



GX Series Amplifier Manual

Models: GX1200.6 • GX800.4 • GX1200.1

GX series

New for 2021 is Phoenix Gold's GX line of amplifiers. Designed to cover a multitude of installation needs, GX is packed with the features and power you can expect from the Phoenix Gold brand. Included in the line are our proprietary PG quick connects for high current capability and reliability while delivering uber clean and quick installations. The chassis has been optimized by utilizing BFD (Balanced Flow Dissipation) to keep the amplifier running cool when the music is hot.

Features

- Class D Topology
- Selectable Balanced / Unbalanced Inputs
- Surface-Mount Component Technology
- Multi-Input Selector
- Low Pass and Subsonic Crossovers (GX1200.1)
- Proprietary PG Quick Connects
- Flush Mountable Bass Knob
- Full Radiation Heat Sink
- Single-sided Control Panel
- Onboard Short/Therm/Imped Protection
- 0-180° Variable Phase Shift (GX1200.1)





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Phoenix Gold Product Warranty

LIMITED WARRANTY ON AMPLIFIERS

Phoenix Gold warrants this product to be free of defects in materials and workmanship for a period of one (1) years from the original date of purchase. This warranty is not transferable and applies only to the original purchaser from an authorized Phoenix Gold dealer in the United States of America only. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction, Phoenix Gold will (at its discretion), repair or replace the defective product with new or remanufactured product at no charge. Damage caused by the following is not covered under warranty: accident, misuse, abuse, product modification or neglect, failure to follow installation instructions, unauthorized repair attempts, misrepresentations by the seller. This warranty does not cover incidental or consequential damages and does not cover the cost of removing or reinstalling the unit(s). Cosmetic damage due to accident or normal wear and tear is not covered under warranty. Additional warranty coverages are available, see your warranty card for specific options based on your geographic region and product.

INTERNATIONAL WARRANTIES:

Products purchased outside the United States of America are covered only by that country's Authorized Phoenix Gold reseller and not by Phoenix Gold. Consumers needing service or warranty information for these products must contact that country's reseller for information.

Designed and Engineered in the USA
Expertly Manufactured in China

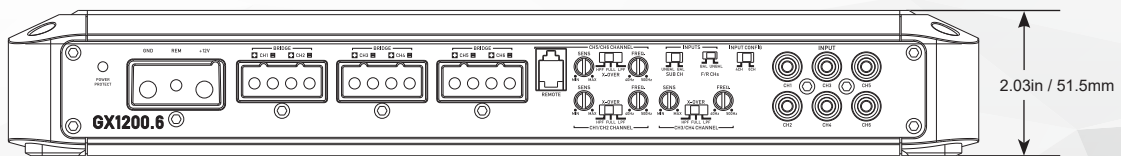
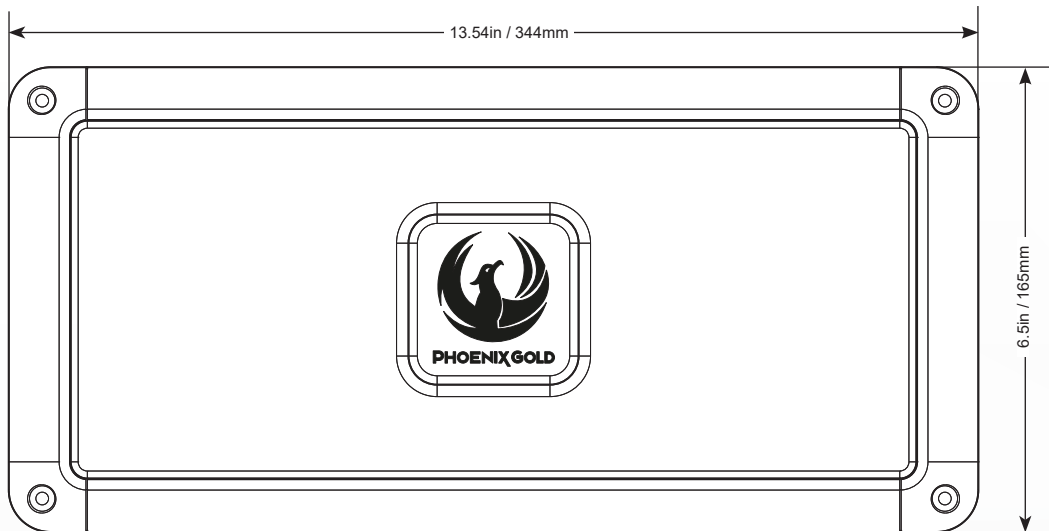
GX1200.6 SPECIFICATIONS

