Professional Fidelity

Mastering Grade Listening

This User Manual is optimized for Acrobat Reader.

Interactive buttons may not appear in other applications.

Get Adobe Acrobat Reader

Phonos – User manual

RIAA Phono Preamplifier

spl

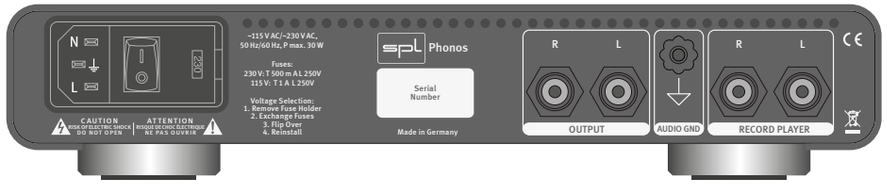
Welcome

and thank you for choosing the Phonos.

Phonos is a preamplifier for record players using either moving magnet (MM) or moving coil (MC) cartridges. The equalization curve is according to RIAA and suitable for all vinyl records since 1954.

With up to 71.5 dB gain for MC cartridges and 50 dB gain for MM cartridges Phonos belongs to the most powerful phono preamplifiers.

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



Content

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.

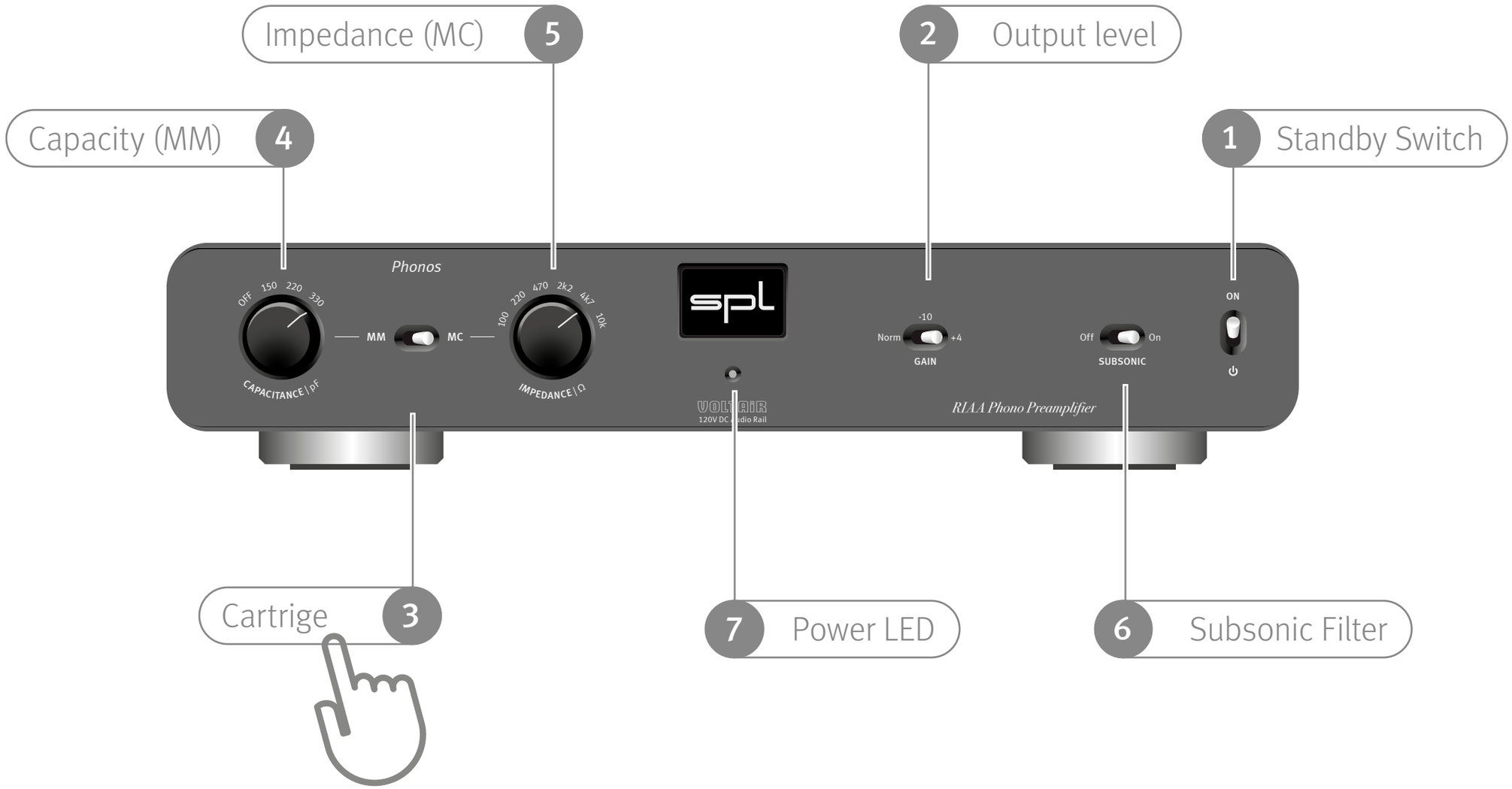
By pressing the I -Button you get to the table of contents.

