

# CAR SPECIFIC-SERIES AMPLIFIER

## OWNER'S MANUAL

### GZCS 4.60ISO

#### Features

- High efficient plug 'n' play analog amplifier
- For any vehicle with passive sound system and iso-connection
- Many different car specific adapters available (optional)
- 2 Ohm stable Stereo
- Power & Protection indicator
- Variable highpass (@ 4Ch + Sub mode)
- Variable lowpass (@ Front + Sub mode)
- Adjustable input sensitivity
- Soft delayed turn- on
- Thermal / Short / Overload protection
- Including 2 m (6.56 ft) cable harness with ISO adaption

## Tools and materials you need

- Screwdriver
- Electric drill, 3 mm / 0.12" carbide drill bit
- Mounting screws

## 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.

## 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.

## Mounting your amplifier

- Select a suitable location that is convenient for mounting, is accessible for wiring and has ample room for air circulation and cooling.
- The unit should be not covered or mounted near to heat emitting objects.
- Because of the high operation temperature (max. 80°C), it is important to ensure sufficient distance to any heat-sensitive objects.  
Especially the distance between GZCS 6.40ISO and any plastic parts and electronic components should be min. 3 cm (1.18").
- 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 wrong fuse may result in damage to this system which isn't covered by the warranty.

## Connection

- The GZCS 4.60ISO will be connected directly between radio and the original cable harness of your car. For vehicles without iso-connection, you'll need an optional adapter.

**!** Please note that the GZCS 4.60ISO can't be used in cars with original active soundsystem. The connection of the GZCS 4.60ISO to an active sound system can cause a defective amplifier or destroy the vehicle's electronics. If you do not know the exact car audio configuration of your vehicle, please contact your dealer or car manufacturer. **!**

## Current demand

The GZCS 4.60ISO is designed for easy-fit connection to the original cable harness.

On a few car models it might be necessary to connect the GZCS 4.60ISO directly to the battery.

### **Please note:**

- An adequate power supply can not be guaranteed, if the car specific fuse of the radio-connector has less than 15Ampere.
- An adequate power supply can not be guaranteed, if additionally units, such as handsfree kits, GPS,... are connected to the original cable harness.
- Max. one GZCS 4.60ISO can be used on the original cable harness. If you want to use additionally amplifiers, you must connect them directly to the battery.
- **The best performance can only be reached by using a direct battery connection for the power.**

## Iso connection

Please note the different variants of iso connector pin assignments in each car model and brand.

For example, many vehicles of VAG group (VW, Audi, Seat, Skoda,...) have inverted +12V and ACC in the iso connector.

That must be noted carefully if you install the GZCS 4.60ISO. A wrong connection can cause a defective amplifier and destroy the vehicle's electronics.

Please contact a professional installer to guarantee an adequate installation of the GZCS 4.60ISO.

## 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 down.

(At about 80° / 176° F).

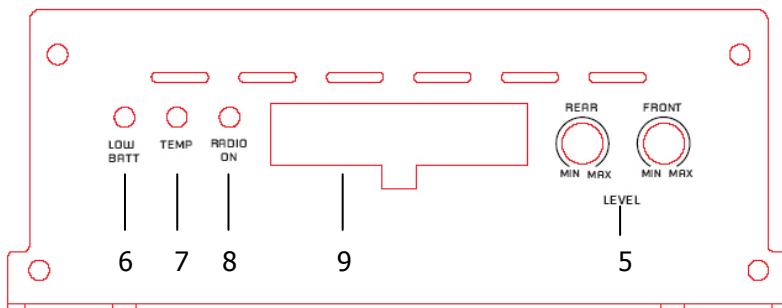
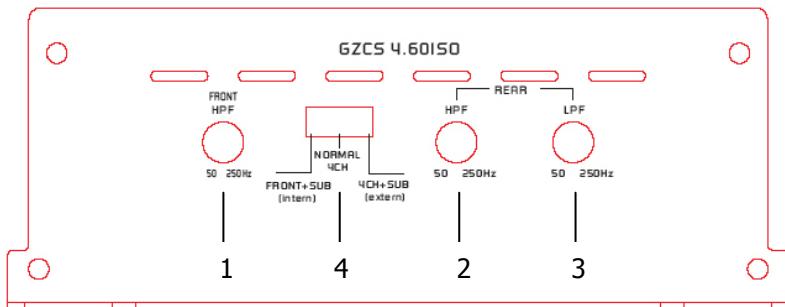
## Adjusting the audio level

