



### INTERFACE COMPONENTS

- AXDSPX-FD3 interface
- AXDSPX-FD3 interface harness
- AXDSPX-FD3 vehicle T-harness • Bass knob

### APPLICATIONS

Visit [AxxessInterfaces.com](http://AxxessInterfaces.com) for current application list

## Ford DSP Interface (for Non-Amplified Vehicles with Pre-Wired Harness) 2020-Up

### INTERFACE FEATURES

- Includes a DSP (Digital Signal Processor)
- 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 band pass filters
- Each channel can be delayed independently up to 10ms
- Designed for non-amplified models
- Easy behind the radio installation with pre-wired harness
- Bass knob included for level control of subwoofer amp
- 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
- USB Micro B updatable

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### 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



## INSTALLATION OPTIONS

### Adding a subwoofer to a factory system:

The diagram on **Page 3** shows the connections that need to be made to add a subwoofer to the factory system.

**Note:** RCA jacks sold separately.

### Adding a full-range of amps and subwoofer to a factory system:

The diagram on **Page 4** shows the connections that need to be made to add: Subwoofer (RCA jacks sold separately)

Amplifier (SPDT **relay E-123** required) or

Additional Amp (RCA jacks sold separately).

**Note:** The interface provides a 12-volt 1-amp output to turn on aftermarket amp(s). If installing multiple amps, an SPDT automotive relay will be required if the amp turn-on current of all amps combined exceeds 1-amp. Use Metra part number E-123 (sold separately) for best results.

