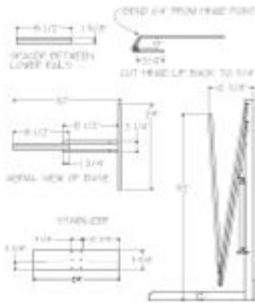




<http://www.deathlord.net/Exorcist/exorc.htm>

Exorcist Corpnelator

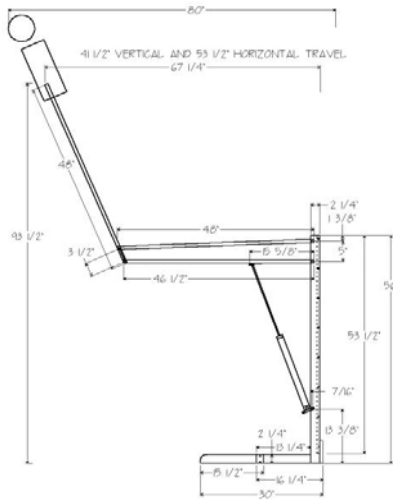


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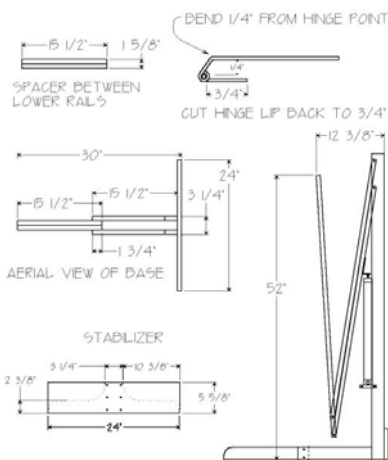
A couple of years back I visited a truly visionary haunt in Fountain Valley Ca. being constructed by Jerry Chavez of SpookyFX.Com called Darkwrath Keep. A haunt that was pitch black, requiring the patrons to light their own way using a small flashlight which in turn triggered the event or image the architect of this new concept wanted them to see. It was there I first saw the awesome effects of what is called in the industry the Corpnelator. Spooky FX had begun to manufacture this new animatronic first unveiled at the an [industry show](#) earlier that year. I wanted one for myself but would have to give up something in my home haunt to have one. This year for 2002 I decided to make that sacrifice and created my own version that flies further and higher than the original and since she hovers with no apparent support like Regan enjoyed doing, I call her the Exorcist. Here's how I made her.

Obtained from
Omarshauntedtrail.com

Exorcist Corpselevator - 1 -



First things first I would need to decide how far I wanted my girl to fly so I turned to the cadd program I use called Visual Cadd. Since I have 10' ceilings in my haunted garage, I figured that around 9 1/2' would be a good finished height. Using standard lengths of square aluminum tube of 48", I asked the computer how to achieve this overall travel. As you can see in the pic above, using these standard lengths I would only have to make a single cut to get the right measurements. Using these placements would offer a flight pattern of over 40" higher than where she starts and over 53" outward. The more distance covered the more impressive will be her attack. So now with the height achieved with the amount of throw from a 24" bicycle pump as the air ram, I lay out the rest of the mechanical dimensions.



All of the details are worked out on the computer screen even down to clearances needed for the tricky attachment I will be using underneath the lowest arm of the scissor mechanism. That will be accomplished with a gate hinge with one end cut down to 3/4" long and the other end bent almost to a 90 degree angle to allow space for the nut at the end of the air ram. Looking down in an aerial view on the framework you can see the footprint of the base is really long, as she will have a lot of fulcrum while fully extended. Storing my props inside my haunted garage between seasons is tight, so I design the footprint to shorten from 30" down to 16 1/4". This is much more storable. You will need to print out the two pictures above for reference while you are constructing your frame.

