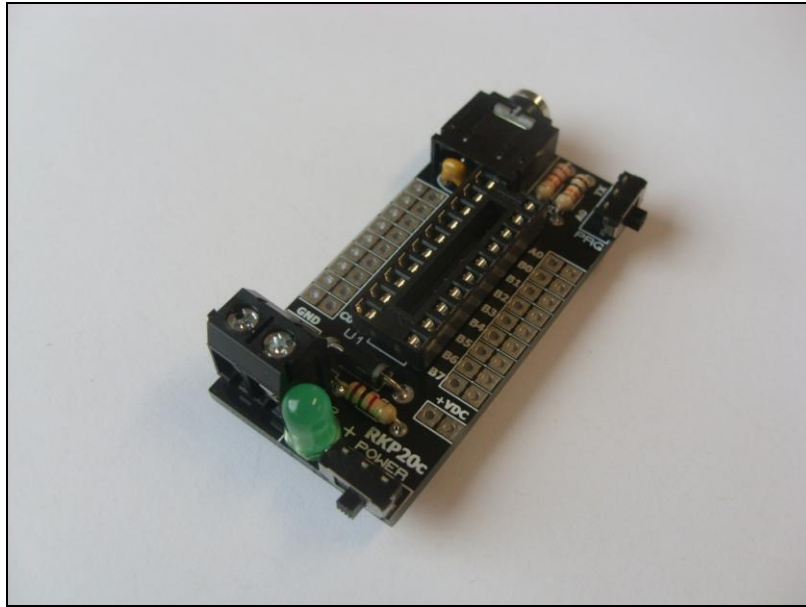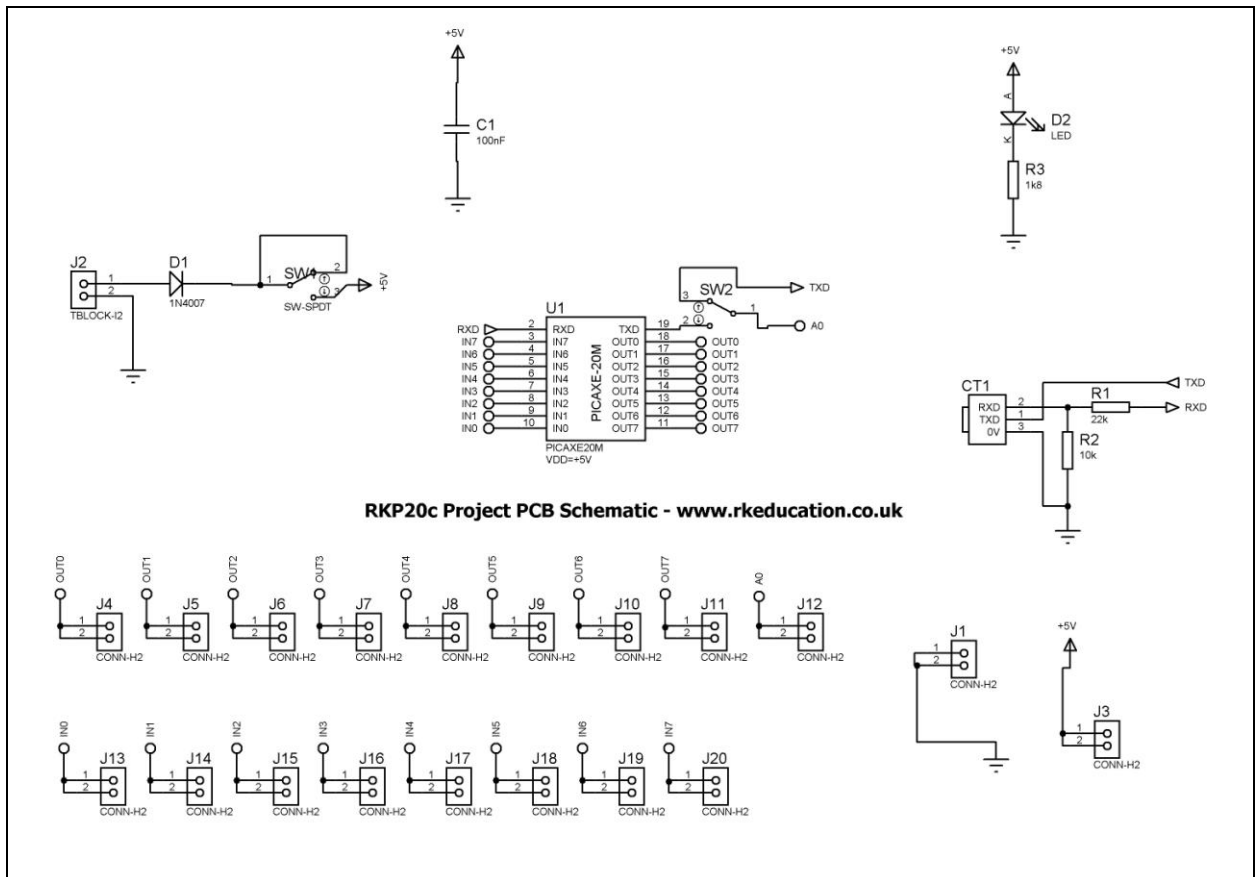# 70-9125 RKP20C Compact Project PCB Kit Components List and Instructions

Constructed PCB

Schematic Diagram

Description

The RKP20C compact project PCB has been designed to use PIC microcontrollers such as PICAXE and Genie.

