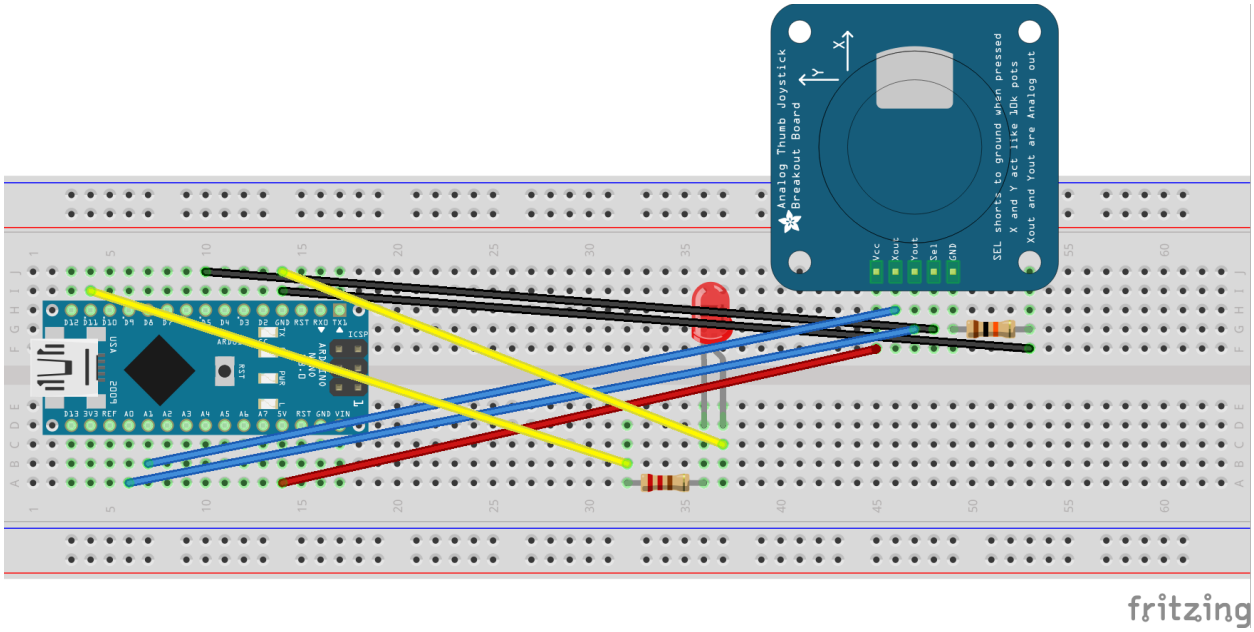
Arduino 2-Axis Joystick Sensor Module

About

The Joystick Module consists of 2 analog potentiometers and a digital switch.



Schematic

Arduino GND -> 10k Resistor -> Module GND
Arduino +5V -> Module Vcc
Arduino D5 -> Module Sel
Arduino A0 -> Module Y
Arduino A1 -> Module X
Arduino D11 -> 220 Resistor -> LED
Arduino GND -> LED

Problems with Digital Input and possible solutions

With the current setup, which is has been verified is the correct setup, there may be the following problem: Pressing the Button results in a HIGH Signal for a random amount between 1 & 5 seconds, which cannot be interrupted through code.
The following solutions may help:

-Implementing a Debounce:
    Check wether the signal received is still valid during the next tick. This helps in reducing signal fluctuation but has not eliminated the problem.
-Implementing a Pulldown
    This can be done through setting up a resistor between Arduino D5 and Module Sel and using pinmode(5, INPUT_PULLUP);
    This should eliminate the problem according to online sources.

Example Code

The following code has been written by Orell Endres based on a code by . It activates a LED when the button is pressed and prints values between 300 and 0 for the respective axis to the console.

```
int joyPin1 = 0;                 // slider variable connected to analog pin 0
int joyPin2 = 1;                 // slider variable connected to analog pin 1
int value1 = 0;                  // variable to read the value from the analog pin 0
int value2 = 0;                  // variable to read the value from the analog pin 1
int ledState = HIGH;             // the current state of the output pin
int buttonState;


 void setup() {
        pinMode(A1, INPUT);
        pinMode(A0, INPUT);
        pinMode(11, OUTPUT);
        pinMode(5, INPUT);
        Serial.begin(9600);

        digitalWrite(11, ledState);
        digitalWrite(5, LOW);       //Inital Setting

}



 void loop() {
 // reads the value of the variable resistor
         value1 = analogRead(joyPin1);
 // this small pause is needed between reading
 // analog pins, otherwise we get the same value twice
        delay(100);
 // reads the value of the variable resistor
         value2 = analogRead(joyPin2);
// write current state to LED
        buttonState = digitalRead(5);
        digitalWrite(11, buttonState);

 //Adjustment needed so the numbers make at least some kind of sense
        value1-=880;
        value2-=880;

 //Printing to console
        Serial.println("X-Axis: ");
        Serial.print(value1);
        Serial.println("Y-Axis: ");
        Serial.print(value2);
        delay(50);


}
```