GX 1200.6 SPECIFICATIONS

RMS Power Ratings listed at less than 1% THD @ 14.4v

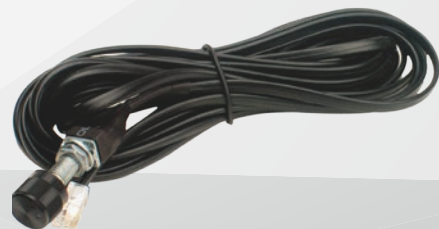
Number of Channels:	6
4Ω: CH 1-6	125W x 6
2Ω: CH 1-6	200W x 6
4Ω Bridged:	400W x 3
Total RMS Power (Sum of rated power):	1200W
Bridgeable:	Yes
Crossover Control, Linkwitz-Riley:	FULL/HP/LP
	40Hz - 500Hz @ 12dB/Oct
Input Selection:	0.4-10V
Signal to Noise (@ CEA Standard):	>100dB
Frequency Response:	Full Range 10-40k

Topology Class	D
Heatsink Type:	Extruded Aluminum
Cooling Type:	Radiation
Operating Voltage:	8V to 16V
Switchable Auto-Turn On:	No
Power Supply Type:	Unregulated
Power Terminal:	4 Gauge Quick Connect
Speaker Terminal:	8 Gauge Quick Connect
Recommended Fusing:	80A
Dimensions (L x W x H):	13.54" x 6.5" x 2.03"
	344mm x 165mm x 51.5mm



Remote Bass Controller:

Flush mount level controller. Fine tune your bass output with a simple turn of the precision controller. 16ft of cable included.



IMPORTANT: A power birth certificate is included for each amplifier. GX amplifiers are conservatively rated and will exceed their RMS power rating shown here. All RMS power ratings and measurements are at 14.4 volts with no more than 1% THD.

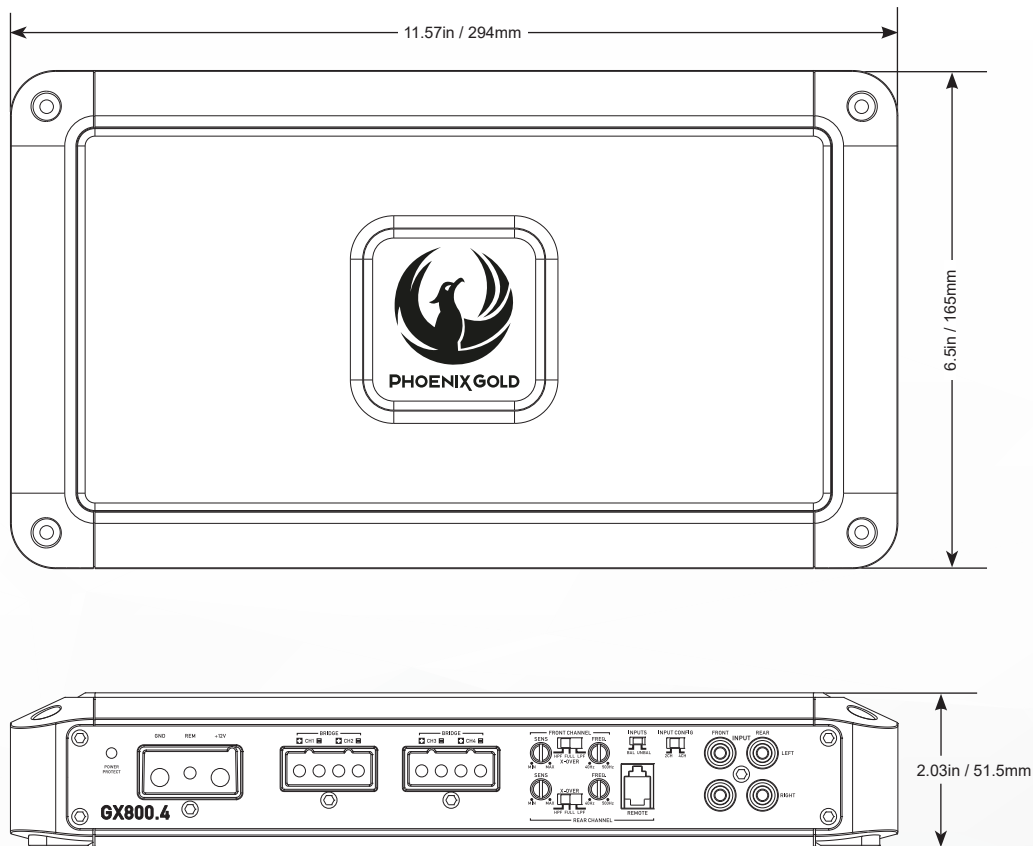
GX800.4 SPECIFICATIONS

GX800.4 SPECIFICATIONS

RMS Power Ratings listed at less than 1% THD @ 14.4v

Number of Channels:	4
4Ω: CH 1-4	125W x 4
2Ω: CH 1-4	200w x 4
4Ω: Bridged	400w x 2
Total RMS Power (Sum of rated power):	800W
Bridgeable:	Yes
Crossover Control, Linkwitz-Riley:	FULL/HP/LP
	40Hz - 500Hz @ 12dB/Oct
Input Selection:	0.4-10V
Signal to Noise (@ CEA Standard):	>100dB
Frequency Response:	Full Range 10-40k

