

# GS AUDIO

## OWNER'S MANUAL

### — CAR AUDIO SYSTEM —

*PLEASE READ CAREFULLY BEFORE INSTALLING  
OR OPERATING THIS UNIT*

## CRYSTAL SERIES

### 4CH AMPLIFIERS

GS-570.4LED

GS-360.4LED

GS-700.4LED

### 2CH AMPLIFIERS

GS-420.2LED

### 1CH AMPLIFIERS

GS-700.1LED

GS-1200.1LED

GS-2300.1LED

## 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.

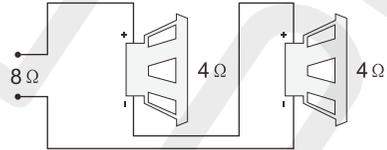
## System planning

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.

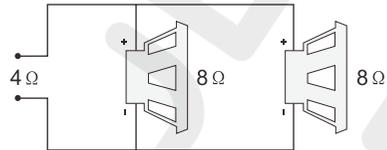
### Speaker requirements

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.

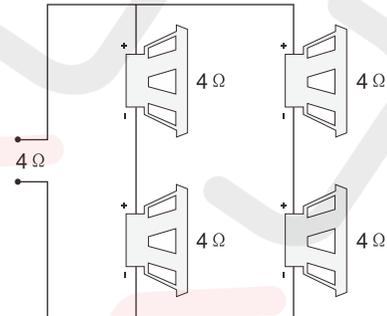
Most speakers designed for car audio operation are 4Ω impedance. Connecting two such speakers in parallel will result in a 2Ω impedance load as seen by the amplifier. Some subwoofer models feature a dual 4Ω voice coil design. Connecting these voice coils in parallel will result in a 2Ω nominal impedance,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



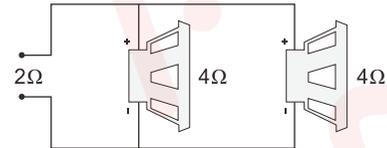
Series wiring



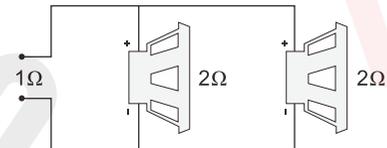
Parallel wiring



Series/parallel wiring



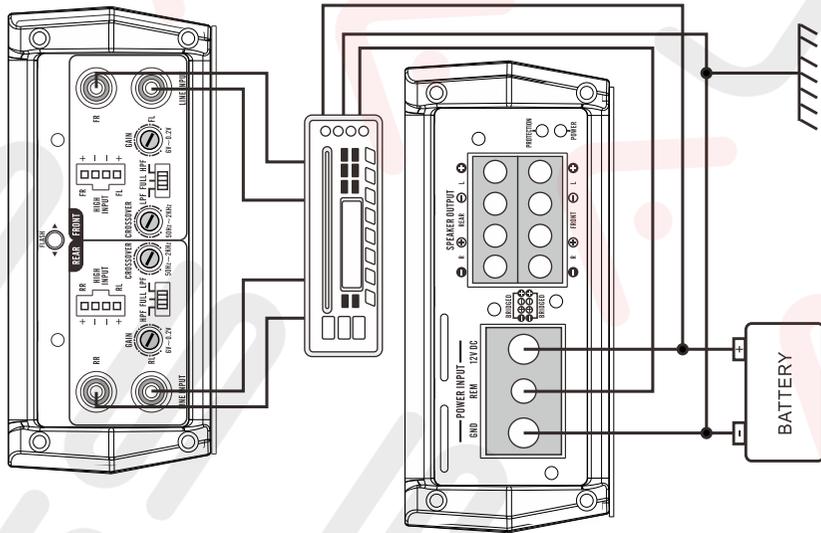
Series/parallel wiring



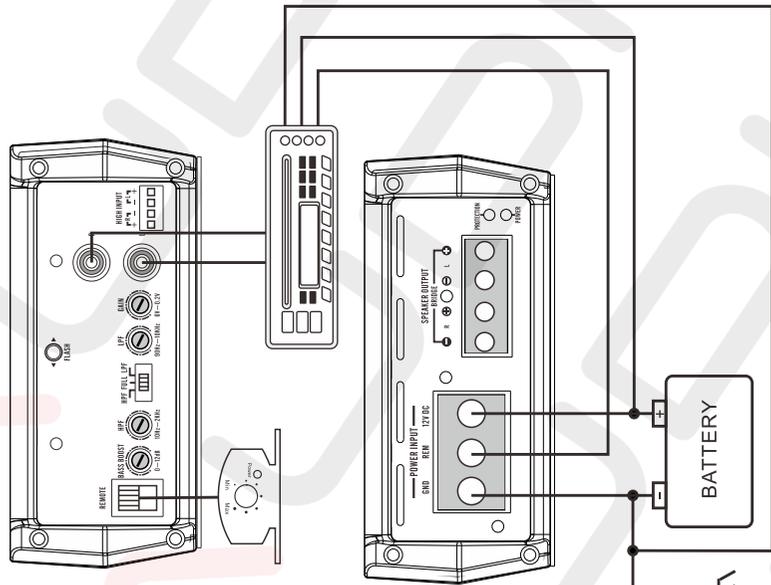
Parallel wiring



# Power Connection Leads

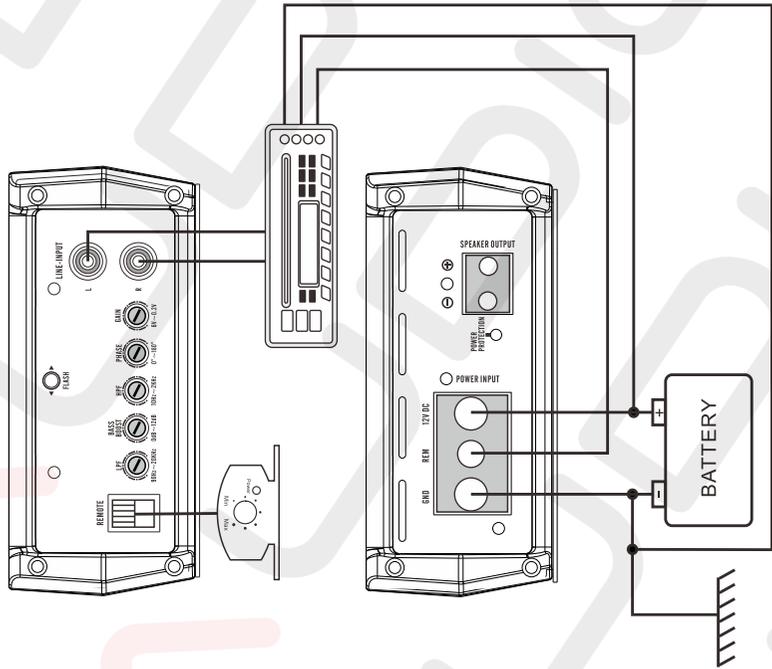


**GS-360.4LED**

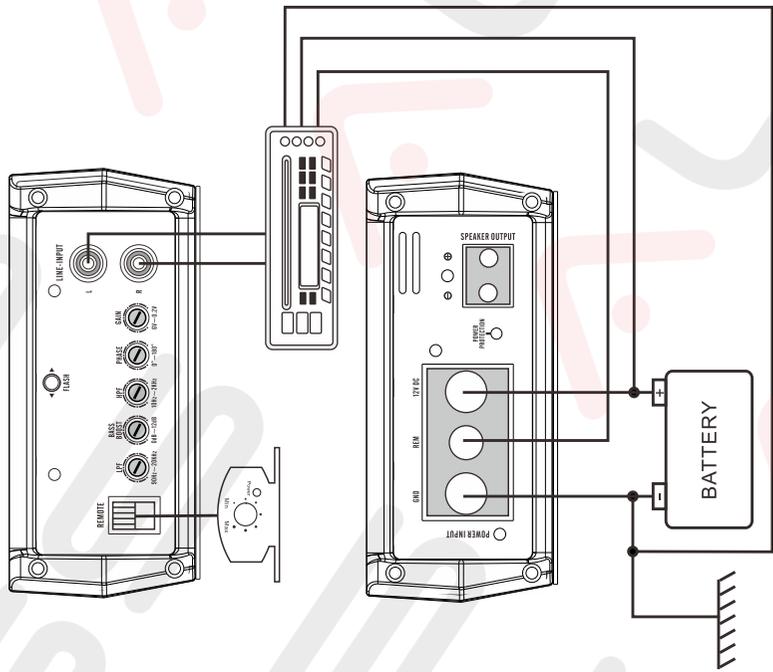