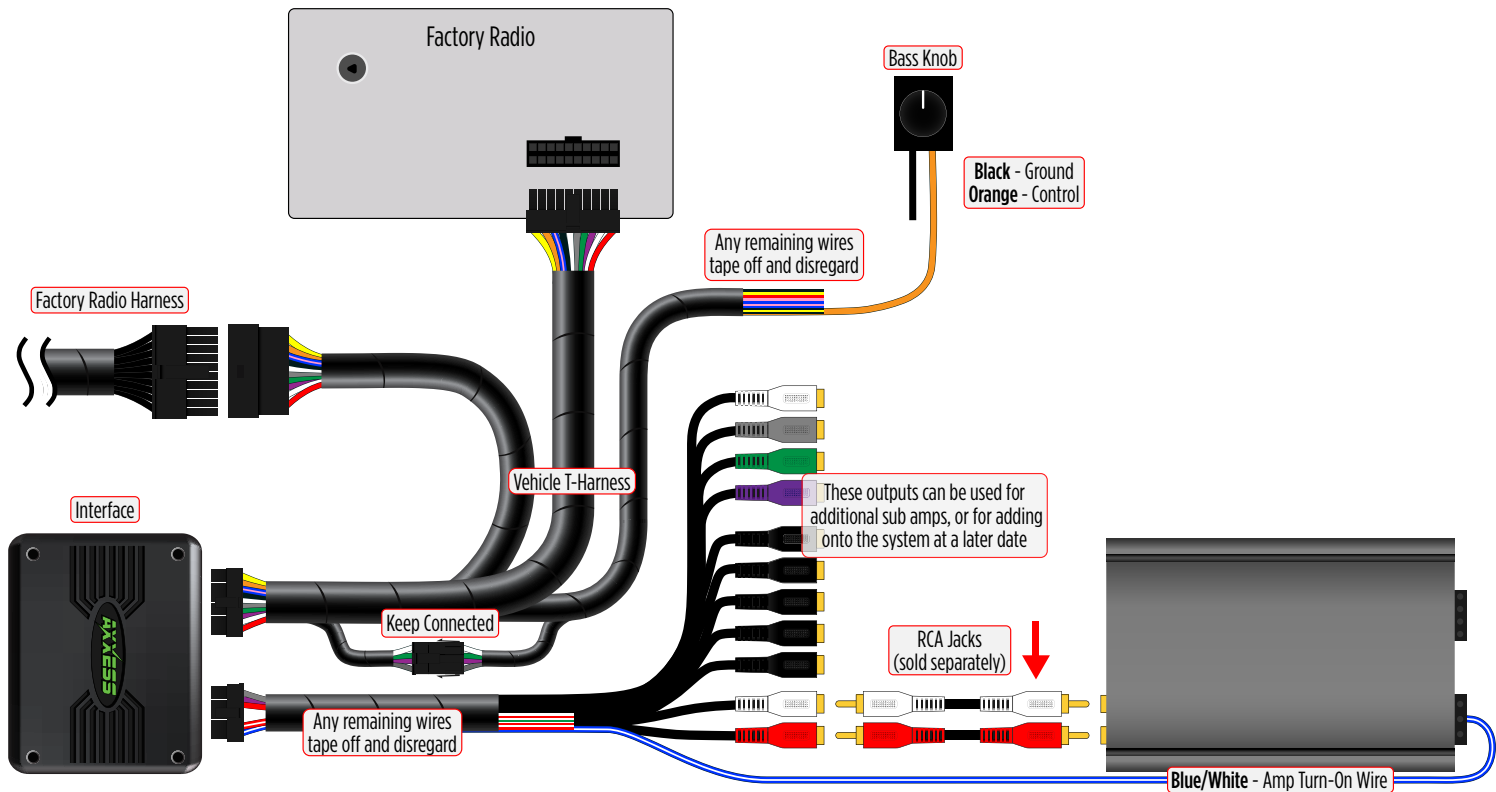
## INSTALLATION

1. Disassemble the dash, unplug all connectors, and then remove the factory radio.<sup>†</sup>
2. Install the **AXDSPX-FD3 vehicle T-harness** to the vehicle and make all necessary connections, but leave the amp turn-on wire disconnected.
3. Plug the **AXDSPX-FD3 vehicle T-harness** to the **AXDSPX-FD3 interface**.
4. Plug the **AXDSPX-FD3 interface harness** to the **AXDSPX-FD3 interface**.
5. Download and install the **AX-DSP-XL app** from the **Google Play Store** or **Apple App Store**.
6. Open the app then select the **Bluetooth Connection** tab. Follow the instructions to pair the mobile device to the interface. Refer to [page 6](#) for more information.
7. Scroll to the **Configuration** tab then select the vehicle type. Press the **Lock Down ‡** button to save the configuration. Refer to [page 7](#) for more information.
8. Connect the amp turn-on wire.
9. Adjust the settings in the app as desired. Press the **Lock Down ‡** button to save any new configurations.

