anti-Vibration Foam		
		

iDatalink Maestro Box Parts (ALP-MRR4/ALP-HRN-WRA5)

Maestro Flashing Cable	Antenna Adapter	iDatalink Maestro Module
		
Main Harness	SAT Radio Antenna Adapter	
		

Programming the iDataLink Maestro Module

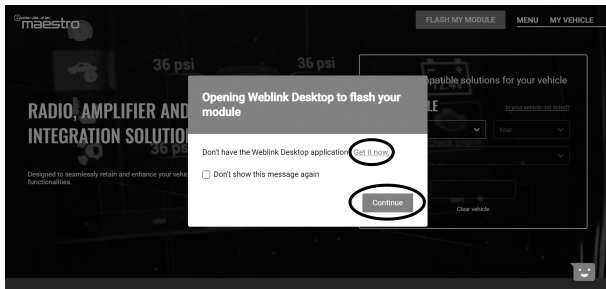
1 INSTALL THE WEBLINK PLUG-IN

Go to:

idatalinkmaestro.com and follow the installation steps. The Maestro module must be programmed specifically for each vehicle and radio. Take care to enter the correct vehicle information, factory options, head unit model, and head unit serial number. The head units serial number is an alphanumeric value which is found on the head units label, underneath the bar code.

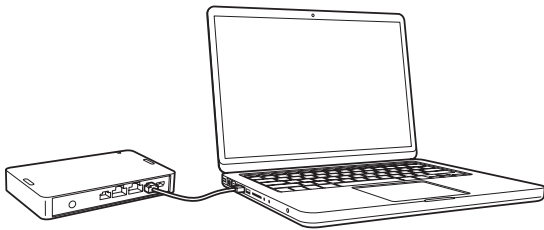


If the plugin is already installed, Click "Continue" and follow the prompts to open. If Plug in is not installed Click "Get it now" and follow prompts to download and install the plug-in



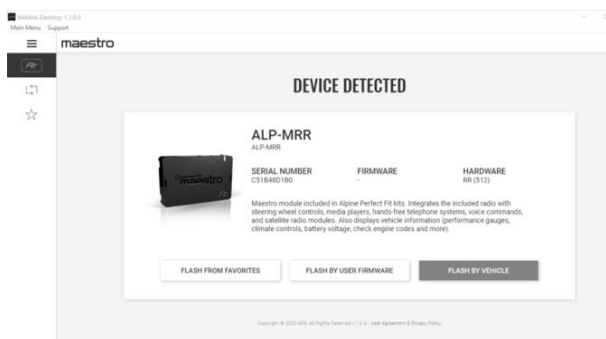
3 CONNECT YOUR MAESTRO MODULE

Use your Maestro module to connect to your PC.



5 PROGRAM YOUR MODULE

Follow the programming steps for your vehicle.

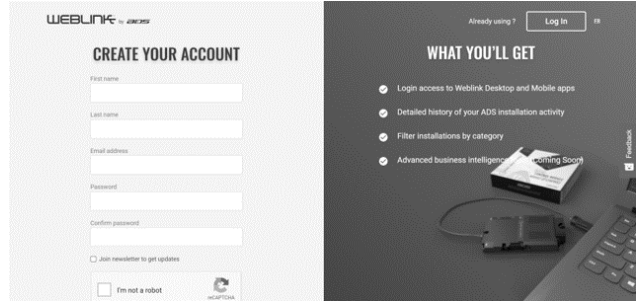


2 REGISTER A WEBLINK ACCOUNT

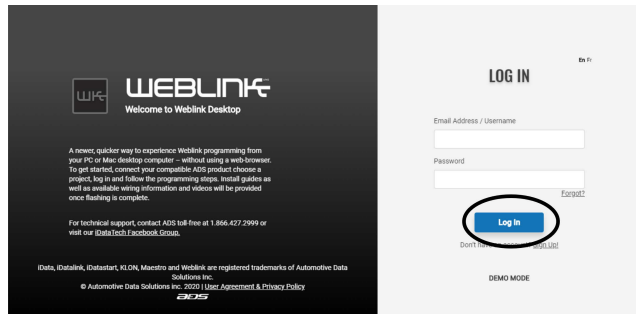
Go to:

Sign Up and complete the registration process.

A confirmation email will be sent to you requiring validation.



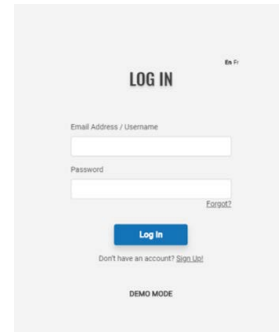
For existing customers, click log in.



4 LOG INTO WEBLINK

Go to:

Enter your username and password, then click OK.



6 Once Programming is complete "FLASHING COMPLETED!" will be displayed.

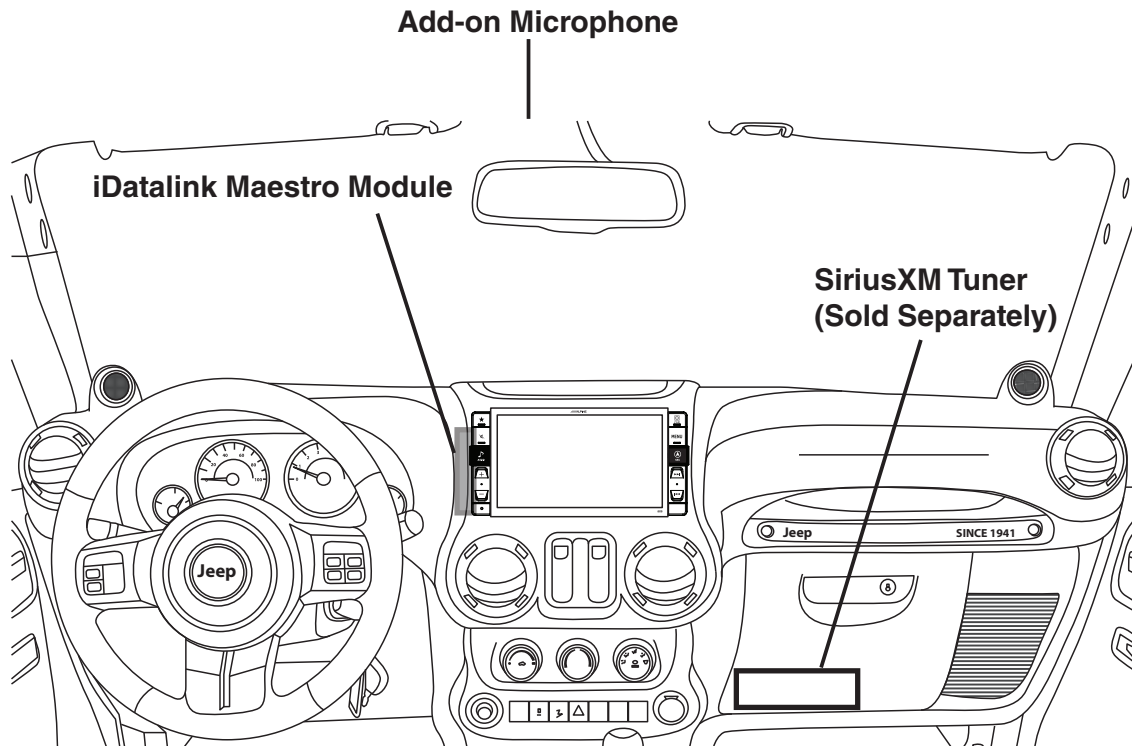
Proceed to the next page to complete installation.



NOTE: If serial number is invalid, Call ADS at 1-866-427-2999 with the serial number.

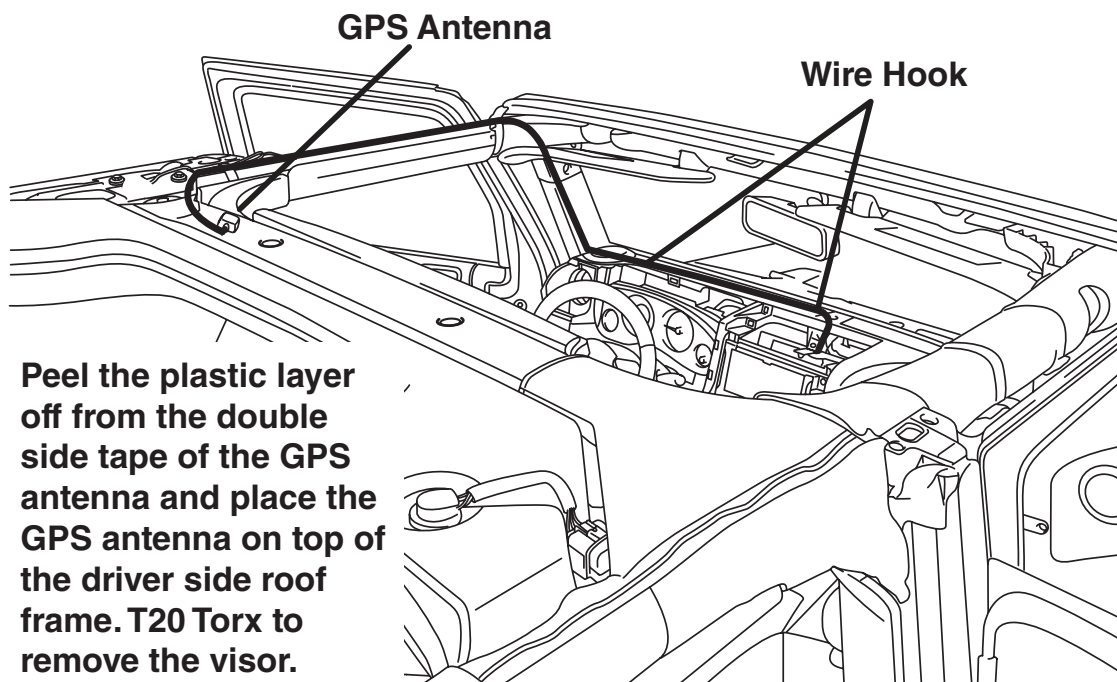
Component Locations

! IMPORTANT: Follow the recommended component location shown below. Failure to do so, will result in poor GPS performance.



