

## Power Box RS amp

Linear power supply for Pro-Ject Audio Systems' power amplifier. Compatible with Amp Box RS, Amp Box RS Mono, Stereo Box RS but also with Amp Box DS or Amp Box DS Mono.

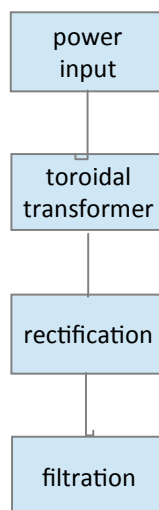
You may ask: "Why is it necessary to avoid interferences from main, when digital amplifiers are generating all kind of interferences?" The answer is simple. Digital amplifier generates only one frequency, which is far above audible spectrum. In case of Pro-Ject Audio Systems' amplifiers it is about 450kHz, so the frequency is 22 times higher than the highest audible frequency. As every amplifier, also digital ones are sensitive on quality of power energy. It was proven by extensive listening tests, that linear power supplies improves the sound of digital amplifiers significantly. This is what all well known highend manufacturers already realised.

Linear power supply consists of a big toroidal transformer with shielding between primary and secondary winding which acts as an isolating transformer and avoids penetration of interferences from mains into amplifier. This transformer has a big power reserve, compared to a standard power adaptor. It has very low output impedance and in combination with large filtration capability it can easily manage all the power needs of one stereo amplifier or two mono amplifiers.

### Technical parameters :

Input voltage	AC 230V/50Hz IEC C15 connector (120V/60Hz US version)
Output voltage	two outputs by 2 x 48V / 2.5A DC each
Filtration capacity	40.000 microFarads
Output voltage ripple	7mV

### Block diagram :



### Description :

- **Power input** block is consisting of power input connector, fuse, main switch and primary windings of toroidal transformer. Even if it is equipped by soft-start circuitry in order to assure the best possible reliability, power switch must resist big inrush current of toroidal transformer. This is the reason why it is far bigger than all the rest of power switches on RS-line. Input of transformer are filteres by X2 capacitor.
- **Toroidal isolating transformer.** Special audio type with exact saturation and current density. Version with copper foil for electromagnetic shielding between primary and secondary windings.
- **Rectification** of secondary AC is provided by diode bridges paralleled with blocking capacitors.
- **Capacitor bank** consists of total capacity of 40.000 uF. All the used capacitors are low ESR types

If Power Box RS amp is used with a stereo amplifier, output power raise from 120W/4ohms to 200W/4ohms.