

User Manual of Product 1:

Lanzar 4-Channel High Power MOSFET Amplifier - Slim 2000
Watt Bridgeable Mono Stereo 4 Channel Car Audio Amplifier w/
Crossover Frequency&Bass; Boost Control, RCA input,Line
Output - Lanzar VCT4110

Lanzar® VECTOR

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Lanzar® VECTOR

VCT-2010
VCT-2610
VCT-4110
VCT-1500D
VCT-3000D



AMERICAN CRAFTED PERFORMANCE

Owner's Manual www.lanzar.com

congratulations...

Congratulations on your purchase of a LanzaR VECTOR series amplifier. You have purchased a quality product designed and engineered to give you many years of uncompromised musical service. VECTOR series amplifiers are designed with the latest 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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LanzaR

features and specifications

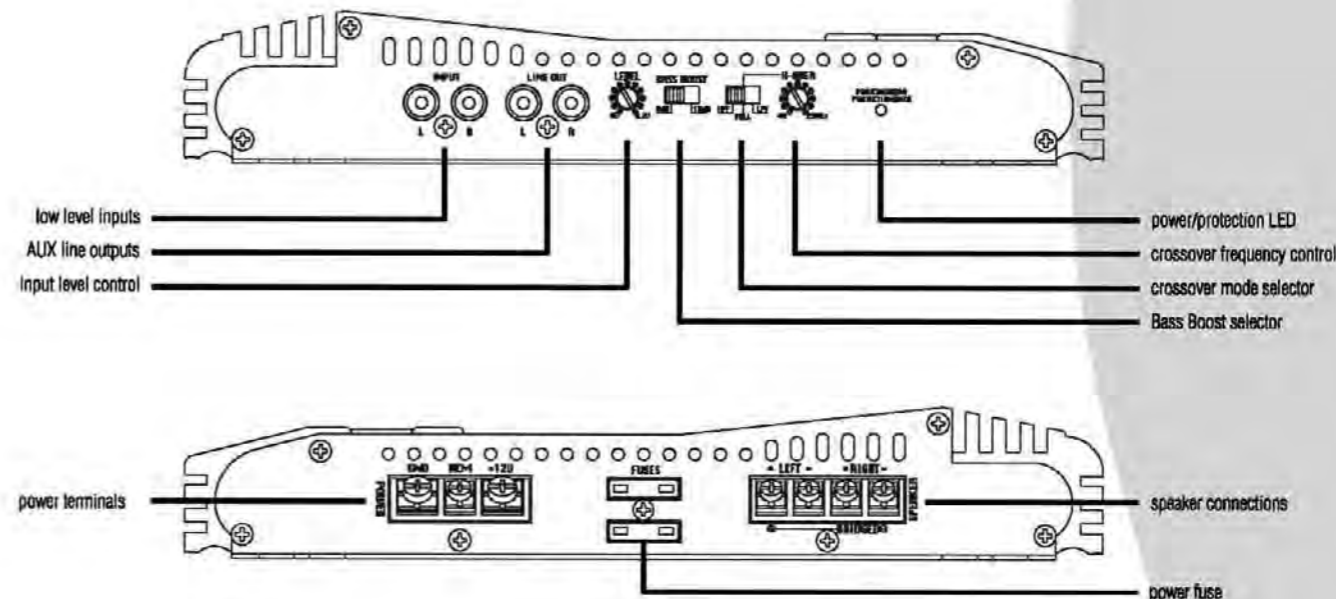
2 ch amp VCT-2010

- crossover mode selector** When used with normal, 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 "LP" or "HP" FOR the "LOWPASS" OR "HIGHPASS" 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 control 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 continuously variable adjustment from 40 to 250 Hz. This selector switch permits the bass level an increase of 18dB.
- 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 output 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 carstereo 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 VECTOR.
- 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 to guarantee high conductivity and minimum signal loss.

output power @ 14.4V DC, 1KHz	VCT-2010
RMS Power @ 4 Ohms	35 Watts x 2
THD @ 4 Ohms	45 Watts x 2
RMS Power @ 2 Ohms	70 Watts x 2
THD @ 2 Ohms	100 Watts x 2
Maximum Power Output	800 Watts
Bridged Power at 4 Output	1000 Watts
frequency response	15 Hz-30 KHz
input impedance	
low level inputs	10K Ohms
input sensitivity	
low level inputs	200mV-6V Adjustable
S/N ratio	>95dB
channel separation	>65dB
crossover filters	
low Pass	40 Hz-250 Hz
high Pass	40 Hz-250 Hz
bass boost	0 / +18dB
matching speaker impedance	
stereo mode	2-4 Ohms
bridged mode	4-8 Ohms
maximum current draw	20A x 2
power supply voltage	14.4V DC Neg. Ground (10.5-16V)
Dimensions (W x H x L)	
mm	270 x 45.2 x 190
inches	10.63 x 1.78 x 7.48

