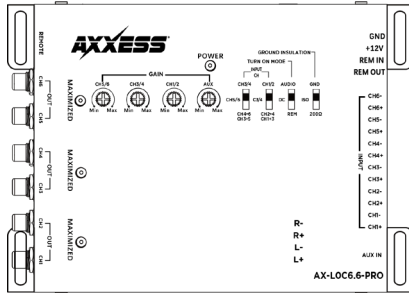


Premium Advanced LOC

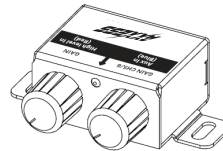
AX-LOC6.6-PRO

Introducing the **Axxess AX-LOC6.6-PRO!** This advanced LOC is a game-changer for your vehicle's audio system. With its powerful audio processing capabilities, it takes your music to a new level. The **AX-LOC6.6-PRO** enables seamless integration by summing OEM audio signals, delivering a full-range output that captures every detail and nuance of your favorite tracks. Experience enhanced clarity, depth, and balance as you enjoy your music like never before. Elevate your driving experience with the **Axxess AX-LOC6.6-PRO** and immerse yourself in the true essence of high-quality sound. Upgrade your car audio system today and unleash the full potential of your music!

COMPONENTS



AX-LOC6.6-PRO Line Out Converter (LOC)



Multi-Function Remote with 6 ft Cable

TABLE OF CONTENTS

Quick Start Guide	
Things to Know	2
Quick Reference	3
Feature Breakdowns	4
Internal Jumper	5
Input/Output Setting Switches.....	6
Connections/Setup	7
Diagrams	8-12
6 Channel High Level Input w/Summing	8
4 Channel High Level Input/6 Ch. Summed....	9
2 Channel High Level Input/6 Ch. Output	10
2 Channel High Level Input/6 Ch. Output	11
Multi-Function Remote	12
Gain Setup	
Basic Setup	13
Advanced Setup	13
Specifications	14

TOOLS RECOMMENDED

- Digital Multi-meter
- Test Tones

QUICK START GUIDE

THINGS TO KNOW

1. This is an active LOC and **MUST** have constant 12 volt and a good ground to operate properly. Having a poor ground can induce noise into your system, use the same gauge wire as the 12 volt line.
2. The **AX-LOC6.6-PRO** enables connections for up to six channels of speaker-level input from the source. It supports input signals ranging from 2Vrms to 20Vrms, resulting in an RCA output that can range from a maximum to minimum gain of up to 10Vrms. However, in cases where factory amplifiers generate signals exceeding 20Vrms or if the **AX-LOC6.6-PRO's** output is too high for the connected aftermarket amplifier(s) even with all gains at minimum, internal jumpers (Figure A) are available. These jumpers allow for the reduction of input sensitivity range by half (-6dB), accommodating input signals from 4Vrms up to 40Vrms.
3. The 3.5mm auxiliary input jack allows you to connect portable devices and other low-level sources using an adapter. It can be selected as a separate source via the remote or programmed as the primary source for standalone systems. Input signals from 0.5Vrms to 5Vrms produce up to 10Vrms RCA output at the maximum to minimum gain setting. The input is differential by default but can be set to unbalanced using internal jumpers (**BAL/UNBAL**) if required.
4. When ready to mount your LOC check under your selected mounting location to make sure it is clear of any wiring harnesses, fuel or brake lines or anything else that may affect the vehicle safety.