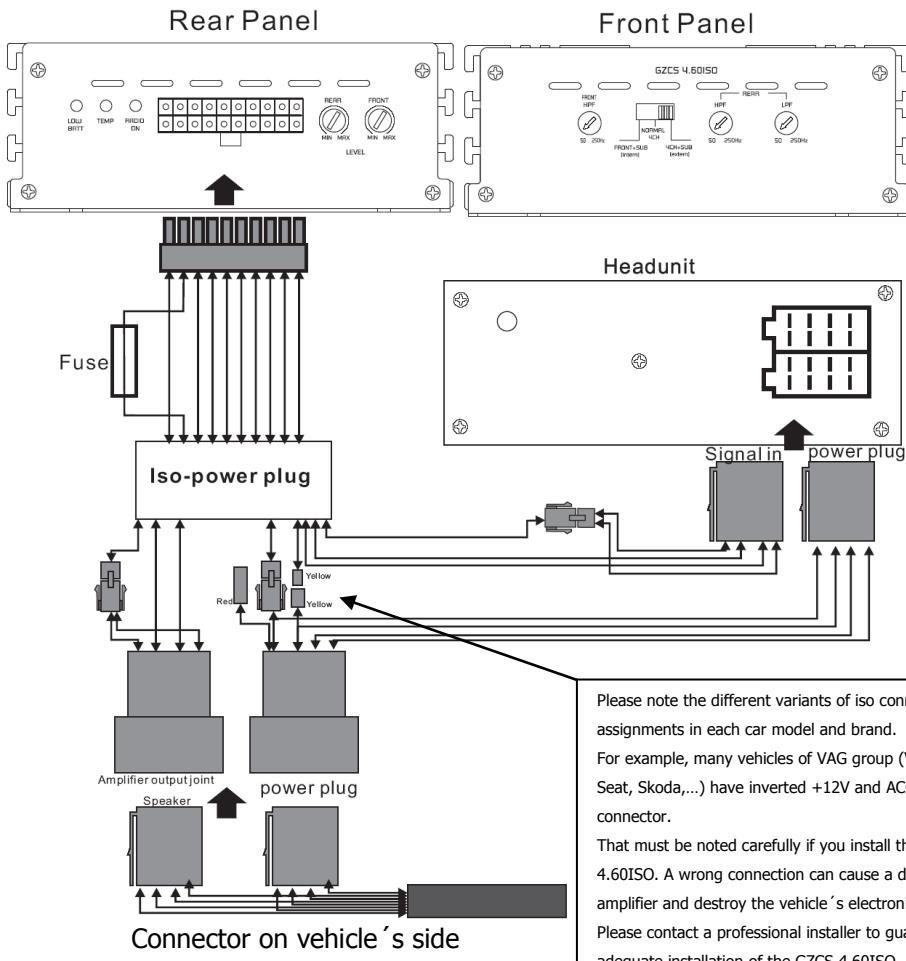
1. LEVEL (Min/Max): Turn fully counter-clockwise to MIN position
2. Turn the auto sound system's volume control to about two-third of its full range.
3. Adjust LEVEL to a comfortable listening level.

