

Forum:[Hack Forums](#)

Thread: [\[HOW TO\]Make an Ambient Light for your Computer\[TUTORIAL\]](#)

skim - May 10, 2011, 7:50 pm

Intro

Just a quick intro here, we're going to be wiring 3 3mm LED's (color of your choice) in series inside of an acrylic rod powered by a USB cable and velcro'd to the back of your monitor for a crisp look. I will be following this guideline:

[img]http://flyphoto.us/images/yes.png[/img]

Spoiler ([Click to View](#))Don't down MS Paint nub:P

Necessities

1/2 inch [Acrylic Rod](#) (\$7)

3 LED's of your choice, preferably 3mm or 5mm (Radioshack/Electronics store/Online)

Wire (Radioshack/Electronics store/Online)

Glue gun/or clear glue

Electric tape/Heatshrink tape or tubing (Radioshack/Wal-mart/Online)

Soldering Iron/Gun (optional, but I suggest using)

Drill with appropriate drill bits (5mm preferably)

USB cable you don't mind cutting up

Sandpaper

Toggle Switch (optional)

Step 1

First off you're going to need to get your acrylic rod, and give it a few swipes with your sandpaper. By doing this we're going to get that ambient look out of our LED's when lit in the rod.

Step 2

Get your drill out, and if you have all the specific requirements listed above, then drill 3 5mm holes in your acrylic rod spaced out accordingly. If you have larger LED's then drill larger holes, but make sure you don't break your rod.

Step 3

Place each LED in a hole, remember that with LED lights, the longer wire is positive, and the shorter is negative. Line them up like listed in the picture above, and glue them in place leaving the wires poking out.

Step 4

Get your USB cable you've decided to sacrifice for a better cause, and cut it. Locate the positive and negative wires, in some USB's there will be a 3rd wire, just ignore/cut it off.

Step 5

Assuming that you're soldering, snip off all that excess wire on each LED, and solder according to the picture above. This is a series circuit, while this is not enough power to power all 3 LED's at full capacity, it will light them up enough to get the effect we want. Why is this not enough power to power them all at full capacity? A standard USB carries 5V of power, and each LED runs about 3.3 forward voltage give or take and 20 mA. If you wanted each LED at full power you would have to

wire each LED in it's own series circuit, basically making a parallel circuit (3 single series circuits) with the appropriate resistors.

Step 6

Now you have your USB ready to connect, and your LED's wired together, you can choose whether you're using a switch or not. If you are using a switch, wire the positive wire from your USB to one of the prongs on the bottom of the switch, and wire the other prong to your first LED's positive. Doing this will either turn off our positive (power) or turn it on.

Step 7

From here it's just cleanup depending on how well your soldering went, the beauty of using this series circuit is that we shouldn't have any positive wires near any negative wires, so there shouldn't be a situation for a short to occur. The only thing is to cover up the wires connecting to your switch, and find a handy spot to put it.

Step 8

Velcro your new ambient light to the back of your computer screen, plugin the USB to the screen/tower, turn it on, turn the lights off in your room.

Here's a few cool pics I found of ambient lights behind computers:

Spoiler ([Click to View](#))

[img]http://www.overclock.net/attachments/computer-room-office/135126d1262200395-tv-setup-ccfl-ambient-light-computer-019.jpg[/img][img]http://hackadaycom.files.wordpress.com/2011/02/screens-hot-10.png?w=470&h=347[/img][img]http://s3.amazonaws.com/atimg/1831442/093010_rg_MohamedYassinDesktop_03_rect540.jpg[/img]

If you enjoyed this guide, take a look at a few of my others:

[\[HOW TO\]Setup a PA system for less than \\$50](#)

[\[HOW TO\]SQLi, Shell, & Remain Undetected\[TUTORIAL\]](#)

[\[HOW TO\]Upload your Shell,and Deface\[TUTORIAL\]](#)

Fuh-Kyu - May 10, 2011, 8:58 pm

Cool beans!

I've been wanting to do something similar using an led flashlight for parts.

Thanks for sharing!

Installation - May 11, 2011, 12:54 am

That Looks so Sick!

Great Tutorial, I am planning on making this very soon when i receive my new Screen! :)

If i could Rep+ You i Would!

James Wilson M.D - May 11, 2011, 11:58 pm

Anyone seen a UK alternative for that rod,the shipping over here looks to be in the realm of about \$8.

skim - May 12, 2011, 12:05 am

(May 11, 2011 11:58 PM)The Do?tor Wrote: [\[CITE\]](#) Anyone seen a UK alternative for that rod,the shipping over here looks to be in the realm of about \$8.Try a [perspex rod](#), perspex comes from the UK I believe.

