



# AXXESS AXDSPL-VW1 DSP Interface Instruction Manual

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## INSTALLATION OPTIONS

### Adding a sub to a factory system:

This feature offers the ability to add a subwoofer to a factory system.

### Adding a full-range amp & sub to a factory system:

This feature offers the ability to add a full-range amp and sub to a factory system.

### 16-pin header port:

Inside the interface is a 16-pin header port for adding optional modules (sold separately). and 6 will show the installation and use of these modules.

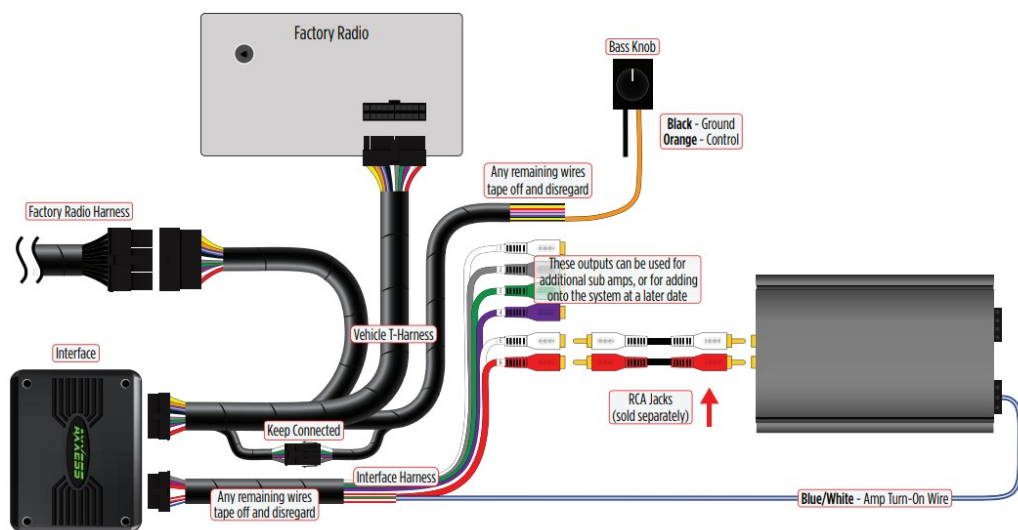
- AXDSPL-BT – Bluetooth streaming interface
- AXDSPL-SP – Toslink digital output

