

Update Meeting Agenda

EEG Alarm Group

Dr. Schafer

Stinson-Remick 205

12:00 PM February 9, 2023

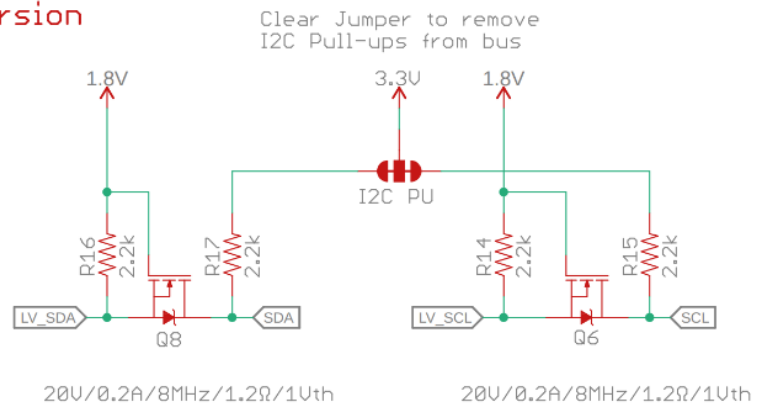
Leader: Alex Beck

Scribe: Josh O'Brien

Agenda

1. Initial parts have been ordered. Total cost: \$69.86
 - a. Pulse-Ox dev kit
 - b. AD8220 Instrumentation amplifier
 - c. MSOP-8 to DIP-8 SMT adaptor
 - d. Electrode cables & electrode pack
 - e. 3.5mm audio jack connector
2. Updates (Note: See other document for detailed descriptions)
 - a. Overall System
 - i. Necessity of two boards: one small board that just contains pulse-ox sensor & surrounding decoupling caps. Need it to clip onto the ear lobe.
 - ii. Will a 9V battery be sufficient to supply the current needed for the board?
 - iii. Question about schematic below on pulse-ox board

Logic Conversion



- b. Subsystem Updates + Questions
 - i. EEG
 - ii. Pulse Oximetry
 - iii. Alarm
 - iv. Internet of Things
 - c. Looking Ahead: Design Reviews 1 and 2
3. Miscellaneous

Design Review 0 Meeting Minutes

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Notes

- Overall System
 - Utilize multiple boards to keep electronics spread out on the head
 - Question on schematic
 - Standard MOSFET practice for alternating between 5 to 3.3
- EEG Subsystem
 - Necessary for 2 signals without a ground, multiple solutions for testing
 - Utilize signal generator with ground as reference
 - Python script - run mirco python on ESP32
 - Audio Jack issues resolved
- Pulse Oximetry Subsystem
 - Pulse oximetry has issues with abnormal readings,
 - use clothes pin or other clip to keep pressure constant
- Alarm SubSystem
 - Javascript accessing sound through website
- Design Review 1
 - Schematics for all subsystem
 - Website schematic can be an hello world example
 - Need to bring it home, has to be able to access home network
- Dual Processor
 - Utilize RTO to select which core to access
 - One core for Wifi
 - One core for application
 - Processors talk to each other