



L.O.C.PRO™ LP7-2R

Line Output Converter with Remote Level Control

The professional way to integrate your new amplifier or radio.

Installation Instructions

Install It Right with L.O.C. PRO™

Don't cheat yourself out of all the performance your new radio or amplifier can deliver. Proper audio line level matching is critical when replacing your vehicle's factory (OEM) radio or amplifier. It can be the difference between a great sounding system that you enjoy every day and a buggy, noisy mess that drives you crazy.

PAC L.O.C.PRO™ interfaces have been professionally designed for those who want the very best.

General Overview

The L.O.C.PRO™ LP7-2R can be used for either replacing an OEM radio and retaining the factory amplified system or adding amplifiers to a system that does not have RCA outputs. L.O.C.PRO™ LP7-2R will also monitor the audio input signal and automatically create an amplifier remote turn-on for systems that do not have one. Level matching is achieved using precision stereo gain dials and will enable proper adjustment of audio output of the radio for optimum system performance. Differential inputs also allow for use in OEM BOSE and other premium system scenarios. Included in these instructions are the most common applications for the L.O.C.PRO™ LP7-2R.

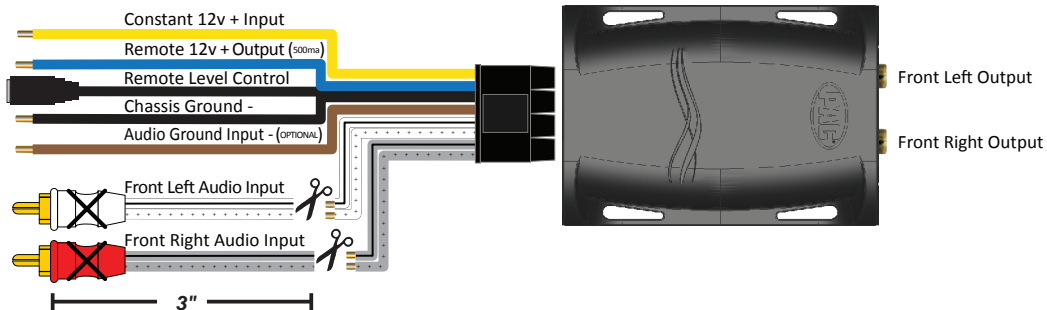
Speaker Level Input to RCA Level Output

Speaker level input to RCA level output is the most commonly used configuration for the LP7-2R.

Use this when you need to create RCA level outputs from a source that only has speaker level outputs.

The RCA input connectors on the main harness will not be utilized for this type of installation, we suggest cutting them off the harness 3 inches from the RCA end so they can be saved and used for a future installation. After all the connections are made on the remaining wires, skip to the level adjustment section of this manual.

Cut away RCA ends for wired speaker level inputs

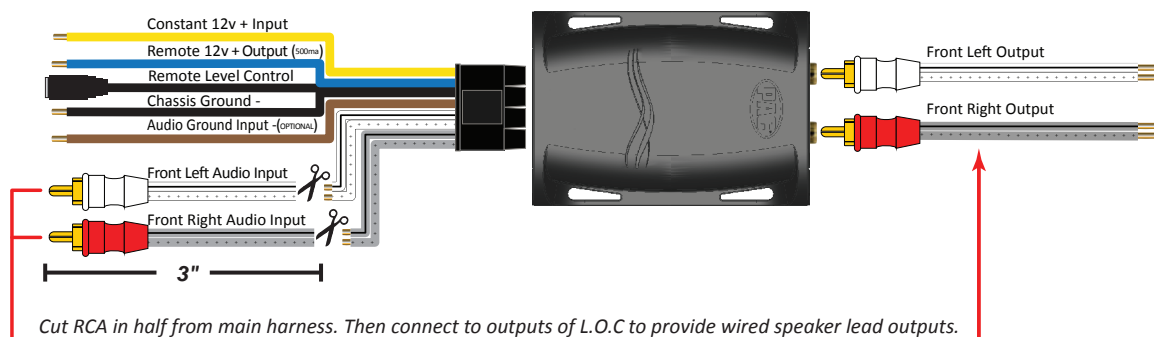


Note: If using large RCA connectors that are difficult to insert into housing, unsnap the L.O.C.PRO™ cover and remove end panel insert around RCA outputs.

Speaker Level Input to Speaker Level Output

Speaker level input to speaker level output is most commonly used when replacing an OEM radio and retaining the factory installed amplifiers.