**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

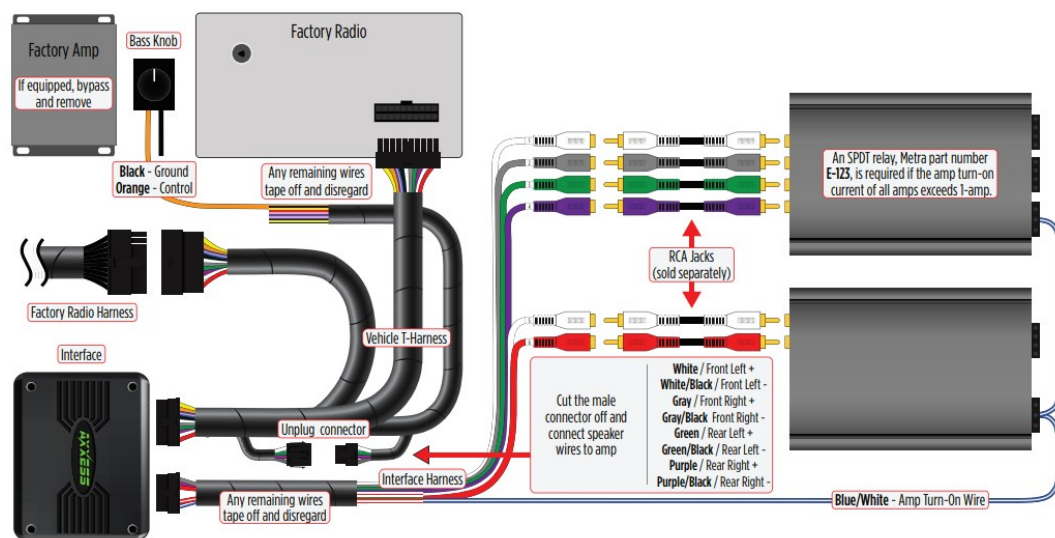
## INSTALLATION

1. Remove the factory radio †, then unplug all connectors.
  2. Install the AXDSPL-VW1 vehicle T-harness to the vehicle and make all necessary connections, but leave the amp turn-on wire disconnected.
  3. Plug the AXDSPL-VW1 vehicle T-harness to the AXDSPL-VW1 interface.
  4. Plug the AXDSPL-VW1 interface harness to the AXDSPL-VW1 interface.
  5. Download and install the AX-DSP-X app from the Google Play Store or Apple App Store.
  6. Cycle the ignition on.
  7. 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.
  8. 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.
  9. Connect the amp turn-on wire.
  10. Adjust the settings in the app as desired. Press the Lock Down ‡ button to save any new configurations
- Refer to [Metra online](#) for dash disassembly. If Metra makes a dash kit for the vehicle, disassembly will be within those instructions.
  - Anytime the interface is locked down the key must be cycled off then back on

## ADDING A SUB TO A FACTORY SYSTEM



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

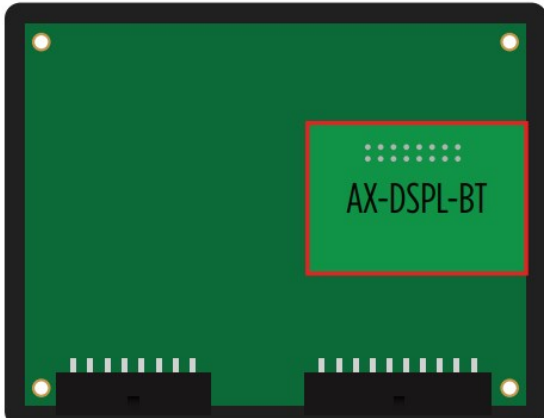
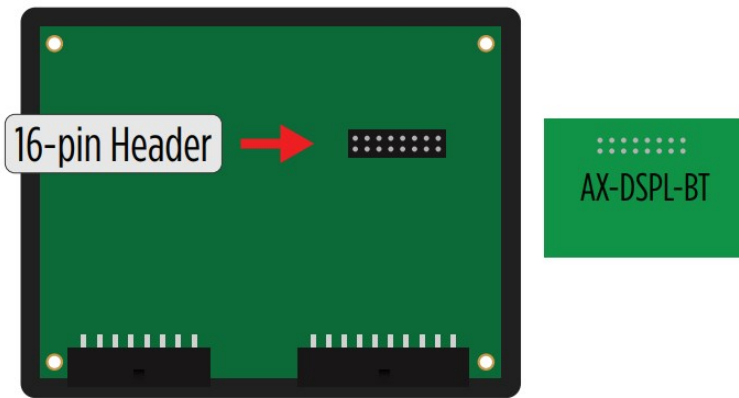


## BLUETOOTH STREAMING INTERFACE

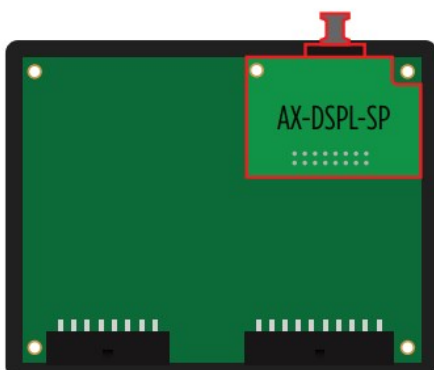
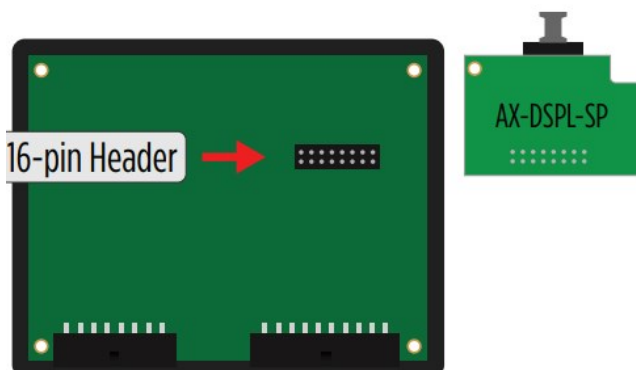
- The AXDSPL-BT Bluetooth streaming interface can be used to stream media directly to the interface.
  - While streaming media the volume on the phone will be used. As an option, the
  - AXBK-1 (sold separately) can be used to control the volume.

