Steampunk Goggles

A Project to add lighting effects to a pair of copper goggles.

by
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Design Goals

- Green glow that fades in/out
- Fit entirely within goggles
- Minimal circuit components
- Battery to run LEDs for > 1 hour
- Optional Choice of colours

Lights

- Surface Mount LEDs

- Bi-colour Red/Green

- Low current / High brightness

- 4 per eye, giving 4 channels

- 50p each

Controller

- Microchip PIC12F629
- 8 pin, 2.0v – 5.5v
- 4MHz with no external components
- 1024 word program flash, 64 bytes RAM
- 6 I/O pins, source/sink 25mA each.
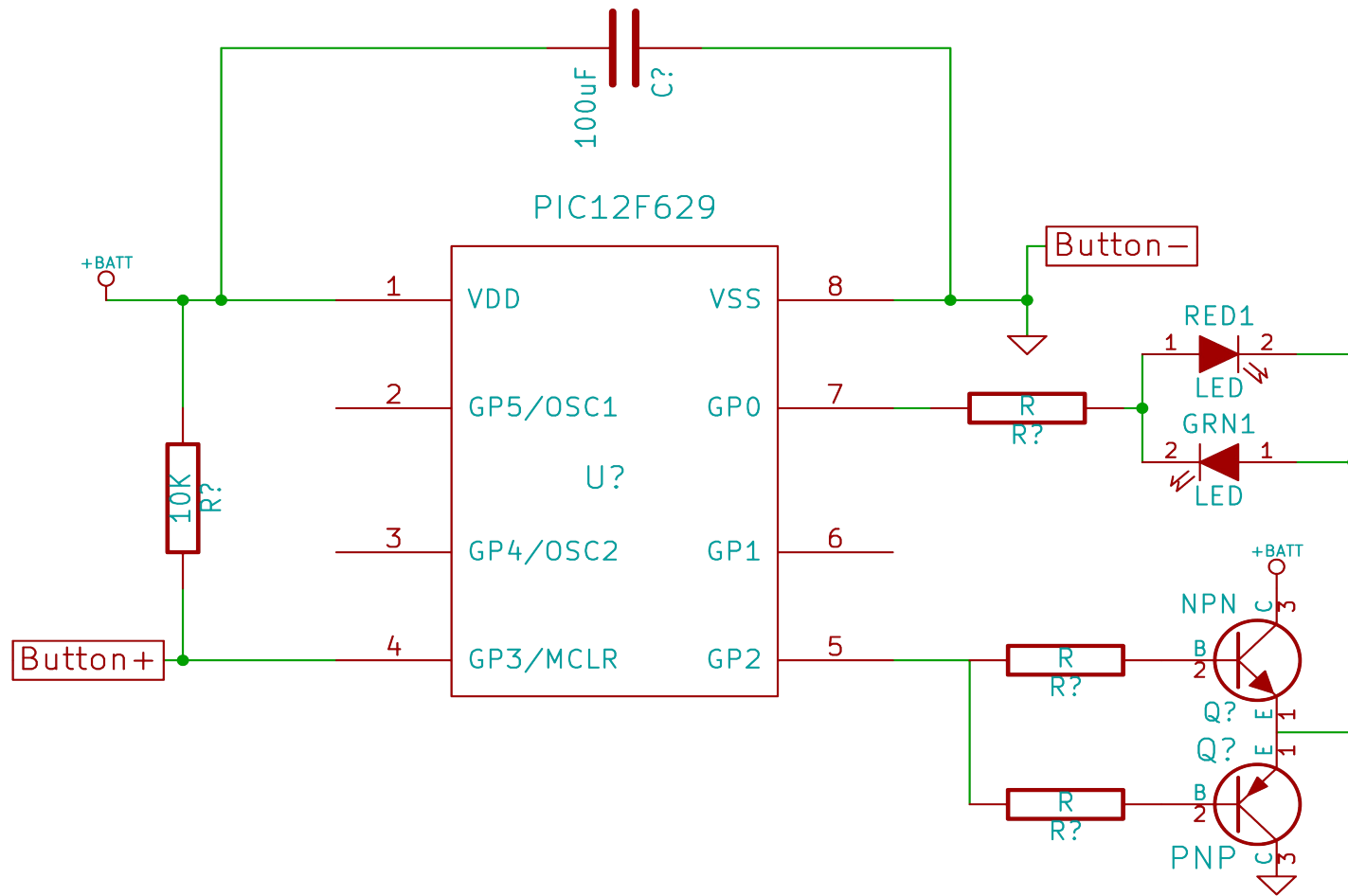- 97p each from Farnell

