

Professional Fidelity

Mastering Grade Listening



Performer m1000 – User Manual

Mono Power Amplifier

This User Manual is optimized for Acrobat Reader.

Interactive buttons may not appear in other applications.

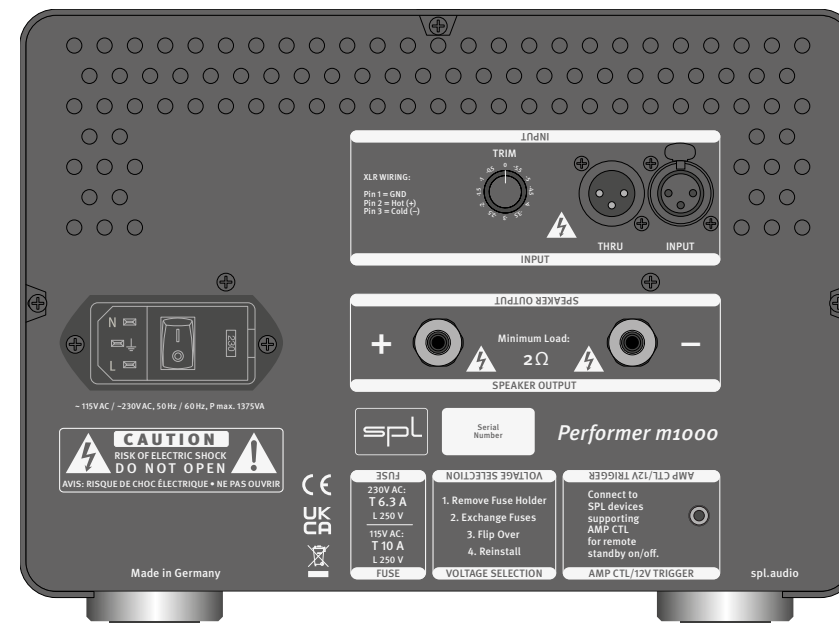


Welcome

and thank you for choosing the Performer m1000.

The Performer s1000 is the big brother of the highly acclaimed Performer s800 and delivers 1000W into 2 ohms, 750W into 4 ohms and 420 W into 8 ohms with ease.

VOLTAiR technology is what we also call the SPL 120V Rail Technology within the Professional Fidelity series. This makes the Performer m1000 an outstanding device in terms of dynamic range, signal-to-noise ratio and headroom delivering an exceptional sound experience with invincible serenity, transparency and realness.



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Getting started

Read thoroughly and follow the instructions as well as the security advices of the Quickstart which is enclosed in the scope of delivery! You can also download the Quickstart [here](#).

