

MONACOR PA-4125DX 4 Zone Matrix Mixing Amplifier



MONACOR PA-4125DX 4 Zone Matrix Mixing Amplifier Instruction Manual

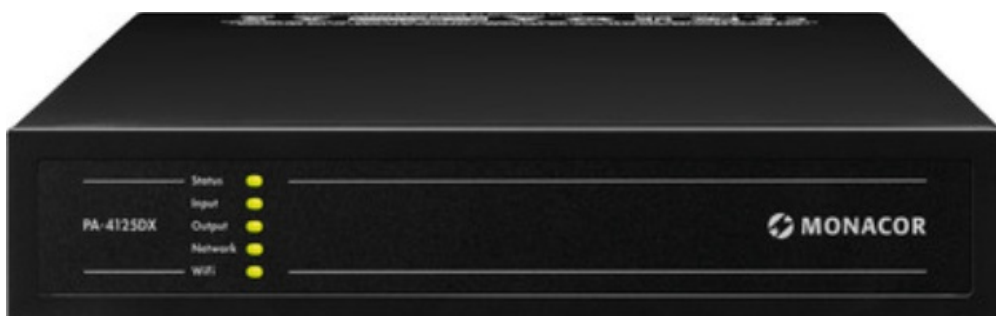
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MONACOR PA-4125DX 4 Zone Matrix Mixing Amplifier



Product Specifications

- Model: PA-4125 DX
- Analog Inputs: 4
- Digital Inputs: 2
- Output Zones: 4 (ZA, ZB, ZC, ZD)
- Output Modes: Hi-Z (BTL), Lo-Z
- Signal Processing: Mix 1-4, Gain/Trim, Compressor, Limiter, FIR Filter, Delay, Polarity
- Control Interface: GPIO, Volume Control

Product Usage Instructions

Analog Inputs

The PA-4125 DX features 4 analog inputs labeled A1, A2, A3, and A4. Connect your analog audio sources to these inputs for processing.

Digital Inputs

There are 2 digital inputs labeled D1 and D2. These inputs support S/PDIF signals and can be used for digital audio sources.

Output Zones

The product has 4 output zones – ZA, ZB, ZC, and ZD. Each zone can be configured independently for different audio output settings.

Signal Processing

Utilize the various signal processing features such as Mix 1-4, Gain/Trim, Compressor, Limiter, FIR Filter, Delay, and Polarity to adjust and enhance your audio output.

Control Interface

Use the GPIO and Volume Control options to manage the product's settings and control the audio output levels effectively.

Frequently Asked Questions (FAQ)

• Q: How do I connect my audio sources to the PA-4125 DX?

A: Use the analog inputs A1-A4 for connecting your analog sources and digital inputs D1/D2 for digital sources.

• Q: Can I adjust the output settings for each zone separately?

A: Yes, each output zone (ZA, ZB, ZC, ZD) can be configured independently to customize the audio output based on your requirements.

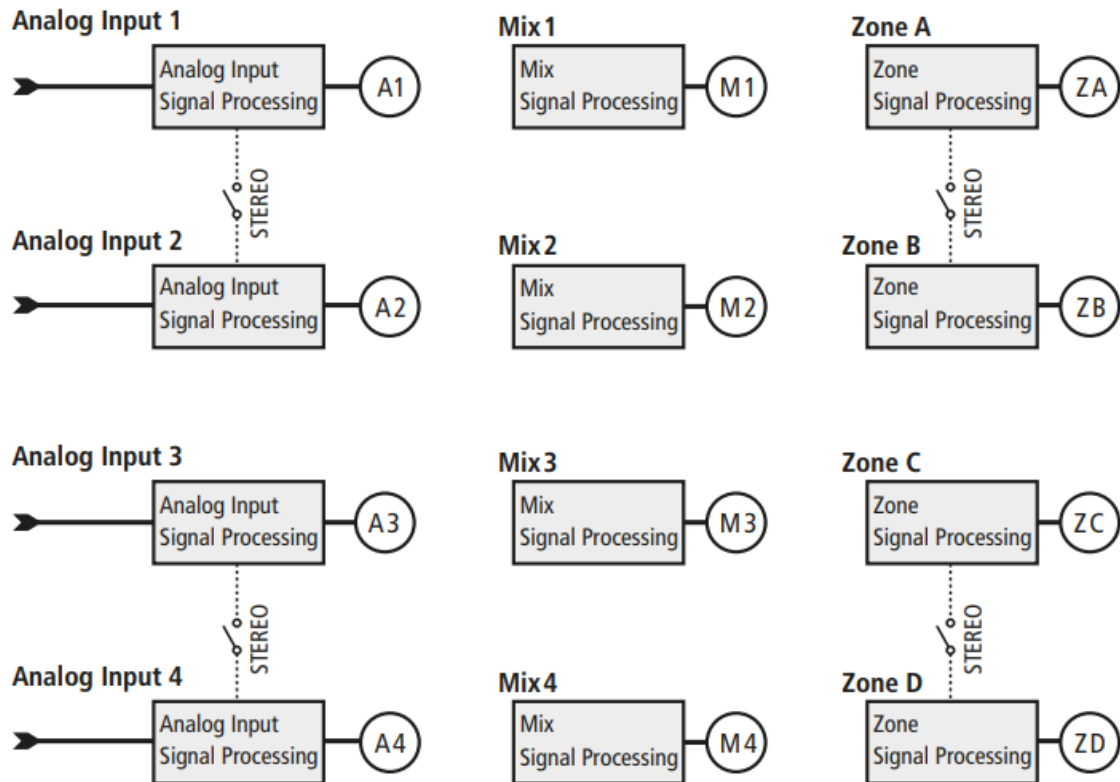
• Q: What is the purpose of the Gain/Trim feature?

A: The Gain/Trim function allows you to adjust the input signal levels for precise control over the audio output.

4 -Zone Matrix Mixing Amplifier

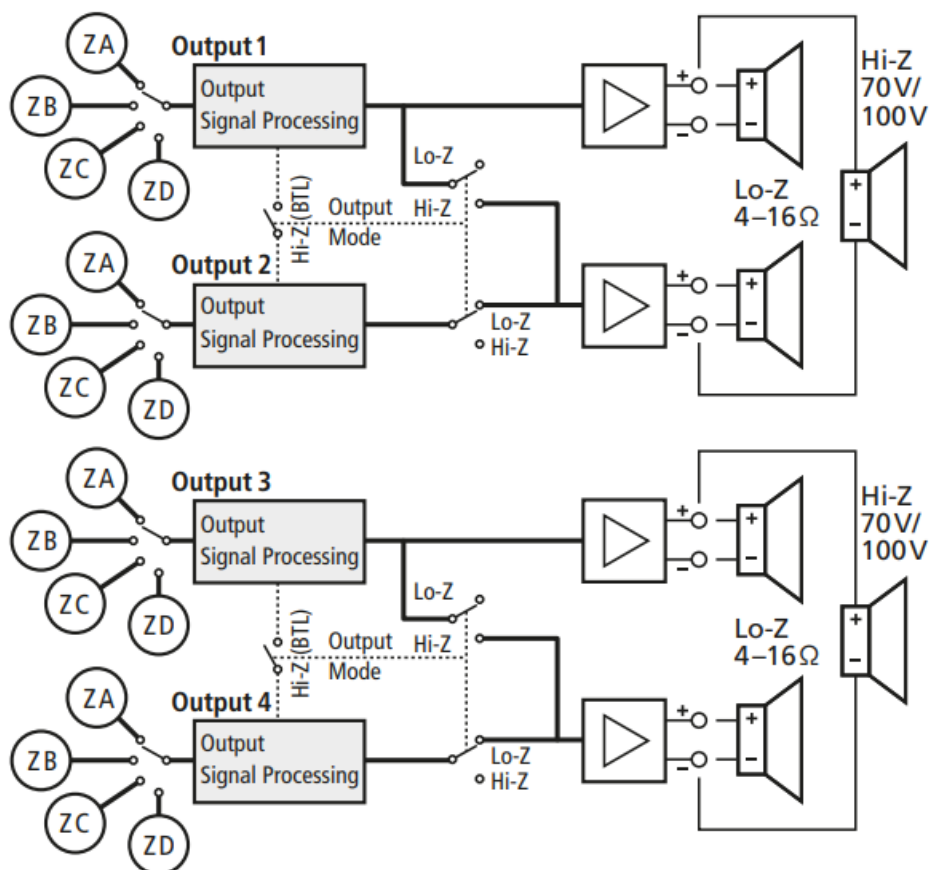
These instructions are intended for installers of PA systems with basic knowledge of audio technology and network technology. Please read the instructions carefully prior to operation and keep them for later reference.

These instructions refer to devices using firmware version 1.5.1.



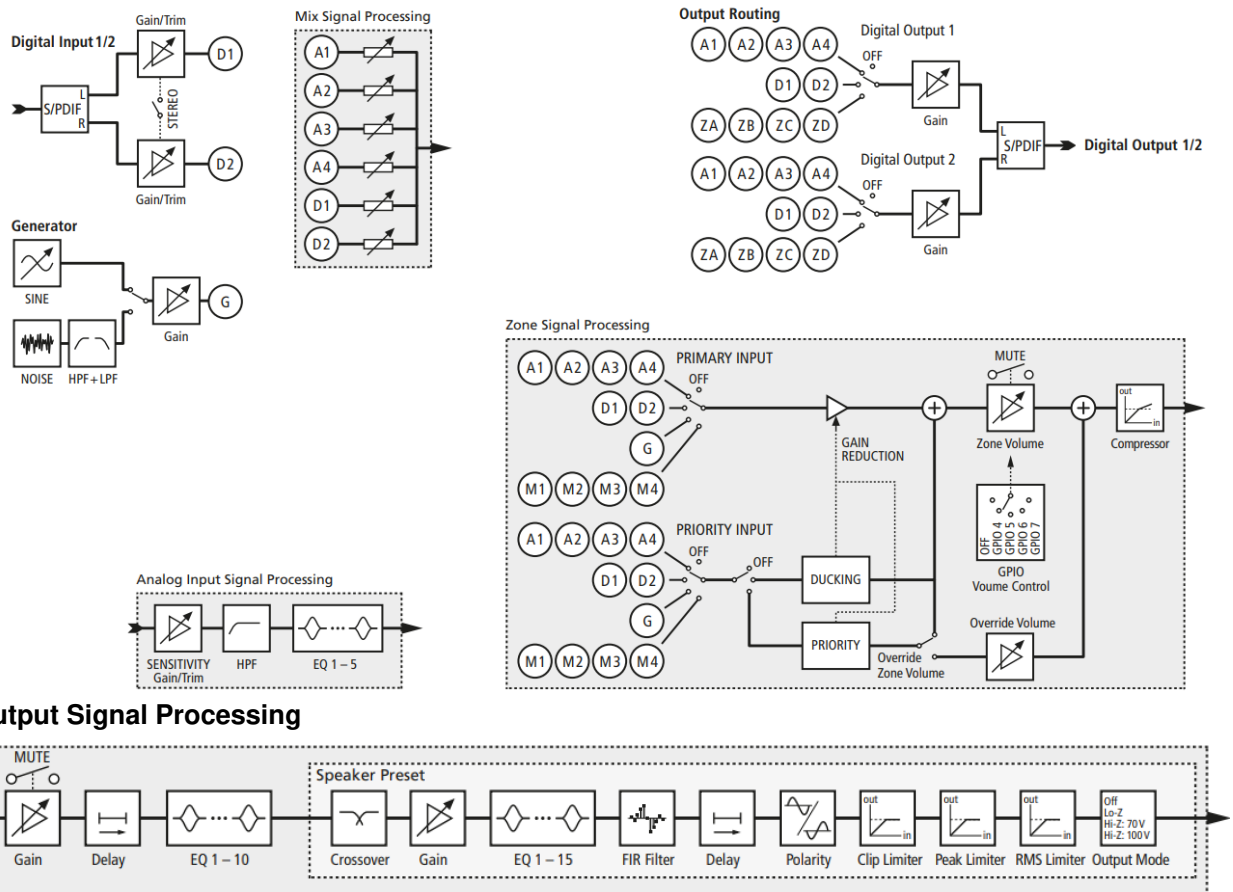
Overview

Front panel (fig. 2)



1. Status LEDs

- Status off: power supply interrupted solid green: amplifier in operation
- flashing green: standby mode
- solid yellow: standby mode via control input
- Input off: no input signal
- green: signal present on at least one input
- yellow: level limiting or overload on at least one input
- Output off: no output signal
- green: signal present on at least one output
- yellow: level limiting or overload on at least one input
- red: the protection circuit against overload is active on at least one output/output pair
- Network off: no LAN found
- green: LAN connection found
- WiFi off: Wi-Fi functions disabled green: Wi-Fi functions enabled
- **Rear panel (fig. 3)**



2. RJ45 connector NETWORK CONTROL to connect the amplifier to a computer network (e. g. to an Ethernet switch, to a router or directly to a computer)

The two LEDs on the connector indicate network connection and network activity.

3. GPIO connections (plug-in screw terminals)

The function of the individual terminal contacts depends on the configuration of the amplifier.

1. Contact 1: Reference potential for a 12 V trigger input signal or a mute switch ("Soft Ground" connected to "Ground" of the device via a 220 Ω resistor).
2. Contact 2: switching input (NO/ NC) for standby or switching input (NO/ NC) for muting the sound
3. Contact 3: "Ground", reference potential for external volume controls and for a 12 V trigger output signal

4. Contacts 4 and 5: Connection for the wiper contact of an external potentiometer for volume control
 5. Contact 6: Input for a 12 V DC voltage "Trigger in" to switch on the amplifier or connection for the wiper contact of an external potentiometer for volume control
 6. Contact 7: Output for a 12 V DC voltage "Trigger out" which is present when the amplifier is on or connection for the wiper contact of an external potentiometer for volume control
 7. Contact 8: Output with a 3.3 V DC voltage for power supply of external potentiometers for volume adjustment (10 mA max.)
4. Wi-Fi antenna
 5. RCA connector DIGITAL OUT
 6. RCA connector DIGITAL IN
 7. Analog inputs CH 1– CH 4 (RCA connectors)
 8. Analog inputs CH 1– CH 4 (plug-in screw terminals) to connect audio sources with balanced signals
 9. Speaker outputs (plug- in screw terminals)
- Attention:** The terminal assignment depends on the configuration.
10. Connector AC MAINS for connection to a mains socket via the mains cable provided

Safety Notes and Instructions for Use

This product corresponds to all relevant directives of the EU and is therefore marked with .

WARNING The device uses dangerous mains voltage. Leave servicing to skilled personnel only and do not insert anything into the air vents: Risk of electric shock!

