Energenie Radio controlled sockets

Ben Everard decided against powering his latest project from a lightning rod attached to the clock tower; instead he's using one of these.

DATA

Web
https://energenie4u.co.uk
Developer
Energenie
Price
£19.99

It's easy to use the GPIO pins on the Raspberry pi to switch low voltage devices on and off. Even components that need more current than the pins can provide can be handled using a motor driver, optical isolator or relay. This is easy to set up and not likely to damage your Pi. However, switching mains voltage is a different case entirely.

When you're dealing with mains voltage at 240V (OK, fine, 230V with a tolerance of +10% or -6%. Thanks EU!), things begin to get a little more tricky. Not only do you need more capable components to switch this level of voltage, they need to be driven by the low voltages that the Pi can supply. It also becomes more dangerous, as any mis-wiring could lead to hardware damage or worse.

These radio controlled sockets are a great solution to the problem. There's no wiring, so it's no more dangerous to use than using electrical appliances normally, and the Pi is air-gapped so there's no risk to that hardware. The manufacturer claims they can handle 13A, and while we had no problem switching high wattage devices, we weren't able to test them at the top of that range.

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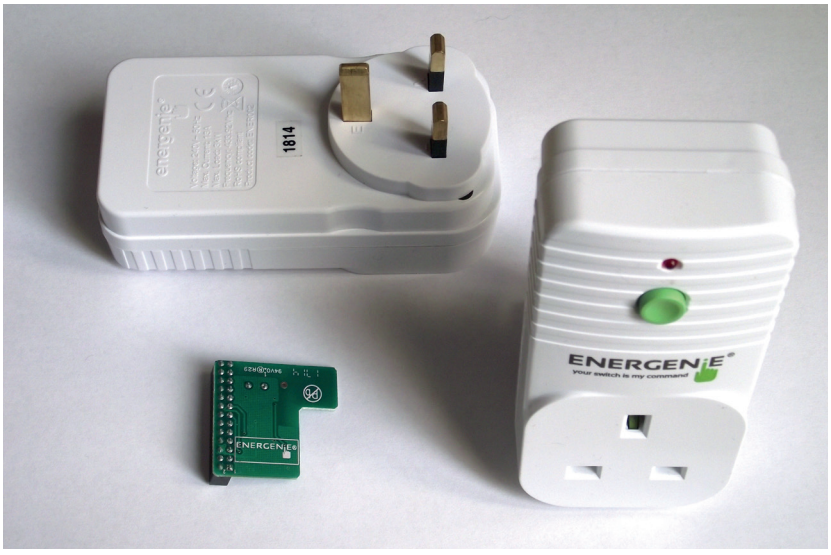
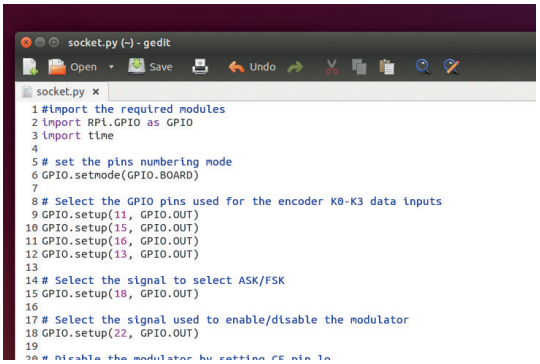
The boxed set is a single Pi expansion board controller, and two radio controlled sockets (additional sockets are sold separately, and it's possible to use up to four sockets with a single expansion board). The expansion board works with every current model of the Pi (A, B and B+).

The protocol for controlling the expansion board is explained on the project's website (**https://energenie4u.co.uk/index.php/catalogue/product/ENER002-2PI**). It doesn't require any specialist software other than what's needed for controlling the GPIO pins. There is some example code in Python using the RPi.GPIO module, but it should be trivial to port this to any other language. For that matter, we wouldn't envisage any problems controlling the expansion board from any 3.3V controller, but we haven't tried it with anything other than the Pi.



The board and sockets are also sold separately for £9.99 and £12.99 respectively.



The example code is well commented, so it's easy to see what all the GPIO operations are for.

Programmers only need apply

There isn't any specific software (either graphical or command line) provided other than a simple example, so it's only suitable for programmers. That said, you could simply copy and paste bits from the example program, so you don't need much programming experience to make it work. Setting the hardware up was simply a case of pressing a button (the only button) on the socket before sending a command.

The listed range is 30m in open space. Some people have reported being able to extend the range by soldering an additional antenna on, but this is not officially supported.

These sockets really couldn't be easier to use for programmers, and while it would be nice to have a graphical application to make it really simple to get started, it's hard to see how this would be useful beyond demonstrating the capabilities. The hardware is really designed for letting you control things with scripts. At the simplest level, this could be turning lamps on or off, but really, it could be anything.

LINUX VOICE VERDICT

The easiest way of switching mains voltage from a computer, but only for those of us in the UK.

★★★★½