Topology Class	D
Heatsink Type:	Extruded Aluminum
Cooling Type:	Radiation
Operating Voltage:	8V to 16V
Switchable Auto-Turn On:	No
Power Supply Type:	Unregulated
Power Terminal:	4 Gauge Quick Connect
Speaker Terminal:	8 Gauge Quick Connect
Recommended Fusing:	60A
Dimensions (L x W x H):	11.57" x 6.5" x 2.03"
	294mm x 165mm x 51.5mm



Remote Bass Controller:

Flush mount level controller. Fine tune your bass output with a simple turn of the precision controller. 16ft of cable included.



IMPORTANT: A power birth certificate is included for each amplifier. GX amplifiers are conservatively rated and will exceed their RMS power rating shown here. All RMS power ratings and measurements are at 14.4 volts with no more than 1% THD.

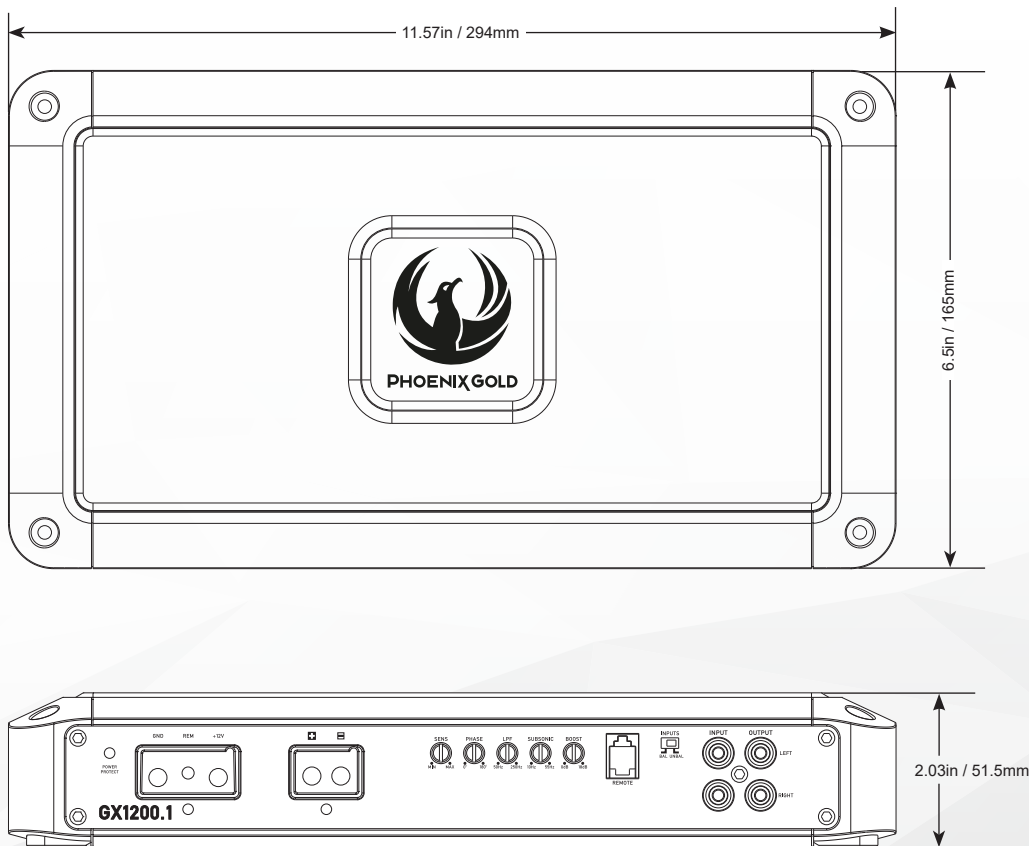
GX1200.1 SPECIFICATIONS

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RMS Power Ratings listed at less than 1% THD @ 14.4v

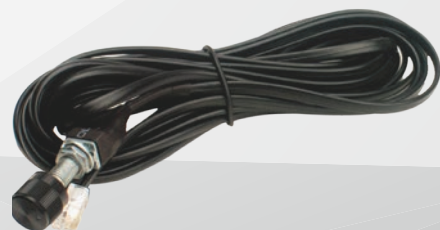
Number of Channels:	1
1Ω: CH 1	1200W x 1
2Ω: CH 1	800W x 1
4Ω: CH 1	500W x 1
Total RMS Power (Sum of rated power):	1200W
Bridgeable:	N/A
Crossover Control, Linkwitz-Riley:	LP
	50Hz - 250Hz @ 24dB/Oct
Input Selection:	0.4-10V
Signal to Noise (@ CEA Standard):	>100dB
Frequency Response:	Sub 15-250Hz

