Jeep Wrangler
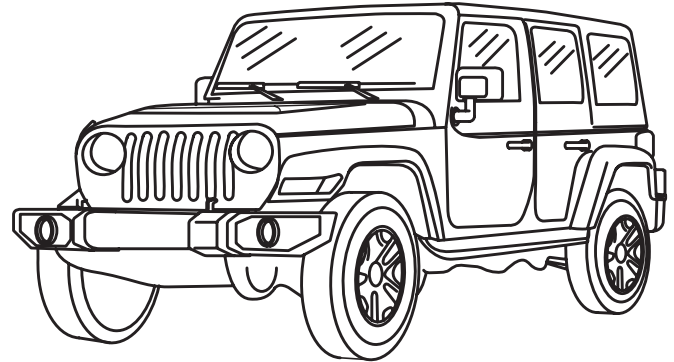## X409-WRA-JL
9" Restyle In-Dash System
Installation Manual
● Model: Wrangler JL 2018-Up
● Model: Gladiator JT 2020-Up

Jeep	Model	Year
	Wrangler JL	2018 - Up
	Gladiator JT	2020 - Up

* 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.

Introduction

● Congratulations on purchasing the X409-WRA-JL. This installation manual is designed to take you through the step-by-step installation of X409-WRA-JL into a 2018-Up Jeep Wrangler JL or Jeep Gladiator JT 2020-Up. Please familiarize yourself with the owners manual as this is a challenging installation. 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. This is an installation that is challenging and time consuming even for installers with experience. A professional installer would typically take a minimum of 3-4 hours to complete this installation. 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 thse 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**

Since this vehicle has two batteries, disconnecting the battery is not a good option. Take caution when testing circuits. 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 willl 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 athe 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**
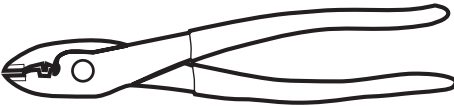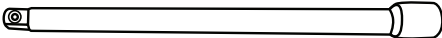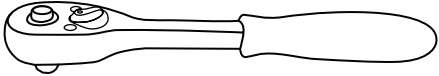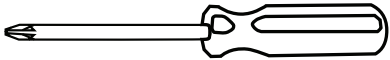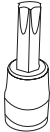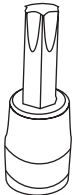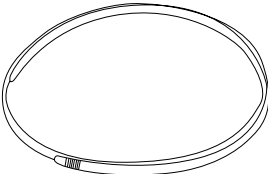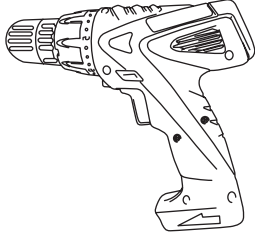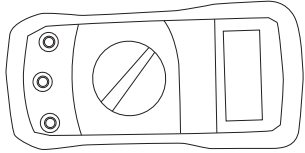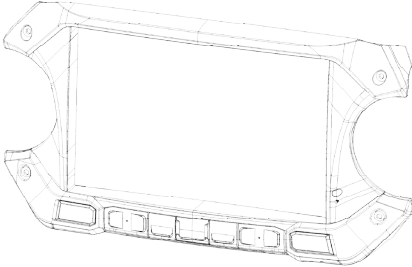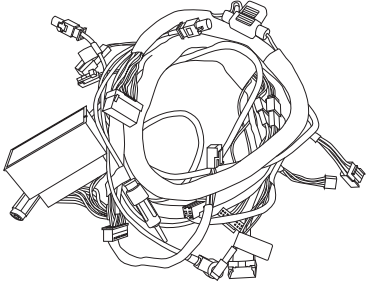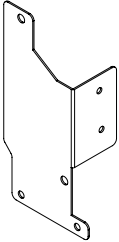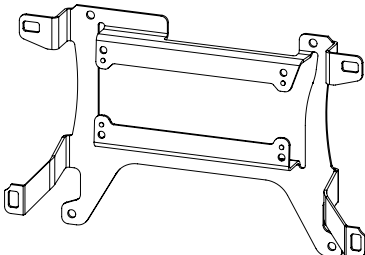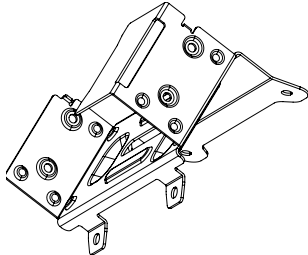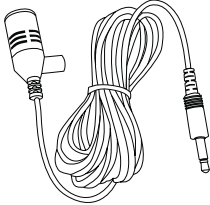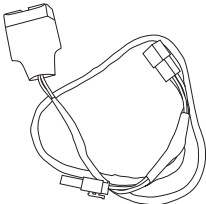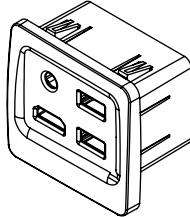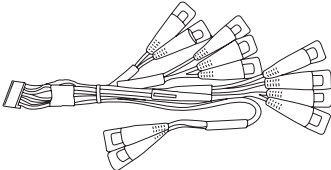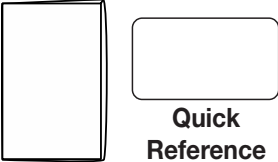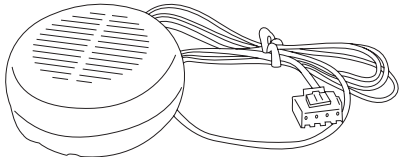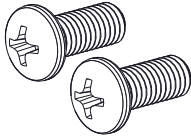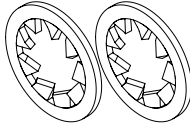
The installation and wiring of this product requires specialized skills and experience. Have the product installed by an Alpine authorized dealer.   ⚠️
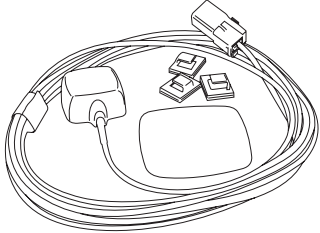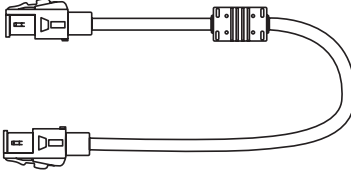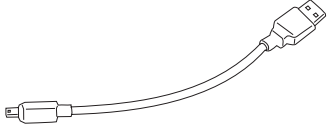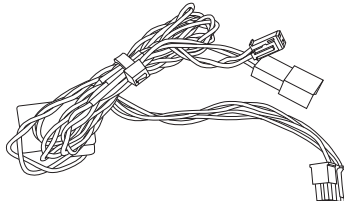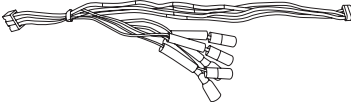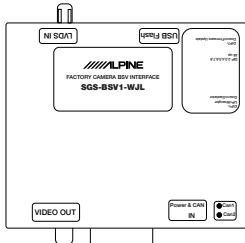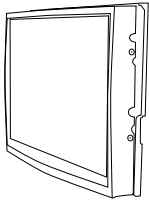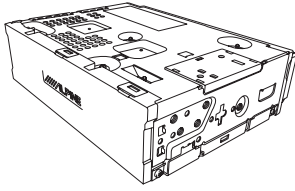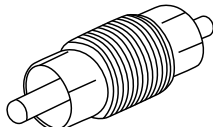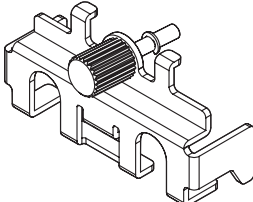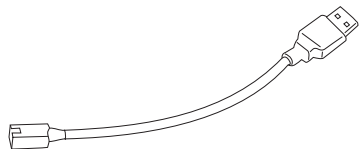
Tools Required

10mm Socket	8mm Socket	7mm Socket
Wire Cutters	Extension	Ratchet
#2 Phillips Screwdriver	Torx T20	Torx T47
Panel Removal Tools	Wire Fishing Tool	Cordless Power Drill
Digital Multimeter		

Accessory List

Display Bezel	Maestro Module	Main Harness
Power Inverter Bracket	Display Bracket	Tuner Bracket
External Bluetooth Mic	USB Power Adapter	USB, HDMI, Aux Interface
Aux/Preout Harness	Documents	Chime Speaker
	Alpine Registration Card / Quick Reference Guide	
Screws M5X10LMM x 2	Lock Washers x 2	Screws M5X8LMM x 8

Accessory List Continued

GPS Antenna	Display Cable	Maestro Programming Cable
Camera Power Harness	**Display Power Harness**	**Camera Module**
X409 Display Unit	**X409 Source Unit**	**Key Harness**
Camera Male To Male RCA Coupler	**Direct Camera Adapter**	**Source Unit HDMI Bracket**
Mini USB To USB For Center Console Power		

Programming The iDatalink Maestro Module

1 INSTALL THE WEBLINK PLUG-IN

Go to:

idatalinkmaestro.com/plugin 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.

