Dwarven Forge - Dwarven Forge Generated: 9 March, 2014, 14:07

Dwarven Forge - Dwarven Forge Generated: 9 March, 2014, 14:07

Re:Modified cavern piece - The Crystal Cave Posted by Lordannilhus - 2012/03/10 12:48
Whaou !
I saw on your blog all the differents steps to create this piece ! Great job :)
And the made luminous is fantastic!
Soon
Lord
Re:Modified cavern piece - The Crystal Cave Posted by Kronos - 2012/03/11 15:04
Now that is just really awesome! :)
Re:Modified cavern piece - The Crystal Cave Posted by Pusherman - 2012/03/11 16:07
that is pretty epic, they blink a little fast for my taste but idea and execution is top notch.
Re:Modified cavern piece - The Crystal Cave Posted by Arcarius2001 - 2012/03/11 19:25
That's awesome! They look good when not lit up too. Great job!
Re:Modified cavern piece - The Crystal Cave Posted by biowizard - 2012/03/11 19:26

Those crystals are VERY cool! Who would have thought one could use real crystals to mimic miniature crystals... They are much more realistic and cheaper then those available at armorcast, and you don't

Generated: 9 March, 2014, 14:07

have to paint them! I am wondering though if there is anyway to make them as stand-alone crystal clusters that you could put anywhere into DF caverns without the drilling/painting/gluing part. Single crystals could probably not be made in this fashion (and I agree that your single small crystals are beautiful) but it would be cool to be able to put them everywhere within a huge cavern all the while keeping the DF pieces intact for a plainer crystal-free cavern for most uses. Any suggestion?

Re:Modified cavern piece - The Crystal Cave Posted by biowizard - 2012/03/11 19:59

richens,

Could you be providing us with more details please! I now want to emulate your work...

Could you be more specific as to what type of cut you did on the crystals so that the light could distribute equally within the crystals that were part of the same cluster? Which bit did you fit your Dremmel to cut through a crystal?

Could you tell us more about those LED you liked most and ended up using? Where did you get them from, catalog number... Is there anything available in between the 2 types you ended up testing?

Where did you get your single 555 timer circuit? I am asking about the single one because I don't think I could ever master the electric complexity of dealing with four LEDs plugged at once on the same circuit and I think I would like to deal only with stand-alone single pieces.

What electricity source (battery type) did you use? ... You mentioned only "5V" in your tutorial.

Could you be more specific as to what type of ON & OFF switch you used?

As Pusherman pointed out, your fantastic design could become even greater if the frequency of the 555 timer circuit would be slightly slower. How is this being measured and can it be bought with different specs?

Re:Modified cavern piece - The Crystal Cave Posted by jackattack - 2012/03/12 12:39

For crystal formations you can put anywhere, you might order "Small Flat Cavern Rocks, Set of 8" from the Individual Pieces section and mount the crystals on those pieces. They won't light up, but they will be modular, and you won't ruin a full-size cavern piece if you make a mistake.

Re:Modified cavern piece - The Crystal Cave

Generated: 9 March,	2014.	14:07
---------------------	-------	-------

Posted by richens - 2012/03/12 21:01

Thanks everyone for the positive feedback.

Pusherman, I agree that the flash rate on some are a bit fast. I wanted each crystal set/light to come on and off independently from the others and there was limited control in doing that (at least that I could figure out). Maybe if I took more time to tinker with the component values I could have tweaked them just right. There were a lot of unforeseen variables when figuring out the electronics. Another thing I would like to have done differently is to get the brightness of the red one down a bit. It's a lot brighter then the other ones and (I think) flashes the fastest, so it seems to always be visually drowning out the others. I'm sure I could fix those things when (or if) I do another one.

biowizard, I was thinking of doing some stand alone versions. They'd be more flexible, but probably all look very similar. With the piece I did, I tried to give each crystal cluster a unique look. The most challenging part for the stand alone type would be how to power them. On the piece I showed, I installed a small polarized connector on the back to power it from a 5 volt wall adapter. As for the on/off switch, I simply unplug the power cord.

http://www.dwarvenforge.com/images/fbfiles/images/power.png

I'm experimenting on using batteries for some of my modifications, but I have yet to try anything out.

As for the crystal mods, I cut and trimmed them with (what I think is) a diamond cutting disc for a dremel.

http://www.dwarvenforge.com/images/fbfiles/images/cutter.png

The trick was to cut and glue them in such a way that each one is lit up. They're beveled then flattened a bit:

http://www.dwarvenforge.com/images/fbfiles/images/IMG_1080.jpg

http://www.dwarvenforge.com/images/fbfiles/images/IMG_1082.jpg

http://www.dwarvenforge.com/images/fbfiles/images/IMG_1084.jpg

The idea is that when the crystals are glued together, there is a surface on each "finger" that the light can access (indicated by the green arrows):

http://www.dwarvenforge.com/images/fbfiles/images/arrows.png

And I think the last thing you asked me was about the components. The 555 timer is here:

Timer IC from Digikey

and the LED's are from here (search for Avago on the website to find the various colours):

LED's from Mouser

I found that the high power ones work *really* well. Smaller (non high power) ones will also work, but the luminous intensity isn't really as good.

Hope this helps.

Dwarven Forge - Dwarven Forge Generated: 9 March, 2014, 14:07 -Bob Re:Modified cavern piece - The Crystal Cave Posted by Thraug - 2012/03/12 22:54 On a scale of 1 to 10 this is about 150! Re:Modified cavern piece - The Crystal Cave Posted by arcanedesign - 2012/03/13 05:57 I love the effect of the crystals. Without the lighting as well as with. I think I would probably keep the crystals lit constantly. Great work! - Eric Re:Modified cavern piece - The Crystal Cave Posted by biowizard - 2012/03/13 12:36 Hi richens, Thank you very much for the very detailed answers and for such a cool-looking project. After reading awhile on LEDs, I think I found the LEDs that would be perfect for me: BlinkM http://www.dwarvenforge.com/images/fbfiles/images/blinkm.jpg

It is a relatively strong RGB LED that retails at around \$13 and comes with a handy microcontroller (no soldering, resistors, capacitors, fancy electrical knowledge needed). The whole thing is smaller then a quarter and I think the 4 pins used to communicate with the controller and provide electricity to the device can be bent to have it even smaller:

http://www.dwarvenforge.com/images/fbfiles/images/BlinkM quarter.jpeg

Electricity is simply provided with a 5V watch battery and the whole thing can become modular (encased underneath a single crystal cluster)!

Finally, the best part is the ability to reprogram entirely the BlinkM as many times as you want. You need for that an Arduino (retails at \$35) and you can hook your computer to the little device and tell it how to light up! You can control in this way which color it uses (a great many combinations as the device can

Dwarven Forge - Dwarven Forge

Generated: 9 March, 2014, 14:07

provide different amount of electricity to the 3 little Red, Green & Blue light sources), at which frequency, which duration, faster/slower breathing etc... This means that after making 5-10 cluster crystals that light red all the time for your cavern underneath the big volcano where the fire dragon lives, you could just reprogram them all to have them glow green in a "breathing" mode for an entirely new setup without the need to generate other crystals.