During operation, there is a hazard of contact with a dangerous voltage at the speaker terminals. Always switch off the device before making or changing any connection.

- The product is suitable for indoor use only. Protect it against dripping water, splash water and high air humidity. The admissible ambient temperature range is 0 – 40 °C.
- Do not place any vessel filled with liquid on the product, e. g. a drinking glass.
- The heat produced inside the device must be dissipated by air circulation; never cover the air vents.
- Do not use the product and immediately disconnect the mains plug from the socket
 1. if the device or the mains cable is visibly damaged,
 2. if a defect might have occurred after the device was dropped or suffered a similar accident,
 3. if malfunctions occur.

In any case, the device must be repaired by skilled personnel.

- Never pull the mains cable to disconnect the mains plug from the socket, always seize the plug.
- For cleaning the product only use a dry, soft cloth; never use water or chemicals.

No guarantee claims for the product and no liability for any resulting personal damage or material damage will be accepted if the product is not correctly used or if it is not repaired in an expert way.

If the product is to be put out of operation definitively, dispose of the product in accordance with local regulations.



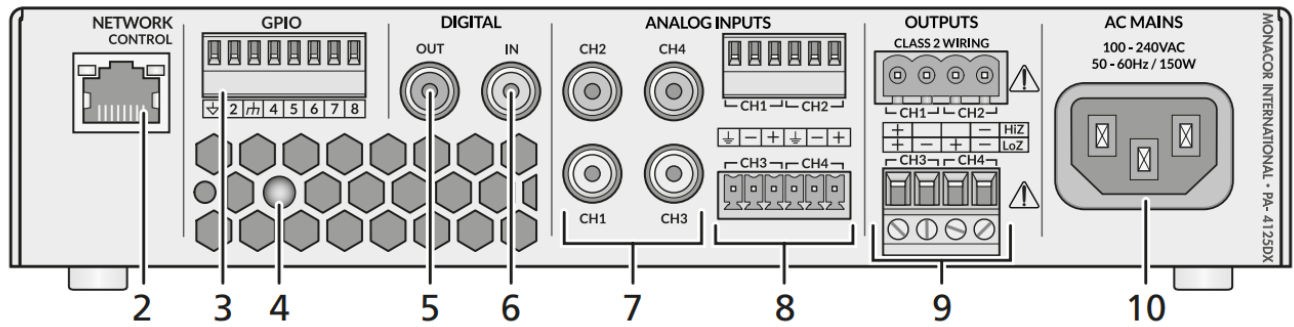


Fig. 3 Rear panel

Applications

PA-4125DX is a mixing amplifier for versatile sound reproduction applications. It offers four outputs for low-impedance speakers. Alternatively, two of these outputs can be combined to one output for 70 V/100 V speakers (bridge mode).

The integrated signal processor is controlled via an HTML5 user interface that can be accessed by means of a standard web browser. Network connection is possible via Wi-Fi or cable.

The amplifier also features:

- 4 balanced analog inputs (terminals) or unbalanced inputs (RCA connectors) (stereo coupling of 2 inputs each possible)
- 1 digital 2-channel input (S/PDIF), can be used as 1 × stereo or 2 × mono
- for each zone either mono or stereo mode
- 1 digital 2-channel output (S/PDIF), can be used as 1 × stereo or 2 × mono
- equalizer with up to 5 filters for each input and additional high-pass filter
- 4 zones with priority option and ducking function
- dynamic compression can be adjusted separately for each zone
- assignment of an output to any zone
- signal delay adjustable for each output
- equalizer with up to 10 filters for each output
- storable speaker libraries with setting options such as crossover network, equalizer, digital filters (FIR), signal delay, level limiting, phase reversal
- test signal generator with tunable sine wave tone or noise with adjustable limiting filters
- connections for external volume control via potentiometer and for muting or standby mode via switch
- power sharing concept which allows to increase the power of an output up to twice the nominal power if the neighbouring channel does not need the power at the moment

Conformity and approval

Hereby, MONACOR INTERNATIONAL declares that the radio equipment type PA-4125DX is in compliance with Directive 2014 / 53 / EU. The full text of the EU declaration of conformity is available at the following internet address: www.monacor-international.com

The product transmits with a maximum power of 19.5 dBm in the frequency range 2412 – 2484 MHz.

Basic Concept

The central elements of signal routing are the zones which usually represent different sound reproduction areas. The signal of a zone is assigned to one or more speaker outputs.

The signals of the audio sources connected (e. g. microphones or music players) can be routed to one or more zones. This can be done directly or via a mixed signal from different audio sources (Mix). In addition, an audio source with priority, such as a microphone for announcements, can be assigned to each zone. The signal of the first audio source will be automatically suppressed by the priority signal.

For each output, corrections for adaptation to the sound reproduction area (e. g. equalizer, signal delay) can be made separately. In addition, speaker-specific settings (e. g. level limiting, correction filter, signal delay) can be made for each output. These settings can be saved as “Speaker Presets” and managed in “Speaker Libraries” for later use.

An overview of the signal routing is shown in the block diagram (fig. 1 on page 2).

Setting up the Amplifier

Before setting up the amplifier, attach the four self-adhesive rubber feet provided to the bottom of the device. Place the device on a flat, horizontal surface. When setting up or installing the amplifier (e. g. in a rack), always make sure that the air vents are not covered and observe the required distance to any adjacent surfaces: The minimum distance behind the amplifier must be ≥ 80 mm and the minimum distance to the sides (at least on one side) 25 mm.

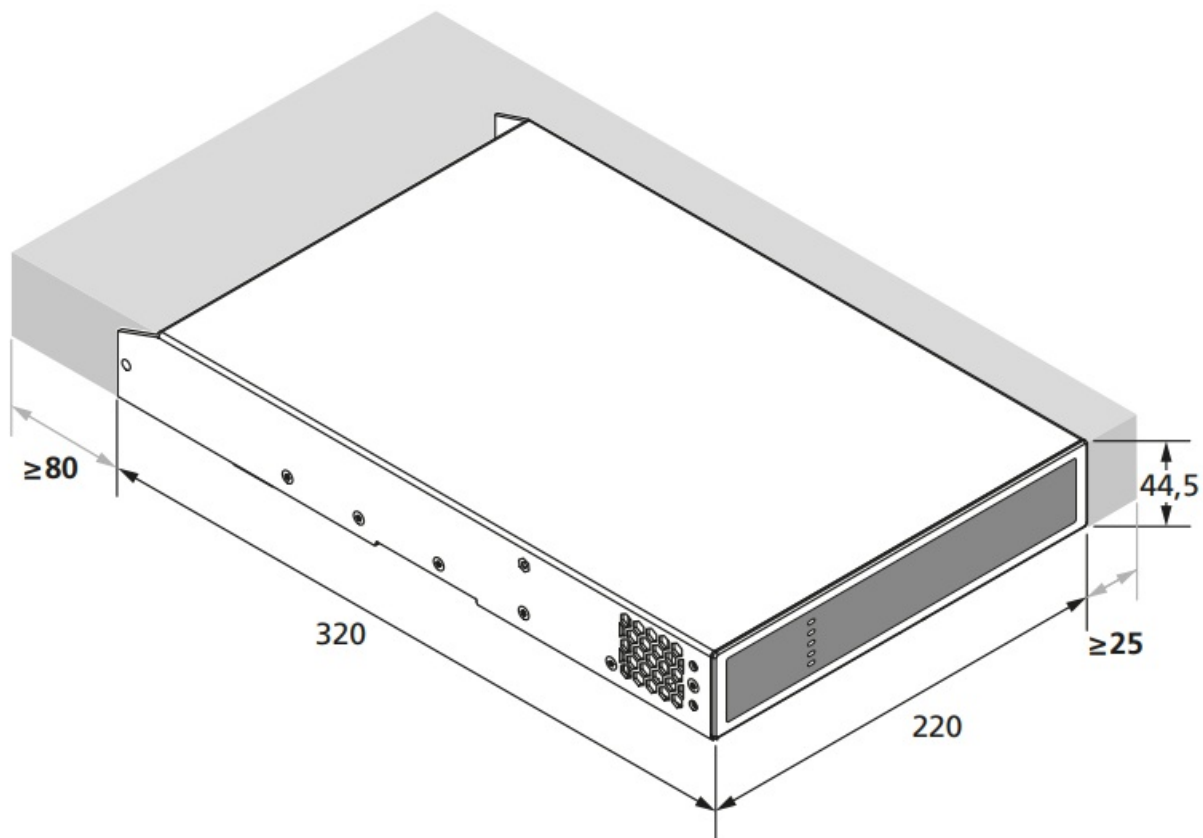


Fig. 4 Ventilation distances

Connections

Important: Before connecting the speakers and control components, the outputs of the amplifier and the GPIO control connections must be configured for their intended use. This is done by means of the user interface, provided by the amplifier as a web interface. To do this, establish a network connection via Wi-Fi (chapter 7.1.1) or network cable (chapter 7.1.2) using a computer, tablet PC or smartphone on which an HTML5-capable web browser is installed. Then make the configuration for the speaker outputs in the view “Output ⇒ Speaker Preset ⇒ Output Mode” (chapter 7.6.4.7). The settings for the control connections are configured in the view “Settings ⇒ GPIO” (chapter 7.7.9).

Installation should always be carried out by qualified and skilled personnel. Before making or changing any connections, disconnect PA-4125DX from the power supply!

Analog audio sources

Connect analog audio sources with unbalanced output signals to the RCA connectors CH1– 4 (7). Audio sources

with balanced outputs can be connected to the plug-in screw terminals CH1– 4 (8). It is also possible to connect microphones (the input sensitivity can be selected via the user interface). However, phantom power is not available.

Digital audio source

Connect a digital audio source with S/PDIF stereo signal to the RCA connector DIGITAL IN (6).

Speakers

Four outputs can be used for connecting low-impedance speakers (4...16 Ω). Connect these speakers to the plug-in screw terminals CH1– 4 (9) (marked "LoZ").

To connect 70 V or 100 V speakers, two outputs each are used together. Connect the speakers (speaker groups) to the plug-in screw terminals CH1– 4 (9) according to the marking "HiZ".

Strip the cable ends of the speaker cable by approx. 5 mm. When connecting the speaker cable, make sure that the bare cable ends are pushed completely into the terminal so that there will be no risk of contact and no risk of short-circuits at the connections during operation.

Audio device with digital input

The RCA output DIGITAL OUT (5) can be used, for example, to send the mixed signal to another PA-4125DX or to a recording device with digital input.

Network components (e. g. Ethernet switch)

Establish a network connection to a router, to a switch or directly to a computer via the RJ45 connector (2).

Alternatively (or additionally), connect the device via Wi-Fi. In this case, the amplifier is integrated into an existing Wi-Fi network or creates its own wireless access point (AP).

External control elements

The GPIO plug-in screw terminals (3) can be used to connect control elements (potentiometers, switches) whose function is respectively defined via the user interface.

Volume controls

To set the zone volumes, potentiometers (> 10 k Ω) can be connected. Connect the potentiometers to the GPIO terminals as shown in fig. 5. Connect each wiper contact to one of the contacts 4 – 7 according to the configuration selected. Shielded cables should be used for connection.

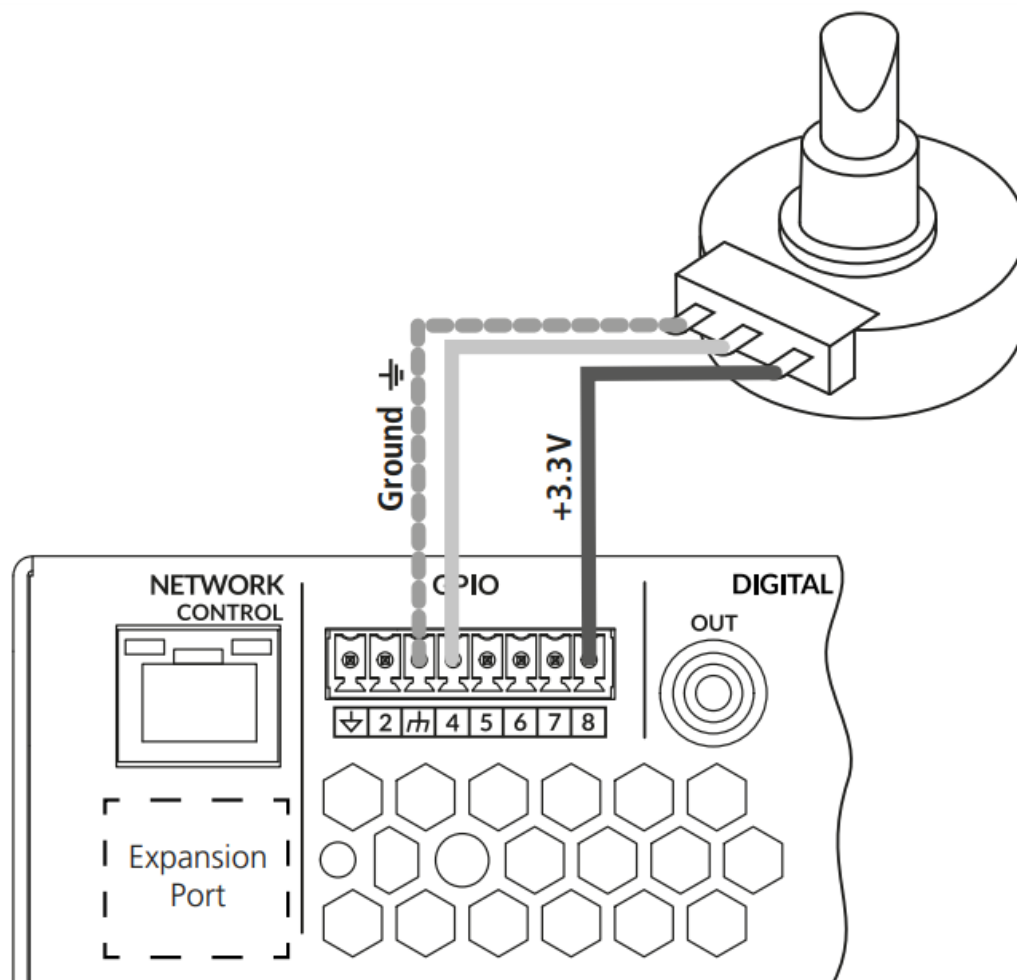


Fig. 5 external volume control

Mute or standby switch

A switch or push-button can be connected to mute all outputs or to switch the amplifier to standby mode. Connect the switch to contacts 1 and 2 of the GPIO terminals as shown in fig. 6. A shielded cable should be used for the connection.

The configuration will define the Mute or Standby function and whether the switch operates as a normally closed (NC) or normally open (NO) contact.

