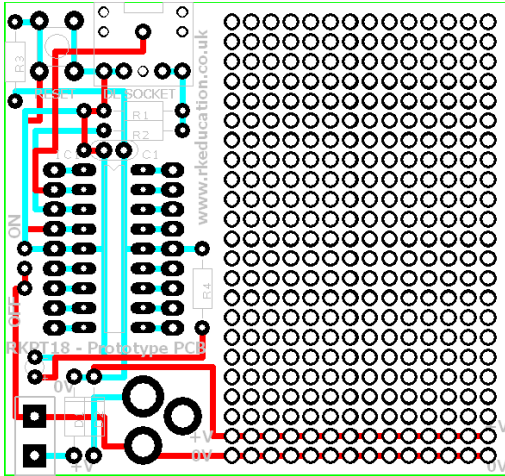
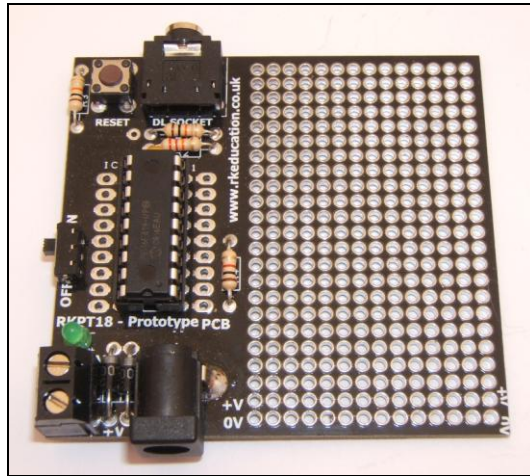


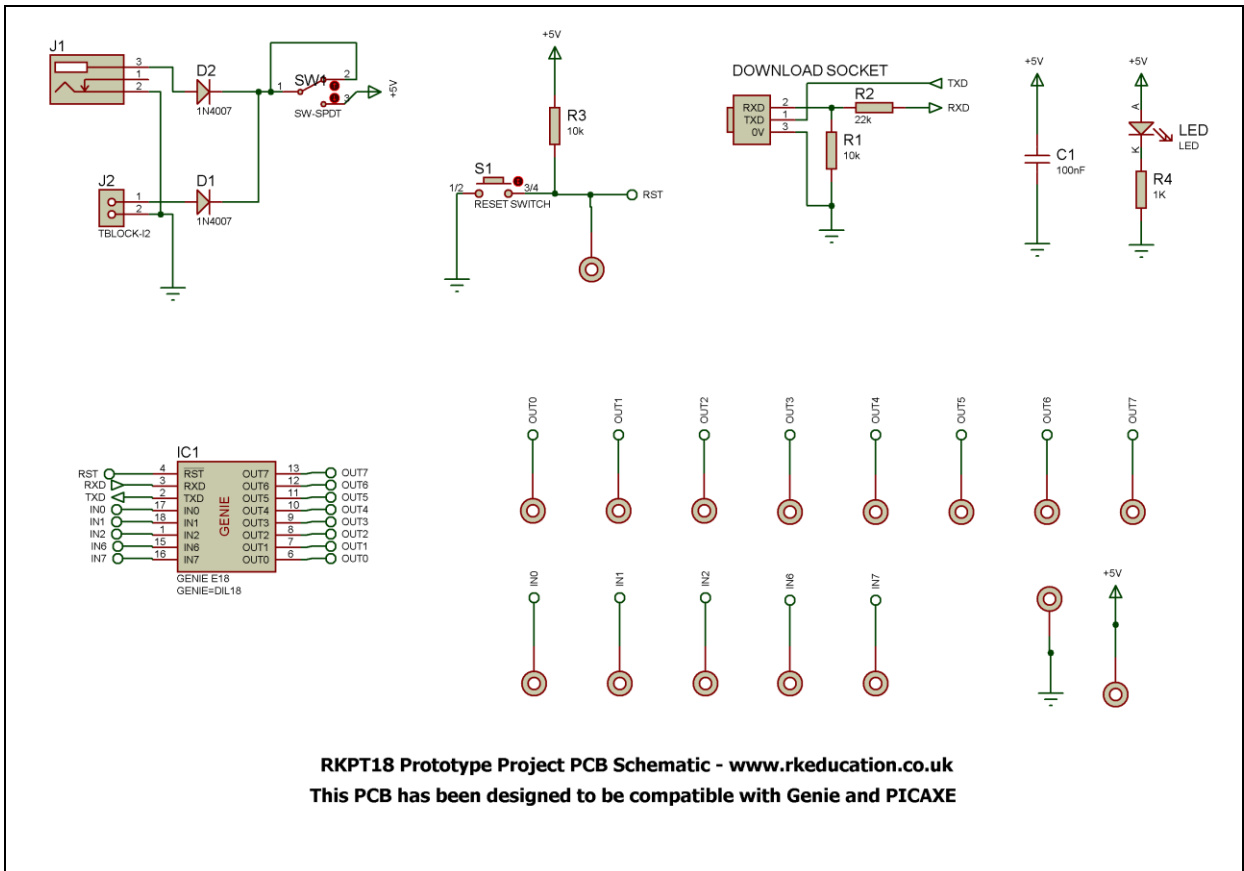
# RKPT18 Component List and Instructions



