

THE SCRATCH PATCH



Scratch Controlling GPIO

This month's article intends to make it as SIMPLE AS PI to get up and running with GPIO in Scratch and allow your Raspberry Pi to control some lights and respond to switches and sensors.

Whilst the Raspberry Pi is a great tool for the creation of software, using languages such as Scratch, Python, C etc., the best way to make it really come alive and to add even more enjoyment to this cheap, credit card sized computer is to start playing around with hardware hacking and physical computing. This involves using the Raspberry Pi to control things like LEDs, and respond to switches and sensors. More often than not it also includes knowledge and learning of both hardware and software in a very interesting practical environment – not just coding for the sake of coding but, for example, creating robots and programming them to do cool things!

This article is based on a post on the Cymplecy blog by Simon Walters (<http://wp.me/p2C0q1-27>), a primary school ICT teaching assistant and general Scratch guru!

Minimum Requirements – a Raspberry Pi with Raspbian installed and a working internet connection, a breadboard, some Light Emitting Diodes (LEDs), some resistors and some wire connectors. Total cost £5-£10 (not including the Pi).

How to get a Rapsberry Pi to control the GPIO Pins from Scratch

Your RaspberryPi needs to be connected to the internet to install the software but internet is not needed to run ScratchGPIO. Copy the text below (starting at sudo and ending at gpio.sh) and paste that into an LX Terminal window and run it to download the installer:

```
sudo wget http://db.tt/jCIVXBJE -O /boot/install_scratch_gpio.sh
```

And then type, and run: `sudo /boot/install_scratch_gpio.sh`