PA-S 250 DSC / PA-S 250 DSC DANTE
Compact 2-Channel Amplifier with DSP

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Description

The PA-S 250 DSC is a sophisticated 2-Channel amplifier with integrated DSP matrix, analog inputs and an optical SPDIF input. The model PA-S 250 DSC DANTE is equipped with a 2-channel DANTE interface instead of the SPDIF input. The amplifiers are configurable with our browser-based LB AUDIO CONTROL app and are operated with network commands via media control systems. The DSP is implemented as a 4 x 2 mixer matrix and offers ten fully parametric filters, high-pass and low-pass filters, a delay of up to 400 ms, and compressors and limiters for each input and output channel.
The amplifiers are designed to ensure outstanding sound quality and operational reliability with minimal power consumption. The Auto On/Off function automatically switches the amplifier to energy-saving SLEEP mode if no input signal is detected. The PA-S 250 DSC has an output rating of 2 x 50 watts at 2 – 4 ohms or 2 x 30 watts at 8 ohms. It is equipped with both cinch inputs and symmetrical inputs.
The PA-S 250 DSC also has an optical SPDIF input with TOSLINK terminal, and the PA-S 250 DSC DANTE has a second network terminal for digital audio transmission via Ethernet. A ground lift switch and DIP switches for changing input sensitivity enable optimum adaption to different signal sources. The amplifiers feature an On/Off contact and VCA inputs for external volume control. This can be done via the WP-V and RP-V volume controllers, or via the DV module and Up/Down contacts.

Key Features

- Remote controllable 2-Channel amplifier with 4 x 2 DSP-Matrix
- Output power 2 × 50 watts at 2-4 ohms, 2 × 30 watts at 8 ohms
- Symmetrical inputs, Cinch inputs
- Optical SPDIF input (PA-S 250 DSC)
- DANTE interface (PA-S 250 DSC DANTE)
- VCA inputs per channel
- On/Off-contact
- Ext. ON/OFF contact
- Switchable input Sensitivity +4/-6 dBU per channel
- Ethernet interface
- Configuration with LB AUDIO CONTROL App
- Controllable via network commands
- Fanless
- Switchable Ground Lift
- Chassis ¼ 19“, 1 U

Optional:
- 100 V transformers
- Volume control (wall-panel WP-V or rack-panel RP-V)
- DV module for volume control via Up/Down contacts

Fields of Application

- Home audio
- Media rooms
- Conference rooms
- Shops, sales rooms
- Gastronomy
- Concert halls, theatres
- Churches

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Technical Data

Inputs analog / digital	
PA-S DSC	2 × Line In sym. + 2 × Line In Cinch, optical SPDIF input
PA-S DSC DANTE	2 × Line In sym. + 2 × Line In Cinch, 2 channel DANTE interface
Nom. input level	+4/-6 dBU, switchable
Max. input level	+ 10 dBU
Input impedance	20 kohms
Load impedance	≥ 2 ohms
Outputs	2 × Speaker Out up to 2 × 2,5 mm², (screwtype terminals, pluggable)
Output power	
2 ohms	2 × 50 watts
4 ohms	2 × 50 watts
8 ohms	2 × 30 watts
Frequency range	15 Hz – 22 kHz
THD	< 0,05 % (1 kHz, 3 dB below full power)
Dynamic range	> 100 dB
Display	LED for ON/STANDBY; LEDs per channel for PROTECT, LIMIT, SIGNAL, SLEEP
Controls	Power switch at front. At back DIP switches for AUTO ON/STEADY ON, GROUND LIFT and SENSITIVITY +4/-6 dBU per channel
DSP	24 Bit, 48 kHz
Latency	0,64 ms
Functions	4 × 2 mixer matrix, Lowpass, Highpass and 10 fully parametric filters per input/output: bell, high shelf, low shelf, high-pass, low-pass. Delay up to 400 ms, limiter and compressor per input/output, 40 presets
App	LB AUDIO CONTROL, Download Website: www.lb-lautsprecher.de/Download-Software
Remote Control	Via network commands
Interface	Ethernet, PA-S 250 DSC DANTE 2 x Ethernet
Additional connectors	VCA inputs 0-10 V for each channel (also for DV modules), ON/OFF contact N/C
Cooling	Fanless
Protective circuits	Peak limiter, current limiter and power limiter for each speaker output, short circuit and multilevel overtemperature protection
Power supply	90 up to 260 VAC
Main connector	IEC connector
Power consumption	PA-S 250 DSC / PA-S 250 DSC DANTE
Standby	< 0,5 watts
All channels SLEEP	5 watts / 6 watts
All channels active	6,7 watts / 7,7 watts
1/8 Nominal power	20 watts / 21 watts
Max. average consumption	44 watts / 45 watts
Peak power	127 watts / 128 watts

