

REPORT

MCTE 3104
MECHATRONICS
INTERFACING LAB
Section 1

Lab Session 6 :

Interfacing Wireless PS2
Controller

Group 13

1.0 Equipment used in this session:

- 1) Arduino Mega 2560
- 2) A PS2 controller (Analog receiver)
- 3) Receiver
- 4) Female to male wires
- 5) Arduino USB
- 6) Arduino software

Kindly refer to appendix part A for the figure of the component.

2.0 Procedure:

- 1) Wiring the receiver to Arduino Mega 2560 using female to male wires.
 - a) The receiver has 9 pins with each has its own function as shown in Figure 1.
 - b) Pin 1 (data) of receiver connected to pin 13 of Arduino.
 - c) Pin 2 (command) of receiver connected to pin 11 of Arduino.
 - d) Pin 3 (motor vibration) of receiver is not used.
 - e) Pin 4 (ground) of receiver connected to ground, GND of Arduino.
 - f) Pin 5 (3.3 V) of receiver MUST BE connected to 3.3 V of Arduino.
 - g) Pin 6 (attention) of receiver connected to pin 10 of Arduino.
 - h) Pin 7 (clock) of receiver connected to pin 12 of Arduino.
 - i) Pin 8 (unknown) and pin 9 (acknowledge) of receiver are not used.