Now that I have a working plan, I lay out the items needed to complete the first phase of the Exorcist. I plan to use 3/4" (four quarter) solid oak for the framework because it is readily available to me being an oak furniture manufacturer, but you could also use any other hard wood, even Fir. I don't recommend using soft wood such as pine. The 3/4" plywood shown below in the materials list can be replaced with solid as well. I just so happen to use 1 5/8" as a standard stock size here, so I used ply for the piece that will separate and hold together the main body of both halves of the frame. When purchasing the bike pump be sure it is steel and has a throw of 17 3/4".



At the top of the photo above is shown a 1" forstner bit you will need later as well. You will only need one strap or gate hinge for your project but I show two here to let you see what the before and after looks like. On the right are two



3/4" square aluminum tubes and one 3/4" aluminum angle piece. Here to your right is another tool you will need (you can make this yourself with a piece of wood if you will only be using it a couple of times such as with this project) The one shown is a [Pock'it Jig Kit](#) you can order from a tool supply like Woodcraft . You will need this drill bit as well, so your center hole and counter sink are correct. Also the long square drive screw driver bit is needed if you are using the square drive pocket bore screws as shown.

MATERIALS LIST;

3/4" PLYWOOD;

1) 1 5/8 53 1/2 BRACE

3/4" SOLID OAK;

2) 2 1/4 56 STILE

2) 2 1/4 13 1/4 RAIL

2) 2 1/4 15 1/2 RAIL

1) 5 5/8 24 STABILIZER

1/8" X 3/4" ALUMINUM;

1) 48" SQUARE TUBE

1) 47" SQUARE TUBE

1) 48" ANGLE

HARDWARE;

1) 24" BICYCLE PUMP (17 3/4" THROW)

4) #8 X 1 1/2" POCKET BORE SCREWS

22) #8 X 1 1/4" DRYWALL SCREWS

3) #8 X 3/8" PAN HEAD SCREWS

1) 3" LT STRAP HINGE (GATE)

4) 5/16" X 3 1/2" CARRIAGE BOLTS

2) 1/4" X 1 1/2" HEX BOLTS

8) 5/16" FLAT WASHERS

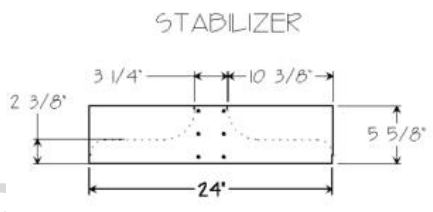
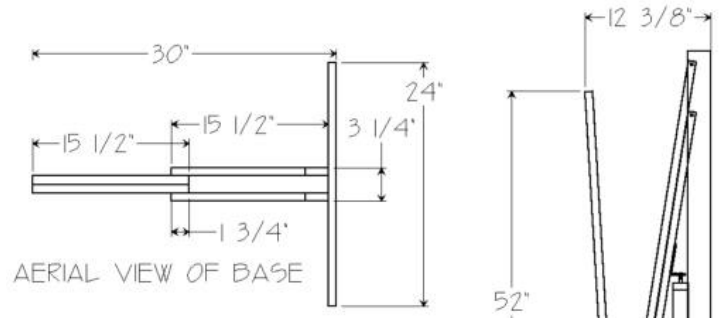
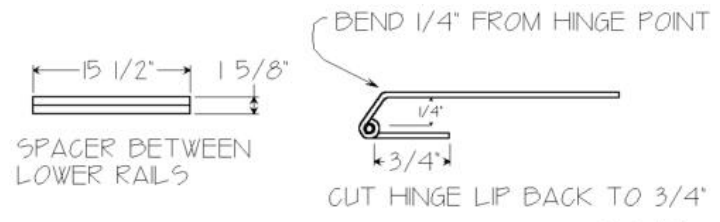
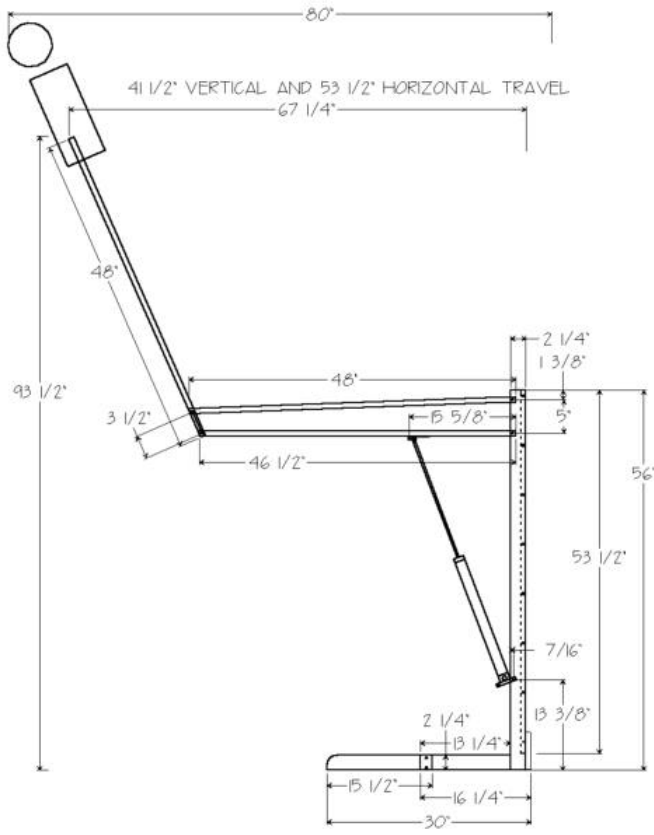
2) 5/16" LOCK WASHERS

