

GROUND ZERO®

GERMAN ENGINEERING

NUCLEAR-SERIES AMPLIFIER

OWNER'S MANUAL

GZNA 4330XII

Features

- 1 Ohm stable Stereo / 2 Ohm bridged
- Dual Mosfet power supply
- Power & Protection indicator
- Variable 12dB Bass boost (45Hz) (Channel 3/4)
- Variable Phaseshift 0 – 180° (Channel 3/4)
- Variable Highpass / Subsonic 5 – 3000 Hz
- Variable lowpass 30 – 3000 Hz
- Variable Bandpass 5 – 3000 Hz
- Adjustable input sensitivity
- Soft delayed remote turn- on
- Remote control (Channel 3/4)
- Thermal / Short / Overload protection

Tools and materials you need

- Screwdriver
- Electric drill, 3 mm / 0.12" carbide drill bit
- Mounting screws
- Power wire min. 35 mm² / 2 AWG
- Ground wire min. 35 mm² / 2 AWG
- Speaker wire min. 2 x 2,5 mm² / 13 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 cars operating systems.
- Never pass wires over sharp angles. It is recommended to buffer the power supply of the amplifier with an additional capacitor (min 1 F) 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 to 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

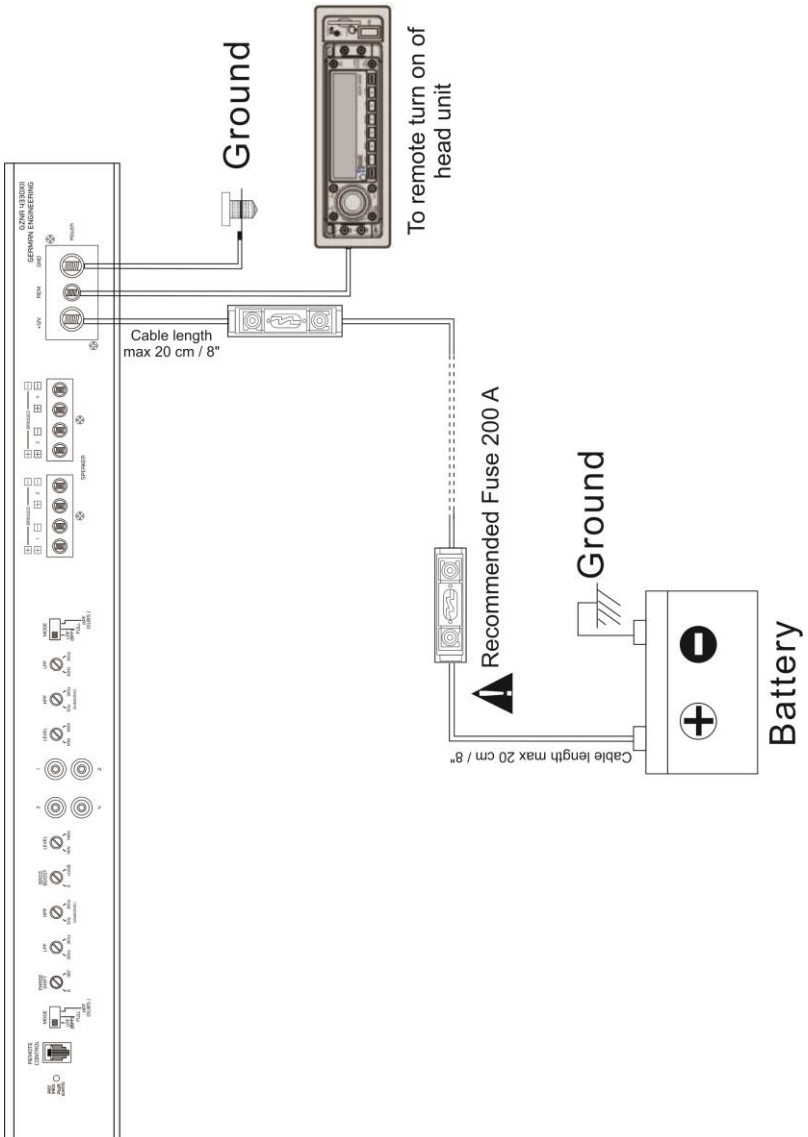
- a. Select a suitable location that is convenient for mounting, is accessible for wiring and has ample room for air circulation and cooling.
- b. Use the amplifier as a template to mark the mounting holes, remove the amplifier and drill 4 holes. Then mount the amplifier with the mounting screws.

