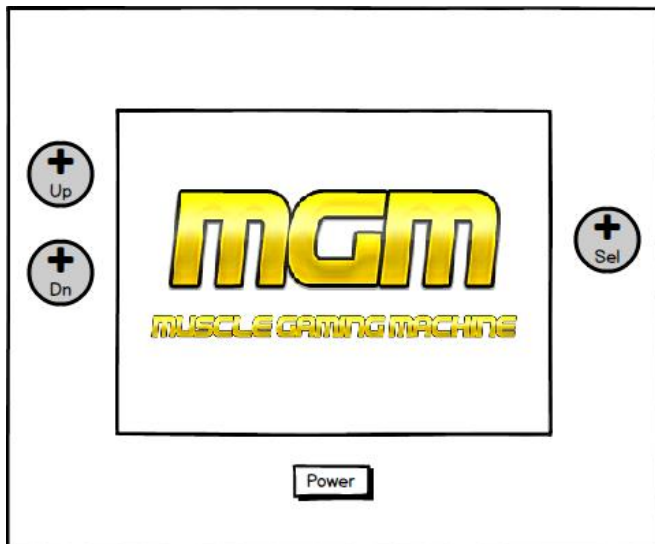# Function Proposal
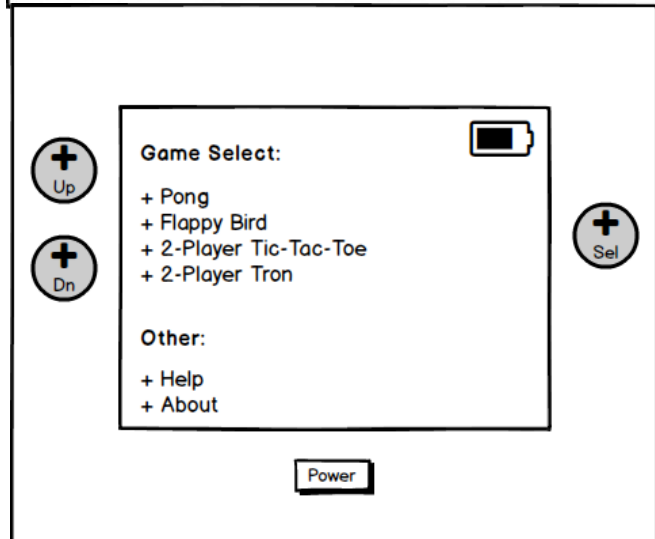
Splash Screen
The splash screen is the first thing that appears when the Muscle Gaming Machine is powered on. It lasts for 2 seconds then loads the main menu.
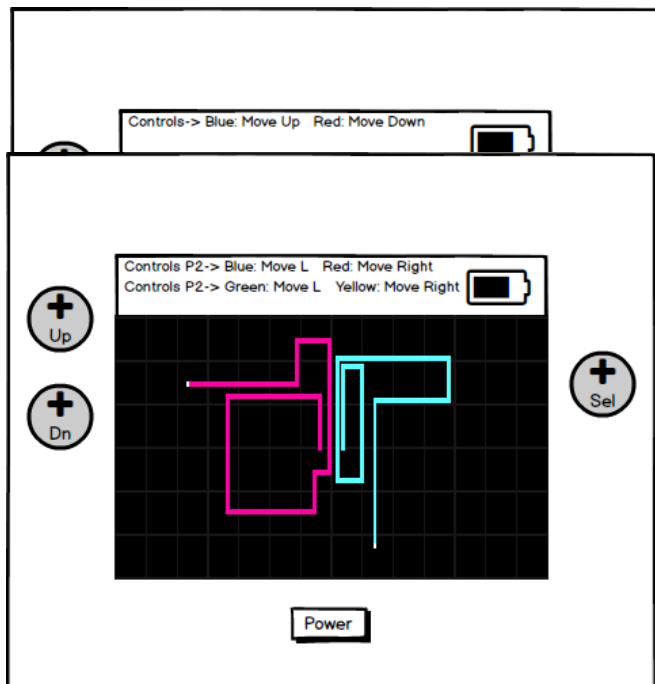
Up

