

EE 491 WEEKLY REPORT 7

Date: 10/24/2016

10/18/16-10/24/16

Group number: MAY1729

Project title: Garmin Power Sensor Test Fixture

Client: Jeremie Vens

Advisor: Professor Degang Chen

Team Members/Role:

Amna Aftab/Key Concept Holder #1

Brandon Floyd/Team Leader

Stephen Julich/Webmaster

Francis Wagner/Team Communication Leader

Xi Zhu/Key Concept Holder #2

o **Weekly Summary (Short summary about what you did this week)**

We met twice as a team - once with our advisor and once on our own. With a complete on-paper circuit design, we simulated our design with PSPICE and began building the circuit on a breadboard. Breadboard prototype testing will be our focus until we send our first full design to Garmin manufacturing right before Fall Break.

o **Past week accomplishments (please describe as what was done, by whom, when)**

- Xi Zhu: simulate the circuit on PSpice and test the resistance value.
- Brandon Floyd: Attended two group meetings. Built a prototype circuit that would be used to test current and voltage measurements according to our circuit design. Calculated resistor ranges based on the ADC's voltage range.
- Stephen Julich: Attended two group meetings. Provided minor editing for Project Plan document. Continued working with the Kinetis Software for the Cortex M0. There is a software problem preventing me from successfully running a build that I need to figure out. I am researching other boards with more computing power on the advice of our advisor Dr. Chen.
- Amna Aftab: Attended two group meetings. Build the prototype current mirror circuit on breadboard to test the resistor and voltage values. Generated Gantt charts for the project planning document. I am researching on other op-amps to use based on current and supply voltage requirements.
- Francis Wagner: Attended two group meetings. Proofread, edited, and completed the lion's share of the project planning document. Formalized circuit design in Microsoft Visio. Coordinated weekly report.

Pending issues (if applicable)

- N/A

o **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Xi Zhu	See above past week accomplishments.	5	21
Brandon Floyd	See above past week accomplishments.	4	22
Stephen Julich	See above past week accomplishments.	4	27
Amna Aftab	See above past week accomplishments.	5	25
Francis Wagner	See above past week	4	30

	accomplishments.		
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o **Comments and extended discussion**

- We feel good about where we are and confident about where we can be by Fall Break.

o **Plan for coming week (please describe as what, who, when)**

- We will meet as a team on Tuesday to continue our breadboard design and begin testing the circuit. Specifically, we will test that the current is indeed being mirrored - in other words, that the output current matches the initial input current. Then we will meet with our advisor and client (via Skype) on Thursday.

o **Summary of weekly advisor meeting (if applicable/optional)**

- Each team member spent one minute detailing his or her accomplishments and concerns during the past week. Dr. Chen gave individual and team-wide advice on top of answering our questions. A tidbit about professional, aesthetic breadboard design stands out as noteworthy. We plan on taking extra steps to complete a first-class breadboard prototype layout.