

HauntMaven.com - Wolfstone's Haunted Halloween Site



http://wolfstone.halloweenhost.com/HalloweenTech/aneuse_UsingLEDEyes.html

Using LED Creature Eyes

Once you have bought or built LED creature eyes, how do you use them?



General Comments

What Not To Do

Assuming that you have LED creature eyes that light up nicely, how do you present them?

First, I don't like to just stick them in the eye sockets of a prop. Bare LEDs often look like little point-sources of light, and they fairly scream "electronic gadget". This is especially true of the red ones which are commonly used in mass-market Halloween props.

In addition, some LEDs are very bright. Visible light LEDs are unlikely to cause eye damage, because people tend to shield themselves from painfully bright light. But black light LEDs are both powerful and nearly invisible; people might have a spotlight aiming at them and not know it.

I like to put LEDs behind something that will diffuse the light or break up the light into something that looks less "electronic". There are LEDs with milky "diffused" cases; that helps some.

The Kosher salt crystals on the right diffuse the light into a glowing patch that is brightest over the LED, and slowly gets dimmer over distance.



The plastic shard beads on the left give a random broken-up effect.

Note On Experiments

In early August 2004, I conducted a series of simple experiments, using various materials to break up or diffuse the light from creature eyes.

For uniformity, I used a talking Boris skull for all experiments. Boris isn't too bad as shipped. The manufacturer could have painted the eye sockets flat black, which would have been better when not activated, but would have emphasized the pinpoint light source LEDs when lit. Instead, they painted the eye sockets a glossy dark brown. This causes reflections that make it look a lot better.

To conduct the experiments, I merely poured loose material into the eye sockets and snapped a picture. In real-life, some sort of adhesive would be required to hold the material in place. Material with small particle sizes would probably need to be saturated with some thin adhesive material like super glue. In the case of material with rough surfaces, like the Kosher salt, this would have a tendency to fill in the rough places on the surface and reduce the light diffusion (i.e. make the salt more "clear").

Specific Approaches

Crystal Eyes

It is easy to find polished pieces of quartz roughly the size and shape of an eyeball. Individual variations in shape make each prop a little different and add character.



The tumbled rock crystal on the left gives a random, organic feel. Unearthly, but not artificial.

We used this for our Boris modifications.



Just for illustration, this is a small gazing "crystal ball".

Faceted Insect Eyes

Many critters have "compound eyes". We go for the "insect" look by shining LED eyes through clear faceted plastic.



We have found various styles of toy kaleidoscopes, both cylindrical and conical. The really cheap ones don't use loose material to make moving patterns or use mirrors to replicate the image. They are simply faceted plastic lenses in a holder.

We used this for our flickering gargoyle eyes.



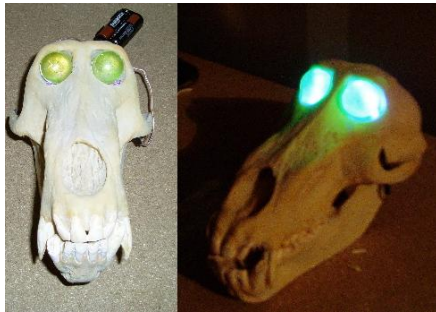
You can also get the insect look from faceted plastic "gems".

We used this for our giant spider eyes.

Vaseline Glass Marbles

Jim Kadel, owner of [Haunt Master Products](http://www.hauntmasterproducts.com), suggested using 1-inch "vaseline glass" marbles as eyes, backlit with UV LEDs. Vaseline glass, also known as uranium glass, is fluorescent, glowing green when exposed to black light.

The first project that I have seen to use this suggestion and post pictures is the Corpsified Blucky Goblin, by Eric Bonzell.



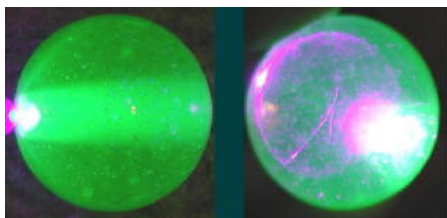
These pictures from Eric's web site show the marble eyes mounted in a plastic baboon skull.

Eric notes:

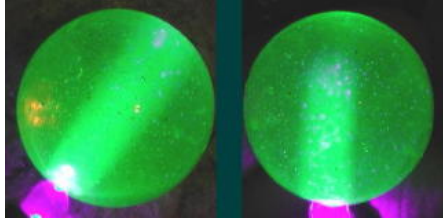
- "vaseline glass" marbles are available in two sizes, 1" and something smaller.
- The 1" size seems to fit the average skull better.
- There are a number of these marbles available on eBay at any given time. Shop for the best price.

Please see Eric's web site (<http://webs.lanset.com/bonzell>) for more information on his technique and pictures.

