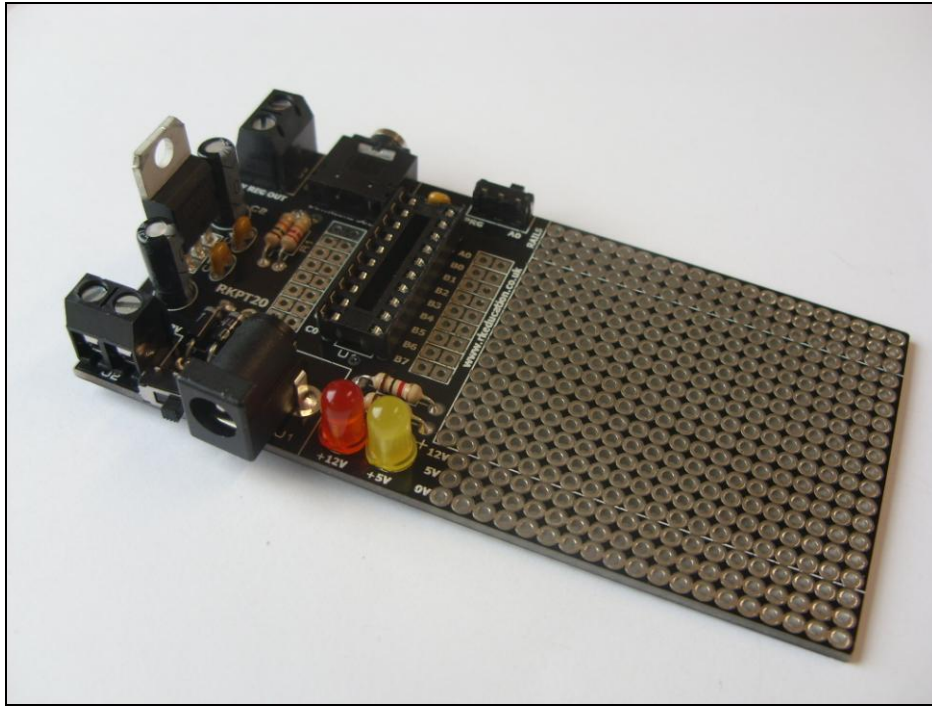
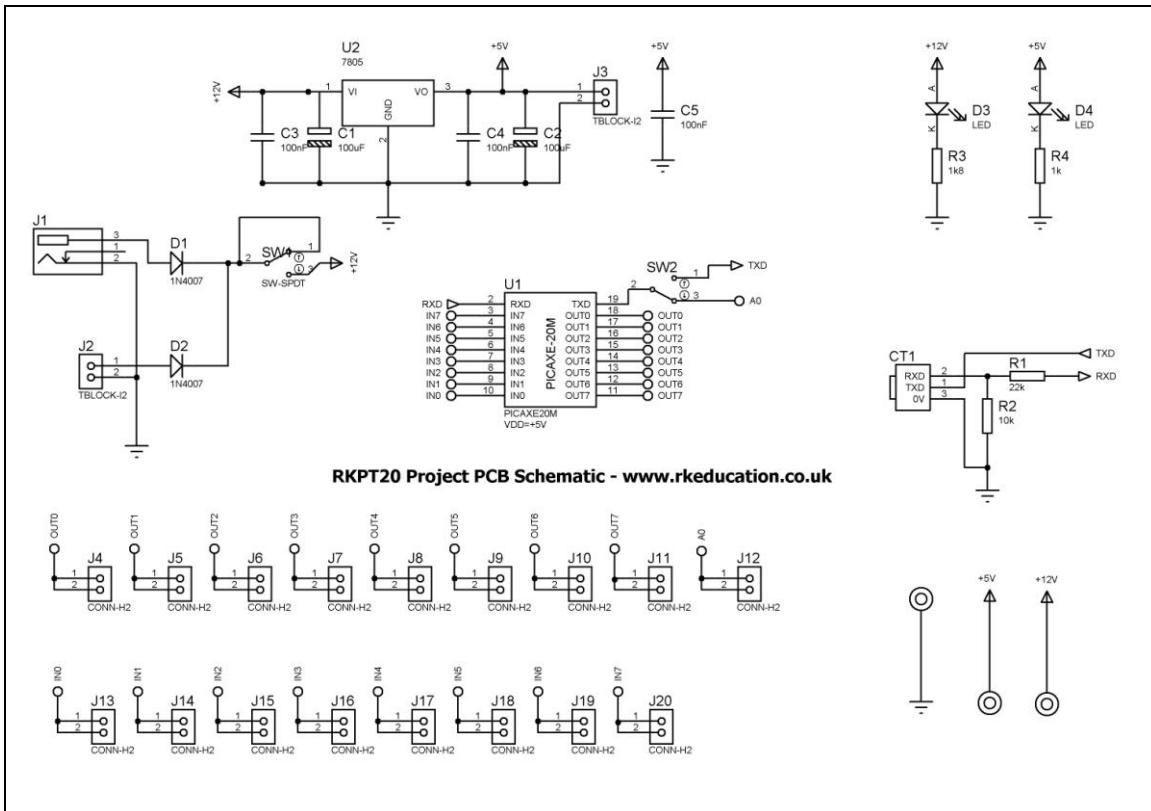


RKPT20 Component List and Instructions



Constructed PCB



Schematic Diagram

Description

The RKPT20 prototype project PCB has been designed to use PIC microcontrollers such as Genie and PICAXE

- Software is downloaded from a PC into the microcontroller via a 3.5mm stereo socket
- The clock reference is from a the microcontrollers internal resonator
- All input and output pins have a PTH
- A large prototyping area
- Power rails on the prototyping area
- Powered via a terminal block

Component List

CT1 – 3.5mm stereo socket

J1 – 2.1mm DC socket

J2, J3 – 2 way 5mm pitch terminal blocks

C1, C2 – 10uF 16VDC electrolytic capacitors

C3 ~ C5 – 100nF multilayer ceramic capacitor

D1, D2 – 1N4007

U1 – 20 way DIP socket with PIC microcontroller, e.g. Genie

U2 – 7805 TO220 voltage regulator

R1 – 22k (red red orange)

R2 – 10k (brown black orange)

R3 – 1k8 (brown grey red)

R4 – 1k (brown black red)

SW1, SW2 – ultra miniature slide switch

Instructions

This PCB is compatible with PICAXE and Genie. For instructions on using your chosen microcontroller please see the appropriate website. The switch to the right of IC1 is used to set OP0 as either an output or to programme IC1.

Connecting Power

The power is connecting via the terminal block J2 OR via the 2.1mm DC socket. The 0V input, usually black is marked clearly as is +12V which is usually red, a regulated 12VDC power supply should be used or a battery supply.

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 prototype area

Using the prototype area is simple and how it is used is dependent on what is being done. Access to all of the pins of U1 is gained by through holes near the pins of U1, simply connect using jumper wires. There are power rails around the prototype area and they are clearly marked.

Please visit our website

www.rkeducation.co.uk

If you have any comments or queries please email us at

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