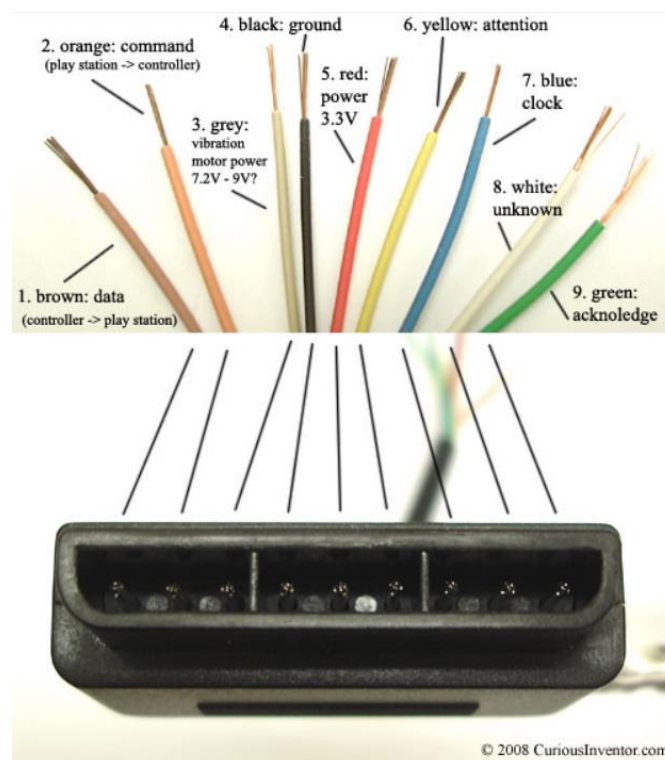


Fig 2.1: Pins diagram of receiver

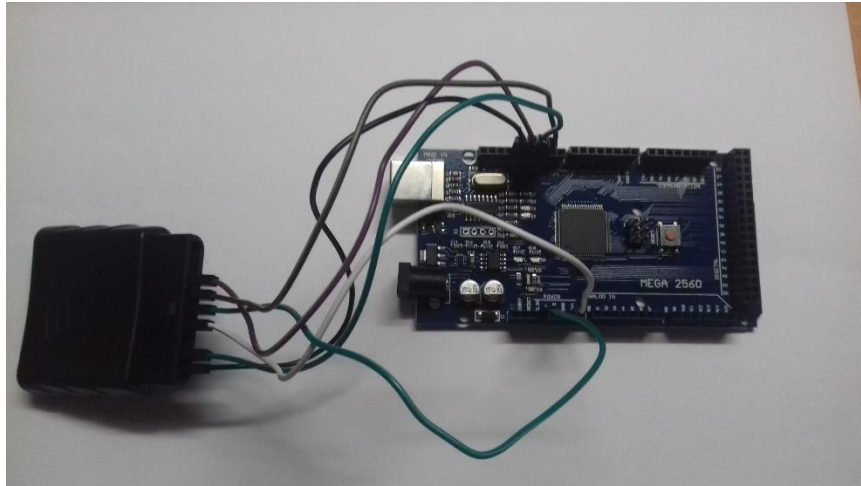


Fig 2.2: Connection between the receiver and Arduino

- 2) The coding using Arduino software.
 - a) The PS2 controller library can be found here https://www.youtube.com/watch?v=xlupRVF_6W8&t=900s on the description click the google drive link. It will bring you to files as shown in Fig 2.3.
 - b) Download the PS2X-Arduino-Complete-Odin.zip file.
 - c) Arduino-PS2X-master is the library file.
 - d) Open the Arduino-PS2X-master file and copy PS2X_lib.cpp and PS2X_lib.h
 - e) Paste those two file at your Arduino library (C:\Program Files (x86)\Arduino\Arduino\libraries\PS2X_lib) by creating a folder name PS2X_lib as indicated in Fig 2.4.
 - f) The PS2X_Example.ino is a file contain the coding and can be found at PS2X-Arduino-Complete-Odin.zip\Arduino-PS2X-master\PS2X_lib\examples\PS2X_Example
 - g) Open the PS2X_Example.ino in Arduino software as shown in Fig 2.5
 - h) The name of the controller can refer to Figure 2.6
 - i) After that, make sure the board is Arduino Mega 2560 and determine the port.
 - j) Compile and upload the code to Arduino Mega 2560.
 - k) If the problem as shown in Fig 2.7, please check the connection of receiver to Arduino Mega 2560 and make sure the connection is not loose.

