

sdmay19-32: Sound Effect Devices for Musicians

Week 8 Report

March 28 - April 4

Advisors: Dr. Geiger & Dr. Chen

Team Members

Tim Day — *Analog Engineer*

Eric Fischer — *Test Engineer*

Francisco Alegria — *Chief/Musical Engineer*

Blake Beyer — *Digital Engineer*

Travis Gillham — *Integration Engineer*

Summary of Progress this Report

The biggest accomplishment this week is the PCBs have been ordered for the noise, mixer, oscillator, output amplifier, and analog mod bay. We plan on ordering them at the end of the week to arrive by next week. The perf boards work for the mixer and the noise. They will be fallbacks if the PCBs do not function. This week we were able to get a total list of parts that covers the entire system and created a list of what needs to be done to integrate the hardware with the software.

Pending Issues

- Need to combine all of the modules together
- Need to put all the code onto a single Arduino
- Need to find a way to manage the power
- Need to finish filter.

Plans for Upcoming Reporting Period

- Filter will be complete
- Output amplifier will be complete
- Need to find a box for the circuit.
- Soldering will start on each module

➤ Order PCBs

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Tim Day	Tested the mixer perf board, tested the noise perf boards, created another mixer board. Created Mixer, Output amplifier, and oscillator PCB.	24	96
Eric Fischer	Took linear to logarithmic code and tested linear digipot. Determined that those will not work because of low resolution. Had four more log digipots, that were originally bought, soldered to be tested.	10	74.5
Francisco Alegria	Writing and debugging code for entire system. Created PCB for the analog mod bay.	15	65
Blake Beyer	Helped create oscillator PCB. Developed BOM.	12	72.5
Travis Gillham	Helped create the output amplifier PCB. Worked on the final report.	7.5	65