Warning

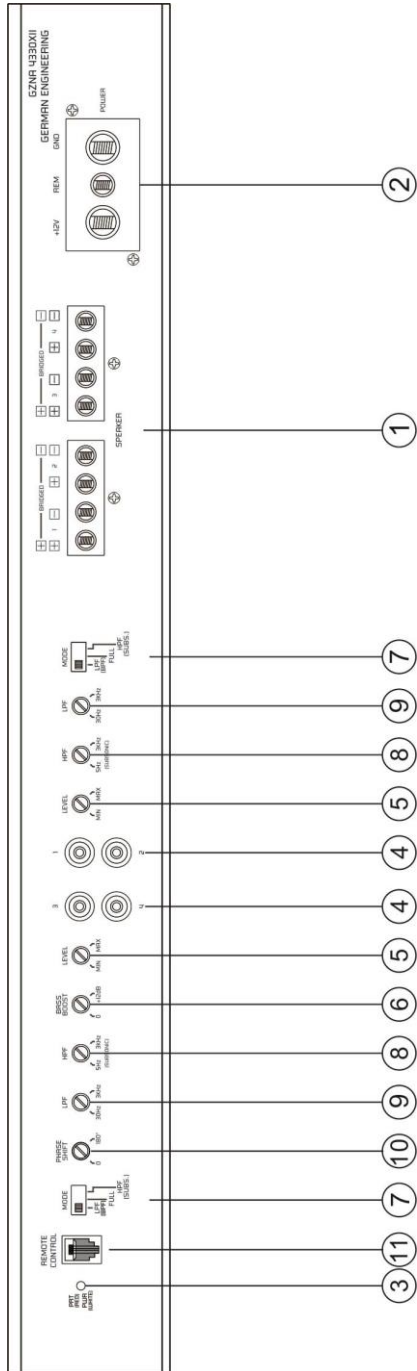
Choose a mounting position where all eclectic wires are protected from being damaged by sharp edges, heat or other conditions. + 12Volt DC electrical connections must be fused on the battery side. Make sure your radio and all other devices will be turned off while connection your system.

This amplifier has now internal fuse. Therefore it is absolutely necessary to connect the ANL- fuseholder (included in delivery) with its 200 A fuse. The cable length between amplifier and fuseholder must not be longer than max 20 cm / 7.9". Please see the connection diagram on the following side for correct wiring.

Power connection



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	WHITE – 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 30Hz - 3000Hz) will be reproduced. In this adjustment the Highpass (Subsonic) is also activated. This equals a Bandpass filter from 5 till 3000Hz. FULL – All frequencies will be reproduced. HPF – Only middle and high frequencies (over 5Hz – 3000Hz) will be reproduced.
8	High pass controller (Subsonic)	Set the filter switch to „HIGH“ position. Adjust the variable Highpass crossover frequency to the desired frequency using the controller. All frequency between 5 and 3000Hz will be reproduced.
9	Low pass controller	For subwoofer and Kickwoofer operation - Only frequencies from 30 to 3000Hz will be reproduced (depending on the lowpass filter controller position). Set the filter switch to „LOW“ position. Adjust the variable Lowpass frequency to the desired frequency using the controller. In this adjustment the Highpass (Subsonic) is also activated. This equals a Bandpass filter from 5 till 3000Hz.
10	Phase shift controller	This controller allows you to fit the subwoofer channel in-phase to the front system.
11	Remote control input	For connection of the bass remote control.

Turning on the amplifier

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

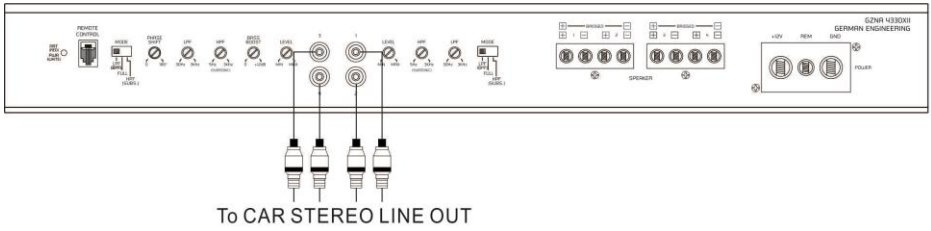
Note: Your amplifier temporarily shuts down if it gets too hot, then restarts automatically once it cools

(At about 80° / 176° F).

