TESLA 2021-2023 A2B Data Interface with Amplifier Bypass Harness & DSP

Visit AxxessInterfaces.com for more detailed information about the product and up-to-date vehicle specific applications.

INTERFACE COMPONENTS

- AXDSPX-TES1 (interface)
- LD-DSP-TES1 (amplifier harnessing)
- LD-TES-SPK (tuner T-harnesses)
- LD-AX-DSP-OUT2 (RCA output harness)
- LD-BASSKNOB

Google Play Store

Apple App Store
iOS 12.1 or higher

TOOLS REQUIRED

- Crimping tool and connectors, or solder gun, solder, and heat shrink
- Tape
- Wire cutter
- Zip-ties

For **Dash Disassembly Instructions,** refer to axxessinterfaces.com. Enter the year, make, and model of the vehicle in the **Vehicle Fit Guide for Radio Install kits.**

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ATTENTION: *With the key out of the ignition, disconnect the negative battery terminal before installing this product. Ensure that all installation connections, especially the air bag indicator lights, are plugged in before reconnecting the battery or cycling the ignition to test this product.*
NOTE: *Refer also to the instructions included with the aftermarket accessory before installing this device.*

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AXDSPX-TES1 INTERFACE FEATURES

INTERFACE FEATURES

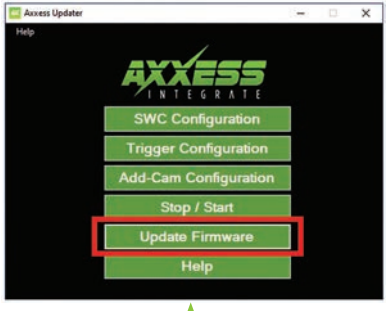
- Designed for A2B amplified models
- Package includes the AXDSP-X and vehicle-specific T-harness
- 31-band graphic EQ or 5-band Parametric EQ
- Selectable high pass, low pass, or bandpass filters on each channel
- 6 inputs and 10 individually assignable outputs
- Independent equalization on each of the 10 outputs
- Selectable slope (12, 24, 36, or 48db per octave)
- Each channel can be delayed independently for up to 10ms
- To be used with OE and radios
- Clipping detection and limiting circuits
- Internal header port for adding interface modules
- Bass knob included
- Retains factory chimes, including parking sensor and cross-path detection alerts with adjustable chime level
- Settings adjusted wirelessly in a smart device application (tablet or mobile phone)
- Read, write, and store configurations for future recall
- Password-protect feature is available in the mobile app
- Micro-B USB updatable

THINGS TO KNOW ABOUT THE AXDSP

Important: Updating your interface with the **Axxess Updater** is critical to the interface functioning properly.

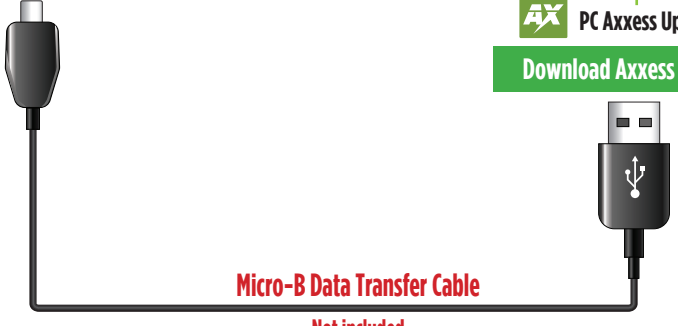
Visit axxessinterfaces.com

Select **Updater Software** from the top menu bar.



PC Axxess Updater

Download Axxess Updater



THINGS TO KNOW ABOUT THE AXDSP *CONT.*

1. The factory amplifier will be completely removed from the vehicle. This interface can not be used to add a subwoofer only. Aftermarket amplifiers will need to be added to power the vehicle speakers.
2. Installation of the **AXDSPX** will be done at the factory amplifiers location, refer to the wire chart for locations. The harnessing installed at the factory amplifier location includes the bypass harness.
3. Three **T-harnesses** are included in the kit, two will be installed at the factory radio to access factory speaker wires powered by the radio.
4. The included bass knob will adjust the output levels of your subwoofer. To set your subwoofer channel, select the **Outputs** page within the app. Under the **Location** column select the channel connected to your sub amp. From the drop-down menu select **Subwoofer**. Don't forget to **Lock Down**.
5. If running multiple amplifiers, a relay is recommended.