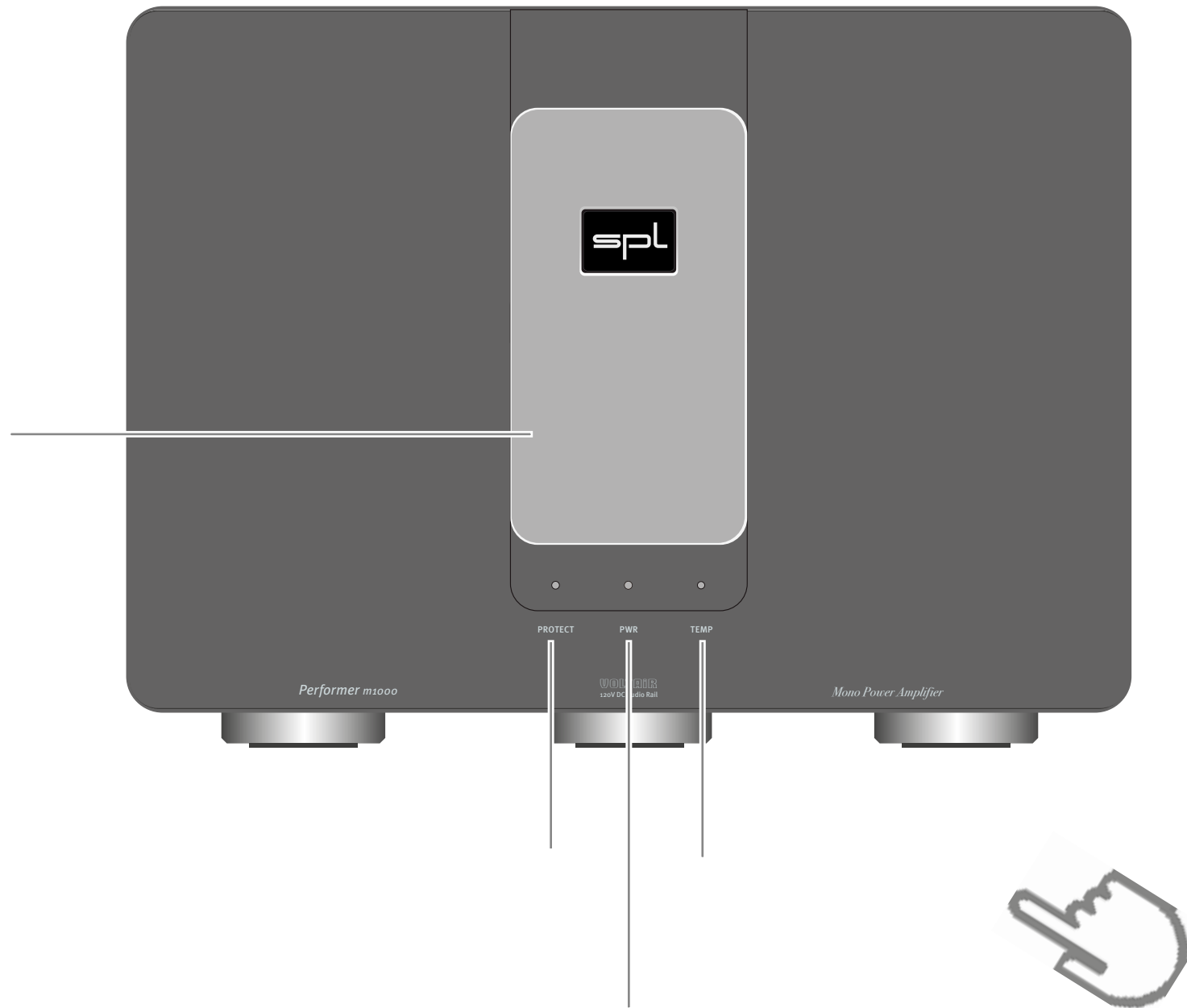
By pressing the -Button you get to the table of contents.

By pressing the -Button you get to the front view of the unit.

