

PRS-xPxxx and LBB 4428/00 Power Amplifiers

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Invented for life



- ▶ 1, 2, 4, or 8 audio outputs (selection from 100 / 70 / 50 V outputs)
- ▶ Audio processing and delay for each amplifier channel
- ▶ Amplifier supervision and spare amplifier switching
- ▶ Loudspeaker line and loudspeaker supervision (LBB 4428/00 only line supervision)
- ▶ Eight control inputs and 1, 2, 4 or 8 control outputs

There are four types of Power Amplifier units in the Praesideo product range. These differ in the number of amplifier channels per frame: one, two, four, or eight. The overall power rating is 500 watts for all of the amplifiers.

The Power Amplifiers can be set to 100 V, 70 V and 50 V output tapplings. They have short-to-ground and short-circuit detection functions, and can generate their own pilot tone for supervision purposes.

Functions

The Power Amplifiers receive input signals over the network. They also have two auxiliary audio inputs (four for LBB 4428/00) for local audio. Their eight control inputs are freely programmable for system actions, and priorities can be assigned to these inputs. Each control input has the ability to monitor the attached line for open and short-circuits. Control outputs are freely programmable for faults and call related actions.

The 2 x 16-character display and the rotary control enable local status enquiries. The display shows the VU-meter reading, when the audio monitoring mode is active. Audio can be monitored by headphone.

The units are self-monitoring and continually report their status to the network controller. They support both single branch and redundant loop cabling. The amplifiers have a changeover facility for spare power amplifier switching. Changeover relays are included with the units. The amplifiers have a 48 V DC back-up supply input.

The digital audio processing can handle three parametric equalization sections and two shelving equalization sections per channel with configurable audio delay.

Controls and indicators

- 2 x 16-character LCD for status display
- Rotary/push control button
- Mains switch
- Voltage selector for PRS-xPxxx

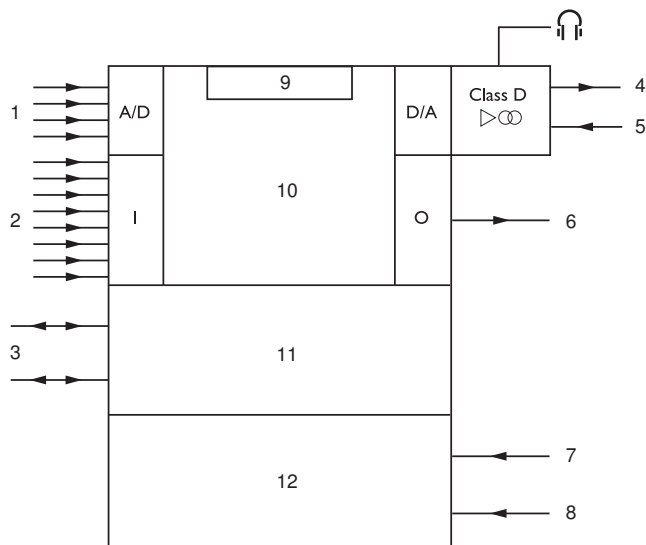
Interconnections

- Mains input
- Battery backup input
- Two system network connections
- Two mic/line inputs (four for LBB 4428/00)
- Selectable 100 V, 70 V or 50 V outputs (per channel)
- Fixed 50 V output
- Eight programmable control inputs
- Control output (for each amplifier channel)
- Headphone output
- Spare amplifier connection (for each amplifier channel)

Certifications and approvals

Safety	acc. to IEC 60065 / EN 60065
Immunity	acc. to EN 55103-2 / EN 50130-4 / EN 50121-4
Emissions	acc. to EN 55103-1 / FCC-47 part 15B
Emergency	acc. to EN 60849 / EN 54-16 / ISO 7240-16
Maritime	acc. to IEC 60945

Region	Certification
Europe	CPD

Installation/configuration notes

- 1 Audio inputs, 2 x or 4 x
- 2 Control inputs
- 3 Plastic optical fiber network
- 4 Loudspeaker outputs, 1 x, 2 x, 4 x, 8 x
- 5 Spare amplifier input
- 6 Control outputs, 1 x, 2 x, 4 x, 8 x
- 7 Mains input

- 8 48 V backup supply
- 9 Display and control
- 10 Network processor and DSP
- 11 Network redundancy switching
- 12 Power supply

Block diagram**Parts included**

Quantity	Component
1	PRS-xPxxx or LBB 4428/00 Power Amplifier
1	Power cord
1	Set of mounting brackets (large) for 19" rack
1	Set of feet
1	Set of connectors

