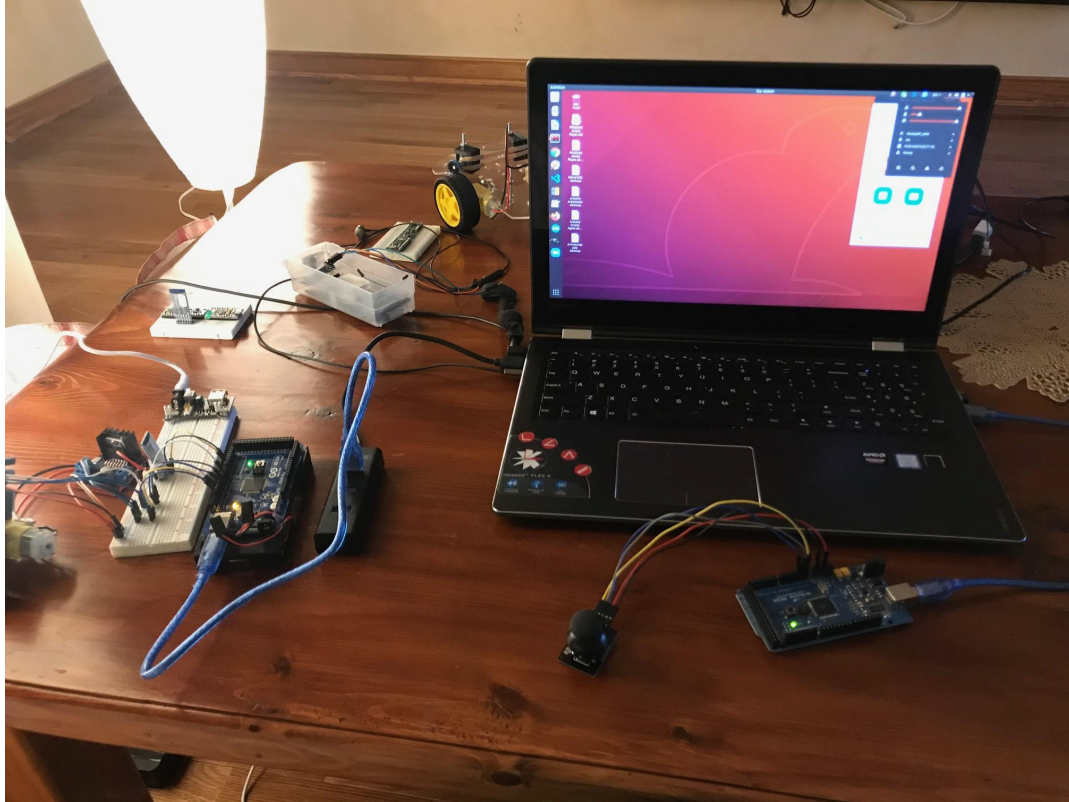
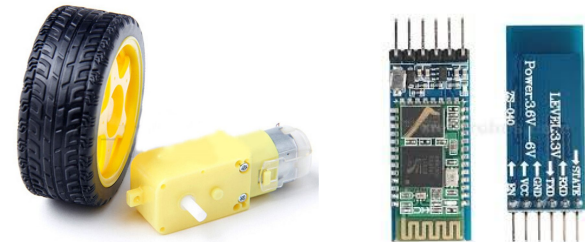
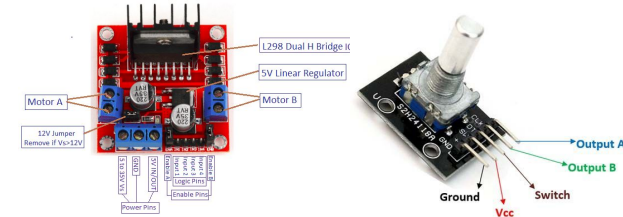
