Professional Fidelity

Mastering Grade Listening

Director – User Manual

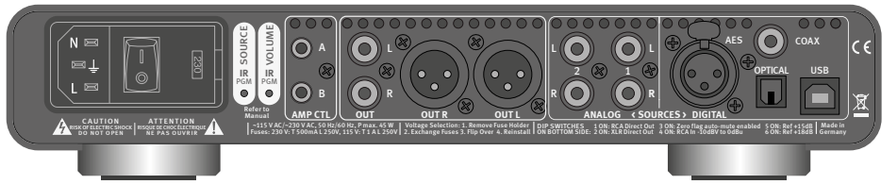
DA Converter and Preamplifier

Welcome

and thank you for choosing the Director.

The Director combines two units in one: a reference-class preamplifier with six inputs (2 x analog and 4 x digital) and both balanced and unbalanced outputs as well as a reference-class DA converter for PCM up to 384 kHz and up to Double Rate DSD (DSD128).

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

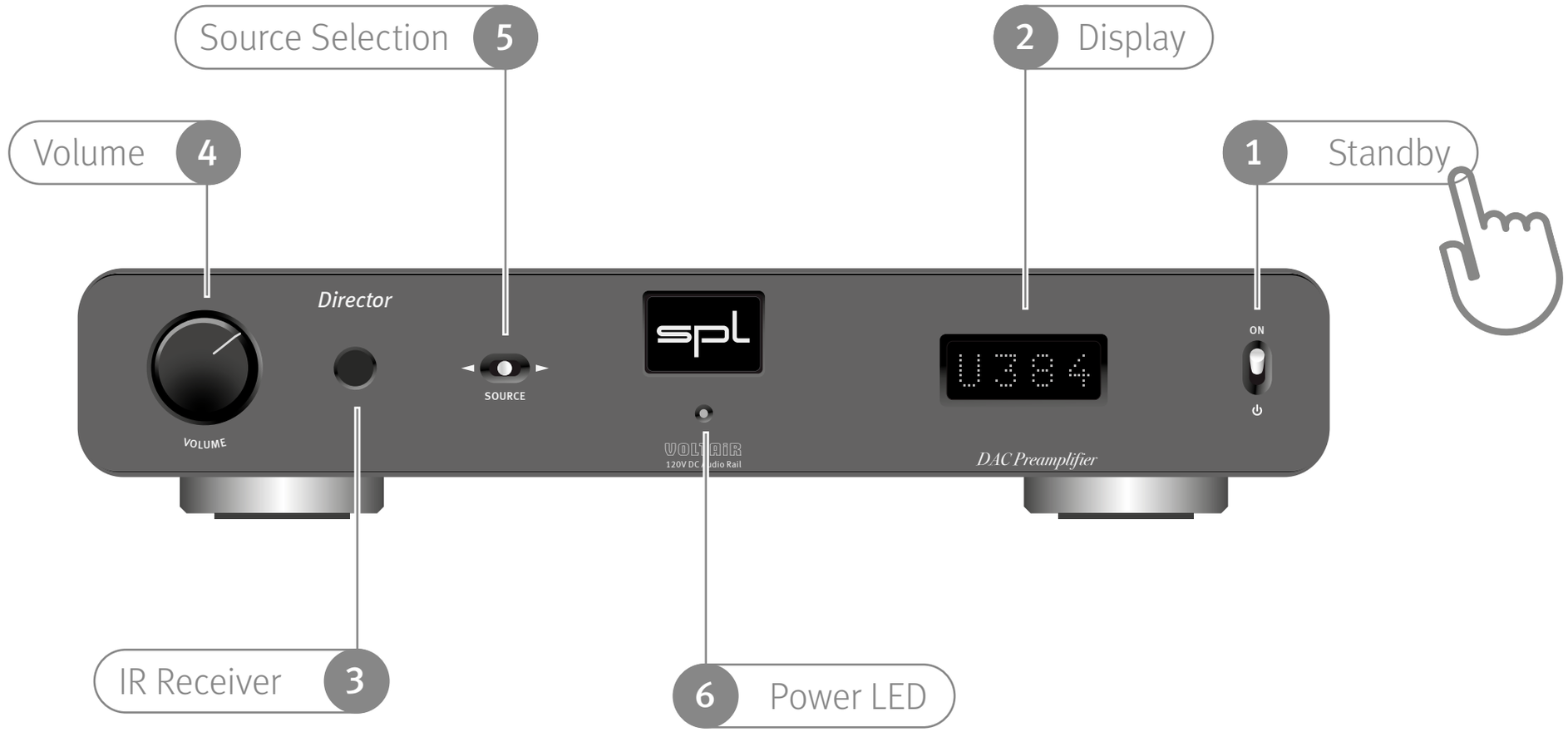
By pressing the F -Button you get to the front view of the unit.

