Nissan **DSP Interface With Pre-Wired Harness 2007-Up**

INTERFACE FEATURES

- Includes a DSP (Digital Signal Processor)
- 31 Band graphic 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
- Can be used in amplified and 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
- Micro-B USB updatable

APPLICATIONS

Visit axxessinterfaces.com for current application list

TABLE OF CONTENTS

INTERFACE COMPONENTS

- AXDSPX-NI1 interface
- AXDSPX-NI1 interface harness
- AXDSPX-NI1 vehicle T-harness • Bass knob

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 sub to a factory system:

This feature offers the ability to add a subwoofer to a factory system, whether amplified or non-amplified. (refer to page 3)

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, whether amplified † or non-amplified. (refer to page 4)
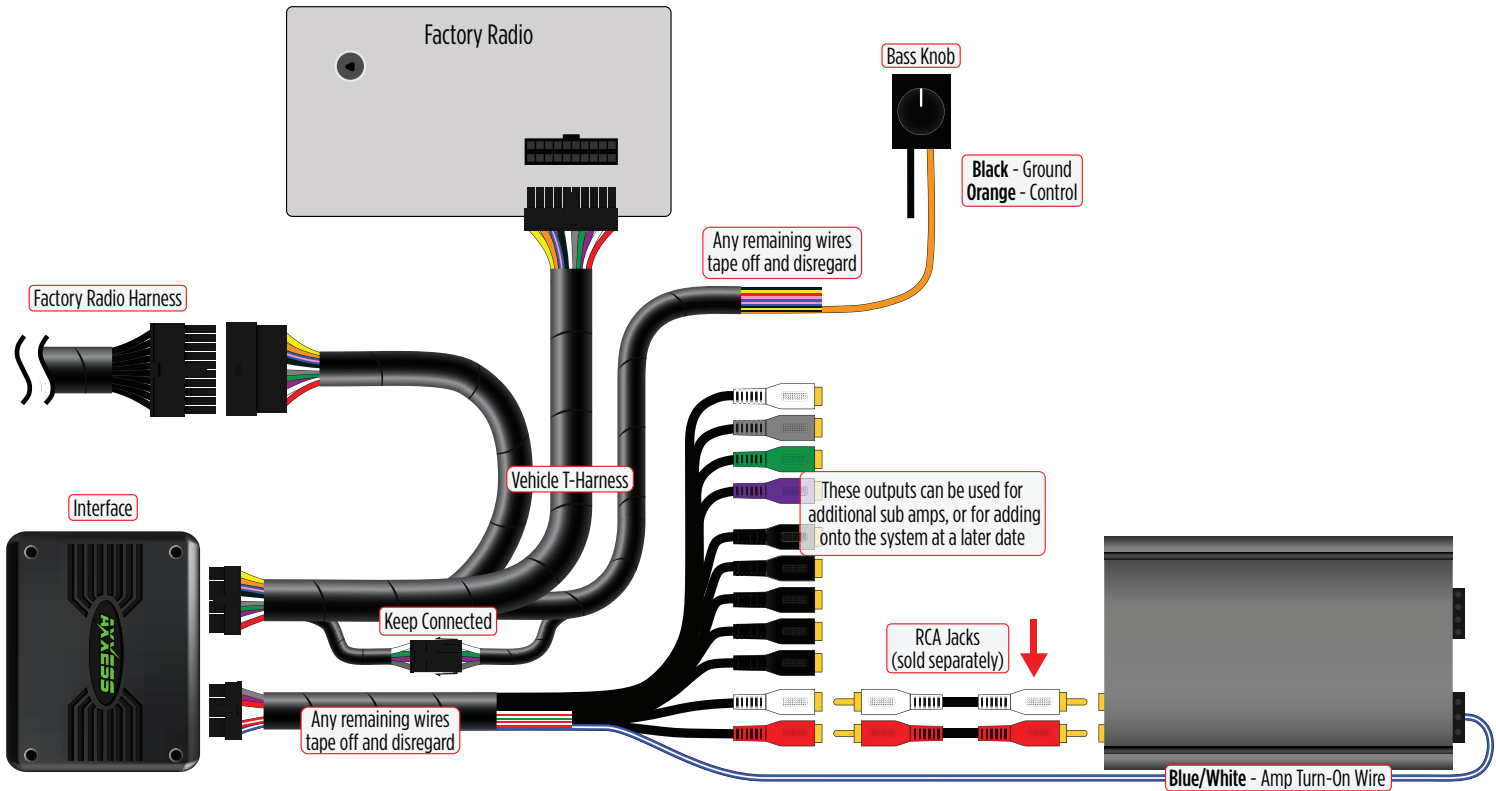
† For amplified models the amp must be bypassed/unplugged, and **With OE Amplifier** chosen in the **Configuration** tab under **Vehicle Type**.