GPS Antenna Installation

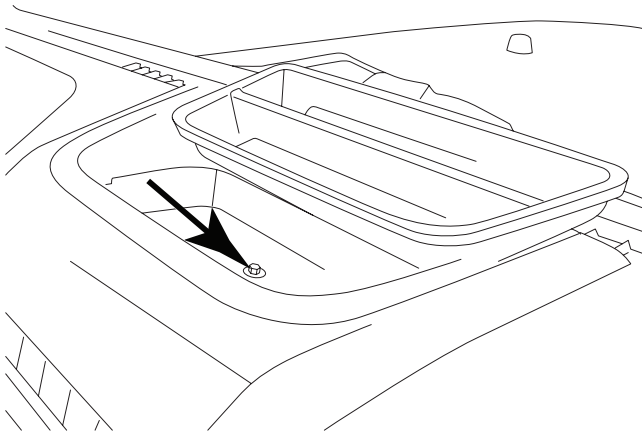
! IMPORTANT: Follow the GPS antenna installation procedure shown below. Failure to do so will result in poor GPS performance for CarPlay, Android Auto, and Navigation.



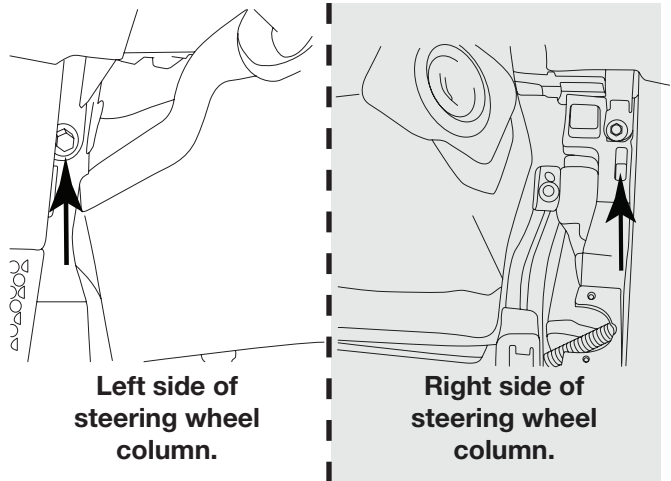
Factory Unit Disassembly Process

⚠ DISCONNECT THE BATTERY BEFORE CONTINUING. FAILURE TO DO SO WILL DISABLE MANY FEATURES.

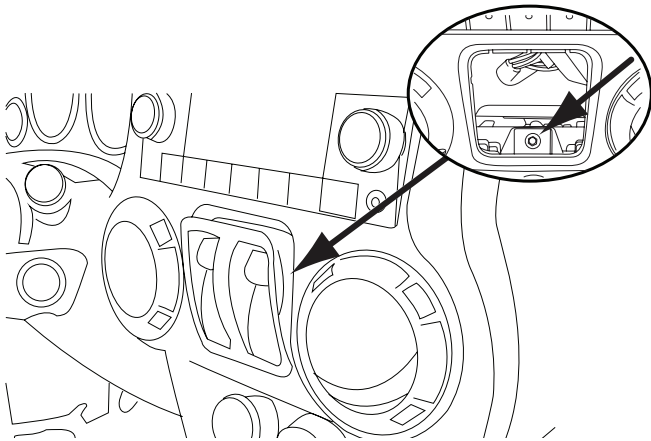
1 Remove the rubber cover from the top center storage area and extract (1) 7mm screw.



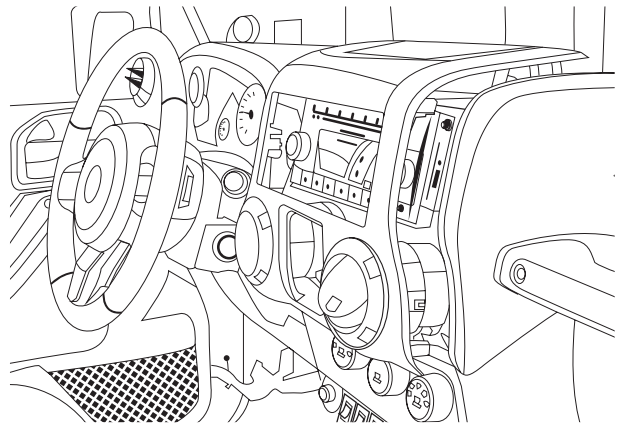
2 Remove the knee cover panel and extract (2) 7mm screws located to the right and left sides of the steering wheel column.



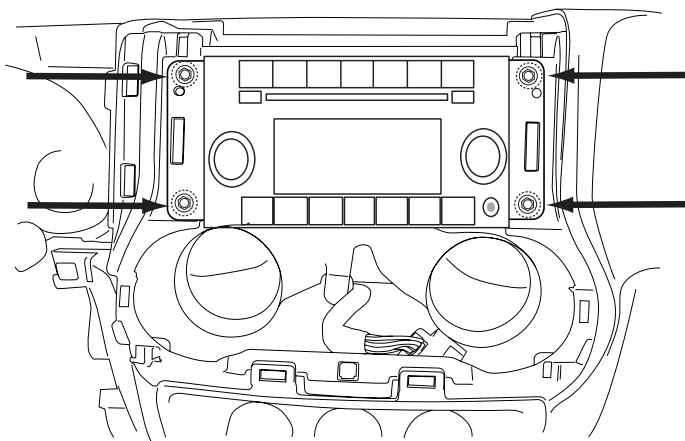
3 Remove the window switch pod using a panel removing tool and extract (1) 7mm screw.



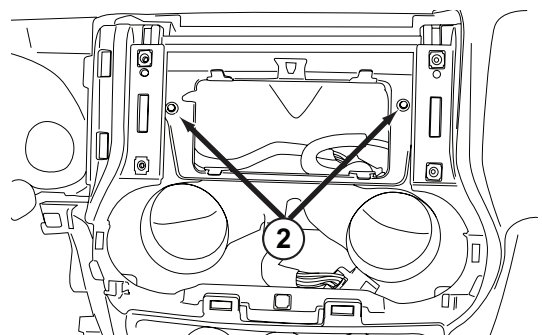
4 Remove the dash panel.



5 Extract (4) 7 mm screws and remove the factory radio.

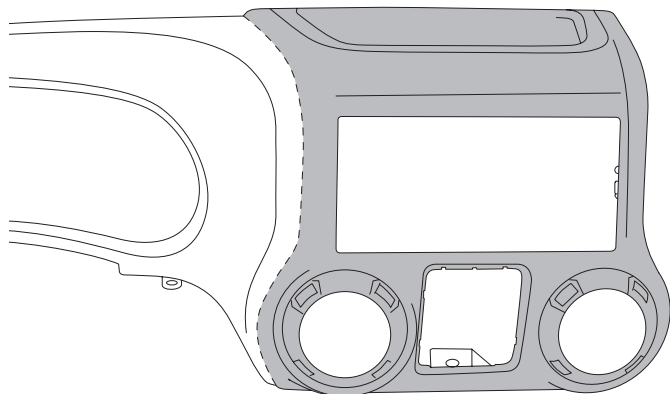


6 Extract (2) 7 mm screws from the factory radio bracket and remove it.

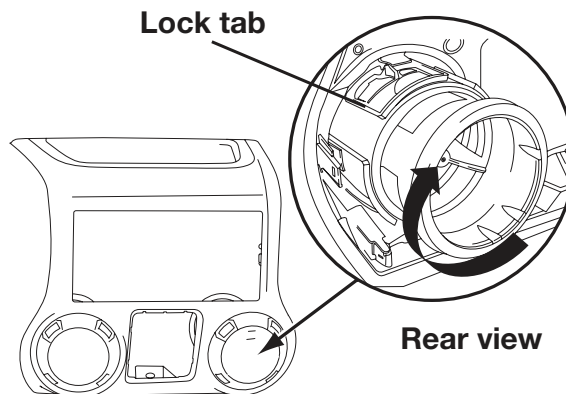


Installation Instructions

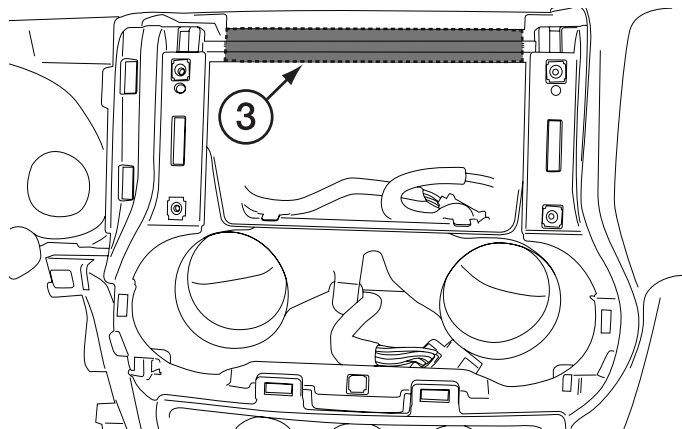
- 1** The factory dash panel needs to be trimmed to allow the new i509-WRA-JK bezel to fit into place. Remove the highlighted area by cutting along the dashed line.



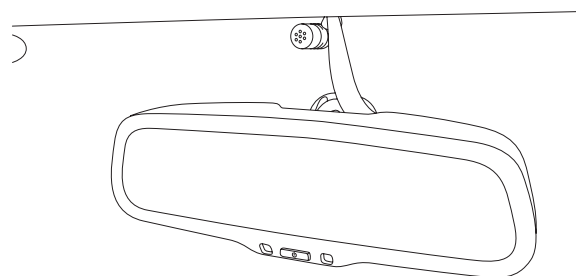
- 2** Remove the vents from the radio section on the OEM dash panel by pressing down on the lock tab and turning right. Mount vents on to the i509-WRA-JK bezel.



- 3** Use a cutting tool to trim the highlighted area shown below.

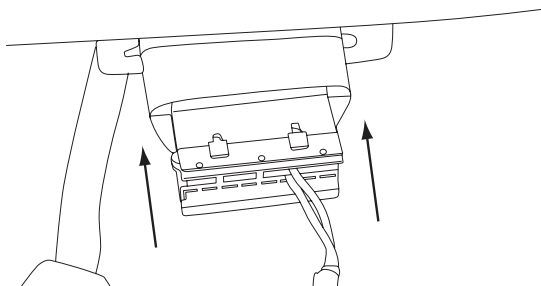


- 4** Mount the microphone as illustrated and run the cable to the radio cavity.

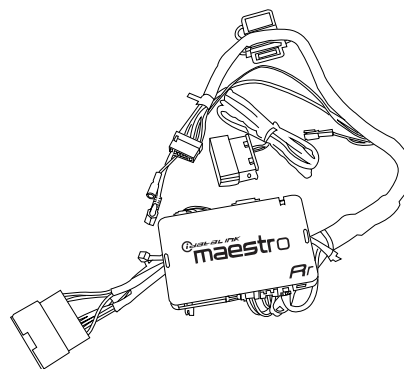


- 5** Plug the OBDII connector on to the OBDII port below the driver side dash and run the extension to the radio cavity.

- ⚠** Avoid any sharp edges or interfering with any safety equipment.



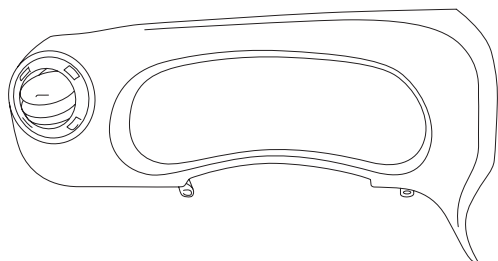
- 6** Attach the Maestro to the main harness.
 *See page 13 for more details.



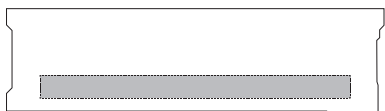
Installation Instructions

⚠ DISCONNECT THE BATTERY BEFORE CONTINUING. FAILURE TO DO SO WILL DISABLE MANY FEATURES.

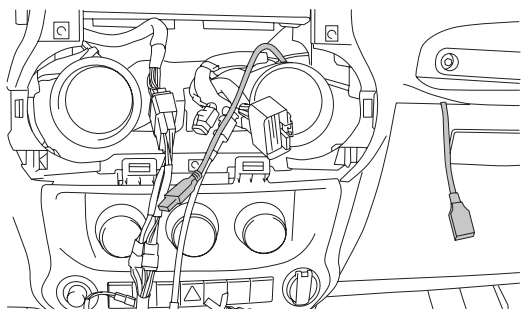
- 1** Attach the modified panel using the factory screws.



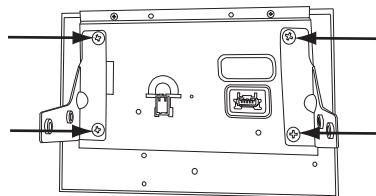
- 3** Apply Insulating pad by removing the paper backing. See diagram below.



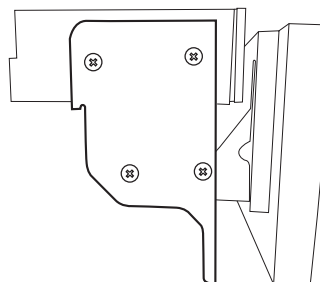
- 5** Route the USB extension cables to the glove box or center console area. The black USB is for data and the gray USB is for charging only. The black USB is used for CarPlay and Android Auto. Connect the main harness and other adapters to the factory harness and secure them.



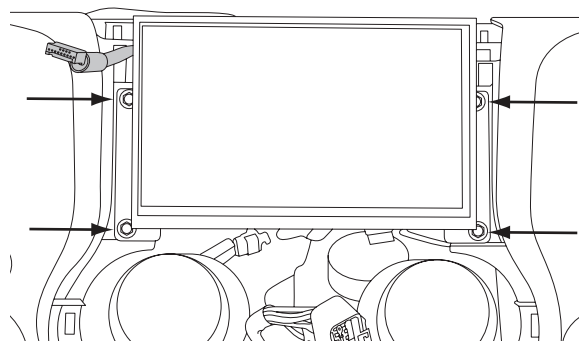
- 2** Put monitor face down on a soft, scratch free surface and attach Display Monitor Brackets using (4) 8mm screws (provided). Plug in the Display Cable and Display Power Harness.



- 4** Attach the display and source unit with the 8mm screws (supplied) as shown below. Route the display cable and power harness from the display to the source unit and plug into the W. Remote and Display Out.

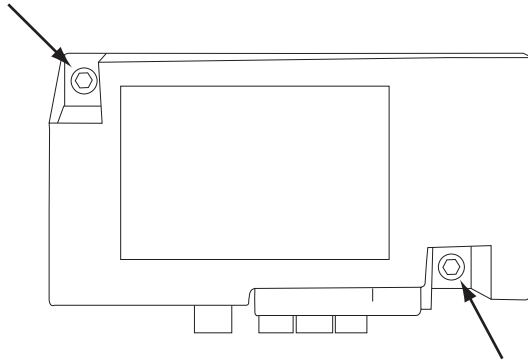


- 6** Route the key harness through the top-left side of the i509 source unit. Mount the i509 source unit using (4) 7mm factory screws.

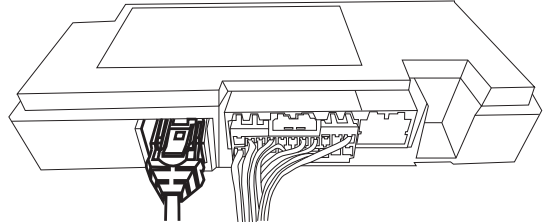


Removing the Uconnect® (only for vehicles with factory Uconnect®)

1 Remove the factory climate control panel. It is clipped on and can be removed with a panel removing tool. Extract the (2) 7mm bolts from Uconnect® module.



2 Disconnect the 24pin OEM connector.

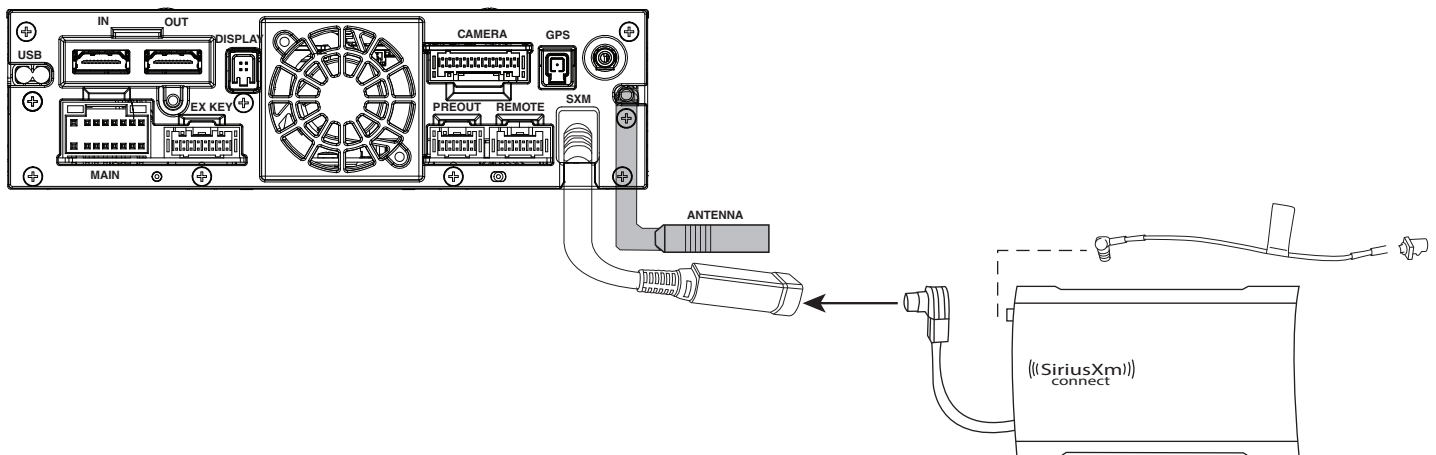


3 Secure the Uconnect® module to the original location using the 7mm bolts.

4. NOTE: If Uconnect® module is not disconnected the Uconnect® system will stay paired with previously paired phones. The user's phone may connect to both Bluetooth devices simultaneously resulting in unpredictable and potentially distracting behavior. The feature is not retained by the i509 and the OEM USB should not be used.

Connecting A SiriusXM Module (Sold Separately)

There is no way to integrate the factory SiriusXM tuner. Once the radio is removed, the factory SiriusXM is removed. As the title states, SiriusXM requires a tuner sold separately. This diagram shows how to integrate the antenna connection. For vehicles with factory SiriusXM connect the adapter to the factory SiriusXM antenna in the radio cavity. The factory SiriusXM antenna is located on the passenger side B-pillar. For vehicles without factory SiriusXM use the antenna that is included with the SXV300 SiriusXM Tuner.