PCB layout



Constructed PCB



Schematic Diagram

RKPT18 Prototype Project PCB Schematic - www.rkeducation.co.uk  
This PCB has been designed to be compatible with Genie and PICAXE

## Description

The RKPT18 prototype project PCB has been designed to use PIC microcontrollers such as the Genie or 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
- Power a terminal block or DC power socket
- Power switch and LED power indicator

## Component List

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

C1 – 100nF multilayer ceramic capacitor

D1 & D2 – 1N4007

IC1 – 18 way DIP socket with microcontroller e.g. Genie

R1 & R3 – 10k (brown black orange)

R2 – 22k (red red orange)

R4 – 1k (brown, black, red)

RESET – PCB mounting tactile switch

DL SOCKET – PCB mount 3.5mm stereo connector

3mm green LED for power indicator

Ultra miniature slide switch for power switch

## Instructions

For instructions on using your chosen microcontroller please see the appropriate website. The PIC in the picture below is a Genie.

### 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. Power can also be inputted from a regulated +6 VDC supply via the DC power socket. The maximum recommended voltage for a PIC is 5.5VDC, the diode in series with the power switch reduces the power supply by approx. 0.7VDC.

A power switch has been included and is to the left of IC1.

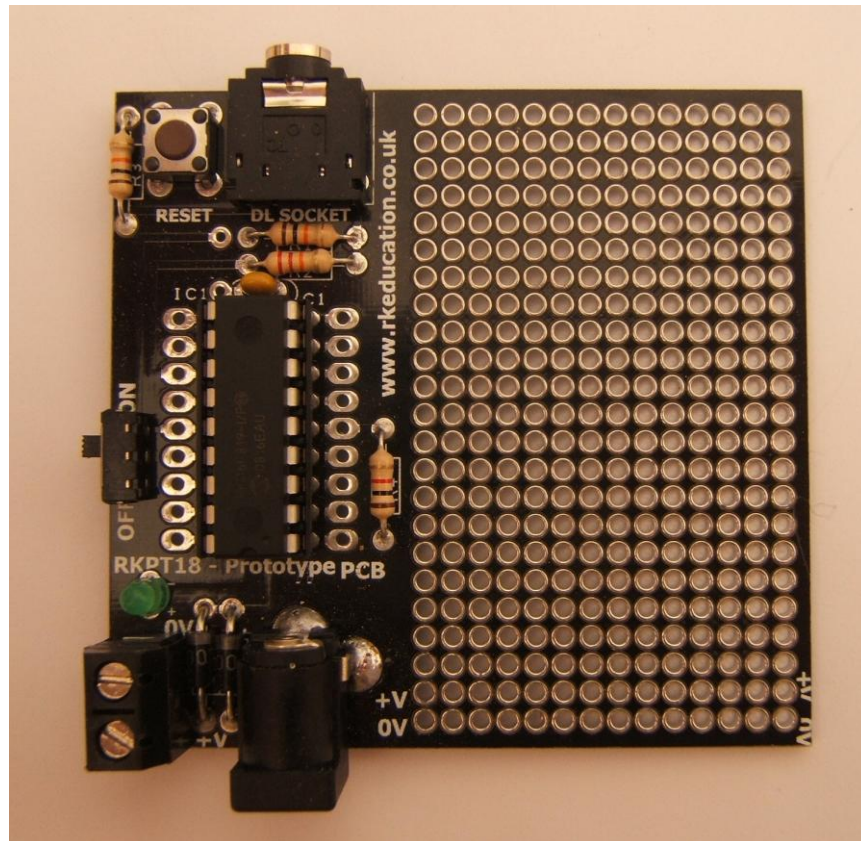
### Downloading software

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. 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 bottom 2 rows of the prototyping area are connected to 0V and +V and are clearly marked on the PCB.