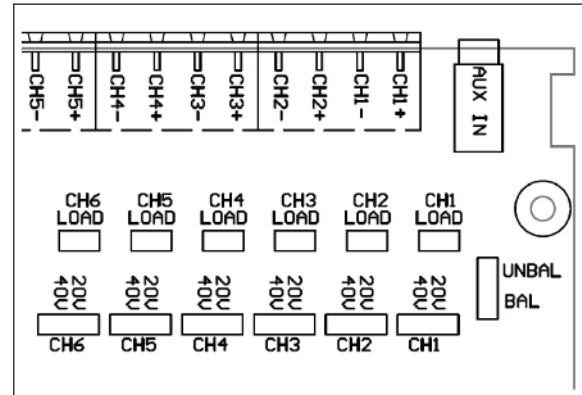
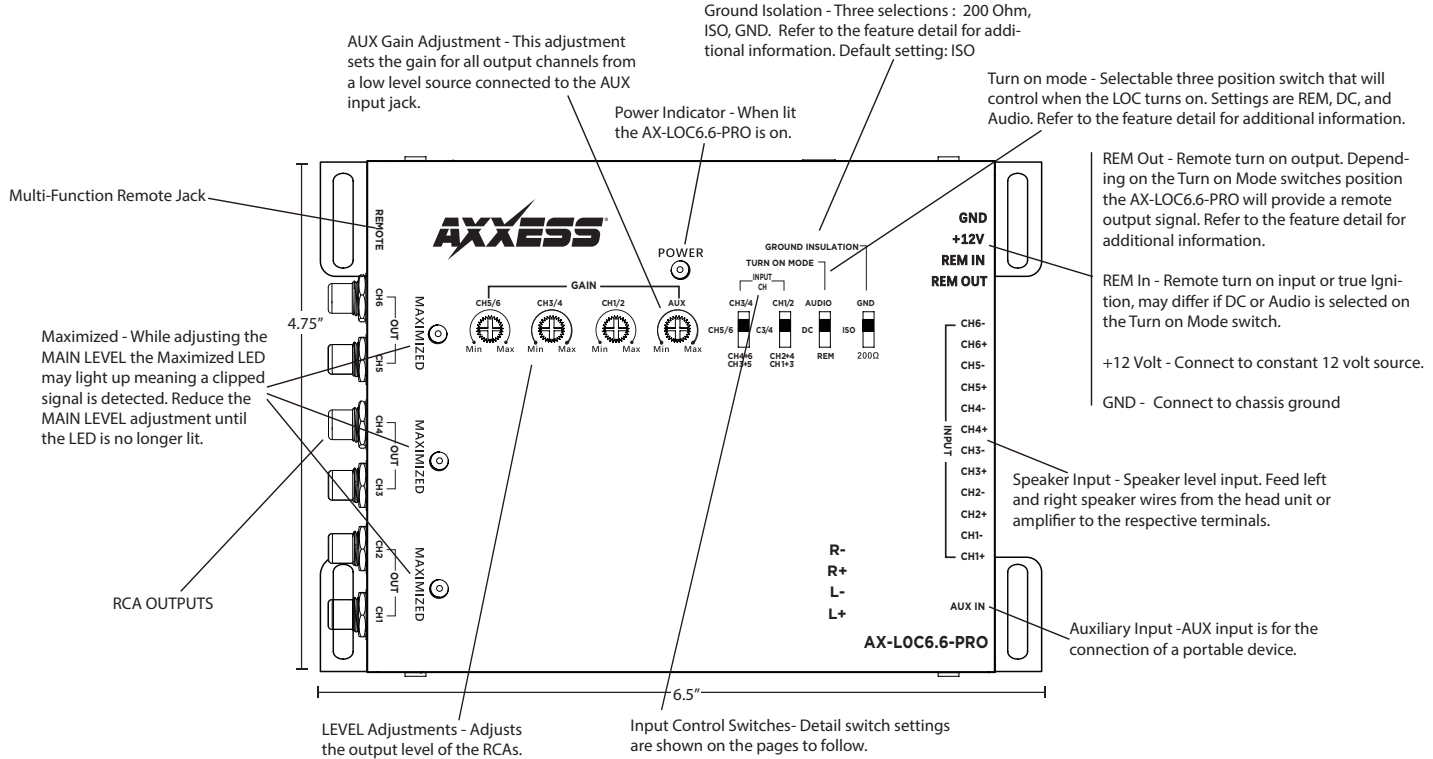


Figure A

QUICK REFERENCE: AX-LOC6.6-PRO



FEATURE BREAKDOWNS

Turn On Signal

Audio sense – When selected the LOC will power up when an audio signal is present, regardless of source. If the radio is muted and the LOC doesn't see an audio signal, it will turn off.

DC Signal Sense (Default) – Detects when the OE radio or OE amplifier turns on. The **AX-LOC6.6-PRO** detects the DC voltage across the speaker leads and will provide 12 volts to the **REM OUT**.

REM IN – This is the standard way to turn off aftermarket equipment by using a dedicated amp turn on signal or a true ignition signal. When the **REM IN** is powered it will output through the **REM OUT**.

Ground Isolation Settings – Different types of ground noise can easily enter into your audio system. The **Ground Isolation** switch on the LOC will help eliminate some of the most common ground noises with the simple flip of a switch.

