LOC-2BR

2-Channel Line-Output Converter With Bass Reconstruction Processor

USER's MANUAL

INTRODUCTION

Thanks for purchasing NEMESIS AUDIO LOC-2BR bass reconstruction processor.

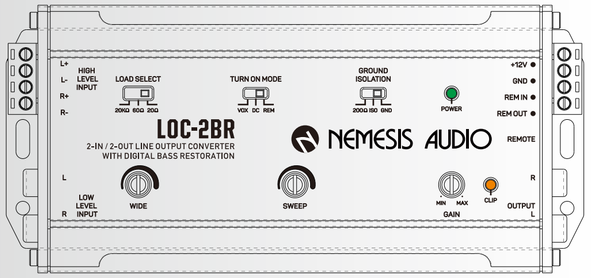
Bass is a topic that every music lover can't get around, regardless of what genres they are playing, either it is a rap, classic, pop or blues. You probably have reached 75 points, by crafting an enclosure strictly following the subwoofer specifications and setting all filters in amplifiers, but you still have 25 points to go to make it perfect and fully under your control by restoring the bass in signal source and controlling the peak signal voltage to protect your precious audio systems.

Don't make tuning without knowing what they are designed for, or just assumed what they are for. If you are not professional in mastering the music signals, read this manual through to get tips and fun of playing with bass.

DIVE INTO FEATURES

Part 1: Control parametrically
Remote bass level control
Parametric bass control (Wide & Sweep)
Variable gain control
Clipping indicator

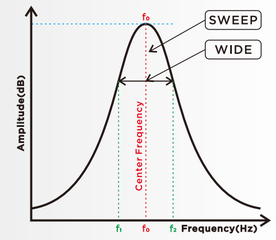
Part 2: Fit all
Separate high- & low -level input (Balanced and unbalanced input)
3 loading options, 20-ohm / 60-ohm / 20K-ohm (Default: 20K-ohm)
3 turn-on modes, audio signal, DC-offset, and REM. (Default: REM)
Ground isolation options, 200-ohm, ISO, GND
REM output.



1) **+12V:** Connect to the positive terminal of the battery, Recommend cable min AWG16.
GND: Connect to the positive terminal of the battery, Recommend cable min AWG16.
2) **REM-in:** Connect to the remote out of the head unit and trigger the device automatically. Recommend AWG18.
REM-out: Connect to aftermarket audio equipment with "Rem In". Rem-out is always on when the LOC-2BR is activated (regardless of the turn-on method). Connect it to only 1 aftermarket amplifier. Recommend AWG18.
3) **High-level input:** Connect it to speaker level output, or the balanced signal output from the head unit.
4) **RCA Connectors / Low level Input:** Run the line level signal RCA cables to these connectors. It is designed for unbalanced signal too.

5) **Load Select:** Many OEM head units require a resistance load to output audio signals, 20-ohm, 60-ohm or 20K-ohm. 20K-ohm is more common than the others. Try the rest if it doesn't work.
6) **Turn-on Mode:** It provides the drivers with the convenience to choose different ways to activate the device.
(a) REM: It's a traditional way of triggering the LOC-2BR to work but provide you timely control when it will be turned on or off via ignition.
(b) DC: The LOC-2BR will be activated when the head unit is on, but please note the signal from the head unit should be a DC offset one.
(c) VOX: When VOX is selected, the LOC-2BR will only turn on when the head unit plays something, either radio, music from CD, or Bluetooth streaming.
7) **Ground Isolation:** Try different switches when the "alternator whine "or "ground noise" creep into the audio path, as power ground and signal ground are not tied together. Turn off the LOC-2BR when switching.
(a) GND: power supply has the same ground as the audio.
(b) ISO: The power supply ground is separated from the audio.
(c) 200-ohm: There is 200-ohm load between the power ground and the audio ground.

8) **Parametric Bass Control:**
Knowledge take-away: Not every subwoofer is created equal, and many of them can't deliver really low bass. With that in mind, most tunes are recorded with low bass, which can harm the system, filtered out. But some guys do have quality subwoofers that can go really low. The LOC-2BR has a circuit that can restore the "missing low bass" in the music source by looking to the upper frequencies. With more bass detail brought back, the LOC-2BR will surprise you instantly!
Sweep: Pick the center frequency that you want the "bass restoration" to enhance. Wide:Adjusts the frequency width around the "picked frequency" above. 70Hz-150Hz.Max width: 45HZ-180HZ, min width: 48HZ-130HZ
We suggest starting from the factory setting.

