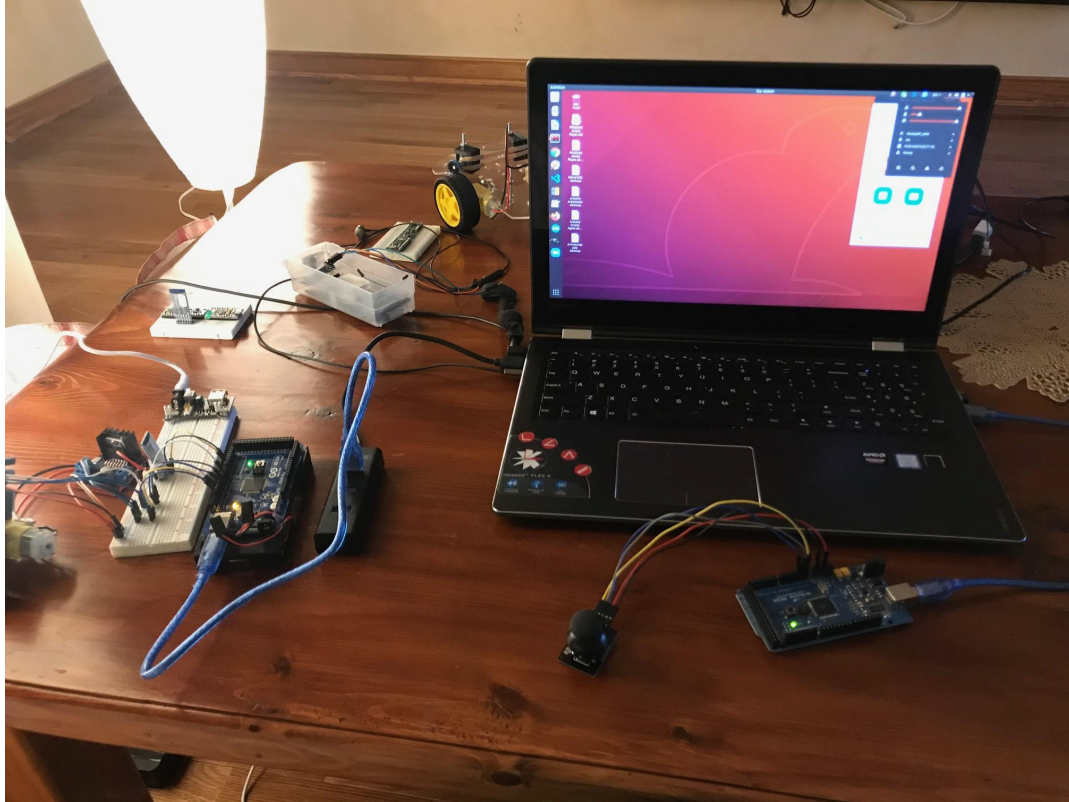
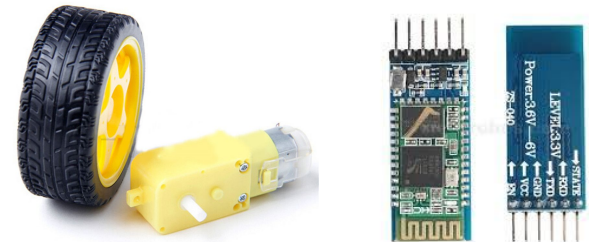
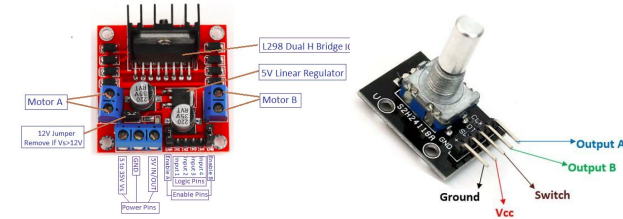