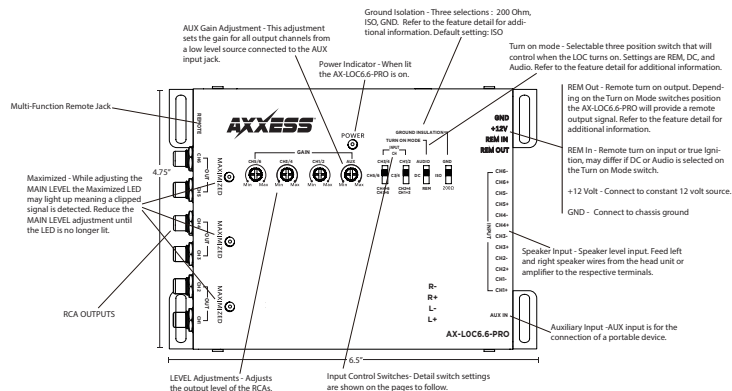
GND – The ground for the LOC is tied to the ground shield of the audio signal.

ISO – The ground of the LOC and ground shield of the RCA are separated.

200Ω – LOC ground and ground shield of RCA are connected to each other by a 200 ohm resistor, balancing yet isolating the ground circuit.

Input/Output Setting Switches and Summing Explanation of Input Control Switch below RCA Output Channels 5/6

The **CH1/2 Output Select Switch** lets you choose how the output for **CH1/2** behaves. The default setting is 1/2 for direct input pass-through. Alternatively, you can select 5/6, which copies the signal from **CH5/6** internally after the summing stage. This is useful for combining 3-way systems while retaining remote level control over **CH5/6** and getting a separate summed full-range output from **CH1/2**.



INTERNAL JUMPER LOCATIONS AND SETTINGS

- In addition to the external controls for main adjustments, the Axxess models provide internal configuration jumpers to address specific vehicle or system conditions.
The **AX-LOC6.6-PRO** unit has designated internal jumper locations and default settings, as depicted in the accompanying illustration. To access these jumpers, simply remove the four screws from each side if the LOC to effortlessly remove the chassis top cover. Prior to making any jumper changes, it is highly recommended to detach the power supply connector to ensure the unit is fully powered off.

Please note the following:

- The input sensitivity range jumpers (20V/40V) can be independently set for each speaker input channel to accommodate varying system conditions.
- The load bypass jumpers (LOAD) are specific to each speaker input channel and should be removed or relocated to a single pin in order to disconnect the internal loading from that channel.
- The AUX input balanced-unbalanced jumper (BALANCED/UNBALANCED) affects both the left and right channels. Default (BALANCE)

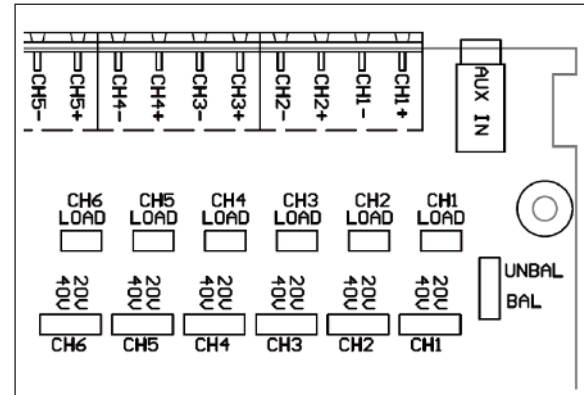


Figure A

INPUT/OUTPUT SETTING SWITCHES

Input Select Switches

1. These 3-position switches allow you to choose the internal signal routing for each channel pair's output stage. They offer options for 2-channel, 4-channel, or 6-channel input, as well as different configurations for independent and summed inputs.
 - a. The **CH3/4** and **CH5/6** Input Select switches determine how the signals are routed for each channel pair's output stage. They provide options for 2-channel, 4-channel, or 6-channel input, as well as different independent and summed input configurations.
 - b. Copy: The bottom switch position copies the signal from the previous channel pair without adjusting the gain, and routes it to the outputs. To have independent gain control, use jumper wires at the speaker input terminals and select direct input instead.
 - c. Direct: The middle switch position directly routes the channel pair's input signal to its gain and output stages.
 - d. Sum: The upper switch position combines the indicated channel signals after their respective gain stages and sends the combined signals to the left and right RCA outputs

Factory radios and amplifiers can sometimes stop passing audio when they do not see the original speaker's impedance. This is a common issue found in many Chrysler vehicles. The Axxess Load Resistors (sold separately) offer different resistor values that will make the factory equipment think the original speakers are still connected and starts passing audio. In some Chrysler vehicles you will need to let the vehicle go to sleep (turn ignition off for 2 minutes) after each load selection.

