

PRS-xBxxx Basic Amplifiers

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Invented for life



- ▶ High efficiency class-D amplifier channel(s)
- ▶ Switched mode power supply
- ▶ Local audio inputs
- ▶ Mains and battery operation
- ▶ Complete supervision

The basic amplifiers are cost effective alternatives to the regular Praesideo power amplifiers, for situations where no built-in digital signal processing functions, such as equalizers, delay and AVC are required. They do not have a Praesideo network connection. Instead, these amplifiers are connected to the Praesideo network via the PRS-16MCI Multi Channel Interface, which provides the basic amplifier with audio signals and has full control. There are four versions, the PRS-1B500 (1 x 500 W), PRS-2B250 (2 x 250 W), PRS-4B125 (4 x 125 W) and the PRS-8B060 (8 x 60 W).

The basic amplifiers are completely supervised and fault events are reported via the multi channel interface to the Praesideo network controller.

The basic amplifiers provide connections for separate group A and group B loudspeakers for each zone, and support class-A loudspeaker loop wiring. The units should be mounted in a 19"-rack with the included mounting brackets.



Notice

Region specific versions of these amplifiers are indicated by a suffix to the typenumber (-EU, -CN, ...). The amplifiers are completely identical, but may differ in certifications, power cord and country of origin.

Functions

Amplification

The PRS-1B500 is a single channel, 500 W unit, the PRS-2B250 is a two-channel amplifier with 250 W per channel, the PRS-4B125 is a four-channel amplifier with 125 W per channel and the PRS-8B060 is an eight-channel amplifier with 60 W per channel. The power supply is switched mode with low inrush current and the units can run on 48 V, battery stand-by power.

Connection

The amplifiers have built-in output transformers for driving 70 and 100 V loudspeakers. They have separate overload-protected group A and group B loudspeaker connections, which support class-A loop wiring. The separate A and B groups of each channel can be

configured for redundancy. The units connect to the PRS-16MCI Multi Channel Interface for audio, control and supervision, but stand-alone operation is possible.

Audio

The amplifiers have analog audio line inputs for low priority local audio. Networked audio from the multi channel interface overrides the local audio.

Security

The units operate both on mains power and on a 48 V battery power supply for emergency back up, with automatic switchover. They supervise both of the power supplies, as well as themselves. They can optionally monitor loudspeakers and their lines, when used together with the PRS-16MCI Multi Channel Interface. Complete channel separation allows one channel of the amplifier to function as a spare amplifier for the other amplifier channel.

The amplifier has overload and short circuit protection. An overheat protection circuit switches off the power stage and activates the fault LED on the front panel if the internal temperature reaches a critical limit.

Controls and indicators

Front

- Two two-color LEDs for mains and battery status
- Four amplifier status/level LEDs (per channel)

Back

- Mains on/off switch
- Mains voltage selector
- Rotary volume control for local audio inputs (per channel)

Inside

- 70 V / 100 V selection (per channel)

Interconnection

Back

- Mains socket
- Battery backup input
- Two loudspeaker output screw terminals (per channel)
- Spare amplifier input screw terminal (per channel)
- Two RJ45 connectors (per channel)
- Local audio input screw terminal (per 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 | CPR | EU_CPR |
| | CE | COC |
| | CE | DOP |
| | GL | |

Parts included

| Quantity | Component |
|--------------|---|
| 1 | PRS-1B500 Basic Amplifier 1x500 W or PRS-2B250 Basic Amplifier 2x250 W or PRS-4B125 Basic Amplifier 4x125 W or PRS-8B060 Basic Amplifier 8x60 W |
| 2/4/8/1 6 | CAT 5-cables (for PRS-1B500 / PRS-2B250 / PRS-4B125 / PRS-8B060) |
| 1 | Power cord |
| 1 | Set of mounting brackets (large) for 19" rack |
| 1 | Set connectors |

Technical specifications

Electrical

| Mains power supply | |
|----------------------|---|
| Voltage | 115/230 VAC ±10%, 50/60 Hz |
| Power consumption | Pmax -3 dB* / idle** / standby |
| PRS-1B500 | 450 / 52 / 17 W |
| PRS-2B250 | 378 / 46 / 18 W |
| PRS-4B125 | 395 / 62 / 16 W |
| PRS-8B060 | 400 / 80 / 16 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-1B500 | 365 / 34 / 6 W |
| PRS-2B250 | 370 / 38 / 6 W |
| PRS-4B125 | 375 / 48 / 9 W |
| PRS-8B060 | 385 / 62 / 10 W |
| | * Alarm tone level ** With pilot tone 15 V |
| Performance | |
| Frequency response | 60 Hz to 19 kHz (-3 dB) |

