

Lanzar®



OPTIDRIVE



user's manual

www.lanzar.com

OptiD-100

***High Performance 7 Volt Line Driver
Crossover Network w/Remote Bass
Boost , Level and Q Controls***

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INTRODUCTION...

Congratulations on your purchase of a new Lanzar Opti signal processor. Opti mobile electronics are some of the most advanced car audio products available. These quality audio products are designed and engineered to afford you years of uncompromising musical service. Lanzar has utilized the latest electronic technologies in order to deliver a superb listening experience.

The D-100 Active Line Driver offers the listener the ability to enjoy the finest in mobile audio. The D-100 unleashes the effortless, natural and open quality of the real performance. Car audio systems which utilize passive crossovers feed the music through chokes and capacitors, which creates a “bottleneck” through which the music must pass. Portions of the program material may pass through at different speeds, creating distortion – some of the music doesn’t make it through at all!

With the Lanzar Opti D-100 you’ll hear all the dynamics in the bass, and still hear delicacies like fingers sliding across guitar strings.



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general features

Blue light illuminated control panel

Rotary control knobs

PWM power supply

Variable line out level control

Variable input level control

Subwoofer variable phase shift control

Subwoofer stereo/mono mode control

Remote bass boost , level and Q controls

Variable bass boost frequency : 40-400 Hz

Variable Q (2-20)



Lanzar[®] Precautions

To prevent short circuits, be sure to disconnect the negative battery ground lead before wiring the system up.

When you finish the installation, be sure to make one more check to be sure everything is done correctly.

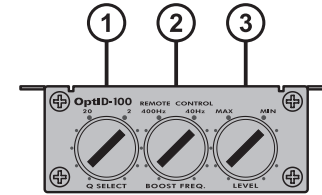
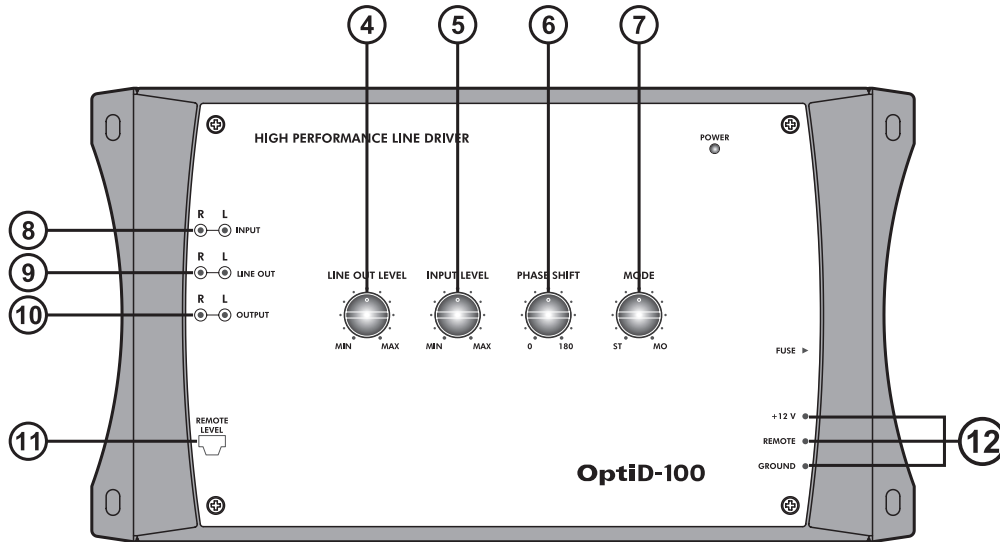
Reinstate all car parts that were removed.

Reconnect the negative battery ground lead.



