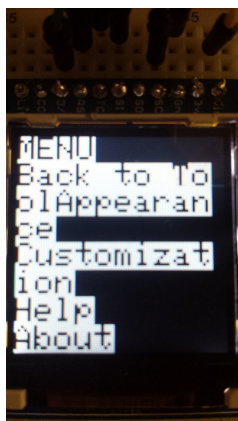
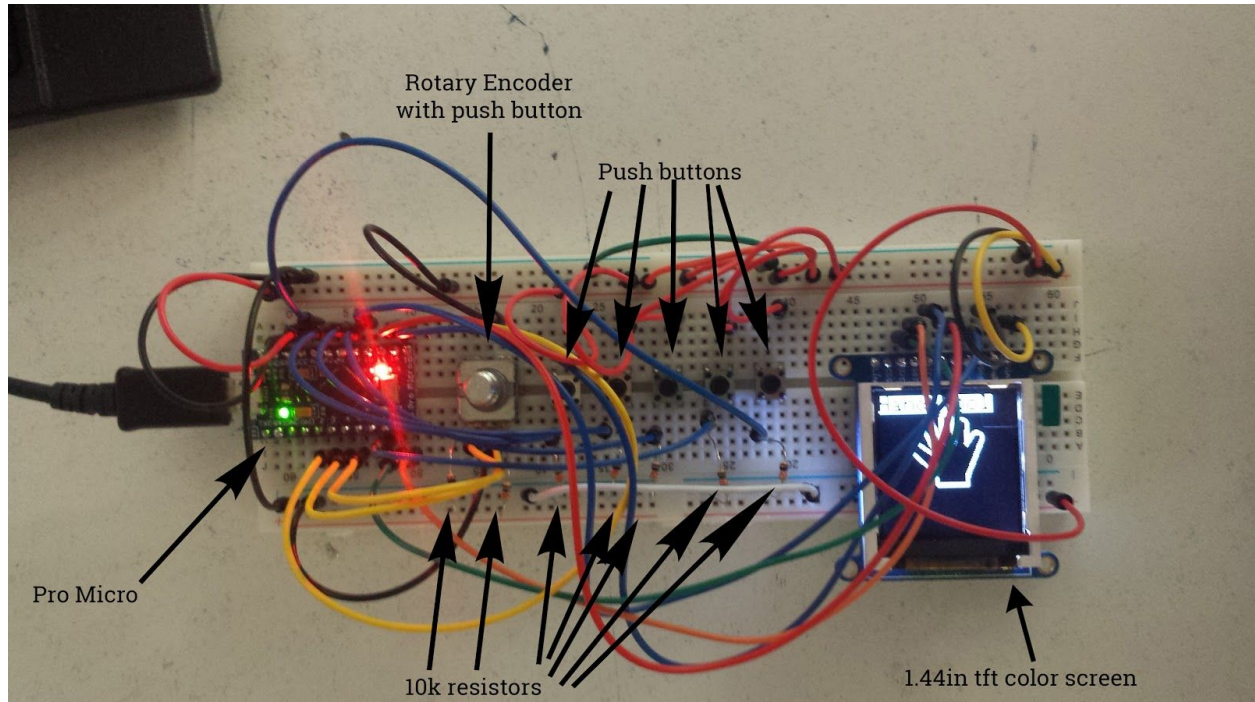


