VCT2020

36Watts 2 Channel High Power MOSFET Amplifier
with Protection LED Indicator

USER GUIDE

You have purchased a quality product designed and engineered to give you many years of uncompromised musical service. ***Lanzar Vector amplifiers*** are designed with the lates technology available, which provides headroom for even the most demanding peaks and dynamic ranges found on modern CD's and recordings.

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PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY AND KEEP THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE.

Features and Specifications

Crossover Mode Selector: When used with neutral, full range system, set this switch to "**FULL**". If you wish to use the internal crossover to power a driver or specific frequency range, use the "**LPF**" or "**HPF**' for the "**L0WPASS**" or "**HIGH-PASS**" settings.

Input Level Controls: Enables the matching of input levels to the output levels from head unit (or other signal source). The input sensitivity of adjustment ranges from 6V to 200mV.

Crossover Frequency Control: When crossover mode selector is in **HIGHPASS** mode, this cantrol sets the lower frequency limit for audio program sent to the speakers. When crossover mode selector is in **LOWPASS** mode, this control sets the upper frequency limit for audio program sent to the speakers. The crossover is continously variable adjustment from 40 to 250Hz.

Bass Boost Selector: This selector switch permits the bass level an increase of 18dB.

Low Level Input: This amp features RCA type jacks for high impedance input. Use these with car stereo input which uses RCA type connector cables.

High Level Input: If your car stereo jacks are not RCA type output, use the high-low level input adaptor to connect the speaker output leads of car stereo and the RCA input jacks of amp.

AUX Line Outputs: This amp features RCA jacks for AUX line outputs. Use these for unlimited system expansion to the next amplifier.

Power LED: This indicator is illuminated in Green when power is applied.

Protection LED: This indicator is illuminated in Red when the built-in protection circuitry is activated.

Power Fuse: The fuse protects the amplifier and your car's electrical system from short circuit conditions.

Power Terminals: Use these connectors to deliver power, ground, and remote turn-ON control to the amplifier.

Speaker Connectors: These terminals are guarantee high conductivity and minimum signal loss.

Features:

- Slim Size Amplifier Design For Easy Installation
- Thermal / Overload / Short Circuit Protection
- Soft Turn On/Off
- Power & Protection LED Indicator
- Low-Level RCA Input: 20K Ohms
- Line Level RCA Output
- MOSFET Power Supply

What's in the Box:

- 2-Channel High Power Amplifier

Technical Specs:

- Construction Material: Aluminum Badge, Aluminum Heatsink Iron End Panels
- Variable Hi-Pass: 40 Hz-250 Hz
- Variable Low-Pass: 40 Hz-250 Hz
- Variable Input Level (Gain) Control: 6V-200mV
- Bass Boost Switch:0-18dB
- 36W x 2 @ 4 Ohms, 14.4V
- 2 Ohm Stable
- Frequency Response: 15 Hz-30K Hz
- Signal to Noise Ratio: >95dB
- THD:0.1 %
- 2x20 Amp Maxi Type Fuse
- Dimensions: 10.63"W x 1.78"H x 7.48"