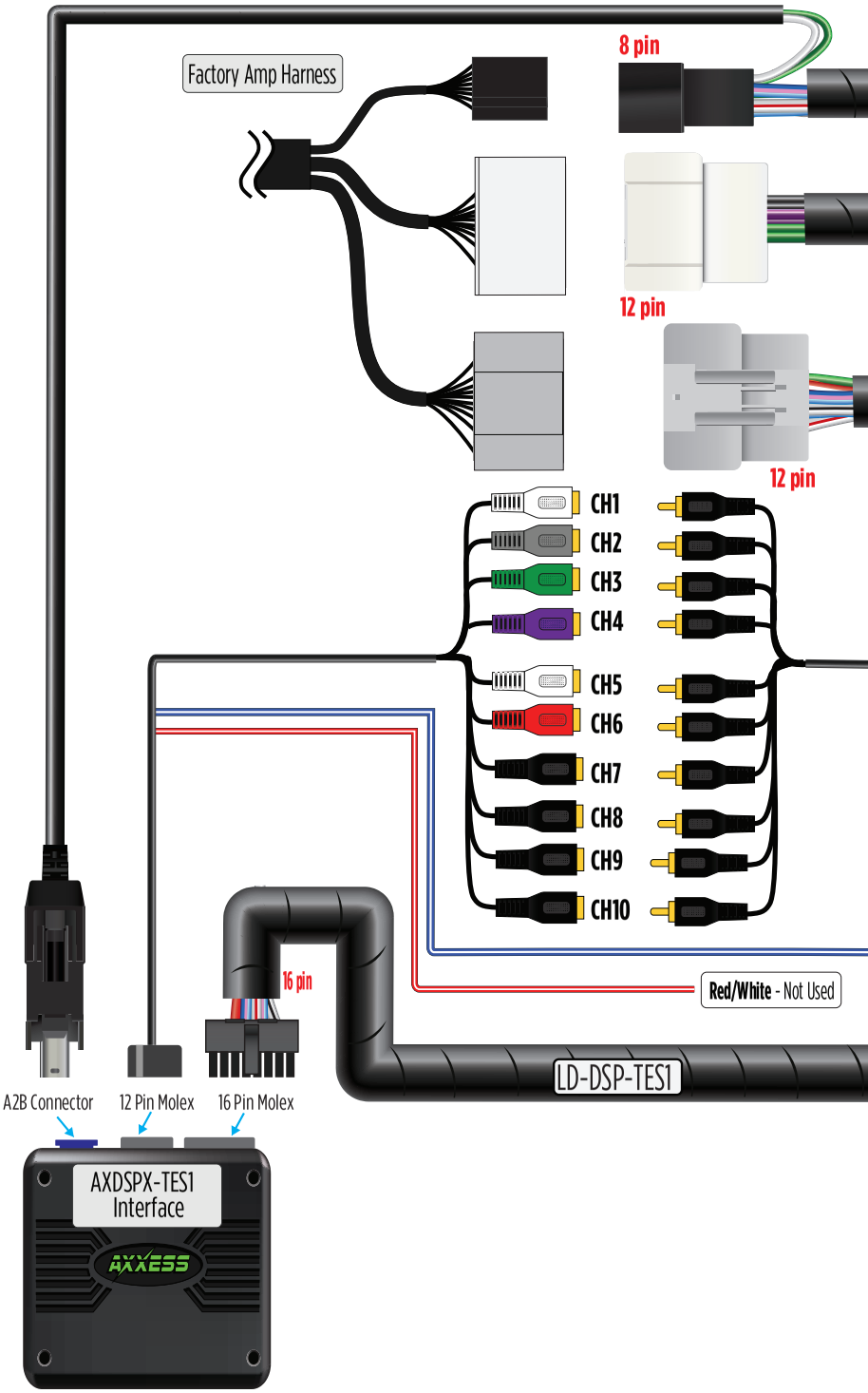
The **AXDSP interface** doesn't require a full understanding of equalization, crossover setting, or time delay to function properly. After the quick setup process is completed the **AXDSP interface** will output a full range signal allowing for the use of an external DSP or to use the aftermarket amplifiers settings.

The **AXDSP** does offer all the standard features found in an external **DSP**. All settings and adjustments are made through the app. For more details on these added features please refer to the instructions under the **Setup Instructions** tab, or online at **Axxessinterfaces.com** for an explanation of each tab in the app.

