Smart Cooler

Week 32 Mar 10 – Mar 16

Progress Made

- Launched & Tested Mobile App
- Installed 3D parts & mounted GPS
- Assembled Bezel
- Installed second drain plug
- Updated and tested auto light feature
- Updated battery levels
- Tested auto lock feature
- Modeled flashlight holder and bottle opener

Mobile App Tests

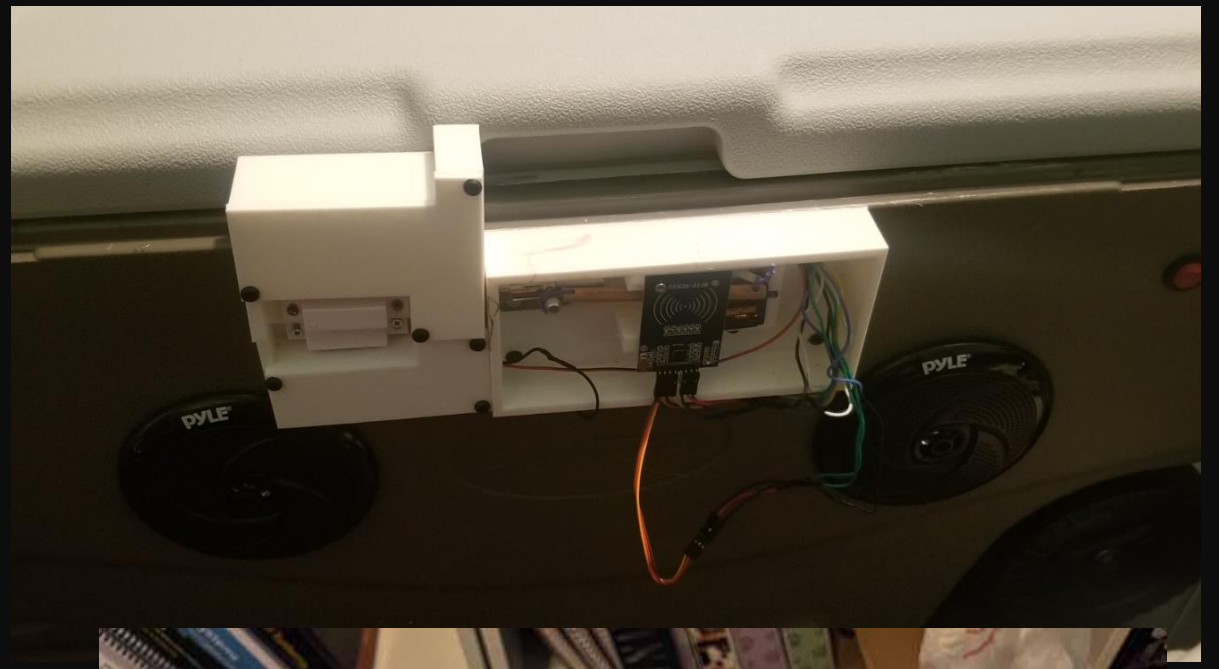
- The mobile app was deployed and tested on both the iPhone and android.
- In this video, an android phone is being used.
- The video shows the app connected to the cooler, where the LED lights are changed from blue to white to red to rainbow.

