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<http://spookineering.com/motoreyes.html>

## Animated Eyes

This particular set of eyes was constructed for a friend. She did not want them servo operated as her haunt is not yet automated. Actually, she didn't even tell me what they were for, just gave me dimensions.

I had several small gear motors removed from microwave ovens. (turntable motors) I selected 2 with different gear reductions so the movement would be completely random. The up down movement uses a 3.5 rpm motor while the side to side uses a 6 rpm. These motors are extremely quiet.

The basic setup is very similar to the eyes used in Count Jackula. The difference being, the use of motors instead of servos. Crank arms were fabricated from 3/8" X 1/4" aluminum stock about an inch long. Holes were drilled for the motor shaft and rod end attachment. Distance from shaft to link is about 1/2 inch giving a movement of 1".

The up / down motor is mounted to the main frame while the left / right motor is mounted to the eye brackets and moves up and down with them. All parts were fabricated using standard shapes of aluminum and common hand tools. Nylon bushings and other hardware are also common parts.

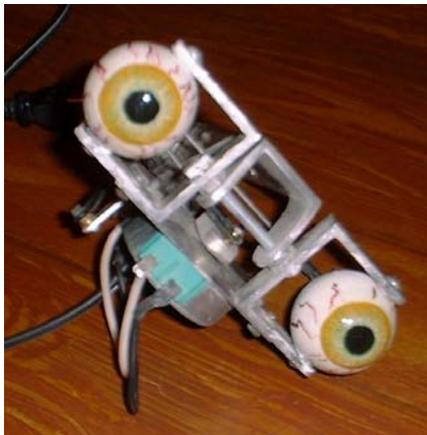
*The following photos are courtesy of **Dr. Laurie Von Frankenstein of Frankenstein Industries** (I forgot to take any)*



This front view shows the left/right motor mounted. You can also see the up/down link attachment.



Here you can see the up/down motor, crank, link, and control arm.



Near the center of this picture you can see the crank for the left/right motor



Bottom view showing main frame, eye mounts, and linkage for left/right movement. Control arms mounted on back of eyes are made from aluminum angle. L/R movement linkage works just like the steering in a car (except rack and pinion) the crank controls one side, a tie rod controls the other



Top view with a better look at the up/down crank and the left/right motor mount.

And what did she do with them?

Here is her 2007 video showing many of her astonishing creations. The ending scene shows the prop she used the eyes for. It even creeped ME out the first time I saw it in person!