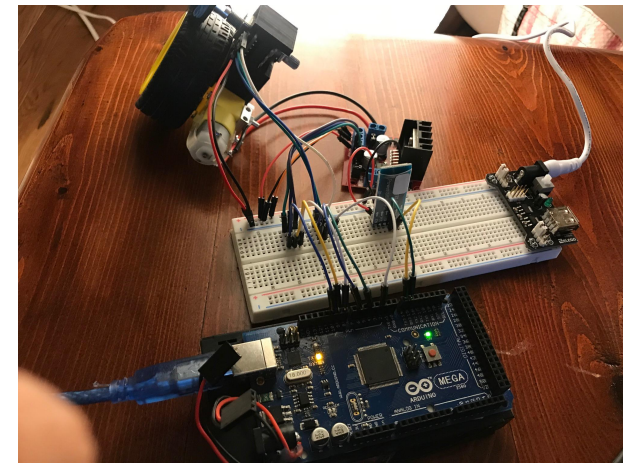
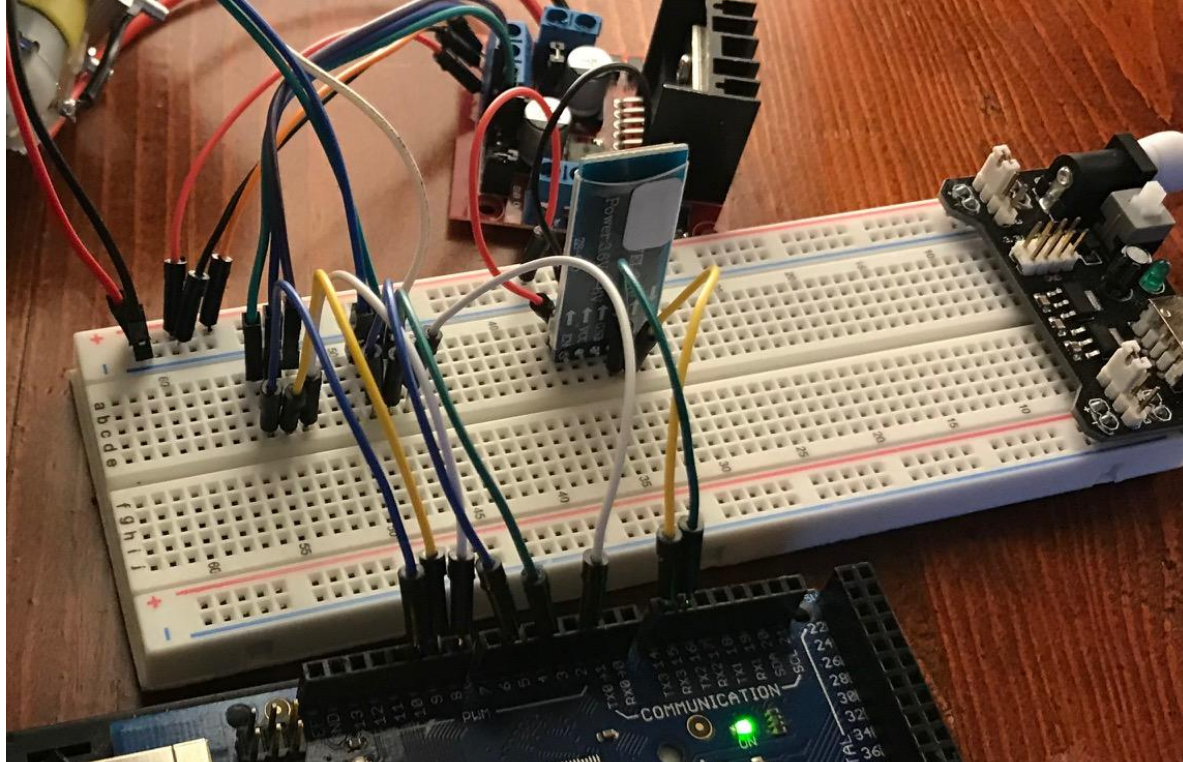


