

MAKE YOUR OWN VIDEO PROJECTED HEAD

By Jeff Davis



I had always wanted to reproduce the effect of the singing busts from Disneyland's Haunted Mansion in my own yard haunt. After a quick Google search I found that the effect was done with a simple 16mm projection on an oversized caricature bust. In the retrofit of one of the parks the film was replaced by a laser disc and projector. There is a great article about how the effect is done at <http://www.grimghosts.com/secrets/MajorFX.html>.

After reading that they went to laser discs for their effect I got the idea that the same effect could be done with a DVD and a LCD projector. Knowing that LCD projectors and DVD players were available through eBay at an affordable price I figured I would give this a try. Many DVD players have an auto-repeat feature and if you video taped someone speaking and then put that on a DVD and projected onto a blank head with a LCD projector it should create the same effect that the Disney Imagineers created.

As a side note: If you are not using eBay to purchase items for your Halloween effects then you are missing out on a huge cost savings. I couldn't do half the things I do in my yard without it. I can't say enough about how much it has helped make some of my projects possible by allowing me to stretch the budget and obtain items that would normally be out of my price range.

First I needed to find was a LCD projector. There are a couple of things I learned along the way. The most expensive part of a LCD projector is the bulb. You can buy a very new LCD projector very cheap without a working bulb but that won't do you any good when the bulbs are hundreds of dollars. The higher the ANSI Lumens rating of a projector the higher the cost. Lumens are a fancy way of rating how bright the projector is. The brighter the projector the more it will show up even with ambient lighting. Today's expensive projectors have ANSI Lumens ratings of over 2000. The older projectors have ratings of 100 to 300. If you are going to be using the projector in the dark then higher Lumens ratings are not as important. Another rating of LCD projectors is resolution. If you are going to be displaying a standard Broadcast TV signal which is 544 x 372 then a resolution of 640 x 480 is more than enough. Most modern projectors have resolutions of 1280 x 1024 which makes them more expensive. One last thing, home theater LCD projectors are less expensive than computer monitor projectors.

I searched on eBay for "LCD Projector" under Home Theater Projectors with a price range of \$99-\$250. One of the first things I noticed was that there were more projectors listed under Sharp than any other brand, except for the "Other" category which had questionable no-name brands. I figured I would stick with the Sharp brand. I made sure I checked that the units were in working order and had been tested. I also checked to make sure that the bulb hours weren't very high which indicates a bulb about to go out. One model that seemed to keep coming up was the Sharp XV-100. This is an old projector with only composite

video inputs and a resolution of only 640x480 and a bulb with only 150 ANSI Lumens. My only complaint about the unit is that it is bulky and weighs over 30 lbs. It does have a good focused lens that will create a wide picture in a very short throw distance. We watched movies on a 4' x 8' white 2" foam sheet from about 10 feet away outdoors for several weekends in the summer when I purchased 2 of these.

The next thing I searched for was a DVD player. I wanted a compact chassis single disc player. I used eBay again and searched for "mini DVD player" under Single-Disc DVD Players. One of the most common brands is Cyberhome. I was able to purchase 2 of them for under \$20 each. I confirmed it was in working order and came with the remote.

The last piece of hardware I needed to purchase was an integrated Stereo Amplifier. I just wanted something that would take the audio output from the DVD player and play it through a set of outdoor speakers loud enough to be heard from a distance. A couple of brands that work well for this are the Realistic SA-150 and the RCA SA-155. I did a search on eBay and was able to find one for \$10.

In order to create the DVD I used my Sony Digital Video camera mounted on a tripod and video taped a friend sitting against a black backdrop. I purchased a black nylon balaclava (a close fitting cap that covers all of the head but the face) through eBay that my friend wore to blend him into the background except for his face. I used a 100W clamp-on flood light to light his face by bouncing it off of the ceiling. As mentioned in the original article about how Disney did their effect the person being filmed had to hold their head perfectly still. He rehearsed saying the words to an audio speech while he stayed in frame on the camera. I then taped it several times. I used a copy of Pinnacle Studio 8 which I bought on eBay to edit the video. Studio is an easy to use video editing tool. I ended up purchasing the upgrade to 10 plus on eBay after dealing with some frustrating issues with the software. I have to say that version 10.7 is very stable and I haven't had any issues with the software for some time. I chose the best take of the animated face for the project. I converted the video to black and white, adjusted the contrast and brightness until the only thing showing in the video was just his round face, and then added the audio track and synced it up to his lips by moving the starting point until his lips matched what was being said. Because I planned on having this run over and over again I also added a blank 4 minute title that faded into the beginning of the video and faded out at the end. This would give a delay between performances. Once I got this running I shortened the pause to 2 minutes so people didn't have to stand and wait too long.