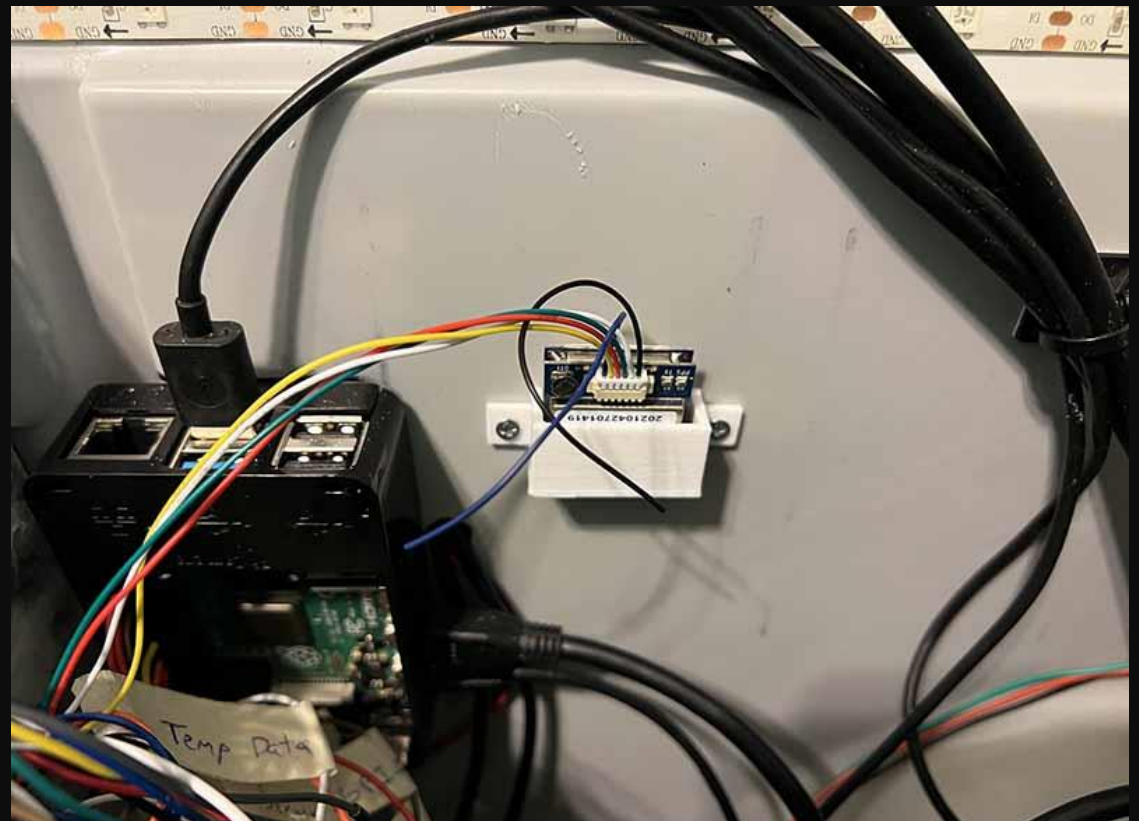
Mobile Lock

- In this video, the app is used to turn the lock on and off.
- Initially, the lock is turned on through the app. Next the lid is attempted to be opened. Then the lock is turned off through the app. Then, the lid is pried open.

