

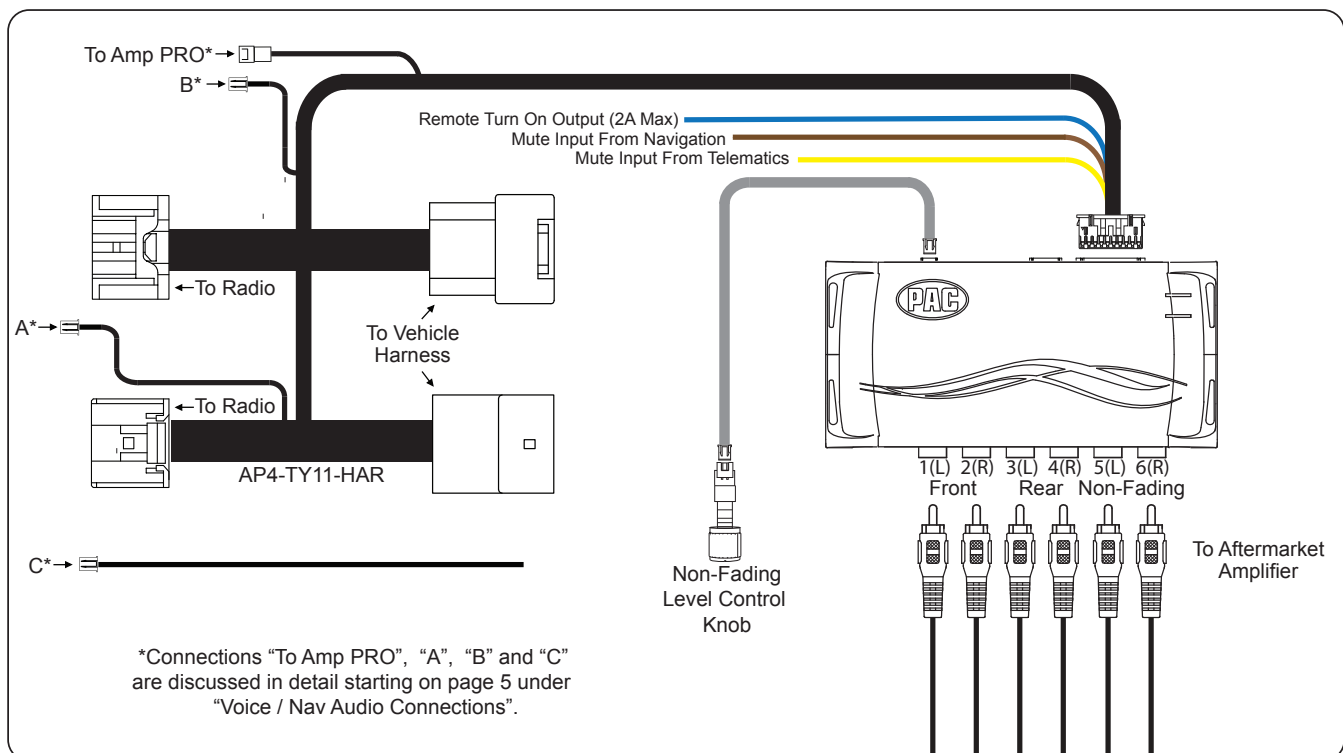
Introduction and Features

The AP4-TY11 provides a 6-channel pre-amp output for use with aftermarket audio equipment. Using the full range, fixed level head unit output, in conjunction with data bus messages, the AP4-TY11 delivers a variable 5v RMS pre-amp output with fading, balance, equalization, and level control capabilities. The module also retains audio from other vehicle features such as factory navigation prompts, Bluetooth and Voice Activation. An accessory controlled remote amplifier turn on wire is also provided by the AP4-TY11. When used in conjunction with the APA-TOS1 (sold separately), the module can provide a variable 2-channel fiber optic digital audio output (TOSLINK).

Important Notes

1. Only compatible in vehicles equipped with a data bus controlled premium sound system. To verify compatibility in Toyota, look for a JBL logo on the radio. In Lexus applications, most compatible radios will have a factory subwoofer or center channel. RX Series Lexus are always amplified regardless if they do or do not have a center channel or subwoofer.
2. Voice activation / navigation prompt audio requires the AP4-TY11 harness to be connected for the proper configuration for the vehicle. **See the Vehicle Connections Chart starting on page 2 for details.**
3. The factory radio's speed controlled volume, DSP, and surround sound mode are not supported by the AP4 outputs.
4. The factory amplifier must remain connected, and in the vehicle after the AmpPRO has been installed.
5. Prior to testing, cycle the ignition off and back on again to properly initialize the AP4-TY11.
6. The AP4-TY11 beep volume and minimum volume levels are set to 0 dB by default. If you are happy with this level in your particular application, additional adjustment is not required. Please refer to the Setup and Configuration section on page for more details.
7. The remote output is rated at 2A of current. If more current is needed, an external relay must be used.
8. Channels 5 and 6 are non-fading outputs. The output level of channels 5 and 6 can be controlled using the supplied level control knob.
9. The level control knob must be connected in order to manually adjust the beep volume and minimum volume settings.
10. Due to variations in output levels between various OEM radios and even between radio modes, the AP4-TY11 output voltage may vary from the selected 5 volt (or 4 volt when DIP switch 2 is down) output.
11. Toyota Safety Connect and Lexus Enform (SOS) can easily be retained.

Wiring Connection Chart



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Advanced Amplifier Interface for Toyota / Lexus

Vehicle Connections Chart

The connections chart provides the information necessary to retain the voice prompts and navigation audio along with details of where to find the factory amplifier, and in some cases, location of the factory navigation module. In vehicles with navigation and / or a voice button on the steering wheel, locate your vehicle on this chart to determine which config you will use. If the vehicle does not have the voice button on the steering wheel and it does not have navigation, this information will not pertain to the installation.

Use the chart to determine which Configuration to use, and the location of the amplifier and navigation module (where applicable). Under the "Config Type" column, if it is listed as "A" it is config type A, "B" is config type "B" and Config type C is listed as the 3 possible versions. "C v1" is config type C version 1, "C v2" is config. type C version 2, and "C v3" is config version 3. See the appropriate section covered on pages 5 thru 8 regarding the connections covered in the chart. If there is an N / A listed for the vehicle, the information in that column does not pertain to your vehicle. The "Nav Input Audio" and "Nav Output Audio" information describes the wiring and connector found at the navigation module.