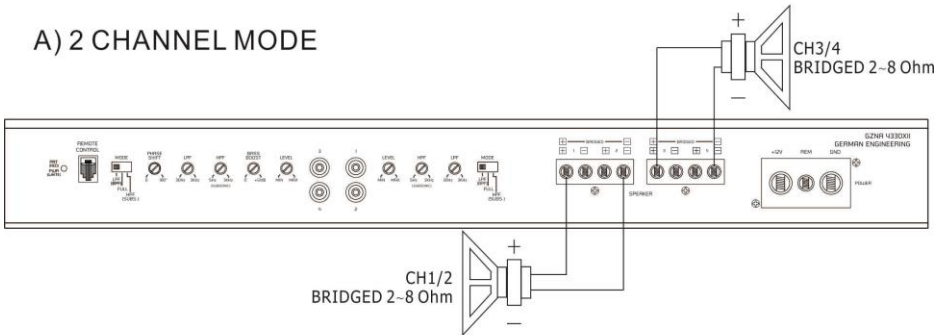
Adjusting the audio level

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.

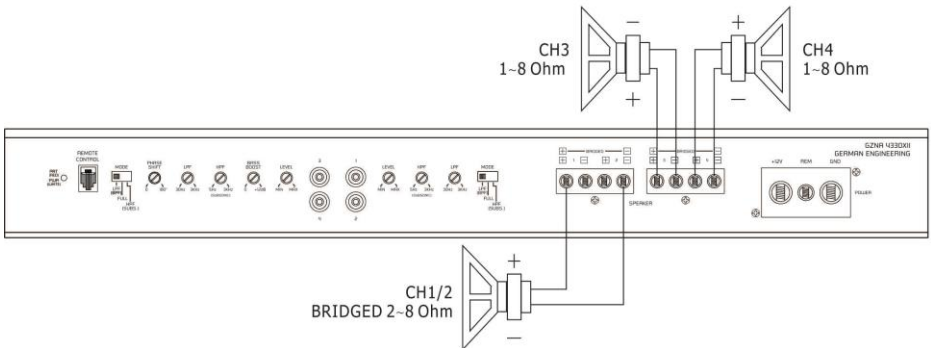
Connecting the speaker



A) 2 CHANNEL MODE

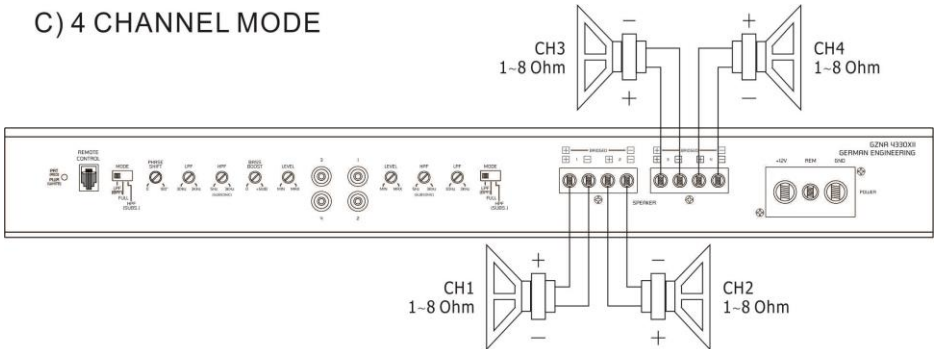


B) 3 CHANNEL MODE

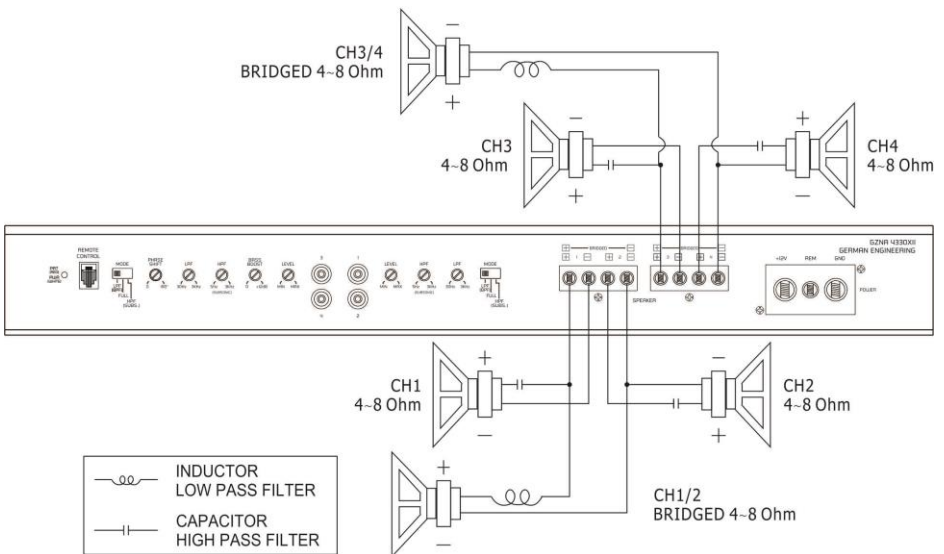


Trimode operation

C) 4 CHANNEL MODE



D) 6 CHANNEL MODE



Component values for 6dB passive crossover

Frequency	Inductor	Capacitor
80Hz	7.5mH	470uF
100Hz	6.5mH	330uF
120Hz	5.5mH	370uF
150Hz	4mH	220uF

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 Ferrit-ore 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 above table. The front and rear channels of this amplifier get this capability. Only the rear left and right channels are shown on the above pictures.

Specifications

Model	GZNA 4330XII
RMS Power @ 4 Ω CEA Standard CEA-2006-A	4 x 200 W (1% THD+N) 4 x 240 W (10% THD+N)
RMS Power @ 2 Ω CEA Standard CEA-2006-A	4 x 350 W (1% THD+N) 4 x 420 W (10% THD+N)
RMS Power @ 1 Ω CEA Standard CEA-2006-A	4 x 550 W (1% THD+N) 4 x 650 W (10% THD+N)
RMS Power @ 4 Ω bridged CEA Standard CEA-2006-A	2 x 700 W (1% THD+N) 2 x 840 W (10% THD+N)
RMS Power @ 2 Ω bridged CEA Standard CEA-2006-A	2 x 1100 W (1% THD+N) 2 x 1300 W (10% THD+N)
Damping factor	> 180
Lowpass	30 – 3000 Hz
Highpass	5 – 3000 Hz
