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Build a Mini Strobe Light



This is a perfect project if you want to get some attention or create an affect for your next party.

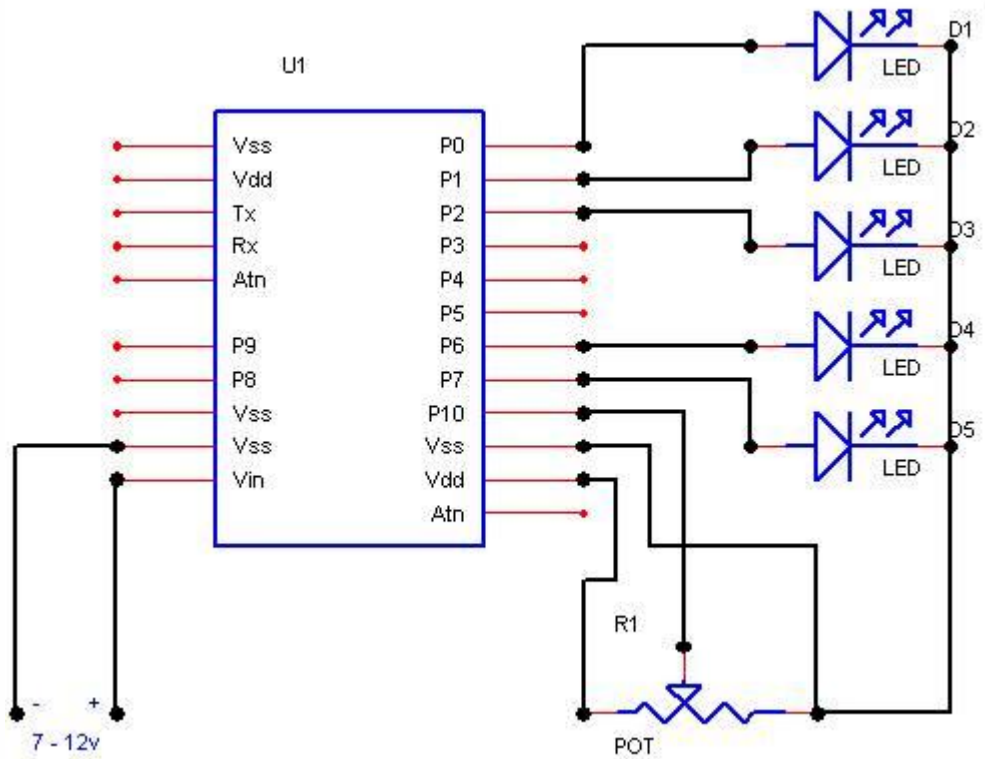
This mini strobe light built with the Perseus microcontroller can be used to pulse some of the new super bright LED's

## Build-it

We will use the Perseus and one of its analog ports to control 5 ultra bright white LED's.

We are going to use 5 white LED's rated at 20ma 5v. This will give us 3000mcd per led or a total of 15,000 mcd when focused properly. Warning dont look into the light :)

A small trimmer will be used to set the flash rate.



Schematic 1

A Perseus Carrier #1 and Option Pack are used to make hookup simple. The option pack gives us a 1.5Amp regulator so we can power the LED's with no problem.

Note that you may use any LED that's rated 20ma or less. You may need to use a 100 ohm resistor for normal LED's as they are not rated for 5v.

## Program 1

Perseus

'mini Strobe Light

'SIM10: 50:20,20:100,20:255

'SIMATOD=SIMPLE

dim delay

configio 0,1,2,3,6,7

atodinit 10

loop:

atod 10,delay

PORTA = 63 'Turn on ports 0,1,2,6,7

pause 25

PORTA = 0 'Turn off ports 0,1,2,6,7

pause delay

goto loop



We added these comments so you can test the program out in the simulator.



configio is used to configure all the ports at once



We use the PORTA register to quickly change the IO states of multiple IO ports

The program is quite simple we take an 8-bit reading from atod port 10. We then turn on the 5 LED's for 25ms. We then pause the program for the number of milliseconds based on the atod reading. This gives us a flash rate of 1ms to 255ms. You could experiment with the code and use the long pause command if you want longer flash times.

We need to turn on all the ports at once. We do this with the PORTA register. This register controls ports 0,1,2,6,7 all at once.

## Related Information



The PORTA register is tied to ports 0,1,2,6 and 7 on the Perseus.

The bits in the register correspond to the actual ports as follows:

Bit	Port
0	0
1	1
2	2
4	7
5	6

The PORTC register is tied to ports 3,4,5,8,9 and 10 on the Perseus

The bits in the register correspond to the actual ports as follows:

Bit	Port
0	3
1	4
2	5
3	10
4	9
5	8

### Something else to try

You can use other types of LED's. I used some jumbo red LED's that were great attention getters.

## Related Products

- Perseus .....<http://kronosrobotics.com/xcart/customer/product.php?productid=16382>
- EZRS232 Driver .....<http://kronosrobotics.com/xcart/customer/product.php?productid=16167>
- Perseus Carrier 1 .....<http://kronosrobotics.com/xcart/customer/product.php?productid=16390>
- Perseus Carrier 1 Option Pack <http://kronosrobotics.com/xcart/customer/product.php?productid=16391>
- 1K Trimmer .....<http://kronosrobotics.com/xcart/customer/product.php?productid=16378>
  
- 7.5v Switching AC Adapter ...<http://kronosrobotics.com/xcart/customer/product.php?productid=16305>
- 9 Pin Cable .....<http://kronosrobotics.com/xcart/customer/product.php?productid=16259>
- Breadboard & Wire Kit .....<http://kronosrobotics.com/xcart/customer/product.php?productid=16303>