Dimensions (W × H × D)	¼ 19“, 1 U, 110 × 42 × 233 mm
Weight	1.2 kg
Warranty	5 years

Models	Order-No.	Version
PA-S 250 DSC	3005-0007	2-Channel amplifier with DSP and optical SPDIF input
PA-S 250 DSC DANTE	3005-0013	2-Channel amplifier with DSP and DANTE interface

Accessories	Order-No.	Version
MP-PA-S 	3005-0030	Mounting plate for PA-S Series
WP-V 	3401-0002	Wall Panel (Volume control and ON/MUTE)
RP-V 	3402-0002	Rack Panel (Volume control and ON/MUTE)
DV-Module 	3109-0006	Digital volume control (UP/DOWN contacts)
PA-T 2050 	3109-0001	100 V transformer module, 2 × 50 watts, toroidal core
PA-T 1 U 	3109-0005	Rack cradle 19“, 1 U for up to 4 x PA-S 250 DSC or PA-T 2050
RP-1 U 	3402-0016	19“ Rack mount, 1U, for 6 × RP panels

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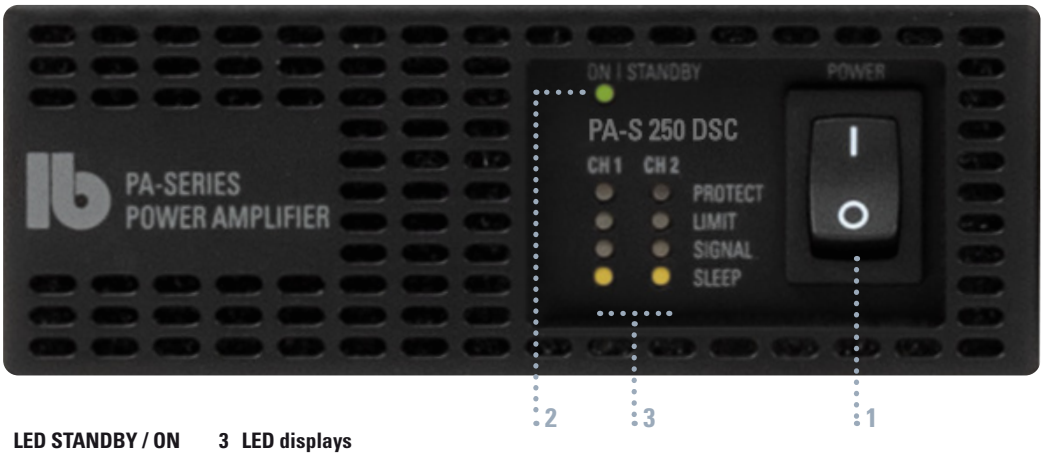
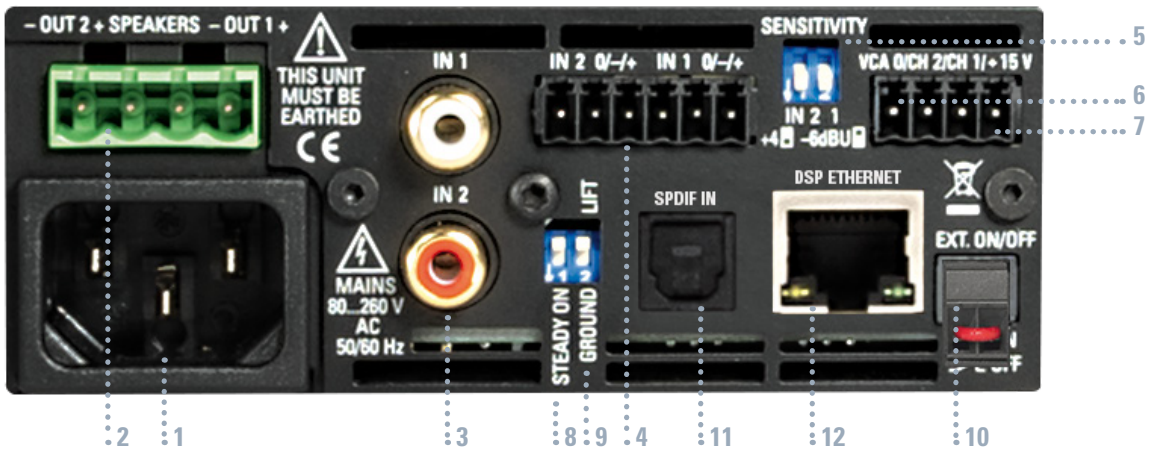