**Note:** The bass knob included with the AXDSPL-VW1 can be used if it will not be used to control a subwoofer.
- Important! Unplug the interface from the vehicle.
- Remove (4) Phillips screws securing the interface, then remove the top cover, exposing the circuit board within.
- Locate the 16-pin header on the circuit board.
- Important! Referencing how the AXDSPL-BT is laid out in the picture, carefully line up the header pins to the interface. Gently press down to secure.
 

**Note:** Both interfaces may be damaged if installed wrong.
- Reinstall the top cover to complete the installation. AXBK-1 Installation:
- Connect the Brown wire from the interface to the Orange wire from the AXBK-1. Ground the Black wire from the AXBK-



## TOSLINK DIGITAL OUTPUT



1. The AXDSPL-BT Bluetooth streaming interface can be used to stream media directly to the interface.
  - While streaming media the volume on the phone will be used. As an option, the AXBK-1 (sold separately) can be used to control the volume.

**Note:** The bass knob included with the AXDSPL-VW1 can be used if it will not be used to control a

subwoofer.

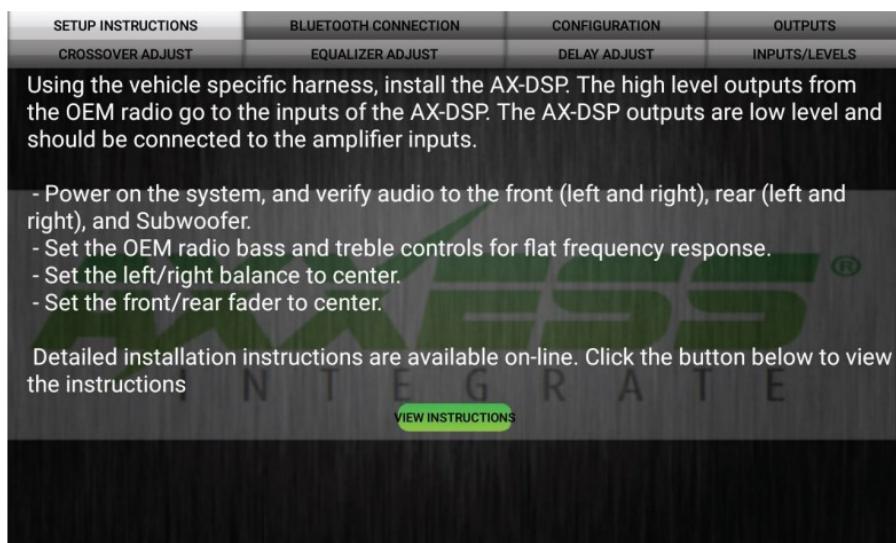
2. Important! Unplug the interface from the vehicle.
3. Remove (4) Phillips screws securing the interface, then remove the top cover, exposing the circuit board within.
4. Locate the 16-pin header on the circuit board.
5. Important! Referencing how the AXDSPL-BT is laid out in the picture, carefully line up the header pins to the interface. Gently press down to secure.