features and controls

2 ch amp VCT-2010



features and specifications

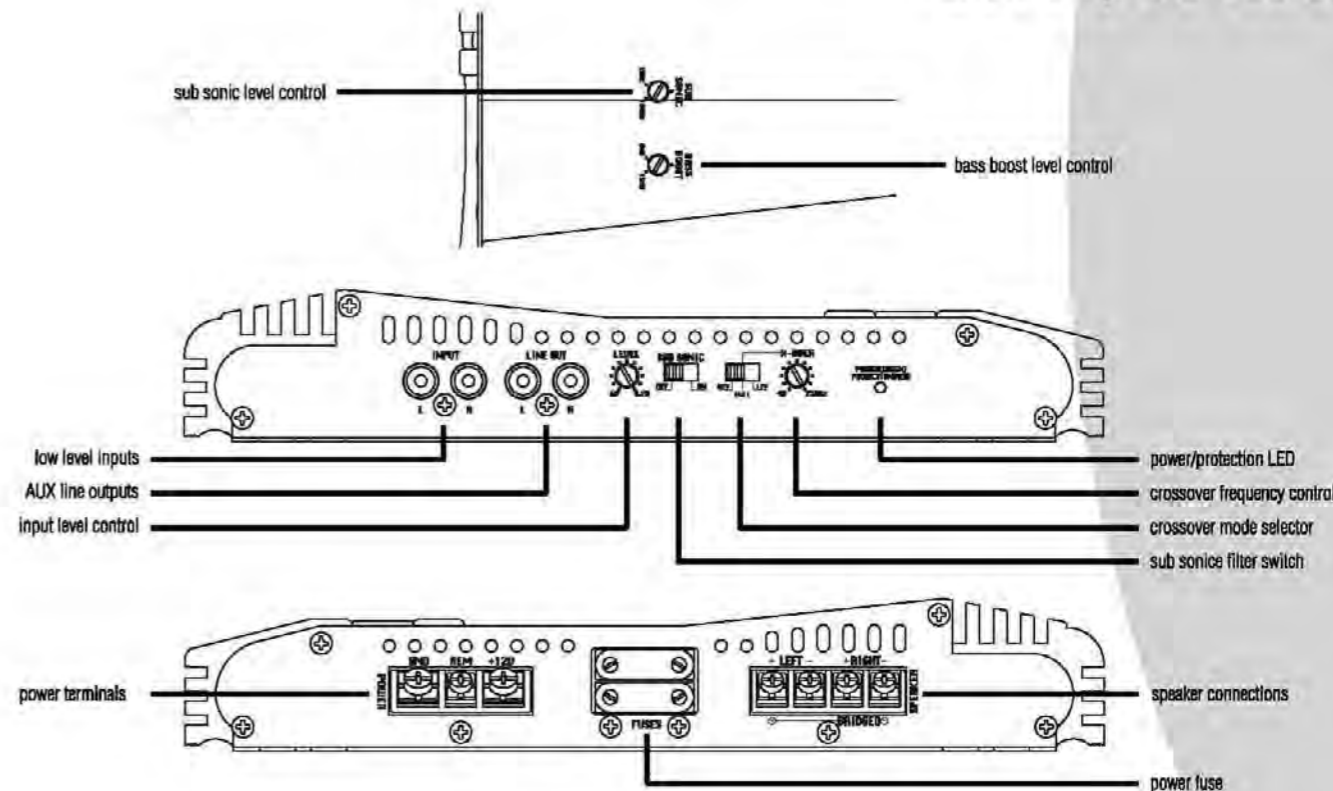
2 ch amp VCT-2610

- crossover mode selector** When used with normal, 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 "LOWPASS" OR "HIGHPASS" 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 control 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 continuously variable adjustment from 40 to 250 Hz.
- bass boost level control** This control permits adjustment of the bass level up to an increase of approximately up to 18dB.
- sub sonic control** When the sub sonic selector switch is in "ON" mode, this filter control permits continuously variable adjustment from 10 to 100Hz.
- low level input** This amp features RCA type jacks for high impedance input.
- high level input** Use these with car stereo output which uses RCA type connector cables. 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 VECTOR.
- 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 to guarantee high conductivity and minimum signal loss.

output power @ 14.4v DC, 1KHz	VCT-2610
RMS Power @ 4 Ohms	300 Watts x 2
THD @ 4 Ohms	450 Watts x 2
RMS Power @ 2 Ohms	600 Watts x 2
THD @ 2 Ohms	900 Watts x 2
Maximum Power Output	6000 Watts
Bridged Power at 4 Output	8000 Watts
frequency response	15 Hz-30 KHz
input impedance	
low level inputs	10K Ohms
input sensitivity	
low level inputs	200mV-6V Adjustable
S/N ratio	>95dB
crosstalk separation	>65dB
crossover filters	
low Pass	40 Hz-250 Hz
high Pass	40 Hz-250 Hz
bass boost	0 - +18dB
sub sonic filter	10-100 Hz
matching speaker impedance	
stereo mode	2-4 Ohms
bridged mode	4-8 Ohms
maximum current draw	60A x 2
power supply voltage	14.4V DC Neg. Ground (10.5-16V)
dimensions (W x H x L)	
mm	270 x 45.2 x 558
inches	10.63 x 1.78 x 21.97

features and controls

2 ch amp VCT-2610



features and specifications

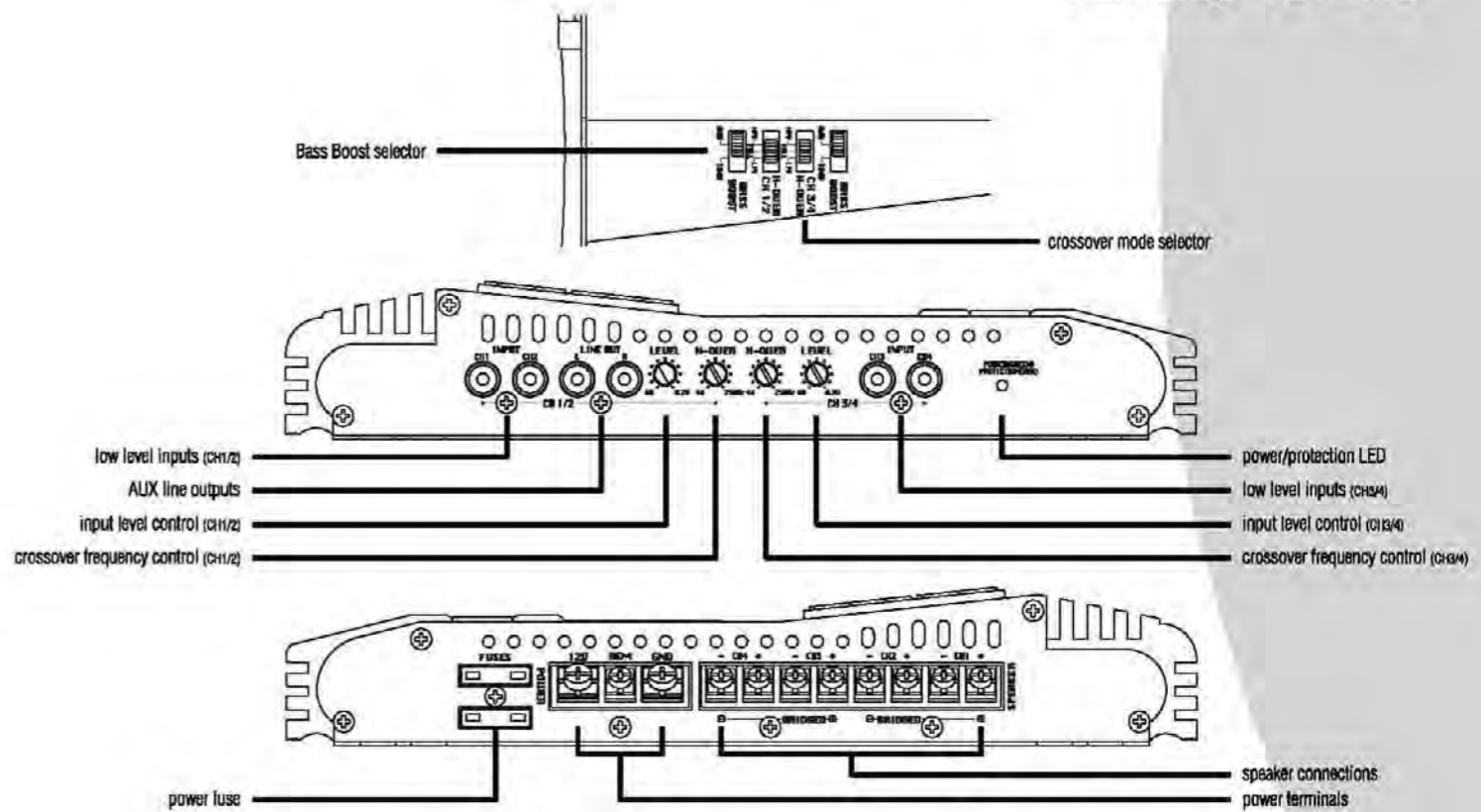
4 ch amp VCT-4110

- crossover mode selector** When used with normal, 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 "LOWPASS" OR "HIGHPASS" 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 control 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 continuously variable adjustment from 40 to 250 Hz.
- bass boost level control** This control permits adjustment of the bass level up to an increase of approximately up to 18dB.
- low level input** This amp features RCA type jacks for high impedance input. Use these with car stereo output 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 VECTOR.
- 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 to guarantee high conductivity and minimum signal loss.

