AXXESS AXDSPX-ETH1 Digital Signal Processor and T-Harness Instruction Manual

Contents

AXXESS-LOGO

AXXESS AXDSPX-ETH1 Digital Signal Processor and T-Harness

Product Information

Axxess Bassknob for AX-DSP Subwoofer Control

Specifications:

- Product Name: AX-BASSKNOB
- Compatibility: AX-DSP
- Mounting Options: Detachable mount or flush mount

Product Usage Instructions

Installation:

1. Locate the factory amp, unplug all connectors, and remove the amp.
2. Install the AXDSPX-ETH1 harness and make all necessary connections, but leave the amp turn-on wire disconnected.
3. Plug the 8-pin and 16-pin connectors from the AXDSPX-ETH1 harness into the AXDSPX-ETH1 interface.
4. Download and install the AX-DSP-XL app from the Google Play Store or Apple App Store.
5. Open the app and follow the instructions on the Bluetooth Connection tab to pair the mobile device to the AXDSPX-ETH1. (Figure A)
6. Scroll to the Configuration tab then select the vehicle type.
   Press the Lock Down button to save the configuration. (Figure B)
7. Connect the amp turn-on wire from the AXDSPX-ETH1 harness.
8. Click the Identify button to confirm that the AXDSPX-ETH1 is connected properly. If so, a chime will be heard from the front left speaker or gauge cluster. Test all functions of the installation for proper operation.
9. 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.

Speaker Wiring Charts:
Refer to pages 5-13 for detailed speaker wiring charts and connector types.

Tools Required:
AxxessInterfaces.com REV. 9/26/23 INSTAXDSPX-ETH1

FAQ:

Q: What is the purpose of the AX-BASSKNOB?
A: The AX-BASSKNOB is an add-on accessory for the AX-DSP that provides quick independent control of the subwoofer gain when installing an aftermarket subwoofer.

Q: What are the mounting options for the AX-BASSKNOB?
A: The AX-BASSKNOB can be mounted under a dash or in a pocket using the detachable mount. It can also be flush mounted using the provided washer and locking nut.

Q: Where can I find more detailed information about the product and vehicle-specific applications?
A: Visit AxxessInterfaces.com for more detailed information about the product and up-to-date vehicle-specific applications.

Q: Where can I find the current application list?
A: Visit axxessinterfaces.com for the current application list.

Axxess bassknob for AX-DSP subwoofer control

AX-BASSKNOB
This is an add-on accessory for the AX-DSP. If you are using the AX-DSP to install an aftermarket subwoofer and would like quick independent control of the subwoofer gain.

Installation is extremely easy.

- Connect the Orange wire Oil the AX-BASSKNOB to the Orange wire on the AX-DSP 20-pin harness or the vehicles specific harness that was purchased.
- Connect the Black wire on the AX-BASSKNOB to a chassis ground in the vehicle.
  We provide two mounting options for the AX-BASSKNOB,there is a detac.h~ble mount so the gain control knob can be mounted under a dash or in a pocket, also provided, a washer and locking nut so the gain control can be flush mounted.

GENERAL MOTORS 2019-UP

ETHERNET DSPX PACKAGE

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

INTERFACE COMPONENTS

- AXDSPX-ETH1 interface
- AXDSPX-ETH1 harness
- LD-DSP-ETH1
- LD-DSP-ETH2
- AXBK-1

- LD-ETH-ADAPT harness
- AXDSPX-ETH1 interface harness
  (male connectors: 8-pin, 16-pin)
- Amplifier bypass harness (female connectors: 8-pin black, 20-pin green)

Visit **axxessinterfaces.com** for current application list.

INTERFACE FEATURES

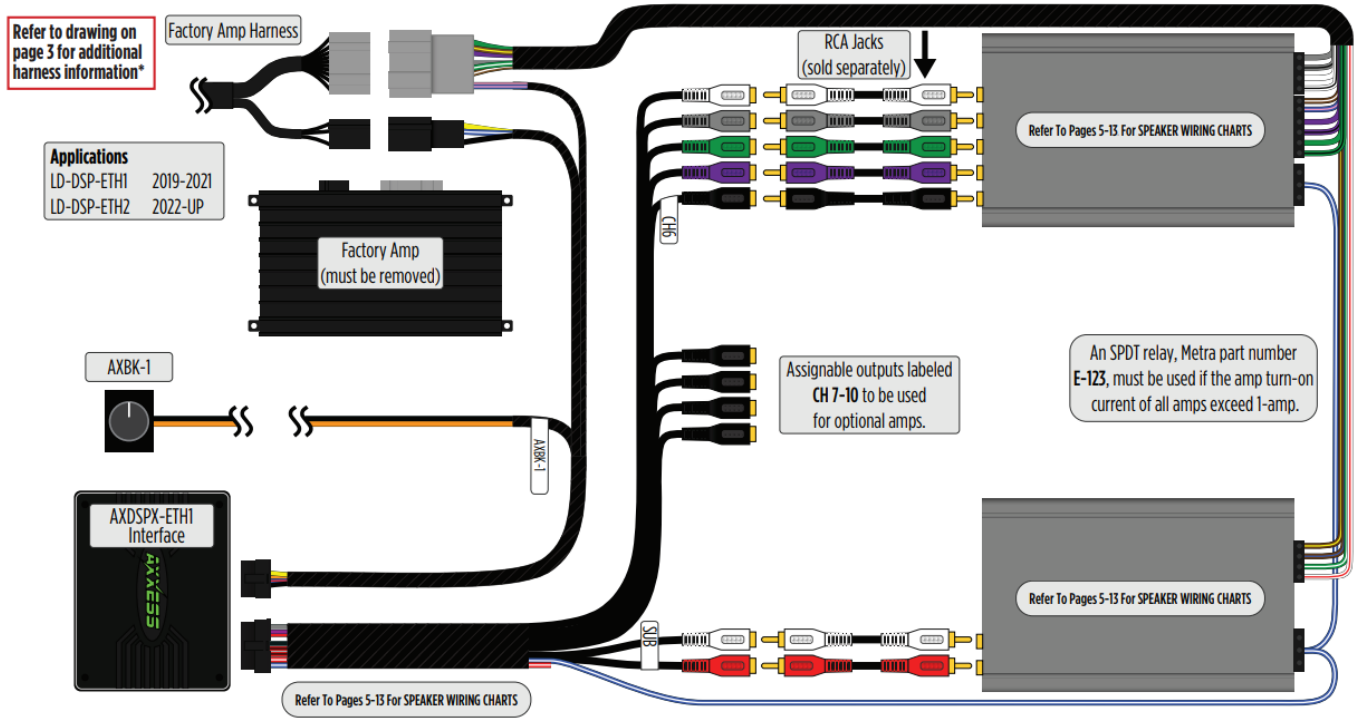
- Designed for GM Ethernet amplifiers
- Ethernet data interface w/AXDSP-X (digital signal processor) built-in
- Includes an amplifier bypass harness
- Retains factory chimes including parking sensor chimes
- Retains vehicle's voice prompts
- Chimes and voice prompts go through the aftermarket amplifier and/or cluster
- Selectable 31 Band graphic EQ or 5 Band Parametric EQ
- 10 individually assignable outputs
- Independent equalization on each of the 10 outputs
- Independent high pass, low pass, and bandpass filters
- Each channel can be delayed independently up to 10ms
- Clipping detection and limiting circuits
- Settings adjusted via Bluetooth® in a smart device application (tablet or mobile phone), compatible with both Android and Apple devices
- Read, write, and store configurations for future recall
- Password protect feature available in the mobile app
- Micro-B USB updatable

TOOLS REQUIRED

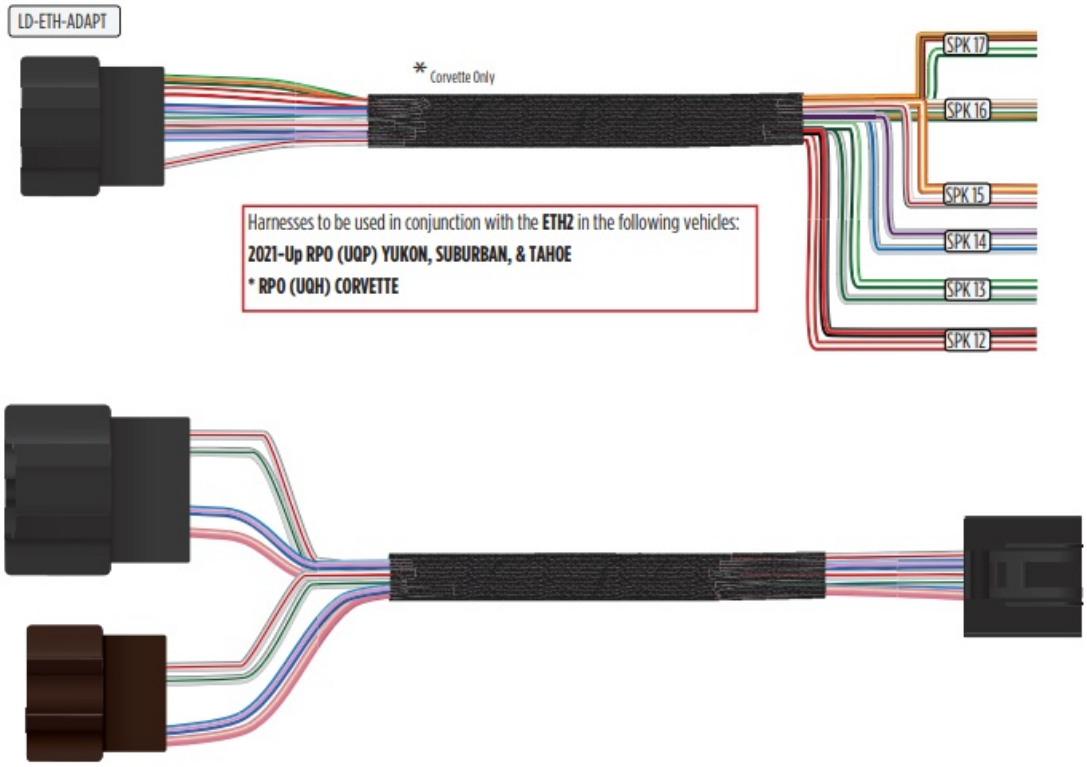
- Crimping tool and connectors, or solder gun, solder, and heat shrink
- Tape
- Wire cutter
- Zip ties