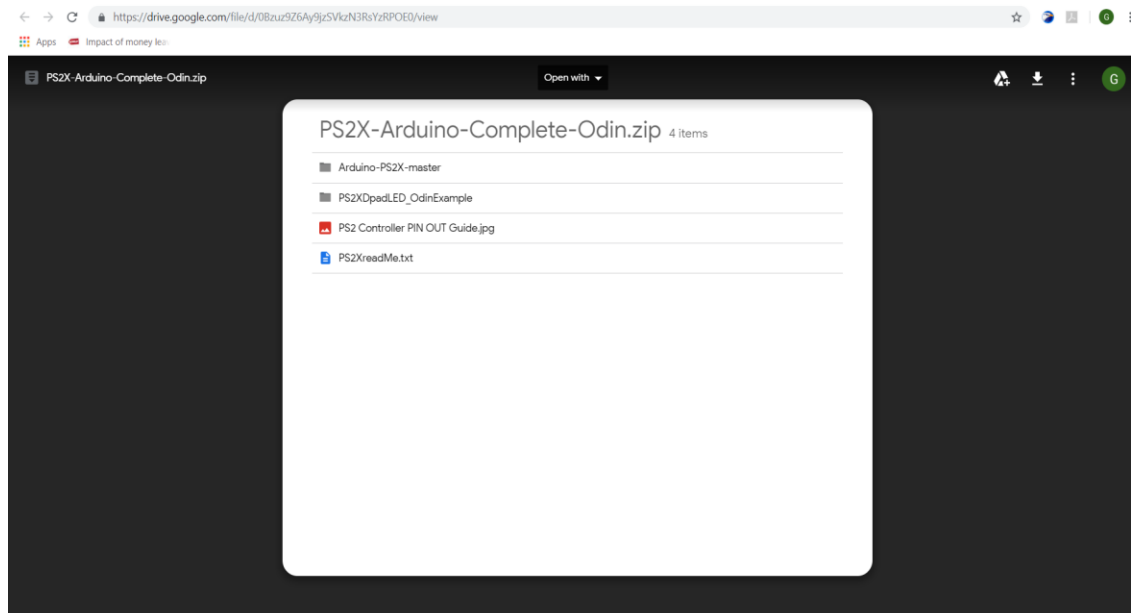


Fig 2.3: Google drive link will bring you here

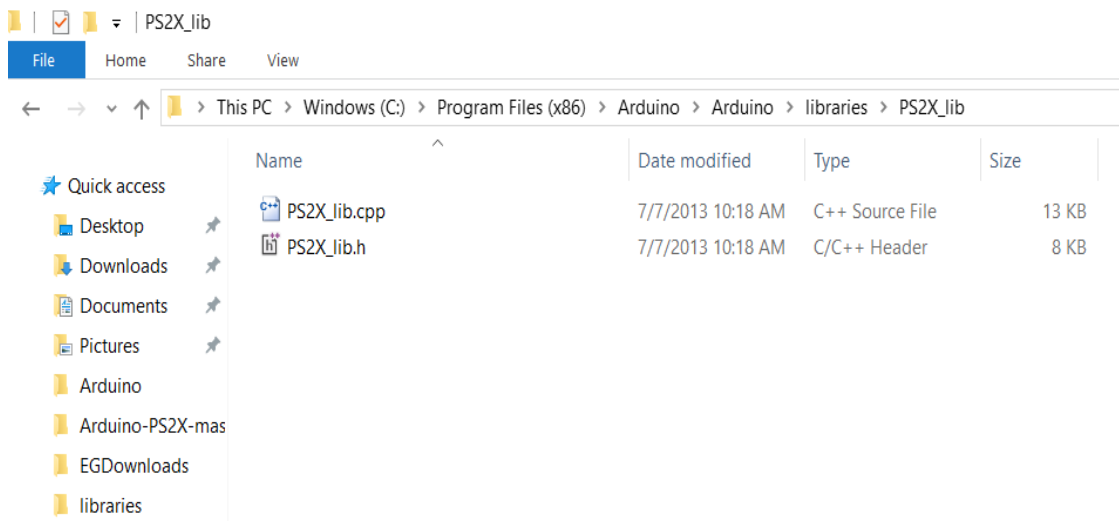


Fig 2.4: Copy and paste PS2X_lib.cpp and PS2X_lib.h at Arduino libraries file

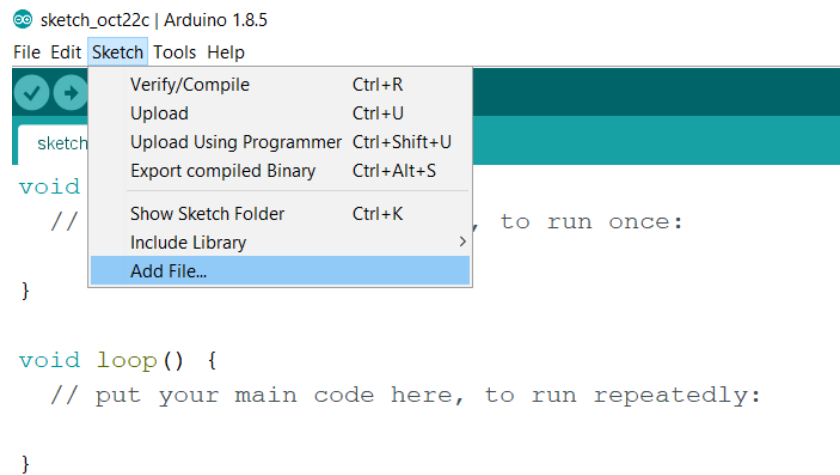


Fig 2.5: Open the PS2X_Example.ino by go to Sketch>>Add file

