sdmay18-39: Sound Effect Devices for Musicians
Week 7 Report
October 31 - November 7

Team Members
Benjamin Reichert — *Experimentation Team Leader*
Daniel Kroese — *Software Integration Leader*
Garrett Mayer — *Technical Communications Leader*
Thomas Kimler — *Technical Project Manager*
Virginia Boy — *Communications Leader*

Summary of Progress this Report
-Completed working prototype of fft movie graph
-Developed improved test bench for data collection
-Corrected shrill sounds on high gain amplifier settings
-Researched and drafted schematics for a signal mixing circuit to be used in our design.
-Verified that lossy data compression will be okay to use in data processing component of our test setup
-Looked into micro controllers and current practices for sound modulation
-Researched amplifier power supplies and DACs

Pending Issues
-Non trivial hum introduced from preamp stage on recorder
-need to add ABC breakout to expand test bench signal chain to allow for 3 recorded inputs (base line signal, tube amp signal, SS signal)
-Need to find consistency between output and input

Plans for Upcoming Reporting Period
- Work on how to find a consistency to signals and what needs to be changed to input into ss to make its outpu look just like tube for any given signal
-Improve graphing function to plot multiple waveforms simultaneously

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Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Benjamin Reichert	with all hardware aspects of signal chain constructed, was able to control some of the more fine recorder stage adjustments - dialed in pre-amp on recorder to minimized distortion from the recorder itself - only hum present on recording is latent in amp; fixed shrill sounds on high gain amplifier settings by floating the neutral, just attaching line to the attenuator circuit	8	57

Daniel Kroese	**At a high level sought out if/how we could make the output of ss look like the output of tube, Looked into micro controllers and current practices for sound modulation in order to reduce latency**	**6**	**52**
Garrett Mayer	**Completed working prototype of fft movie graph. Will continue to add and modify code to take more parameters, Started code to save movie of fft graph as a video, Updated graphing functions to be extendable with movie functions in matlab, Fixed bug in time wave graphing function**	**7**	**57**
Thomas Kimler	**Researched data converters applicable to our project, Researched and drafted schematics for a signal mixing circuit to be used in our design, Verified that lossy data compression will be okay to use in data processing component of our test setup.**	**6**	**58**
Virginia Boy	**Researched the cause and potential solutions to minimize 60 Hz hum in amplifier, Researched data converters as they apply to our project**	**5**	**40**