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

ADDING A FULL-RANGE AMP & SUB TO A FACTORY SYSTEM



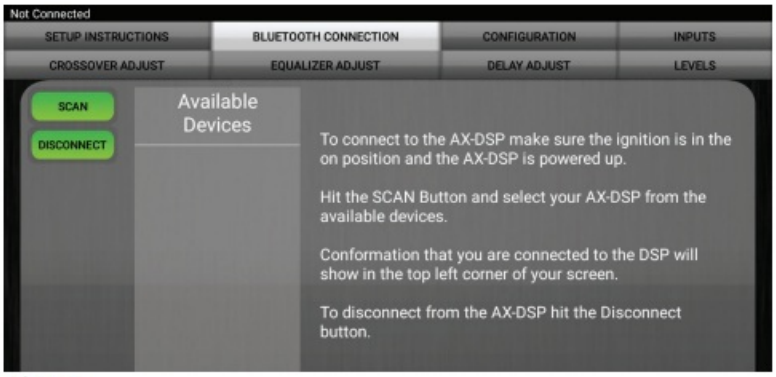
LD-ETH-ADAPT



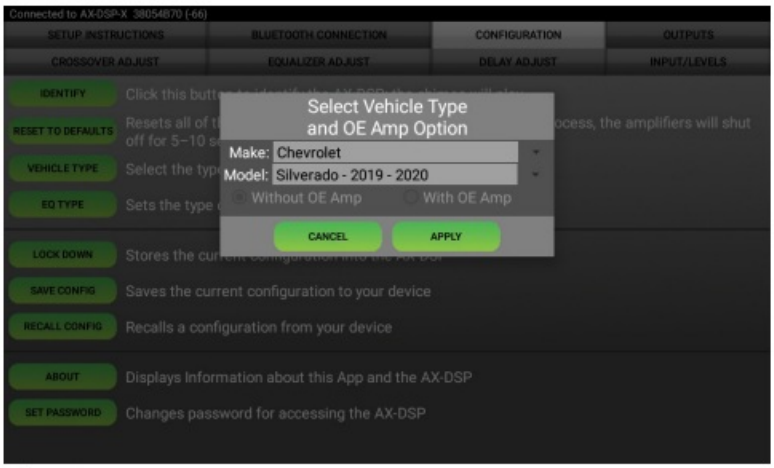
INSTALLATION

1. Locate the factory amp (†), unplug all connectors, then remove the amp.
2. Install the AXDSPX-ETH1 harness and make all necessary connections, but leave the amp turn-on wire disconnected.
3. Plug the 8-pin and 16-pin connectors from the AXDSPX-ETH1 harness into the AXDSPX-ETH1 interface.
4. Download and install the AX-DSP-XL app from the Google Play Store or Apple App Store.
5. Open the app and follow the instructions on the Bluetooth Connection tab to pair the mobile device to the AXDSPX-ETH1. (Figure A)

6. Scroll to the Configuration tab then select the vehicle type. Press the Lock Down button to save the configuration. (Figure B)
7. Connect the amp turn-on wire from the AXDSPX-ETH1 harness.
8. Click the Identify button to confirm that the AXDSPX-ETH1 is connected properly. If so, a chime will be heard from the front left speaker or gauge cluster. Test all functions of the installation for proper operation.
9. 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)

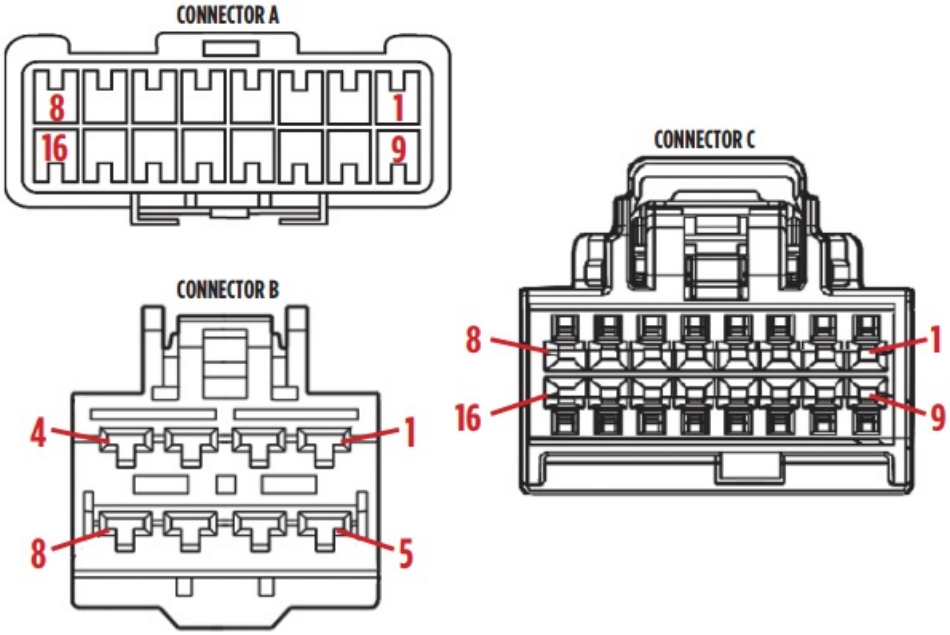
SPEAKER WIRING CHARTS

CONNECTOR TYPES

SPEAKER WIRING CHARTS

It is recommended to use the factory speaker wires when connecting to your aftermarket equipment.
Due to the variation from the factory speaker wire location and colors, it is critical that these Speaker Wire Charts be used when wiring your aftermarket equipment.

Important: The supplied T-harnesses will not follow the standard speaker wire colors.
We recommend that each speaker wire be double checked using a tone generator and polarity tester.



CADILLAC / XT4 2019-UP W/UQG OR UQS

CADILLAC/XT4 2019-UP W/UQG				
CONNECTOR/PIN	**WIRE COLOR/POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink (+)	RIGHT REAR	SPK1	UQG
A-9	Pink/Black (-)			
A-2	Blue (+)	LEFT REAR	SPK2	UQG
A-10	Blue/Black (-)			
A-3	Red/White (+)	RIGHT FRONT MID RANGE	SPK3	UQG
A-11	Red/Black (-)			
A-4	Purple (+)	CENTER	SPK4	UQG
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT FRONT MIDR ANGE	SPK5	UQG
A-13	Green/Black (-)			
A-6	Orange	NA	SPK6	UQG
A-14	Orange/Black			
A-7	Orange	NA	SPK7	UQG
A-15	Orange/Black			
A-8	Yellow	NA	SPK8	UQG
A-16	Yellow/Black			
B-1	Red (+)	RIGHT FRONT	SPK 09	UQG
B-5	Black (-)			
B-2	Gray	NA	SPK 10	UQG
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	UQG
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CADILLAC/XT4 2019-UP W/UQS				
CONNECTOR/PIN	**WIRE COLOR/POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	UQS
A-9	Pink/Black			
A-2	Blue	NA	SPK2	UQS
A-10	Blue/Black			
A-3	Red/White	NA	SPK3	UQS
A-11	Red/Black			
A-4	Purple (+)	RIGHT REAR	SPK4	UQS
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQS
A-13	Green/Black (-)			
A-6	Orange (+)	LEFT REAR MIDRANGE	SPK6	UQS
A-14	Orange/Black (-)			
A-7	Orange (+)	CENTER	SPK7	UQS
A-15	Orange/Black (-)			
A-8	Yellow	NA	SPK8	UQS
A-16	Yellow/Black			
B-1	Red (+)	RIGHT FRONT	SPK 09	UQS
B-5	Black (-)			
B-2	Gray	NA	SPK 10	UQS
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	UQS
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

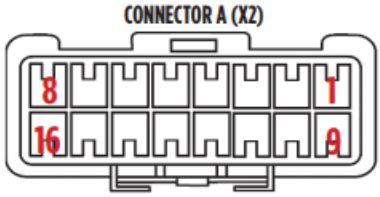
CHEVROLET / BLAZER 2019-UP & CAMARO 2019-UP

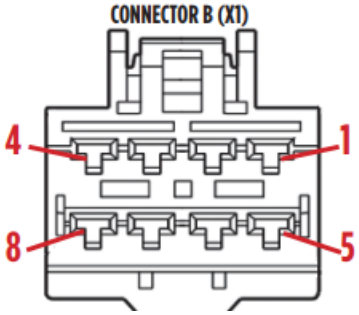
CADILLAC/XT4 2019-UP W/UQS				
CONNECTOR/PIN	**WIRE COLOR/POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	UQS
A-9	Pink/Black			
A-2	Blue	NA	SPK2	UQS
A-10	Blue/Black			
A-3	Red/White	NA	SPK3	UQS
A-11	Red/Black			
A-4	Purple (+)	RIGHT REAR	SPK4	UQS
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQS
A-13	Green/Black (-)			
A-6	Orange (+)	LEFT REAR MIDRANGE	SPK6	UQS
A-14	Orange/Black (-)			
A-7	Orange (+)	CENTER	SPK7	UQS
A-15	Orange/Black (-)			
A-8	Yellow	NA	SPK8	UQS
A-16	Yellow/Black			
B-1	Red (+)	RIGHT FRONT	SPK 09	UQS
B-5	Black (-)			
B-2	Gray	NA	SPK 10	UQS
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	UQS
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CAMARO 2019-UP W/UQA & /UQA + CM8				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	UQA
A-9	Pink/Black			
A-2	Blue	NA	SPK2	UQA
A-10	Blue/Black			
A-3	Red/White (+)	LEFT FRONT TWEET	SPK3	UQA
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	UQA
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQA
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	UQA
A-14	Orange/Black			
A-7	Orange (+)	CENTER	SPK7	UQA
A-15	Orange/Black (-)			
A-8	Yellow (+)	RIGHT SUBWOOFER	SPK8	UQA
A-16	Yellow/Black (-)			
B-1	Red (+)	RIGHT FRONT	SPK9	UQA +CM8
B-5	Black (-)			
B-2	Gray	NA	SPK 10	UQA +CM8
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	UQA +CM8
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CAMARO 2019-UP W/UQA – CM8				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
B-1	Red (+)	RIGHT SUBWOOFER	SPK9	UQA -CM8
B-5	Black (-)			
B-2	Gray (+)	RIGHT FRONT	SPK 10	UQA -CM8
B-6	Gray/Black (-)			
B-3	White (+)	FRONT LEFT	SPK 11	UQA -CM8
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CHEVROLET / CHEYENNE & COLORADO 2019-2021