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

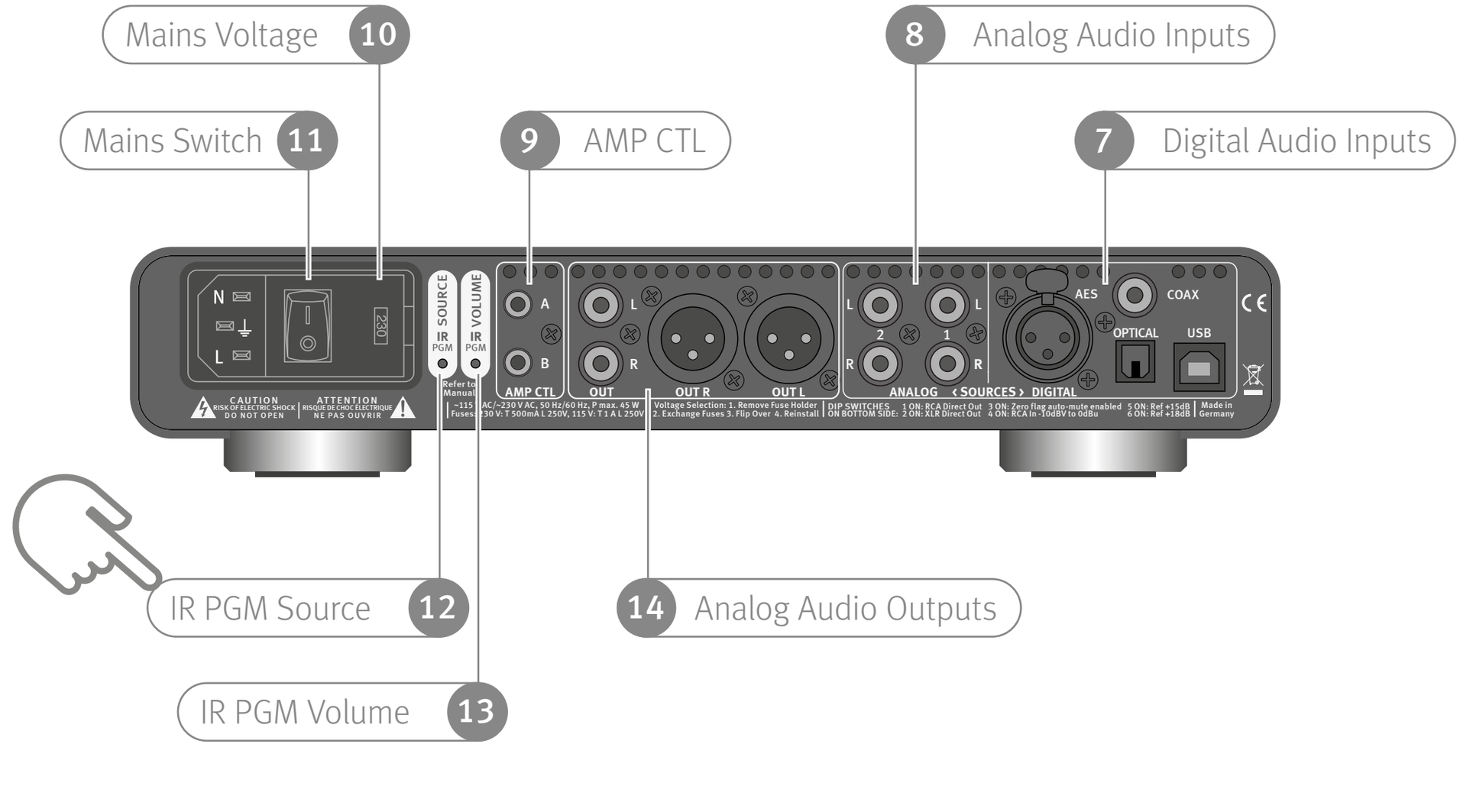
By pressing the B -Button you get to the bottom view of the unit.