Topology Class	D
Heatsink Type:	Extruded Aluminum
Cooling Type:	Radiation
Operating Voltage:	8V to 16V
Switchable Auto-Turn On:	No
Power Supply Type:	Unregulated
Power Terminal:	4 Gauge Quick Connect
Speaker Terminal:	8-12 Gauge Quick Connect
Recommended Fusing:	80A
Dimensions (L x W x H):	11.57" x 6.5" x 2.03" 294mm x 165mm x 51.5mm



Remote Bass Controller:

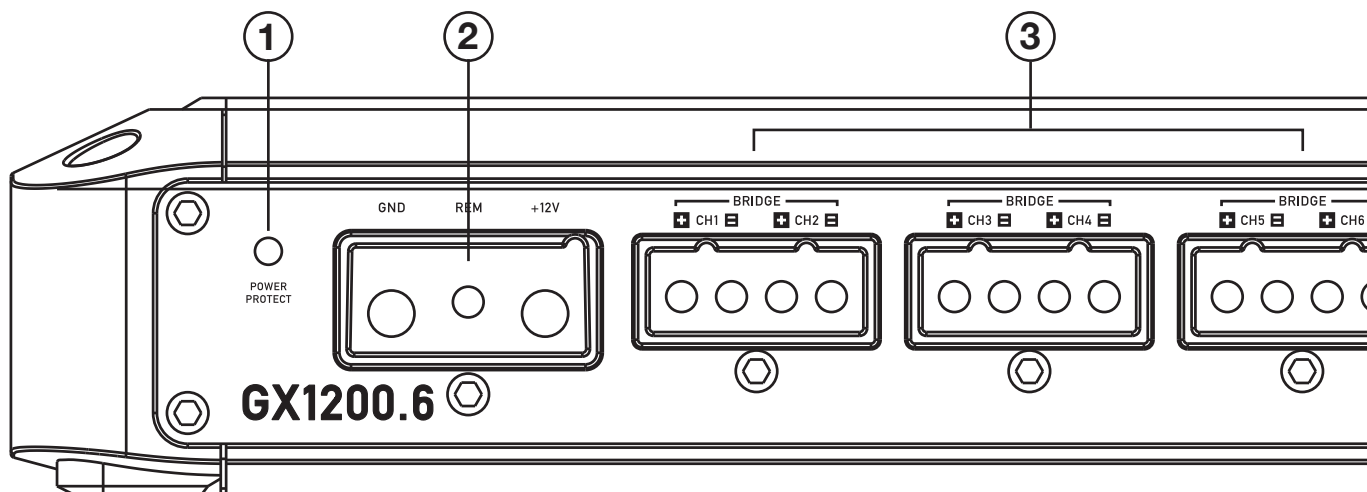
Flush mount level controller. Fine tune your bass output with a simple turn of the precision controller. 16ft of cable included.



IMPORTANT: A power birth certificate is included for each amplifier. GX amplifiers are conservatively rated and will exceed their RMS power rating shown here. All RMS power ratings and measurements are at 14.4 volts with no more than 1% THD.

GX1200.6

Multi-Channel Power Amplifier



- 1 POWER/PROTECT LED**
Amplifier status indicator. Blue indicates all systems working and amplifier is on. Red indicates protection mode, from Thermal or Short Circuit. (See Troubleshooting)

2 GROUND (GND)
This must be connected to the negative terminal of the car's battery or bolted to a clean, unpainted part of the chassis of the vehicle. Bad grounds account for 90% of amplifier issues, make sure the amplifier is grounded correctly and securely.

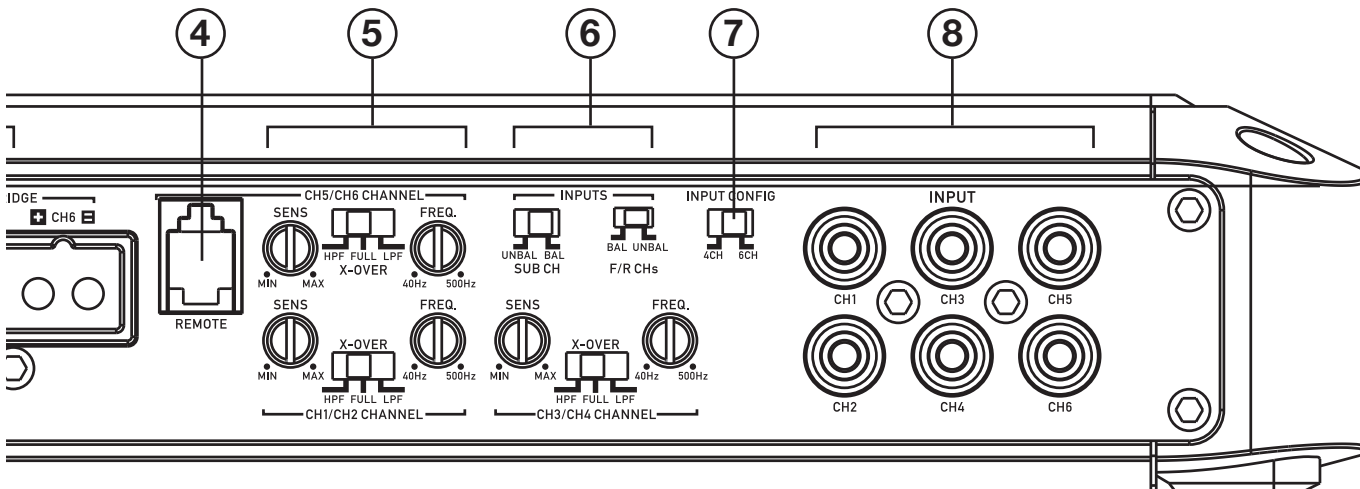
2 REMOTE (REM)
Connect to switched +12V, usually a trigger wire coming from the head unit or an ignition lead if one is not available.

