

GROUND ZERO[®]

GERMAN ENGINEERING

RADIOACTIVE-SERIES AMPLIFIER

OWNER'S MANUAL

GZRA 4230X

Features

- 4 Ohm / 2 Ohm stable Stereo
- Mosfet power supply
- Power & Protection indicator
- Variable 12dB bass boost (45Hz)
- Variable highpass
- Variable lowpass
- Adjustable input sensitivity
- Soft delayed remote turn- on
- Thermal / Short / Overload protection

Tools and materials you need

- Screwdriver
- Electric drill, 3 mm / 0.12" carbide drill bit
- Mounting screws
- Power wire min. 20 mm² / 4 AWG
- Ground wire min. 20 mm² / 4 AWG
- Speaker wire min. 2 x 1,5 mm² / 15 AWG

Please note!

- As a precaution it is advisable to disconnect the vehicle's battery before making connection to the +12 Volts supply wiring (see owner's manual of your car for further information).
- Please use great caution drilling your trunk. Your gas tank and brake lines can be damaged by puncturing with your drill bit – this could cause damage or failure of your car's operating systems.
- Never pass wires over sharp angles. It is recommended to buffer the power supply of the amplifier with a capacitor min. 1 Farad to guarantee a stable operation voltage.

WARNING !

High powered audio systems in a vehicle are capable of generating "Live Concert" levels of sound pressure. Continued exposure to excessively high volume sound levels may cause hearing loss or damage. Also, operation of a motor vehicle while listening to audio equipment at high volume levels may impair your ability to hear external sounds such as; horns, warning signals, or emergency vehicles, thus constituting a potential traffic hazard. In the interest of safety, Consumer Electronics recommends listening at lower volume levels while driving.

Planning your system

Before beginning the installation, consider the following:

- a. If you plan to expand your system by adding other components sometime in the future, ensure adequate space is left, and cooling requirements are met.
- b. If your radio / source is equipped with pre-amp outputs, it is possible to utilize them to drive the amplifier and connecting (amplifier) to the 2 rear speakers.

Mounting your amplifier

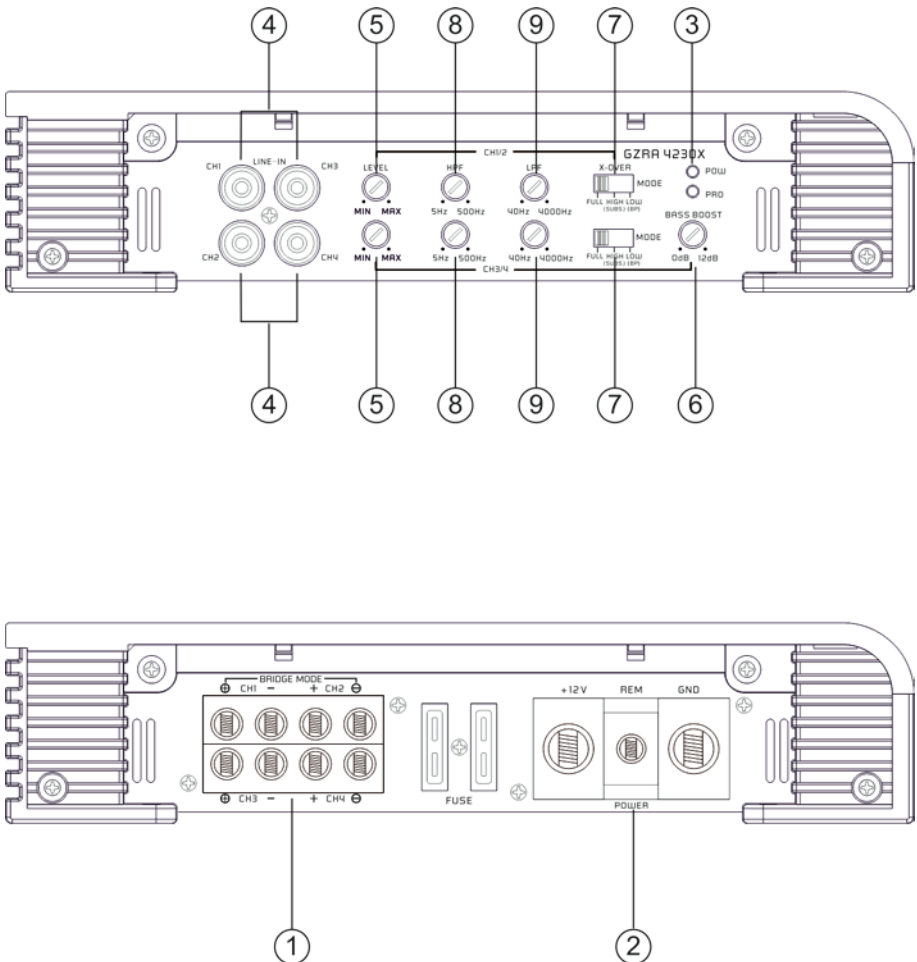
- a. Select a suitable location that is convenient for mounting, is accessible for wiring and has ample room for air circulation and cooling.
- b. Use the amplifier as a template to mark the mounting holes, remove the amplifier.

