

# 2-CHANNEL AMPLIFIER

## GZRA 2HD

Owner's Manual

### Features

- High-performance class D amplifier
- 2 ohms stable in stereo mode
- 4 ohms stable in bridged mode
- High-level input with auto-on feature
- Adjustable wide band active crossover
- Bass boost control (0-12 dB @ 45 Hz)
- Adjustable input sensitivity
- Wired bass level remote control (separately available) (GZTA Bassremote)
- Turn-on delay
- Thermal protection circuit

GROUND ZERO GZRA 2HD

## Mounting instructions

- As a precaution, it is recommended to disconnect the vehicles battery before mounting the amplifier.  
Note: For new vehicles, disconnecting the battery might cause various errors in your vehicle's electric system that can be cleared only by authorized service partners of your vehicle's manufacturer! Please ask your service partner first before disconnecting the battery!
- The power supply wire (+12 V) has to be protected within max. 20 cm / 8" by a main fuse holder with a fuse value matching the recommendation for your amplifier  
Note: If there is more than one amplifier connected using this power wire, the main fuse value must be equal to the sum of the recommended fuses of all connected devices. However, make sure the diameter of your power wire will be enough for the required current!
- If necessary, replace a defective fuse by a fuse with identical quality and value
- Never drill holes to the vehicle's gas tank, brake lines, to wirings or any other important vehicle parts!
- Never pass wires over sharp edges or vehicle parts due avoid any kind of damage
- Keep the wiring away from the antenna and electronic devices contributing to radio reception
- Lay the power supply wiring always separated from speaker wiring to avoid disturbance
- The amplifier contains a temperature protection circuit that turns the device off in case of overheating. After a certain cooling time, it will turn on automatically. To avoid heat build-up, enough air supply for cooling must be provided. Never cover the surface of the amplifier's heatsink entirely
- The amplifier should **NEVER** be mounted onto a vibrating part or surface such as a subwoofer enclosure. This might lead to malfunction due to loosened electrical parts inside the amplifier.
- Some amplifiers offer a high-level input option, however if a pre-amplified output (RCA) is available (at the head unit), it is strongly recommended to make use of it.

## Terms of warranty

The limited warranty for this product is covered by GROUND ZERO's regional distribution partners and their terms and conditions. For further information contact your local retailer or distributor.

## Recommended wiring

Speaker wires	min 2.5 mm <sup>2</sup> / 13 AWG
Power supply wires	min 20 mm <sup>2</sup> / 4 AWG

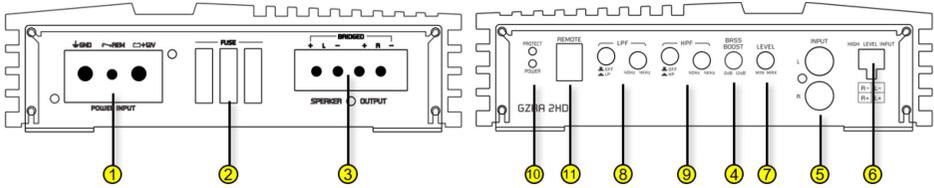


GROUND ZERO products are engineered in Germany

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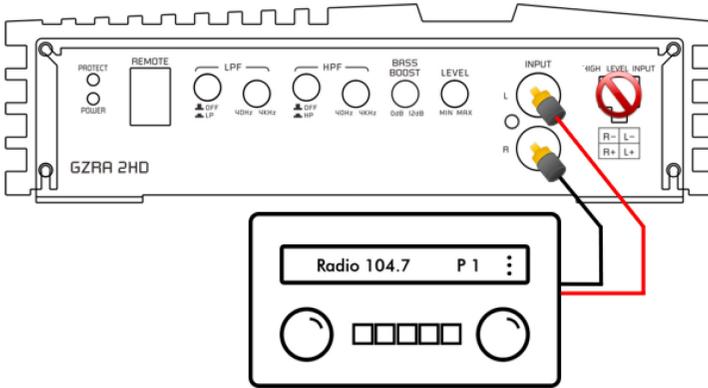