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.
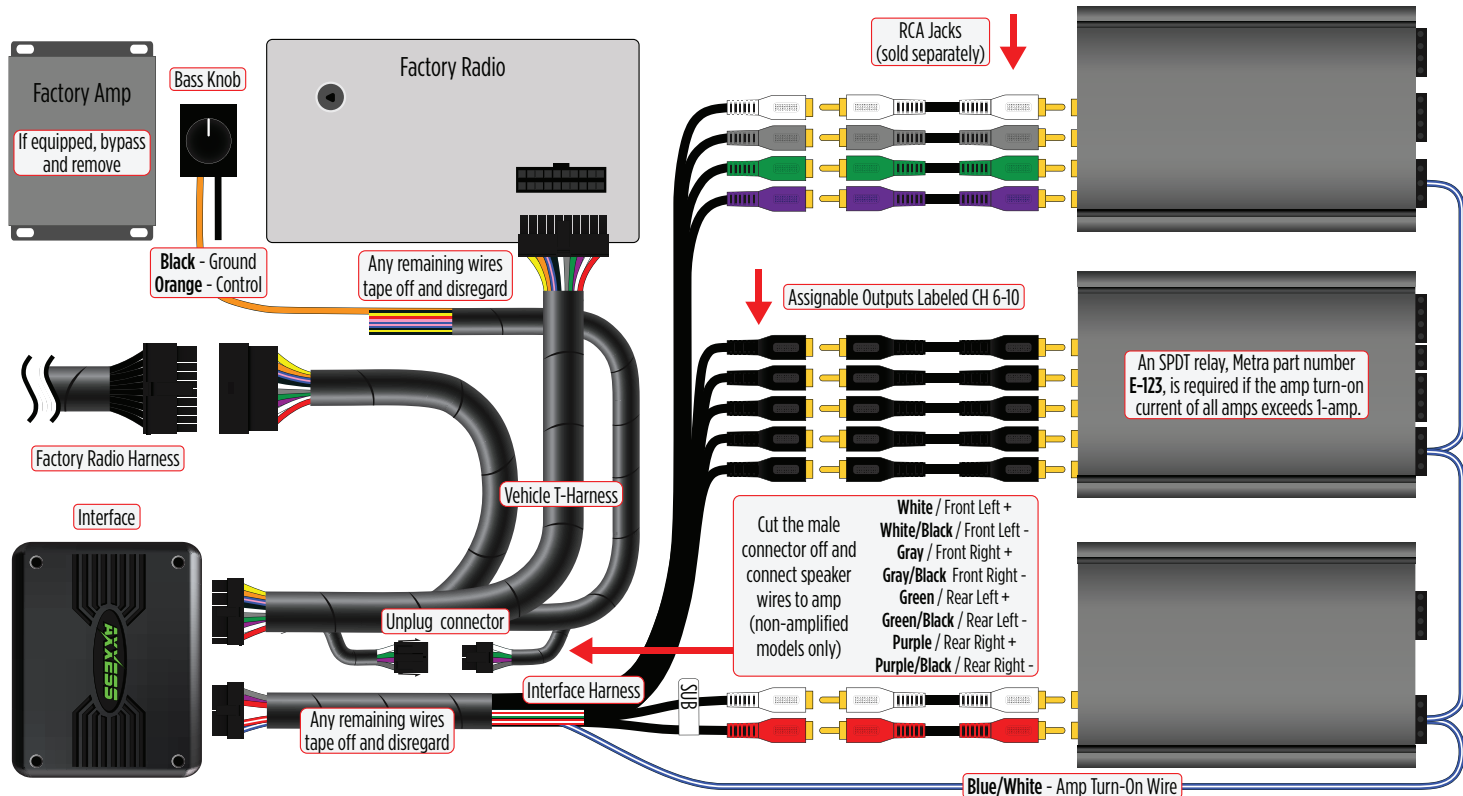
INSTALLATION