## Controls and functions

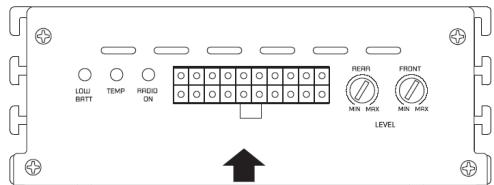
1	<b>High pass controller Front</b>	Activated at 3 channel mode with subwoofer [Modeswitch to Front+Sub (intern)] and for external subwoofer use [Modeswitch to 4CH + Sub (extern)]. Adjust the variable HPF crossover frequency to the desired frequency using the controller. All frequency below 50 and 250Hz will be filtered.
2	<b>High pass controller Rear</b>	Activated at external subwoofer mode [Modeschalter auf 4CH + Sub (extern)] Adjust the variable HPF crossover frequency to the desired frequency using the controller. All frequency below 50 and 250Hz will be filtered.
3	<b>Low pass controller Rear</b>	Activated at 3 channel mode with subwoofer [Modeswitch to Front+Sub (intern)] Adjust the variable LPF crossover frequency to the desired frequency using the controller. All frequency above 50 and 250Hz will be filtered.
4	<b>Mode switch</b>	Choose the correct mode for your application. <b>FRONT+SUB</b> – 3 channel mode. The front speakers are powered by the FRONT channels. The high pass filter is activated. The REAR channels are powering a subwoofer in bridgemode with min. 4 Ohm impedance. The low pass filter is activated. <b>NORMAL</b> – FRONT and REAR channels are powering the front and rear speakers. The filters are NOT activated. <b>4CH + SUB</b> – 4 channel mode with external subwoofer. FRONT and REAR channels are powering the front and rear speakers. The high pass filter of FRONT and REAR are activated. Low pass is NOT activated.
5	<b>Level controller</b>	With this controller you can adjust the input sensitivity.
6	<b>LED Low Batt</b>	Protection circuit that protects the unit and battery from low voltage. LED is illuminated yellow during low batt protection.
7	<b>LED Temp</b>	Protection circuit that protects the unit from overheating. (max 80°). LED is illuminated red during overheat protection.
8	<b>LED Radio On</b>	The amplifier automatically turns on a few seconds after you turn on your radio. The LED is illuminated green when amplifier is switched on.
9	<b>Power and signal connector</b>	Connector for the provided cable harness. <b>Please attend to use SOLELY the original, specific GZCS 4.60ISO cable harness. Using a wrong cable harness can destroy the amplifier and car electronics.</b>

## Controls and functions

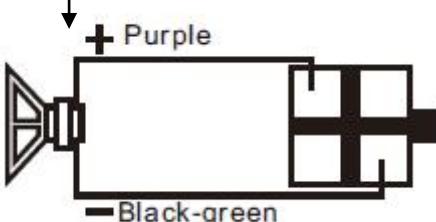
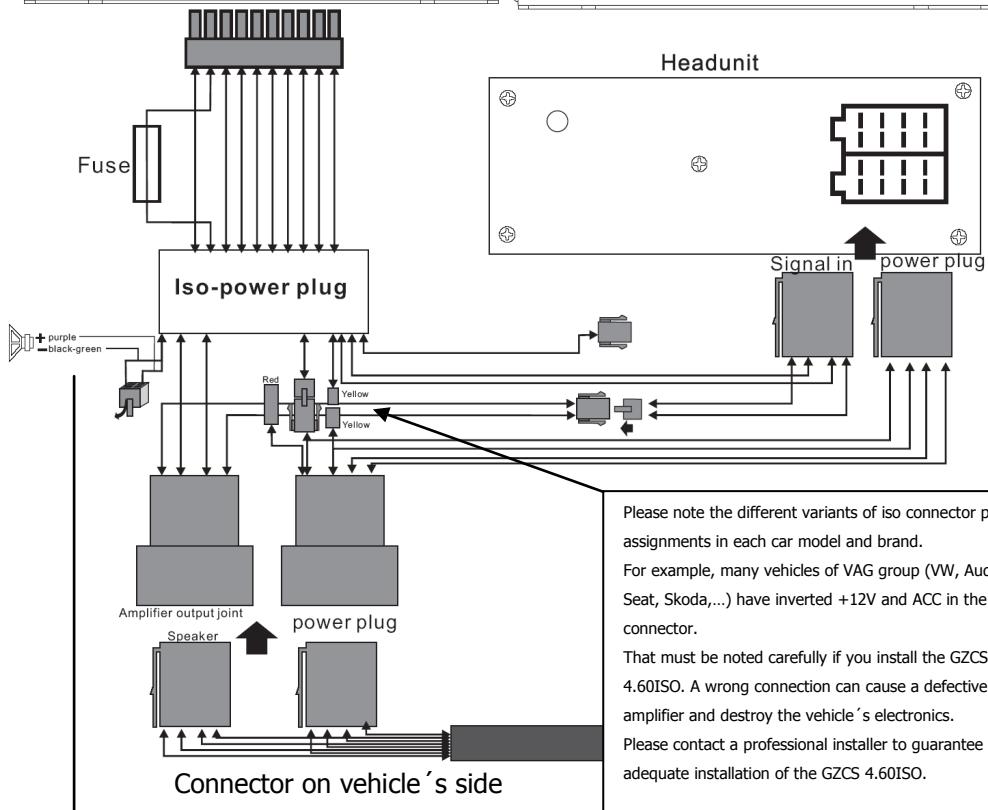
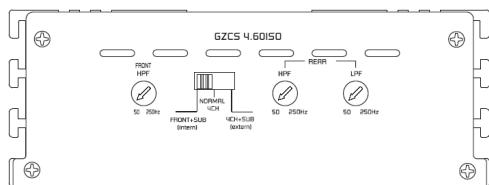