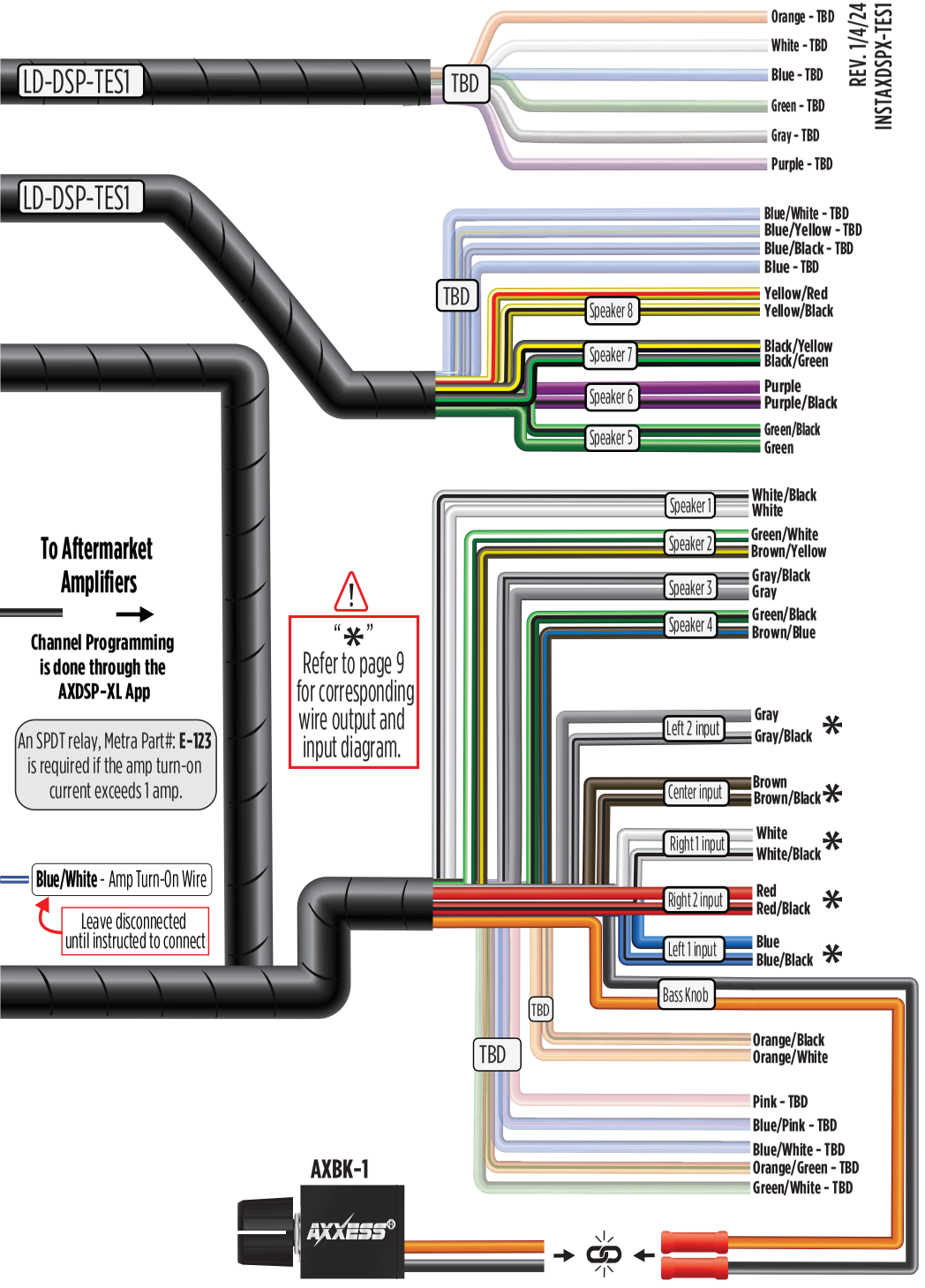
CONNECTIONS: FACTORY AMPLIFIER'S LOCATION