output power @ 14.4V DC, 1KHz	VCT-4110
RMS Power @ 4 Ohms	50 Watts x 4
THD @ 4 Ohms	75 Watts x 4
RMS Power @ 2 Ohms	100 Watts x 4
THD @ 2 Ohms	150 Watts x 4
Maximum Power Output	2000 Watts
Bridged Power at 4 Output	4000 Watts
frequency response	15 Hz-30 Hz
input impedance	10K Ohms
low level inputs	200mV-6V Adjustable
input sensitivity	>95dB
SN ratio	>65dB
crosstalk separation	
crossover filters	
low Pass	40 Hz-250 Hz
high Pass	40 Hz-250 Hz
switching speaker impedance	
stereo mode	2-16 Ohms
bridged mode	4-16 Ohms
maximum current draw	30A x 2
power supply voltage	14.4V DC Neg. Ground (10.5-16V)
dimensions (W x H x L)	
mm	270 x 45.2 x 356
inches	10.63 x 1.78 x 14.02

features and controls

4 ch amp VCT-4110



features and specifications

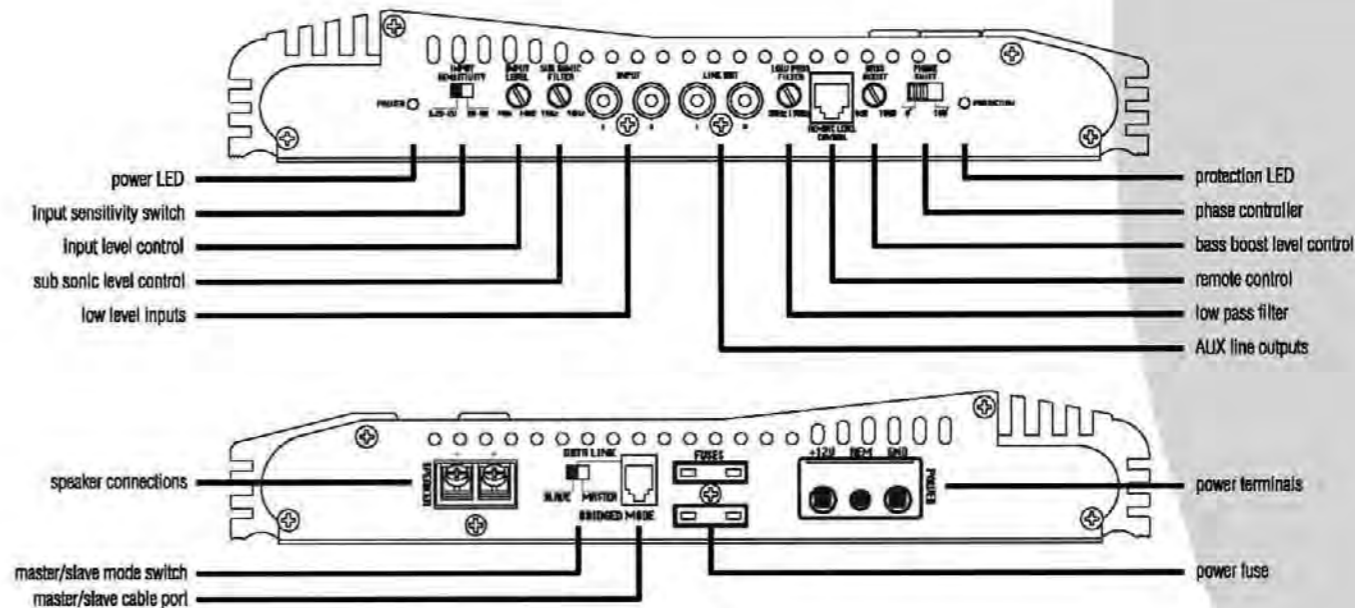
1 ch amp VCT-I5000

features and controls

1 ch amp VCT-I5000

- input level controls** Enables the matching of input levels to the output levels from head unit (or other signal source).
- bass boost level control** This control permits adjustment of the bass level up to an increase of approximately up to 18dB.
- sub sonic control** Variable adjustment from 15 to 40Hz.
- low level input** This amp features RCA type jacks for high impedance input. Use these with car stereo output which uses RCA type connector cables.
- input sensitivity** The input sensitivity of adjustment ranges from 0V to 200mV.
- low pass filter** Variable adjustment from 50 to 150Hz.
- remote control** Adjust the low pass signal via the enclosed remote control.
- phase controller** Shift allows 0 degrees 180 degrees.
- AUX line outputs** This amp features RCA jacks or AUX line outputs. Use these for unlimited system expansion to the next VECTOR.
- 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.
- master/slave cable port** MASTER/SLAVE signal cable.
- master/slave mode switch** In the SLAVE-Mode the amplifier works as a SLAVE amp, this means only the audiosignal of the MASTER amp will be amplified. All controllers on the SLAVE Amp are without function and will be assumed by the MASTER amp. In the MASTER-Mode (Low Pass mode) you are able to limit the frequencies to above with the LOW PASS controller. All controllers are active. The fuse protects the amplifier and your car's electrical system from short circuit conditions.
- 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 to guarantee high conductivity and minimum signal loss.

output power @ 14.4V DC, 1kHz	VCT-15000
RMS Power @ 4 Ohms	300 Watts x 1
THD @ 4 Ohms	450 Watts x 1
RMS Power @ 2 Ohms	450 Watts x 1
THD @ 2 Ohms	650 Watts x 1
RMS Power @ 1 Ohms	500 Watts x 1
THD @ 1 Ohms	1000 Watts x 1
Maximum Power Output	1500 Watts x 1
frequency response	15 Hz-150 Hz
input impedance	
low level inputs	10K Ohms
input sensitivity	0.2V-8V
low level inputs	200mV-8V Adjustable
S/N ratio	>95dB
channel separation	>65dB
crossover filters	
low Pass	50 Hz-150 Hz
bass boost	0 - +18dB
sub sonic filter	15-40 Hz
matching speaker impedance	
stereo mode	2-8 Ohms
bridged mode	1-8 Ohms
maximum current draw	30A x 2
power supply voltage	14.4V DC Neg. Ground (10.5-16V)
dimensions (W x H x L)	
mm	270 x 45.2 x 308
inches	10.63 x 1.78 x 12.13