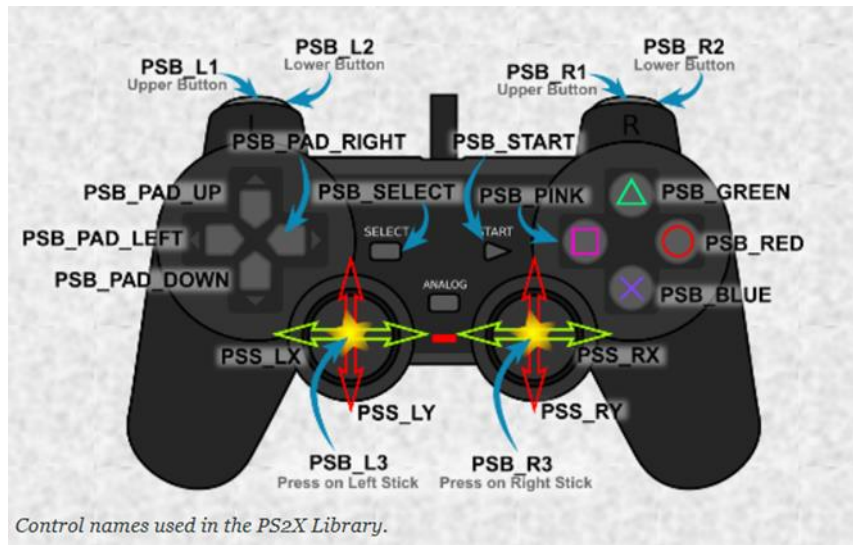


Fig 2.6: Controller names used in coding

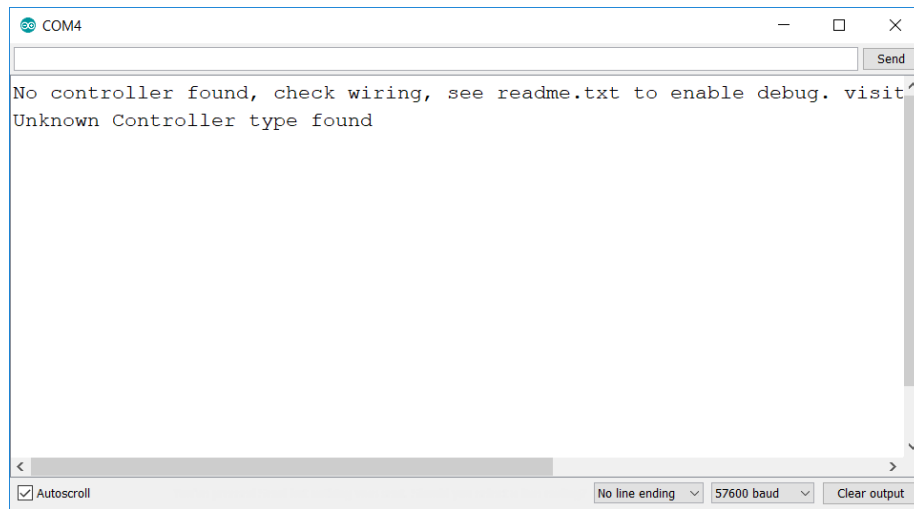
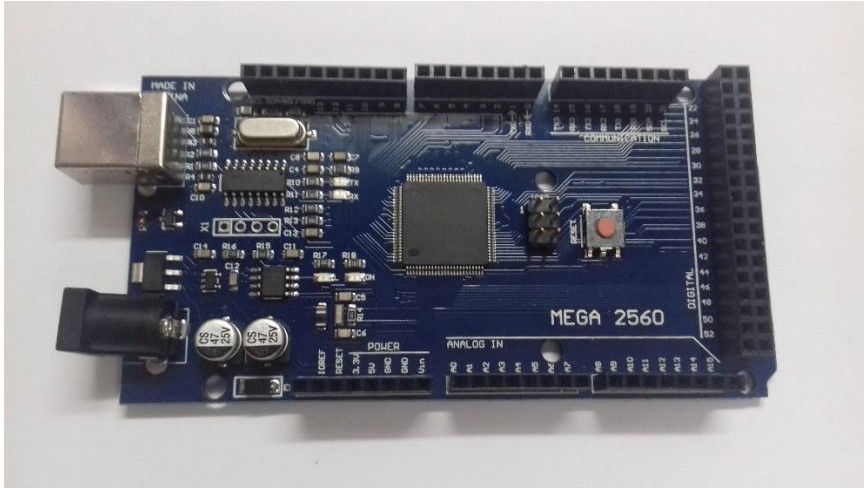


Fig 2.7: Error no controller found

Appendix

Part A

Arduino Mega 2560



PS2 Controller



Receiver





Female to male



Arduino USB



Arduino software

