

Team 19043 Build and Test Prep Pre-Read

Project Title:	Personal Data Collection System for Essential Tremor Evaluation II
Project Number:	19043
Primary Customer:	Dr. Daniel Phillips, dbpeee@rit.edu
Sponsor(s):	Dr. Daniel Phillips, dbpeee@rit.edu
Start Term:	Fall 2018
Faculty Champion:	Dr. Daniel Phillip, dbpeee@rit.edu
Other Support:	As applicable
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Team Vision

Our team set out to verify that we were able to carry out the build phase of our device. We also focused on the refining of our test plans. Expansions were carried out on our device test plan, and all IRB Human Subject Testing has been submitted to the IRB office.

Build Preparation

Verification for build was done by ensuring that each critical part was ordered and received by the PICS office. As well as through review of our schematic/wiring diagram. We discussed and expanded on housing designs, including a housing design for the power system. We determined locations, rough time, and procedure to test each specific ER.

We will be using our assigned senior design lab to proceed with the bulk of our build phase. Our device is meant to be compact which will allow us to work on it with the provided workbench

Test Preparation

Device Testing: We were able to determine concrete ways to verify that our design matches with our engineering requirements, and therefore our customer requirements. Our device test can be found in "Device Test Overview." This test procedure will be used to test our engineering requirements to all test standards that have been agreed on by team P19043 and our customer. (ie. 40 Hz sample rate, 8 hrs of batter, etc.) We determined 9 TER procedures to correspond with each of our engineering requirements. These TERs correspond exactly with the Engineering Requirements list that was approved by our customer (Oct. 17th, 2018)

[Device Test Overview](#)

Human Subject Testing: We have additionally submitted our IRB test protocol to gain approval for human subject testing. Frank Howard, the team lead, has taken the certification course required by the IRB to carry out human subject testing and will need to be present for all human subject testing. Our IRB protocol has been submitted and is under review.

[IRB Test Procedure](#)

Risk Assessment

We have begun risk tracking to verify that our team is on the right track. As time goes on, we should be able to track the drop of our perceived risk until project completion at which point it should reach zero. The first tab of our risk assessment workbook remains as it was previously, but we have introduced three new tabs to aid in risk tracking.

Risks over Time Data- Numerical analysis of risks and importance over time

Risk Graph- Representation of the sum of all risk importance over time

Risk Bar Chart- The same data will display a breakup of each risk corresponding to importance via a bar chart