Rear Panel



Front Panel



Please solely use the delivered adapter to connect a subwoofer to the GZCS 4.60ISO.

**Please take care that the subwoofer impedance must be min. 4 Ohm.**

## Technical specifications

<b>Model</b>	<b>GZCS 4.60ISO</b>
<b>Type</b>	4 Channel ISO amplifier
<b>Output Power @ 4 Ω</b>	<b>4 x 70 W</b>
<b>RMS Power @ 4 Ω</b> CEA Standard CEA-2006-A	4 x 30 W (1% THD+N) 4 x 60 W (10% THD+N)
<b>Output Power @ 2 Ω</b>	<b>4 x 90 W</b>
<b>RMS Power @ 2 Ω</b> CEA Standard CEA-2006-A	4 x 45 W (1% THD+N) 4 x 80 W (10% THD+N)
<b>Output Power @ 4 Ω (3 Channel mode)</b>	<b>2 x 70 W &amp; 1 x 180 W</b>
<b>RMS Power @ 4 Ω (3 Channel mode)</b> CEA Standard CEA-2006-A	2 x 30 W & 1 x 90 W (1% THD+N) 2 x 60 W & 1 x 160 W (10% THD+N)
<b>Lowpass filter (Rear)</b>	50 Hz – 250 Hz
<b>Highpass filter</b>	50 Hz – 250 Hz
<b>Frequency response</b>	5 Hz – 30000 Hz (± 1 dB)
<b>Fuse</b>	20A
<b>Dimensions</b> B x H x L mm	165 x 52 x 135
<b>Dimensions</b> B x H x L inch	6.5" x 2.05" x 5.31"

## Troubleshooting

Symptoms	Check points	Cure
No sound	Is the POWER LED NOT illuminated?	Check fuses in cable harness. Check signal leads. Check again control. Check tuner/deck volume level. Check power wire or connections
	Is the Temp LED illuminated red?	Unit overheated!
	Leuchtet die Low Batt LED?	Check all the connections detailed Battery fully charged?
Amp turning off at medium / high volume	Check speaker load impedance	Be sure that the speaker load impedance of all channels is min. 2 Ohm.
No sound in one channel	Check speaker leads	Inspect for short circuit or an open connection

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.

De Garantie bepalingen van alle door ground zero geleverde producten is volgens wettelijke bepalingen geregeld. Een retourzending kan alleen na duidelijke afspraak en in de originele verpakking plaatsvinden. SVP een aankoopbon en een duidelijke storingsomschrijving bijvoegen. Van garantie uitgesloten zijn defecten door overbelasting, onkundig gebruik, of door deelname aan wedstrijden (SPL) ontstaan zijn. Wij behouden ons het recht om de nodige veranderingen of verbeteringen aan het product door te voeren zonder de klant hierover te informeren.

La garantie est conforme aux droits légaux. Un retour du produit défectueux doit être dans son emballage d'origine sur présentation du reçu ou de la facture indiquant la description du défaut. La présente Garantie n'est pas applicable lorsque le produit a été endommagé en raison: Mauvaise alimentation, Trop de puissance (HP, Subwoofer) Accident, Installation ou Utilisation non conforme aux normes Technique (Concours SPL etc). Nous nous réservons le droit d'entreprendre à l'avenir nécessairement des modifications ou des améliorations au produit sans informer le client.

## Ground Zero GmbH

**Erlenweg 25, 85658 Egmating, Germany**

**Tel. +49 (0)8095/873 830      Fax -8310**

**[www.ground-zero-audio.com](http://www.ground-zero-audio.com)**

