WORK COMPLETED

This week was mainly spent exploring the different options possible for a new gooseneck for the headpiece, and to figure out how to attach the arm gooseneck to the arm piece. I called Uniprise to see if they had any 36 inch length goosenecks with an inner diameter of .33 inches or bigger. The gentleman said that with this large a diameter, there was no way to get a gooseneck that would be light in weight since they are made of metal. This led to our group researching different ways to overcome the given situation: maybe get a plastic flexible piece or to use only the inner speedometer cable in the gooseneck therefore requiring a smaller diameter.

We asked Bill if it is possible to run the inner speedometer cable through the gooseneck without any problems of friction or heat. He said no, it would be ok and that we would not even need grease. So, Sirisha and I cut the speedometer cable for the arm mounted piece and found the outer tube was basically a gooseneck anyway, so there was no problem with that in the first place. We cut it so that the inner cable can go through the gooseneck, but then the outer speedometer cable will still protect the portion not surrounded by the gooseneck.

Figure 1: Cut Section of Speedometer Cable
I went to the machine shop and discussed what options my group had to attach the motors to the inner speedometer cables. With the help of Rich, I created a sketch of the two pieces to be machined. They are both .5 inch diameter aluminum stock, and they will allow both different size diameters to be fit securely into the holes by using set screws: only one set screw for the motor and two set screws for the cable.

My group and I made final decisions on how to attach the arm gooseneck to the arm piece. We decided that we will sew on neoprene onto the main part of the armband, while leaving enough room for the gooseneck to run through. Sirisha made up a purchase requisition for the neoprene. We did a weight test again and decided that having the gooseneck run along the bottom of the arm would be more comfortable than running it above.

The group and I also started doing some research on how to connect our TASH switches to our motor, in order to have the motor reverse in direction. One question we had was the type of connection was at the end of our switch. We received a “stereo monojack” from Jenna, since she had an extra one. She explained that this would allow us to
solder it into any circuit we wanted, since it would now give us places to connect the positive and negative ends.

![Figure 3: Monojack Connection](image)

**FUTURE WORK**

By the end of this week, I will like to have found a new 36-inch gooseneck with the new smaller diameter, which will hopefully weigh less due to the smaller diameter. I will call Moffatt to see if they can help us. If they cannot, I will try to look at gooseneck lamps at stores to determine if any would be suitable for us. Also, I am going to go to the machine shop to machine those two adaptable pieces that will attach the motor to the inner speedometer cable. If the compasses come in, I will machine a small hole and set screw set-up as well. Also, we are going to order the neoprene pieces and decide what type of threading to use when sewing.

**PROJECT REVIEW**

As of right now, our team is running slightly behind since we have had troubles ordering our eyeblink switch sensor, which we feel will take up most of our time to figure out how to set it up in our circuit. Once we get the new size head gooseneck, we will make quick progress to where we are supposed to be since so many tasks rely on having that one accomplished. My team and I plan on working over spring break for a bit, so that we may be kept on our timeline in the long run.
HOURS WORKED

In Lab: 7
Outside of Lab: 3