



## User's Guide

Thank you for using ARDUnity.

For more information, visit below link, please.

([www.ardunity.com](http://www.ardunity.com))

# What is ARDUnity?

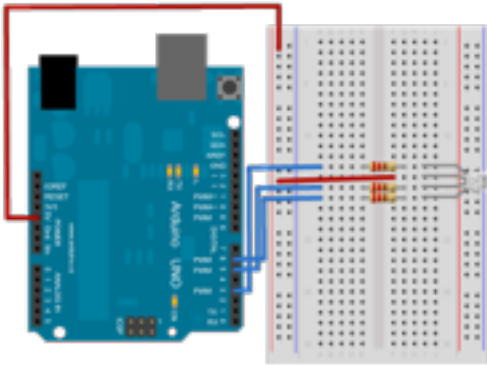
- **ARDUnity** is an asset that can make Unity App to interact with Arduino.
- **ARDUnity** is a compound word of “Arduino + Unity”



# ARDUnity Edition Comparison

Features	Basic	Deluxe
Price	Free	\$50
Wire Editor	Yes	Yes
Support PlayMaker	Yes	Yes
ARDUINO Board (Included compatible product)	Yes	Yes
Digital I/O (Digital Read/Write)	Yes	Yes
PWM (Analog Write)	Yes	Yes
ADC (Analog Read)	Yes	Yes
Servo Motor (Only controlling PWM)	Yes	Yes
Tone (Buzzer)	Yes	Yes
Bluetooth LE (Only ARDUnity Brain)	Yes	Yes
DC Motor Driver (ex, Motor Shield)	No	Yes
Bluetooth Classic (ex, HC-06)	No	Yes
TCP/IP (ex, WiFi Shield)	No	Yes
Utilities for Smart Phone (Android/iOS)	No	Yes
AHRS Sensor (ex, MPU6050)	No	Yes
Support various product for ARDUINO	No	Yes

# How it works?



**Build Arduino Circuit**



**Add Component using Wire Editor**



**Export Arduino Sketch**



**Play in Unity3D Editor**



**Upload sketch to Arduino Board**



# Supported connections



Arduino Hardware



USB



PC



Mac OS X



Bluetooth



Tablet



ANDROID



WiFi

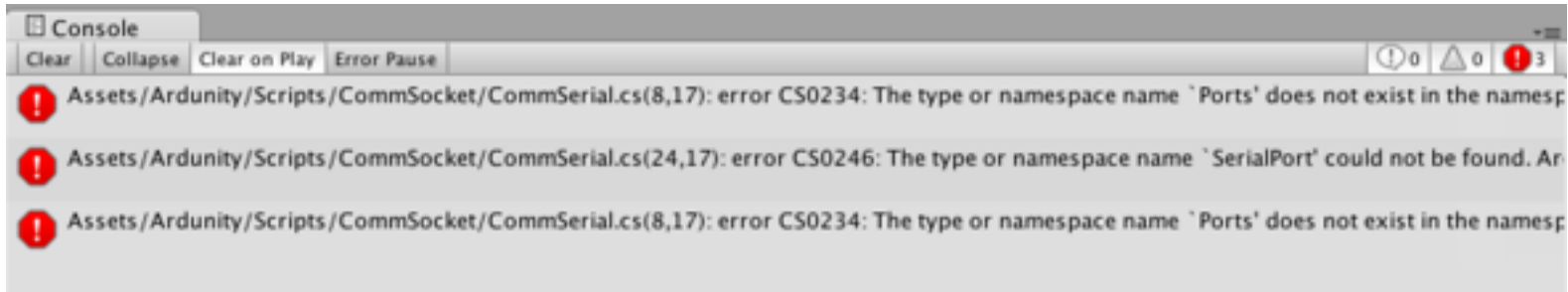


Smart Phone



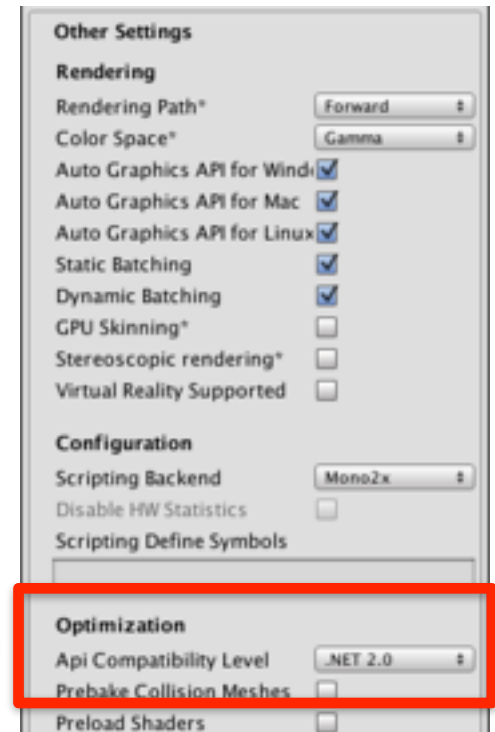
※ Some connections may not yet supported and may require additional hardware Arduino.

# Resolve error



If you find an error like above, proceed as follows.

1. Find Menu & Click (Edit->Project Settings->Player)
2. See "Inspector View"
3. Click "Other Settings" tab
4. Find "Optimization/Api Compatibility Level."
5. Change ".Net 2.0 Subset" to ".Net 2.0"



# You need to Arduino

- Download & Install “Arduino IDE”
  - <https://www.arduino.cc/en/Main/Software>
- You must have Arduino Board
  - It does not matter what series. (Uno, Leonard, etc)



```

Blink
Turns on an LED on for one second, then off for one second, repeatedly.

This example code is in the public domain.
*/

// Pin 13 has an LED connected on most Arduino boards.
// give it a name:
const int led = 13;

// the setup routine runs once when you press reset:
void setup() {
  // initialize the digital pin as an output.
  pinMode(led, OUTPUT);
}

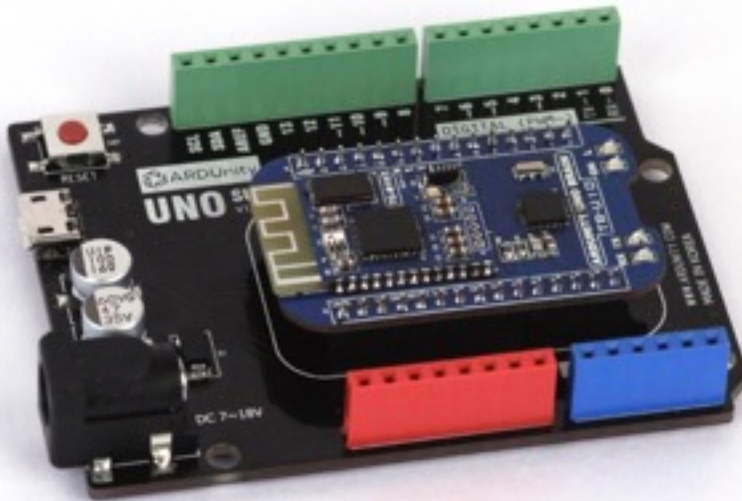
// the loop routine runs over and over again forever:
void loop() {
  digitalWrite(led, HIGH); // turn the LED on (HIGH is the voltage level)
  delay(1000);             // wait for a second
  digitalWrite(led, LOW);  // turn the LED off by making the voltage LOW
  delay(1000);             // wait for a second
}

```



# ARDUnity Board

- If you have not ARDUINO board, We recommend ARDUnity board. (Online shopping mall is coming soon.)
- ARDUnity board has Bluetooth LE.