2) 5/16" LOCK NUTS

7) 5/16" HEX NUTS

6) 1/4" FLAT WASHERS

2) 1/4" LOCK NUTS



Exorcist Corpselevator - 2 -

(Note; If you cut and paste the materials needed list from the previous page and print it out, you will have an accurate shopping list to take to the hardware store. There are other items needed to complete this entire project that aren't shown here, but these are the items needed to build the entire mechanical portion of this event.)



The l-shaped sides for both sides of your framework will be assembled as shown above using the pocket bore jig. Use a yellow wood worker's glue in the joint and be sure your cuts are square. Hold your two pieces of wood down FLAT to your work bench so your joint is flat and square. Be sure the screws pull up tight. Here are both sides and the center piece that will attach them to each other.



Between the lower legs of each side I will need a "foot" to stick out forward that is exactly $1 \frac{5}{8}$ " wide like the above separator. To achieve this I am gluing two $\frac{3}{4}$ " solid pieces of oak together and since four quarter stock is actually a finished size of $\frac{13}{16}$ " thickness ($\frac{1}{16}$ " thicker than $\frac{3}{4}$ ") this will equal precisely what I need. These pieces are $2 \frac{1}{4}$ " wide by $15 \frac{1}{2}$ " long. You can clamp these together not using any nails if you want. They will be dry enough to work with within one to four hours depending on your temperature.



I used a few staples in mine so I could work with them immediately and will cut off one corner which will be at the top of the foot's end. While your glue is drying on the framework, you can turn to the details of the mechanism.



The strap hinge above shows how it looks like when you first see it and on the left with one tongue cut down to $\frac{3}{4}$ "

and a hole drilled in the middle for a $\frac{5}{16}$ " bolt (the bike pump's air ram) to fit through. As you can see, the hole will cut into a previous hole, but it will still work just fine. Notice the other tongue is bent as we mentioned earlier to a nearly 90 degree bend. This will give you the cavity needed underneath.



Now we turn to the air ram. We will need to mount the base somehow to the frame, so the way I chose is to use a section of one of the feet that is on the bottom. You can cut this to $2\frac{3}{8}$ " or even $2\frac{1}{2}$ ". This "pin" will slide through the two holes that the foot used to clamp into and into holes drilled in to each side of the framework.



The placement of the $\frac{3}{16}$ " hole drilled for the pin is at $13\frac{3}{8}$ " off the floor and $\frac{7}{16}$ " from the front edge of the frame. Drill in about $\frac{3}{8}$ " to $\frac{1}{2}$ " deep. Make sure your holes are exactly the same on both sides of the frame so the line up and leave the cylinder mounted square to the frame.