# Arduino motor controlling through Bluetooth joystick



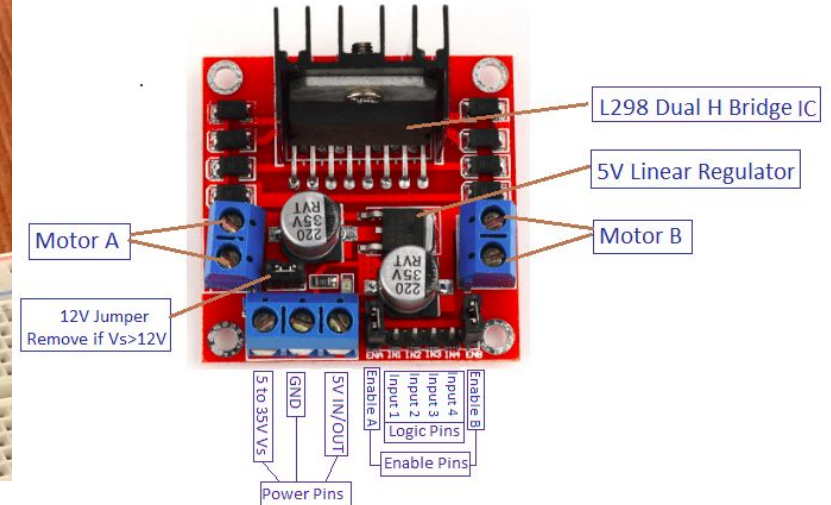
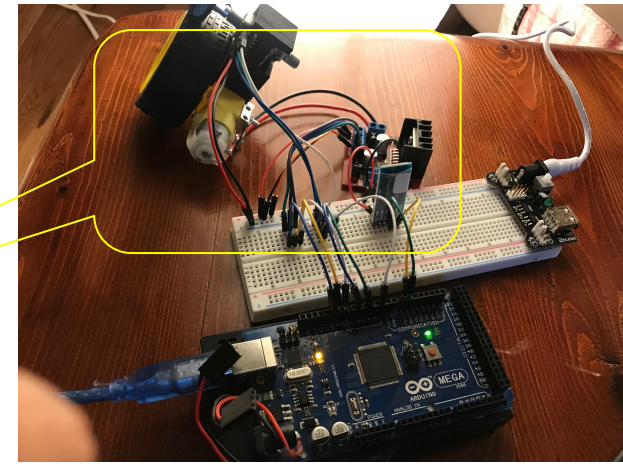
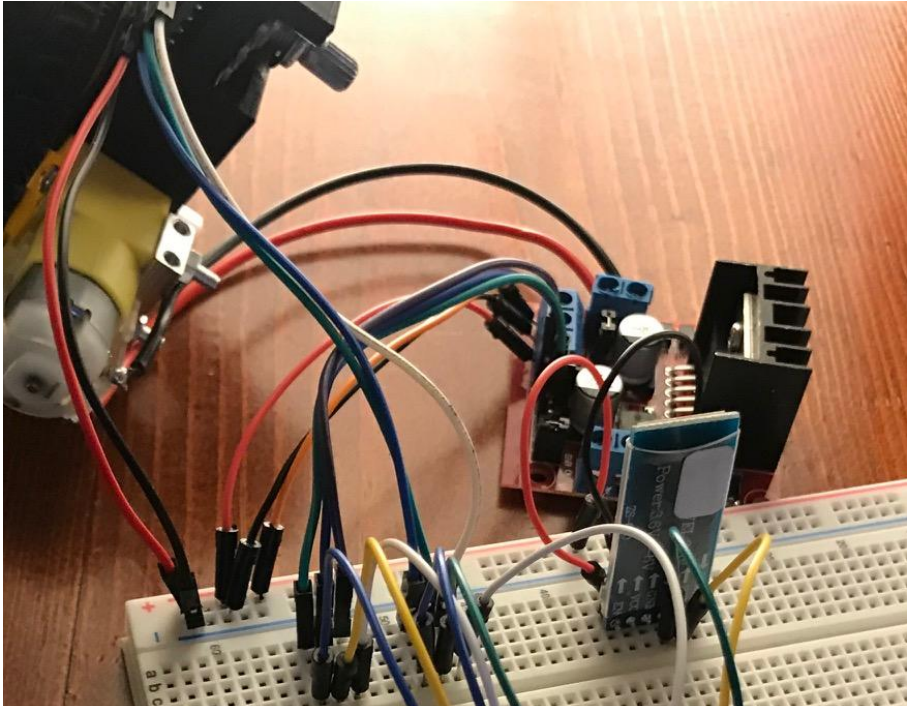
# Arduino Wiring for DC Motor control