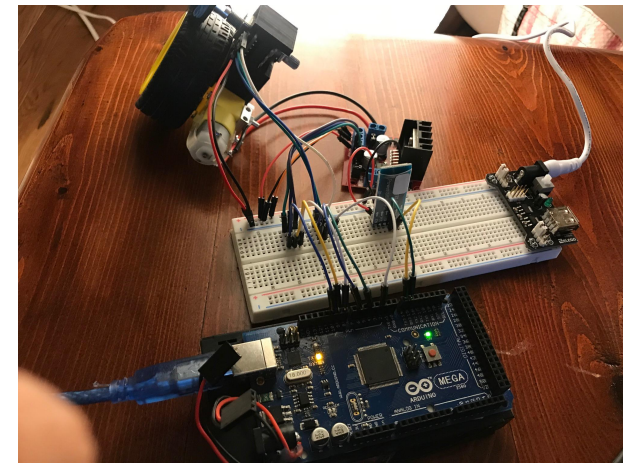
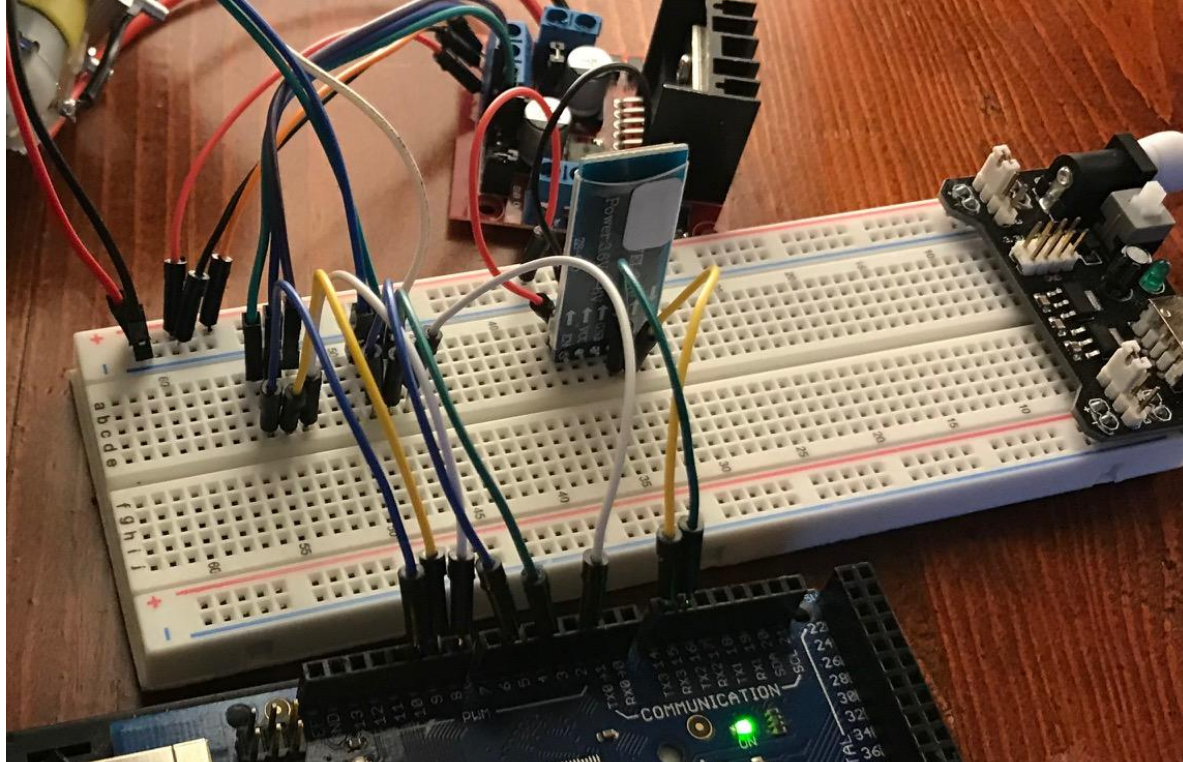