Toyota

Model	Years	Config Type	OEM Amp Location	Nav Module Location	Nav Input Audio	Nav Output Audio
4Runner	2003 - 2005 *	C v3	Behind Right Rear Side Panel in Rear Cargo Area	Over Right Rear Tire Well In Rear Cargo Area	18 Pin Connector Pin 1 (+) Light Green Pin 10 (-) Blue	18 Pin Connector Pin 2 (+) Light Green Pin 11 (-) Blue
4Runner	2006 - 2013	A	Behind Right Rear Side Panel in Rear Cargo Area	N / A	N / A	N / A
Avalon	2005 - 2007	C v3	Under Front Right Seat	Left Side of Luggage Compartment	18 Pin Connector Pin 1 (+) Gray Pin 10 (-) Yellow	18 Pin Connector Pin 2 (+) Pink Pin 11 (-) Violet
Avalon	2008 - 2010	Non Nav: A Nav: C v3	Under Front Right Seat	Left Side of Luggage Compartment	18 Pin Connector Pin 1 (+) Gray Pin 10 (-) Yellow	18 Pin Connector Pin 2 (+) Pink Pin 11 (-) Violet
Avalon	2011 - 2012	A	Under Front Right Seat	N / A	N / A	N / A
Avalon	2013 - 2014	B	Under Front Left Seat	N / A	N / A	N / A
Camry	2007 - 2011	A	Under Front Right Seat	N / A	N / A	N / A
Camry	2012 - 2014	B	Under Front Left Seat	N / A	N / A	N / A
Corolla	2005 - 2008	N / A	Under Front Right Seat	N / A	N / A	N / A
Corolla	2009 - 2011	A	Under Front Right Seat	N / A	N / A	N / A
FJ Cruiser	2011 - 2014	A	Behind Right Rear Side Panel in Rear Cargo Area	N / A	N / A	N / A
Highlander	2008 - 2010	A	Under Front Right Seat	N / A	N / A	N / A
Highlander	2011 - 2013 **	Radio and Display: B All Others: A	Under Front Right Seat	N / A	N / A	N / A
Prius	2004 - 2005	C v1	Under Front Right Seat	N / A	N / A	Pin 22 (+) White Pin 21 (-) Black
Prius	2006 - 2009	C v2	Under Front Right Seat	N / A	N / A	Pin 25 (+) Green Pin 26 (-) Red
Prius	2010 - 2011	A	Under Front Right Seat	N / A	N / A	N / A
Prius	2012 - 2015	B	Under Front Right Seat	N / A	N / A	N / A
Rav4	2004 - 2006	N / A	Behind Right Rear Side Panel in Rear Cargo Area	N / A	N / A	N / A



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Vehicle Connections Chart (cont.)

Toyota (cont.)

Model	Years	Config Type	OEM/Amp Location	Nav/Module Location	Nav Input/Audio	Nav Output/Audio
Rav4	2007 - 2012	A	Behind Right Rear Side Panel in Rear Cargo Area	N / A	N / A	N / A
Rav4	2013	B	Behind Right Rear Side Panel in Rear Cargo Area	N / A	N / A	N / A
Sequoia	2005 - 2013	A	Under Front Right Seat	N / A	N / A	N / A
Sienna	2004	C v3	Right Side of Dash Behind Glovebox	Under Front Right Seat	18 Pin Connector Pin 1 (+) Green / White Pin 10 (-) Brown	18 Pin Connector Pin 2 (+) Pink Pin 11 (-) Violet
Sienna	2005 - 2010	A	Right Side of Dash Behind Glovebox	N / A	N / A	N / A
Sienna	2011 - 2014	A	Under Front Right Seat	N / A	N / A	N / A
Tacoma	2005 - 2008	N / A	Back Wall Right Side	N / A	N / A	N / A
Tacoma	2009 - 2011	A	Back Wall Right Side	N / A	N / A	N / A
Tacoma	2012 - 2013	B	Back Wall Right Side	N / A	N / A	N / A
Tundra	2009 - 2012	A	Built Into Rear Seat Back	N / A	N / A	N / A
Tundra	2007 - 2013	A	Under Front Right Seat	N / A	N / A	N / A
Venza	2009 - 2012	A	Under Front Left Seat	N / A	N / A	N / A
Venza	2013	B	Under Front Left Seat	N / A	N / A	N / A

* VR / Nav Trigger wire is in the 18-Pin Navigation connector in Pin 15 and is Violet / White.

** If the radio only has provisions for one of the 20-Pin connectors from the AP4-TY11 harness, it is "Config A", if it has provisions for both 20-Pin connectors, it is "Config B".

Lexus

Model	Years	Config Type	OEM/Amp Location	Nav/Module Location	Nav Input/Audio	Nav Output/Audio
CT200h	2011 - 2013	A	Under Front Right Seat	N / A	N / A	N / A
ES300	2002 - 2003*	C v3	Behind Right Side Panel of Luggage Compartment	Left Side of Luggage Compartment	18 Pin Connector Pin 1 (+) Pink Pin 10 (-) Violet	18 Pin Connector Pin 2 (+) Pink Pin 11 (-) Violet
ES300h	2013 - 2014**	Multi-Media Radio: B Other: A	Under Front Left Seat	N / A	N / A	N / A
ES330	2004 - 2006	A	Behind Right Side Panel of Luggage Compartment	N / A	N / A	N / A
ES350	2007 - 2009**	Non Nav: A Nav: C v1	Behind Right Side Panel of Luggage Compartment	N / A	N / A	Pin 22 (+) Yellow Pin 21 (-) Brown
ES350	2010 - 2012	A	Behind Right Side Panel of Luggage Compartment	N / A	N / A	N / A
ES350	2013 - 2014**	Multi-Media Radio: B Other: A	Behind Right Side Panel of Luggage Compartment	N / A	N / A	N / A



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Vehicle Connections Chart (cont.)

Lexus (cont.)

Model	Years	Config Type	OEM/Amp Location	Nav/Module Location	Nav Input/Audio	Nav Output/Audio
GX460	2008 - 2009	C v1	Behind Right Side Panel of Luggage Compartment	N / A	N / A	Pin 22 (+) Yellow Pin 21 (-) Brown
GX460	2010 - 2013	A	Under Front Right Seat	N / A	N / A	N / A
GX470	2004 - 2006*	C v3	Under Front Left Seat	Under Front Right Seat	18 Pin Connector Pin 1 (+) Blue Pin 10 (-) Light Green	18 Pin Connector Pin 2 (+) Light Green Pin 11 (-) Blue
GX470	2007 - 2009	C v2	Under Front Left Seat	N / A	N / A	Pin 25 (+) Blue Pin 26 (-) Pink
HS250h	2010 - 2012	A	Under Front Right Seat	N / A	N / A	N / A
IS250 IS350	2006 - 2009	C v1	Behind Right Side Panel of Luggage Compartment	N / A	N / A	Pin 22 (+) Yellow Pin 21 (-) Brown
IS250 IS350	2010 - 2013	A	Behind Right Side Panel of Luggage Compartment	N / A	N / A	N / A
IS250C IS350C	2010 - 2015	A	Behind Right Side Panel of Luggage Compartment	N / A	N / A	N / A
IS-F	2008 - 2009	C v1	Behind Right Side Panel of Luggage Compartment	N / A	N / A	Pin 22 (+) Yellow Pin 21 (-) Brown
IS-F	2010 - 2014	A	Behind Right Side Panel of Luggage Compartment	N / A	N / A	N / A
RX330	2004 - 2006	C v3	Under Floor Right Front Side of Luggage Compartment	Right Rear Side of Luggage Compartment	18 Pin Connector Pin 1 (+) Yellow Pin 10 (-) Light Green	18 Pin Connector Pin 2 (+) Brown Pin 11 (-) Black
RX350	2007 - 2009	C v2	Under Floor Right Front Side of Luggage Compartment	N / A	N / A	Pin 25 (+) Red Pin 26 (-) Green
RX350	2010 - 2012	A	Under Floor Right Front Side of Luggage Compartment	N / A	N / A	N / A
RX350	2013 - 2015**	Radio & Display: B Others: A	Under Floor Right Front Side of Luggage Compartment	N / A	N / A	N / A
RX400h	2007 - 2008	C v2	Under Floor Right Front Side of Luggage Compartment	N / A	N / A	Pin 25 (+) Red Pin 26 (-) Green
RX450h	2010 - 2015**	Radio & Display: B Others: A	Under Floor Right Front Side of Luggage Compartment	N / A	N / A	N / A

