

GS AUDIO

OWNER'S MANUAL

CAR AUDIO SYSTEM

PLEASE READ CAREFULLY BEFORE INSTALLING
OR OPERATING THIS UNIT



VULTUR SERIES

2CH AMPLIFIERS

GS-2.2000VLT

GS-2.2000VLT24

1CH AMPLIFIERS

GS-1.3200VLT

GS-1.5500VLT

GS-1.9000VLT

GS-1.13500VLT

WARNING

Make sure you choose a suitable place to mount the unit. The position should be completely dry with a good circulation of air, and from a mechanical point of view very stable.

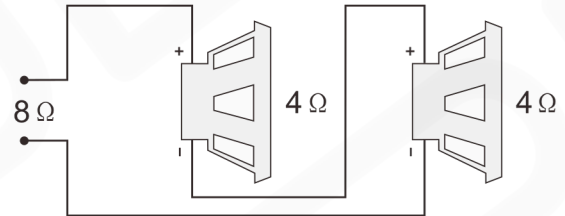
System planning

Proper system planning is the best way to maximize your amplifier performance. By planning your installation carefully you can avoid situations where the performance or the reliability of your system is compromised. Your authorized dealer has been trained to maximize your system's sonic potential. Your dealer is a valuable resource in helping you with your system design and installation.

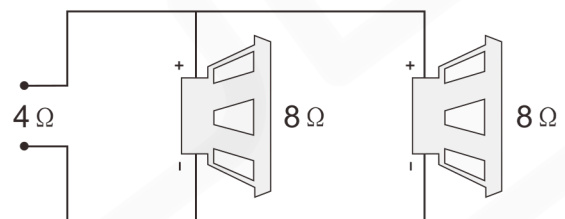
Speaker requirements

Each channel of your amplifier can easily drive 4Ω speaker loads when used in the stereo mode. When a channel-pair is bridged, the recommended minimum load impedance is 3Ω for subwoofer use, and 4Ω for full range operation. Although operation with lower impedances is not likely to cause immediate damage to the internal circuitry, the unit will most likely overheat, causing the thermal protection circuitry to shut down the amplifier. When the chassis cools down, normal operation will resume. Continuing to operate the amplifier under these conditions is not recommended and will reduce its life expectancy.

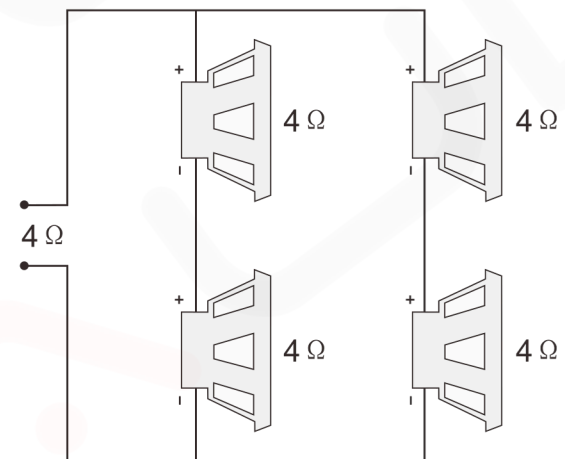
Most speakers designed for car audio operation are 4Ω impedance. Connecting two such speakers in parallel will result in a 2Ω impedance load as seen by the amplifier. Some subwoofer models feature a dual 4Ω voice coil design. Connecting these voice coils in parallel will result in a 2Ω nominal impedance, which is not recommended for use with bridged channels of your amplifier.



