## Skull Post

Here's a new project for 2001 I'm not sure what its going to turn out to be but here's the start of it, and we will see where it goes from here.







I started with a model skull, built and fading eye circuit and installed it.

Next we add some movement, first I cut out a section inside the skull to install the handle to move the jaw open and closed. I drilled out holes in the jaw to accept the handle. Then I took a coat hanger and bent it to the shape needed, and slide each end in to the jaw to create a lever.

Then I cut out a piece of wood to fit in the back side of the skull and cut out a section for the servo motor, then hot glue it into place. Then take a piece of piano wire bent it accordingly to fit from the servo to the lever. Slide one side into the servo arm and the other bent it around the lever and hot glue it in to place.

Now for the servo controller, this is a nifty little thing I bought from the Robot Store. It will record moment of one servo up to 4 minutes. Its very flexible and inexpensive as well. You can record, erase and loop movements. it uses a 3v power supply.

Next hot glue in a set of ultra bright leds for the eyes. Then make an led fader, ( the instructions can be found on this site). and hot glue it in the skull, and connect the ultra bright LED's to it, that will finish off the eyes.
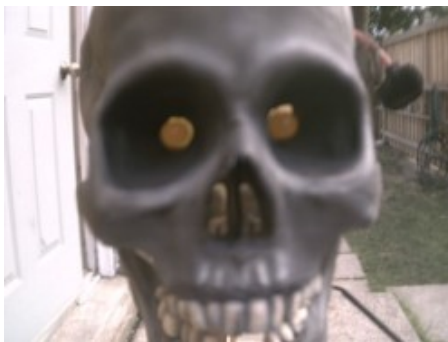
Now we need to take a dowel or broom handle  drill a hole about an inch from the top, the size that a piece of coat hanger will slide through easily, then stick it through the bottom opening in the skull and hot glue the ends of the coat hanger to the bottom of the skull, so the handle swings freely. This will be for the head to tilt up and down.

Now on to installing the control that will allow the head to node. First I took a piece of 4/40 threaded rod and two pivot joints.(the rod and joints are readily available at you local hobby store and come in handy so buy a few.)

Twist the joints on both ends of the threaded rod. Then I took a screw heated it up, put it through one of the pivot joints and pushed it in the skull, in the opening made for the jaw movement, then I positioned the servo, and fastened it to the pole with a hose clamp ( a clamp works well) and fastened the other pivot joint to the servo arm with a nut and bolt. But I found the head to be a bit heavy so I install a counter weight at the back of the skull using a few elastics and two threaded rings.



Now on to the sign, buy a piece of Styrofoam from Home Depot 2", then from your computer make your desired design and print out the pattern, I use coral Draw. Then take your pattern tape it together and glue it the foam using Elmer's spray adhesive. Its works great as you can peel the pattern off. Once it its glued in place use a dermal to cut out the letters in your sign, I also use a styrofoam cutter avaliable at (http://www.woodlandscenics.com) a handy tool for cutting out curves. or a band saw the cut out the shape. Then using black pant color in the lettering (I used an air brush to do this)

On to the sign post, Cut out four sections 4"wide, two for the post two for the arm ( the height and length of them is up to u).

On the post section , on the back side cut a channel 1" deep in the center for the skull pole to sit in.

Then cut out 3 square blocks - 2 with holes right through and one half way thought, this one will be the seat,  cut out groves in the foam to seat the blocks( make sure you trial fit the pole and skull so you have enough clearance for the mouth to open and the head to tilt, as well make sure the pole spins freely in the blocks, I used wood glue and hot glue to fasten them in place, Next glue the 2 sections of posts and arms together to give you 2 4x4 sections,

Next cut out a section the the post and arm 10" doun from the top 2" deep and 4" wide, to fit the post with the arm, On to the painting.

The painting was a 4 step process 1. You need three types of paint for this process a base, crackle, and a top coat, 2. put on you base coat, let dry. (I used brown) 3. Apply crackle, let dry. 4 apply top coat. (I used old white) note when applying top coat it will start to crackle very quickly and you can not go over it once it starts to crackle, so you have to be quick and thorough.





I wanted my sign to look like wood that was painted white with an old weathered affect , this method worked very well, as well no one cold tell me if you could crackle Styrofoam. Well IT WORKS. the picture is not great but you can get the idea.



This is my flicker circuit ( the easyest and best ever)its a starter for a fluorescent light

Heres the light on the top of the post. I found it in the garbage (perfect) I just drilled to holes in the foam and used 2 peices of flat plate on the back and bolted it together then cut a groove in the back of the fome for the cord and put on a switch and starter ( see flicker light)

Finally the finished post, I added moss all around the lamp and down the shaft and at the base to give it an old look.

I also installed an autotalk card to use for the movement of his mouth ,and a single servo controler module for his head tilt. then I recorded 5 min of audio on my computer  and used the soft ware to slow the voice down , so it sounded very erie. I then recorded it to a cd. the cd hed phone jack plugs in to the auto talk card and the line out to a computer speaker, when the audio is picked up by the card the jaw moves (this works well). I let the speech run recording the head tilt movments on the servo controler module, it records up to 4 min/s of movement.

Here is the post on the haunt. It rained this year so i could not set it up the way I wanted to, but  for his first run he ran for 4 hours with out a hitch.

Next year i will have mpgs to see him in action.
was a great effect the lamp filckering and the erie voice his have and head
moving and his eyes fading off and on.