**GS-420.2LED**

# Power Connection Leads

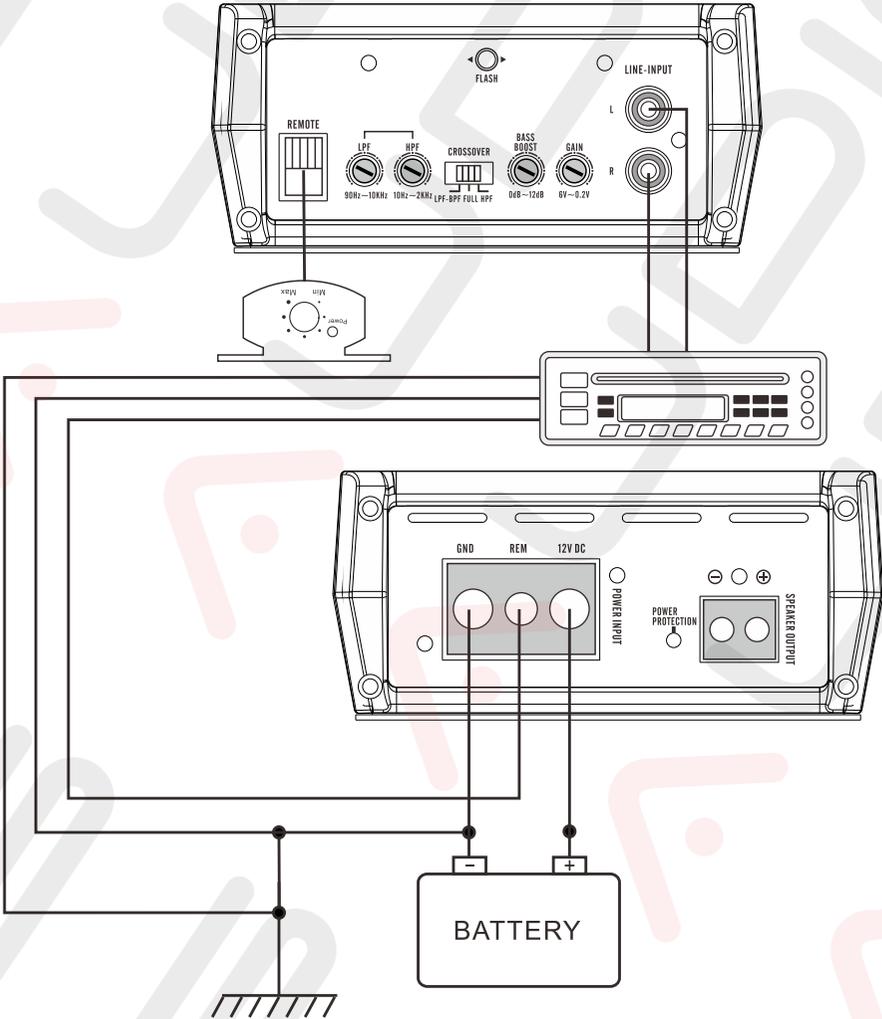


GS-1200.1LED



GS-2300.1LED

# Power Connection Leads



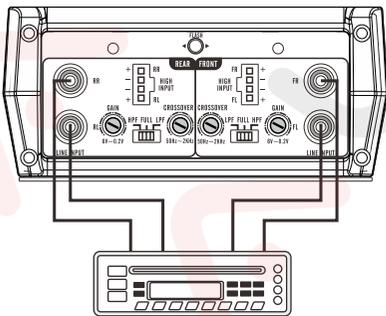
◀ **GS-700.1LED** ▶

# GS-700.4LED

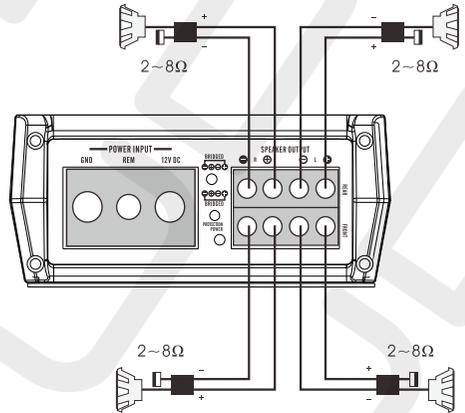
## SPEAKER CONNECTION LEADS

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).

