



# BITNG LAB UPDATE

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Date 4/26/2021

# Progress from last week

- Low Power ECG
  - Wireless charging

# LOW POWER ECG

# Low Power ECG

## Debugging Problems:

### ~~1. Random Disconnection~~

- ~~1. Fixed – Logging was stalling processor~~

### 2. Wireless Charging Coil

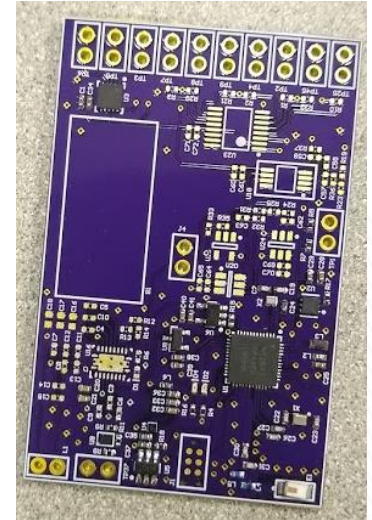
- 1. In Progress – Implemented smaller antenna to operate at higher frequency
  - 1. Need to order more components for tuning

### ~~3. ECG Noise~~

- ~~1. Fixed – Calibration setting was enabled~~

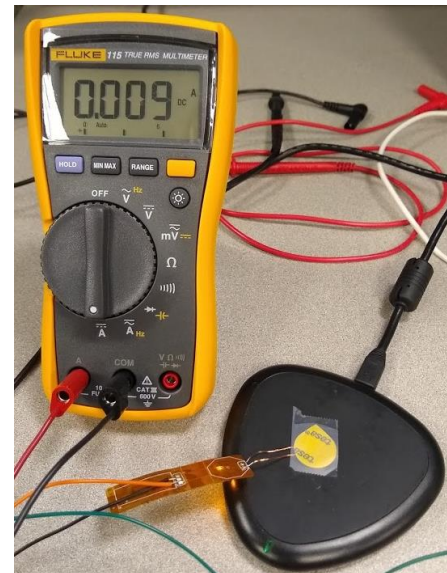
### 4. BLE Antenna RSSI

- 1. Lowest priority



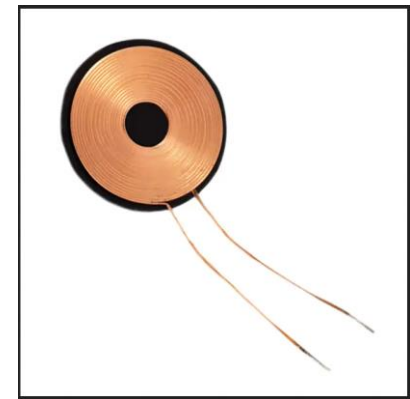
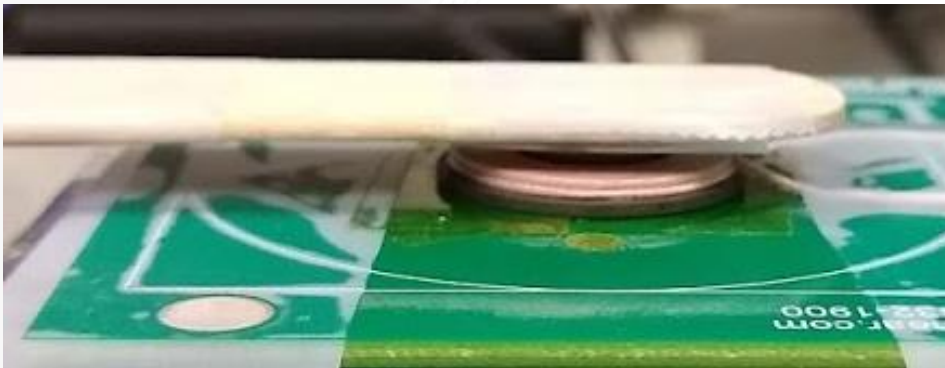
# Wireless Charging Solution #1

- Standard Wireless Charger
- Coil Diameter: 17 mm – 50 mm
- Charge current: 10 mA – 1 A
- Frequency range: 100 kHz – 166 kHz



# Wireless Charging Solution #2

- Custom Wireless Charger
- Coil Size: 6 mm - 17 mm
- Charge current: 10 mA – 50 mA
- Frequency range: 166 kHz – 250 kHz



# PATH FORWARD



# Path forward (4/26/21 – 5/03/21)

- Shriner's Project:
  - Strain gauge, round #10
  - Wireless charging
    - Ordering more components
  - BLE matching network
- LP-ECG:
  - Support for Shinjae/Bu



# APPENDIX