

Re: Has my PIC blown?

Source: <http://sci.tech-archive.net/Archive/sci.electronics.basics/2005-11/msg00830.html>

- *From:* ehsjr <ehsjr@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* Wed, 23 Nov 2005 05:36:24 GMT
-

Silverfox wrote:

Ok now I have set up a delay and a loop and I am switchin a red LED on and off via pin 17 and I am keeping a green LED turned on, on pin 18.

So both the anodes of the LED goes to the output pin of the voltage regulator. I put a 270 ohms resistor in series and the red LED flickers ok, and so does the green LED (but very slightly) as if its being interfered by the red LED. So its output pin goes to resistor goes to red LED and to the green LED. I am wondering why this causees intereference in the green LED.

If I put in another 270ohms resistor, so one resistor from green LED to output pin of voltage regulator and 1 resistor from red LED to output pin of voltage regulator and this clears up the flickering.

Can anyone explain what is happinening here please?

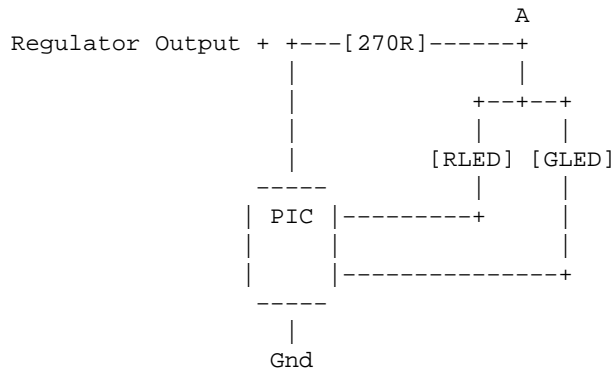
Thank you all very much in advance

Richard

Hi Richard,

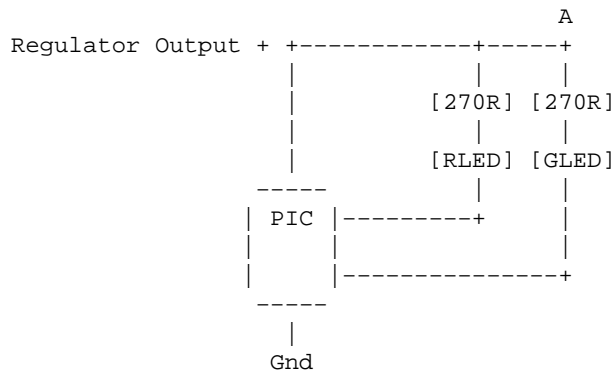
A schematic will help to explain this:

Re: Has my PIC blown?



A green led requires a higher voltage to turn on than a red led. A rough approximation is 1.4 volts for a red, and 1.7 volts for a green. When a led is turned on, it draws current through the resistor, creating a voltage drop. Turning on the red led will drop the voltage at point A to about 1.4 volts, which is too low for the green led to glow properly. Thus it will dim or turn off completely every time the red led is turned on.

Now look (below) at the correct way to wire it:



Point A will be held at +5 volts by the regulator, regardless of what the red led does. So when the red led is turned on, it draws current through the 270 ohm resistor connected to it, causing a voltage drop to about 1.4 volts at the bottom of the resistor, but does not prevent the green led from turning on.

Ed