

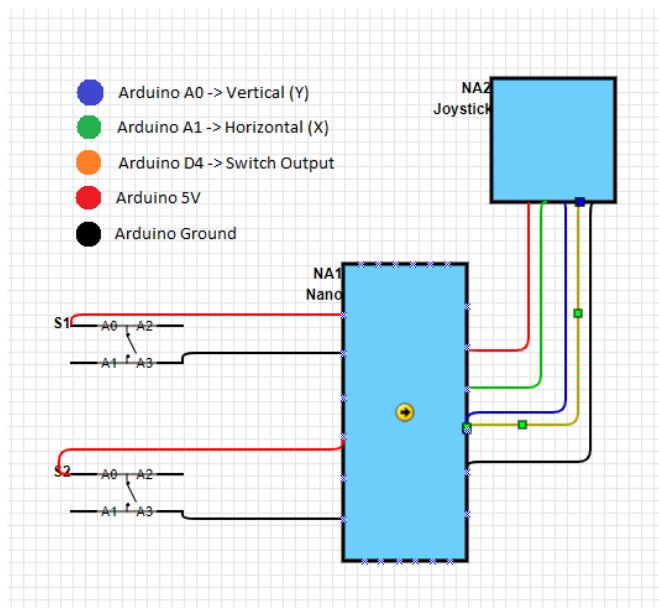
One Handed Video Game Controller

A simple video game controller with a joystick and two buttons. Designed to be operated in a single hand.

Required Components

- 3D Printer
- Arduino mini
- Joystick breakout module for Arduino
- 2 Buttons
- Jumper wires
- Soldering set-up
- USB micro to USB-A chord

Basic Wiring



Analog input pins measure how much you're pushing the joystick. Value 0-1023 on both the X and Y axis. 511 at Center.

Buttons connected with a 10K pull-up resistor. Wired to ground and a digital input pin.

Code:

Modified version of Matthew Heironimus' code

<https://github.com/MHeironimus/ArduinoJoystickLibrary>



sketch_oct08a

```
#include "Joystick.h"

// Create Joystick
Joystick_Joystick;
int XAxis = 0;
int YAxis = 0;

const bool testAutoSendMode = true;

//booleans for buttons
bool buttonApressed = false;
bool buttonBpressed = false;

void setup() {
  // put your setup code here, to run once:
  pinMode(9, INPUT_PULLUP); //sets up our buttons
  pinMode(4, INPUT_PULLUP);

  Joystick.begin(); //starts joystick
}

void loop() {
  // put your main code here, to run repeatedly:
  YAxis = analogRead(A0); //create a variable that is equal to the input value
  YAxis = map(YAxis, 0, 1023, 255, 0); //map that variable
  Joystick.setYAxis(YAxis); //links the joystick's right axis to our input variable

  XAxis = analogRead(A1);
  XAxis = map(XAxis, 0, 1023, 255, 0);
  Joystick.setXAxis(XAxis);

  if(digitalRead(9) == LOW) //if the button connected to pin 9 is pressed
  {
    buttonApressed = true;
  }
  else{
    buttonApressed = false;
  }
  if(digitalRead(4) == LOW) //if the button connected to pin 4 is pressed
  {
    buttonBpressed = true;
  }
  else{
    buttonBpressed = false;
  }
}
```

Done compiling.

```
Sketch uses 8216 bytes (28%) of program storage space. Maximum is 28672 bytes.
Global variables use 276 bytes (10%) of dynamic memory, leaving 2284 bytes for local variables. Max
```

