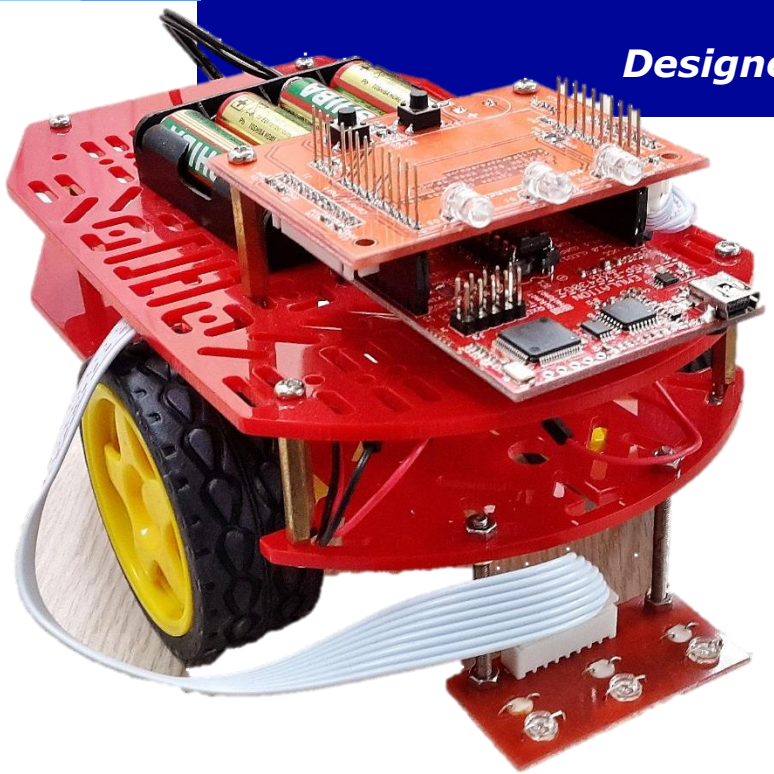
Ho Chi Minh City University of Technology