Part Installation

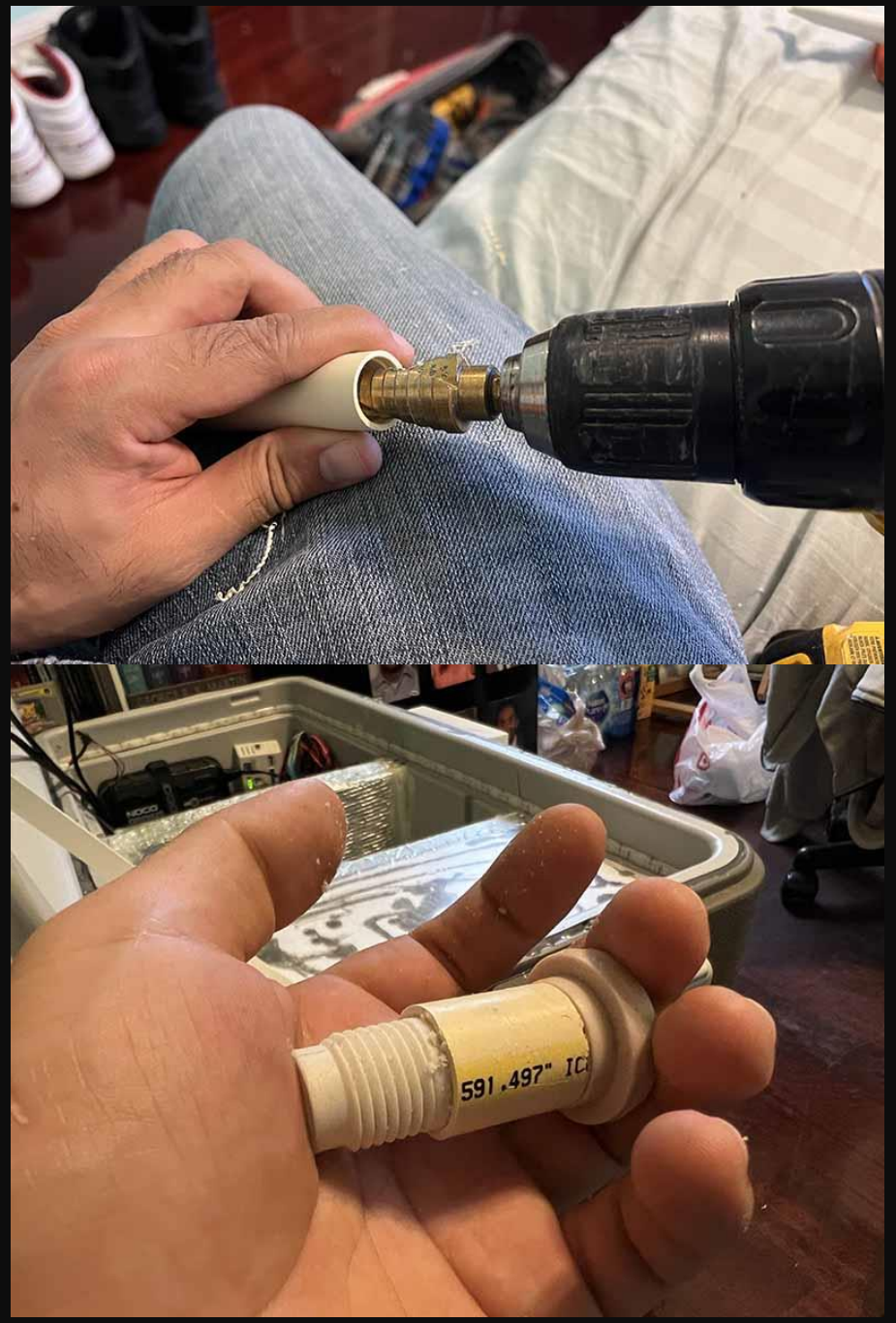
- The locking mechanism covers, GPS bracket, and monitor bezel were installed.





Drain Plug

- It was determined the second compartment needed a drain plug.
- A plug was obtained but not long enough, so it needed to be modified.
- Using a unibit and a piece of ½" pvc, the plug was extended by about an inch.



Drain Plug

- The plug was then glued and sealed using pvc cement.
- The plug was then installed and sealed using clear silicon.