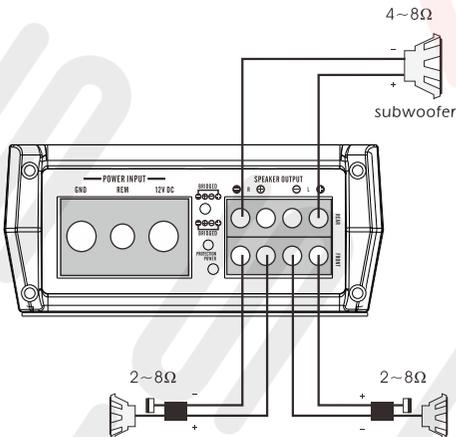
### CONNECTION :



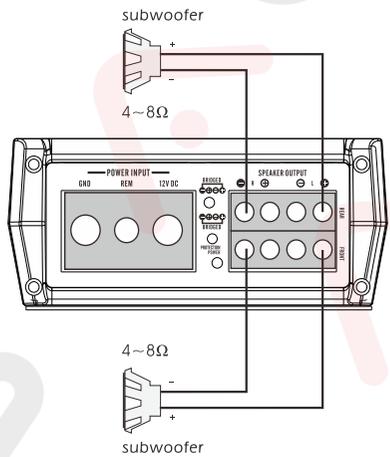
### 4-CHANNEL MODE:



### 3-CHANNEL MODE:



### 2-CHANNEL BRIDGED CONNECTION:

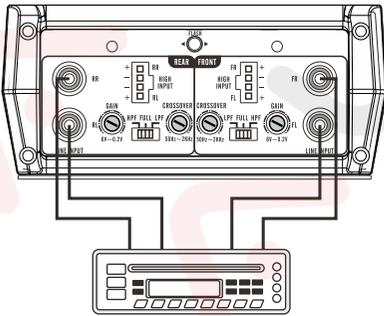


# GS-570.4LED

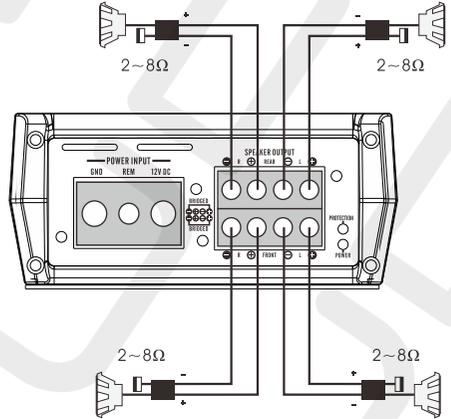
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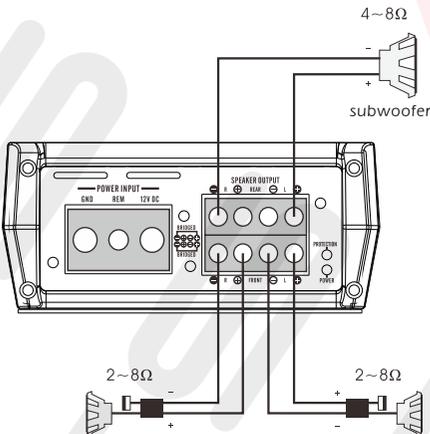
### CONNECTION :



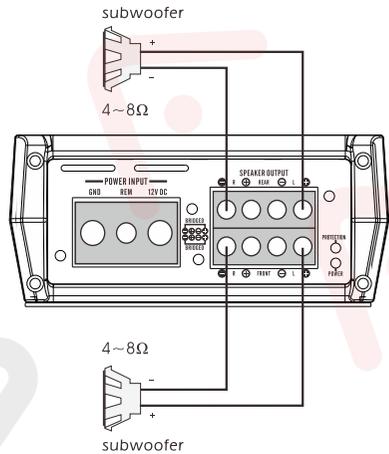
### 4-CHANNEL MODE:



### 3-CHANNEL MODE:



### 2-CHANNEL BRIDGED CONNECTION:

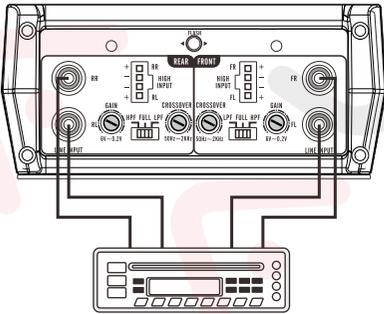


# GS-360.4LED

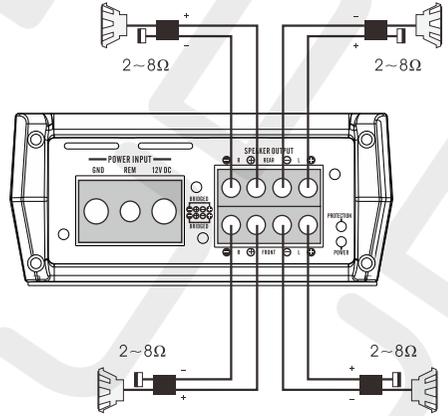
## SPEAKER CONNECTION LEADS

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).

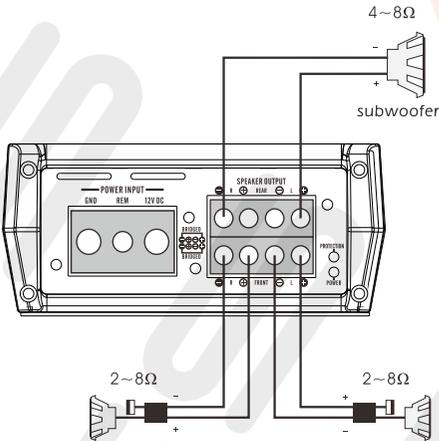
### CONNECTION :



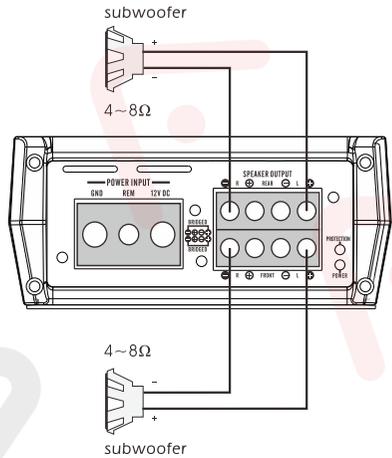
### 4-CHANNEL MODE:



### 3-CHANNEL MODE:



### 2-CHANNEL BRIDGED CONNECTION:

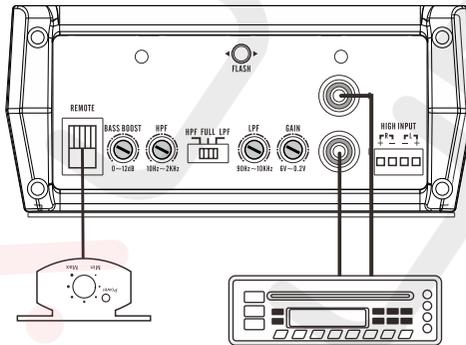


# GS-420.2LED

## SPEAKER CONNECTION LEADS

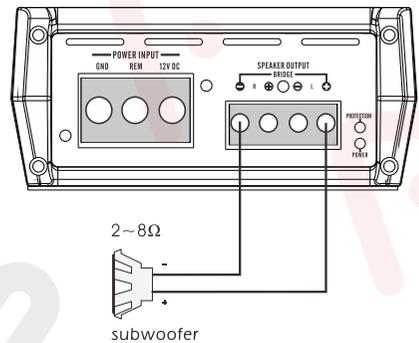
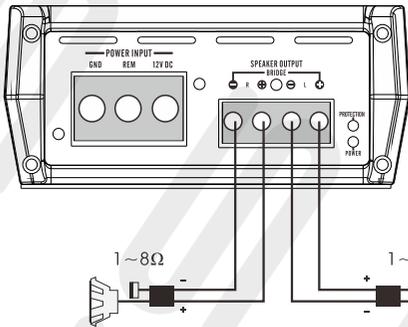
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### CONNECTION :