Faculty of Electrical and Electronics Engineering

iBot
Assembly Instructions

Designed by FEEE Student Research Club - PayItForward



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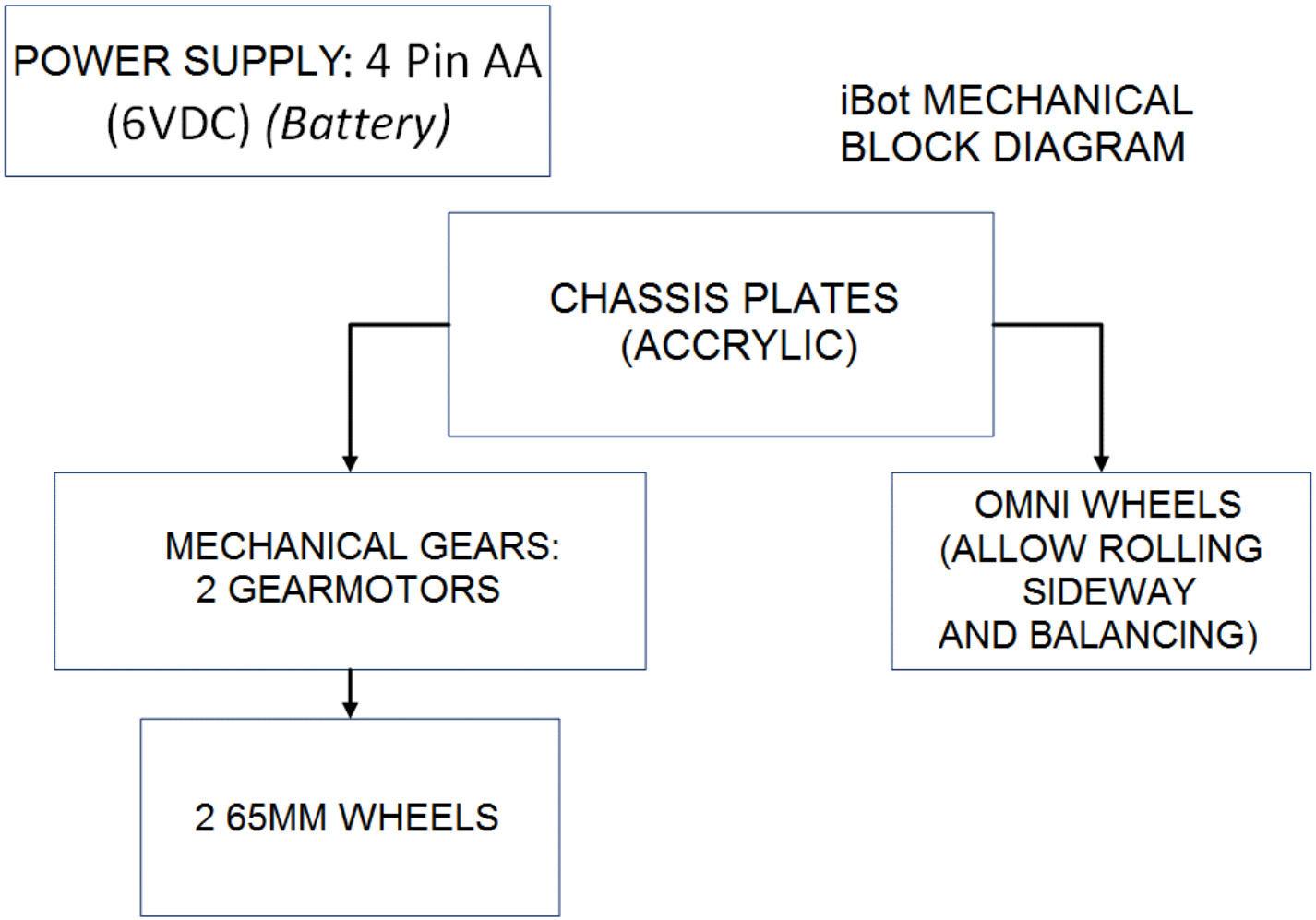
Specifications



Specifications

Measurement: 110 x 174mm

Technical specifications:

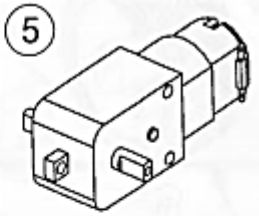
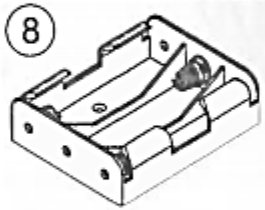
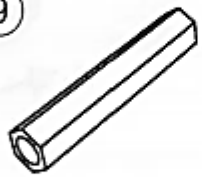
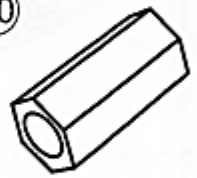
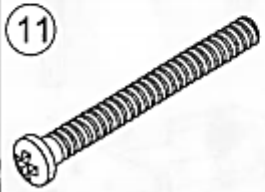
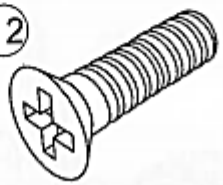
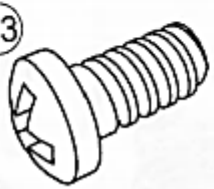
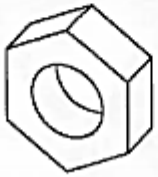
- Maximum voltage for motor: 6VDC
- No-load speed: 90±10rpm
- No-load current: 190mA (max.250mA)
- Torque: 800gf.cm
- Stall Current: ~1A
- Wheel diameter: 65mm (30mm Wide)