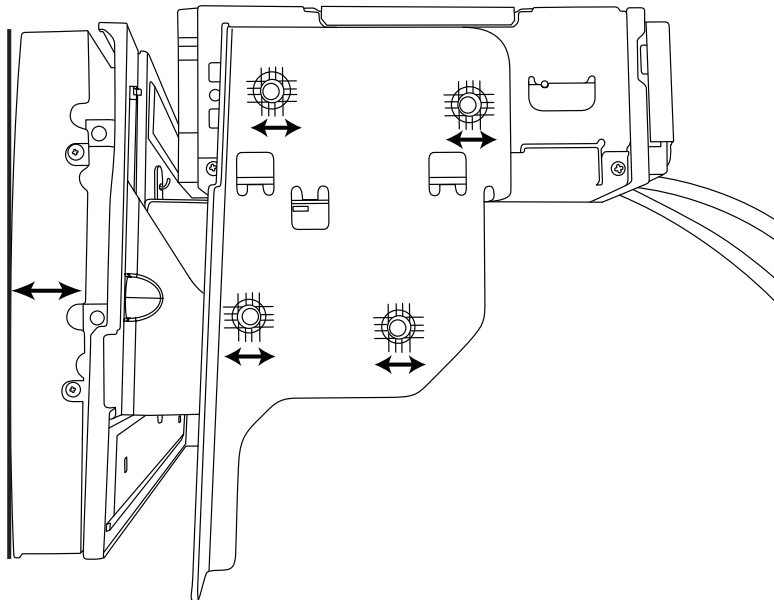


Mounting Brackets

⚠ DISCONNECT THE BATTERY BEFORE CONTINUING. FAILURE TO DO SO WILL DISABLE MANY FEATURES.

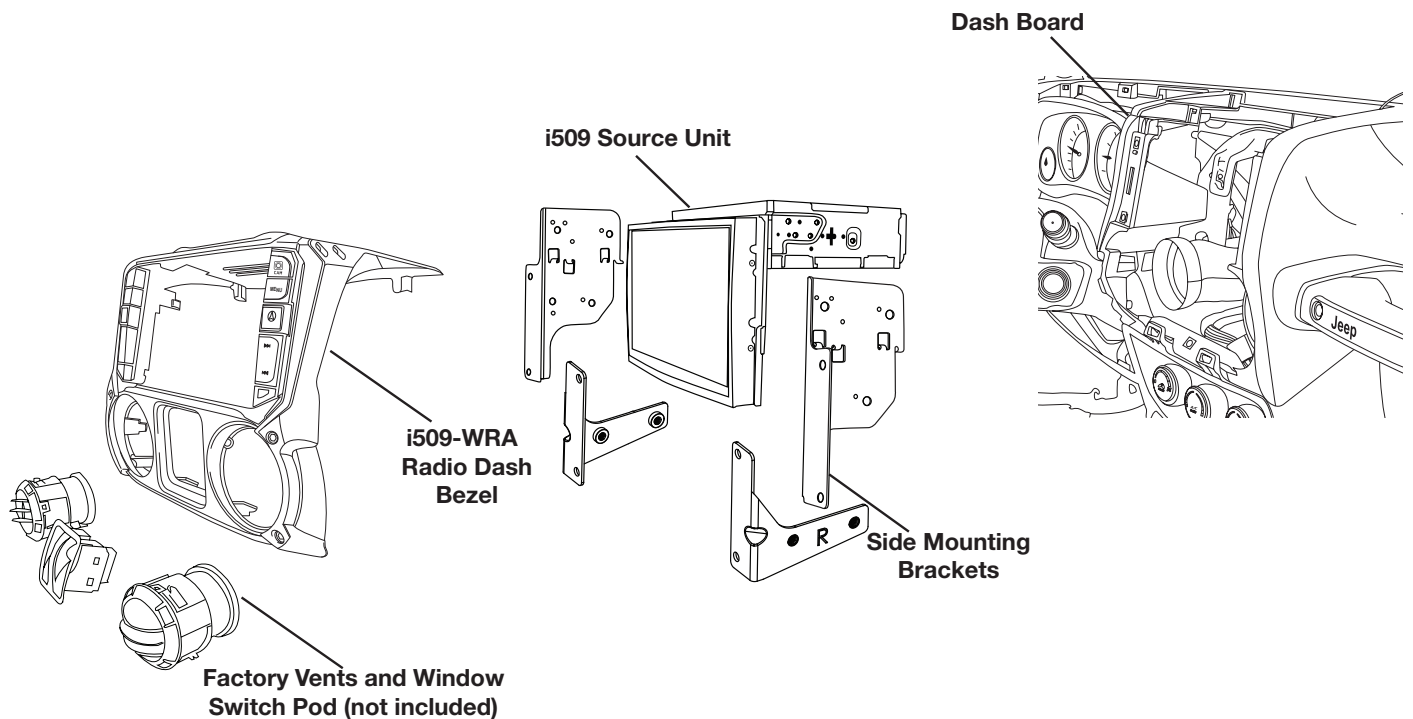
⚠ IMPORTANT: During the research and development of this product it was discovered that mounting tolerance may vary from the vehicle's trim level to year built. We have added a 1mm tolerance to the mounting brackets to compensate for such variance in mounting tolerance. Use the guides below as reference if there are any required adjustments.

Adjust the rear bracket as needed when the top or bottom is protruding or not flushed.

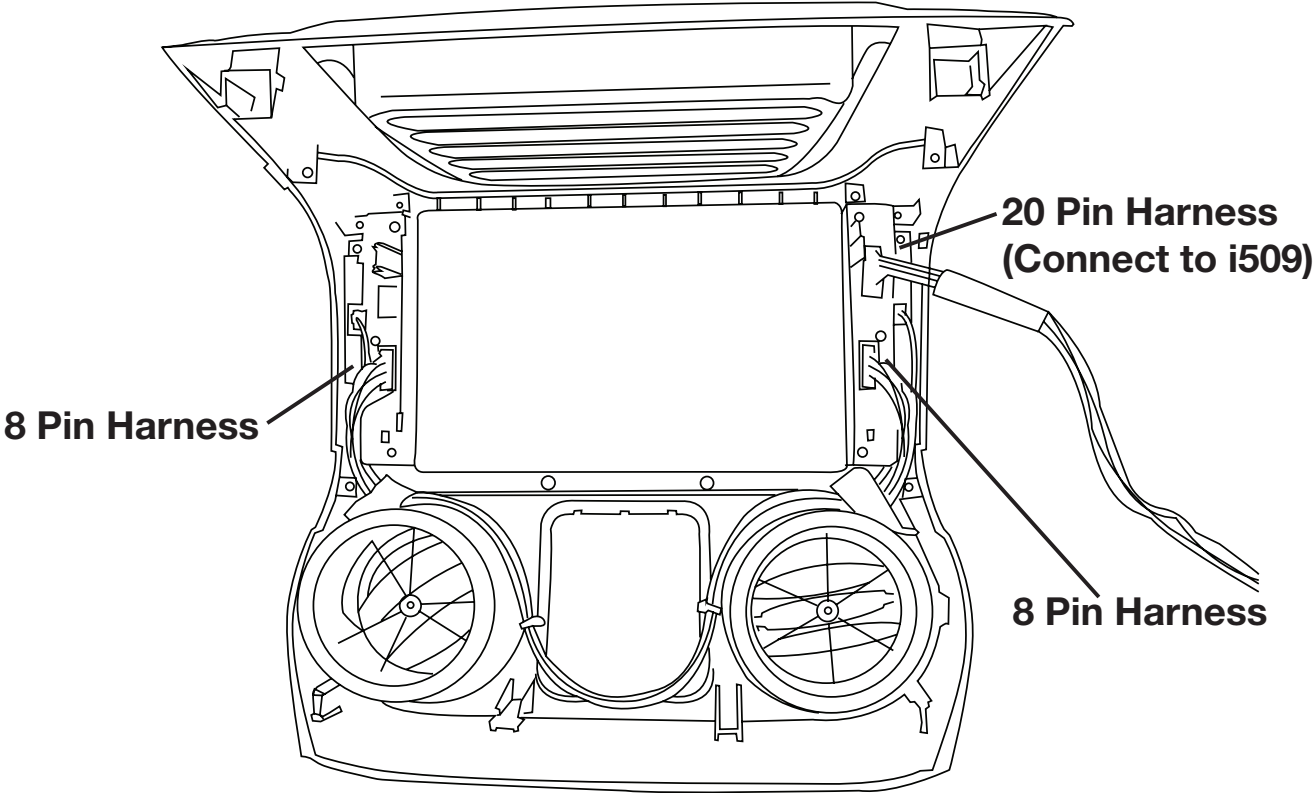


Adjust the side brackets as needed when either side is protruding or not flushed.

