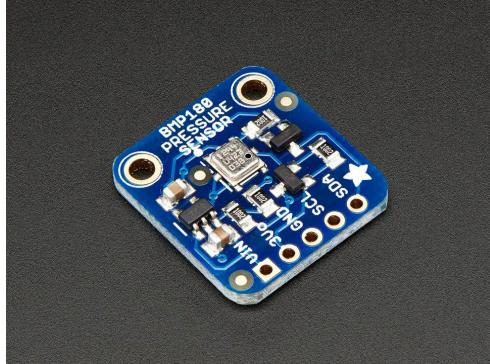


## Function Proposal

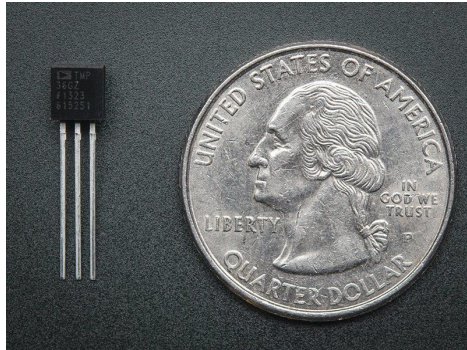
- **Inputs**

- Barometer (BMP180) \$1-10
  - 3.3V-5V
  - Measures pressure associated with altitude as well as changes in weather



<https://learn.sparkfun.com/tutorials/bmp180-barometric-pressure-sensor-hookup->

- Temperature Sensor (TMP36) \$3
  - 2.7V-5.5V
  - Reads temperatures accurately within 0.1 degrees



<https://learn.adafruit.com/tmp36-temperature-sensor/using-a-temp-sensor>

- Buttons to start timer, calculation etc



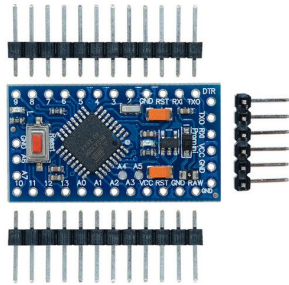
- Switches On/Off, different modes

<https://learn.sparkfun.com/tutorials/switch-basics>

- **Processing Platform**

- Arduino Pro Mini

World Chips



- Arduino with basic, yet reliable functions. One potential concern is number of pins due to their being a small handful of components needed for this project
- Small size compliments portability of device

- **Outputs**

- Screen: Screen “4” .96”
  - Yellow/blue different colors will be able to be used as a type of menu so the user has a reminder of what they’re doing
  - Small size, like the arduino, is beneficial and keeps this item potentially pocket sized



[https://www.amazon.com/gp/product/B01G6SAWNY/ref=oh\\_aui\\_detailpage\\_o07\\_s01?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B01G6SAWNY/ref=oh_aui_detailpage_o07_s01?ie=UTF8&psc=1)

Documentation: <https://www.youtube.com/watch?v=wloWlyvw2w4>

<http://www.instructables.com/id/Monochrome-096-i2c-OLED-display-with-arduino-SSD13/>

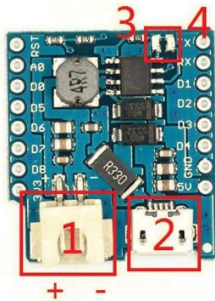
- Piezo Speaker

- Will allow for user to get feedback when using buttons
- Maybe another noise for feedback after a calculation is finished

<http://www.instructables.com/id/How-to-use-a-Buzzer-Arduino-Tutorial/>

- **Power:**

- TP5410 - LiPo Charger/Boost Converter
  - Lithium Battery voltage: 3.3-4.2V
  - Boost Power Supply: 5V(max: 1A)
  - Rechargeable and affordable battery \$2



1. Li Battery
2. MicroUSB charging port
3. Green LED
4. Red LED

Purchase/features: <https://www.ebay.com/itm/191990401129>

Documentation: <https://www.youtube.com/watch?v=aND0j2Y2IkM>

- **Software**

- Arduino Programming
- Read data from components and display on screen
- Libraries/code for parts can be found through their respective links