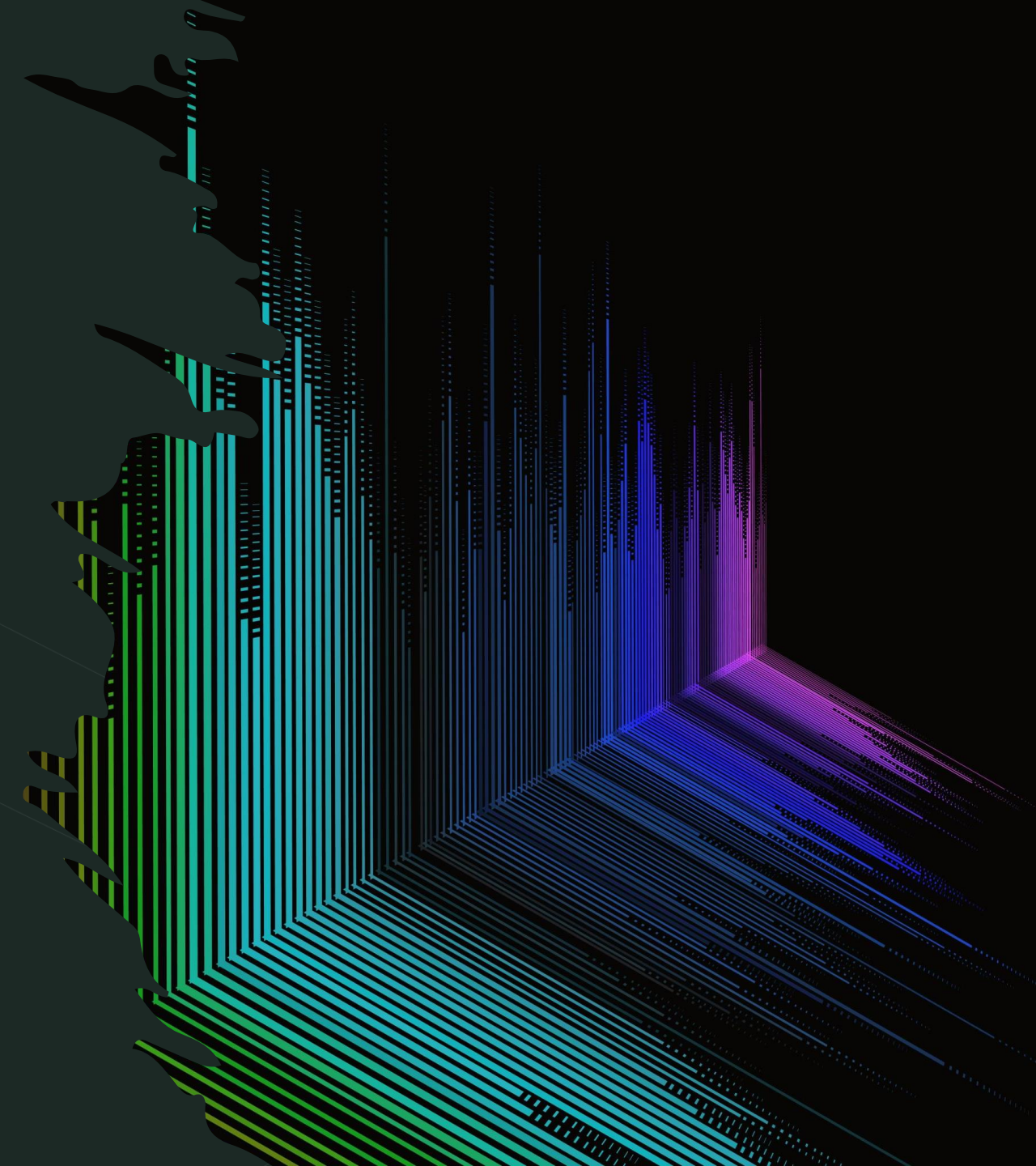


Smart Cooler

Week 25 Jan20 – Jan 26



Progress Made

- The speaker power button is functional on cooler GUI and mobile app.
- The battery level indicator is added to mobile app.
- The LED light strip is run around the rim of the cooler

Speaker Power Button

- In order to have power switching capability of the speakers, the speaker LEDs and amplifier connections needed to be split.
- The connection was run through a low level MOSFET.
- The connection is split on the ground side, so ground wire from the speakers go to the drain pin of the MOSFET, and the ground to the batteries is connected to the source pin.
- In the following video, when the speaker power button is turned on, the speaker LEDs light up and the amplifier is powered. The phone reconnects to the speakers and plays. When the power button is turned off, the speaker LEDs and the amplifier turn off.

