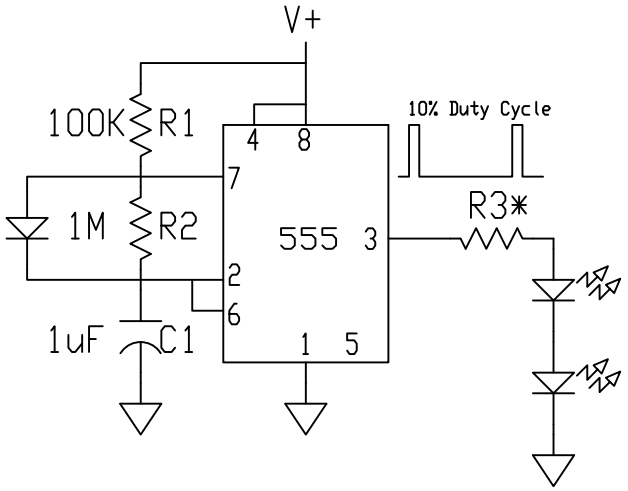
STROBING YOUR LEDs



NOTE; USE HI VALUE FOR R3 DURING TESTING!
ONCE FAST FLASHES ARE OBSERVED,
SUBSTITUTE R3 CALCULATED FOR 100mA.
THE LED CAN NOT TOLERATE 100mA FOR
LONG PERIODS.

$$R3 = \frac{(V+ - V_{LEDs})}{0.1}$$

ABOVE IS CALCULATED VALUE FOR 100mA.
USE THE NEXT HIGHER COMMON VALUE.
USE ABOUT 3X THAT VALUE DURING TESTING.

THEORY: ON STARTUP, PIN 2 TRIGGERS BECAUSE THE VOLTAGE ON C1 IS<= 1/3V+. OUTPUT PIN 3 GOES HIGH AND THE NEAR SHORT TO GROUND IS REMOVED FROM PIN 7. C1 CHARGES THROUGH FORWARD BIASED D1 AND R1 FOR ABOUT 0.1 SECOND UNTIL PIN 6 REACHES 2/3V+. AT THAT INSTANT, PIN 3 GOES LOW AND PIN 7 GOES LOW. C1 THEN DISCHARGES THROUGH ONLY R2 BECAUSE D1 IS REVERSE BIASED. THE DISCHARGE BACK TO 1/3V+ TAKES ABOUT 10 TIMES LONGER SINCE R2 IS 10 TIMES R1. THE CYCLE REPEATS.

JOE STANKO 7/11/15