1 Power switch
The amplifier switches on with a delay of approx. 3 seconds.

2 LED STANDBY / ON
The LED lights up red in STANDBY and green when the amplifier is switched on.

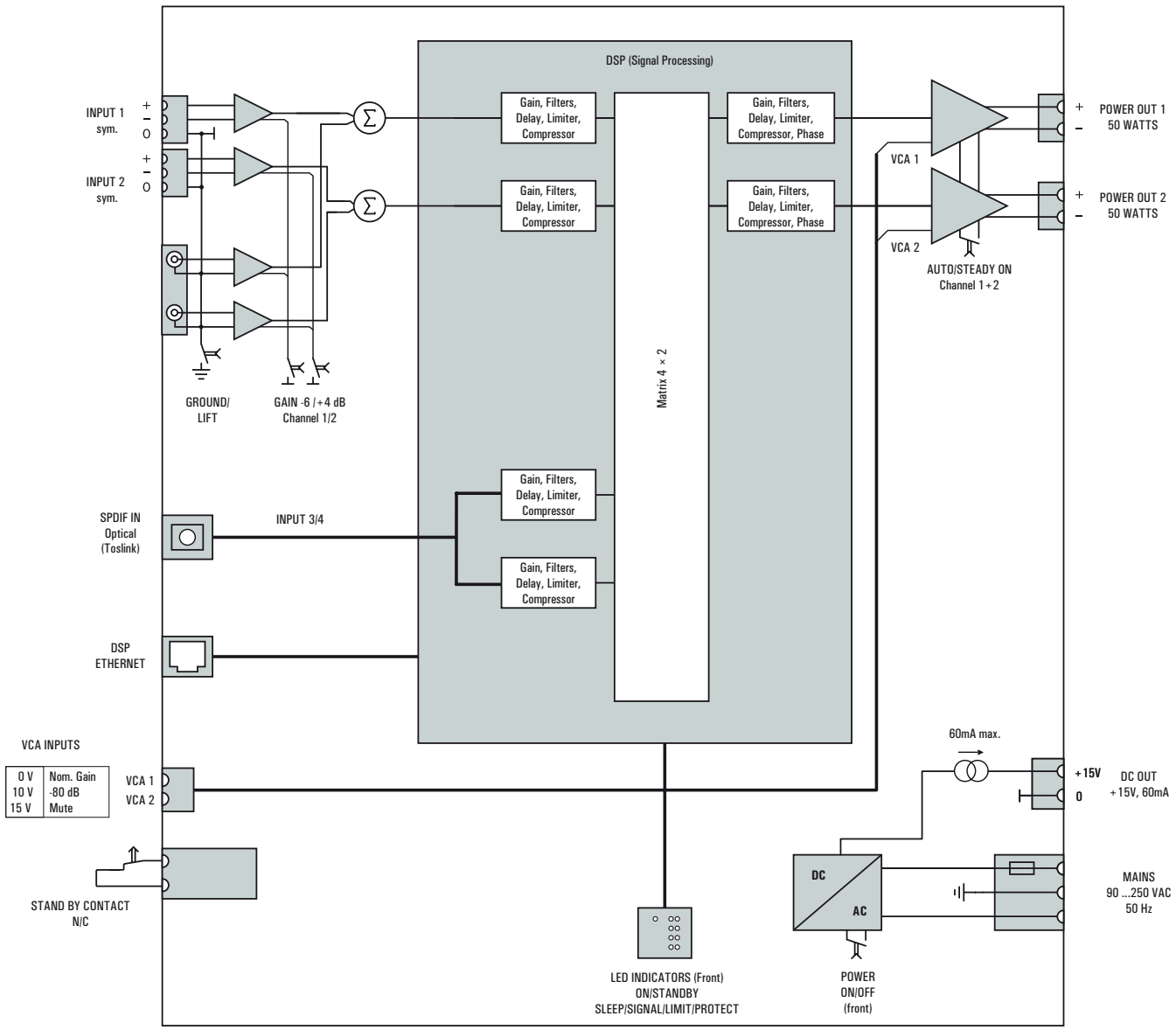
3 LED displays
SLEEP – the corresponding power amplifier channel is in power-saving mode and is automatically reactivated when there is a signal.
SIGNAL – there is a signal at the output of the corresponding power amplifier channel.
LIMIT – the corresponding output stage channel limits. (Peak Voltage, Peak Current, Peak Power or Average Power)
PROTECT – the corresponding output stage channel switches off: short circuit at the output, overtemperature or defect. A flashing LED indicates that the power of the channel is reduced due to excessive operating temperature.