iBot Chassis

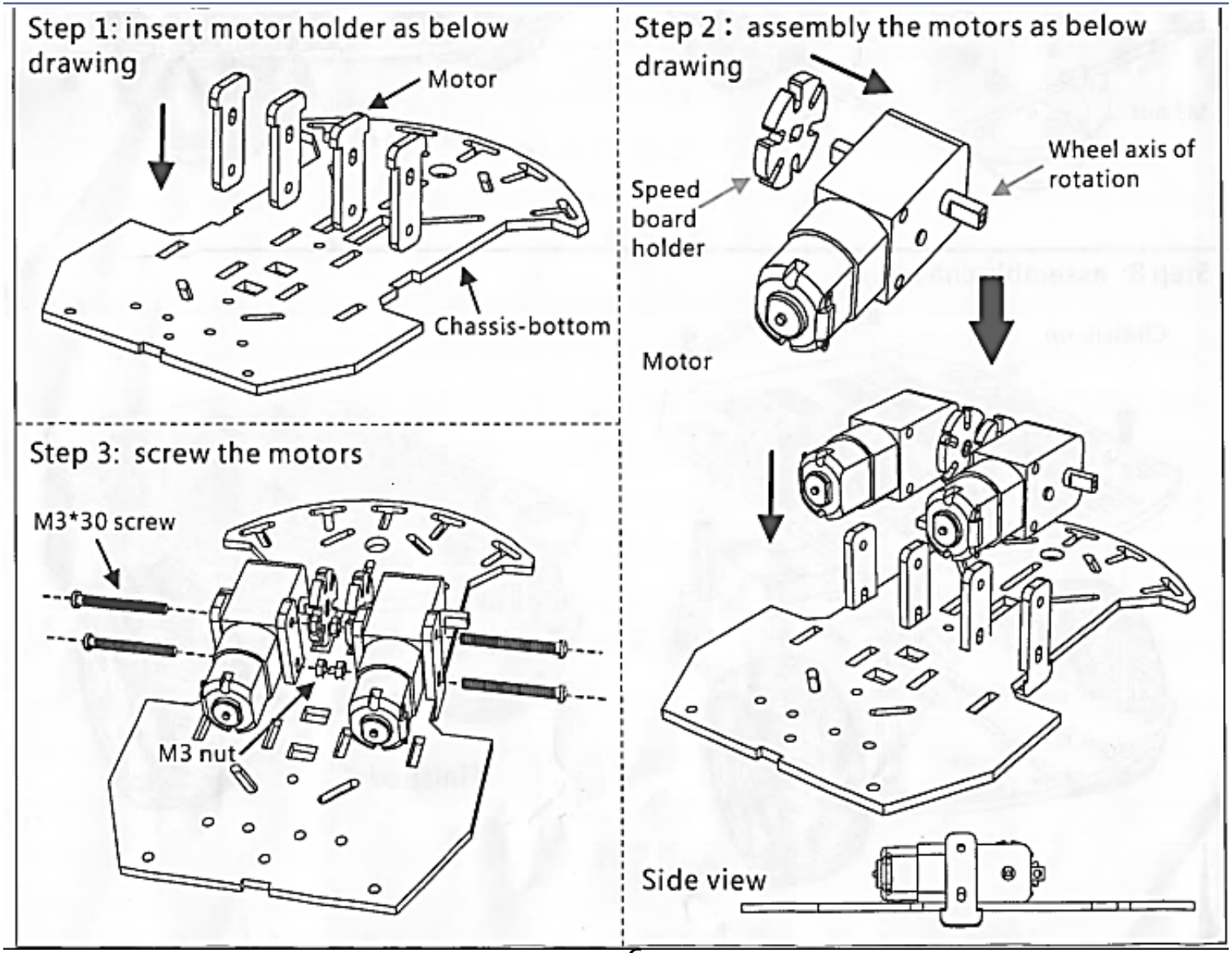
Magician Chassis Kit’s components: 2 DC Motor + Wheels + Encoder, omni wheel, 4 AA batteries package, acrylic plates and general mechanical items .

