

sdmay20-39: Batteryless, Encapsulated Hydrometer

Week 5 Report

November 17 - November 30

Team MembersJason Cheng — *Technology Lead*Zach Higgs — *Project Lead*Harel Cohen — *Hardware Lead*Ben Colson — *Test lead*Craig Phillip — *Communications Lead***Summary of Progress this Report**

The boards have arrived in the mail, and so have the parts, so we have begun construction and layouts of the testing procedures and the physical PCB itself. We have sourced a few MOSFETs to be used and rapidly swapped so we know exactly what we are looking for in terms of testing procedure, and how to verify that we have the verified procedures. Furthermore, we have an assembled board that we soldered in this period, extraneous to the testbed, so we can verify functionality and general progress

Pending Issues

We have found that we need to continue testing and getting the ringing down more, the first MOSFET that we assembled the board with to ensure functionality does not quite bring the rise time down where we need to. In addition, more ringing and other noise has appeared in our signal which is currently being attributed to the MOSFET, but needs to be verified.

Plans for Upcoming Reporting Period

Continue testing and start changing MOSFETs to verify our theories, source a MOSFET that will help us design within our self imposed constraints, while meeting the goals for this project.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Jason Cheng	Created the PCB and assisted in testing first revision for functionality. Created project and wrote script for youtube video. Helped finish PCB and BOM documentation, and started drafting version 2 requirements.	10	0
Zach Higgs	Helped create testing procedure and troubleshoot design. Assembled and soldered PCB	10	
Harel Cohen	Assisted in soldering first draft and creating first PCB for future testing.	8	0

Ben Colson	Assisted in assembling PCB and sourcing MOSFETs for testing	6	
Craig Phillip	Assisted in MOSFET sourcing and future improvement speccing so we know where to go from V1	6	

Gitlab Activity Summary

Nothing to report.
