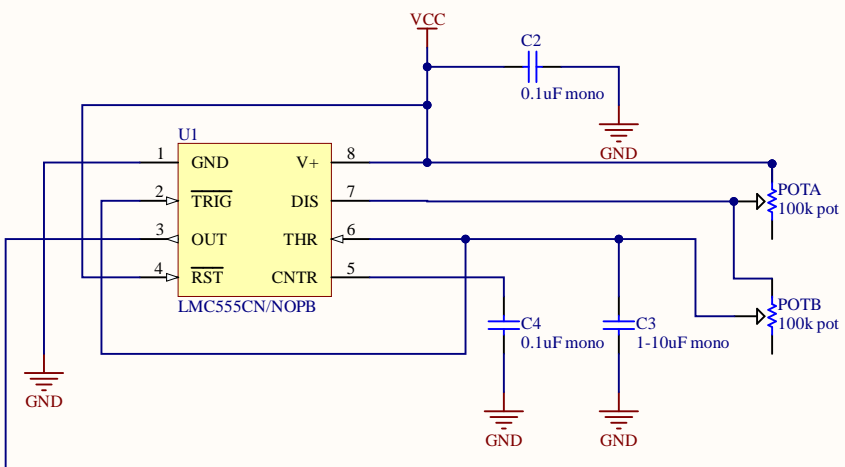


Magic Wand

555 Timer Clock Circuit



555 Modeling Equations

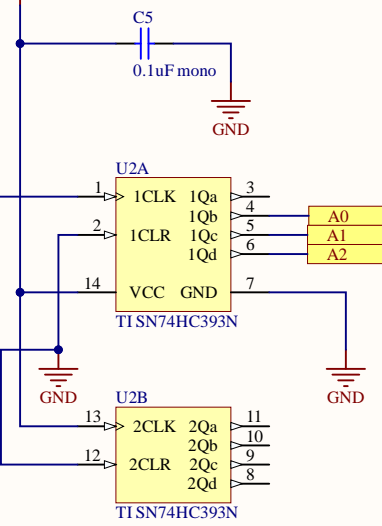
Total Period :

$$T = 0.693 (RA + 2RB)C$$

Therefor:

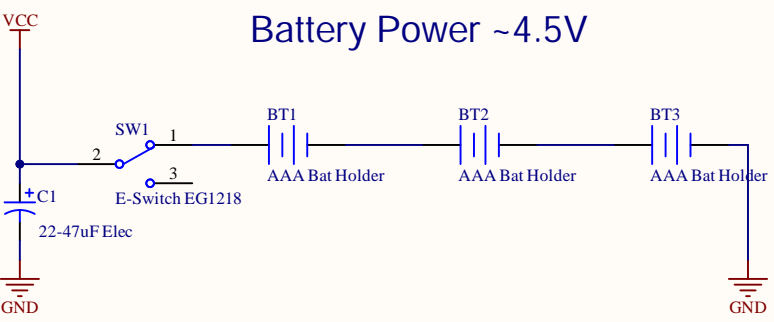
$$f = 1/T = 1 / (0.693 (RA + 2RB)C)$$
$$D = RB / (RA + 2RB)$$

4-Bit Counter

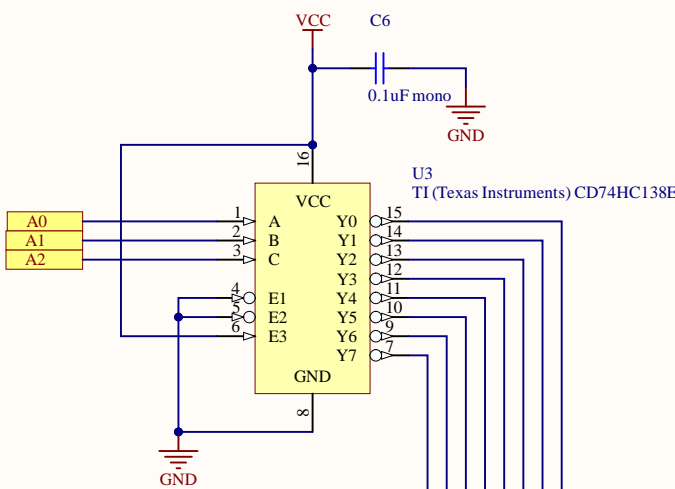


The SN74HC393 has two counters but I will use only 1 counter for this project. The other pins I will leave it in high to not to float.

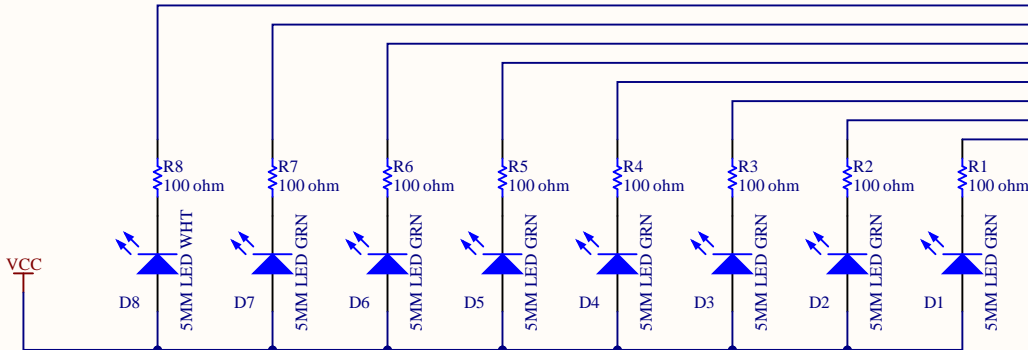
Battery Power ~4.5V



3-8 Decoder LED Driver



LEDs for Wand



Title		
Size	Number	Revision
A4		
Date:	10/20/2023	Sheet of
File:	MagicWandSchematic.SchDoc	Drawn By: