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Date: 07/09/2018

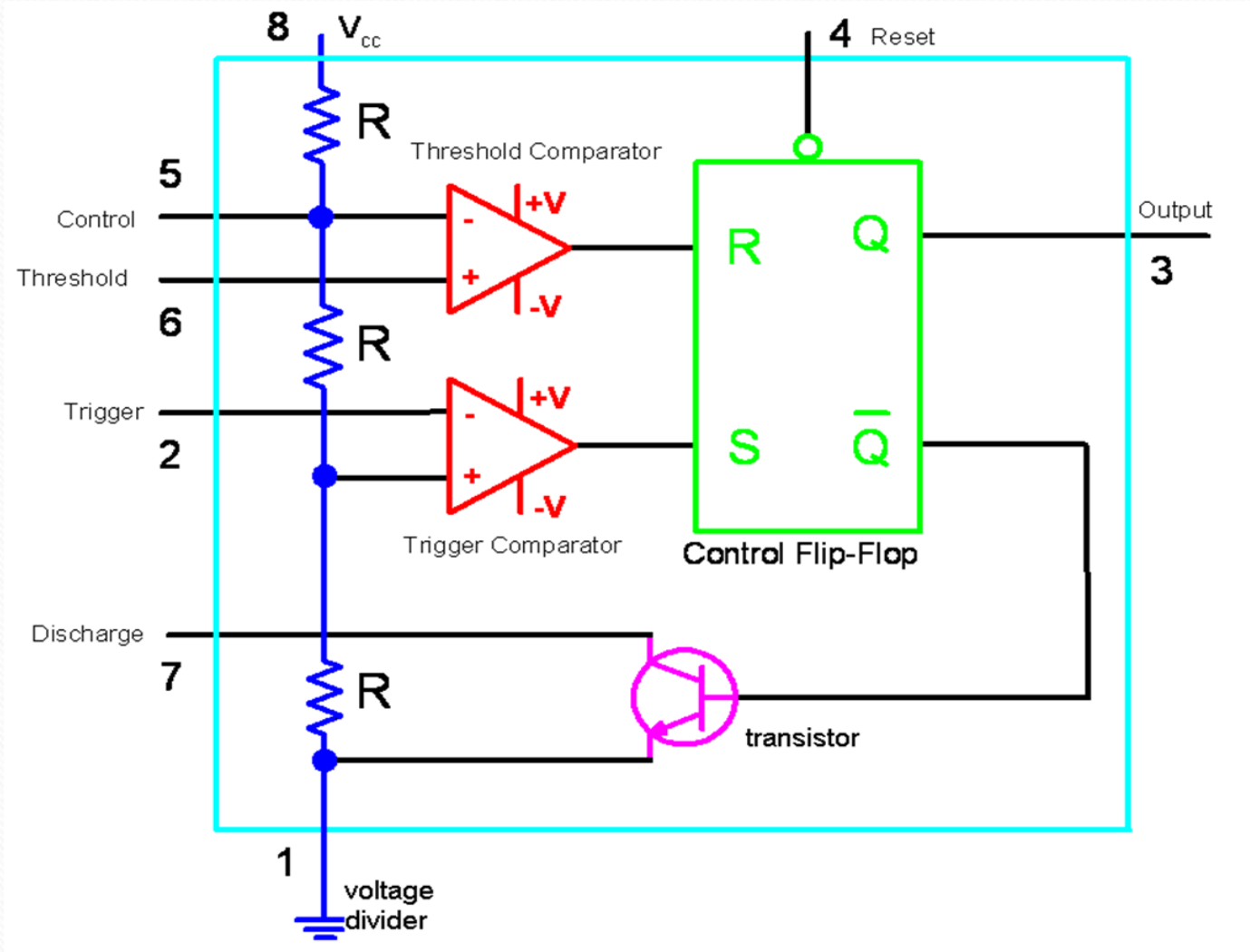
Monostable Multivibrator

Aim: To study the monostable multivibrator with different time period using IC 555

Apparatus: TPSU, CRO, Frequency generator, component etc.

Component: IC 555 resistor (2k), capacitor (0.1 μ f), (0.01 μ f), Potentiometer (10 K), connecting wires etc.

