

GROUND ZERO[®]

GERMAN ENGINEERING

DIGITAL SOUND PROCESSOR

MANUAL

GZDSP 6-8X

Features

- Digital sound processor
- Simple handling via 1-page user interface
- Realtime setup (all functions)
- Cirrus Logic single core 32 Bit, 8-channel, 192 kHz
- 6 channel input / 8 channel output
- High-level and low-level input
- DC Auto-On (using the high-level input)
- TOSLINK input (optical @12 ~ 96 kHz)
- 3.5mm stereo jack AUX – input connector
- 6 x 31 band equalizer (-18 to + 12 dB / Q: 0.5 - 9) 20 - 20000 Hz (on output A - F)
- 2 x 11 band equalizer (-18 to + 12 dB / Q: 0.5 - 9) 20 - 200 Hz (on output G/H)
- Time alignment – adjustable range 0 - 15 ms / 0 - 510 cm
- Adjustable filters (Butterworth) HPF / LPF / BPF with a slope of 6 – 48 dB/Oct.
- selectable phase shift for each channel (0° or 180°)
- Memory for up to 10 user presets
- Optional remote control unit with LED display to adjust the main volume and switch between the presets and input mode

Package contents

- 1 x GZDSP 6-8X processor
 - 1 x USB cable (A- to Mini-B connector) 5 m
 - 1 x high-level input harness
 - 1 x power supply harness
 - 1 x PC software und drivers on CD-ROM
 - 1 x manual (German/English)
- optional:
- remote control unit **GZDSP Remote** with LED display incl. connection wire

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Required parts and tools for the installation

- screwdriver
- electric drill, 3 mm / 0.12" carbide drill bit
- mounting screws
- power wire min. 1 mm² / 17 AWG
- ground wire min 1 mm² / 17 AWG

Most important

- Disconnect vehicle battery before starting the installation! (Note the vehicle's operating manual)
- Never drill any holes into the fuel tank, brake pipes, wiring or any other sensitive parts of the vehicle!
- Keep the installed wires away from any sharp edges!

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! This may lead to potential traffic hazards. In the interest of safety, consumer electronics recommends listening at lower volume levels while driving.

Planning your system

Before starting to install the unit, please consider the following:

- a. If you are planning to expand your system by adding other components in the future, ensure enough space is left and cooling requirements are met.
- b. If your head-unit is equipped with pre-amplified outputs (RCA), we recommend to use them.

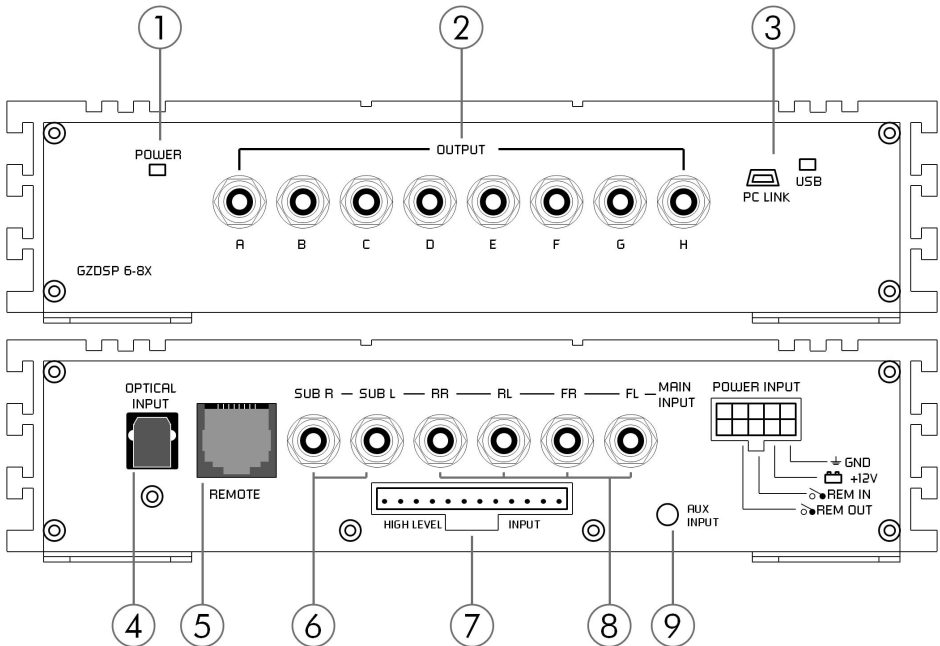
Mounting the Unit

- a) Select a suitable location that is convenient for mounting, is accessible for wiring and has enough space for air circulation and cooling.
- b) You may use the unit as a template to mark the mounting holes, then remove it and drill the marked holes. Finally mount the unit with the mounting screws.

Caution

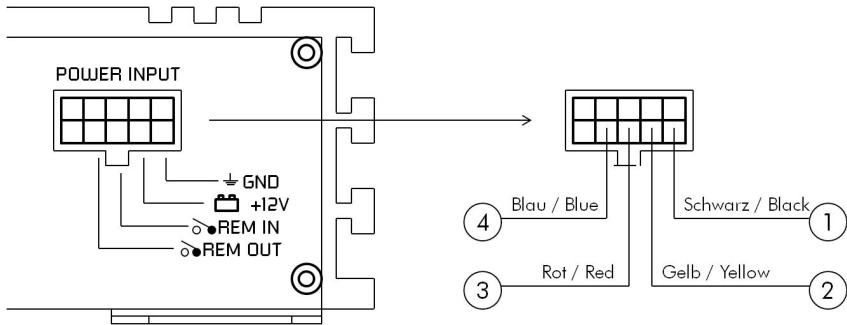
Choose a mounting position where all electric wires are protected from damage by sharp edges, heat or other conditions. +12 Volt DC electrical connections must be fused on the battery side. Make sure your head-unit and all other devices will remain turned off while connecting parts of the system. If it is necessary to replace any fuse make sure to use only an equivalent one. Using inferior fuses may cause serious damage to your unit, system or even your cars wiring. Any kind of damage traced back on disregard of these notes will not be covered by the warranty!