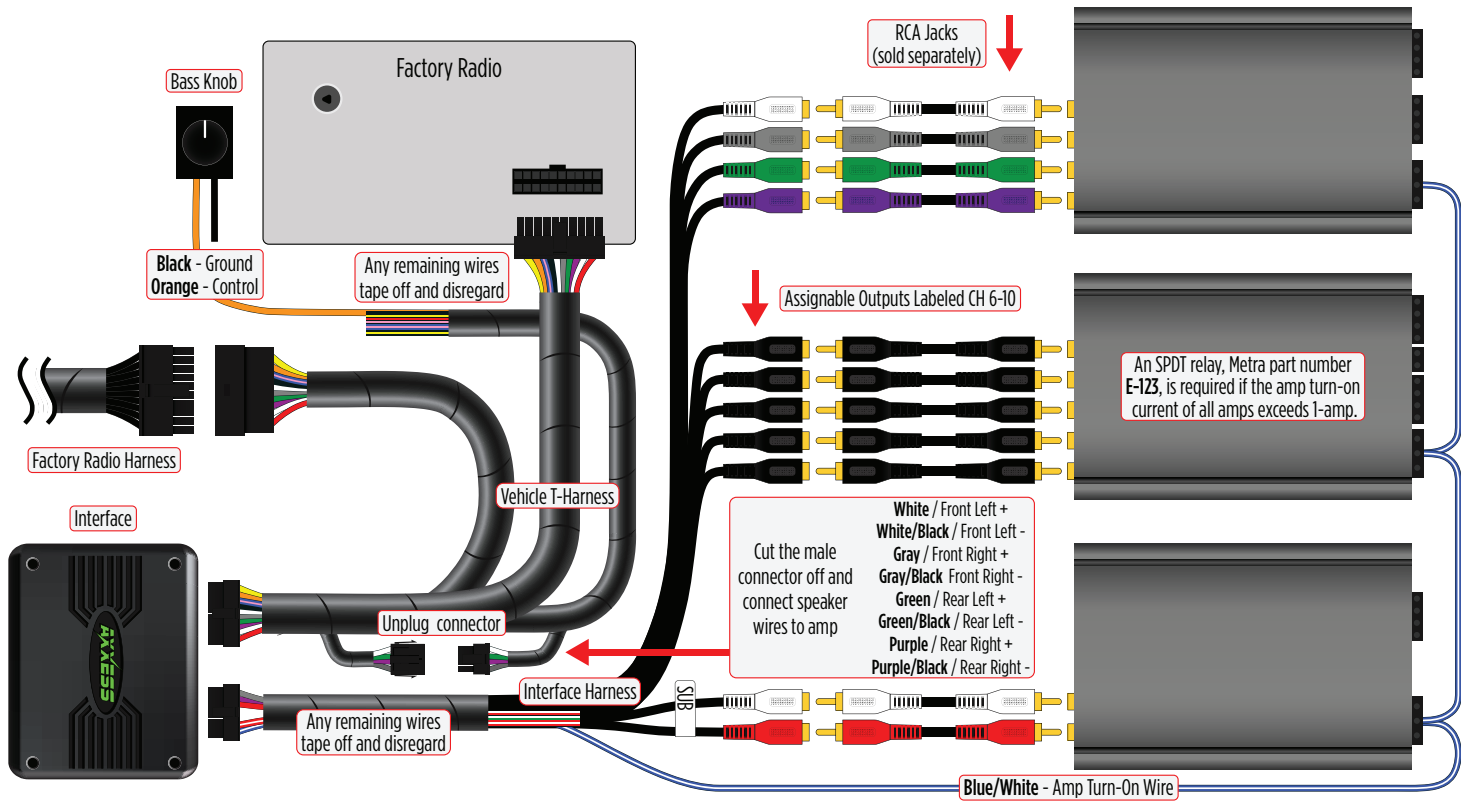
<sup>†</sup> For dash disassembly instructions, refer to [metraonline.com](http://metraonline.com). Enter the year, make, and model of the vehicle in the Vehicle Fit Guide and find instructions under Metra Radio Install kits.

<sup>‡</sup> Anytime the interface is locked down the key must be cycled off then back on.