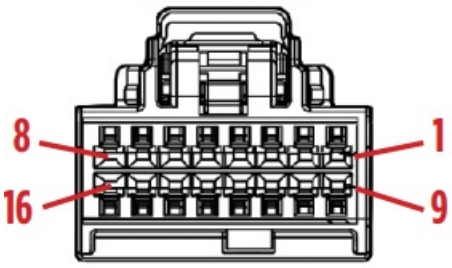


CHEYENNE 2019-2021 W/UQA				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	UQA
A-9	Pink/Black			
A-2	Blue (+)	RIGHT FRONT MIDRANGE	SPK2	UQA
A-10	Blue/Black (-)			
A-3	Red/White (+)	LEFT FRONT MIDRANGE	SPK3	UQA
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	UQA
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQA
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	UQA
A-14	Orange/Black			
A-7	Orange	NA	SPK7	UQA
A-15	Orange/Black			
A-8	Yellow	NA	SPK8	UQA
A-16	Yellow/Black			
B-1	Red (+)	SUB WOOFER	SPK9	
B-5	Black (-)			
B-2	Gray	RIGHT FRONT	SPK 10	
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

COLORADO 2019-2021				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	
A-9	Pink/Black			
A-2	Blue (-)	RIGHT FRONT TWEET	SPK2	
A-10	Blue/Black (+)			
A-3	Red/White (+)	LEFT FRONT TWEET	SPK3	
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	
A-14	Orange/Black			
A-7	Orange (+)	CENTER	SPK7	
A-15	Orange/Black (-)			
A-8	Yellow	NA	SPK8	
A-16	Yellow/Black			
B-1	Red (+)	RIGHT FRONT	SPK9	
B-5	Black (-)			
B-2	Gray	NA	SPK 10	
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CHEVROLET / CORVETTE 2020-UP

CONNECTOR C (X3)



CORVETTE 2020-UP				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	
A-9	Pink/Black			
A-2	Blue (-)	RIGHT FRONT TWEET	SPK2	
A-10	Blue/Black (+)			
A-3	Red/White (+)	LEFT FRONT TWEET	SPK3	
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	
A-12	Purple/Black (-)			
A-5	Green(+)	LEFT REAR	SPK5	
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	
A-14	Orange/Black			
A-7	Orange (+)	CENTER	SPK7	
A-15	Orange/Black (-)			
A-8	Yellow	NA	SPK8	
A-16	Yellow/Black			
B-1	Red (+)	RIGHT FRONT	SPK9	
B-5	Black (-)			
B-2	Gray	NA	SPK 10	
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CORVETTE 2020-UP cont.				
CONNECTOR /PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
C-1	Red/White (+)	LEFT REAR MIDRANGE	SPK 12	UQH
C-9	White/Blue (-)			
C-2	Red/Black(-)	RIGHT REAR MIDRANGE	SPK 13	UQH
C-10	White/Purple (+)			
C-3	NA	NA	SPK 14	NA
C-11	NA			
C-4	NA	NA	SPK 15	NA
C-12	NA			
C-5	Green/White (-)	RIGHT FRONT TWEET	SPK 16	UQH
	Green/Black (+)			
C-5	Orange (+)	LEFT FRONT TWEET	SPK 17	UQH
C-14	Orange/Black (-)			
C-7	Orange	NA	SPK 18	NA
C-15	Orange/Black			
C-8	Yellow	NA	SPK 19	NA
C-16	Yellow/Black			

CHEVROLET / EQUINOX, MALIBU, & SILVERADO

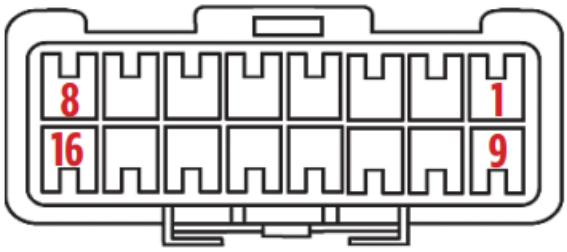
CHEVROLET EQUINOX 2019-UP W/UQA				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	
A-9	Pink/Black			
A-2	Blue (-)	RIGHT FRONT TWEET	SPK2	UQA
A-10	Blue/Black (+)			
A-3	Red/White (+)	LEFT FRONT TWEET	SPK3	UQA
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	UQA
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQA
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	
A-14	Orange/Black			
A-7	Orange (+)	CENTER	SPK7	UQA
A-15	Orange/Black (-)			
A-8	Yellow	NA	SPK8	
A-16	Yellow/Black			
B-1	Red (+)	RIGHT FRONT	SPK9	UQA
B-5	Black (-)			
B-2	Gray	NA	SPK 10	
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	UQA
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CHEVROLET MALIBU 2019-UP W/UQA				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	UQA
A-9	Pink/Black			
A-2	Blue	NA	SPK2	UQA
A-10	Blue/Black			
A-3	Red/White (+)	CENTER	SPK3	UQA
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	UQA
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQA
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	UQA
A-14	Orange/Black			
A-7	Orange	NA	SPK7	UQA
A-15	Orange/Black			
A-8	Yellow	SUBWOOFER	SPK8	UQA
A-16	Yellow/Black			
B-1	Red (+)	SUBWOOFER	SPK9	UQA
B-5	Black (-)			
B-2	Gray (+)	RIGHT FRONT	SPK 10	UQA
B-6	Gray/Black (-)			
B-3	White (+)	LEFT FRONT	SPK 11	UQA
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

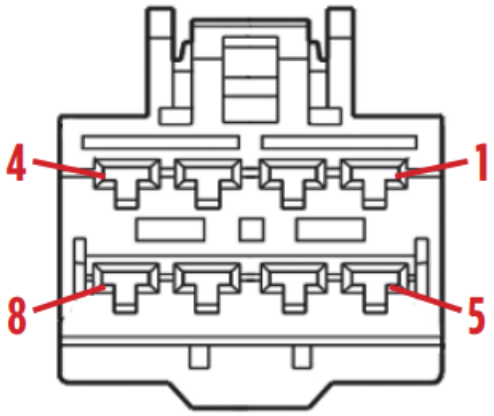
CHEVROLET SILVERADO 1500/2500/3500 2019-2021				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	UQA
A-9	Pink/Black			
A-2	Blue (-)	RIGHT FRONT MIDRANGE	SPK2	UQA
A-10	Blue/Black (+)			
A-3	Red/White (+)	LEFT FRONT MIDRANGE	SPK3	UQA
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	UQA
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQA
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	UQA
A-14	Orange/Black			
A-7	Orange	NA	SPK7	UQA
A-15	Orange/Black			
A-8	Yellow	NA	SPK8	UQA
A-16	Yellow/Black			
B-1	Red (+)	SUBWOOFER	SPK9	UQA
B-5	Black (-)			
B-2	Gray (+)	RIGHT FRONT	SPK 10	UQA
B-6	Gray/Black (-)			
B-3	White (+)	LEFT FRONT	SPK 11	UQA
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CHEVROLET / VOLT 2019

CONNECTOR A



CONNECTOR B



CHEVROLET VOLT 2019				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	
A-9	Pink/Black			
A-2	Blue	NA	SPK2	
A-10	Blue/Black			
A-3	Red/White (+)	CENTER	SPK3	
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	
A-14	Orange/Black			
A-7	Orange	NA	SPK7	
A-15	Orange/Black			
A-8	Yellow	NA	SPK8	
A-16	Yellow/Black			
B-1	Red (+)	SUBWOOFER	SPK9	
B-5	Black (-)			
B-2	Gray	RIGHT FRONT	SPK 10	
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

GMC / ACADIA 2019-UP & CANYON 2019-UP

GMC ACADIA 2019-UP				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	UQA
A-9	Pink/Black			
A-2	Blue	NA	SPK2	UQA
A-10	Blue/Black			
A-3	Red/White (+)	CENTER	SPK3	UQA
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	UQA
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQA
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	UQA
A-14	Orange/Black			
A-7	Orange	NA	SPK7	UQA
A-15	Orange/Black			
A-8	Yellow	NA	SPK8	UQA
A-16	Yellow/Black			
B-1	Red (+)	SUBWOOFER	SPK9	UQA
B-5	Black (-)			
B-2	Gray (+)	RIGHT FRONT	SPK 10	UQA
B-6	Gray/Black (-)			
B-3	White (+)	LEFT FRONT	SPK 11	UQA
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

CANYON 2019-UP				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	
A-9	Pink/Black			
A-2	Blue (-)	RIGHT FRONT TWEET	SPK2	
A-10	Blue/Black (+)			
A-3	Red/White (+)	LEFT FRONT TWEET	SPK3	
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	
A-14	Orange/Black			
A-7	Orange (+)	CENTER	SPK7	
A-15	Orange/Black (-)			
A-8	Yellow	NA	SPK8	
A-16	Yellow/Black			
B-1	Red (+)	RIGHT FRONT	SPK9	
B-5	Black (-)			
B-2	Gray	NA	SPK 10	
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

