

Basic Electronic Circuits Lab

(IEC-103)

Experiment-09

Objective

To implement astable multivibrator and alternating LED flasher using 555 Timer.

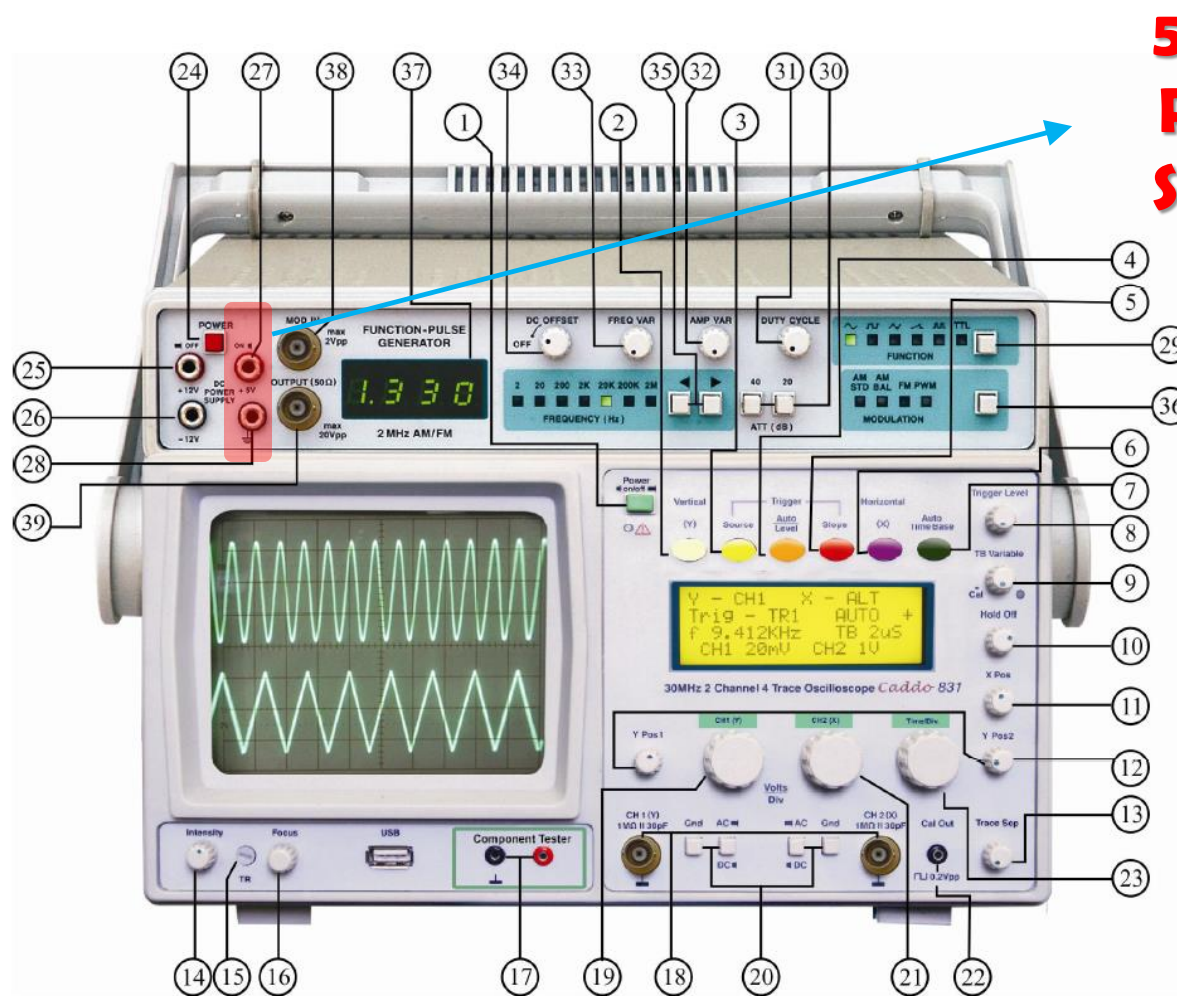
Components

- **LEDs (green and red), Resistances (1 K Ω , 10 K Ω , 220 Ω (2)), and Capacitors (0.1 μ F, 1 μ F 100 μ F, 220 μ F), 555 Timer IC.**
- **Breadboard**
- **Connecting wires**