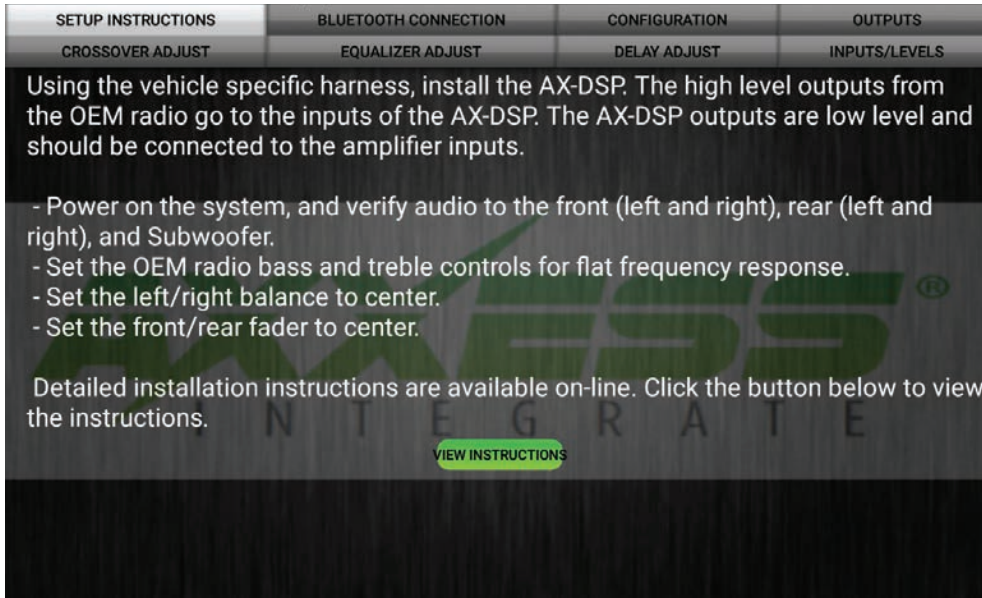
## ADDING A SUBWOOFER TO A FACTORY SYSTEM



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



## Setup Instructions



The screenshot shows a mobile application interface with a dark background and light text. At the top, there is a navigation bar with four tabs: "SETUP INSTRUCTIONS", "BLUETOOTH CONNECTION", "CONFIGURATION", and "OUTPUTS". Below the navigation bar, there are four sub-tabs: "CROSSOVER ADJUST", "EQUALIZER ADJUST", "DELAY ADJUST", and "INPUTS/LEVELS". The main content area displays the following text:

Using the vehicle specific harness, install the AX-DSP. The high level outputs from the OEM radio go to the inputs of the AX-DSP. The AX-DSP outputs are low level and should be connected to the amplifier inputs.

- Power on the system, and verify audio to the front (left and right), rear (left and right), and Subwoofer.
- Set the OEM radio bass and treble controls for flat frequency response.
- Set the left/right balance to center.
- Set the front/rear fader to center.

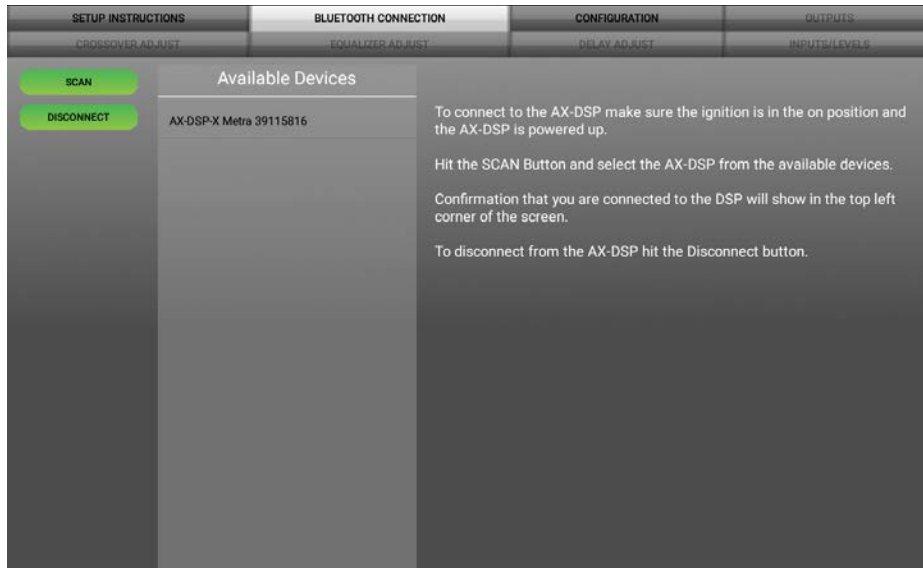
Detailed installation instructions are available on-line. Click the button below to view the instructions.

At the bottom of the screen, there is a green button labeled "VIEW INSTRUCTIONS".

- General information tab for installing the interface.