**Note:** Both interfaces may be damaged if installed wrong.

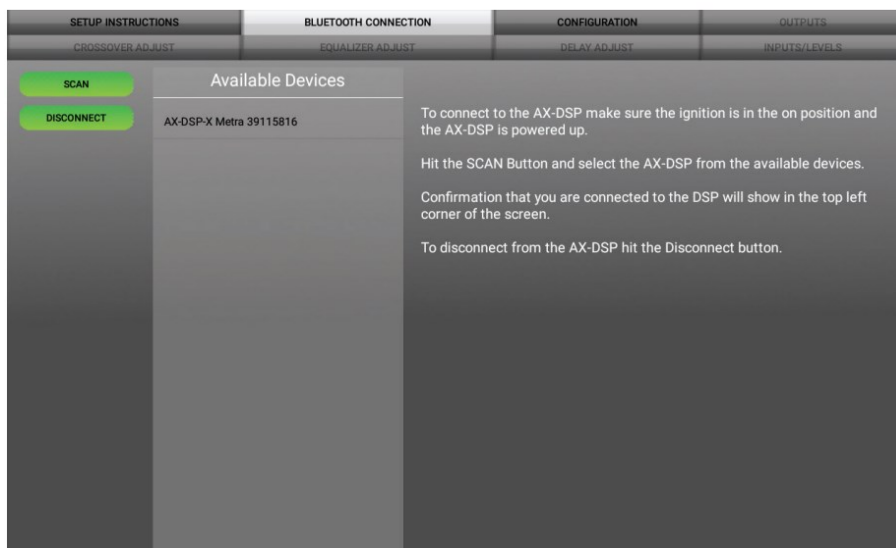
6. Reinstall the top cover to complete the installation. AXBK-1 Installation:
7. Connect the Brown wire from the interface to the Orange wire from the AXBK-1. Ground the Black wire from the A

## MOBILE APP

### Setup Instructions

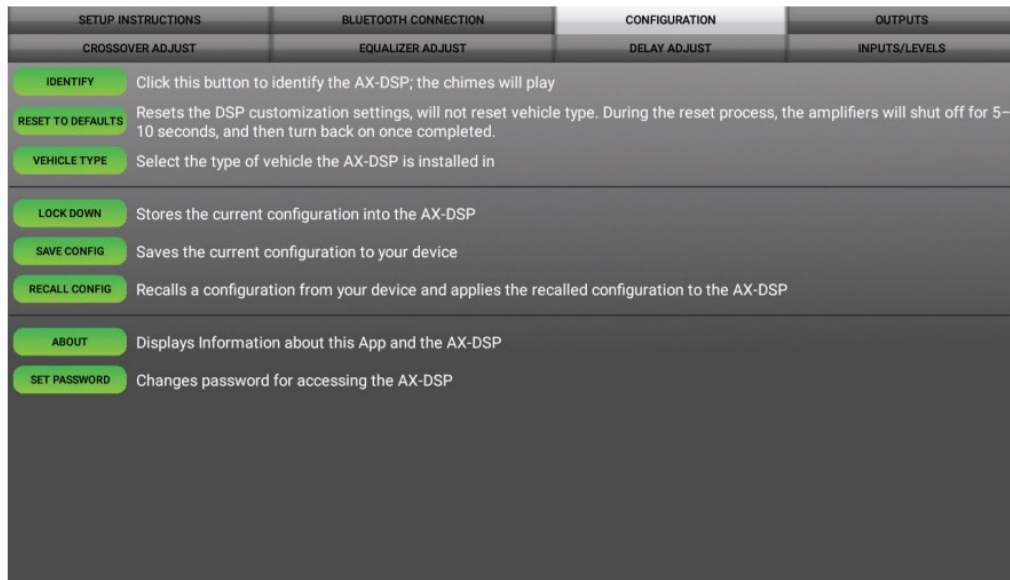


### Bluetooth Connection



- **Scan** – Press this button to start the Bluetooth pairing process, then select the interface 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.

