

Chapter6

Project Assembly

This chapter view the steps of mechanical build and electrical connection for the robot and show the wiring diagram.

6.1: Mechanical Assembly

As shown in Figure 6.1, the motors are fixed on the base.

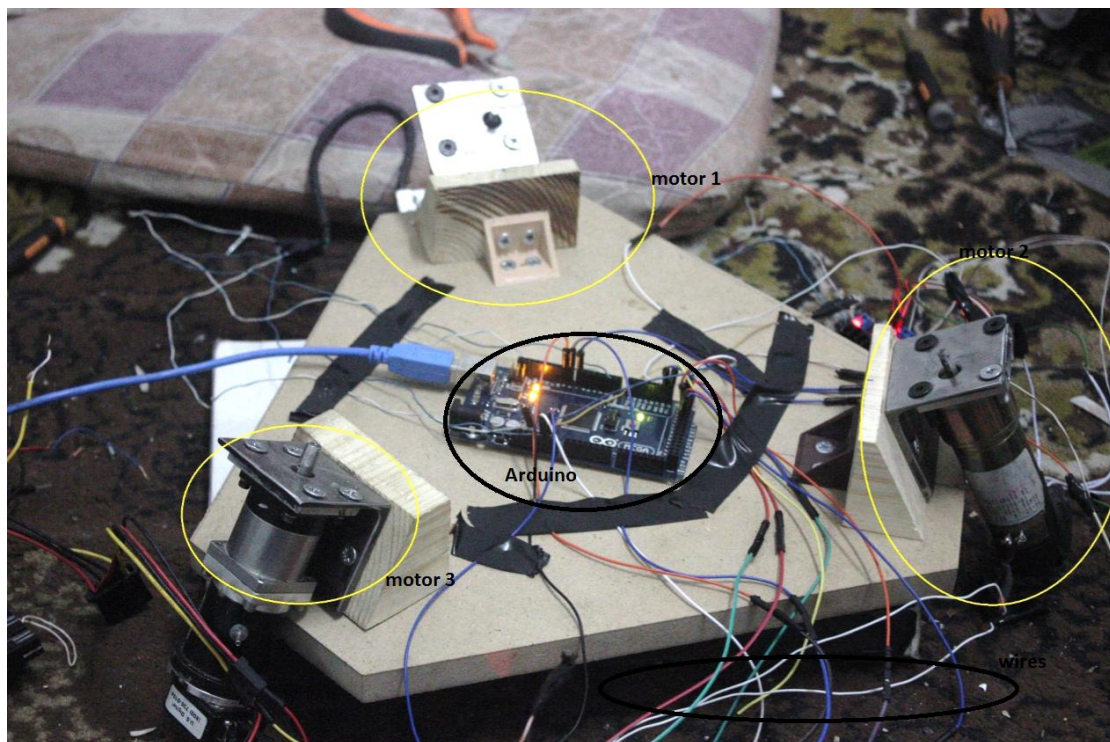


Figure 6.1 how to fix the motors on the base

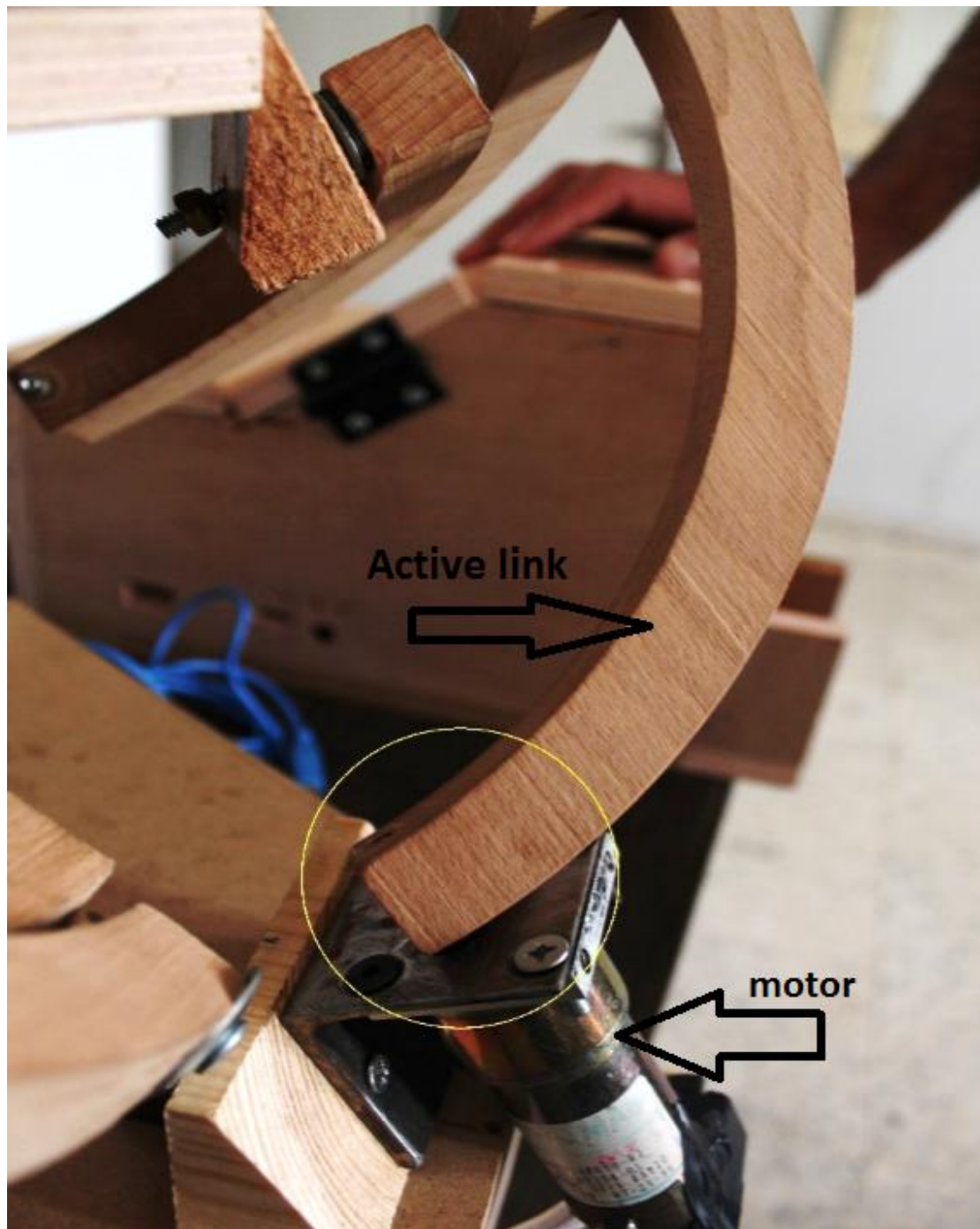


Figure 6.2 Active link connected with motor shaft

In this figure the active link is connected to motor shaft, in this location the revolute joint isn't needed.