# Arduino Wiring for DC Motor control

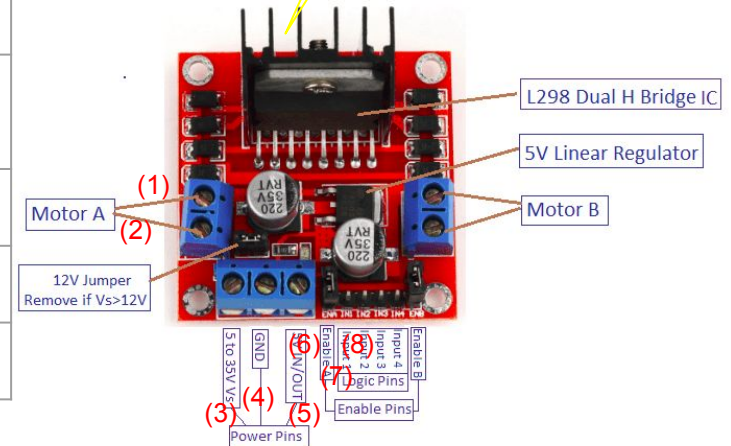
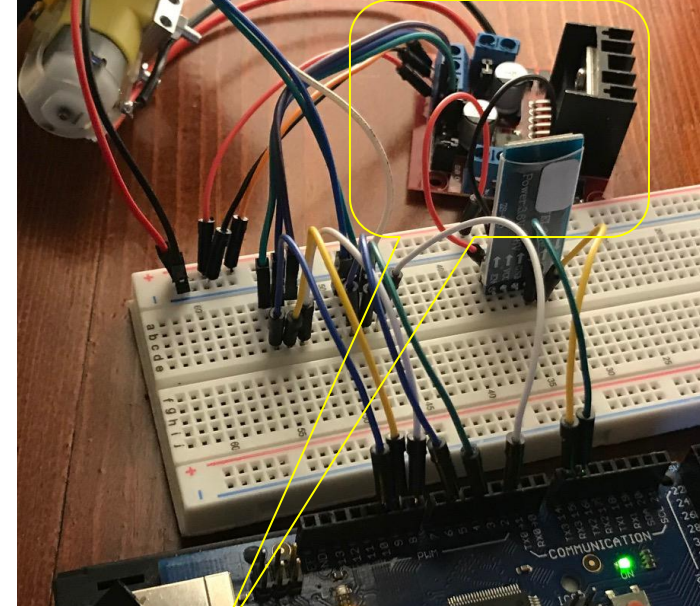
## H-Bridge Motor Driver to Breadboard



# Arduino Wiring for DC Motor control

H-Bridge Motor Driver <--> Breadboard <--> Arduino

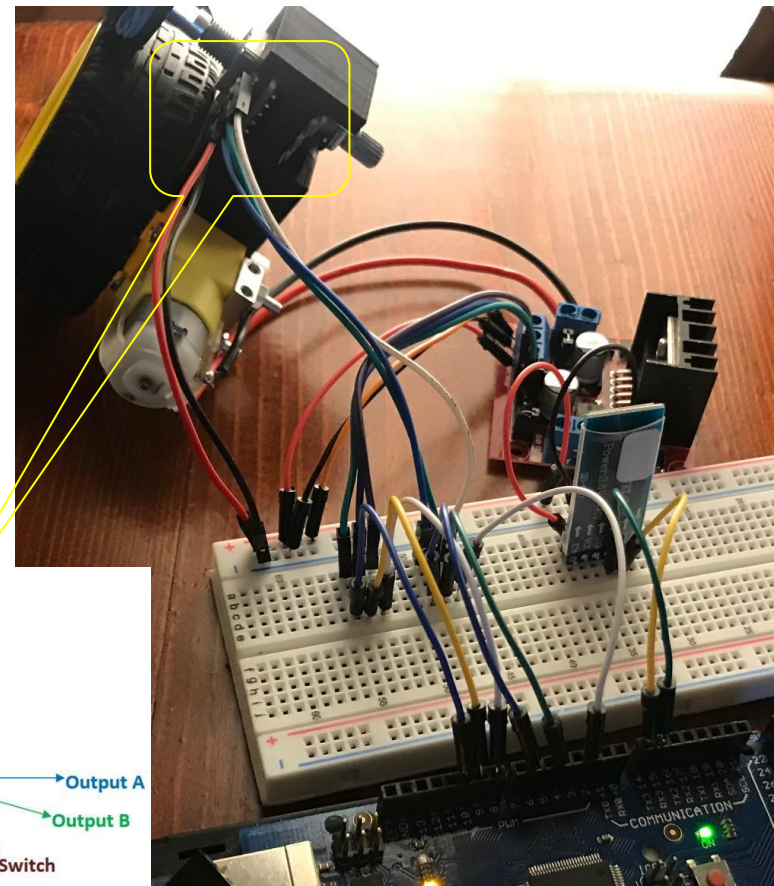
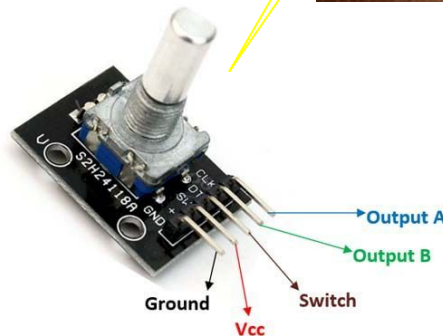
Motor A	Motor Driver	Breadboard	Arduino
Motor A (black)	Motor A (1)	--	--
Motor A (red)	Motor A (2)	--	--
	5 ~ 35 V -Motor Power (3)	Redline Bus	--
	GND (4)	Blueline Bus	GND
	5 V - Motor Driver Login Power (5)	Redline Bus	5V
	ENA (6)		D 8 (PWM)
	IN1 (7)		D 9 (PWM)
	IN2 (8)		D 10(PWM)



