Biped Patrol
Hardware Testing

Greetings from e-Yantra!! Congratulations on clearing Stage 1.

Once you received the robotic kit sent from e-Yantra, make sure to record a video while unboxing the package received. Follow the instructions given in this video: https://youtu.be/EF3ZTkBurNc

After unboxing we will test all those equipments received in the Robotic Kit Package.

In the Hardware Testing folder you will find **"Biped Patrol - Hardware Testing.pdf".** This document lists all the connections required to be made in order to test Motors, Motor Driver, Buzzer, LED, IRF540 IC with Electromagnets and the GY-87/HW-290 Sensor Module.

Hardware testing process is divided into two steps.

1. Step 1

In first step we will test Motors, Motor Driver, Buzzer, LED & Electromagnets with IRF540 IC.

- Make connections between Arduino Mega and (Motors, Motor Driver, Buzzer, LED & Electromagnets withIRF540 IC) as depicted in the **"Biped Patrol - Hardware Testing.pdf".**
- After carefully making all the connection open **"motor_buzzer_led_EM"** folder and open the **"motor_buzzer_led_EM.ino"** Arduino file.
- Connect the Arduino Mega with you Laptop/PC. Upload this code in Arduino Mega.

If the program is successfully uploaded then you will observer the equipments perform in certain ways as depicted in this video: https://youtu.be/mPakTwemIGo

2. Step 2

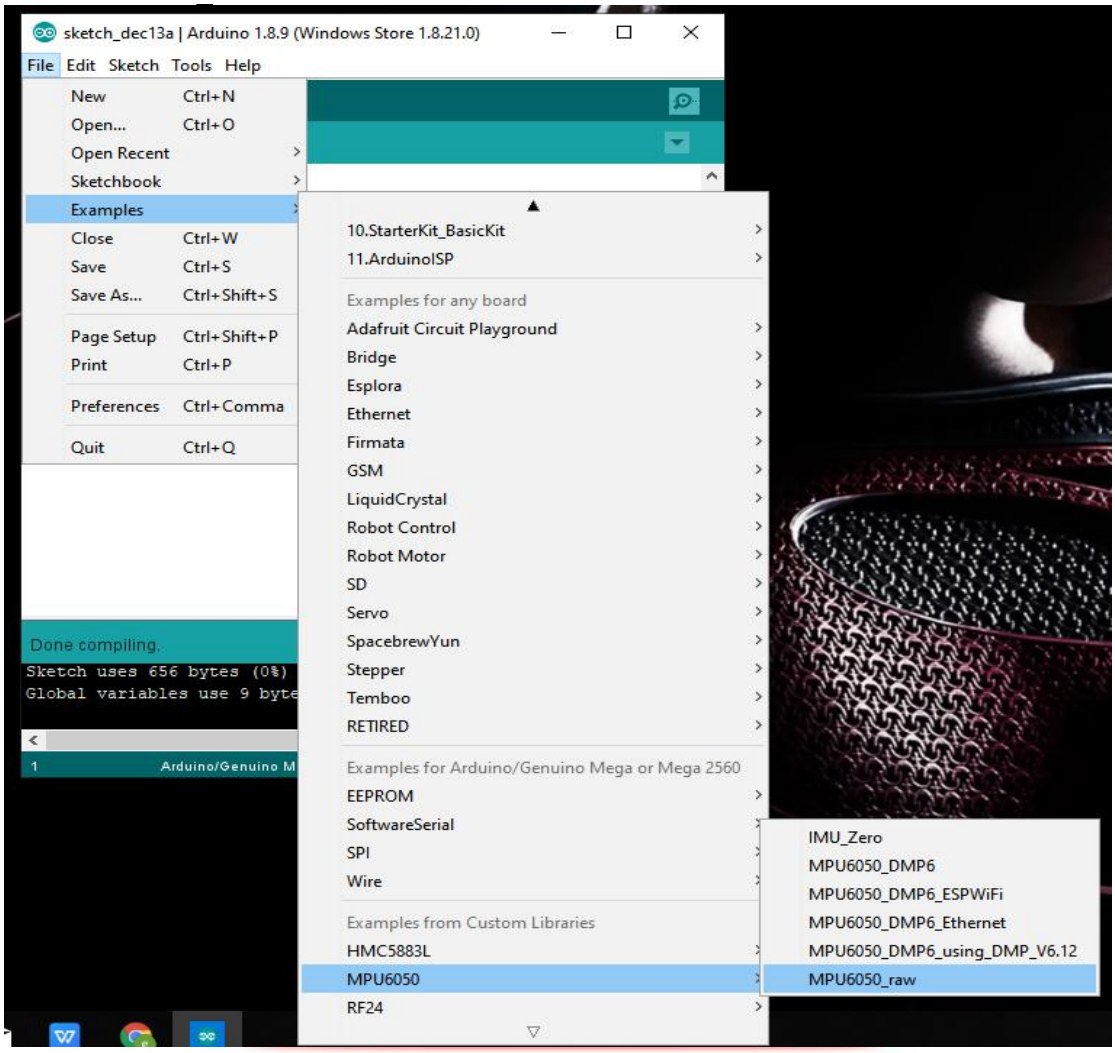
In this step we will test the GY-87/HW-290 Sensor Module.

- Make proper connections as indicated in the last section of **"Biped Patrol - Hardware Testing.pdf"**.
- After doing the connections properly, open folder **Libraries** folder**.** There you will find two folders named as **"I2Cdev"** & **"MPU6050"**. Copy these two folders and paste them in Arduino libraries folder as shown in the video.

following location: **Documents>>Arduino>>libraries**

If you are using Ubuntu as OS then you will find the Arduino libraries foldes in the following location: **~Arduino/libraries**

- Now open Arduino IDE. Click on **File** option then click on **Examples.**
- In the list of examples select **MPU6050** and open the example named as **MPU6050_raw.**



- Connect the Arduino Mega with you Laptop/PC. Upload this example code in Arduino Mega.

If the program is successfully uploaded then open the Serial Monitor in the Arduino IDE. Keep the Baud Rate of the Serial Monitor as 38400.

You will be able to see the Raw values of sensor data in the Serial Monitor as depicted in this video: https://youtu.be/mPakTwemIGo