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

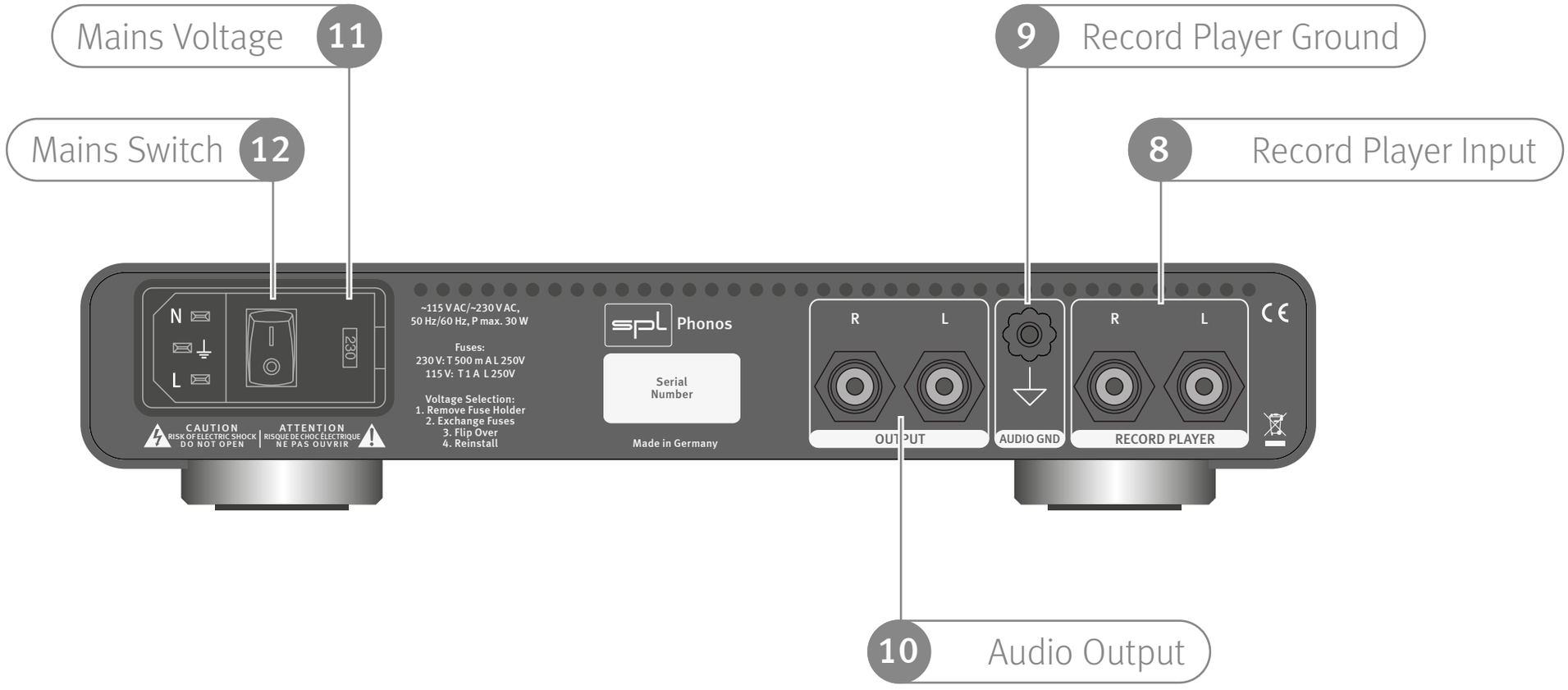
By pressing the R -Button you get to the rear view of the unit.