Bandpass	5 – 3000 Hz
Subsonic filter	5 – 3000 Hz
Bass boost	0 ~ +12 dB (Channel 3/4)
Bass boost frequency	45 Hz (Channel 3/4)
Phase shift	0 – 180° (Channel 3/4)
Frequency response	5 Hz – 38 KHz (\pm 1 dB)
Efficiency @ 4 Ω	200 mV – 9 V (\pm 5%)
Operating voltage	9.5 – 16 Volt
Bass remote	✓ Lowpass-Operation (Channel 3/4)
Fuse	External ANL Fuse 200A (included in delivery)
Dimensions W x H x L mm	293 x 67 x 560
Dimensions W x H x L inch	11.54 x 2.64 x 22.05"

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 signal leads. Check again control. Check tuner/deck volume level.
	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 loa 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

Die Gewährleistung entspricht der gesetzlichen Regelung. Eine Rücksendung kann nur nach vorheriger Absprache und in der Originalverpackung erfolgen. Bitte unbedingt einen maschinell erstellten Kaufbeleg und eine Fehlerbeschreibung beilegen. Von der Gewährleistung ausgeschlossen sind Defekte, die durch Überlastung, unsachgemäße Behandlung oder bei Teilnahme an Wettbewerben entstanden sind. Wir behalten uns das Recht vor, zukünftig nötige Änderungen oder Verbesserungen an dem Produkt vorzunehmen ohne den Kunden darüber zu informieren.

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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