Review the System Requirements before installing.
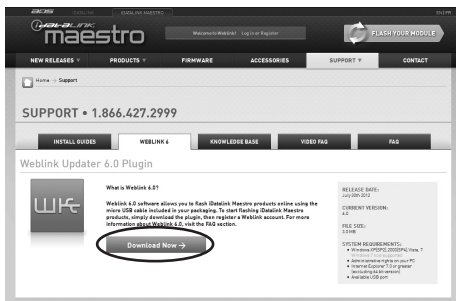
If the plugin is already installed, the caution, "The plugin is already installed" appears. Please skip to step 2.
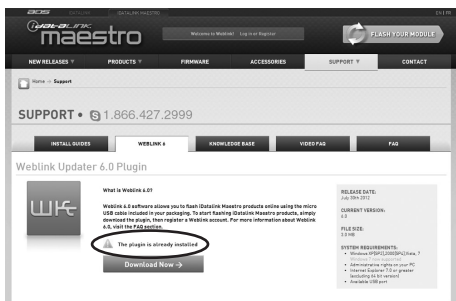
3 CONNECT YOUR MAESTRO MODULE
Use your Maestro module to connect to your PC.
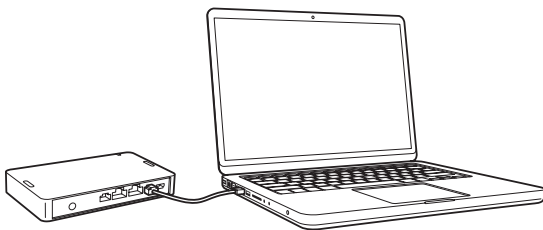
5 PROGRAM YOUR MODULE
Follow the programming steps for your vehicle.

2 REGISTER A WEBLINK ACCOUNT

Go to:

idatalinkmaestro.com/register and complete the registration process.

A confirmation email will be sent to you requiring validation.
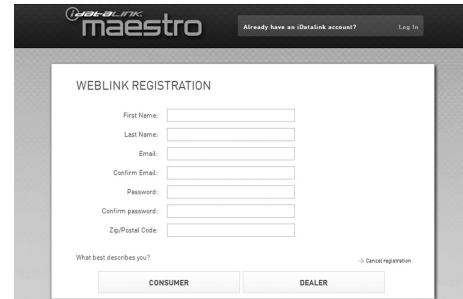
For existing customers, click log in.

4 LOG INTO WEBLINK
Go to:
idatalinkmaestro.com/login.
Enter your username and password, then click OK.

6 Once Programing is complete "FLASHING COMPLETED!" will be displayed.
Proceed to the next page to complete installation.
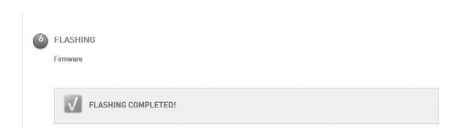
NOTE: If serial number is invalid, Call ADS at 1-866-427-2999 with the serial number.

About The Installation

The different trim levels of the Wragler JL and the Gladiator JT come with different options which will make the installation vary slightly. If the vehicle has the 115V Power outlet or the Cold Weather Group package then there are different brackets that will need to be used. If your vehicle does not have those then you will not need to use those. If you are installing the X409-WRA-JL in a Gladiator JT then a few of the steps will vary slightly so please take notice to this as you go through the installation. Also the screen size in the pictures may be different if you have the 5.0" display. The following chart shows which options are available on the different trim levels for the Wrangler JL.

2019 Jeep Wrangler	Sport	Sport S	Sport Altitude	Sahara	Rubicon	Sahara Altitude	MOAB
5.0" Touchscreen Display	Standard	Standard	Standard	Not Available	Not Available	Not Available	Not Available
7.0" Touchscreen Display	Not Available	Not Available	Not Available	Standard	Standard	Standard	Standard
115V Power Outlet	Not Available	Not Available	Not Available	Standard	Standard	Standard	Standard
Cold Weather Group	Not Available	Optional	Optional	Optional	Optional	Optional	Optional

Retained Features

STEERING WHEEL CONTROLS	
Two Functions on Each Button	■
Standard and Expanded Radio Functions	■
NAVIGATION OUTPUTS	
Accessory Power Output (15A)	■
Parking Brake Output	■
Reverse Light Output	■
Vehicle Speed Pulse Output	■
Foot Brake Output	■
FACTORY AMPLIFIER	
Amplifier Turn on	■
Speed Compensated Volume (Premium Audio)	■
Digital Fader (Premium Audio)	■
DSP Settings (Premium Audio)	■
Gain Adjustment (Premium Audio)	■
SECONDARY VEHICLE DISPLAY (IF EQUIPPED)	
Audio Information Display	■
Hands Free Info Display	■
Navigation Info Display	■
VEHICLE SETTINGS	
Access And Modify Vehicle Settings	■
ADVANCED CAMERA FEATURES	
Front Camera Auto Control (Not Retained)	X
CLIMATE CONTROL	
Climate Display And Control On Radio	■
GAUGES	
Selectable Performance Gauges	■
"Track Pack" Gauges	■
Read/Reset Check Engine Codes	■
PARK ASSIST	
Retain Parking Assist Chimes	■
Distance Display On Screen	■
VEHICLE INFO	
Tire Pressure Display	■
Battery Voltage Display	■
Read/Reset Check Engine Codes	■
Door open Status and Warning	■
ACCESSORIES	
OEM Accessory Control Integration	■

Factory Unit Disassembly Process

1 As a precautionary measure it's a good idea to mask out the dashboard and panels to prevent scratches.

2 Unsnap the 6 clips and remove the knee panel under the steering wheel using a panel removal tool.

3 The locations of the 6 clips from the previous step.
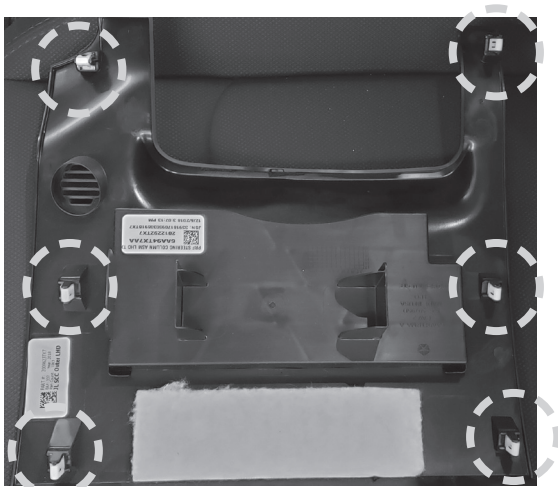
4 Unsnap 10 clips, unplug the 2 harnesses, and remove HVAC panel using a panel removal tool.