## Configuration

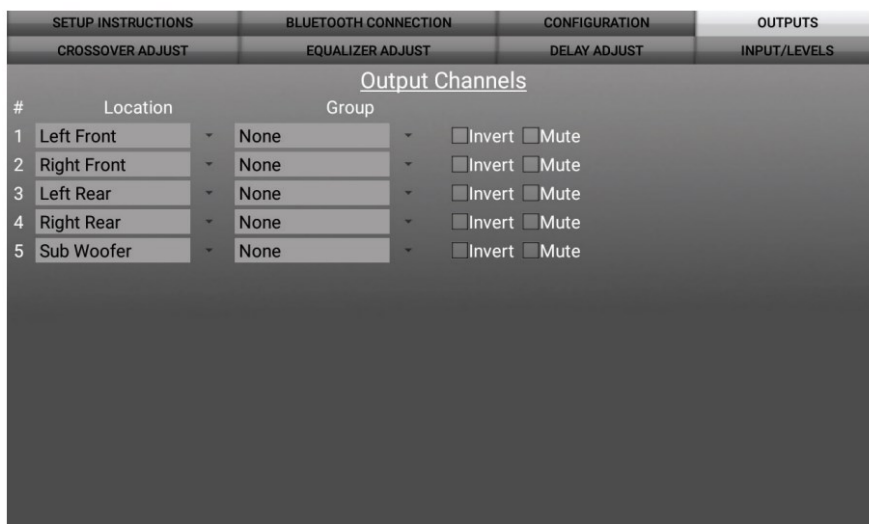


- **Identify** – Click this button to send a test tone to the front left speaker\*.
  - Only installations using the front left output (white RCA jack).
- **Reset to Defaults** – Resets the interface to factory settings. During the reset process the amp(s) will shut off for 5-10 seconds.
- **VehicleType** – Select the vehicle type from the drop down box, then click the apply button.
- **Lock Down** – Click this button to save the selected settings.

**Attention!** This must be done before closing the app or cycling the key otherwise all new changes 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”.

## Outputs



## 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.

## Crossover Adjust

SETUP INSTRUCTIONS	BLUETOOTH CONNECTION	CONFIGURATION	OUTPUTS
CROSSOVER ADJUST	EQUALIZER ADJUST	DELAY ADJUST	INPUT/LEVELS
<b>Left Front</b> Lower Freq: 100 Hz <input type="radio"/> Low Pass <input type="radio"/> 12dB <input type="radio"/> Band Pass <input checked="" type="radio"/> 24dB <input checked="" type="radio"/> High Pass <input type="radio"/> 36dB <input type="radio"/> 48dB			
<b>Right Front</b> Lower Freq: 100 Hz <input type="radio"/> Low Pass <input type="radio"/> 12dB <input type="radio"/> Band Pass <input checked="" type="radio"/> 24dB <input checked="" type="radio"/> High Pass <input type="radio"/> 36dB <input type="radio"/> 48dB			
<b>Left Rear</b> Lower Freq: 100 Hz <input type="radio"/> Low Pass <input type="radio"/> 12dB <input type="radio"/> Band Pass <input checked="" type="radio"/> 24dB <input checked="" type="radio"/> High Pass <input type="radio"/> 36dB <input type="radio"/> 48dB			
<b>Right Rear</b> Lower Freq: 100 Hz			

- Select the desired crossover filter per channel, low pass, band pass, or high pass.
- Select the desired crossover slope per channel, 12db, 24db, 36db, or 48db.
- Select the desired crossover frequency per channel, 20hz to 20khz.

**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 down to.

## Equalizer Adjust

SETUP INSTRUCTIONS	BLUETOOTH CONNECTION	CONFIGURATION	OUTPUTS
CROSSOVER ADJUST	EQUALIZER ADJUST	DELAY ADJUST	INPUT/LEVELS
<b>FLAT</b> <b>LEFT FRONT</b> <b>RIGHT FRONT</b> <b>LEFT REAR</b> <b>RIGHT REAR</b> <b>SUB WOOFER</b>			
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
+10			
-10			
Gain 25 40 63 100 150 250 400 630 1K 1.6K 2.5K 4K 6.3K 10K 16K			

- All channels can be adjusted independently within this tab with 15 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

SETUP INSTRUCTIONS	BLUETOOTH CONNECTION	CONFIGURATION	OUTPUTS
CROSSOVER ADJUST	EQUALIZER ADJUST	DELAY ADJUST	INPUTS/LEVELS
<u>Distance from each speaker to 'Head' position (in inches)</u>			
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.