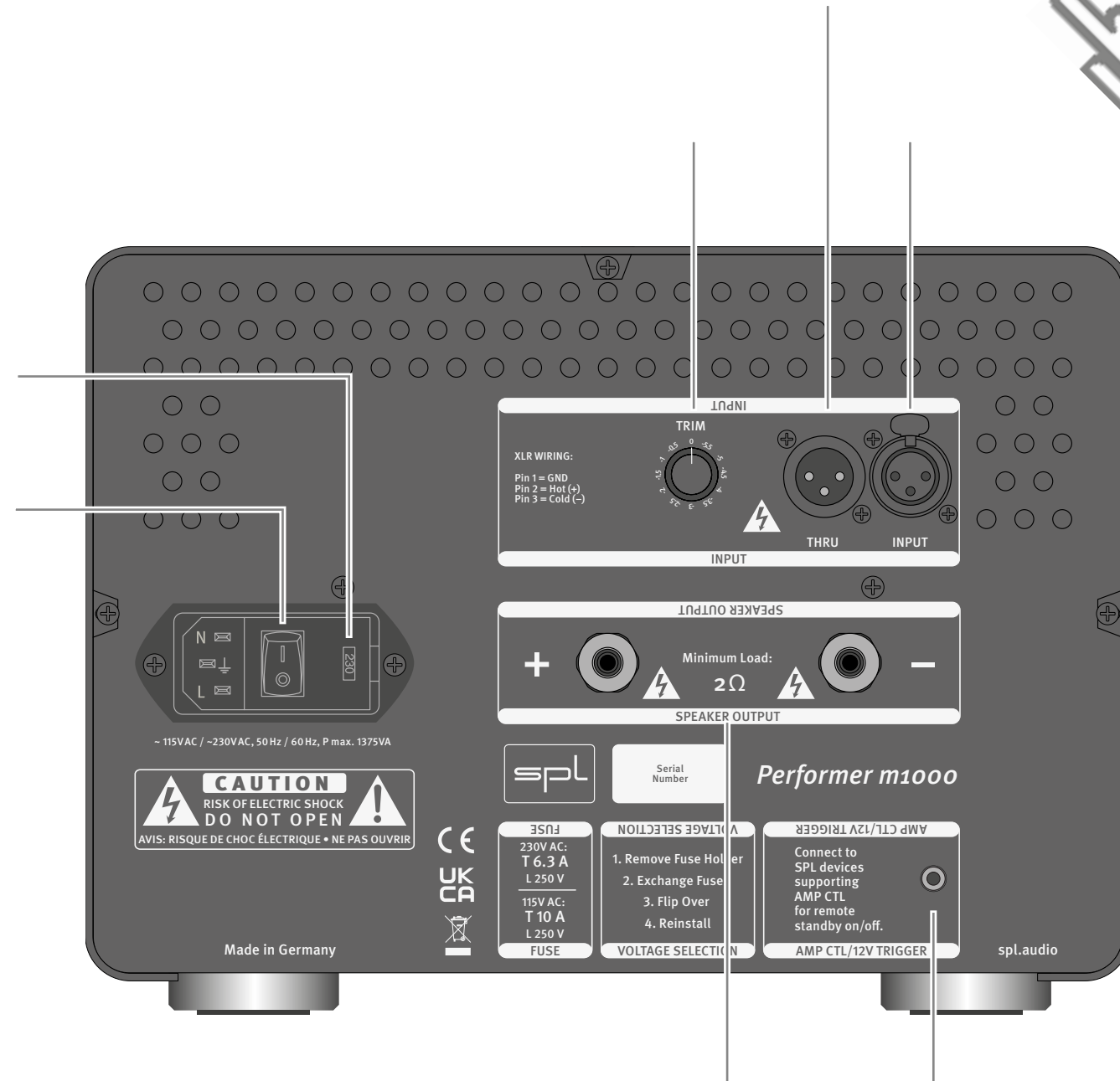
By pressing the -Button you get to the rear view of the unit.

By pressing the -Button you get to the previous content.

Front view



Rear view



VOLTAiR – 120V Rail Technology

VOLTAiR is the synonym for our 120V Rail Technology within the Professional Fidelity series. The audio signals are processed with an unequalled $\pm 60V$ DC, which corresponds to twice that of discrete operational amplifiers and four-times that of semiconductor operational amplifiers.