Arduino motor controlling through Bluetooth joystick

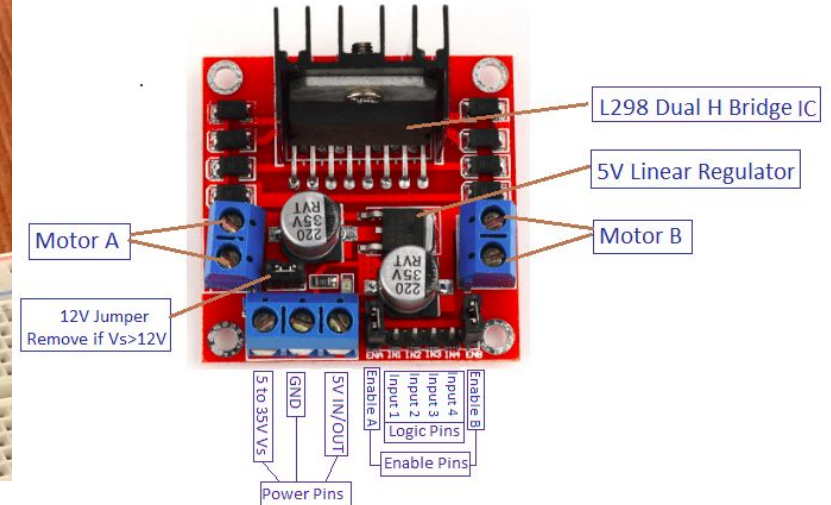
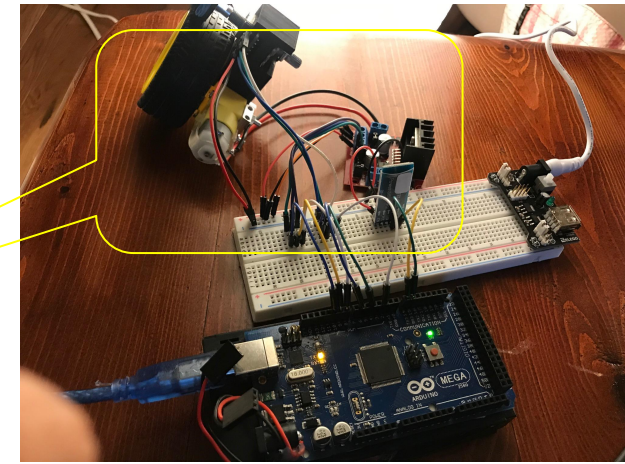
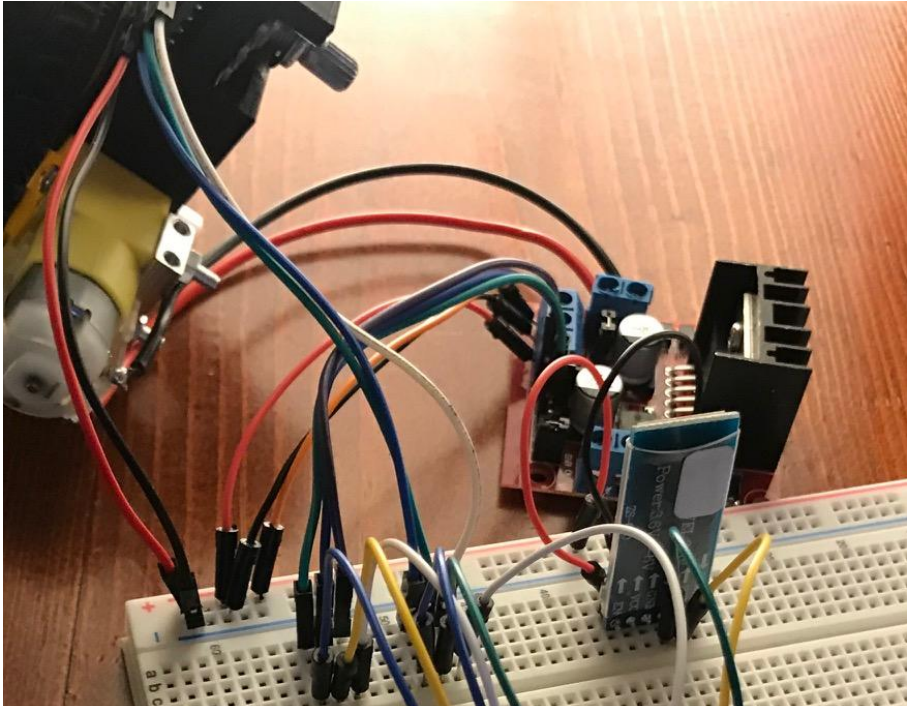


Arduino Wiring for DC Motor control



Arduino Wiring for DC Motor control

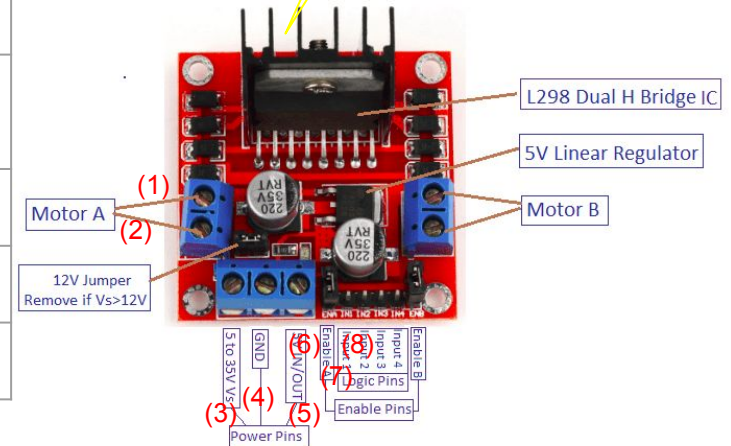
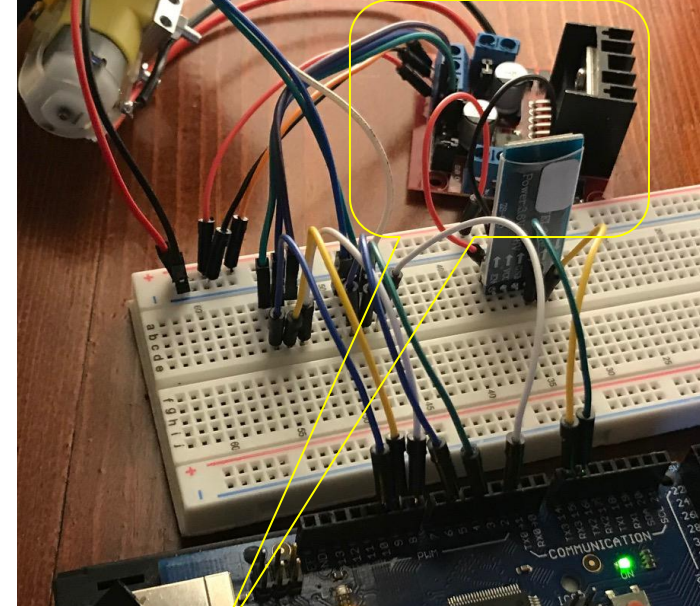
H-Bridge Motor Driver to Breadboard



Arduino Wiring for DC Motor control

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

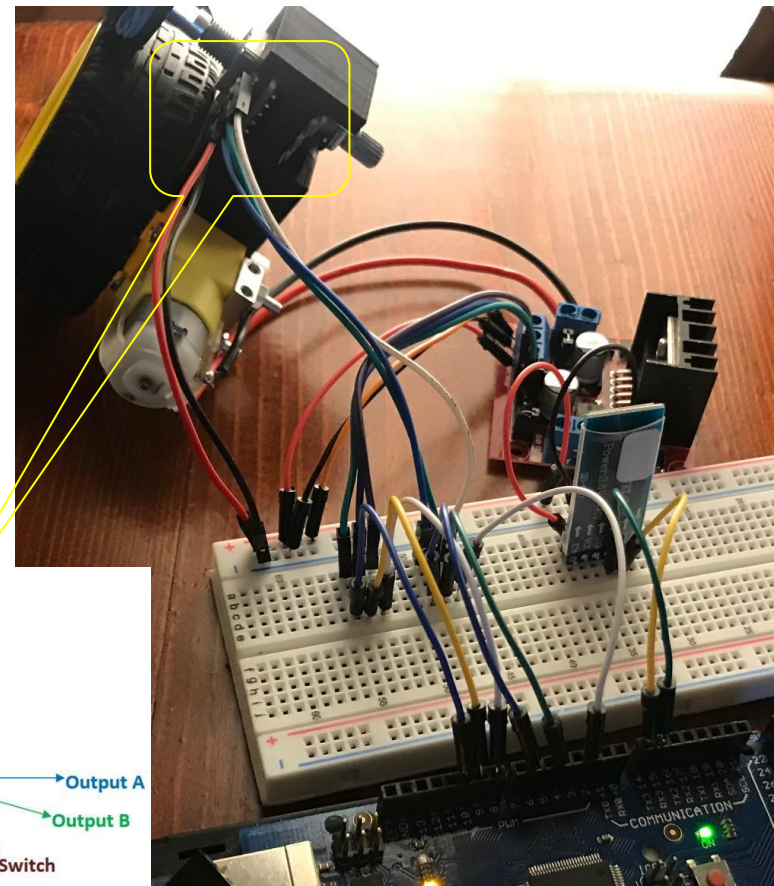
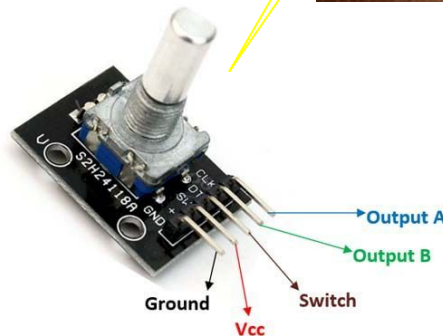
Motor A	Motor Driver	Breadboard	Arduino
Motor A (black)	Motor A (1)	--	--
Motor A (red)	Motor A (2)	--	--
	5 ~ 35 V -Motor Power (3)	Redline Bus	--
	GND (4)	Blueline Bus	GND
	5 V - Motor Driver Login Power (5)	Redline Bus	5V
	ENA (6)		D 8 (PWM)
	IN1 (7)		D 9 (PWM)
	IN2 (8)		D 10(PWM)



Arduino Wiring for DC Motor control

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

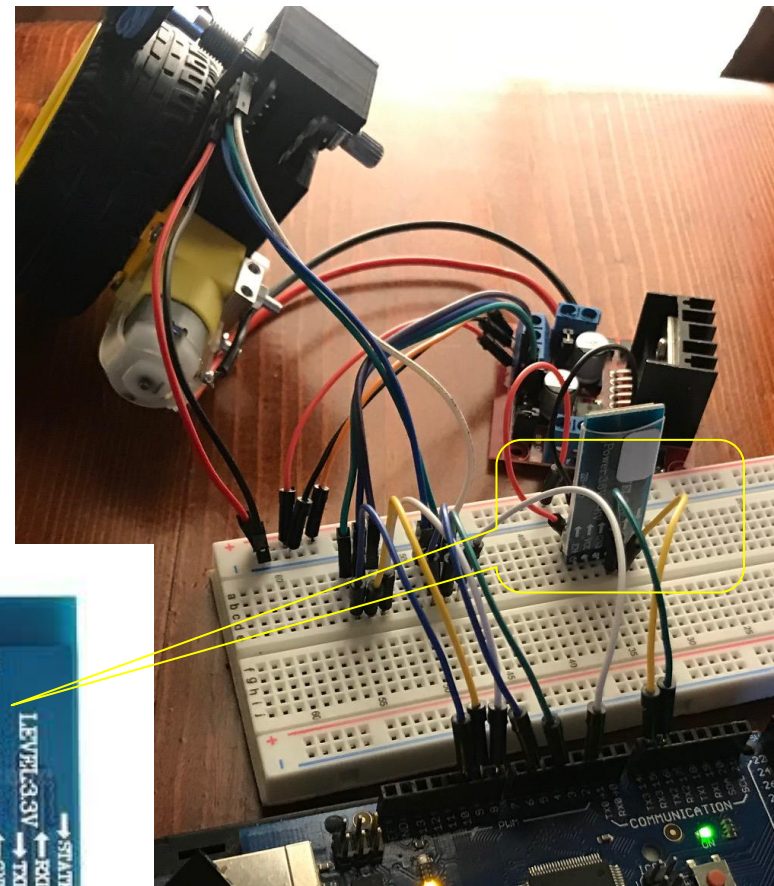
Rotary Encoder	Breadboard	Arduino
Output A (CLK)	White wire	D2 (PWM)
Output B (DT)	Green wire	D4 (PWM)
Switch (SW)	Blue wire	D6 (PWM)
VCC	Red wire	5V
GND	Black wire	GND