5 Locations of the clips and harnesses of the HVAC controls from the previous step.

6 Use #2 Phillips Screwdriver to extract (2) screws from the bottom of the radio bezel.
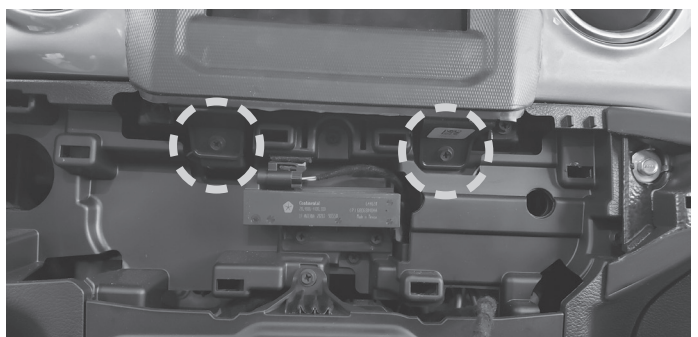
Factory Unit Disassembly Process (Continued)

7 Unsnap 6 clips and remove radio bezel using a panel removal tool.

8 Unsnap the 6 clips and remove the knee panel under the steering wheel using a panel removal tool.

9 Use #2 Phillips Screwdriver to extract (4) screws from head unit. Disconnect and remove the radio.
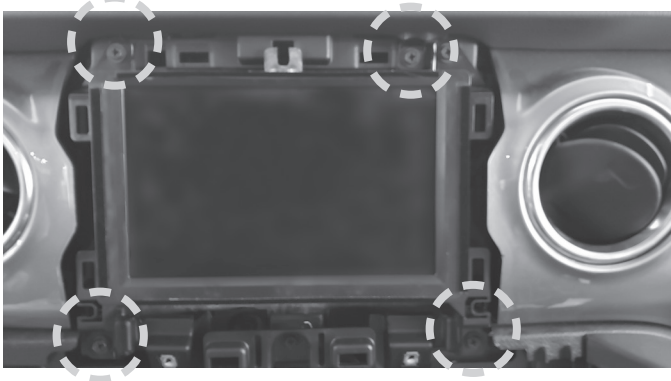
10 Disconnect the harnesses behind the OEM head unit.

11 The disconnected harnesses from the previous step. These will be used later to connect to the main harness in the installation.
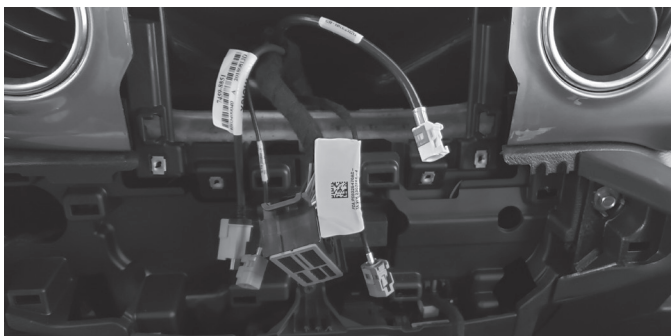
12 Open the glove compartment and remove all contents, push up the glove compartment travel stop and lower the door, pivot the glove compartment downward, release latch on left side of the glove compartment by pushing it upward, pull the glove compartment upward to remove it from the pivot.

Factory Unit Disassembly Process (Continued)

13 For vehicles with the power inverter remove the ventilation duct behind the drivers side knee panel using a panel removal tool to release the one clip holding it in place. Once the installation of the X409-WRA-JL tuner is completed the vent can go back in place.
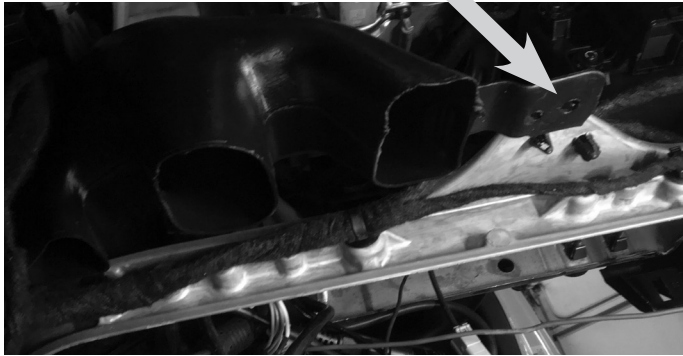
14 For vehicles with heated seats or the power inverter the bracket for the module needs to be removed. Remove the (4) 10mm screws to remove the bracket. Then remove the (2) 8mm screws lower and the (2) 10mm screws top to remove the module.
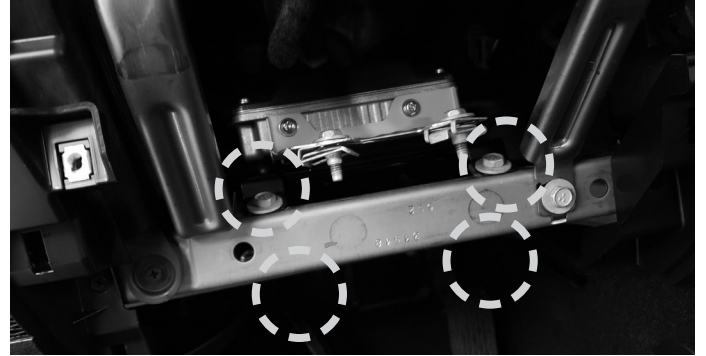
15 Remove the two knee panel brackets. Each bracket is held in by (1) 10mm screw.
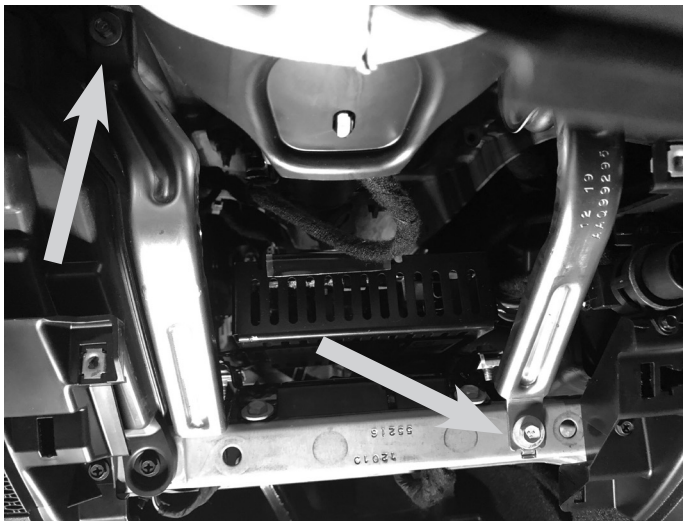
16 Remove the A pillar by removing the (2) 8mm screws and unclipping the panel. The screws can be exposed using a panel removal tool.

Factory Unit Disassembly Process (Continued)

17 Loosen the clips around the top panel visor area.

18 Remove panel above drivers door going to the B pillar.

19 Unclip 7 clips and remove the center media stack.

Installation Instructions

1 Run the GPS antenna Bluetooth microphone cables up the A pillar along the OEM wiring. Route as shown on the diagram on page 17.

2 Mount the microphone next to the rear view mirror and run the cable behind the factory panels. Route as shown on the diagram on page 17.

3 Mount GPS antenna near driver side B-pillar as illustrated on page 17 and run the cable to the knee panel.

4 Route radio cables including Radio Main, Sirius XM, FM, and Aux in main harness and also the display cable from radio cavity to knee panel.

5 Route vehicle cable in main harness from radio cavity to glove box and connect it to OBDII gateway behind the glove box. If the gateway is fully occupied, unclip 1 connector from it and use T-harness.

6 Attach tuner bracket to tuner using (4) M5X8LMM supplied screws.
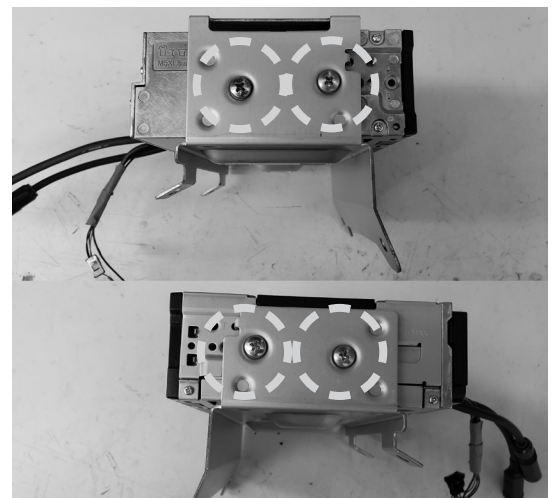
Installation Instructions (Continued)