1. Remove the factory radio †, then unplug all connectors.

2. Install the **AX-DSPX-NI1 vehicle T-harness** to the vehicle and make all necessary connections, but leave the amp turn-on wire disconnected.

3. Plug the **AX-DSPX-NI1 vehicle T-harness** to the **AX-DSPX-NI1 interface**.

4. Plug the **AX-DSPX-NI1 interface harness** to the **AX-DSPX-NI1 interface**.

5. Download and install the AXDSP-X 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.

† 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

AXXESS

Factory Radio

Bass Knob

Black - Ground
Orange - Control

Any remaining wires
tape off and disregard

Factory Radio Harness

Vehicle T-Harness

These outputs can be used for
additional sub amps, or for adding
onto the system at a later date

Interface

Keep Connected

RCA Jacks
(sold separately)

Any remaining wires
tape off and disregard

Blue/White - Amp Turn-On Wire

Factory Amp

If equipped, bypass and remove

Bass Knob

Factory Radio

Black - Ground
Orange - Control

Any remaining wires tape off and disregard

Factory Radio Harness

Interface

Vehicle T-Harness

Unplug connector

Any remaining wires tape off and disregard

Interface Harness

RCA Jacks (sold separately)

Assignable Outputs Labeled CH 6-10

An SPDT relay, Metra part number **E-123**, is required if the amp turn-on current of all amps exceeds 1-amp.

Cut the male connector off and connect speaker wires to amp (non-amplified models only)

White / Front Left +
White/Black / Front Left -
Gray / Front Right +
Gray/Black Front Right -
Green / Rear Left +
Green/Black / Rear Left -
Purple / Rear Right +
Purple/Black / Rear Right -

SUB

Blue/White - Amp Turn-On Wire

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AXXESS

Setup Instructions

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

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.
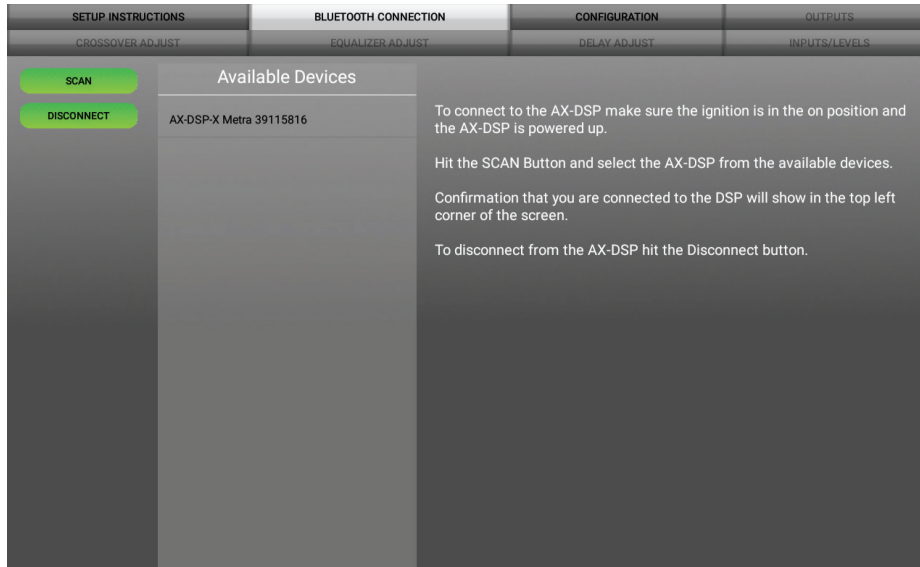 - Set the front/rear fader to center.