+12V

This must be connected to the fused positive terminal (+12V) of the car's battery. A fuse must be located within 18 inches of the battery to protect the vehicle and should be fused at, or above, the amplifiers fuse rating.

- 3 SPEAKER OUTPUTS CH1-6**
Used to connect the amplifier to speakers. The GX1200.6 minimum impedance is 2 Ohms Stereo or 4 Ohms Bridged for all channels.

- 4 REMOTE LEVEL CONTROL**
This port is for connecting the remote level control knob. This allows up to 20dB of volume adjustment. This is not a bass boost, it controls the level of the signal. The remote only controls CH 5/6.



INPUT GAIN (SENS) CH 1/2, 3/4, 5/6

Used to adjust the input sensitivity to match the input level signal on the channels. Continuously variable from 0.4V to 10V. Adjust this with the help of a DMM and a test signal or an Oscilloscope. See *System Tuning* section for basic setup instructions.

5 CROSSOVER (X-OVER) CH 1/2, 3/4, 5/6

High Pass Filter (HPF): When set, activates a highpass crossover for the channels.

Continuously variable from 40Hz to 500Hz using the **FREQ** dial.

Full Range (FULL): Select FULL to amplify a full range signal.

Low Pass Filter (LPF): When set, activates a low pass crossover for the channels.

Continuously variable from 40Hz to 500Hz using the **FREQ** dial.

6 INPUTS (F/R CHs, SUB CH)

If you are using RCA or high level signal from an aftermarket head unit, select **UNBAL**. If you are using high level from a OEM factory source unit or factory amplifier select **BAL**.

7 INPUT CONFIG (4CH / 6CH)

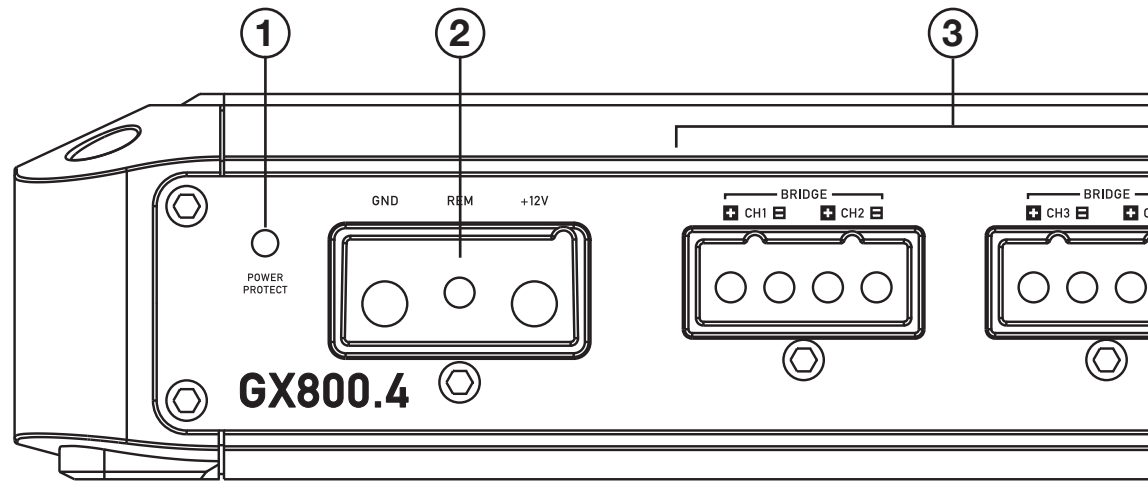
Input signal selectable for 4 or 6 channels. If only 4 channels of input signal are available, select 4CH to allow signal to split to CH 5+6. Select 6CH if 6 channels of input are being used.

8 INPUT (CH1-6)

Connect preamp signal cables (RCA) from the source unit to these terminals. Use of 4 or 6 channels of input signal selectable with INPUT CONFIG switch.