# Arduino Wiring for DC Motor control

Rotary Encoder <--> Breadboard <--> Arduino

Rotary Encoder	Breadboard	Arduino
Output A (CLK)	White wire	D2 (PWM)
Output B (DT)	Green wire	D4 (PWM)
Switch (SW)	Blue wire	D6 (PWM)
VCC	Red wire	5V
GND	Black wire	GND

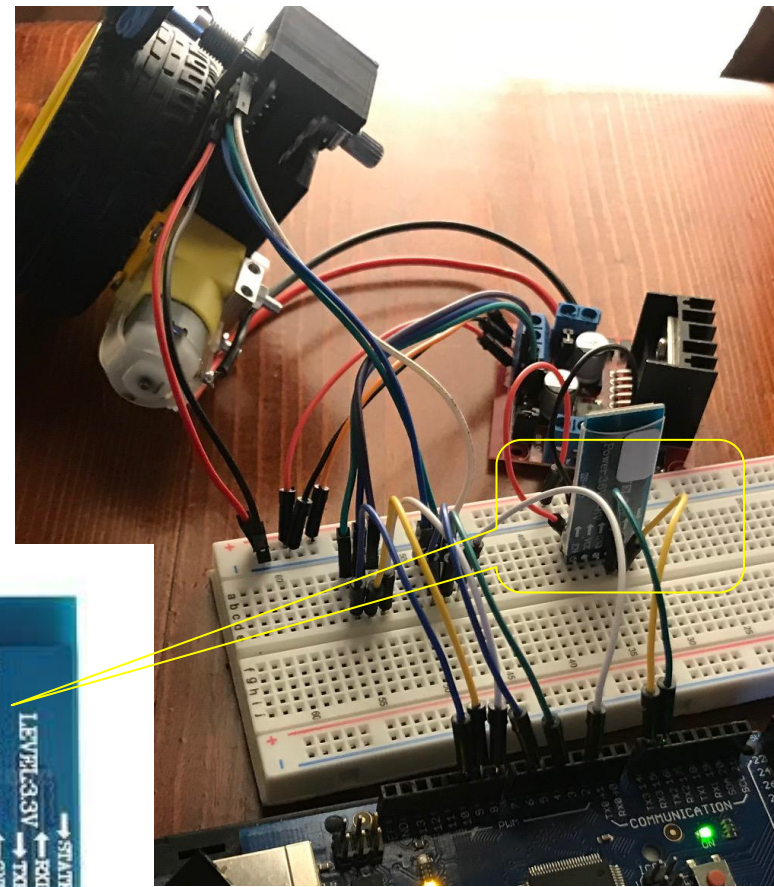




# Arduino Wiring for DC Motor control

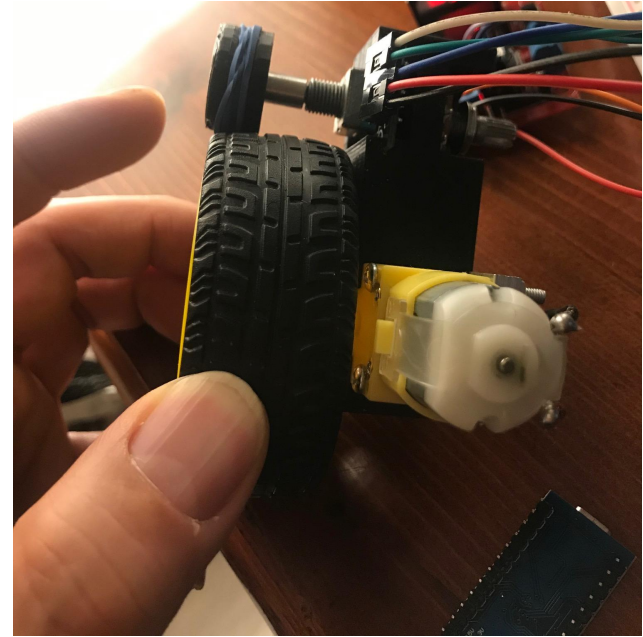
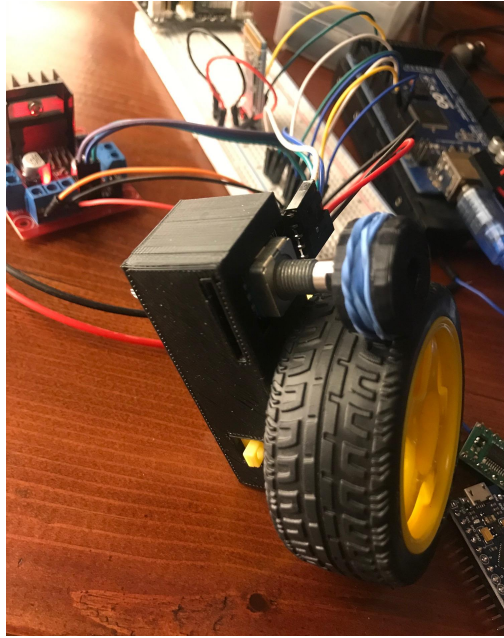
Bluetooth <--> Breadboard <--> Arduino

Bluetooth	Breadboard	Arduino
RX	White wire	TX3
TX	Green wire	RX3