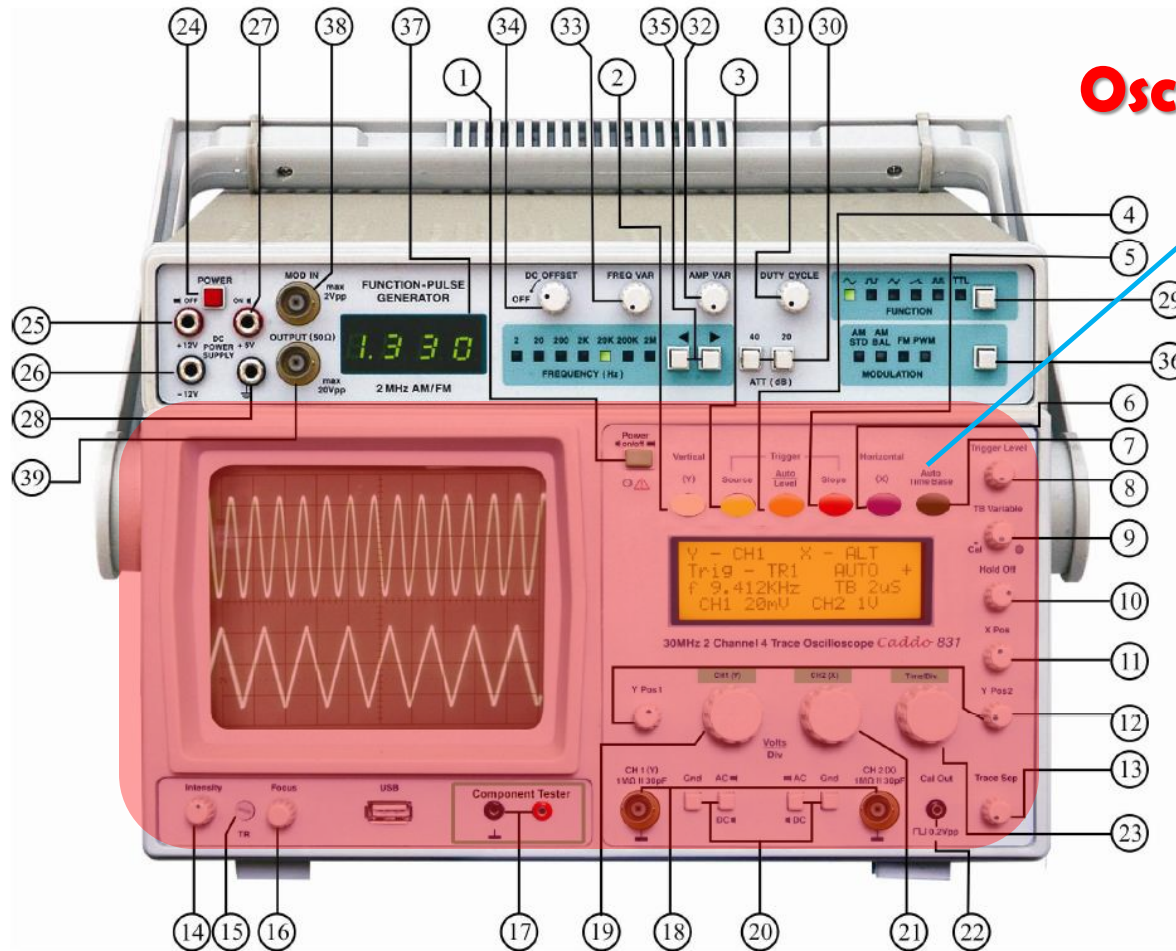
Equipment

- 5V **DC Power Supply**
- CRO **for output measurement.**

5V DC Power Supply

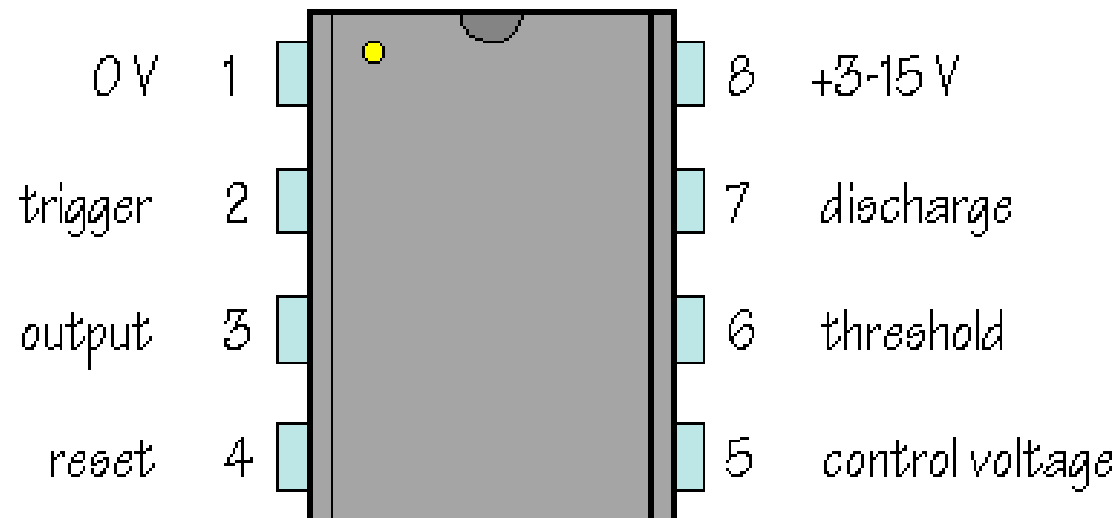


Oscilloscope

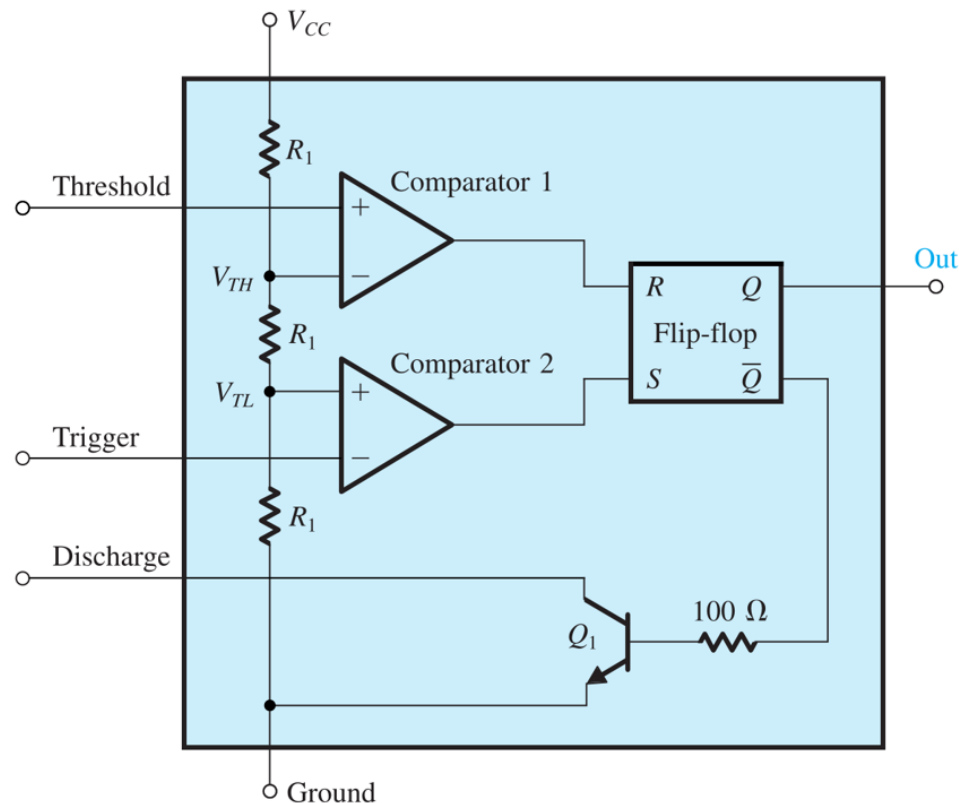