At the end of the upright section of the sides we will need to drill some holes. Here you can see two large holes that are countersunk with the 1" forstner bit that will allow $\frac{5}{16}$ " x $3\frac{1}{2}$ " carriage bolts that will mount the top of the scissor to the frame to sit in flush.

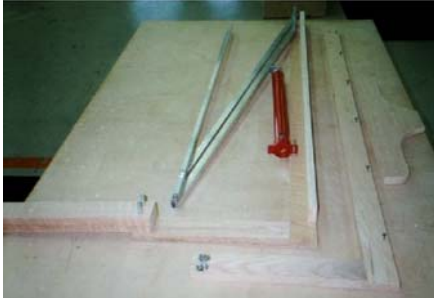
Also a countersunk #8 hole for the screws we will be using to attach both sides of the frame together. You will be drilling 6 of these from the top as shown (not right at the end of the wood, as we don't want our pieces splitting out) to just above the foot section below.



A close up of the scissor attachments show the hinge already in place. With my air ram, the perfect spot to attach this was at 15 5/8" from the end on center to the pin of the hinge itself. You should put your entire mechanism together and place yours where it needs to be to allow your scissor to be fully folded down with your air cylinder standing vertical. Once attached, if your cylinder has the same throw as mine did, your lower or the two parts of the scissor shown above should lift up to perfectly horizontal.

Also shown above is the connection of the scissor to one side of the frame and how you will space this out to work with just enough clearance to pivot, but not allow slop. Drill your 5/16" holes at 3/8" from the end of each tube aluminum, on center to the tube. Be sure your holes are drilled square to itself, or they will be lopsided in the frame. It is best to use a drill press for these holes. And remember also to keep your holes drilled through each side of the frame to be perfectly aligned with each side too. If you attach both sides of the frame to each other temporarily with some screws you can drill these holes together at the same time, insuring perfect alignment. The attachment of the scissor on the bolt will be; flat washer / nut / flat washer / tube aluminum / flat washer / nut / flat washer. This should space out to precisely 1 5/8". If it does not, use more washers or thinner washers to achieve a perfect dimension to 1 5/8" before putting the final side of the frame on.

Exorcist Corpselevator - 3 -



Here is our first look at the items making up the entire frame and mechanism together. We attached the lower points of the scissor sections to each other using 1/4" x 1 1/2" hex bolts. Cut your lower square tube down to 47" long and now drill a 1/4" hole in the bottom side. Drill the same hole in each of your other two sections as well. Remember to put these on center and 3/8" from the ends.

Then drill one final hole in the angle aluminum exactly 4" above the one in the end. Measure this on center from the other hole. Attachment will be bolt with flat washer through square tube / flat washer / angle aluminum / flat washer / lock nut. Do not fully tighten this connection, as the scissors need some slack to move, but it does need to be snug to prevent slop.

You will need to pre drill your holes for attaching the sides together, drill your pin holes for the cylinder and drill the holes at the end of the sides at the bottom to attach your foot's extension. You will be gluing the 1 5/8" plywood brace or divider between the the two side to just ONE SIDE of the frame using six 1 1/4" drywall screws. This frame will be disassemble-able in the event we ever need to replace the air ram. Flush the brace up with the top of the uprights and to the back. This will give us a cavity between the two sides for the air cylinder to rest partially inside of.



The extension's top hole needs to be placed in exactly the same spot as the bottom hole so the extension can be taken off, turned around and bolted back into place the opposite way to shorten the footprint and store the extension.



Once you have all your holes drilled and then attach the final side to your framework with 1 1/4" drywall screws and the 5/16" carriage bolts, your air cylinder should be "floating" between the two sides.

The placement of the holes for the pin are a "one shot" type situation. If they aren't perfectly placed your cylinder will be lopsided. To ensure that mine were right I measured at least twice and then used a tapered drill bit to predrill the holes.