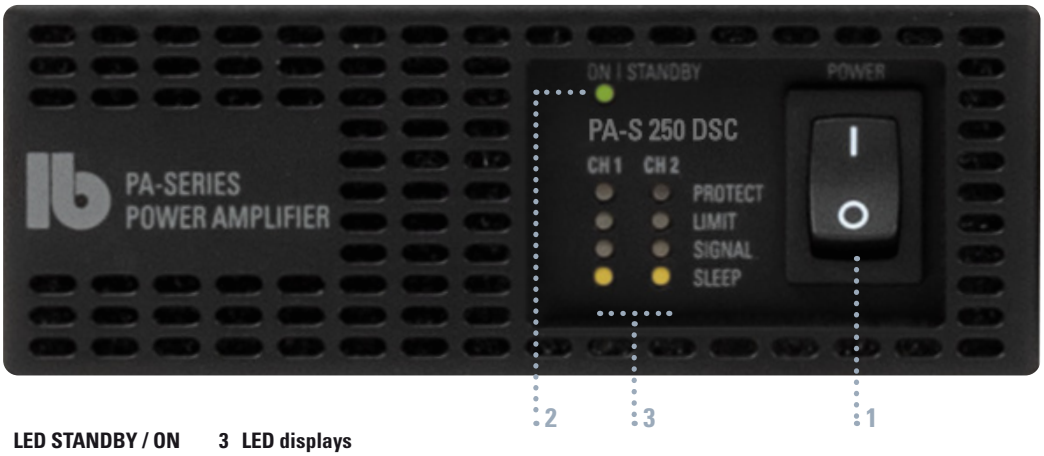
1 IEC Connector (Power cord is included)
2 Speaker outputs
Fix the speaker cables to the screw-type terminals. The speaker impedance should not fall below 2 ohms
3 Cinch Inputs
4 Symmetrical Inputs
5 SENSITIVITY – DIP switch +4/-6 dB per channel. In the lower switch position, the input sensitivity of the respective channel is switched from +4 dBU (pro level) to –6 dBU for home audio and PC applications
6 VCA-INPUTS – (Voltage Controlled Amplifier) Inputs for external volume control via our WP-V and RP-V control panels, with the DV-Module (digital volume control) plus up/down contacts or with 0 – 10 V dimmer actuators (0 V = nom. Gain, 10 V = -80 dB) At 15 V the respective power amplifier channel is set to SLEEP.
7 DC OUT 15 V
Power supply for our volume controls WP-V and RP-V or the DV module (60 mA max.)
8 AUTO ON/STEADY ON – DIP switch
In the upper position the channel pair operates in AUTO-ON/ OFF mode and switch into an idle state (SLEEP) automatically if the input signal is absent for over 10 min. This reduces power consumption significantly. In the lower position the channel pair is active permanently (STEADY ON).
9 GROUND LIFT-Switch
In the GROUND position (down) audio ground is directly connected to the mains ground. If the signal source is also grounded this may cause humming noise. In this case the Input connector can be separated from mains ground (LIFT position)
10 EXT. ON/OFF – N/C (short circuit plug).
The EXT. ON/OFF-contact must be closed to activate the amplifier. It may either be closed by a shorting bridge (delivery condition) or by an external potential-free switch or contact.
With this contact one or multiple amplifiers in parallel can be switched on and off via media control or voice alarm systems.
11 SPDIF IN
Optical input (input channel 3/4)
12 ETHERNET
RJ 45 port for configurating and controlling the amplifer.

