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LED VIP Circuit [EELKVIP] by TRONIC.LK

This is based on the 555 Timer IC and CD4017 Decade Counter IC. The two groups of LEDs, Red and Blue are blinked in a special frequency where it looks similar to what can be found in VIP LED circuits.

Working Principle

The working principle is similar to the Knight Rider Circuit except the sequence of operation is different. The frequency is determined by R1, R2 and C1. Since R1 is adjustable, it is possible to vary the frequency. Refer to Knight Rider circuit for more details on working principle.

There are six outputs for each side of the LED sets. The output pins Q0, Q2 and Q4 are connected to LEDs 13 to 24 and output pins Q5, Q7 and Q9 are connected to LED 1 to 12. We have let other output pins free (Q1, Q3, Q6 and Q8) and that brings up the VIP effect. After 10 clock pulses, the counter gets reset automatically and will restart the operation.

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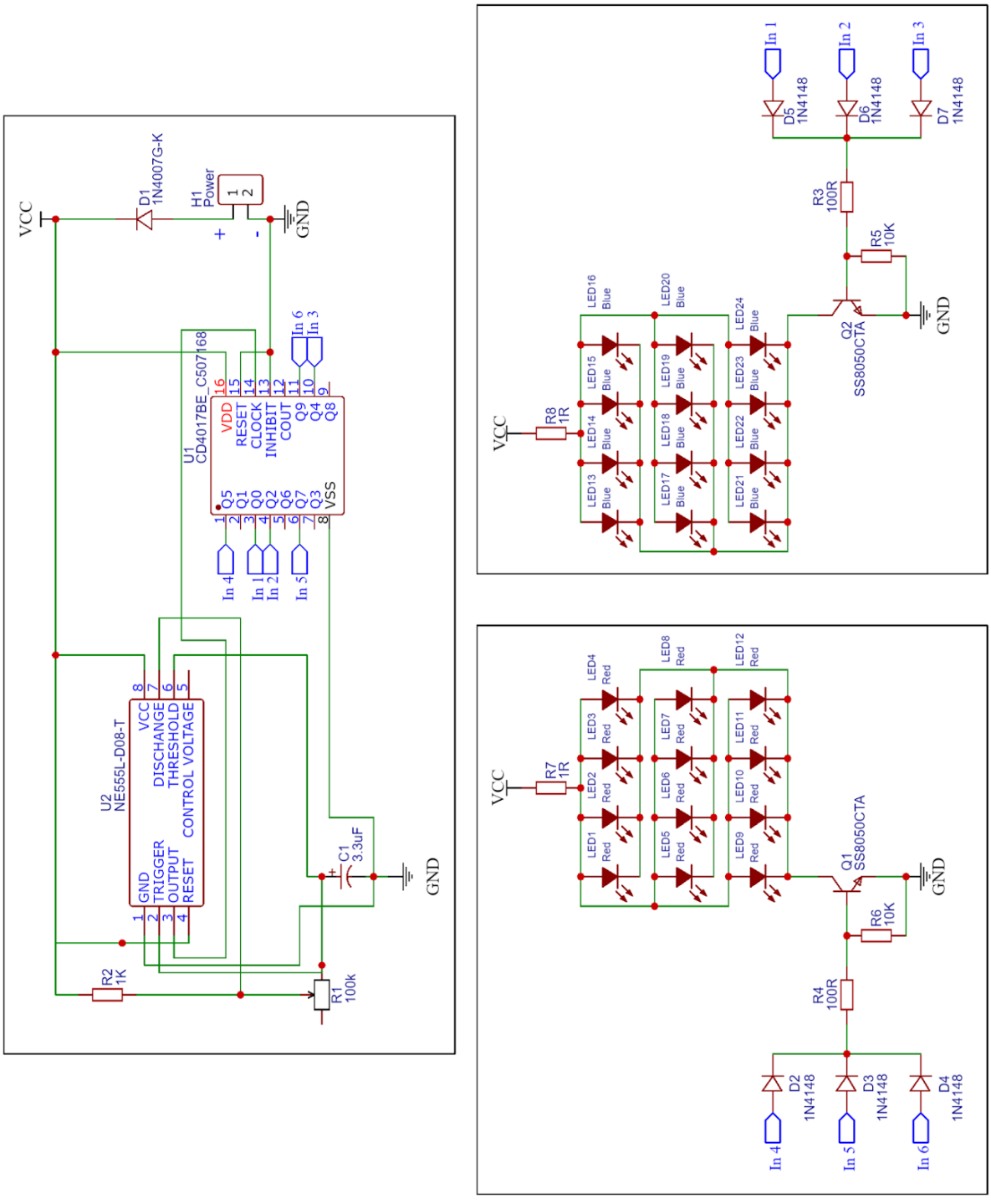
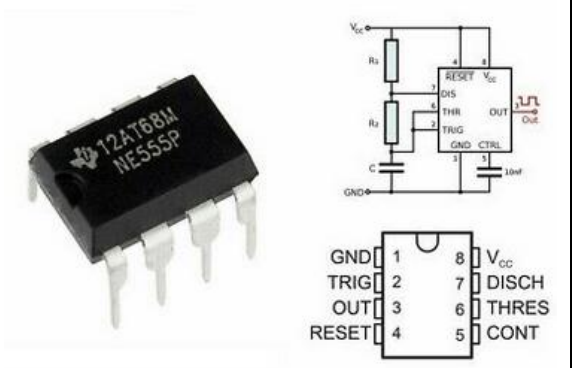
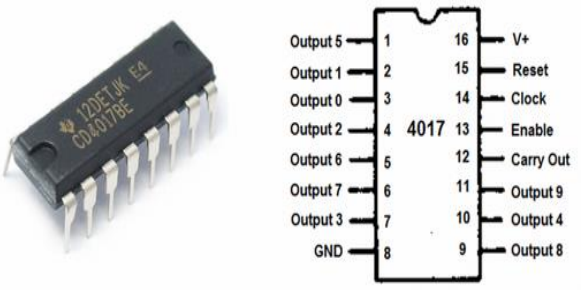
ITEM CODE	VALUE	DESIGNATOR	QUANTITY	IMAGE
CA0158	3.3uf	C1	1	
DI0002	1N4007	D1	1	
DI0003	1N4148	D2 - D7	6	
TA0443	Header	H1	1	
RE0091	100K V/R	R1	1	
RP0035	1K	R2	1	
RP0047	10K	R5, R6	2	
RP0001	1 Ohms	R7, R8	2	
RP0023	100 Ohms	R3, R4	2	
IC0130	CD4017	U1	1	
HE0016	16 Pin IC Base	U1	1	
IC0018	NE555	U2	1	
HE0014	8 pin IC Base	U2	1	
LE0027	LED 5mm Red	LED1-LED12	12	
LE0039	LED 5mm Blue	LED13-LED24	12	
DI0063	S8050	Q1, Q2	2	

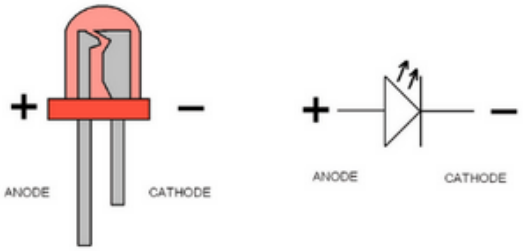
Supply Voltage: 5V

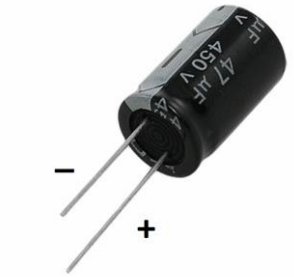


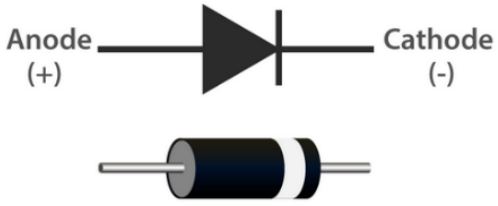
PIN DESCRIPTION OF SPECIAL COMPONENTS











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COMPONENTS & FINAL ASSEMBLY