Magician Chassis Kit's components:

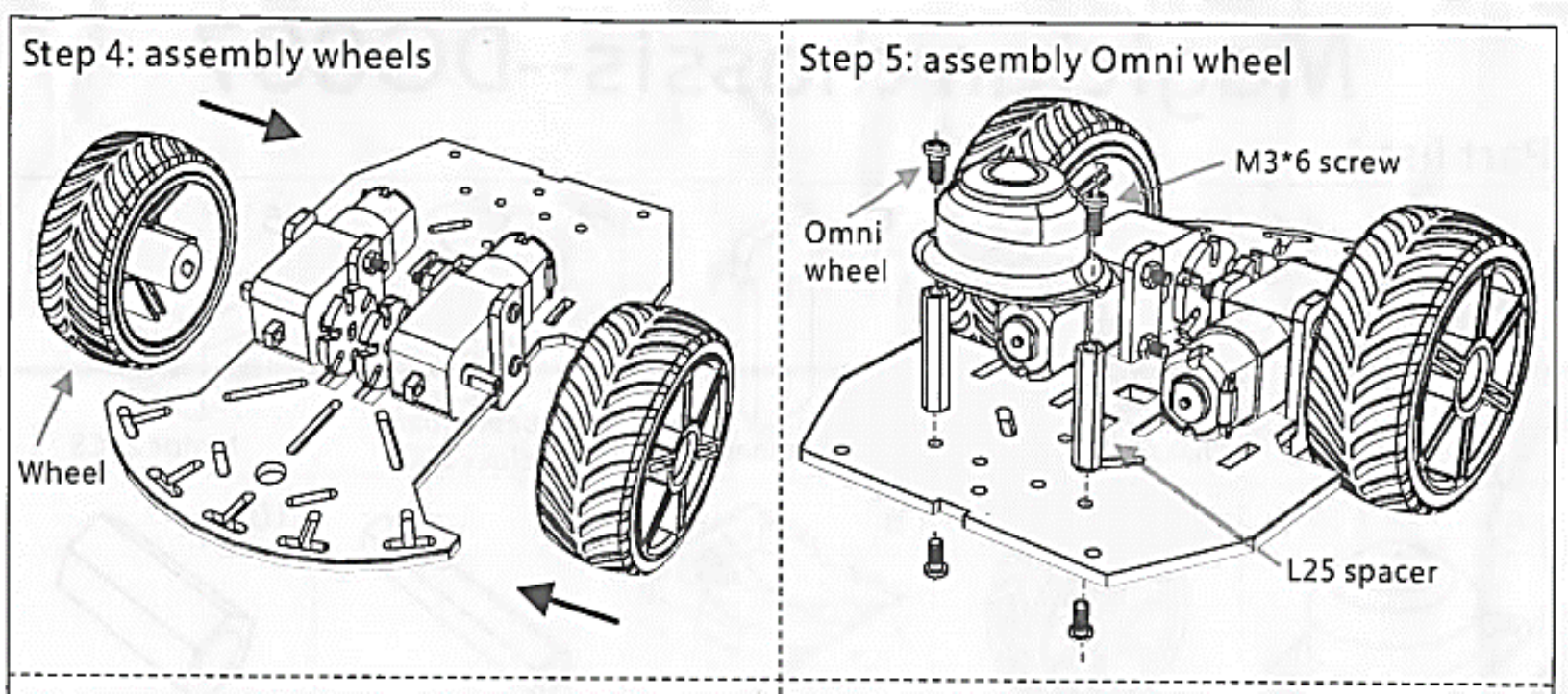
Part list :

 Chassis-up 1PC	 Chassis-bottom 1PC	 Motor holder 4PCS	 Speed board holder 2PCS	 Motor 2PCS
 Omni wheel 1PC	 Wheel 2PCS	 Battery holder 1PC	 L25 spacer 8PCS	 L10 spacer 4PCS
 M3*30 screw 4PCS	 M3*10 flathead screw 2PCS	 M3*6 screw 22PCS	 M3 nut 6PCS	

