Weekly report

EE 491 DEC1503

April 6, 2015

Modular 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

## Weekly Summary

We are finalizing and ordering components. We plan to receive our parts within the next week, and start fabricating the PCB, which has also been approved. Our 3D printing resource has required the mechanical design to be scaled down to fit 7 x 5 x 2 inches, and we are further investigating multiple sources in efforts to keep costs within budget. We will be programming the Raspberry Pi within these next few weeks.

## Team/Client Meeting Notes

* **Duration:**  n/a  **Members Present:** n/a
* **Purpose and Goals:** We will now be meeting with Jay every other week; a team discussion took place instead.
* **Achievements:** 
  + *Enclosure:*The enclosure is too large to fit the 3D printers in Howe, and the price of printing in Howe will cost the project at least $56 unless we trim the dimensions.
  + *PCB:* Gerber files have been approved.
  + *Website:* The team information needs individual photos.

## Team/Advisor Meeting Notes

* **Duration:**  60 minutes **Members Present:** All.
* **Purpose and Goals:**Schedule update, and monthly outlook. Have enough done by the 17th.
* **Achievements:** 
  + *Schedule by the week:* Ordering, Fabricating, Debugging and Testing. Then we will be presenting on our process, documentation, and demonstration.
  + *Debugging:* Potentially using a week to debug. Use the LCD screen to debug the potentiometers.
  + *Components:* Ordering on April 3rd, and anything outside of the budget, the team will individually order. Hopefully, we will be soldering by April 10th.
  + *Costs:* Developed the BOM, and considered variable costs.
  + *PCB:* Single-sided, ground output headers, gives the ability to scrape off a trace to reach any point.
  + *Enclosure:* New PCB dimensions are 4.5 x 6.5 x 2 inches; Female audio jacks are 1.5 inches into the body; Dials fall 0.5 inch; LCD screen has 6 wires.
  + *Fall Semester:* USB connection to computer allows for application to run the mixer.

## Pending Issues

* *Choose either Acrylic material or Protocase.com for fabrication.*
* *Wait for components to be delivered to the shop. .*

## Plans for Next Week

Brian: Continue to work with Raspberry Pi. Start programming to make sure code compiles.

Debbie: Change the dimensions and get quotes from Howe Hall, Boyd Lab, and Protocase.com

Chad: Await components and start soldering. Get help from the team.

Clay: Soldering and Dig Pot Programming.

## Individual Contributions

Clay: Arranging the BoM and checking the PCB to ensure parts get ordered.

Debbie: Went to get the 3D printing quote from the lab in Howe. Looked for more sources to fabricate around campus. Scaled down the enclosure dimensions. Contacted Protocase.com, Howe Hall, and Boyd Lab for a quote on scaled dimensions. Updated and reformatted the Project Plan 2.0 where necessary.

Brian: Our mentor gave us a Raspberry Pi to work with. I have been working with it to get a feel of it. Have successfully been able to get it to boot up through an HDMI connection to my TV and boot up into GUI mode. From here all necessary coding can be done. Connected it via Ethernet and could successfully get online which opens the door to wifi capabilities.

Chad: Place components on the PCB. Manually routed all the traces on the PCB. Double checked that all the footprints were correct in the datasheets. Fixed the design errors found by EAGLE and the manufacturer. Created the Gerber files and submitted them to the electronics shop for fabrication.

Team: Updated content on the Project Plan 2.0.

# Weekly hours for the project: 28

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| --- | --- |
| Name | Hours |
| Clay Hawken | 5 |
| Debbie Baeder | 10 |
| Brian West | 3 |
| Chad Stobbie | 10 |

# total hours for the project: 177

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| --- | --- |
| Name | Hours |
| Clay Hawken | 40 |
| Debbie Baeder | 53 |
| Brian West | 35.5 |
| Chad Stobbie | 48.5 |