1. Factory amps location is behind the panel on be passanger side of the trunk.

2. Install the **LD-DSP-TES1 harness** and make all necessary connections, but leave the amp turn-on wire disconnected.



REV. 1/4/24
INSTAXDSPX-TES1



CONNECTIONS: FACTORY RADIO (AT GLOVE BOX) T-HARNESS LOCATIONS

Located Behind Glovebox

* Gray/Black
Gray

* Brown/Black
Brown

* White
White/Black

Harness A
Harness A is used on all applications except Model X vehicles

* Gray
Gray/Black

* Brown
Brown/Black

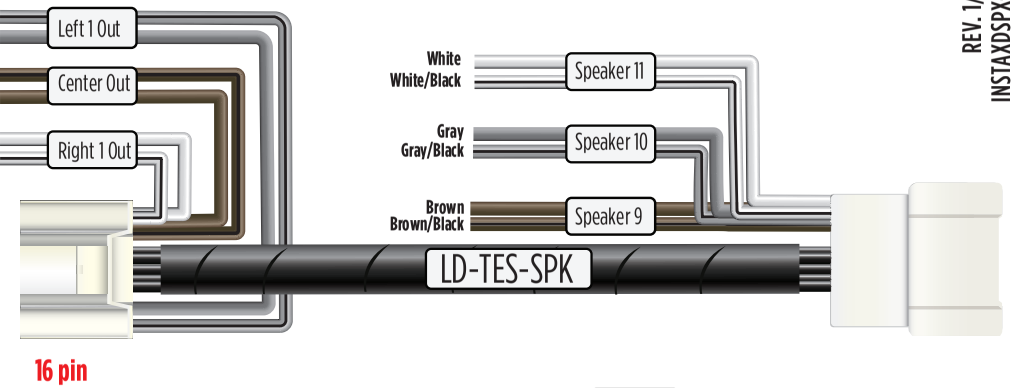
* White
White/Black

Harness B
Harness B is to be used instead of Harness A in Model X vehicles

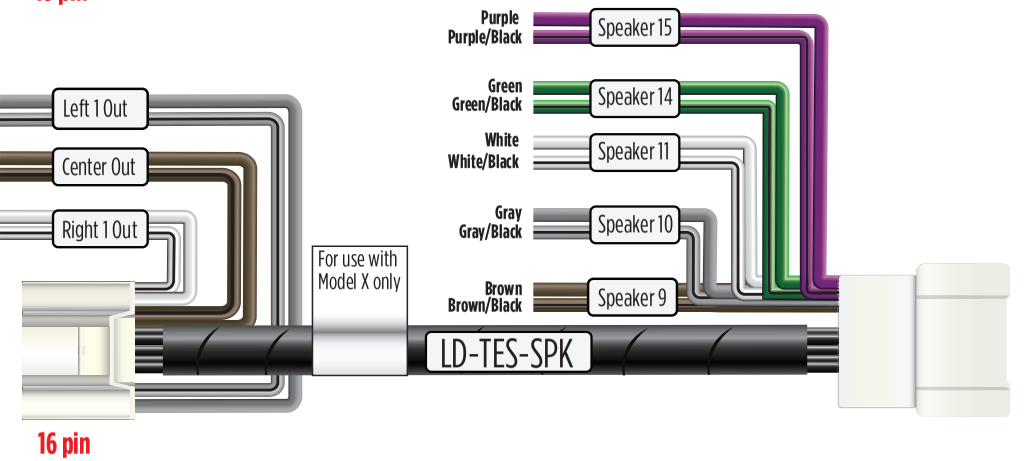
* Red
Red/Black

* Blue
Blue/Black

Harness C
Harness C is used on all applications



16 pin



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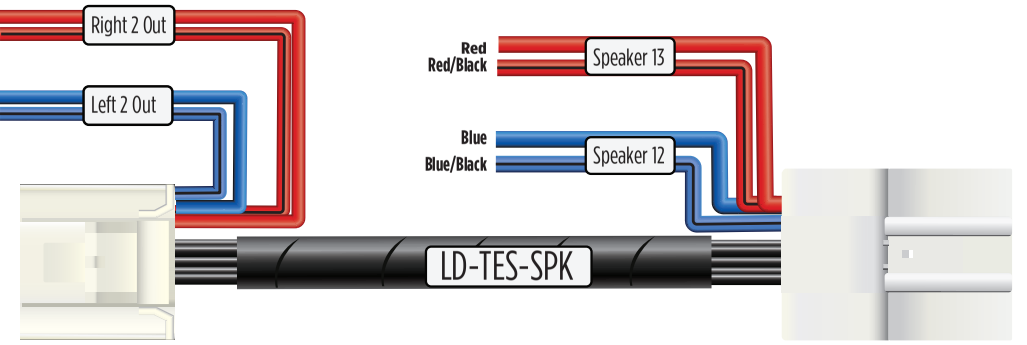

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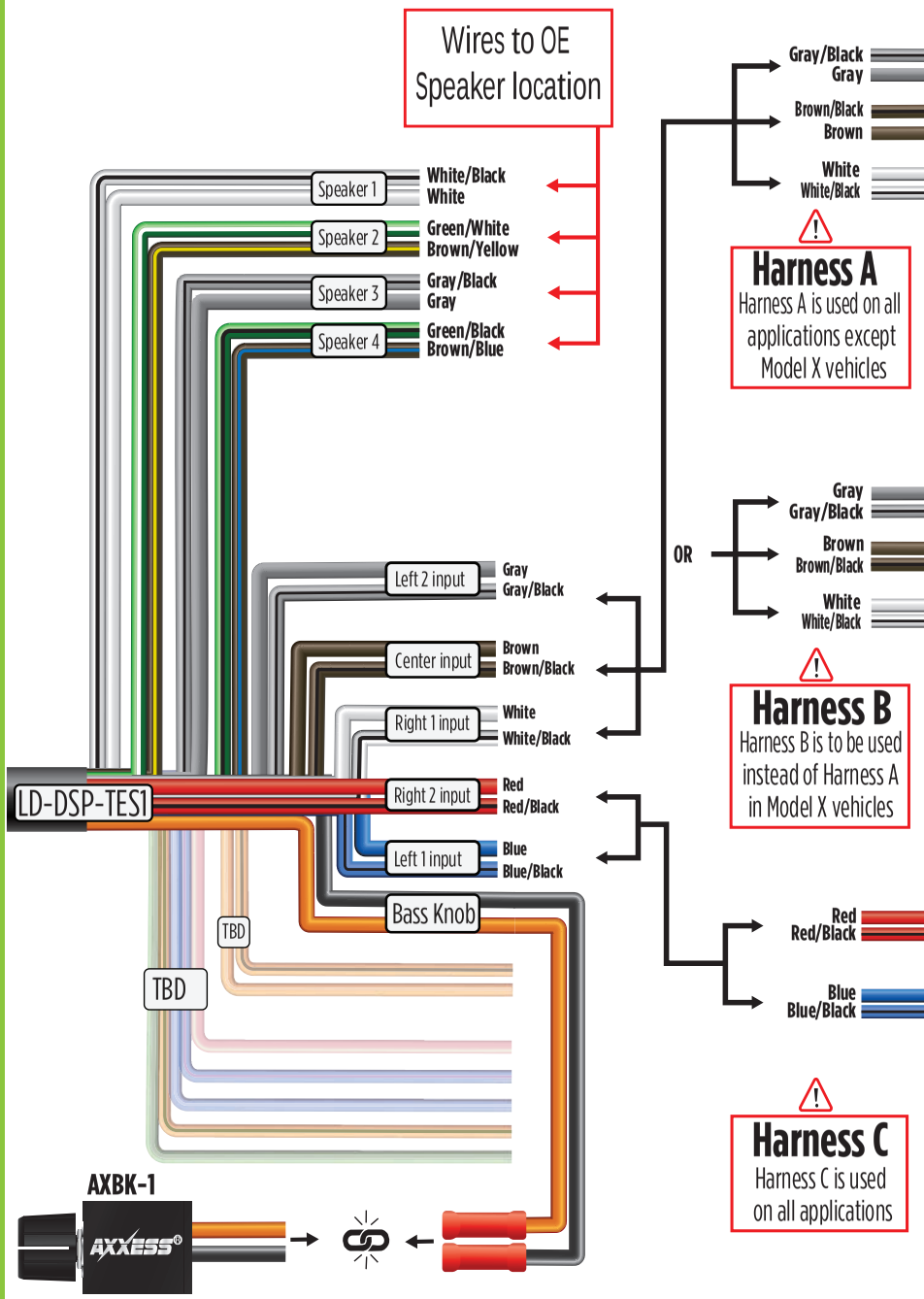
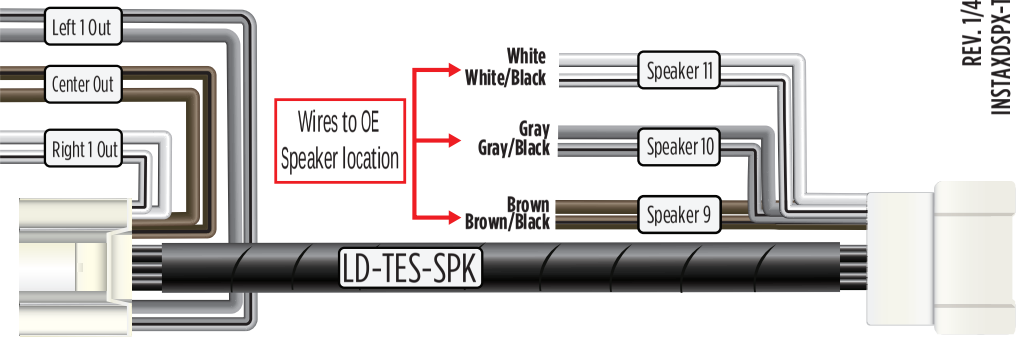
CONNECTIONS: FACTORY RADIO (AT GLOVE BOX) T-HARNESS LOCATIONS





