

# HowlHaunter's Workshop

http://home.comcast.net/~pumpkin1000/props/13hour.htm

### 13 Hour Clock Props

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The original 13 hour clock described here was static (and lighted). However, since the good Webmaster at the Monster Page gave me a link that said "instructions for creating a working outdoor clock with 13 hours", I took it as a challenge! So, I created an even bigger 13 hour clock, but with a minute hand that spins wildly BACKWARD. Now, that's my definition of a working clock! You can still place this clock outdoors (with appropriate precautions).

## 13 Hour Clock Prop

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You've seen the 13 hour INDOOR Halloween clock, but how about one you can put outdoors in your haunting scene?

This is an easy project that doesn't have to be lighted.

What do you need for materials? Cheap stuff, of course! Buy a 5 buck plastic clock at WalMart. You know, the ones that take 1 AA cell battery to run. Now, go to a home improvement store and buy a sheet of translucent ceiling plastic panel (frosted white). These cover lights in a basement, whatever for about \$3. You'll only need a small piece of it for the new clock face. Then, get some one inch thick cedar wood (a plank that is about one foot wide is good --cedar isn't cheap, but you want something that won't break down in rain like chipboard or plywood). You can buy a 8 foot length for about \$10..but you can use it for other projects too.

You'll need a length of extension cord attached to two C7 Christmas light sockets (with bulb color of your choice, but green looks best, IMHO). Make sure you make good safe electrical connections. Remember, this prop is probably going to get rain on it. I solder my connections, then use the heat sensitive shrink tubing to insulate the soldered wire. Then, another wrap of electrical tape. Use GFIC outlets for

all outdoor electrical items. If you are not comfortable with electrical stuff, then just leave it unlit. Up to you.

First off, you need to remove the clock plastic "dome cover" (little tabs come right off), the face and clockworks can easily come right out too. More tabs. You need the paper clock face for a stencil later. Toss the other stuff in your parts bin. Now you only have a plastic ring! 5 bucks for this? Well, not quite. Get some half inch wood dowels to attach the black outer clock ring to the appropriately sized cedar wood backing. You can paint the backing green or let it weather to cedar silver, you choice.

Now, you want to cut four dowels to about 3 inches in length. Drill a hole through the ring (4 holes spaced at the 12,3,6 9 positions. Screw it into the backing where they will just fit into the back of the clock outer plastic ring.

Screw the ring to dowels. No glue! You want to remove the ring to replace bulbs as needed later. Remove the ring and then drill a hole in the middle to fish the extension cord through to the lights. Then position the two lights, one pointed up and one down (use tie wraps to hold the sockets to the backing).

Now, be creative with that clock face. I used the old paper click face as a stencil (clever huh?) and used an xacto knife to cut out the little triangles on the dial where the numbers go by. Then, I choose to print out a BIG number 13 to dominate the place where 12 would normally be. You may want to add the numbers 3,6,9--but I choose not to because I wanted the 13 to stand out. I used the word processor with a big font to do this. I used the old clock face to trace out a new face on the translucent panel. I used a dremel tool to cut out the plastic round face (cutting with anything else will just crack the plastic).

Then, attached my handy stencil with the 13 on it, used a little art brush to apply black epoxy paint. Then, attach the

face to the outer clock ring with epoxy glue. You can add the hands to the face (I choose to make it 15 til 13 o'clock. I also made little plastic spacers so I could glue the hands in place. (think about how windy it can get outside).



Attach to the clock to a post, bush, or tree, and you have a very spooky prop indeed. Clock side view (with bulbs showing):

# 13 Hour Big Backward Clock Prop

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I call this the 13 hour Big Backward Clock. It is truly unique. You can buy clocks that run backwards, but not with a spinning minute hand!

Halloween is meant for some goofiness along with spookiness! The clock is backlit with green light bulbs that glow through the translucent face.

#### Parts list:

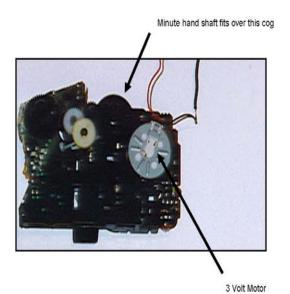
- 1) You'll need a white plastic lid from a 5 gallon plastic bucket. You can find these at any hardware store for around \$4. This is the clock face.
- 2) You'll need to go through your own junk drawers (free) or a yard sale (cheap) or a discount store (\$15 or so new) to buy a personal cassette player. It has to work...well, before you tear it apart!
- 3) A 3 volt power supply (make your own or buy one at a discount store at \$12 or so). To replace to two AA batteries you won't have to anymore on the tape player!
- 4) Two Radio Shack Project boxes. One for the power supply and one to house the "converted" tape player.

- 5) Assorted nuts/bolts/screws/speaker wire
- 6) Chunk of wood to mount the clock

#### STEP 1



Gently pry apart your tape player using a screwdriver between the two halves of plastic. You'll have a few plastic pieces probably fall out. Relax. You'll end up with something that looks like this



What you'll see is a little 3 volt motor that drives two rubber pulleys with a bunch of gears to reduce the speed.