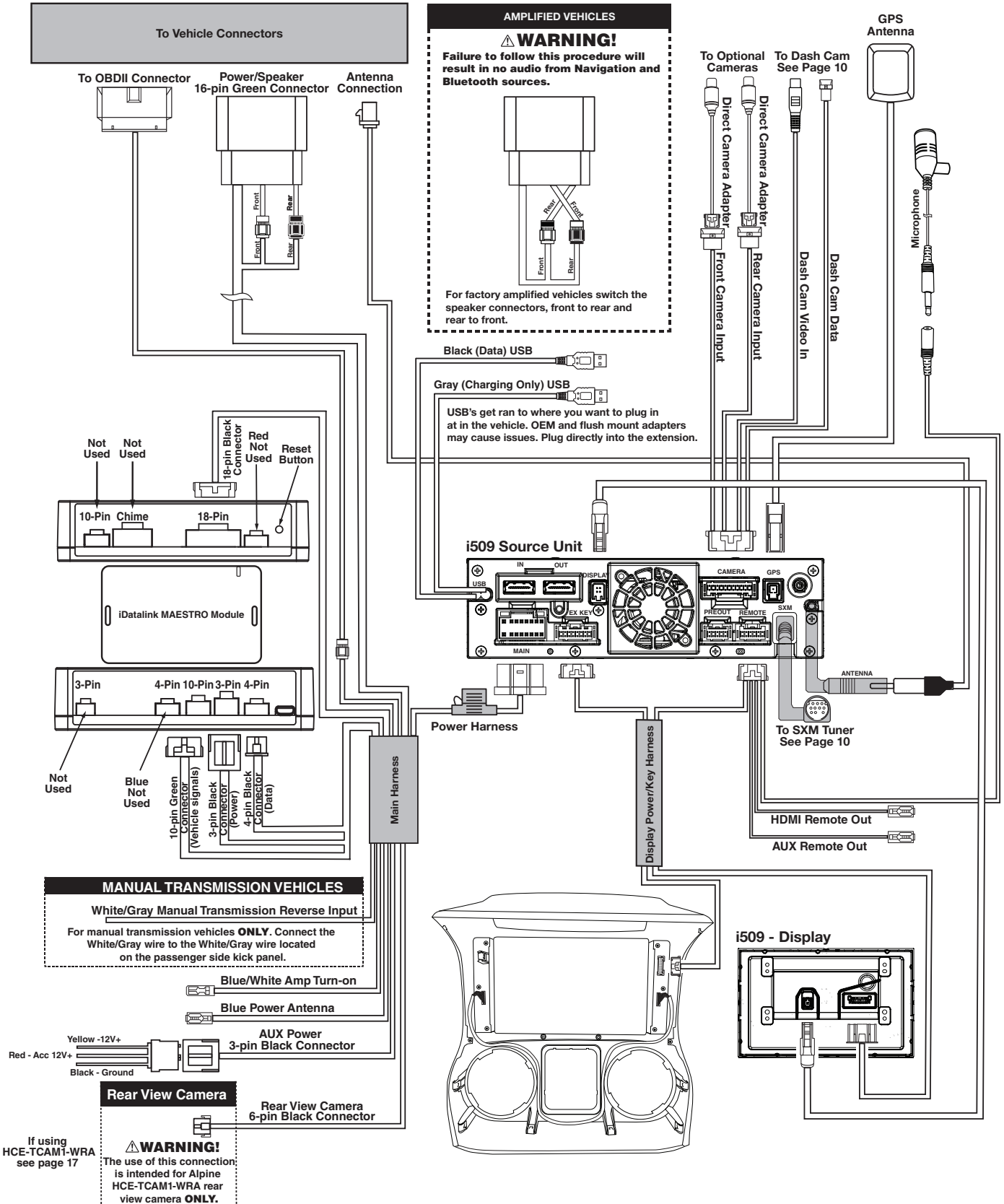
Exploded-View Diagram



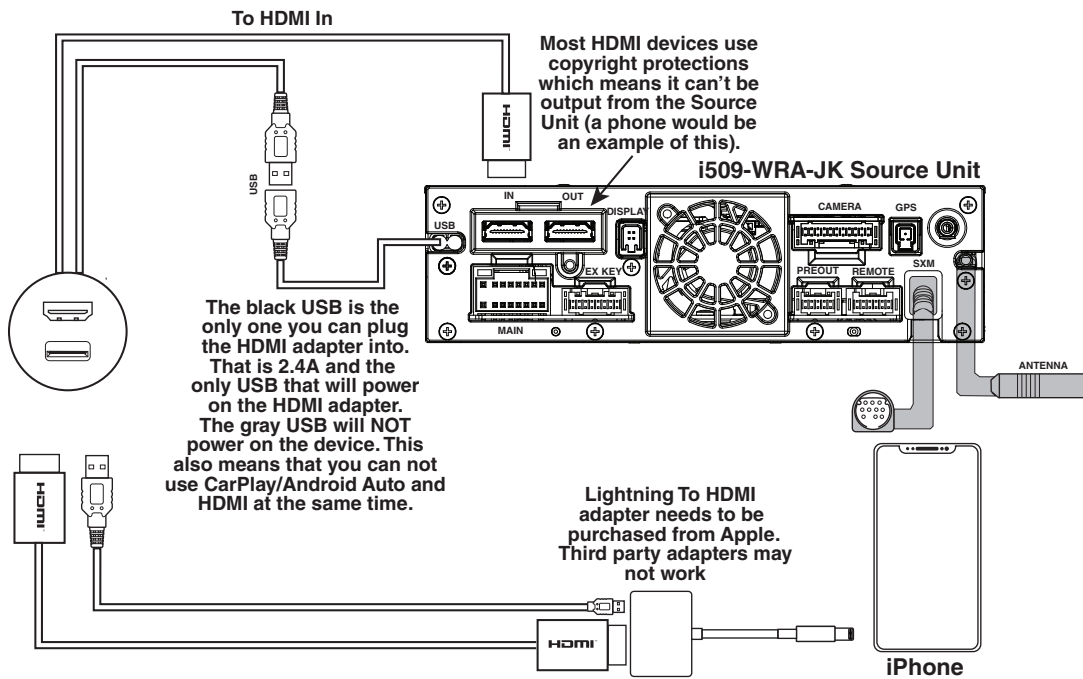
Bezel Wiring Diagram



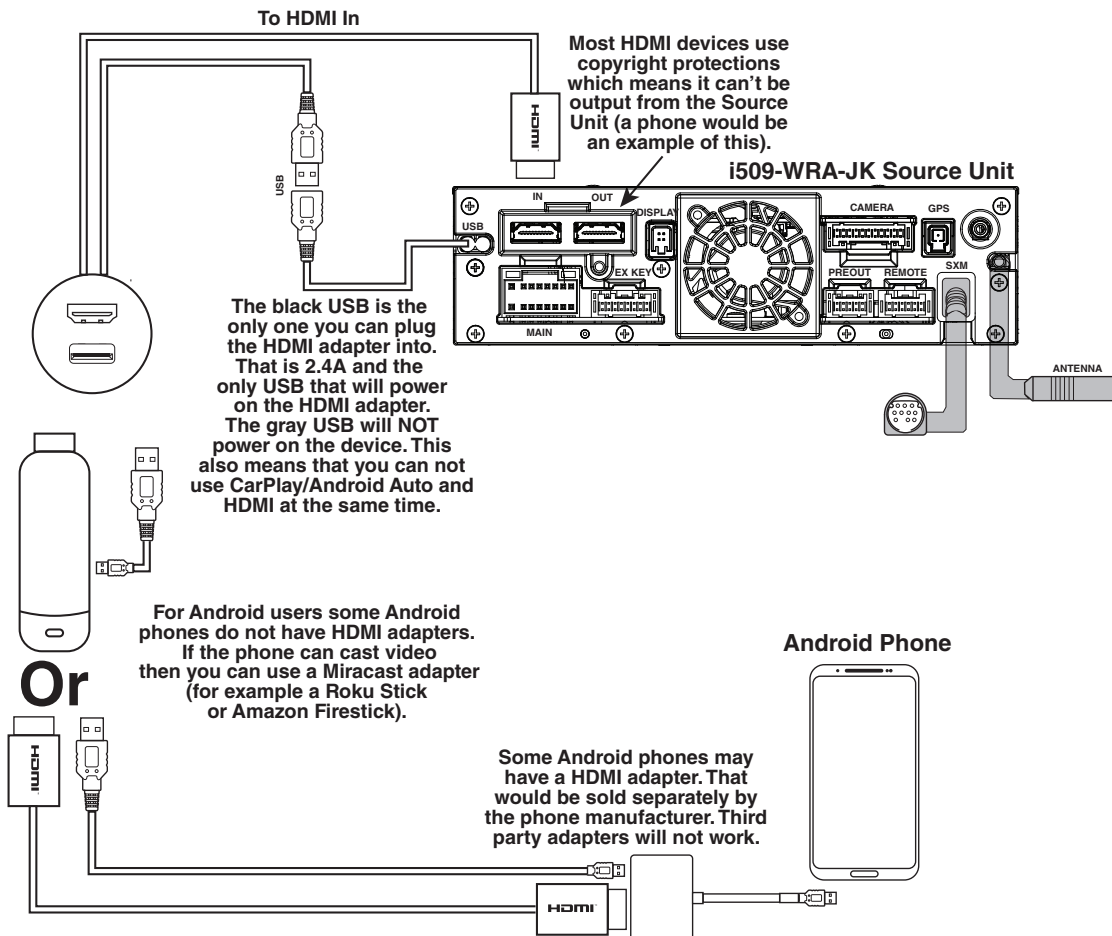
i509-WRA-JK Wiring Diagram



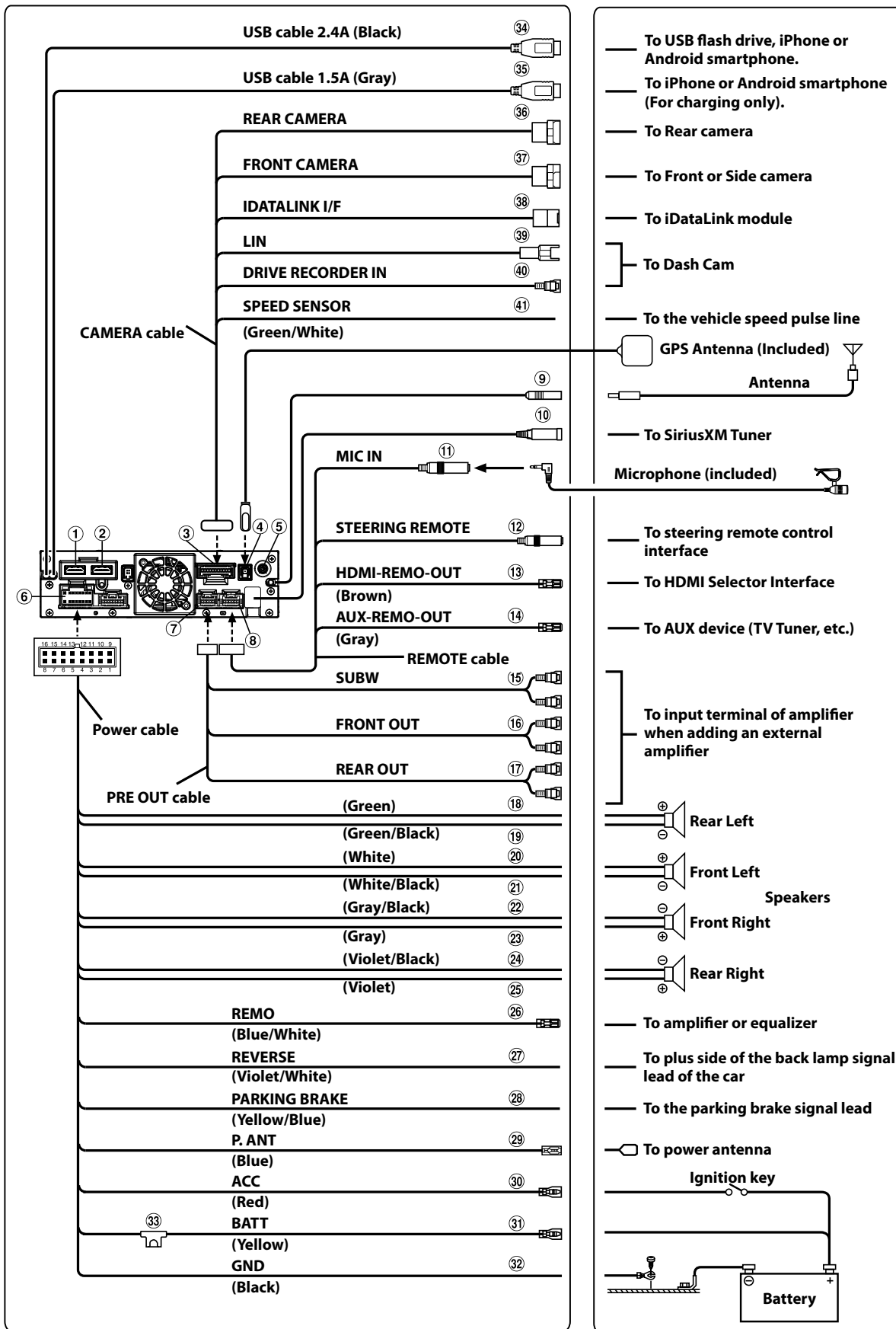
i509-WRA-JK HDMI Usage With An iPhone



i509-WRA-JK HDMI Usage With An Android Phone



i509-WRA-JK Wiring Diagram

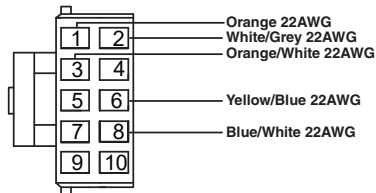


Wire Harness Pin Outs

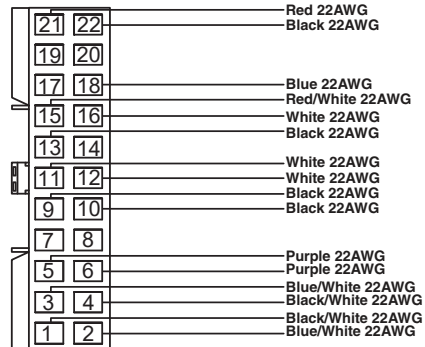
Radio Main



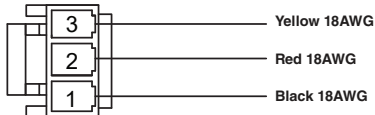
