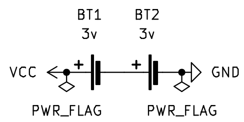
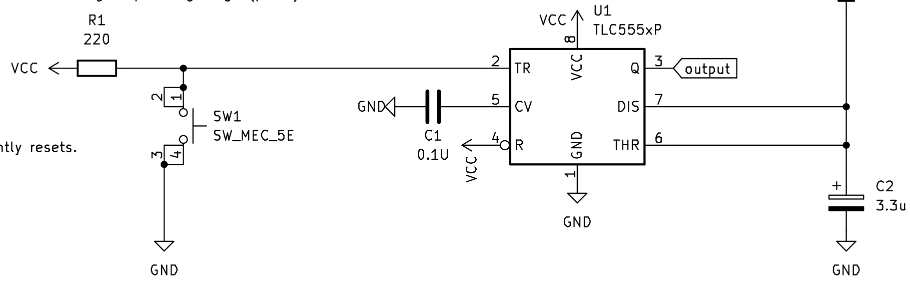
Pin 4 (Reset) is connected to Vcc to prevent accidently resets.

Pin 5 (CV/Control) is grounded with a capacitor
so that it does not consume much power and does
not change the default operation of the 555 timer.

This pin controls the threshold and trigger voltages
and it is set to 2/3Vdd. The capacitor will help
maintain this voltage consitently.

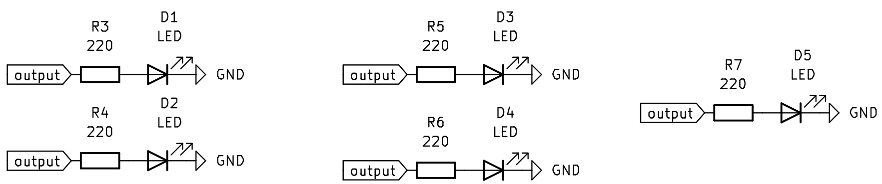


Pin 2 is pulled high with a current limiting resistor
of 220 Ohms. When SW1 is pressed pin 2 is pulled to
ground causing output to go high (pin 3).



R2 and C2 for our timing circuit. When pin 2 gets
pulled to ground DIS becomes an open drain (not
connected to Vcc or GND) which allows C2 to charge
through R2. Once the threshold (pin 6) reaches the
threshold voltage output (pin 3) will go low and
the discharge pin will also go low causing the
capacitor to quickly discharge. On page 15 of this
datasheet, https://www.ti.com/lit/ds/symlink/tlc555.pdf,
we see the capacitor will take approximately (1.1)(C2)(R2)
to reach the threshold voltage. In this project a large
resistor is chosen in conjunction with a medium value
capacitor to create a 36s output time.

t=1.1*R*C=1.1*(10Mohm)(3.3uF) = 36.3s
Will not be exactly that since the capacitor is
rated to within 20% of its value and the resistor
is within 5% of its value.
A more accurate resistor and capacitor would make
a more accurate timer. The 555 is most definitely
the most accurate component here.



Let's figure the approximate LED current.
Vcc = 6V (will be a bit less)
Vpled = forward voltage of the purple LED = 3.2V
Vrled = forward voltage of the red LED = 2V
Voled = forward voltage of the orange LED = 2V
R = 220 Ohm

Irled = Ioled
V=Vcc - Vrled=IR
Irled = 4V/220 Ohm = 18mA

Ipled = 13 mA

There may be rounding errors in these calculations
but they should be fairly close.
This means that the total current consumption is
just under 50mA when turned on.

We have two CR2032 batteries which have approximately
235mAh, https://data.energizer.com/pdfs/cr2032.pdf,
so that is 470mAh. Our little device should be
able to last 9 hours on (1080 cycles).
This will vary based on how long you leave it not
on since a small amount of current will be used
when off. Where do you think that current is?

Lets figure the off current.
The 10M Ohm resistor will have a current draw.
Vcc=IR -> 6V=I (10M Ohm)
-> I = 6V/(10M Ohm) = 0.6uA (micro-amps!)

Not very much there!

On page one of the data sheet we see P=1mW at Vdd = 5V
lets figure out the current consumption:
P=VI -> I = P/V -> I = 1mW/5V = 0.2mA.

So that is more significant!

Plus our batteries discharge about 1% a year by
themselves (see energizier doc).

In one year our 555 timer will use aproximately
1752mA, so our batteries would be drained.

Let's figure how long it will last approximately
I = 0.2mA
Pbatt = 470mAh = I*(time in hours)
-> time = 470mAh/0.2mA = 2350 hours = 98 days
So approximately 3 months!

Should be enough for easter season.