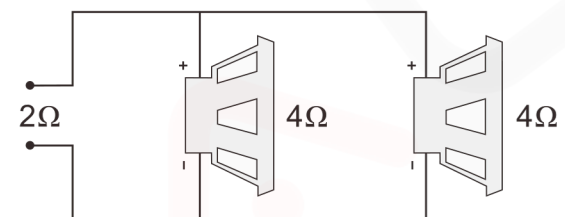
Series wiring



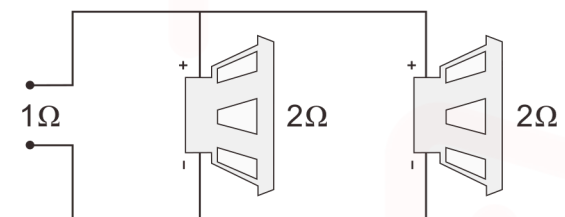
Parallel wiring



Series/parallel wiring

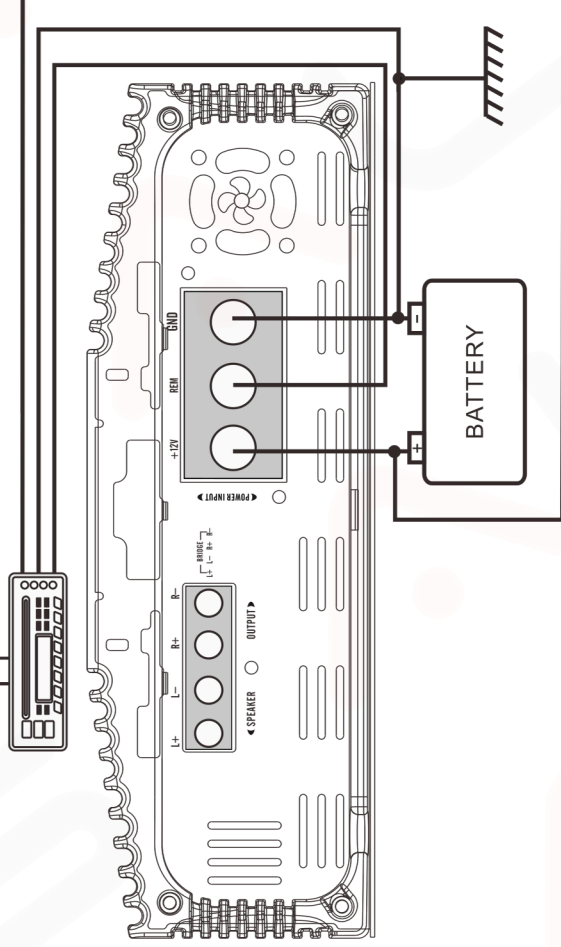
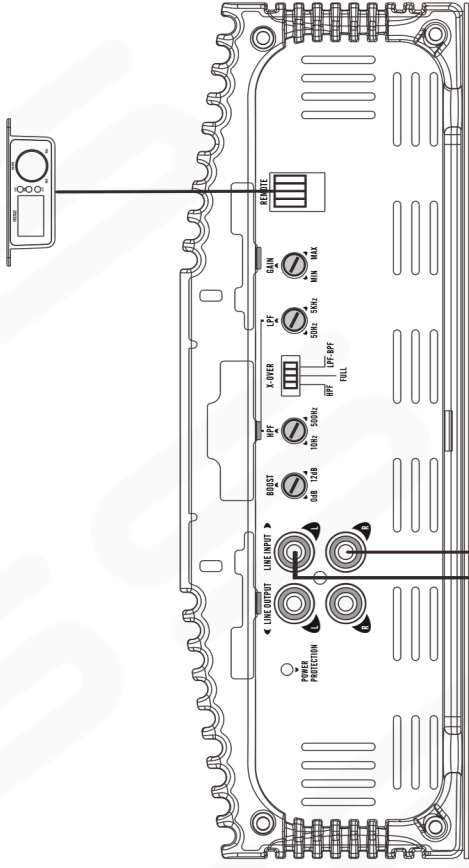


Series/parallel wiring

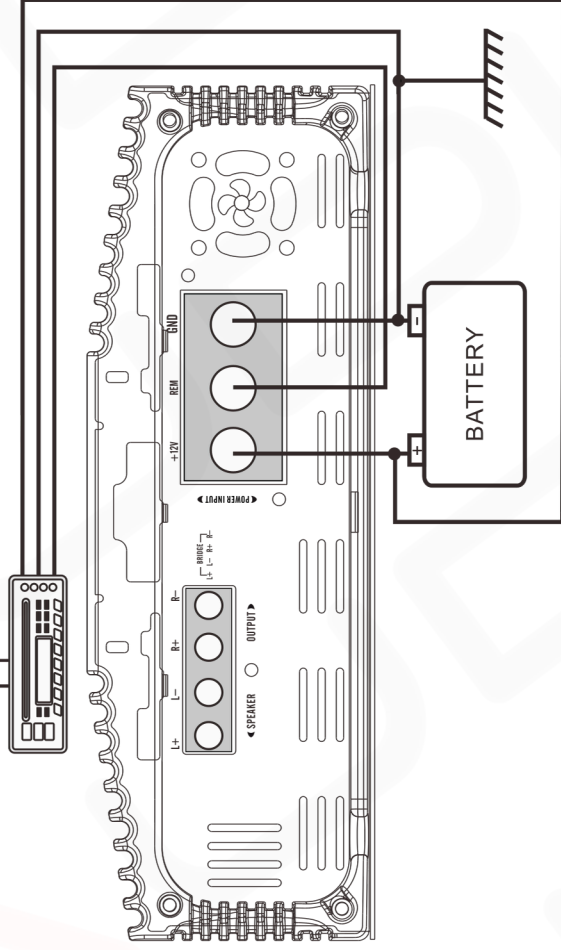
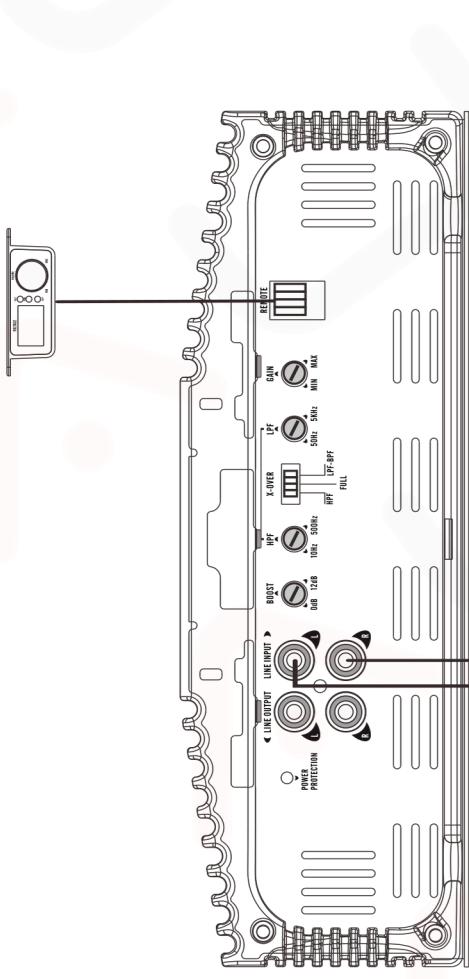


