Weekly report

EE 491 DEC1503

March 2, 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

An exciting week for development: During our Team/Advisor meeting, we sketched out ideas for supplying power to the Raspberry Pi and for the Enclosure. We decided to encapsulate and design our own power supply for the circuit and Raspberry Pi, in order to reduce exterior wires and interior layout restrictions. Before ordering components, we must first map out Raspberry Pi pins to reassure that we can assemble the circuit we want.

## Team/Client Meeting Notes

* **Duration:**  N/A **Members Present:** N/A
* **Purpose and Goals:** Did not take place.
* **Achievements:** 
  + *Clay emailed Jay Becker a synopsis of our Project Plan, and preliminary progress on testing the line-in schematic.*

## Team/Advisor Meeting Notes

* **Duration:**  60 minutes **Members Present:** Chad, Brian, Debbie, and Josh. *Clay was sick.*
* **Purpose and Goals:** To discuss analog circuit design.
* **Achievements:**
  + *Circuit:* We decided to build a custom power supply instead of using the power supply for the Raspberry Pi. This way we don’t have to be restricted to locating the Raspberry Pi near an edge of the enclosure. Moreover, the operational amplifier buffer stage near the output will now be a single transistor. In order to reduce pin/soldering efforts, we will be using an LCD display instead of 7 segment displays. The Raspberry Pi will react to each channel and display the channel number and volume level when directed.
  + *Enclosure and Layout:* The overall size will start out larger for the initial prototype, and will be resized according to the circuitry layout. We might use Velcro in order to adjust module locations inside the enclosure. As for aesthetics, we discussed gun metal gray, shear bright blue, and using Neopixel LED strips to outline the edges.
  + *Raspberry Pi:* Josh mentioned the importance of delegating pin responsibilities and making sure the Raspberry Pi pins can meet our needs.

## Pending Issues

* The website is still in development, but should be on the server soon.
* We have to select Potentiometers, Rotary Encoder and on/off components by next week to ensure Raspberry Pi compatibility.

## Plans for Next Week

Brian: Deliver website onto server. Add Debbie as a co-Editor.

Debbie: Develop enclosure design, material, and color. Find CAD tutorials online.

Chad: Develop custom power supply design.

Team: Research Adafruit Raspberry Pi features and information, and cultivate Raspberry Pi pin mapping.

## Individual Contributions

Clay: Researched components.

Debbie: Documented the weekly report and meeting notes. Brainstormed Enclosures.

Brian: Website development on Weebly.com, and the Iowa State server. Research on raspberry pi programming, pins, and features.

Chad: Circuit research, design, and simulation.

# Weekly hours for the project: 17

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

# total hours for the project: 78

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| --- | --- |
| Name | Hours |
| Clay Hawken | 19 |
| Debbie Baeder | 20 |
| Brian West | 18.5 |
| Chad Stobbie | 20.5 |