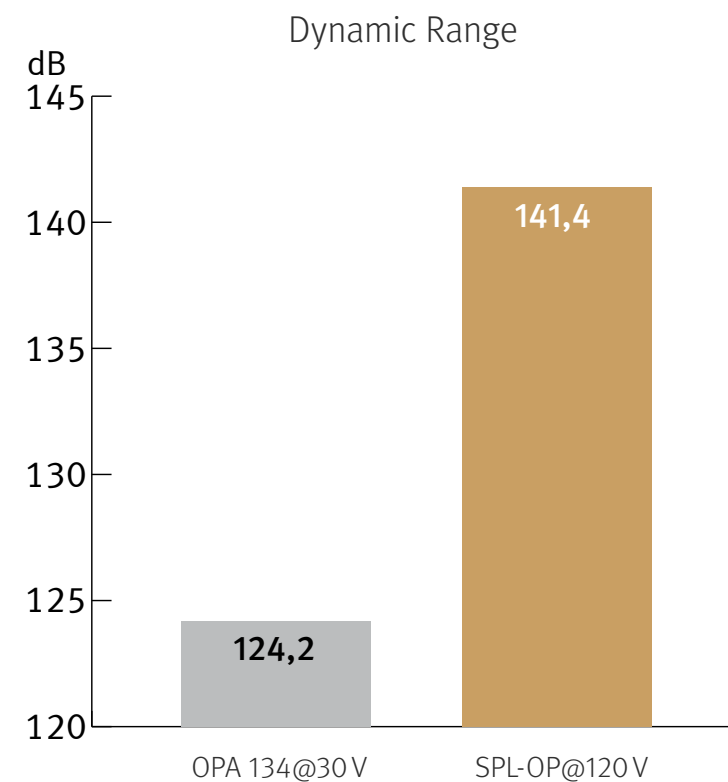
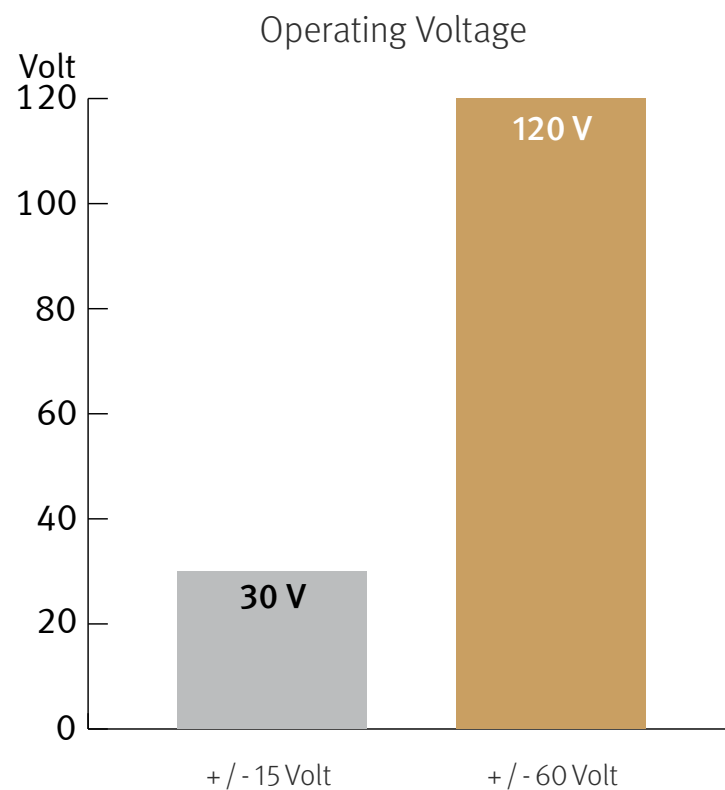
VOLTAiR Technology reaches outstanding technical and sonic performances. Technically especially in terms of dynamic range and headroom and sonically especially in reproducing the finest details and delivering a totally relaxed sounding audio experience. Music sounds absolutely natural.

SPL's 120V Rail Technology is the internal audio processing voltage ($\pm 60V$ DC).
It is not to be confused with the external mains voltage (e.g. 115V or 230V AC).

Comparisons

These diagrams show how our VOLTAiR Technology compares to other circuits.