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

Front View


Impedance (MC) 5
2 Output level
Capacity (MM) 4
1 Standby Switch
Phonos
OFF 150 220 330
CAPACITANCE | pF
MM
MC
100 220 470 2k2 4k7 10k
IMPEDANCE | Ω
spl
-10
Norm +4
GAIN
Off On
SUBSONIC
ON
VOLTAIR
120V DC Audio Rail
RIAA Phono Preamplifier
Cartrige 3
7 Power LED
6 Subsonic Filter

Rear View


Mains Voltage 11
Mains Switch 12
9 Record Player Ground
8 Record Player Input
10 Audio Output
N
L
230
~115 V AC/~230 V AC,
50 Hz/60 Hz, P max. 30 W
Fuses:
230 V: T 500 m A L 250V
115 V: T 1 A L 250V
Voltage Selection:
1. Remove Fuse Holder
2. Exchange Fuses
3. Flip Over
4. Reinstall
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
ATTENTION
RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR
spl Phonos
Serial
Number
Made in Germany
R
L
OUTPUT
AUDIO GND
R
L
RECORD PLAYER

VOLTAiR – 120V Rail Technology

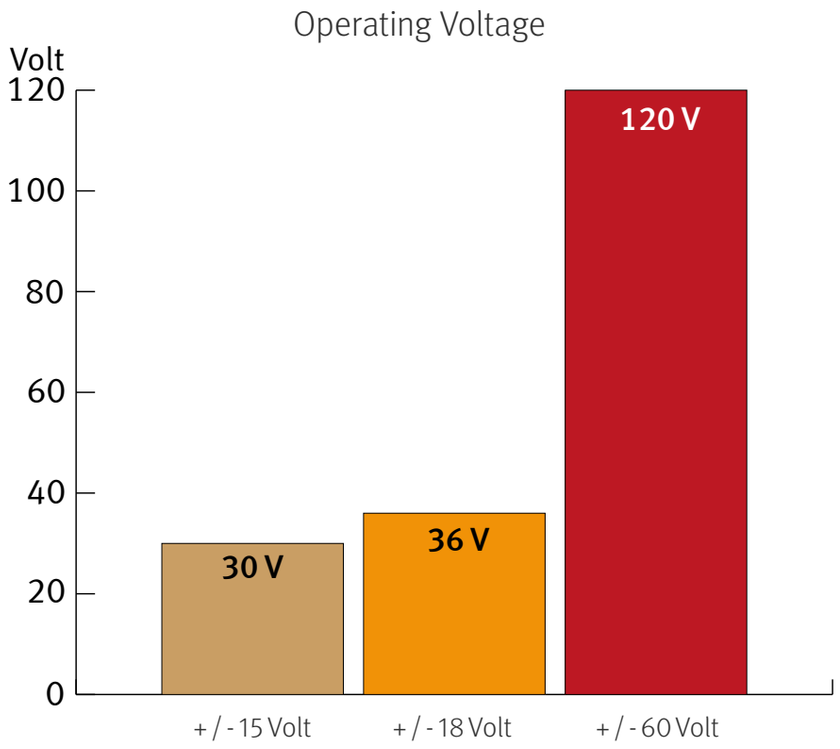
VOLTAiR is the synonym for our 120V Rail Technology within the Professional Fidelity series. The audio signals are processed with an unequalled +/-60V DC, which corresponds to twice that of discrete operational amplifiers and four-times that of semiconductor operational amplifiers.