**Bluetooth™**  
**4.0** 

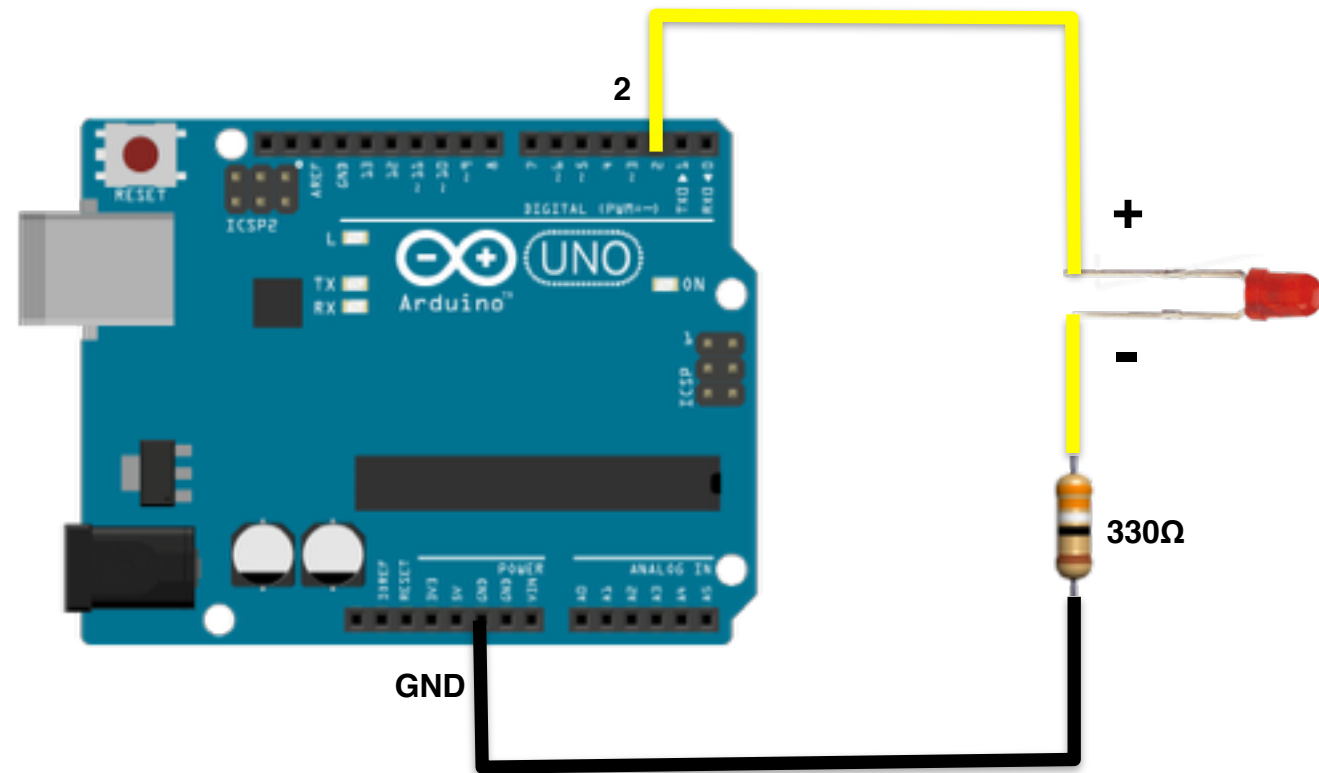
# Youtube Channel

- You can see various videos (tutorial, demo, etc...) in Youtube channel.
- Please visit.
  - [https://www.youtube.com/channel/UCA3j4X\\_ic1wih0z0xs5LgTg/videos](https://www.youtube.com/channel/UCA3j4X_ic1wih0z0xs5LgTg/videos)