Technical specifications**Electrical**

Mains power supply	
Voltage	
PRS-xPxxx	115 / 230 VAC $\pm 10\%$, 50/60 Hz
LBB 4428/00	100 to 240 VAC $\pm 10\%$, 50/60 Hz
Power consumption	Pmax -3 dB* / idle** / standby
PRS-1P500	353 / 39 / 15 W
PRS-2P250	354 / 43 / 16 W
PRS-4P125	350 / 54 / 20 W
LBB 4428/00	433 / 90 / 32 W
	* Alarm tone level
	** With pilot tone 15 V
Battery power supply	
Voltage	48 VDC -10% to +20%
Power consumption	Pmax -3 dB* / idle** / standby
PRS-1P500	327 / 29 / 5 W
PRS-2P250	327 / 30 / 5 W
PRS-4P125	332 / 39 / 10 W
LBB 4428/00	397 / 63 / 22 W
	* Alarm tone level
	** With pilot tone 15 V
Mic/line inputs	
Connector	2 x (4 x for LBB 4428/00)
	6-pole header for removable screw connector (mono, balanced)

Line	
Frequency response	-3 dB @ 50 Hz and 20 kHz (± 1 dB)
S/N	>87 dBA
CMRR	>40 dB @ 1 kHz
Input range	-6 dBV to 6 dBV
Input impedance	22 kohm
Mic	
Frequency response	-3 dB @ 100 Hz and 16 kHz
Nominal input level	-57 dBV
S/N	>62 dBA with 25 dB headroom
CMRR	40 dB at 1 kHz
Input impedance	1360 ohm
Phantom supply	12 V ± 1 V @ 15 mA
Input range	-7 dBV to +8 dBV ref nominal input value
Control inputs	8 x
Connectors	Removable screw terminals
Operation	Closing contact (with supervision)
Control outputs	1 x per amplifier channel
Connectors	Removable screw terminals
Performance	
Frequency response	
PRS-xPxxx	60 Hz to 19 kHz (-3 dB)
LBB 4428/00	80 Hz to 19 kHz (-3 dB)
S/N	>85 dB (no pilot tone)
Crosstalk	<80 dB at nominal load for 1 kHz
Distortion	<0.3% (@ 1 kHz) @ 50% of rated output power
Loudspeaker outputs	PRS-1P500
Rated load resistance	20 ohm (100 V); 10 ohm (70 V) 5 ohm (50 V)
Rated load capacitance	250 nF (100 V); 500 nF (70 V) 1000 nF (50 V)
Rated output power (per channel)	500 W (1 min. at 55 °C) 250 W (30 min. at 55 °C, cont. at 30 °C) 125 W (cont. at 55 °C)
Connector	9-pole header for removable screw connector

Loudspeaker outputs	PRS-2P250
Rated load resistance	40 ohm (100 V); 20 ohm (70 V) 10 ohm (50 V)
Rated load capacitance	125 nF (100 V); 250 nF (70 V)) 500 nF (50 V)
Rated output power (per channel)	250 W (1 min. at 55 °C) 125 W (30 min. at 55 °C, cont. at 30 °C) 60 W (cont. at 55 °C)
Connector	9-pole header for removable screw connector
Loudspeaker outputs	PRS-4P125
Rated load resistance	80 ohm (100 V); 40 ohm (70 V) 20 ohm (50 V)
Rated load capacitance	62 nF (100 V); 125 nF (70 V)) 250 nF (50 V)
Rated output power (per channel)	125 W (1 min. at 55 °C) 60 W (30 min. at 55 °C, cont. at 30 °C) 30 W (cont. at 55 °C)
Connector	9-pole header for removable screw connector
Loudspeaker outputs	LBB 4428/00
Rated load resistance	166 ohm (100 V); 83 ohm (70 V) 42 ohm (50 V)
Rated load capacitance	30 nF (100 V); 60 nF (70 V)) 120 nF (50 V)
Rated output power (per channel)	60 W (1 min. at 55 °C) 30 W (30 min. at 55 °C, cont. at 30 °C) 15 W (cont. at 55 °C)
Connector	9-pole header for removable screw connector

Mechanical

Dimensions (H x W x D)	
for tabletop use, with feet	92 x 440 x 400 mm (3.6 x 17.3 x 15.7 in)
for 19" rack use, with brackets	88 x 483 x 400 mm (3.5 x 19 x 15.7 in)
in front of brackets	40 mm (1.6 in)
behind brackets	360 mm (14.2 in)
Weight	
PRS-1P500	12.6 kg (27.78 lb)
PRS-2P250	13.6 kg (29.98 lb)