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



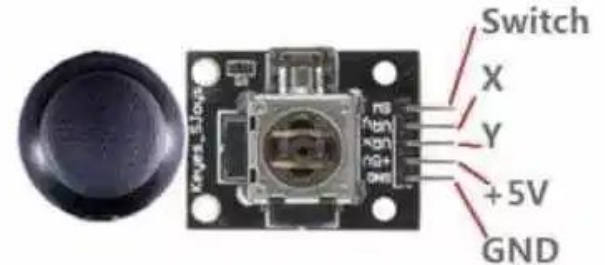
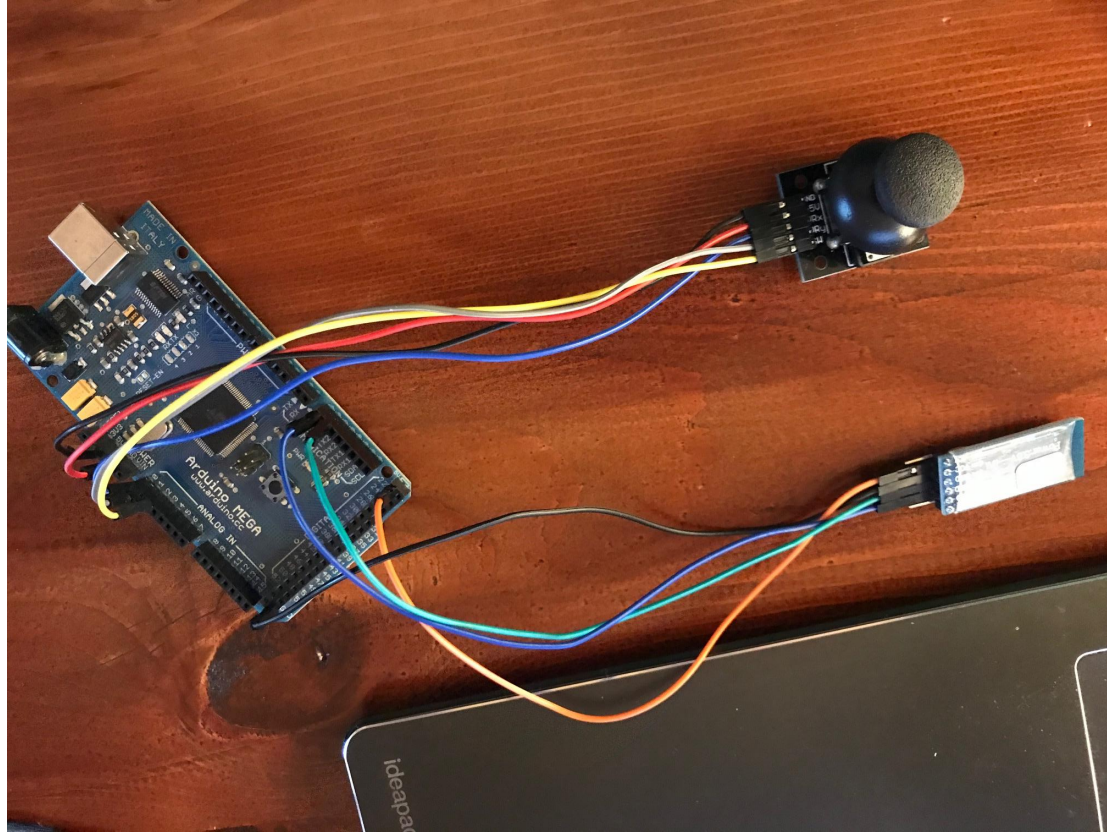
DC Motor Control Pin Map

```
#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



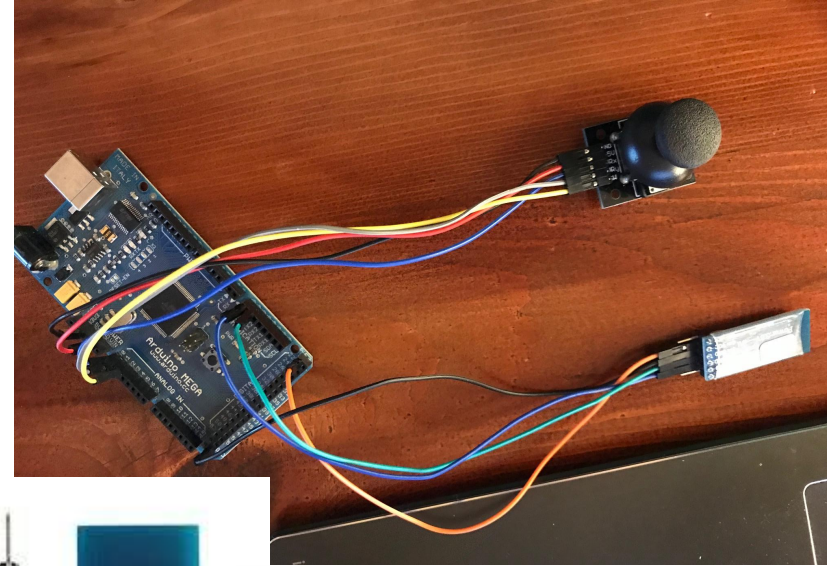
Arduino Wiring for Bluetooth Remote Control

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);
```