Assembly Instructions



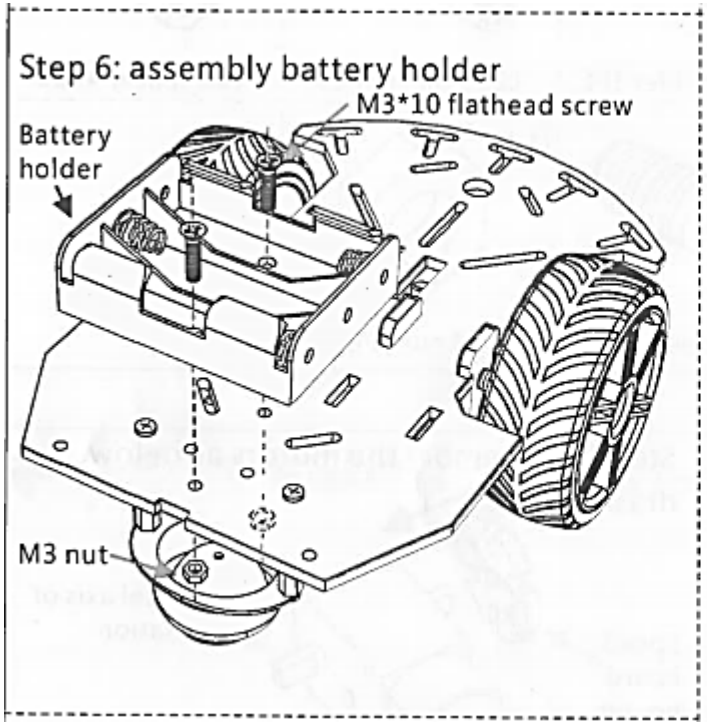
Assembly Instructions

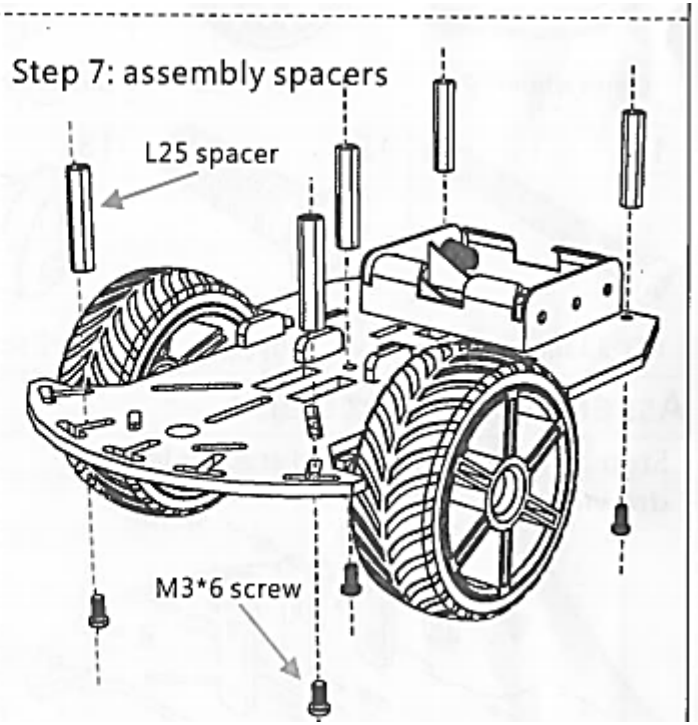


1st week target: Complete Step 5 (Assembly Omni wheel)