A tapered bit has a pinpoint to it that tapers back up to like a #8 body. That means it will enter at a precise point and will not wander as it travels through the wood like a regular bit will do following the softer grain.



With both sides on next stand up the frame and use a square to make sure it is vertical. Then using 1 1/4" drywall screws, attach the stabilizer to the back at the floor. Notice the screws are centered to each of the 3/4" sides.

Here's a little trick when doing scroll work like shown above; once you have drawn a shape that looks right to you and is centering the middle section for its attachment, cut out one side with your jig or scroll saw in one piece and use that off fall as a template for the other side. Both sides will then be exactly alike.



As soon as I tested the mechanism I learned that when the air cylinder fully deploys, it tilts out forward slightly, putting a bind on the cylinder sliding back down into the body of the pump. To counter this I used a hose clamp around the top of the pump's cap to hold one end of a small chain that limited the pump to perfectly aligned to the ram. No binding has occurred since.



Success! The mechanism for our exorcist is now together! We will be hooking air up to it later, but for now we need to turn to our puppet. We'll call her Regan.

Exorcist Corpseator - 4 -



For this section of our project you will need one blow-mold skeleton. I choose the slightly higher quality ones sold by stores such as Target rather than the infamous ones sold at Big Lots.



While they do look alike, the Target skellies' plastic is thicker and makes a better quality finished product that will hold up better in the rough environment I usually put mine in. You will also need some ping pong balls, some paint (I used air brush paint and a small brush for this project) and some Crayola Model Magic.

You will also need a night gown for a young girl around 11. Not shown were some LED EYES from Haunt Masters are what I used; hauntmasterproducts.com/7.html in the shade of green. I will admit that I ordered mine in red and then went down to the local Radio Shack and bought two green LEDs to replace the actual light bulb on this assembly that were not the SUPER BRIGHT as offered by Haunt Masters. I wanted a more of a smoldering eye look rather than the very piercing brighter light.



This year I was fortunate enough to run across a website by Merlin at hauntershantout.com/home/smokeyjoe.asp that showed a bright technique of making a blow mold skeleton much more poseable by fitting one with an interior frame of PVC. We will be using that idea here. First you will cut the arm ends out of the torso large enough to send a 1/2" x 13" pipe through. We will then be attaching a 90 degree fitting to each end of the shoulder pipe to put the arms on.

For arms you will need two sections 16" long. I went to the trouble of cutting the ends out of the arm bones and heating them up with a heat gun and sliding them on each end of my arm sections. I am not sure this really added anything to my puppet since her arms are totally covered by the night gown, but the little bit of bulking it offers may add something.



I bent each arm into a 30 degree bend in the middle first before putting the bones on. Next I cut out the end of the hands for the end of the arm pipes to slip into and fastened them using #8 x 3/4" pan head screws through the hand and into the pipe for a secure hold.



Next cut off the pelvic bone and carve an angled cut out of the bottom of the spine of the torso just enough for the angled aluminum to slip into. If you keep this square to the torso this angled slot will keep your puppet facing forward. I used a jig saw to cut this slot on mine. To get the aluminum all the way up to the shoulder pipe you may need to use the heat gun again to soften the plastic. Then simply drill about three holes through the back and into the aluminum and fasten with #8 x 3/4" pan head screws. Keep the aluminum from touching the shoulder pipe so the arms will swing freely, as this is part of the animation for her attack.

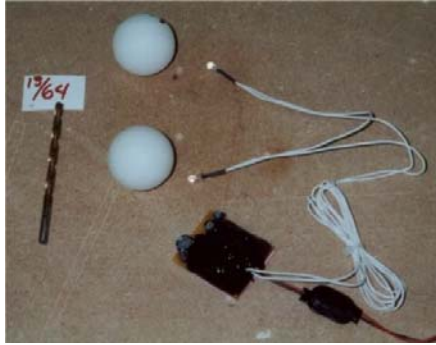


To keep the head facing forward you can put one screw through the back of the base of Regan's head and into the top of the spine shaft that bumps up inside the head. I also put another screw from inside her mouth cavity through the bottom of the mouth area and into the spine shaft. So this head isn't going anywhere.