- 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 and LED power indicator

Component List

C1 – 100nF multilayer ceramic capacitor
CT1 – PCB mount 3.5mm stereo connector
D1 – 1N4007
D2 - 3mm green LED for power indicator
J2 – 2 way 5mm pitch terminal block for power supply
R1 – 22kΩ ¼ watt resistor (red red orange)
R2 – 10kΩ ¼ watt resistor (brown black orange)
R3 – 1kΩ ¼ watt resistor (brown, black, red)
SW1, SW2 – Ultra miniature slide switch for power switch
U1 – 18 way DIP socket with microcontroller e.g. Genie

Instructions

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

Connecting Power

The power is connecting the terminal block J2, 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 to the right of J2.

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 downloaded 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. 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 are 2 0V on the left and 2 +VE on the right.
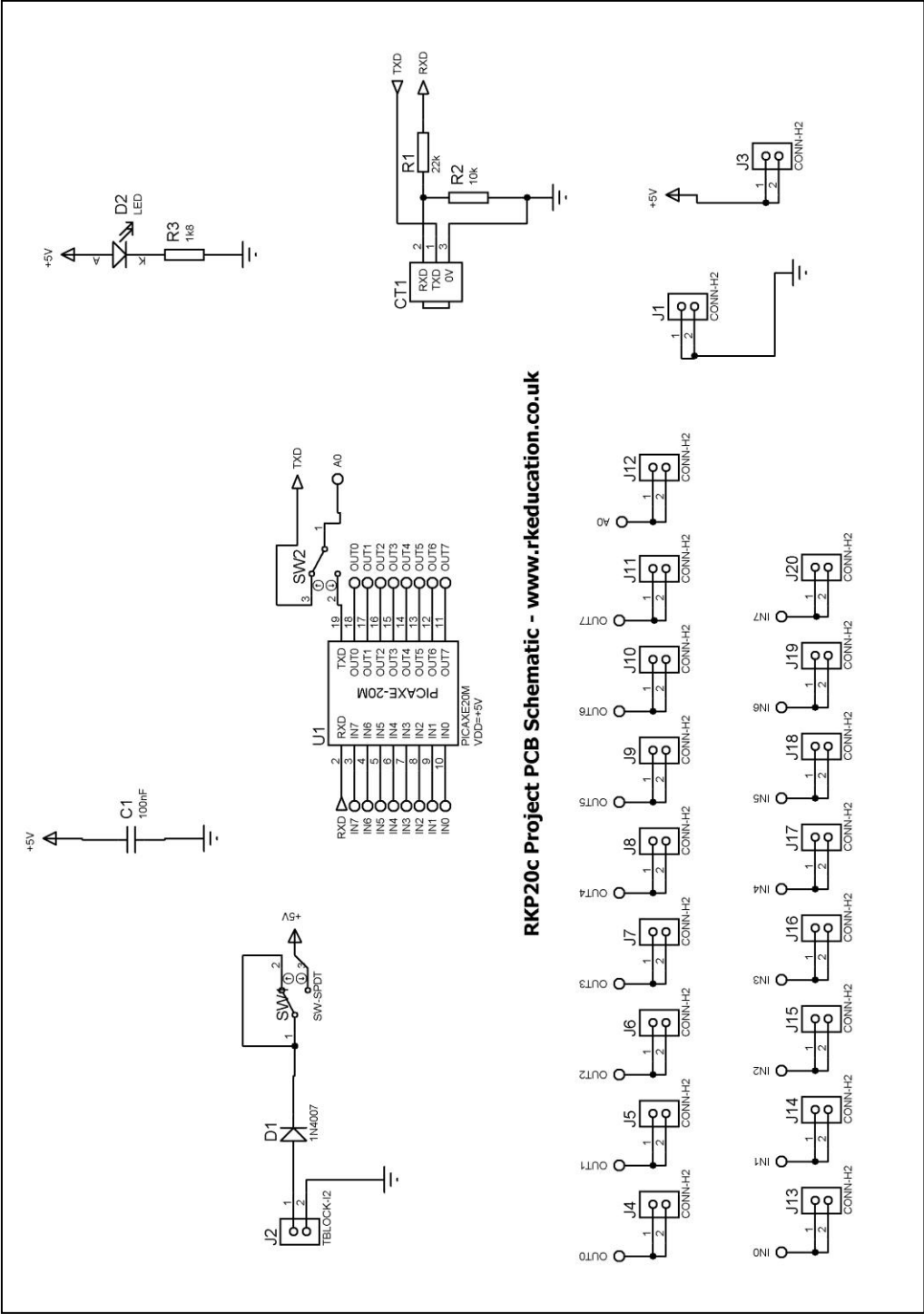
RKP20c Project PCB Schematic – www.rkeducation.co.uk

Version 1: 18Feb15