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

Front view


Source Selection 5
2 Display
Volume 4
1 Standby
Director
VOLUME
SOURCE
spl
U384
ON
VOLTAIR
120V DC Audio Rail
DAC Preamplifier
IR Receiver 3
6 Power LED

Rear view


Mains Voltage 10
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9 AMP CTL
8 Analog Audio Inputs
7 Digital Audio Inputs
N
L
230
IR SOURCE
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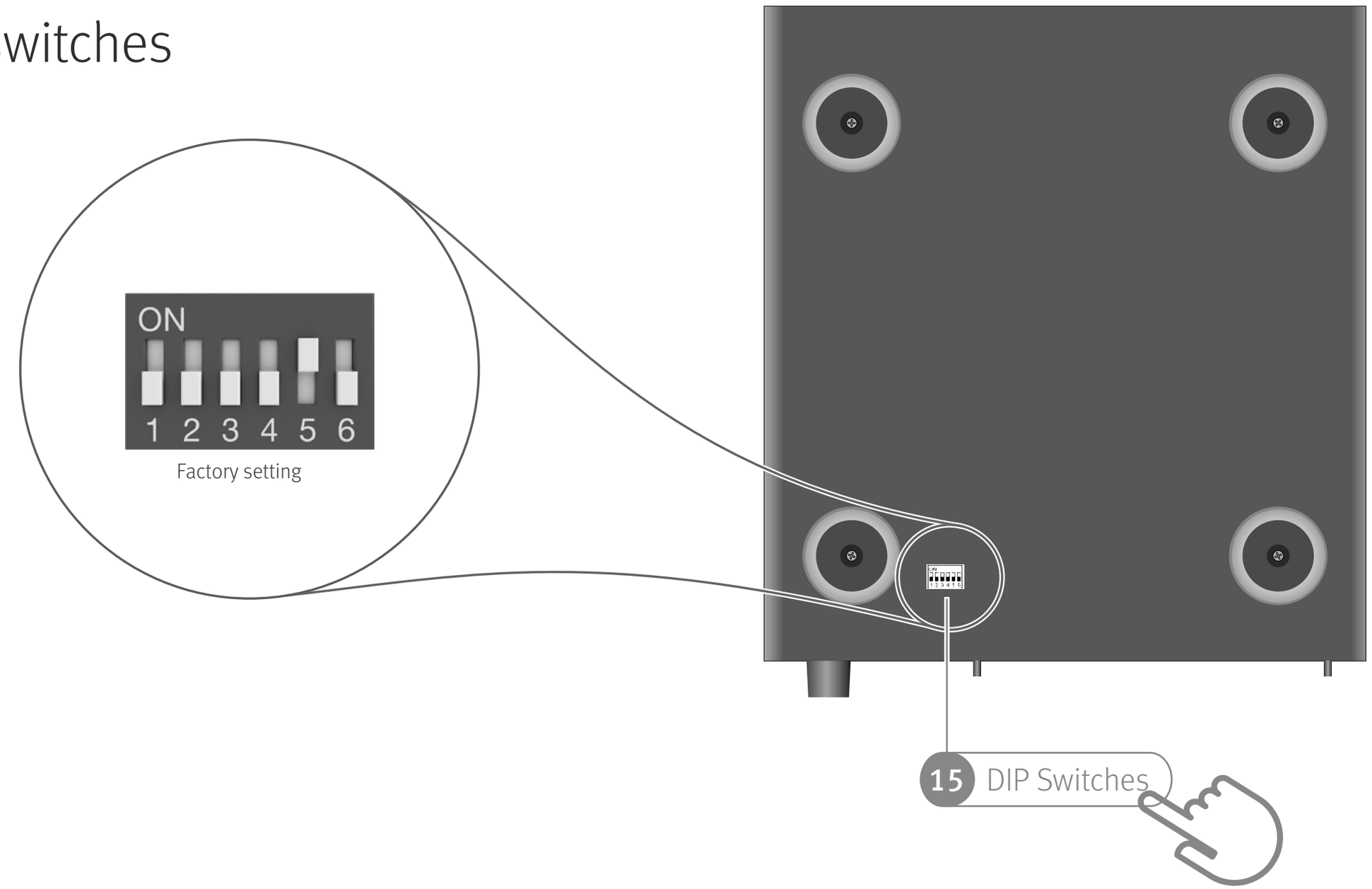
PGM
Refer to Manual
A
B
AMP CTL
L
R
OUT
OUT R
OUT L
2
1
ANALOG
‹ SOURCES ›
DIGITAL
AES
COAX
OPTICAL
USB
CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN
ATTENTION
RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR
~115 | Fuses:
AC/~230 V AC, 50 Hz/60 Hz, P max. 45 W
230 V: T 500mA L 250V, 115 V: T 1 A L 250V
Voltage Selection: 1. Remove Fuse Holder
2. Exchange Fuses 3. Flip Over 4. Reinstall
DIP SWITCHES ON BOTTOM SIDE:
1 ON: RCA Direct Out
2 ON: XLR Direct Out
3 ON: Zero flag auto-mute enabled
4 ON: RCA In -10dBV to 0dBu
5 ON: Ref +15dB
6 ON: Ref +18dB
Made in Germany
IR PGM Source 12
IR PGM Volume 13
14 Analog Audio Outputs

