

## **EE/CprE/SE 491 BI-WEEKLY REPORT 1**

**Start Semester – 3/24/2023**

### **Group number:**

**sdmay23-41**

### **Project title:**

**Automated Testing Station for Sensing Applications**

### **Client &/Advisor:**

**Moneim Ismail**

### **Team Members/Role:**

**Thomas McCoy - Group Organizer, Software developer**

**Matthew Rief - CAD designs/3D printing**

**Garth Anderson - PCB designs**

**Malvin Lim - PCB designs**

### ○ **Weekly Summary**

Overall objective for this week was to get as close as possible to a testable design. Garth and Malvin continued working on PCB design, improvements, fixes, etc. Thomas continued work on the LabView program for project interface, and Matt started 3D printing components and continued work on DUT platform design.

Progress was less than previous weeks, as last week was Spring Break.

### ○ **Past week accomplishments**

#### **Thomas McCoy:**

- Cleaned up LabView program.
- Updated front panel.
- Fixed some program control issues.

#### **Garth Anderson:**

- Made a new footprint for the RGBW LED since the old one broke after a KiCAD update.
- Resolved a few ERC errors in the electrical schematics.

#### **Malvin Lim:**

- Edited PCB footprints.
- Added labels on PCB for a better user experience.

#### **Matthew Rief:**

- Frame design alterations.
- Online training for 3D printing.

○ **Individual contributions**

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b> <i>(Quick list of contributions. This should be short.)</i>	<b><u>Hours this week</u></b>	<b><u>HOURS cumulative</u></b>
Thomas McCoy	LabView programming (see list above)	4	28
Garth Anderson	PCB design improvements (see list above)	4	24
Malvin Lim	PCB design improvements (see list above)	4	26
Matthew Rief	CAD designs and 3D printing (see list above)	3	19

○ **Plans for the upcoming week**

**Thomas McCoy:**

- Continue LabView programming, get Keithley sweep data collection finalized.
- Save sweep data to files

**Garth Anderson:**

- Check KiCad design of the 3 PCBs for errors
- Send field to ETG and submit order

**Malvin Lim:**

- Same as listed under Garth.