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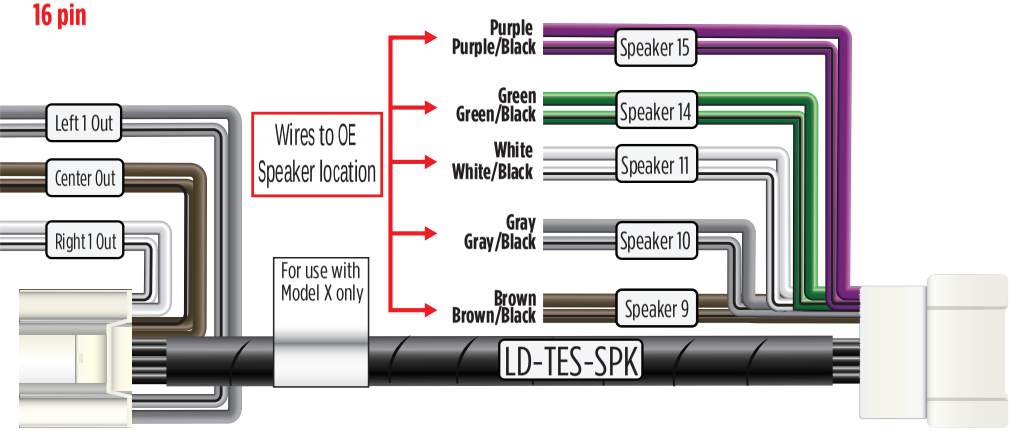

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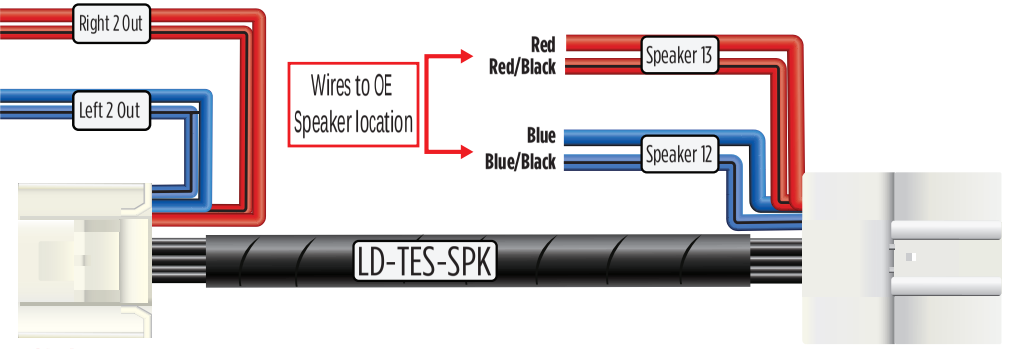


16 pin

IMPORTANT INFORMATION ABOUT SUPPLIED T-HARNESSES

It is recommended to use the factory speaker wires when connecting to your aftermarket equipment. In vehicles that use **A2B communications** the factory amplifier powers specific speakers in the vehicle. The remaining speakers are powered off the factory radio. The speaker connectors found behind the glove box could be one of two harnesses, both are included with the interface and allow for quick access to the OE speaker. Additional speaker wires will be needed to run from the radio chassis to the aftermarket amplifier's location.