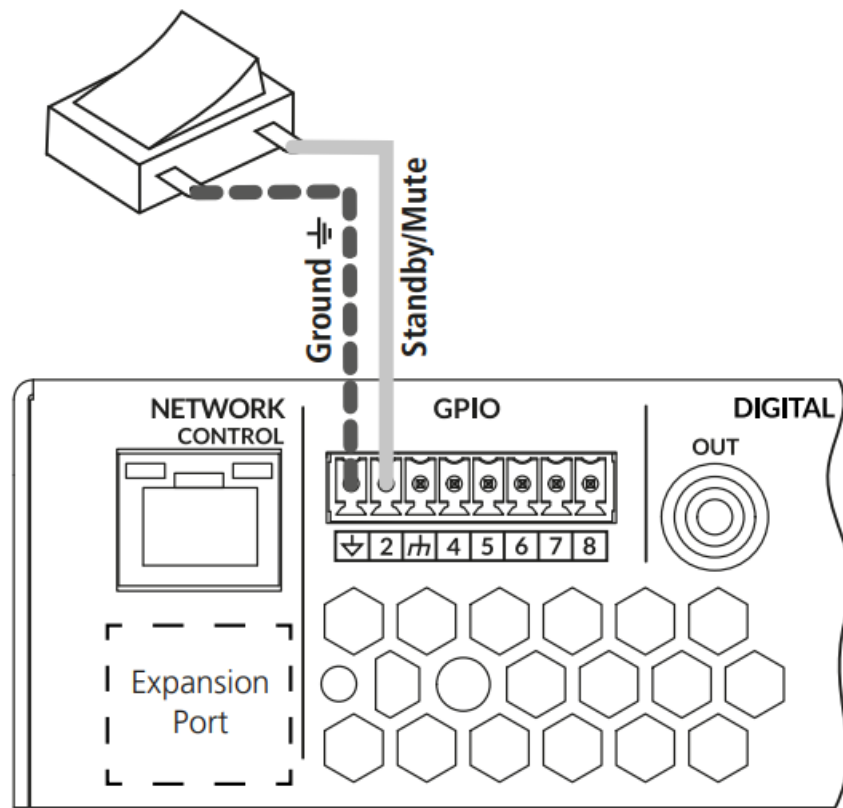


Fig. 6 external standby/mute switch

Switching input

With the corresponding configuration (12 V Trigger in), the amplifier is switched on by a 12 V DC voltage from contact 6 against contact 1 of the terminals GPIO. Without this voltage, the amplifier will remain in standby mode.

Switching output

With the corresponding configuration (12 V Trigger out), the amplifier will provide a 12 V DC voltage from contact 7 against contact 3 of the terminals GPIO as long as it is on. This voltage can be used, for example, to switch on a second amplifier via the switching input of this amplifier.

Power supply

For power supply, connect the connector AC MAINS (10) to a mains socket using the mains cable provided. The device is switched on when it has been connected to the power supply. It can be switched to standby via an external switch, via the user interface of the web interface or automatically (☞ chapter 7.7.7).

User Interface

For configuration and control of the signal processor, the amplifier offers an HTML5 user interface that can be accessed on a computer or mobile device (e. g. tablet PC) using a standard web browser.

ATTENTION In combination with the user interface, the signal processor is an effective tool that allows to make very subtle but also profound changes to the transmission characteristics of the sound reproduction system. Any change of the parameters should therefore be made with care and expertise. In the worst case, extreme changes to the settings may damage the speakers.

Establishing a control connection

Network connection is possible via Wi-Fi or via LAN cable. To do this, use a computer, tablet PC or smartphone on which an HTML5-capable web browser is installed to establish a network connection via Wi-Fi (chapter 7.1.1) or network cable (☞ chapter 7.1.2).

The connection options described here are mainly used to call up the user interface for the first time. The user interface can then also be used to reconfigure the amplifier, for example, to integrate it into an existing network (☞ chapters 7.7.10 and 7.7.11).

Connection via Wi-Fi

1. Connect the connector AC MAINS (10) to a mains socket using the mains cable provided. By doing this, PA-4125DX is switched on. When the LED "WiFi" (1) is green, the amplifier is ready for connection.
2. Connect a device capable of Wi-Fi (e. g. tablet PC) to the network of the amplifier "MONACOR PA-4125DX ...". The default password is "password".
3. On the device with Wi-Fi function, use the browser to call up the address 192.168.4.1.
The user interface of PA-4125DX will be displayed.

Note: We strongly recommend to change the Wi-Fi password for future use (☞ chapter 7.7.11).


Cable connection via LAN

1. Connect a computer via a switch or directly to the network connector NETWORK (2).
2. Connect the connector AC MAINS (10) to a mains socket using the mains cable provided. This will switch on PA-4125DX.
3. The default IP address of PA-4125DX is 192.168.64.100. Configure the computer in such a way that it is in the same subnet with a static IP address (e. g. 192.168.64.10, with netmask 255.255.255.0 [or prefix length 24] and gateway 192.168.64.1).
4. On the computer, use the browser to call up the address 192.168.64.100.
The user interface of PA-4125DX will be displayed.


Start view "Dashboard"


The functions of the different views of the user interface are described below. Chapter 9 gives an example of the procedure for setting up the device.

At the start of the user interface, the view Dashboard will always appear (fig. 7). It provides an overview of the status of the device and of the settings made for the zones.

Under Input and Output, it is shown whether an input signal or output signal is present (Signal) or not (No Signal). Under LAN and WiFi, the current IP addresses of the device are indicated. Under Power, it is shown whether the device is switched on (On) or in standby mode (Standby). To change the operating mode, click on the icon , use the external control or the automatic mode (=> chapter 7.7.7, Power Management).

For each zone, the current signal level is displayed as a bar with a vertical line marking the peak level of the last

few seconds. Below this bar is a slider for adjusting the volume of the zone. By clicking on the icon , the

channel can be muted without losing the previous volume setting. The icon will then change to . A click on the icon will unmute the sound again.

The signal source selected for the zone and the outputs to which the zone signal is sent are displayed below the slider.

On the left, a different view (Input, Zone, Output, Settings) can be selected.

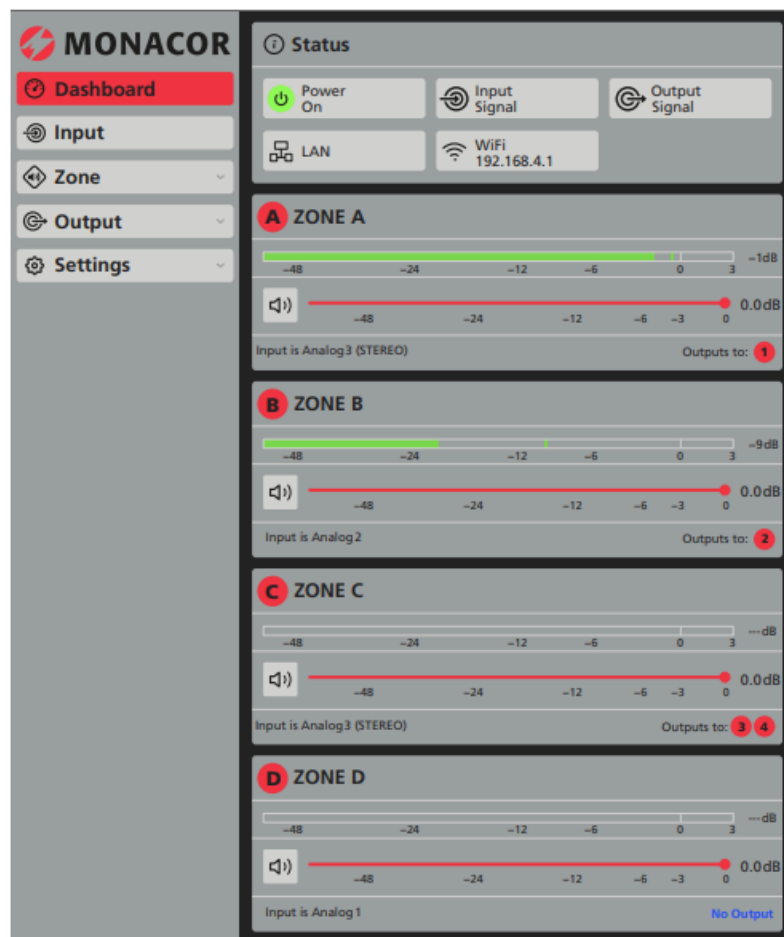







Fig. 7 Start view "Dashboard"

General information on operation

The names for the inputs, outputs, zones, mixed signals and the test signal generator are predefined (Analog 1 – 4, S/PDIF, ZONE A – D, Mix 1 – 4, Output 1 – 4, Generator). It is possible to change these names to names that are more informative (e. g. to the type of audio source, the name of a speaker zone or the place of installation of the speaker). To change a name, click (or tap) on the name, enter the new name and click  to confirm.

Clicking on a field with the symbol  will show additional setting options. The symbol will change to  and another click will hide these options again.

To set a value, click directly on the value and then enter it. If also a slider is displayed, the circular handle of the slider can be "touched" and moved. Some sliders have buttons next to them that can be used to decrease  or increase the  value in small steps.

View "Input"

Via the view Input, the sensitivity of the inputs can be adjusted to the audio sources connected. In addition, two inputs each can be coupled to create a stereo channel. It is also possible to make frequency response corrections for the analog inputs. At the top, above the setting options, the desired view can be selected: Analog, SPDIF (for the digital input), Mix (for creating mixed signals) and Generator (internal test signal generator). These four views are described below.

Analog



Fig. 8 View "Input - Analog"

In this view, the analog inputs are configured. When a stereo audio source is connected to the inputs CH 1/2 or CH 3/4, the input channels can be coupled to create a stereo channel. To do this, click on the button MONO of a channel concerned. Figure 8 shows the stereo coupling for the input channel "Analog 3". The settings that follow will then be made for the two inputs together, in this case inputs CH 3 and CH 4.

Note: A stereo signal at the input does not necessarily result in a stereo signal for the speakers. A stereo signal can be routed to mono zones and to stereo zones. For each output of a stereo zone, it is then possible to define if one of the stereo channels or a mixed mono signal is produced.

To adjust the input sensitivity to the audio source connected, click on one of the fields below SENSITIVITY. A fine adjustment of ± 15 dB can be made via GAIN/ TRIM:

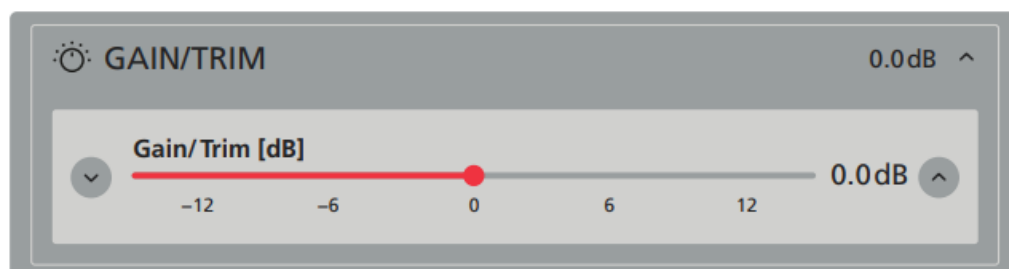


Fig. 9 View "Input - Analog - GAIN/TRIM"

Adjust the input sensitivity in such a way that the signal level displayed does not exceed 0 dB. For sound correction of an input, a switchable high-pass filter "100 Hz" (e. g. against impact sound) is available

which can be activated via the button at the top on the right. For further corrections, each input channel has a parametric 5-band equalizer that can be shown via EQ.

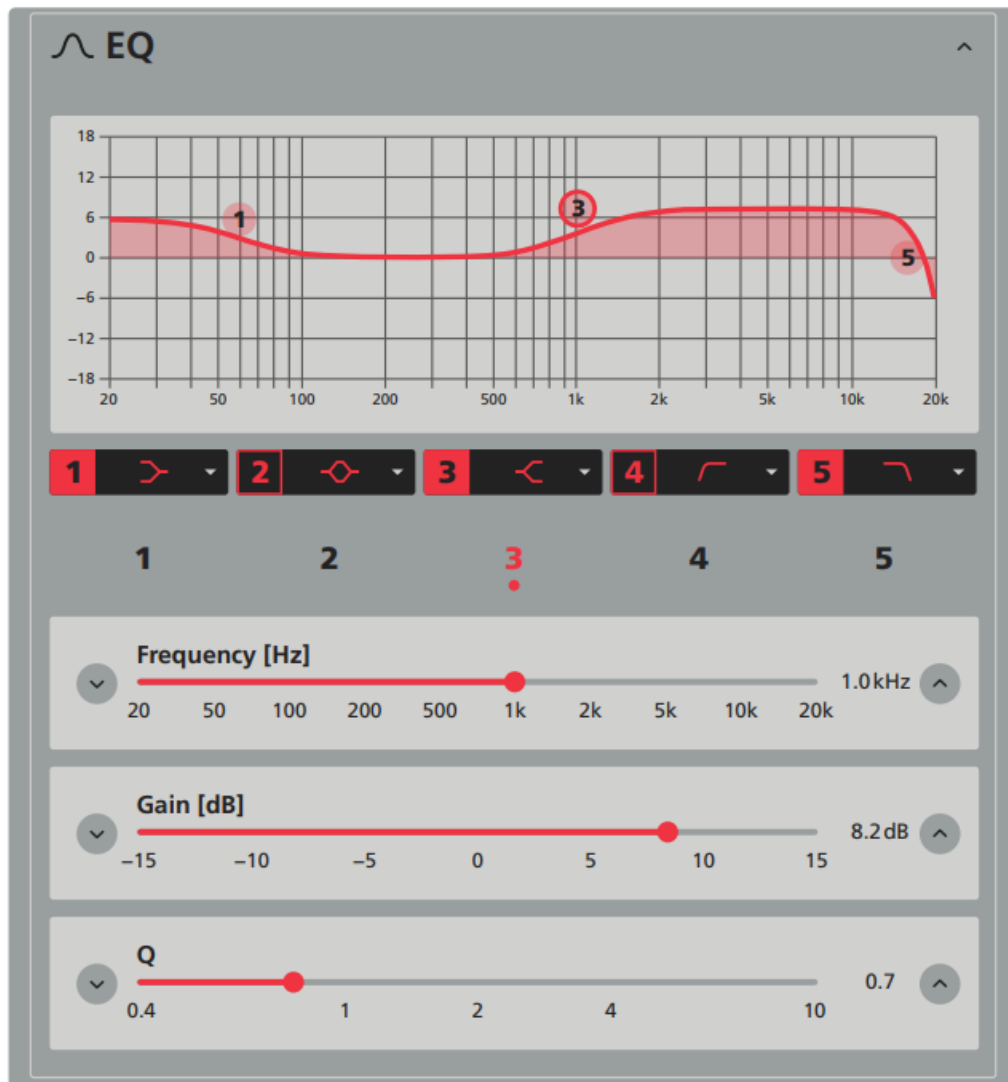


Fig. 10 View "Input – Analog – EQ"

To activate or deactivate a filter, click on the square button with the filter number. When the filter is active, a round filter mark with the filter number will appear in the frequency curve at the position of the filter frequency selected.