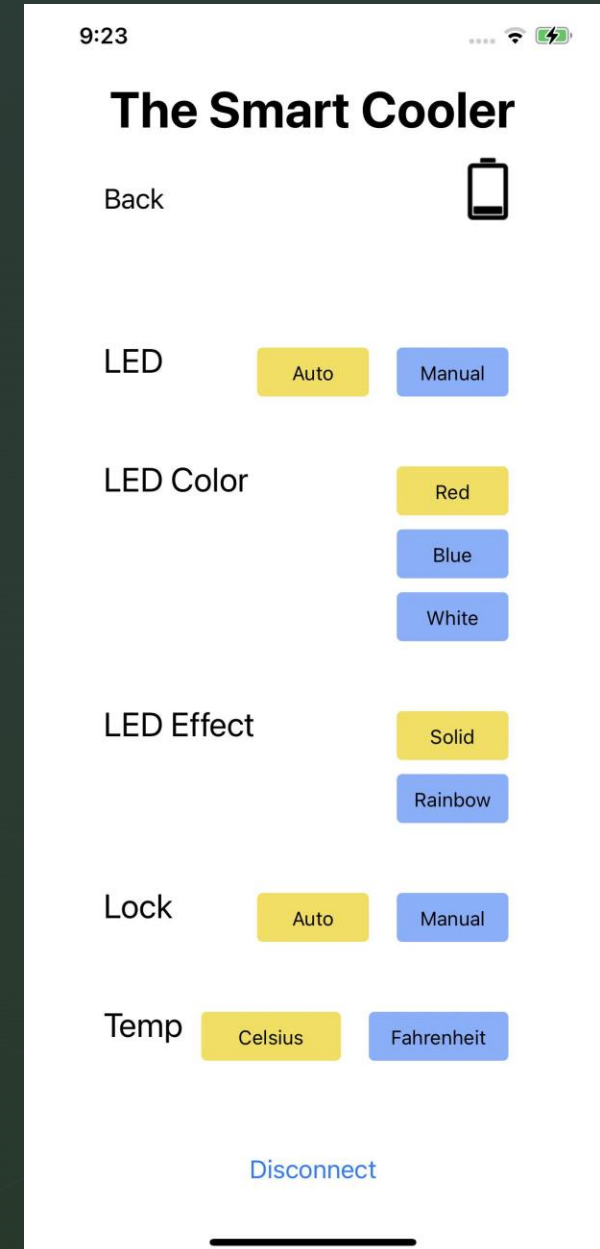
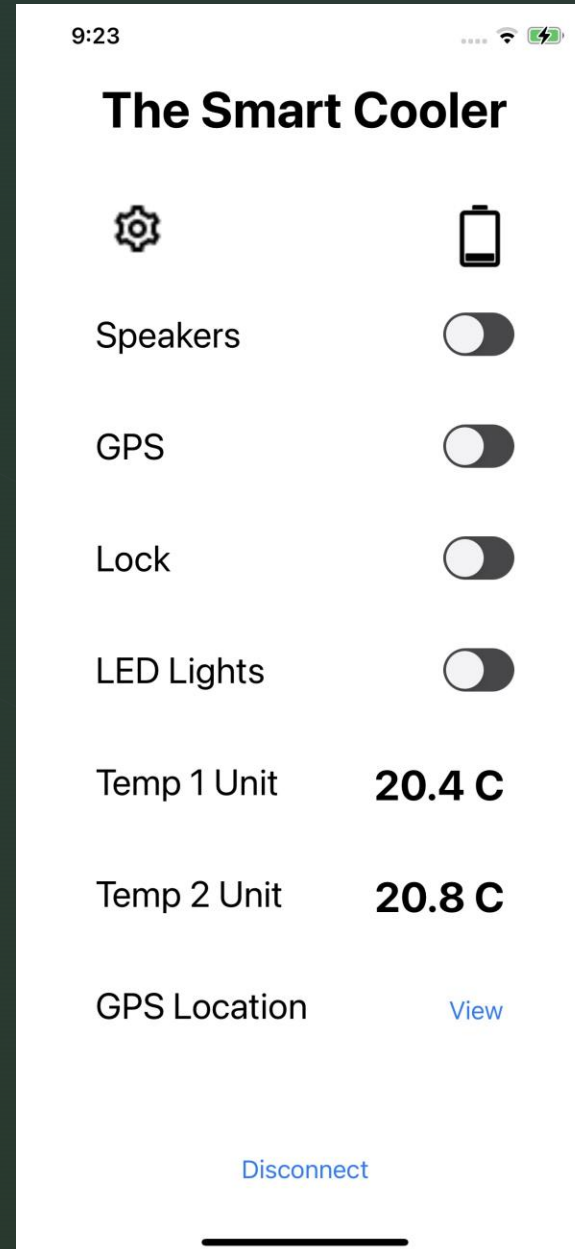
Speaker Power Button Video



Mobile App Battery Level Indicator

The battery level value now gets sent from the cooler to the mobile app through Bluetooth.