AX-LR20 (20Ω) – Commonly used in vehicles that do not have a factory amplifier. Mainly late model Chrysler vehicles, which includes RAM, JEEP, DODGE, and some FIATS

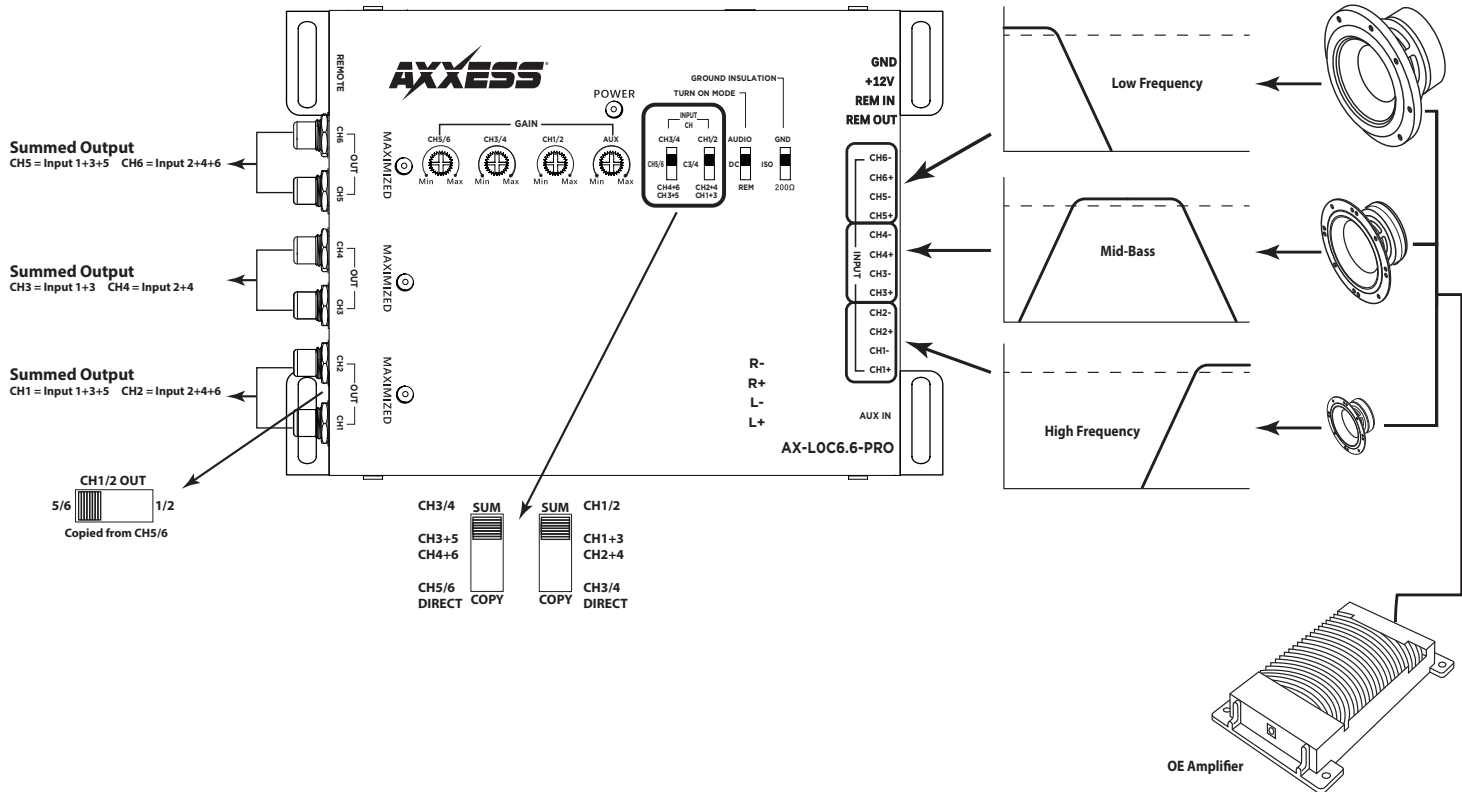
AX-LR39 (39Ω) – Used in factory systems that mute or cause distortion when replacing OEM speakers

AX-LR60 (60Ω) – Commonly used in vehicles with a factory amplifier. Mainly late model Chrysler vehicles, which includes RAM, JEEP, DODGE, and some FIATS