Audio Connection



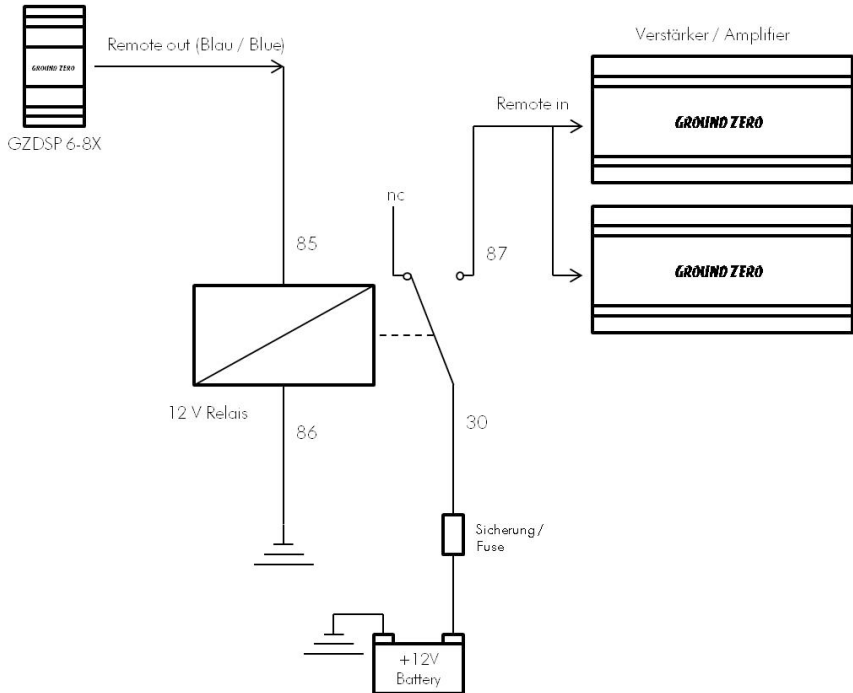
1	Status LED	LED lights up - unit is ready and working
2	RCA output	Every single RCA (LINE OUT) connector provides an audio-signal driving the RCA inputs of the amplifier and is capable of being configured using the DSP PC software.
3	USB port	Connect the unit with the supplied cable to your PC to operate the user interface and configure the setup of the DSP. Make sure to install the PC software previously. The unit may be disconnected after the setup is done. We do not recommend to use any extension cord with the supplied USB wire, as the proper function ca not be ensured. If the enclosed wire is too short, we recommend a suitable USB wire with an integrated repeater. The LED next to the USB port will light up blue as soon as the DSP unit has been connected to the PC.
4	Optical input (TOSLINK)	Audio sources offering an optical SP/DIF signal (Stereo PCM) may be connected to this port using a suitable TOSLINK wire. Please note: If the audio source offers no variable volume level, it is absolutely necessary to use the optional remote control unit (GZDSP Remote)
5	RC connector	Connector for the optional remote control unit GZDSP Remote
6	Subwoofer input	If your head-unit has six pre-amplified output channels, the (two) subwoofer channels should be connected to these inputs.
7	High-level input	The High-Level Input has to be used if the head-unit has neither pre-amplified output, nor offering a SP/DIF signal. In this case the head-unit speaker output wires have to be connected to the High-level Input harness. By using the High-Level Input the DSP unit will turn on automatically recognizing the DC level, therefore it is not necessary to connect the Remote-In wire to the power terminal. Caution: The high-level input and the RCA input cannot be used at the same time. This may lead to malfunction and cause serious damage to the DSP unit.
8	RCA input	Connect the pre-amplified head-unit output for front and rear signals using suitable wires to the RCA (LINE IN) sockets.
9	AUX Input	External audio sources like smartphone, MP3-player or mobile GPS system may be connected to the 3,5 mm (1/8") stereo jack and used with the auxiliary input mode. Please note: If the audio source offers no variable volume level, it is absolutely necessary to use the optional remote control unit (GZDSP Remote)

