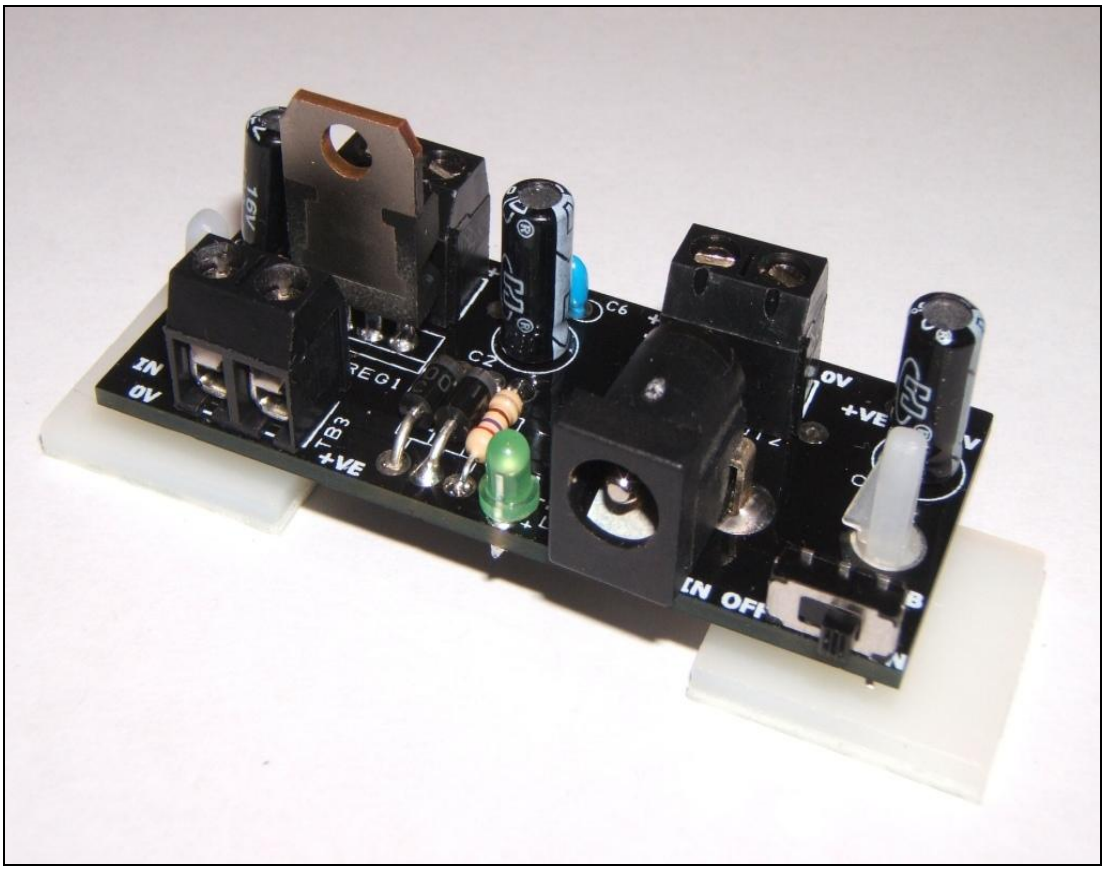
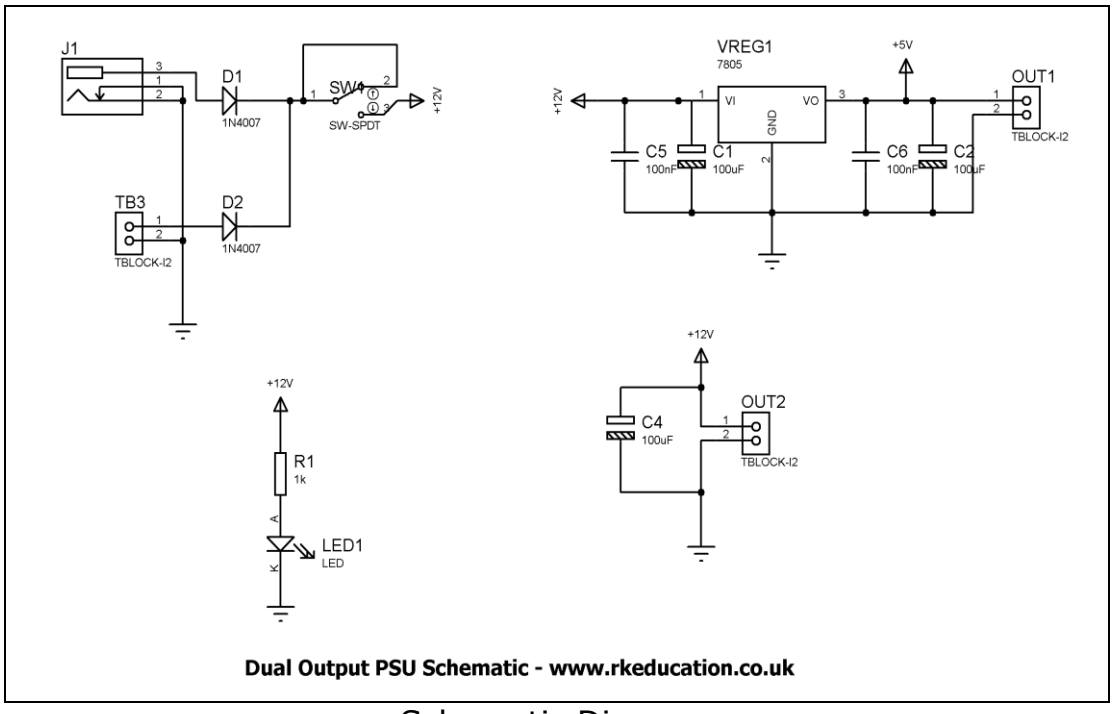
Dual Output Power Supply Project