Parallel wiring

Power Connection Leads



GS-2.2000VLT



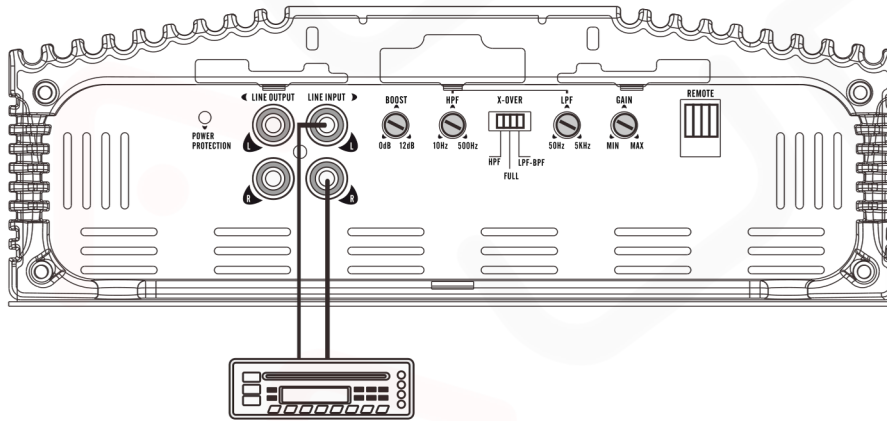
GS-2.2000VLT24

GS-2.2000VLT

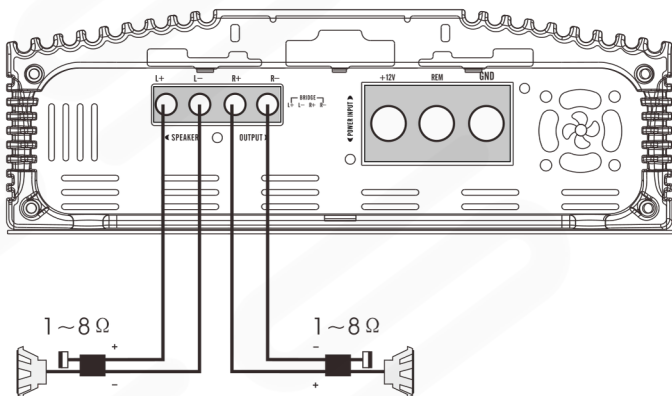
SPEAKER CONNECTION LEADS

During a full power operation, Maximum current will run through the system. Therefore. Make sure the that the leads to be connected to the +12v and GND terminals of the unit respectively must be larger than 8-Gauge(AWG.8).

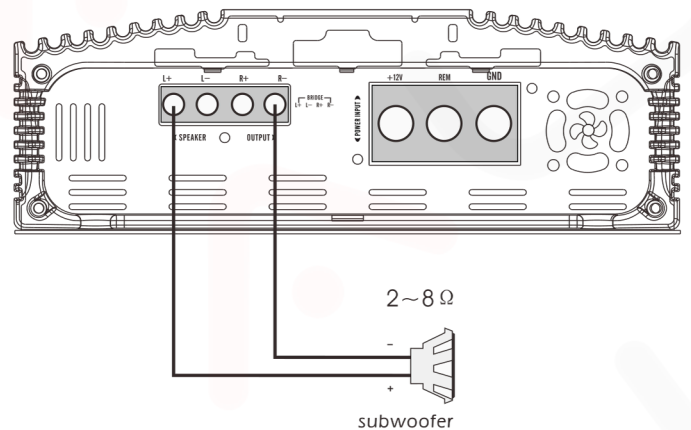
CONNECTION :



2-CHANNEL MODE:



BRIDGED CONNECTION SUBWOOFER:

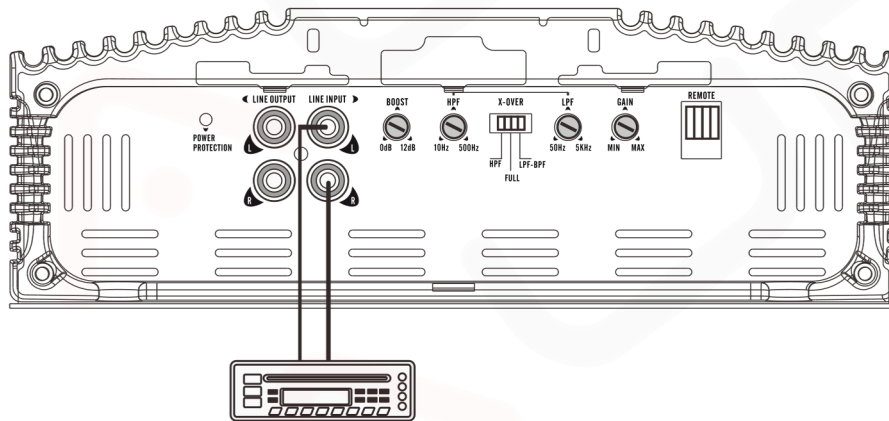


GS-2.2000VLT24

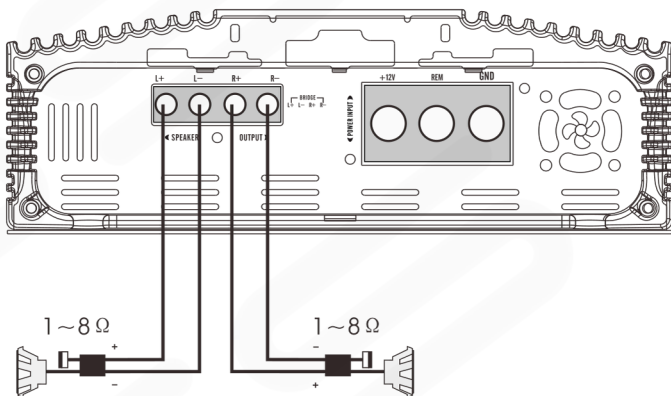
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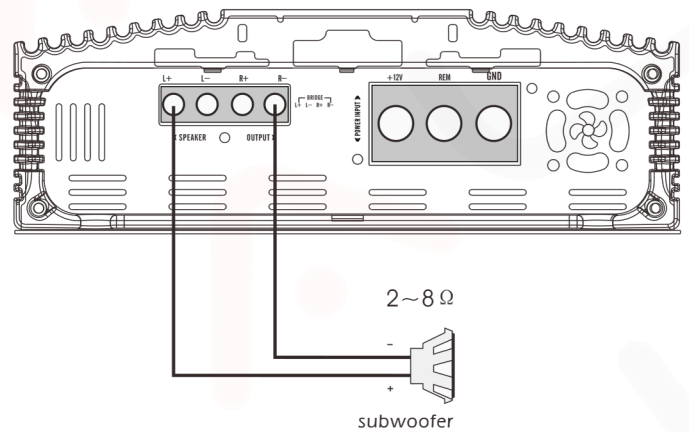
CONNECTION :



2-CHANNEL MODE:



BRIDGED CONNECTION SUBWOOFER:

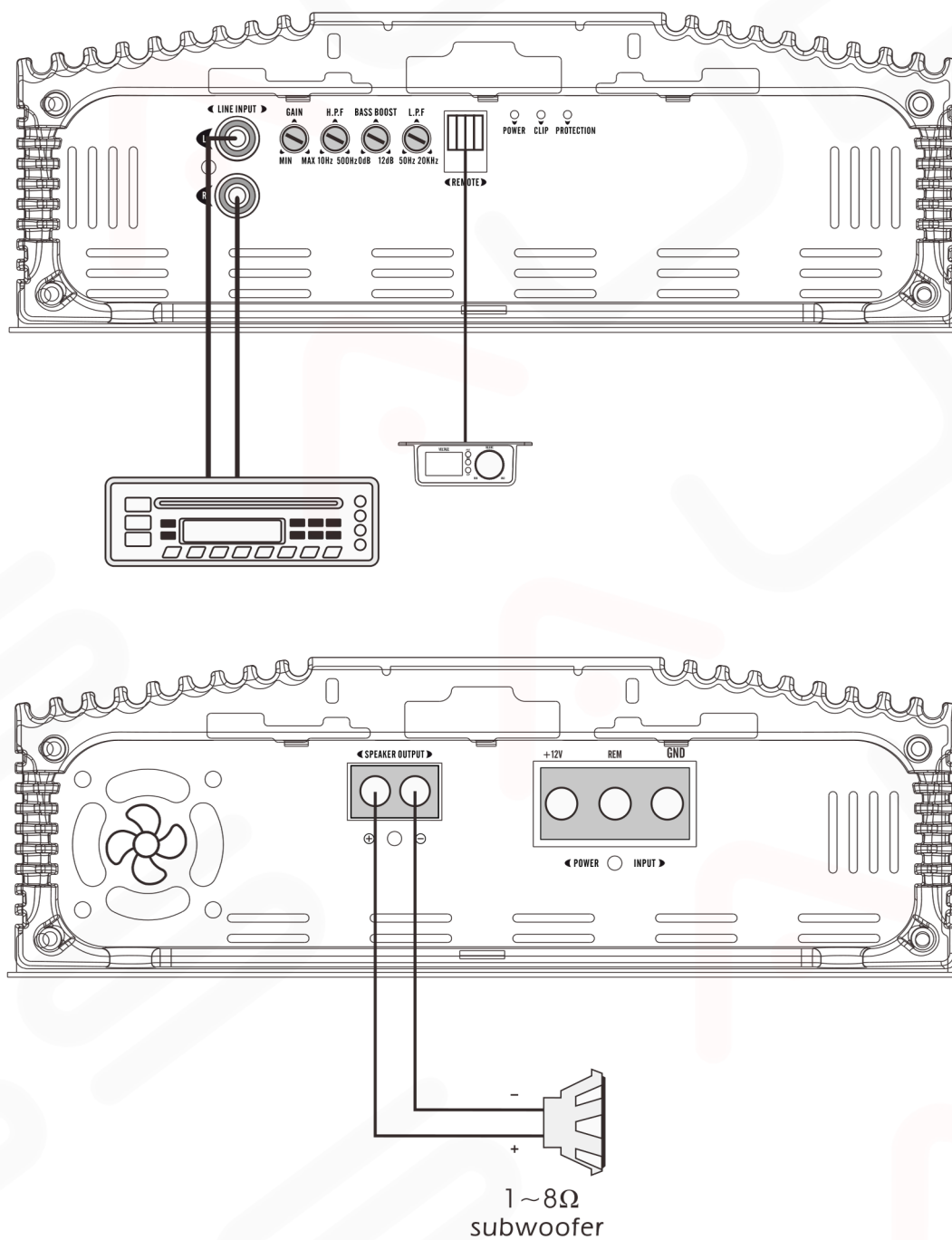


GS-1.3200VLT

SPEAKER CONNECTION LEADS

During a full power operation, Maximum current will run through the system. Therefore. Make sure the that the leads to be connected to the +12v and GND terminals of the unit respectively must be larger than 8-Gauge(AWG.8).

CONNECTION 1: 1-CHANNEL MODE

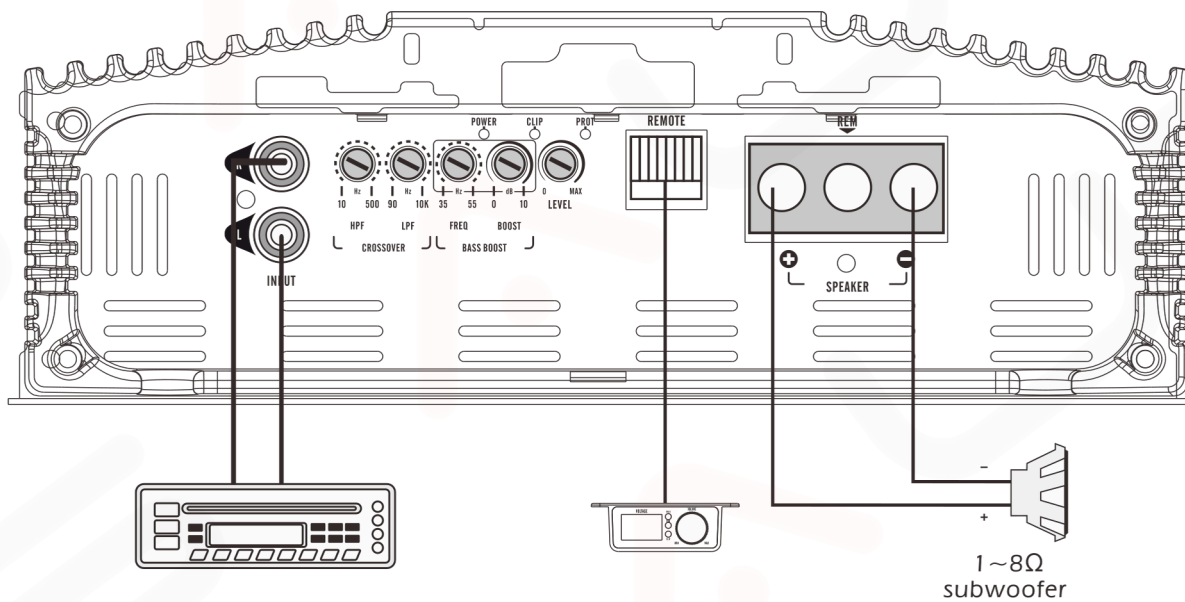


GS-1.5500VLT/GS-1.9000VLT

SPEAKER CONNECTION LEADS

During a full power operation, Maximum current will run through the system. Therefore, Make sure the that the leads to be connected to the +12v and GND terminals of the unit respectively must be larger than 8-Gauge(AWG.8).