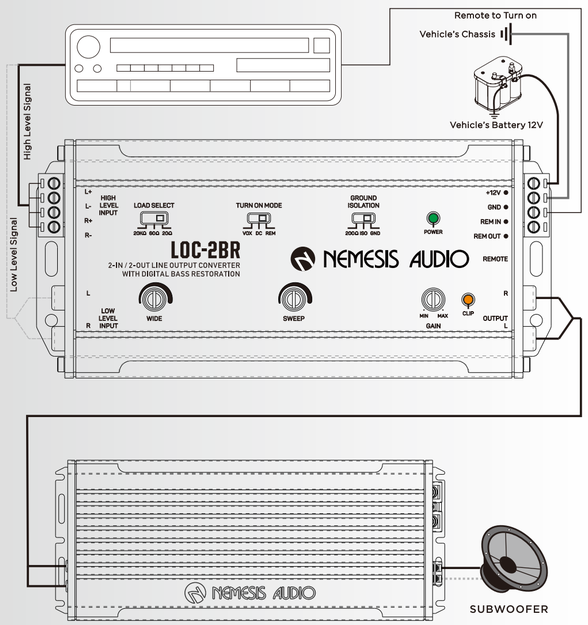


9) **Gain**: The final bass voltage work with most amplifiers input sensitivity range, but some systems are designed for SPL, with high input voltage range. The "Gain" controls the signal from "-28dB" to "1dB" that work for ALL after market bass systems.
10) **Clip**: The LED lights up then the output signal gets distorted.
11) **Remote control**: Access to the bass level processed by the Parametric bass control from 0-12dB. When switching the track to a different style, adjust the bass level to hear difference.
12) **RCA Connectors/Level Output**: Feed it right into the amplifier or crossover, not after the crossover.

INSTALLATION CAUTIONS

1) Make all connections with the power off and connect the battery ground in the last step.
2) Run constant +12V power to the LOC-2BR +12V connector. 16AWG recommended.
3) Use the same gauge wire for ground as for the +12V and find a verified GROUND location for the LOC-2BR. Head unit ground is not a good ground.
4) Fully open the terminals before inserting any wire.
5) Ensure the device has a stable, dry, and well-ventilated base, and is away from moisture, heat and dirt.
6) Do not mount it directly on the vehicle's body, frame, or structure.
7) Never place the device next to the loudspeaker box as it could cause vibrations.
8) It is advisable to place RCA cables as far away from the vehicle's wiring, power cables, and output speaker wires as possible.
9) Please make wires as short as possible in order to reduce noise and loss of power.
10) Run the remote level control LOC-2BR to where within driver's access.
11) Professional installation is required.

TYPICAL WIRING



TECH SPECIFICATIONS

Operating Voltage	9 to 16V
Low Level Input	150mV to 2V
High Level Input	2.5V to 30V (20K-ohm Load for 30V)
Output Voltage	Max. 9.5V @ 13.8V
Input Impedance	20-ohm / 60-ohm / 20K-ohm
Signal to Noise	>105dBA
THD+N	<0.005%
Frequency Response	10-25KHz
Max Current Draw	170 mA
Output Impedance	< 120-ohm
Gain Control	-28 to 1 dB
Turn-On Trigger, DC	3 to 7V
Wide Frequency	MAX:45Hz to 180Hz MIN:48Hz-130Hz
Sweep Frequency	70Hz to 150Hz
Terminal Gauge	Quick Connect / 16# AWG
Remote Level Knob	Available (0dB to 12dB)
Turn On Mode	REM / DC / VOX
Ground Isolation	200-ohm / ISO / GND
Dimension(LxWxH)	177 x 82 x 24.5(mm) or 7.0" x 3.23" x 0.96"

Due to continuing products improvement, features and specifications are subject to change without notice.

WARRANTY

Should your LOC-2BR require service Please consult with the dealer from which it was purchased, or contact NEMESIS AUDIO Local Dealer.

Do not attempt to return your LOC-2BR directly to us without first calling for a Return Authorization Number. Units received without an accompanying Return Authorization Number will be processed more slowly. Additionally, you must include a copy of your purchase receipt from an authorized dealer for consideration of in-warranty service; otherwise repair charges will apply. Units received without a receipt will be held for 30 days, allowing us time to contact you and obtain a copy of the receipt. After 30 days, all units will be returned.

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