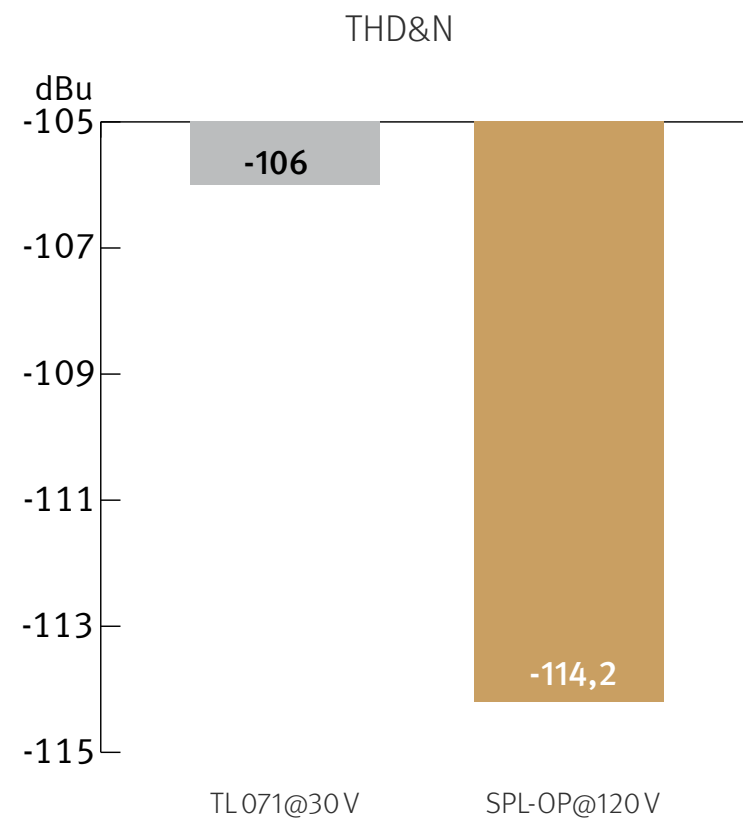
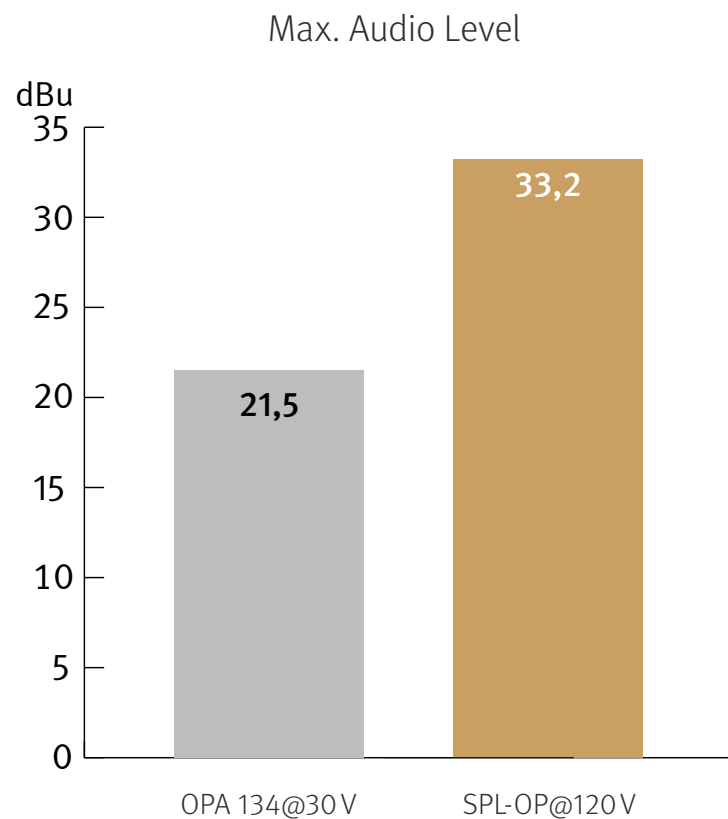
The direct relation between operating level and maximum level is fundamental for the classification: the higher the operating level, the higher the maximum level a circuit can handle. And since virtually all essential acoustic and musical parameters depend on this relation, a higher operating voltage also has a positive impact on the dynamic range, distortion limit and signal-to-noise ratio.



Do bear in mind that dB scales do not represent linear but rather exponential increases. A 3 dB increase corresponds to doubling the acoustic power, +6 dB correspond to twice the sound pressure level, and +10 dB correspond to twice the perceived loudness.

When it comes to volume, the VOLTAiR Technology exhibits a performance, in regard to maximum level and dynamic range, that is twice that of common components and circuits given that its values are approximately 10 dB higher.

THD measurements show a difference of more than 8 dB compared to the TL071 at 30 V — in terms of sound pressure level, that corresponds to an improvement of more than 130%. The operating level most commonly used for audio equipment is +/- 15 volts.



Ornamental inlays

The Performer m1000 comes with three ornamental inlays: in black, red and silver. They can be combined with the chosen color of the main front panel. A neodymium magnet holds the ornamental inlay in place. This allows easy exchange and gives you the unique opportunity to style your power amplifier.

Possible inlay combinations with the basic color red



Possible inlay combinations with the basic color silver



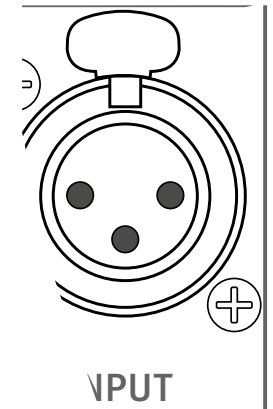
Possible inlay combinations with the basic color black



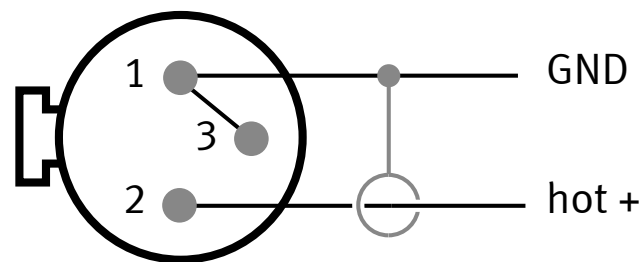
Input

The Performer m1000 is equipped with an [XLR input \(7\)](#) for balanced connection to a preamp. Full output power (1000W RMS into 2 ohms, 750W RMS into 4 ohms or 420W into 8 ohms) is performed at +6 dBu at the input.