PA-S 250 DSC
Compact 2-Channel Amplifier with DSP

Block Diagram



PA-S 250 DSC DANTE
Compact 2-Channel Amplifier with DSP and DANTE Interface



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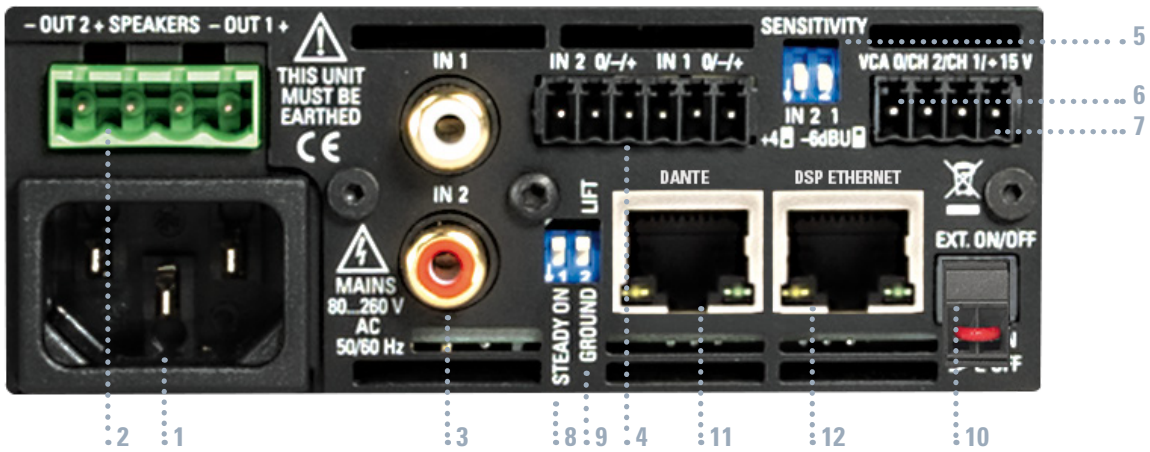

1 IEC Connector (Power cord is included)
2 Speaker outputs
Fix the speaker cables to the screw-type terminals. The speaker impedance should not fall below 2 ohms.
3 Cinch Inputs
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5 SENSITIVITY – DIP switch +4/-6 dB per channel.
In the lower switch position, the input sensitivity of the respective channel is switched from +4 dBU (pro level) to –6 dBU for home audio and PC applications.
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Power supply for our volume controls WP-V and RP-V or the DV module (60 mA max.)
8 AUTO ON/STEADY ON – DIP switch
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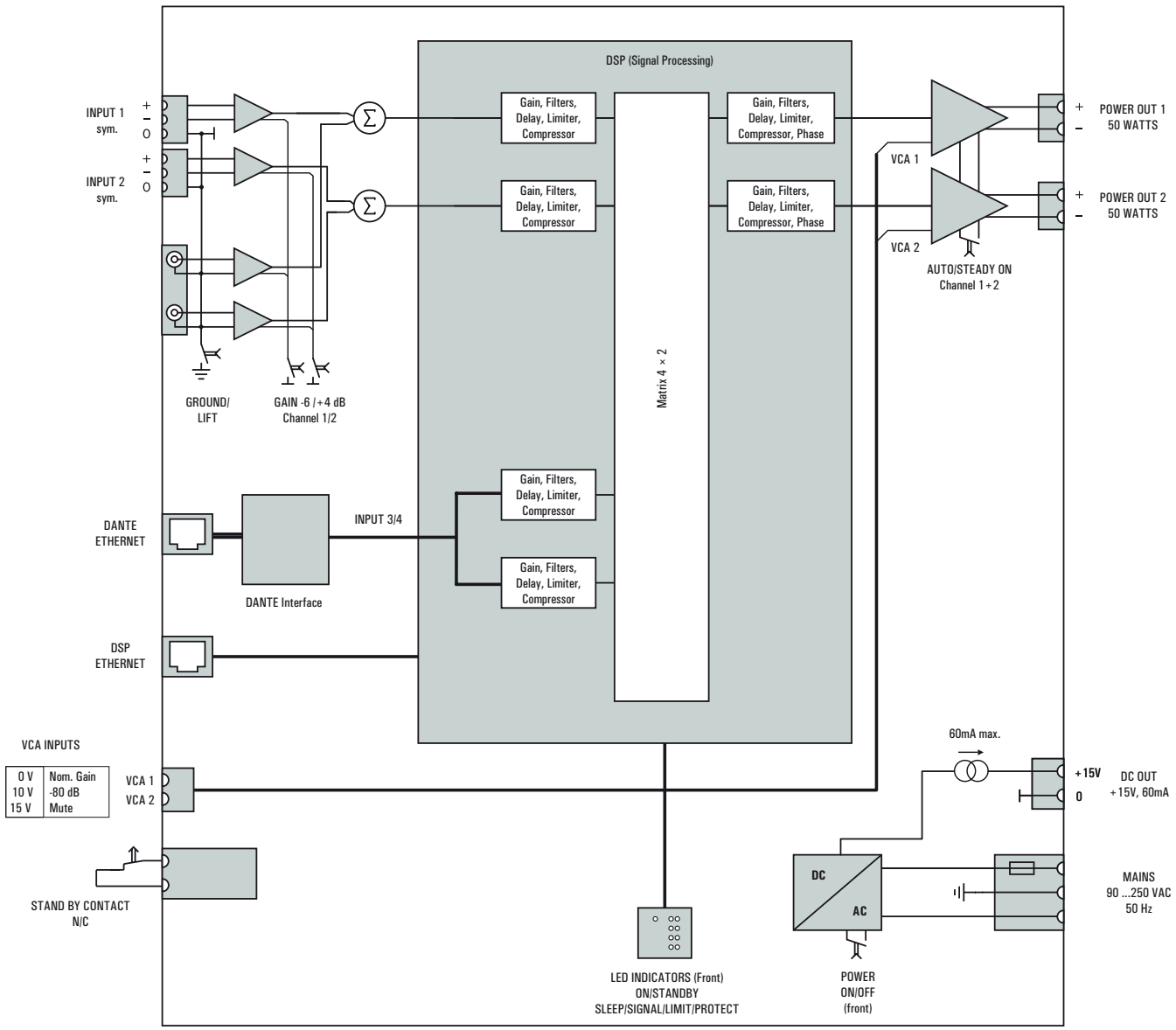
With this contact one or multiple amplifiers in parallel can be switched on and off via media control or voice alarm systems.
11 DANTE IN
DANTE-Interface for Audio over Ethernet (input channel 3/4)
12 ETHERNET
RJ 45 port for configurating and controlling the amplifer.