CONNECTION 1: 1-CHANNEL MODE

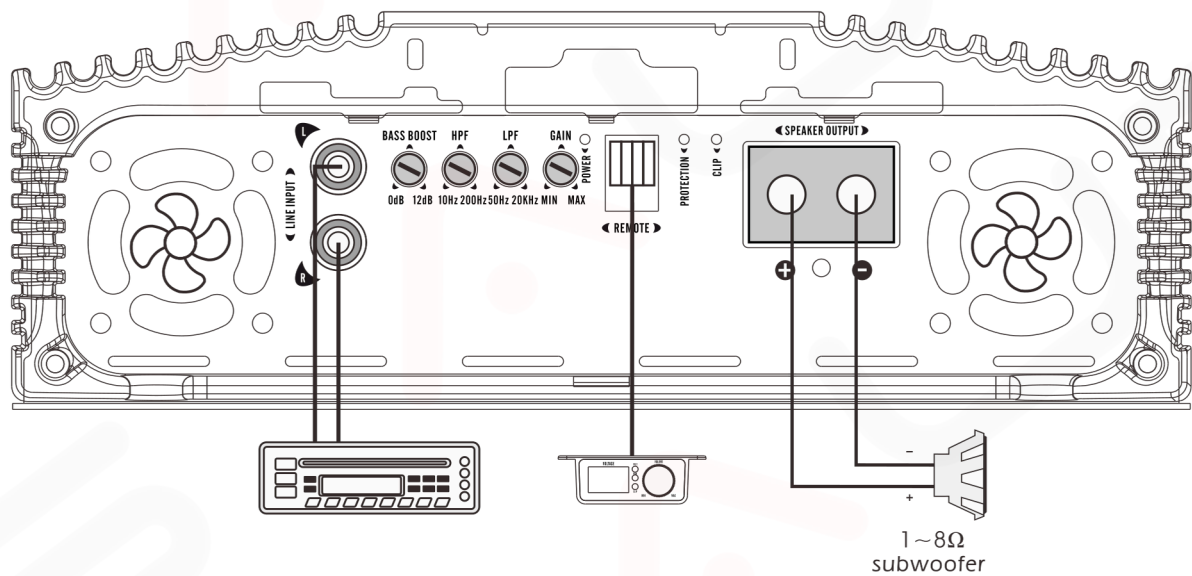


GS-1.13500VLT

SPEAKER CONNECTION LEADS

During a full power operation, Maximum current will run through the system. Therefore. Make sure the that the leads to be connected to the +12v and GND terminals of the unit respectively must be larger than 8-Gauge(AWG.8).

CONNECTION 1: 1-CHANNEL MODE



Troubleshooting

symptom

no output

possible cause

low or no remote turn-on input

fuse blown

power wires not connected

audio input not connected or no output from source

speaker wires not connected

audio cycles on and off

speakers are blown

thermal protection engages when amplifier heatsink temperature exceeds 90°C

loose or poor audio input

distorted output

amplifier level sensitivity set too high; exceeding maximum output capability of amplifier

impedance load to amplifier too low

shorted speaker wires

speaker not connected to amplifier properly

action to take

check remote turn-on voltage output at amplifier and correct as needed

check power wire integrity and reversed polarity ,repair as needed and replace fuse

check power wire and ground connections and repair or replace as needed

check input connections and signal integrity , repair or replace as needed

check speaker wires and repair or replace as needed

check system with known working speaker and repair or replace speakers as needed

make sure there is proper ventilation for amplifier and improve ventilation as needed

check input connections and repair or replace as needed

reset gain referring to the tuning section of the manual for detailed instructions

check speaker impedance load if below 2Ω stereo or 4Ω mono rewire speakers to achieve a higher impedance

check speaker wire connections and repair or replace as needed

check speaker wiring and repair or replace as needed refer to the installation section of this manual for detailed instructions

Symptom	possible cause	action to take
	internal crossover not set properly for speaker	reset crossovers referring to the multi-cross crossover configuration section of this manual
distorted output (cont'd)	speakers are blown	check system with known working speakers and repair or replace as needed
poor bass response	speakers wired wrong polarity causing cancellation at low frequencies	check speaker polarity and repair as needed
	crossover set incorrectly	reset crossovers referring to the multi-cross crossover configuration section of this manual for detailed instructions
battery fuse blowing	impedance load to amplifier too low	check speaker impedance load, if below 2Ω stereo or 4Ω mono rewire speakers to achieve a higher impedance
	short in power wire or incorrect power connections	check power and ground connections and repair as needed
	fuse used is smaller than recommended	replace with proper fuse size
	too much current being drawn	check speaker impedance load, if below 2Ω stereo or 4Ω mono rewire speakers to achieve a higher impedance
	short in power wire or incorrect	check power and ground connections and repair as needed
amplifier fuse blowing	too much current being drawn	check speaker impedance load, if below 2Ω stereo or 4Ω mono rewire speakers to achieve a higher impedance and replace with recommended fuse size
	fuse used is smaller than recommended	check power and ground connections and repair as needed replace with proper fuse size

