

GROUND ZERO[®]

GERMAN ENGINEERING

COMPETITION SERIES

Mono High-Power Amplifier

GZCA 20000.M1

Owner's manual

(AWV4.0)

Features

- High-power mono class D amplifier
- High-efficient class D technology
- 1 ohm stable
- Adjustable subsonic filter
- Adjustable low pass filter
- Variable bass boost function
- Adjustable input sensitivity
- Turn-on delay
- Thermal protection
- Short protection
- Overload protection
- Bass level remote control included

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General 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!
- 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.

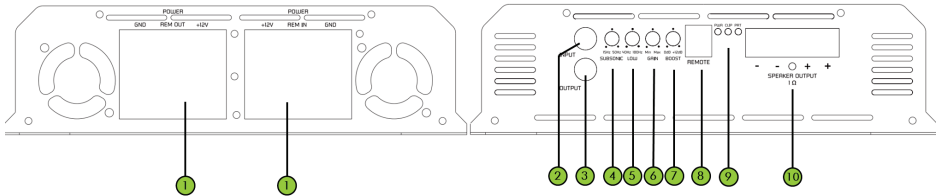
Specifications

Model	GZCA 20000.M1
Amplifier type	Mono class D
RMS Power @ 4 Ω (@ 100 Hz) *	7300 W (1% THD+N)
RMS Power @ 2 Ω (@ 100 Hz) *	13000 W (1% THD+N)
RMS Power @ 1 Ω (@ 100 Hz) *	20000 W (1% THD+N)
Max. Power @ 1 Ω (@ 100 Hz)	22000 W (10% THD+N)
Subsonic filter	15 Hz – 50 Hz (12 dB/oct)
Low pass filter	40 Hz – 180 Hz (12 dB/oct)
Frequency response	15 Hz – 180 Hz
Total harmonic distortion (THD+N)	< 0.2%
Damping factor	> 70
Signal-to-noise ratio	> 82 dB
Input sensitivity	300 mV – 4.8 V
Input Impedance	27 k Ω
Rec. speaker wire	$\geq 6 \text{ mm}^2$ / 10 AWG
Rec. power wire	$\geq 4 \times 50 \text{ mm}^2$ / 0 AWG
Max. current	1800 A
Dimensions w x h x l (heatsink / overall)	230 x 67 x 790 mm
Dimensions w x h x l (heatsink / overall)	9.06" x 2.64" x 31.10"

*based on CEA-2006 standard

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Controls & Features



1	Power terminal(s)	+12V REM GND	To be connected to the positive terminal of the battery To be connected to the remote output of the head unit* To be connected to the vehicle's ground (or directly to the negative terminal of the battery)
2	Line input (RCA)		Input socket to connect an RCA signal wire Important note: Do not use stereo RCA input wires! The lower RCA socket can only be used as output to connect another amplifier!
3	Line output (RCA)		Output socket to connect an RCA wire Important note: Do not use stereo RCA input wires! The lower RCA socket can only be used as output to connect another amplifier!
4	Subsonic filter		To adjust the required crossover point. Frequencies below the selected crossover point will be filtered (15 Hz to 50 Hz)
5	Low pass filter		To adjust the required crossover point. Frequencies above the selected crossover point will be filtered (40 Hz to 180 kHz)
6	Sensitivity control		To adjust the input sensitivity
7	Bass Boost control		To adjust the bass boost frequency and level (0 to 12 dB)
8	Remote wire socket		To connect the wired remote control
9	Status indication	PWR (blue) CLP (yellow) PRT (red)	ok (correct operation) amplifier is clipping error (protection mode)
10	Speaker terminal		To connect the speaker wires - min. load 1 ohm

Important note !

To avoid any damage to the device due to a short circuit during the connection of the loudspeaker cables, it is strongly recommended to connect the loudspeaker cables **before** the power cables are connected to the device. In addition, the signal cable (RCA cable) must not be connected during operation but only when the device is turned off.

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Trouble shooting guide

Symptoms	Check / Cause	Action
No audible sound	Does the PWR 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 PRT LED turned 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
Device turns off at medium / high volume	Load impedance of connected speaker(s) correct?	Check if each speaker load impedance matches the technical specifications of the amplifier
PRT LED 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

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.

Safety instruction / Manufacturer's declaration

Safety Instructions: Do not expose the device to extreme temperatures, fire, high humidity or direct contact with liquids. Do not use the device if it has been damaged or exposed to liquids. Keep the device, packaging and accessories away from children and pets to prevent accidents and suffocation.

Manufacturer's declaration: Electronic products contain valuable raw materials and must not be disposed of with normal household waste. At the end of its service life, please bring the device to your local recycling facility.



GROUND ZERO products are engineered in Germany
GROUND ZERO - international sponsor of



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