NEMESIS AUDIO

Line-output Converter

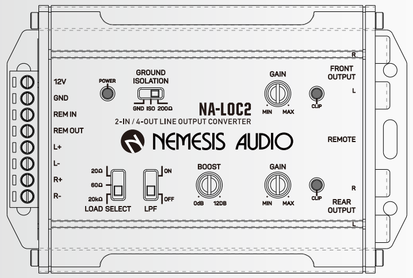
USER's MANUAL

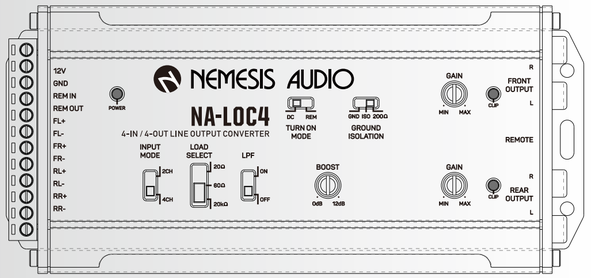
NA-LOC2
2-IN / 4-OUT LINE-OUTPUT CONVERTER
NA-LOC4
4 IN / 4 OUT LINE-OUTPUT CONVERTER
NA-LOC6
6 IN / 6 OUT LINE-OUTPUT CONVERTER

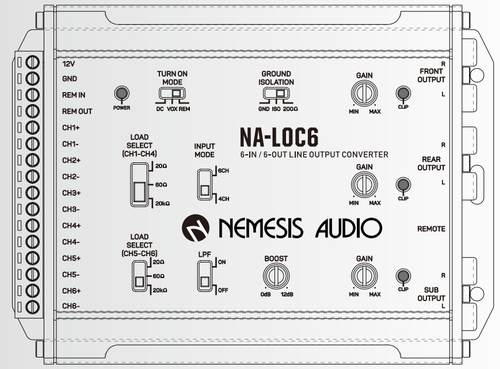
INTRODUCTION

Thanks for purchasing Nemesis audio premium NA-LOC series line-output converter.
New cars serve more than a vehicle, but an entertainment center.
It's so common that many new head units come with integrated amplifiers, around 30-45 watts each channel, which powers the OEM speaker well. The pre-installed, or OEM music system can be ok for those who are not picky, but far away from trapping the drivers and passengers to fall in love with it.
But a sweet OEM audio system can burn a hole in your wallet.
LOC, known as line-out converters will iron it out, with extremely low distortion. And NEMESIS is aware that new generation OEM integration requires more than a high-to-low level convertor, but a device that can trick OEM head units designed refuse to upgrade into work and help avoid picking environment noise into the system.

NA-LOC FEATURES OVERVIEW







ITEM	NA-LOC2	NA-LOC4	NA-LOC6
Speaker Input	2CH	4CH	6CH
Outputs	4CH	4CH	6CH
REM In	Yes	Yes	Yes
REM Out	Yes	Yes	Yes
Load Select	20-ohm / 60-ohm / 20K-ohm		
Ground Isolation	GND/ISO/200-ohm		
Gain	Yes,X2	Yes,X2	Yes,X3
Clipping	Yes,X2	Yes,X2	Yes,X3
LPF On/Off	Yes,Rear CHs	Yes,Rear CHs	Yes,Sub CH
Boost(0-12dB)	Yes,Rear CHs	Yes,Rear CHs	Yes,Sub CH
Turn On Mode	REM	REM/DC	REM/VOX/DC
Input Mode	N/A	2CH/4CH	6CH/4CH
Remote	Yes,Rear CHs	Yes,Rear CHs	Yes,Sub CH
Dimensions(LxWxH)mm	122.5x82x24.5	177x82x24.5	147.5x110x24.5
Chassis Body	Aluminum	Aluminum	Aluminum

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

DRIVE INTO FEATURES

1) Speaker Inputs: connect to head unit or amplifier speaker outputs. It receives the signal that your amplifier can't handle.

2)Outputs: Connect to the amplifier inputs. The signal processed by the device is what just the amplifier wants.

3) REM In: Rem turn-on input. It works with the "REM" in the "Turn-on" mode.

4) REM Out: Connect to aftermarket audio equipment with "Rem In". Rem-out will always remain active when the NA-LOC is turned on (regardless of the turn-on method). Connect it to only 1 aftermarket amplifier.

