

EE 491 WEEKLY REPORT 11

Date: 4/17/17

Group number: dec1712

Project title: Sound Effect Devices for Musicians

Client &/Advisor: Professors Geiger and Chen

Team Members/Role: Jake Asmus/Team Leader, Joseph Brown/Team Communicator, Daniel Peterjohn/Team Webmaster, and Jiangning Xiong/Team Key Concept Holder

o **Weekly Summary**

- This week we spent some time trying to figure out the pathway to head down/ get ready for the next semester of work. We talked briefly about the realistic goals we would like to have for this project over the summer, and decided upon trying to create a testing prototype for the pedal mat and work on more coding for the pedal to add more effects. Jake spent some time working on the seven segment displays for the pedal mat to display the level of the knobs as they are incremented/decremented. Daniel suggested that we use the shift registers instead of a seven-segment decoder to cut down on the number of wires to run each display, since the pedal mat will have 12 seven segment displays total (2 per column). Daniel did some more work on the pedal programming, and spent some time integrating the toggle button/incremental button coding into the mat's teensy to help create "pages" of pedal effects. Joseph spent some time trying to work on the cases for the seven-segment display, so that when the counter is up to 9 the display will read "9".

o **Past week accomplishments**

- Jake Asmus: Accomplished implementing the "Multistate" function and displayed the current value on a seven-segment display. This was implemented with a CD4511BE chip (a binary to decimal SSD decoder).
- Joseph Brown: Worked on seven segment display coding, tried to use a case function to define the displays (didn't quite work out yet).
- Daniel Peterjohn: Worked on PedalMat library. Mat functionality. Initial testing with column knob mode.
- Jiangning Xiong: Keep studying coding for teensy and learn something about the shift register.

o **Pending issues**

- Jake Asmus: Understanding the code that needs to be implemented for the pedal.
- Joseph Brown: Figuring out the seven-segment case coding.
- Daniel Peterjohn:
- Jiangning Xiong:

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o Individual contributions

| <u>NAME</u> | <u>Individual Contributions</u> | <u>Hours this week</u> | <u>HOURS cumulative</u> |
|------------------|---|----------------------------|-----------------------------|
| Jake Asmus | SSD code complete for one digit using a CD4511BE chip. | 8 | 59 |
| Joseph Brown | Worked on studying seven segment displays, tried to write case coding in online Arduino (didn't work out, too busy to really focus these last few weeks). | 5 | 39 |
| Daniel Peterjohn | Worked on PedalMat library. Mat functionality. | 7 | 69 |
| Jiangning Xiong | Keep learning teensy coding trying to help the team on code and learn something about the shift register. | 3 | 15.5 |

o Plan for coming week

- Jake Asmus: Implement the "Multistate" logic for two digits and will use a shift register instead of the CD4511BE chip. Will also work on the pedal.
- Joseph Brown: Fix the seven-segment case coding, but mostly spend time working on the final versions of the design document, project plan, final presentation, and the website.
- Daniel Peterjohn: Continue working on mat functionality.
- Jiangning Xiong: Continue working on teensy coding.

o Summary of weekly advisor meeting

- Professor Geiger was out of town, no meeting.