PA-S 250 DSC DANTE
Compact 2-Channel Amplifier with DSP and DANTE Interface

Block Diagram



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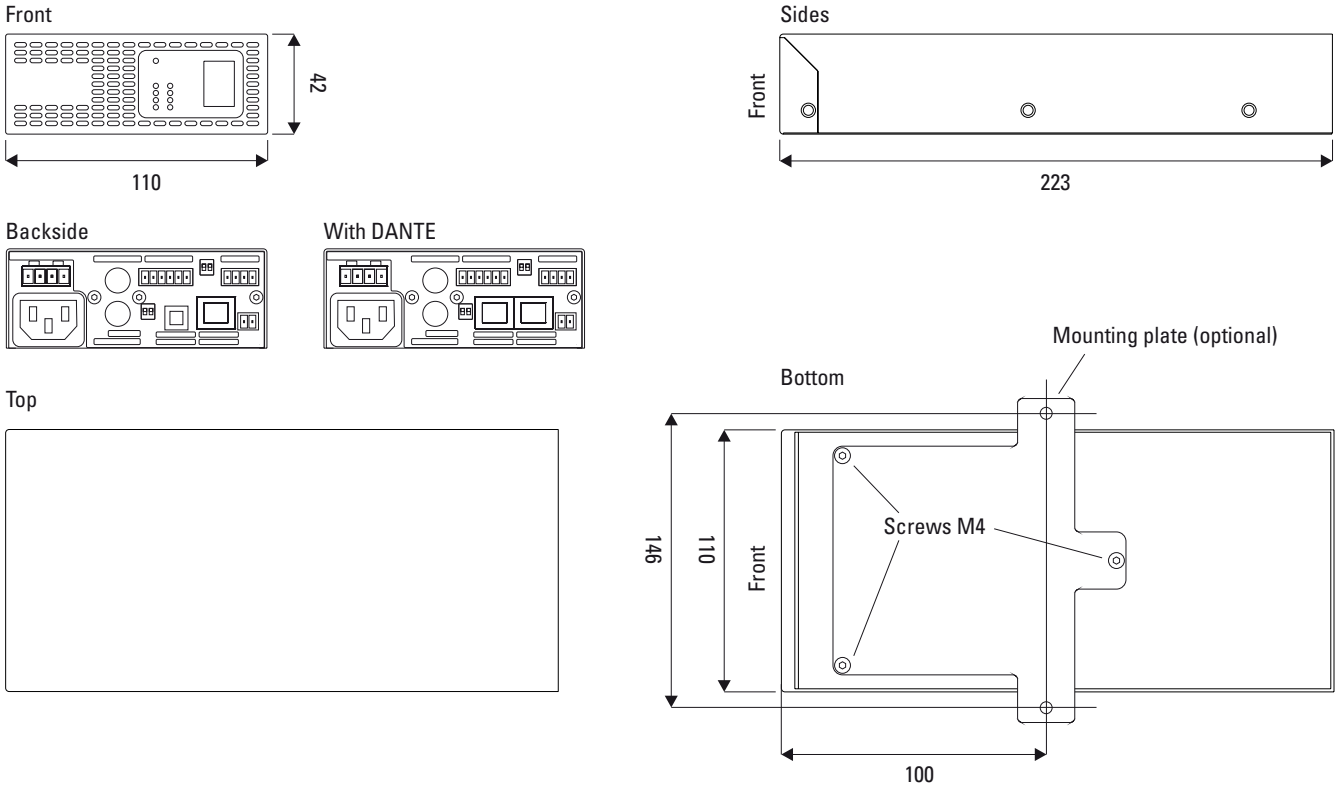
Dimensions



