



# L.O.C.PRO ADVANCED

Line Output Converter

## LPA-2.2 | 2 Channel Line-Output Converter

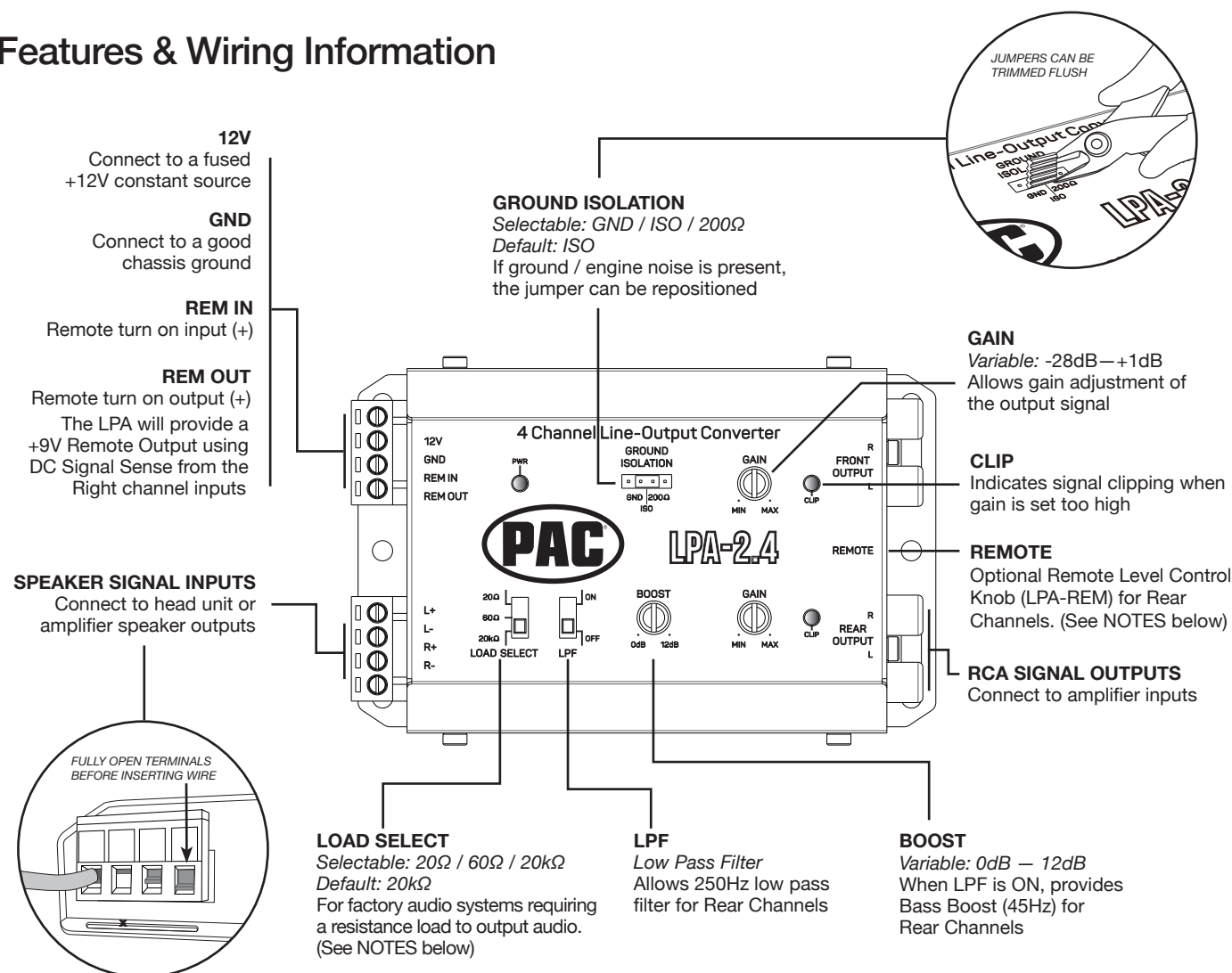
## LPA-2.4 | 4 Channel Line-Output Converter

### Quick Start Guide

The L.O.C.PRO ADVANCED™ can be used to add amplifiers to an audio system that does not have RCA outputs or when replacing an OEM radio and retaining the factory amplified system. Variable Gain Controls with Clipping Indicators, Selectable Ground Isolation and Load Select features ensure a pure, noise-free signal for any type of audio system.

This Quick Start Guide will get you going, but if you need additional help or information, please visit our website or contact Technical Support.

### Features & Wiring Information



#### NOTES:

**LOAD SELECT-** Some late model Dodge/Chrysler/Jeep/Ram/Fiat vehicles require a load for the audio system to work properly:  
20 Ω - Vehicles equipped with base audio system.  
60 Ω - Vehicles equipped with premium amplified audio system.  
20 kΩ - Default, for all other vehicle applications.