The battery levels still need to be calibrated to find when the battery is close to dying and when its fully charged.

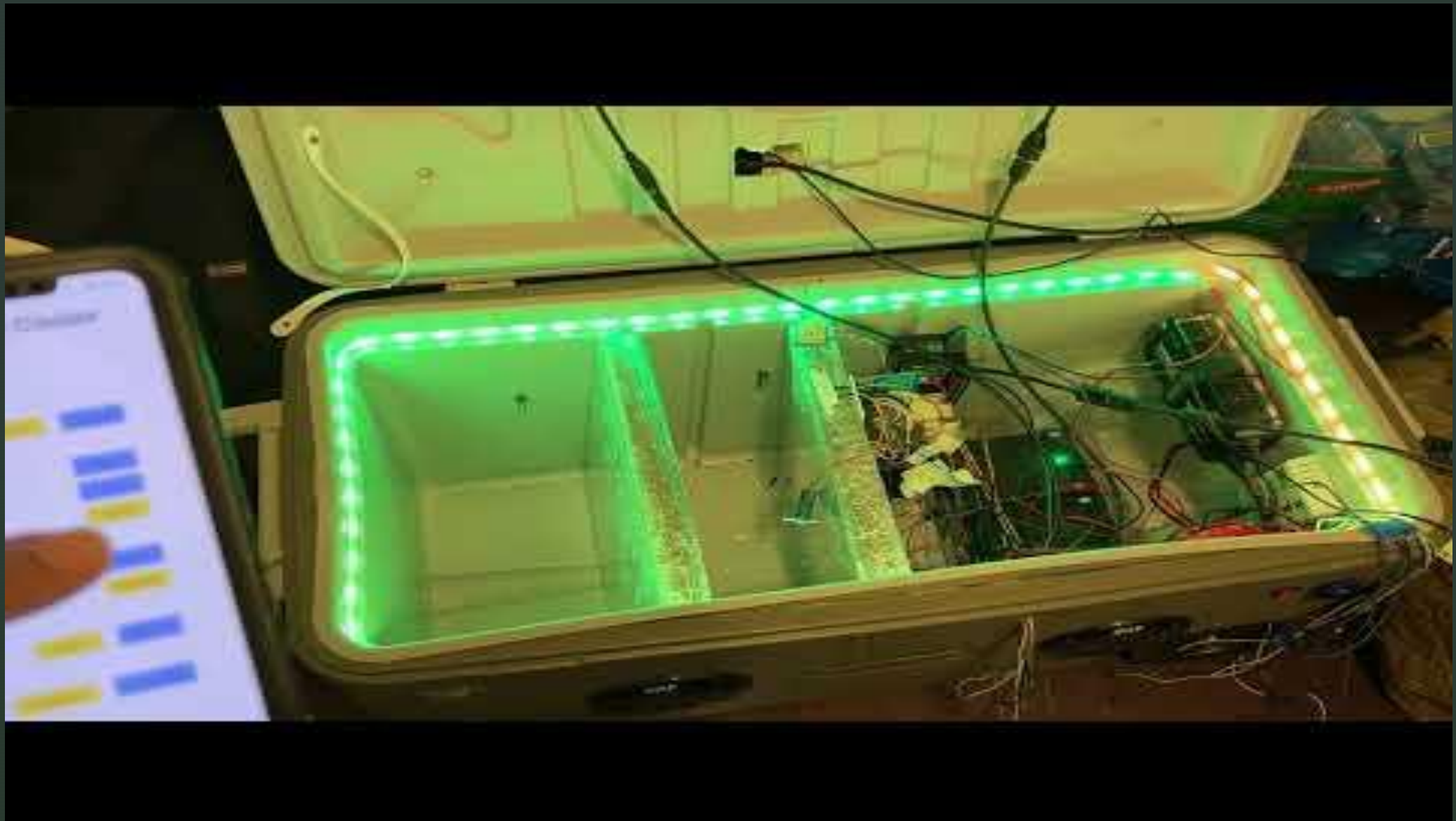


LED Light Strip



- The LED light strip was glued around the rim of the cooler.
- The strip was cut to length
- Wire was extended from the breadboard to the LED light strip wire, as the wire comes out of the electronics compartment.
- The following video shows the LED light strips around the cooler. The mobile app is used to turn the lights on, change the colors of the lights, turn off the lights when the door position sensor is closed, and turn on when the door position sensor is open. The auto feature for the lights also does not turn on the lights when the door position sensor is closed.

Testing System with Mobile App





Goals For Next Meeting

- Trim top covers to accommodate LED Strip
 - Trim excess bread board wiring
 - Add saving profiles to settings
 - Battery capacity testing
 - Continue work on mobile app
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