VCC	Red wire	5V
GND	Black wire	GND



# Arduino Wiring for DC Motor control

Encoder <--> Wheel



# DC Motor Control Pin Map

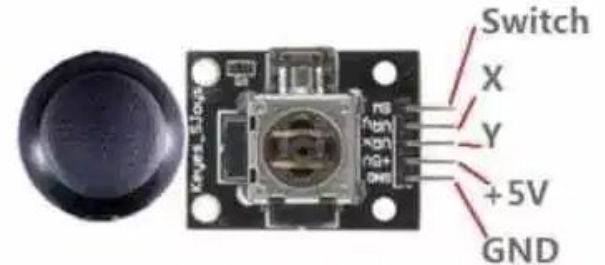
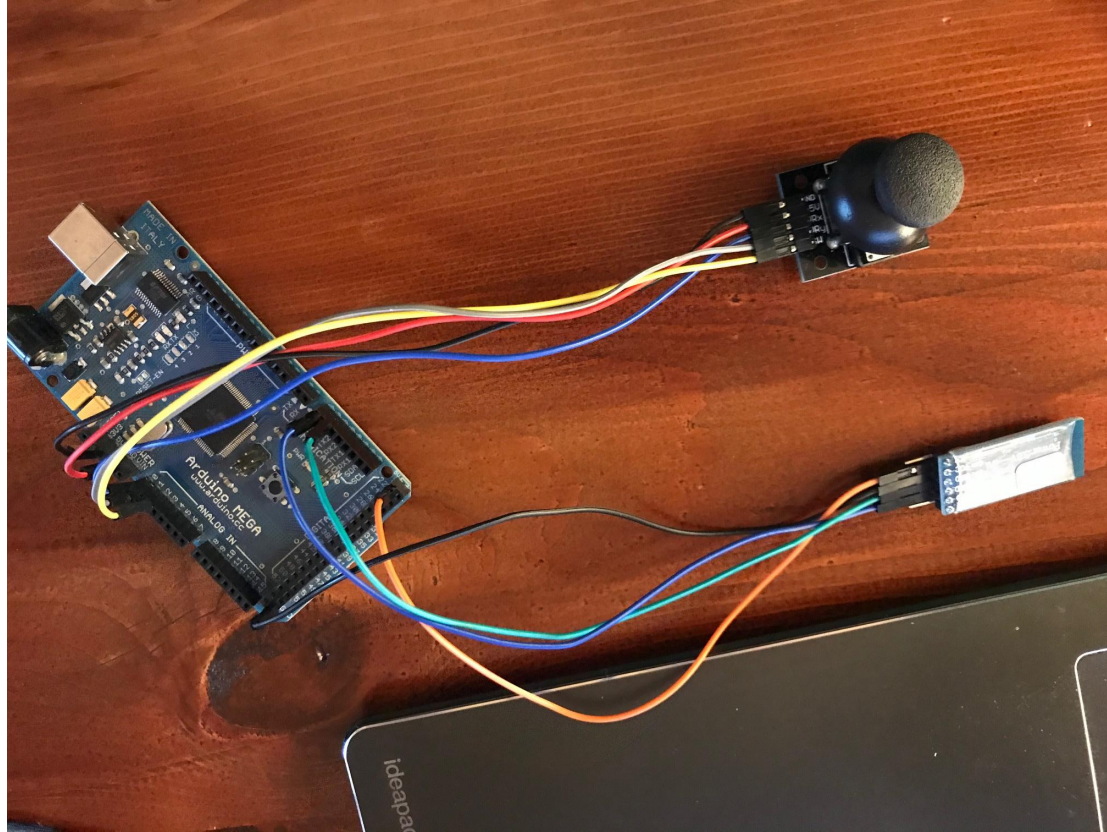
```
#define PIN_WHEEL_ENCODER_CLK_LEFT    2  
#define PIN_WHEEL_ENCODER_DT_LEFT    4  
#define PIN_WHEEL_ENCODER_SW_LEFT    6
```

```
#define PIN_MOTOR_PWM_LEFT  8  
#define PIN_MOTOR_IN0_LEFT  9  
#define PIN_MOTOR_IN1_LEFT 10
```

```
// Bluetooth is connected to Serial3 (RX3,TX3)  
// Serial3.Begin (115200);
```