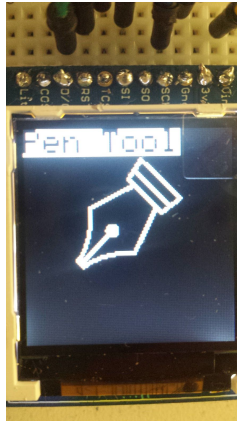
## Functional Breadboard



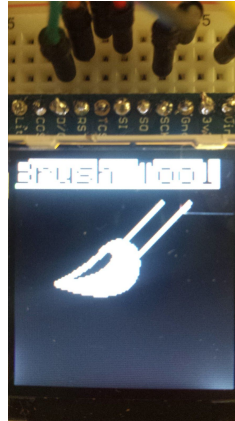
Menu Screen



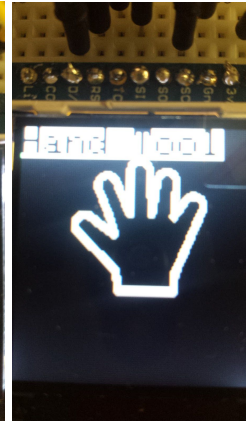
Move Tool



Pen Tool



Brush Tool



Hand tool

During this experience, I went through a few troubles with my screen not working, bricking my pro micros, and trying to connect my potentiometer. I got many of the screens working and yes, there is a help screen and an about screen, but they are not displayed here. The device is not 100% functional yet but will be shortly. All bitmaps were made by the png bitmap code converter and were all found on the internet. Different colors can be programmed. I also have yet to make the customization screen. I do know that all buttons are working and the pro micro is responding to the potentiometer. Some flushing out in the code still needs to be done. One thing that i did not include in my PCB are neopixels which will light up as the tool is being used. This, I have not coded in quite yet.

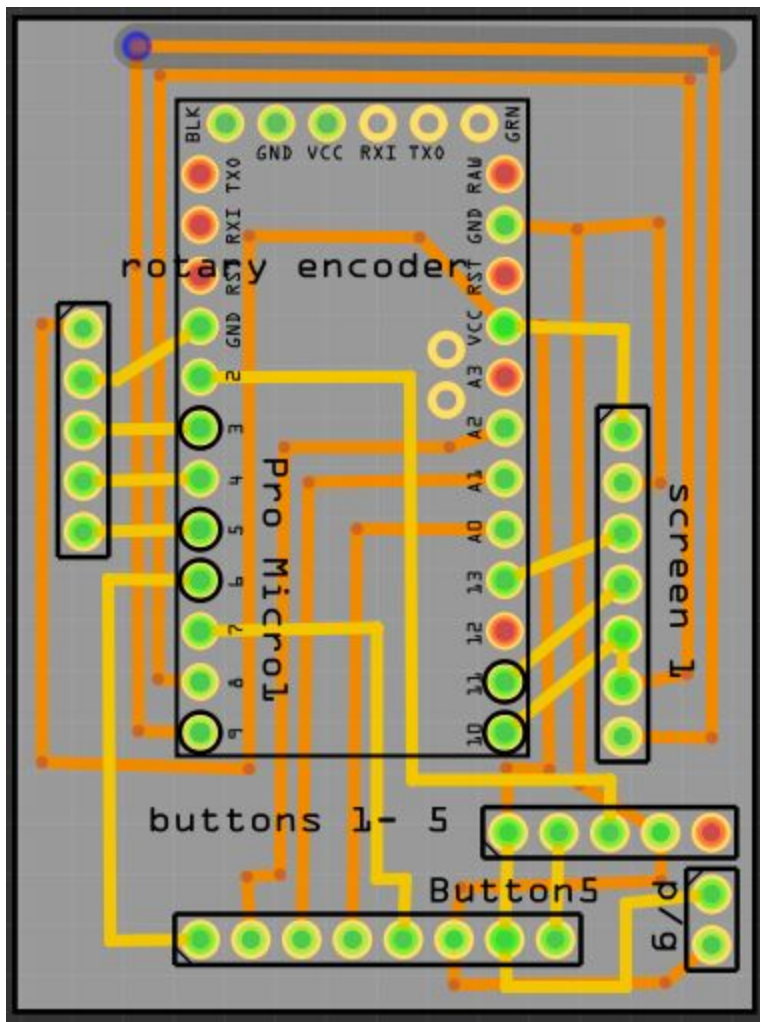
### **Hello World Software**

My code has been uploaded to my Github under the software folder.