* VR / Nav Trigger wire is in the 18-Pin Navigation connector in Pin 15 and is Pink in the GX470 and Violet in the RX330

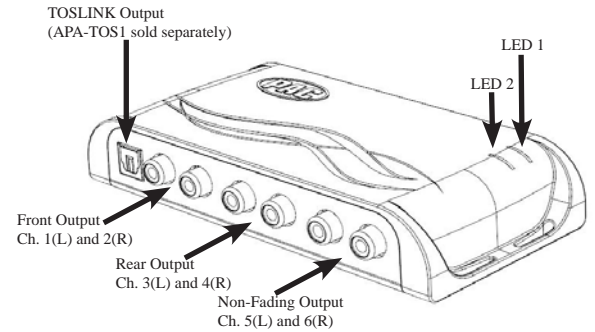
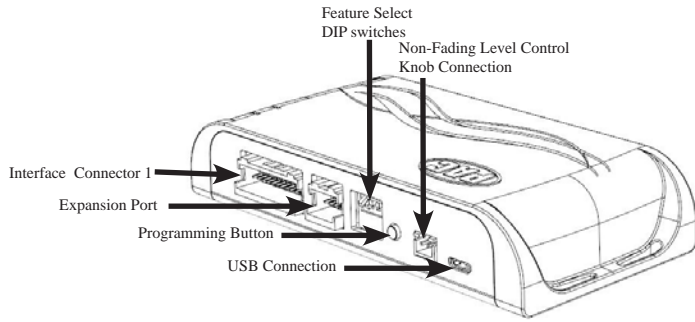
** If the radio only has provisions for one of the 20-pin connectors from the AP4-TY11 harness, it is "Config A", if it has provisions for both 20-pin connectors, it is "Config B".



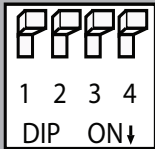
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Module Layout



Installation



Set DIP switches to the ON position to activate the corresponding features. Set DIP switches to the OFF position for any features that are not desired.



Two Channel Mode	5v / 4v Preout	Not Used	Not Used
1	2	3	4

1. Find your vehicle on the vehicle config chart (pages 2 - 4) to determine which config you will use.
2. Remove factory radio.
3. Disconnect the primary 20-pin harness and the secondary 20-pin harness (when available) from the radio.
4. Connect AmpPRO harnesses to vehicle harnesses.
5. Connect AmpPRO harnesses to factory radio.
6. Make appropriate "A", "B" or "C" Voice / Nav audio connections (see next section for detailed information).
7. Set any feature DIP switches that apply to your install (per the diagram above).
 - a. DIP switch 1 is used for two channel mode. In this mode, both the TOSLINK and front RCA outputs (1 and 2) become non-fading outputs.
 - b. Set DIP switch 2 on (down) to lower the RCA output voltage to 4v. Leave DIP switch 2 off (up) to keep the RCA output voltage at 5v. See troubleshooting section on page 11 for more details.
 - c. DIP switches 3 and 4 are not used and should remain up.
8. If you are using the APA-TOS1 (sold separately) refer to the instructions included with that product for its installation.
7. Connect the AmpPRO harness to the module.
8. Connect the level control knob to the module and install in an accessible location.
9. Connect the signal cables and remote input from the aftermarket amplifier.
10. The Yellow / Black "Mute Input from Telematics" wire will only be used in conjunction with the Safety Connect / Lexus Enform (SOS) Retention.

Voice / Nav Audio Connections

Toyota / Lexus voice activation audio and navigation audio is located in different harnesses and different locations depending on the year, make and model of the vehicle. If the radio has navigation or the steering wheel has a voice button (or both), to retain this audio it is necessary to make some additional connections when using aftermarket amplifiers to power the front speakers. There are 3 possible configurations. To determine the configuration to use, refer to the vehicle chart on pages 2 - 4

Configuration A:

The voice / navigation positive and negative audio leads are present in the secondary 20-pin connector in pins 11 and 12 of the factory radio connector. This can be verified by plugging the secondary 20-pin connector (see Config A diagram on page 6) from the radio harness into the AP4-TY11 secondary 20-pin connector then looking for wires in pin positions 11 and 12 on the factory harness side. Pins 11 and 12 will be the same pins as the White / Red and White / Blue wires on the AP4-TY11 side of the harness. If there are no wires in these pin locations on the factory harness, Config A is not the correct one for the vehicle.

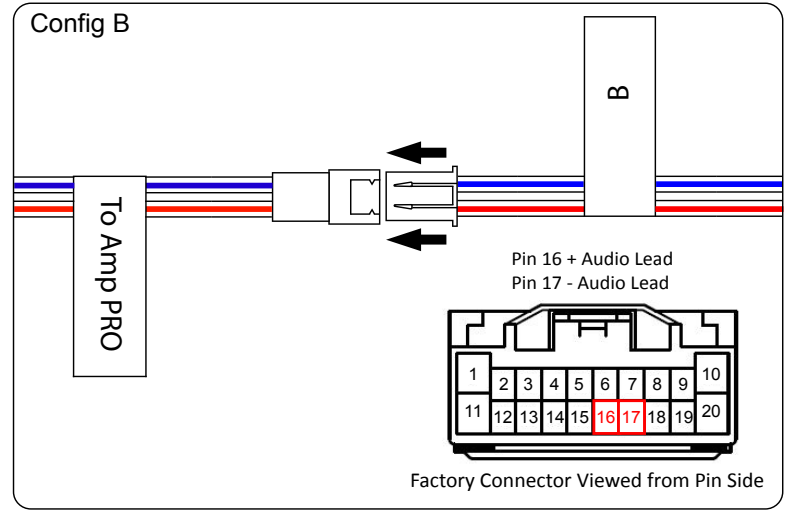
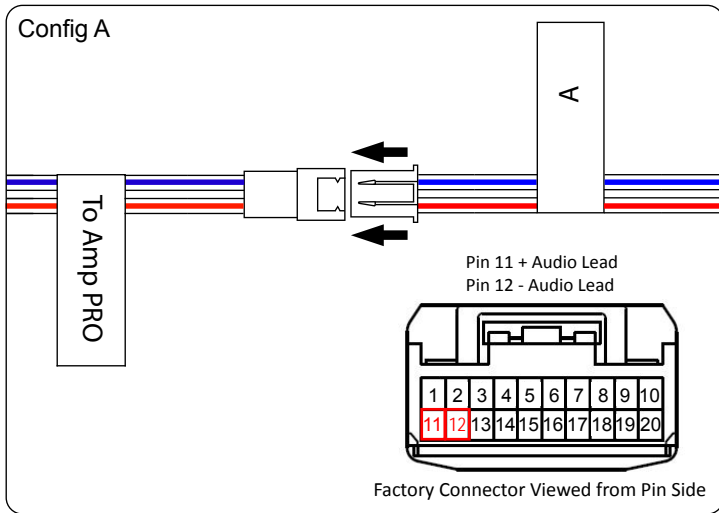
Connect the 2-pin connector labeled "A" to the 2-pin connector labeled "To Amp PRO" (See Config A diagram on page 6). The Brown "Mute Input from Navigation" wire from the AP4-TY11 harness will not be used for this configuration.