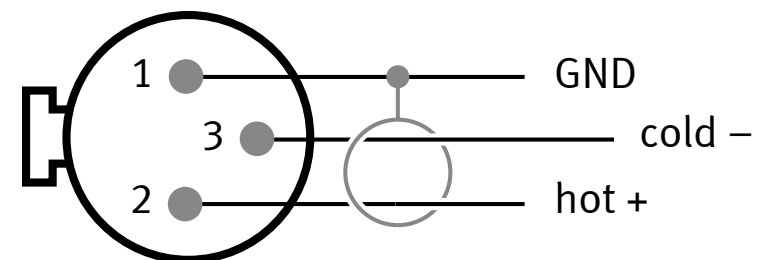
For unbalanced connection with e.g. RCA output connect Pin 3 to Ground in the external connector.



unbalanced

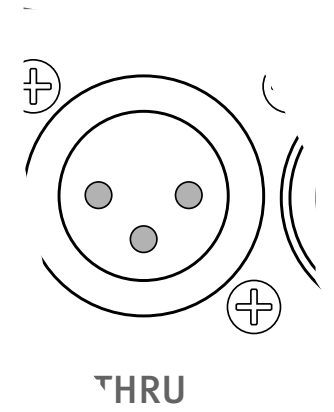


balanced



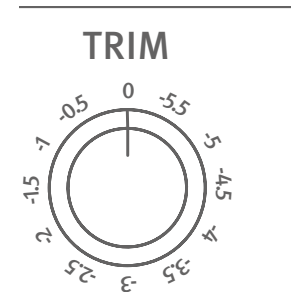
Slave Thru

The input is passively fed to the [Slave Thru \(8\)](#) output for bi-wiring applications.



Gain Trim

The input can be lowered with the [Gain TRIM switch \(9\)](#) from 0 dB to -5.5 dB in 0.5 dB steps. This is helpful if you want to use multi speaker sets or speakers in a bi-wiring application. It allows to level speakers with different efficiency to equal loudness.

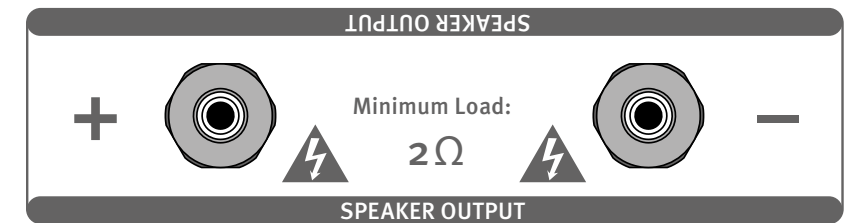


Speaker output

You can connect a 2, 4 or 8 ohms loudspeaker to the [speaker output \(11\)](#).

You can either use the $\varnothing 4$ mm cable hole (screwable) or the banana plugs of the gold-plated loudspeaker binding posts.

Make sure that you do not mix up the polarity of the speaker connections and that the power amplifier is switched off when you connect speaker cables.



Protection circuits

The Performer m1000 has protection circuits against DC (direct current) voltage at the output and against overheating.

DC Protection

If DC is detected at the output, the Performer m1000 automatically switches off. DC voltage can be an indication for a defective power stage. The [ProtectLED \(3\)](#) on the front indicates that the protection circuit is activated and the power stage has been switched off.

The Performer m1000 does not automatically switch on again. It needs to be switched off manually with the [mains switch \(6\)](#). Wait at least one minute before switching the Performer m1000 on again.

If the Performer m1000 repetitively switches off due to a DC detection please contact your dealer.

Overheating protection circuit

The Performer m1000 is actively cooled with six temperature controlled fans. The noise of the fans does not exceed 19 dB – therefore the fans are inaudible.

In the unlikely event of overheating the Performer m1000 will switch off at about 70° C at the heat sink and the [Temp LED \(2\)](#) on the front indicates the overheating.