### 2-CHANNEL MODE:

### BRIDGED CONNECTION SUBWOOFER:

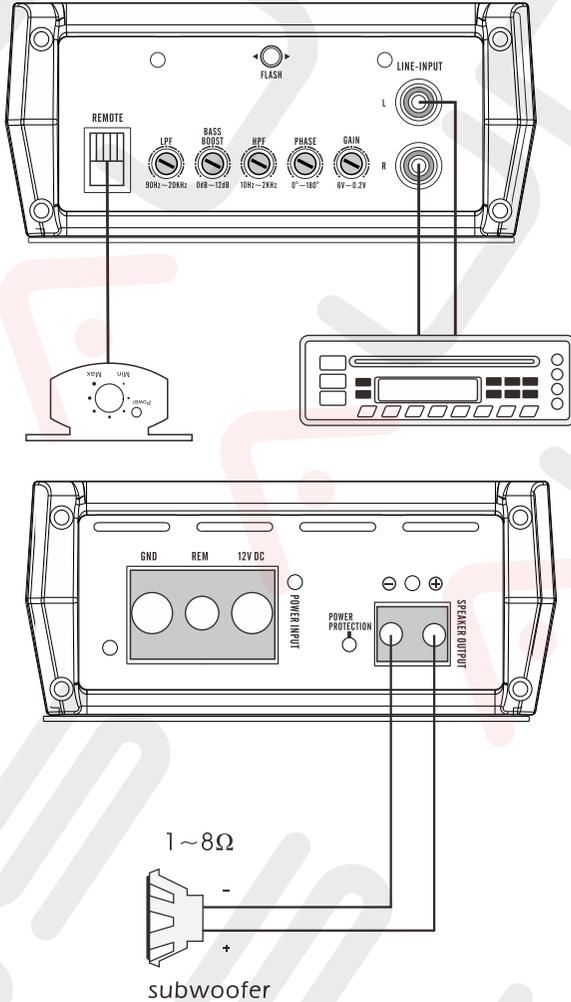


# GS-1200.1LED

## 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

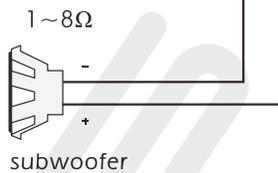
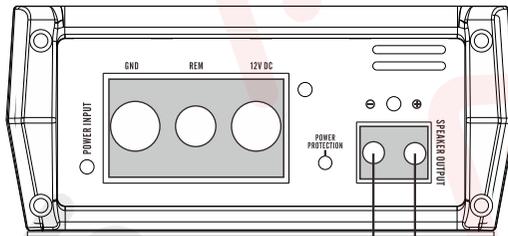
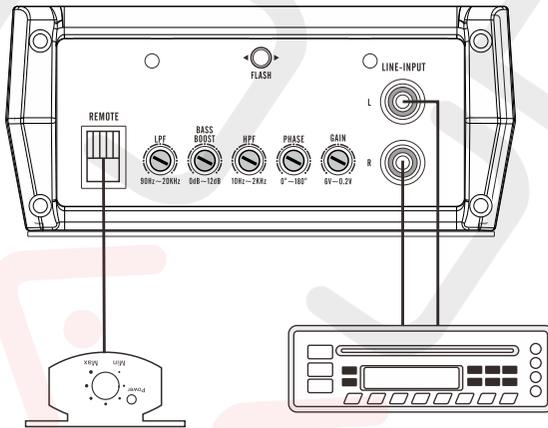