Radio I/O



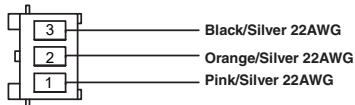
Cam Aux Data



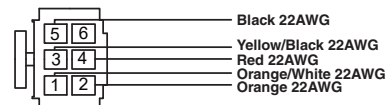
Power/ACC



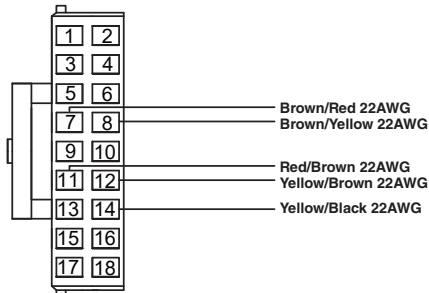
Key Harness



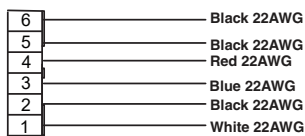
Rear Camera



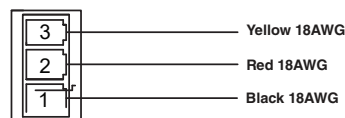
Data SWC



Front Camera



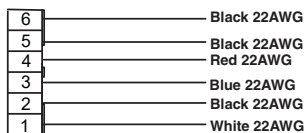
AUX Power Pigtail



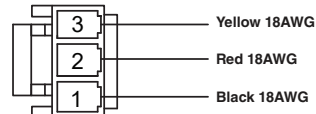
iDataLink



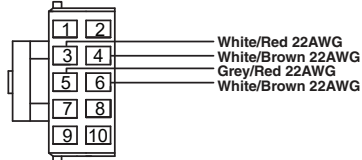
Rear Camera



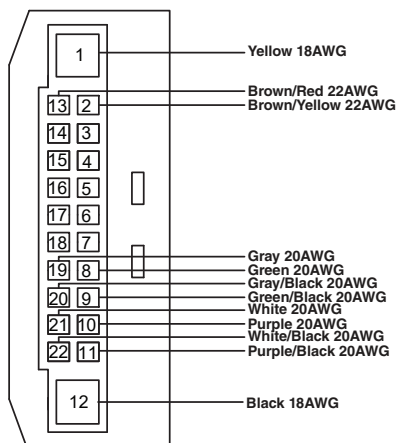
