

PL1_____Male Mains plug

SW1_____SPST Mains switch

Device purpose:

A Variable DC Power Supply is one of the most useful tools on the electronics hobbyist's workbench. This circuit is not an absolute novelty, but it's simple, reliable, "rugged" and short-proof, featuring variable voltage up to 24V and variable current limiting up to 2A. It's well suited to supply the circuits shown in this website. You can adapt it to your own requirements as explained in the notes below.

Notes:

- | P1 sets the maximum output current you want to be delivered by the power supply at a given output voltage.
- | P2 sets the output voltage and **must be a logarithmic** taper type, in order to obtain a more linear scale voltage indication.
- | You can choose the Transformer on the grounds of maximum voltage and current output needed. Best choices are: 36, 40 or 48V center-tapped and 50, 75, 80 or 100VA.
- | Capacitor C1 can be 2200 to 6800 μ F, 35 to 50V.
- | Q4 must be mounted on a good heatsink in order to withstand sustained output short-circuit. In some cases the rear panel of the metal box in which you will enclose the circuit can do the job.
- | The 2N3055 transistor (Q4) can be replaced with the slightly less powerful TIP3055 type.
- | **Excellent quality-price ratio: enjoy!**