Bottom view

DIP switches



VOLTAiR – 120V Rail Technology

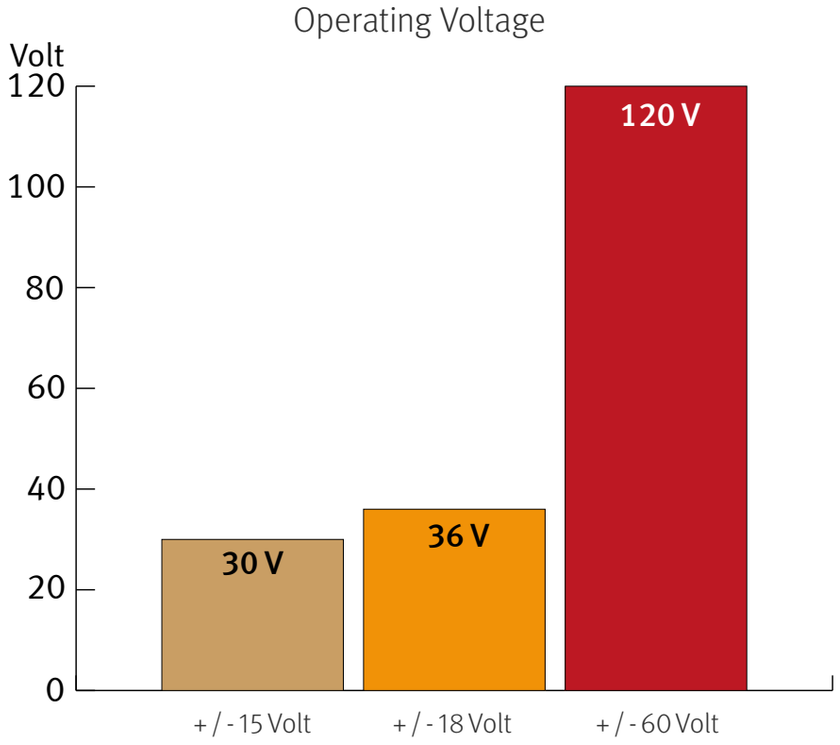
VOLTAiR is the synonym for our 120V Rail Technology within the Professional Fidelity series. The audio signals are processed with an unequalled +/-60V DC, which corresponds to twice that of discrete operational amplifiers and four-times that of semiconductor operational amplifiers.