I cleaned the paint off the skull before marking where I needed to cut out by using lacquer thinner. Then I simply marked and cut out two eyes. I used a small, sharp pocket knife for this step but you may want to use an exacto knife. Remember, cutting plastic is a fast way to cut yourself. Be very careful here. For the open mouth and the detail gaps between the teeth I used a Roto Zip tool and cleaned up the jagged edges with my knife. At the nose you see here one of the knobs on the end of an arm bone that I attached with a drywall screw from inside the head. If you look close you will see that I opened a "hatch" in the back of the skull to facilitate the placement of her glowing eyes.

Exorcist Corpnelator - 5 -



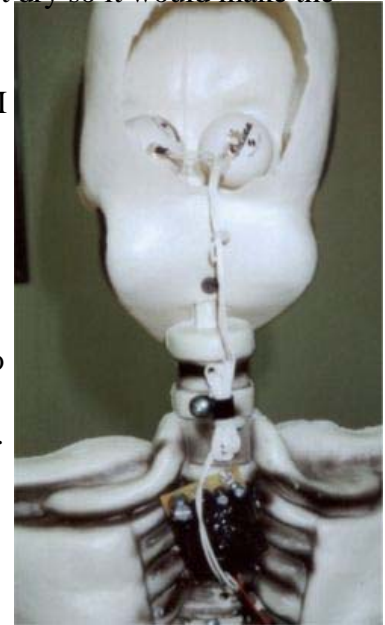
Here is the LED eye set up and two ping pong balls we will be using as well as the correct drill bit for this particular size lamp. You may want to measure your lamps before drilling any holes. I needed to bulk out the skull to look a little more like a face, so I sprayed down the entire skull with 3M spray adhesive and let it dry so it would make the Crayola cling fast.



Then using the modeling magic I filled in the sides of the skull face till it was smoothed out and fashioned her nose around the bone joint so there was a strong bond to hold it on.

This stuff is absolutely a party to work with, so don't be afraid to jump right in. Anyone can use it.

With the hatch door lifted up on the back of the skull we see the ping pong balls that have been hot glued into the eye sockets from inside. Then I drilled a hole in back of each "eye" and hot glued the LEDs in place that slipped in and stopped perfectly centered to each eye opening. I mounted the IC board that runs the fading eyes to the back of the torso with a couple of pan head screws and cable clamped the excess wire to the back of the neck.



Next I sprayed down the torso and the head with 3M adhesive spray again and once dry I applied paper napkins soaked in a mixture of yellow woodworker's glue using the corpsing method from SpookyFX.com as shown on my how-to on Rotting Corpse.





Now our little Regan is starting to look like a real lady. She was painted over with spray skin colored paint and then over that very lightly with white. For the gashes in her face I outlined each one with a bead of hot glue. Then the space between the two glue lines was painted black. The glue ridges then were painted bright red.

The outline for the mouth and eyes was a green / gray combination. The puke down her face and body is a yellow / dark green / light green mess with speckles of red blood drops here and there. The teeth were carefully painted a subtle yellow that doesn't show up in this shot with a black pin stripe between each tooth to outline. The eyes were the most demanding. With a black cornea and the rest in a yellow / green mix. Once she was painted I went over the entire puppet with a thick coat of clear semi gloss lacquer to protect everything.

At the local thrift store I found a wig made from real human hair and attached it to the skull with drywall screws. I collected some of the hair into strands using some of the lacquer on my fingers and then touched that up with red paint as well.



Now that Regan is looking like a little lady, we return to the mechanics. Most all of the animatronics I have made I have always built the unit as this one now is and left it at that, with the sound usually being fed to the scene from somewhere else. The air needed to be regulated in-line before getting to the ram, the timer system hidden under a black sheet somewhere. For the exorcist I was determined to make her fully integrated with regulated air, sound, power, everything. So that once you plugged the air line in and plugged in the extension cord, you had nothing else to do at all. No batteries, no switches, nothing.