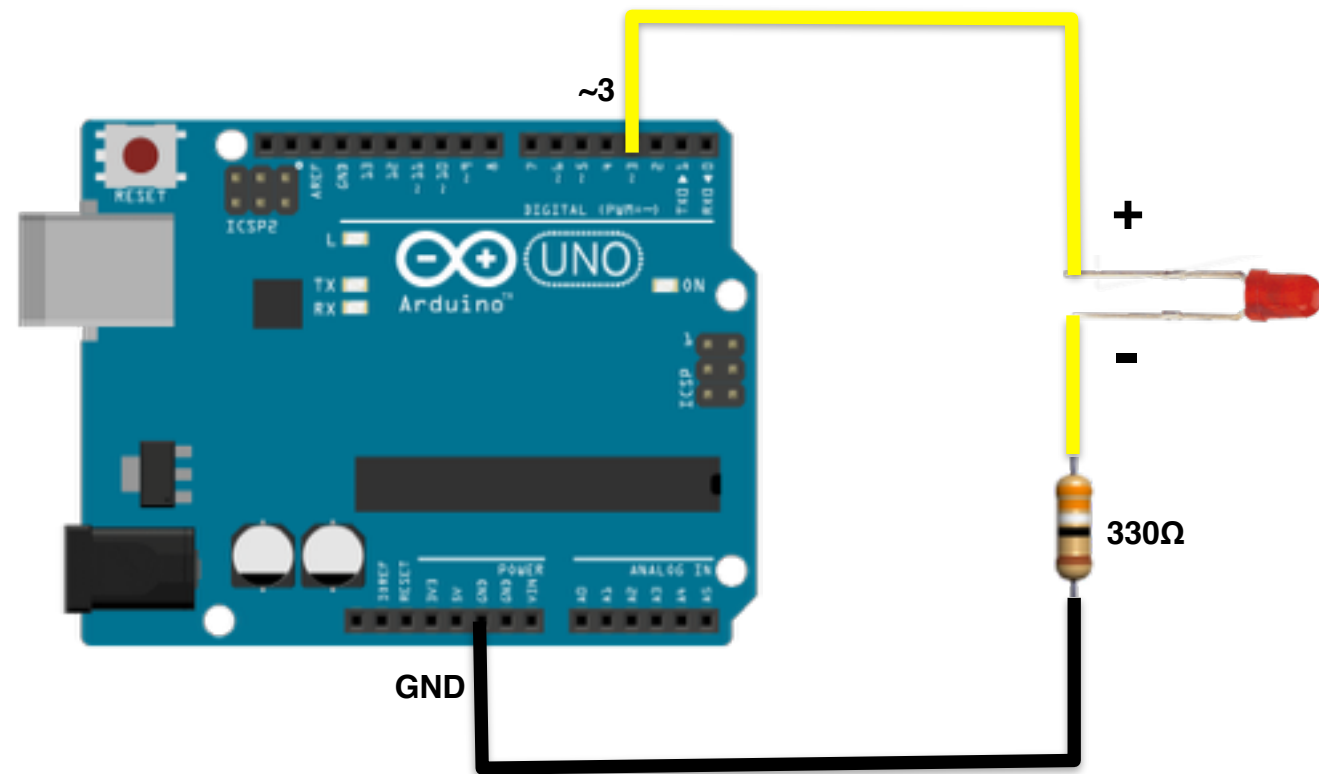


# Circuits for Example

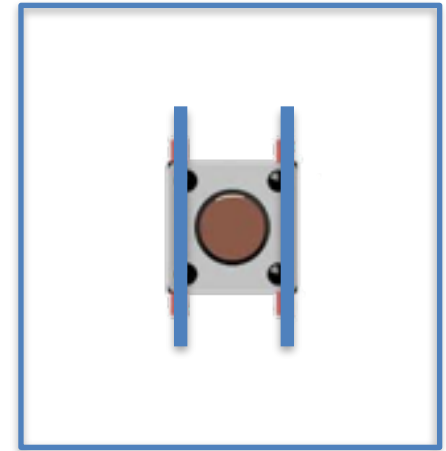
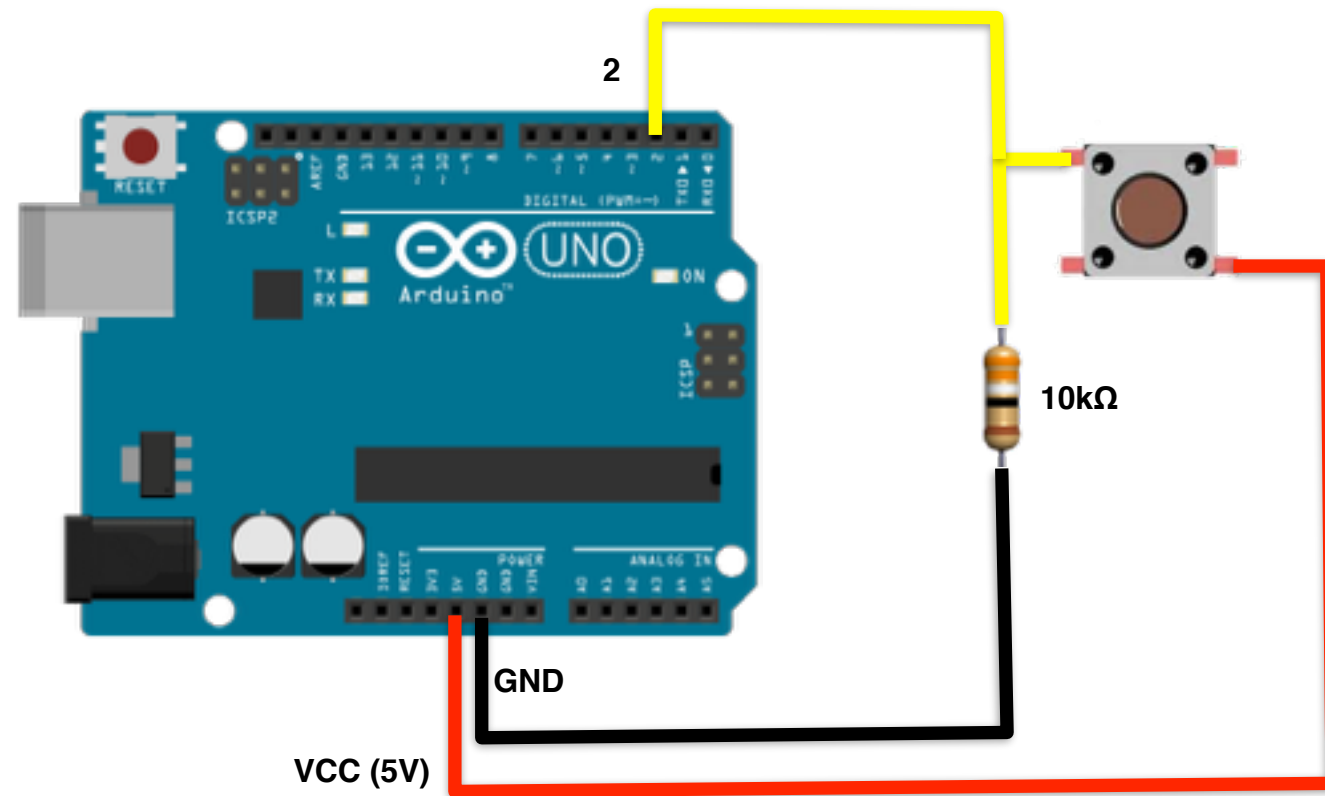
# LED Circuit (Digital)



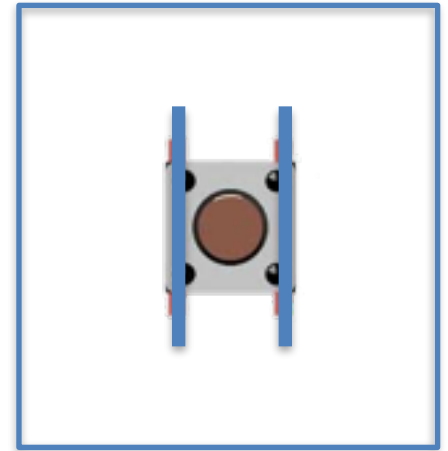
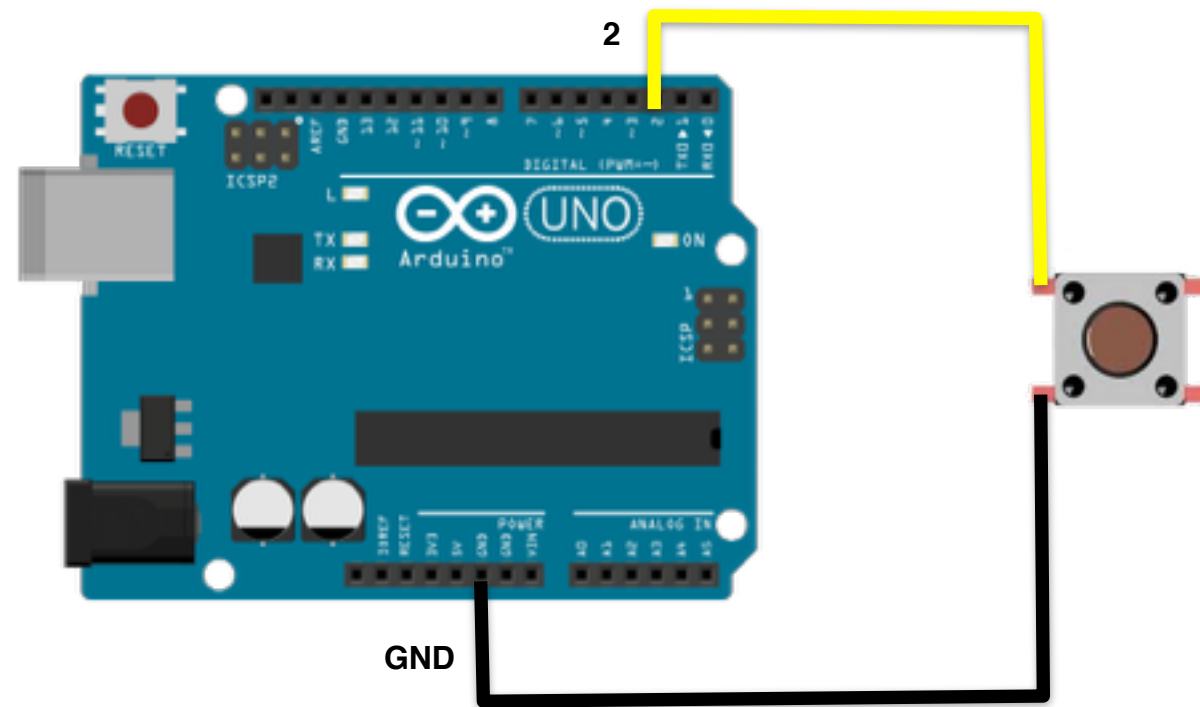
# LED Circuit (Analog)



