

Team: P20068 Robotic Drum Assist **Engineer:** Mehmet Koksas

What were the outcomes of the prior phase?

1. What did I plan to do?
 - a. Research more about the circuitry needed to control the motors correctly along with keeping them safe. Find more parts that are better for what we need and update the interconnect design.
2. What did I actually do?
 - a. Tried connecting the relay to the motor only to find out that the specific relay I had chosen was a bad lemon. Ultimately learned more about how the relay can work with the actuator and that we'd need two relays to control the motor going back and forth.
3. What did I learn? How were the plan and reality different?
 - a. The relay being a dud was not a part of the plan but through more research and help from my groupmates we were able to make progress.

Team level goal for next phase

The team will continue the design work started during this phase, filling out the BOM further and creating a full design that will allow us to quickly begin prototyping and implementation when MSD2 starts. We will create simulations and add more detail to schematics, drawings, and diagrams, with high-quality renders of the final design. Small-scale prototyping will be done as members are able to.

What do I plan on doing to ensure that my team has a successful review at the end of the next phase?

1. Update our findings through our files.
2. Finish up the connections for trying to get the motors to work alone with the relays.
3. Apply the same knowledge with our equipment to the Arduino board to see if Josh and Irfan can get it to work through them.
4. Stress test the motors and start integrating our pieces together.

What is standing in my way of meeting my next phase goals?

Rona, TIME, specific equipment and limited materials.