A project report on
Touch Sensor using 555 Timer IC

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Introduction

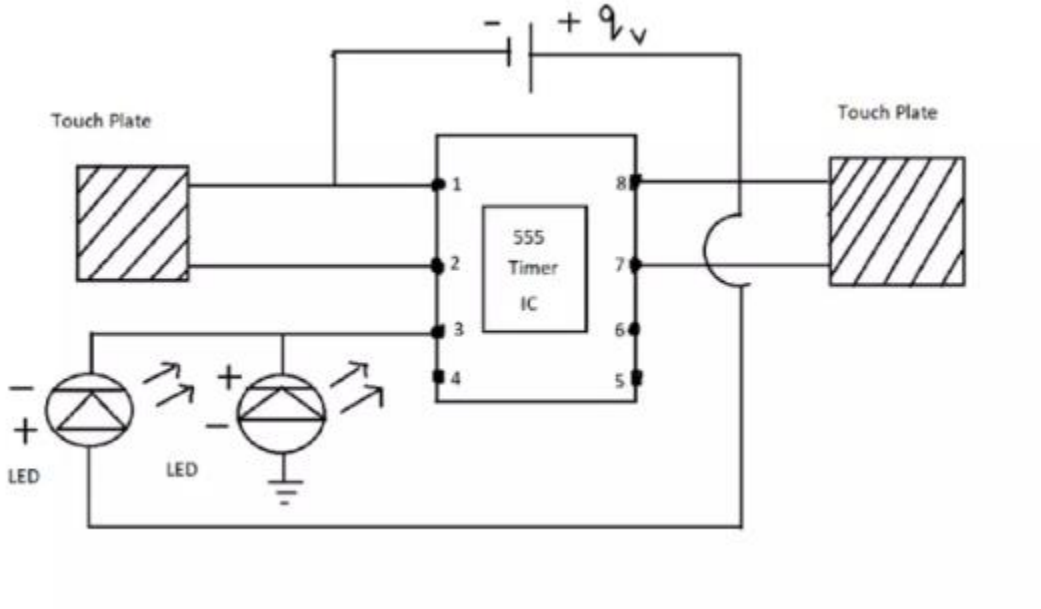
In this project, we have made a touch sensor using NE 555N Timer IC.

We wil touch by our fingers and then LED will light and Buzzer will make sound according to touch.

Components Used

- (1) NE 555N Timer IC,
- (2) 330 Ω resistor,
- (3) LED,
- (4) 9 volt battery,
- (5) Jumper Wires,
- (6) Bread board,
- (7) Buzzer.

Circuit Diagram



Pin Connections

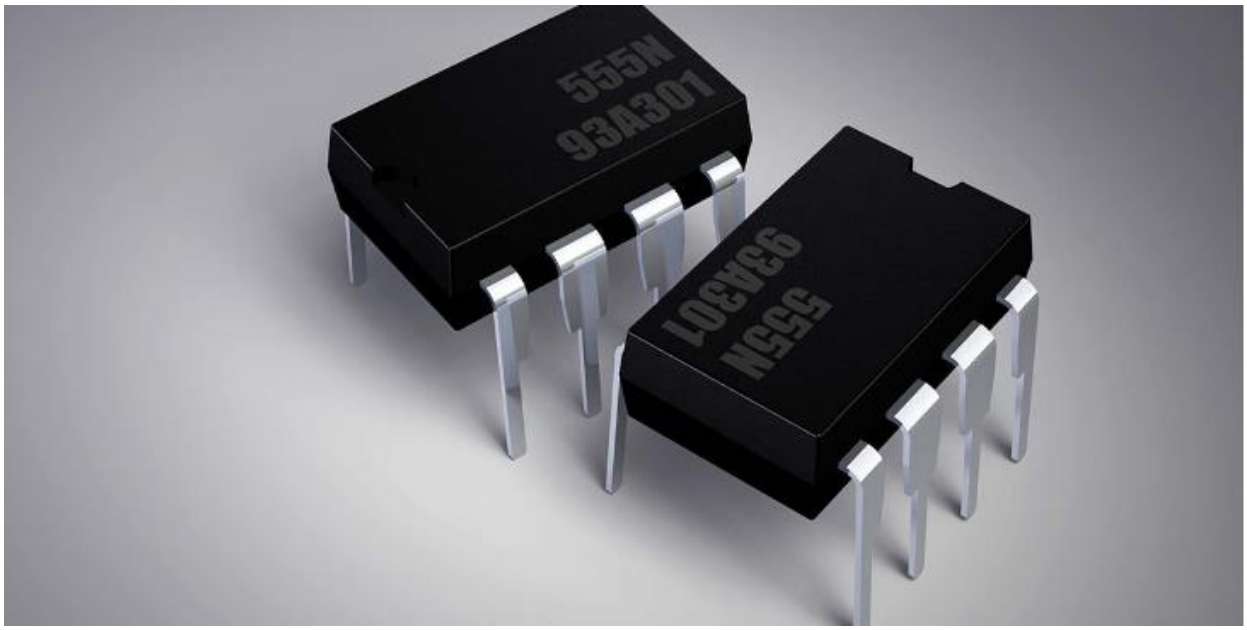
Pin	Connection
Pin1	Touch sensor, pin 1 to negative rail
Pin 2	Touch sensor
Pin 3	330 Ω resistor , LED from pin 3 to positive rail of bread board.
Pin 4	----------
Pin 5	----------

Pin 6	Touch sensor
Pin 7	----------
Pin 8	Touch sensor, jumper wire from pin 8 to positive rail of bread board.

