

**555 Timer (J2) [EELKTR] by TRONIC.LK**

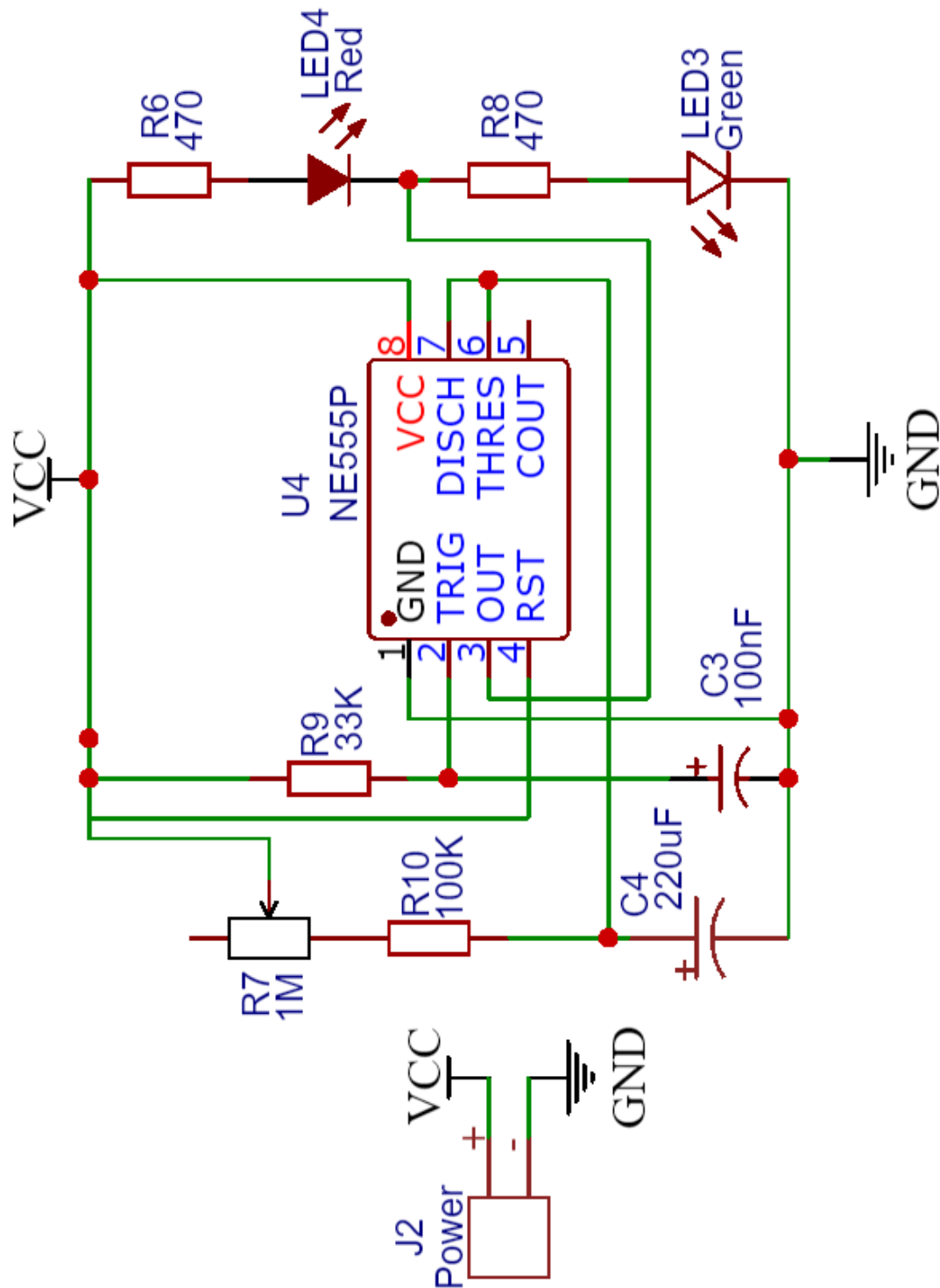
When the 555 adjustable timer is switched on, the green LED turns ON and shows that timing is in progress. When the time period is over the green LED turns OFF and the red LED turns ON. The time period can be adjusted by the variable resistor.

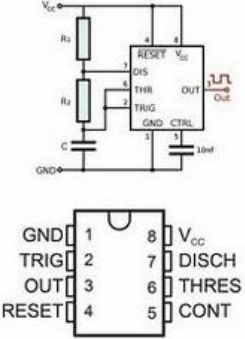
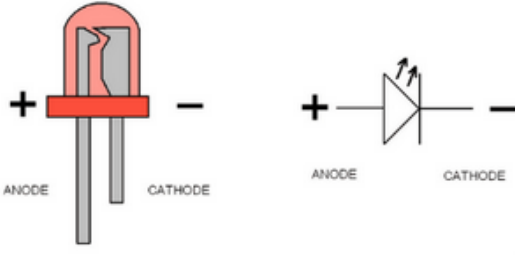
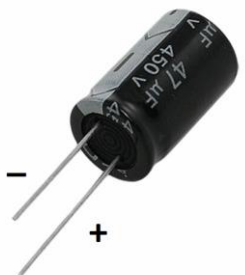
**Working Principle**

Astable multivibrator inside the 555 timer IC generates continuous pulses where the frequency of the circuit is controlled by R7, R10 resistors and C4 capacitor. Since R7 is adjustable, it is used to control the frequency.

The period T is equals to  $1.1 \times (R7 + R10) \times C4$  where T is in seconds, R7, R10 are in ohms and C4 in farads (not in microfarads)

| ITEM CODE | VALUE         | DESIGNATOR | QUANTITY | IMAGE                                                                                 |
|-----------|---------------|------------|----------|---------------------------------------------------------------------------------------|
| CA0125    | 220uF         | C4         | 1        |    |
| CA0002    | 100nf         | C3         | 1        |    |
| TA0443    | Header        | J2         | 1        |    |
| LE0026    | LED 5mm Green | LED 3      | 1        |    |
| LE0027    | LED 5mm Red   | LED 4      | 1        |    |
| RP0031    | 470 Ohm       | R6, R8     | 2        |  |
| RP0059    | 100K          | R10        | 1        |  |
| RP0053    | 33K           | R9         | 1        |  |
| RE0162    | 470K V/R      | R7         | 1        |  |
| IC0018    | NE555         | U4         | 1        |  |
| HE0014    | 8 pin IC Base | U4         | 1        |  |

**Supply Voltage: 5V**

| PIN DESCRIPTION OF SPECIAL COMPONENTS                                                                                                                                                                                                                                                                                  |                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|   <p>             GND 1 8 V<sub>CC</sub><br/>             TRIG 2 7 DISCH<br/>             OUT 3 6 THRES<br/>             RESET 4 5 CONT         </p> |  <p>ANODE CATHODE</p> |
|  <p>+</p> <p>-</p>                                                                                                                                                                                                                    |                                                                                                         |

## COMPONENTS & FINAL ASSEMBLY

## 555 IC Timer

