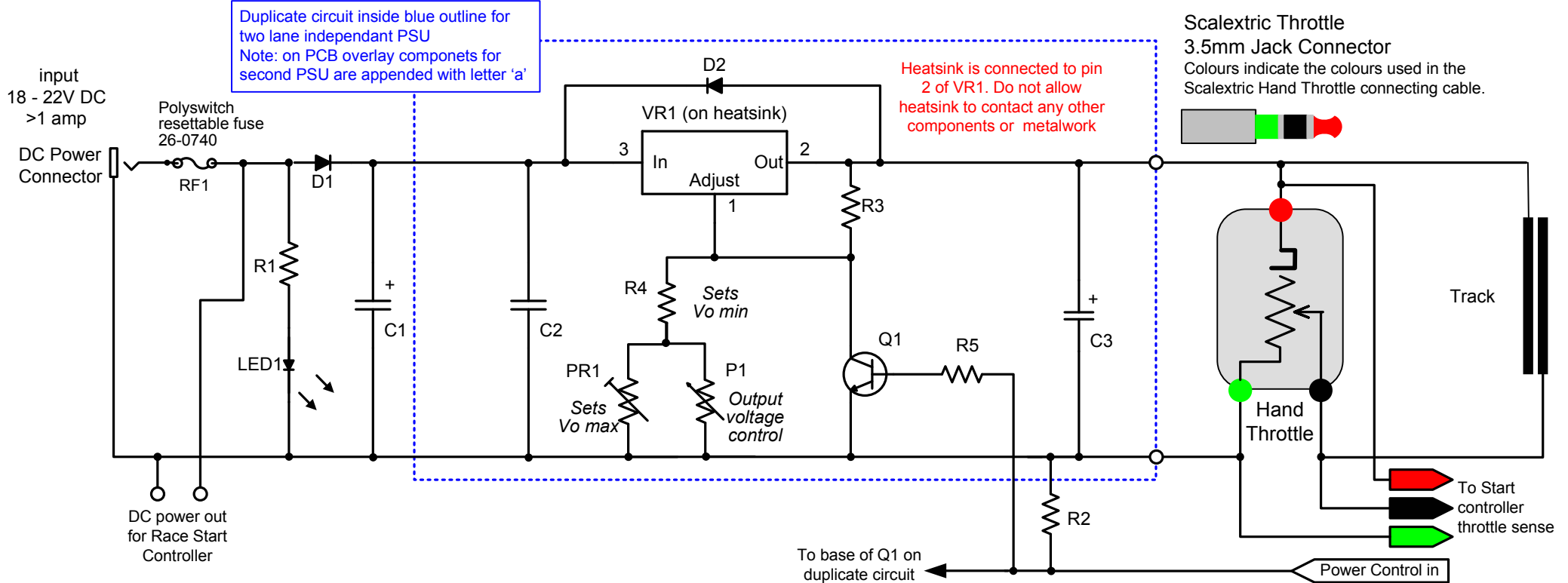


Variable voltage DC power supply with track power shutdown for Scalextric 1/32 slot car track. (provides stabilised DC output for use with 1 or 2 cars)



Power Supply Notes

Do not use the original Scalextric PSU as this outputs AC not DC. The Powerbase rectifies the AC to DC but does not smooth the supply so should also not be used.

Suitable PSU for input to this circuit should deliver 18-22V DC at 1 Amp or greater. Any PSU meeting this requirement can be used.

For example 18V/1.1A supply from www.cpc.co.uk P/N PW00752.

This circuit is for use with standard Scalextric cars using stock electric motors.

Component List

Resistors

	0.25watt 5%
R1	1.5K Ω
R2	47K Ω
R3	220 Ω
R4	1K Ω
R5	3.3K Ω
PR1	2K Ω enclosed preset
P1	4.7K Ω linear potentiometer

Capactors

C1	2200 μ F / 35volt electrolytic
C2	100nF ceramic
C3	10 μ F / 25volt Tantalum

Semiconductor

VR1	LM317T 3-terminal adjustable regulator 1.5 amp
D1	1N5401
D2	1N4001
LED1	Green 5mm
Q1	BC548 npn transistor
RF1	1.1A Polyswitch resettable fuse (Rapid Electronics P/N 26-0740 or simliar)

Hardware

- 2x Heatsink for IC1 3.9 $^{\circ}$ C/W (Rapid Electronics P/N 36-0316 or similar).
- 2 x M3 6mm screw and M3 nut to fix VR1 to heatsink.
- 2 x Knob to fit voltage adjust potentiometer P1.
- 1 x 2.1mm or 2.5mm PCB mounted DC Power connector to suit chosen power supply.
- 6 x 2-way PCB terminal blocks (Rapid Electronics P/N 21-0440)