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features and specifications



OptiD-100



features and specifications

- 1. PARAMETER "Q" SELECT 2-20** Allows independent continuous change of the boost frequency bandwidth (Q-factor) for each band from Q=20 (Narrow bandwidth, steep slope) to Q=2 (Wide bandwidth, gentle slope).
- 2. BASS BOOST FREQUENCY CONTROL** This control adjusts the bass boost frequency from 40Hz to 400Hz.
- 3. BASS BOOST LEVEL CONTROL** This control sets the subwoofer gain control.
- 4. VARIABLE LINE OUTPUT LEVEL CONTROL** Turning this control to adjust the output sensitivity of line out to match the input of additional amplifier, crossover or audio system.
- 5. VARIABLE INPUT LEVEL CONTROL** Turning this control to adjust the input sensitivity of the set to match the radio's output.
- 6. VARIABLE SUBWOOFER PHASE SHIFT CONTROL 0-180** Allows you to control the phase of your subwoofer between 0 degrees and 180 degrees to help compensate for timing difference between drivers.
- 7. SUBWOOFER STEREO/MONO MODE CONTROL** Allows you to control the subwoofer output between stereo and mono, thus facilitating single subwoofer installation.
- 8. INPUT PORT** To be connected to the outputs of the source unit or signal processor.
- 9. LINE OUT PORT** To input additional amplifiers, crossover or Audio system.
- 10. OUTPUT PORT** To be connected to the amplifier left/right inputs.
- 11. REMOTE CONTROL JACK** Plug the modular telephone style cord connected to the remote control unit into this jack.
- 12. POWER TERMINALS** Use these connectors to deliver power, ground, and remote turn-on control to the unit.

Adjustable Bass Boost

Frequency 40Hz-400Hz

Adjustable Bass Boost 0-18dB

Adjustable Q Control 2-20

Power Supply 10-16V DC, negative ground

Input Impedance 10K Ohm

S/N ratio more than 85dB

Max Output Signal Level 7.0V RMS

Channel Separation 60dB

Distortion less than 0.05%

Dimensions, WxDxH, inches 6x10-11/16x1-3/4
(millimeters) (150 x 272 x 45)



REMOTE CONTROL UNIT

1.Q SELECT

This control will narrow or widen the boost frequency bandwidth (Q=factor) being sent to the amplifier for each band from Q=20 (Narrow bandwidth, steep slope) to Q=2 (Wide bandwidth, gentle slopes).

2.BASS FREQUENCY

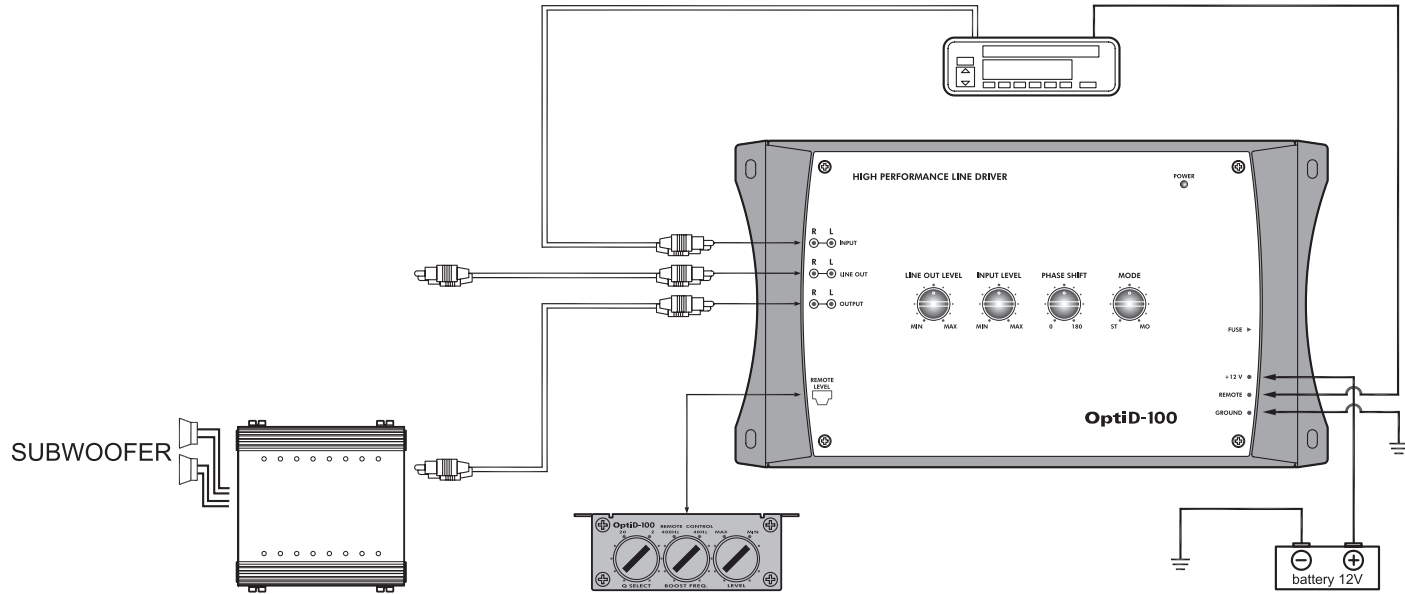
This control sets the center frequency of the bass boost effect from 40Hz to 400Hz.