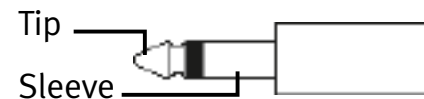
After the temperature has fallen below 55° C, the amplifier automatically switches on again.

AMP CTL (Standby / Amplifier Control)

If you own an SPL device supporting AMP CTL output(s) you can trigger standby and operation. Therefore connect the AMP CTL output of the SPL device with a mono mini jack cable to the [AMP CTL \(10\)](#) of the Performer m1000.

You may also use other 12V trigger controller. The Performer m1000 is in operation mode when a switching voltage of 12 Volt DC is applied to the AMP CTL input. As soon as the 12 Volt DC is removed, the Performer m1000 switches back to standby mode.

Use a mono mini jack cable where the tip is plus and the sleeve is minus.

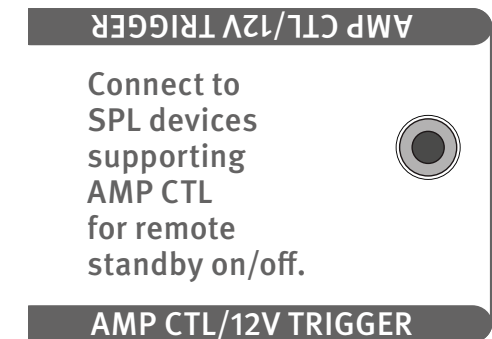


Power LED

In standby the Power LED is dimly lit.

If the Performer m1000 is in operation, the Power LED lights up brightly.

If the Performer m1000 is off, e.g. the mains switch is off, the Power LED is off.



Specifications

Line Input & Line Output

- Neutrik XLR, balanced, Pin 2 = (+)
- Input impedance: 10 kohms
- Input trimming: 0 dB to -5.5 dB in 0.5 dB steps
- Input sensitivity: +6 dBu
- Output impedance (Slave Thru) is defined by the connected device

Speaker output

- 1 pair gold-plated binding posts with $\varnothing 4$ mm cable hole (screwable) and banana plug; fully encapsulated

Output power (Sine at 1kHz)

- 1000W into 2 Ohm
- 750W into 4 Ohm
- 420W into 8 Ohm

Output voltage

- 180 V Peak-to-Peak
- 64,6 V RMS

Output impedance

- < 0.031 , 20 Hz to 20 kHz

Damping factor

- > 280 at 1 kHz and 8 ohms

Frequency response

- 10 Hz to 80 kHz

Signal-to-noise ratio

- > 118 dB (wide-band, unweighted, referred to full power output)
- > 123 dB (A-weighted)

Gain

- 26 dB

Total harmonic distortion

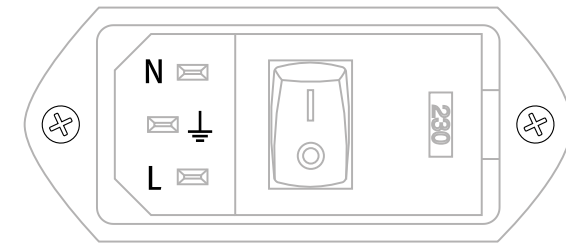
- < 0,03% at 1 kHz, at 420 W, 8 ohms
- < 0,05% at 1 kHz, at 750 W, 4 ohms
- < 0,08% at 1 kHz at 1000 W, 2 ohms

Internal Voltage

- +/- 60 V

Power supply

- Mains voltage: 230 V AC / 50 Hz; 115 V AC / 60 Hz
- Fuses: 230 V: T 6.3 A; 115 V: T 12 A
- Power consumption: max 1370 VA
- Idle power consumption: 50W
- Standby power consumption: 0.3 W



Dimensions (incl. feet)

- (WxHxD) 10.94 x 8.07 x 14.76 in (278 x 205 x 375 mm)

Weight

- 54.67 lbs (24.8 kg), unit only
- 64,60 lbs (29,3 kg), shipping

Important Notes


Version 1.1 – 06 /2022

Developer: Bastian Neu

This manual includes a description of the product but no guarantee as for specific characteristics or successful results. Unless stated otherwise, everything herein corresponds to the technical status at the time of delivery of the product by SPL electronics GmbH. The design and circuitry are under continuous development and improvement. Technical specifications are subject to change.

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Declaration of CE Conformity

 The construction of this unit is in compliance with the standards and regulations of the European Community.