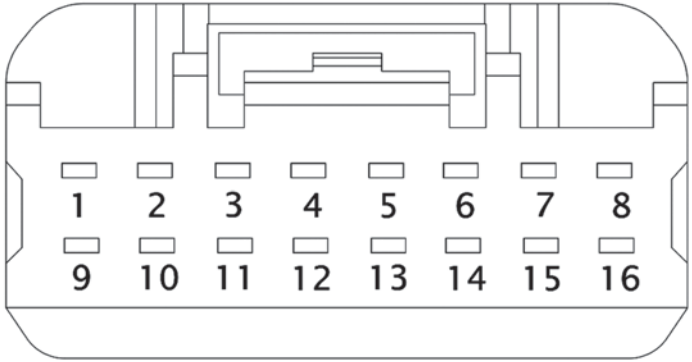
Due to the variation from the factory speaker wire location and colors it is critical that the speaker wire charts be used when wiring your aftermarket equipment. The supplied T-harnesses will not follow the standard speaker wire colors. It is recommended that each speaker wire be double checked using a tone generator and polarity tester.

EXAMPLE

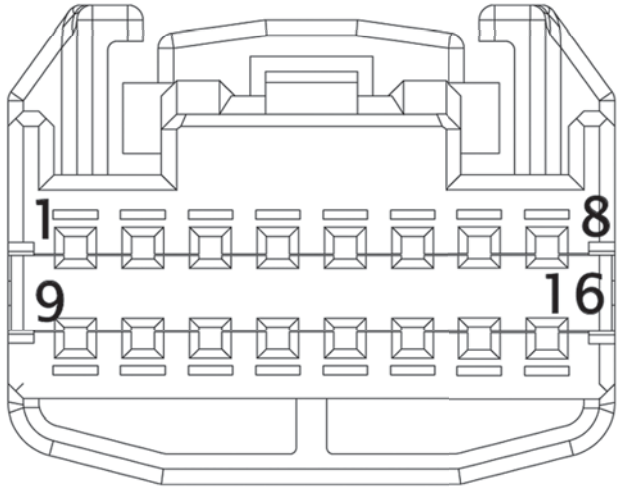
Location: At the Radio			
LD-TES-SPK 16 Pin Radio Bypass Harness (Behind Glove Box)			
SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Center	Speaker 9	Brown/Black	-
		Brown	+
Left Front Door Tweeter	Speaker 10	Gray	+
		Gray/Black	-
Right Front Tweeter	Speaker 11	White/Black	-
		White	+

SPEAKER WIRING CHARTS: TESLA MODELS 3, S, & Y 2021-2023

Location: At the Radio			
LD-TES-SPK 16 Pin Radio Bypass Harness (Behind Glove Box)			
SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Center	Speaker 9	Brown/Black	-
		Brown	+
Left Front Door Tweeter	Speaker 10	Gray	+
		Gray/Black	-
Right Front Door Tweeter	Speaker 11	White/Black	-
		White	+



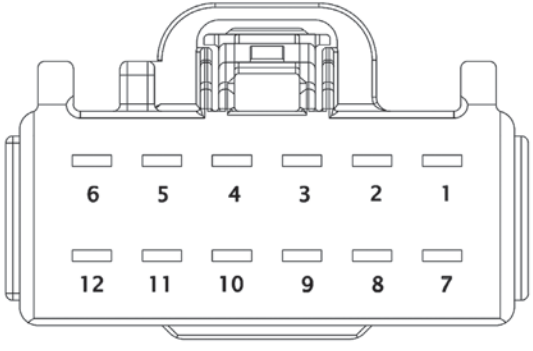
Location: At the Radio			
LD-TES-SPK 16 Pin Radio Bypass Harness (Behind Glove Box)			
SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Left Front Dash	Speaker 12	Blue	+
		Blue/Black	-
Right Front Dash	Speaker 13	Red/Black	-
		Red	+

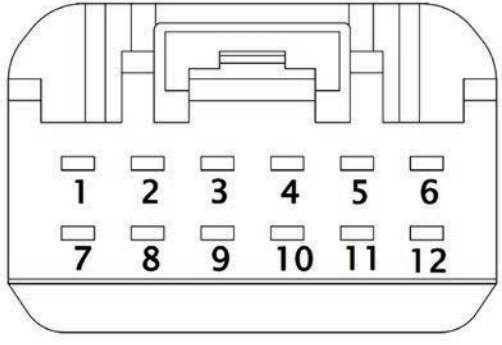


SPEAKER WIRING CHARTS: TESLA MODELS 3, S, & Y 2021-2023

Location: At the Amplifier			
LD-TES-SPK 12 Pin Amplifier Bypass Harness (Right Rear Corner Panel)			
SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Left Front Door	Speaker 1	White/Black	-
		White	+
Subwoofer 1	Speaker 2	Green/White	+
Subwoofer 2		Brown/Yellow	-
Right Front Door	Speaker 3	Gray/Black	-
		Gray	+
Subwoofer 1	Speaker 4	Green/Black	-
Subwoofer 2		Brown/Blue	+

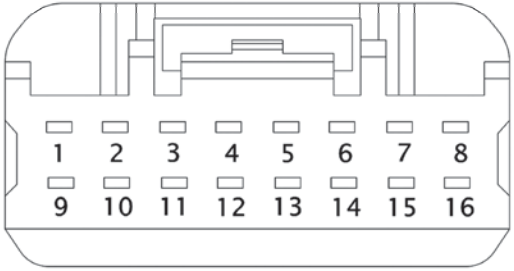
Location: At the Amplifier			
LD-TES-SPK 12 Pin Amplifier Bypass Harness (Right Rear Corner Panel)			
SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Left Rear Door	Speaker 5	Green/Black	-
		Green	+
Right Rear Door	Speaker 6	Purple	+
		Purple/Black	-
Right Shelf	Speaker 7	Black/Yellow	-
		Green/Black	+
Left Shelf	Speaker 8	Yellow/Black	-
		Yellow/Red	+



