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CRT 420

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Function Proposal

- Hardware
    - Inputs:
        - Accel/Mag/Gyro+Temp Breakout Board
            - Function:
            - Source: https://www.adafruit.com/product/3387
        - 2-Axis Joystick
            - Function: To navigate up, down, right and left on the screen and through menus.
            - Source: https://www.adafruit.com/product/245
        - Push Buttons
            - Function: To give the user action buttons to navigate through the menus
                - Accept Button
                - Back Button
                - Action Button
            - Source: https://www.amazon.com/PP-NEST-Pieces-Waterproof-Momentary-ANKG-

01/dp/B074MN56W2/ref=sr_1_10?ie=UTF8&qid=1517422471&sr=8-10&keywords=pushbutton+switches

- Processing
    - Seeeduino Lite
        - Source: https://www.adafruit.com/product/3228
- Outputs
    - 2.2" 18-bit color TFT LCD display with microSD card breakout
        - Source: https://www.adafruit.com/product/1480
    - Piezo Buzzer
        - Source: https://www.adafruit.com/product/160
    - Neopixel
        - Source: https://www.adafruit.com/product/2858
- Power
    - 1200 mAh LiPo Battery - This battery will give the unit enough power to function over a reasonable span of time when testing circuits.
        - Source: https://www.adafruit.com/product/258
    - Adafruit PowerBoost 1000- This addon circuit will provide constant power and charging capabilitites to device.
        - Source: https://learn.adafruit.com/adafruit-powerboost-1000c-load-share-usb-charge-boost/downloads
- Software
    - For the accel/gyro sensor, the Adafruit libraries:
        - https://github.com/adafruit/Adafruit_LSM9DS1

        - https://github.com/adafruit/Adafruit_Sensor
    - For the LCD screen:
        - https://github.com/adafruit/Adafruit_ILI9340
    - For the Neopixel:
        - https://github.com/adafruit/Adafruit_NeoPixel