That means that with just 56" of frame to attach to, I would need to keep it all very compact! First I did a little measuring to see what would be the tightest package I could get my air system down to and attach that directly to the base of the frame. This setup is exactly like you will see on my how-to Air Trigger. This wrapped around the bottom of the frame next to the air cylinder itself. The 3/8" air line fit perfectly around the existing fitting at the bottom of the bicycle pump, so there was no need to use other adaptors. I slipped it over and hose clamped it tight. (Note; you will need to remove the device from the pump that keeps the air from coming back out of the tire between down strokes. This is usually a little rubber seal directly





behind the fitting that we are sending the air in through. Just take it out and toss it.) The power going into the washing machine solenoid is coming directly out of an event control timer as you will find thoroughly covered in my how-to [Motion Trigger](#). Above the ECT I mounted a power strip to the top of the frame and ran an extended cord from it back down the frame to the floor and out. In that power strip I plugged in a 9 volt 100 milliamp AC adaptor to feed power to the ECT as well as the LED eyes.

Exorcist Corpselevator - 6 -



It's time for Regan to speak up. I didn't have a digital voice recorder handy for her voice, so I picked up a 10 second talking picture frame from Radio Shack. Hacking into it I ran one wire to the hot lead under the button that you push inside the photo frame to make it play back, and another lead to the opposite side of the panel the IC board it attached to for the ground.



Now, touching the ends of the wire together will make the recorder play. Those two lines will be going to both the ECT (timer) and to my motion trigger. You can find the motion trigger (110 volt relay) on my how-to page Motion Trigger as well. In this case the relay Regan will be using is a photo cell, so she will trigger when hit with a beam of light from a flashlight. The power to the photo cell came off of the same power strip, with the return wire bundled with the others with zip ties to the scissor.

Next I eliminated the batteries on this little device by soldering on to the terminals the wires from an AC adaptor which also plugged into the power strip. Since these batteries were all 1 1/2 volts each, I needed a low milliamp (100) , 6 volt adaptor. Finally, two more leads were soldered to each speaker lead. These will be going into an amplified computer speaker. If you try using this voice recorder, make sure you have the power going to it correctly + and - otherwise you

will smoke this delicate device. My first one was a success, my second one for another event cost me two recorders from that mistake.



I took this \$5 find from the thrift store apart and hacked the amplified speaker line out of it to the speaker that came out of the second (stereo) speaker of the mate speaker. I also unclipped the wires going to this amplified speaker so I wouldn't have sound coming out of this amplification unit. This bare speaker now will be mounted directly onto Regan's chest (would that be breast?). The speaker box was then mounted directly to the side of the frame. The power for it came from another AC adaptor also plugged into the power strip above the ECT.



At the bottom of the ribcage was a perfect sized cavity to mount the speaker. Two long zip ties to the steel frame of the speaker made a factory type fit. Then I fashioned the grill that was on the speaker box to fit around just the speaker to keep it safe from flailing hands.

Here's what little Regan looks like in flight. I find she flies on only 27 pounds of air pressure and with the new muffler I designed this year for the exhaust line, she is very very quiet.

The recording of her voice is a ten second clip I downloaded directly from an internet midi site that was from the bedroom scene in the Exorcist movie where she was thrashing against her restraints.

Before triggering, she is genuinely frightening with her fading green eyes as she hovers above the ground. When the air is triggered the scream is as well, sending her from 6 feet in front of your face to three feet above your head, all the while her terrifying scream is coming closer and closer.



In the process of building and adjusting her and triggering her many times, I don't think even once she didn't catch me off guard enough to raise the hair all the way down my legs.



There is something astonishingly spooky about how she comes after you with her arms moving backward as she flies and then ultimately clear above you when the arms come reaching out forward. You would just have to [see it](#) to really get the full feel of the scare.

The Exorcist debuted in Schock Manor this year for 2002 and was clearly the most disturbing of all the images we used that night. Screams were free. Success.