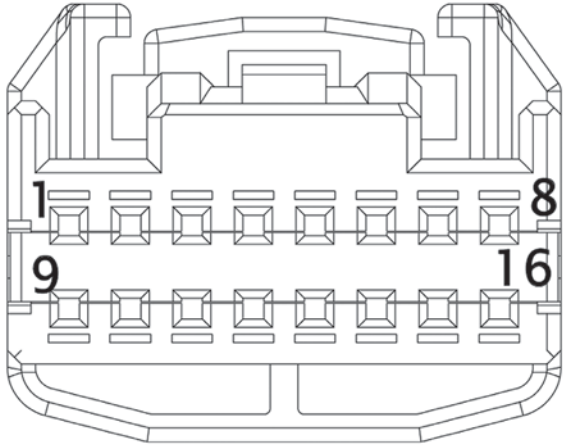


SPEAKER WIRING CHARTS: TESLA MODEL X 2021-2023

Location: At the Radio			
LD-TES-SPK 16 Pin Radio Bypass Harness (Behind Glove Box)			
SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Center	Speaker 9	Brown	+
		Brown/Black	-
Left Tweeter	Speaker 10	Gray	+
		Gray/Black	-
Right Tweeter	Speaker 11	White/Black	-
		White	+
Left Front Door	Speaker 14	Green	+
		Green/Black	-
Right Front Door	Speaker 15	Purple/Black	-
		Purple	+



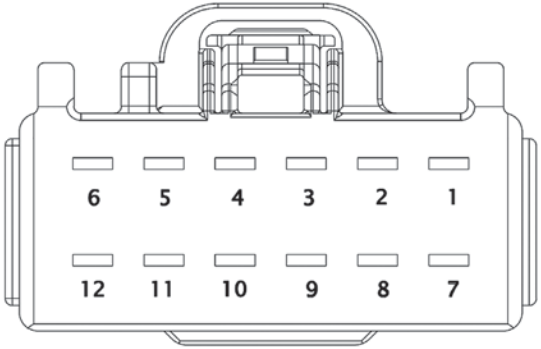
Location: At the Radio			
LD-TES-SPK 16 Pin Radio Bypass Harness (Behind Glove Box)			
LD-TES-SPK SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Left Dash	Speaker 12	Blue	+
		Blue/Black	-
Right Dash	Speaker 13	Red/Black	-
		Red	+

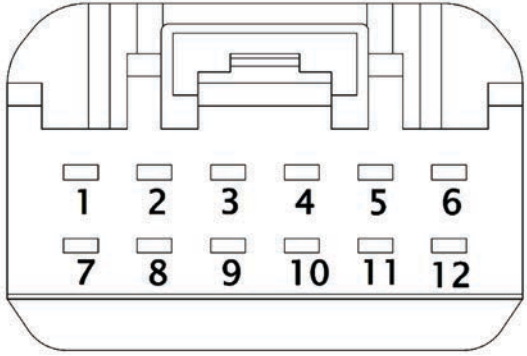


SPEAKER WIRING CHARTS: TESLA MODEL X 2021-2023

Location: At the Amplifier			
LD-TES-SPK 12 Pin Amplifier Bypass Harness (Right rear corner panel)			
SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Left Front Door	Speaker 1	White/Black	-
		White	+
Subwoofer 1	Speaker 2	Green/White	+
Subwoofer 2		Brown/Yellow	-
Right Front Door	Speaker 3	Gray/Black	-
		Gray	+
Subwoofer 1	Speaker 4	Green/Black	-
Subwoofer 2		Brown/Blue	+

Location: At the Amplifier			
LD-TES-SPK 12 Pin Amplifier Bypass Harness (Right rear corner panel)			
SPEAKER LOCATION	**LABEL NAME**	**AXXESS COLOR**	**POLARITY**
Left Rear Door	Speaker 5	Green/Black	-
		Green	+
Right Rear Door	Speaker 6	Purple	+
		Purple/Black	-
Right Shelf	Speaker 7	Black/Yellow	-
		Green/Black	+
Left Shelf	Speaker 8	Yellow/Black	-
		Yellow/Red	+