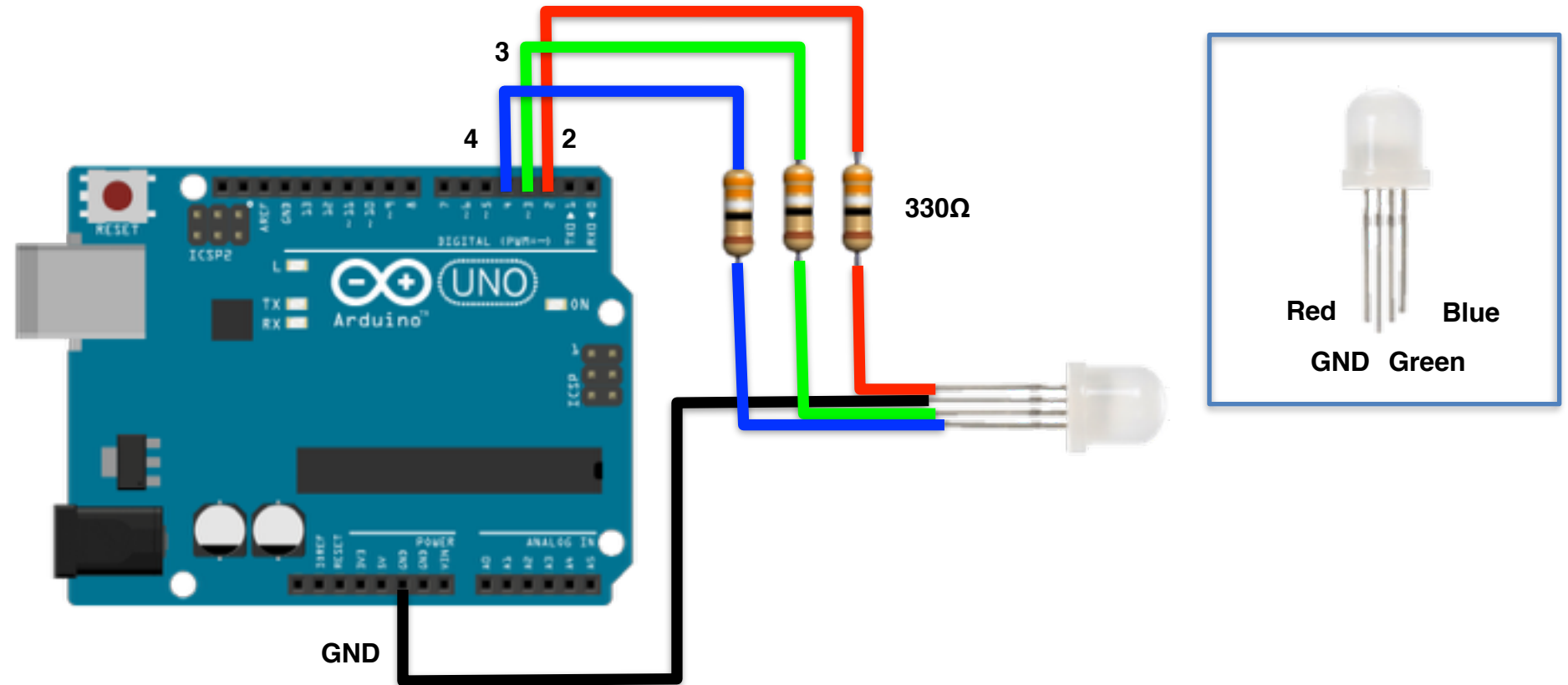
# Push Button Circuit (Use external VCC)



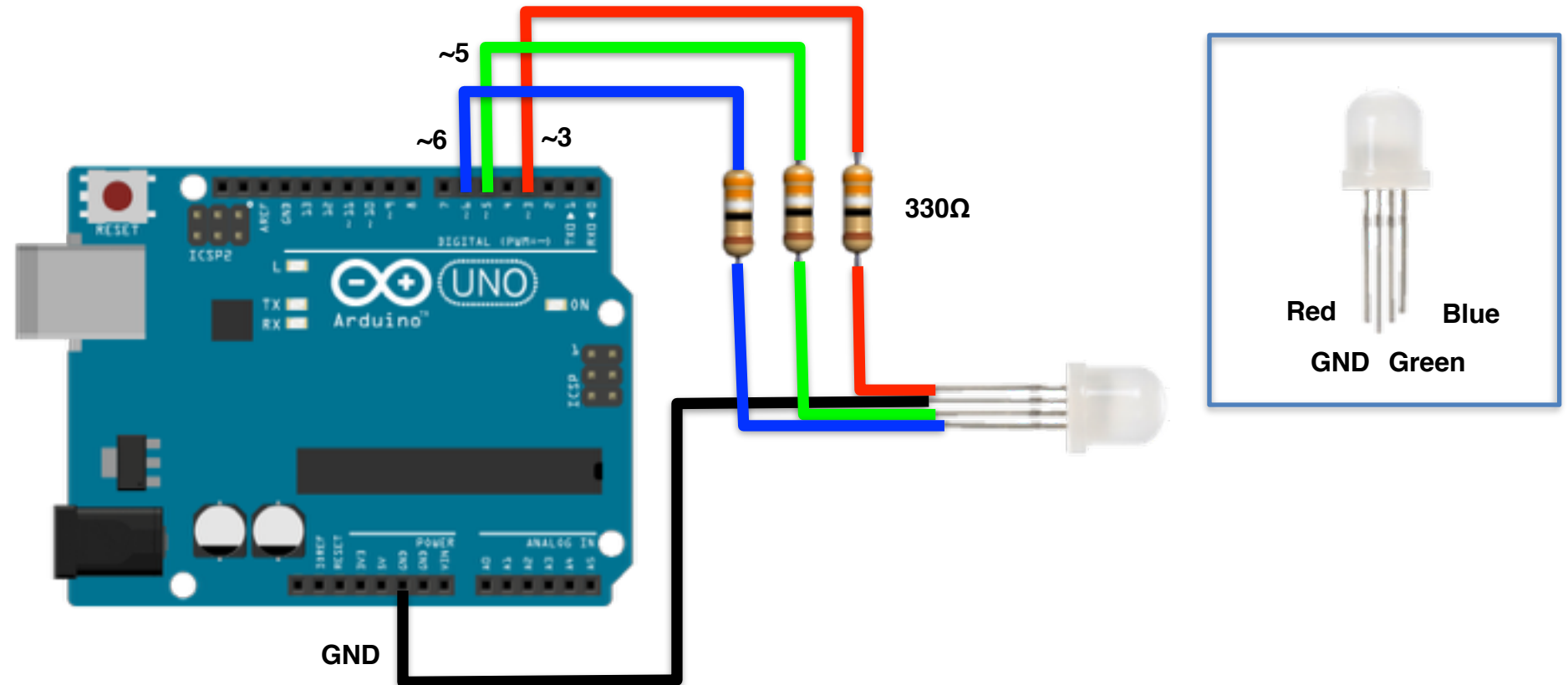
# Push Button Circuit (Use internal pull-up)