GMC / SIERRA 1500/2500/3500 2019-2021 & TERRAIN 2019-UP

SIERRA 1500/2500/3500 2019-2021				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	UQA
A-9	Pink/Black			
A-2	Blue (-)	RIGHT FRONT MIDRANGE	SPK2	UQA
A-10	Blue/Black (+)			
A-3	Red/White (+)	LEFT FRONT MIDRANGE	SPK3	UQA
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	UQA
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQA
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	UQA
A-14	Orange/Black			
A-7	Orange	NA	SPK7	UQA
A-15	Orange/Black			
A-8	Yellow	NA	SPK8	UQA
A-16	Yellow/Black			
B-1	Red (+)	SUBWOOFER	SPK9	UQA
B-5	Black (-)			
B-2	Gray (+)	RIGHT FRONT	SPK 10	UQA
B-6	Gray/Black (-)			
B-3	White (+)	LEFT FRONT	SPK 11	UQA
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

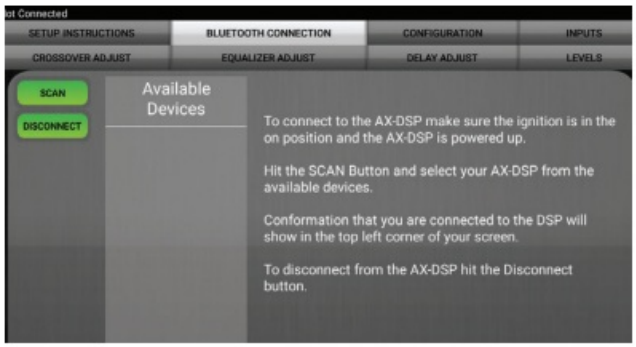
TERRAIN 2019-UP				
CONNECTOR/ PIN	**WIRE COLOR/ POLARITY**	**ASSIGNMENT**	**LABEL**	**RPO**
A-1	Pink	NA	SPK1	
A-9	Pink/Black			
A-2	Blue (-)	RIGHT FRONT TWEET	SPK2	UQA
A-10	Blue/Black (+)			
A-3	Red/White (+)	LEFT FRONT TWEET	SPK3	UQA
A-11	Red/Black (-)			
A-4	Purple (+)	RIGHT REAR	SPK4	UQA
A-12	Purple/Black (-)			
A-5	Green (+)	LEFT REAR	SPK5	UQA
A-13	Green/Black (-)			
A-5	Orange	NA	SPK6	
A-14	Orange/Black			
A-7	Orange (+)	CENTER	SPK7	UQA
A-15	Orange/Black (-)			
A-8	Yellow	NA	SPK8	
A-16	Yellow/Black			
B-1	Red (+)	RIGHT FRONT	SPK9	
B-5	Black (-)			
B-2	Gray	NA	SPK 10	
B-6	Gray/Black			
B-3	White (+)	LEFT FRONT	SPK 11	
B-7	White/Black (-)			
B-4	Yellow	12V		
B-8	Black	GROUND		

QUICK SETUP STEPS THROUGH AX-DSP-XL APP

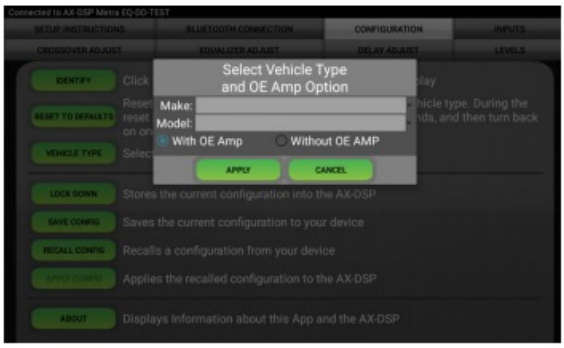
1. Download and install the AX-DSP-XL app from the Google Play Store or Apple App Store.
2. Turn Vehicle Ignition on. Make sure the Remote Turn on lead is disconnected.
3. Open the app: Select Bluetooth Connections page.
    - Select Scan, all available AXDSP devices within range will be displayed. Select your AXDSP and hit connect. (Figure A)
4. Select the Configuration page.
    - Select Vehicle Type Icon
    - Select the Vehicle Make: _____
    - Select the Vehicle's model: _____
    - 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 AXDSPX-ETH1 harness to the aftermarket amplifiers.
7. From the Configuration page click the Identify button to confirm that the AXDSPX-ETH1 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.

Google Play Store

Apple App Store
iOS 12.1 or higher



(Figure A)



(Figure B)

(Figure C)

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

SPECIFICATIONS

- Input Impedance 1M Ohm
- Input Channels 6 High/Low level Selectable
- Input Options High Level or Low Level
- Input Type Differential-Balanced
- Input Voltage
- High Level Range 0 – 28v Peak to Peak
- Input Voltage
- Low Level Range 0 – 4.9v Peak to Peak
- Ouput Channels 10
- Output Voltage Up to 5v RMS
- Output Impedance 50 Ohms
- Equalizer Type 31 Band Graphic EQ, +/- 10dB
- THD <0.03%
- Frequency Response 20Hz – 20kHz
- Crossover 3-Way LPF, BPF, HPF THP per channel
- Crossover Type Linkwitz-Riley 24DB Slope, Fixed
- Sampling 48kHz
- S/N Ratio 105dB @ 5V RMS

General

- Operating Voltage 10 – 16VDC
- Standby Current Draw ~7mA
- Operation Current Draw ~150mA
- Adjustments/Controls Application via Bluetooth®
- Remote Output 12VDC, Signal Sense or with Ignition

TROUBLESHOOTING

If the Red light in the AXDSPX-ETH1 interface is blinking 2 or 3 times every 5 seconds, it is not communicating with the vehicle properly. Remove the key from the ignition, unplug the connectors from the interface, then inspect all connections made. If everything is proper, connect the harnesses back into the interface, cycle the key to ignition, then re-inspect. The Red light should blink once every 5 seconds.

LED FEEDBACK	
BLINK RATE	**CONDITION/STATUS**
1 Blink Every 5 Seconds	ALL GOOD
2 Blinks Every 5 Seconds	MISSING ETHERNET FRAMES
3 Blinks Every 5 Seconds	MISSING CAN FRAMES

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.

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

KNOWLEDGE IS POWER
Enhance your installation and fabrication skills by enrolling in the most recognized and respected mobile electronics school in our industry. Log onto www.installerinstitute.edu or call 386-672-5771 for more information and take steps toward a better tomorrow.

Metra recommends MECP certified technicians

INTERFACE FEATURES

- 31 Band graphic EQ
- 6 Inputs, 10 individually assignable outputs
- Independent equalization on each of the 10 outputs
- Independent high pass, low pass, and bandpass filters

- Each channel can be delayed independently up to 10ms
- Easy behind the radio installation in most applications
- Can be used with OE and aftermarket radios
- Chime control for GM/Chrysler vehicles
- Clipping detection and limiting circuits
- Bass knob included
- Retains OE voice prompts (SYNC® and OnStar®)
- Retains factory chimes including parking sensor and cross path detection alerts
- Settings adjusted via Bluetooth® in a smart device application (tablet or mobile phone), compatible with both Android and Apple devices
- Read, write, and store configurations for future recall
- Password protect feature available in the mobile app
- Micro-B USB updatable

INTERFACE COMPONENTS

- AX-DSP-X interface
- AX-DSP-X harness (16-pin & 20-pin)

TOOLS & INSTALLATION ACCESSORIES REQUIRED

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

Google Play Store

Apple App Store
iOS 12.1 or higher

PREFACE

The AX-DSP-X can be used with an aftermarket system, OEM system, and also an OEM system that is amplified with either an analog or digitally controlled (fixed signal) OEM amplifier.
The AX-DSP-X can also grow as your stereo system grows. Start off by adding a subwoofer to an OEM system, then add on from there. Simply reference the Installation Options page to change the AX-DSP-X to the new system. All 10 channels of the AX-DSP-X can be assigned however needed for the installation at hand. If 10 channels of a subwoofer signal is needed, the AX-DSP-X can do it.
In the following section, Installation Options, choose the installation type, then either click on the hyperlink, or reference the page number.
It is highly suggested to use an AX-DSP-X pre-wired harness (sold separately) unless you are installing it with an aftermarket radio. As such, the instructions are written in that manner. Certain connections to the vehicle are

unique per vehicle and will require the pre-wired harness to reference to.
The AX-DSP-X provides a 12v 1-amp output to turn on an aftermarket amplifier. If installing multiple amplifiers, an SPDT automotive relay will be required if the current exceeds that amount. Use Metra part number E-123 (sold separately) for best results.
If installing the AX-DSP-X behind the radio to install a sub amp, the OEM amp can be retained for mids/highs. If installing the AX-DSP-X at the OEM amp location, the OEM amp must be fully removed.
In most cases the CAN Bus wires need to be connected in order for the AX-DSP-X to communicate with the vehicle to turn on and provide an amp turn-on output.

