

1. Connect 240W Supply to mains and DC Barrel Jack to Clear case.
2. Connect USB cable from Arduino to Computer
 - a. Open Device Manager
 - b. Under “COM & LPT” list, find COM_ for Arduino Mega.
 - c. In the Python Program ^[1], edit the **line 16**, to match your ‘COM#’

```
s_obj = serial.Serial('COM5')
```

- d. Remember, the light on the case keeps blinking till any serial communication is started.
3. There are 4 connectors coming out from the Model. Please unwrap and untangle them to ensure nothing hinders the operation. The before-mentioned connectors are:



x2

Fig 1: JST 5-pin



x1

Fig 2: JST SM-2



x1

Fig 3: USB

- a. Connect the (Fig-3) USB cable to computer.
 - i. In case the camera isn't being used, try increasing the number on **line 7**, in the Python Program ^[1]

```
cap = cv.VideoCapture(3)
```

- ii. If error is coming like, try lowering the number on said line.

```
cv::obsensor::getStreamChannelGroup Camera index out of range
```

- b. Connect the (Fig-2) JST SM-2 connector to back of the case. Ensure proper connection is done, since can be connected only one way.
- c. The (Fig-1) JST 5-pin Connectors can only be connected in one way, such that the notches on the female connector (inside case, on the driver board) align with the ridges on the male connectors from the motors. There are 2 of the said connectors.
 - i. One of the sets of wires is coming from the motor that is mounted on the base plate. Connect this to the Driver board labelled “Horizontal Motor” (engraved and highlighted on the clear case).
 - ii. Similarly, connect the vertically mounted motor to the Driver board with the label “Vertical Motor”
 - iii. Keep in Mind, there are two Push Buttons to enable the motors. If something were to go wrong, you may push these to disable the motors.

iv. The buttons on the board can also be used to override the signals coming from the software.

4. You may now switch off the model supply and disconnect the Arduino, while we configure our software.
5. Firstly, install and setup Anaconda ^[2].
6. Next, run the following commands, in Anaconda Prompt:

```
conda create --name ultralytics-env python=3.8 -y
```

```
conda activate ultralytics-env
```

```
conda install pytorch torchvision torchaudio cpuonly -c pytorch
```

```
conda install -c conda-forge ultralytics
```

7. Within the same Anaconda Prompt, run the commands

```
conda activate ultralytics-env
```

```
python <path-to-Python-Program [1]>
```

8. Now power on the Model and connect the Arduino to the computer.

References:

- [1] Python Program is located in the repository at

<~/Codes/YOLOv8-TEST/pose.py>

Please download it and save it in a folder, so runs can be managed.

- [2] <https://docs.conda.io/projects/conda/en/latest/user-guide/install/windows.html#installing-on-windows>