

MONTHLY REPORT

EE 492 DEC1503

September 14, 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. Weekly Summary

After a summer break, the team reunited in class and during an instructor meeting to review our progress and discuss our intentions for this second semester's goals. We have collaborated on understanding last semester's problems, and brainstorming potential project upgrades that could possibly be installed prior to our presentation in December. The modular audio mixer has been retested for basic functionality and gone through a bit of wire clean-up, as well as a few programming minimization efforts by adding functions for repetitive code.

2. Team/Client Meeting Notes

- **Duration:** n/a **Members Present:** n/a.
- **Purpose and Goals:** We have not reviewed our progress with our client, yet. This will happen once we find a mutual time to meet through Google Hangout.

3. Team/Instructor Meeting Notes

- **Duration:** 50 mins. **Members Present:** All.
- **Purpose and Goals:** Discuss last semester's progress and problems, and imagine new expansions or adjustments for this semester.
- **Achievements:** The following were given to us to consider when planning our new semester.
 - *Testing:* Write a lab document of theoretical and actual testing outcomes. Take pictures of the mixer, and record data along with graphs or schematics.
 - *Bluetooth Implementation:* There is interest in creating a mobile application or a web server application for remote controlling. Consider Chrome Cast for a single network connection to the mixer. Give wireless access and password protection per user. Perhaps use a USB to configure the protection then keep the system wireless for a clean look.
 - *Power Supply:* Compare custom-built vs outsourcing parts. There is development within our current design to upgrade the linear regulator to reduce the need for a heat sink and shrink the size of the PCB.

- *Manufacturing:* Consider our project becoming mass-produced, and adjust components in such a way that a cost analysis proves that a million units is justifiable.
- *Documentation:* Record not just by notes, but by screenshots and video to capture the development through as much media for an all-inclusive final presentation.

4. Pending Issues

- *Wire/Cable Management*
- *Potentiometer Clipping*
- *Auto-Booting on power reset*
- *Reloading settings on power reset*
- *Code Clean-up and review*
- *LED enclosure fitting needs fixed*
- *Power supply Cap fixed or changed*
- *New LED pin*
- *LCD Velcro method needs another solution for stability*
- *Bottom of enclosure to be added*
- *New Features: Bluetooth audio, LAN web server access to mixer settings*

5. Plans for Next Week

Debbie: Brainstorm new enclosure materials and design. Consider designing a feedback display for volume level indication.

Clay: Look to buy a new Bluetooth dongle. Select a new digital potentiometer.

Brian: Prepare Bluetooth RPI code. Work on scripts for auto login.

Chad: Develop new circuit designs concerning the power supply and linear regulators.

6. Individual Contributions

Debbie: Wire organization and separation within the free space of the mixer. Soldered a small disconnect in the power supply's capacitor. Aided Brian with the code implementation of functions and commenting code.

Clay: Designed and guided responsibilities for the new semester's task list. Researched Bluetooth implementation.

Brian: Programming functions for the repetitive code in the Raspberry Pi. Aided Debbie with cable management and pinout map interpretation.

Chad: Researched for a new power supply linear regulator.

MONTHLY HOURS FOR THE PROJECT: 16

Name	Hours
Clay Hawken	3
Debbie Baeder	4
Brian West	3
Chad Stobbie	6

TOTAL HOURS FOR THE PROJECT: 306

Name	Hours
Clay Hawken	72
Debbie Baeder	81
Brian West	78
Chad Stobbie	75