INSTALLATION OPTIONS

Aftermarket radio system:
The AX-DSP-X can be used with an aftermarket radio to improve the overall listening experience for car audio enthusiasts. Installers will connect the RCA inputs from the AX-DSP-X to the outputs from the aftermarket radio; Front, Rear, Sub (sub is optional). When using an aftermarket radio with the AX-DSP-X, General must be chosen for the vehicle type. (refer to page 4)

Adding a subwoofer to an OEM System:
This feature offers the Installer the ability to add an aftermarket subwoofer to an OEM system, whether the OEM system is non-amplified, or amplified with an analog or digitally controlled (fixed signal) amplifier. If the vehicle is equipped with noise canceling mics, they must be disabled for this type of system. (refer to page 5)

OEM System without an amplifier:
This option allows the Installer to wire the AX-DSP-X directly to the speaker outputs from the OEM radio for an audio signal (high-level). (refer to page 6)

OEM System with an “analog” amplifier:
This option allows the Installer to tap directly to the output of the OEM radio and feed an audio signal into the AX-DSP-X. This type of installation requires the removal of the factory amplifier, and will provide a full range signal to the input side of the AX-DSP-X. (refer to page 7)

OEM System with a “digitally controlled” amplifier:
Digitally controlled systems function differently than analog systems. They have a fixed level audio signal that is controlled through the vehicle’s CAN bus. In most cases the programming content (audio) provided is just two channels, which can be either front or rear. The other channels are for content like Phone/Bluetooth, SMS reader, SYNC, or OnStar. The AX-DSP-X can retain these OEM features, and also provide a clean audio signal. This type of installation requires the removal of the factory amplifier, and will provide a full range signal to the input side of the AX-DSP-X. (refer to page 7)

INSTALLATION

Factory Radio Systems

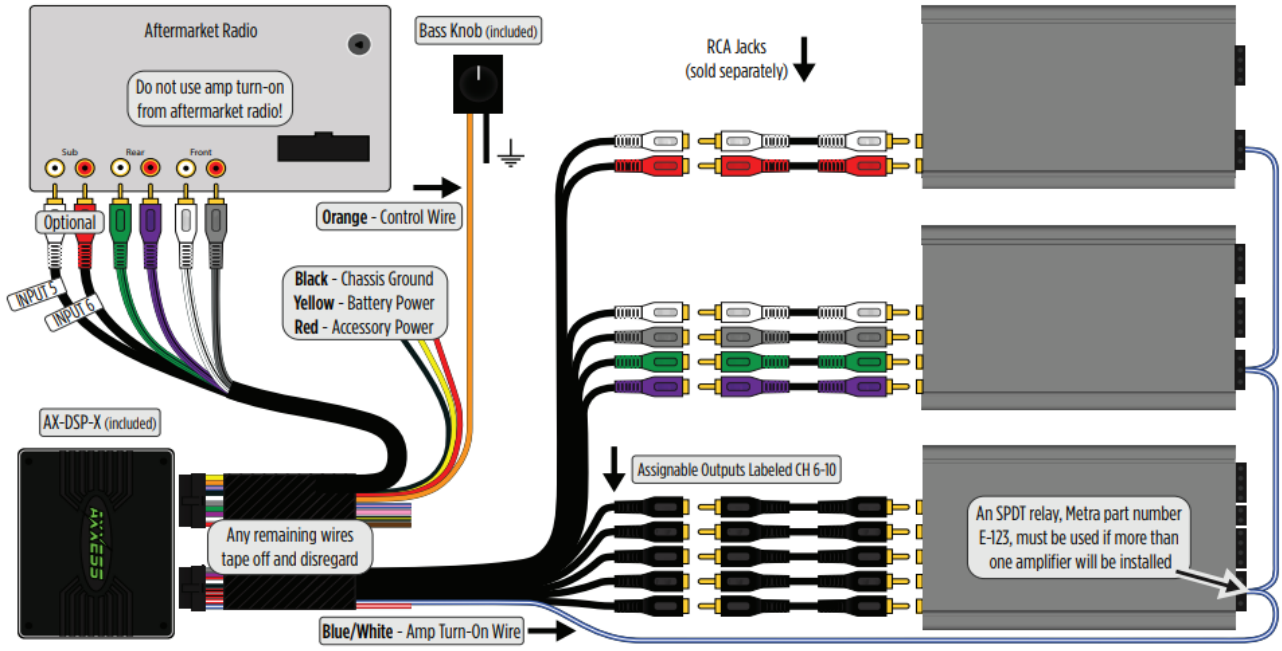
1. Remove the factory radio*, then unplug all connectors.
2. Install the vehicle specific T-harness (sold separately) and make all necessary connections, but leave the amp turn-on wire disconnected.
3. Plug the 20-pin AX-DSP-X harness into the AX-DSP-X.
4. Plug the 16-pin AX-DSP-X harness into the AX-DSP-X.
5. Plug all connectors back into the OEM radio.
6. Download and install the AX-DSP-X app from the Google Play Store or Apple App Store.
7. Using the app, select the vehicle.
8. Connect the amp turn-on wire from the AX-DSP-X.

9. Test all functions of the installation, then reassemble the dash to complete the installation.
   Refer to Metra online for dash disassembly. If Metra makes a dash kit for the vehicle, disassembly will be within the instructions.

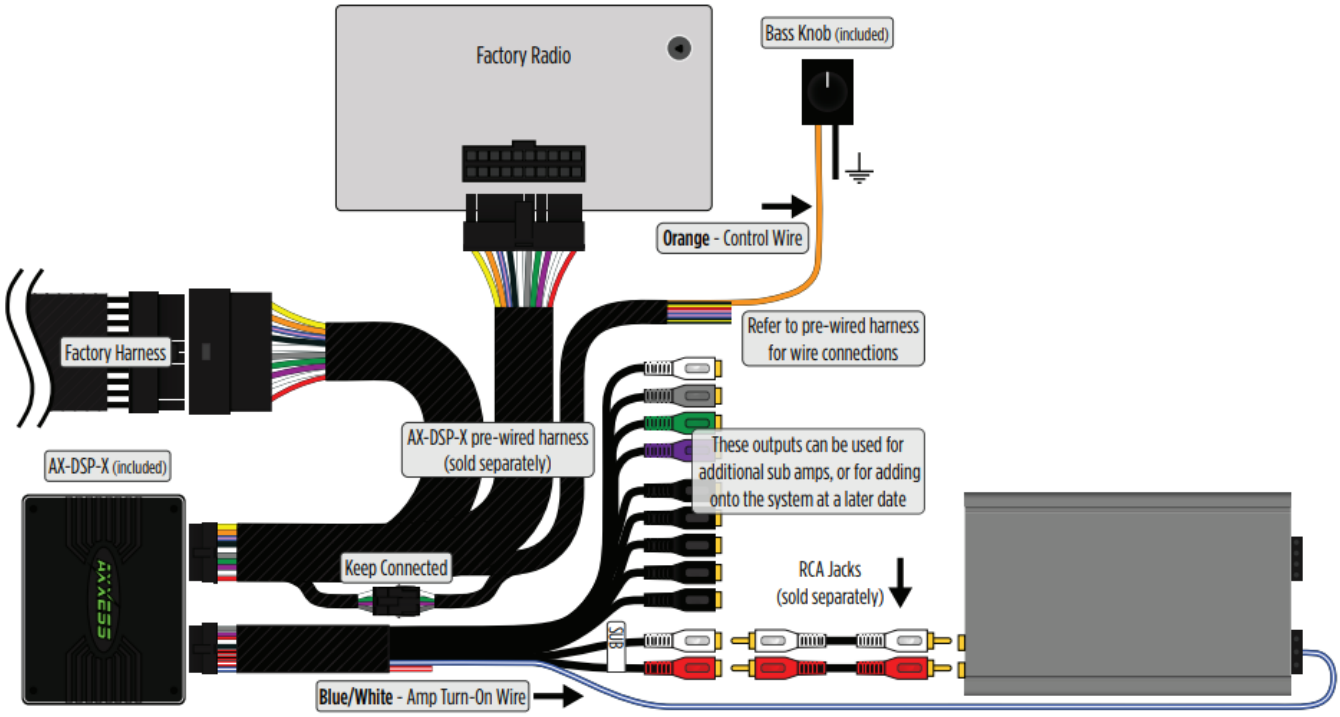
Aftermarket Radio Systems

1. Complete all necessary connections to the radio and vehicle, but leave the amp turn-on wire disconnected.
2. Plug the 20-pin AX-DSP-X harness into the AX-DSP-X.
3. Plug the 16-pin AX-DSP-X harness into the AX-DSP-X.
4. Download and install the AX-DSP-X app from the Google Play Store or Apple App Store.
5. Using the app, select the vehicle.
6. Connect the amp turn-on wire from the AX-DSP-X.
7. Test all functions of the installation, then reassemble the dash to complete the installation.