## Controls &amp; Features

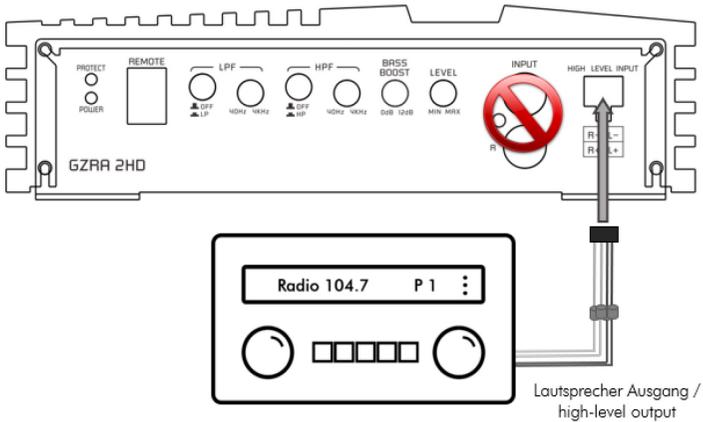


1	<b>Power terminal</b>	<p>+12V To be connected to the positive terminal of the battery</p> <p>REM To be connected to the remote output of the head unit* (*not required in high-level input mode)</p> <p>GND To be connected to the vehicle's ground (or directly to the negative terminal of the battery)</p>
2	<b>Fuse(s)</b>	If necessary to replace a defective fuse, it's strongly recommended to use a fuse with identical value
3	<b>Speaker terminal</b>	To connect the speaker wires min. 2 ohms load in stereo mode min. 4 ohms load in bridged mode
4	<b>Bass boost control</b>	To increase the bass level at 45 Hz up to 12 dB
5	<b>Line input (RCA)</b>	Input sockets to connect RCA wires Important note: High-level and RCA inputs should <b>never</b> be used simultaneously! This may cause serious damage to the amplifier
6	<b>High-level input</b>	Head units without RCA pre-amplifier output signal can be connected using the high-level input to connect the speaker output of the head unit directly. If used, the amplifier turns on automatically (auto-on feature) The remote input of the power supply terminal remains unused Important note: High-level and RCA inputs should <b>never</b> be used simultaneously! This may cause serious damage to the amplifier
7	<b>Sensitivity control</b>	Controller to adjust the input sensitivity
8	<b>Low pass filter</b>	To adjust the required crossover point. Frequencies above the selected crossover point will be filtered (40 Hz to 4000 Hz)
9	<b>High pass filter</b>	To adjust the required crossover point. Frequencies below the selected crossover point will be filtered (40 Hz to 4000 Hz)
10	<b>Status indication</b>	POWER (green) ok (correct operation) PROTECT (red) error (protection mode)
11	<b>Remote socket</b>	To connect the wired bass level remote control (available separately)

