

Unit-5

Lecture -1

555 Timer, Monostable Multivibrator

555 Timer

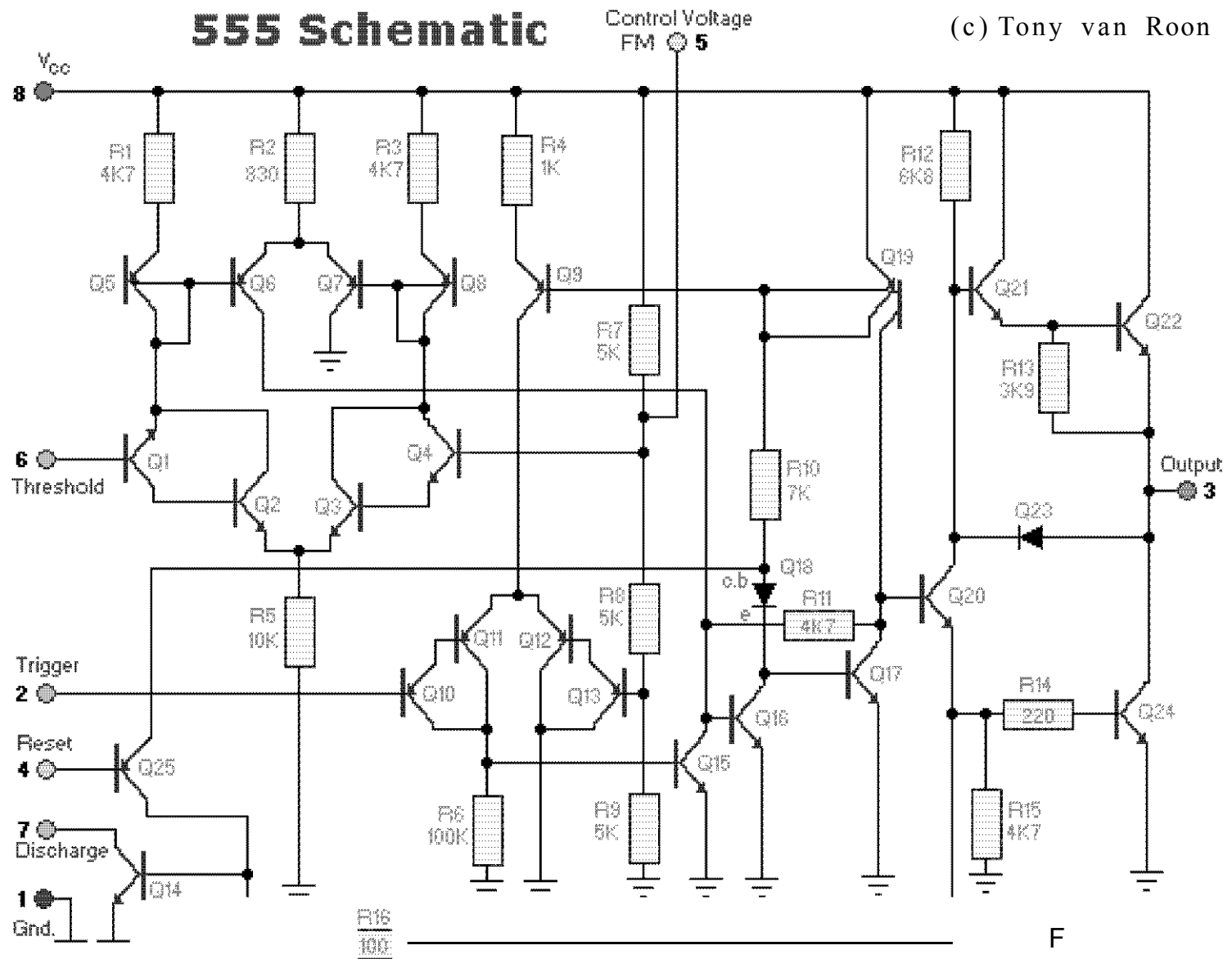
- What is the 555 Timer
- 555 schematic
- Pin Configurations
- Monostable Mode
- Astable Mode

What is the 555 Timer?

