

## Neon Light Tube Mod

Standard disclaimer here. I can accept no responsibility for any mishap that arises from this article. If you are not comfortable replacing a pigtail, find someone to help you who is. Always take precautions when working with electricity.



A while back, I wrote a DIY article on installing an acrylic side panel. I still have that panel, and I have grown attached to it. What better way to show off all my hard work, blue motherboard, blue video card, blue rounded cables, big polished copper heat sink? All I needed now was a neon light.

I started to look for a neon light. What better way to show off my tricked-out rig? What I discovered was much the same as when I wrote the article about acrylic side panels. The neon lighting kits were not cheap. Commonly ranging from 30 to 40 dollars, throw in 10 or 15 bucks for shipping and things are quickly becoming expensive. So I started wondering: Why I couldn't put together one of my own? Not only would it save me some money, but also equally important, it would give me an excuse to tinker around some.

***WARNING: If you are under thirty you may want to skip the next paragraph. As when I was a teenager, this old fogey drivell made me want to puke.***

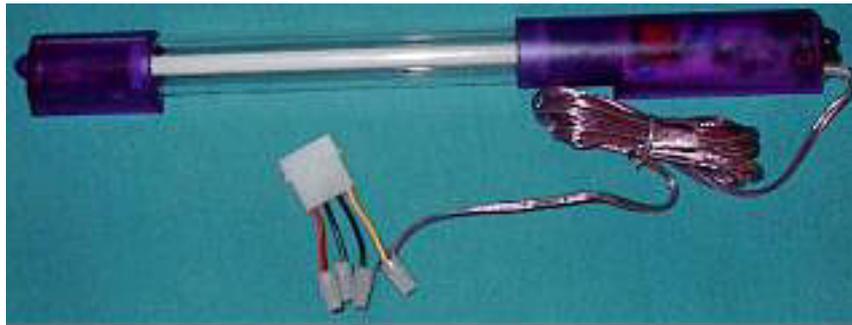
You see, on the weekends, when I was a child, while other kids were playing baseball and camping, my father used to take me along to Radio Shack, or PI Burkes, with a five gallon bucket of old vacuum tubes that he had pulled out of an old TV he was working on, and let me test them while he talked shop to the technician behind the counter.

The first place I went to look for a neon light was Pep Boys. No luck there. They had a 10-inch neon tube similar to what I was looking for, but it was 30 dollars. So I kept looking. I finally found what I was looking for at Target in the automotive section. It was less than twenty dollars. It was designed to run on a twelve -volt power supply (the end was made to plug in to a cigarette lighter receptacle). I figured it wouldn't be too hard to mod it to work in a computer case, since its power supply also supplies twelve volts.

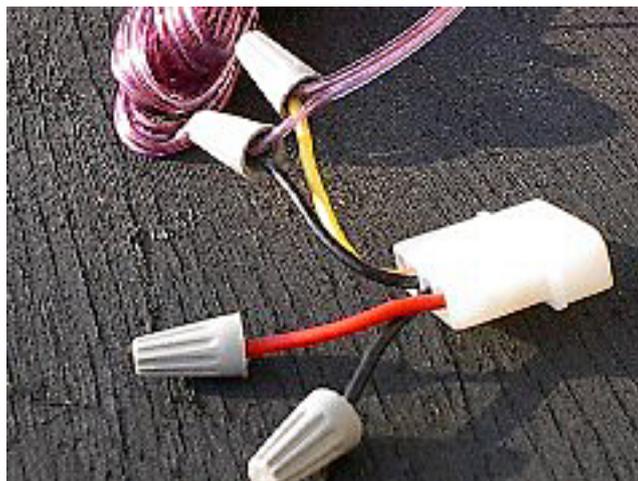
When I got it home I took it out and plugged it in to the cigarette lighter to see if it worked. It worked fine. It also has a setting called sound activated, which is a pretty interesting effect that basically mimics a strobe light with the added bonus of flashing in time with music. I later learned that this is really cool when you are playing an fps at night, but I'm getting ahead of myself there.

The first thing I was curious about after I saw that it worked was how much heat it put out, so I let it run for about fifteen minutes. It was still cool to the touch. So cool, in fact, that I didn't see the need to get out my multimeter and take an official measurement, but it wasn't more than 1 to 2 deg c above ambient temperature.

As for the light output from this neon tube, while I wouldn't want to read by it, is pretty bright--far brighter, in fact, than the nightlight we keep on in the bathroom at night. You can see the glow through every crack and crevice in the case. At this point, you need to put on a new pigtail (the end that plugs into the power supply), since the one that plugs into the cigarette lighter is obviously not going to work in your computer case. This means finding a three to four pin fan header converter, and lopping off the two wires for the three-pin header and then cutting off the wires on the other end so it matches the photo below. If there are two ends to your converter, you want to preserve the end that would plug in to a hard drive. Again see the picture below.



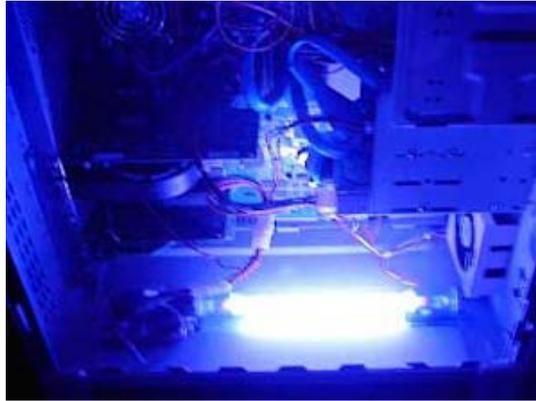
Now you want to attach the **POSITIVE** wire from your neon tube to the **YELLOW** wire on your pigtail. Then you want to attach the **NEGATIVE** wire from your neon tube to the **BLACK** wire next to it. If you are using the **EXACT** model I have, your positive wire is copper colored and your negative wire is silver colored. So that is copper to yellow, and silver to black. Next, you want to protect your connections. In this example, I have used soldiers-less connectors (available at Radio Shack--they're pretty cheap). You can also soldier your ends together if you are comfortable doing so. Make sure none of your wires are touching any wires other than the ones they are mated with, or you may cause a dead short, which will probably blow the fuse in your power supply.



Now you are ready to mount the neon tube in your case. I mounted mine on the bottom of the case using some two-sided Velcro tape. If you want a more permanent solution, you can drill two holes in the bottom of your case and affix the ends of your tube with screws; it is pre-drilled with two holes for just such mounting. If you decide on this route, make absolutely sure that you are satisfied with the placement of the tube, because once you have mounted it you are pretty much stuck with it there, whether you like it there or not.

**Here is what it looked like when I was finished.**





[Jim Adkins](#)

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