Assembly Instructions

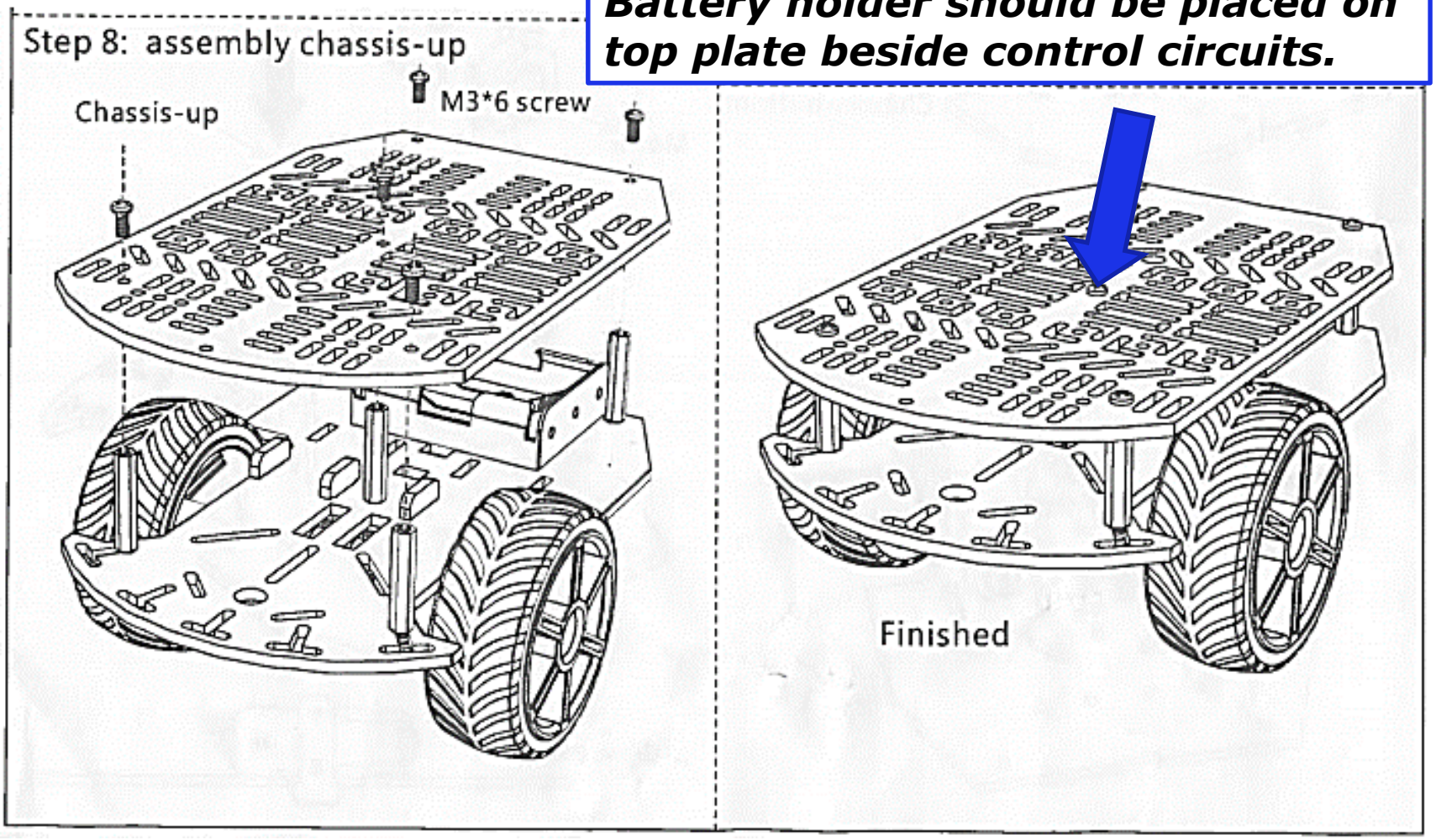
Note: ***Participants will not assembly the battery holder in Step 6*** (The battery holder is placed on top plate for easy replacement).
Instead, Power Circuit (Motor Control Circuit–H-bridge) will be placed at that position.