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

VIEW INSTRUCTIONS

• General information tab for installing the interface.

Bluetooth Connection

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

SCAN

DISCONNECT

Available Devices

AX-DSP-X Metra 39115816

To connect to the AX-DSP make sure the ignition is in the on position and the AX-DSP is powered up.

Hit the SCAN Button and select the AX-DSP from the available devices.

Confirmation that you are connected to the DSP will show in the top left corner of the screen.

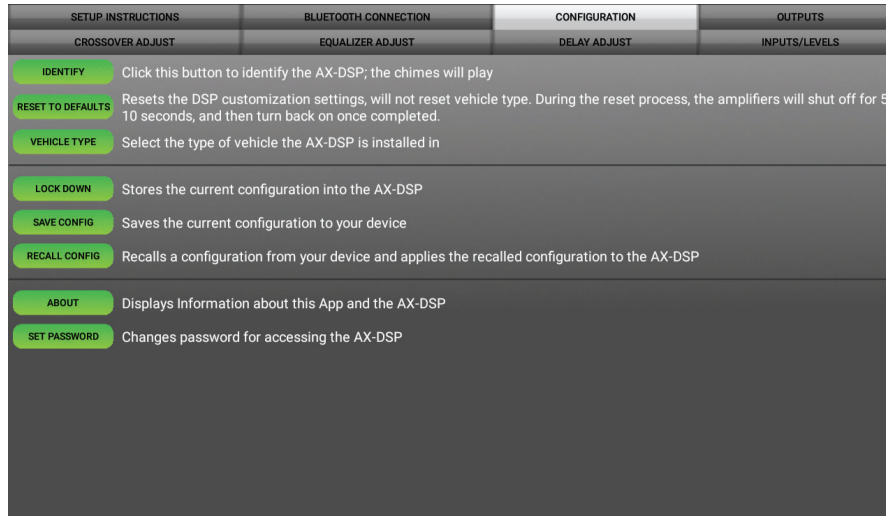To disconnect from the AX-DSP hit the Disconnect button.

- **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

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

IDENTIFY — Click this button to identify the AX-DSP; the chimes will play

RESET TO DEFAULTS — Resets the DSP customization settings, will not reset vehicle type. During the reset process, the amplifiers will shut off for 5–10 seconds, and then turn back on once completed.

VEHICLE TYPE — Select the type of vehicle the AX-DSP is installed in

LOCK DOWN — Stores the current configuration into the AX-DSP

SAVE CONFIG — Saves the current configuration to your device

RECALL CONFIG — Recalls a configuration from your device and applies the recalled configuration to the AX-DSP

