

Multi-channel Brain Tissue Stimulator

Week – September 22-September 28

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Team Members: Ashley Phillips – Team Leader
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Steve Noel – BWIG
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Problem Statement

Our objective is to develop a multi-channel brain stimulator. This device must generate stimulation current of 1 mA on 16 separate channels, filter out external electrical noise, and allow each channel to be independently gated on and off as well as adjust the current amplitude on each channel. Such devices are available but exist as a hardware/software packages and are expensive. These packages include many elements that are not necessary for our client's research.

Accomplishments

- Met with advisor
- Read article that the current circuit is based on
- Contacted Professor Jack Ma
- Met with Dan Yee and David Markovitch of the medical electronics lab and discussed the current circuit; made some changes to the schematic

Difficulties

- Setting up appointments (getting responses) with professors on campus to discuss possible solutions to the design problem

This Week's Goals

- Continue to speak with professors on campus to learn about high voltage circuits
- Begin building a smaller scale prototype that doesn't input a high voltage
- Complete PDS

Activities/Accomplishments

Group Member	Weekly Accomplishments	Time (hrs)	Total Time (hrs)
Ashley Phillips	Class time, progress report, meeting with David M. and Dan Y., article	2.5	10.5
Nina Lewis	Class time, meeting with Prof. Ma, article	2	9
Steve Noel	Emailed T. Jahns, updated website	1	8
Steven Skroch	Class time, brainstorm of alternative circuit components	1	8