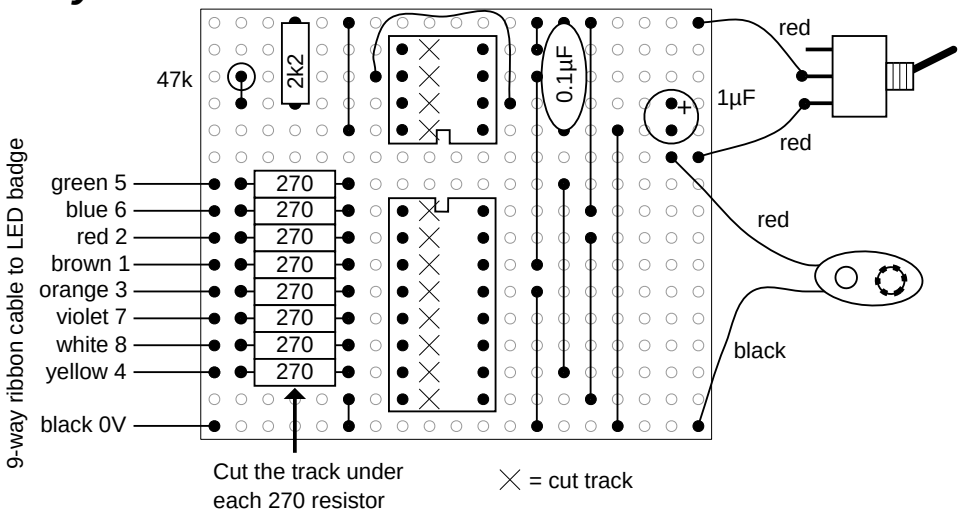
Heart-shaped Badge Project

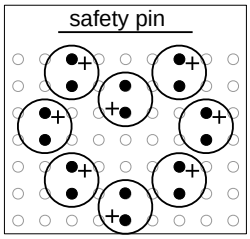
The badge consists of eight LEDs arranged in the shape of a heart. One LED is lit at a time and this ‘chases’ round the shape. It would be easy to adapt this project to create other shapes with the 8 LEDs.

Parts Required

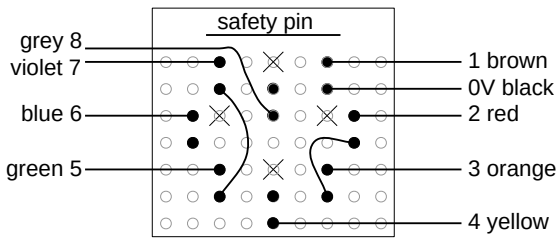
- resistors: 2.2k, 47k, 270 ×8
- capacitors: 0.1µF, 1µF 16V radial
- red LEDs ×8
- 555 timer IC
- safety pin to attach badge
- ribbon cable 9-way about 1 metre (to connect badge to main circuit)
- stripboard: 16 rows × 19 holes for circuit, 10 rows × 9 holes for badge
- 4017 counter IC
- DIL sockets for ICs: 8-pin, 16-pin
- on/off switch
- battery snap for 9V PP3

Stripboard Layouts



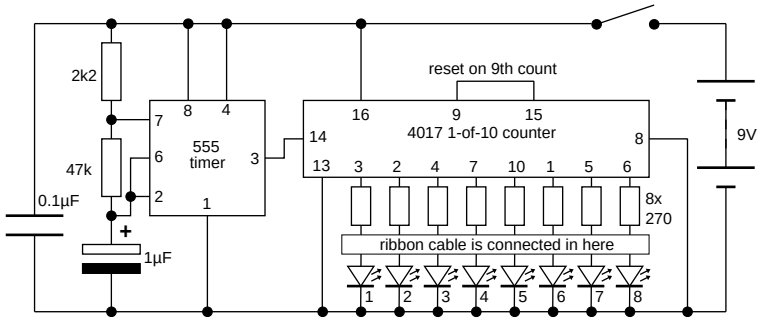


Arrange the 8 LEDs in a heart shape like this. Note that the two centre LEDs have their + (long) leads down, the other 6 LEDs have their long leads up.



Rear view of LED badge (solder side). Attach the ribbon cable wires directly to the LED leads (so they won't show on the front of the badge).

Circuit diagram



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A kit for this project is available from RSH Electronics