Professional Fidelity

Elector – User Manual

Analog Preamplifier

This User Manual is optimized for Acrobat Reader.

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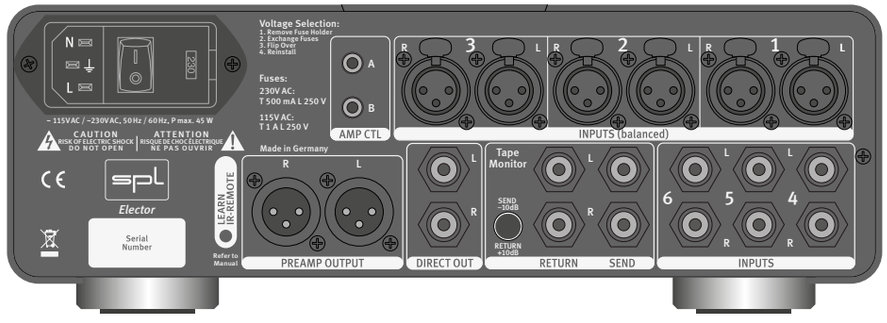
Welcome

and thank you for choosing the Elector.

The Elector is based on the Director Mk2 and designed as a pure analog preamplifier. It features a total of six analog inputs. Three of which are balanced with XLR connectors. The Elector is equipped with the big remote controllable aluminum volume control with marker LED and two mechanical VU meters.

Fans of analog tape machines or external audio processing can insert their beloved gear in the Tape Monitor loop.

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



Content

I F R

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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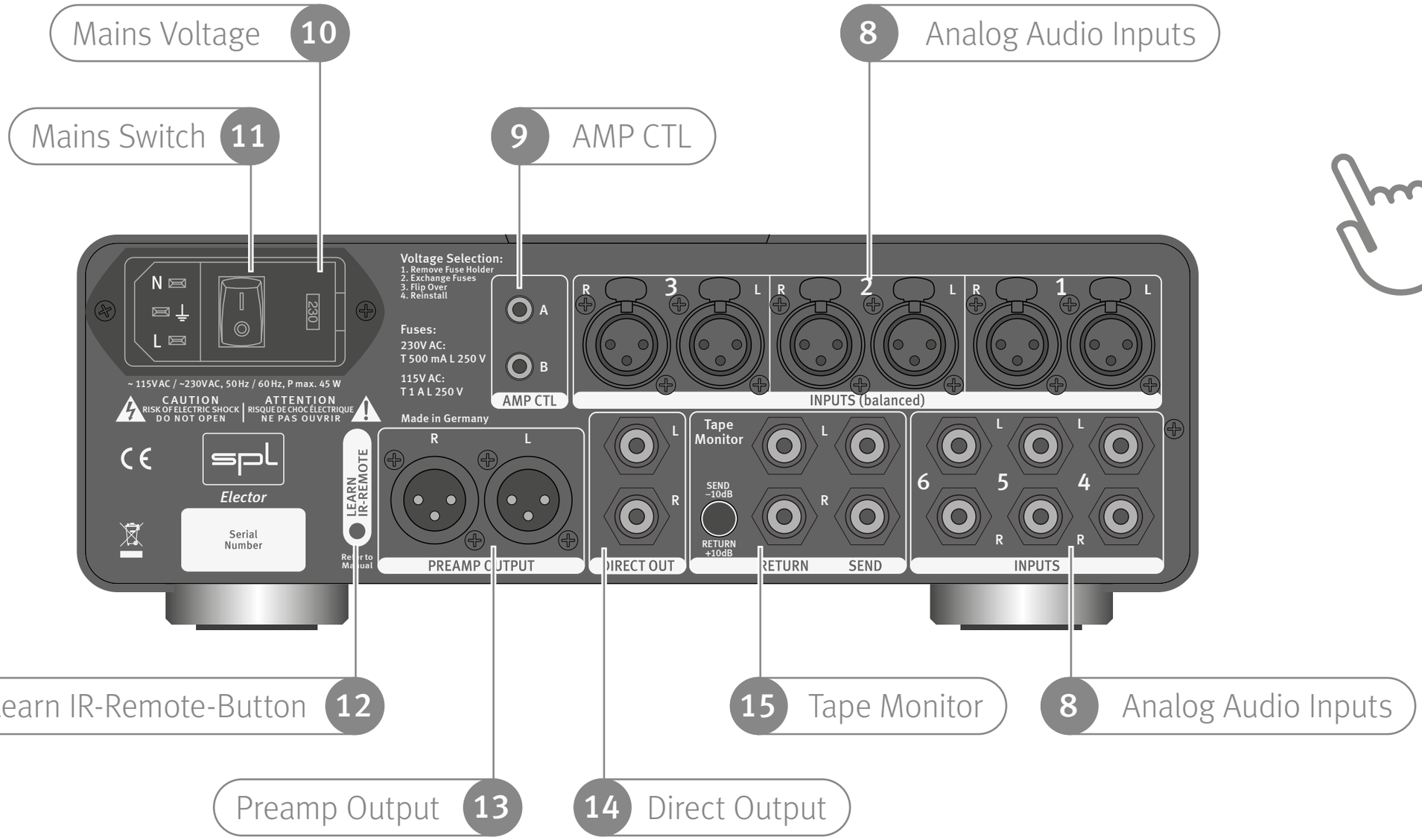
Rear view