features and specifications

1 ch amp VCT-3000D

features and controls

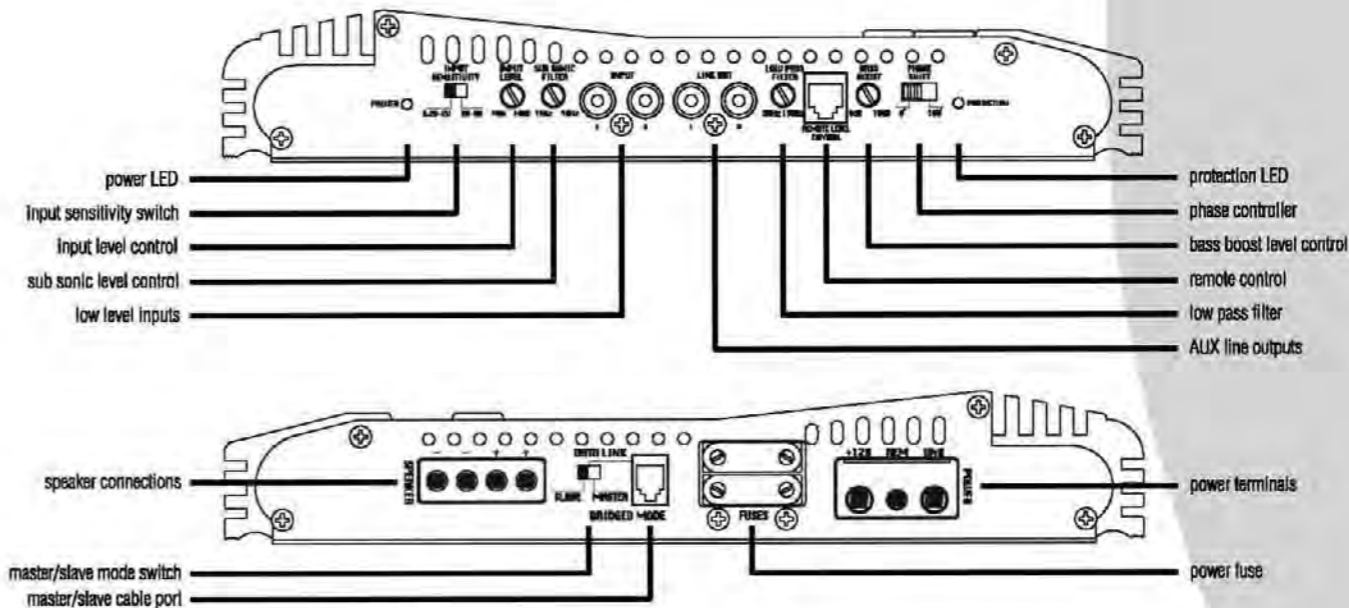
1 ch amp VCT-3000D

- input level controls** Enables the matching of input levels to the output levels from head unit (or other signal source).
- bass boost level control** This control permits adjustment of the bass level up to an increase of approximately up to 18dB.
- sub sonic control** Variable adjustment from 15 to 40Hz.
- low level input** This amp features RCA type jacks for high impedance input. Use these with car stereo output which uses RCA type connector cables.
- input sensitivity** The input sensitivity of adjustment ranges from 0V to 200mV.
- low pass filter** Variable adjustment from 50 to 150Hz.
- remote control** Adjust the low pass signal via the enclosed remote control.
- phase controller** Shift allows 0 degrees 180 degrees.
- AUX line outputs** This amp features RCA jacks or AUX line outputs. Use these for unlimited system expansion to the next VECTOR.
- 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.
- master/slave cable port** MASTER/SLAVE signal cable.
- master/slave mode switch** In the SLAVE-Mode the amplifier works as a SLAVE amp, this means only the audiosignal of the MASTER amp will be amplified. All controllers on the SLAVE Amp are without function and will be assumed by the MASTER amp. In the MASTER-Mode (Low Pass mode) you are able to limit the frequencies to above with the LOW PASS controller. All controllers are active.
- 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 to guarantee high conductivity and minimum signal loss.

output power @ 14.4V DC, 1kHz

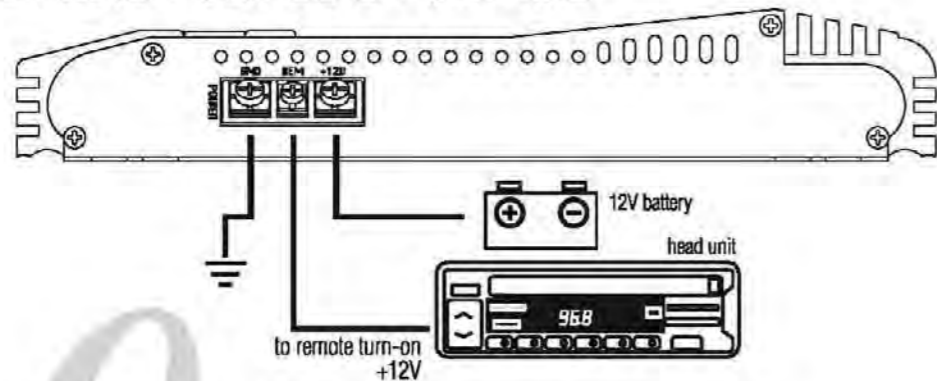
VCT-3000D

RMS Power @ 4 Ohms	500 Watts x 1
THD @ 4 Ohms	650 Watts x 1
RMS Power @ 2 Ohms	650 Watts x 1
THD @ 2 Ohms	850 Watts x 1
RMS Power @ 1 Ohm	1000 Watts x 1
THD @ 1 Ohm	2000 Watts x 1
Maximum Power Output	3000 Watts x 1
frequency response	15 Hz-150 Hz
input impedance	
low level inputs	10K Ohms
input sensitivity	0.2V-8V
low level inputs	200mV-8V Adjustable
S/N ratio	>95dB
channel separation	>65dB
crossover filters	
low Pass	50 Hz-150 Hz
bass boost	0 - +18dB
sub sonic filter	15-40 Hz
matching speaker impedance	
stereo mode	2-8 Ohms
bridged mode	1-8 Ohms
maximum current draw	50A x 2
power supply voltage	14.4V DC Neg. Ground (10.5-16V)
dimensions (W x H x L)	
mm	270 x 45.2 x 360
inches	10.63 x 1.78 x 14.17