Methodology

(1) 555 Timer IC :

The 555 Timer, designed by Hans Camenzind in 1971, can be found in many electronic devices starting from toys and kitchen appliances to even a spacecraft. It is a highly stable integrated circuit that can produce accurate time delays and oscillations. The 555 Timer has three operating modes, bistable, monostable and astable mode.



(2) <u>Buzzer:</u>

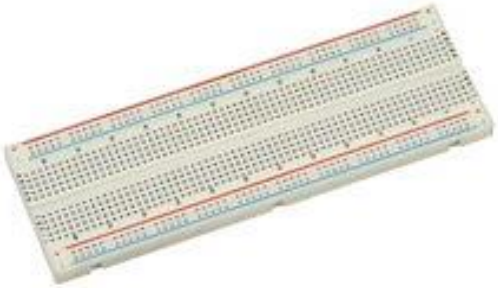
An audio signaling device like a beeper or buzzer may be electromechanical or piezoelectric or mechanical type. The main function of this is to convert the signal from audio to sound. Generally, it is powered through DC voltage and used in timers, alarm devices, printers, alarms, computers, etc. Based on the various designs, it can generate different sounds like alarm, music, bell & siren.

The pin configuration of the buzzer is shown below. It includes two pins namely positive and negative. The positive terminal of this is represented with the '+' symbol or a longer terminal. This terminal is powered through 6Volts whereas the negative terminal is represented with the '-'symbol or short terminal and it is connected to the GND terminal.

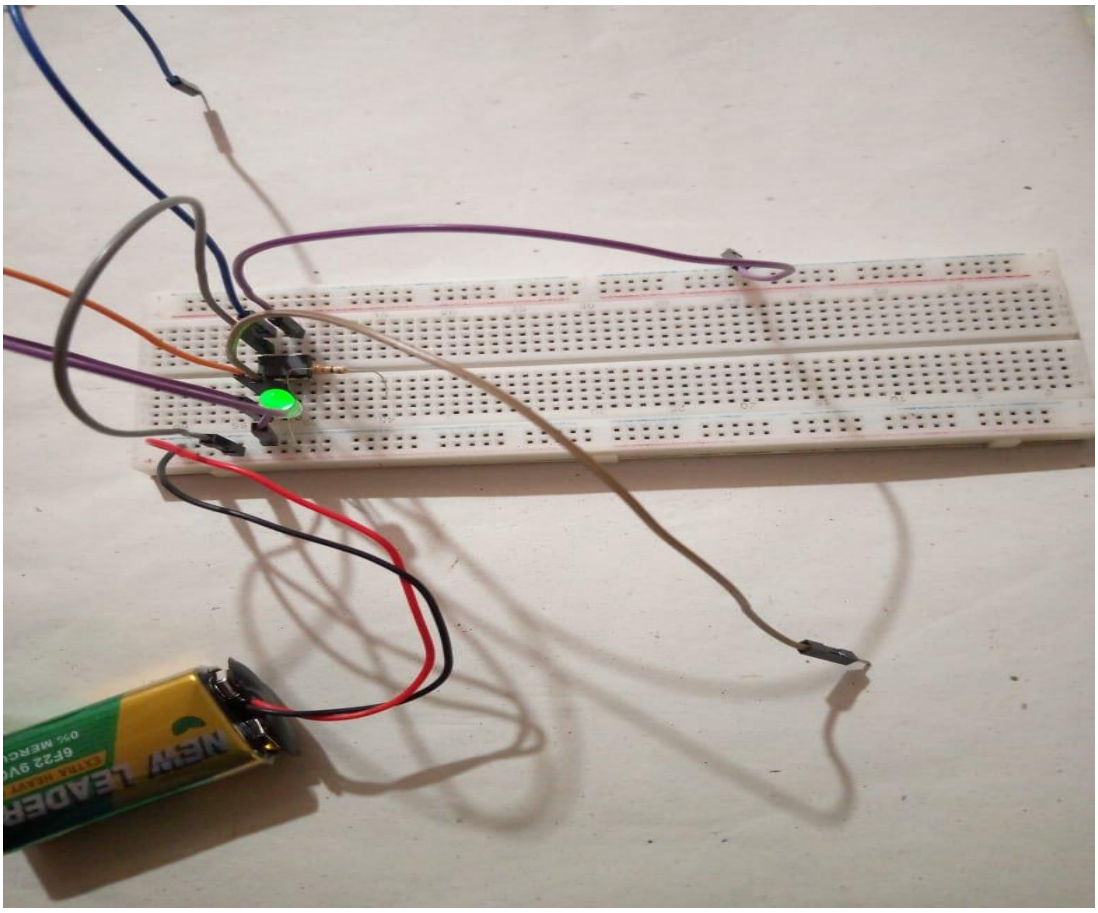
(3) Breadboard:

A breadboard is used to make up **temporary circuits** for testing or to try out an idea. No soldering is required so it is easy to change connections and replace components. Parts are not damaged and can be re-used afterwards.

Almost all the Electronics Club website projects started life on a breadboard to check that the circuit worked as intended.



Implementation



Applications

(1) It is used in many daily usable things like toys, sensors, fax, telephones etc.

(2) It is also used in lamp dimmer, wiper speed control, timer switch.

Conclusion

So from reading and implementing all the above we can conclude that 555 timer IC is basically used for making sensors, game paddles, telephones etc. It can be used as an electronic oscillator and also a flip flop within modes like astable and monostable modes. However nowadays 555 timer IC is being replaced by modern IC and arduino.