GX800.4

Multi-Channel Power Amplifier



- 1 POWER/PROTECT LED**
Amplifier status indicator. Blue indicates all systems working and amplifier is on. Red indicates protection mode, from Thermal or Short Circuit. (See Troubleshooting)

GROUND (GND)

This must be connected to the negative terminal of the car's battery or bolted to a clean, unpainted part of the chassis of the vehicle. Bad grounds account for 90% of amplifier issues, make sure the amplifier is grounded correctly and securely.

REMOTE (REM)

Connect to switched +12V, usually a trigger wire coming from the head unit or an ignition lead if one is not available.

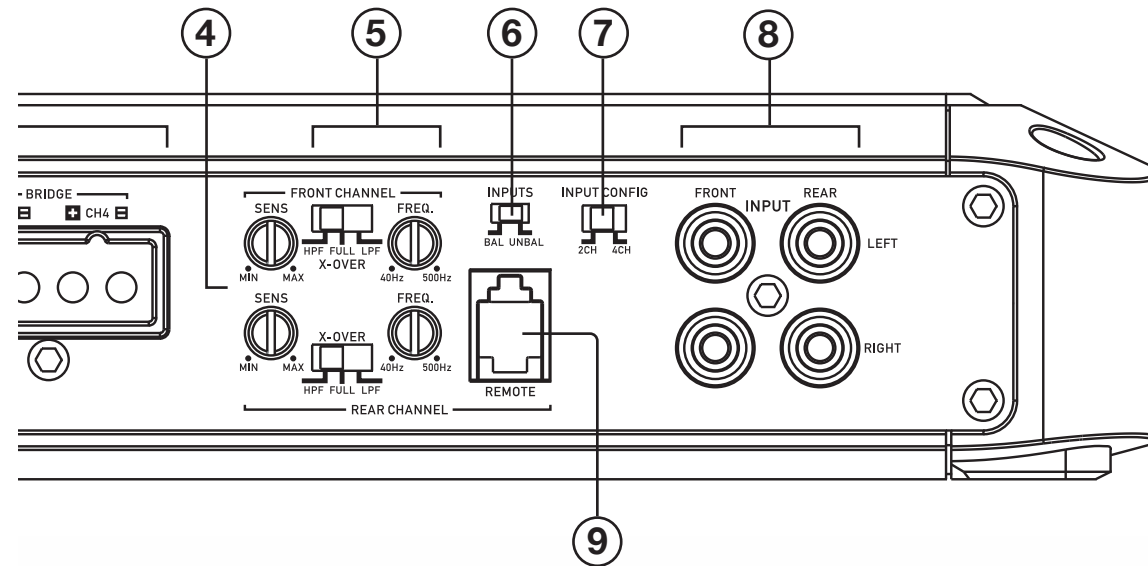
+12V

This must be connected to the fused positive terminal (+12V) of the car's battery. A fuse must be located within 18 inches of the battery to protect the vehicle and should be fused at, or above, the amplifiers fuse rating.

- 3 SPEAKER OUTPUTS CH1-4**
Used to connect the amplifier to speakers. The GX800.4 minimum impedance is 2 Ohms Stereo or 4 Ohms Bridged for all channels.

INPUT GAIN (SENS) Front Channel, Rear Channel

- 4**
Used to adjust the input sensitivity to match the input level signal on the channels. Continuously variable from 0.4V to 10V. Adjust this with the help of a DMM and a test signal or an Oscilloscope. See *System Tuning* section for basic setup instructions.



CROSSOVER (X-OVER) Front Channel, Rear Channel

High Pass Filter (HPF): When set, activates a highpass crossover for the channels.

- ⑤ Continuously variable from 40Hz to 500Hz using the **FREQ** dial.

Full Range (FULL): Select FULL to amplify a full range signal.

Low Pass Filter (LPF): When set, activates a low pass crossover for the channels.

Continuously variable from 40Hz to 500Hz using the **FREQ** dial.

INPUTS

- ⑥ If you are using RCA or high level signal from an aftermarket head unit, select **UNBAL**. If you are using high level from a OEM factory source unit or factory amplifier select **BAL**.

INPUT CONFIG (2CH / 4CH)

- ⑦ Input signal selectable for 2 or 4 channels. If only 2 channels of input signal are available, select 2CH to allow signal to split to REAR Channels. Select 4CH if 4 channels of input are used.

INPUT (Front / Rear)