Power Supply Connection



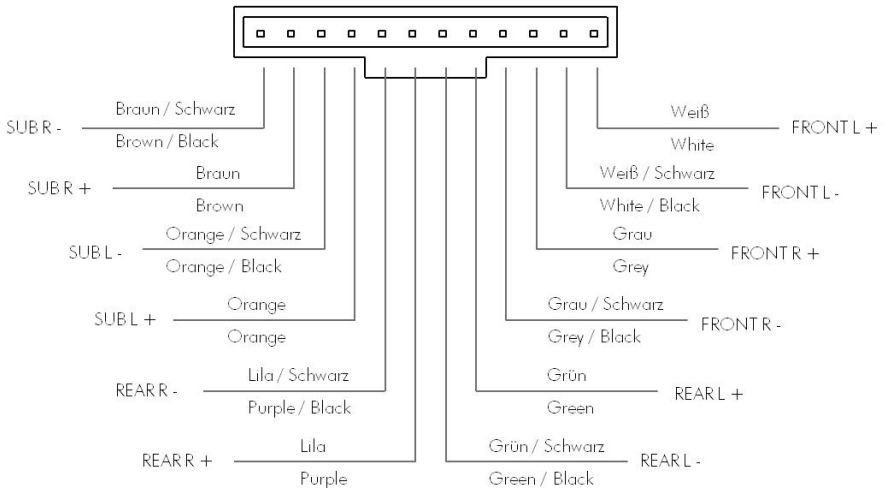
1	Ground	Connect the unit to a suitable ground terminal on the vehicles body. The ground wire should be as short as possible and be mounted to an unvarnished metal part of the vehicles body. Ensure that this part has an unlimited electrical connection to ground pole of the battery. Use an adequate ground wire gauge (not less than 1,0 mm ² / 17 AWG). The ground wire gauge should match the power wire gauge.
2	+ 12 Volt Power	Connect the unit to the + 12 volt power pole of the vehicles battery. Use an adequate power wire gauge (not less than 1,0 mm ² / 17 AWG) and mount an additional fuse holder (with a 2 Ampere fuse) which will not be further than 30 cm / 12" away from the power pole of the vehicles battery. The fuses should not be plugged into the fuse holder before the installation has been finished.
3	Remote In	+ 12 Volt remote turn on signal. Connect the head-units remote out wire (REM) for amplifiers or the electric antenna if the RCA signal input or the optical connector is used. A wire gauge of 0.5 mm ² / 20 AWG is sufficient. Please note: Auto Turn/On (activates the DSP unit) By using the high-level input the DSP unit will be turned on automatically if a DC-On voltage is recognized. Therefore it is not necessary to connect a remote wire to the power terminal. This feature will work fine with most of the modern head-units. However some older head-units may not be capable to provide the DC-On signal. In this case the Auto Turn/On feature cannot be used. The Remote-Out function remains in Auto Turn/On mode and may be used for additional system equipment.
4	Remote Out	To be used with additional system equipment like amplifiers. If connected to the amplifiers Remote-In terminal the amplifier will turn on or off together with the DSP unit when the head-unit is turned on or off. A wire gauge of 0.5 mm ² / 20 AWG is sufficient to connect the amplifier. The current should not exceed 130 mA! If the current of multiple connected units is higher, it is necessary to use an additional relay (page 6).

Relay circuit for using multiple amplifiers at the REMOTE OUT terminal

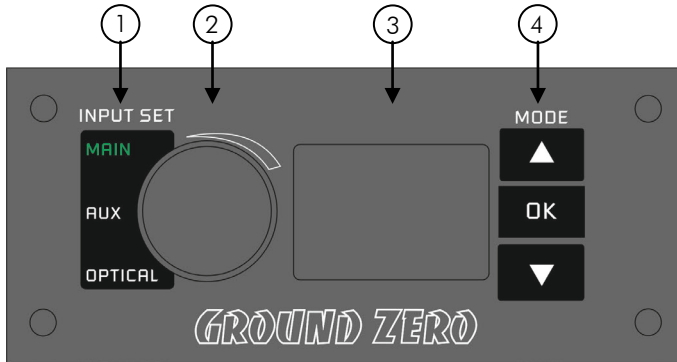


Relais ist nicht im Lieferumfang enthalten / Relay is not included in the package content

High-Level Connector Pin Assignment



Remote Control Unit Features (optionally available)



1	Input Set	Selects the Input Mode in shown sequence (MAIN/AUX-IN/OPTICAL)
2	Level Controller	The controller sets the main volume level of the DSP unit. Subwoofer level (SUB OUT G/H) can be adjusted after pushing and holding the button for approximately 3 seconds.
3	LED Display	The LED display will show the current volume level or the chosen preset
4	Mode (Presets)	Up/Down button switch between previously saved presets. The OK button confirms the selection and sets the DSP to this preset.

Installation of PC software

In order to install and use the PC software, a Windows™ XP (SP3) operating system (or later) and a USB port is required. The installation will need about 25 MB free memory space. We recommend to use a laptop for easier handling. Insert the enclosed CD-ROM into the CD drive of your PC. If there is no CD drive available, the software can be downloaded from the following link: <http://ground-zero-audio.com/de/downloads/dsp-software.html>
Run the setup.exe, the installation wizard will install the software for the DSP the usual way. We recommend to create a desktop icon. The drivers will be installed automatically during the DSP software installation. Restart the PC after the installation has been finished.

Important note for 64 bit operating systems:

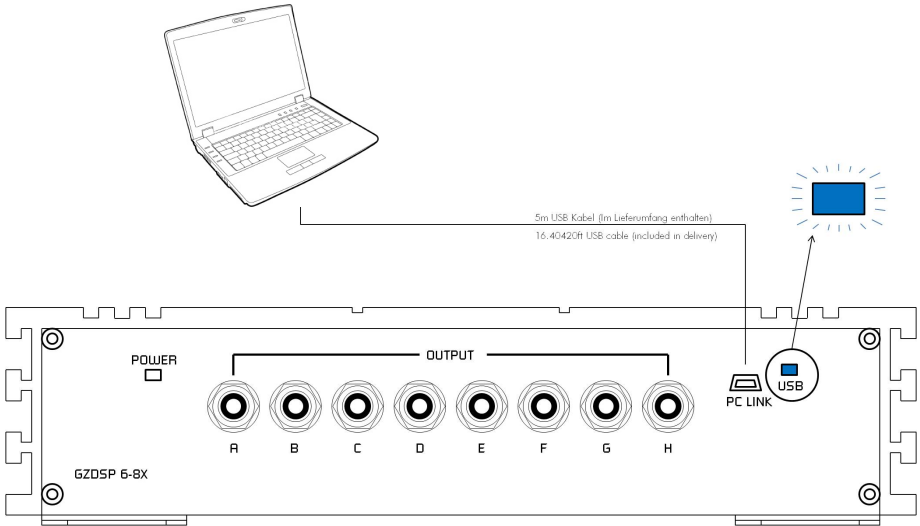
It may be necessary to install a 64 bit driver manually. The driver can be found on the CD-ROM or at: <http://ground-zero-audio.com/de/downloads/dsp-software.html>