ABOUT — Displays Information about this App and the AX-DSP

SET PASSWORD — Changes password for accessing the AX-DSP

- **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.
- **Vehicle Type** - 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".
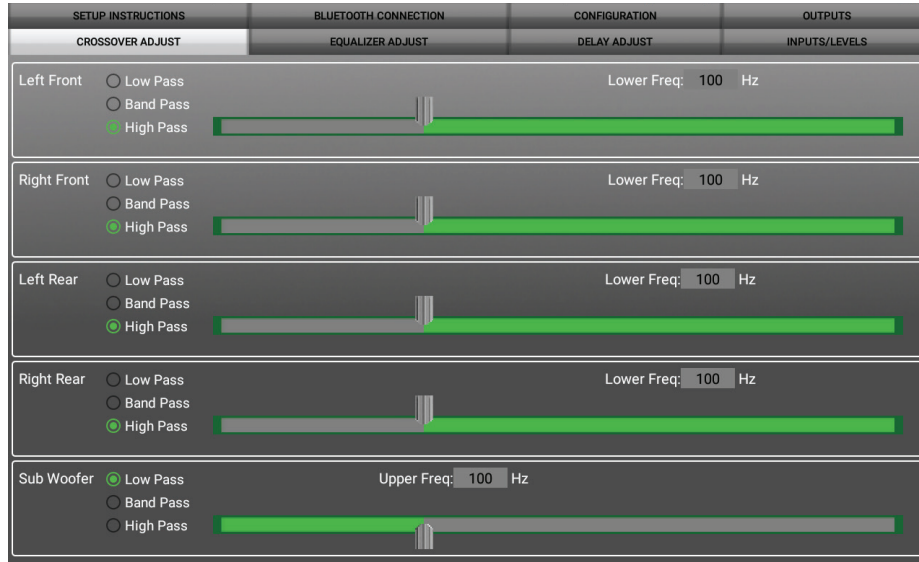
Outputs

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

Output Channels

#	Location	Group		
1	Left Front	None	☐ Invert	☐ Mute
2	Right Front	None	☐ Invert	☐ Mute
3	Left Rear	None	☐ Invert	☐ Mute
4	Right Rear	None	☐ Invert	☐ Mute
5	Sub Woofer	None	☐ Invert	☐ Mute
6	Not Used	None	☐ Invert	☐ Mute
7	Not Used	None	☐ Invert	☐ Mute
8	Not Used	None	☐ Invert	☐ Mute
9	Not Used	None	☐ Invert	☐ Mute
10	Not Used	None	☐ Invert	☐ 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.

Crossover Adjust

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

Left Front
- Low Pass
- Band Pass
- High Pass

Lower Freq: 100 Hz

Right Front
- Low Pass
- Band Pass
- High Pass

Lower Freq: 100 Hz

Left Rear
- Low Pass
- Band Pass
- High Pass

Lower Freq: 100 Hz

Right Rear
- Low Pass
- Band Pass
- High Pass

Lower Freq: 100 Hz

Sub Woofer
- Low Pass
- Band Pass
- High Pass

Upper Freq: 100 Hz

- If installing a subwoofer, the front and rear outputs will 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.

- 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
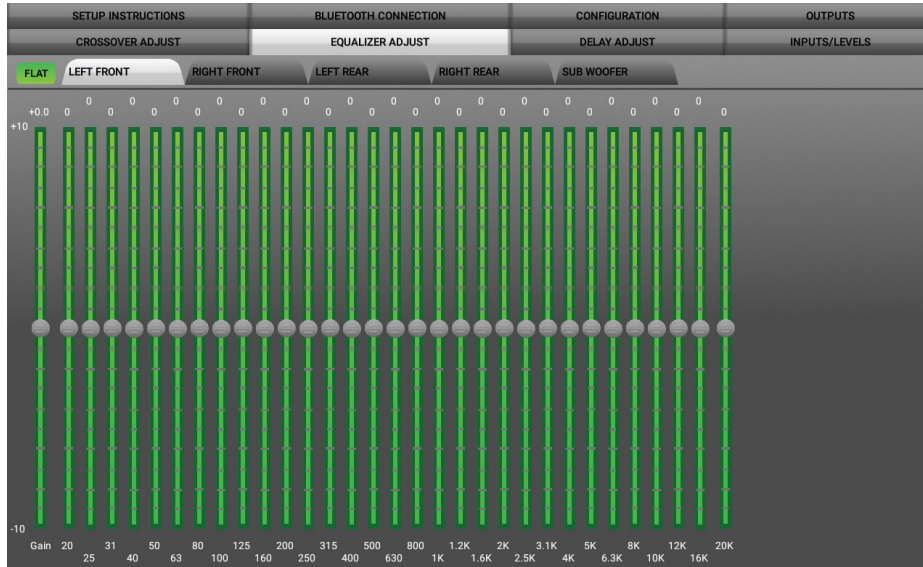
- All channels can be adjusted independently within this tab with 31 bands of available equalization. It is best to tune this by using an RTA (Real Time Analyzer).