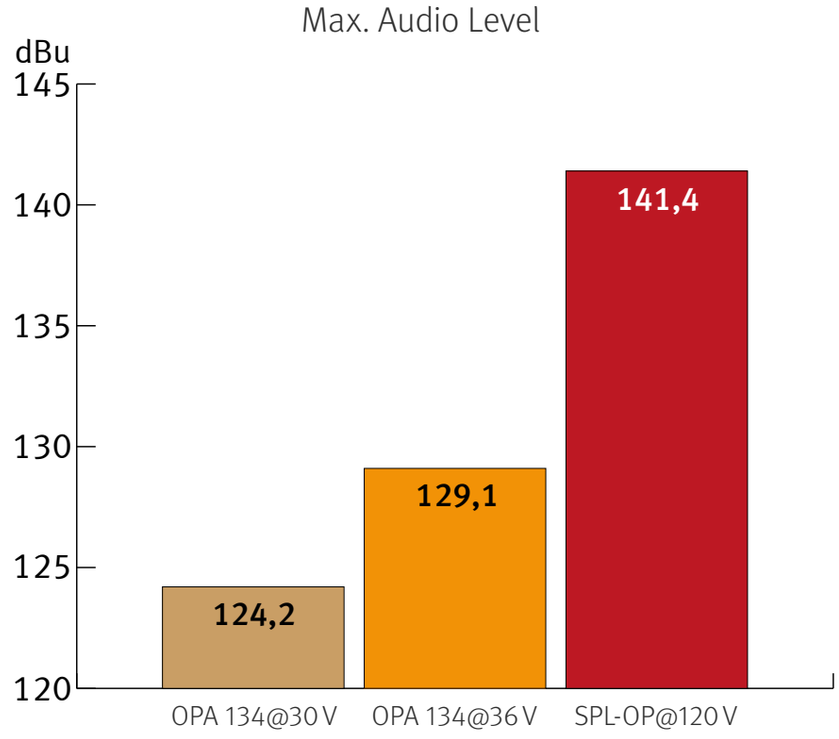
VOLTAiR Technology reaches outstanding technical and sonic performances. Technically especially in terms of dynamic range and headroom and sonically especially in reproducing the finest details and delivering a totally relaxed sounding audio experience. Music sounds absolutely natural.

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.

