

# EE 491 Weekly Report    MAY1612    Week 8 (10/13/15-10/20/15)

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**Advisors:** Mani Mina, John Pritchard

**Client:** Minnetronix

**Members (roles):** Brandon McDonnell, Group Lead; Justin Long, Web Master  
Timothy Dee, Key Concepts; Corey Wright, Communications

**Project Title:** Remotely Connected Electric Field Generator for Particle Separation in a Fluid

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## Weekly Summary

This week we meet to work on the minigen, Arduino, and raspberry pi devices. We meet in a 201/230 lab to have access to the oscilloscope to read the output of our devices easily. We did further research into the possible types of amplifiers we could use but have not settled on any specific method at this time.

## Meeting notes:

At 11:00 am on Thursday the 15<sup>th</sup> a meeting was held between our group here at Iowa State University in the newer 201/230 lab. We set up the minigen and raspberry pi devices and started working on them. We set up with the goal of getting the minigen and the pi to work together to read out the proper sine wave that we would need for our project. By having the pi write the minigen we could control the output. We could not get the minigen working properly but did learn a good amount about how this particular device works and which registers to use. We later pinpointed the problem of our errors the having an improper write to one of the control registers.

At 4:00 pm on Thursday the 15<sup>th</sup> we met at the Library to conduct our Skype call with John Pritchard. Due to a lack of space in the library we moved to an abandoned classroom on the first floor of Carver Hall. We talked to John about our progress and touched again on the amplifier issue shortly. Overall there was not a ton of comment on and the meeting was done relatively quickly.

## 10/8    Group Meeting with team

**Duration:** 1.5 hours      **Members Present:** All

### **Purpose and Goals:**

Meet with John Pritchard and get him up to date on our progress

### **Achievements:**

We met with John via Skype and discussed what we were working on along with getting some clarifications for the next parts of the project.

## Pending issues

1. We now need to continue doing research into how exactly we can accomplish our goals, specifically the amplifier portion of the circuit and the interfaces between components, and through what means
2. We need to continue to learn what sort of products are available to be used, particularly the function generator part of our circuit and how it is controlled via its registers

## Plans for next week

Describe who will do what .....

1. Brandon: Facilitate further meetings with John and Prof. Mina
2. All: Continue to test the script code that was mocked up by Tim
3. All: Further work on the minigen and actually get it to write to its registers properly
4. Finish work on the first design document that is due this week.

## **Individual Contributions (this week)**

Each member was present at our meeting on Thursday  
All did some amount of research.

Brandon McDonnell	(2hr)
-worked on the mingen and arduino	
Justin Long	(2hr)
-worked on the website	
Tim Dee	(3hr)
-worked on the raspberry pi	
Corey Wright	(1.5hr)
-worked on the lab report	

## **Total contributions for the project**

Brandon McDonnell	(15hr)
Justin Long	(13hr)
Tim Dee	(20.5hr)
Corey Wright	(15hr)