Schematic Diagram

Component List

C1 – 100uF 25VDC Electrolytic Radial
C2 - 100uF 25VDC Electrolytic Radial
C4 - 100uF 25VDC Electrolytic Radial
C5 – 100nF Radial Multilayer Ceramic 50VDC
C6 - 100nF Radial Multilayer Ceramic 50VDC
3 * 2 way 5mm PCB terminal blocks
VREG1 – TO220 7805 5V regulator
D1, D2 – 1N400x diodes
R1 – 1k 1/4watt resistor
Ultra miniature PCB slide switch
LED1 – 3mm Green LED
DC power socket 2.1mm

Description

The Dual Output Power Supply has been designed for electronic project work and is ideal to use with breadboards and stripboards and is perfect for use with PIC microcontrollers such as PICAXE and Genie.

- Small and compact
- Professional, double sided, high quality, black PCB
- Easily connected to breadboards and stripboards
- Uses a 7805 linear voltage regulator
- Can be powered by DC plug or via a terminal block
- Dual output, outputs the input voltage and regulated 5VDC
- Power switch and LED power indicator

Instructions

When constructing PCBs always start with the components with the lowest profile, for example the resistors.

Once constructed operation is simple, input 12VDC and the unit will output approx 11VDC and regulated 5VDC. To ensure the unit is operating correctly test the voltages with a digital multi meter – DVM. The unit has 1N4007 diodes in series with the input voltage incase of reverse polarity, this reduces the input voltage by approx. 0.7V, to overcome this they can be replaced with shorting links or the input voltage can be increased.

To use simply connect the output from the unit to the target circuit using jumper wires. A standard 7805 can output up to 1Amp, at higher currents a suitable heat sink will be required, 2Amp 7805s are also available.