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Voice / Nav Audio Connections (cont.)



Configuration B:

The voice / navigation positive and negative audio leads are present in the primary 20-pin connector in pins 16 and 17 of the factory radio connector. Config. B applications will only have provisions for one of the 20-pin connectors at the radio. The additional 20-pin male and female connection will not be used.

Connect the 2-pin connector labeled "B" to the 2-pin connector labeled "To Amp PRO".

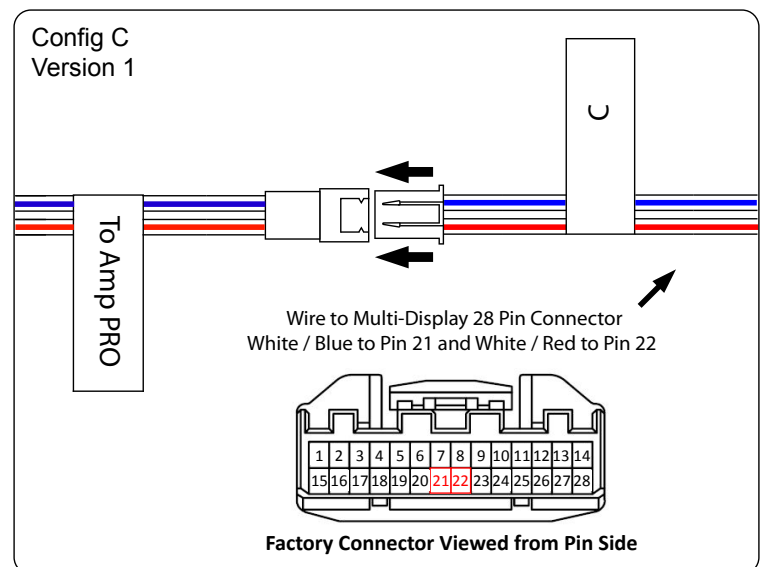
The voice / navigation positive and negative audio leads are present in the primary 20-pin connector in pins 16 and 17 of the factory radio connector. This can be verified by plugging the primary 20-pin connector (see Config B diagram above) from the radio harness into the AP4-TY11 primary 20-pin connector then looking for wires in pin positions 16 and 17 on the factory harness side. Pins 16 and 17 will be the same pins that you find the White / Red and White / Blue wires on the AP4-TY11 side of the harness. If there are no wires in these pin locations on the factory harness, Config B is not the correct one for the vehicle.

Connect the 2-pin connector labeled "B" to the 2-pin connector labeled "To Amp PRO" (See Config B diagram above). The Brown "Mute Input from Navigation" wire from the AP4-TY11 harness will not be used for this configuration.

Configuration C:

This configuration requires manually wiring the harness with connector labeled "C" into either the Multi-Display (separate radio / HVAC display screen) harness or the outputs at the navigation module depending on the year, make and model of the vehicle (refer to the vehicle chart on pages 2 - 4). For this reason, we have divided Config C into 3 different versions.

- Config C, Version 1:** The voice / navigation audio leads are present in the 28-pin connector located behind the Multi-Display. Connect the loose 2 pin harness labeled "C" to the 2 pin connector labeled "To Amp PRO". Next, locate the 28-pin Multi-Display connector (at the back of the separate radio / HVAC display screen). Connect the White / Blue wire from the "C" harness into the wire that is in pin 21 and connect the White / Red wire from the "C" harness to the wire that is in pin 22 of the 28-pin Multi-Display connector. Refer to the Vehicle Connections Chart starting on page 2 for specific wire color information. The Brown "Mute Input from Navigation" wire from the AP4-TY11 harness will not be used for this configuration.

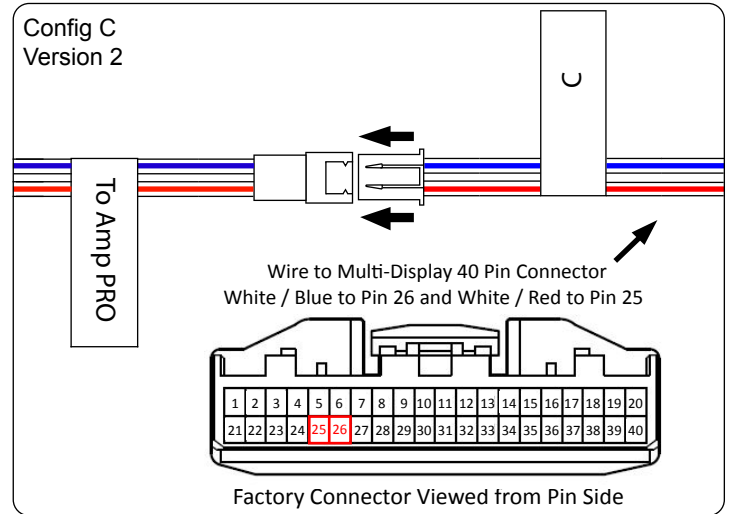


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Voice / Nav Audio Connections (cont.)

- Config C, Version 2:** The voice / navigation audio leads are present in the 40-pin connector located behind the Multi-Display. Connect the loose 2-pin harness labeled "C" to the 2-pin connector labeled "To Amp PRO". Next, locate the 40-pin Multi-Display connector (at the back of the separate radio / HVAC display screen). Connect the White / Blue wire from the "C" harness into the wire that is in pin 26 and connect the White / Red wire from the "C" harness to the wire that is in pin 25 of the 40-pin Multi-Display connector. Refer to the Vehicle Connections Chart starting on page 5 for specific wire color information. The Brown "Mute Input from Navigation" wire from the AP4-TY11 harness will not be used for this configuration



- Config C, Version 3:** The voice / navigation audio leads are only present at the outputs of the navigation module. There are 3 different methods for connections under version 3. Use the information provided to determine the best option for your application.