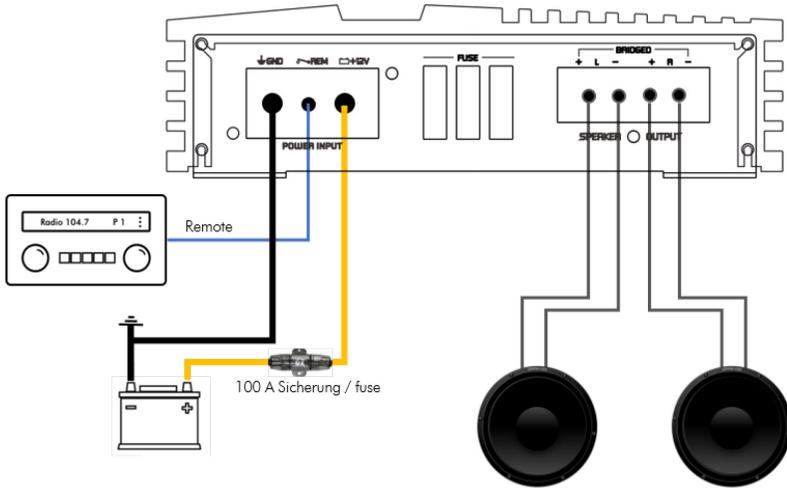
RCA input wiring



High-level input wiring

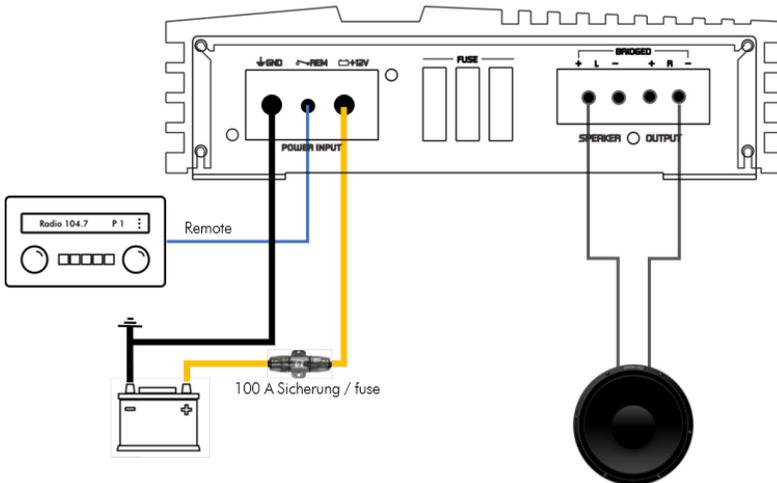


### Speaker wiring in stereo mode



Geringste Lautsprecherimpedanz je 2  $\Omega$   
Minimum speaker impedance 2  $\Omega$  each

### Speaker wiring in bridged mode



Geringste Lautsprecherimpedanz 4  $\Omega$   
Minimum speaker impedance 4  $\Omega$

## Specifications

Model	GZRA 2HD
<b>Amplifier type</b>	2 channel class D
<b>RMS Power @ 4 <math>\Omega</math></b> CEA Standard CEA-2006-A	2x 285 W (1% THD+N)
<b>RMS Power @ 2 <math>\Omega</math></b> CEA Standard CEA-2006-A	2x 450 W (1% THD+N)
<b>RMS Power @ 4 <math>\Omega</math> in bridged mode</b> CEA Standard CEA-2006-A	1x 900 W (1% THD+N) 1x 1150 W (10% THD+N)
<b>Low pass filter</b>	40 Hz – 4000 Hz (12 dB/oct)
<b>High pass filter</b>	40 Hz – 4000 Hz (12 dB/oct)
<b>Frequency response</b>	10 Hz – 25 kHz
<b>Signal to noise ratio (SNR)</b>	-101.9 dB
<b>Total harmonic distortion (THD+N)</b>	< 0.1%
<b>Damping factor</b>	> 200
<b>Input sensitivity</b>	200 mV – 5.3 V
<b>Fuse(s)</b>	3x 30 A
<b>Recommended main fuse</b>	100 A
<b>Dimensions w x h x l (heatsink / overall)</b>	186 x 52 x 229/268 mm
<b>Dimensions w x h x l (heatsink / overall)</b>	7.32 x 2.05 x 9.02/10.55"

## Trouble shooting guide

Symptoms	Check / Cause	Action
No audible sound	Does the POW LED turn to green?	Check protection fuse(s) of the amplifier (harness) Check remote wire connection (RCA input mode) Check +12 Volt power supply wire connection Check ground wire connection
	Did the PROTECT LED turn to red?	Check for speaker short or amplifier overheating
Device does not turn on	Power supply of the amplifier?	Check power wire or connections
	Remote wire powered? (RCA input mode)	Check remote wire connection to the head unit
No sound on one channel	Speaker wiring undamaged?	Check for short circuit or open connections
	Input signal on each RCA lead?	Reverse left and right RCA inputs to check the audio input signal
Device turns off at medium / high volume	Load impedance of each speaker correct?	Check if each speaker load impedance matches the technical specifications of the amplifier
Status LED turned on red	Temperature protection circuit active	Decrease head unit's volume / wait for cooling
	Speaker wires short / speaker damaged	Check speaker / wires and insulate if necessary



Listening to music can be emotional, impressive, relaxing or enjoyable. At that, it doesn't really matter what kind of music is the personal favorite, whether it's Instrumental, Jazz, Electro, Latin, Classic, Rock or any other music direction. However, audio reproduction quality at each desired volume is elementary. Some music styles require higher levels while others prefer the soft tones.

GROUND ZERO considers all the different wishes of customers during the development of new products. Along with this, the target is to create the most realistic sound, to transfer the soul of the music and the intention of the performer. Summarized to one phrase: RESPECT THE MUSIC!

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