Software update:

Please note that you should always use the latest DSP-Software. Here you can download all software versions:

<http://ground-zero-audio.com/de/downloads/dsp-software.html>

Connecting the DSP to the PC



To configure the DSP unit, it has to be connected using the enclosed USB wire to the PC with the previously installed DSP software.

The head-unit and the DSP unit has to be turned on before starting the DSP software.

The DSP software starts by clicking the desktop icon.

The start screen will appear and the GZDSP 6-8x unit has to be selected as device (Select Device).



Demo Mode (Off-Line Mode):

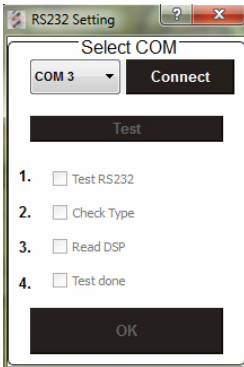
It's possible to use the PC software without having the DSP unit connected, to become familiar with most of the software features.

Important Note:

We don't recommend to use any passive extension cord with the supplied USB wire, as the proper function can't be ensured. If the enclosed wire is too short, we recommend a suitable USB wire with an integrated repeater.

The LED next to the USB port will light up blue as soon as the DSP unit has been connected to the PC.

Selecting the USB COM-port

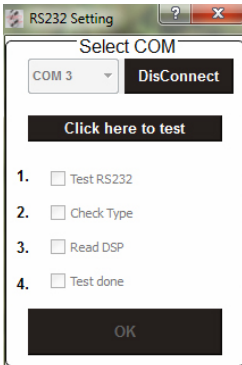


After the DSP unit has been selected in the „**Select Device**“ menu, the „**RS232 Setting**“ window will appear. Usually the correct COM port will be selected automatically and varies depending on the computers environment.

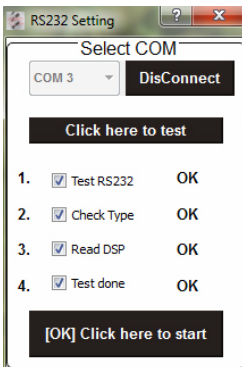
By clicking the „**Connect**“ button the GZDSP 6-8X will be connected to the PC automatically.

Note:

The COM port will be assigned automatically by the Windows™ operating system. Please note that this may be one of the COM1 to COM9 ports. If any problem remains, the description on the following page has to be noticed



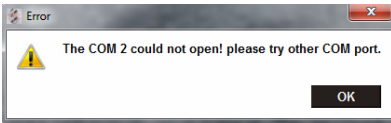
Now the „**Click here to test**“ button should be chosen.



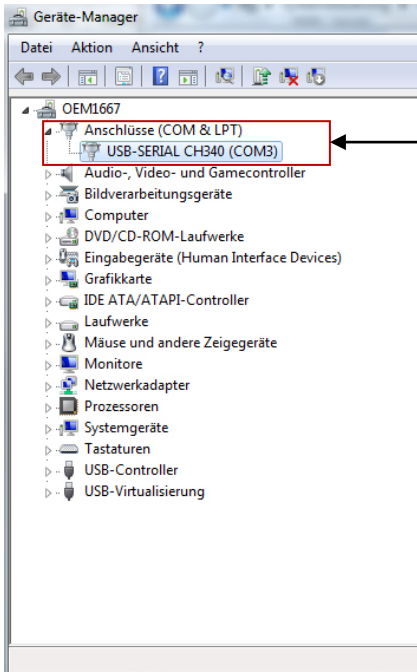
All 4 points should be checked.

By clicking the „**[OK] Click here to start**“ button will open the “Channel Matrix”

Error Message using wrong USB COM-Port

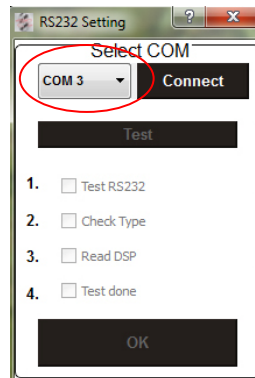


If this message will appear, the operating system assigned the wrong COM port or it was not possible to assign one of the COM1 to COM9 ports due to environmental issues of the PC. The COM port assignment may be checked with the operating systems device manager.