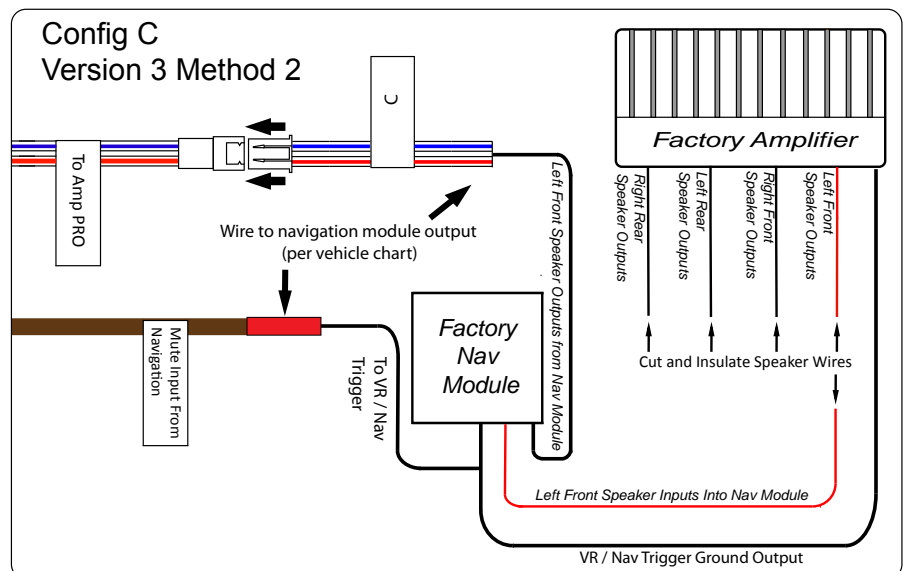
Method 1 is used when you are only adding an aftermarket amplifier for subwoofers, or when wiring an aftermarket amplifier to the front speaker outputs of the factory amplifier, rather than running new speaker wires from the aftermarket amp straight to the front speakers. When running an aftermarket amp to the front speaker outputs of the factory amplifier, the left front speaker output of the aftermarket amplifier passes through the navigation module. It is recommended to use an amplifier that provides 150 watts or less so that the factory navigation module is not damaged due to excessive heat. If the front speaker output is in excess of 150 watts, use Method 2 or Method 3 instead.

Method 1 may require running a wire from the AP4-TY11 harness brown wire labeled "Mute Input From Navigation" to a wire at the navigation module. Most applications do not require this connection. Next, cut the front speaker outputs (and rear speaker outputs if applicable) to the appropriate speaker wire outputs at the factory amplifier, and insulate the side that goes towards the amplifier (these will not be used). Wire the aftermarket amplifier outputs to the appropriate remaining speaker wires. Refer to the Vehicle Connections Chart section starting on page 5 for information regarding where the navigation module is located and where to connect the Brown wire.

- Config C, Version 3:**

Method 2 is used to pass the voice prompts and navigation audio through the AP4-TY11 instead of through the navigation module when using an aftermarket amplifier on the front speakers. If the Vehicle Connections Chart (starting on page 5) does not indicate that there is a VR / Nav Trigger wire, Method 2 is not an option (use Method 3). If the aftermarket amplifier output is less than 150 watts on the front speakers, Method 1 is also an option.

Method 2 requires running a wire from the AP4-TY11 harness brown wire labeled "Mute Input From Navigation" to a wire at the navigation module. It is also necessary to run a speaker wire from the White / Red (+) and White / Blue (-) wires on the loose AP4-TY11 harness labeled "C" to the navigation audio outputs located at the navigation module.



Voice / Nav Audio Connections (cont.)

- **Config C, Version 3, Method 2 (cont.):**

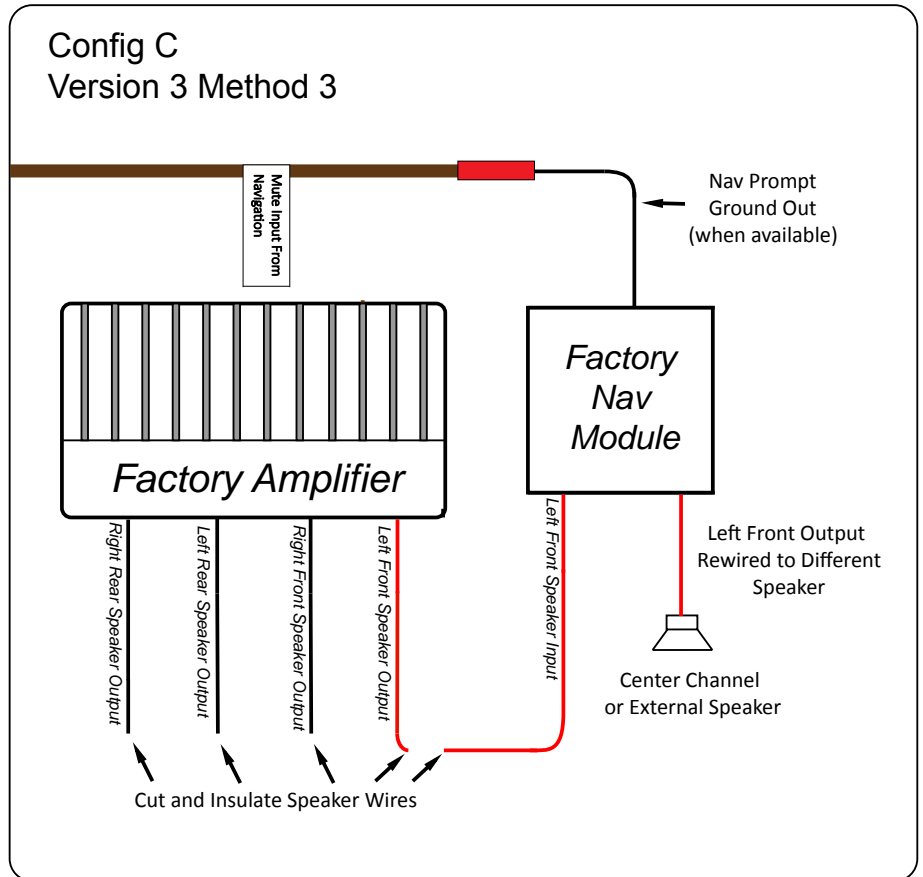
Next, plug the 2-pin connector on the "C" harness into the 2-pin receptacle on the AP4-TY11 harness labeled "To Amp PRO". Refer to the "Vehicle Connections Chart" section starting on page 5 for information regarding where the navigation module is located and where to connect the Brown wire. See the Config C, Version 3, Method 2 diagram on page 7.

- **Config C, Version 3:**

Method 3 bypasses the factory navigation module and uses an external speaker (not supplied) to provide the voice prompts and navigation audio.

Method 3 may require running a wire from the AP4-TY11 harness brown wire labeled "Mute Input From Navigation" to a wire at the navigation module. It also requires cutting the audio input and output wires at the navigation module and insulating the input wires that lead back to the factory amp (to prevent shorting them out). Extend a speaker wire from the navigation audio output wires to an

external 4 ohm speaker and hide it in a place where it will be audible (commonly under the dashboard on the driver's side of the vehicle). If the vehicle has a center channel speaker that is no longer being used, it is possible to run the speaker wires to this speaker rather than adding an additional speaker. Refer to the "Vehicle Connections Chart" section below for information regarding where the navigation module is located and where to connect the Brown wire. Applications that use the Brown wire will be marked with a single asterisk (*) and the wiring information will be given below the vehicle chart. For this method, none of the White / Red and White / Blue connectors ("To Amp PRO", "A", "B" or "C") will be used. See the Config C, Version 3, Method 3 diagram above.



Setup and Configuration

1. Turn the ignition on. LED 1 on the interface will turn on and the +12v remote output will turn on.
2. Set the amp gain(s) to the desired level. We recommend using an oscilloscope and test tones to set the amp gain(s). Please refer to the MECP Advanced study guide if you are unfamiliar with this process.
3. Check volume, balance, fade and EQ settings.
4. If you would like to adjust the minimum volume, do so using the method outlined on the next page. If you are happy with the default level then no further adjustments are required
5. If you would like to adjust the radio's beep volume or minimum volume, do so using one of the methods outlined below. If you are happy with the default levels, no adjustments are necessary.

