

**Team: P16201**

**Engineer: Leslie Bowen**

**Entering Phase: Integrated System Build and Test with Customer Demo**

**What do I plan on doing to ensure that Team P16201 has a successful Integrated System Build and Test with Customer Demo review?**

1. Continue work on Walking Program - motor control (2 hours per week during phase)
2. Connect motors and run in concert, daisy-chained (more than 2) (2 hours per week during phase)
3. Connect motors in joint fixtures and run in concert (2 hours per week during phase)
4. Continue up-keep of the task list and adherence to 3 week plans of other team members (Ongoing)
5. Enter team in a design competition (1 hour, 3/22)
6. Assist in building up joints from aluminum pieces, wherever possible (Ongoing)

**You will answer these three questions when you submit at the end of Integrated System Build and Test with Customer Demo**

1. What did I actually do?
  - a. I connected two Teensys to one computer to confirm that we can run different programs at the same time. I updated the pin assignments for the motor Teensys as we moved to a 4 Teensy design. I created a git repository for all of our code and wrote a program to run each motor independently when we have them all connected to one power supply. I have been connecting the motors one-by-one to ensure the power supply can handle the load. We are up to 4 motors currently. I also tested the breakout board, so far unsuccessfully, and am working to get these up and running. I worked with Kate to get the breakout board working, connected all of the left leg motors to power and I/O and ran code to show the function of each motor. After running each motor, I started creating the first step routine. I also advised AJ about wire management and started brainstorming possible solutions to keeping the wires in line.
2. What did I learn?
  - a. Writing the code to run the motors one-by-one ahead of time was massively helpful in efficiency. In the future, the team needs to communicate more openly about the subsystems they control, specifically the Teensy as this led to an issue with the breakout board.
3. What do I plan on doing to ensure that Team P16201 has a successful Customer Handoff and Final Documentation review?

- a. Work on the tech paper, Create a full walk program, run the motors for both legs independently to ensure functionality, coordinate the left and right leg teensys