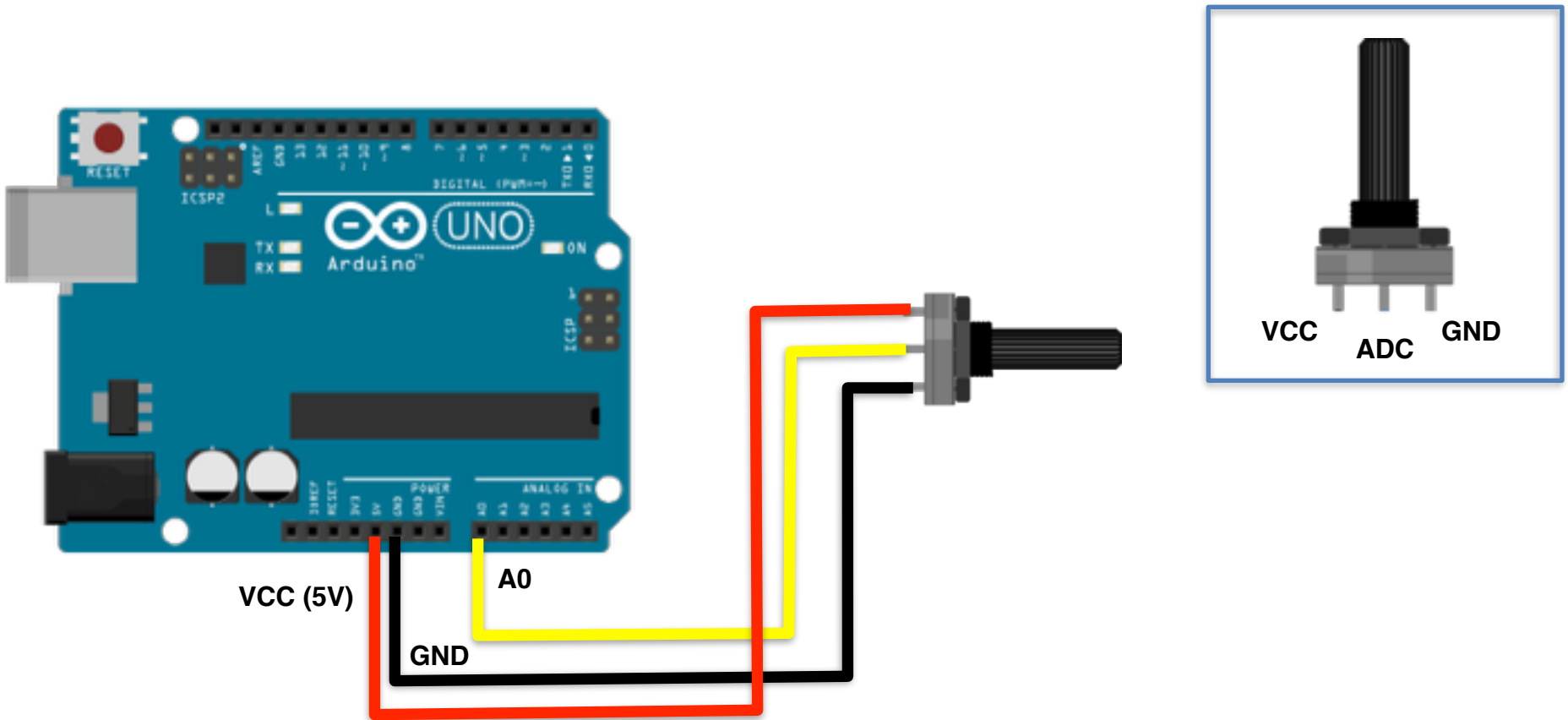
# RGB LED Circuit (Digital)



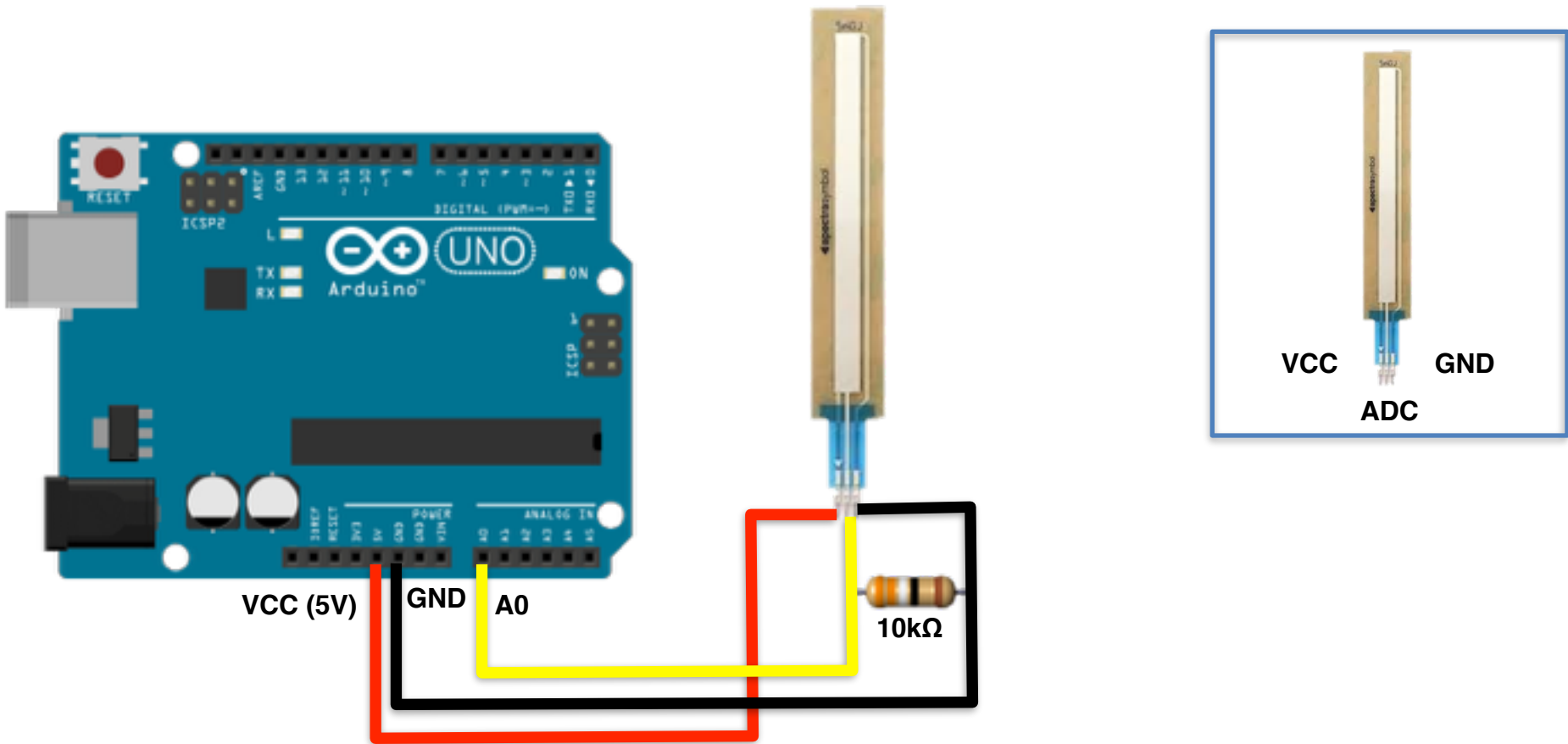
# RGB LED Circuit (Analog)