Mains Voltage 10
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9 AMP CTL
8 Analog Audio Inputs
N
L
230
~ 115VAC / ~230VAC, 50Hz / 60Hz, P max. 45 W
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
ATTENTION
RISQUE DE CHOC ÉLECTRIQUE
NE PAS OUVRIR
Voltage Selection:
1. Remove Fuse Holder
2. Exchange Fuses
3. Flip Over
4. Reinstall
Fuses:
230V AC:
T 500 mA L 250 V
115V AC:
T 1 A L 250 V
Made in Germany
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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.

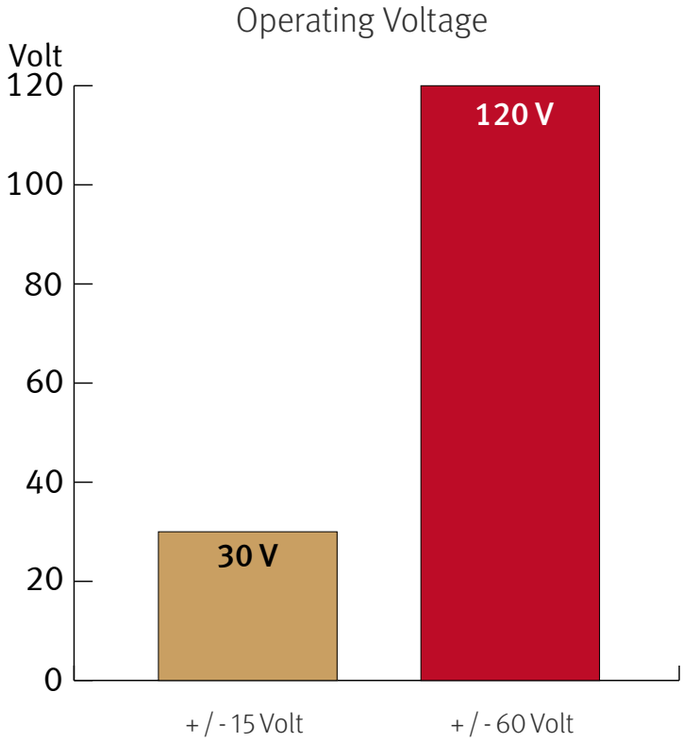
VOLTAiR Technology reaches outstanding technical and sonic performances. Technically especially in terms of dynamic range and headroom and sonically especially in reproducing the finest details and delivering a totally relaxed sounding audio experience. Music sounds absolutely natural.