7   If you are using the optional SiriusXM tuner, Cable tie the module on top of the source unit.
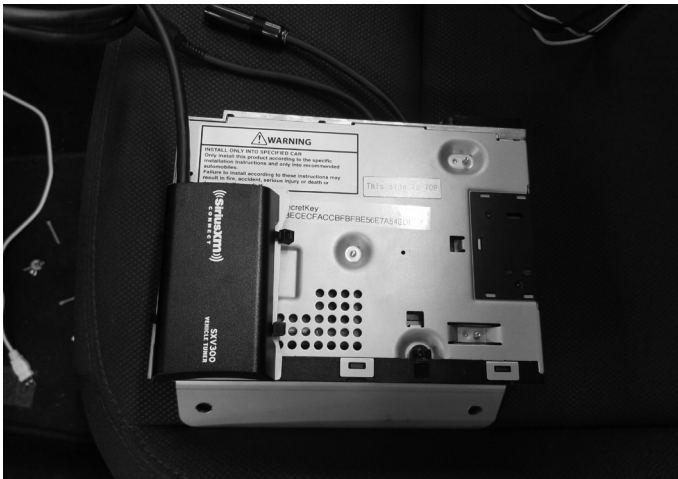
8   For vehicles with heated seats or the power inverter attach the Power Inverter bracket using the supplied (2) M5X10LMM screws and lock washers. This will mean you will not use two of the M5X8LMM screws from the previous page. These two screws are slightly longer and can make it through both brackets.
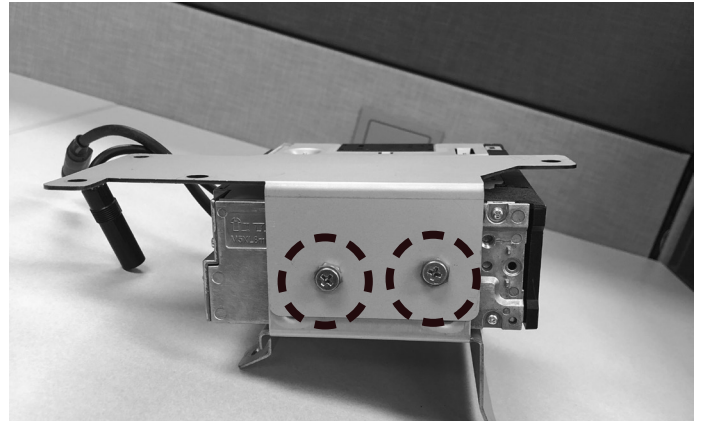
9   Use the factory speed clips from the bracket that was removed from the vehicle and attach them to the Power Inverter bracket. For the Wrangler JL use the 2 holes circled in black. For the Gladiator JT use the 3 holes pointed out by the arrows.

10   After attaching the factory speed clips this is what the bracket will look like for the Wrangler JL.
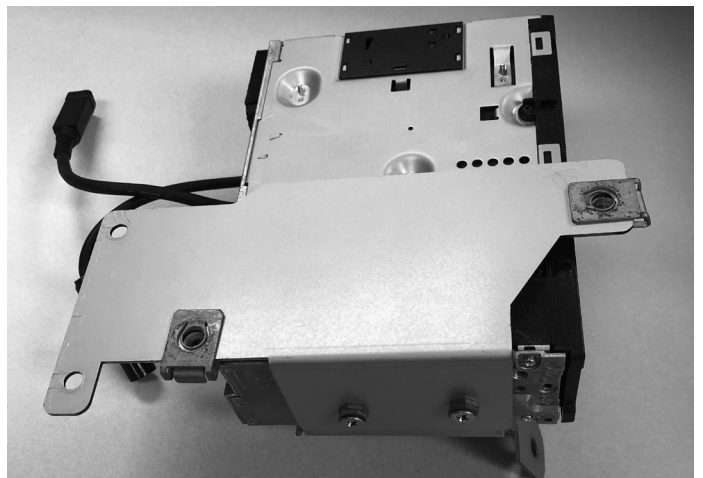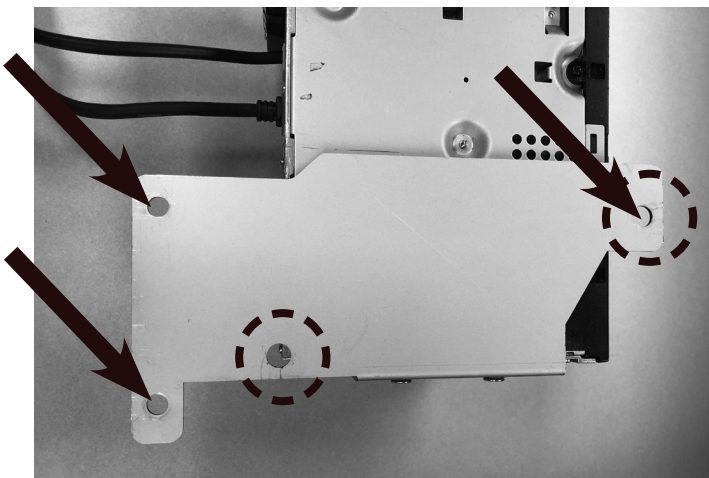
Installation Instructions (Continued)

11 Attach the factory Power module to the bracket using the OEM screws. This is what the power module will look like for the Wrangler JL.
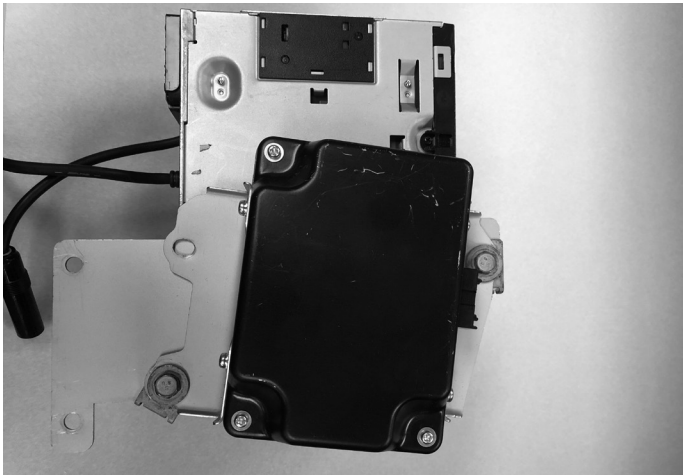
12 Attach the factory Power module to the bracket using the OEM screws. This is what the power module will look like for the Gladiator JT.
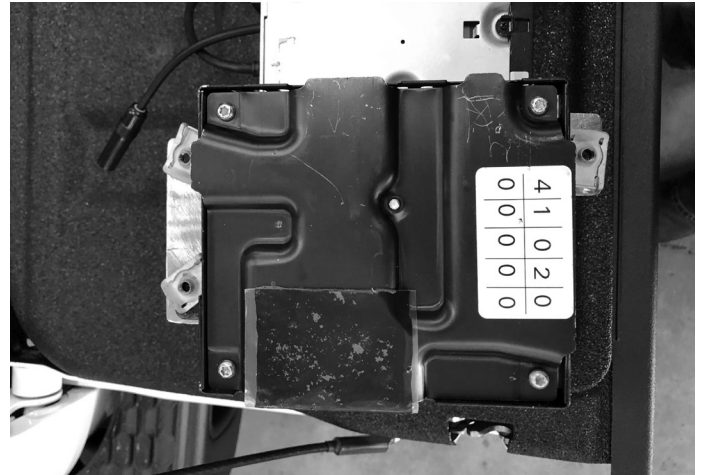
13 If the vehicle has the heated seat module clip that into the bottom bracket. The OEM clips on the module will snap into the bracket.
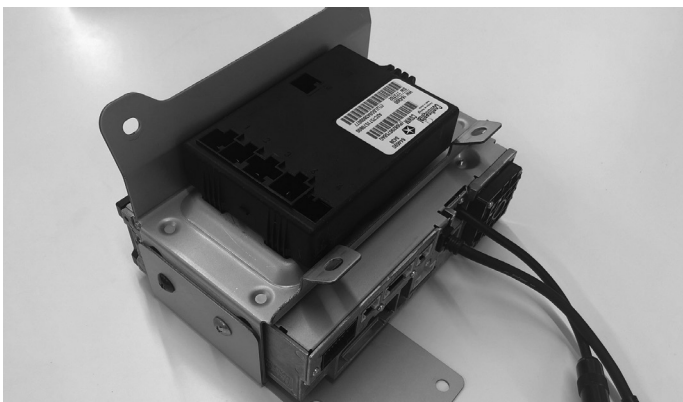
14 Use (4) OEM bolts to secure the X409 source unit tuner bracket to the vehicle. If the vehicle is equipped with the power inverter it will mount behind the 2nd cross bar.