PRS-4P125	16.1 kg (35.49 lb)
LBB 4428/00	14.5 kg (31.97 lb)
Mounting	Standalone; 19"-rack
Color	Charcoal with silver

Environmental

Operating temperature	-5 °C to +55 °C (+23 °F to +131 °F)
Storage temperature	-20 °C to +70 °C (-4 °F to +158 °F)
Relative humidity	15% to 90%
Air pressure	600 to 1100 h Pa

Ordering information**PRS-1P500 Power Amplifier 1 x 500 W**

1 x 500 W

Order number **PRS-1P500****PRS-2P250 Power Amplifier 2 x 250 W**

2 x 250 W

Order number **PRS-2P250****PRS-4P125 Power Amplifier 4 x 125 W**

4 x 125 W

Order number **PRS-4P125****LBB 4428/00 Power Amplifier 8 x 60 W**

8 x 60 W

Order number **LBB4428/00****PRS-1P500-US Power Amplifier 1 x 500 W**

US version, 1x 500 Watt

Order number **PRS-1P500-US****PRS-2P250-US Power Amplifier 2 x 250 W**

US version, 2 x 250 Watt

Order number **PRS-2P250-US****PRS-4P125-US Power Amplifier 4 x 125 W**

US version, 4 x 125 Watt

Order number **PRS-4P125-US****LBB 4428/00-US Power Amplifier 8 x 60 W**

US version, 8 x 60 Watt

Order number **LBB4428/00-US****PRS-1P500-CN Power Amplifier 1 X 500 W**

China version, 1 x 500 Watt

Order number **PRS-1P500-CN****PRS-2P250-CN Power Amplifier 2 x 250 W**

China version, 2 x 250 Watt

Order number **PRS-2P250-CN****PRS-4P125-CN Power Amplifier 4 x 125 W**

China version, 4 x 125 Watt

Order number **PRS-4P125-CN****LBB 4428/00-CN Power Amplifier 8 x 60 W**

China version, 8 x 60 W

Order number **LBB4428/00-CN****Accessories****LBB 4440/00 Supervision Control Board**

for use in the power amplifier on each amplifier channel

Order number **LBB4440/00****LBB 4441/00 Loudspeaker Supervision Board**

monitors the integrity of a loudspeaker

Order number **LBB4441/00****LBB 4442/00 Line Supervision Set**

contains the master and slave device for supervision of a single loudspeaker line

Order number **LBB4442/00****LBB 4443/00 End of Line (EOL) Supervision Board**

monitors the integrity of a loudspeaker line

Order number **LBB4443/00****LBB 4440/00-CN Supervision Control Board**

China version, for use in the power amplifier on each amplifier channel

Order number **LBB4440/00-CN****LBB 4441/00-CN Loudspeaker Supervision Board**

China version, monitors the integrity of a loudspeaker

Order number **LBB4441/00-CN****LBB 4442/00-CN Line Supervision Set**

China version, contains the master and slave device for supervision of a single loudspeaker line

Order number **LBB4442/00-CN****LBB 4443/00-CN End of Line (EOL) Supervision Board**

China version, monitors the integrity of a loudspeaker line

Order number **LBB4443/00-CN**

Represented by:

Americas:

Bosch Security Systems, Inc.
12000 Portland Avenue South
Burnsville MN 55337, USA
Phone: +1-800-392-3497
Fax: +1-800-955-6831
audiosupport@us.bosch.com
www.boschsecurity.com

Europe, Middle East, Africa:

Bosch Security Systems B.V.
P.O. Box 80002
5617 BA Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:

Robert Bosch (SEA) Pte Ltd, Security
Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2808
Fax: +65 6571 2699
apr.securitysystems@bosch.com
www.boschsecurity.asia

China:

Bosch (Shanghai) Security Systems Ltd.
201 Building, No. 333 Fuquan Road
North IBP
Changning District, Shanghai
200335 China
Phone +86 21 22181111
Fax: +86 21 22182398
www.boschsecurity.com.cn

America Latina:

Robert Bosch Ltda Security Systems Division
Via Anhanguera, Km 98
CEP 13065-900
Campinas, Sao Paulo, Brazil
Phone: +55 19 2103 2860
Fax: +55 19 2103 2862
al.securitysystems@bosch.com
www.boschsecurity.com