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### Bluetooth Connection



- **Scan** - Press this button to start the Bluetooth pairing process, then select the Available Device once it is found. "Connected" will appear in the top left corner of the app once paired.

**Note:** The ignition must be cycled on during this process.

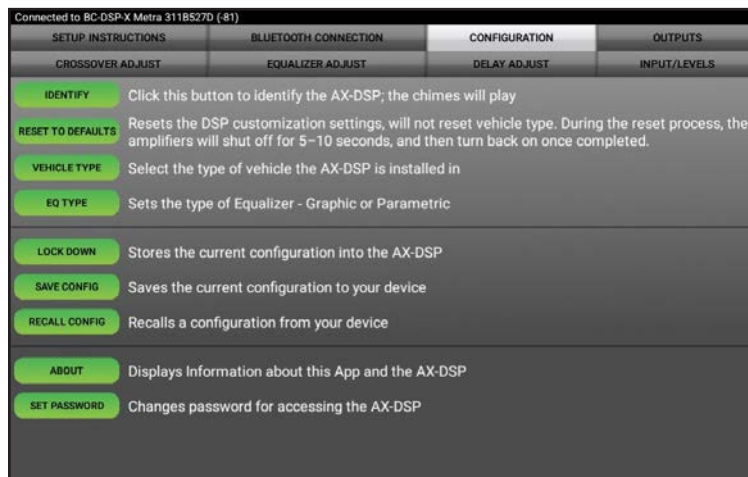
- **Disconnect** - Disconnects the interface from the app.

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## Configuration

**IDENTIFY:** Click this button to confirm that the interface is connected properly. If it is, a chime will be heard from the front left speaker.\*

\* Only installations where the interface is connected to a front left speaker.



**RESET TO DEFAULTS:** Resets the interface 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**

**EQUALIZER (EQ) TYPE:** User has the option of optimizing the car's sound quality with a Graphic or Parametric equalizer.

**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.

**ABOUT:** Displays information about the app, vehicle, interface, and mobile device.

**SET PASSWORD:** Assign a 4-digit password to lock the interface. If no password is desired, use "0000". This will clear out any currently set password. It is not necessary to lock down the interface when setting a password.

**Note:** A 4-digit only password must be chosen; otherwise, the interface will show "password not valid for this device".

*Continued on the next page*

## Outputs

SETUP INSTRUCTIONS		BLUETOOTH CONNECTION		CONFIGURATION		OUTPUTS	
CROSSOVER ADJUST		EQUALIZER ADJUST		DELAY ADJUST		INPUTS/LEVELS	
<u>Output Channels</u>							
#	Location	Group					
1	Left Front	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
2	Right Front	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
3	Left Rear	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
4	Right Rear	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
5	Sub Woofer	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
6	Not Used	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
7	Not Used	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
8	Not Used	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
9	Not Used	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			
10	Not Used	None	<input type="checkbox"/> Invert	<input type="checkbox"/> Mute			

### Output Channels

- **Location** - Location of speaker.
- **Group** - Used to join channels together for simple equalization. Example, left front woofer/midrange and left front tweeter will be considered simply left front. The letter **M** indicates 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.

