

Weekly reports are to be emailed to atbecker@uh.edu by 5:00pm on Tuesdays. The purpose of a weekly report is to: (1) give you text and images for your papers, thesis, and dissertation, (2) document progress, (3) identify if you are stuck or need resources.

Weekly report

1. My Goals from last week

- **Deliverable 1:** Write Simulink Model and use it to track the sphere. - Complete
- **Deliverable 2:** Write MATLAB script to which tracks sphere and overlays position on raw video feed. - Complete

2. My Accomplishments this week

- a. Project 1: Magnetic Coil Control for Mico robots
 - **Deliverable 1:** Write MATLAB script to which tracks sphere and overlays position on raw video feed from camera. - In Progress
 - **Deliverable 2:** Install Camera lens stream video to MATLAB and Simulink – Complete
 - **Deliverable 3:** Test interface of Arduino with Current Controller – Complete. Used Packet Serial format to send commands to the Current Controller.

Note: The manufacturer for the current controller, SyRen 25, created a set of fully supported libraries for the Arduino micro controller. This reduces the development time for the code significantly and this controller might be useful in other applications where motor control is needed. However, I am unable to make the controller reverse a connected motor but since I do not need that specific function (I have controllers for each coil) it does not affect my project. It might be needed on another project so it is worth figuring out. I used the code examples which came with the libraries and followed the wiring diagram so the root cause remains unknown. I may contact the manufacturer this week to see what they have to say on the matter.

• 3. My Goals for Next Week.

- Objective 1: Write MATLAB script which tests the video detection to command sequence for controller.
- Objective 2: Test objective 1 24VDC solenoid on Friday.

3. What I need Dr. Becker to do:

- a. Assist with debugging script as needed this week.