# Arduino Wiring for Bluetooth Joystick Control



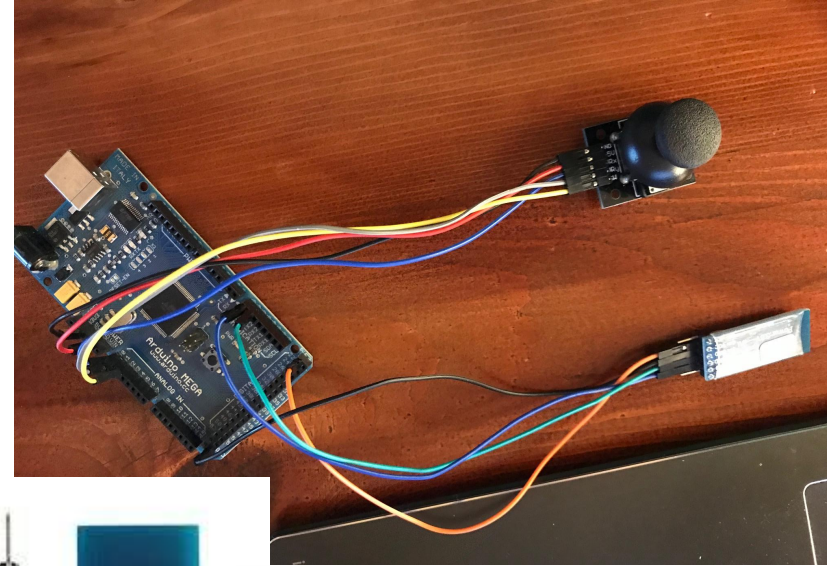
# Arduino Wiring for Bluetooth Remote Control

## Bluetooth <--> Arduino

Bluetooth	Breadboard	Arduino
RX	White wire	TX3
TX	Green wire	RX3
VCC	Red wire	5V
GND	Black wire	GND

## Joystick <--> Arduino

Joystick	Breadboard	Arduino
SW	Yellow wire	A2
X	Grey wire	A1
Y	Blue wire	A0
+5	Red wire	5V
GND	Black wire	GND



# Bluetooth Joystick Controller Pin Map

```
#define PIN_JOY_X  A0  
#define PIN_JOY_Y  A1  
#define PIN_JOY_SW  A2
```

```
// Bluetooth is connected to Serial3 (RX3,TX3)  
// Serial3.Begin (115200);
```