Auto Light Feature

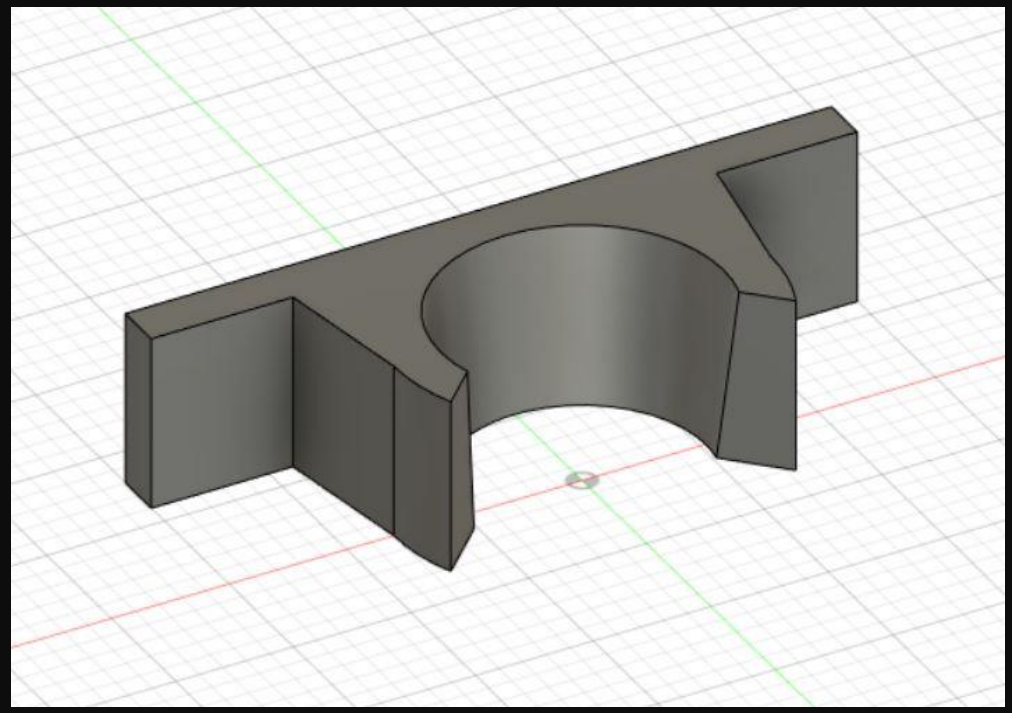
- The auto light feature needed to be modified.
- The following video shows the auto ligh feature being activated. The lid is opened, and then the lights in the room are turned off. The auto light feature turns on the lights, and the lights stay on until the lid is closed.
- An issue that occurred was that the lights would turn off when the light turned on because of ambient light affecting sensor.

Auto Lock Feature

- Auto lock feature tested.
- The following video shows the auto lock feature being enabled. Once the lid is closed, the lock automatically locks.
- When auto lock feature activated, to open, there is a 3 second delay.

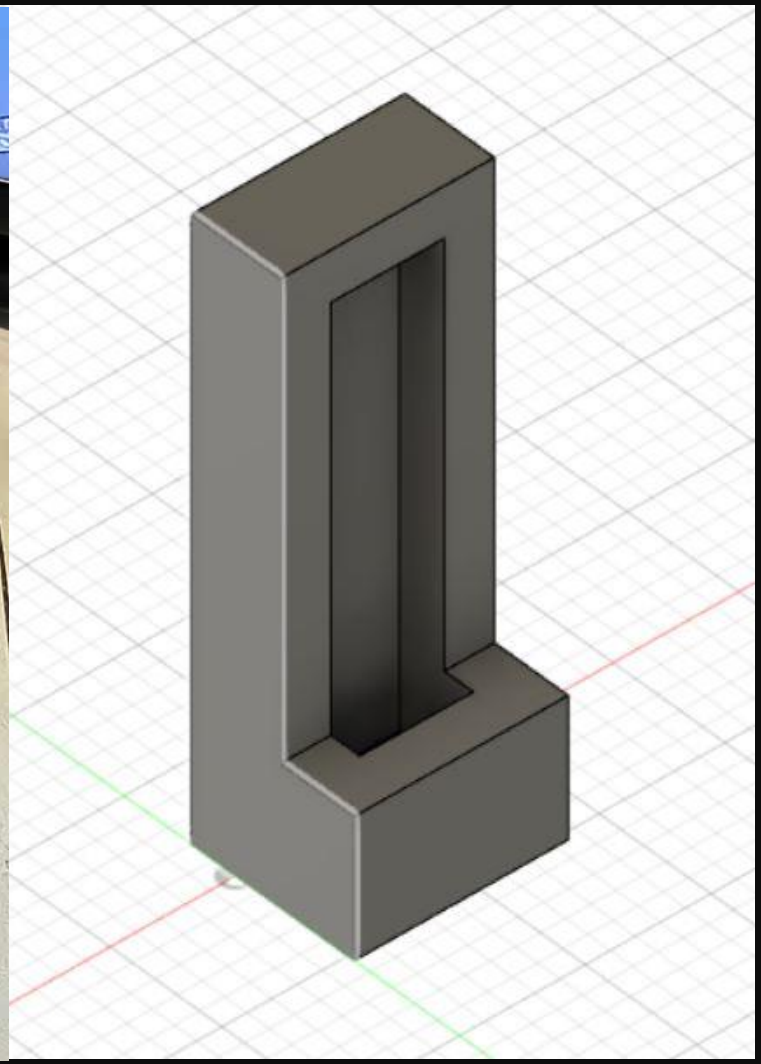
Flashlight Holder

- The cooler will hold a small flashlight.
- The dimensions of the flashlight holder are 3" wide by 0.75" high.
- The diameter of the head of the flashlight is 1.2" diameter at its max and 1.1" diameter at its smallest.