Installation Instructions (Continued)

15 At the knee panel, connect the main harness, display harness, GPS antenna, microphone, USB cable, HDMI, FM adapter, and other adapters to X409 source unit and secure them.
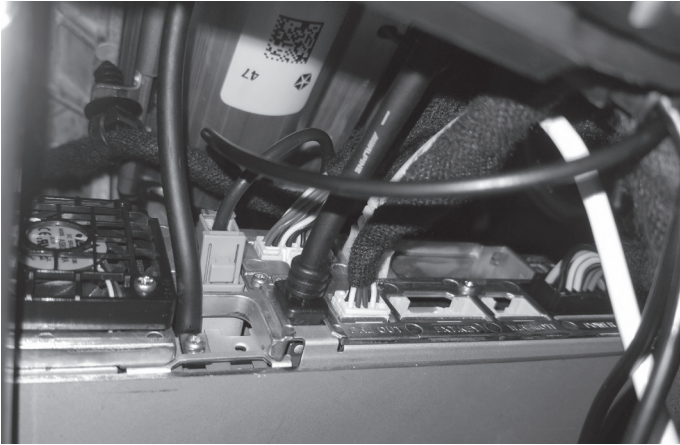
16 At radio cavity, connect the main harness, white FM adapter, and green SiriusXM antenna, and other adapters to factory harness and secure them.
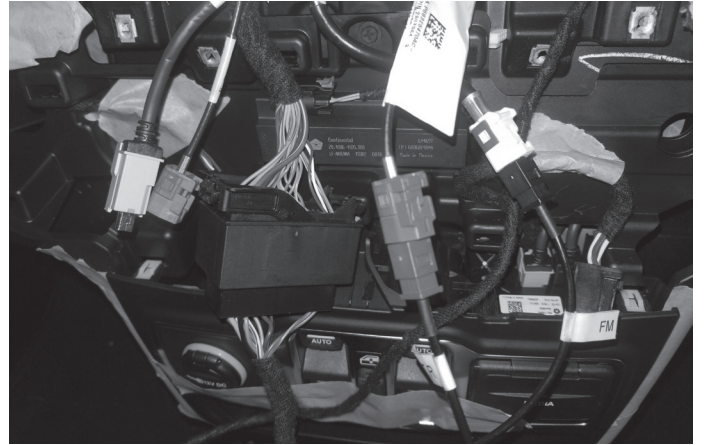
17 Connect the camera interface module to the violet or red factory camera plug and put it in right side of radio cavity. Dip switch 1 will need to be moved down for the Gladiator JT.

18 Attach the Maestro to the main harness and tuck it in left side of radio cavity.
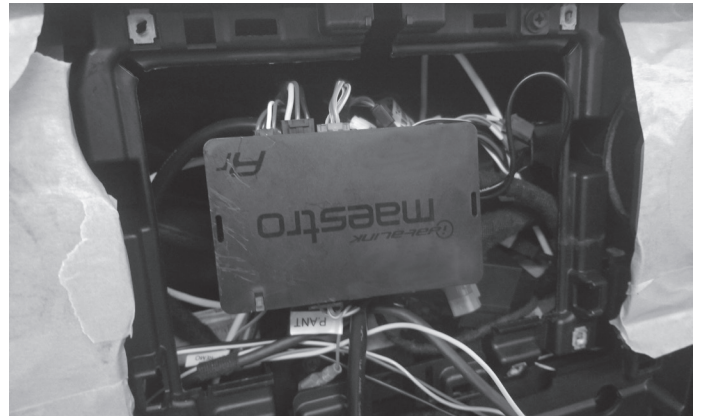
19 Run chime speaker harness from Maestro module to behind the glove box and attach there.
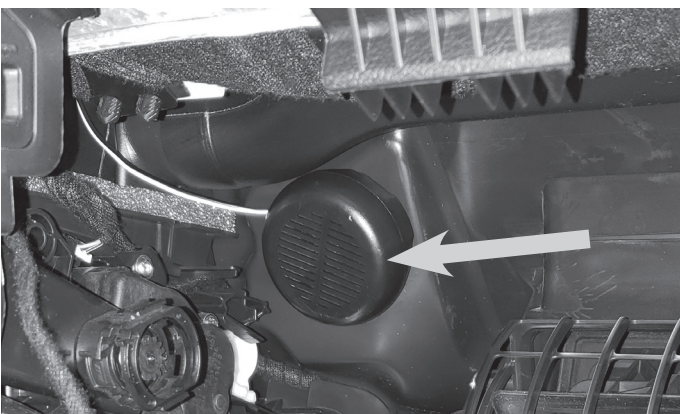
20 Remove the OEM USB from the Center Media panel by unclipping the clips on the sides.
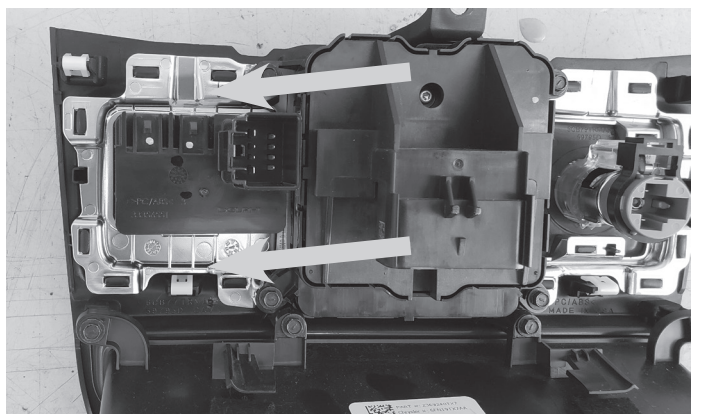
Installation Instructions (Continued)

21 Insert the X409 USB HDMI box into the OEM Center Media panel.

22 Plug in the OEM USB and the USB from the box to the power adapter. The adaptor needs to be plugged into the BLACK micro usb.

23 WARNING: There are 2 factory micro USB plugs in the dash behind the media center. One is black and one is grey. If the supplied adaptor is plugged into the grey micro USB the factory USB's will not charge. When it is plugged into the black plug all rear USB's will charge.

24 Attach the display unit to the display bracket using the (4) M5X8LMM supplied screws.

25 Attach the display and bracket to the vehicle using the OEM screws from the OEM radio.

26 Plug in the bezel and and reinstall all the factory panels.

Component Locations

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

Add-on Microphone

OEM Camera Module

Harness Route

OBDII Gateway

SAT-Radio Tuner (Sold Separately)

iDatalink Maestro Module

X409-WRA-JL Source Unit
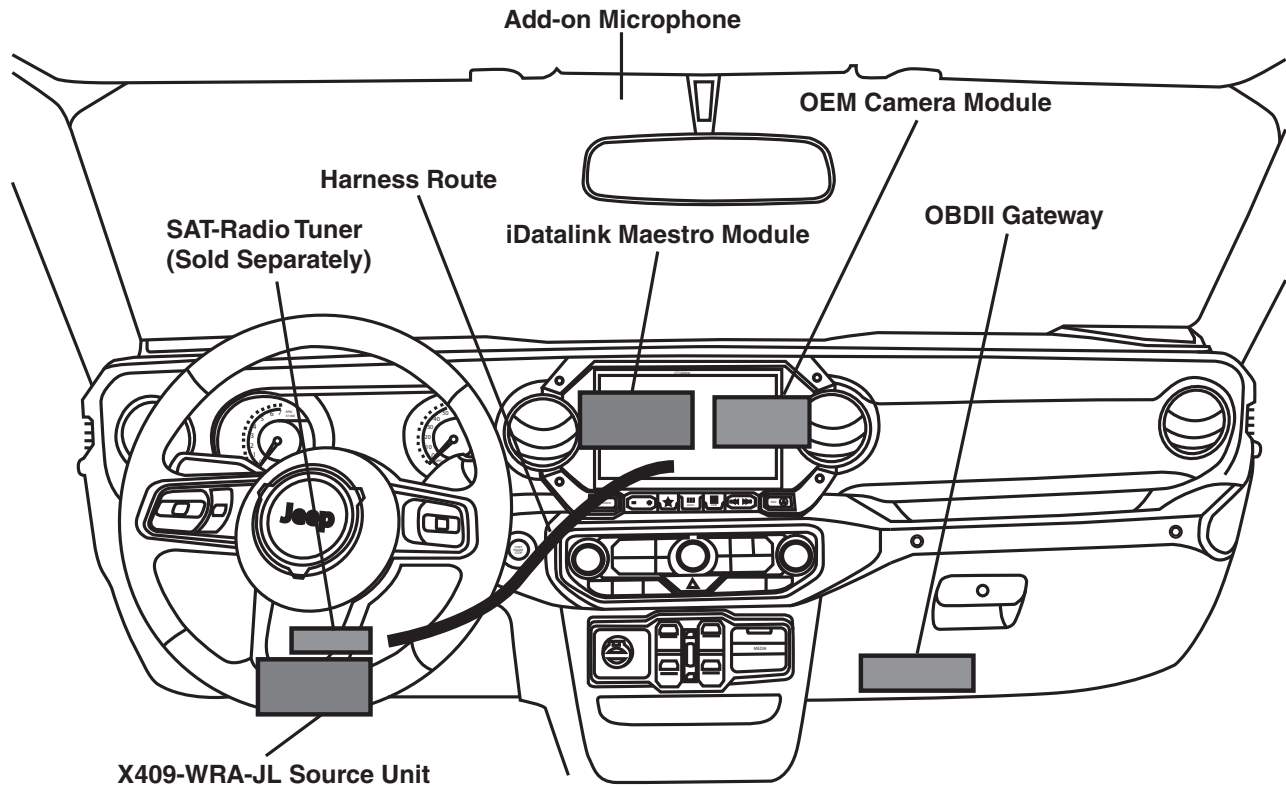
GPS Antenna Installation

⚠ IMPORTANT: Follow the GPS antenna installation procedure shown below. Failure to do so will result in poor GPS performance for CarPlay, Android Auto, and off-road navigation.

GPS Antenna

Route from behind tuner, through lower dash, and up the A pillar.

Peel the plastic layer off from the double side tape of the GPS antenna and place the GPS antenna on top of the driver side roof frame.

X409-WRA-JL Wiring Diagram

External Microphone

GPS Antenna

X409D - Display

Brown DVD Remote

Brown Mon Remote

Brown/White Remote In

Brown Remote Out

Red/White DVD Status In

AUX Input

HDMI

X409

CAN I/F   USB   DISP. OUT

GPS

HDMI IN   HDMI OUT

SXM/DAB

PRE OUT   EXT. KEY   W.REMOTE   POWER

ANTENNA

Remote Harness

Power Harness

Bluetooth Mic Input

Key Harness

To optional
SiriusXM tuner
(sold seperately)

SiriusXM Antenna

(((SiriusXm)))
connect

X409-WRA-JL Wiring Diagram Continued

To Vehicle Connectors

SXM Antenna (Green)   FM Antenna (White)

Power Speaker 52-pin Connector

AMPLIFIED VEHICLES

⚠ **WARNING!**

Failure to follow this procedure will result in no audio from Navigation and Bluetooth sources.

Rear   Front   Front   Rear

For factory amplified vehicles switch the speaker connectors, front to rear and rear to front.

Front   Rear   Front   Rear

18-pin Black Connector

Black Not Used

Red Not Used

Reset Button

10-Pin   Chime   18-Pin

iDatalink MAESTRO Module

Chime Speaker

3-Pin   4-Pin 10-Pin 3-Pin 4-Pin

Black Not Used

Blue Not Used

★ **If using KAC-001 see page 25**

10-pin Green Connector (Vehicle signals)

3-pin Black Connector (Power)

4-pin Black Connector (Data)

Main Harness

CAN pass through connection in case bank is full. Otherwise not used.

To CAN Connector

Rear Camera (Violet or Red)

See Page 24
Dip Switch 1 should be up for the Wrangler and down for the Gladiator. The rest of the switches are not used.

LVDS IN   USB Flash

//////ALPINE
FACTORY CAMERA BSV INTERFACE
SGS-BSV1-WJL
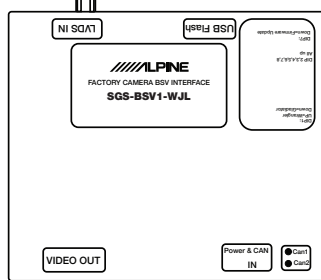
ACC CAN

Camera Power

Direct Camera

CAN Connector Bank

VIDEO OUT

Power & CAN IN   ● Can1 ● Can2

Blue Power Antenna

Blue/White Amp Turn-on

RCA Coupler

Aux Power pass through covered by protective cap

Aux Power

Direct Camera Adapter

USB, AUX, HDMI Interface

Aux Input

USB

USB Power

Mini USB To USB

HDMI

To Center Console USB Power connector in vehicle

This must be plugged into the black micro USB. See page 16 for details

Connection Of An External Amplifier

❷ **RCA Extension Cable (sold separately)**

⑦ **Remote Turn-On Lead (Blue/White)**

㉚ **Subwoofer RCA Connectors**

㉛ **Front Output RCA Connectors**

㉜ **Rear Output RCA Connectors**

CAN I/F USB
GPS
HDMI IN HDMI OUT
SXM/DAB
PRE OUT W.REMOTE POWER
ANTENNA

⑦
(Blue/White) REMOTE REMOTE ON (Blue/White)
REMOTE ON (Blue/White)

SUBW ㉚ (Red) ❷ Amplifier for subwoofer (sold separately) Subwoofer
(White) To subwoofer input terminal

FRONT OUT ㉛ (Red) To front input terminal Front speaker
❷
(White) Amplifier 4 ch (sold separately)

REAR OUT ㉜ (Red) ❷ Rear speaker
(White) To rear input terminal

Connecting A SiriusXM Module (Sold Separately)
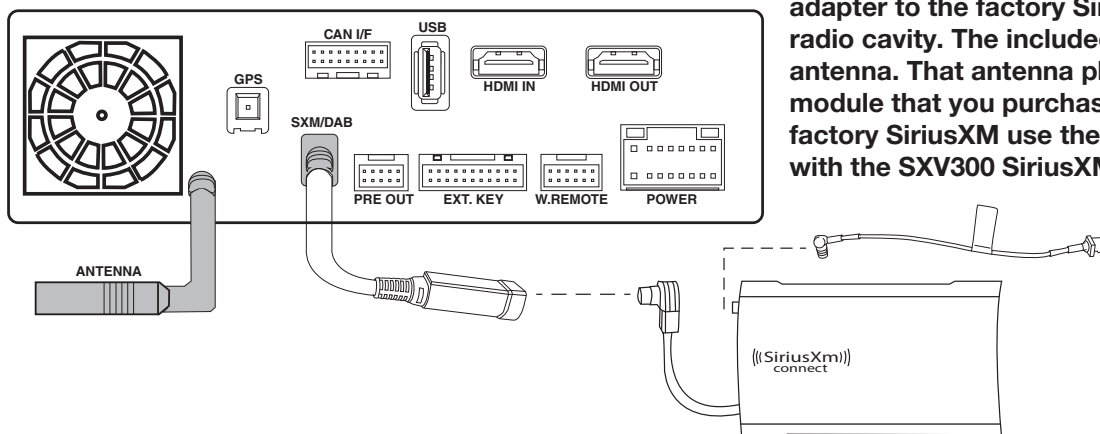
There is no way to integrate the factory SiriusXM tuner. Once the radio is removed, the factory SiriusXM is removed. As the title states, SiriusXM requires a tuner sold separately. This diagram shows how to integrate the antenna connection. For vehicles with factory SiriusXM connect the adapter to the factory SiriusXM antenna in the radio cavity. The included adapter is just for the antenna. That antenna plugs into the aftermarket module that you purchase. For vehicles without factory SiriusXM use the antenna that is included with the SXV300 SiriusXM Tuner.

CAN I/F USB
GPS
HDMI IN HDMI OUT
SXM/DAB
PRE OUT EXT. KEY W.REMOTE POWER
ANTENNA

(((SiriusXm)))
connect

HDMI Input (iPhone)

Do not use the head unit's USB to power HDMI devices. This port is meant for Apple CarPlay, Android Auto, and USB flash drives.