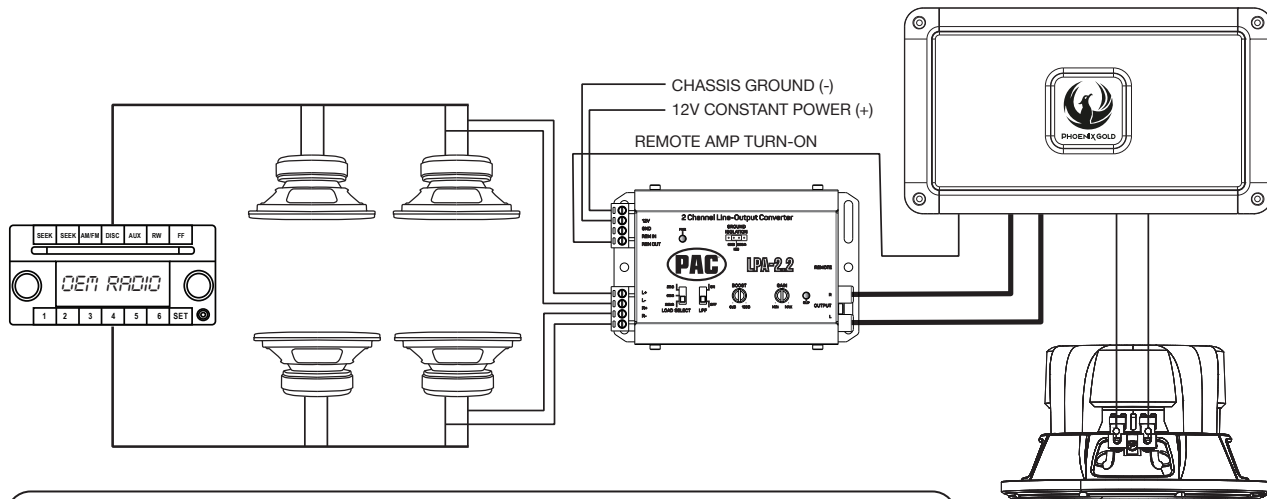
When changing the Load, turn vehicle off, change the Load and let vehicle sit for 5-10 minutes, then retry.

**REMOTE-** It is always optimal to adjust the gain at the output side of the amplifier, thus it's recommended to use the Amplifier's Remote Knob when available.

## Example Installation

Speaker level input from a radio to RCA level output for an aftermarket amplifier is the most commonly used configuration for the L.O.C.PRO ADVANCED. This will create RCA level outputs from a radio that only has speaker level outputs.

In the example below, the Positive(+) and Negative(-) wires of two speakers are “tapped” and connected to the SPEAKER SIGNAL INPUTS of the LPA. The speakers will continue to play as normal. The REM OUT is connected to the amplifiers turn-on. When the radio is turned on the LPA will automatically turn on the amplifier. Lastly, the RCA SIGNAL OUTPUTS from the LPA are connected to the aftermarket amplifiers inputs.



For more installation examples, tech tips and updates,  
visit the L.O.C.PRO ADVANCED product pages on  
[PAC-Audio.com](http://PAC-Audio.com)



## Specifications

Model Number	LPA-2.2	LPA-2.4
Channels	2 IN — 2 OUT	2 IN — 4 OUT
Operating Voltage	9V—16V	9V-16V
Max Input Level (20kH $\Omega$ Load Setting)	40V / 400W @ 4 Ohms	40V / 400W @ 4 Ohms
Auto Turn On	DC Offset / Remote	DC Offset / Remote
Output Voltage MAX @ 13.8V	9.5V RMS	9.5V RMS
Turn On Trigger (DC-Offset)	3V—7V	3V—7V
Load Input Impedance	20 $\Omega$ , 60 $\Omega$ , 20K $\Omega$	20 $\Omega$ , 60 $\Omega$ , 20K $\Omega$
Output Impedance	<120 $\Omega$	<120 $\Omega$
Variable Gain Adjustment	-28dB—+1dB	-28dB—+1dB
Signal To Noise	>110dBA @ 6.4V Output	>110dBA @ 6.4V Output
THD+N	< 0.01%	< 0.01%
Input Sensitivity	0.5V—40V	0.5V—40V
Frequency Response	10Hz—20kHz	10Hz—20kHz
Current Draw (Max)	40mA	40mA
Low Pass Filter	<250Hz	<250Hz
Bass Boost	0dB to +12dB	0dB to +12dB
Clip Indicator	YES	YES
Remote Level Control	OPTIONAL (PN: LPA-REM)	OPTIONAL (PN: LPA-REM)
Chassis Type	Stamped Steel	Stamped Steel
Terminal Gauge	18AWG / Quick Connect	18AWG / Quick Connect



## Line Output Converter Gain Level Set-Up

### Advanced method –

Required items:

- Digital Multi-Meter
- Test track media @ 1kHz and 100Hz. (Download from PAC-Audio website's LPA section)
- Maximum Amplifier Line-level Input Voltage Specification (i.e., 4vrms, 8vrms, etc.)

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 LPA using equipment that is readily available.

Amplifiers usually have 4-6v 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 LPA you are installing.

1. Start with gain adjustment levels on LPA set to minimum.
2. Set the head unit's audio setting to the center (flat) position such as Bass, treble, balance and fader. Turn off any loudness or other signal processing features (preset EQ).
3. Turn source unit to maximum volume and start test track (1kHz for mid/high or full range, 100Hz for sub). If Bluetooth is used as source, make sure the device volume is set to maximum.
4. Choose either left or right channel - With multi-meter, test output of LPA front channels. Probe with negative on RCA shield and positive in center of RCA output.
5. Slowly adjust gain level on LPA until you reach the target voltage of the amplifier. Turn down the LPA gain level if clipping light turns on.
6. Repeat steps for rear channels (if connecting to a different amplifier, adjust to that amplifier's voltage requirements).
7. Turn volume down and system off.
8. Connect RCAs, set gains on amplifiers to minimum.
9. Turn system on and fine tune the gain of amplifier by following the amplifier's instruction manual.

### Example scenarios:

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

Amplifier 2 (Sub frequency) has a maximum 6v input voltage, so you will be targeting a 6 volt output voltage from the LPA.

### Basic method –

1. Start with gain adjustment levels on LPA and amplifiers set to minimum.
2. Turn head unit to  $\frac{3}{4}$  maximum volume and play test track (Random Noise) or 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 LPA until just a hint of distortion is audible, and then back down gain just under that threshold and the distortion goes away.
4. Repeat steps 1-3 for rear channels.