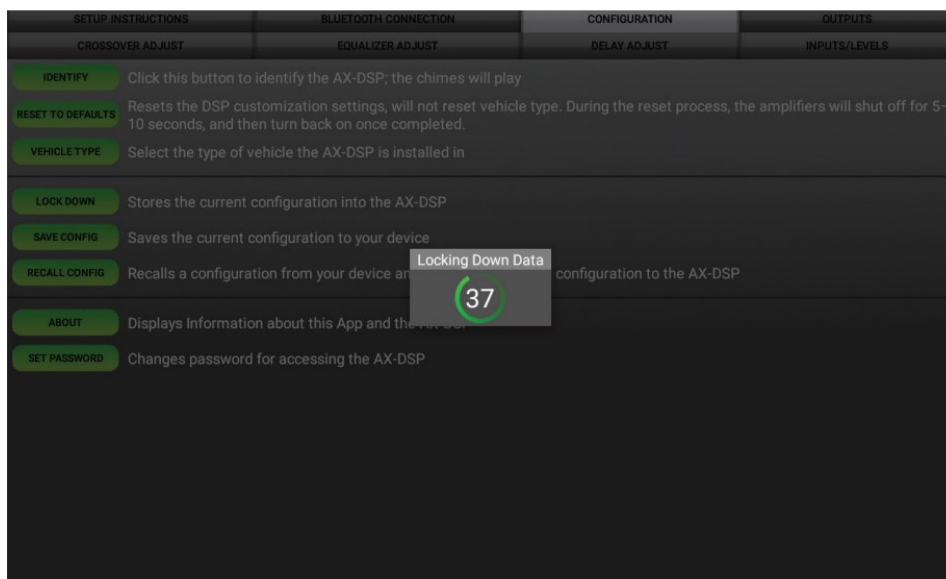
## Inputs/Levels

SETUP INSTRUCTIONS	BLUETOOTH CONNECTION	CONFIGURATION	OUTPUTS
CROSSOVER ADJUST	EQUALIZER ADJUST	DELAY ADJUST	INPUT/LEVELS
<u>Chime Volume</u>			
Volume: 3 <span>Low Medium High</span>			
The Chime Volume control is provided to prevent warning tones from being overly loud.			
<u>Clipping Level</u>			
Off <input type="radio"/> On <input checked="" type="radio"/> Level: 5 <span>Soft Demo Hard</span>			
The AX-DSP can detect clipping of the audio signals and reduce the level for a period of time to prevent damage to the speakers.			
<u>Amp Turn On</u>			
Turn On Delay: 6 <span>0 Seconds 10</span>			
<input checked="" type="radio"/> Signal Sense <input type="radio"/> Always On			
The AMP ON line can be turned on whenever accessory power is on, or only when a signal is detected from the radio.			
<u>Subwoofer Input</u>			
<input checked="" type="radio"/> Front + Rear <input type="radio"/> Subwoofer			
The Subwoofer output can be driven from the sum of the Front and Rear inputs, or it can be from the Subwoofer input only.			

- **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.
- **Sub woofer Input** – Select Front + Rear

## 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:** 0 – 28-volts (peak-to-peak) (high level range)

**Input Voltage:** 0 – 4.9-volts (peak-to-peak) (low level range)

**Output Channels:** 6

**Output Voltage:** Up to 5-volts RMS

**Output Impedance:** 50 Ohms

**Equalizer Type:** 15 Band Graphic EQ, +/- 10dB

**THD:** <0.03%

**Frequency Response:** 20Hz – 20kHz

**Crossover Filter:** Low pass, band pass, high pass

**Crossover Frequency:** Selectable 20hz to 20khz

**Crossover Slope:** 12db/24db/36db/48db

**Crossover Type:** Linkwitz-Riley

**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 with ignition)

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)

### **TechSupport Hours (EasternStandardTime)**

**Monday – Friday:** 9:00 AM – 7:00 PM

**Saturday:** 10:00 AM – 7:00 PM

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### **Documents / Resources**



[AXXESS AXDSPL-VW1 DSP Interface](#) [pdf] Instruction Manual  
AXDSPL-VW1 DSP Interface, AXDSPL-VW1, DSP Interface, Interface

[Manuals+](#)