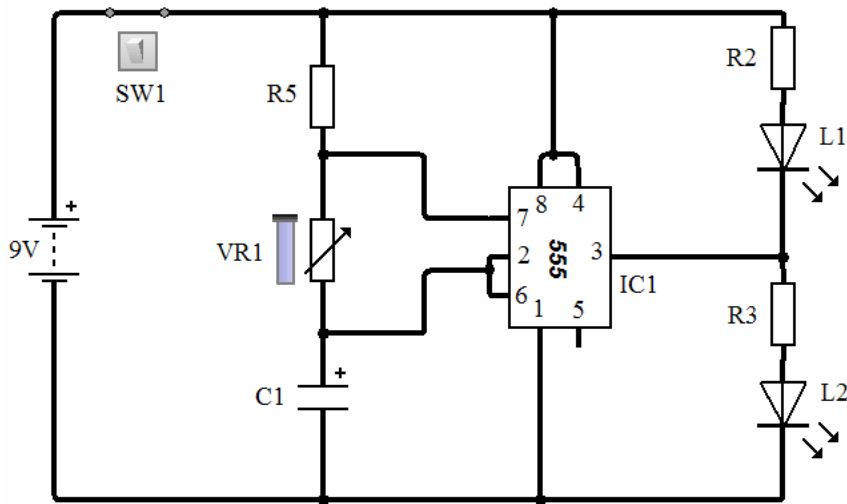


Theme: Safe Environment

Astable Circuits using the 555 Chip

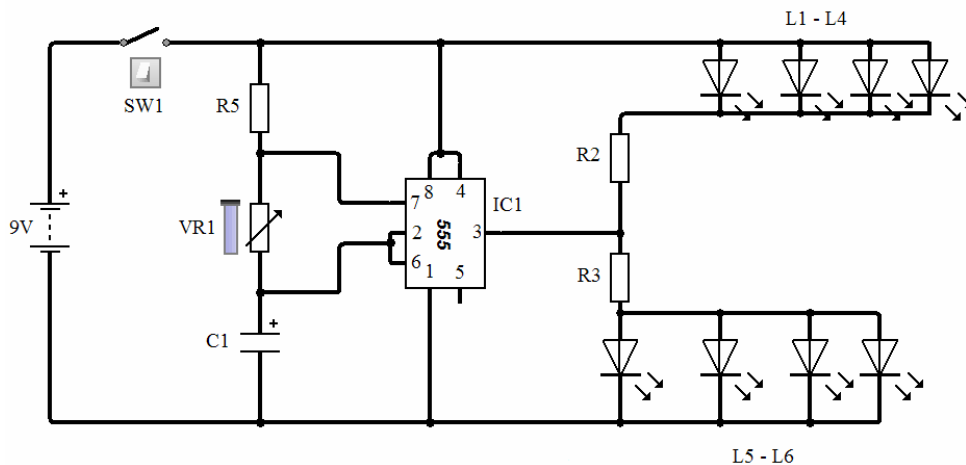
Flashing Lights – Hazard/warning/schools crossing



Components:

- | | |
|---------------|---------------------------------------|
| R2 = 470 ohms | SW1 = Toggle switch |
| R3 = 470 ohms | IC1 = 555 Microchip |
| R5 = 1k ohms | L1 = 1 LED on Horizontal line of LEDs |
| C1 = 100uF | L2 = 1 LED on 'L' shape line of LEDs |
| VR1 = 100k | |

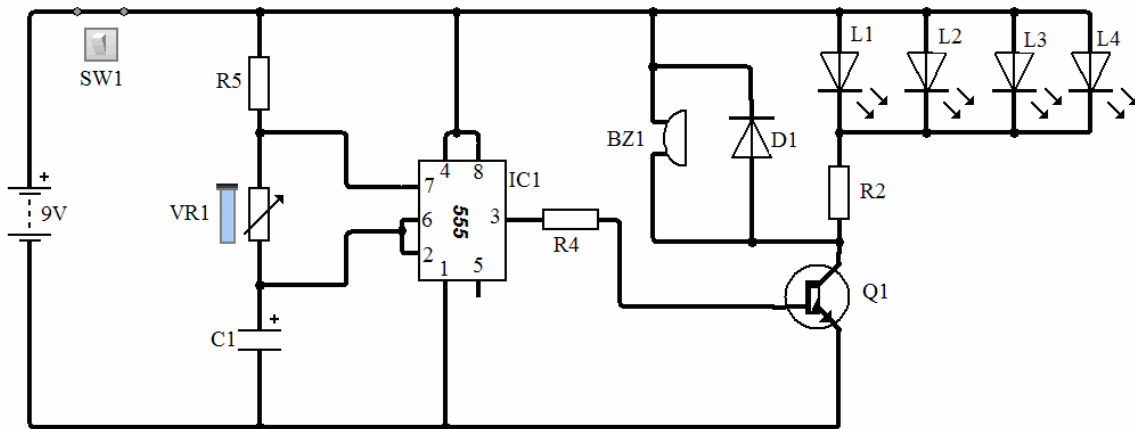
Set of 4 Flashing Lights



Components:

R2 = 100 ohms SW1 = Toggle switch
 R3 = 100 ohms IC1 = 555 Microchip
 R5 = 1k ohms L1 – L4 = Horizontal line of LEDs
 C1 = 10uF L5 – L6 = ‘L’ shape line of LEDs
 VR1 = 100k

4 Flashing LEDs and a Buzzer – alarm/lorry reversing
 (For sound only the LEDs can be removed)



Components:

R2 = 100 ohms C1 = 10uF
 R4 = 2200 ohms VR1 = 100k
 R5 = 1k ohms SW1 = Toggle switch
 D1 = 1N4148 IC1 = 555 Microchip
 Q1 = BC 108 L1 – L4 = Horizontal line of LEDs

Modifications to above circuits:

- Water Level Detector - replace SW1 with a float switch.
- Step Gradient Indicator – replace SW1 with a tilt switch.