Controls

Low level inputs

AUX line inputs

Input level control

Power/protection LED

Crossover frequency control

Crossover mode selector

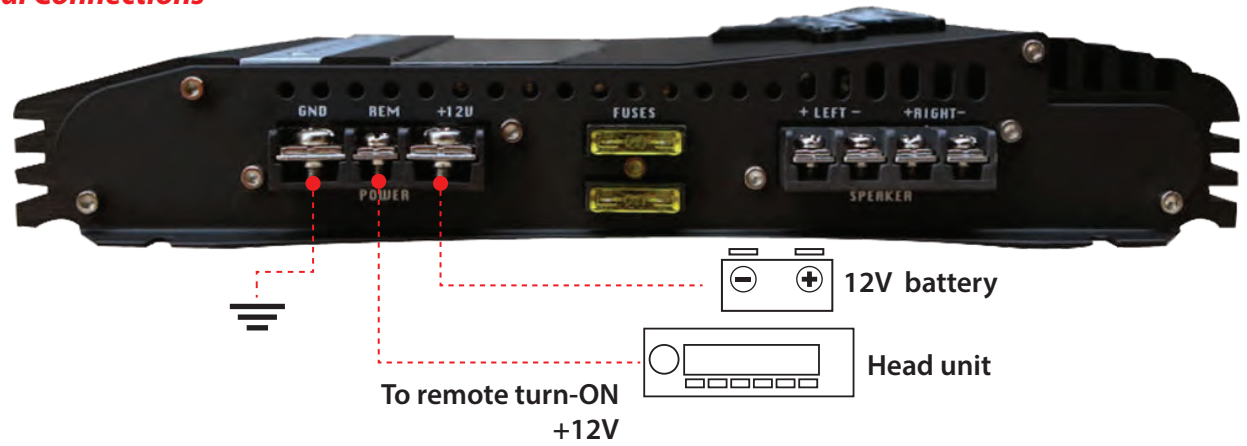
Bass boost selector

Power Terminals

Speaker connections

Power fuse

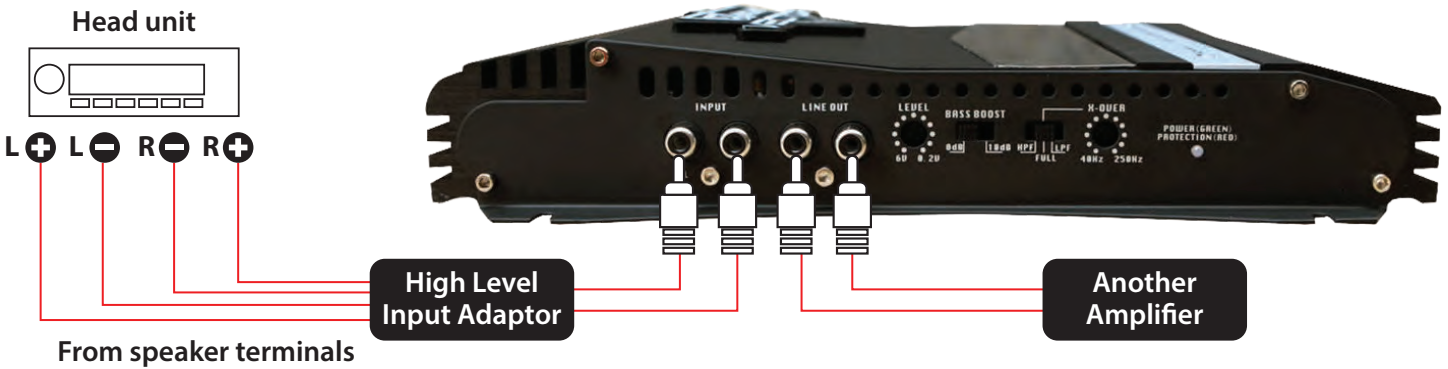
Electrical Connections



Stereo/Mono Input Connections

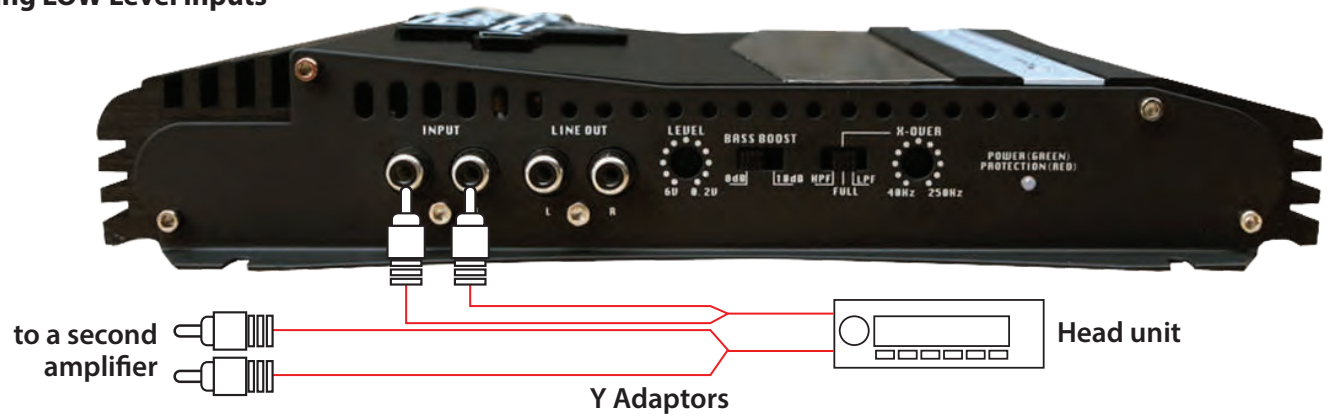
Using LOW Level Inputs

Using HIGH Level Inputs

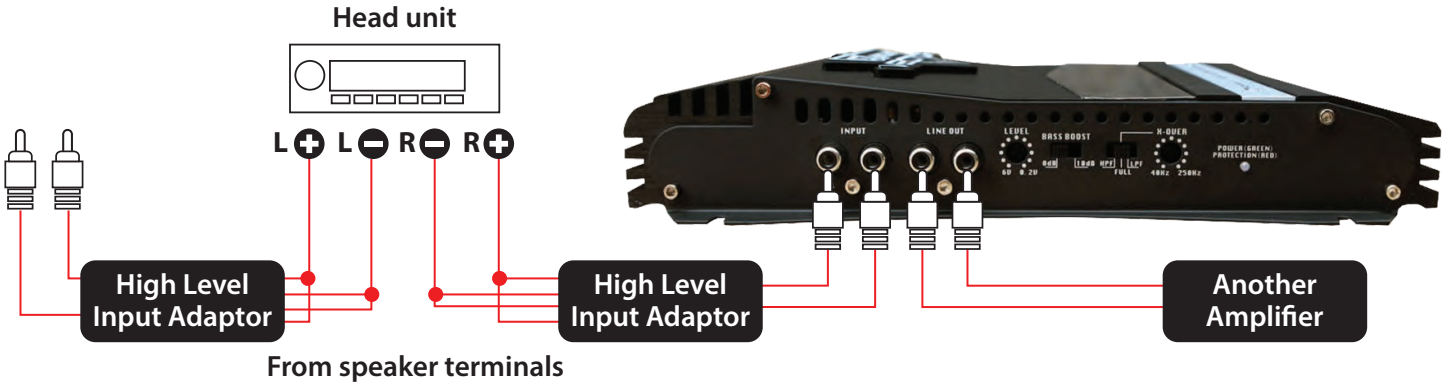


Mono Input Connections

Using LOW Level Inputs

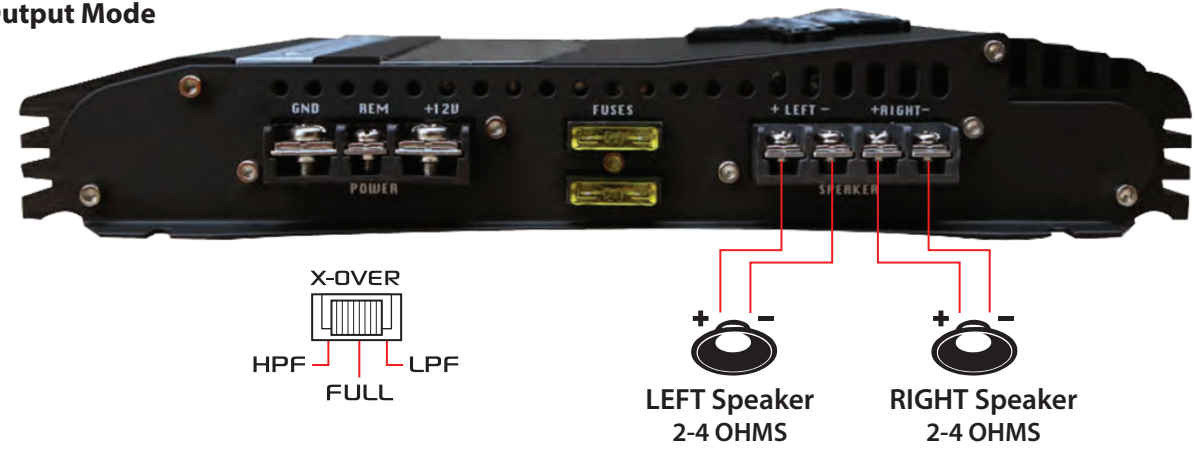


Using HIGH Level Inputs

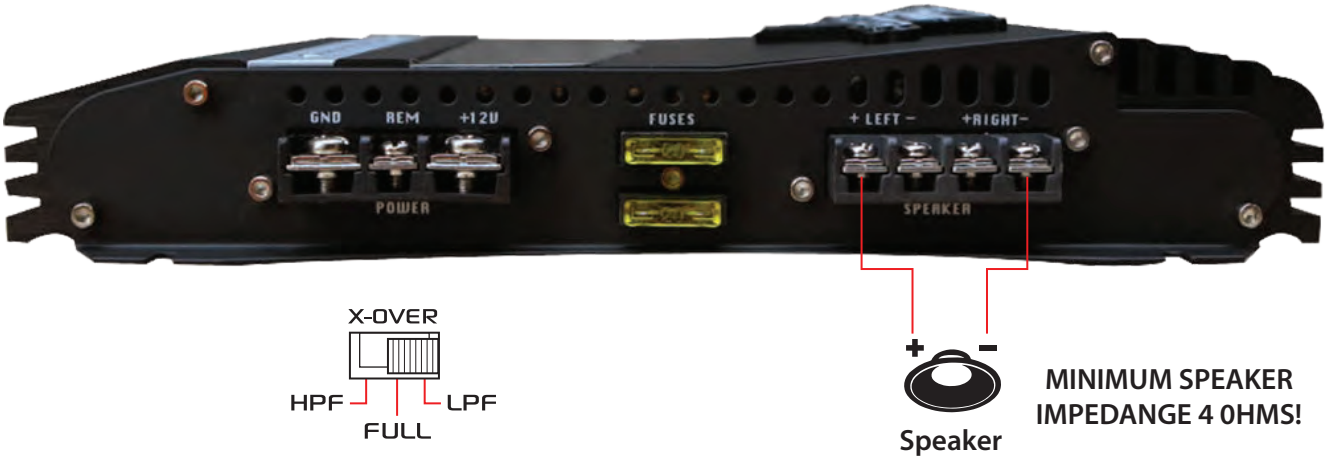


System Wiring Speaker Connections

Stereo Output Mode



Bridged Mono Output Mode



Mounting and Installation

