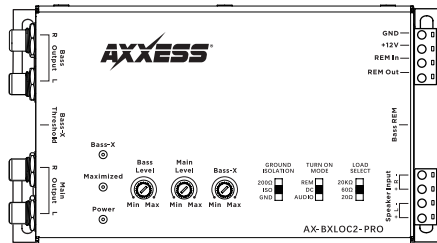


Premium Active LOC with Bass Restoration 2 IN - 4 OUT, Input Of 400 Watts Per Channel, 40v Max

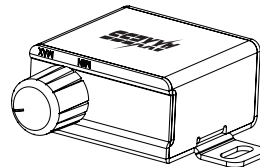
Universal Premium LOC

The **Axxess AX-BXLOC2-PRO** is a compact premium line output converter with active input circuitry, which allows it to accept speaker-level signals of up to 400 watts per channel from factory-installed source units or amplifiers. It converts them to high-quality pre-amp signals that can then be directed to aftermarket amplifiers. The **AX-BXLOC2-PRO** offers **Built In Load Resistors** for those factory radios or amplifiers that stop passing audio when OE speakers are disconnected. The built in load resistors trick the factory equipment to pass audio into the Axxess LOC allowing easy audio upgrades. Many of these factory audio systems regulate lower frequencies to prevent potential damage to the OE speakers, which is not a desirable feature when wanting to add subwoofers to your OE system. Some OE radios and amplifiers can reduce the output of low frequencies as the volume is increased. Having a product with a Bass-X restoration circuit in the LOC will allow users to enjoy their music as it was recorded. Users can enjoy maximum sound quality while maintaining the use of factory volume and steering wheel controls. A bass remote control with digital voltmeter is included, so that you can monitor your car audio amplifier voltage to prevent damage to all your car audio equipment.

COMPONENTS



AX-BXLOC2-PRO Line Out Converter (LOC)



Bass Knob

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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. Determine a suitable mounting location. Make sure you can access all controls and connections.
3. 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.

CONNECTIONS

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 Input** 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. Your LOC only requires two inputs, we recommend a left and right signal full range signal.
 - b. If your vehicle has an OE amplifier your best option is to use the speaker wires on the output side of your factory amplifier, look for a full range signal.
4. Find a suitable mounting location of the **Bass Knob** and run the control wire to that location in the vehicle. The **Bass Knob** included offers a voltage display and control of **Bass Output** levels.
5. Connect your RCAs. **Red** RCAs are for the right channel. **Black, Gray, or White** are for the left channels. An explanation of the RCA's **Main Output** and **Bass Output** are described in the **Feature Breakdown** portion of this manual.

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.

SETTING UP BASS-X

Many automotive manufactures load predetermined crossover slopes into OE radios to protect the factory speakers. The louder the volume the more low frequencies are removed. This feature is not ideal when wanting to upgrade your factory system with aftermarket amplifiers and speakers. The **Bass-X Feature** on the **BXLOC Series** restores those lost frequencies, improving the overall listening experience with just a few simple adjustments.

1. Start by turning the **Bass-X Gain** to **MIN** and the **Bass-X Threshold** all the way down.
2. Turn the **Bass-X Level Adjustment** to the center position.
3. With the volume all the way down start playing music with a good vocal and bass track. During these next steps be sure to pay attention to how far you turn the volume up so you do not damage your equipment.
4. Slowly turn the radio's volume up until you hear the bass drop off. This could happen at any time. Once you believe you have found the point at which the bass drops off turn the volume up and down until you are confident the bass is being affected, then stop.
Tip: Keep playing the same song at the same time stamp during this process.
5. Using a small screw driver, adjust the **Bass Threshold Control** up until the bass starts to come back.
6. The **Bass Level Control** on top of the LOC can be used to fine tune the low frequency output to the listening preference.

Note: If during **Step 4** your bass does not roll off, but you still want more, turn the **Bass-X Level Control** fully down, rotate the **Threshold Control** fully clockwise to lock in the bass equalization.

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-BXLOC2-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 of 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.

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

Load Select Settings – 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 load selector switch will offer two Ohm Load settings that will make the factory equipment think the original speakers are still connected and start 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.