AUX Power



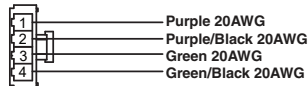
Audio In



Wrangler Harness



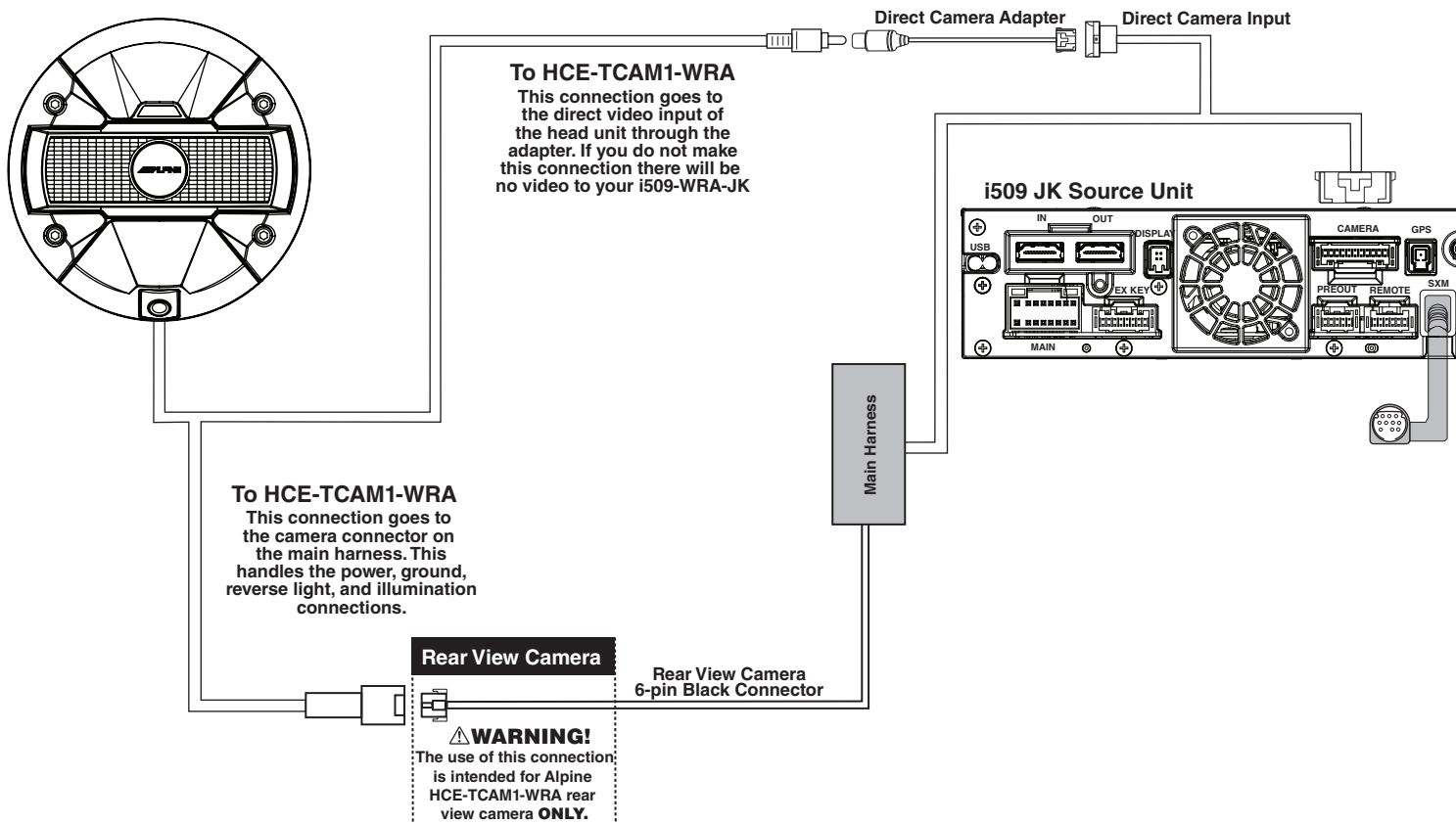
Speaker Harness



Speaker Harness

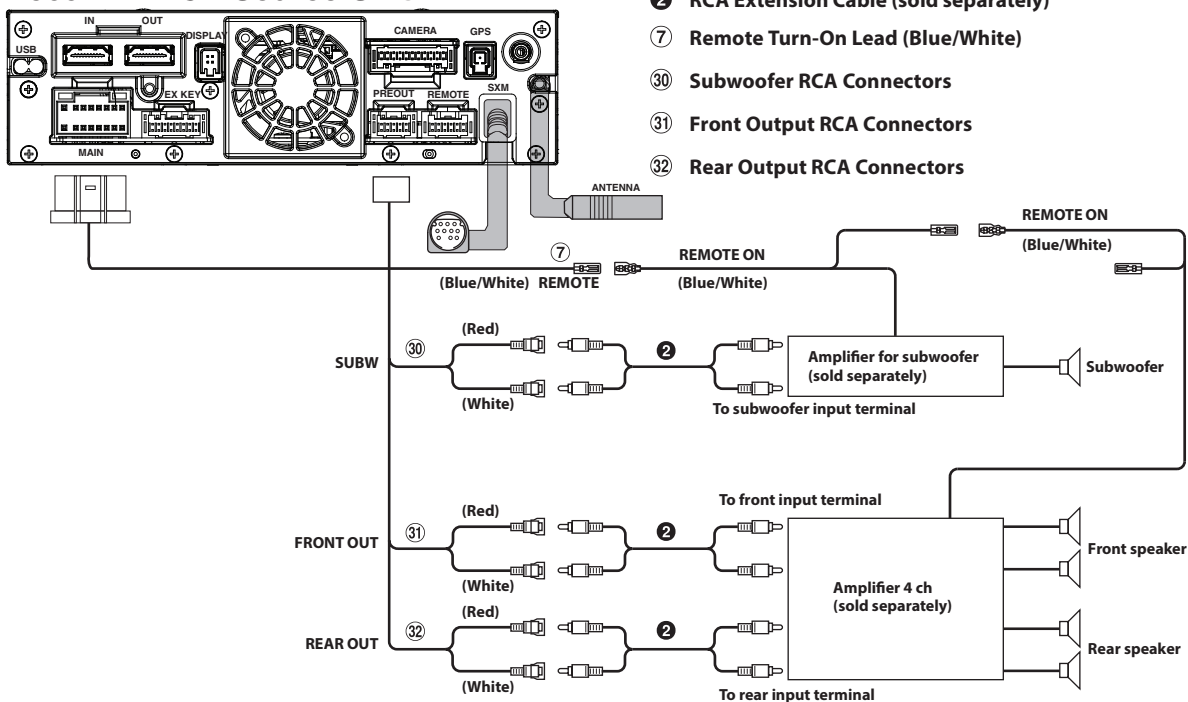


Connection Of HCE-TCAM1-WRA (Sold Separately)

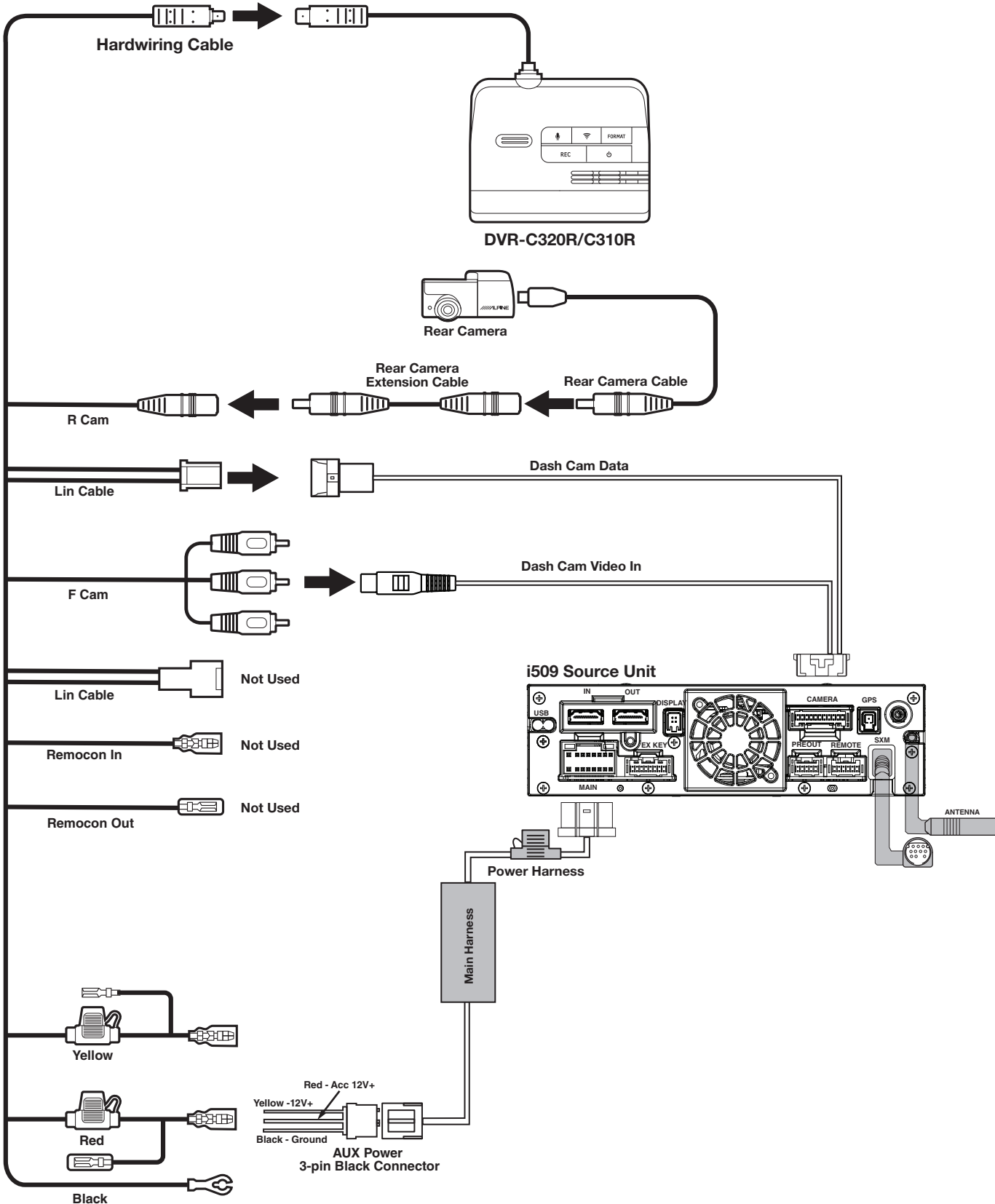


Connection Of An External Amplifier

i509-WRA-JK Source Unit

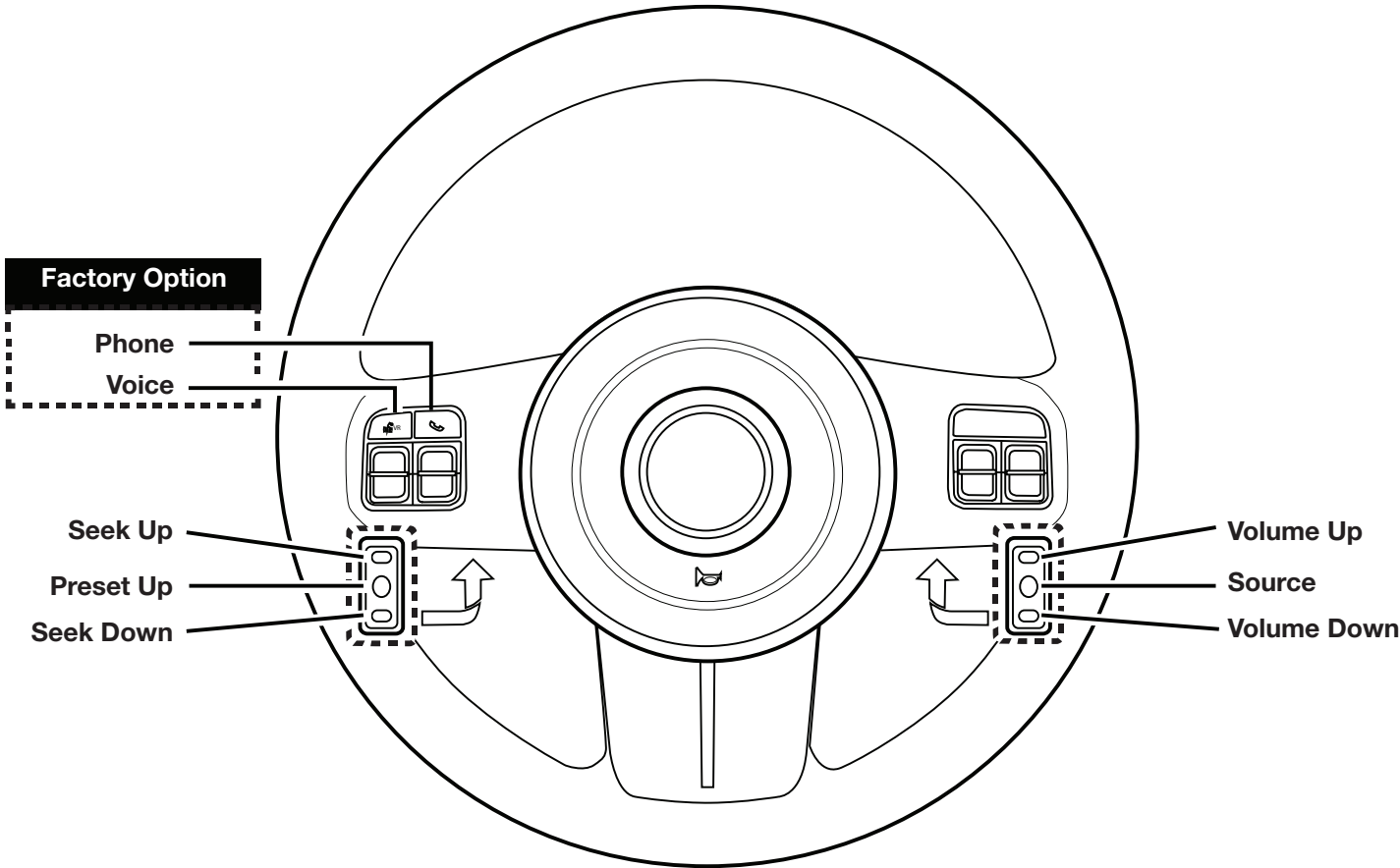


Connection Of DVR-C320R/C310R (Sold Separately)



Cut the terminals.
 Solder and heat shrink
 to AUX Power Connector.