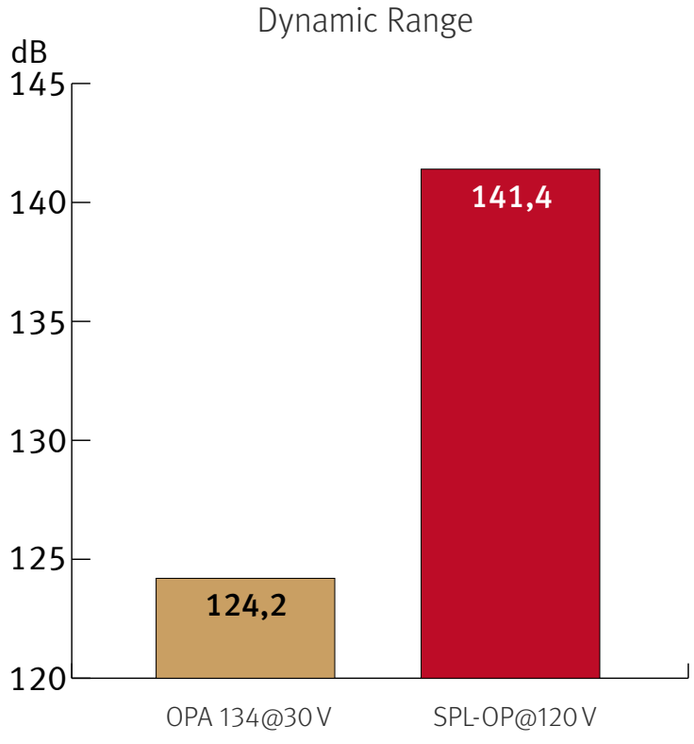
SPL's 120V Rail Technology is the internal audio processing voltage (+/- 60V DC).
It is not to be confused with the external mains voltage (e.g. 115V or 230V AC).

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.



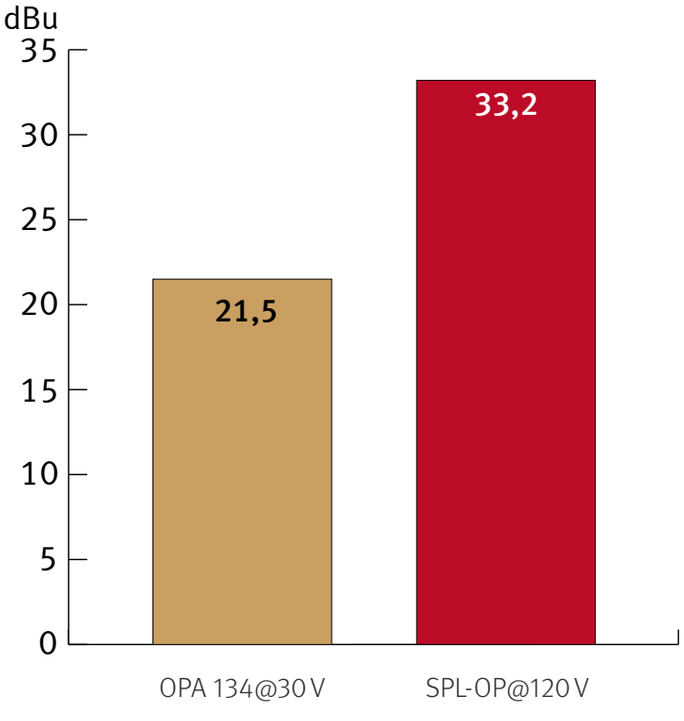


Do bear in mind that dB scales do not represent linear but rather exponential increases. A 3 dB increase corresponds to doubling the acoustic power, +6 dB correspond to twice the sound pressure level, and +10 dB correspond to twice the perceived loudness.