5) Load Select: 20-ohm/60-ohm/20k-ohm Many OEM head units require a resistance load to output audio signals, so an LOC without that load won't work. 20-ohm or 60-ohm are compatible with most such systems. Select 20-ohm/60-ohm for those systems, and 20k-ohm for all the rest.

6) 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 converter when switching it.

GND: power supply has the same ground as the audio.

ISO: The power supply ground is separated from the audio.

200-ohm: There is 200-ohm load between the power ground and the audio ground.

7) Gain: It adjusts the output signal for every channel pair. 9.5V RMS.

8) Clip: The LEDs lights up then the output signal gets distorted.

9) LPF: It can be switched off or activated to filter signal above 250Hz. The 2 rear channels are mostly for subwoofers.

10) Boost: Adjusts bass from 0-12dB at 45Hz.

11) Turn-on Mode: It provides the drivers with the convenience to choose different ways to activate the device.

REM: It's a traditional way of triggering the NA-LOC to work but provide you timely control when it will be turned on or off via ignition.

DC: The NA-LOC will be activated when the head unit is on, but please note the signal from the head unit should be a DC offset one.

AUD: When VOX is selected, the NA-LOC will only turn on when the head unit plays something, either radio, music from CD, or Bluetooth streaming.

12) Input Mode: When you want to get 4 outputs with the 2 speaker level inputs, switch it to 2CH. The 4 outputs will be fed with the same source, but you can still set LPF and or Boost for it.

13) REMOTE: NEMESIS provides optional remote level control for rear channels. It's an attenuation control of the signal through the rear channels.

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 NA-LOC 12V connector. 16 AWG recommended.

3) Fully open the terminals before inserting any wire.

4) Ensure the device has a stable, dry, and well-ventilated base, and is away from moisture, heat and dirt.

5) Do not mount it directly on the vehicle's body, frame, or structure.

6) Never place the device next to the loudspeaker box as it could cause vibrations.

7) It is advisable to place RCA cables as far away from the vehicle's wiring, power cables, and output speaker wires as possible.

8) Please make wires as short as possible in order to reduce noise and loss of power.

9) Professional installation is required.

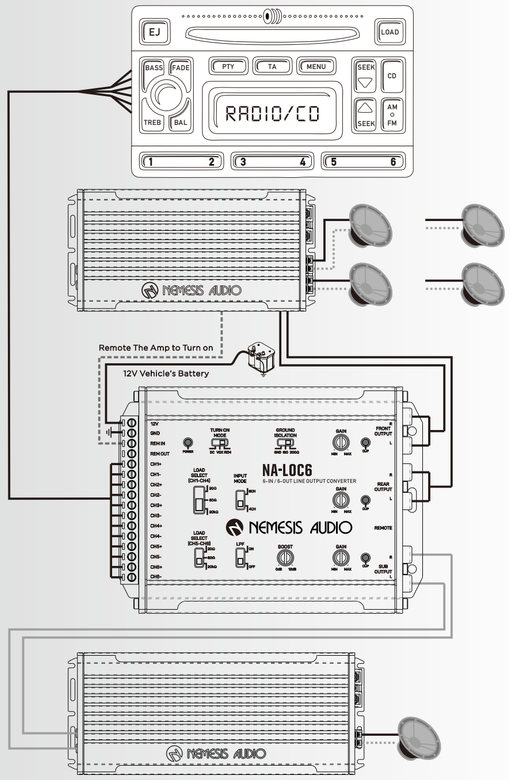
10) Run the remote level control to where within driver's access.

TECH SPECIFICATIONS

The NA-LOC family share the performance specifications below, apart from that they have different No. of inputs and outputs.

Operating Voltage	9 to 16V
Input Sensitivity	0.5 to 40V
Max 40V as Input	Must be 20K-ohm load
Output Voltage	Max. 9.5V @ 13.8V
Input Impedance	20-ohm / 60-ohm / 20K-ohm
Signal to Noise	>110dB @6.4V output
THD+N	<0.01%
Frequency Response	10-20kHz
Max Current Draw	110 mA(XLOC8, 200mA)
Output Impedance	< 120-ohm
Gain	-28 to 1 dB
Turn-On Trigger, DC	3 to 7V
Bass Boost(at 45Hz)	0 to +12dB
Low Pass Filter(LPF)	250Hz
Terminal Gauge	Quick Connect / 16# AWG
Remote Level Knob	Available for ALL NA-LOC Models

TYPICAL WIRING



WARRANTY

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

Do not attempt to return your NA-LOC 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.

NEMESIS AUDIO

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