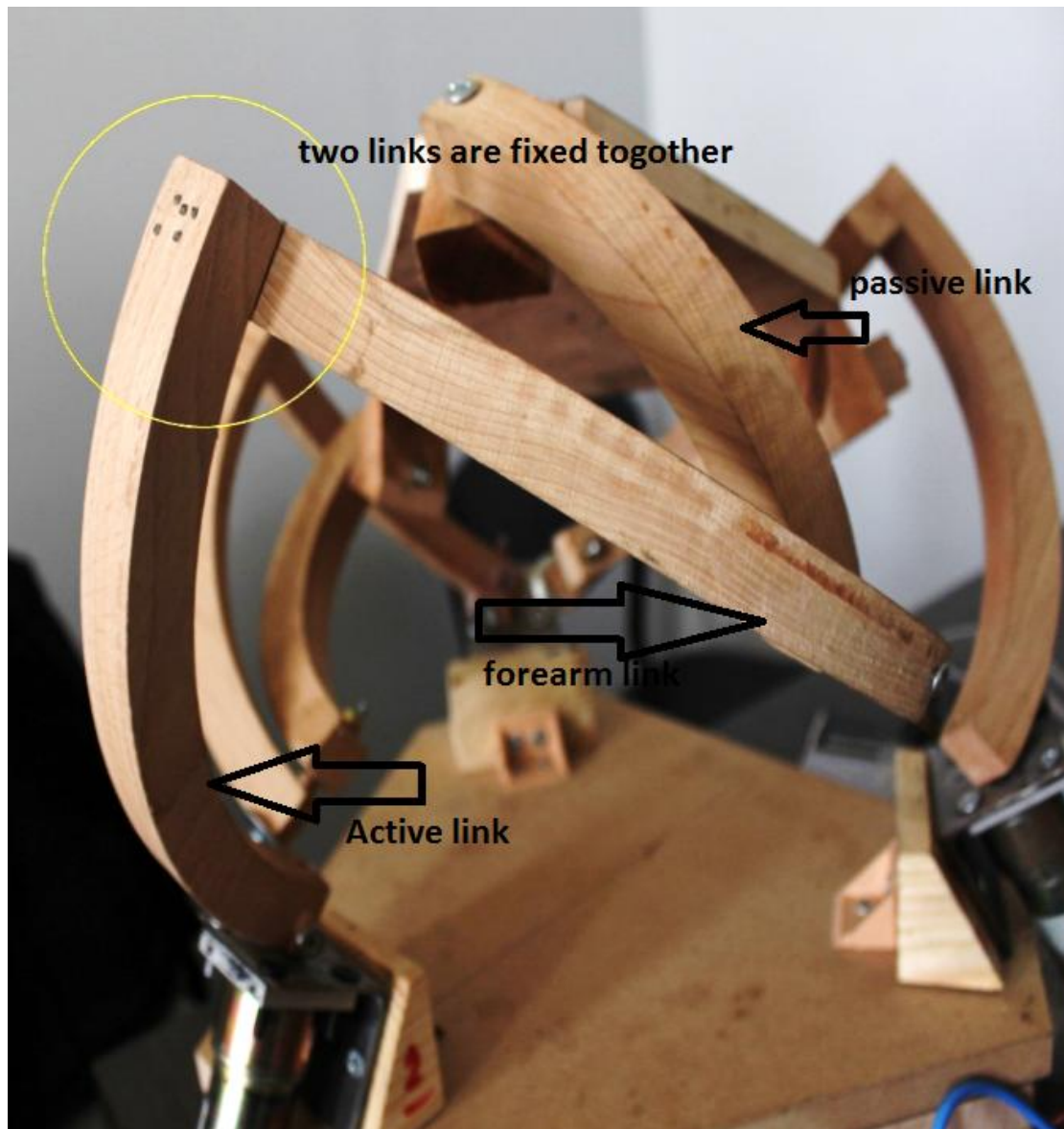


Figure 6.3 How Active link fixed to forearm link

Figure 6.3 show the links of the robot, and how active link fixed to forearm link.