Your new ***Lanzar Vector Amplifier*** comes complete with all required mounting hardware. When determining a suitable location in your vehicle for the amp, please remember that it is a high-power electronic device capable of generating high heat.

For this reason, **always choose a location in your vehicle which has low vibration, adequate ventilation, a minimum of dust, and no moisture.** Be sure to mount the amp in such a manner as to allow reasonable air flow over the cooling fins.

Mark the location for the mounting screw holes by positioning the amp 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 holes in the mounting surface for the mounting screws and insert them. Tighten the screws securely.

When making electrical connections to your amplifier, please observe the following:

- Use at least 8 gauge wire for power and ground connections.
- Wire the amplifier directly to the car battery.
- For the ground connection, use the shortest possible wire to a good chassis ground point.
- Wire the remote connection to the auto start lead of your head unit, equalizer or power antenna.

About Power Fuses:
Lanzar Vector amplifiers feature built-in fuse systems. These fuses protect both the amplifier and electrical system in your vehicle from fault conditions. If you ever need to replace the fuse in your amplifier, use a fuse of exactly the same type and rating. A different type or rating may result in damage or fire.

Troubleshooting

PROTECTION CIRCUITRY

The built-in protection circuitry in the ***Lanzar Vector Series amplifiers*** will disable the amplifier if it senses an input overload, a speaker short circuit, or extreme temperature conditions.
When the protection circuit is activated by any of these conditions the Protection LED will be illuminated.
If this occurs carefully inspect the system to determine the source of the problem.