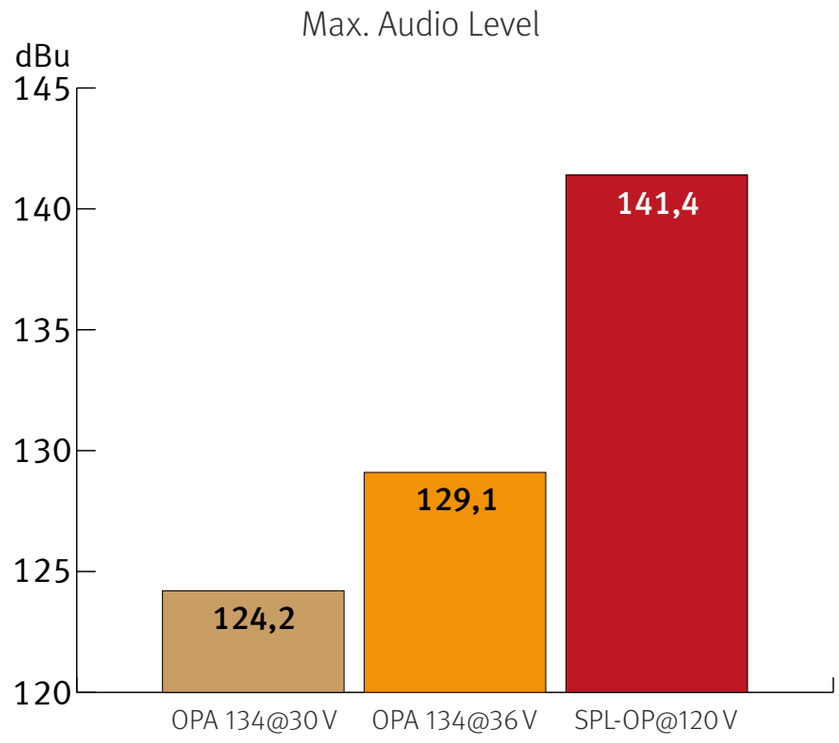
VOLTAiR Technology reaches outstanding technical and sonic performances. Technically especially in terms of dynamic range and headroom and sonically especially in reproducing the finest details and delivering a totally relaxed sounding audio experience. Music sounds absolutely natural.

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.