In this case the correct COM port would be number 3

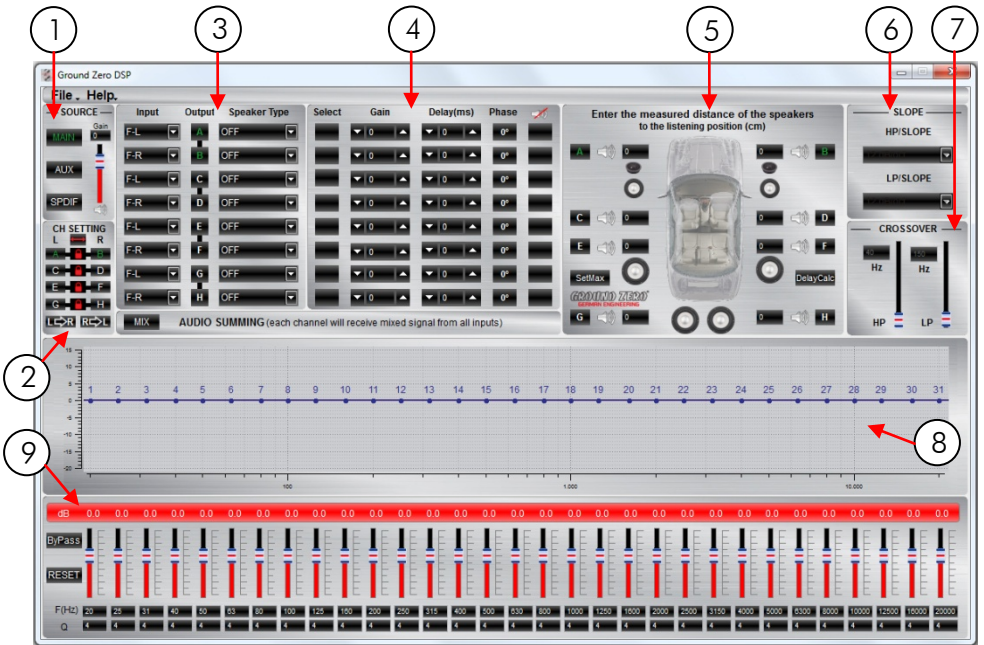
Close the pop-up window by clicking „OK“, now it is possible to select the correct COM port at the „Select COM“ window.



Important note:

If the assigned COM port is COM10 or higher, one of the unused COM ports 1 to 9 has to be deleted in order to change the previously automatically assigned COM port for the „USB-SERIAL CH340“ device to the one that has been deleted now.

Features of the User Interface



1 SOURCE

Input selection



MAIN - RCA or High-Level Audio Input
AUX - 3.5 mm / 1/8" Stereo Jack
SPDIF - optical TOSLINK input

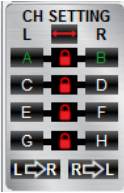
Main volume control


Gain - Main volume (-40dB to +12dB).

Caution: The controls have to be used carefully to avoid damaging the speakers.

② CH SETTING

Channel selection




Clicking the -Icon will link the relevant pair of channels allowing function adjustments simultaneously (Crossover / Slope / Equalizer) for both channels.




Simultaneous adjustment of channel A and B



Independent adjustment of channel A and B

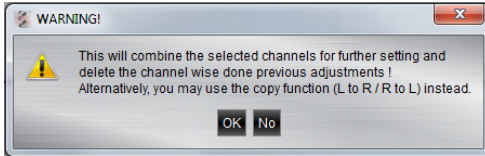
Clicking  will copy the current adjustment of the left channel to the right channel.



Clicking  will copy the current adjustment of the right channel to the left channel.

Clicking the -Icon will invert the left and right inputs.

Warning

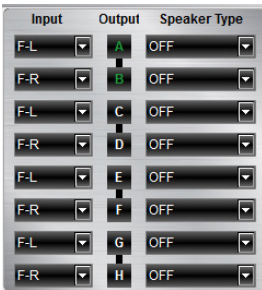
Trying to synchronize (link) two channels, which have already been adjusted separately, will cause a pop-up warning.



Confirming this with OK will reset all channel wise done previous adjustments. This can not be revoke. Therefore, either a separate adjustment is recommended or alternatively the copy-functions  or  can be used.

3 CHANNEL MATRIX

Configuration of in- and outputs



Input – Assignment of the corresponding input channel to the respective output A – H.

The following input options are available:

Channel A/B : F-L (Front-L) and F-R (Front-R)

Channel C/D/E/F : F-L (Front-L) and F-R (Front-R)
or R-L (Rear-L) and R-R (Rear-R)

Channel G/H: F-L (Front-L) and F-R (Front-R)
or R-L (Rear-L) and R-R (Rear-R)
or SUB-L and SUB-R
or F-L+R (Mono-summation of Front-L and Front-R)
or R-L+R (Mono-summation of Rear-L and Rear-R)
or SUB-L+R (Mono-summation of SUB-L and SUB-R)
or F+R-L (Summation of Front-L and Rear-L)
and F+R-R (Summation of Front-R and Rear-R)

MIX AUDIO SUMMING (each channel will receive mixed signal from all inputs)

Input-MIX – Input summing of filtered signals

This setup should be chosen if the head-unit has filtered (HPF/LPF/BPF) pre-amplified output channels. All 6 input channels will be summed to a full-range audio signal.

Outputs A+C+E+G receive a summed audio signal from the input channels FL+RL+SUBL

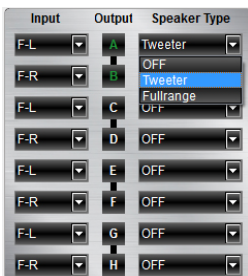
Outputs B+D+F+H receive a summed audio signal from the input channels FR+RR+SUBR

We recommend to connect the input channels as follows

FL+FR: Highpass filtered audio signal

RL+RR: Bandpass filtered audio signal

SUBL+SUBR: Lowpass filtered audio signal



Output – Clicking the corresponding channel will allow adjustments of crossover, slope and equalizer functions.

