

# Function Development

## Wireframe Storyboard

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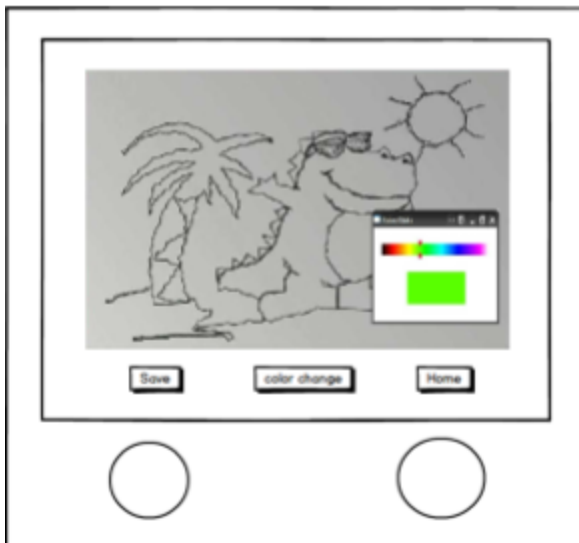
### Splash Screen

This screen is displayed when the device is first turned on to indicate that it is powering up.



### Main Menu

This menu allows the user to navigate through the main six options. Users will return here at the end of their game or drawing session.



### Single Player Sketch Mode

This screen is what is seen when the game is in single player mode. From here players can change color by pressing both buttons in the rotary encoders at the same time, and then change the color using the left rotary encoder to move the slide bar.



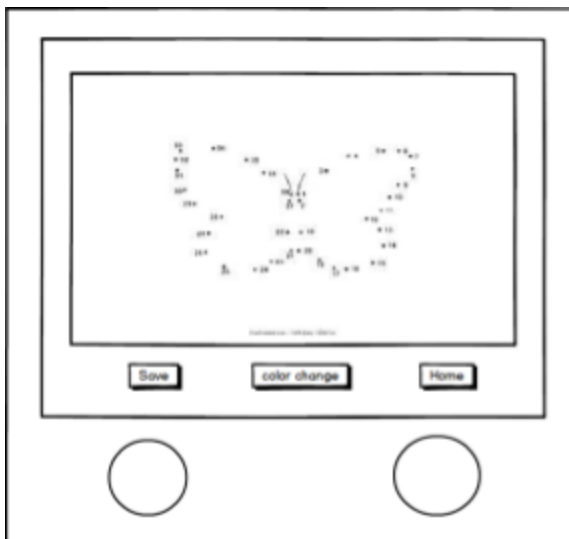
## Save

When the user presses the save button, which is done using the button in the left rotary encoder, they are taken to this page. They can then fill in the information and press save, which will take them to the main menu, or cancel which will take them back to their previous page.



## Save Prompt

When the user presses the home button, by hitting the button in the left rotary encoder, a save prompt comes up. Here they have the choice of yes or no. If they press yes, then they are directed to the save screen. If they press no they are taken back to the home screen and their work is not saved.



## Multiplayer

Multiplayer works much like regular draw mode, except each player gets one rotary encoder and must work together to trace the image on the screen. From here Save, Color Change, and Home work the same as they do in single player.



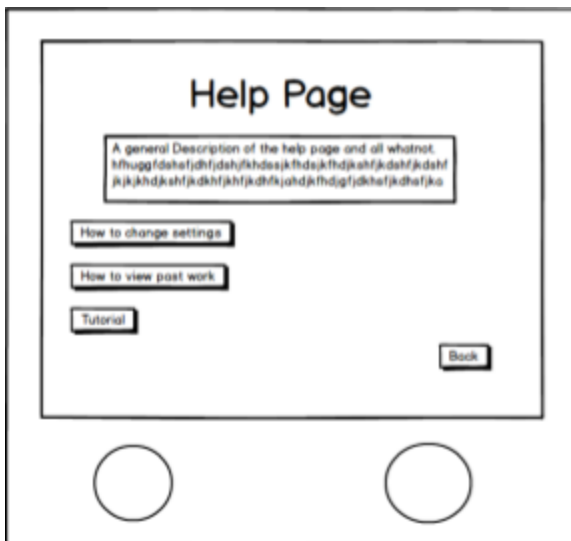
## Art Gallery Page

This page displays saved work. From here you can look at the work by clicking on the name, or go back to the main menu by pressing back. Scrolling and selecting is done using the left rotary encoder.