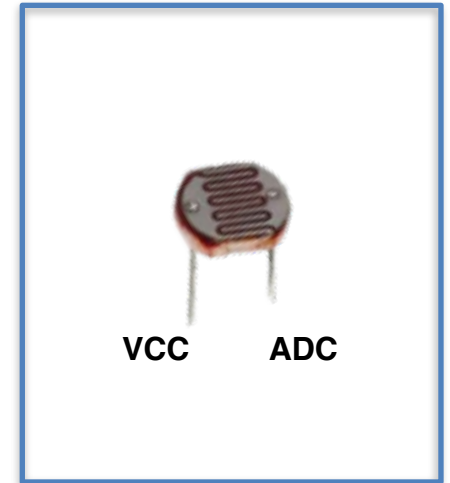
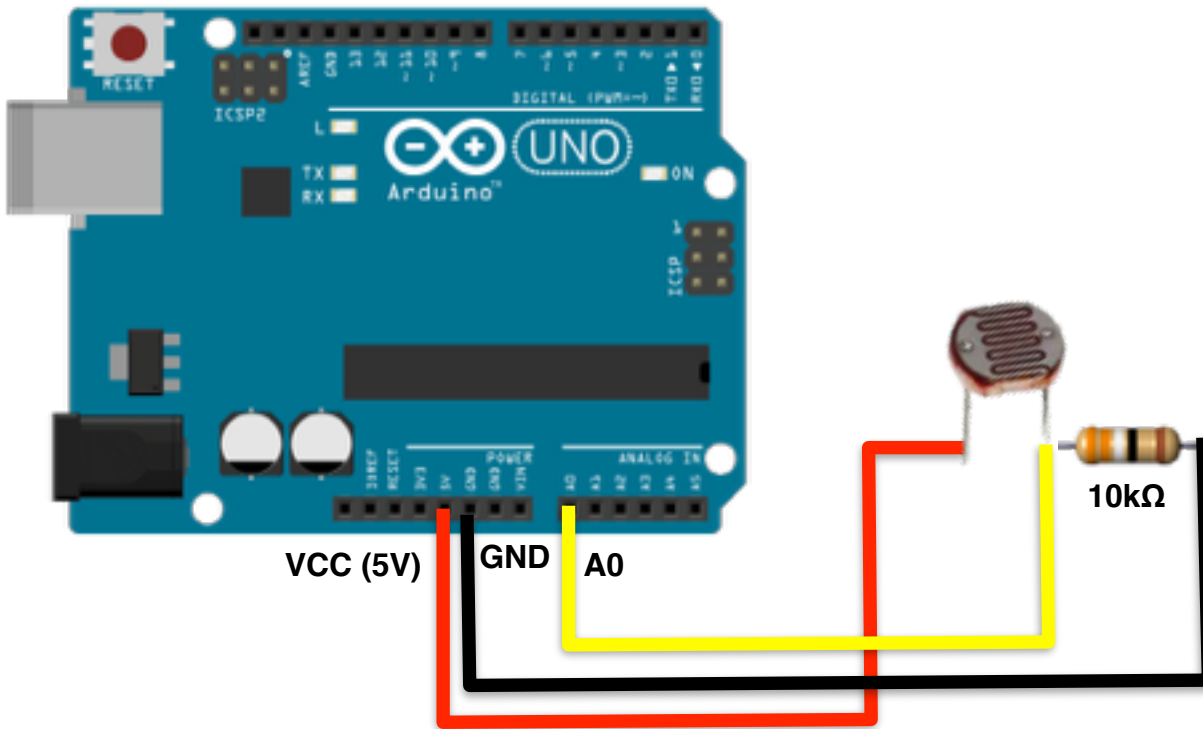
# Potentiometer Circuit