Manually Setting the Radio's Beep Volume

You can manually set the level of the factory radio beeps using the programming button on the side of the interface. If you would like to set the beep volume using the PC app please proceed to the AmpPRO App section.

Setup and Configuration (cont.)

Setting the radio's beep volume using the programming button

1. Start with the level control knob turned all the way down (counter-clockwise).
2. Press the programming button on the side of the interface.
3. LED 1 will turn green and beeps will begin continuously sounding.
4. Turn the level control knob clockwise until the desired beep volume level is reached.
5. You can now either press the programming button twice or wait ten seconds to exit the settings.

Manually Setting the Minimum Volume

If the minimum volume of the radio (factory radio volume level 1) is too loud, you can manually set the level of the minimum volume using either the programming button on the side of the interface or the factory SWC. If you would like to set the minimum volume using the AmpPRO app, please proceed to the AmpPRO App section.

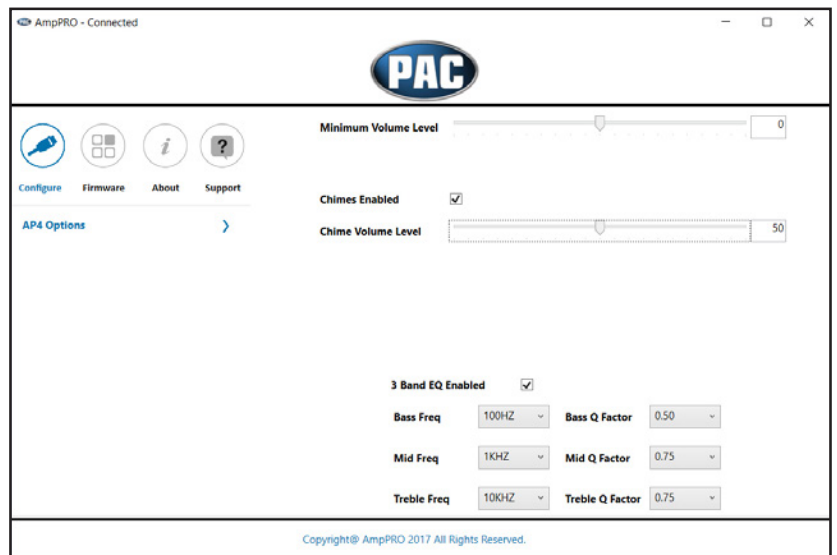
Setting the minimum volume using the programming button

1. Start with the level control knob turned all the way down (counter-clockwise).
2. Set the amp gains to the desired level.
3. Set the volume on the factory radio to 1.
4. Press the programming button on the side of the interface twice.
5. LED 1 will turn amber and the chimes will begin sounding every five seconds
6. Turn the level control knob clockwise until the desired minimum volume level is reached.
7. You can now either press the programming button once or wait ten seconds to exit the settings.

AmpPRO App

Use of the AmpPRO App allows you to do the following:

- Configure User Interface Options such as
 - Minimum Volume Level
 - Enable / Disable factory EQ
 - Bass / Mid / Treble boost frequencies and Q factor
- Update Product Firmware
- Read Firmware / Hardware Versions



PLEASE NOTE: These settings can be adjusted with the module installed in the vehicle, or on the bench. However, it is recommended to make the adjustments with the module installed, and the factory radio on, so that the changes can be heard.

Minimum Volume Level - This allows you to set the minimum volume level of the factory radio (factory radio volume level 1).

3 Band EQ Enabled - This allows you to enable / disable the 3 band factory EQ.

Bass / Mid / Treble Freq / Q Factor - This allows you to set the center frequency that will be adjusted when setting the 3 band factory EQ, as well as the Q Factor for each frequency. The Q Factor determines how many of the adjacent frequencies will be affected when adjusting the selected frequency. The lower the Q Factor, the more frequencies will be affected.

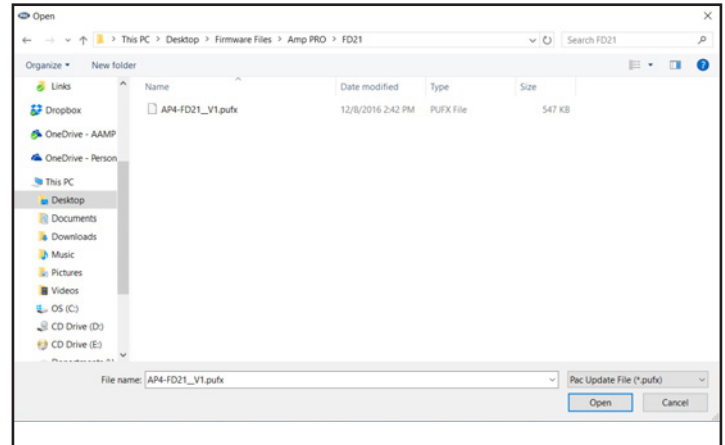
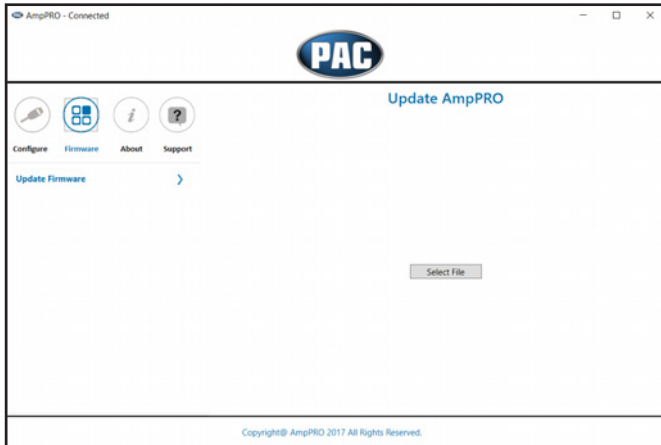
Available Frequencies and Q Factors					
Bass Frequency	60HZ	Mid Frequency	500HZ	Treble Frequency	7.5KHZ
	80HZ		1KHZ		10KHZ
	100HZ		1.5KHZ		12.5KHZ
	120HZ		2.5KHZ		15KHZ
Bass Q Factor	0.50	Mid Q Factor	0.75	Treble Q Factor	0.75
	1.00		1.00		1.25
	1.50		1.25		
	2.00		1.50		

AmpPRO App (cont.)

Firmware Updates

The AmpPRO app will also allow you to update the interface with new firmware as it becomes available.

Connect the interface to your PC and select "Firmware", then "Update Firmware". Now select "Select File". Finally, browse to the place where you saved the file and select it. This will begin the updating process. Once finished, disconnect the interface from the PC and resume normal operation.



Restoring Factory Settings

You can restore the interface to factory default settings by pressing and holding the programming button on the side of the module until the status LEDs start blinking red. Once the LEDs start blinking red, release the button.