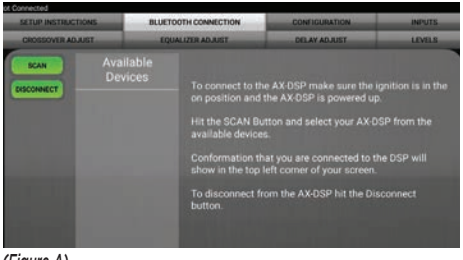


QUICK SETUP STEPS THROUGH AXDSP-XL APP

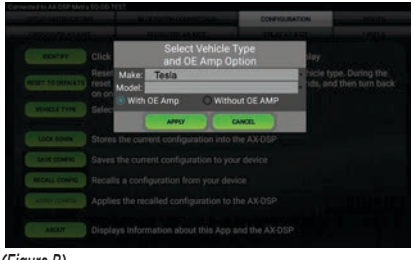
Google Play Store

Apple App Store
iOS 12.1 or higher

1. Download and install the AXDSP-X app from the **Google Play Store** or **Apple App Store**.
2. Turn Vehicle Ignition on. Make sure the Remote Turn on lead is disconnected.
3. Open the app: Select **Bluetooth Connections** page.
   - Select **Scan,** all available AXDSP devices within range will be displayed. Select your AXDSP and hit connect. (Figure A)
4. Select the Configuration page.
   - Select **Vehicle Type** Icon
   - Select the Vehicle Make: **Tesla**
   - Select the Vehicle's model: _____ (Example: **S**)
   - Select **With OE Amp**
   - Hit **Apply** (Figure B)
5. Make sure radio volume is all the way down.
6. Connect the amp turn-on wire from the **LD-DSP-TES1 harness** to the aftermarket amplifiers.
7. From the **Configuration** page click the **Identify** button to confirm that the **AXDSPX-TES1** is connected properly. If so, a chime will be heard from the front left speaker.
8. Press the **Lock Down** button to save the configuration. (Do not turn ignition off until this process is completed) (Figure C)
9. Select the **Bluetooth Configurations** page and disconnect the DSPX.
10. Turn ignition off, close all door then lock vehicle using the key fob. The vehicle will need to sit uninterrupted for 10 minutes while the vehicle goes to sleep. (Make sure Key fob is 15 feet away from the vehicle)
11. Unlock Vehicle, turn ignition on and test radio's functions.
12. Adjust the DSP settings in the app as desired. Refer to the instructions under the **Setup Instructions** tab, or online at **Axxessinterfaces.com** for an explanation of each tab in the app.

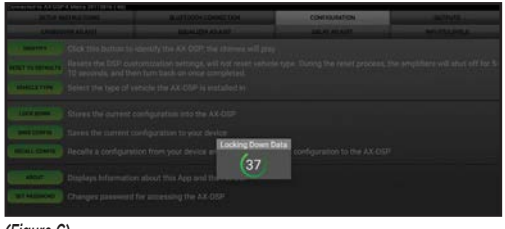


(Figure A)



(Figure B)

Locking Down Data



(Figure C)

Last and the most important:
You MUST lock down your configuration and cycle the key!!!

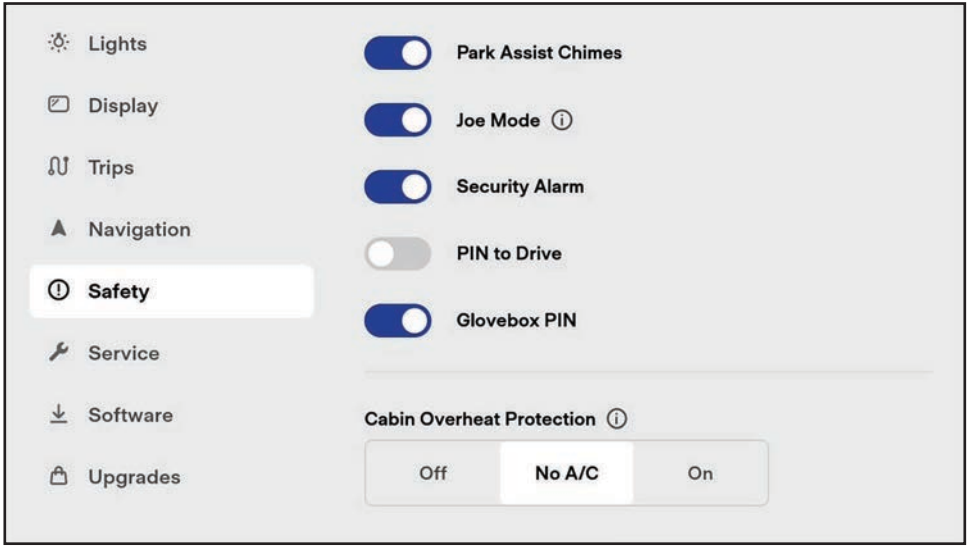
LED FEEDBACK LEGEND	
BLINK RATE	**CONDITION/STATUS**
SOLID LED	All Good
LED OFF	Vehicle Is Asleep
BLINKING LED	1 blink every 5 seconds – all good 2 blinks every 5 seconds – Missing A2B signal

ADJUSTING CHIMES AND TURN SIGNAL SOUNDS IN “JOE MODE”

IMPORTANT! Tesla Chimes and Turn Signal Sounds are produced by the radio, therefore you cannot adjust them.

To lower the level of both chimes and turn signals you must go into your **Vehicle Settings** menu and activate **“Joe Mode”** in the app.

Joe Mode enables the user to reduce the volume of all chimes that are not related to critical safety issues.



Having difficulties? We're here to help.

Contact our Tech Support line at:
386-257-1187

Or via email at:
techsupport@metra-autosound.com

Tech Support Hours (Eastern Standard Time)

Monday - Friday: 9:00 AM - 7:00 PM
Saturday: 10:00 AM - 5:00 PM
Sunday: 10:00 AM - 4:00 PM

Metra recommends MECP certified technicians

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