Specifications

Model: GS 2.2000VLT	
Output Power @ 1 Ohm - 14.4V:	2*2000 WRMS
Output Power @ 2 Ohm - 14.4V:	2*1500 WRMS
Output Power @ 4 Ohm - 14.4V:	2*1200 WRMS
Crossover HPF:	10Hz - 500Hz
Crossover LPF:	50Hz - 5kHz
Crossover Mode:	HPF / Full / LPF
TDH:	< 0.1%
Frequency response (\pm 3dB):	20Hz - 20kHz
Signal-to-noise ratio:	> 90dB
Sensitivity:	0.2 ~ 6V
Dimensions:	448mm X 233.5mm X 79 mm

Model: GS 2.2000VLT24	
Output Power @ 1 Ohm - 14.4V:	2*2000 WRMS
Output Power @ 2 Ohm - 14.4V:	2*1500 WRMS
Output Power @ 4 Ohm - 14.4V:	2*1200 WRMS
Crossover HPF:	10Hz - 500Hz
Crossover LPF:	50Hz - 5kHz
Crossover Mode:	HPF / Full / LPF
TDH:	< 0.1%
Frequency response (\pm 3dB):	20Hz - 20kHz
Signal-to-noise ratio:	> 90dB
Sensitivity:	0.2 ~ 6V
Dimensions:	448mm X 233.5mm X 79mm

Model: GS 1.3200VLT	
Output Power @ 1 Ohm - 14.4V:	1*3200 WRMS
Output Power @ 2 Ohm - 14.4V:	1*2500 WRMS
Output Power @ 4 Ohm - 14.4V:	1*1700 WRMS
Crossover HPF:	10Hz - 500Hz
Crossover LPF:	50Hz - 20kHz
TDH:	< 0.1%
Frequency response (\pm 3dB):	10Hz - 20kHz
Signal-to-noise ratio:	> 90dB
Sensitivity:	0.2 ~ 6V
Dimensions:	198mm X 233.5mm X 79mm

Specifications

Model: GS 1.5500VLT

Output Power @ 1 Ohm - 14.4V:	1*5500 WRMS
Output Power @ 2 Ohm - 14.4V:	1*3500 WRMS
Output Power @ 4 Ohm - 14.4V:	1*2500 WRMS
Crossover HPF:	10Hz - 500Hz
Crossover LPF:	90Hz - 10kHz
TDH:	<0.1%
Frequency response (\pm 3dB):	10Hz - 10kHz
Signal-to-noise ratio:	>90dB
Sensitivity:	0.2 ~ 6V
Dimensions:	329mm X 233.5mm X 79mm

Model: GS 1.9000VLT

Output Power @ 1 Ohm - 14.4V:	1*9000 WRMS
Output Power @ 2 Ohm - 14.4V:	1*5600 WRMS
Output Power @ 4 Ohm - 14.4V:	1*3700 WRMS
Crossover HPF:	10Hz - 500Hz
Crossover LPF:	90Hz - 10kHz
TDH:	<0.1%
Frequency response (\pm 3dB):	10Hz - 10kHz
Signal-to-noise ratio:	>90dB
Sensitivity:	0.2 ~ 6V
Dimensions:	413mm X 233.5mm X 79mm

Model: GS 1.13500VLT

Output Power @ 1 Ohm - 14.4V:	1*13500 WRMS
Output Power @ 2 Ohm - 14.4V:	1*9500 WRMS
Output Power @ 4 Ohm - 14.4V:	1*6500 WRMS
Crossover HPF:	10Hz - 200Hz
Crossover LPF:	50Hz - 20kHz
TDH:	<0.1%
Frequency response (\pm 3dB):	20Hz - 20kHz
Signal-to-noise ratio:	>90dB
Sensitivity:	0.2 ~ 6V
Dimensions:	558mm X 233.5mm X 79mm