Original video



After video filters

I tested the projection out by playing the DVD through the projector onto a foam wig head. It was easy to tell that the foam wig head was not going to work as the projection looked too small. Using pink 2" foam sheets cut into 16" squares I glued them together into a large block. I had an artist friend of mine use a foam cutter to carve out a faceless oversized wig head. I painted it white and placed it on a pedestal that I created using a simple wooded frame covered in 1" white foam and painted. When the video was projected on the head it worked pretty well. The face still had a sort of round look to it but for the first year we went with it.



Our 2nd year we re-taped the head using a friend who does voice talent and had him read a script we wrote together. We then projected the video on the head. Using sculpting clay we molded a simple nose, lips, eyes, and a brow of his face. We then made a mold in plaster of Paris and then cast it in rigid foam. We sanded the back of the face down and cut the foam head flat and then glued them together.



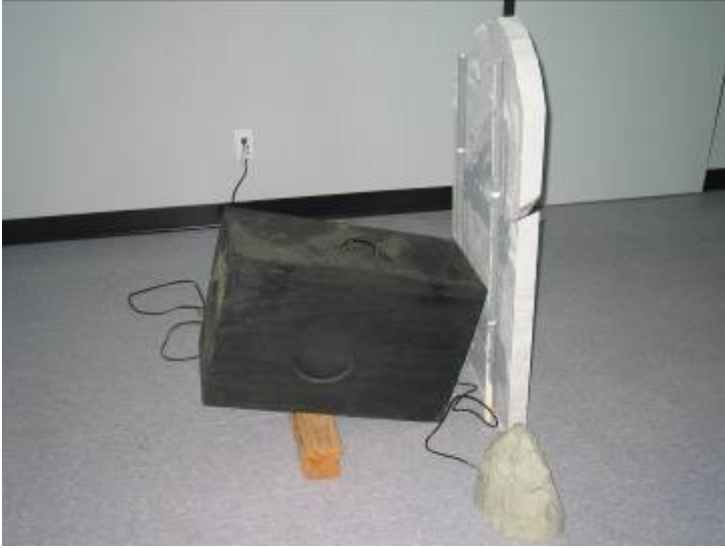


Now when the video is projected it looks VERY realistic.

We used the actual audio of the video tape reading and added a Noise Reduction and Reverb effect. The main video had the Black and White and Lighting Effects added.



Using $\frac{3}{4}$ inch plywood I built a box that would hold the projector with the DVD player and amplifier on top. It had a hinged lid with a handle on top to carry it. I cut a hole for the projector lens to project through. I also cut round holes on the sides and the back and screened them for ventilation. I spray painted the exterior of the plywood box flat black. I drilled a small hole in the back of the box and inserted an extension cable. I then inserted the electronic equipment and cabled it together and plugged it in.



I placed the wooden box behind a foam tombstone and placed the pedestal with the head on it further behind the tombstone. Using some blocks of wood to tilt the box up I was able to project the face image onto the foam head. I used a pair of outdoor speakers that looked like rocks I got on eBay to connect to the amplifier in the wooded box. I placed the speakers on either side of the tombstone. Then using the remote I was able to play the DVD and set the auto-repeat feature. The title would display for 4 minutes and then the animated head would perform its speech and then fade out.



With a little ingenuity and some creative shopping on eBay I was able to pull off the same talking bust head that Disney has in the Haunted Mansion. It was a centerpiece of my Halloween haunt and I received rave reviews from the people who came to see it.

Sharp XV-100	\$135 eBay
CyberHome mini DVD Player	\$30 eBay
Realistic SA-150 Amplifier	\$30 eBay
Acoustics Outdoor Rock Speakers	\$68 eBay
Scrap ¾" Plywood, 2 Hinges, Handle, and Latch	\$25
Black Nylon Balaclava	\$17 eBay
Pinnacle Studio Plus v10.5	\$20 ebay
Sony Digital Handycam DCR-TRV19	