Oscilloscope

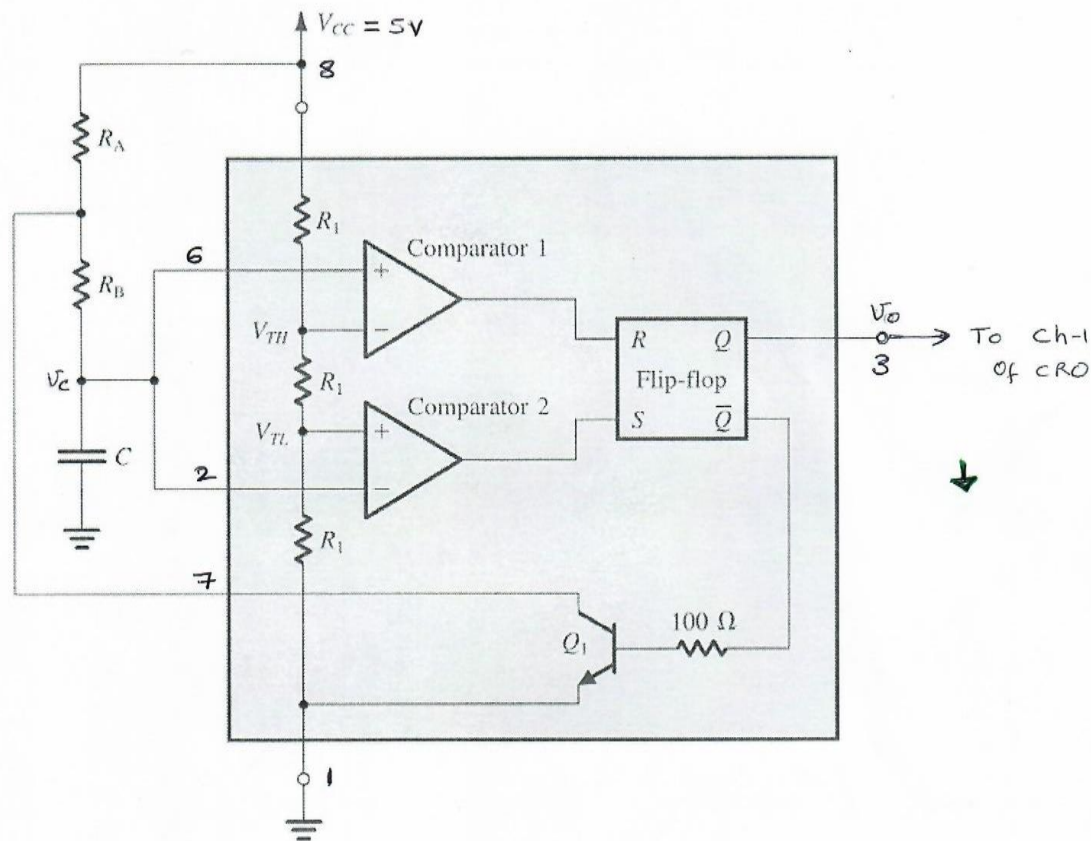
Pin Diagram of 555 Timer IC



Internal Circuit Diagram (555 IC)

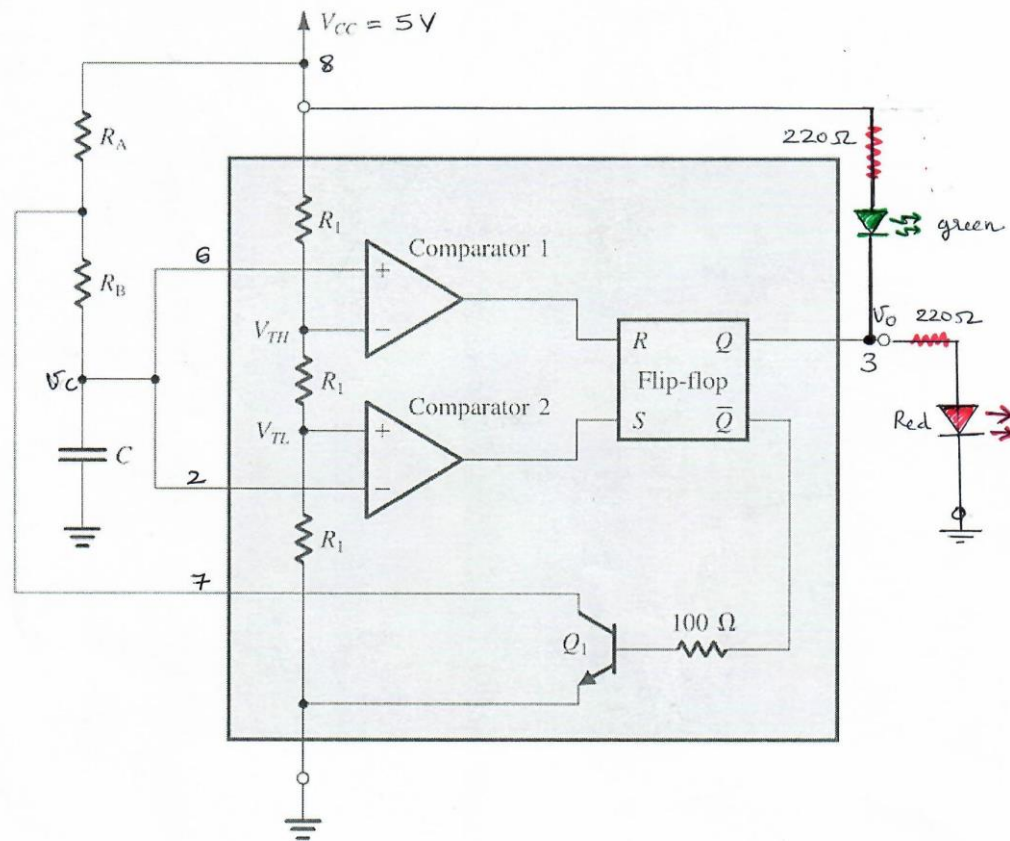


Astable Multivibrator



$$R_A = 1 \text{ K}\Omega, R_B = 10 \text{ K}\Omega, C = 0.1 \mu\text{F}, 1 \mu\text{F}$$

Alternating LED Flasher



$$R_A = 1 \text{ K}\Omega, R_B = 10 \text{ K}\Omega, C = 100 \text{ }\mu\text{F}, 220 \text{ }\mu\text{F}$$