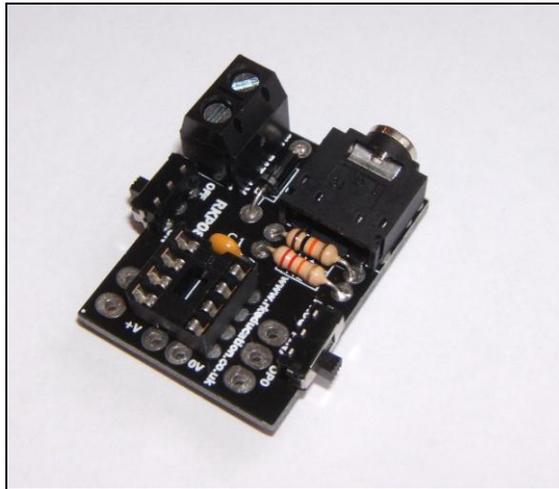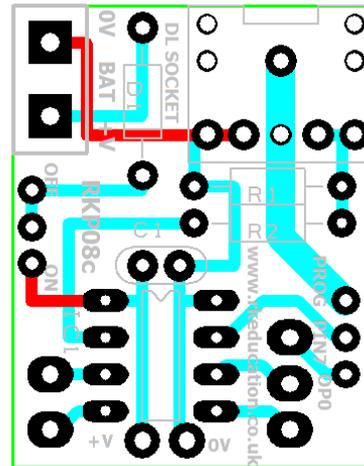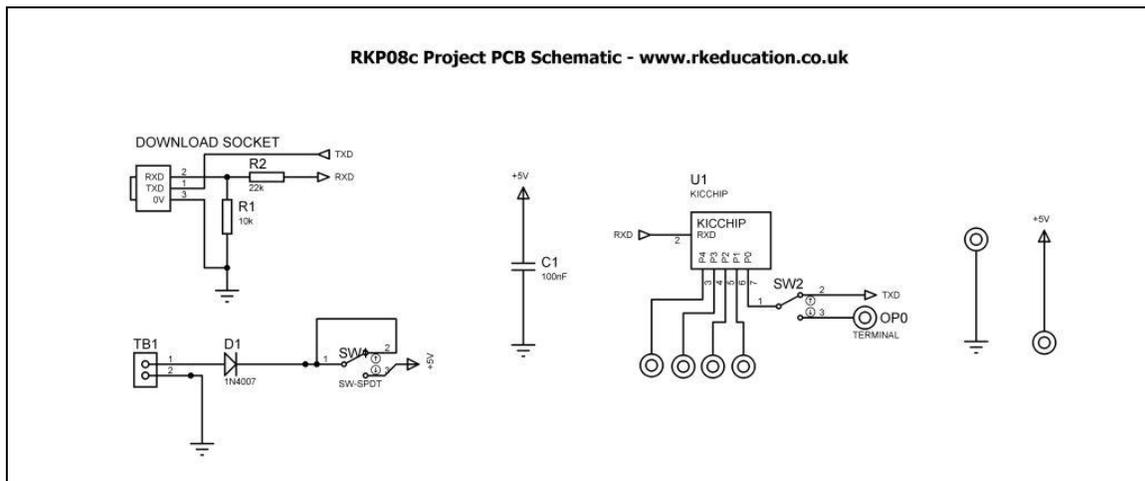# 70-9117 RKP08C Compact 8-Pin PIC Microcontroller Project PCB Kit Component List and Instructions

Constructed PCB

PCB Layout

Schematic Diagram

Description

The RKP08C compact project PCB has been designed to use PIC microcontrollers such as the Genie and PICAXE

- Software is downloaded from a PC into the microcontroller via a 3.5mm stereo socket
- All input and output pins have a PTH
- Easily interfaced to peripheral devices
- Power supplied via a terminal block – 6V DC is recommended
- Power switch
- OP0 switched between program and output using a slide switch

Components List

C1 – 100nF multilayer ceramic capacitor
D1 – 1N4007
IC1 – 8 way DIP socket with microcontroller e.g. Genie
R1– 10kΩ ¼ watt resistor (brown black orange)
R2 – 22kΩ ¼ watt resistor (red red orange)
DL SOCKET – PCB mount 3.5mm stereo connector
TB1 – 2 way 5mm pitch terminal block for power supply
Ultra miniature slide switches for power switch and program/OP0 switch

Instructions

The PCB has been designed to use microcontrollers based on PIC, for instructions on using your chosen microcontroller please see the appropriate website.

Connecting Power

The power is connecting the terminal block TB1, the 0V input, usually black is marked clearly as is +V which is usually red, a regulated 6V DC power supply can be used. Other voltages may be used as required. The recommended maximum voltage for the PIC is 5.5V DC, the 6V DC supply is reduced by approximately 0.7V DC by diode D1. D1 may be left out but if this is done adjust the supply voltage accordingly.

A power switch has been included and is below TB1.

Downloading software

Once the software has been written using the Genie Programming Editor (or equivalent) it can be downloaded into the Genie (or equivalent). This is done using a download cable that connects either to your PC's serial port or USB port. Insert the download plug into the download socket and activate the program function in your Programming Editor, the slide switch labelled pin7 must be set to **PROG**, it will need to be set to **OP0** when the software is being executed. If all goes well it will tell you the program download was successful.

Using the I/O pins

Using the I/O pins is simple and is just a case of soldering jumper wires between the appropriate pin and peripheral. Remember to use a common 0V. Power supply pins have been included below IC1, there is a V+ on the left and 0V on the right.

+5V

TXD
OP0
TERMINAL

SW2

U1
KICCHIP
RXD

P0
P1
P2
P3

RXD

C1
100nF
+5V

DOWNLOAD SOCKET

TXD
RXD

R2
22k
R1
10k

RXD
TXD
0V

+5V

SW1
SW-SPDT

D1
1N4007

TB1