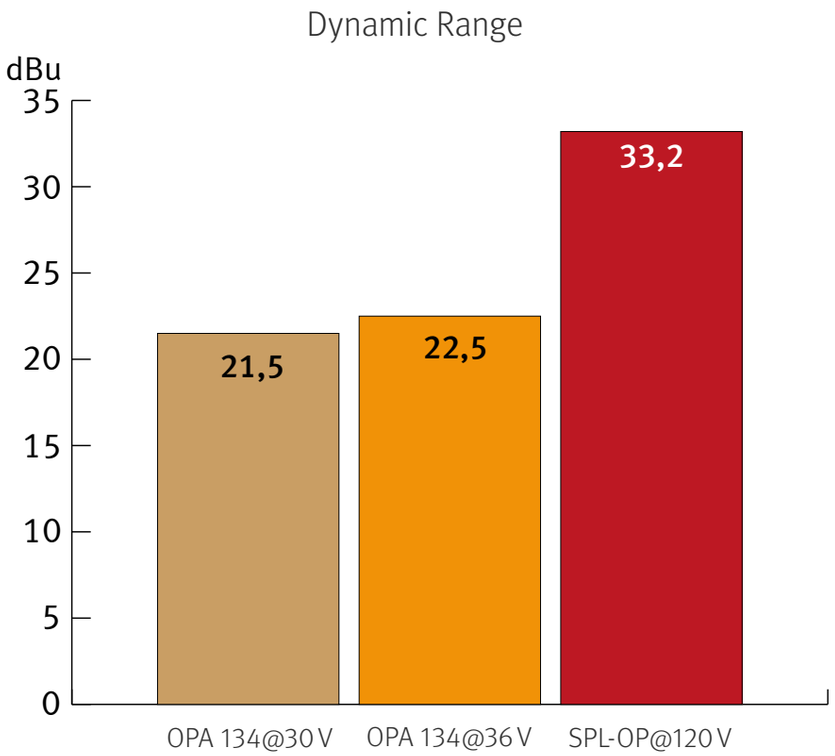


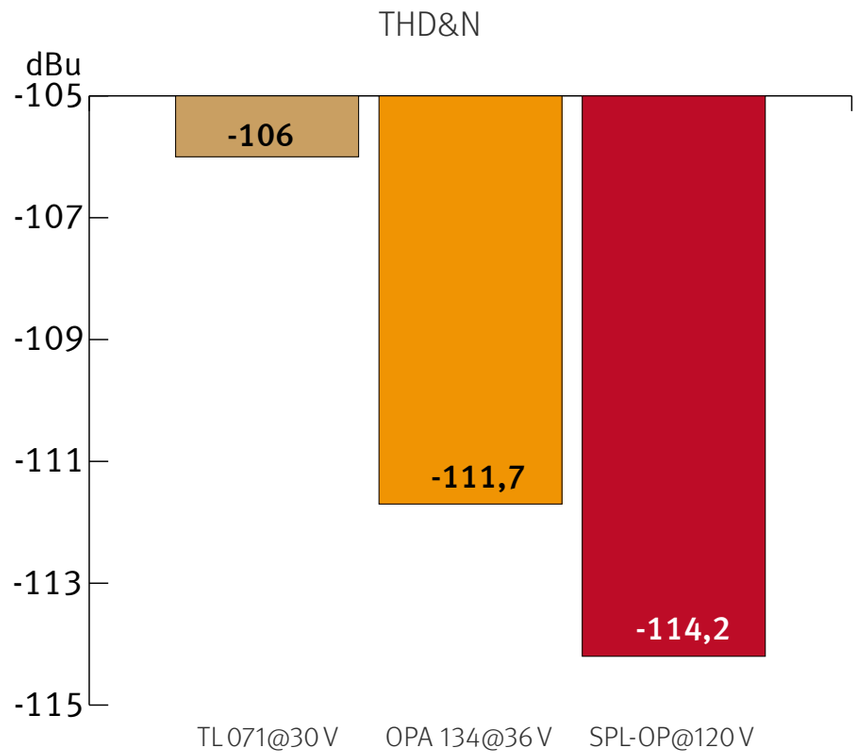


Do bear in mind that dB scales do not represent linear but rather exponential increases. A 3 dB increase corresponds to doubling the acoustic power, +6 dB correspond to twice the sound pressure level, and +10 dB correspond to twice the perceived loudness.

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 3 dB compared to the OPA134 at 36V — in terms of sound pressure level, that corresponds to an improvement of more than 50%. The operating level most commonly used for audio equipment is +/- 15 volts.





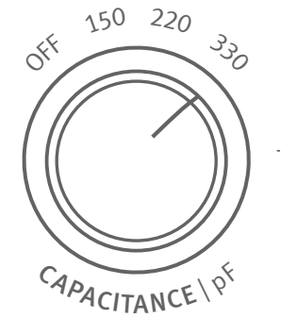
Cartriges

Phonos is a preamplifier for record players using either moving magnet (MM) or moving coil (MC) cartridges.

- Choose the right setting regarding your cartridge with the Cartridge Switch (3).

