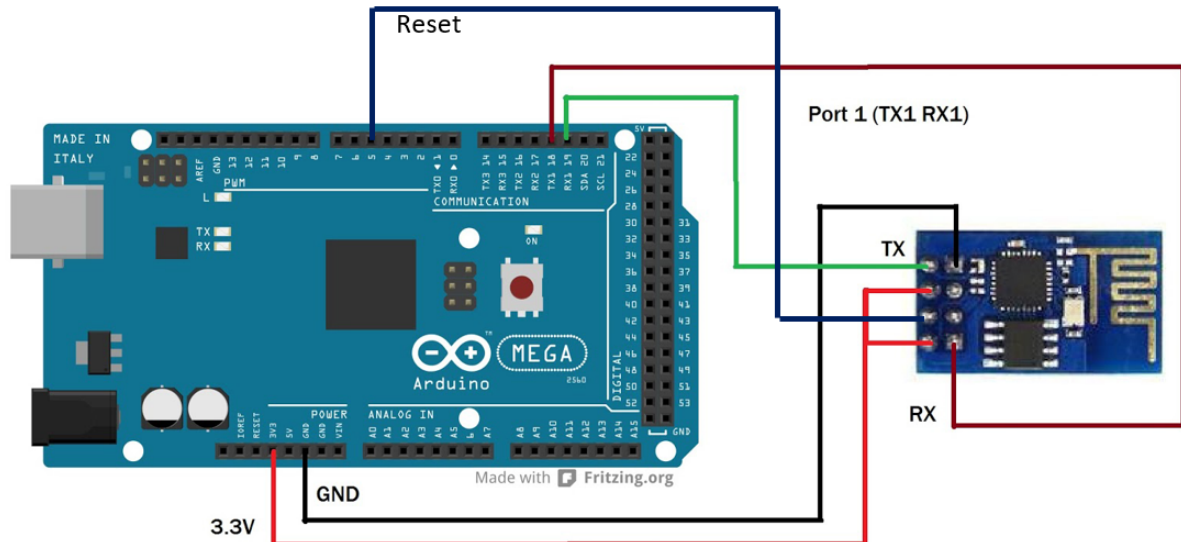


# Steps for testing the Master and Joystick Arduino:

1. The ESP Wifi module needs to be connected in the following way:



Make sure the Tx pin of the ESP is connected the RX pin of the Mega and vice-versa. Also note that the Wifi module may not be connected to the 5V in any circumstances since this will immediately destroy the wifi module!

2. For communication between Master and Joystick Arduino over I2C: Connect A4 (SDA), A5 (SCL) of the Uno to pin 20 (SDA), 21 (SCL) of the Arduino mega.
3. Power both Arduinos and Upload the files named: Arduino\_Joystick and Test\_Master from our Github repository. They can be found in the Arduino Master and Arduino Joystick Folder. Libraries for the Master Arduino can be found in the Arduino Master/libraries folder.
4. Upload the code to the Arduino, open the serial monitor, and wait until it says 'TCP server started'
5. On the android phone, first make sure you are connected to the ARDUINO\_SERVER wifi. If this doesn't happen automatically, check if the Arduino is up and running. Then go to available wifi connections and tap ARDUINO\_SERVER to connect to the wifi. When it asks for a password, enter 123456789.
6. Once you are connected to the wifi of the Arduino, you can open the AWB\_TCP app. Click the connect button to connect to the TCP server on the Arduino. Now you should start receiving data from the Arduino, which is printed in the User Interface. If not, click the disconnect button and try connecting again a little later. Always make sure you are connected to the ARDUINO\_SERVER wifi!

### Joystick Connections

All interfaced with the Arduino Uno!

Wire colors:

Red – 5V

Black - Ground

Blue(X), Yellow(Y), Green(Z) - A2, A1, A0

Digital Connections:

Blue – Pin 7 on one side and the other side goes 22K then to ground

Orange/Red - Pin 6 on one side and the other side goes 22K then to ground

White(common) – 5V

### PMOD Connections

All interfaced with the Arduino Uno!

Input pins:

1 – Pin 10 (CS)

2 – Pin 11 (MOSI)

3 – Not Connected

4 – Pin 13 (SCK)

5 – Ground

6 – VCC

RedWire (Vref) – 5V

Outputs:

Channel B - Z-axis

Channel D - Y-axis

Channel F - X-axis

Channel H - Digital buttons