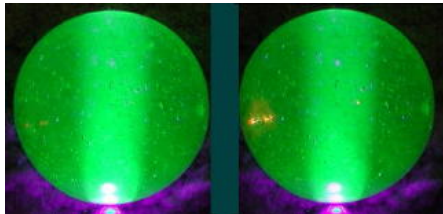
In private correspondence, Doktor Calamari remarked that when the UV LED is directly behind the marble, in a line of sight with the viewer, there is a bluish spot. He sent me some vaseline glass marbles to experiment with, and I took pictures of the vaseline glass marble illuminated at different angles with respect to the viewer. [The angles are rough. Illumination is provided by a keychain LED using a Cree UV chip LED.]



The picture on the right shows the blue/purple bloom that results when the LED is in line with the eye. The picture on the left is the side view.



The picture on the right is what you see when the light enters the marble at an angle. The picture on the left shows the side view.



The picture on the right is what you see when the light enters the marble from the bottom, perpendicular to the view angle. The picture on the left shows the side view.

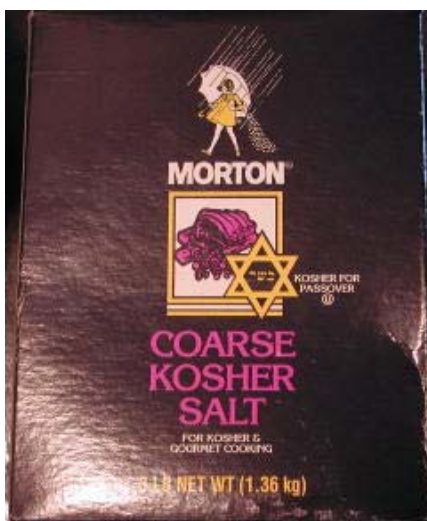
Salt Crystals

We really like the effect of Crystal Eyes, but if you need a lot of eyes, the rock crystal becomes expensive.

Here are the results of some experiments done with common, inexpensive mineral salts available in the form of tiny crystals.

If the salt crystals are small, you get a smooth diffusion effect. If the salt crystals are large, and mostly clear, you get more random variations.

The following pictures show coarse Kosher cooking salt.



From the store, made by Morton.



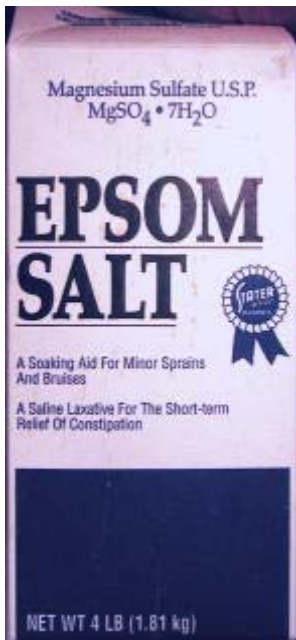
This is just enough coarse Kosher cooking salt to cover the LED.



More.



Eye socket not full of coarse Kosher cooking salt, but the light is hard to see.



The following pictures show coarse Epsom Salts.
House brand, purchased at Stater Brother's grocery store.

Obtained from
Omarshantedtrail.com



This is just enough coarse Epsom Salts to cover the LED.



More.



Eye socket nearly full of coarse Epsom Salts.

Beads Or Marbles

I didn't find any salt crystals that were big enough to suit me, so I considered using a number of large beads or small marbles in the eye sockets.

Here are the results of some experiments done with various size, shape, and material beads, all from my local [Michaels](#).



Panacer item #70601, from [Michaels](#).



I like the effect, but the marbles are too big.

The following pictures show 4x7mm Pony beads.



Western Trimming Corp, Westrim Crafts #2837-ZE-029, from [Michaels](#).



This is just enough 4x7mm Pony beads to cover the LED.



More.



More.



Eye socket full of 4x7mm Pony beads.

The following pictures show 8mm faceted beads.



Western Trimming Corp, Westrim Crafts #2999-ZE-029, from [Michaels](#).



This is just enough 8mm faceted beads to cover the LED.



More.



Eye socket full of 8mm faceted beads.

The following pictures show shards of clear plastic sold as decorative "beads".

SKU #296290, from [Michaels](#).



They carry similar bags of large and small shards. These are the smaller of the two.



This is just enough plastic shard "beads" to cover the LED.



About half full.



Eye socket full of plastic shard "beads".

Diana particularly likes this effect. It looks like a glowing bed of coals.

Translucent Panel Material

Home improvement stores, like [Home Depot](#) usually stock several types of translucent plastic panels, used to make or repair luminous ceiling lights.



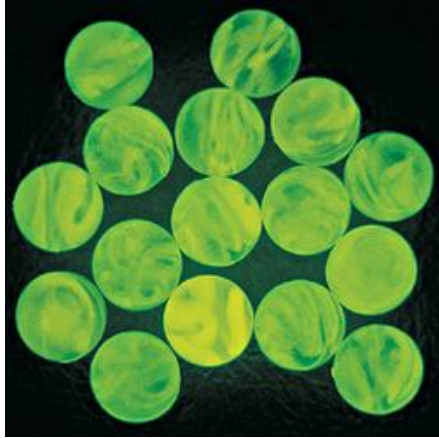
Here's a piece of the panel in a crackle-finish pattern.