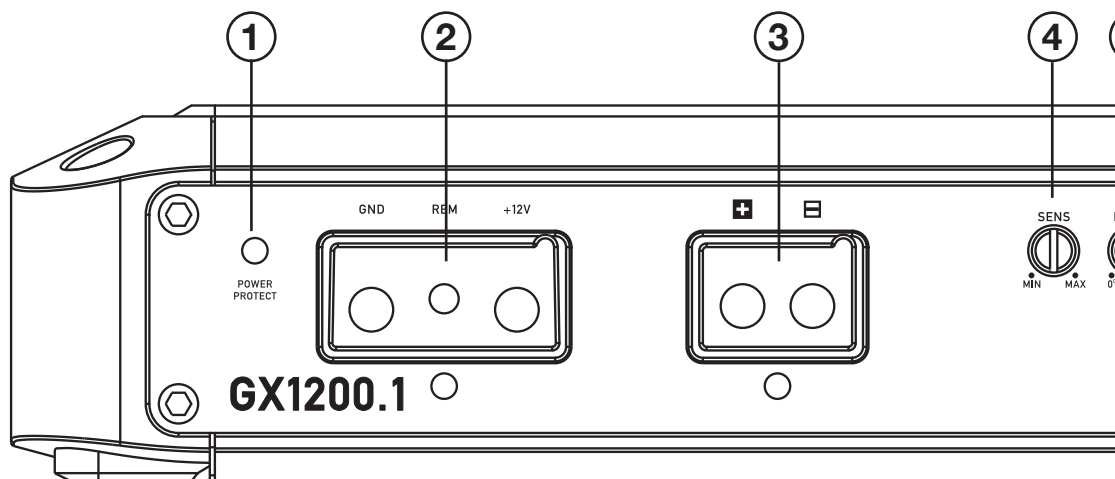
- ⑧ Connect preamp signal cables (RCA) from the source unit to these terminals. Use of 2 or 4 channels of input signal selectable with INPUT CONFIG switch.

REMOTE LEVEL CONTROL

- ⑨ This port is for connecting the remote level control knob. This allows up to 20dB of volume adjustment. This is not a bass boost, it controls the level of the signal. The remote only controls REAR Channel level.

GX1200.1

Monoblock Power Amplifier



- 1 POWER/PROTECT LED**
Amplifier status indicator. Blue indicates all systems working and amplifier is on. Red indicates protection mode, from Thermal or Short Circuit. (See Troubleshooting)

GROUND (GND)

This must be connected to the negative terminal of the car's battery or bolted to a clean, unpainted part of the chassis of the vehicle. Bad grounds account for 90% of amplifier issues, make sure the amplifier is grounded correctly and securely.

REMOTE (REM)

Connect to switched +12V, usually a trigger wire coming from the head unit or an ignition lead if one is not available.

+12V

This must be connected to the fused positive terminal (+12V) of the car's battery. A fuse must be located within 18 inches of the battery to protect the vehicle and should be fused at, or above, the amplifiers fuse rating.

SPEAKER OUTPUT

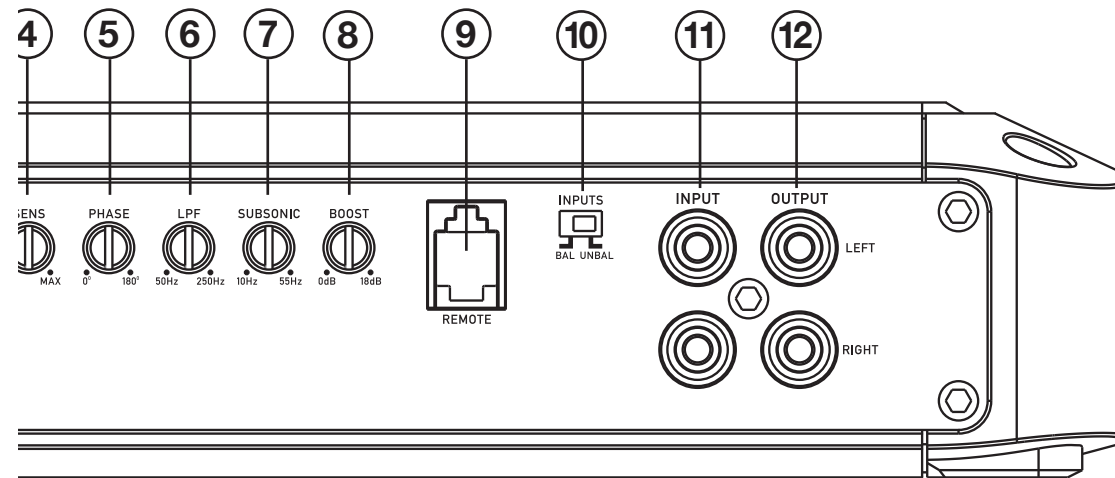
Used to connect the amplifier to speakers. The GX1200.0 minimum impedance is 1 Ohms

INPUT GAIN (SENS)

Used to adjust the input sensitivity to match the input level signal. Continuously variable from 0.4V to 10V. Adjust this with the help of a DMM and a test signal or an Oscilloscope. See *System Tuning* section for basic setup instructions.

PHASE

Controls the Phase from 0-180°. Properly adjusting phase will allow enhanced bass response, dynamics and impact at any volume.