Assembly Instructions

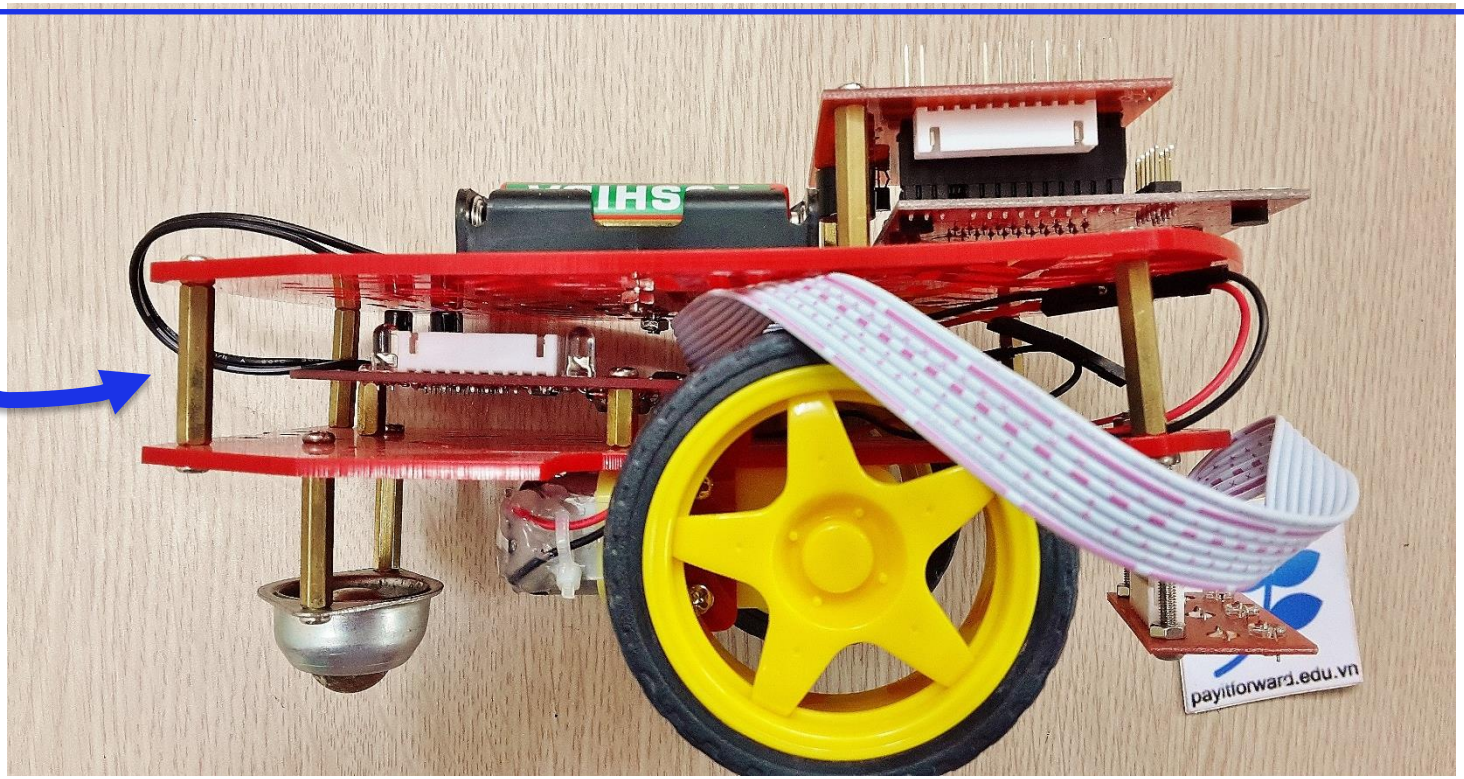
Battery holder should be placed on top plate beside control circuits.



iBot Completed!

iBot After Final Assembly!

Power circuit is placed between 2 plates, battery holder on top, connecting wires from battery to power circuit as in the image below



*Note: in this image there is **a 10-wire signal bus** connecting the power circuit to control circuit that will be disconnected (in lab student will have to connect it to the circuit)*