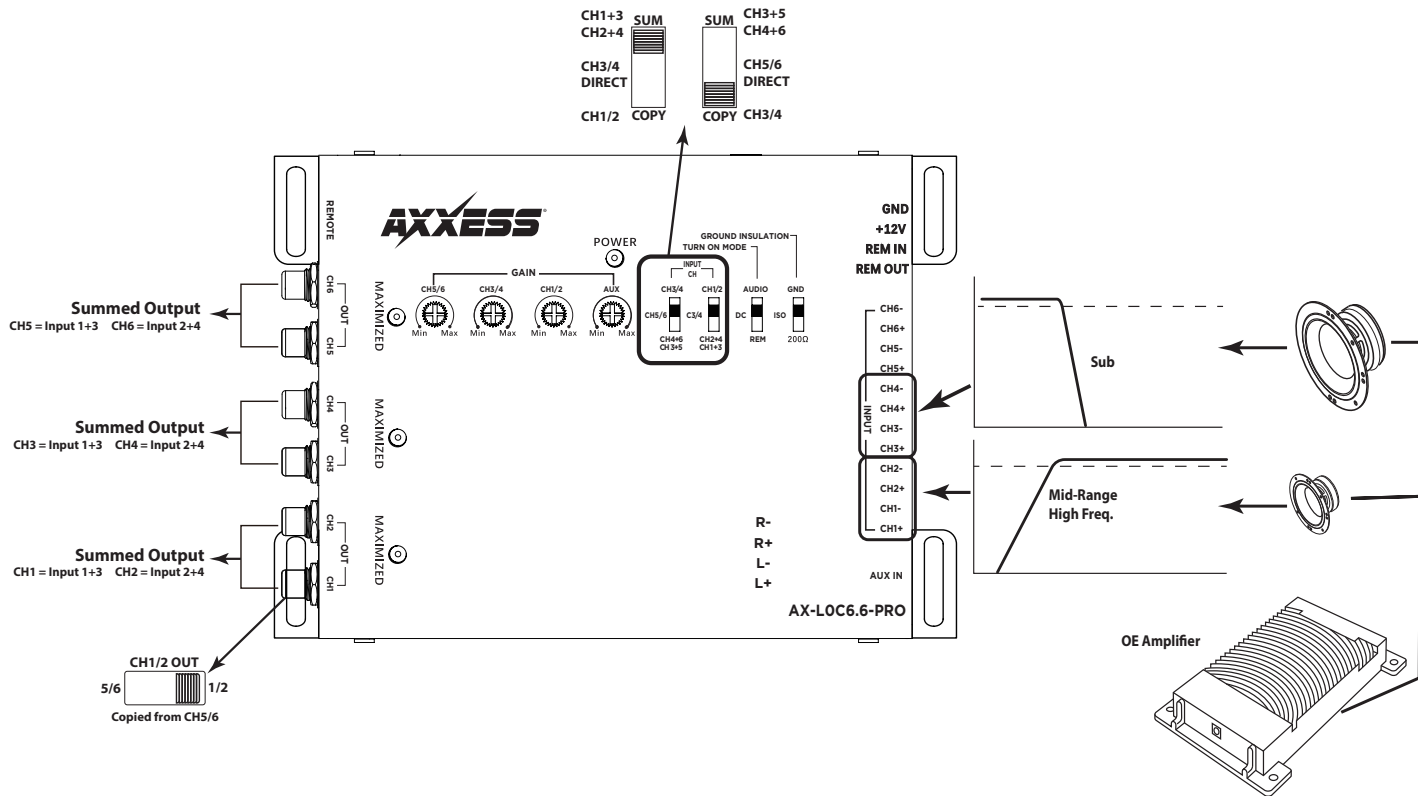
CONNECTIONS/SETUP

1. Connect your 12 volt and ground wires to the terminals. 14-16 gauge wire is recommended.
2. By default the LOCs **Turn On Mode** is set to **DC Offset**. Other turn on options are available and described in the **Turn On Signal Feature Breakdown** portion of this manual.
3. Connecting your **Speaker Inputs** can happen in a few different places based on your factory system.
 - a. If your vehicle doesn't have an OE amplifier your best option is to use the speaker wires located behind the radio or the speaker wires connected to the rear speakers. Your LOC only requires two inputs, we recommend a left and right signal full range signal.
 - b. If your vehicle has a factory amplifier, they typically output different frequency ranges from each channel to protect the OE speakers. Summing the channels involves combining the individual speaker outputs into a single signal that covers the entire audio spectrum. Recommended connections below.
 - i. Connect **Tweeter** output from OE amp to channels 1 and 2
 - ii. Connect **Mid/Woofers** output from OE amp to channels 3 and 4
 - iii. Connect **Subwoofer** output from OE amp to channels 5 and 6