3.BASS LEVEL

This control sets the subwoofer level control.

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System wiring



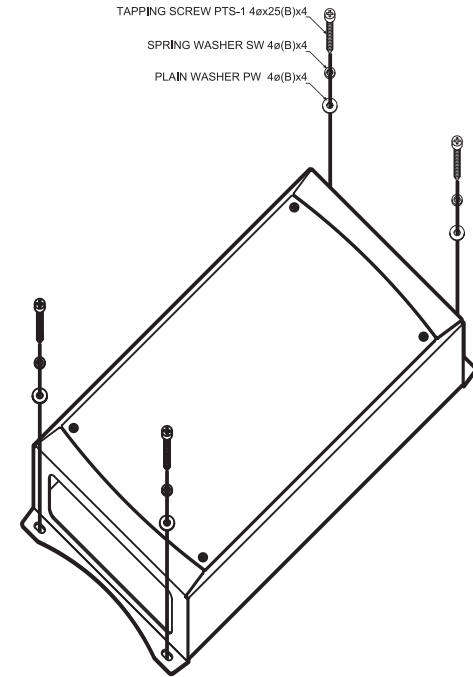
Your new Opti Series Line Driver comes complete with all required mounting hardware.

Mark the location for the mounting screw holes by positioning the Line Driver where you wish to install it and use a scribe (or one of the mounting screws) inserted in each of the mounting holes to mark the mounting surface. If the mounting surface is carpeted, measure the hole centers and mark with a felt tip pen.

Before attempting to drill the mounting holes, take note of any wires, lines or other devices in your vehicle which may be located behind the mounting surface! Then drill pilot in the mounting surface for the mounting screws and insert them. Tighten the screws securely.

Installation

- A red 18 gauge stranded or heavier and insulated wire should be connected to the terminal marked +12V. Wire an in-line fuse holder on this lead as it is the 12 Volts DC wire for the system. This wire should be connected to your vehicle's battery. If a wire is run directly to the battery make sure to install an in-line fuse on this wire within 12" from the battery.
- A black stranded wire of at least 18 gauge should be connected to the terminal marked Ground. This is the ground wire for the D-100 and should be attached to the same ground point with the amplifiers in the system. Keeping this ground wire as short as possible improves the electrical circuit and keeps ground related noise problems to a minimum.
- An orange stranded wire of a least 20 gauge should be connected to the terminal marked Remote. This wire connects to your head unit's remote out or power antenna lead out. This wire should supply 12 Volts DC any time the radio, cd or cassette are playing. This lead must also be connected to any other components in your system that utilize a remote turn-on lead for powering up.
- Connect all line inputs and outputs using high-quality RCA-RCA cables.
- Recheck all connections before powering up.
- Set all level controls to their least sensitive positions and set all Line Driver controls, switches, etc. to the desired frequency or position.
- Once the system is powered up, set the volume control on the head unit to about the 2 o'clock position, and then set all the amplifiers' level controls for half output level.



Lanzar® Noise check and system adjustment

NOISE CHECK

Check the entire audio system for noise before permanently securing the Line Driver mounting

1. Start the engine.
2. Turn the audio system on.
3. Rev the engine and vary the VOLUME of the audio system to determine if there is any unwanted noise.
If so, turn both the audio system and the engine off. Do not secure the Line Driver mounting screws. Refer to the "Trouble Shooting Guide" at this manual.
4. If the audio system does not have any noise, securely tighten the Line Driver mounting screw and double check the wiring cables for safe placement.

SYSTEM ADJUSTMENT

Preliminary Adjustments

Pre-setting the system provides a necessary starting point for fine-tuning the entire audio system to maximum performance.

NOTE: DO NOT MOUNT Line Driver UNTIL THE FOLLOWING PROCEDURES HAVE BEEN COMPLETED.

1. Preset each amplifier input gain adjustment at the amplifier to half of maximum.
2. Slowly turn the volume up and listen carefully for: obvious trouble in sound (distortion, no sound, no hiss, total silence). Turn the system off refer to "Trouble Shooting Guide" at this manual.