The filter type can be selected via a list that is shown via the button . The following filter types are available: "Parametric filter",

"Low shelf (with quality)", "High shelf (with quality)", "Low-pass filter (12 dB/octave)" and "High-pass filter (12 dB/octave)". A corresponding symbol is used to show the type of filter selected.

The frequency and gain (depending on the filter type) of a filter can be roughly adjusted by directly moving the filter mark. A more precise setting is possible when using the sliders below the curve. In addition to Frequency and Gain, the filter quality (Q) can also be set here. The dot below the filter number shows the filter currently selected (in fig.10, filter 3 is selected). Furthermore, the filter mark in the frequency curve has a thicker edge.

SPDIF

The setting of the digital input S/PDIF is almost identical to the setting of the analog inputs. Here, it is also possible to define whether the two channels of the input will be treated separately or as a stereo pair. The input gain is adjustable via GAIN/ TRIM in a range of ± 15 dB. For the digital input, however, there is no option for sound correction.

Mix

Four independent mixed signals can be created from the analog and digital input signals. For each of the mixed signals Mix 1 to Mix 4, use the sliders to adjust the respective portion of each input signal. For any input signal not desired for the mix, set the slider to the left stop. Above each slider, the current signal level of the corresponding

input will be shown.

Note: It is not compulsory to use the mixed signals described here; an input signal can also be sent directly to the desired zone.

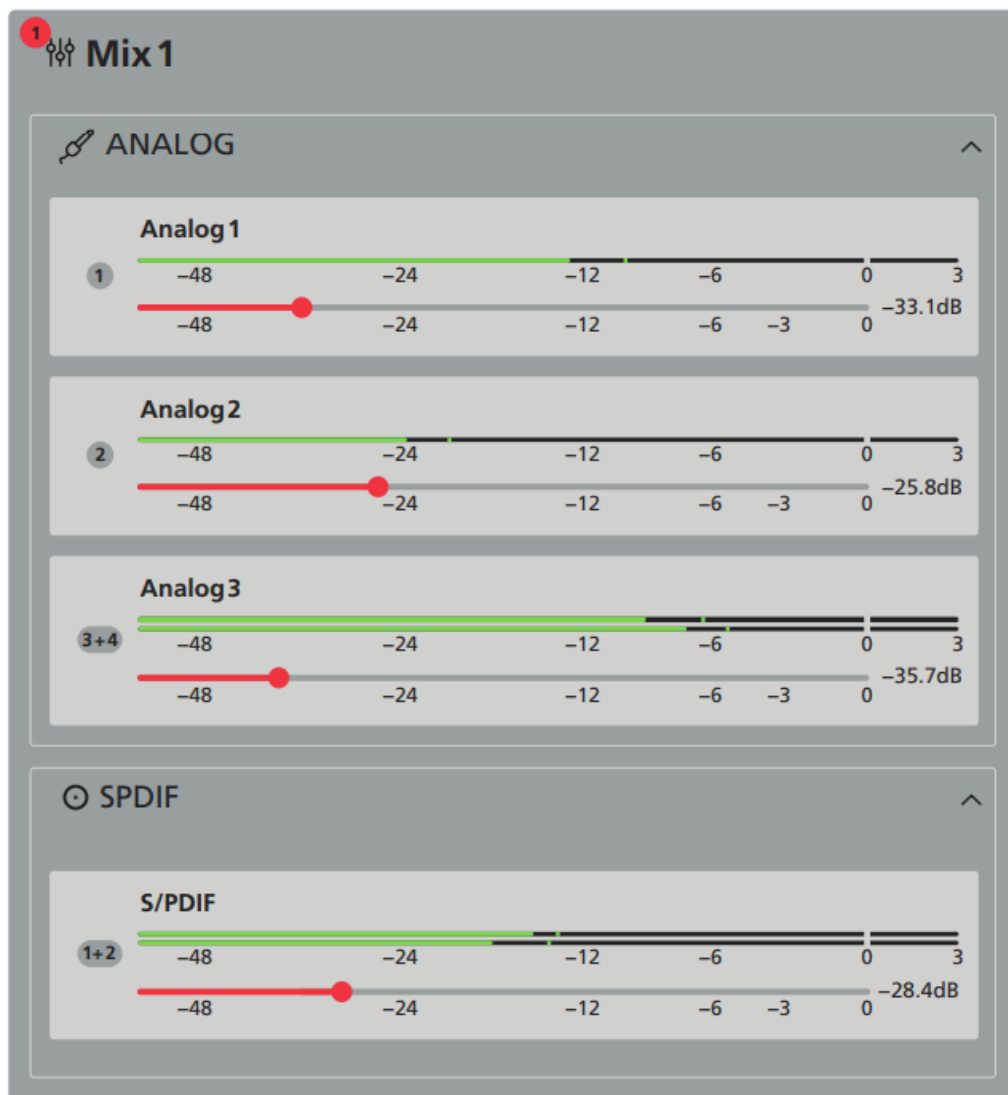


Fig. 11 View "Input – Mix"

Generator

The amplifier is equipped with a built-in signal generator for testing the sound system.

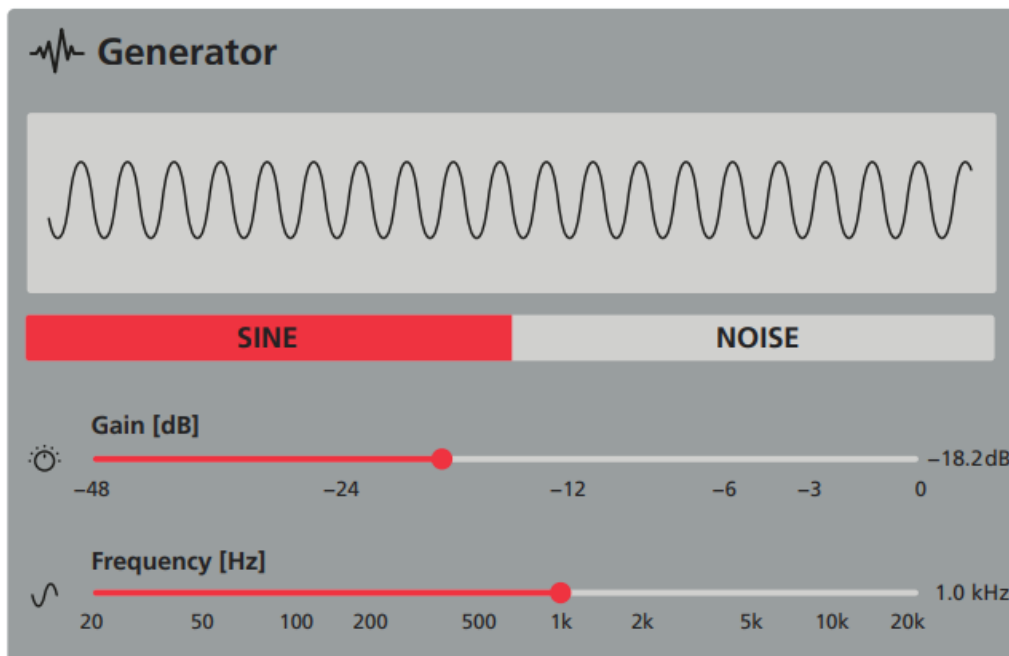


Fig. 12 View “Input – Generator”

The signal type can be selected: SINE or NOISE.

For the sine signal, the audio frequency (Frequency) and the signal level (Gain) can be adjusted.

For the noise signal, the signal level (Gain) can be adjusted. In addition, a switchable combination of high-pass filter (HPF) and low-pass filter (LPF) with adjustable cut-off frequencies allows to limit the bandwidth of the noise signal.

View “Zone“

The setting options of the zones are divided into the subviews Source, Volume, Restrictions and Compressor. These views can be accessed via the buttons that will appear after clicking the button Zone on the left.

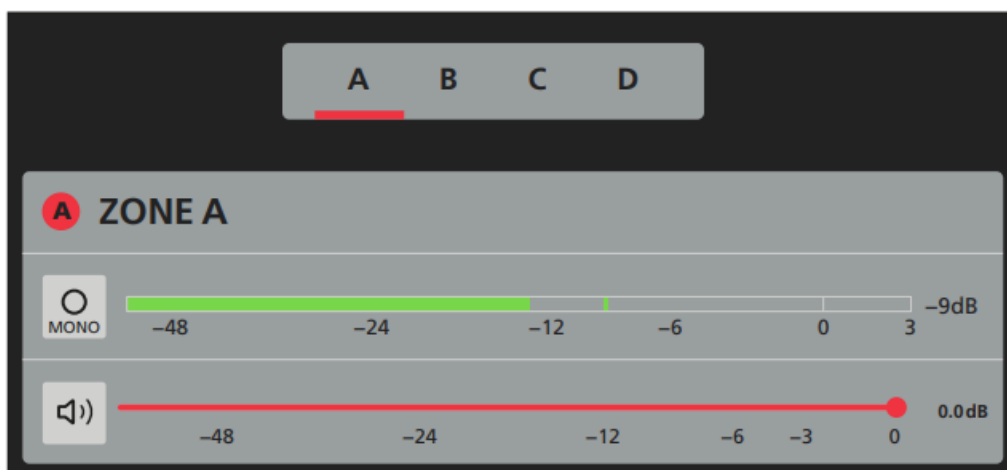


Fig. 13 View “Zone“

At the top of each of these subviews, the letters A, B, C, D can be used to select the zone to be set. Below that, the same setting options are available as in the view “Dashboard”: the MONO/STEREO switch next to the indication of the signal level and the slider for setting the zone volume with the mute button.

Source

In this view, the signal sources for the corresponding zone can be selected. The following signal sources are available: the input signals, the mixed signals and the test signal of the generator.

Note: When a stereo signal source is selected for a mono zone, the mono sum of both stereo channels is automatically created.

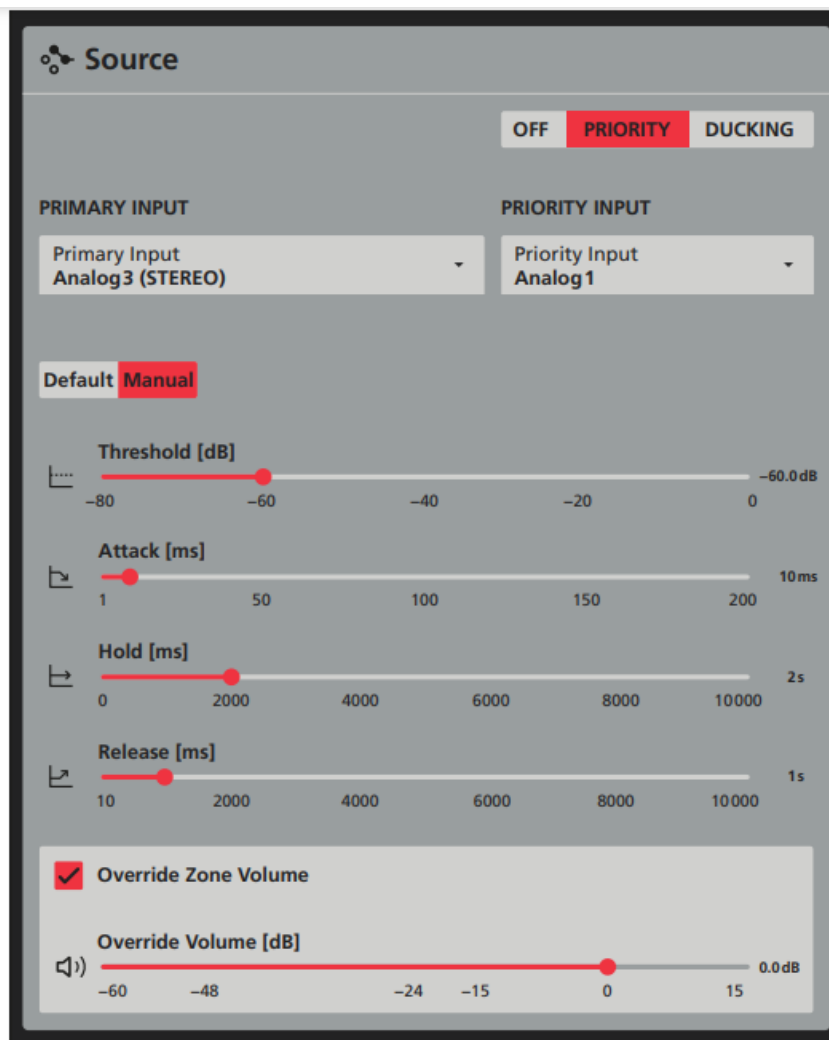


Fig. 14 View "Zone – Source"

Under PRIMARY INPUT, click to open the list of possible signal sources. Select one of the sources or OFF (no source)

Note: If a source is missing from the list, it may have been blocked for this zone chapter 7.5.3).

Under PRIORITY INPUT, a second source can be selected that will have priority over the first source. The way in which the signal of the first source is suppressed by that of the second source can be selected via the buttons PRIORITY and DUCKING. While PRIORITY will completely suppress the signal of the first source, DUCKING can be used to set the level of attenuation with the slider Depth. In the mode PRIORITY, there is an additional option Override Zone Volume which can be used to set a volume for the priority audio source that is independent of the zone volume (control: Override Volume).

If no priority source is required, click on the button OFF.

For PRIORITY and DUCKING, the mode Default or Manual can be selected. In the mode Manual, the following parameters can be set:

- Threshold (threshold value above which the priority signal starts suppressing the other signal)
- Attack (delay time after which the suppression starts)
- Hold (time for which the suppressed signal will remain attenuated after the priority signal has fallen below the threshold value again)
- Release (release time until the suppressed signal reaches its defined level again after the hold time has elapsed).

In the mode Default, only the parameter Threshold can be set. For all other parameters, default values are used.

Volume

In this view, the setting range for the volume of a zone can be limited and the volume settings of a channel can be assigned to an external volume control.

