

**Advisors:** Mani Mina, John Pritchard **Client:** Minnetronix

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

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

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## Weekly Summary

Now that we have figured out a plan for this semester and divided up Corey's work we began to work on the amplifier circuit a lot. We developed the code to control the programmable gain amplifiers (PGA) with the Raspberry Pi and also had to do a software update for the Raspberry Pi. We are looking into different PGA's that would be able to give us a more varied range of gains which would give us a better span of voltages. We are also looking into using power MOSFET's for an amplifier circuit in case we cannot use the PGA's like we want to, but as of right now the PGA's are very promising and should be a valid solution. We also began researching the necessary transformer we would need to use wall power to power our whole project.

## Weekly Notes

We are setting up a meeting with Leland Harker to discuss the steps we need to take to get our own PCB to use for a final end product for our project. Next meeting with client will be Friday February 5th.

## Pending Issues

Looking into getting a PGA with higher rail voltages because we have had some issues with the ones we currently have that only allow 5V on the rails.

## Plans for Next Week

Figure out what additional components exactly we need to order.

Meet with Leland Harker to get a grasp on the process of ordering a PCB

## Individual Contributions

## Total Contributions

Brandon McDonnell	12hrs	52hrs
Tim Dee	10hrs	55hrs
Justin Long	6hrs	37hrs