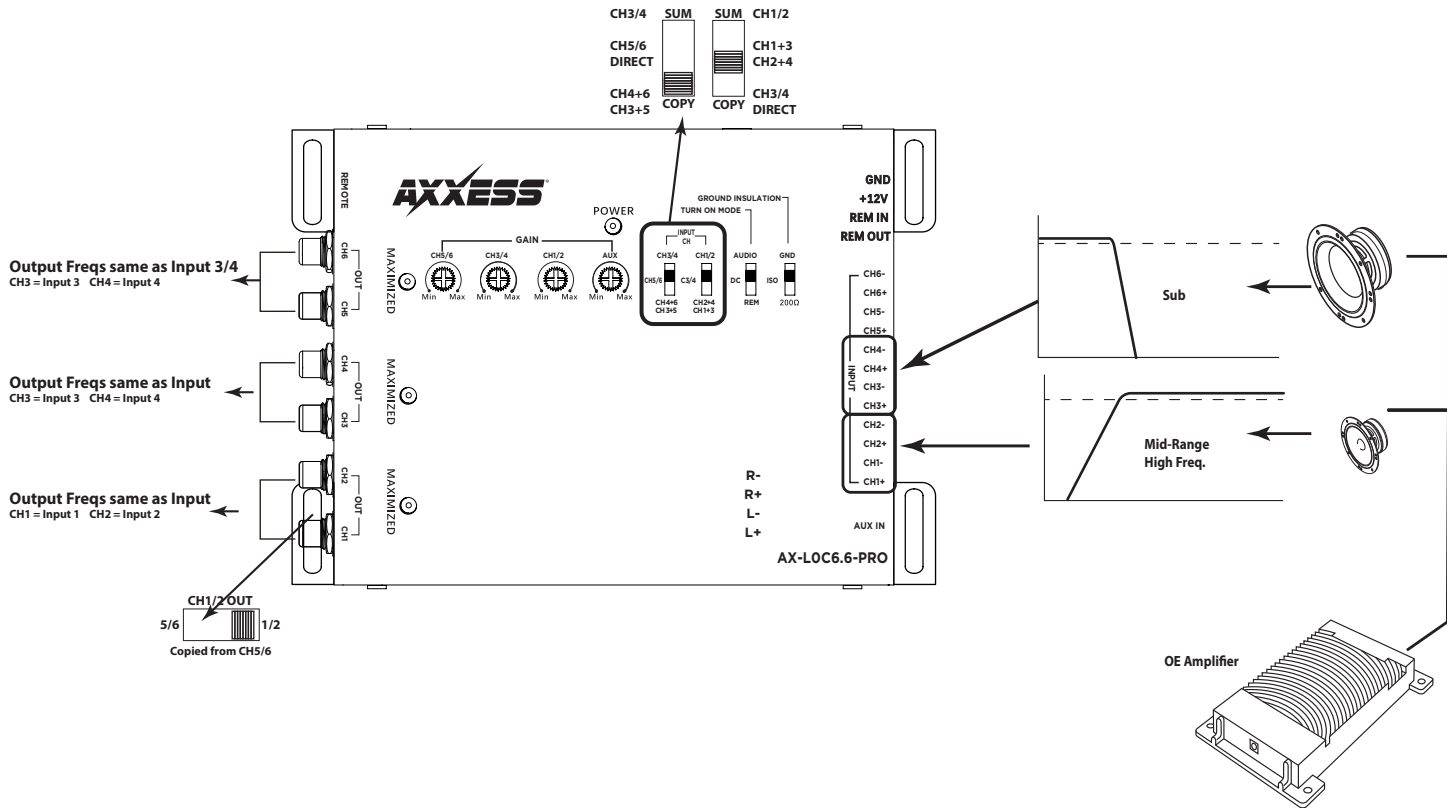
6 CHANNEL HIGH LEVEL INPUT W/SUMMING/6 CHANNEL OUTPUT