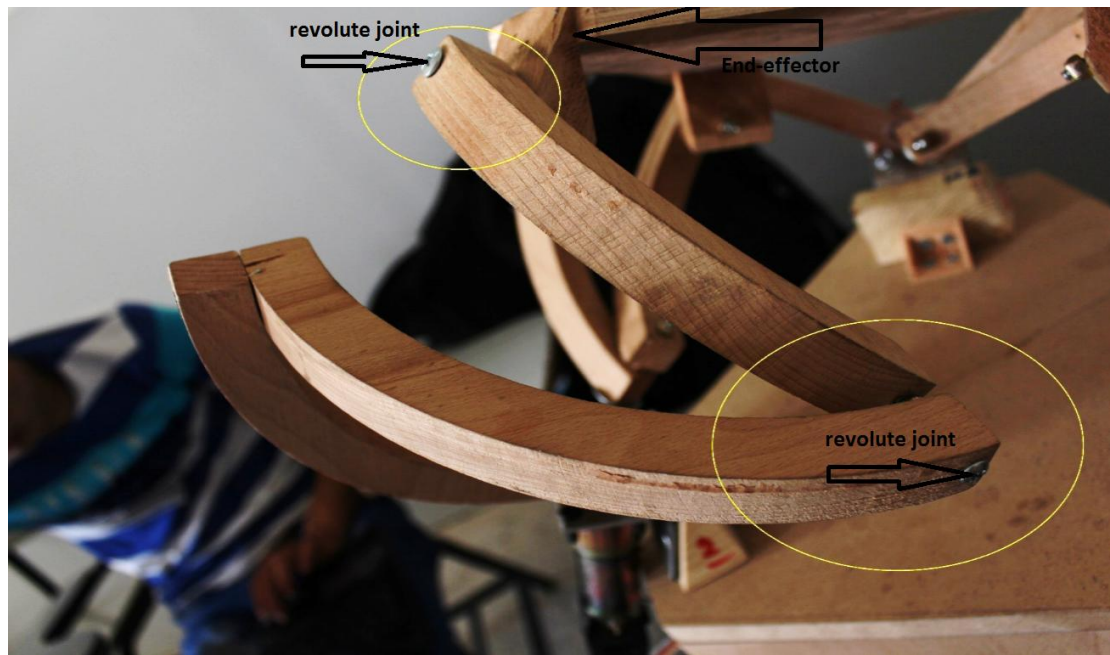


Figure 6.4 passive link connected to end effector and in the other side connected with forearm link

Revolute joint the used to connect forearm link with passive link, another revolute joint used to connect end-effector with passive link.