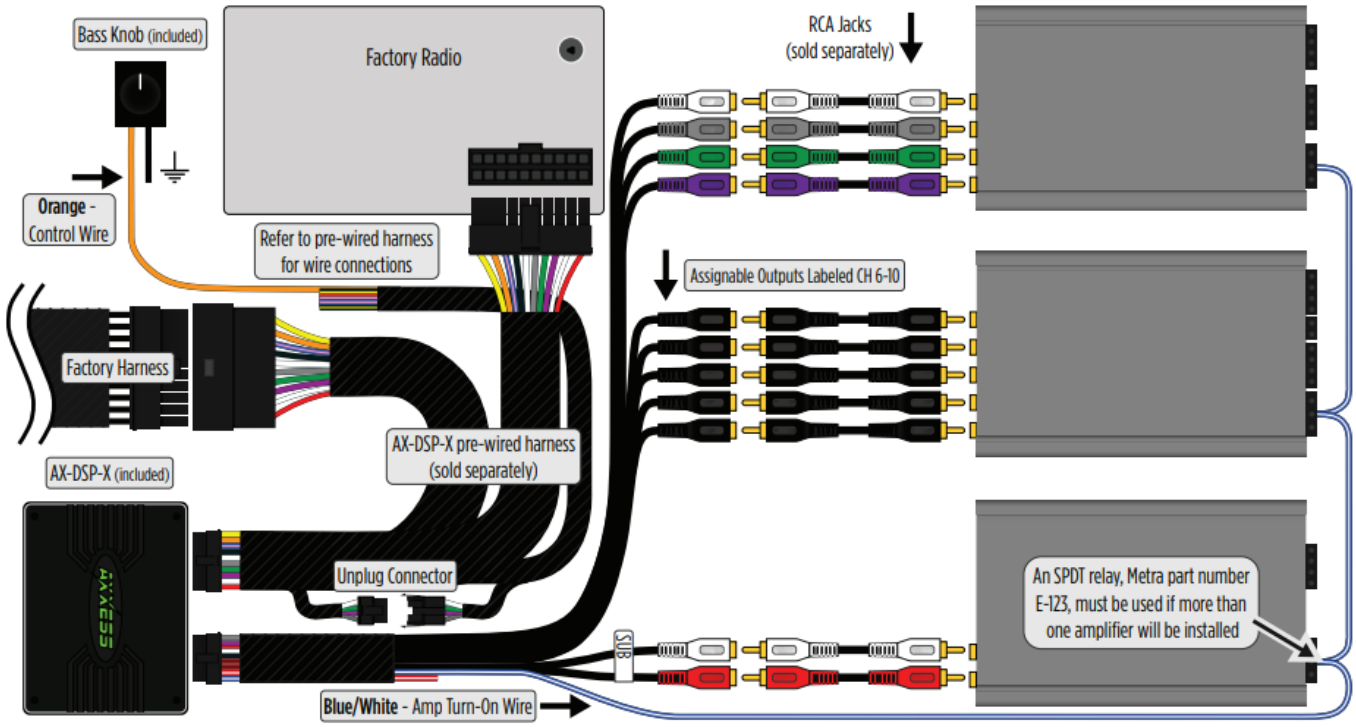
AFTERMARKET RADIO SYSTEM



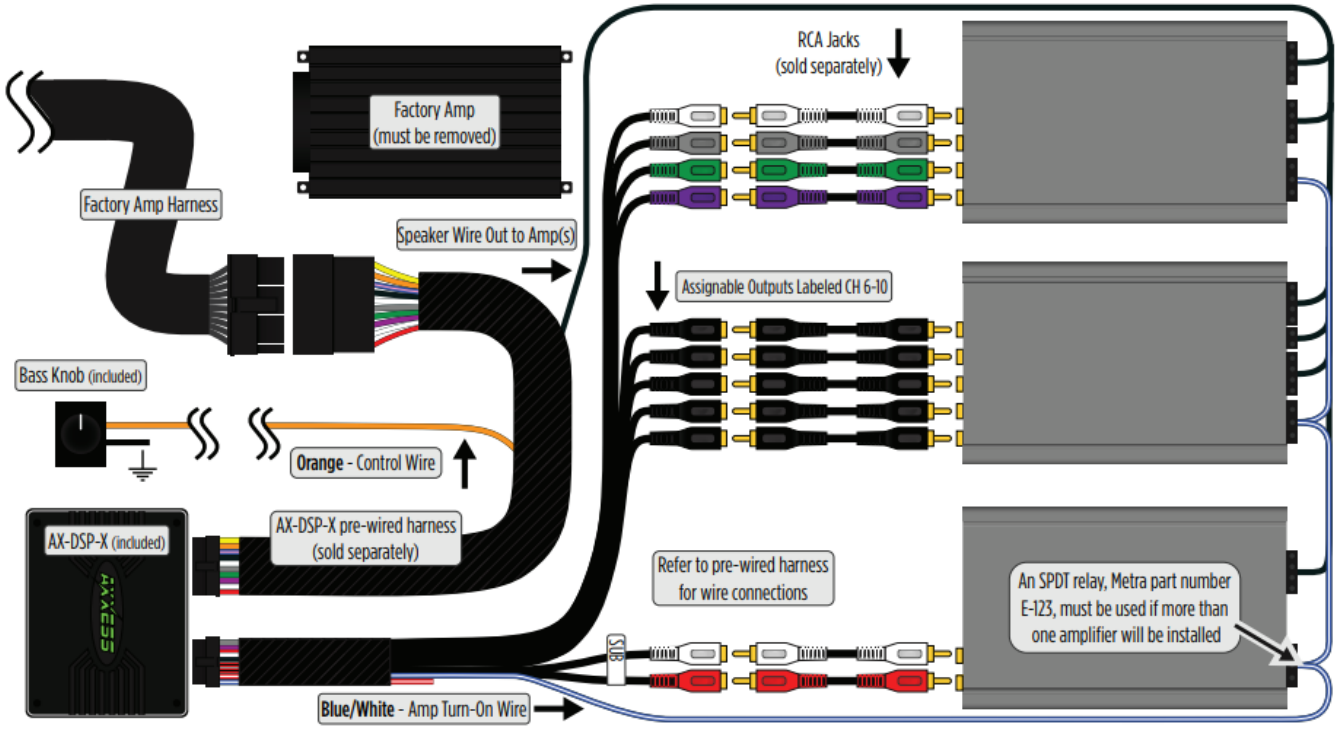
ADDING A SUBWOOFER TO AN OEM SYSTEM



OEM SYSTEM WITHOUT AMP

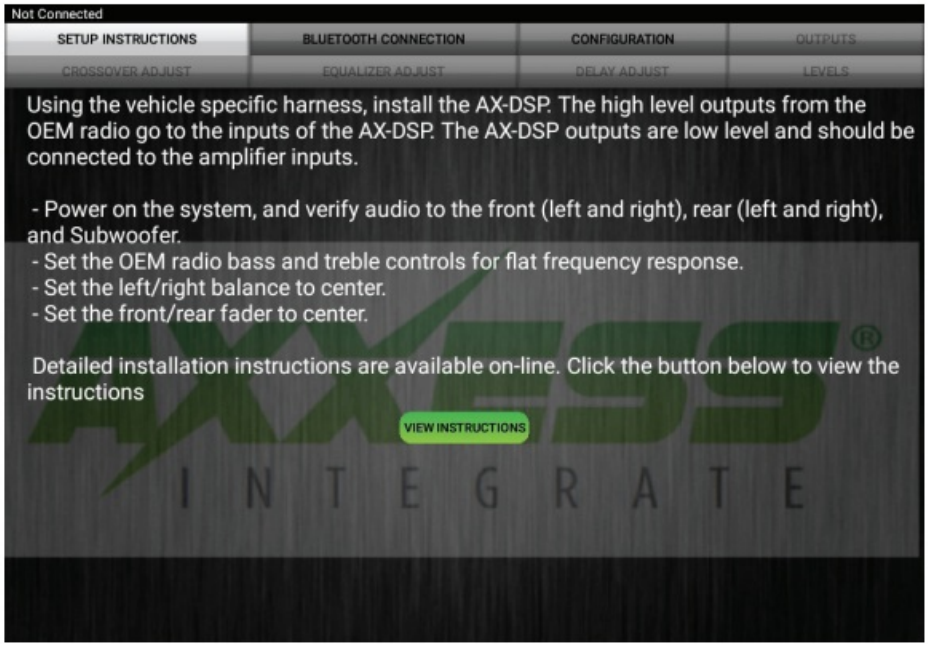


OEM SYSTEM WITH AMP BYPASS HARNESS



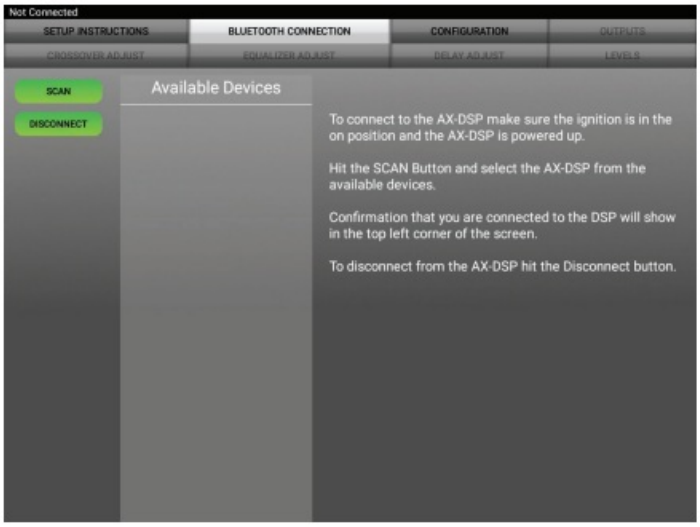
AX-DSP-X APP

Setup Instructions



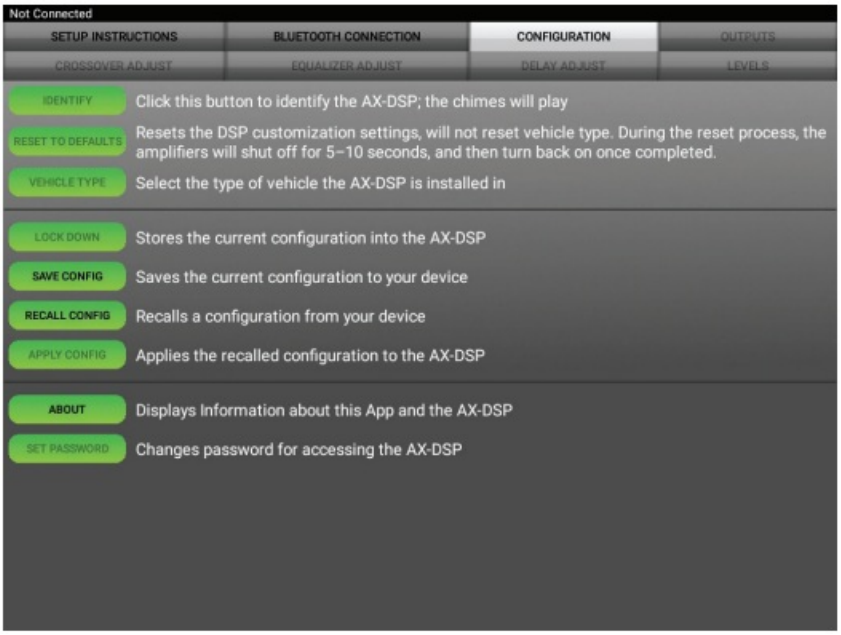
- General information tab for installing the AX-DSP-X.

Bluetooth Connection



- Scan – Press this button to start the Bluetooth pairing process, then select the AX-DSP-X from the mobile device. The AX-DSP-X must be powered during this process. Confirmation that you are connected will show in the top left corner of the app.
- Disconnect – Disconnects the AX-DSP-X from the app.