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## Crossover Adjust

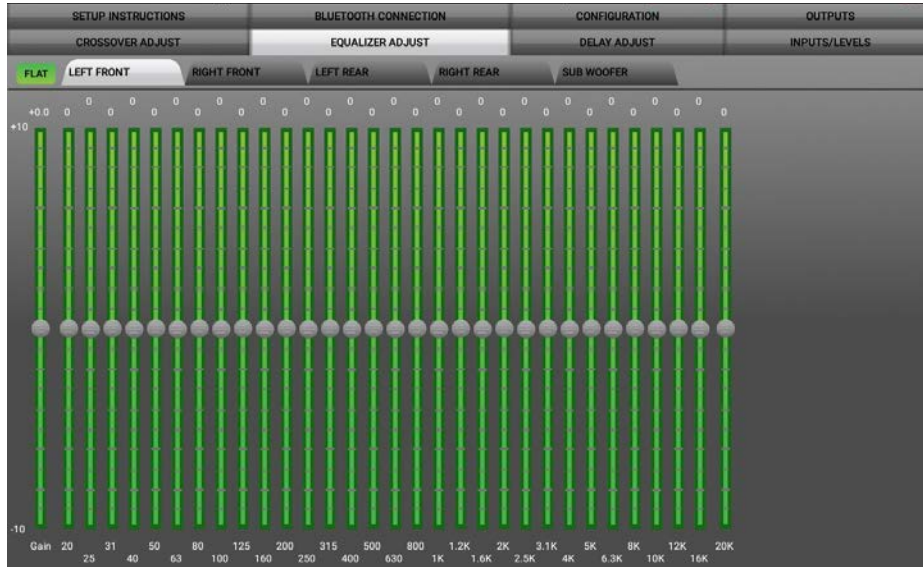


- Selecting **High Pass** and **Low Pass** will provide one crossover frequency adjustment.  
Selecting **Band Pass** will provide two crossover frequency adjustments: one for low pass, and one for high pass.
- Select the desired crossover slope per channel, 12db, 24db, 36db, or 48db.
- Select the desired crossover frequency per channel, 0hz to 100khz.

**Note:** The front and rear channels default to a 100Hz high pass filter to keep the low frequency signals out. 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.

*Continued on the next page*

## Equalizer Adjust



### Graphic EQ

- 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.

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## Parametric EQ



Each output has a **5 Band parametric EQ** per channel. Each band will give the user the ability to adjust:

- Q Factor
- Frequency
- Gain

The **FLAT** button above **Filter #1** will reset all curves back to flat.

*Continued on the next page*

## Delay Adjust

SETUP INSTRUCTIONS	BLUETOOTH CONNECTION	CONFIGURATION	OUTPUTS
CROSSOVER ADJUST	EQUALIZER ADJUST	DELAY ADJUST	INPUTS/LEVELS

Distance from each speaker to 'Head' position (in inches)

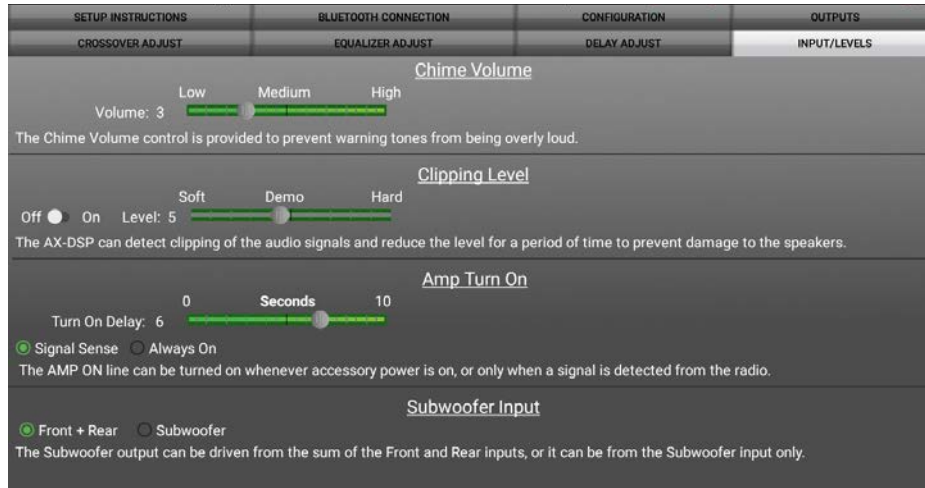
Left Front	0
Right Front	0
Left Rear	0
Right Rear	0
Sub Woofer	0

Measure the distance from each speaker to the desired 'Head' position and enter those values in the corresponding boxes. Maximum distance is 99".