Figure 6.5 Aluminum prototype of the project

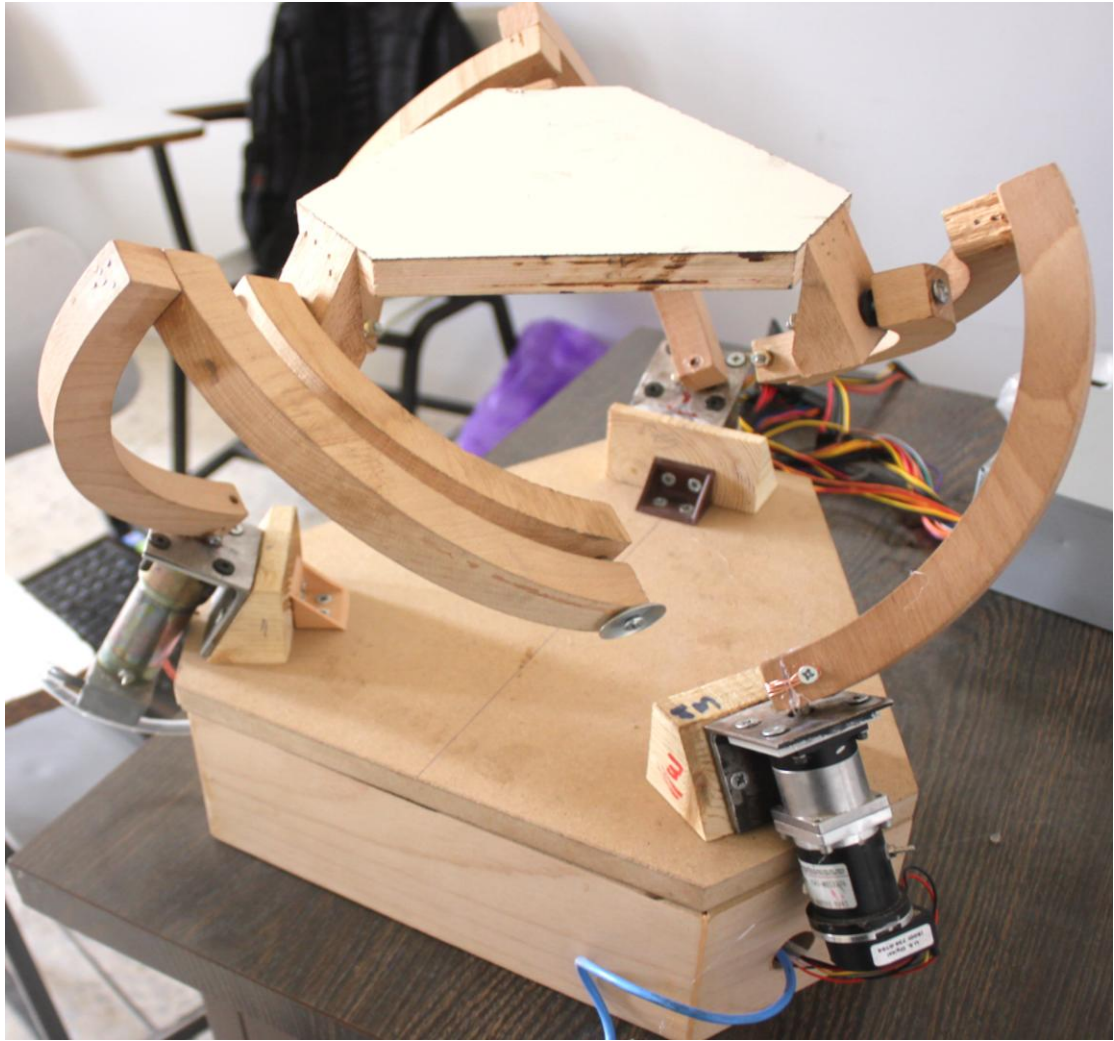


Figure 6.6 wood prototype

As shown in Figure 6.6, all of the wires, Arduino and H-bridges are hidden in the case under the base of the project.