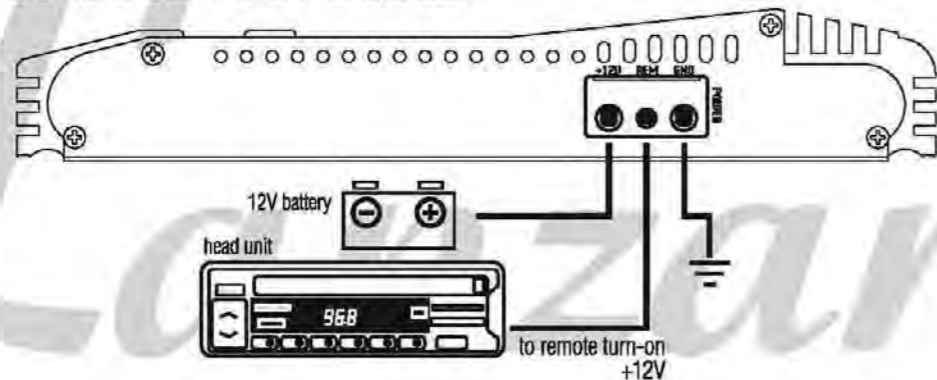


electrical connections

VCT-2010 • VCT-2610 • VCT-4110



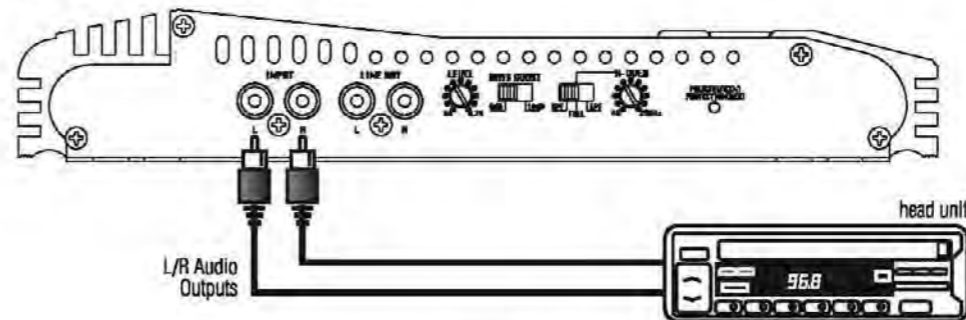
VCT-15000 • VCT-30000



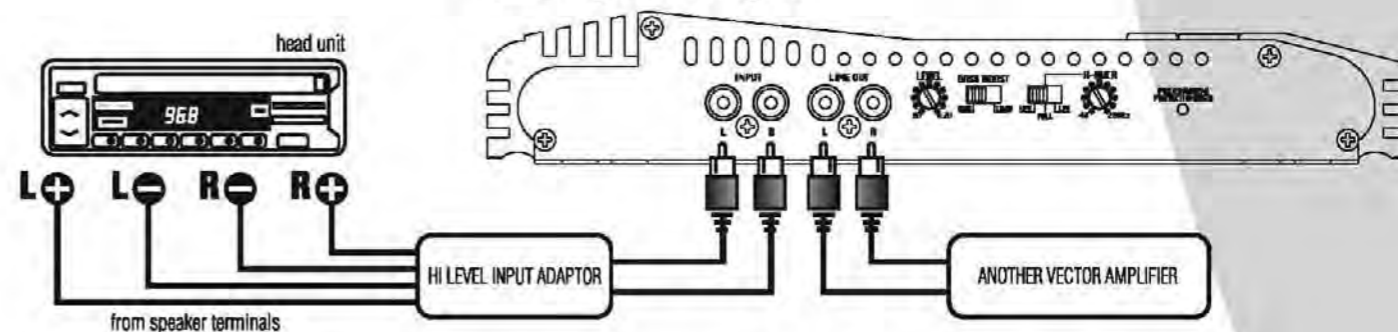
stereo input connections

2 ch amp • VCT-2010

using low level inputs



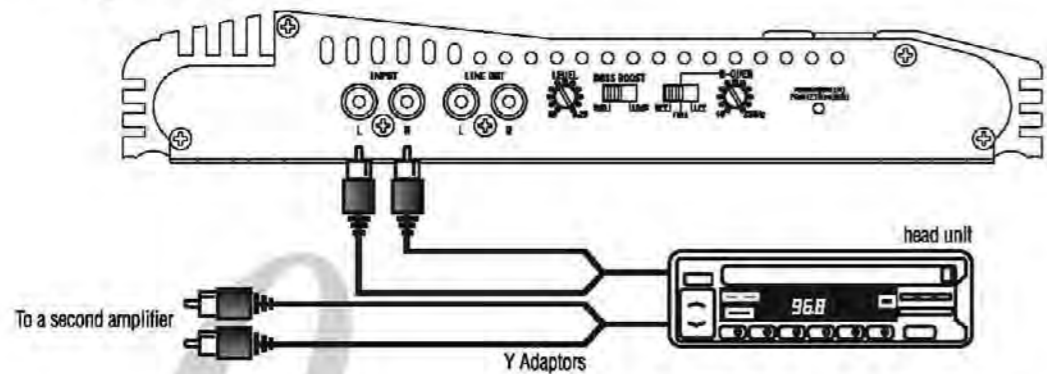
using high level inputs



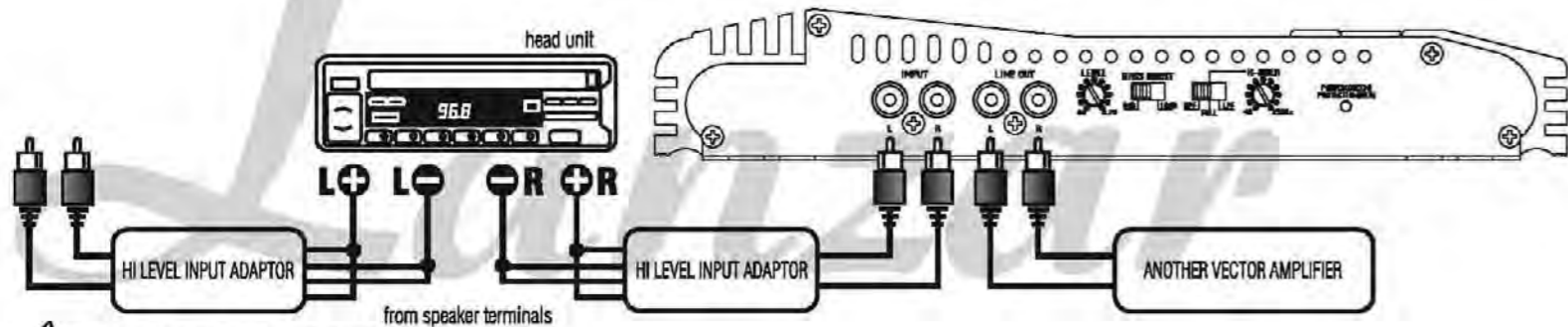
mono input connections

2 ch amp • VCT-2010

using low level inputs



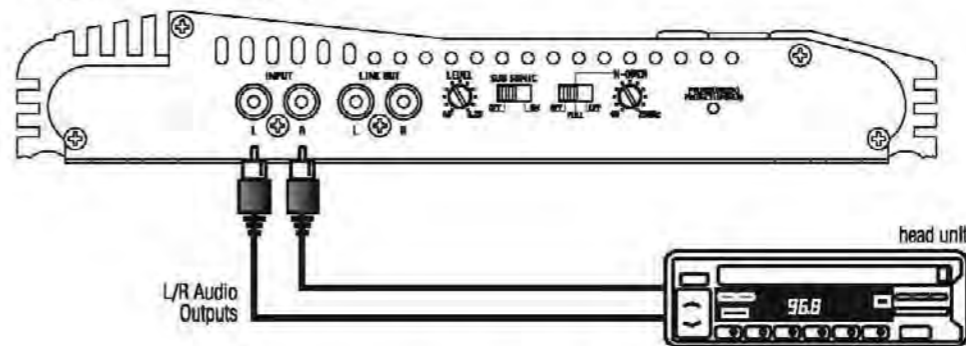
using high level inputs



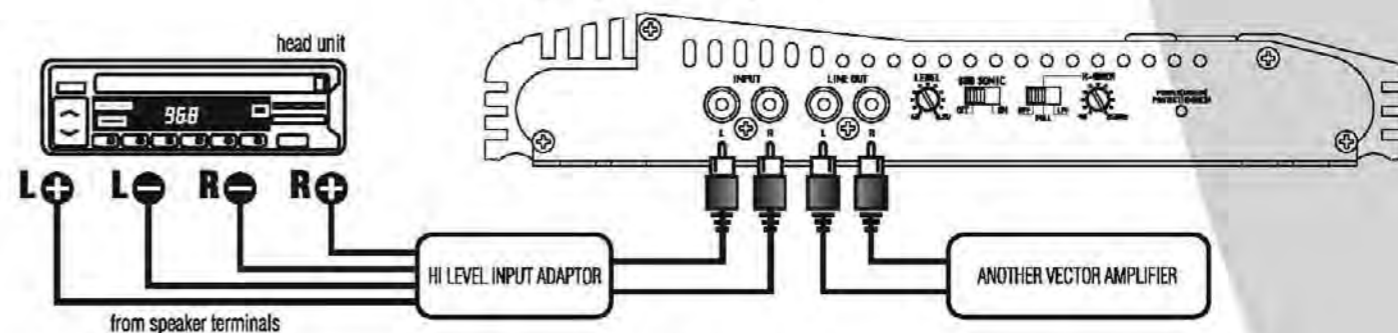
stereo input connections

2 ch amp • VCT-2610

using low level inputs



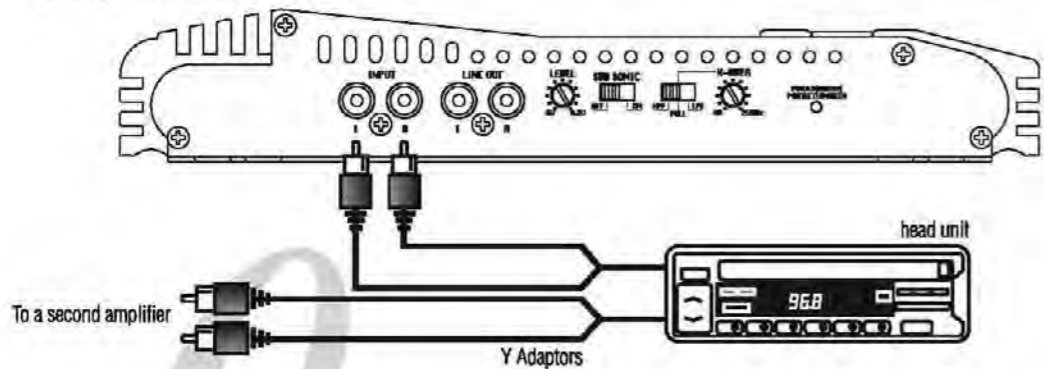
using high level inputs



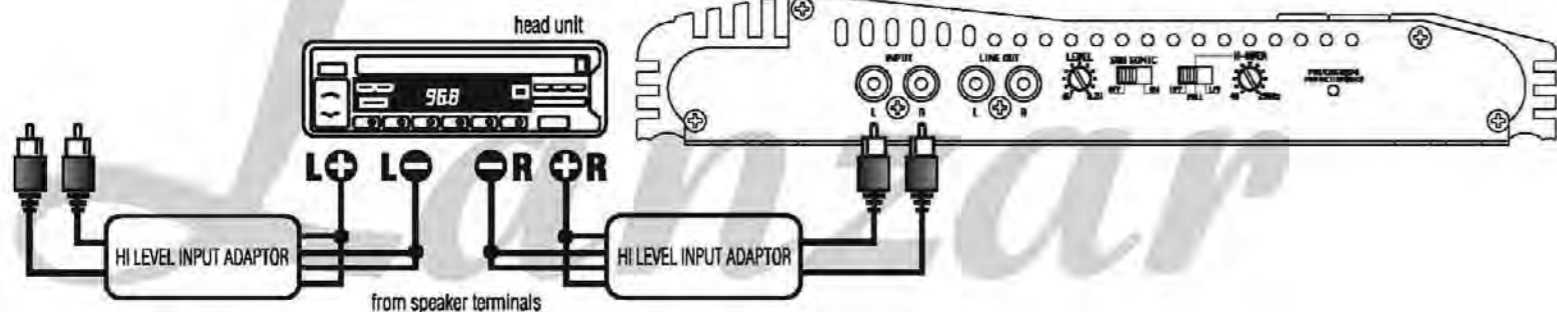
mono input connections

2 ch amp • VCT-2610

using low level inputs