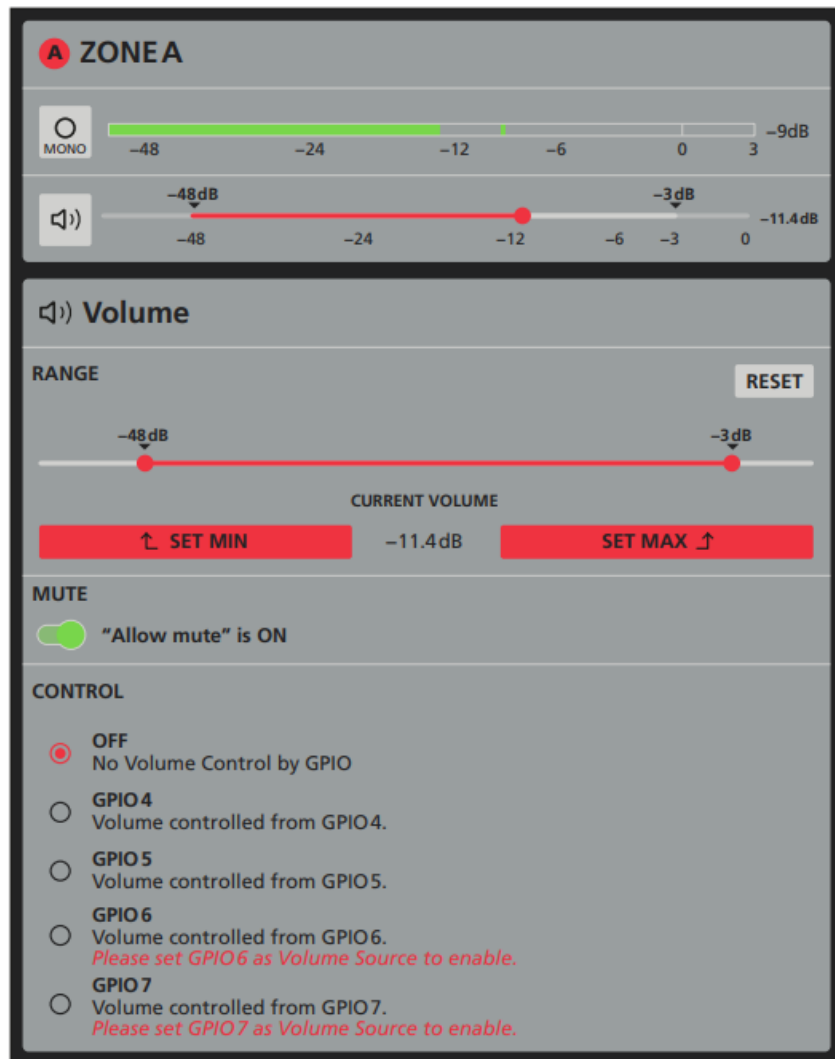


Fig. 15 View "Zone – Volume"

To limit the setting range for the zone volume, simply slide the handles of the control RANGE to the lower and upper limits of the desired range. Alternatively, the zone volume currently set can be accepted with SET MIN as the lower range limit or with SET MAX as the upper range limit. The button RESET is used to reset a limit defined previously.

Even if a minimum volume has been set, the zone can be muted. If this is not desired, set the switch MUTE to the left position ("Allow mute" is OFF). In this case, it is no longer possible to mute the zone.

Under CONTROL, volume control via external potentiometers can be defined (Connections [chapter 6.6.1](#)).

Note: To use the GPIO connections for external volume control, they must be configured accordingly (Settings [⇒ GPIO](#), [chapter 7.7.9](#)). If a connection is not configured correctly, a corresponding message will appear.

Select the desired connection under CONTROL. It will no longer be possible to change the volume for this zone via the user interface.

When the switch MUTE is set to the right position ("Allow mute" is ON), the volume can be turned down to silence with the external control even when a lower limit has been set. The lower limit is only effective for the external control when the switch is in the left position.

Restrictions

In this view, it can be defined for each input signal and for each mixed signal whether it is allowed as a source for this zone (Allowed) or not (Restricted). In the view Source, a restricted signal will not appear on the list for the PRIMARY INPUT. If a signal has already been selected as PRIMARY INPUT for this zone, it will be mentioned here.

For selection of a signal with priority (PRIORITY INPUT), these settings have no significance.

Compressor

A compressor will reduce the dynamic range and attenuate the signal level above an adjustable level threshold. This is necessary when the dynamic range of the audio signal is greater than that allowed by the amplifier system or the listening situation (e. g. background music). Level differences (e. g. with varying microphone distances) can also be reduced or signal peaks attenuated in order to achieve a higher gain setting and thus a higher average volume.

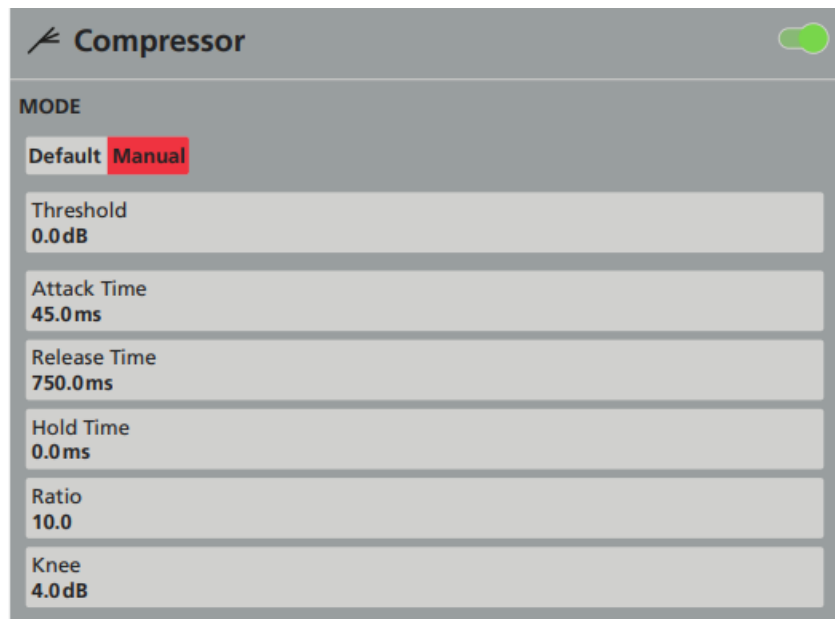


Fig. 16 View “Zone – Compressor”

To activate or deactivate the compressor, use the switch at the top on the right. Under MODE, the operating mode Default or Manual can be selected. In the mode Manual, the following parameters can be set:

- Threshold (to set the level above which the gain is reduced)
- Attack Time (response time after which the gain is reduced when the threshold value is exceeded)
- Hold Time (to define the duration for which the gain remains reduced after the signal level has already fallen below the threshold value again)
- Release Time (to define the duration until the gain returns to its original value after the hold time has elapsed)
- Ratio (The compression ratio means, for example, with a value of 10, that above the threshold, an input level increase of 20 dB will only increase the output level by 2 dB. The higher the compression ratio, the more the function of the compressor resembles the function of a limiter.)
- Knee (to define the transition range between the uncompressed signal and the compressed signal in the range of the threshold value)

In the mode Default, only the parameter Threshold can be set. For all other parameters, default values are used.

View “Output”

In this view, settings are made for the four speaker outputs. The type of output (high-impedance output for 70 V/100 V speakers or output for low-impedance speakers) is defined, and the outputs are assigned to the zones. It is also possible to make speaker-specific settings (e. g. frequency response correction, signal delay, level limiting) which can be saved as speaker preset files.

The setting options of the outputs are divided into the subviews Routing, Delay, Equalizer and Speaker Preset. These options can be called up via buttons which will appear after clicking on the button Output on the left.

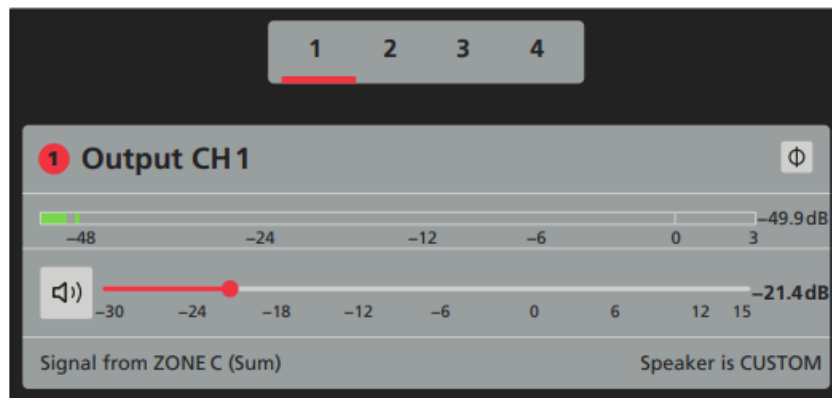



Fig. 17 View "Output"

At the top of each of these four views, the output to be set can be selected via the numbers 1, 2, 3, 4. Below the numbers, the signal level for the output selected and the slider for setting the volume for this output with the button for muting the output will be displayed

CAUTION

Never adjust a very high volume. Permanent high volumes may damage your hearing!

The button  can also be used to invert the signal of the output.

Routing

In this view, the outputs are assigned to the signals of the zones.

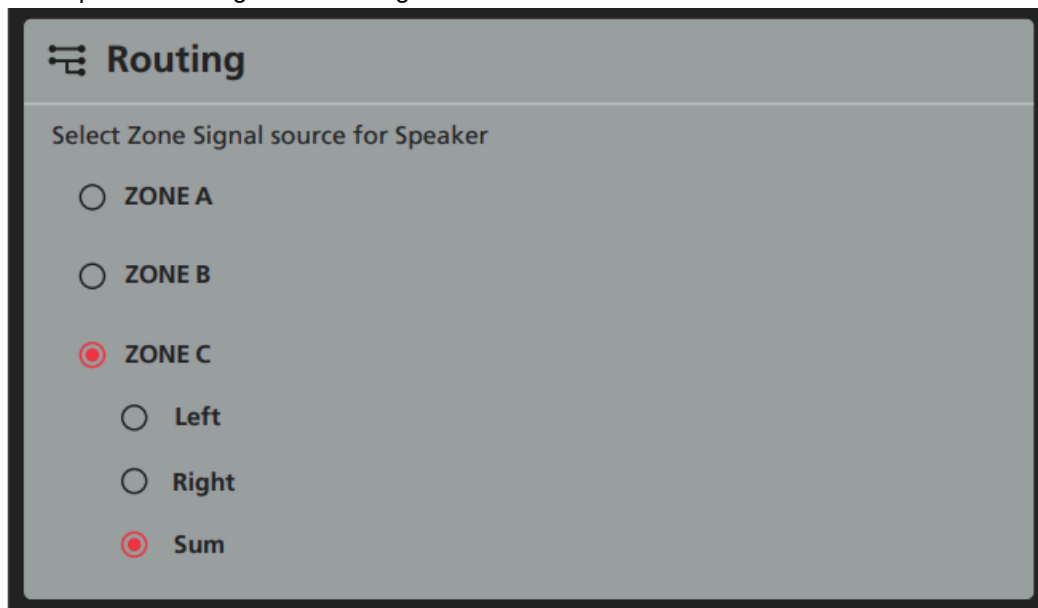


Fig. 18 View "Output – Routing"

Under Routing, it is possible to define the zone signal to be sent to the output selected. If the desired zone has a stereo signal, also select whether one of the stereo channels (Left / Right) or the mono sum (Sum) is to be reproduced. This allows, for example, the zone signal to be reproduced as a stereo signal in one room, while it is only reproduced monophonically in another room. In another example, a stereo reproduction could be complemented by a mono subwoofer.

Note: Routing for the digital output is made via the view "Settings ⇒ Output Routing" ( chapter 7.7.8).

Delay

The signals of the outputs can be delayed individually. This is useful, for example, when speakers are at different distances from the listeners. To compensate for the delay caused by the sound propagation time, the signal of the closer speaker is delayed to such an extent that it will not reach the listener before that of the more distant speaker.

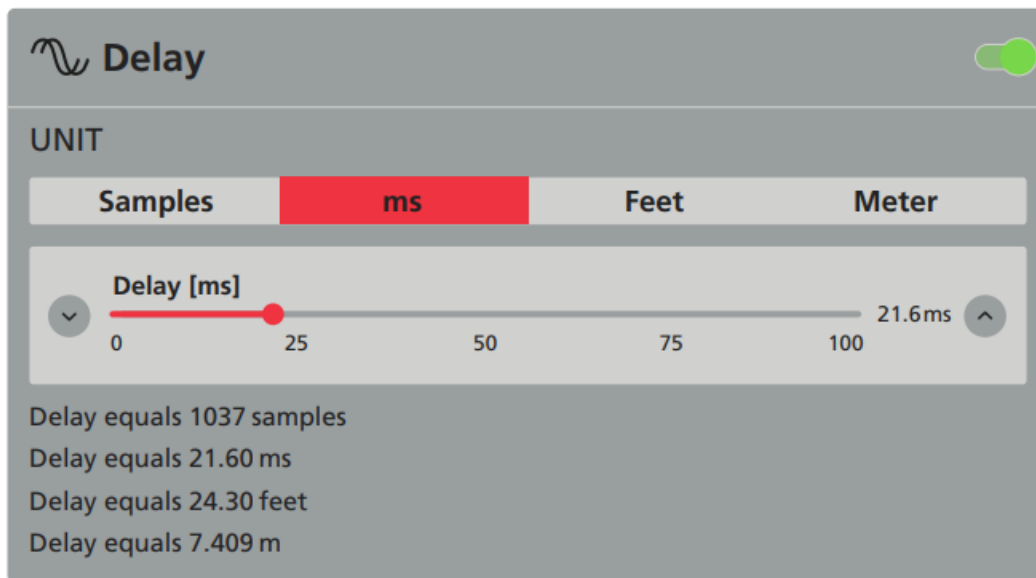


Fig. 19 View "Output – Delay"

To save the user from having to calculate the sound propagation time, the delay can optionally be entered under UNIT not only as a time (in ms) but also as a distance (in Meter or Feet). The device uses a sound velocity of 343 m /s for calculation. In addition, it is also possible to enter the number of Samples by which the signal is to be delayed. A conversion to other units is shown below the slider.

To activate / deactivate the signal delay, use the switch at the top on the right.

Note: Another option to set a delay can be found under "Output ⇒ Speaker Preset ⇒ Driver Alignment" (chapter 7.6.4.4).

Equalizer

The 10-band equalizer in this view is primarily used to adapt the sound of an output to the ambient conditions, for example, by filtering out unwanted room resonances.