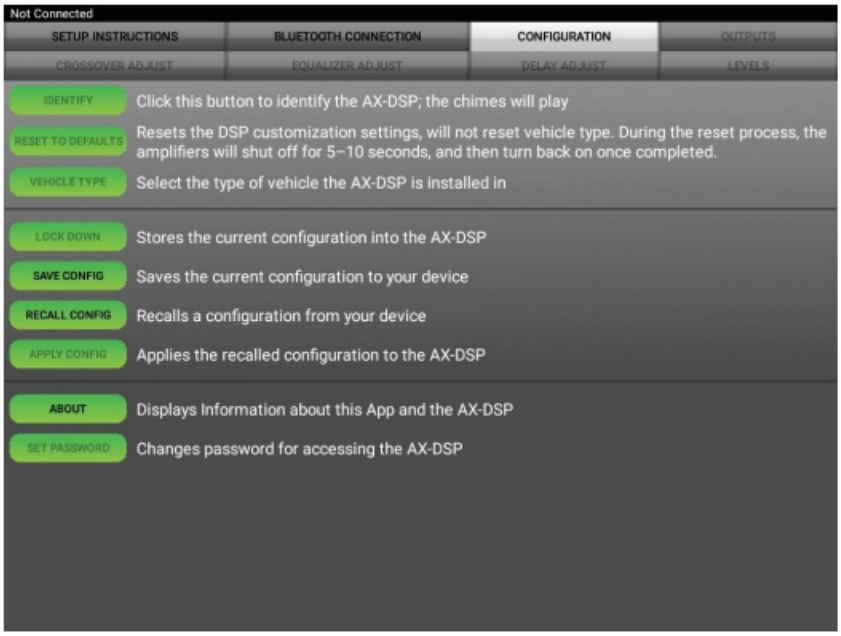
Configuration



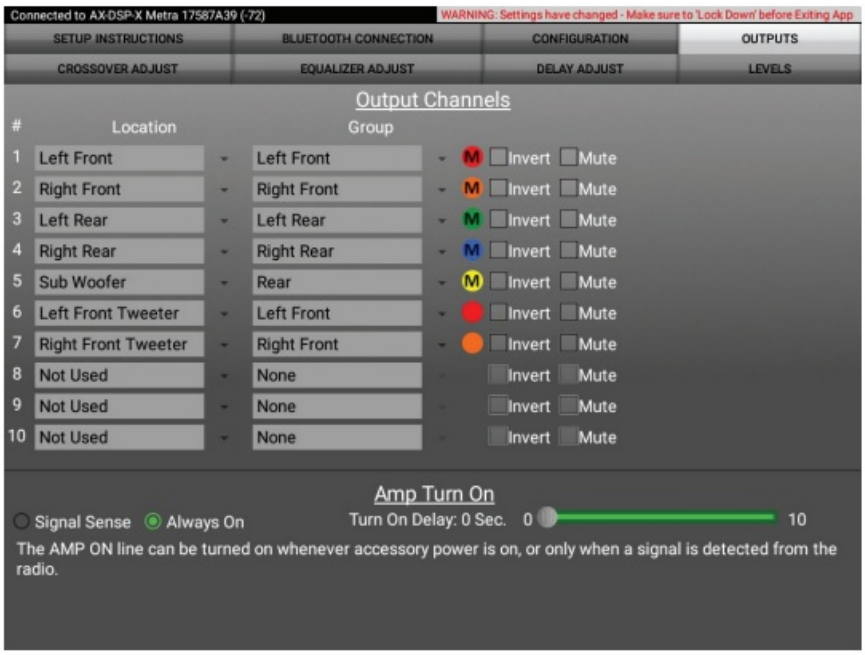
- Identify – Click this button to confirm that the AX-DSP-X is connected properly. If so, a chime will be heard from the front left speaker.
- Reset to Defaults – Resets the AX-DSP-X to factory settings. During the reset process the amplifiers will shut off for 5-10 seconds.
- Vehicle Type – Select the vehicle type from the drop down box, select either Without OE Amplifier or With OE Amplifier, then click the apply button.
- Lock Down – Click this button to save the selected settings. Attention! This button must be selected before closing the app or cycling the key otherwise all settings will be lost.
- Save Configuration – Saves the current configuration to the mobile device.
- Recall Configuration – Recalls a configuration from the mobile device.

- Apply Configuration – Allows a recalled configuration to the AX-DSP-X.
  The AX-DSP-X will need to be locked down to save the recalled configuration. This process will shut the amplifier off between 5-10 seconds while the configuration is uploaded to the AX-DSP-X.
- About – Displays information about the app, vehicle, AX-DSP-X, and mobile device.
- Set Password – Assign a 4-digit password to lock the AX-DSP-X. If no password is desired, use “0000”. This will clear out any currently set password. It is not necessary to lock down the AX-DSP-X when setting a password.

Note: A 4-digit only password must be chosen otherwise the interface will show “password not valid for this device”.



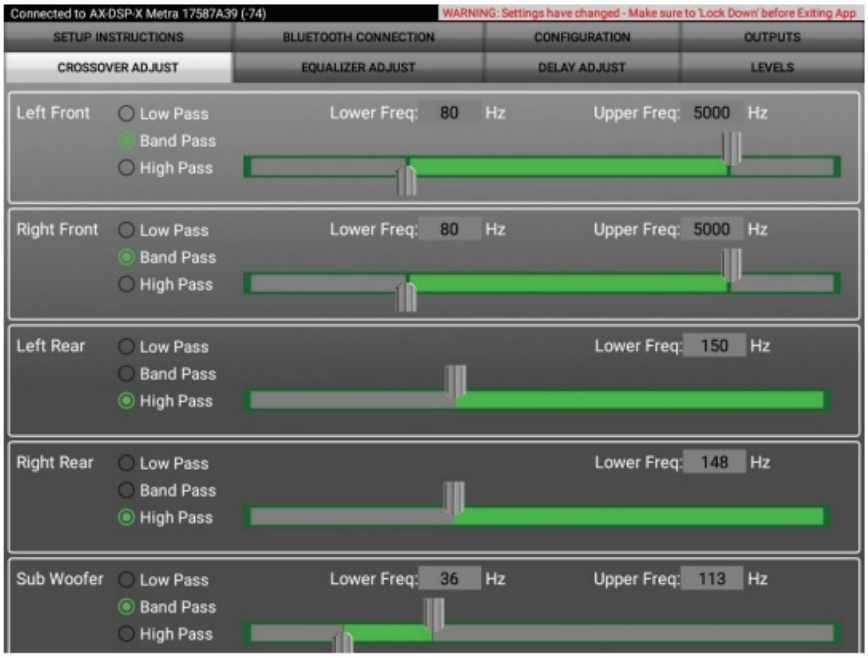
Outputs



Output Channels

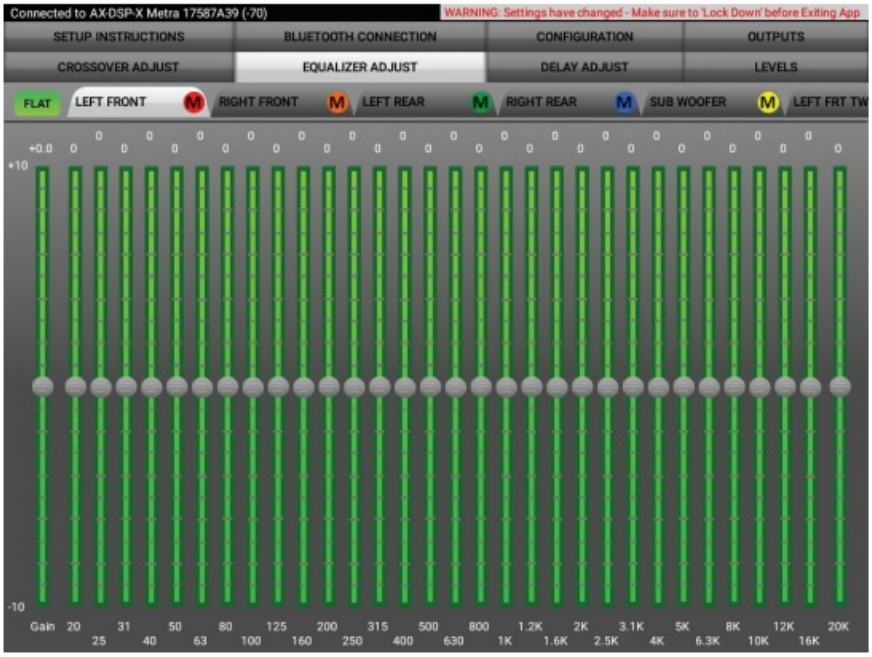
- Location – Location of speaker.
- Group – Used to join channels together. Example, left front woofer/ midrange and left front tweeter will be considered simply left front to the AX-DSP-X. The letter M denotes the speaker assigned as the master speaker.
- Invert – Will invert the phase of the speaker.
- Mute – Will mute desired channel(s) for tuning individual channels.
- Amp Turn On
- Signal Sense – Will turn the amplifier on when an audio signal is detected, and keep on for 10 seconds past the last signal. This ensures the amplifier doesn't shut off between tracks.
- Always On – Will keep the amplifiers on as long as they is cycled on.
- Turn on Delay – Can be used to delay amp turn-on to avoid turn-on pops.

Crossover Adjust



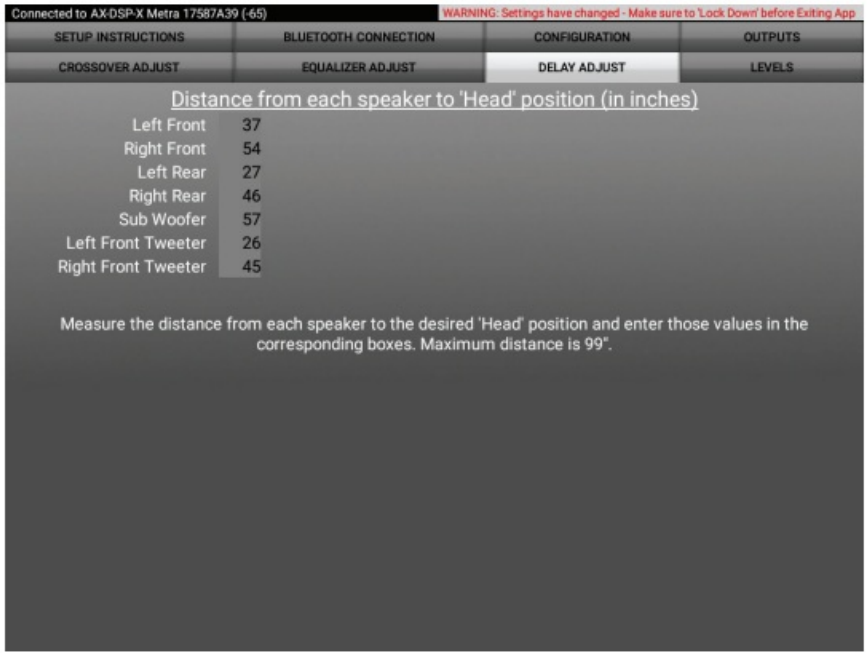
- If installing a subwoofer, the front and rear outputs will default to a 100Hz high pass filter to keep the low frequency signals out of the full range speakers. If a subwoofer is not being installed, change the front and rear crossover points down to 20Hz for a full range signal, or to the lowest frequency the speakers will play to.
- Selecting High Pass and Low Pass will provide one crossover frequency adjustment. Selecting Band Pass will provide two crossover frequency adjustments, one for low pass, and one for high pass.