- Allows a delay of each channel. If a delay is desired, first measure the distance (in inches) from each speaker to the listening position, then enter those values to the corresponding speaker. Add (in inches) to the desired speaker to delay it.

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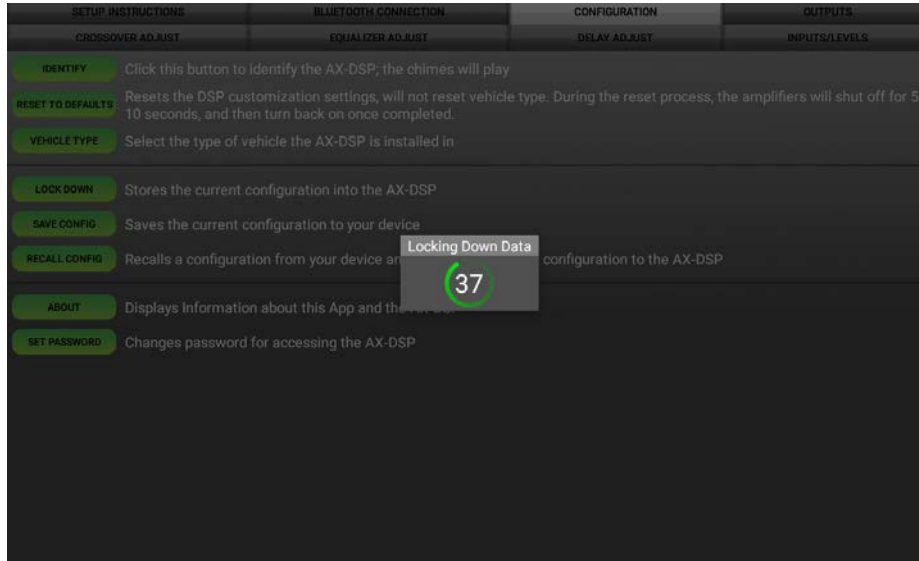
## Inputs/Levels



- **Chime Volume** - Not applicable in this application.
- **Clipping Level** - Use this feature to protect sensitive speakers like tweeters from being driven past their capabilities. If the output signal of the interface 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.
- **Amp Turn On**
  - **Signal Sense** - Will turn the amp(s) on when an audio signal is detected, and keep on for (10) seconds after the last signal. This ensures the amp(s) won't shut off between tracks.
  - **Always On** - Will keep the amp(s) on as long as the ignition is cycled on.
  - **Turn On Delay** - Can be used to delay audio output to avoid turn-on pops.
  - **Subwoofer Input** - Select **Front + Rear** or **Subwoofer input** depending on preference.

*Continued on the next page*

### Locking Down Data



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

## SPECIFICATIONS

Input Impedance	1M Ohm
Input Channels	6
Input Options	High Level or Low Level
Input Type	Differential balanced
Input Voltage (high level range)	0 - 28-volts (peak-to-peak)
Input Voltage (low level range)	0 - 4.9-volts (peak-to-peak)
Output Channels	10
Output Voltage	Up to 5-volts 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
Sampling	48kHz
S/N Ratio	105dB @ 5-volts RMS
Operating Voltage	10-16 volts DC
Standby Current Draw	7mA
Operation Current Draw	150mA
Adjustments/Controls	Application via Bluetooth
Remote Output	12 volts DC (signal sense) or ignition on

Having difficulties? We're here to help.



Contact our Tech Support line at:

**386-257-1187**



Or via email at:

[techsupport@metra-autosound.com](mailto:techsupport@metra-autosound.com)

### **Tech Support Hours (Eastern Standard Time)**

Monday - Friday: 9:00 AM - 7:00 PM

Saturday: 10:00 AM - 7:00 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](http://www.installerinstitute.edu) or call 386-672-5771 for more information and take steps toward a better tomorrow.



**Metra recommends MECP  
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