# GS-2300.1LED

## 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

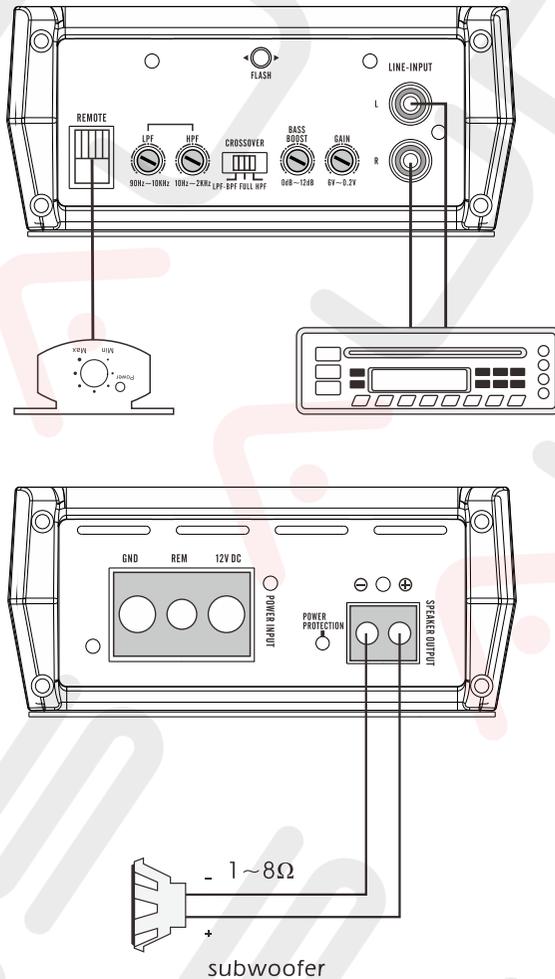


# GS-700.1LED

## 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

## action to take

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

fuse blown

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

power wires not connected

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

audio input not connected or no output from source

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

speaker wires not connected

check speaker wires and repair or replace as needed

audio cycles on and off

speakers are blown

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

thermal protection engages when amplifier heatsink temperature exceeds 90°C

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

loose or poor audio input

check input connections and repair or replace as needed

distorted output

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

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

impedance load to amplifier too low

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

shorted speaker wires

check speaker wire connections and repair or replace as needed

speaker not connected to amplifier properly

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 $2\Omega$ stereo or $4\Omega$ 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 $2\Omega$ stereo or $4\Omega$ 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 $2\Omega$ stereo or $4\Omega$ 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-700.4LED

Power output 4Ω(watts):	450W X 4CH
Power output 2Ω(watts):	700W X 4CH
Power output BTL(watts):	1400W X 2CH
THD:	≤0.2%
Frequency response (± 1dB):	20Hz~20KHz
Signal to noise ratio:	>90dB
Sensitivity:	0.2~6V
Dimensions:	410mm X 126mm X 57mm

## Model:GS-570.4LED

Power output 4Ω(watts):	350W X 4CH
Power output 2Ω(watts):	570W X 4CH
Power output BTL(watts):	1140W X 2CH
THD:	≤0.2%
Frequency response (± 1dB):	20Hz~20KHz
Signal to noise ratio:	>90dB
Sensitivity:	0.2~6V
Dimensions:	351mm X 126mm X 57mm

## Model:GS-360.4LED

Power output 4Ω(watts):	200W X 4CH
Power output 2Ω(watts):	360W X 4CH
Power output BTL(watts):	720W X 2CH
THD:	≤0.2%
Frequency response (± 1dB):	20Hz~20KHz
Signal to noise ratio:	>90dB
Sensitivity:	0.2~6V
Dimensions:	290mm X 126mm X 57mm

## Model:GS-420.2LED

Power output 4Ω(watts):	250W X 2CH
Power output 2Ω(watts):	420W X 2CH
Power output BTL(watts):	840W X 1CH
THD:	≤0.2%
Frequency response (± 1dB):	20Hz~20KHz
Signal to noise ratio:	>90dB
Sensitivity:	0.2~6V
Dimensions:	230mm X 126mm X 57mm

# Specifications

<b>Model:GS-1200.1LED</b>	
Power output 4Ω(watts):	400W X 1CH
Power output 2Ω(watts):	700W X 1CH
Power output 1Ω(watts):	1200W X 1CH
THD:	≤0.2%
Frequency response (± 1dB):	20Hz~20KHz
Signal to noise ratio:	>90dB
Sensitivity:	0.2~6V
Dimensions:	250mm X 126mm X 57mm

<b>Model:GS-2300.1LED</b>	
Power output 4Ω(watts):	800W X 1CH
Power output 2Ω(watts):	1400W X 1CH
Power output 1Ω(watts):	2300W X 1CH
THD:	≤0.2%
Frequency response (± 1dB):	20Hz~20KHz
Signal to noise ratio:	>90dB
Sensitivity:	0.2~6V
Dimensions:	370mm X 126mm X 57mm

<b>Model:GS-700.1LED</b>	
Power output 4Ω(watts):	280W X 1CH
Power output 2Ω(watts):	450W X 1CH
Power output 1Ω(watts):	700W X 1CH
THD:	≤0.2%
Frequency response (± 1dB):	20Hz~20KHz
Signal to noise ratio:	>90dB
Sensitivity:	0.2~6V
Dimensions:	230mm X 126mm X 57mm