James Wilson M.D - May 12, 2011, 12:12 am

(May 12, 2011 12:05 AM)skim Wrote: [\[CITE\]](#) Try a [perspex rod](#), perspex comes from the UK I believe. I shall however be curious is there a way to make this look good as I understand that the USB wires would be just along the side of the rod and that wouldn't look nice, also the rod itself will terminate in 2 very rough ends that are flat as a pancake so got any ideas for the ends either?

skim - May 12, 2011, 12:24 am

Well it's going to be behind your monitor, so it doesn't matter what it looks like as long as it does what we want it to do. If you're going for appearance I would just be creative, the ends of the rod being flat doesn't really matter, you could round them somehow if you like.

The Archetype - May 12, 2011, 1:51 am

Your tut is great but it only shows for wiring in series. (aka one bulb goes out, they all go out). You should add in a diagram for wiring in parallel (so if one goes out, the others still work).

skim - May 13, 2011, 6:49 pm

(May 12, 2011 01:51 AM)The Archetype Wrote: [\[CITE\]](#) Your tut is great but it only shows for wiring in series. (aka one bulb goes out, they all go out). You should add in a diagram for wiring in parallel (so if one goes out, the others still work). Setting this up in parallel would be about 3x the work and it would require the correct resistor's depending on the source voltage, and the forward voltage/forward current of the LED's used. On top of that it would require a lot more wire and shrink wrap/electric tape. I'll MS Paint one anyways for fun ha.

Cody8295 - May 13, 2011, 7:04 pm

This looks pretty awesome. The last picture looks very professional.

YNN - May 14, 2011, 6:43 pm

This is a really cool idea, and I am really planning to do this, but I am having difficulties in finding an Acrylic Rods. Do you know any main stores (example: Radioshack) that sell these Rods? I've been looking at a couple of stores today but they don't sell any at all. I have most of the stuff but I just need the Rods.

Thank you also.

skim - May 16, 2011, 12:58 pm

You'll have to order one off Amazon/Ebay, they're pretty cheap. If you're from the UK I'm pretty sure you can get a Perplex rod somewhere close, which is pretty much the same thing.

Mr. Anderson - May 16, 2011, 1:21 pm

Now that looks sick, it gives my PC a sci-fi look :)

Elfy10 - June 1, 2011, 4:32 pm

(May 11, 2011 11:58 PM)The Do?tor Wrote: [\[CITE\]](#) Anyone seen a UK alternative for that rod, the shipping over here looks to be in the realm of about \$8.

<http://www.theplasticshop.co.uk/acrylic-rod-clear-cast-5mm-to-35mm-diameter-3214-0.html>

There you go. :)

Elfy10 - June 4, 2011, 2:50 pm

Or you could buy these :D

<http://www.ebuyer.com/product/51686>

muslim hacker - June 12, 2011, 12:29 pm

cool one i'll make a one :D thanq

xyble - June 12, 2011, 4:21 pm

If you want to make it even more cool, you can hook up a transistor and make it flash to the music you're playing. I did the same thing, except I put it behind my bed. Cool shit.

[IMG]<http://www.instructables.com/image/FMZXXB8G5W7R47J/Building-the-circuit.jpg>[IMG]

Reference: <http://www.instructables.com/id/Music-LED-Light-Box/step6/Building-the-circuit/>

GDK Rum - June 27, 2011, 5:05 pm

Wow, thanks for the idea!

I have been looking for ways to give my desktop some... pzazz, but i havnt been able to come up with any! I will definitely do this.

I'll post pics when its done.

Valour - June 28, 2011, 9:34 pm

Wow, the flashing over music one is too cool. Maybe instead of using a battery, we can just put the USB in place of the battery.. it would be better. :D

Heulen - February 12, 2014, 4:08 am

if you don't have a rod laying around, you could use a water bottle, fill it up with water, sand it and tape the leds to it, should work just fine :)

(Jun 12, 2011 04:21 PM)xyble Wrote: [\[CITE\]](#) If you want to make it even more cool, you can hook up a transistor and make it flash to the music you're playing. I did the same thing, except I put it behind my bed. Cool shit.

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i'm actually doing this with my speakers now, it's going to look sick as fuck.

Mohatu - February 12, 2014, 9:53 am

(Feb 12, 2014 05:08 AM)Heulen Wrote: [\[CITE\]](#) if you don't have a rod laying around, you could use a water bottle, fill it up with water, sand it and tape the leds to it, should work just fine :)

i'm actually doing this with my speakers now, it's going to look sick as fuck.

I'll honestly say this was the most useful grave dig I've ever seen. Yes, that's a compliment.

vitalitasia - February 12, 2014, 11:18 am

I just wanted to mention that I add this to my compilation. Thanks for the gravedig!

EDIT: I just saw that it's already in there.

Heulen - February 13, 2014, 7:48 am

(Feb 12, 2014 10:53 AM)Mohatu Wrote: [\[CITE\]](#) I'll honestly say this was the most useful grave dig I've ever seen. Yes, that's a compliment.

haha, thanks man, i noticed it was a gravedig just after i posted... better look before i post.