X409-WRA-JL Source Unit

CAN I/F   USB

GPS

SXM/DAB

HDMI IN   HDMI OUT

PRE OUT   EXT. KEY   W.REMOTE   POWER

ANTENNA

For all phones the USB power source needs to be a 2A source. This will require a separate USB power source to be installed in the vehicle.

iPhone

HDMI

Lightning To HDMI adapter needs to be purchased from Apple. Third party adapters may not work

HDMI

HDMI Input (Android)

For Android users most Android phones do not have HDMI adapters. The easiest way to connect is with a Miracast adapter (for example a Roku Stick or Amazon Firestick).

Android Phone

Or

HDMI

Some Android phones may have a HDMI adapter. That would be sold separately by the phone manufacturer. Third party adapters will not work.

HDMI

X409-WRA-JL Wiring Diagram

Label	Terminal	Connection
①		To SiriusXM Tuner
②		Vehicle Antenna
		GPS Antenna (Included)
SPEED SENSOR (Green/White)	③	To the vehicle speed pulse line
CAMERA	④	To Front, Rear or Side camera
IDATALINK I/F	⑤	To iDataLink module
AUX INPUT	⑥	To AUX output device or iDataLink module
REMO (Blue/White)	⑦	To amplifier or equalizer
REVERSE (Orange/White)	⑧	To plus side of the back lamp signal lead of the car
P. ANT (Blue)	⑨	To power antenna
PARKING BRAKE (Yellow/Blue)	⑩	To the parking brake signal lead
ACC (Red)	⑪	Ignition key
BATT (Yellow)	⑫ ⑬	Battery
GND (Black)	⑭	
(Green)	⑮	Rear Left
(Green/Black)	⑯	
(White)	⑰	Front Left
(White/Black)	⑱	
(Gray/Black)	⑲	Front Right
(Gray)	⑳	
(Violet/Black)	㉑	Rear Right
(Violet)	㉒	Speakers
DVD REMOTE (Brown)	㉓	To remote control input lead of DVE-5300
MON REMOTE (Brown)	㉔	To remote control input lead of Rear Monitor
REMOTE IN (Brown/White)	㉕	To remote control output lead
REMOTE OUT (Brown)	㉖	To remote control input lead
DVD STATUS IN (Red/White)	㉗	To remote control output lead of DVE-5300
W. REMOTE HARNESS (Yellow, Black, Pink, Brown)	㉘	To display monitor
KEY HARNESS		To bezel
MIC IN	㉙	Microphone (Included)
SUBW	㉚	
FRONT OUT	㉛	To input terminal of amplifier when adding an external amplifier
REAR OUT	㉜	

Interface cable

DISPLAY OUT

㉝ ㉟ ㊱ ㊲ ㊳

㉞ ㊴

㊵

PRE OUT cable

Power cable

W.REMOTE cable

Wire Harness Pin Outs

Radio Main

8	16
7	15
6	14
5	13
4	12
3	11
2	10
1	9

- Blue 22AWG
- Red 20AWG
- Blue/White 22AWG
- Orange/White 22AWG
- Yellow/Blue 22AWG
- Purple 20AWG
- Gray 20AWG
- Purple/Black 20AWG
- Gray/Black 20AWG
- Green 20AWG
- White 20AWG
- Green/Black 20AWG
- White/Black 20AWG
- Yellow 18AWG
- Black 18AWG

Camera Power

1
2

- Red 20AWG
- Black 20AWG

Data SWC

17	18
15	16
13	14
11	12
9	10
7	8
5	6
3	4
1	2

- Brown/Red 22AWG
- Brown/Yellow 22AWG
- Red/Brown 22AWG
- Yellow/Brown 22AWG

Wrangler Radio

52	48	44
51	47	43
50	46	42
49	45	41

40	30	20	10
39	29	19	9
38	28	18	8
37	27	17	7
36	26	16	6
35	25	15	5
34	24	14	4
33	23	13	3
32	22	12	2
31	21	11	1

- Green/Black 20AWG
- Green 20AWG
- Yellow 18AWG
- White/Black 20AWG
- Black 18AWG
- White 20AWG
- Gray 20AWG
- Gray/Black 20AWG
- Purple 22AWG
- Purple/Black 22AWG
- Brown/Yellow 20AWG
- Brown/Red 20AWG

Remote Harness

11	12
9	10
7	8
5	6
3	4
1	2

- Yellow 22AWG
- Yellow 22AWG
- Black 22AWG
- Black 22AWG
- Brown 22AWG
- Red/White 22AWG
- Brown 22AWG
- Brown 22AWG
- Brown/White 22AWG
- Pink 22AWG
- Brown 22AWG

Direct Camera

6
5
4
3
2
1

- Black 22AWG
- Black 22AWG
- Red 22AWG
- Blue 22AWG
- Black 22AWG
- White 22AWG

Radio I/O

9	10
7	8
5	6
3	4
1	2

- Orange/White 22AWG
- Green/White 22AWG
- Yellow/Blue 22AWG
- Blue/White 22AWG

iDatalink

4
3
2
1

- Blue 22AWG
- White 22AWG
- Black 22AWG
- Red 22AWG

Speaker Harness

1
2
3
4

- Purple 20AWG
- Purple/Black 20AWG
- Green 20AWG
- Green/Black 20AWG

Speaker Harness

1
2
3
4

- Gray 20AWG
- Gray/Black 20AWG
- White 20AWG
- White/Black 20AWG

CAN

1
2

- Brown/Red 22AWG
- Brown/Yellow 22AWG

Cam Aux Data

17	18
15	16
13	14
11	12
9	10
7	8
5	6
3	4
1	2

- Red 22AWG
- Blue 22AWG
- Black 22AWG
- White 22AWG
- Blue 22AWG
- Black 22AWG
- Red 22AWG
- Black 22AWG
- Black 22AWG
- White 22AWG
- Green/White 22AWG
- Red 22AWG

Aux Power

3
2
1

- Yellow 18AWG
- Red 20AWG
- Black 18AWG

Maestro Power

3
2
1

- Yellow 18AWG
- Red 20AWG
- Black 18AWG

CAN Connector

2
1

- Yellow/Brown 22AWG
- Red/Brown 22AWG

CAN Connector

1
2

- Red/Brown 22AWG
- Yellow/Brown 22AWG

Adding The KCX-C250MC (Sold Separately)

Violet Or Red Rear Camera Connector From Vehicle

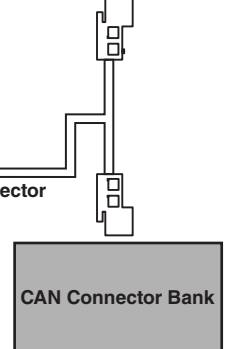**Dip Switch 1 should be up for the Wrangler and down for the Gladiator. The rest of the switches are not used.**

KCX-C250MC (Sold Separately)

MULTI CAMERA SELECTOR INTERFACE
FOR ALPINE CAMERA   KCX-C250MC

POWER / V. OUT   REAR CAMERA   FRONT CAMERA   SIDE CAMERA

1   **2**   **3**   **4**

1 - Video Out & Power Harness
2 - Rear Camera
3 - Front Camera
4 - Side Camera

FACTORY CAMERA BSV INTERFACE
SGS-BSV1-WJL

LVDS IN   USB Flash

VIDEO OUT   Power & CAN   IN

Alpine Direct Front Camera

Alpine Direct Front Camera

RCA Coupler

Not Used

Direct Camera Adapter

ACC CAN

Camera Power

Video Output Connector

Accessory (Red)

Ground (Black)

Direct Camera

CAN I/F Connector

Main Harness

X409-WRA-JL Source Unit

CAN I/F   USB   DISP. OUT

GPS

HDMI IN   HDMI OUT

SXM/DAB

PRE OUT   EXT. KEY   W.REMOTE   POWER

ANTENNA

Connection Of KAC-001 (Sold Separately)

KAC-001 Side View

POWER RESET HEADUNIT CAN OUTPUT UPDATE

Reset Button

USB port (Firmware updates only)

Power Harness (3-pin White)

BATT* (Yellow)
ACC (Red)
GND (Black)
*Fuse Rating: 7A

Interface Harness (4-pin White)

Interface Cable (4-pin) (included with ADS module)

8ch Output Harness (24-pin White)