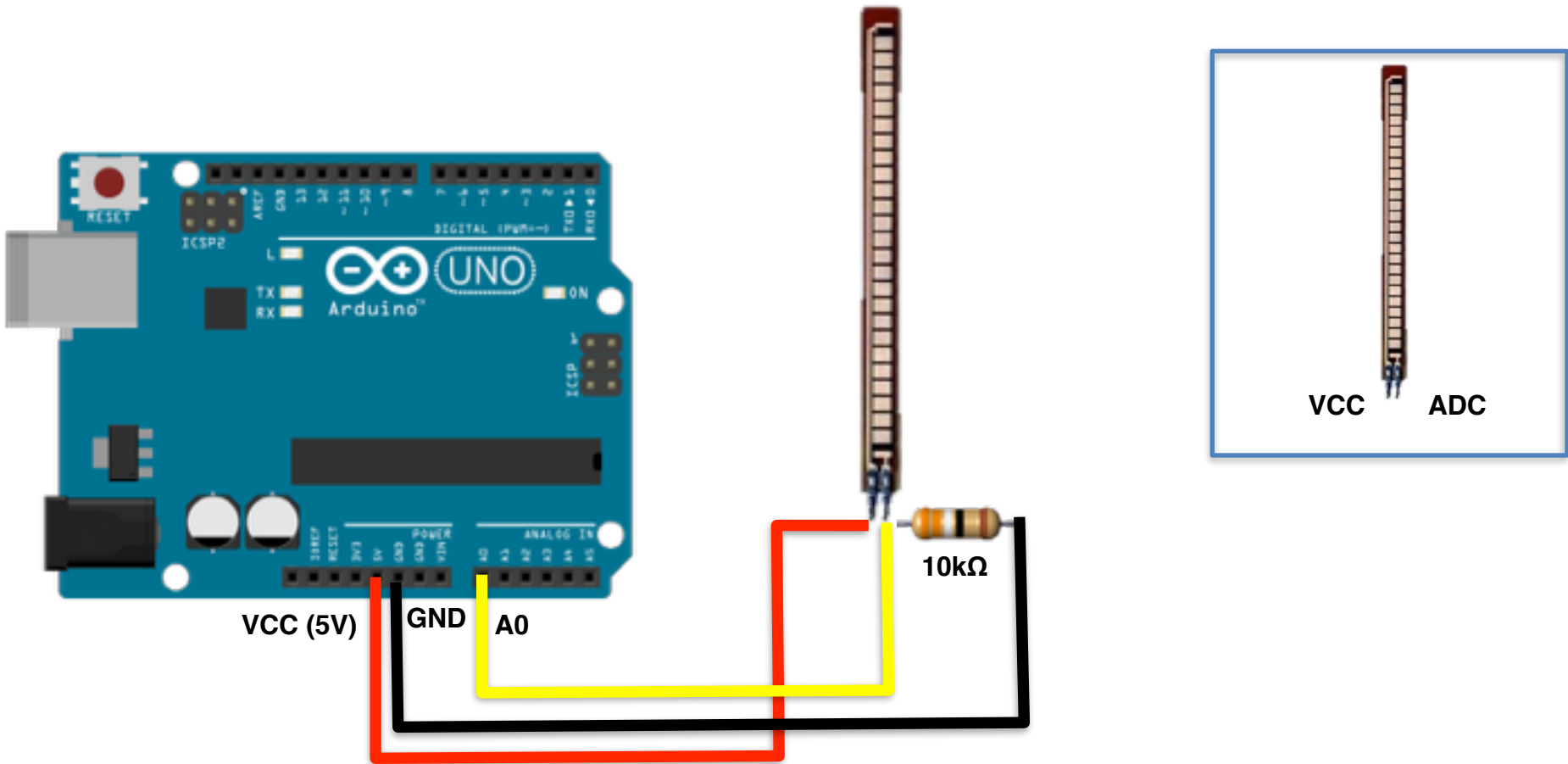
# Soft Potentiometer Circuit



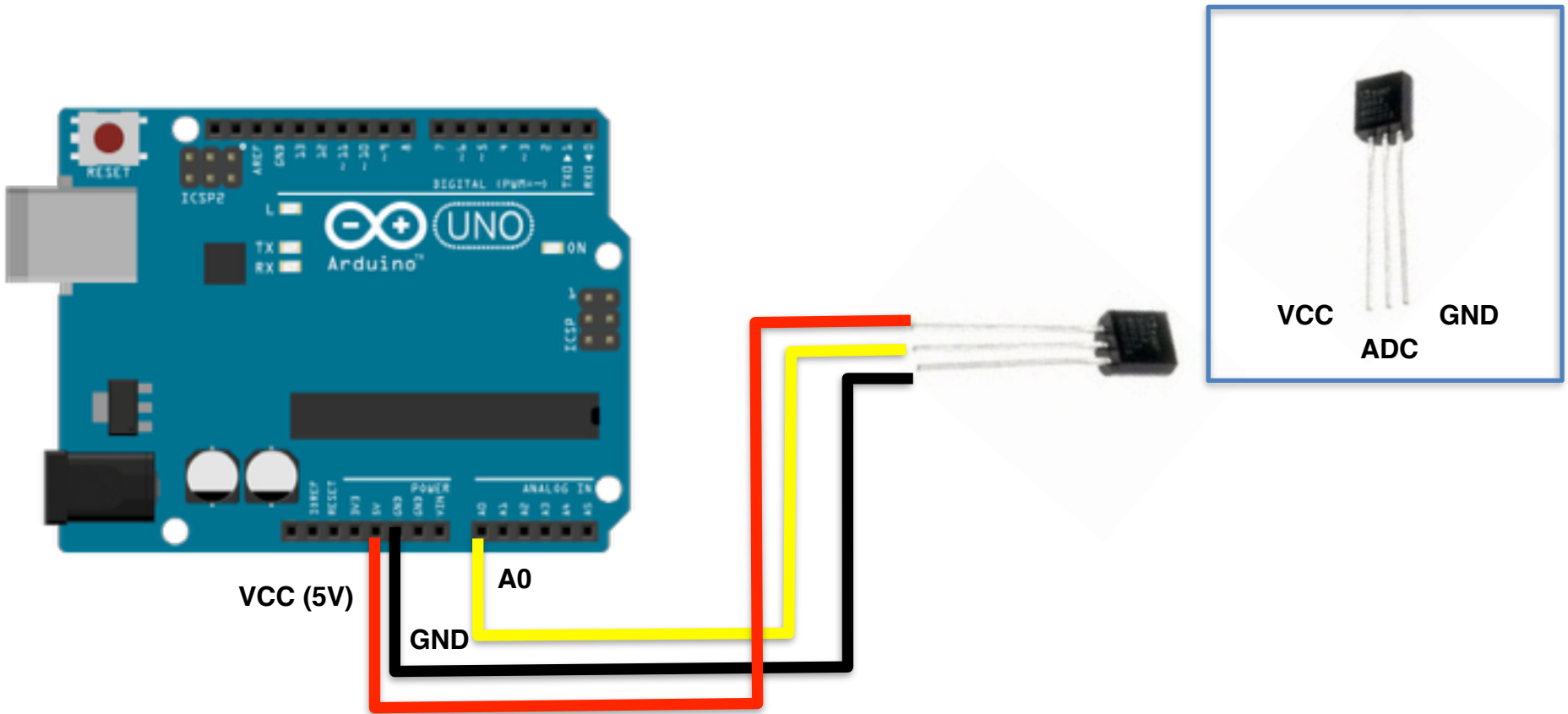
# Photo Cell Circuit



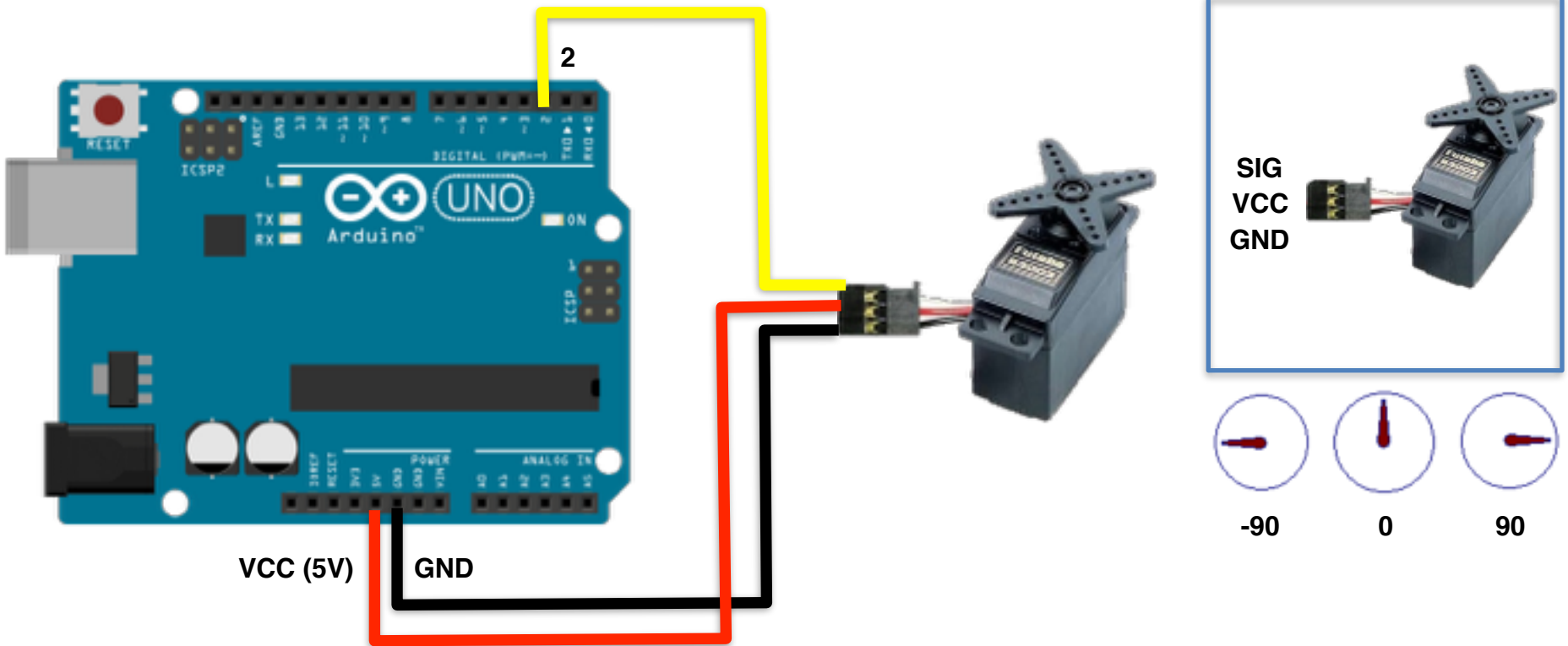
# Flex Sensor Circuit



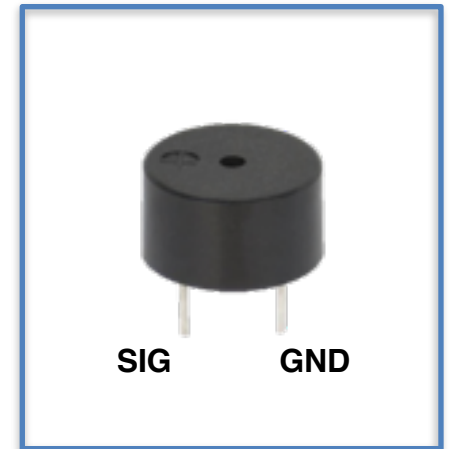
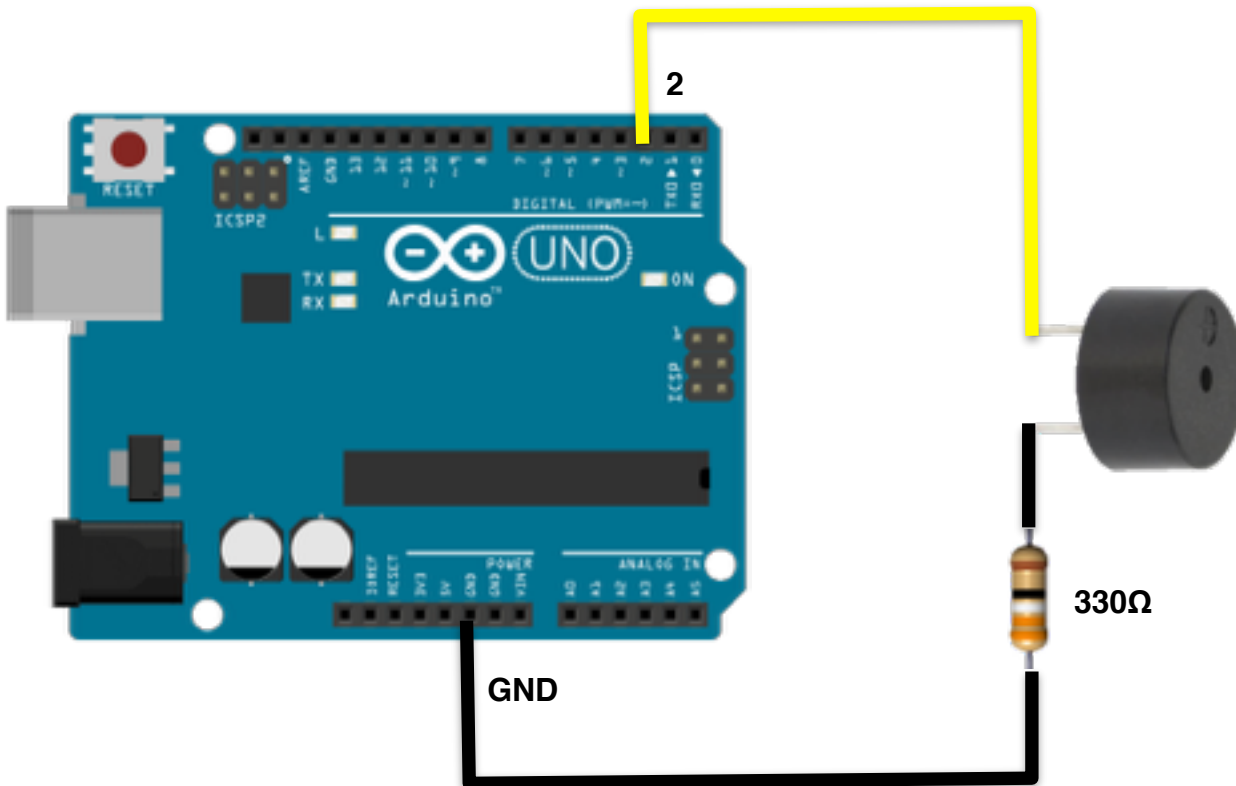
# TMP36 Circuit