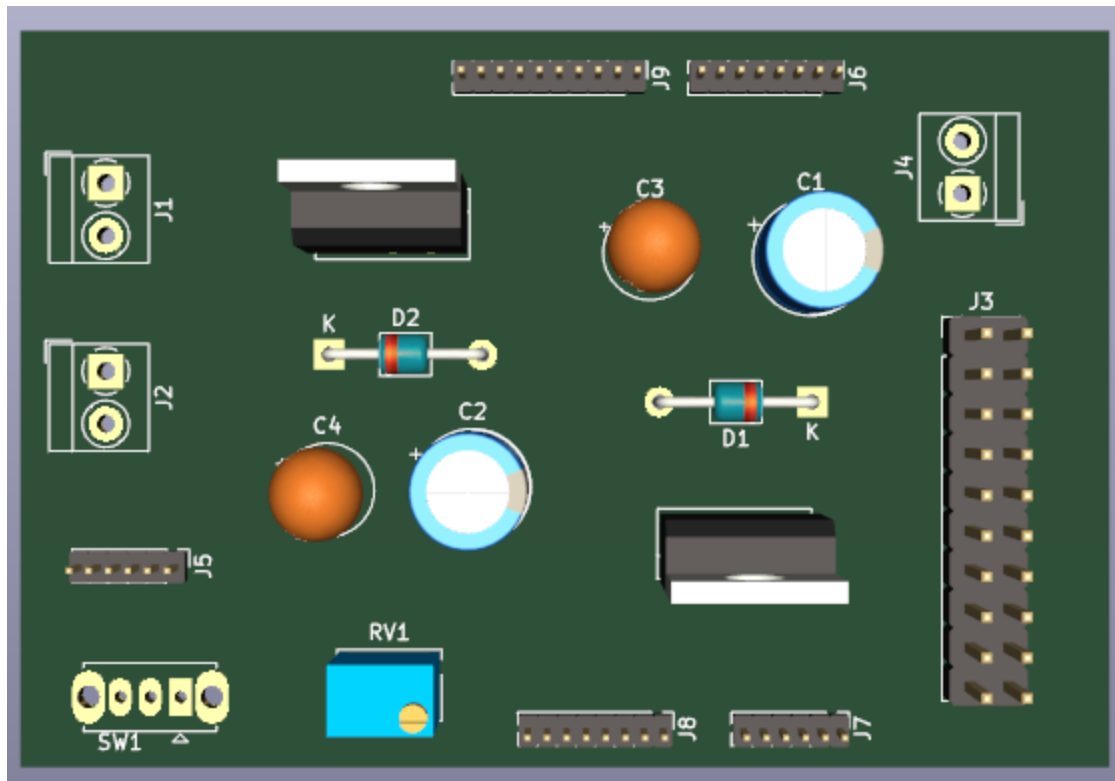
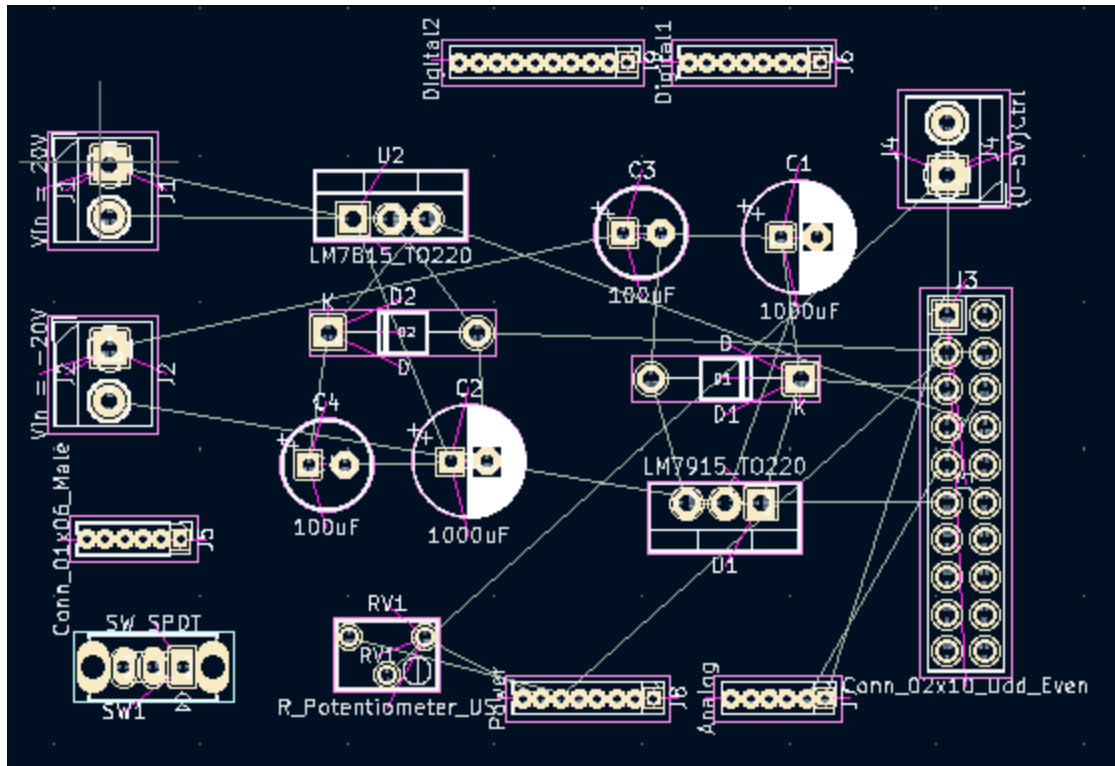
**Matthew Rief:**

- Make the base and sides of the box thin with a high filling ratio.
- Print a prototype for everything using a low resolution filling ratio. (20% or 10%)
- Send order to ETG for O-ring.

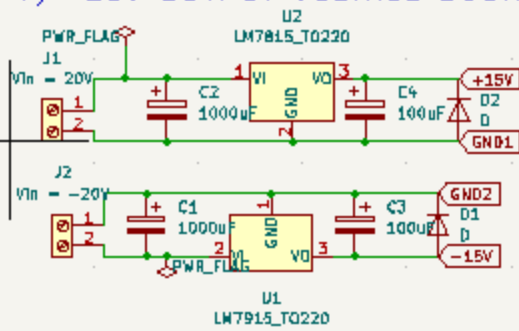
○ **Summary of weekly advisor meeting**

Virtual through email -- include updates of current progress and to-do list for the coming weeks.