Equalizer Adjust



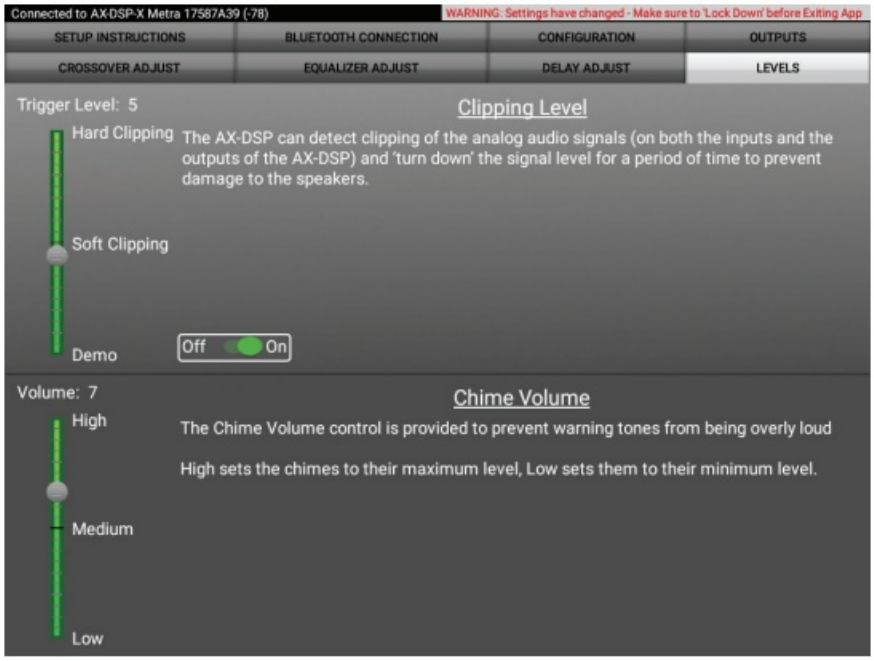
- All channels can be adjusted independently within this tab with 31 bands of available equalization. It is best to tune this by using an RTA (Real Time Analyzer).
- The Gain slider on the far left is for the channel selected.

Delay Adjust



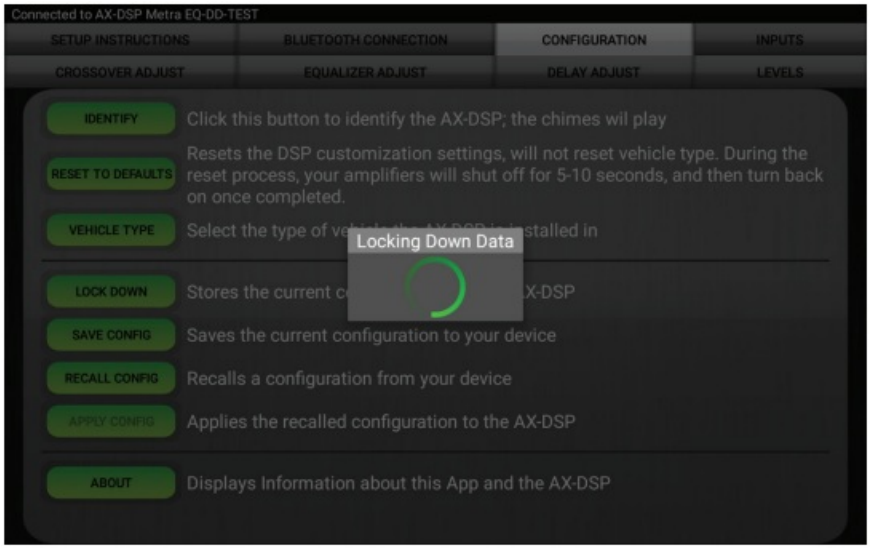
- Allows a delay of each channel, up to 10 milliseconds. First measure the distance (in inches) from each speaker to the listening position, then enter those values. If a delay is desired, add to the desired channel(s), up to 99 inches.

Levels



- Clipping Level – Use this feature to protect sensitive speakers like tweeters from being driven past their capabilities. If the output signal of the AX-DSP-X clips the audio will be reduced by 20dB.
  Turning down the stereo will allow the audio to come back at a normal level. The sensitivity of this feature can be adjusted to the listening preference of the user.
- Chime Volume – Allows the chime volume to be adjusted up or down.
  Note: In newer Ford vehicles chimes will be heard through the gauge cluster if the OEM amplifier is removed

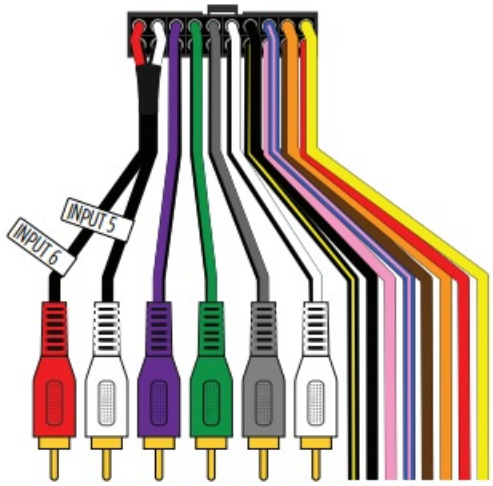
Locking Down Data



Last and the most important.
You must lock down your configuration!!!

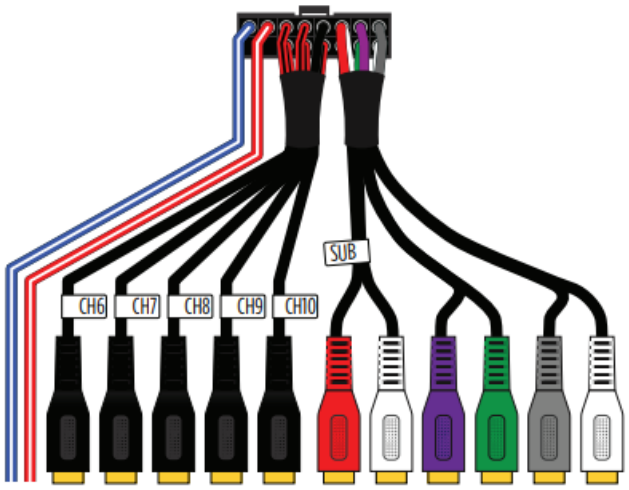
PINOUT

Input Connector



- Input 6 – Subwoofer Right Input
- Black – Chassis Ground
- Input 5 – Subwoofer Left Input
- Pink – CAN-HI
- Purple RCA Jack – Rear Right
- Input * Blue/Pink – CAN-LO
- Green RCA Jack – Rear Left Input * Brown – Future Use
- Gray RCA Jack – Front Right Input * Orange – Control Wire for Bass Knob
- White RCA Jack – Front Left Input * Red – Accessory Power
- Black/Yellow – Future Use Yellow – Battery Power

Output Connector



- Blue/White – Amp Turn-On
- Purple RCA Jack – User Assignable Output
- Red/White – Future Use
- Green RCA Jack – User Assignable Output
- Channel 6-10 – User Assignable Outputs
- Gray RCA Jack – User Assignable Output
- Sub RCA Jacks – Use Assignable Outputs
- White RCA Jack – User Assignable Output

Cut off RCA jack for speaker level input

Specifications

- Input Impedance 1M Ohm
- Input Channels 6 High/Low level Selectable
- Input Options High Level or Low Level
- Input Type Differential-Balanced
- Input Voltage
- High Level Range 0 – 28v Peak to Peak
- Input Voltage
- Low Level Range 0 – 4.9v Peak to Peak
- Ouput Channels 10
- Output Voltage Up to 5v RMS
- Output Impedance 50 Ohms
- Equalizer Type 31 Band Graphic EQ, +/- 10dB
- THD <0.03%
- Frequency Response 20Hz – 20kHz
- Crossover 3-Way LPF, BPF, HPF THP per channel
- Crossover Type Linkwitz-Riley 24DB Slope, Fixed
- Sampling 48kHz
- S/N Ratio 105dB @ 5V RMS

General

- Operating Voltage 10 – 16VDC
- Standby Current Draw ~7mA
- Operation Current Draw ~150mA
- Adjustments/Controls Application via Bluetooth
- Remote Output 12VDC, Signal Sense or with Ignition

Having difficulties? We're here to help.
Contact our Tech Support line at: 1-800-253-TECH
Or via email at:
techsupport@metra-autosound.com
Tech Support Hours (Eastern Standard Time)
Monday – Friday: 9:00 AM – 7:00 PM
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Documents / Resources

	AXXESS AXDSPX-ETH1 Digital Signal Processor and T-Harness [pdf] Instruction Manual AXDSPX-ETH1 Digital Signal Processor and T-Harness, AXDSPX-ETH1, Digital Signal Processor and T-Harness, Signal Processor and T-Harness, Processor and T-Harness, T-Harness

References

- Home - Auto Sound
- Axxess Integrate - Comprehensive Interface Products for Vehicle Upgrades
- Metra Online | Welcome to Metra Auto Parts Online Warehouse
- User Manual