The motor will typical have a red (positive) and black (negative) wire hooked to it to get power from the batteries.

You'll snip those off at the battery contacts. Be careful with the wires on the motor. They are fairly fragile and you

don't want to have to re-solder them.

Now, you know why I chose the cassette player. You'll need something to drive the minute hand on the clock...and it has to be relatively slow speed. The little DC motors you can buy, run very fast and you'd spin the hand right off...and wouldn't be even able to see the hand spin. However, if you hook the hand to the little cog that drives the cassette tape...well, the gears reduce that speed to what we want!!

Time to make the shaft connection. I used a steel threaded connector for a desk lamp (available at hardware stores for about \$1).

I used my Dremel to CAREFULLY grind down the little driver cog on the tape player to allow it to fit in the end of the shaft. Take a little bit off at a time until the cog just fits snugly in the end of the shaft. The little spring just below the cog will keep it turning OK as it rolls when the clock is face side forward.

Wait to cutoff the other end of the shaft.

#### Step 3



Now, you need to do a little engineering to fit the player "guts" into the project box. I used three wood dowel spacers at just the right length to raise the player "cog" to just under the project box lid.

Epoxy the dowel to the bottom of the box and use screw through hole through the player circuit board. Find some or make some.

Don't drill through any mechanical parts! But the circuit board itself is fair game. Nothing there is needed anymore. Cut off chunks of it to allow it to fit into the project box. You'll want to shear off any plastic parts that stick up (the non functional ones!). Use your Dremel tool with cutting

wheel. Works great. You can also use the Dremel to make a hole in the box lid. Just big enough to allow the shaft to rotate inside without rubbing.

#### Step 4



Time to create the clock face.

Use your Word processor to come up with a big number 13...and transfer to a stencil (an old folder works great or construction paper).

I then used a protractor to lay out the 30 degree angles to put little diamonds the other 11 points of the clock face.

I used black epoxy paint (appliance spray paint with a

brush) to fill in the 13 number and the diamonds. Or use the new "spray paint for plastic" paints. Whatever.

You can also paint on the hour hand. It's not going anywhere! Have it point to the 13 always. Let the paint dry overnight.

You can add some wood around the face to make it look more like a nicer clock..or if you want to have this thing run inside instead.

Now, it gets a bit of trial and error. You find a chunk of wood to attach all this...I used a 12 inch by 16 inch chunk of cedar. Holds up well outside. I painted it green.

I measured out 4 hardwood dowels of equal length and drills hole for them to fit into...at four equal points around the bottom of the clock face. Make the dowels long enough to allow the project box to fit under...plus some gap to allow the hand shaft to go up through another hole in the center of the clock face.

Dremel to the rescue again. Push the shaft through the hole in the project lid box and the hole in the center face. Mark where to cut it off...have it about 1/2" about the level of the clock.

Mark the edges of the project box onto the chunk of wood. Remove the clock face. Drill two hole in the back of the box to attach it with screws to the chunk of wood. Put some silicon caulk on the screws to keep this fairly water proof.

### Step 6

Create a minute hand. I used some old brass sheet metal I had it my shop so it won't rust. I just marked the design up (have it so it's long enough for the hand to fit inside the circle of the clock face.)..and used my Dremel cutoff wheel to cut it out.

Sand off the rough edges and then put a hole in the center at the end. Paint it black and let dry. I used JB Weld to attach a nut to the end of the shaft...that allowed the hand to screw into. You may want to use something else.

Test this puppy out! Drill a hole in the side of the case to run your speaker wire into. Smear some JB Weld around it to keep water out of the box later. Connect your 3 volt power supply to the motors two leads.

You'll find that if you hookup up positive to negative one way, the motor will go clockwise. If you reverse the wire connections, it will go counter clockwise (Backward).

I chose to let it run backward. You can put the project box lid back on. And use clear plastic storage tape to seal the box from rain later on (tape all four sides at the top).

#### Step 8:



I put 4 C7 light sockets attached underneath the clock face on each wood dowel. I used green bulbs for the spooky look. And attached them all to one power cord (soldered and insulated with a strain relief knot in the cord).

I connected the 120V cord to a <u>Infrared motion detector</u> and the 3 volt battery eliminator. And put the detector in Test Mode, so it

only is active when it detects motion. You don't want your tape motor to be running constantly.

Then I put stiff wire through holes I drilled in the top and bottom of the chunk of wood to hook it to a bush. You'll need to power the player motor with your 3V battery eliminator (power supply).

Done. The small hole for the minute hand shaft may allow rainwater to get into the project box with the 3V motor. Better if you don't leave the clock out in the weather and just run it on a dry Halloween night!

Now you have a lighted spooky green clock with a spinning backward minute hand that is activated by the TOTs as they approach your doorway!!