Same as CH Setting (2) function.

Speaker Type – Preselection of the connected speakers.

3 different options can be chosen.

OFF – Channel deactivated

Fullrange – Expertmode. All filters deactivated

Tweeter (A/B) –Highpass filter preset 3000 Hz (12 dB)

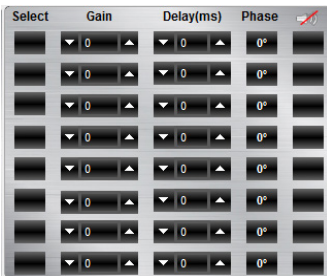
Midrange (C/D) –Bandpass filter preset 250 / 3000 Hz (12 dB)

Kickwoofer (E/F) –Bandpass filter preset 80 / 250 Hz (12 dB)

Subwoofer (G/H) –Bandpass filter preset 20 / 80 Hz (12 dB)

4 GAIN & DELAY

Channel configuration



Select – Marking the Select-box allows to group the respective channels together for combined adjustments of **Gain** and **Delay**.

Gain – Adjusting the output level of the respective channel

Delay(ms) – Adjusting the time alignment of the respective channel. Displayed in milliseconds.

Warning

It is recommended to fill-in the measured distances of the speakers to the listening position first (5) and realize the fine-tuning afterwards at **Delay(ms)**

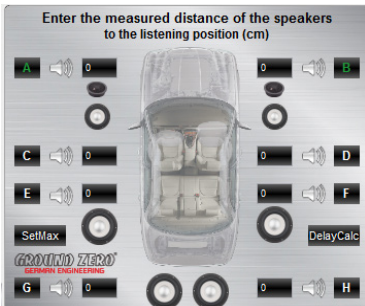
Phase – 0 / 180° Phase inversion of the respective channel



– Mute of the respective channel

5 SPEAKER DISTANCE

Speaker distance entry

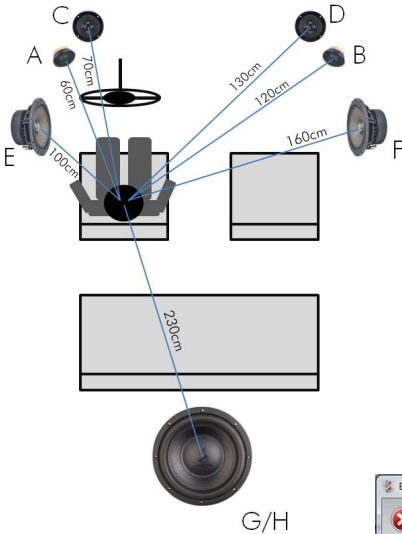


Before realizing the fine-tuning of each speakers time alignment in window 4 **Delay(ms)**, the measured distances of all connected speakers should be added to the graphic. The distances can be measured with an usual measuring tape.

The exact distance between listening position (head) and cone center of each speaker must be measured.

The explanation of a correct implementation on the following page can be used as an application example.

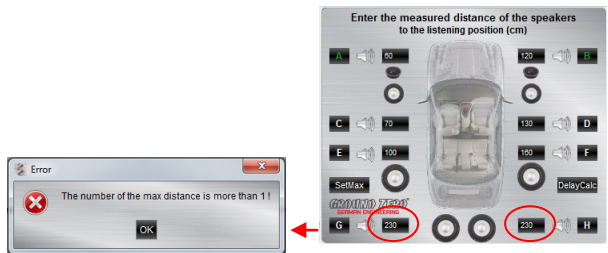
Example of use



1. All measured distances (cm) must be added to the graphic.
2. The speaker with the largest distance will be set as the reference with the button **SetMax**.

Warning

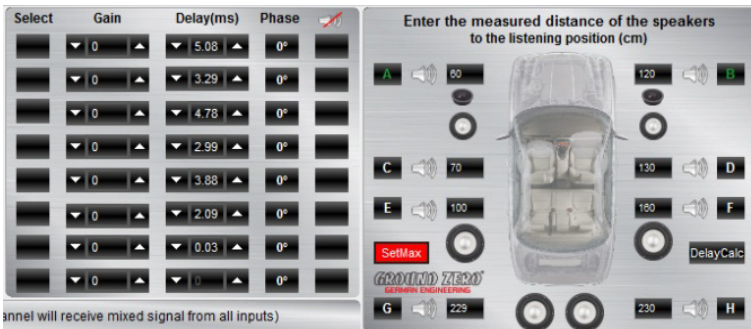
The number of channels with the maximum distance must be 1. In case of 2 channels with maximum distance (for example mono subwoofer at G/H) a failure notice will pop up.



3. If that failure notice pops up, one of the two identical distances must be reduced by 1 cm. In this case the instruction from **point 5** on must be followed.

After editing the numbers correctly the background of the button turns to red -> **SetMax**

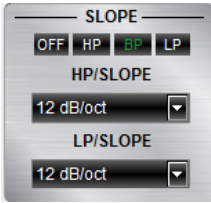
4. Clicking the button **DelayCalc** will cause the calculation of the respective time alignment and transfer the data to the **Delay(ms)** list.
5. In case of 2 channels with largest distance, one of these two identical numbers must be reduced by 1cm. Subsequently the **SetMax** button must be clicked. Finally the background turns to red -> **SetMax**



6. Now the real value can be re-edited **G** 230 **H**.

Clicking the button **DelayCalc** will cause the calculation of the respective time alignment and transferring the data to the **Delay(ms)** list.