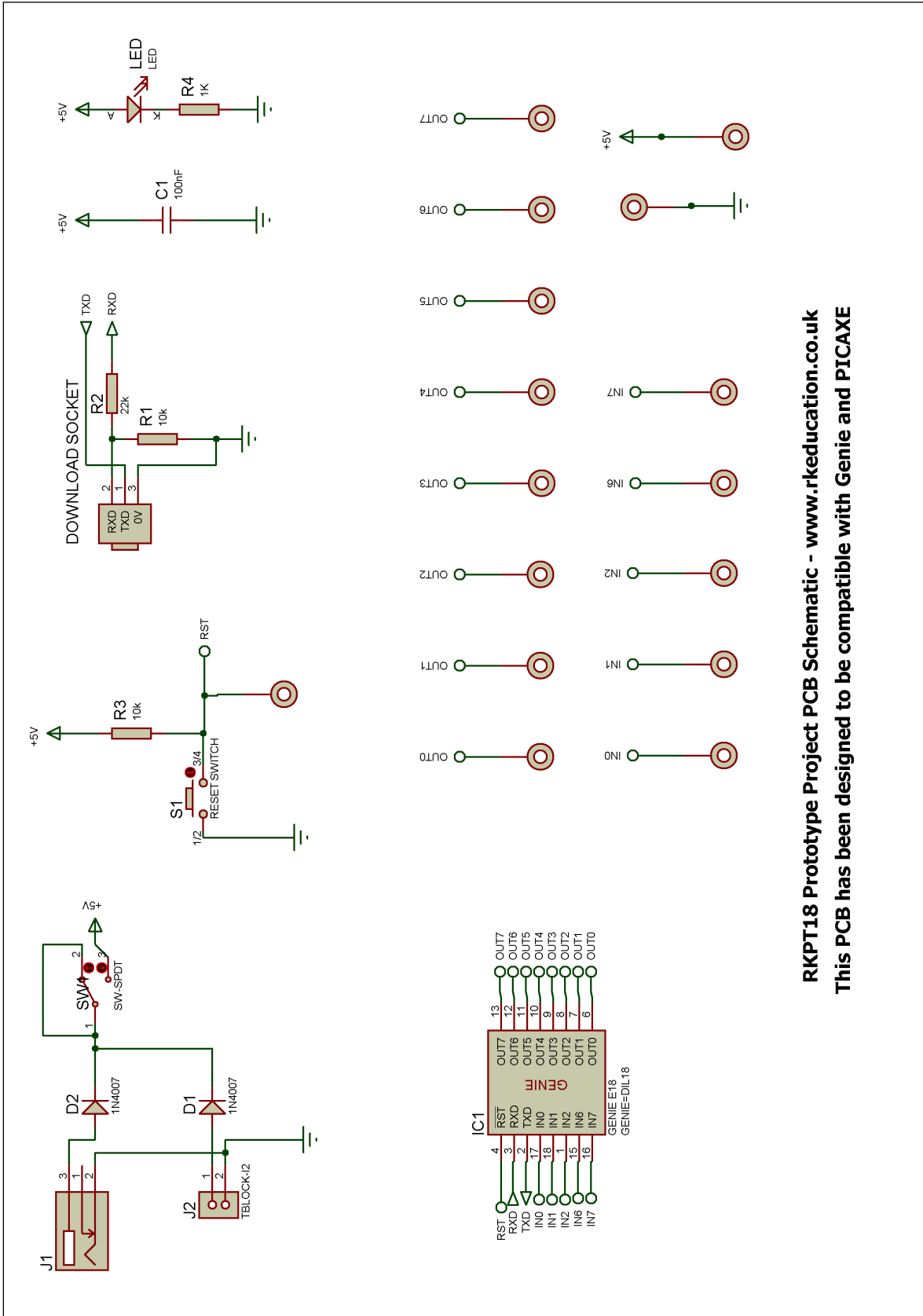


Please visit our website

[www.rkeducation.co.uk](http://www.rkeducation.co.uk)

If you have any comments or queries please email us at

[technical@rkeducation.co.uk](mailto:technical@rkeducation.co.uk)



**RKPT18 Prototype Project PCB Schematic - [www.rkeducation.co.uk](http://www.rkeducation.co.uk)**  
**This PCB has been designed to be compatible with Genie and PICAXE**