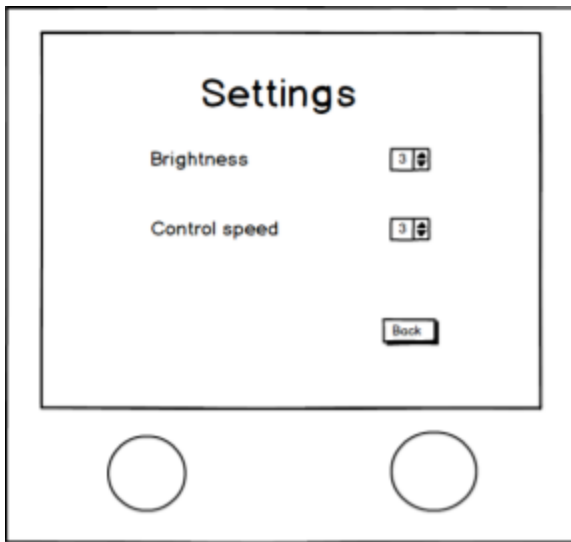
## Saved Image

When a image in the gallery is selected, the user is directed to this page where they can see their work and have the chance to edit it, or go back to the gallery. If they choose to edit, it continues onto the single player mode.



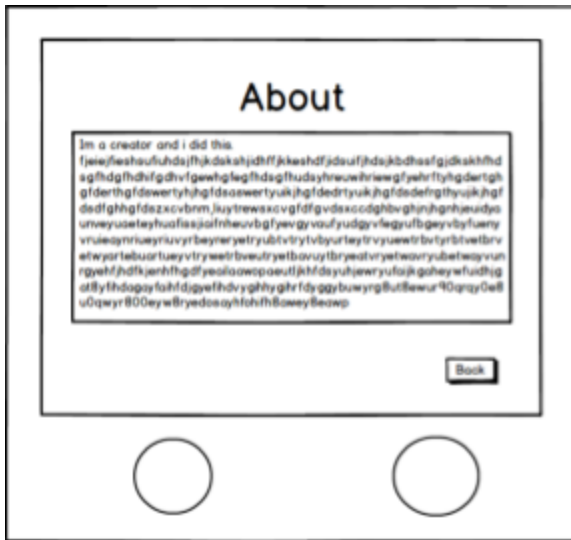
## Help Page

This page can be selected from the home screen. It is used to provide general information on how to use the device.



## Settings

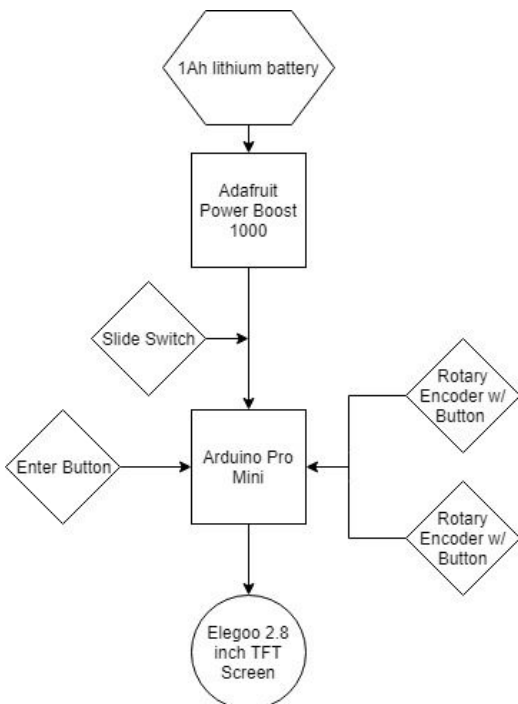
This page can be navigated to from the main menu and is used to set brightness and speed.



## About

This page can be navigated to from the home screen and is meant to provide general information about the designer.

## Component Sketch



## Bill Of Materials

| Item   | Cost   | # | Purchase URL  | Documentation URL   |
|--|--------|---|---|---|
| Rotary Encoder with buttons                                    | \$4    | 2 | <a href="https://www.sparkfun.com/products/9117">https://www.sparkfun.com/products/9117</a>   | <a href="https://learn.adafruit.com/pro-trinket-rotary-encoder">https://learn.adafruit.com/pro-trinket-rotary-encoder</a>   |
| Arduino Pro Mini   | \$10   | 1 | <a href="https://www.sparkfun.com/products/11113">https://www.sparkfun.com/products/11113</a> |   |
| 3.5" TFT 320x480 + Touchscreen Breakout Board w/MicroSD Socket | \$40   | 1 | <a href="https://www.adafruit.com/product/2050">https://www.adafruit.com/product/2050</a>     | <a href="https://learn.adafruit.com/adafruit-3-5-color-320x480-tft-touchscreen-breakout/touchscreen">https://learn.adafruit.com/adafruit-3-5-color-320x480-tft-touchscreen-breakout/touchscreen</a> |
| TP5410 - LiPo Charger/Boost Converter                          | \$2.19 | 1 | <a href="https://www.ebay.com/itm/191990401129">https://www.ebay.com/itm/191990401129</a>     | <a href="https://www.youtube.com/watch?v=aND0j2Y2IkM">https://www.youtube.com/watch?v=aND0j2Y2IkM</a>   |
| Lithium Ion Battery 1Ah  | \$10   | 1 | <a href="https://www.sparkfun.com/products/13813">https://www.sparkfun.com/products/13813</a> |   |