6 SLOPE



Activating the filters and choosing the slope

Important

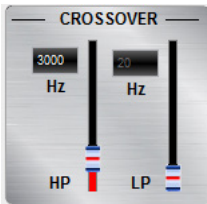
Before choosing the filter, a Speaker type must be defined in window 3.



Highpass (HP) / Bandpass (BP) and Lowpass (LP) can be chosen.

A slope of 6/12/18/24/30/36/42/48 dB/Oct can be selected.

7 CROSSOVER



Adjusting the cutoff frequency

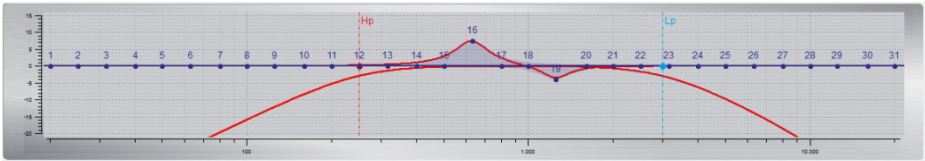
The filters can be adjusted continuously from 20 – 20000 Hz.

The controls can only be used if a filter (Slope/6) has been selected first.

Note: If a filter has been selected, it is possible to adjust the crossover frequency directly with the cursor at the frequency chart (8). Click and hold the red (HPF) or blue (LPF) dot with the cursor and move it to the desired point on the frequency chart.

Hint: Instead of using the crossover control, it is possible to adjust the crossover point by typing the required value directly into the box above and confirm with >ENTER< or by using the up/down cursor buttons.

8 FREQUENCY DIAGRAM

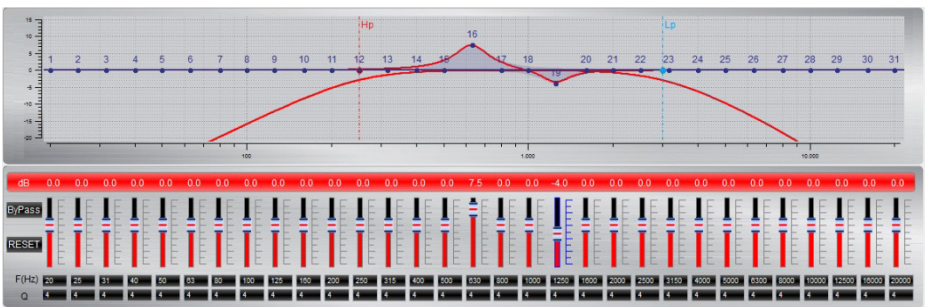


Function of the frequency diagram

The frequency chart displays the adjustments of the 31 band equalizer (9) and the setting of the crossover (7) for every output channel or a pair of output channels.

Furthermore the curves can be adjusted individually using the mouse (drag&drop).

9 EQUALIZER



Adjusting the parametric 31-band equalizer

The output channels A to F can be equalized by adjusting 31 frequency bands (20 - 20000 Hz) using the controls (-18 to +12dB) individually. The subwoofer output channels G/H offer 11 bands (20 - 200 Hz) to adjust the audio signal.

Each frequency can be adjusted individually in 1-Hz steps in the F(Hz) window.

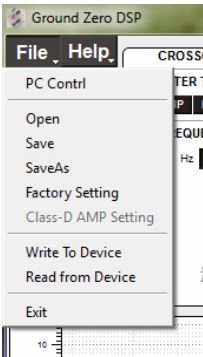
Additionally it is possible to change the filter Q (bandwidth/slope) by typing the required value directly into the box below each band control (0,5/narrow - 9,0/wide) or by using the up/down cursor buttons.

Furthermore the curves can be adjusted individually in window 8 using the mouse (drag&drop).

The EQ-function can be deactivated with the **B/Pass** button without resetting the EQ-setup.

Using the **RESET** button will cause a full reset of the EQ-setup to factory setting. (Other adjustments are not affected).

Features of the „FILE“ Dropdown Menu



PC Contrl	Opens the „Select COM“ window (page 9)
Open	Opens a setup file that has been saved previously to the PC memory or an external drive
Save	Saves the current setup as a file to the PC with unmodified filename. If no filename has been selected yet, the dialogue will ask for the input.
Save as	Saves a setup file with a certain filename.
Factory setting	Sets the unit to default settings
Class-D AMP Setting	No function
Write to Device*	Saves the current setting to the preset memory of the DSP unit. At the following window the preset number can be selected.
Read from Device*	Opens the preset that has been selected with the optional remote control GZDSP Remote
Exit	Closes the DSP software

***Important:** The 10 presets can be used if the optional remote control GZDSP Remote is connected. Without the remote control unit, it is only possible to use and edit the last preset that has been saved.

Saving to the Preset Memory (write to device)

Click „Select Save Place“ and choose one of the presets.
Confirm by clicking „Save to Flash“

***Note:** All presets must be covered in numerical order (Pos 1>Pos 2>Pos 3>...) without skipping a position, otherwise it will not be possible to access the following presets.

***Important:** The 10 presets can be used if the optional remote control GZDSP Remote is connected. Without the remote control unit, it is only possible to use and edit the last preset that has been saved.