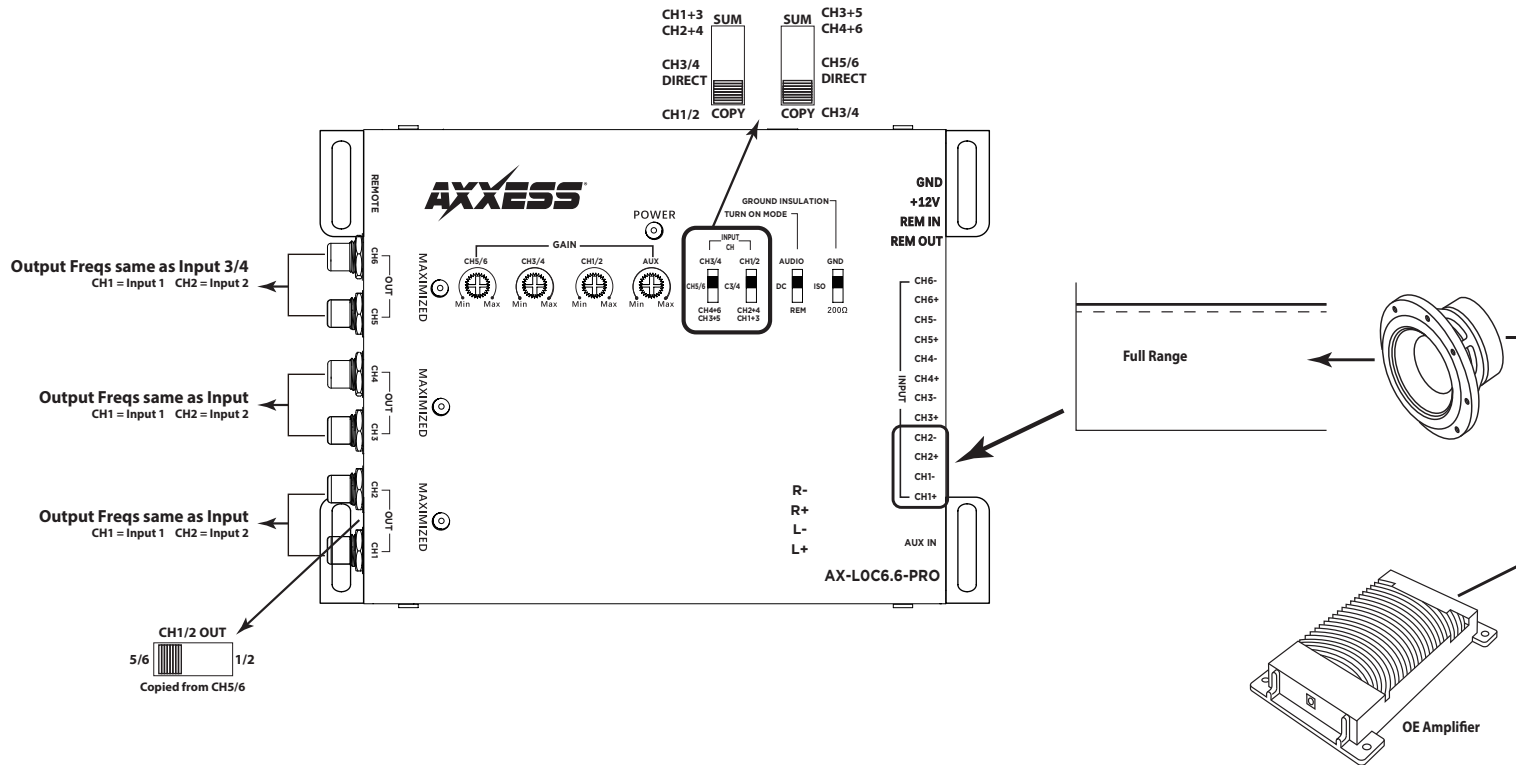
4 CHANNEL HIGH LEVEL INPUT WITH SUMMING/6 CHANNEL SUMMED OUTPUT



4 CHANNEL HIGH LEVEL INPUT/6 CHANNEL OUTPUT

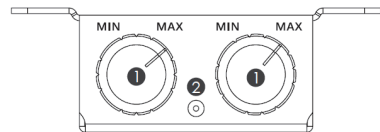
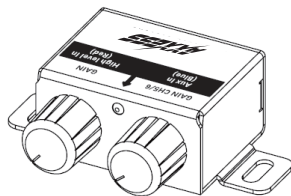


2 CHANNEL HIGH LEVEL INPUT/6 CHANNEL OUTPUT



MULTI-FUNCTION REMOTE

1. Find a suitable mounting location of the **Dual Control Bass Knob** and run the control wire to that location in the vehicle. The **Dual Bass Knob** is included and offers the ability to control overall System Levels and the output level of channel 5 and 6 (Subwoofer Level).
2. The six RCA output channels are used to connect signals to your amplifier(s). The output from **CH3/4** and **CH5/6** depends on their corresponding INPUT CH settings, while **CH1/2** is determined by its output select switch. When using an AUX source, the left/right stereo signals are sent to all output pairs. To maintain stable connections and minimize potential noise, it is recommended to use high-quality RCAs.



