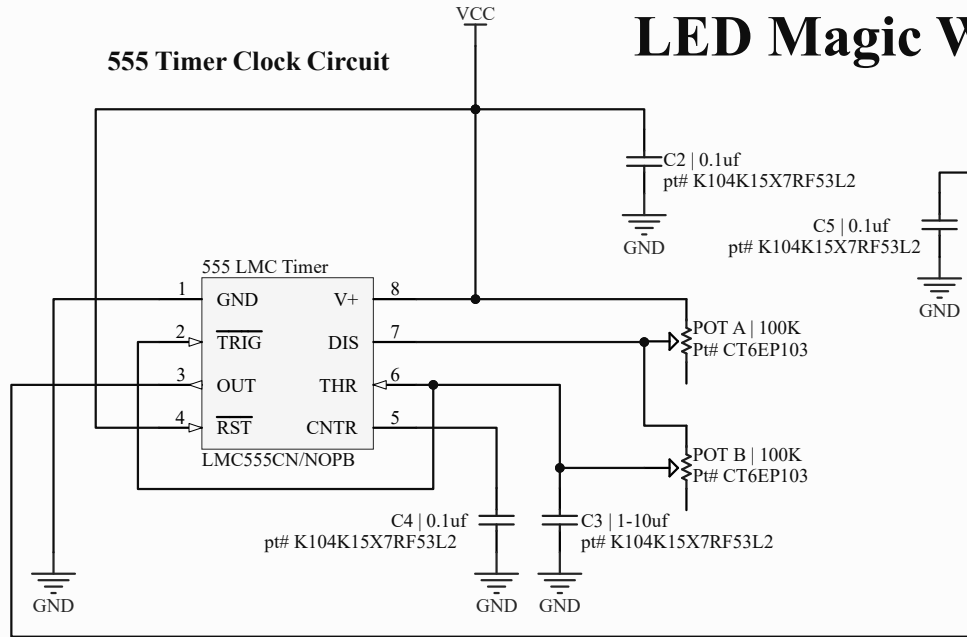


LED Magic Wand

555 Timer Clock Circuit



555 Modeling Equations

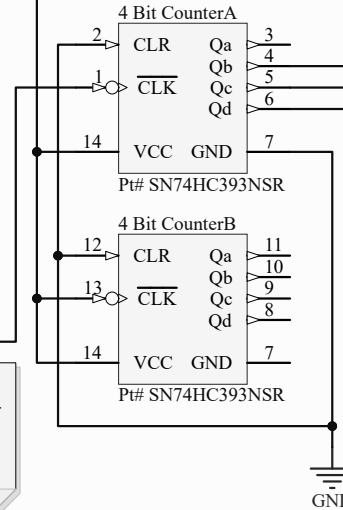
Total Time Period:
 $T = 0.693 (RA + 2*RB)*C$

Therefore, Frequency:
 $f = 1 / T = 1 / [0.693 (RA + 2*RB)*C]$

Duty Cycle:
 $D = (RB) / (RA + 2RB)$

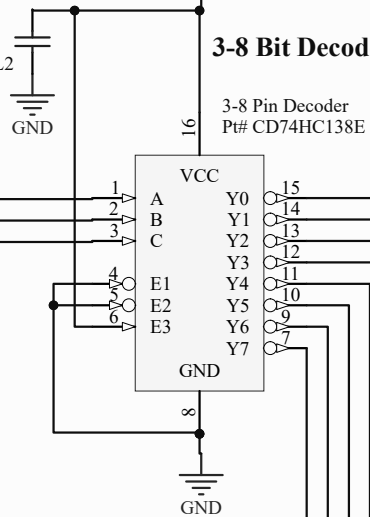
Note:
 The SN74HC393NSR has two 4 bit counters in this package. I am using oonly one and the other is left blank for any modification in future.

4 Bit Counter Circuit

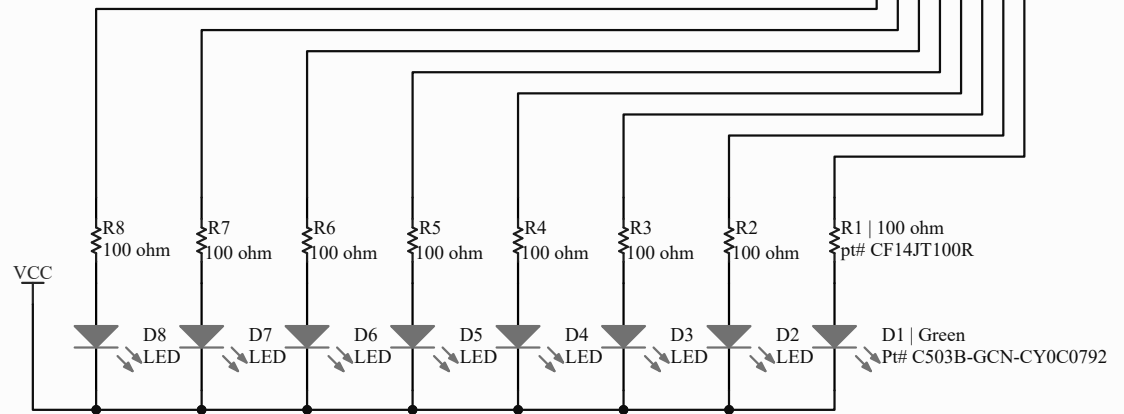


3-8 Bit Decoder LED Driver

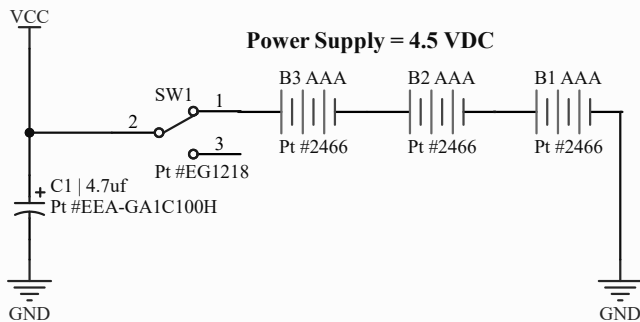
3-8 Pin Decoder
 Pt# CD74HC138E



Magic Wand LEDs



Power Supply = 4.5 VDC



Title LED Magic Wand Schematic Diagram		
Size A	Number 1	Revision 1
Date:	9/09/2024	Sheet of
File:	Magic Wand Schematic 1.SchDoc	Drawn By: Muhammad Tahir Hassan