

## sddec18-21: Multi-Effect Sound Pedal Sequencer for Performing Musicians

Week 4 Report

February 20 - March 1

### Team Members

Tyler McAnally — *Software Lead / Outreach*

Karla Beas — *Facilitator / Scribe*

Charles Rigsby — *Hardware Assembly*

Calyn Gimse — *Test Engineer*

Derrick Lawrence — *Report Manager*

Dr Geiger — *Project Advisor / Client*

Dr Zambreno — *Course Instructor*

### Summary of Progress this Report

During this past week, the group was able to make substantial progress in open-sourced digital effects and researching key factors in UI design. Calyn was able to find more digital effects and also verify that they were available to us to use as needed. The group was able to find a lot of public, online articles that deal with human factors in terms of UI design. Apple Inc has posted some tips that their company found worked well for their designs. There are several web-based magazines that offer anecdotal evidence into what people typically prefer when using various kinds of apps. We have also reached out to the College of Design, hoping the faculty there can offer insight. We have not heard back from them.

We were able to place our order for Raspberry Pis to begin physical test work on our project.

### Pending Issues

A few things coming up in the immediate future include the pending College of Design research, sorting through the data we have already obtained in UI design to pick the most relevant information to our specific application, and also rework the code in the digital effects that we found so they may be used with a raspberry Pi 3 model. Another issue we are looking at is whether or not there are a combination of effects that would produce an appealing sound when wired in parallel. Here, we could have hundreds of different combinations that may sound great and unique at the same time. The goal of finding one that produces a pleasurable sound is second to functionality of switching between sets of effects wirelessly. However, this is an issue that can be easily tested while simultaneously testing the wireless functionality.

### Plans for Upcoming Reporting Period

For the upcoming week, we are hopeful to hear back from the College of Design. The group currently has a Raspberry Pi to begin primitive testing with. We plan to modify the digital effects we currently have, and upload them to the Pi. From there, we are going to test the output quality of each effect by connecting a speaker or cheap pair of headphones. Once we have tested each effect, we will look at the signal integrity of multiple effects in series.

### Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Tyler McAnally	Helped find public research on UI design and	3	9

	sorted through to find the helpful topics pertaining to our design needs.		
Karla Beas	Researched the process of uploading the digital effects to the raspberry Pi OS. Worked on Project Plan.	3	9
Charles Rigsby	Reached out to the Dean of the College of Design in regards to UI design. Researched design fabrication advice. Assisted with Project Plan.	3	9
Calyn Gimse	Verified that we are able to use the effects found from a previous project posted in the public domain. Found additional effects within that project site. Researched ADC/OpAmp schematics for manipulating the signal.	3	11
Derrick Lawrence	Looked into public research done on UI design and typed weekly status report.	3	9
Dr Geiger			
Dr Zambreno			