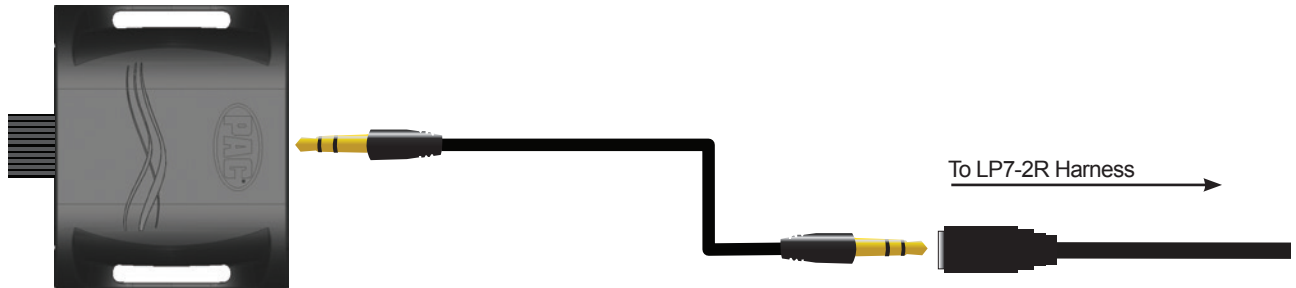
Use this when you need to match levels from a source that only has speaker level outputs and an amplifier with speaker level inputs. The RCA input connectors on the main harness will be used for this type of installation, we suggest cutting them off the harness 3 inches from the RCA end so they can be used for the wired speaker level output. After all the connections are made, skip to the level adjustment section of this manual.



Cut RCA in half from main harness. Then connect to outputs of L.O.C to provide wired speaker lead outputs.

Remote Level Controller

Find a suitable location for the remote level controller and mount it with screws, wireties or doubletape. If custom mounting is more desirable, the outer housing is removable and the circuit board is perforated so it can be cut away. Use this option for mounting in tight locations and behind factory knockouts. Connect the remote to the LP7-2R harness via the included 3.5mm to 3.5mm extension cable. If a longer cable is needed, any standard stereo 3.5mm cable can be utilized. Adjust the amplifier gain with the level on the remote level controller all the way up, after the amplifier gain have been adjusted you can then use the level controller to attenuate the output from full.



Gain Level Adjustment

New School – *Adjust with remote level at full.

Required items: Digital Multi-Meter, Test track media @ 1kHz and 100Hz. Max Amplifier Line-level Input Voltage Specification (i.e., 4vrms, 8vrms, etc. refer to amplifier specifications documentation)

Proper level adjustment is crucial for obtaining the best possible sound quality. Following the guidelines below will enable you to properly set the output gain of the LP7-2RR using equipment that is readily available. Although this device can be set by ear (Old School), we recommend using a multi-meter and test tracks for pinpoint accuracy and the least chance of noise.

Amplifiers usually have 2, 4 or 8v max line-level input ratings but this can vary. This max line-level input will be your target setting you will read on the multi-meter. Perform the following procedure for each amplifier you are installing.

Example:

Amplifier 1 (*Mid/High frequency*) has a maximum 4v input voltage, so you will be targeting a 4 volt output voltage from the LP7-2R.

or

Amplifier 1 (*Sub frequency*) has a maximum 2v input voltage, so you will be targeting a 2 volt output voltage from the LP7-2R.

1. Start with gain adjustment levels on LP7-2R and amplifiers set to minimum.
2. Turn source unit to $\frac{3}{4}$ maximum volume and start test track
(1kHz for mid/high or full range, 100Hz for sub).
3. Choose either left or right channel - With multi-meter, test output of LP7-2R .
Probe with negative on RCA shield and positive in center of RCA output. (*figure 1*)
4. Slowly adjust level on LP7-2R until you reach the target voltage of the amplifier. (*figure 2*)
5. Turn volume down and system off.
6. Connect RCAs, set gains on amplifiers to minimum
7. Turn system on and fine tune gains of amplifier (*if needed*).

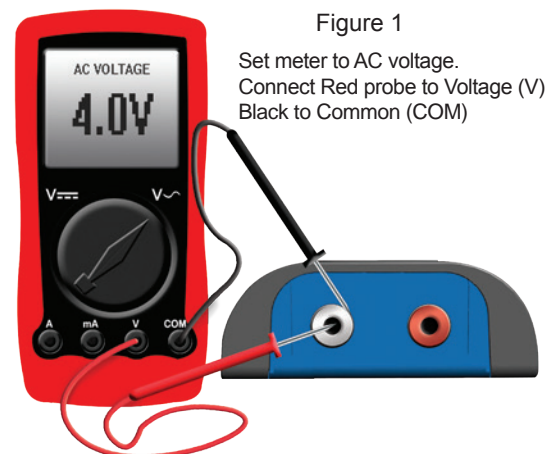


Figure 1

Set meter to AC voltage.
Connect Red probe to Voltage (V)
Black to Common (COM)

Old School – *Adjust with remote level at full.

1. Start with gain adjustment levels on LP7-2R and amplifiers set to minimum.
2. Turn source unit to $\frac{3}{4}$ maximum volume and play a familiar song that has dynamic attributes.
For example, if your volume goes to 40 you will turn it up to 30 and play a song that has some quiet sections and some really loud sections.
3. Slowly adjust front channel gain of LP7-2R until just a hint of distortion is audible, and then back down gain just under that threshold and the distortion goes away. (*figure 2*)

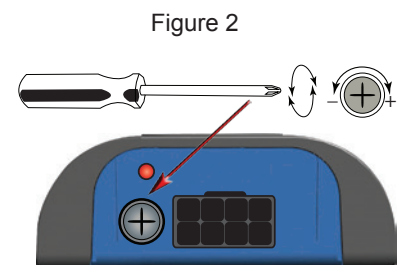


Figure 2