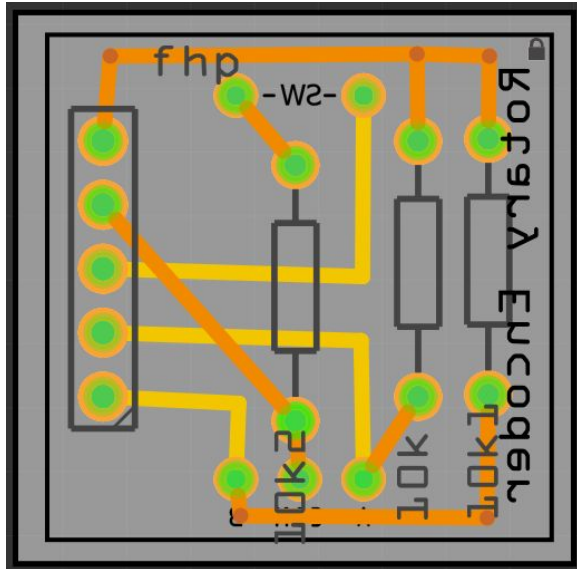
I used the following libraries

1. Adafruit\_NeoPixel
2. Encoder
3. Adafruit\_GFX
4. Adafruit\_ST7735
5. SPI
6. Arduino IDE

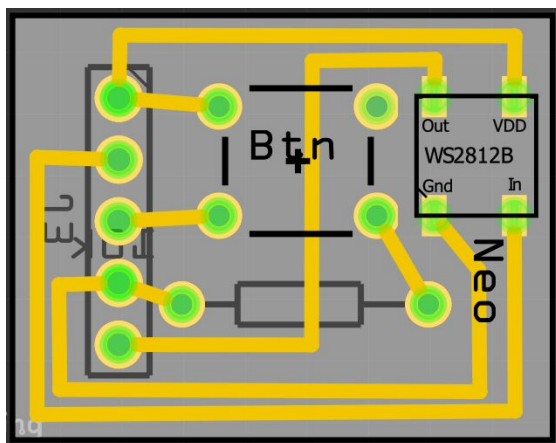
## PCB Design



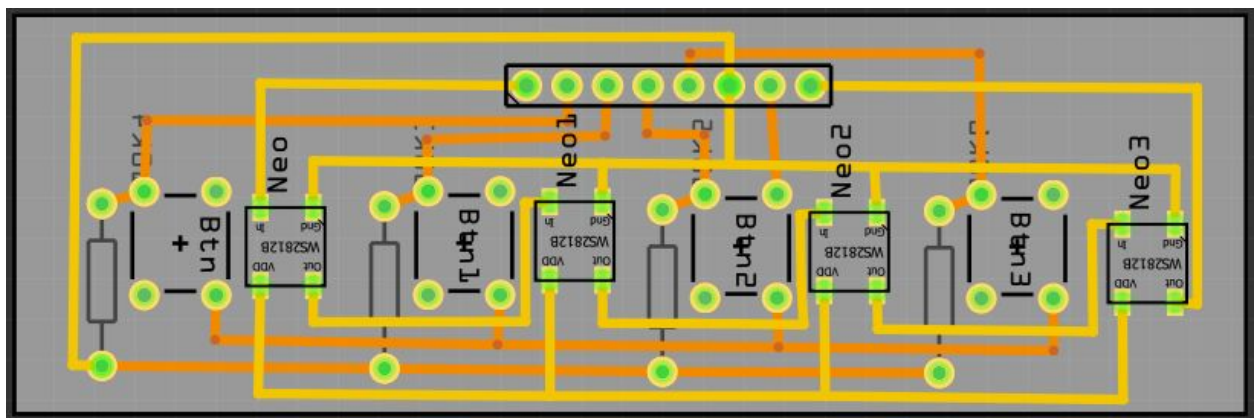
Arduino Pro Micro PCB



Rotary Encoder PCB



Single Btn and Neopixel PCB



Multi Btn and PCB Design