- If the shutdown was a result of a thermal overload condition, allow the amplifier to cool down before attempting to restart it.
- If the shutdown was a result of an input overload, or speaker short circuit, be sure to correct the condition before restarting. The amplif ier can be restarted by turning the remote power **OFF** and then **ON** again.

No Output

Confirm that all terminal strip connections are secure and tight. Check both in-line and built-in fuses. Both the +12V and the remote terminals must have +12V referenced to chassis ground. Confirm that the audio signal source (car radio, equalizer, etc.) is connected and is supplying output signal. To check if the amp is supplying signal, unplug the cables from the signal source (but leave them plugged into the amp.) Briefly tap the center pin of each of the disconnected RCA plugs with your finger. This should produce a noise (feedback) in your speakers.

Only once channel works

Confirm that all terminal strip connections are secure and tight. Check the balance control on the head unit (or other source) to verify that it is set to its midpoint. If you are using the Low Level RCA input, reverse the input plugs at the amplifier (i.e., switch the L with the R). If the channels which is silent switches to the other side, the problem is either in the head unit/other source or the connecting cables.

Weak Output
Readjust the input level control(s) to better suit the input signal.

Noise in the Audio
If the noise is a "whine" whose pitch follows the engine speed, confirm that the amplifier and any other signal sources (head unit, etc.) are properly grounded.

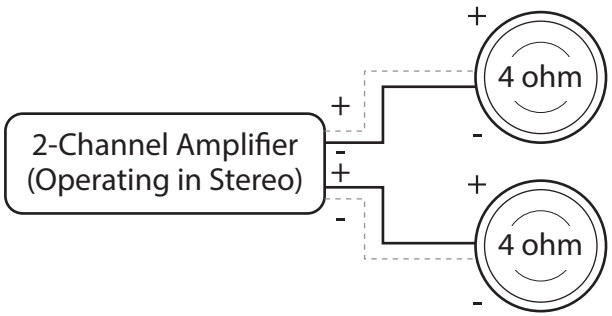
If the noise is a "clicking" or "popping" noise whose rate follows the engine speed, this usually means that the vehicle is equipped with resistor spark plugs and wires, or that the ignition is in need of service.

Check the rounting of the speaker and input wires to make sure they are not adjacent to wires which interconnect lights and other accessories.

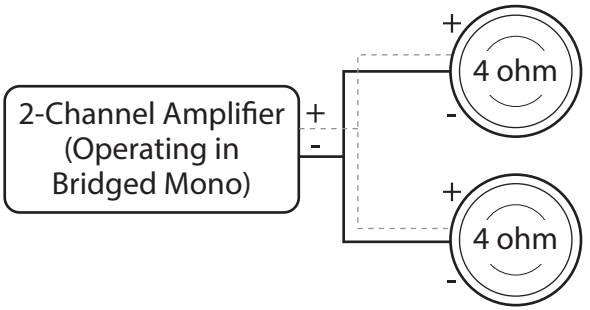
If the above steps fail to improve or clear noise interference, the system should be checked by a professional mobile audio installer.

Precautions

- Do not operate the amplif ier when it is unmounted. Attach all audio system components securely within the automobile to prevent damage, especially in an accident.
- Do nor mount this ampiif ier so thatthe wire connections are unprotected. or in a pinched condltlon or likely to be damaged by nearby objects.
- Before making or breaking power connections in your system, disconnect the vehicle battery. Confirm that your head unit or other equipment is turned off while connecting the input jacks and speaker terminals.
- If you need to replace the power fuse, do so only with a fuse identital to that supplied with the amplifier. Using a fuse of a different type or rating may result in damage that isn't covered in the manufacturer's warranty.



Two 4-ohm speakers, wired in stereo, will present a 4-ohm load to each channel of the amplifier. Most two-channel amplifiers will work well in this configuration.



Two 4-ohm speakers, wired in parallel to a bridged two-channel amplifier will present a 2-ohm mono load to the amplifier.

MOST TWO-CHANNEL AMPLIFIERS DO NOT SUPPORT 2-OHM MONO OPERATION! AMPLIFIER DAMAGE COULD RESULT!

Questions? Issues?

We are here to help!

Phone: **(1) 718-535-1800**

Email: **support@lanzar.com**