



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.