Output 1 (Purple)
Output 2 (White/Red)
Output 3 (Brown)
Output 4 (Blue)
Output 5 (Green)
Output 6 (Pink)
Output 7 (White)
Output 8 (Gray)

Connect to Relay/output to accessories (Sold separately)

Connect to IDATALINK I/F cable from head unit. This is the 4 pin data connector shown on page 12 in the installation diagram that comes directly off of the main harness

To 4 Pin Black Data

Maestro Module Side View

3 Pin Black   4 Pin Blue   10 Pin Green   3 Pin Black   4 Pin Black Data

Not Used

Main Harness

To Head Unit

Steering Wheel Configuration

Off Hook
Voice
On Hook

Seek Up
Preset Up
Seek Down

Volume Up
Source
Volume Down

Button	Press Once	Press And Hold
Seek Up	Track +	None
Seek Down	Track -	None
Next Preset	Preset & Folder +	Preset & Folder -
Voice	Voice Or Siri	None
Off Hook	Answer Call	None
On Hook	Hang Up & Reject Call	None
Volume Up	Volume +	None
Volume Down	Volume -	Attenuation On/Off
Source	Source/Camera View	None

Setting Up OEM Aux Switches

1   Once in the setup menu (see page 28) select SYSTEM and then MAESTRO MODULE.

2   Select VEHICLE FEATURES.

3   Select AUX SWITCHES.

4   Select the switch that you would like to edit (AUX 1, AUX 2, AUX 3, or AUX 4).

5   Select the setting you would like to edit (TYPE, POWER SOURCE, or RECALL LAST STATE).

6   TYPE can be set for either LATCHING or MOMENTARY. LATCHING means that when the switch is selected it will stay on until the switch is pressed again. MOMENTARY will only keep the switch on as long as the button is held in.

7   RECALL LAST STATE when set to ON the state of the switch is retained across ignition cycles.

8   POWER SOURCE menu can be set for either BATTERY or IGNITION. BATTERY means the switch has power to it at all times. IGNITION means it has power only when the vehicle is on.
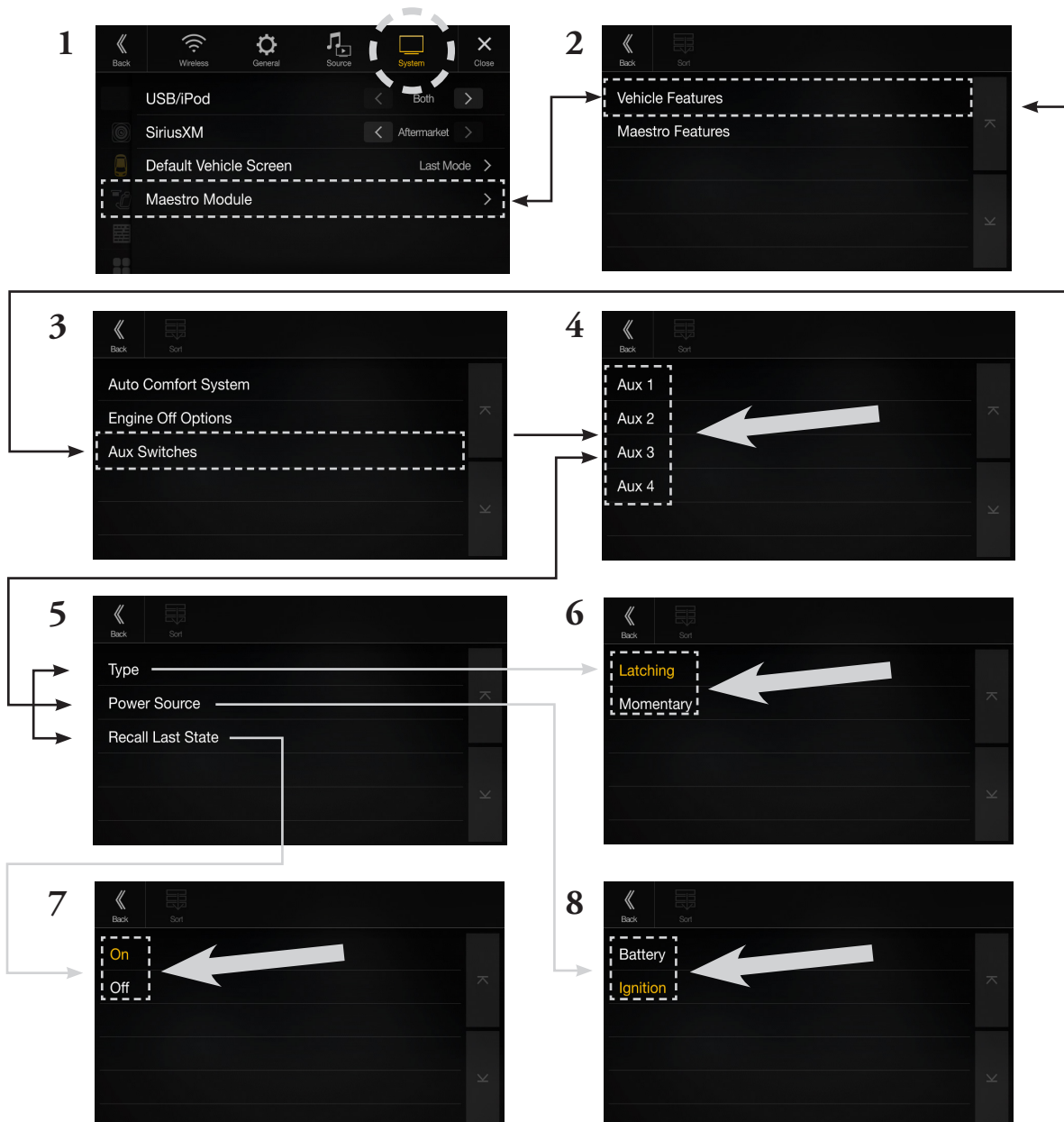
Set Up Guide

1 Turn the vehicle's Ignition switch to ACC.

2 Turn ON the X409-WRA-JL by pressing any key.

3 Select the user language and press OK.

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 When the KAC-001 (External Accessory Control Module) is present be sure to turn it ON in the SETUP MENU. Page 96 of the owners manual goes over the details of setting it up. That can be found on the support page of the website. (MENU/SYSTEM/EXTERNAL ACCESSORIES/EXTERNAL ACCESSORY CTLR).

6 When the KCX-C250MC (Multi Camera Selector Interface) is present be sure to turn it ON in the SETUP MENU. (MENU/SYSTEM/CAMERA/CAMERA SELECT/CAMERA SELECTOR).

7 Vehicle information- Set the desired gauge information. (MENU/VEHICLE INFO/GAUGES/CAR SETTINGS).

8 If the vehicle is equipped with the factory accessory switches set those up. See previous page for details. (MENU/FACTORY SYSTEM SETUP/MAESTRO MODULE/VEHICLE FEATURES/AUX SWITCHES).

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.	A 2A USB power source must be used to power on the device.
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 or HDMI adapter isn't plugged into a 2A source.	A 2A USB power source must be used to power on the device.
		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 X409-WRA-JL 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.
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, key-harness or main harness are not connected.	Check for proper connection or disconnected pins.

Troubleshooting Guide Continued

Symptom		Possible Cause	Remedy
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 28.
7	Sound mutes when vehicle is shifted into reverse.	Mute on reverse is turned on in the SOUND menu.	Change Mute on reverse to off.
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 recommeded GPS antenna route was used. See page 17.
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.
		Wrong USB port used.	The OEM USB's are only meant for charging. They can't transfer data. The only one that can is the bottom port of the USB, AUX, HDMI interface that is included.
13	Volume controls on bezel and steering wheel controls do not work.	The setting for External Processor was turned on.	That setting should only be checked when using an external sound processor. When there isn't one being used in the audio system it needs to be in the default setting of off. MENU/SETUP/SYSTEM/EXTERNAL ACCESSORIES/EXTERNAL AUDIO PROCESSOR/OFF
14	OEM USB's not charging.	The wrong micro USB was plugged into the USB power adapter.	There are 2 factory micro USB plugs in the dash behind the media center. One is black and one is grey. If the supplied adaptor is plugged into the grey micro USB the factory USB's will not charge. Make sure the black USB is plugged into the power adapter. See pages 16 and 19 for details.