

# Flashing LED Project

**LED** stands for **L**ight **E**mitting **D**iode

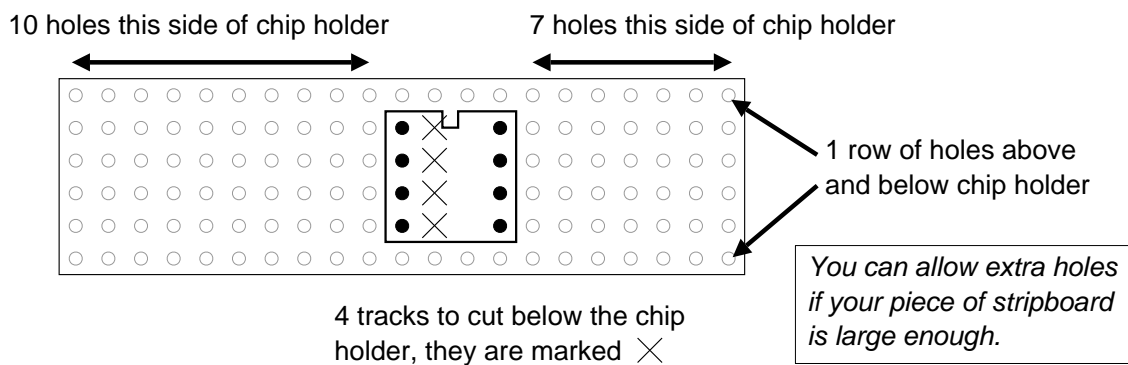
This project is designed as an introduction to soldering, identifying common components, using the resistor colour code and placing components correctly on stripboard. The LED flashes at about 3Hz (3 flashes per second).

## Parts Required

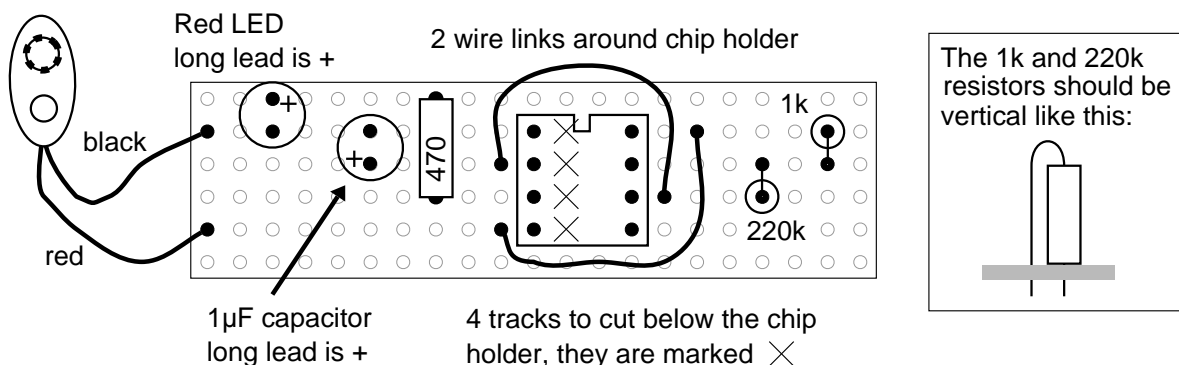
- resistors: 470, 1k, 220k
- capacitor: 1 $\mu$ F 16V radial
- red LED (or orange, yellow or green if you prefer!)
- 8-pin chip holder (a 'DIL socket') for the 555 chip
- 555 timer chip (IC)
- battery clip for 9V PP3
- stripboard: 6 rows  $\times$  21 holes

## Instructions

1. Solder the 8-pin chip holder in the correct place on the stripboard.
2. Break the 4 tracks under the chip holder with a track cutter tool. You can allow extra holes if your piece of stripboard is large enough.



3. Use the resistor colour code to identify the resistors which are marked with coloured bands to show their value.
4. Insert and solder the resistors in the correct position, they can be put in either way round, but you **must** line them up correctly with the chip holder.
5. Identify the other parts, then solder them in the **correct position** and the **right way round**. To help you identify the parts please see our page on soldering.



6. Solder the 2 wire links in place around the chip holder, it is easier to use plastic-coated **single-core** wire. (*The flexibility of stranded wire is not needed for connections like this and the strands can be difficult to push through the small hole*).
7. Finally insert the 555 timer chip and connect a battery!