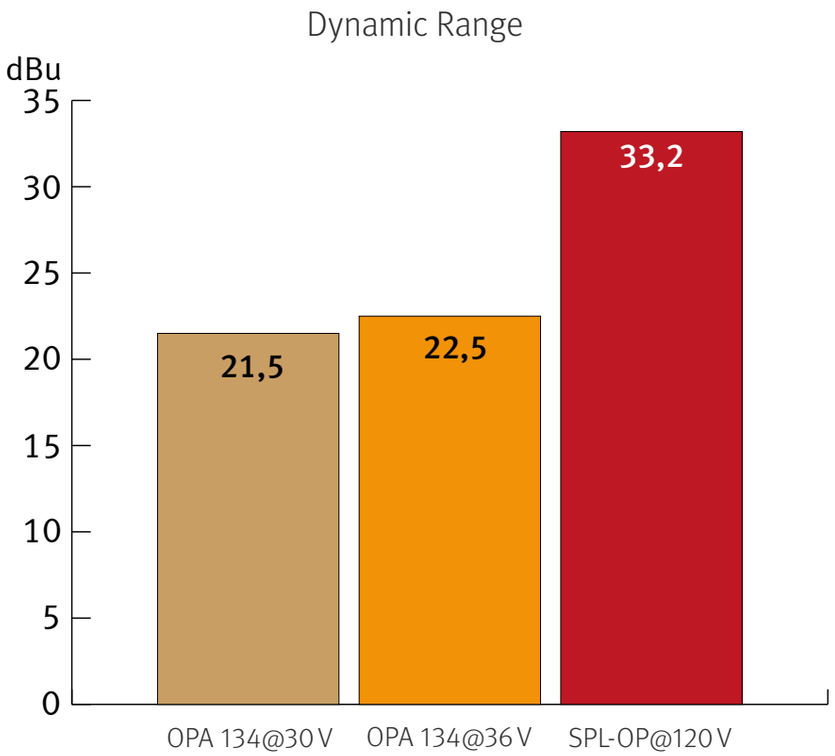


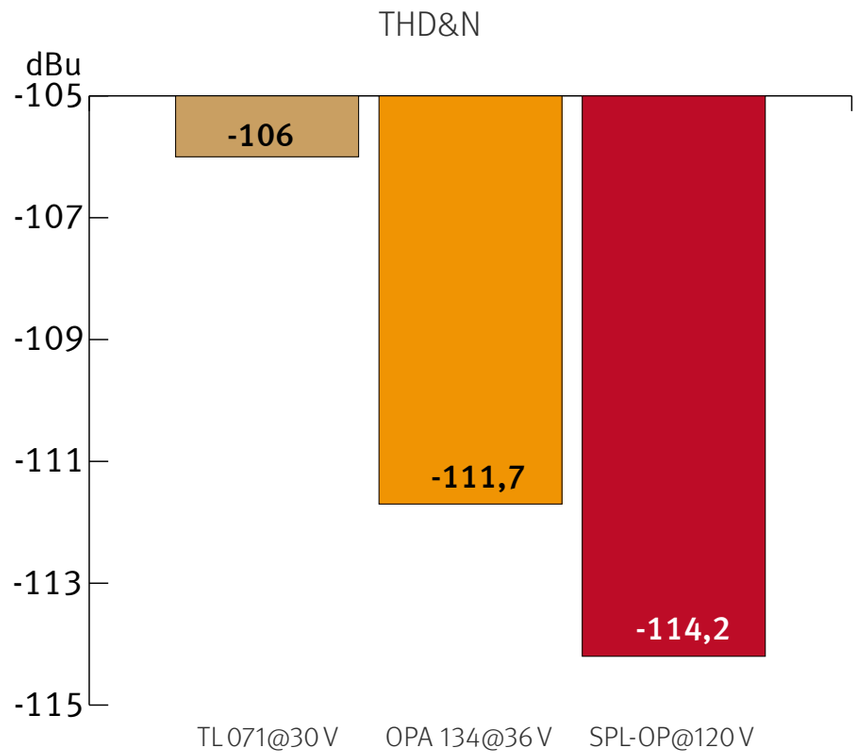


Do bear in mind that dB scales do not represent linear but rather exponential increases. A 3 dB increase corresponds to doubling the acoustic power, +6 dB correspond to twice the sound pressure level, and +10 dB correspond to twice the perceived loudness.

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 36 V — 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.



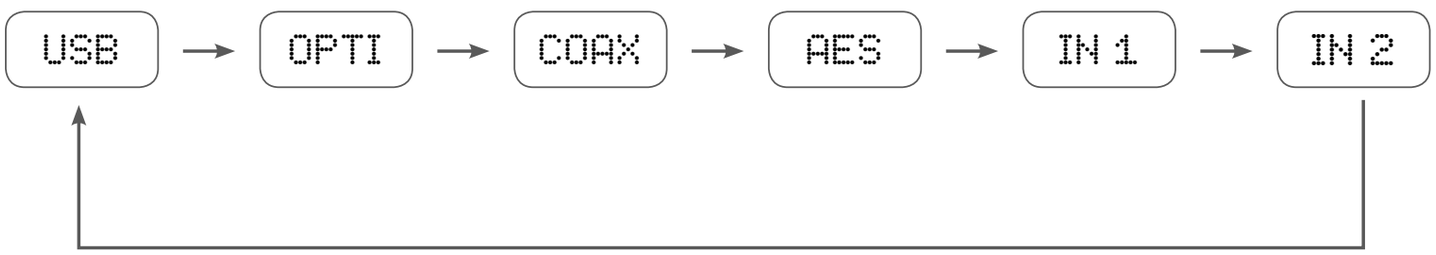


Operation

Source Selection

With the SOURCE switch (5) you select the next source by toggling to the right. Toggling to the left selects the previous source.

The selected source is shown in the dot matrix display (2).



When a digital source is selected, its name is displayed for about two seconds (USB, OPTI, COAX, AES). After that the first letter of the name appears together with the sample rate which is automatically detected by the Director (e.g. U384, 0192). See table on the next page.