Diagram:



Observations:

1. Input frequency at trigger input =
2. Pulse Height =
3. Pulse period =

Observation Table

Sr. No.	Resistance in R_A $K\Omega$	T_{ON} in second	
		Observed	Calculated $T = 1.1 R_{AC}$

Procedure:

1. Check the circuit as shown in diagram
2. Now vary the values R_A and measure corresponding values of T_{ON} and T_{OFF}
3. Also calculate values of T by calculation
4. Compare the observed and calculated T

Result:

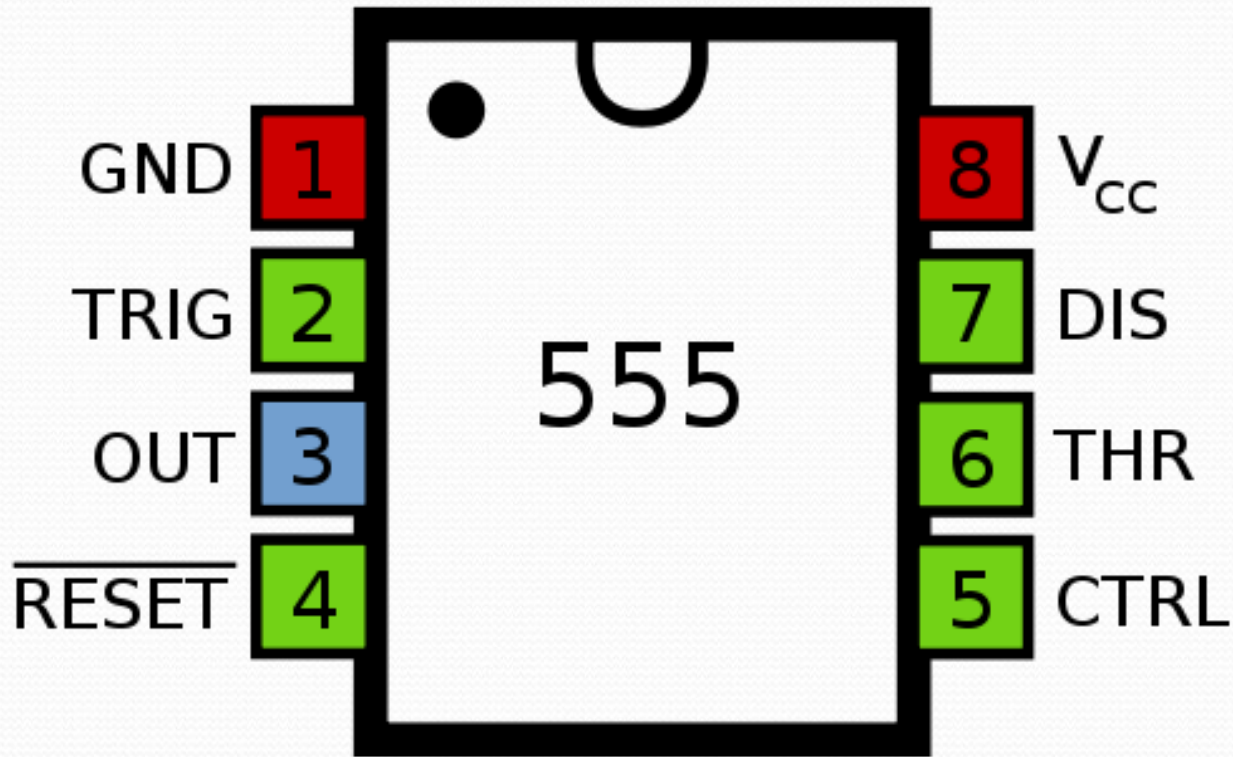
By varying RA we can vary the pulse width and hence time period of the pulse

i. e. by varying RA the frequency of monostable multivibrator can be varied

Introduction To The 555 Timer

- ❖ The 555 Timer is one of the most popular and versatile integrated circuits ever produced!
- ❖ It was first introduced by Hans R. Camenzind in 1970 and brought to market in 1971 by Signetics (later acquired by Philips).
- ❖ It is 30 years old and still being used!
- ❖ It is a combination of digital and analog circuits.

555 Timer IC Pin Configuration:



Pin Details:

- 1.GND(Ground)
- 2.TRIG(Trigger voltage)
- 3.OUT(Output)
- 4.RESET(Reset)
- 5.CTRL(Control Voltage)
- 6.THR(Threshold)
- 7.DIS(Discharge)
- 8.Vcc(Supply Voltage)

Types of 555-Timer circuits:

❖ There are three types of 555-Timer circuits:-

- Monostable Multivibrator.
- Astable Multivibrator.
- Bistable Multivibrator.

Application's for the 555 Timer include:

- ❖ Bounce-free switches and Cascaded timers.
- ❖ Frequency dividers.
- ❖ Voltage-controlled oscillators.
- ❖ Pulse generators and LED flashers.
- ❖ Saw tooth (linear ramp) generator.
- ❖ Pulse width modulator.
- ❖ Pulse position modulator.

THANK
YOU