Digital Sound Processor (application examples)

GZDSP 6-8X offers countless possible system configurations. Here is a description of the two most common applications:

		3-way front system + subwoofer (full active)	2-way front system (active) + 2-way or coaxial rear system (passive) + subwoofer
Channel	A/B	Tweeter Highpass filter HP: 2500 – 6000 Hz	Tweeter Highpass filter HP: 2500 – 4500 Hz
	C/D	Midrange Bandpass filter HP: 150 – 300 Hz LP: 2500 – 6000 Hz	Midwoofer Bandpass filter HP: 60 – 80 Hz LP: 2500 – 4500 Hz
	E /F	Woofer Bandpass filter HP: 60 – 80 Hz LP: 150 – 300 Hz	Rear system Highpass filter HP: 60 – 80 Hz
	G/H	Subwoofer Bandpass filter HP: 10 – 30 Hz LP: 50 – 100 Hz	Subwoofer Bandpass filter HP: 10 – 30 Hz LP: 50 – 100 Hz

Note: The final crossover points depend on the speakers capacity that have been installed. The technical specifications of the speakers will supply more information about possible applications and suggested crossover points.

Above, these are just noncommittal examples. Ground Zero will not be legally responsible for any kind of damage of speakers or other components caused by wrong settings.

Technical Specifications

Model	GZDSP 6-8X
Type	8 channel DSP unit
Frequency Response	5 Hz – 20 KHz (-3 dB)
Signal to noise ratio	> 110 dB
Channel separation	> 60 dB
Harmonic distortion	0.05%
Processor	Cirrus Logic Single Core 32 bit, 8 channel, 192 kHz
Input sensitivity	High level: 2 – 15 V RMS Low level: 0.6 – 5 V RMS Aux inpu: 0.6 – 5 V RMS
Input impedance	> 47 kOhm
Output	8 x RCA audio socket
Input	Main: 6 x RCA audio socket / 6 x high-level Aux: 3.5 mm / 1/8" stereo jack Digital: TOSLINK optical 12 - 96 kHz stereo
Remote out	Max 130mA
Recomended fusing	2 A
Dimensions (heatsink) W x H x L mm / inch	96 x 39 x 185 / 3.78" x 1.54" x 7.28"
Dimensions (total) W x H x L mm / inch	132 x 42 x 185 / 5.2" x 1.65" x 7.28"
Software compatibility	Microsoft Windows™ XP SP3, Vista, 7, 8, 8.1, 10
Presets	10 Individual presets – storing/calling via optional remote control GZDSP Remote
Gain bandwidth	-40 ~ + 12dB
Equalizer	6 x 31 bands on each channel (A-F) (20-20000Hz) -18 to +12dB, Q 0.5 - 9 2 x 11 bands on subwoofer channels (G/H) (20-200Hz), -18 to +12dB, Q 0.5 - 9
Time alignment	0 - 15ms / 0 - 502cm per channel
Crossover	6 / 12 / 18 / 24 / 30 / 36 / 42 / 48 dB/Oct. BPF / LPF / HPF Butterworth 20 - 20000Hz
Phase switch	selectable (0° / 180°) per channel
Optional remote control (GZDSP Remote)	Main level, subwoofer level, input mode, preset selection

Detecting Possible Errors

Error	Control	Help / Solution
No function	PWR LED on?	-check the fusing -check the remote wire -check the + 12 Volt connection and wire -check the ground connection and wire
No sound (PWR LED on)	signal wire no contact or broken	-check the contact or replace the wire
	no audio signal from head-unit	-check the audio output signal of head-unit
	amplifier not switched on	-check the remote out of DSP -check the amplifiers power supply
	non operational source selected	-check the setting
	activated >MUTE< function (User Interface)	-check the setting
Single channels with no function	adjusted level on optional remote control unit too low	-check the setting
	signal wire no contact or broken	-check the contact or replace the wire
	no audio signal from head-unit	-check the audio output signal of head-unit
	balance or fader control of head-unit not in center position	-check the setting of the head-unit
	wrong setup of input and output mode	-check the setting
Impure sound, incorrect stereo reproduction	>GAIN< level too low or >Mute< function (user interface) active	-check the setting
	inverted phase of one or more speakers	-check the polarity of the speaker connection -check the polarity of the high-level input -check the >PHASE< setting -check the >TIME ALIGNMENT< adjustment
Distorted sound quality	speaker overload	-reduce the volume level -check the highpass filter and slope
	DSP input override (distortion)	-select the correct input mode -pay attention to the input sensitivity of DSP unit
	head-unit output override (distortion)	-reduce the volume level of head-unit -set the sound controls of head-unit to center position -deactivate the >Loudness< function of head-unit
	amplifier override (clipping)	-check amplifier input sensitivity -reduce the level
Increased noise level	>GAIN< level too high	-reduce the >GAIN< level
	head-unit creates noise	-select a superior quality head-unit -use the optical output (if available) -let the audio store or manufacturer check the head-unit
Car specific interferences audible through the audio system	diverse power supplies or ground connection	-the head-unit, the DSP and each amplifier should be wired up to a common ground and +12 Volt connection
	signal wire no contact or broken	-check the contact or replace the wire
	head-unit defective	-let the audio store or manufacturer check the head-unit
	amplifier defective	-let the audio store or manufacturer check the amplifier
	DSP unit or amplifier mounted close to an automotive control unit	-choose another mounting position
analog output of an OEM MOST head-unit connected	-connect the digital MOST audio signal directly to the DSP unit*	

*Note: Use an optional car specific interface to connect the digital MOST audio signal directly to the GZDSP 6-8X

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