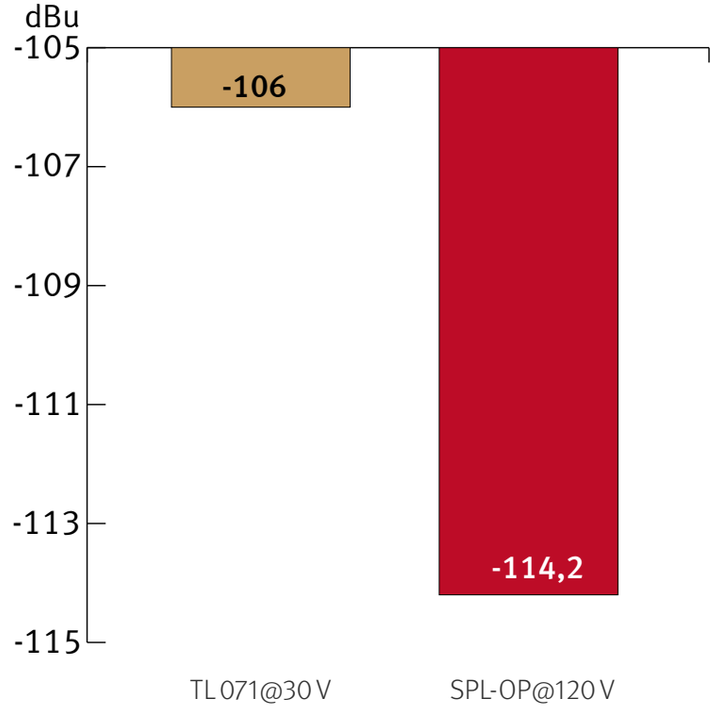
When it comes to volume, the VOLTAiR Technology exhibits a performance, in regard to maximum level and dynamic range, that is twice that of common components and circuits given that its values are approximately 10 dB higher.

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.

Max. Audio Level

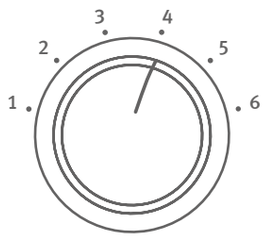


THD&N



Operation

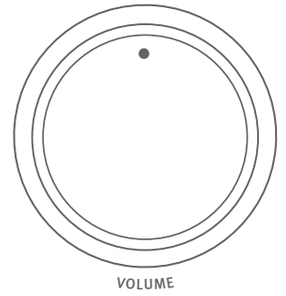
Source Selection



With the SOURCE switch (4) you select the source.

Select one of the six analog inputs 1 - 6.

Volume



You control the volume of the PREAMP OUTPUT (13) with the VOLUME potentiometer (5).

The DIRECT OUT (14) level is fixed to 0 dBfs and can be used to connect a headphone amplifier.

The VOLUME potentiometer is motorized and can be remotely controlled (see page 13).

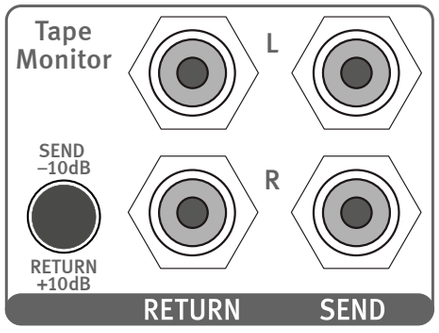
Tape Monitor

You can insert tape machines or external audio processing devices like an equalizer or Vitalizer in the Tape Monitor loop.

Insert a tape machine and listen back (tape monitoring) while recording from a vinyl record or insert beloved equalizers or other processing devices to tune sound.

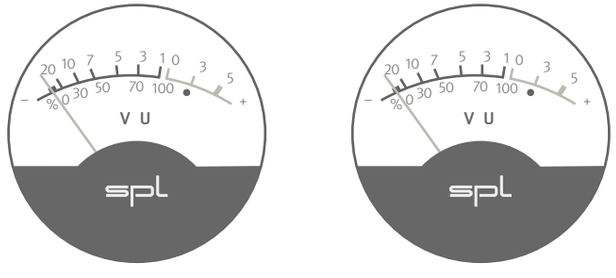
Connect the SEND (15) output of the Elector to the input of your external device.
Connect the RETURN (15) input of the Elector to the output of your external device.

If the send level from the Elector is too high for your external device engage the level calibration switch beside the tape send and tape return sockets to lower the send level by 10 dB. The return level will be increased by 10 dB to eliminate a level difference.



> If no external device is connected set the TAPE MONITOR switch to Off.
> Otherwise the audio signal is interrupted.

VU Meter

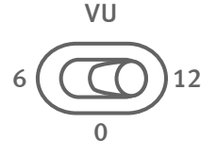


The VU meters (2) display the input levels for the selected source. The meter indicates levels from -20 dB to +5 dB.