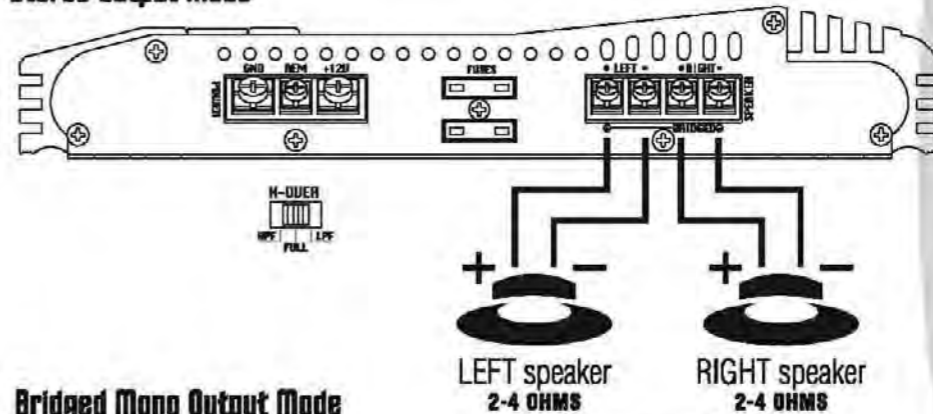
using high level inputs



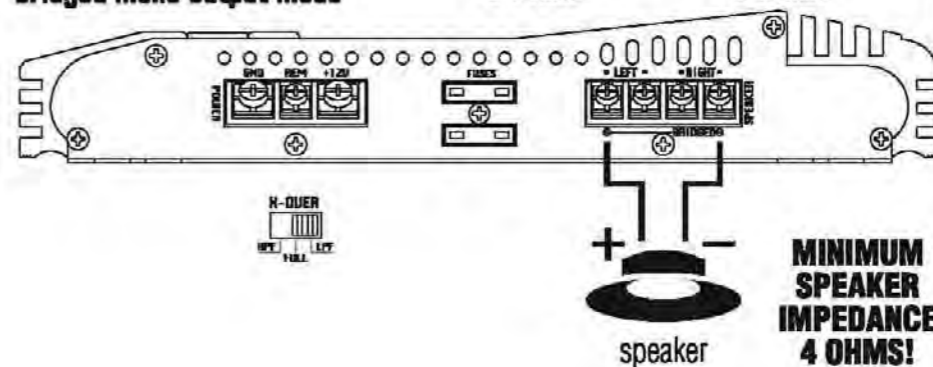
speaker connections

2 ch amp • VCT-2010 • VCT-2610

Stereo Output Mode



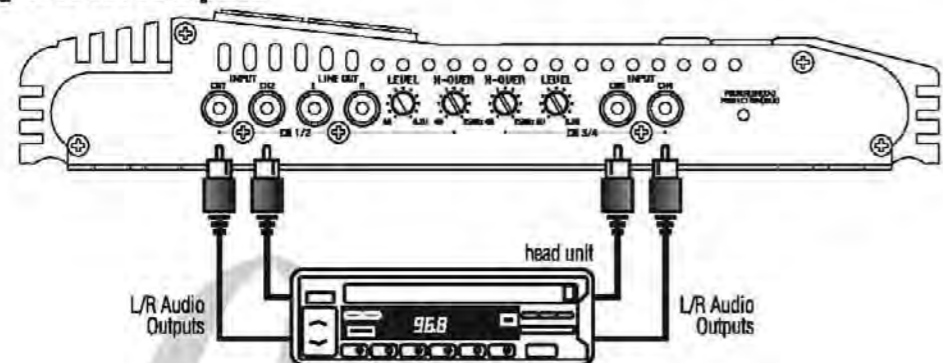
Bridged Mono Output Mode



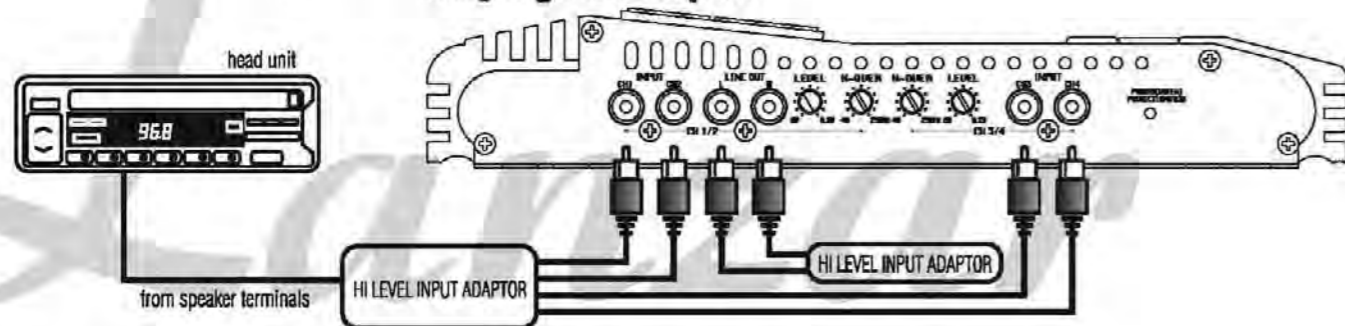
input connections

4 ch amp VCT-4110

using low level inputs



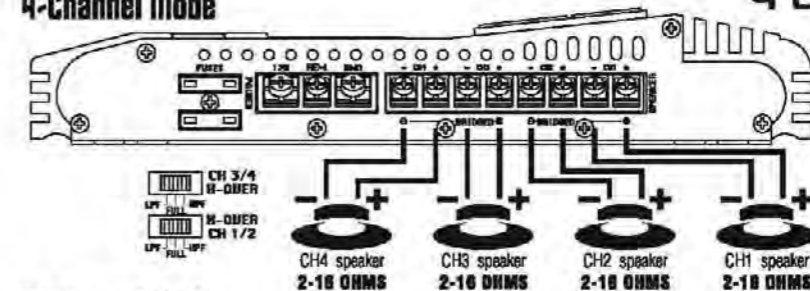
using high level inputs



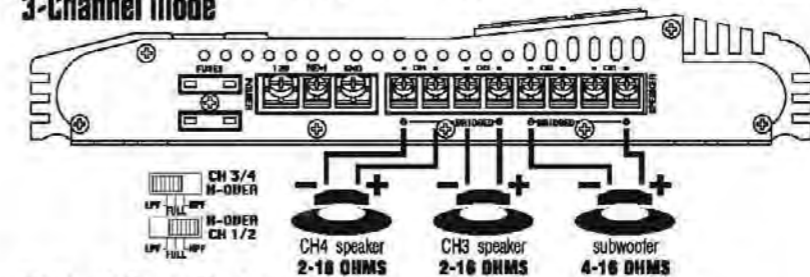
speaker connections

4 ch amp VCT-4110

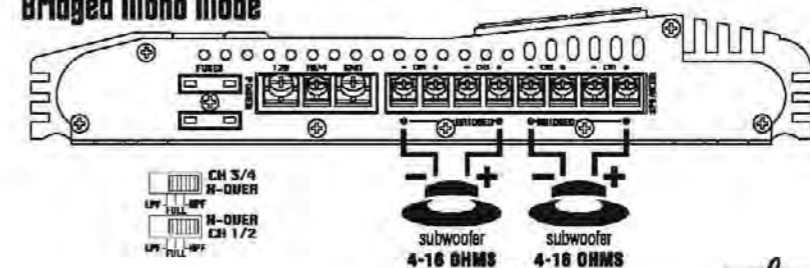
4-Channel Mode



3-Channel Mode



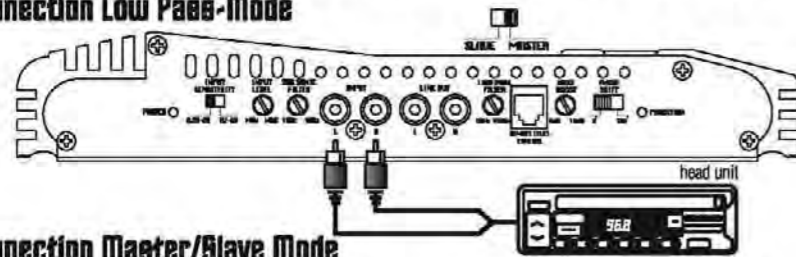
Bridged Mono Mode



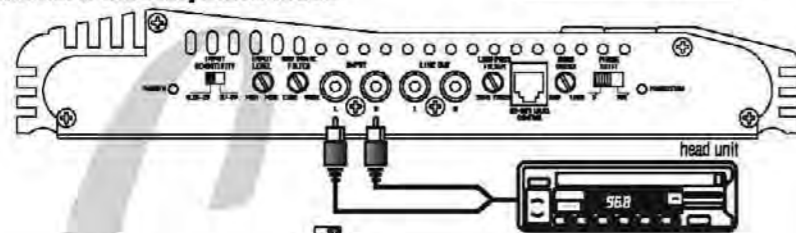
mono input connections

1 ch amp VCT-1500D • VCT-3000D

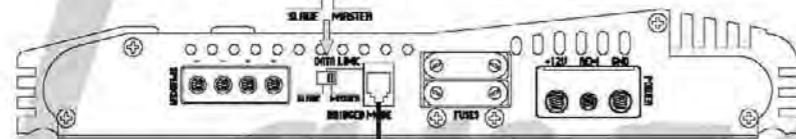
Interconnection Low Pass-Mode