Warning

Choose a mounting position where all electric wires are protected from being damaged by sharp edges, heat or other conditions. +12Volt DC electrical connections must be fused on the battery side. Make sure your radio and all other devices will be turned off while connection your system.

If you need to replace the power fuse, replace it only with a fuse identical to that supplied with the system. Using a fuse of different type or rating may result in damage to this system which isn't covered by the warranty.

Controls and functions



Controls and functions

1	Speaker terminals	For connection of the speakers
2	Power terminals	GND -> Ground connection REM -> Remote antenna terminal BATT -> +12 Volt
3	Status indication	GREEN – OK RED – Error
4	Cinch inputs	Terminal for connection of the RCA wires. To avoid failure, please use high quality RCA wires.
5	Input level controller	With this controller you can adjust the input sensitivity.
6	Bass boost controller	For adjusting of the bass boost level in the range from 0 to +12 dB.
7	Mode switch	Adjust the crossover for the chosen utilization. LPF – Only bass frequencies (below 40Hz -4000Hz) will be reproduced. FULL – All frequencies will be reproduced. HPF – Only middle and high frequencies (over 5Hz – 500Hz) will be reproduced. At LPF adjustment, also the Highpass (Subsonic) is activated. This equals a Bandpass filter of 5 – 4000Hz.
8	High pass controller (Subsonic)	Set the filter switch to „HIGH“ position. Adjust the variable HPF crossover frequency to the desired frequency using the controller. All frequency between 5 and 500Hz will be reproduced.
9	Low pass controller	For subwoofer and Kickwoofer operation - Only frequencies from 40Hz to 4000Hz will be reproduced (depending on the LPF filter controller position). Set the filter switch to „LOW“ position. Adjust the variable LPF frequency to the desired frequency using the controller. At LPF adjustment, also the Highpass (Subsonic) is activated. This equals a Bandpass filter of 5 – 4000Hz.

Turning on the amplifier

The amplifier automatically turns on a few seconds after you turn on your radio.

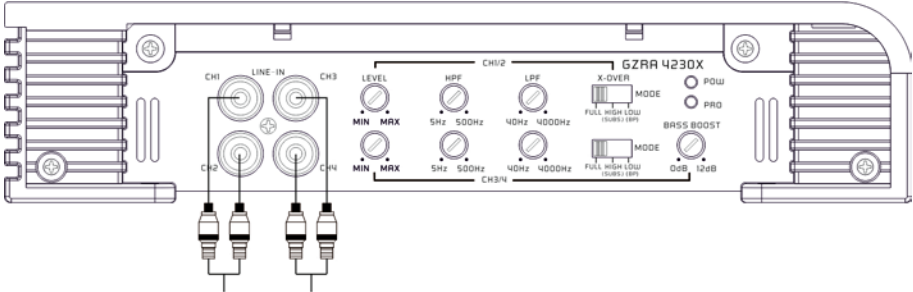
Note: Your amplifier temporarily shuts down if it gets too hot, then restarts automatically once it cools

(At about 80° / 176° F).