1. **Rotary Encoder:** This compact remote controller features two knobs. One is the Primary knob for adjusting **CH1/2/3/4/5/6** primary volume, while the other is for **CH5/6** bass level control. You can also press the Primary knob to toggle between Main and AUX sources.
2. **Source/Function LED:** There are four LED modes: solid red, flashing red, solid blue, and flashing blue. When selected for high-level input from the source unit, the LED indication is solid red. When adjusting the level, the blue LED flashes until it reaches the minimum or maximum level, and then it turns into solid red. When the Auxiliary source is selected, the LED indicator is solid blue. When adjusting the level, the red LED flashes until it reaches the minimum or maximum level, and then it turns into solid blue.
3. **Remote Level Control Jack:** This RJ45 jack is used to connect the remote to the RLC port on the main **AX-LOC6.6-PRO** unit using the supplied 16.4' cable, which is a standard 8-conductor Ethernet cable.

GAIN SETUP

Setting gains is very important, if done incorrectly you can damage your speakers. It is recommended that all settings be adjusted by a professional. **Axxess LOCs** have a maximum output of 9.5v RMS. On average aftermarket amplifiers have a maximum input voltage range of 3-6 volts.

When adjusting the gains it is important to understand the input sensitivity of your aftermarket equipment and adjust the output levels of the LOC to match. If the output levels of the LOC are increased beyond the input capabilities of the amplifier, it will cause the input stage of the aftermarket amplifier to clip, creating distortion. The fix would be to lower the output levels of the LOC until the distortion is removed.

Basic Setup – No Tools Required

1. Before turning your system on, set all levels and gains to minimum. This includes the LOC and all aftermarket amplifiers.
2. On your radio make sure all audio adjustments i.e. **Bass, Treble, Balance** and **Fade** are all **Centered** and **Flat**. Turn **Loudness** off and any preset **EQ** to **Flat**.
3. While playing a Pink noise track or a song with dynamic sound, increase radio's volume to 3/4 of the way up.
4. Adjust the output levels of the LOC slowly until the clipping indicator activates, then reduce the levels so the indicator light doesn't come on.
5. Do NOT adjust the amplifier's gain.

Advanced Setup – Tools Required: Digital Multi-meter, Test Tones

1. During this setup process the RCAs between the LOC and aftermarket amplifier need to be disconnected. They will be reconnected in **Step 11**.
2. Set all levels to **Minimum** on the LOC.
3. On your radio make sure all audio adjustments **Bass, Treble, Balance, and Fade** are all **Centered** and **Flat**. Turn **Loudness** off and any preset **EQ** to **Flat**.
4. Open the manual for the aftermarket amplifier and look for **Line Input Maximum Sensitivity** on the specifications page. This measurement will be in volts. (i.e. 3vrms 6vrms)
5. If setting gains for a full range system, play a 1 kHz tone through your radio into the LOC. If setting levels for a subwoofer, play a 100 Hz tone from the factory radio into the LOC.
6. Turn the radio all the way up, you should not hear the tone playing.
7. Using a Digital Multi-meter set to **Volts AC**, touch the **Black** lead to the **OUTPUT RCA** shield and insert the **Red** lead to the center of the **RCA OUTPUT**. You will see a voltage reading show on the Multi-meter's screen.
8. Adjust the **OUTPUT LEVEL** of the LOC until the voltage shown on the screen matches the **Line Input Maximum Sensitivity** of the aftermarket amplifier. If the **Maximized** light comes on before the level is reached, reduce **OUTPUT LEVEL** until the light is off.
9. Repeat **Steps 7** and **8** for the rear output.
10. Turn the radio's volume down
11. Connect the RCAs from aftermarket amplifier to the LOC.
12. Adjust the gain on your amplifier(s) to minimum.
13. Refer to the amplifier's manual if additional adjustments are required.

SPECIFICATIONS

SPECIFICATIONS

Model	AX-LOC6.6-PRO
Channels	6 IN - 6 OUT SUMMING
Max Input Level (20kOhm)	20V/40V SELECTABLE
Operating Voltage	10.5V-18V
Trigger Selection	REM / DC / AUDIO
Turn On Trigger (DC)	>1.3V
Output Max@13.8V	9.5V RMS
Input Impedance Selection (Speaker Level)	20 / 60 / 20k Ohm
Input Impedance (RCA Level)	180ff/>20kff
Ground Selection	GND / ISO / 2000hm
Gain Adjustment	- 28dB to +1dB
Input Sensitivity	0.5V - 20V
Signal to Noise	>114dB @10V Output
THD+N (Total Harmonic Distortion)	<0.05% @ 10v
Frequency Response	5Hz - 100KHz
Low Pass Filter	< 250Hz (Rear Channels)
Clip Indicator	YES
Bass Boost	0dB + 12dB (5/6)
Remote Control	Included



AX-LOC6.6-PRO

INSTALLATION INSTRUCTIONS

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