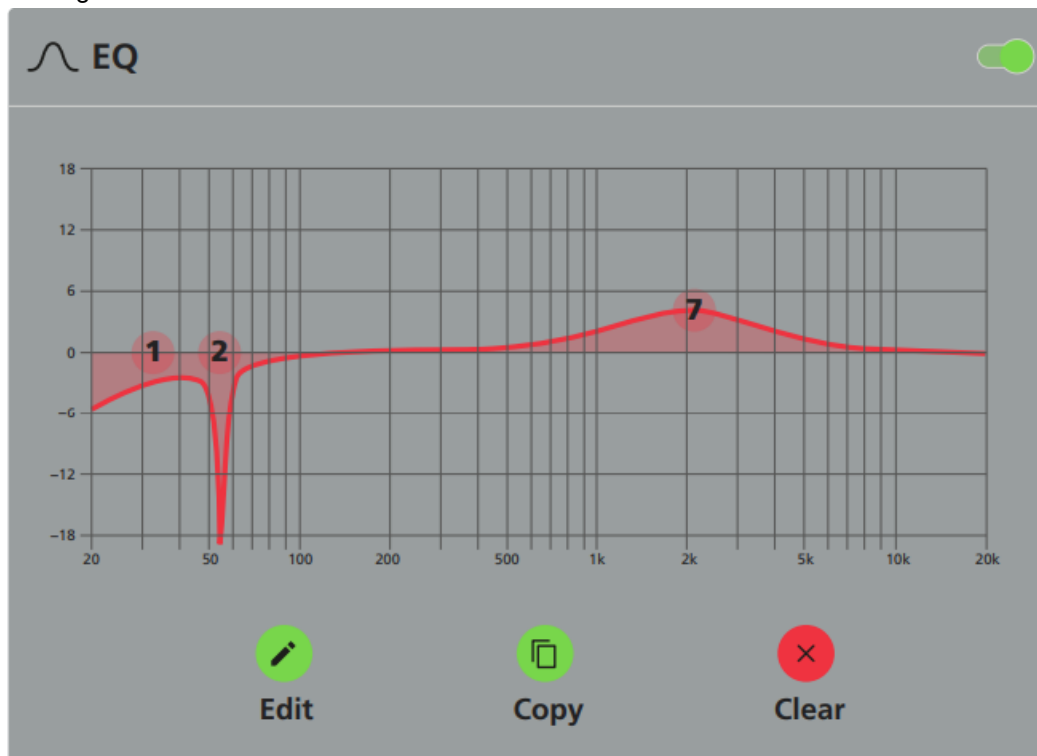


Fig. 20 View "Output – Equalizer"

To activate / deactivate the equalizer, use the switch at the top on the right.

With Copy, the current filter settings can be copied to another out-put. With Clear, the settings will be reset after a security prompt has been confirmed. To set the filters, click on the button above Edit. The following view will appear:

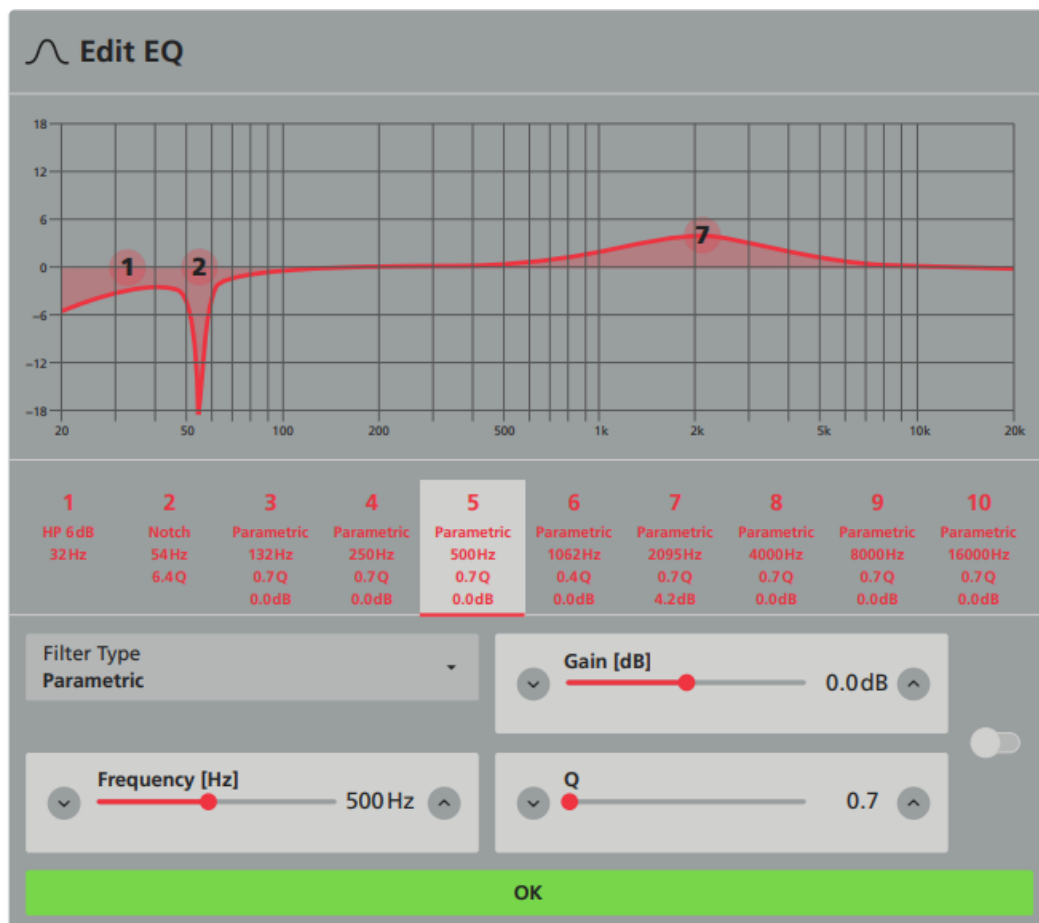


Fig. 21 View "Output – Edit Equalizer"

Click on the filter number to select the filter to be set. In the lower area, the corresponding parameters with the current values will be displayed: Filter Type, Frequency and, depending on the filter type, Gain and /or filter quality (Q). To activate /deactivate the filter, use the switch on the right.

The frequency and gain (depending on the filter type) of a filter can also be roughly adjusted by moving the round filter mark in the frequency curve.

After having set all the filters required, click on the button OK to exit the view.

Speaker Preset

The settings summarized in this view are used to make adjustments for the speaker models used. All settings made here can be saved in individual preset files. These files are managed in speaker libraries and can be easily used again.

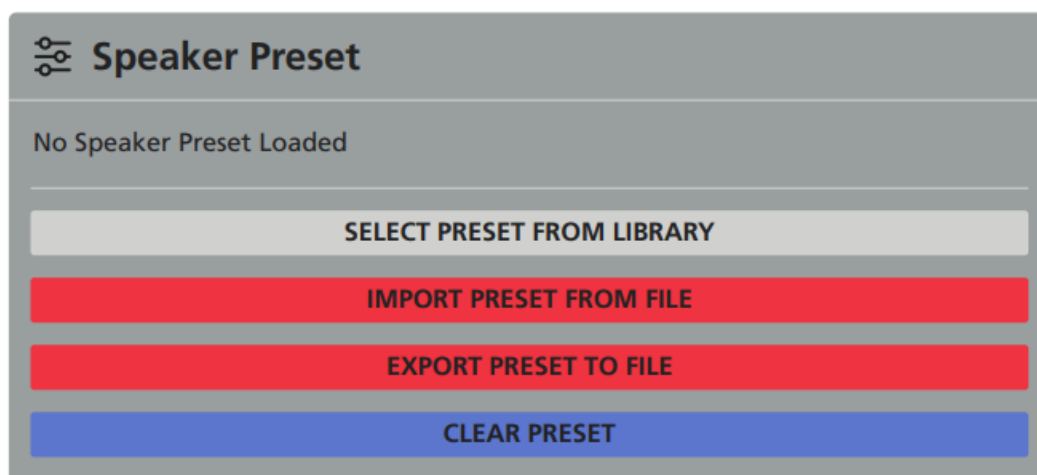


Fig. 22 View "Output – Speaker Preset"

The following functions are available in this view:

SELECT PRESET FROM LIBRARY – Selection of a preset from the speaker library currently loaded
Note: The speaker libraries are created and managed via the view “Settings Speaker Library” (chapter 7.7.5).

EXPORT PRESET TO FILE – Saving the current settings as a preset to a file
The following window will appear:

↑ Export Speaker Preset

Preset Name

Include:	Export	Protect
Speaker EQ	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Crossover	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Speaker Delay	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FIR	<input type="checkbox"/>	<input type="checkbox"/>
Limiter	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Polarity	<input type="checkbox"/>	<input type="checkbox"/>
Output Mode	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>


CANCEL

EXPORT

Fig. 23 View “Output – Speaker Preset – Export Preset”

Fig. 23 View “Output – Speaker Preset – Export Preset”
Enter a preset name at the top first. Below this, a tick ☒ under Export will define which settings are saved in this preset. To protect this set-ting against any changes (after the preset has been loaded), tick the box ☒ under Protect .

IMPORT PRESET FROM FILE – Loading a preset from a file
After a preset has been loaded, all subviews of Speaker Preset are hidden. To change the settings, they can be shown again via the button
CUSTOMIZE PRESET. Protected settings additionally ticked ☒ under

Protect during export are marked with a lock icon  and cannot be called up. Presets changed via
CUSTOMIZE PRESET can only be saved as new presets with EXPORT PRESET TO FILE if they do not contain
any protected settings.
To reset a preset that has been changed to the default values, call up the function RESET PRESET TO DEFAULT.
CLEAR PRESET – Resetting the settings after a security prompt has been confirmed

Crossover & Gain

This view can be used to configure a crossover network. This makes it possible to set up an active multi-way
sound reproduction system by, for example, configuring one output to drive a tweeter and a second output to drive
a complementary woofer.

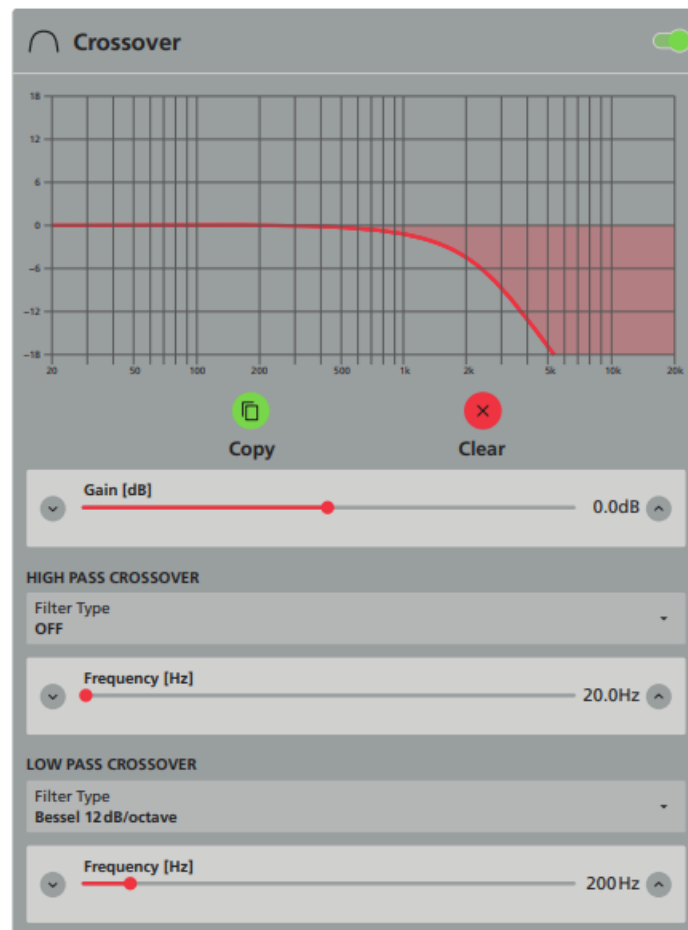


Fig. 24 View "Output – Speaker Preset – Crossover"

There is a high-pass filter HIGH PASS CROSSOVER and a low-pass filter HIGH PASS CROSSOVER. The type and slope of each filter can be set under Filter Type, and the cut-off frequency can be set under Frequency. If the filter is not required, select the option "OFF" under Filter Type. The signal level can be further adjusted via Gain. To activate /deactivate the filters and the level correction, use the switch at the top on the right. Copy is used to copy the current settings to another output. Clear is used to reset the settings after a security prompt has been confirmed.

Speaker EQ

The 15-band equalizer in this view is used to adjust the sound of an output to the characteristics of the speaker used. Operation of this equalizer is the same as that of the equalizer in chapter 7.6.3. However, it has an additional switch Show Crossover for showing the effect of Crossover & Gain (chapter 7.6.4.1) in the frequency curve.

FIR

This view offers the option to apply digital filters of the type FIR (Finite Impulse Response) to the output. The filter coefficients required for this purpose can be taken, for example, from calculations of a speaker measurement program and are loaded via IMPORT as a text file (for-format: .csv or .txt). CLEAR will delete the data.

Driver Alignment

This view offers an additional option for signal delay and is used, for example, to compensate for differences in sound propagation time within a multi-way sound system. For operation see Delay in chapter 7.6.2.

Polarity

This view offers the option of inverting the signal of an output (180° phase reversal). It is the same function that is operated via the button (fig. 17) .

Limiter

This view offers several possibilities to limit the signal level of the output and thus protect the speaker from overload, for example.

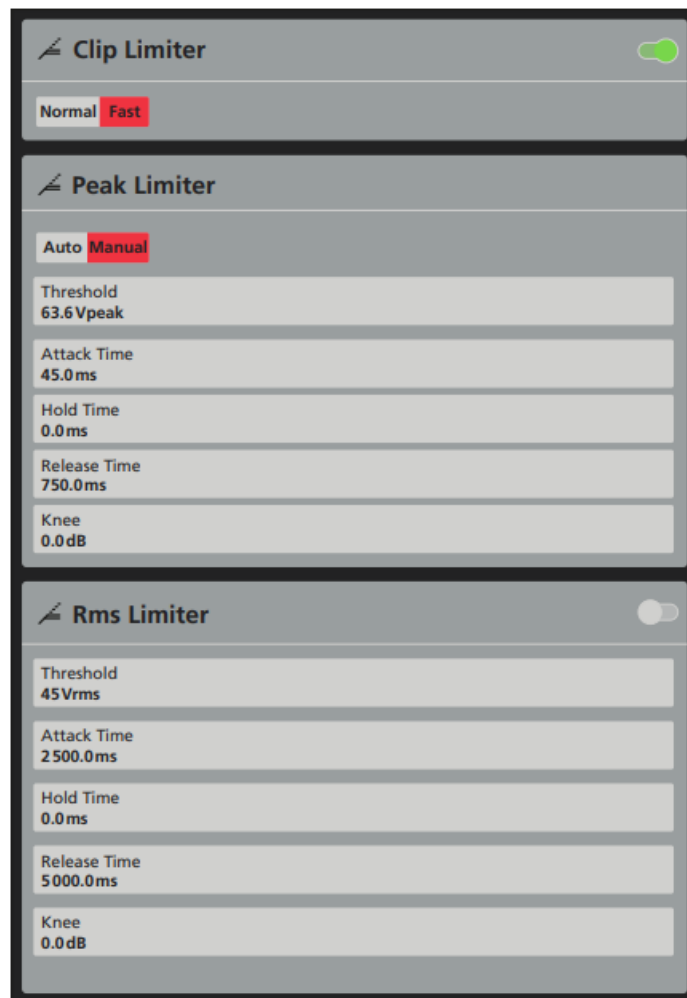


Fig. 25 View "Output - Speaker Preset - Limiter"

The three types of limiter can be used at the same time.