Power Supply

- Single Cell Lithium Polymer
- 3.7v nominal
- 160mAh, 25 C constant discharge
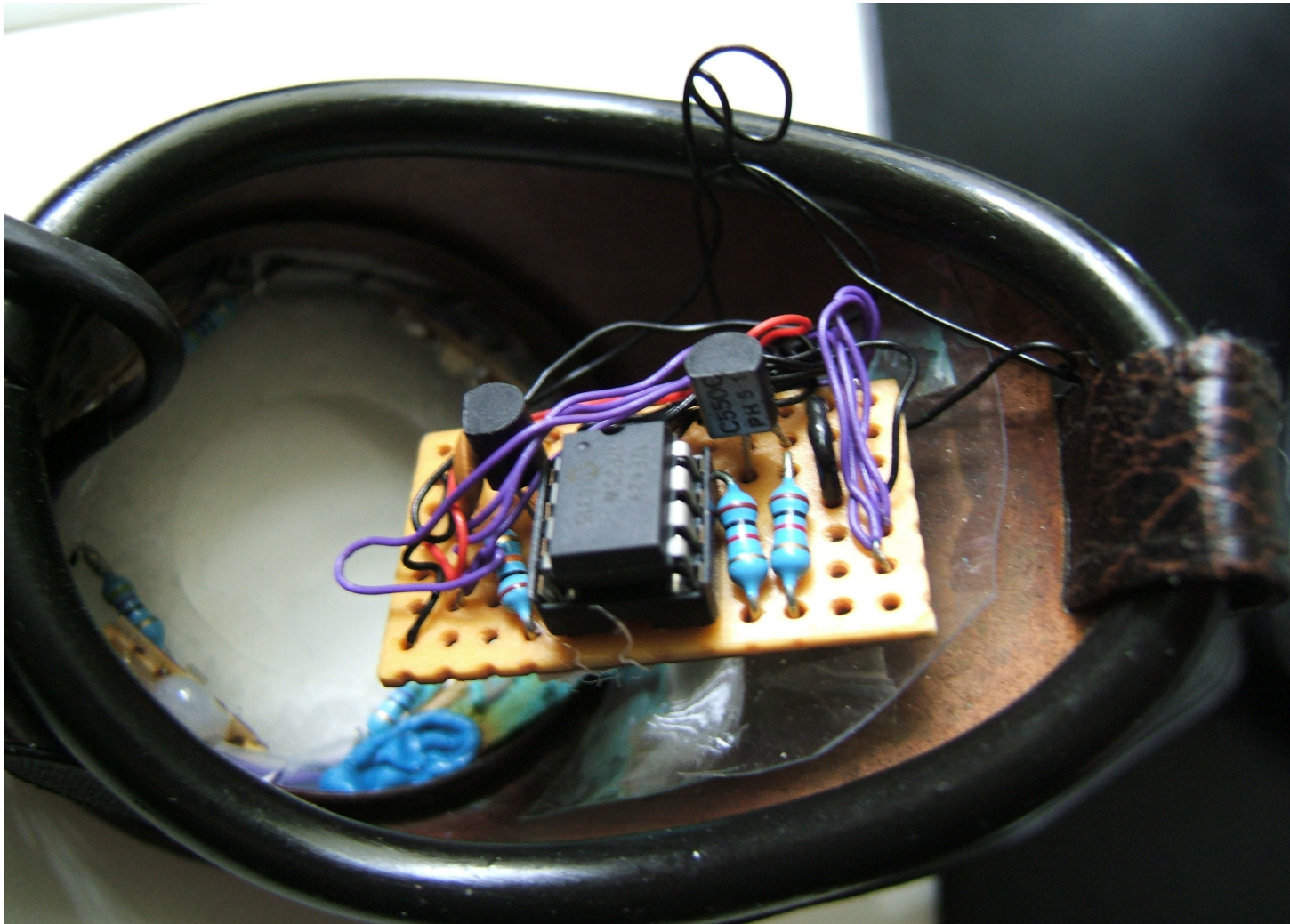- 39 x 12 x 8mm 4.5g
- £2.50 each

Design

- 4 channels
- Totem-Pole common
- PWM brightness control
- Push button interface

Schematic

Finished Circuit

What's next...?