The source selection can also be remotely controlled (see page 15).

Table: Selected digital source displayed after two seconds

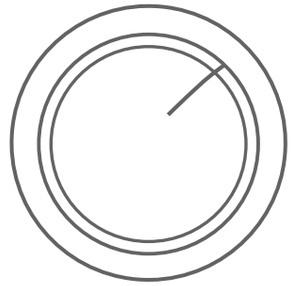
	Sample rate PCM (kHz)								Sample rate DSD (n * 44.1 kHz)	
Selected digital source	44.1	48	88.2	96	176.4	192	352.8	384	64 times	128 times
USB	U 44	U 48	U 88	U 96	U176	U192	U352	U384	DSD1	DSD2
Optical	O 44	O 48	O 88	O 96	-	-	-	-	-	-
Coax	C 44	C 48	C 88	C 96	C176	C192	-	-	-	-
AES	A 44	A 48	A 88	A 96	A176	A192	-	-	-	-

Volume

You control the volume with the VOLUME potentiometer (4).

The signal of the selected source can also be passed directly to the outputs without being affected by the volume control. To activate this feature set on the DIP switches on the bottom of the unit accordingly (see “DIP switches” on page 17).

The VOLUME potentiometer is motorized and can be remotely controlled (see page 14).



IR Remote Control

Volume

Volume of the Director can be remotely controlled using any infrared (IR) remote control.

The special feature is that the Director learns your remote and not the other way around. You do not need a learnable remote control. Take, for example, the remote control of the CD player. Out of the many buttons there are two you hardly use if at all and that do not directly trigger a function on the CD player. Assign Volume up / Volume down to these two buttons and let the Director learn them.

- Press the PGM IR VOLUME button (12) on the rear of the unit. Power LED now lights up brighter.
- Point your remote control towards the IR receiver (3) and push the button you wish to use to **lower the volume**. The power LED lights up once per push. Press the same button repeatedly until the power LED lights up three times within a short interval – programming this button is then completed.
- Point your remote control towards the IR receiver (3) and push the button you wish to use to **increase the volume**. The power LED lights up once per push. Press the same button repeatedly until the power LED lights up three times within a short interval – programming this button is then completed.
(Learn mode ends automatically after the second button is learned.)

Source Selection

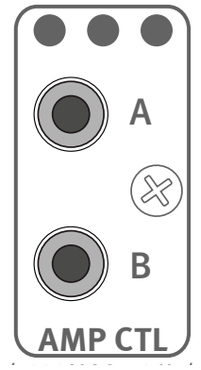
Source seletion of the Director can be remotely controlled using any infrared (IR) remote control.

The special feature is that the Director learns your remote and not the other way round. You do not need a learnable remote control, take, for example, the remote control of the CD player. Out of the many buttons there are maybe two you hardly use if at all and that do not directly trigger a function on the CD player. Assign previous source / next source to these two buttons and let the Director learn them.

- Press the PGM IR SOURCE button (12) on the rear of the unit. Power LED now lights up brighter.
- Point your remote control towards the IR receiver (3) and push the button you wish to use to switch to the **previous source**. The power LED lights up once per push. Press the same button repeatedly until the power LED lights up three times within a short interval – programming this button is then completed.
- Point your remote control towards the IR receiver (3) and push the button you wish to use to switch to the **next source**. The power LED lights up once per push. Press the same button repeatedly until the power LED lights up three times within a short interval – programming this button is then completed.
(Learn mode ends automatically after the second button is learned.)

AMP CTL (Amplifier Control)

If you connect the Director via AMP CTL (9) to the SPL Performer s800 power amp, the Director switches both units between standby and operation together. Use a 3.5 mm mono mini jack cable.



The Director offers two outputs (A and B) in case you use two Performer s800 in bridge mode or in a bi-wiring application.

DIP switches

With the DIP switches (15) on the bottom of the unit the following settings can be chosen:

Slave Thru

DIP switches 1 and 2 allow the signal of the selected source to be passed directly to the output.

DIP switch 1: ON = The signal of the selected source is passed directly to the RCA output without volume control (Slave Thru).