Clip Limiter will reduce the signal level when the level limit is reached. This will prevent signal distortions that may damage the speakers. For the response time, Normal or Fast can be selected.

To activate /deactivate this limiter, use the switch on the right.

Note: For loads of very low impedance ($< 4 \Omega$), it is strongly recommended to activate the limiter with the option Fast.

Peak Limiter responds to signal peaks. It works like a dynamic com-pressor with a very high compression ratio and can be operated in manual mode (Manual) or automatic mode (Auto) (description of the parameters [chapter 7.5.4](#)). In automatic mode, only the value Threshold can be set; the other parameters will be defined automatically based on the high-pass filter settings in the view Crossover & Gain.

Rms Limiter works like the peak limiter, but it responds to the effective value of the signal (description of the parameters [chapter 7.5.4](#)). To activate /deactivate this limiter, use the switch on the right.

Output Mode

In this view, the type of speaker to be connected to the outputs is generally defined. It is important to make this setting before connect-ing the speakers!

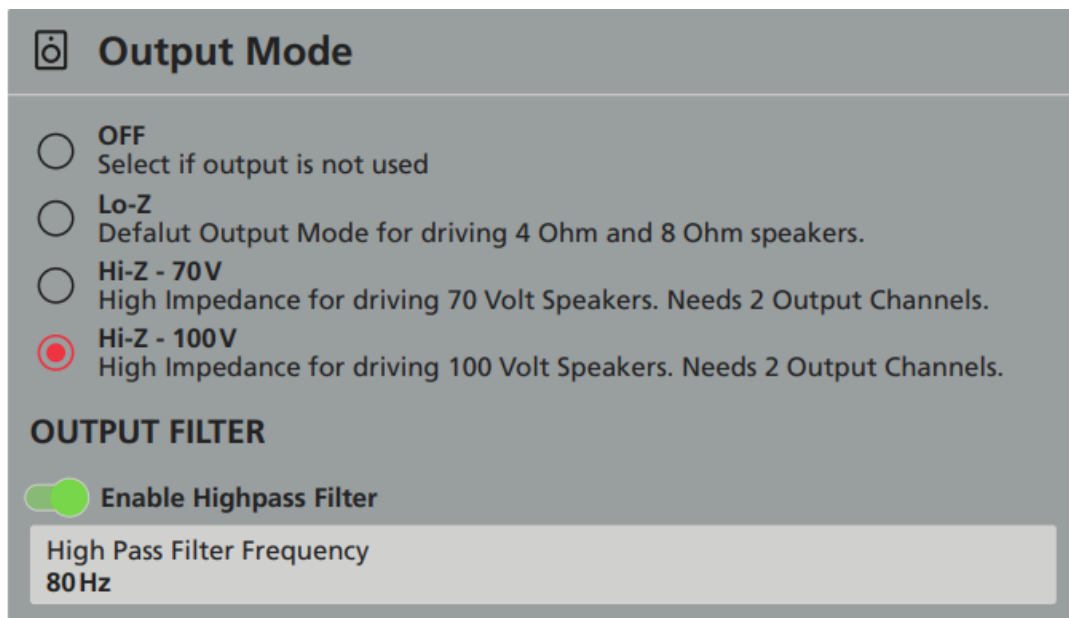


Fig. 26 View “Output – Speaker Preset – Output Mode”

When connecting low-impedance speakers (or speaker groups) with a (total) impedance of 4 – 16 Ω , select the setting Lo-Z.

When connecting speakers with a transformer, use the setting Hi-Z – 70 V or Hi-Z – 100 V, depending on the nominal voltage of the speakers. The frequency range of these speakers is usually not very low, partly due to their transformers. To avoid distortion caused by saturation of the transformer and to reduce the load on the amplifier, a high-pass filter can be activated ahead. The frequency can be entered under High Pass Filter Frequency and the filter can be activated /deactivated via the switch Enable Highpass Filter.

Note: In Hi-Z mode, two channels are required for one output, with their power amplifiers used in bridge mode. This will affect the configuration of the speaker terminals. Only outputs 1 and 3 can be configured for Hi-Z operation; outputs 2 or 4 will no longer be available.

Use the setting OFF for any output that is not used.

View “Settings“

Under Settings, various system settings are made. When clicking on Settings, the buttons for calling up the subviews described below will appear.

System Information

In this view, the following information can be entered, for example, by the installer of the system:

- Device Name
- Venue Name
- Customer Name
- Asset Tag Number
- Installer Name
- Installer Contact Info
- Date of Installation
- Installation Notes

Device

This view shows information about the device. There is also a function LOCATOR to identify the device (e. g. when using several PA-4125DX amplifiers): After a click on FIND ME, a green light will run through all LEDs (1) of the

device being controlled. To exit the function, click on the button again.

When a new firmware (operating system) for this model is available on the Monacor website, download the firmware file, e. g. to the computer controlling the device. To update the system, click on the button FIRMWARE UPDATE, select the file with the new firmware and confirm the update.

Note: Firmware updates are made at your own risk. After an update, the functions of the device may differ from the description in this user manual.

External Devices

In this view, external control elements (wall modules) can be added and configured.

Backup & Restore

In this view, all settings can be saved as a file and loaded again.

To back up all current settings, click on the button BACKUP SETUP TO FILE and then select a location for saving the file created.

To load a backup file to the amplifier, click on the button RESTORE SETUP FROM FILE and then click on Select restore file to select the desired file. Use the option Restore Network Settings to define if the current network settings are to be replaced by the settings saved in the file. Click on RESTORE to confirm loading the settings.

Note: If the button LOGOUT appears at the bottom on the right after loading, settings with password protection have been saved. Do not click on the button or close the user interface if you do not know the password, but instead disable the password protection or set a new password via the view Security (☞ Kapitel 7.7.6).

Under RECOVERY, a click on RESTART DEVICE will restart the device. A security prompt will appear with the information that the user interface will not be available again after the restart until the device has reconnected. Click on CONFIRM to restart the device.

The function RESET! will reset all settings of the device (including the network settings) to the default settings. A security prompt will appear with the information that the connection to the user interface may be lost when the network settings are reset and that this process cannot be reversed. Click on CONFIRM to reset the device.

Note: If necessary, back up the current settings via BACKUP SETUP TO FILE before starting the function RESET!.

Speaker Library

In this view, speaker-specific settings can be managed in speaker libraries. The settings from a speaker library loaded to the amplifier can be accessed via the view "Output ⇒ Speaker Preset" (☞ chapter 7.6.4).

If no library has been loaded when this view is called up (indication: "No Speaker Library"), either load an existing library as a file via the button IMPORT or create a new library via CREATE.

If a library has already been loaded to the amplifier, there is also an option to edit the library via EDIT.

When creating or editing a library, the following window will appear:

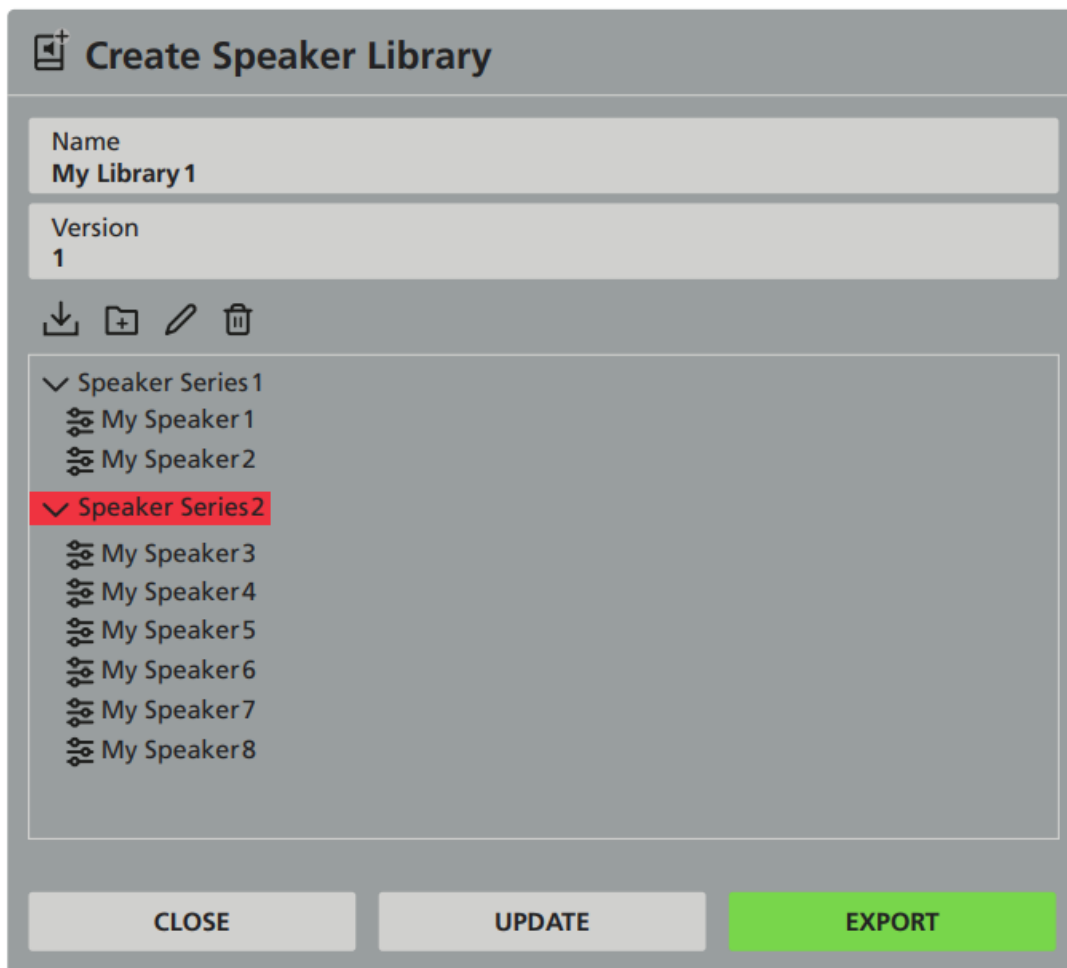


Fig. 27 View “Output – Speaker Library – Create/Edit”

Under Name, it is possible to name or rename the library. Under Version, a version number can be entered. The speaker settings can be arranged in groups (Speaker Series) within the library. To add a new group, click on . To rename a group selected, click on , enter the desired name and confirm with RENAME.

To add a speaker setting to the group selected, click on , click on Select file speaker preset(s), select the desired preset file(s) and confirm with IMPORT.

To remove a preset or group from the library, select the item to be removed from the list and click on . The button UPDATE is used to transfer the changes made here to the library (in the device). EXPORT is used to save the library in a file and thus import it into other devices. CLOSE will close this window.

Note: Any changes that have not been accepted with UPDATE or exported will be lost when CLOSE is clicked.

To load a library, click on the button IMPORT, click on Speaker Library file, select the desired library file and confirm with LOAD. Only one library can be loaded in the amplifier at a time.


Security

In this view, the user interface can be protected from any unauthorised access. This is especially important when the amplifier is not only addressed via its own (password-protected) Wi-Fi, but when it is also integrated into an existing network.

Fig. 28 View "Settings – Security"

To set up a password protection

1. Click on Enabled to enable the function.
2. Enter the desired password under Password (confirmation displayed: Not empty).
3. Enter the same password again under Repeat Password (confirmation displayed: Match) and make sure to remember it!
4. Click on APPLY at the top on the right to confirm.

Note: To show a password that has been entered, click on the icon .

When the password protection has been enabled, the button LOG-OUT will appear at the bottom on the right. This button can be used to block access immediately. In any case, however, the password must be entered when the user interface is called up again.

To disable the password protection, click on Disabled and then on APPLY.

Power Management

In this view, the behaviour of the amplifier when being switched on /off (automatically) can be defined. The following options are available for AUTO ON:

- **Audio (Eco)**

The amplifier is switched on when a signal level > 2.5 mV is present at an analog input.

Attention! No network functions available in standby mode!

Note: In accordance with the European ErP standby directive, the power consumption in standby mode is < 0.5 W.

- **Audio**

The amplifier is switched on when a signal level > 2.5 mV is present at an analog input.

Note: In accordance with the European ErP directive for network-connected standby devices, the power consumption in standby mode is < 2 W.

- **Audio (Digital)**

The DSP is always on. The power amplifier will switch on as soon as a signal with a level > -80 dBFS is present.

Note: Not in accordance with the European ErP directive for network-connected standby devices (power consumption in standby mode < 2 W).

- **Trigger (Eco)**

The amplifier is switched on when a switching voltage of 12 V is applied to the corresponding GPIO contact (3).

Attention! No network functions available in standby mode!

Note: In accordance with the European ErP standby directive, the power consumption in standby mode is < 0.5 W.

- **Trigger**

The amplifier is switched on when a switching voltage of 12 V is applied to the corresponding GPIO contact (3).

Note: In accordance with the European ErP directive for network-connected standby devices, the power consumption in standby mode is < 2 W.

- **Network only**

The amplifier is switched on when it receives an API command via the network.

Note: In accordance with the European ErP directive for network-connected standby devices, the power consumption in standby mode is < 2 W.

The slider below Standby Time can be used to define that the amplifier will go to standby mode if no audio signal has been present for the time specified. The slider position OFF will deactivate this function.

Note: This function is only available if one of the two options Audio and Audio (Eco) has been selected under AUTO ON.

The slider underneath Mute Time can be used to define that the outputs of the amplifier will be muted if no audio signal has been present for the time specified. The slider position OFF will deactivate this function.

Output Routing (for digital output)

In this view, the signal for the 2-channel digital output is set.