This reset will restore the following settings to their factory defaults:

- Enable / Disable Factory Chimes
- Minimum volume level
- Enable / Disable factory EQ
- Factory EQ frequency
- Factory EQ Q factor

Troubleshooting

1. Hiss at high amp gain - Set feature DIP switch 2 to the on (down) position to lower the output voltage of the AP4 to 4v. If you still hear the hiss, lower your amp gains until the hiss is gone.
2. Low volume setting on radio is too loud - Set minimum volume using process outlined in Setup and Configuration, or using the AmpPRO application.
3. Cannot hear beeps when pressing buttons on the radio - Set the beep volume using process outlined in Setup and Configuration, or using the AmpPRO application. If you still do not hear beeps, check for a beep on off setting in the factory radio menu and be sure that you are using the remote output from the AP4 to turn on your aftermarket amplifie .
4. Cannot hear the Voice Activation or Navigation Prompts, verify that the configuration connections are properly connected. See "Voice / Nav Connections" starting on page 2 for details.
5. Low volume setting on radio is too loud - Set minimum volume using process outlined in Setup and Configuration, or using the AmpPRO application.
6. Drastic volume difference between radio sources - The radio stores the volume of the radio source from the last time that source was used. Readjust the volume of the individual sources to the same output level.

LED Legend		
	Action / Color	During Normal Operation
LED 1	Solid Red	Module Active
	Solid Green	Chime Volume Adjustment Mode
	Solid Amber	Minimum Volume Adjustment Mode
	Rapid Blink Any Color	DSP Activity
LED2	Blink Amber	USB Connection Detected
Both LEDs	Alternate Blinking Red	Performing Memory Reset

Overview

Symptom: Symptoms may include the interface not turning on, the factory radio not turning on (AP4-CH41 only), no audio or intermittent audio on one or more channels.

Cause: Pins pulling out of the JST connector that plugs into the AP4 interface resulting in poor, or no connection of some circuits.

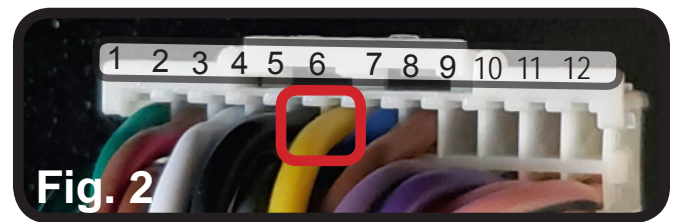
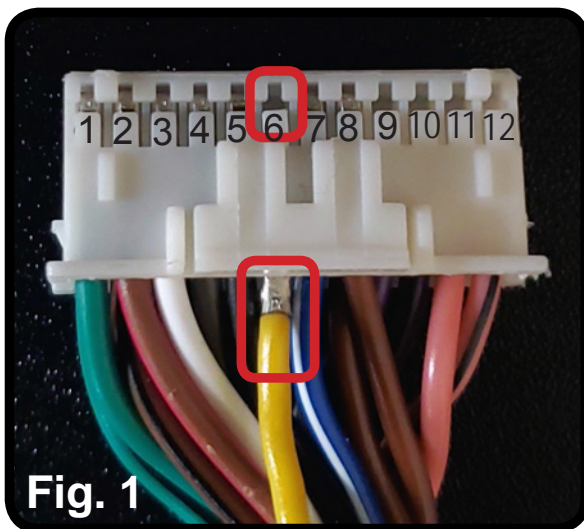
Solution: Locate pins that have pulled out of the connector and fully re-insert the pins into the harness.

If a pin has pulled completely out of the harness, see “AP4 Connector Diagrams” starting on page 2 for pinouts of each of the amp pro interfaces to find pin location information

Inspect The Harness To Identify Pins That May Be Causing Issues

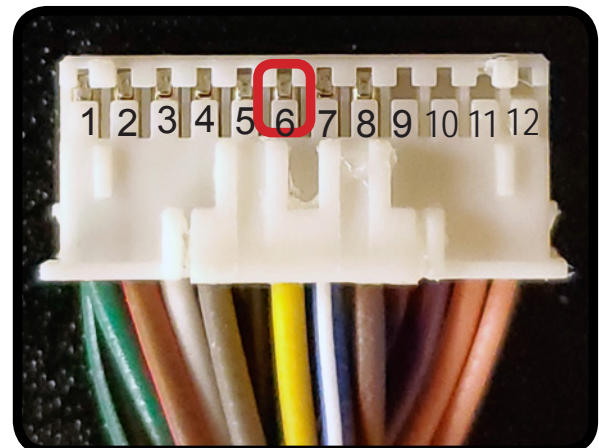
Visually inspect the AP4 harness at the JST connector that plugs into the AP4 interface. A loose pin may or may not be obviously visible. In the examples shown, a harness from the AP4-FD21 is being shown, but this applies to all of the AP4 interface harnesses.

- Check for pins in the open spaces of the AP4 interface connector. Each wire should have a corresponding visible pin in the open space above it. In Fig. 1, looking at the pin opening for the 6th pin position, it appears that there is no wire in that position. However, looking at the wire side of the connector for the 6th pin position (Fig. 2), the yellow wire is populated and it's pin should be visible. This indicates that the yellow wire is not fully seated into the connector.

