Electronic Die using 12F675 PIC

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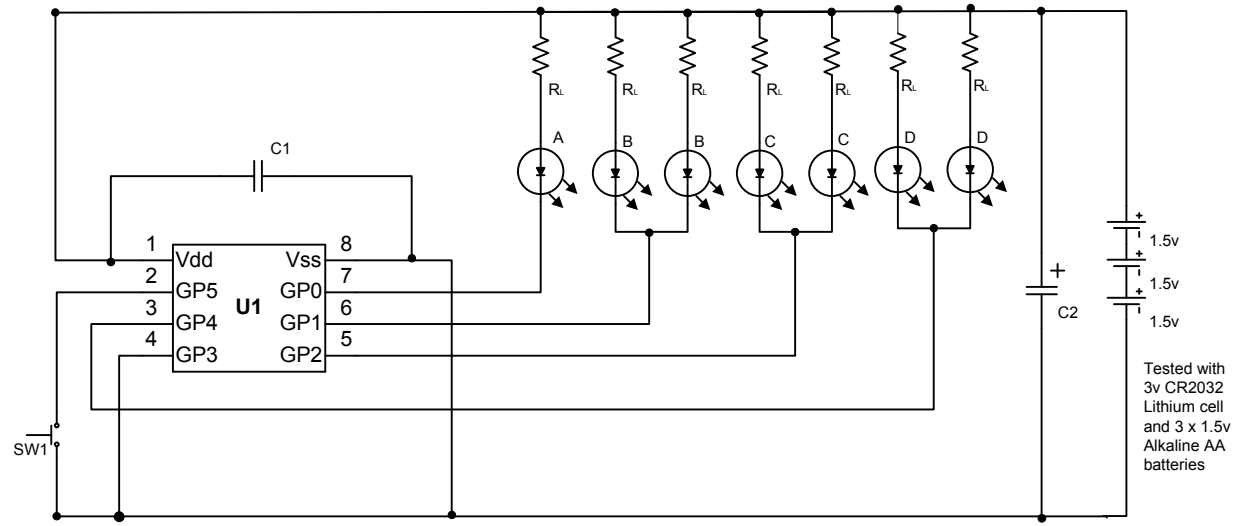

Components

RL	*See text*
C1	0.1uF Ceramic
C2	22uF Tantalum
U1	PIC12F675
LEDs	Any High Efficiency LED with Vf < 2V
SW1	Any n/o push-to-make

The 12F675 can sink 25mA on the RB port pins (125mA total all pins). To calculate the value for LED current limiting resistor, RL use the following formula:

$$\frac{Vbatt - VF(LED)}{If(LED)} = R_L$$

$$\frac{4.5 - 1.9}{0.01} = 260\text{ohms}$$

use 270R resistor

270R also works well with 3v Lithium coin cell, which gives ~4mA but helps battery life.

LED layout for Die

B		**C**
D	**A**	**D**
C		**B**