Dn

Sel

mgm

MUSCLE GAMING MACHINE

Power

Main Menu
The Main Menu on the MGM shows 6 options in 2 categories. There will be one section for games and another section for help and about. The Up and Dn keys navigate the screen and the Sel key confirms the selection. There is also a battery meter in the top right section that appears when the battery is low.
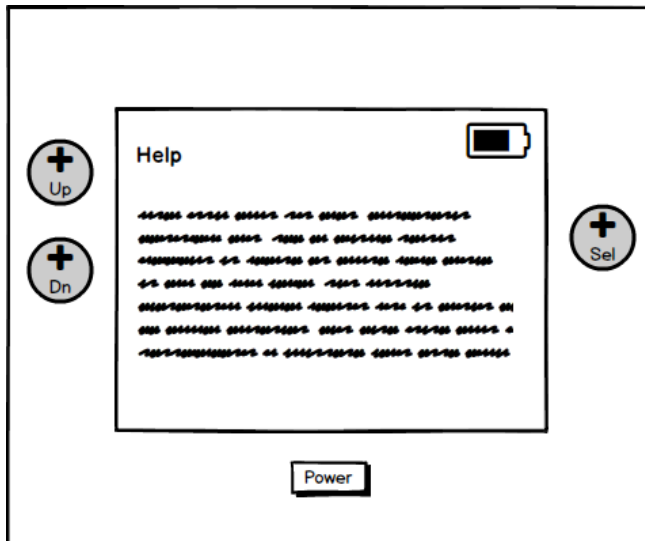
Up

Dn

Sel

Game Select:

+ Pong
+ Flappy Bird
+ 2-Player Tic-Tac-Toe
+ 2-Player Tron

Other:

+ Help
+ About

Power

Pong Game
The Pong game is played by connecting the muscle sensors to the user. The muscles are then flexed according to the controls shown on the top of the screen. The muscle sensors will be color coordinated to assist in usability.

Controls-> Blue: Move Up   Red: Move Down

Controls P2-> Blue: Move L   Red: Move Right
Controls P2-> Green: Move L   Yellow: Move Right
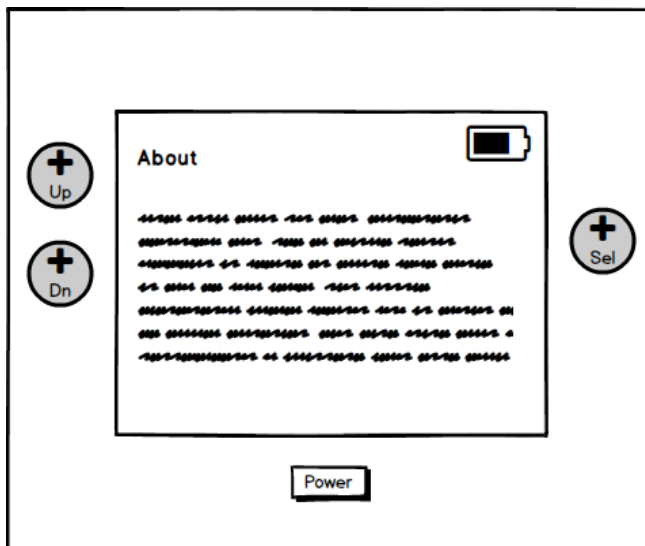
Up

Dn

Sel

Power

Tron Game

The Tron game is also played and controlled by connecting the muscle sensors to the user. The controls in the top of the screen show which sensor controls what for each of the users.

Help Screen

The Help Screen includes simple instructions on how to use and configure the device. The Sel key returns to the Main Menu.

About Screen

The About Screen includes information about the creator and contributors to the MGM.

Component Sketch

Muscle
Sensor #1

Muscle
Sensor #2

Muscle
Sensor #3

Muscle
Sensor #4

240x320 TFT
LCD Screen

I2C

Arduino Pro
Micro

Up Button

Dwn Button

Sel Button

Low Voltage
Indicator

5.2v

WeMos D1
Boost
Converter

3.7v

1200 mAh LiPo
Battery

Power Button