This is what you get, just holding a piece of the crackle-finish panel in front of Boris's face.

Balls

[Oriental Trading Company](#) sells several different kinds of Phosphorescent (glow in the dark) bouncing balls. I have ordered a package of each of the following that look like they might make good eyeballs.



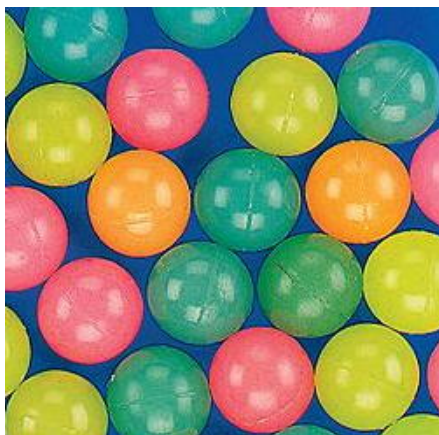
#12/510 G-I-D BOUNCING BALLS (1", 25mm) - \$3.95 for 4 dozen [August 2004]

[photo from OTC web site]



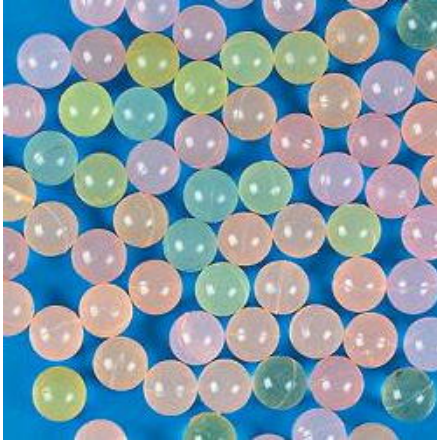
#12/693 G-I-D BOUNCING EYEBALLS (1-3/8", 35mm) - \$5.95 for 1 dozen [August 2004]

[photo from OTC web site]



#39/1111 G-I-D BOUNCING BALLS, assorted colors (1", 25mm) - \$8.95 for 1 gross [August 2004]

[photo from OTC web site]



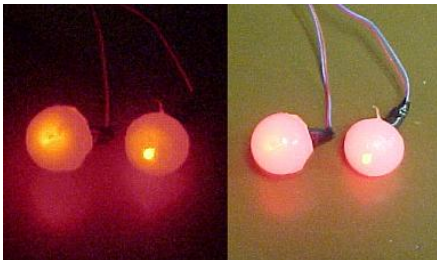
#12/516 G-I-D MINI BOUNCING BALLS, assorted colors (3/4", 19mm) - \$4.95 for 1 gross [August 2004]

[photo from OTC web site]

Hot Glue

Around 1999 I used sticks of hot-melt glue material to diffuse the light from LEDs garlanded around my camera tripod so people wouldn't trip over it in the dark. I just made a hole in the end of a stick and shoved in a LED. The translucent material turned the light from a sharp beam into a glowing cylinder.

In August 2004, I was experimenting with various diffusing materials for creature eyes and decided to try hot glue again. To my pleasant surprise, Frank at <http://www.born2haunt.com> had beaten me to it.



These pictures from Frank's web site show the eyes made from hemispherical moldings of hot-melt glue.

Please see Frank's web site (<http://www.born2haunt.com>) for more information and pictures.

I should add that hot-melt glue sticks are available in a variety of opaque colors, glitter, even glow-in-the-dark. I have seen translucent hot glue that ranges from ivory, to milky, to almost clear.

Ping-Pong Balls

Ping-Pong balls are nice and spherical, and can be used for big creatures eyes. I once used Ping-Pong balls with flashlight bulbs inside for dragon eyes [approximately 1970]. The outside of the balls were painted with an eye pattern. Parts of the design used glow-in-the-dark paint.

Assorted Materials

There are lots of other ways one might take a sharply focused beam of light and break it up or diffuse it:

- Long ago, a reader of Halloween-L suggested using the big plastic ball from roll-on deodorant. The balls are translucent.
- Polymer clay is available in numerous colors, including glow-in-the-dark. If you made a hollow spherical shell with the GITD clay, perhaps a UV LED inside would keep it glowing.
- [Anatomical Chart Company](#) sells several kinds of plastic eyeballs. You might try drilling a hole in the back and inserting a LED.
- Wax is translucent and easy to shape. I have kept away from it because I fear that it might melt in storage over a hot summer.
- Styrofoam is translucent and virtually free if you use old drink cups.
- When I was at [Michael's](#) craft store [~June 2004], I noticed that they were selling little bags of broken glass for use in mosaics.
- How about little wads of crumpled up cellophane?



I have a string of lights, with each lamp covered by plastic frogs like this.

The material is some sort of translucent plastic beads that are poured into a mold and heated to fuse them together.

I wish I had a source of this material! (Other than sacrificing the frogs, of course.)