

# Function proposal

## Hardware

### Inputs

- **Rotary Encoders**

Function: used as dials to draw the picture and to navigate through other functions such as saving page and switching between one and two player mode.

Purchasing

- <https://www.sparkfun.com/products/9117>
- <https://www.adafruit.com/product/377>
- <https://learn.adafruit.com/pro-trinket-rotary-encoder>

- **Buttons**

Function: power on and off, enter button used to select settings and save drawings



### Outputs

- **Elegoo Screen**

Function: This is used to display the pictures

Purchasing:

- [https://www.amazon.com/gp/product/B01EUVJYME/ref=oh\\_aui\\_detailpage\\_o07\\_s00?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B01EUVJYME/ref=oh_aui_detailpage_o07_s00?ie=UTF8&psc=1)

Documentation:

- <https://learn.adafruit.com/adafruit-2-8-tft-touch-shield-v2/graphics-test>



## Processing

- **Arduino Pro Mini**

Function: This is the arduino I will use to control the device

Purchasing:

- <https://www.sparkfun.com/products/11113>

Documentation:

<https://learn.sparkfun.com/tutorials/using-the-arduino-pro-mini-33v>

- **SD reader**

- Virabotics sd card reader and writer

Function: This is used to save images

Purchasing:

Documentation:

- <http://scholarslab.org/makerspace/saving-arduino-sensor-data/>

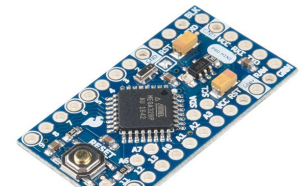
**OR**

- sd breakout board

Function: This would be used to save images

Purchase source:

- <https://www.adafruit.com/product/254>



Documentation:

- <https://learn.adafruit.com/adafruit-micro-sd-breakout-board-card-tutorial?view=all>

## Power

- **TP5410 - LiPo Charger/Boost Converter**

Function Description:

Purchase Source:

- <https://www.ebay.com/itm/191990401129>

Documentation:

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

- **Lithium Ion Battery 1Ah**

Function Description: This is what I will use to power my device

Purchase Source:

- <https://www.sparkfun.com/products/13813>

## Software

- **Arduino IDE**

Function: this will be used to write code

Documentation:

- <https://www.arduino.cc/en/Main/Software>

- **Adafruit GFX Library**

Function: This is a graphics library for screen displays

Documentation:

- <https://github.com/adafruit/Adafruit-GFX-Library>

- **Adafruit TFT Library**

Function: this simplifies the process of making shapes and lines

Documentation:

- <https://www.arduino.cc/en/Reference/TFTLibrary>

- **SPI library**

Function: This is used to connect with the screen and SD card

Documentation:

- <https://www.arduino.cc/en/Reference/SPI>