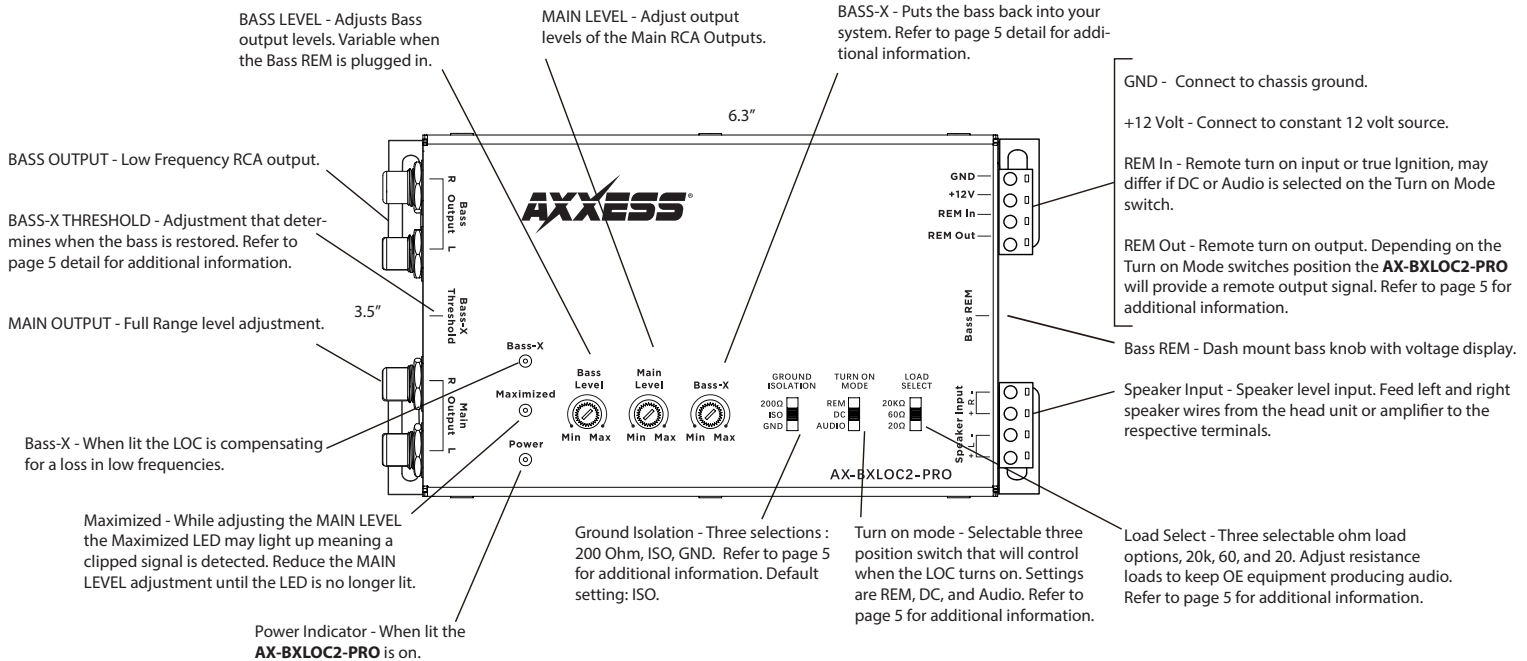
20 ohm – Commonly used in vehicles that do not have a factory amplifier. Mainly late model Chrysler vehicles, which includes RAM, JEEP, DODGE, and some FIATS.

60 ohm – Commonly used in vehicles with a factory amplifier. Mainly late model Chrysler vehicles, which includes RAM, JEEP, DODGE, and some FIATS.