- The **Gain** slider on the far left is for the channel selected.

Delay Adjust

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.

Inputs/Levels

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

Chime Volume

Low   Medium   High

Volume: 3

The Chime Volume control is provided to prevent warning tones from being overly loud.

Clipping Level

Soft   Demo   Hard

Off   On   Level: 5

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.

Amp Turn On

0   **Seconds**   10

Turn On Delay: 6

◉ Signal Sense   ○ 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.

Subwoofer Input

◉ Front + Rear   ○ Subwoofer

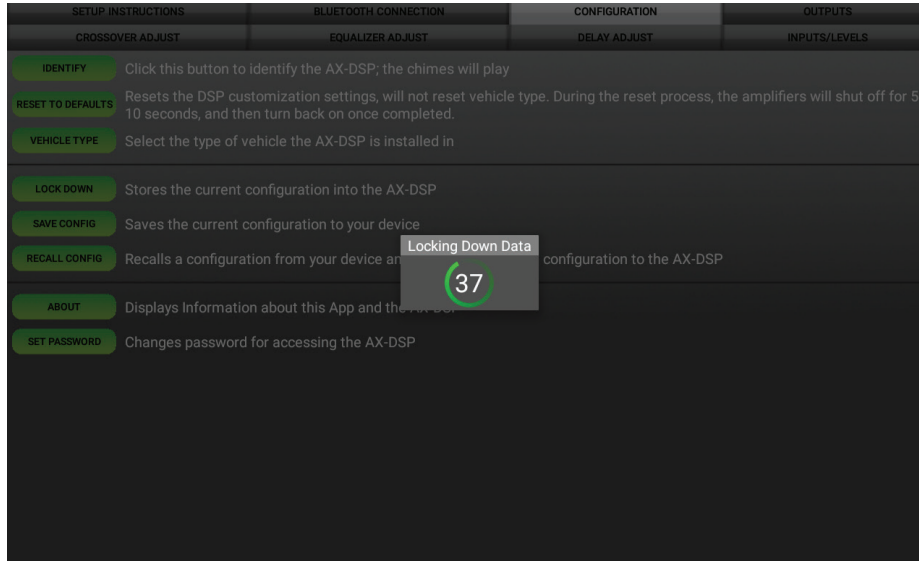The Subwoofer output can be driven from the sum of the Front and Rear inputs, or it can be from the Subwoofer input only.

- **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.
- **Subwoofer Input** - Select **Front + Rear**

Locking Down Data

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Locking Down Data
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ABOUT — Displays Information about this App and the AX-DSP

SET PASSWORD — Changes password for accessing the AX-DSP

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

Input Impedance	1M Ohm		Operating Voltage	10-16 volts DC
Input Channels	6		Standby Current Draw	7mA
Input Options	High Level or Low Level		Operation Current Draw	150mA
Input Type	Differential balanced		Adjustments/Controls	Application via Bluetooth
Input Voltage (high level range)	0 - 28-volts (peak-to-peak)		Remote Output	12 volts DC (signal sense or with ignition
Input Voltage (low level range)	0 - 4.9-volts (peak-to-peak)			
Ouput 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			

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 - 7:00 PM
Sunday: 10:00 AM - 4:00 PM

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Metra recommends MECP certified technicians