6.2 Assembly of electrical parts

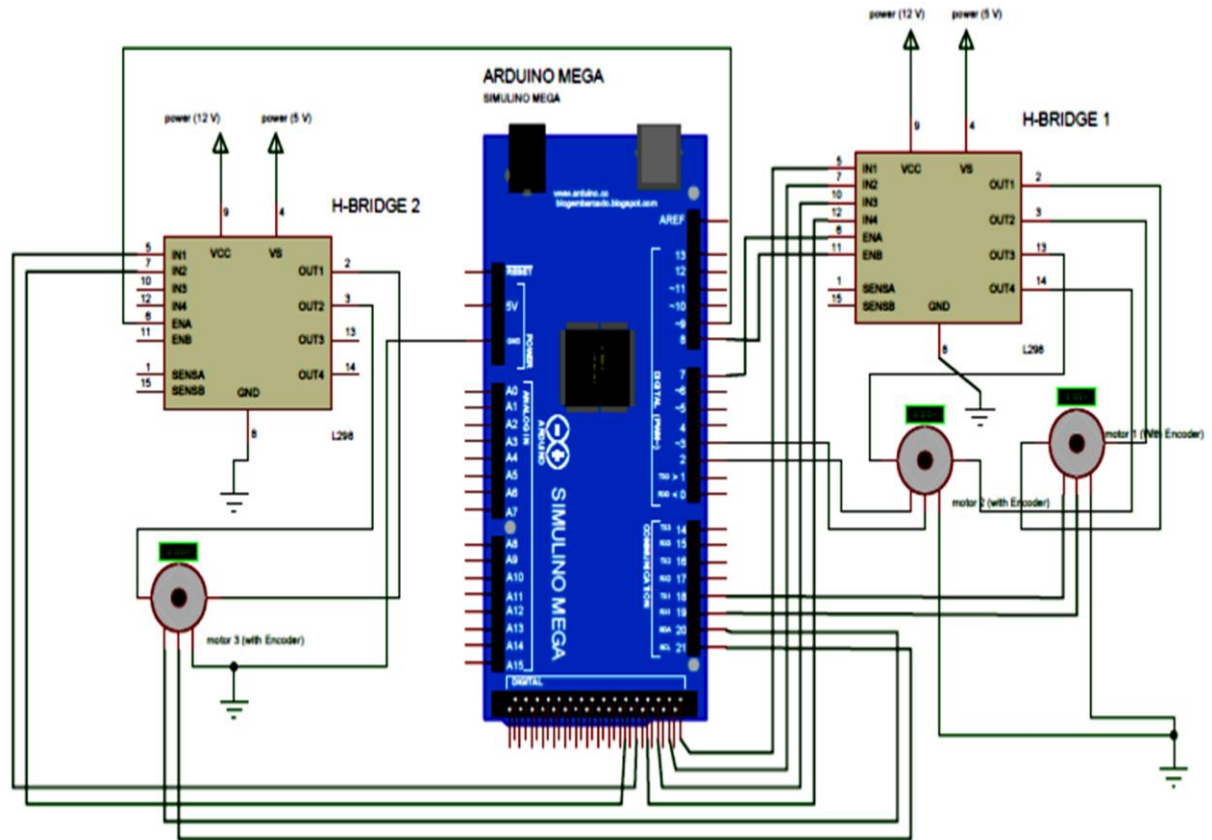


Figure 6.7 wiring diagram of the electrical circuit

Figure 6.7 are the wiring diagram of the project, it shows how to connect the motors with h-bridge and Arduino, and from this figure any one can connect the electrical circuit of the project.

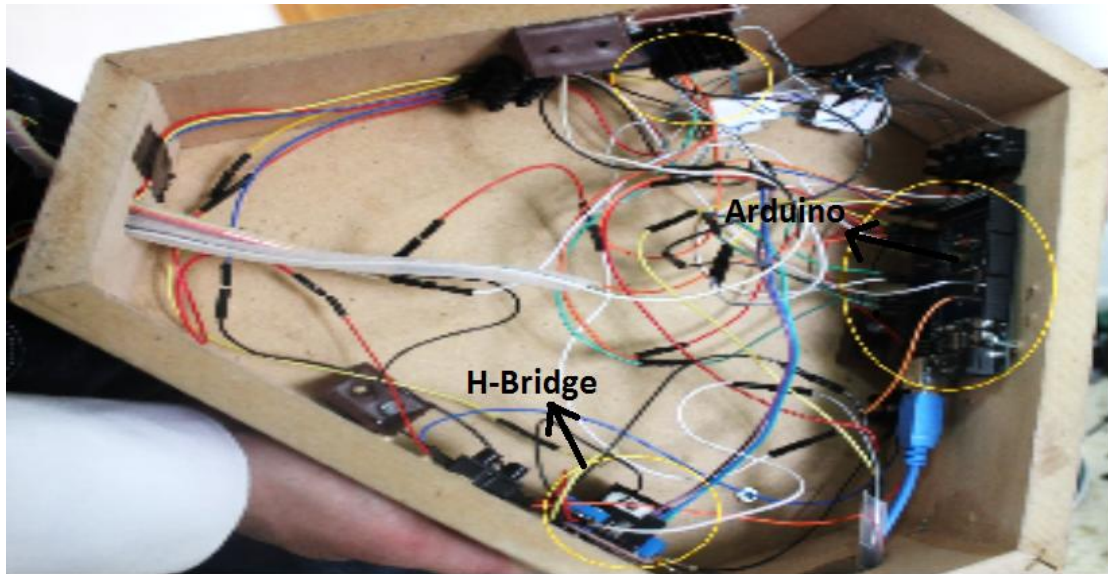


Figure 6.8 electrical connection inside the box of the robot

Figure 6.8 show the wires, h-bridge and Arduino, all these connection are in the case and not visible.