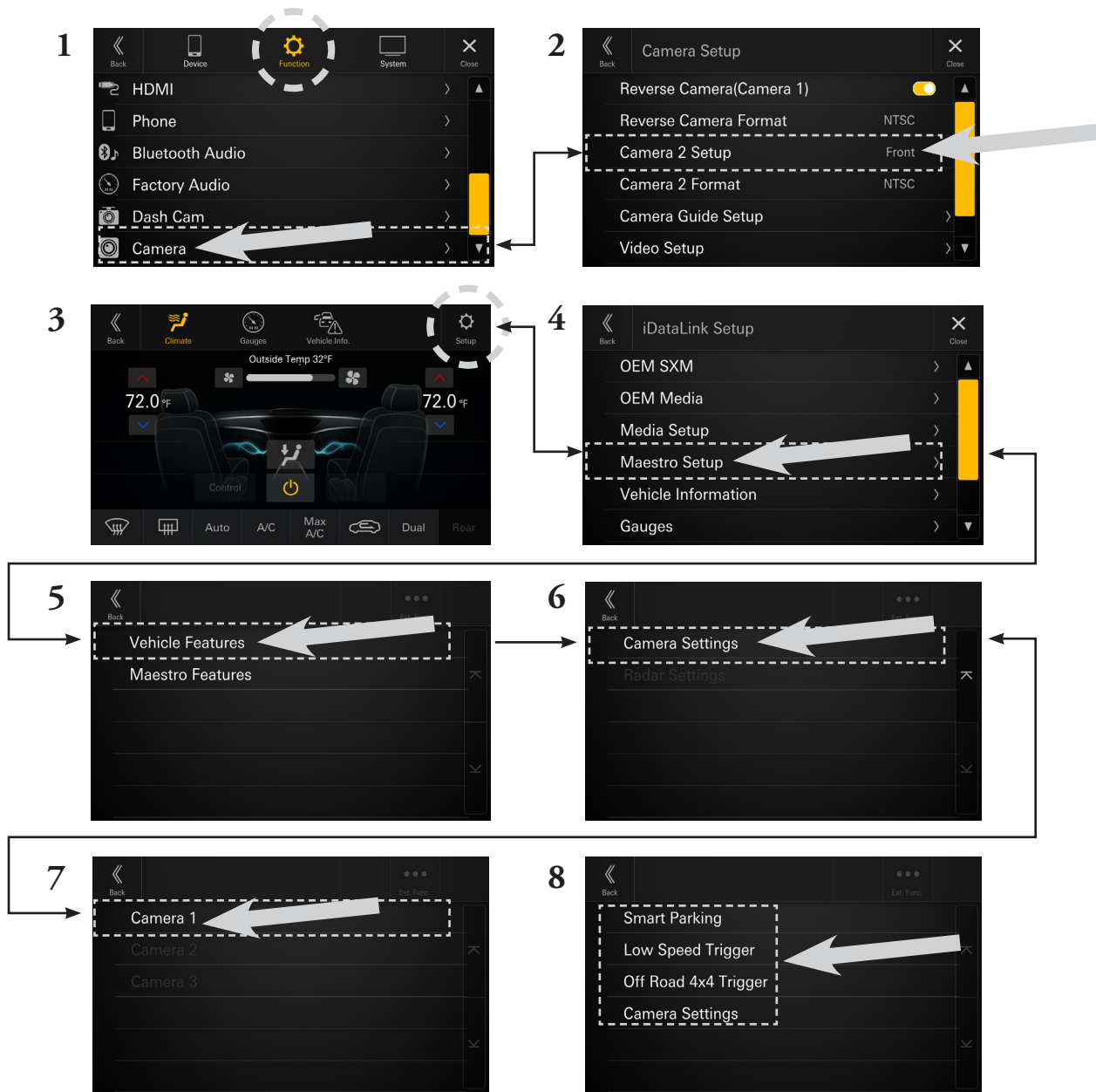
Steering Wheel Configuration



Button	Press Once	Press And Hold
Volume Up	Volume +	None
Volume Down	Volume -	None
Seek Up	Track +	None
Seek Down	Track -	None
Source	Source	Band
Next Preset	Preset & Folder +	Preset & Folder -
Voice	Voice Or Siri	None
Phone	Answer Call	Hang Up & Reject Call

Setting Up Advanced Camera Features

- 1 Once in the setup menu (see page 21) select FUNCTION and then CAMERA.
- 2 Select CAMERA 2 SETUP. The camera 2 input needs to be set to FRONT or SIDE. This will let the Maestro module know the second camera is active and that will enable the CAMERA SETTINGS in the Maestro Setup Menu.
- 3 In the Maestro screen select SETUP.
- 4 Select MAESTRO SETUP. (Note this path in the settings can vary slightly with different Maestro firmwares).
- 5 Select VEHICLE FEATURES.
- 6 Select CAMERA SETTINGS.
- 7 Select Camera Assignment then CAMERA 1. The available options are FRONT CAMERA, RIGHT LANE WATCH CAMERA, and LEFT LANE WATCH CAMERA.
- 8 Once CAMERA 1 is set the corresponding camera settings will then be available.



Set Up Guide

- 1 Turn the vehicle's Ignition switch to ACC.
- 2 Turn ON the i509-WRA-JK by pressing any key.
- 4 **To get into the settings the parking brake sequence needs to be done.** Engage the parking brake, release the parking brake, and engage the parking brake again.
- 5 Vehicle information- Set the desired gauge information. (HOME/VEHICLE INFO/SETUP).
- 6 If a rear camera is present, turn it ON in the system menu. (HOME/FUNCTION/CAMERA/REVERSE CAMERA).

Troubleshooting Guide

Symptom	Possible Cause	Remedy
1 iPhone not working with HDMI.	Not using Apple HDMI to Lightning adapter.	Purchase the HDMI to Lightning adapter directly from Apple. Not all 3rd party adapters work the same.
	Didn't plug USB power into a 2A source.	Do not plug into the USB from the Alpine head unit. A third party USB adapter will need to be used that is 2A.
2 Android phone is not working with HDMI.	Using incorrect HDMI adapter.	If the phone has the feature to use an HDMI adapter it must be the one purchased from the manufacturer of the phone, not a third party adapter.
	Miracast adapter isn't plugged into a 2A source.	Do not plug into the USB from the Alpine head unit. A third party USB adapter will need to be used that is 2A.
	Miracast adapter has resolution settings that are too high.	Plug the adapter into another monitor (for example a television in the home) and reduce the resolution settings.
3 iDataLink website says serial number is invalid.	Incorrect serial number is being used.	In the i509-WRA-JK settings confirm the serial number. MENU/SETUP/GENERAL/ABOUT.
	Serial number may not be in iDataLink database.	Call ADS at 1-866-427-2999 and verify.
4 No output from RCA's	Maestro module is flashed for amplified system.	Re-flash module for non-amplified system.

Troubleshooting Guide Continued

Symptom		Possible Cause	Remedy
5	Headunit will not turn on.	Incorrect serial number was used when flashing maestro.	Flash Maestro with correct serial number.
		4 pin Maestro data cable is disconnected or damaged.	Check for proper connection or disconnected pins.
		OBD2 cable is not plugged in.	Connect OBD2 connector to the OBD2 port.
		Monitor or main harness are not connected.	Check for proper connection or disconnected pins.
6	Cannot enter SETTINGS MENU.	Vehicle is in motion or parking brake is not engaged.	With vehicle in (P)PARK engage the parking brake. Release the parking brake and engage the parking brake a second time, as shown in the Setup Guide on page 21.
8	Only the front speakers are on for SXM Radio.	SXM Tuner has not been activated.	Activate SXM Tuner.
9	The vehicle is incorrectly positioned on the Navigation display.	Poor GPS signal.	Ensure the recommended GPS antenna route was used. See page 6.
10	CarPlay, Android Auto, or off-road navigation map positioning issues.	GPS antenna is positioned incorrectly.	GPS antenna is obstructed and doesn't have line of sight to the sky. Perform a factory reset. The unit will automatically recalibrate.
11	CarPlay, Android Auto, or off-road navigation vehicle position icon heading in wrong direction	Reverse Signal is not connected or not reliable.	Ensure that Reverse wire is connected. Also ensure that no 3rd party interface module(s) interfere with the Reverse Signal. The head unit uses the Reverse Signal to achieve optimal positioning performance.
12	iPhone or Android phone is not recognized when connected to the USB cable.	Loose or disconnected USB cable.	Check the USB connection behind the headunit.
		Non-compatible cable.	Use the cable supplied with the iPhone or Android phone. Third party adapters and long extensions may not work. Only use USB extension that came with the head unit.
		Dirty charging port on phone.	Clean charging port.
13	Rear camera doesn't activate when vehicle is in reverse.	The rear camera wasn't turned on in the settings	Follow the setup guide on the previous page.
14	Rear camera just shows cones in reverse.	The rear camera that was used either is not powered on properly or there is an issue with the video connection.	Test the power wires of the rear camera with a digital multimeter to ensure they have the proper voltage. Test the video output of the camera with a test monitor to make sure it is outputting a picture.