

**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

Had issues with our amplifier with a gain of 1 because the high voltage op amps we are using are optimized for gains greater than 5. We had to use a frequency compensation technique to allow the amplifier to be stable with a gain of one. This same technique allowed the summing amplifier to be more stable because it also has a gain of 1.

## Weekly Notes

Gain of 1 amplifier working and summing amplifier both working correctly but still with slightly different phase

Gain of 7.5 op amp works as well but has a slightly different phase shift from the summing amplifier and the other gain of 1 amplifier at high frequencies

## Pending Issues

Phase shift is different at frequencies above 750kHz for the two op amp circuits which is causing the output of the summing amplifier to not be what is desired.

## Plans For Next Week

Troubleshoot phase shift in circuit in hopes that we can get a correct output of the summing amplifier circuit

## Individual Contributions

## Total Contributions

Brandon McDonnell	10hrs	130hrs
Tim Dee	10hrs	145hrs
Justin Long	10hrs	140hrs