

# MONTHLY REPORT

EE 492 DEC1503

December 9, 2015

## BLUETOOTH AUDIO MIXER

Advisor: Josh Bertram

Client: Jay Becker

Clayton Hawken: Team Leader

Debbie Baeder: Team Communication Leader

Chad Stobbie: Team Concept Holder

Brian West: Team Webmaster

### 1. Monthly Summary

The last two weeks before the end of the semester revolved around the delivery of the PCB. We had intended on fabricating after Thanksgiving break, but the Printed Circuit Board was delivered to us only a handful of days before our project deadline. Nevertheless, our team came together to fabricate, assemble, and troubleshoot the mixer before getting into testing the edge cases.

### 2. Fabrication

- Starting with the smallest components, and migrating up to the largest, the PCB was gradually completed and generally tested through a process that took our team about 10 hours.
- We recycled a linear regulator from the first prototype, as well as many wires.
- The new compact enclosure stabilizes and organizes the second prototype.

### 3. Omitted Features

- Our team decided to restrict the scope of the project from having modular functionality due to time constraints, and in the interest of handing a working system to our client.
- The mobile-phone app and website remote intended for ease of use have also been discontinued.

### 4. Challenges

- A few soldering mishaps caused the circuit board to start smoking once the power was on, and a headphone was attached to an auxiliary input port.
  1. Resolved – the main output port now has audio playback.
- The back-up battery circuit will hold a voltage once the main power has been released, but does not activate the Raspberry Pi to commence safe shutdown.

### 5. Pending Issues

- *The back-up battery circuit does not complete safe shut-down properly.*
- *Testing for total harmonic distortion.*

- Testing for user edge cases, such as power on/off and volume memory.

## 6. Plans for the next few weeks.

|| All: Not applicable.

## 7. Individual Contributions

|| **Clay:** Digital Potentiometer pin mapping. Helped with fabrication of the PCB. Facilitated the Final Document. Testing for Total Harmonic Distortion.

|| **Debbie:** Fabrication of the PCB. Editing and formatting of the Final Document. Helped with testing.

|| **Brian:** Final code revision and documentation. Assembly of the second prototype, and auto boot testing. Back-up battery troubleshooting.

|| **Chad:** Verification and fabrication of the PCB components. Troubleshooting the circuit board from poor output.

## MONTHLY HOURS FOR THE PROJECT: 52

Name	Hours
Clay Hawken	13
Debbie Baeder	13
Brian West	13
Chad Stobbie	13

## TOTAL HOURS FOR THE PROJECT: 471

Name	Hours
Clay Hawken	113
Debbie Baeder	119
Brian West	116
Chad Stobbie	123