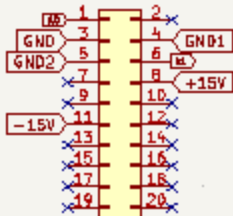
○ Diagrams



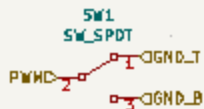
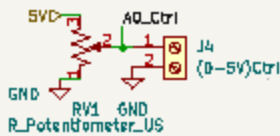
## +/-15V OUTPUT VOLTAGE SOURCE



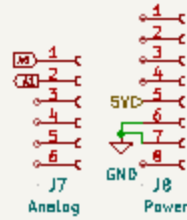
## Connector



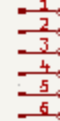
## 0-5V



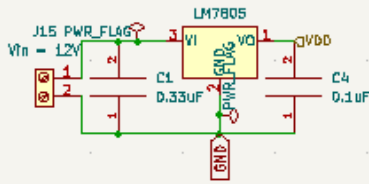
## Connector Pins



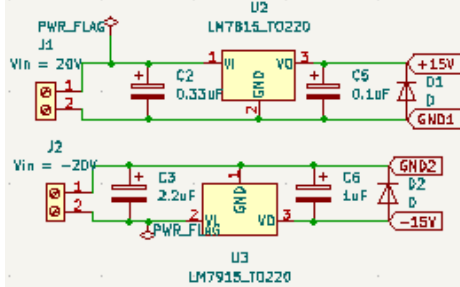
## J5 Conn\_01x06\_Male



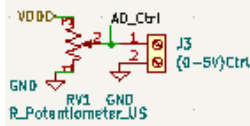
### MC VOLTAGE SOURCE (5V Reg)



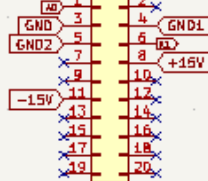
### +/-15V OUTPUT VOLTAGE SOURCE



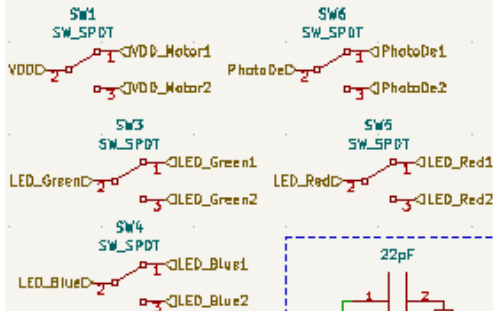
### 0-5V



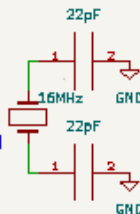
### Connector



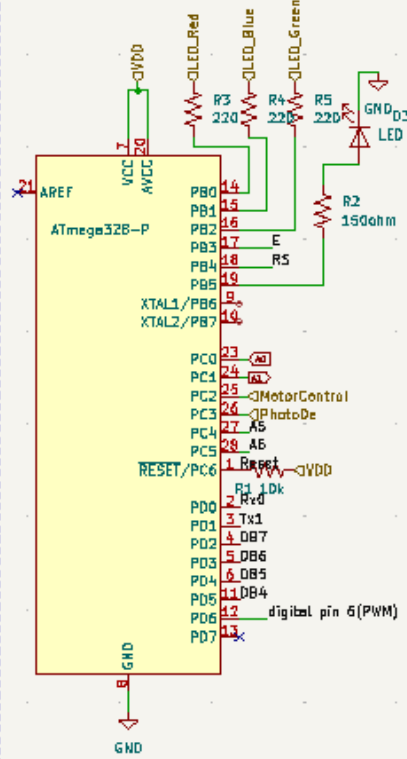
### Switches



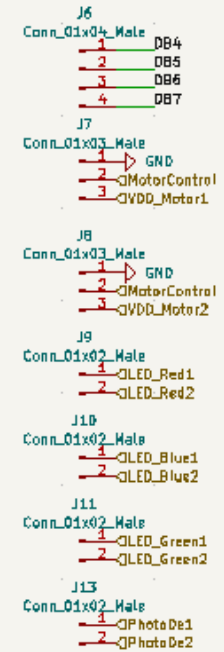
### Crystal for Atmega



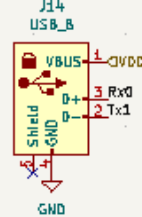
### MICROCONTROLLER



### Connector pins



### USB B port



Sheet  
File:  
776  
Size:  
KiCo

