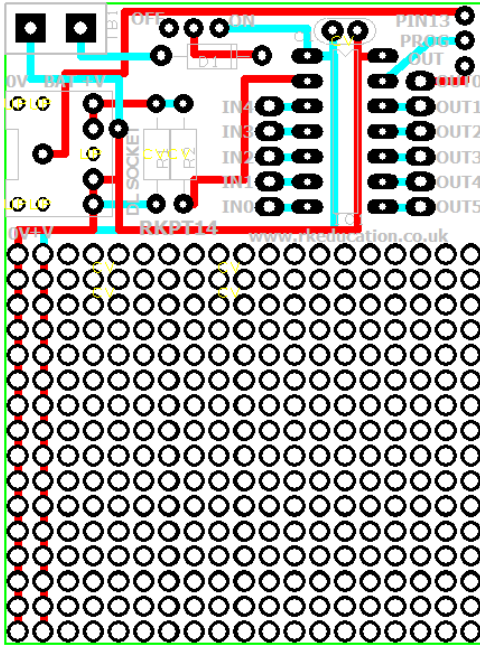
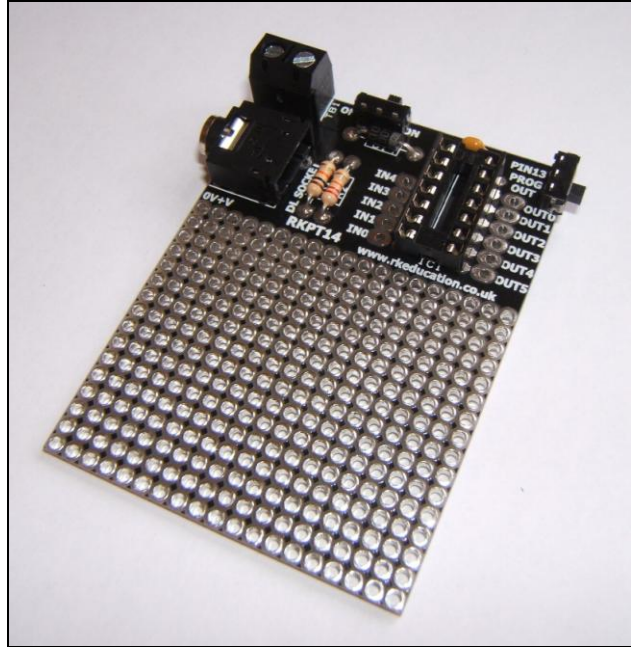


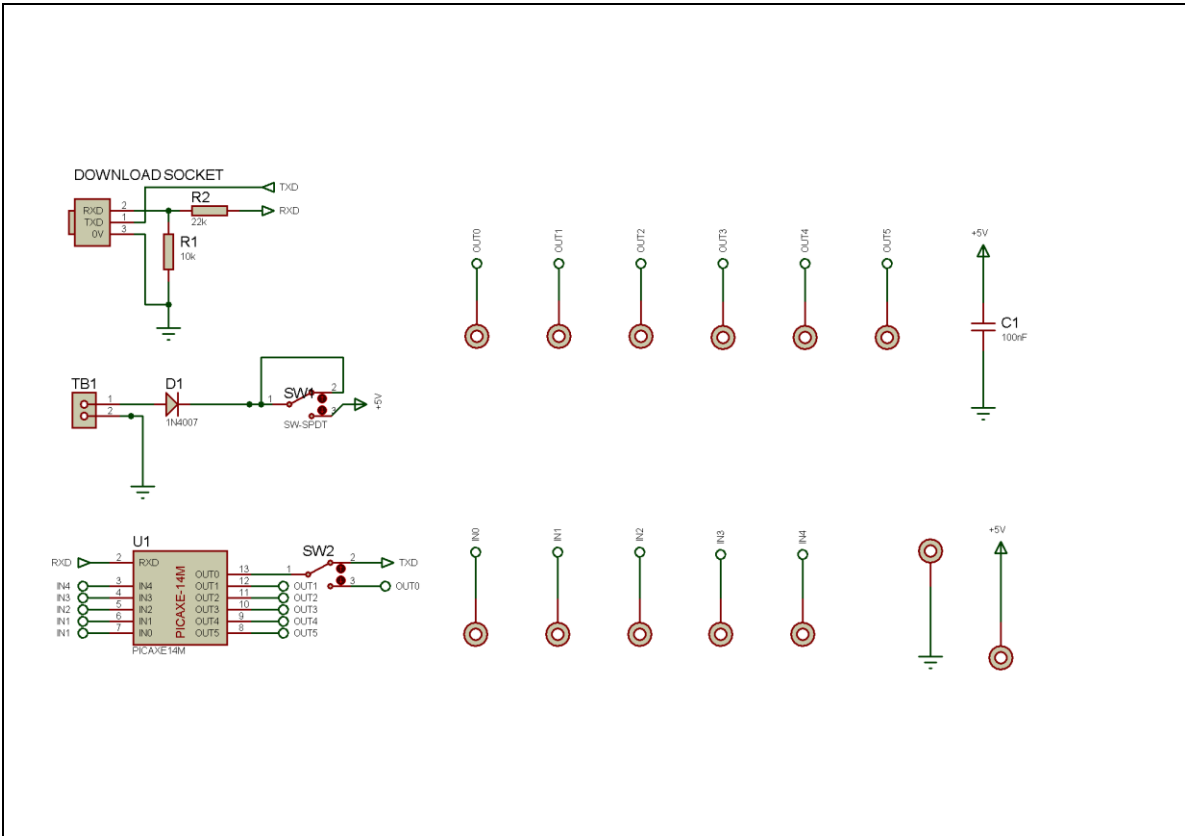
RKPT14 Component List and Instructions



PCB layout



Constructed PCB



Schematic Diagram

Description

The RKPT14 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 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

TB1 – 2 way 5mm pitch terminal block for power supply

C1 – 100nF multilayer ceramic capacitor

D1 – 1N4007

IC1 – 14 way DIP socket with PIC microcontroller e.g. Genie

R1 – 10k (brown black orange)

R2 – 22k (red red orange)

DL SOCKET – PCB mount 3.5mm stereo connector

Ultra miniature slide switches for power switch and program OP0 selector

Instructions

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 the terminal block, the 0V input, usually black is marked clearly as is +V which is usually red, a regulated 6VDC power supply should be used or a 6VDC battery supply.

A power switch has been included and is above IC1.

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, 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 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 IC1 is gained by through holes near the pins of IC1, simply connect using jumper wires. The 2 rows to the left of the prototyping area are connected to 0V and +V and are clearly marked on the PCB.

Please visit our website

www.rkeducation.co.uk

If you have any comments or queries please email us at

technical@rkeducation.co.uk