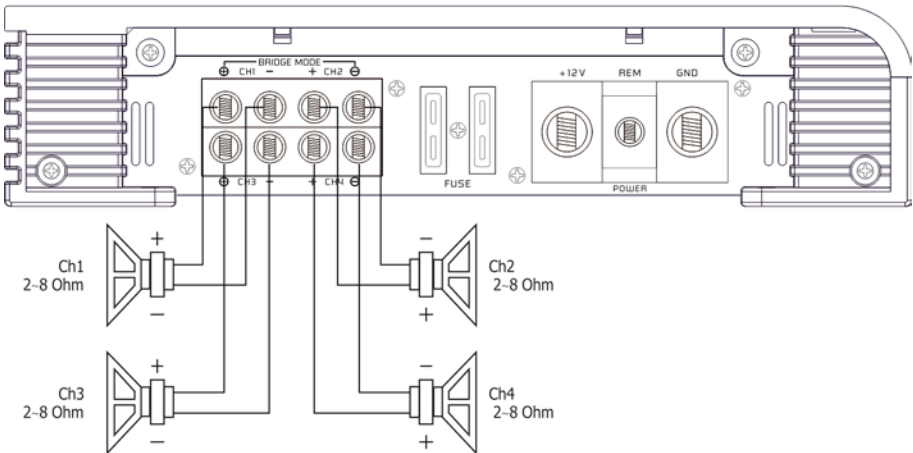
Adjusting the audio level

1. LEVEL (Min/Max): Turn fully counter- clockwise to MIN position
2. Turn the auto sound system's volume control to about two-third of its full range.
3. Adjust LEVEL to a comfortable listening level.

Stereo wiring

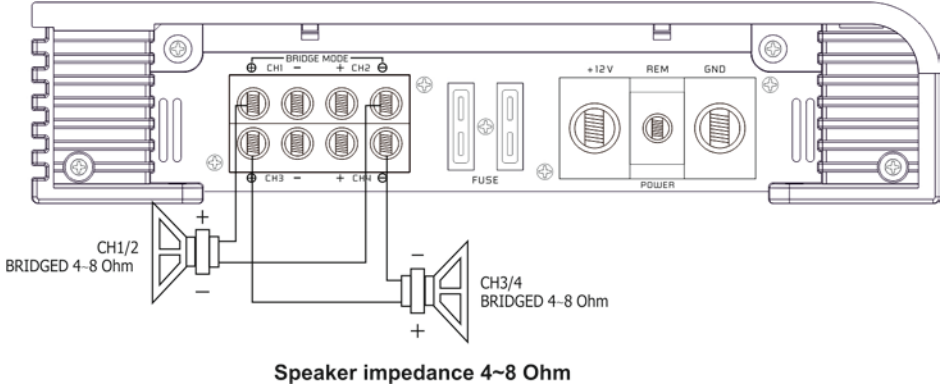


Zum Line out des Autoradios/

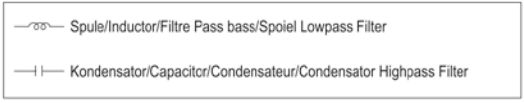
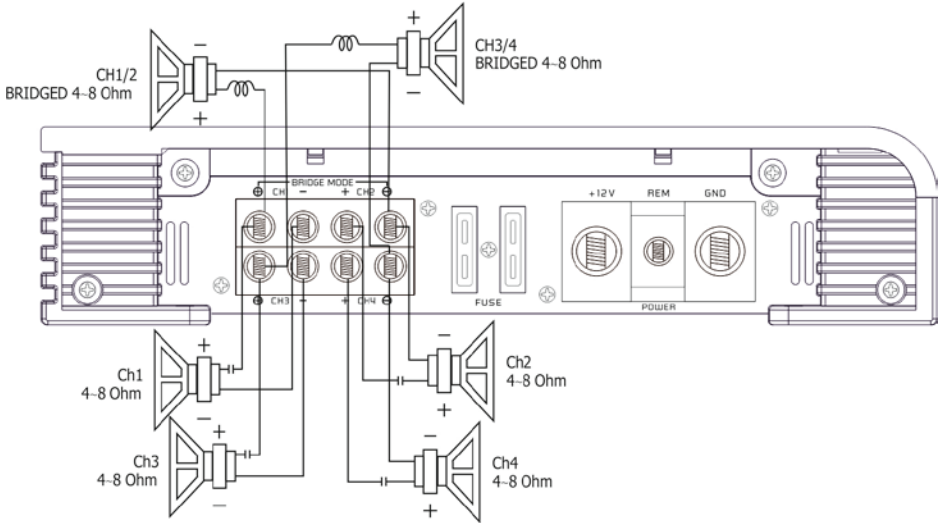


Speaker impedance 2~8 Ohm

Bridge mode



Trimode wiring



Speaker impedance 4-8 Ohm

Trimode crossover

TRI MODE operation output allows a subwoofer to be operated in mono mode while the main speakers are playing in stereo. Leave the crossover switch on "Full" position.

Use 100 volt, non-polar capacitors for a high pass crossover to filter out low frequencies and Air-core or Ferrite-core coils with a minimum diameter of 1 mm / 0.039" for the lowpass crossover to filter out high frequencies.

The capacitor and inductor values as written in the below table. The front and rear channels of this amplifier get this capability. Only the rear left and right channels are shown on the following pictures.

Values for 6dB passive crossover

Frequency	Inductor	Capacitor
80 Hz	7,5 mH	470 μ F
100 Hz	6,5 mH	330 μ F
120 Hz	5,5 mH	370 μ F
150 Hz	4 mH	220 μ F

Specifications

Model	GZRA 4230X
Type	4 Channel Class A/B
RMS Power @ 4 Ω CEA Standard CEA-2006-A	4 x 140 W (1% THD+N)
RMS Power @ 2 Ω CEA Standard CEA-2006-A	4 x 230 W (1% THD+N)
RMS Power @ 4 Ω Bridged CEA Standard CEA-2006-A	2 x 460 W (1% THD+N) 2 x 550 W (10% THD+N)
Damping factor	> 150
Lowpass	40 Hz – 4000 Hz
Highpass	5 Hz – 500 Hz
Bandpass	5 Hz – 4000 Hz
Bass boost	0 ~ +12 dB (45 Hz) (CH 3 & 4)
Frequency response	5 Hz – 38 KHz (\pm 1 dB)
Input sensitivity	500 mV – 9 V (\pm 5%)
Fuse	2 x 40A
Dimensions W x H x L mm	230 x 53 x 476
Dimensions W x H x L inch	9.04" x 2.09" x 18.74"

Trouble shooting guide

Symptoms	Check Points	Cure
No sound	Is the POWER LED illuminated?	Check fuses in amplifier. Be sure remote lead is connected. Check +12 Volt connection Check ground connection
	Is the diagnostic LED illuminated?	Check for speaker short or amplifier overheating
Amp not switching on	No power to the amplifier	Check power wire or connections
	No power to remote wire with receiver on	Check connections to radio
No sound in one channel	Check speaker leads	Inspect for short circuit or an open connection
	Check audio leads	Reverse left and right RCA inputs to determine if it is occurring before the amp
Amp turning off at medium / high volume	Check speaker load impedance	Be sure proper speaker load impedance recommendations are observed (If you use an ohm meter to check speaker resistance, please remember that DC resistance and AC impedance may not be the same.)
Protection LED is on	Temperature shut down	Turn radio volume down
	Speaker wires short	Separate speaker wires and insulate

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Limited warranty - defective products must be returned in original packaging - please add a copy of the original purchasing invoice showing the purchasing date and a detailed description of the failure. Failure caused by overload, misuse or by using the product for competition purpose are not covered by the warranty. We reserve the right to make needed change or improvement to the product without informing customer about this in advance.

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