0 dB corresponds to +4 dBu.

The ballistics of the VU meters guarantee an optimal visual perception. The time calibration of the VU meters complies with the requirements of the BBC. The rise time up to 0 dB is about 300 ms.

Attenuate the sensitivity of the VU meters



With the VU switch (7) you can lower the sensitivity by 6 or 12 dB so that the meters go up to +17 dB intput level if the switch is set to “+12”.

IR Remote Control

The volume potentiometer can be remotely controlled using any infrared (IR) remote control

The special feature is that the Elector learns your remote and not the other way around. You do not need a universal remote control. Take, for example, the remote control of your 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.

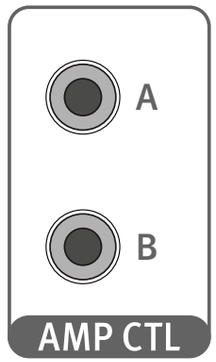
Programming of the Elector to your remote control is easy and takes just two steps – one for each function: to the lower volume and increase the volume.

- Press the LEARN IR-REMOTE button (12) on the rear of the unit until you note the actuation point
  The Power LED now lights up brighter.
- **Step 1/2:** Point your remote control towards the VU meters (2) and push the button you wish to use to to **lower the volume**. The power LED flashes once per push. Press the same button repeatedly until the power LED flashes three times within a short interval – programming of this button is then completed.
- **Step 2/2:** Push the button you wish to use to **increase the volume**. The power LED flashes once per push. Press the same button repeatedly until the power LED flashes three times within a short interval – programming of this button is then completed.

Learn mode ends automatically after the second button is learned.

Please note: direct insolation of strong light (e.g. sun light, halogen lamps, neon tubes, fluorescent tubes, terrarium and aquarium lights as well as big flat screens) may lead to misoperation of the remote control functions.

AMP CTL (Amplifier Control)



If you own SPL Performer power amplifiers or other amplifiers using 12V trigger inputs you can connect the AMP CTL (9) outputs of the Elector with mono mini jack cables to the AMP CTL of the amps to trigger on and standby.

Up to two amplifiers can be triggered together.

Specifications

Inputs and Outputs

Analog inputs

- 6 analog stereo inputs
- 3 x XLR, balanced (10 kOhm)
- 3 x RCA, unbalanced (47 kOhm)
- Max. input level: +32,5 dBu

Outputs

- 2 analog stereo outputs
- Neutrik XLR, balanced, Pin 2 = (+)
- RCA, unbalanced (Direct Out)
- Impedance: 75 ohms (balanced)
- max. output level 32,5 dBu

Measurements

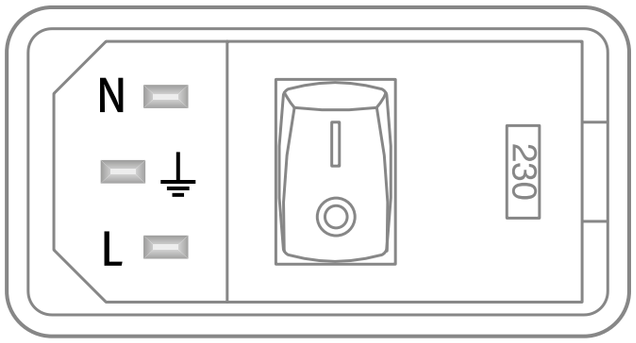
- Frequency range: 10 Hz (-0.1 dB), 200 kHz (-1.2 dB)
- Crosstalk at 1 kHz: -108 dB
- THD: 0.00992 % (0 dBu)
- Noise (A-weighted): -102.5 dB
- Dynamic range: 135 dB

Internal Voltages

- Analog: +/- 60 V

Power supply

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



Dimensions (incl. feet)

- 278 mm W x 100 mm H x 337 mm D
- 10.95 in W x 3.94 in H x 13.27 in D

Weight

- 4.25 kg; 9.37 lbs (unit only)
- 5.4 kg; 11.9 lbs (shipping)

Important Notes

Version 1.0 – 09/2019

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.