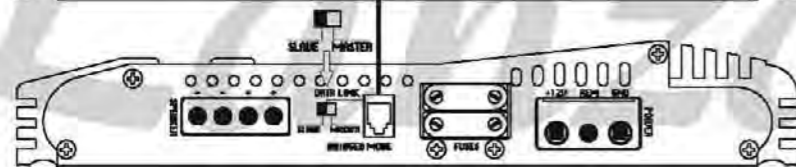
Interconnection Master/Slave Mode



Master



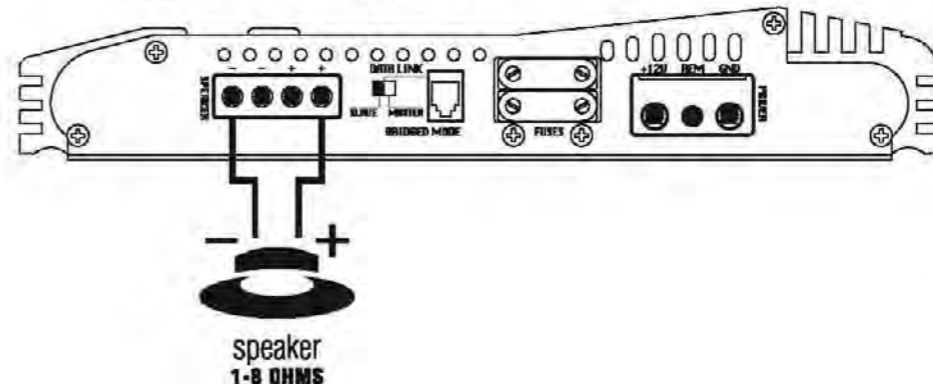
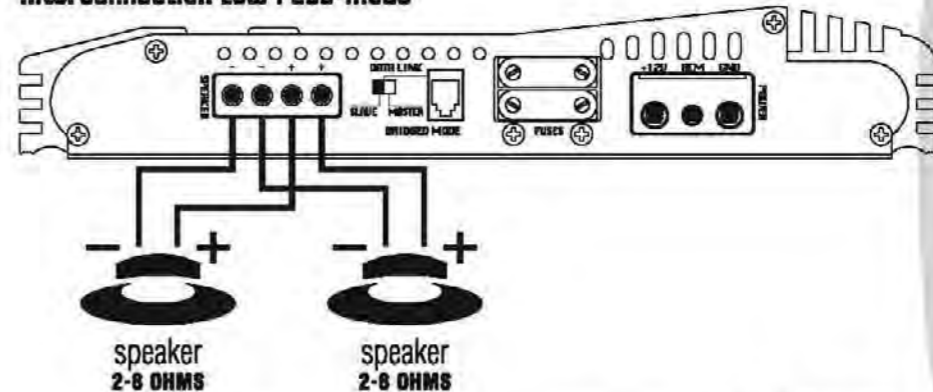
Slave



speaker connections

1 ch amp VCT-1500D • VCT-3000D

Interconnection Low Pass-Mode

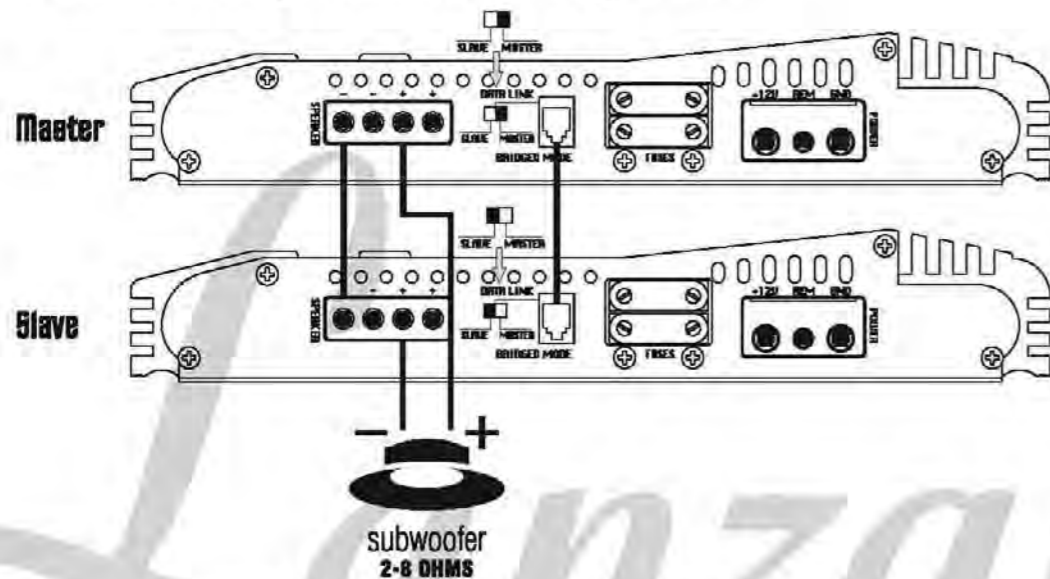


speaker connections

1 ch amp VCT-1500D • VCT-3000D

Interconnection Master/Slave Mode

Interconnection example 1 subwoofer with a single-Voicecoil

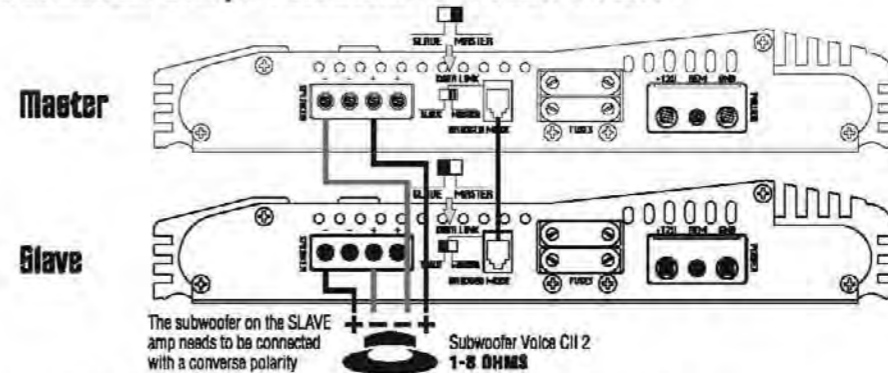


speaker connections

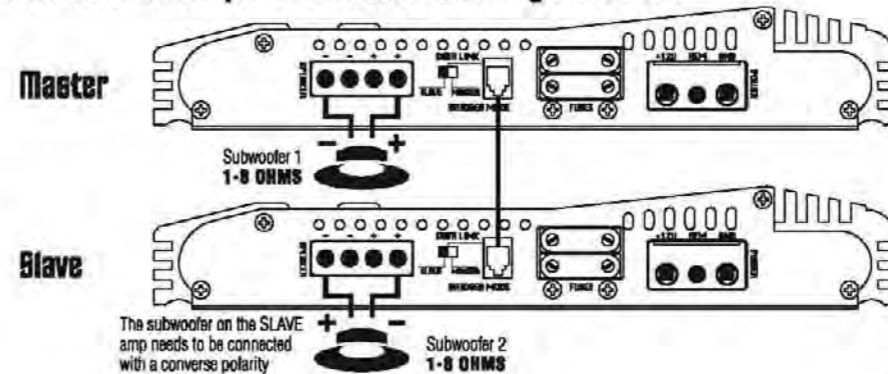
1 ch amp VCT-1500D • VCT-3000D

Interconnection Master/Slave Mode

Interconnection example 1 subwoofer with a Dual-Voicecoil



Interconnection example 2 subwoofer with Single-Voicecoil



mounting and installation

Your new Lanza Vector Series 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 airflow 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:

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

troubleshooting

protection circuitry

The built-in protection circuitry in the Lanza 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 amplifier 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 one 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 routing 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 amplifier when it is unmounted. Attach all audio system components securely within the automobile to prevent damage, especially in an accident.

Do not mount this amplifier so that the wire connections are unprotected, or in a pinched condition, 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 identical 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.