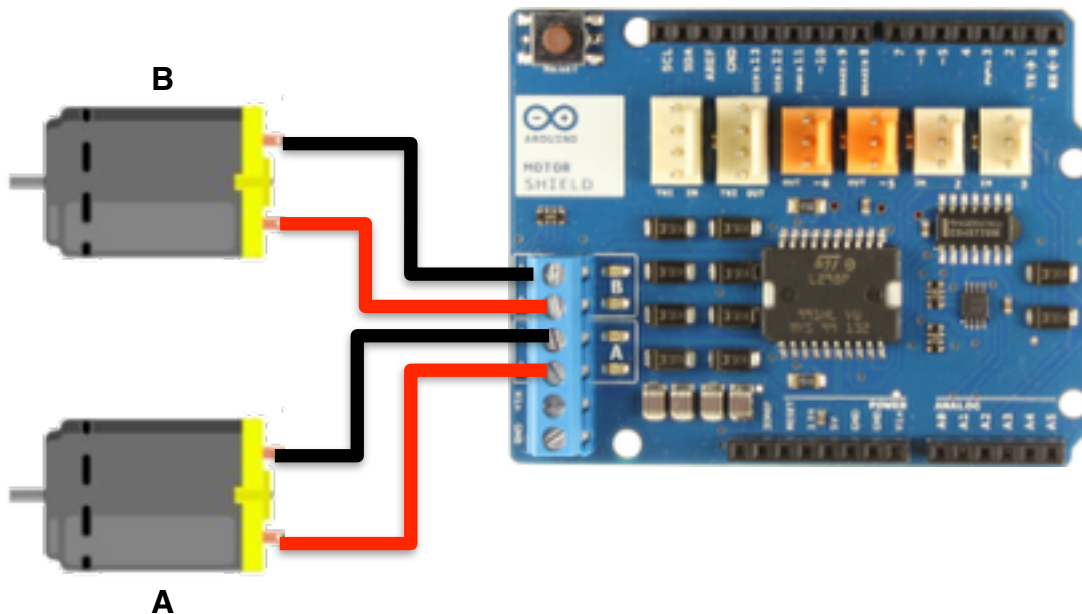
# Servo Motor Circuit



# Buzzer Circuit



# Motor Shield Circuit



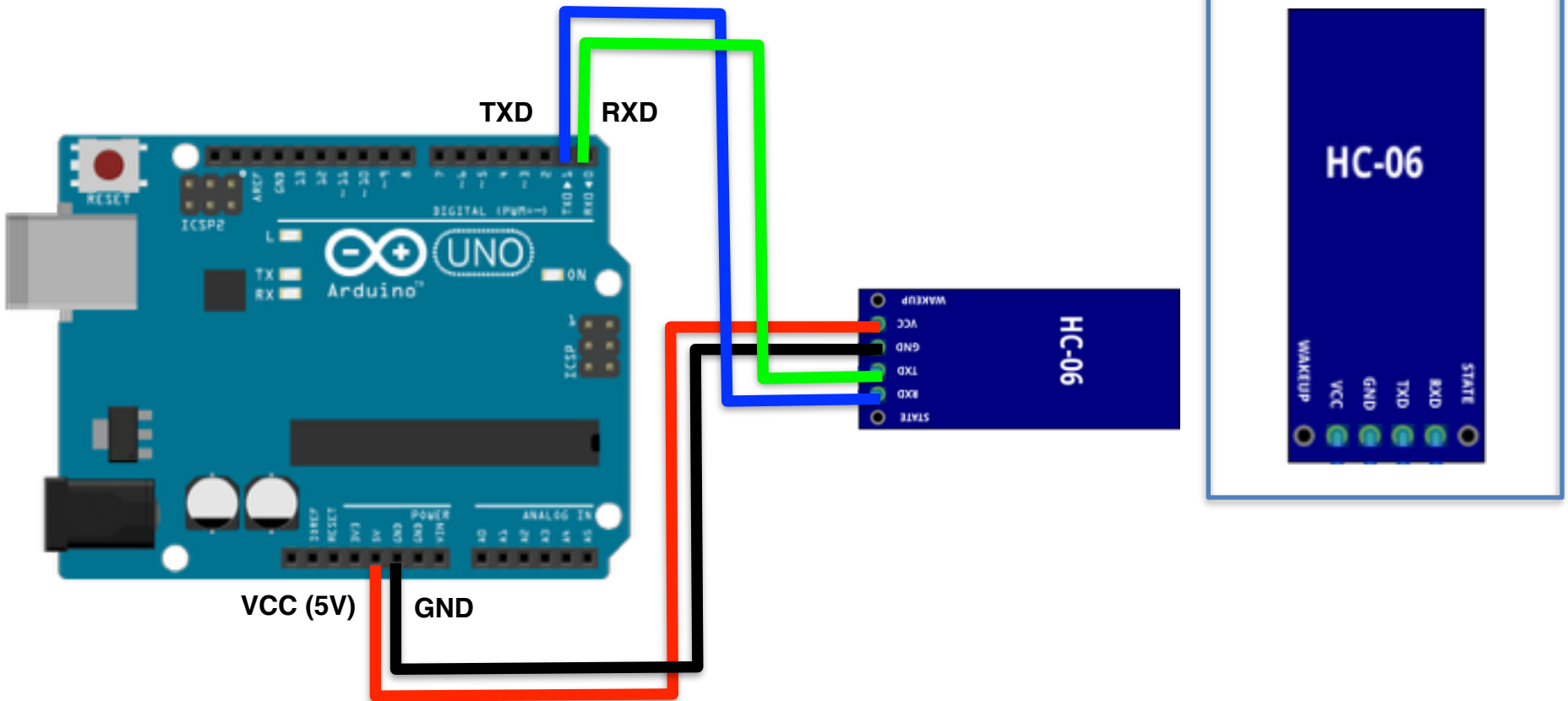
< Motor A >

- Direction pin: 12
- PWM pin: ~3

< Motor B >

- Direction pin: 13
- PWM pin: ~11

# HC-06 Circuit



# Appendix

# UNO Timer Conflict