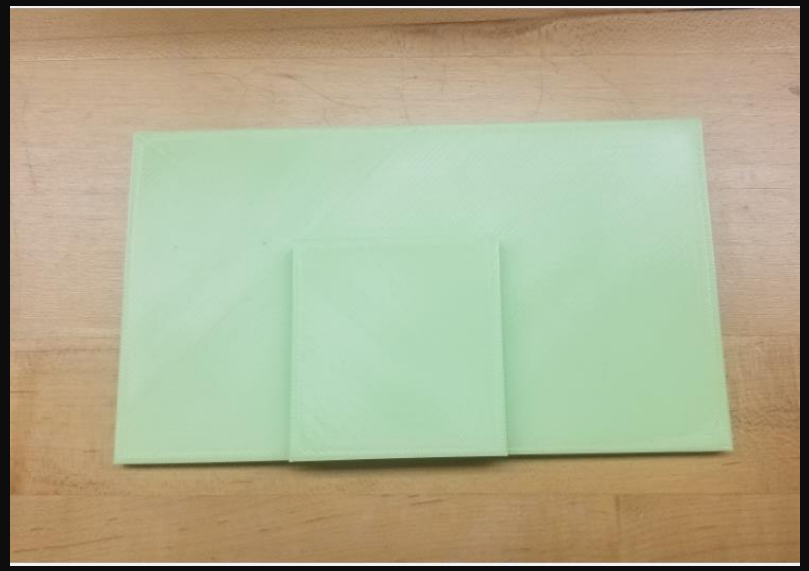
Bottle Opener

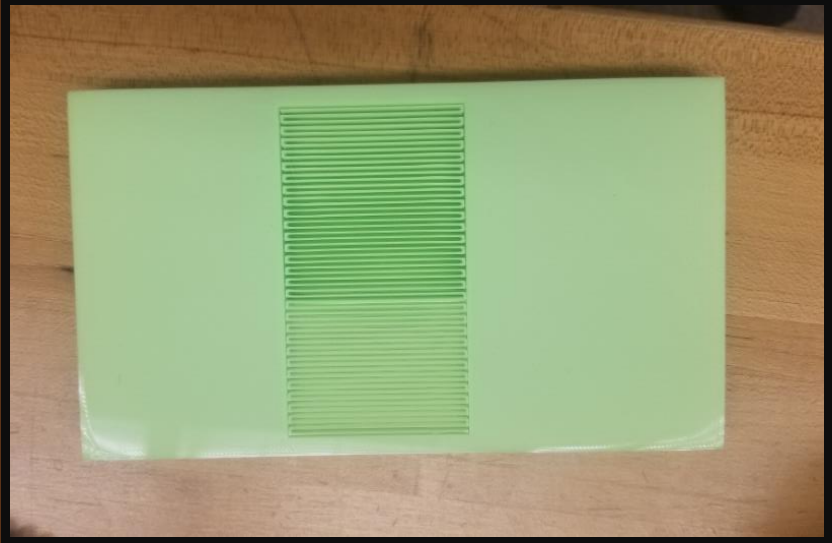
- The can opener being used was already on hand.
- The dimensions are 2.4" high by 0.85" wide by 0.73" long.
- The bottle opener will be placed and screwed into holder.



Printed parts

- Due to some printing issues we had to go to the 3D Printing lab on campus
- The cover was printed without any issues and will fit the cover





Goals for Next week

- Install newly printed parts
- Finish last Compartment Lid
- Focused testing
- Correct and troubleshoot locking mechanism
- Continue work on report
- Outdoor Testing