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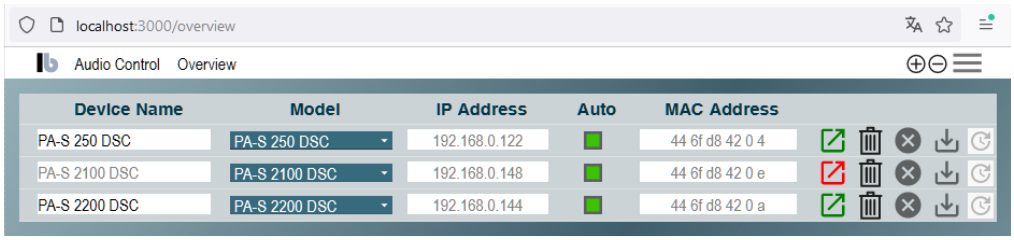
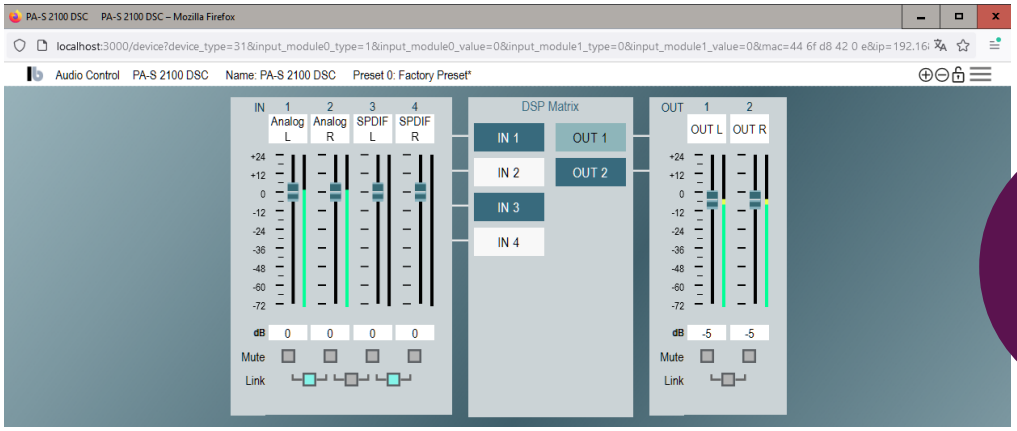
LB AUDIO CONTROL Software





LB AUDIO CONTROL
Browser-based Software for our new DSPs

Browser-based app for configuring and controlling our amplifiers and active speakers with digital signal processors (DSPs). One or more devices can be connected via Ethernet and configured using the **LB AUDIO CONTROL app**.

With network commands, all devices can be controlled via e.g. media controls.

The app provides the appropriate user interface for the different device types. In addition to a mixer matrix, amplifiers have ten fully parametric filters, high-pass and low-pass filters, delays, compressors and limiters available for each input and output. The radiation characteristics (Beam Steering) from some active speakers can also be adjusted.

We are happy to create project-related presets upon request.

Download Website –
www.lb-lautsprecher.de/de/download-software