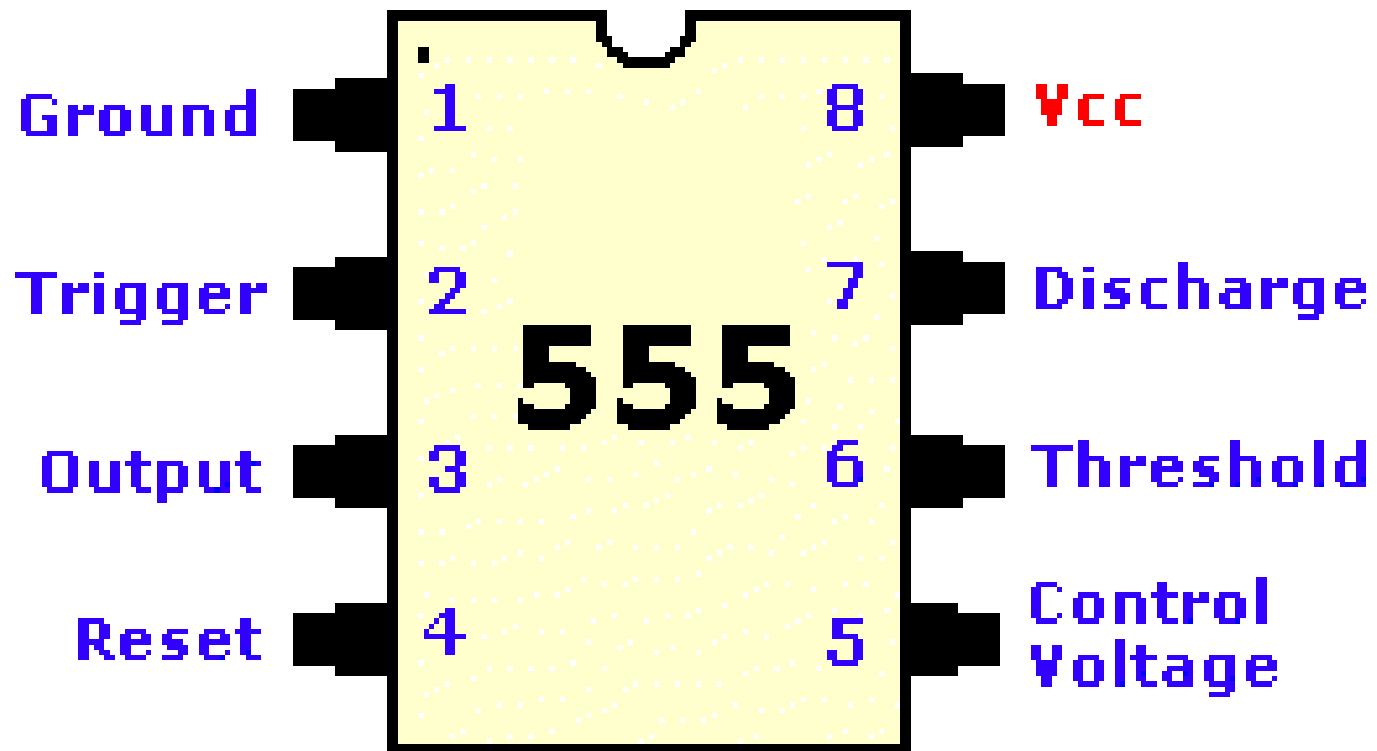
- Integrated Circuit
- Transistors, Diodes, Resistors
- Designed and invented in 1970 by Hans R. Camezind