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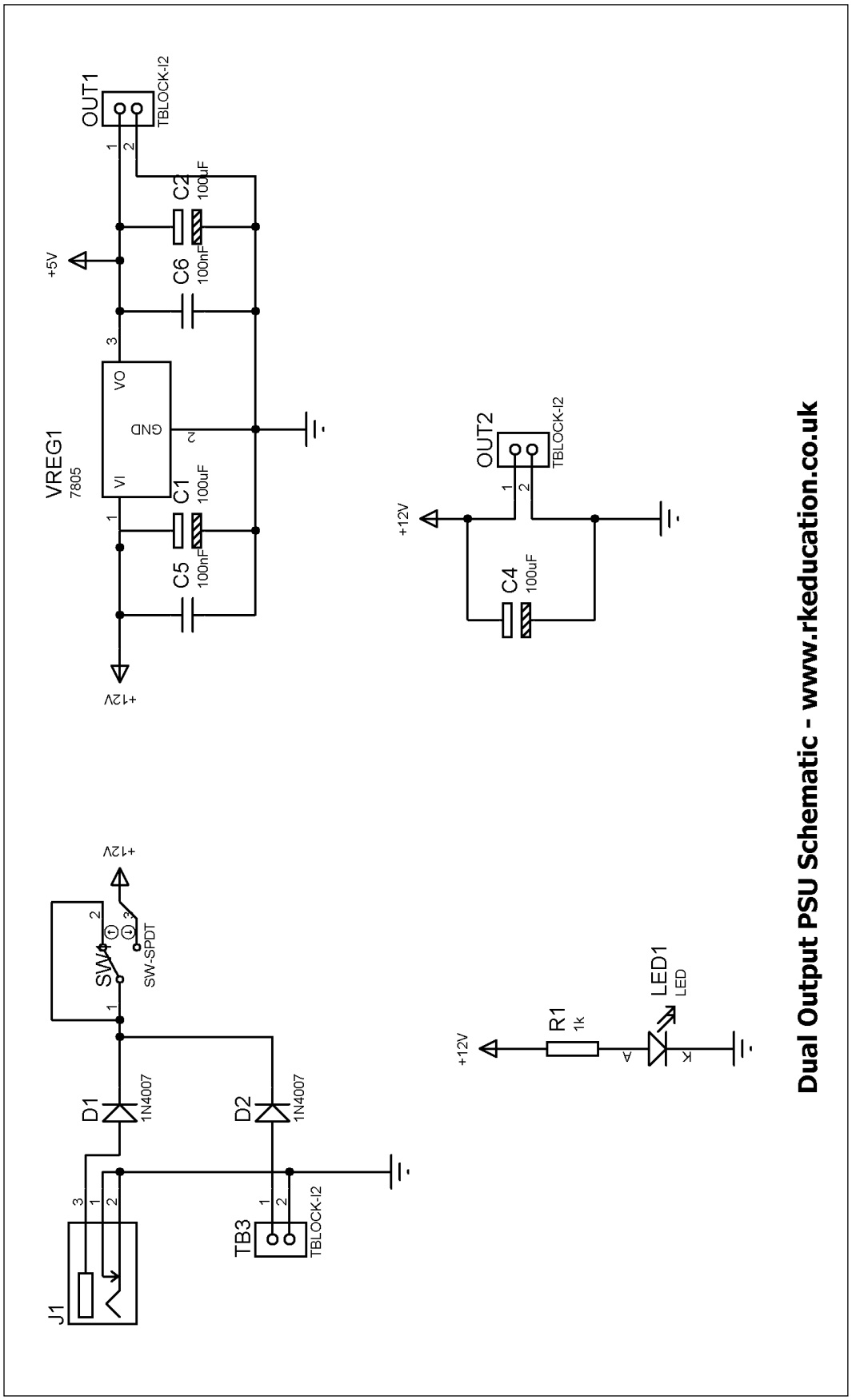
OUT1
TBLOCK-I2
C2
100uF
C6
100nF
+5V
VREG1
7805
VO
GND
VI
C1
100uF
C5
100nF
+12V
OUT2
TBLOCK-I2
+12V
C4
100uF
+12V
R1
1k
LED1
LED
SW4
SW-SPDT
+12V
D1
1N4007
D2
1N4007
J1
TB3
TBLOCK-I2
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