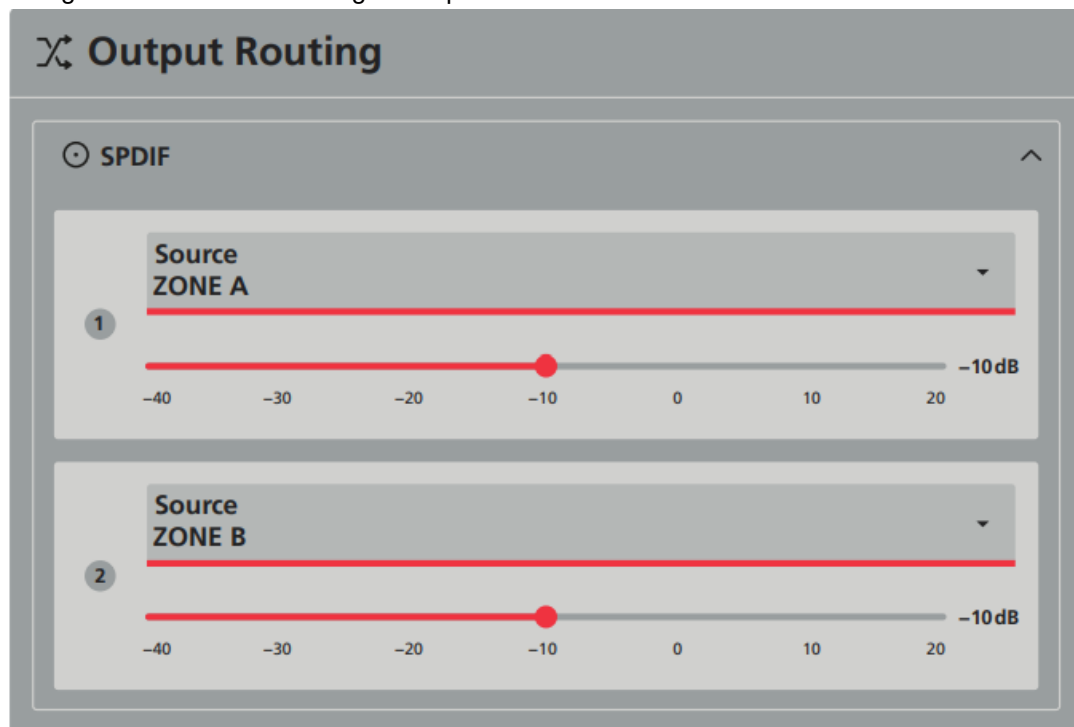


Fig. 29 View "Output – Speaker Preset – Output Mode"

For each output channel, the signals of the analog inputs, the signals of the digital input and the zone signals are available. If a zone is configured as a stereo zone, it must be defined whether one of the stereo channels (Left / Right) or the mono sum (Sum) is reproduced.

Both signal levels can be adjusted with the sliders.

GPIO

In this view, the functions of the control connections GPIO (3) are defined. The eight contacts can have the following functions:

- **PIN 1**
 - Reference potential Soft Ground for a 12 V trigger input signal, a a switch to mute the sound or a standby switch
- **PIN 2**
 - Off: no function
 - Standby (NO): will switch the amplifier to standby mode when connected to PIN 1 (NO contact)
 - Standby (NC): will switch the amplifier to standby mode when not connected to PIN 1 (NC contact)
 - Mute (NO): all outputs of the amplifier will be muted when con-nected to PIN 1 (NO contact)
 - Mute (NC): all outputs of the amplifier will be muted when not connected to PIN 1 (NC contact)
- **PIN 3**
 - Reference potential Ground for external volume control and for a 12 V trigger output signal
- **PIN 4, PIN 5:**
 - Volume Control: to connect the wiper contact of an external potentiometer for volume adjustment.
 - Off: no function
- **PIN 6**
 - 12 V Trigger In: With the corresponding setting in the view “ Settings ⇒ Power Management“, the amplifier is switched on by a 12 V switching voltage at this connection. Without this voltage, the amplifier remains in standby mode.
 - Volume Control: to connect the wiper contact of an external potentiometer for volume adjustment.
 - Off: no function
- **PIN 7**
 - 12 V Trigger Out: When the amplifier is switched on, a 12 V switch-ing voltage is present here. This voltage can be used, for example, to switch on a second amplifier via its switching input.
 - Volume Control: to connect the wiper contact of an external potentiometer for volume adjustment.
 - Off: no function
- **PIN 8**
 - Power 3.3 V: DC voltage for supplying power to external potenti-ometers for volume adjustment.

LAN

This view allows to make settings for the network connection via the connector NETWORK CONTROL (2). The LAN interface of the amplifier is preset to a static IP address (Static) 192.168.64.100. To integrate the device into an existing net-work, the address and the corresponding settings can be changed here.

However, the interface of the amplifier can also be configured automatically by a DHCP server in the network (e. g. in the router). In this case, select the option DHCP.

Confirm any changes made with APPLY.

Note: To avoid complicating access to the user interface in DHCP mode by assigning a different address to the amplifier each time it is switched on, select the option “Always assign the same IPv4 address to this network device” in the router.

WIFI

In this view, settings are made for Wi-Fi functionality of the amplifier.

WIFI APPLY

ENABLE WIFI ☒

When WiFi is disabled the only way to connect to the amplifier is using the LAN port. The setting can be reset by pressing the Factory Reset button during startup or connecting via LAN and enabling WiFi again.

WHEN LAN CONNECTED

☐ Disable WIFI

☒ Do Nothing

DISABLE WIFI AFTER

5min 10min 30min **Always On**

If set to any other value than "Always On" - WiFi will be turned off after the selected duration. Amplifier will be need power cycling to turn WiFi on again.

WIFI MODE

Access Point **Client**

Access Point Name (SSID)
MONACOR PA-4125DX xxxx-yyyyy

Password
password

Fig. 30 View "Output – Speaker Preset – Output Mode"

The slider at ENABLE WIFI is used to enable or disable the Wi-Fi function. When Wi-Fi is disabled, the user interface can only be accessed via LAN.

Note: To reactivate the Wi-Fi function, either call up the user interface via LAN and enable the Wi-Fi in this view or use the recessed reset push-button to reset the amplifier to its default settings (☞ chapter 8).

Under WHEN LAN CONNECTED, it is defined whether the Wi-Fi connection will be disabled when the device is connected via LAN

(Disable WIFI) or whether this will have no effect on the Wi-Fi function (Do Nothing).

Under DISABLE WIFI AFTER, an automatic disconnection of the Wi-Fi function after 5 min, 10 min or 30 min can be set. In the setting Always On, there will be no automatic disconnection.

Note: To reactivate the Wi-Fi function after automatic disconnection, it will be necessary to disconnect the amplifier from the power supply and to reconnect it.

Under WIFI MODE, it is defined whether the amplifier will set up its own Wi-Fi as an Access Point or whether the amplifier will be integrated into an existing Wi-Fi as a Client. When Client is selected, enter the name of the desired network under SSID and the corresponding password under Password.

If the amplifier is used as an Access Point with its own Wi-Fi, the default password "password" should always be changed for security reasons. The Access Point Name (SSID) can be changed if necessary.

Confirm any changes made with APPLY.

Note: Changing the Wi-Fi settings may require reconnection.

Reset to the Default Settings

The amplifier can be reset to its default settings. In this case, all settings made by the user will be lost (including the password protection). These settings should therefore be saved before resetting the amplifier (☞ chapter 7.7.4).

If access to the user interface is possible, all settings can be reset with the function RESET! via the view "Settings ⇒ Backup & Restore"

(☞ chapter 7.7.4).

Alternatively, use the recessed reset push-button. This push-button can be found in a small hole in the bottom plate of the amplifier, located in the middle of the front section.

1. Disconnect the amplifier from the power supply.
2. Disconnect the terminal blocks for the speakers (9) and for external control elements GPIO (3) from the device.
3. Use a thin object to keep the push-button in the small hole pressed while reconnecting the power supply.
4. Keep the push-button pressed for 3 – 5 seconds until the amplifier starts.

The amplifier will now start with its default settings.

5. Before reconnecting the speakers and external control elements, check the settings for these connections via the user interface and readjust them if necessary.

Example of Amplifier Setup

This chapter uses an example to describe a possible procedure for setting up the amplifier.

The following example system is to be set up:

Signal sources used

1. CD player with RCA outputs
2. dynamic microphones with balanced outputs

Zone 1

- Mainly stereo music from a CD player is to be reproduced in a room.
- It must be possible to add the signal from microphone 1 to the music.
- The user interface is to be used to set the volume for the zone.
- Low-impedance speakers (4 – 16 Ω) are to be used.

Zone 2

- Monophonic background music from the CD player is to be reproduced in several rooms.
- The volume for this zone is to be adjusted via an external control.
- When announcements are made via microphone 2, the background music is to be faded out.
- The volume of announcements must be independent of the music volume.
- Several 100 V speakers are to be used.

Proceed in the way described below

1. Call up the user interface. To do this, connect the amplifier to the power supply (☞ chapter 6.7) and when the Wi-Fi LED (1) lights up, establish a connection to the Wi-Fi of the amplifier, e. g. using a laptop (☞ chapter 7.1.1).
2. Set the operating modes of the speaker outputs (☞ chapter 7.6.4.7): To do this, in the view “Output ⇒ Speaker Preset ⇒ Out-put Mode”,
 - set “Output 1” and “Output 2” to “Lo-Z”,

- set “Output 3” to “Hi-Z – 100V”.
3. Set the inputs:
 - In the view “Input ⇒ Analog”, set the input “Analog 1” to “Stereo” (☞ chapter 7.4) and change the name to “CD” (☞ chapter 7.3); set the sensitivity to “+4dBu”.
 - For the inputs “Analog 3” and “Analog 4”, set the input sensitivity to “MIC” and change the input names to “Microphone 1” and “Microphone 2”.
 4. Configure the connection for the external volume control:
 - Open the view “Settings ⇒ GPIO” and select the option “Volume Control” for “PIN 4” (☞ chapter 7.7.9).
 5. Set the zones (☞ chapter 7.5.1):
 - In the view “Zone ⇒ Source”, set “Zone A” to “STEREO” and select the source “Mix 1” as “PRIMARY INPUT”.
 - For the time being, set the volume control for “Zone A” to a low value (e. g. –40 dB).
 - Leave “Zone C” at “MONO” and select the source “CD (Stereo)” as “PRIMARY INPUT”. Select the option “PRIORITY” and select the source “Microphone 2” as “PRIORITY INPUT”. Select the option “Override Zone Volume” and, for the time being, set the volume control now appearing to a medium value, e. g. “–24 dB”.
 - In the view “Zone ⇒ Volume”, under “CONTROL”, select the option “GPIO 4” for “Zone C”.
 6. Assign the outputs (☞ chapter 7.6.1):
 - In the view “Output ⇒ Routing”, select the option “Zone A: Left” for “Output 1” under “Routing”.
 - For “Output 2”, select the option “Zone A: Right” under “Routing”.
 - For “Output 3”, select the option “Zone C” under “Routing”.
 7. Disconnect the amplifier from the power supply and make the connections:
 - Connect the left speaker for Zone 1 to the terminals OUTPUTS “CH1” and connect the right speaker for this zone to the terminals “CH2” (☞ chapter 6.3).
 - Connect the 100 V speakers for Zone 2 to the terminal of “CH3” and the terminal of “CH4” in parallel (☞ chapter 6.3). Make sure that the total load of the speakers will not exceed the output power of 250 W.
 - Connect the CD player to the RCA connectors ANALOG INPUTS (7) “CH1” (left channel) and “CH2” (right channel). (☞ chapter 6.1).
 - Connect microphone 1 at ANALOG INPUTS (8) to the terminals “CH3” and microphone 2 to the terminals “CH4” (☞ chapter 6.1).
 - Connect the potentiometer for volume control to contacts 3, 4 and 8 of the terminals GPIO (3) (☞ chapter 6.6.1) and, for the time being, set it to minimum.
 8. Reconnect the amplifier to the power supply and call up the user interface.

For Zone 1, set the volume for “CD” and “Microphone 1” in the view “Input ⇒ Mix” under “Mix 1/ANALOG” (☞ chapter 7.4.3).

Set the total volume of the zone via the control for “Zone A” in the view “Dashboard” (☞ chapter 7.2).
 9. The volume for Zone 2 can only be set via the potentiometer. Additional adjustments can be made if required:–

Input sensitivities (☞ chapter 7.4.1)

 - Sound of the input signals (☞ chapter 7.4.1)
 - Dynamic compression for the zones (☞ chapter 7.5.4)
 - Threshold and volume for the priority signal of microphone 2 (☞ chapter 7.5.1)
 - Limitation of the setting range for the zone volume (☞ chapter 7.5.2)

- Adaptation to the room acoustics (☞ chapter 7.6.3)
- Optimisation of the speaker sound (☞ chapter 7.6.4.2 and chapter 7.6.4.3)
- Level limiting to protect the speakers (☞ chapter 7.6.4.6)
- Signal delay (☞ chapter 7.6.2)
- The names of the zones, outputs and “Mix 1” can be changed if required (☞ chapter 7.3).

Specifications

- Amplifier class: D
- Output power
- LoZ mode ($4\ \Omega/8\ \Omega$): $4 \times 125\ \text{W}$
- HiZ mode¹ ($70\ \text{V}/100\ \text{V}$): $2 \times 250\ \text{W}$
- Frequency range: 20 – 20 000 Hz
- Analog inputs
- Connection: plug-in screw terminals (balanced) or RCA (unbalanced)
- Sensitivity, adjustable: MIC / –10 dBV / +4 dBu / +14 dBu
- max. input level: 12.3 V (+24 dBu)
- Digital input:
- Signal format: S / PDIF
- Channels: 2
- Connection: RCA
- Digital output:
- Signalformat: S / PDIF
- Channels: 2
- Connection: RCA
- S/ N ratio: > 106 dB (A-weighted)
- THD: < 0.05 %
- Wi-Fi
- Frequency range: 2.412 – 2.484 GHz
- max. transmission power: 19.5 dBm
- Power supply: ~ 100 – 240 V/ 50 – 60 Hz
- Power consumption
- Operation (at 1/8 output power): 150 W
- Standby (depending on settings): < 0.5 W
- Dimensions (W × H × D): 220 × 44.5 × 320 mm
- Weight: 1.95 kg

¹ **Note:** During 100 V operation, the amplifier output will only reach approximately 90 V, resulting in a power loss of $\approx -1\text{dB}$ compared to the power rating of 100 V speakers.

Documents / Resources

	<p>MONACOR PA-4125DX 4 Zone Matrix Mixing Amplifier [pdf] Instruction Manual PA-4125DX 4 Zone Matrix Mixing Amplifier, PA-4125DX, 4 Zone Matrix Mixing Amplifier, Matrix Mixing Amplifier, Mixing Amplifier, Amplifier</p>
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References

- [User Manual](#)

[Manuals+.](#) [Privacy Policy](#)

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