555 Schematic

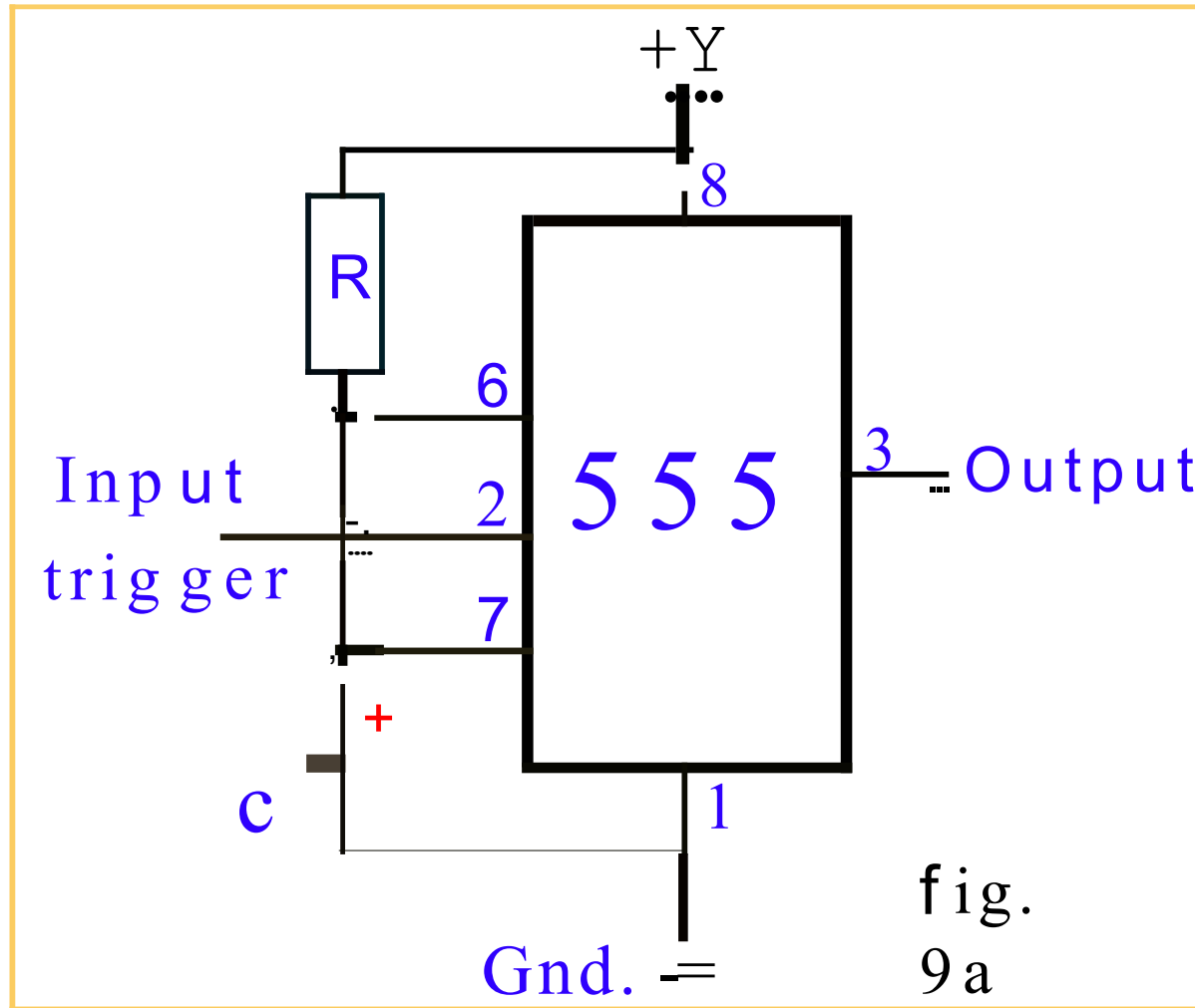
(c) Tony van Roon



Pin Configurations



Monostable Mode



Monostable Output Voltage

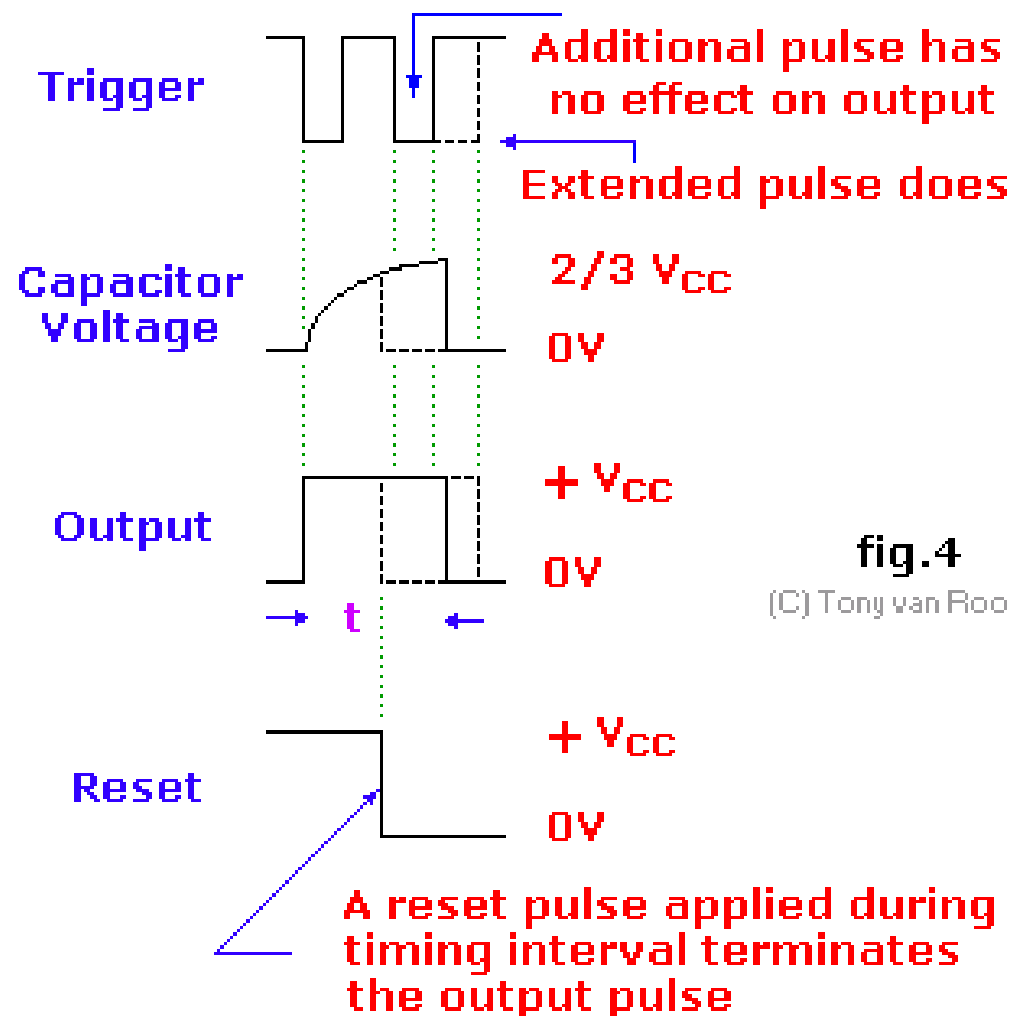


fig.4

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Monostable Characteristics

- Generates a single pulse of a fixed time duration each time it receives an input trigger pulse
- Length of pulse depends on when the capacitor reaches 66.6% V
- Length of pulse is given by:

$$t_p = 1.1 R C$$

Monostable Applications

- Turning a circuit or external component on / off for a specific length of time
- Generate delays
- Multiple pulses can be used to time and sequence other related applications