Capacity (MM)

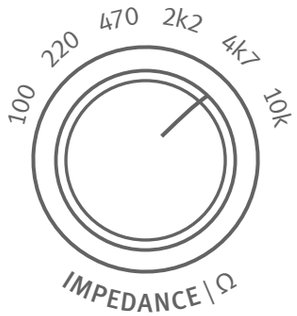
Choose the right setting regarding the capacity of your MM cartridge with the CAPACITANCE switch (4).



If you do not know the right setting for your record player, start with capacity = OFF. If you increase the value you will receive a higher tone.

Impedance (MC)

Choose the impedance for your MC cartridge with the IMPEDANCE switch (5).



If you do not know the right setting for your record player, start with an impedance of 100 ohms. If you increase the value you will receive a higher tone.

Subsonic filter

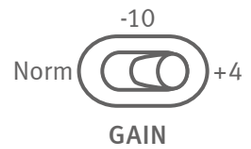
Thanks to the Subsonic filter you can eliminate the rumble. The Subsonic filter starts at 15 Hz with an edge steepness of -3 dB per octave.

- Activate the Subsonic filter with the SUBSONIC switch (6).

Output level

With the GAIN switch (2) you calibrate the amplification of the Phonos. If the Cartridge switch is set to MM it is amplified by 46 dB. If it is set to MC it is amplified by 67 dB.

- Set the GAIN switch to -10 to attenuate the amplification by 10 dB (amplification MM = 36 dB, MC = 56 dB).
- Set the GAIN switch to +4 to increase the amplification by 4 dB (amplification MM = 50 dB, MC = 71.5 dB).



Specifications

Inputs and Outputs

- RCA, unbalanced, gold-plated
- Input impedance (MM): 47 kohms
- Input impedance (MC): switchable
- Output impedance: < 5 ohms
- Crosstalk: -80 dB (at 1 kHz)

Filter

- RIAA equalizer (after Douglas Self)

Moving Magnet (MM) Preamplifier

- Amplification: 46 dB (Norm), 36 dB (-10 dB), 50 dB (+4 dB)
- Switchable capacitance: Off, 150 pF, 220 pF and 330 pF
- Noise (A-weighted): -85.3 dB

Moving Coil (MC) Preamplifier

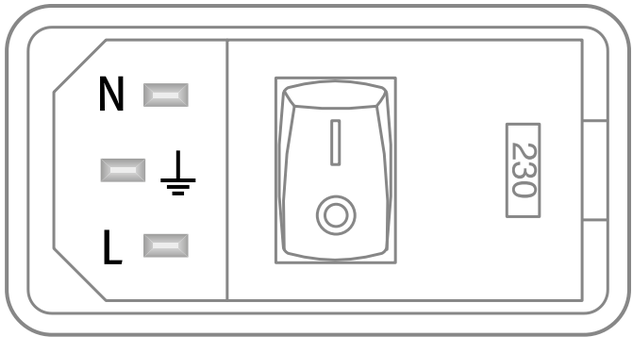
- Amplification: 67 dB (Norm), 56 dB (-10 dB), 71.5 dB (+4 dB)
- Switchable impedances: 100 / 220 / 470 ohms; 2.2 / 4.7 / 10 kohms
- Noise (A-weighted): -61.7 dB

Internal Operating Voltage

- Analog: +/- 60 V

Power Supply

- Mains voltage (switchable): 230 V AC / 50Hz or 115 V AC / 60Hz
- Power consumption: max. 30 VA
- Fuses: 230 V: T 500mA; 115 V: T 1A
- Standby power consumption: 0.7 W



Dimensions (incl. feet)

- (WxHxD) 10.94 x 2.24 x 13.19 in (278 x 57x 335 mm)

Weight

- 7.05 lbs (3.2 kg), unit only
- 9.48 lbs (4.3 kg), shipping

Important Notes

Version 1.0 – 04 /2016

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.

 Sound Performance Lab (SPL) continuously strives to improve its products and reserves the right to modify the product described in this manual at any time without prior notice. SPL and the SPL Logo are registered trademarks of SPL electronics GmbH. All company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

Declaration of CE Conformity

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