sdmay19-11: MIDI Zeusaphone (Singing Tesla Coil)
Week Report 20
March 14 - March 28
Client/Advisor
Joseph Zambreno
Team Members
Gunnar Andrews — *Webmaster*
Leo Freier — *Interrupter and Micro Controller Lead*
Luke Heilman — *Technical Architect*
William Brandt — *Pulse Width Modulation Expert*
Greg Harmon — *Tesla Coil Construction Expert*
Jacob Feddersen — *Communications Specialist*

Summary of Progress this Report
- Received first two PCBs
- Successfully soldered/tested transmitter
- Integrated pitch bending on the keyboard
- Installed some needed packages on the team PI for MIDI
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Past Period Accomplishments
- Progress on building the bridge circuit on perfboard - Luke and Jake
    - Cut sil-pad to fit heat sinks
    - Installed major components - should be ready for testing with oneTesla secondary soon
- Integrated pitch bending for keyboard
- Soldered transmitter PCB and verified that it works
- Pitch bending and Pi updating
    - Still need final tests but it works in the driver
- Documentation work
    - Some progress on the user manual
    - Documentation on PCB specifications for case designs
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Pending Issues
Nothing to report

Plans for Upcoming Reporting Period
- Test bridge circuit and complete PCB layout
- Solder second PCB
- Continue work on case designs and building the secondary coil
- Test pitch bending and finalize software
- Possibly work on captive portal and finalizing API
- Documentation

Individual Contributions

Team Member	Contribution	Reporting Period Hours	Total Hours
Gunnar Andrews	- Got pitch modulation working - Changed some keyboard functionality in software to fix some bugs - Updated website - Updated team PI	6.5	147.5
Leo Freier	- Helped with pitch modulation code - Documented PCBs for case designs - Worked on User Manual	6	147
Luke Heilman	- Verified all parts arrived from 2nd parts order - Planned perfboard for bridge circuit - Soldered newly arrived transmitter PCB	7	179.5
William Brandt	- Rearranged safety manual - Planned for explanations of document - Started adding explanations	5	134
Greg Harmon	- Begin Compiling Datasheets and other technical documentation. - Begin creating operation documents - Create a document-tracking Sheet	5	154
Jacob Feddersen	- Soldered bridge circuit on perfboard - Worked with Gunnar on pitch-bend software - GDT research and calculations	7	206.25

Gitlab Activity Summary

commit 79db3949f794b7f391a3f411be236001be36b736 (HEAD -> pi_generate_wave, origin/pi_generate_wave)
Author: Senior Design Team sdmay19-11 <sdmay19-11@iastate.edu>
Date: Wed Mar 27 18:53:28 2019 -0500

    Pitch bending!