| | |
|----------------------------------|---|
| | 80 Hz to 19 kHz (-3 dB, PRS-8B060) |
| Total harmonic distortion | <0.3% (1kHz) at 50% of rated power |
| Cross talk | -70 dB (1 kHz) nominal (only multichannel) |
| Signal-to-noise ratio | >85 dB with pilot tone off |
| Line inputs | |
| Local audio input | 0 dBV (symmetrical) |
| Speaker outputs | |
| | PRS-1B500 |
| Rated load resistance | 20 ohm (100 V); 10 ohm (70 V) |
| Rated load capacitance | 250 nF (100 V); 500 nF (70 V) |
| Rated output power | 500 W (1 min. at 55 °C) 250 W (30 min. at 55 °C, cont. at 30 °C) 125 W (cont. at 55 °C) |
| Speaker outputs | |
| | PRS-2B250 |
| Rated load resistance | 40 ohm (100 V); 20 ohm (70 V) |
| Rated load capacitance | 125 nF (100 V); 250 nF (70 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) |
| Speaker outputs | |
| | PRS-4B125 |
| Rated load resistance | 80 ohm (100 V); 40 ohm (70 V) |
| Rated load capacitance | 60 nF (100 V); 125 nF (70 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) |
| Speaker outputs | |
| | PRS-8B060 |
| Rated load resistance | 160 ohm (100 V); 80 ohm (70 V) |
| Rated load capacitance | 30 nF (100 V); 60 nF (70 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) |
| Mechanical | |
| Dimensions (H x W x D) | |
| 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-1B500 | 12 kg (26.5 lb) |
| PRS-2B250 | 14 kg (30.9 lb) |
| PRS-4B125 | 15 kg (33.4 lb) |
| PRS-8B060 | 13.7 kg (30.5 lb) |
| Mounting | 19" rack |
| Color | Charcoal with silver |

Environmental

| | |
|-----------------------|--------------------------------------|
| Operating temperature | -5 °C to +55 °C (+23 °F to +131 °F) |
| Storage temperature | -40 °C to +70 °C (-40 °F to +158 °F) |
| Relative humidity | 15% to 90% |
| Air pressure | 600 to 1100 hPa |

Ordering information**PRS-1B500 Basic Amplifier 1 x 500 W**

1-channel basic power amplifier, 1 x 500 W, to be network connected to the PRS-16MCI, rack unit 2 RU. Order number **PRS-1B500**

PRS-2B250 Basic Amplifier 2 x 250 W

2-channel basic power amplifier, 2 x 250 W, to be network connected to the PRS-16MCI, rack unit 2 RU. Order number **PRS-2B250**

PRS-4B125 Basic Amplifier 4 x 125 W

4-channel basic power amplifier, 4 x 125 W, to be network connected to the PRS-16MCI, rack unit 2 RU. Order number **PRS-4B125**

PRS-8B060 Basic Amplifier 8 x 60 W

8-channel basic power amplifier, 8 x 60 W, to be network connected to the PRS-16MCI, rack unit 2 RU. Order number **PRS-8B060**

PRS-1B500-EU Basic Amplifier 1 x 500 W

1-channel basic power amplifier, 1 x 500 W, to be network connected to the PRS-16MCI, rack unit 2 RU. Order number **PRS-1B500-EU**

PRS-2B250-EU Basic Amplifier 2 x 250 W

2-channel basic power amplifier, 2 x 250 W, to be network connected to the PRS-16MCI, rack unit 2 RU. Order number **PRS-2B250-EU**

PRS-4B125-EU Basic Amplifier 4 x 125 W

4-channel basic power amplifier, 4 x 125 W, to be network connected to the PRS-16MCI, rack unit 2 RU. Order number **PRS-4B125-EU**

PRS-8B060-EU Basic Amplifier 8 x 60 W

8-channel basic power amplifier, 8 x 60 W, to be network connected to the PRS-16MCI, rack unit 2 RU. Order number **PRS-8B060-EU**

PRS-1B500-US Basic Amplifier 1 x 500 W

1-channel basic power amplifier, 1 x 500 W, to be network connected to the PRS-16MCI, rack unit 2 RU, USA version.

Order number **PRS-1B500-US**

PRS-2B250-US Basic Amplifier 2 x 250 W

2-channel basic power amplifier, 2 x 250 W, to be network connected to the PRS-16MCI, rack unit 2 RU, USA version.

Order number **PRS-2B250-US**

PRS-4B125-US Basic Amplifier 4 x 125 W

4-channel basic power amplifier, 4 x 125 W, to be network connected to the PRS-16MCI, rack unit 2 RU, USA version.

Order number **PRS-4B125-US**

PRS-8B060-US Basic Amplifier 8 x 60 W

8-channel basic power amplifier, 8 x 60 W, to be network connected to the PRS-16MCI, rack unit 2 RU, USA version.

Order number **PRS-8B060-US**

PRS-1B500-CN Basic Amplifier 1 x 500 W

1-channel basic power amplifier, 1 x 500 W, to be network connected to the PRS-16MCI, rack unit 2 RU, Chinese version.

Order number **PRS-1B500-CN**

PRS-2B250-CN Basic Amplifier 2 x 250 W

2-channel basic power amplifier, 2 x 250 W, to be network connected to the PRS-16MCI, rack unit 2 RU, Chinese version.

Order number **PRS-2B250-CN**

PRS-4B125-CN Basic Amplifier 4 x 125 W

4-channel basic power amplifier, 4 x 125 W, to be network connected to the PRS-16MCI, rack unit 2 RU, Chinese version.

Order number **PRS-4B125-CN**

PRS-8B060-CN Basic Amplifier 8 x 60 W

8-channel basic power amplifier, 8 x 60 W, to be network connected to the PRS-16MCI, rack unit 2 RU, Chinese version.

Order number **PRS-8B060-CN**

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