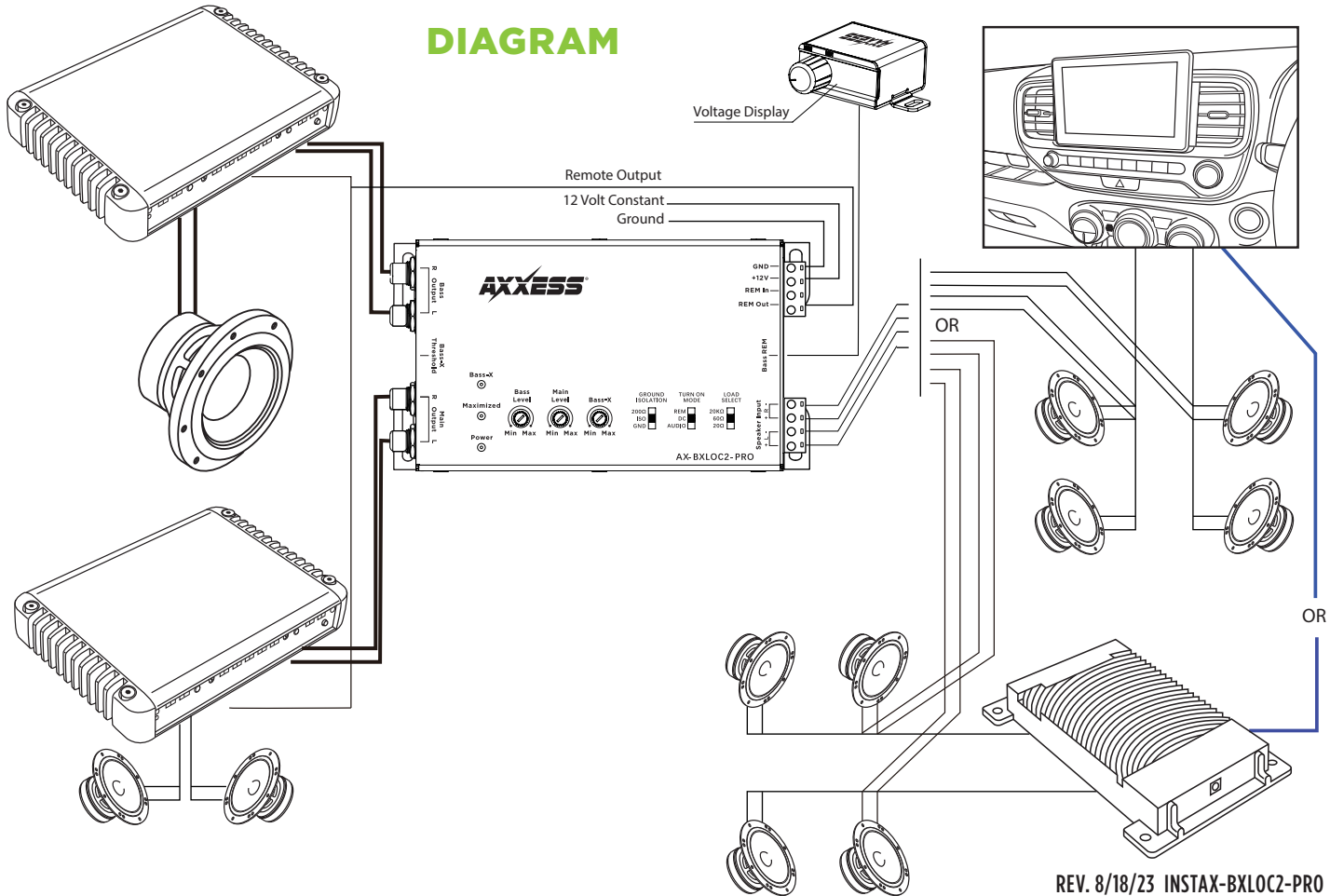
20k ohm – Default setting and used for all other applications.

If none of these Ohm load settings restore the factory audio or if you have distortion Axxess offers additional load resistors that plug directly into the speaker level input terminal(s) of each LOC. **AX-LR39** is the only value not built into the Axxess LOCs.

QUICK REFERENCE: AX-BXLOC2-PRO



DIAGRAM





AX-BXLOC2-PRO

INSTALLATION INSTRUCTIONS

SPECIFICATIONS

Channels	2 IN - 4 OUT (2 Main & 2 SUB)
Max Input Level (20kOhm)	40V / 400W @20K Ohm
Operating Voltage	9V - 16V
Trigger Selection	REM / DC / AUDIO
Turn On Trigger (DC)	3V - 7V
Output Max@13.8V	9.5V RMS
Input Impedance Selection (Speaker Level)	20 / 60 / 20k Ohm
Input Impedance (RCA Level)	N/A
Ground Selection	N/A
Gain Adjustment	- 28dB to +1dB
Input Sensitivity	0.5V - 20V
Signal to Noise	>110dB @6.4V Output
THD+N (Total Harmonic Distortion)	<0.01%
Frequency Response	20Hz - 20kHz
Low Pass Filter	N/A
Clip Indicator	YES
Bass Boost	0dB + 12dB
Remote Control	N/A
Remote Control w/Voltmeter	Included

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



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