Caution

DO NOT ROUTE AUDIO CABLES AND POWER CABLES TOGETHER! THIS CAN CAUSE ENGINE NOISE IN YOUR AUDIO SYSTEM. ALWAYS DISCONNECT THE SYSTEM FROM THE BATTERY BEFORE ATTEMPTING TO MAKE OR ALTER ANY CONNECTIONS. THIS PRODUCT IS DESIGNED FOR USE IN ANY 12 VOLTS NEGATIVE GROUND ELECTRICAL SYSTEM ONLY. INSTALLING THIS PRODUCT IN ANY POSITIVE GROUND ELECTRICAL SYSTEM COULD SERIOUSLY DAMAGE THE AUDIO SYSTEM.

Adjusting The Line Driver

The Line Driver provides variable enhancement of Line frequencies. The level of peak boost varies from 0 to +18dB and the frequency at which peak boost occurs is adjustable from 40Hz to 400Hz. 20-Q to 2-Q boost characteristic can be adjustable.

2-Q characteristic boosts a wide range of frequencies and is useful for general sound quality enhancement. The 20-Q characteristic boosts a narrow range of frequencies and can be used to tune a subwoofer system to maximum output.

The Line Driver Q adjustable should be set to the 2-Q(wide) position and the frequency control set approximately one octave below the subwoofer's resonant frequency.

In vented enclosures, the roll off of the system is quite steep below the tuning frequency (typically 24dB/octave). In this case, the Line driver should be set for 20-Q(narrow) operation. Never set the Line Driver boost frequency below a vented enclosure's tuning frequency. For maximum output from a vented enclosure, set the Line Driver boost frequency to the tuning frequency of the enclosure. These adjustments can be made with the Line Driver in the signal path, but make sure the effect is turned off (remote level Min.) then verify operation of the Line Driver by increasing the boost level while listening for changes in subwoofer response.

Once operation of the Line Driver is confirmed, adjustment can proceed.

PROBLEM	POSSIBLE CAUSE
1. There is an audible distortion at a low volume level.	<ul style="list-style-type: none">• Output levels NOT set correctly.• Check for shorts on the speaker leads.
2. A whining sound can be heard through the speakers when the audio system is at low volume with the engine running. The whining noise remains unchanged or seems to disappear when the volume level is increased.	<ul style="list-style-type: none">• Check the red power wire. It must be connected directly to the battery.• Check the system's ground point. It must make good contact with chassis ground (bare metal).• The radio and the Line Driver must be grounded at the same reference point.
3. There is a "motor boating" type of sound when the engine is running and the audio system volume is set at a reasonably high level.	<ul style="list-style-type: none">• Check the red power wire. It must be connected directly to the battery.• Check the system's ground point. It must make good contact with chassis ground (bare metal).
4. High squeal noise from speakers	<ul style="list-style-type: none">• This is almost always caused by a poorly - grounded RCA patch cord.



limited warranty policy

Line Driver

All Lanzar Signal Processors are carefully constructed and thoroughly tested before shipment. Units purchased in the USA are warranted to be free of defects in material and workmanship for three (3) years from the date of purchase. This warranty is limited to the original retail purchaser of the Signal Processor.

Should the unit fail due to a factory defect in material or workmanship, your unit will be repaired or replaced at the sole discretion of Lanzar.

To obtain warranty service, you must first call our Consumer Return Hotline number at (718) 236-6948 to obtain a Return Authorization (RA) number. This RA Number must appear on the outside of your package and on all paperwork relating to your return.

When returning the unit to us for warranty service, it must be carefully packed and shipped prepaid to:

R.A. # _____
Lanzar Service Center
1600 63rd Street
Brooklyn, NY 11204

You must also include the following items with your return:

- A copy of your sales receipt or other proof of purchase
- A brief letter indicating the problem you are experiencing with the product
- Include in your letter your return address, daytime phone number and RA Number
- Also include a check or money order for \$20.00 for return shipping, handling and insurance, or provide your VISA/MasterCard number with expiration date.

Our obligation under this warranty is limited to the repair or replacement of the defective unit when it is returned to us prepaid. This warranty will be considered void if the unit was tampered with, improperly serviced, or subject to misuse, neglect or accidental damage.

All implied warranties of merchantability and fitness for a particular purpose are limited in duration to the length of the warranty. Lanzar expressly disclaims any liability for incidental or consequential damages caused by product defects. This warranty does not cover any expense incurred in the removal and/or reinstallation of the Signal Processor. Lanzar's total liability will not exceed the purchase price of the Signal Processor.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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