- 6 LOW PASS FILTER (LPF)**
Sets low pass crossover frequency. Continuously variable from 50Hz to 250Hz
- 7 SUBSONIC**
Continuously variable filter from 10Hz-55Hz to remove low inaudible frequencies to increase system efficiency and protect speakers.
- 8 BOOST**
Controls the bass boost from 0 to +18dB
- REMOTE LEVEL CONTROL**
- 9** This port is for connecting the remote subwoofer level control knob. This allows up to 20dB of volume adjustment. This is not a bass boost, it controls the level of the low pass signal.
- 10 INPUTS**
If you are using RCA or high level signal from an aftermarket head unit, select **UNBAL**. If you are using high level from a OEM factory source unit or factory amplifier select **BAL**.
- 11 INPUT**
Connect preamp signal cables (RCA) from the source unit to these terminals.
- 12 OUTPUT**
Used to connect to a secondary amplifier without degrading signal strength.

SYSTEM TUNING

1. Install all system fuses.
2. Set the amplifier's input sensitivity controls to their minimum positions (full counterclockwise).
3. Set all amplifier crossover switches according to your system's design.
4. Make preliminary adjustments to the crossover frequency, usually 80Hz is a good starting point for high and low pass. It may be necessary to fine tune the crossover frequency later for the best overall sound quality.
5. If using a Remote Subwoofer Level Control, set it to maximum (full clockwise).
6. Turn the headunit on with the volume set to minimum.
7. Visually check the amplifier has turned on via the power LED.
8. Check the condition of all other components to make sure they are powered up.
9. Set the headunit's tone controls, balance, and fader to the center (flat) position. Turn off any loudness or other signal processing features.
10. Set the volume control of the headunit to 3/4 of maximum volume. Play music you typically listen to through the system.
11. Turn up the sensitivity or input level control on the amplifier until the speakers reach maximum undistorted output.
12. Repeat sensitivity level adjustments for all other amplifiers.
13. Reduce the headunit's volume to a comfortable level.
14. Listen to various musical selections to check overall system balance. Compare front to rear, midbass to midrange, etc. If one speaker set is too loud compared to another, then its level must be lowered to blend correctly with the other speakers.
Note: For subwoofers controlled by the Remote level control, keep the level setting from step 11 or 12. Use the control to blend subwoofers with the rest of the system. The correct subwoofer volume will change depending on road noise and differences in recordings.
15. Fine tune crossover frequencies to achieve the smoothest possible blending of each speaker set.
16. Adjust the Bass Equalization Controls on the amplifier, headunit or processor upstream if necessary to increase output.
Note: Use these controls sparingly. Every 3dB of boost requires double the power at 45Hz. If your subwoofer system requires a lot of boost to sound good, there may be a problem. Look for out-of-phase woofers, a leaking subwoofer box, or incorrect box size.
17. With all levels set correctly, the system will reach overall maximum undistorted output at the volume level set in step 10.

TROUBLESHOOTING

NO POWER:

Check voltage at the amplifier with a DMM (volt meter), +12v and R (with head unit on) the voltage should register between 11.5V and 14.4V when using the attached ground lead of the amplifier. Check that the amplifier's ground is good and has a solid connection. Check fuse at the battery. Use a meter to verify connection from one end of the fuse to the other, breaks may not always be visible. If the fuse is blown, check the power wire and also the amplifier for a short. If the short is in the amplifier itself, see your Phoenix Gold dealer. If no short is present, replace the fuse.

POWER WITHOUT SOUND:

Turn the amplifier off and check all input and output signal cables and power connections. Check the speakers for shorts with a DMM (volt meter) or by connecting them to another audio source. After making sure everything is correct, turn the amplifier on again.

POWER, NO SOUND, PROTECT LED LIT:

The red PROTECT LED lights when the amplifier shuts down for either thermal or over-current protection. A high internal amplifier operating temperature will trigger thermal shutdown: after it cools about 5°C, the amplifier will restart. A shorted speaker lead or operation into unusually low impedance loads will trigger over-current shutdown: cycle power at the amplifier R terminal to restore operation. Check for shorted speaker wiring or damaged speakers or crossover systems if over-current shutdown occurs.

NO SOUND FROM ONE OR MORE CHANNELS:

Check the balance control in the head unit. Check speaker connections. Check signal input connection. Very low output: Check your head unit's fader control or the amplifier's input sensitivity level. Make sure subsonic frequency control is not set too high and LPF frequency control is not set too low at the same time.

FREQUENT AMPLIFIER SHUTDOWN WITH AUTOMATIC RECOVERY:

This indicates chronic amplifier thermal shutdown because of operation at consistently high internal temperatures. High operating temperature can be caused by inadequate ventilation. Make sure you are not running a lower than recommend impedance. Also check for damaged speakers or passive crossover systems. Finally, chronic thermal shutdown may result from otherwise normal operation of the amplifier at elevated output power levels, which can be resolved by providing additional amplifier cooling, installing a higher-power amplifier, or reducing amplifier output level.

POWER CYCLES ON/OFF QUICKLY:

If the power indicator is going off repeatedly when the audio system is on, check all ground connections. Check the amplifier's connection to the battery. Check battery voltage. If low, recharge or replace the battery.