DIP switch 2: ON = The signal of the selected source is passed directly to the XLR output without volume control (Slave Thru).

Digital 0

With the DIP switch 3 you can mute the outputs, if there is no signal at the digital input.

DIP switch 3: ON = If there is no signal at the digital input (digital 0) the outputs are muted.

Please note: some audio devices with digital outputs might produce a signal which is not digital 0 or even on lower values (0 – 1 – 2 – 1– 0) , even when there is no playback. The output of the Director is muted with a relay. You might hear quiet clicks when the signal of the selected input toggles between digital 0 and another value.

RCA input HiFi level / Studio level

If you connect a HiFi audio device (e.g. a CD player) to the analog RCA input (8), you can amplifiy the signal from HiFi level to studio level with DIP switch 4.

The sources are then equal in level when you switch between XLR and RCA (provided that a studio signal is present at the XLR input).

DIP switch 4: ON = The RCA input is boosted from -10 dBV (HiFi level) to 0 dBu (studio level).

Reference level DA converter

You can calibrate the output level (reference level) of the DA converter with DIP switches 5 and 6.

DIP switch 5: ON = The DA converter puts out +15 dBu at 0 dBfs (factory setting).
DIP switch 6: ON = The DA converter puts out +18 dBu at 0 dBfs.

When DIP switches 5 and 6 are off, the DA converter puts out +24 dBu at 0 dBfs.

Specifications

Inputs and Outputs

Analog inputs

- 2 analog stereo inputs
- RCA, unbalanced
- Impedance: ca. 10 kohms
- Max. input level: +32.5 dB

Digital inputs/sample rates

- AES/EBU (XLR), balanced – Sample rates PCM (kHz): 44.1, 48 , 88.2, 96, 176.4, 192
- Coaxial SPDIF (RCA) – Sample rates PCM: (kHz): 44.1, 48 , 88.2, 96, 176.4, 192
- Optical TOSLINK (F06) – Sample rates PCM: (kHz): 44.1, 48 , 88.2, 96
- USB (B) – Sample rates PCM: (kHz): 44.1, 48 , 88.2, 96, 176.4, 192, 352.8, 384
  DSD: DSD1 (DSD64), DSD2 (DSD128)

Outputs

- 2 analog stereo outputs
- Neutrik XLR, balanced, Pin 2 = (+)
- RCA, unbalanced (single ended)

Measurements

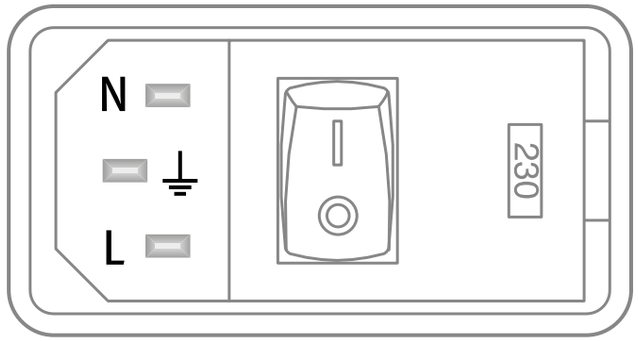
- Frequency range (analog): 4 Hz to 300 kHz (-3 dB)
- Crosstalk at 1 kHz: -95 dB (analog); -100 dB (digital)
- THD: 0.0008 % (analog 0 dBu); 0.0004 % (digital -1 dBfs)
- Noise (A-weighted): -105.1 dB (analog); -96.8 dB (digital)
- Dynamic range: 137.6 dB (analog); 120.8 dB (digital)

Internal Voltages

- Analog: +/- 60 V
- Digital: + 5 V und + 3.3 V

Power supply

- Mains voltage (switchable): 230 V AC / 50 Hz or 115 V AC / 60 Hz
- Power consumption: max. 40 VA
- Fuses: 230 V: T 500 mA; 115 V: T 1 A
- Standby power consumption: 0.7 W



Dimensions (incl. feet)

- (WxHxD) 10.94 x 2.24 x 12.91 in (278 x 57x 328 mm)

Weight

- 7.27 lbs (3.3 kg), unit only
- 9.92 lbs (4.5 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.

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Declaration of CE Conformity

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