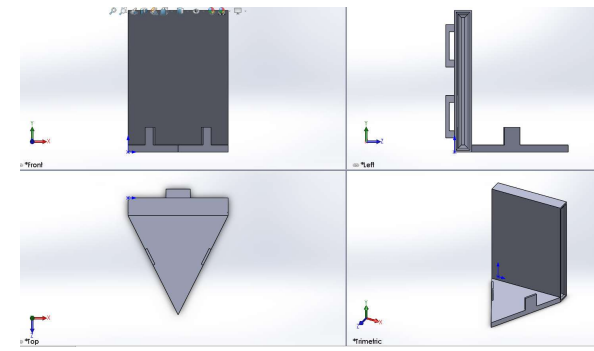


URS Walker
Name: Christy Diersing
 Advisor: Dr. Amy Doll



3D Model of Speaker Mount

Background

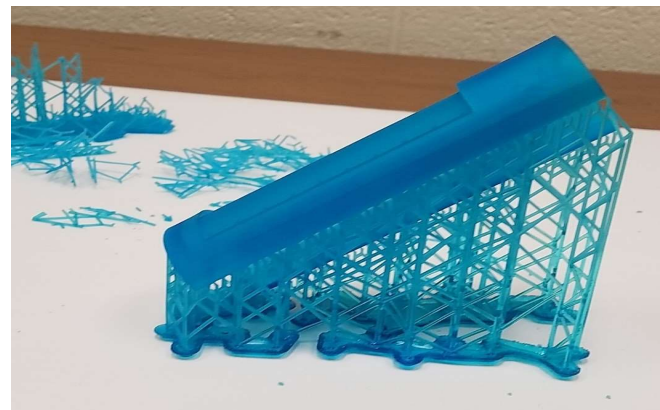
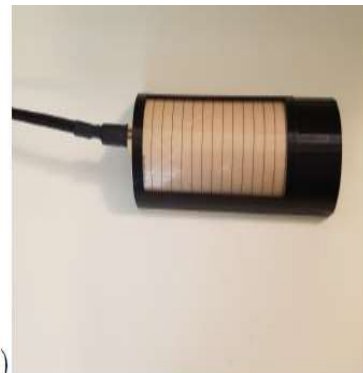
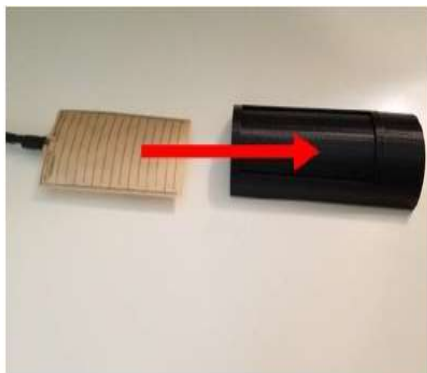
The purpose of this project is to complete the design for a walker that encourages Ellie to use her walker. Ellie is blind and has severe autism, so she has to use a walker. However, she tends to get distracted and leave her walker, leading to her falling. A previous senior design project was to design a system to encourage her to keep using her walker. This was achieved using pressure sensors, which would tell the system when she was using her walker. Once the pressure sensors were triggered, either the mp3 system or vibration system would turn on. Another graduate student, Dimitri Papazoglou, helped a lot with this project, particularly with the 3D printing.

The pressure sensor sheathes needed to be reprinted in different resins due to cracking. The iteration using tough resin was too loose on the walker handles. The final iteration was tight enough on the handle and had a spot to place the vibration motor, rather than taping it onto the handles. The speaker mount also had to be reprinted to fit the new speaker.

Pressure Sensor Sheathes - Final

Pressure Sensor Sheathes – Tough Resin

Pressure Sensor Sheathes - Original



a)

b)