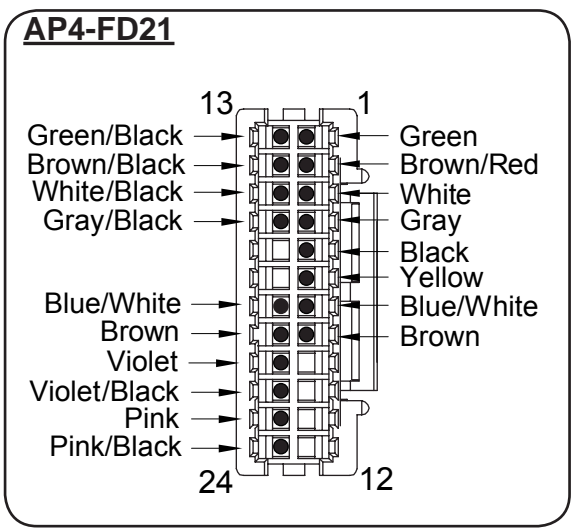
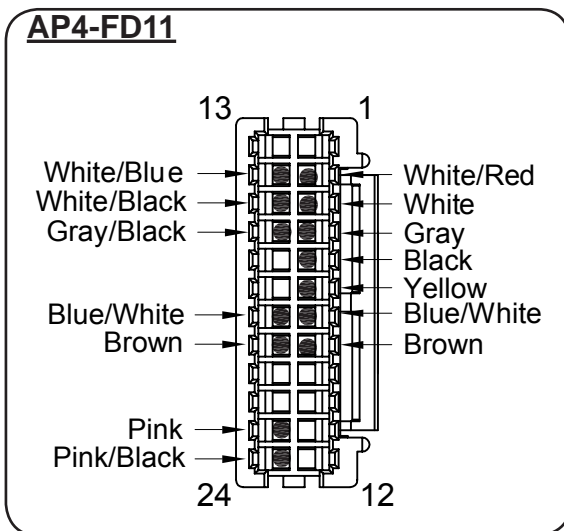
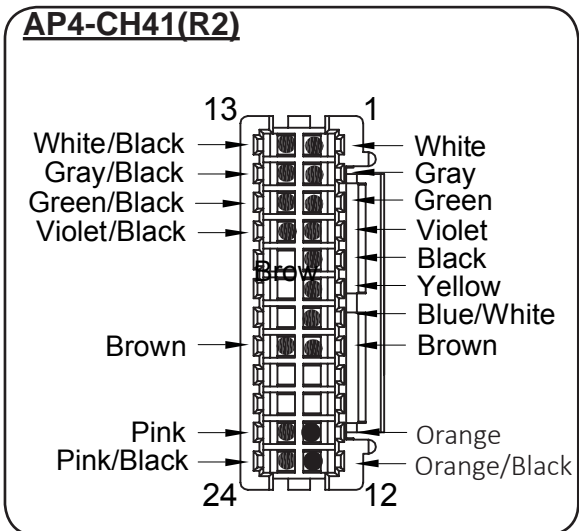
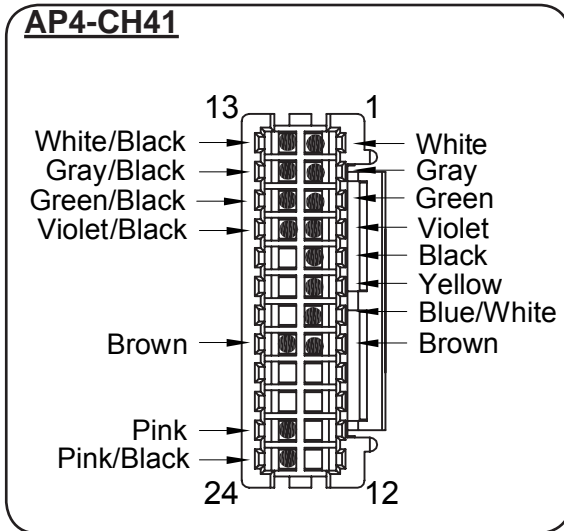
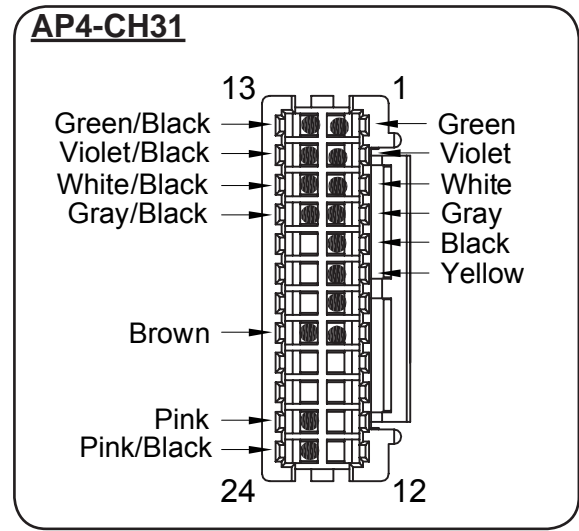
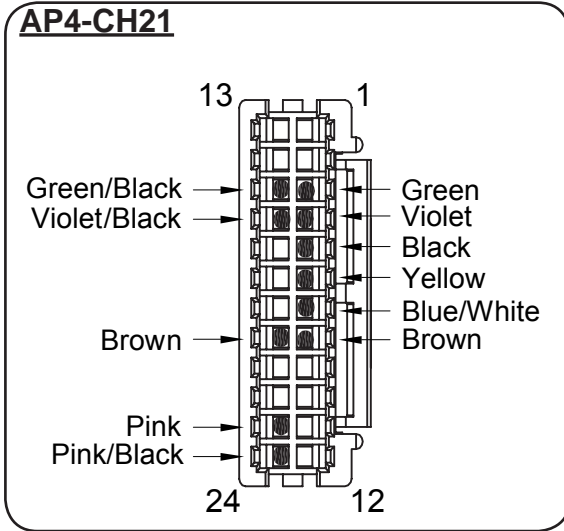


Solution

If a wire is found that is not fully seated into the connector, reinsert the wire by pushing it fully into the connector until the pin can be seen in the opening on the side of the connector. The pin should lock into place. Notice that the pin is now visible in the 6th pin position. If necessary, remove some of the tesa tape on the harness to reduce stress on the pins.

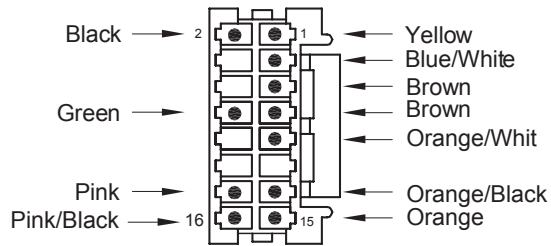


AP4 Connector Diagrams

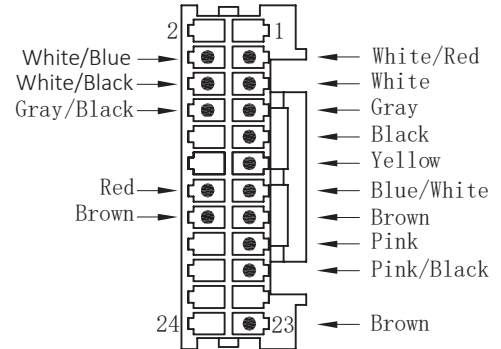


AP4 Connector Diagrams (cont.)

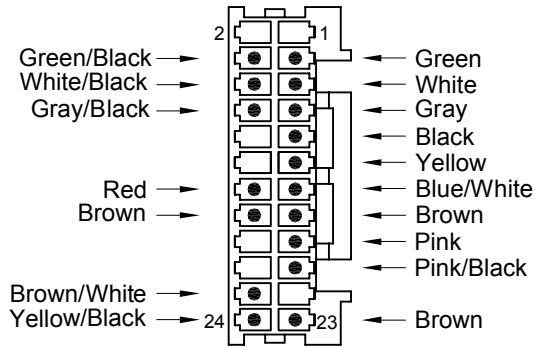
AP4-GM61



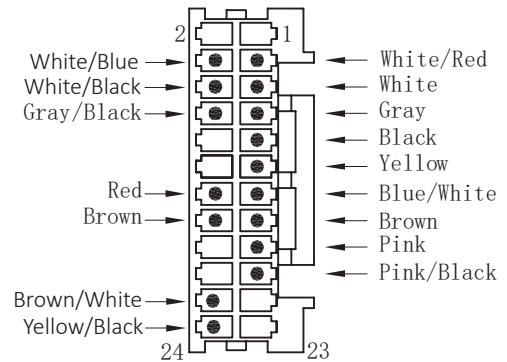
AP4-TY11



AP4-TY12



AP4-TY13



Vehicles with Telematics (ie: SOS, Enform, etc) will require some additional wiring. See manual for details.

- Toyota vehicle must be equipped with a JBL system. There must be an actual visible label that says JBL or JBL Synthesis. If the vehicle is equipped with a factory amplifier but does not say JBL, it is not compatible because the amplifier is analog and not digital.
- Lexus vehicles must be equipped with a center channel and a subwoofer in order for the AP4-TY11 to be compatible:
- Between 2012-2015 Toyota used two different styles of connectors. In order for the AP4-TY11 to be compatible, the radio must have the 20-pin BHA8113 style connector. Vehicles equipped with the 10 / 6-pin BHA1761 style connector are not compatible. The only way to know what connector the radio has is to physically remove it from the dash and look at it. Please see pictures below for reference



Compatible

