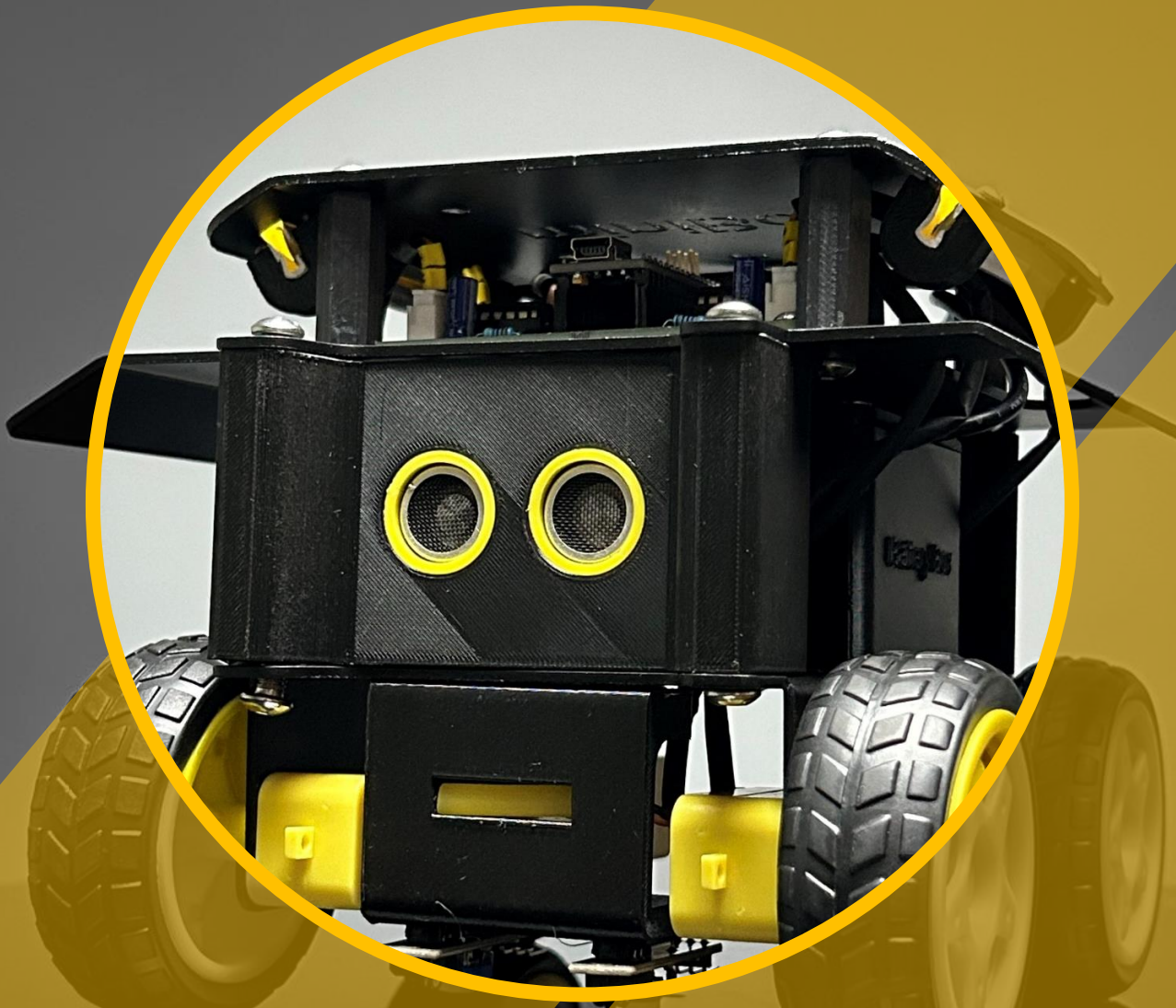


miniBot



GETTING STARTED GUIDE



ABOUT MINIBOT

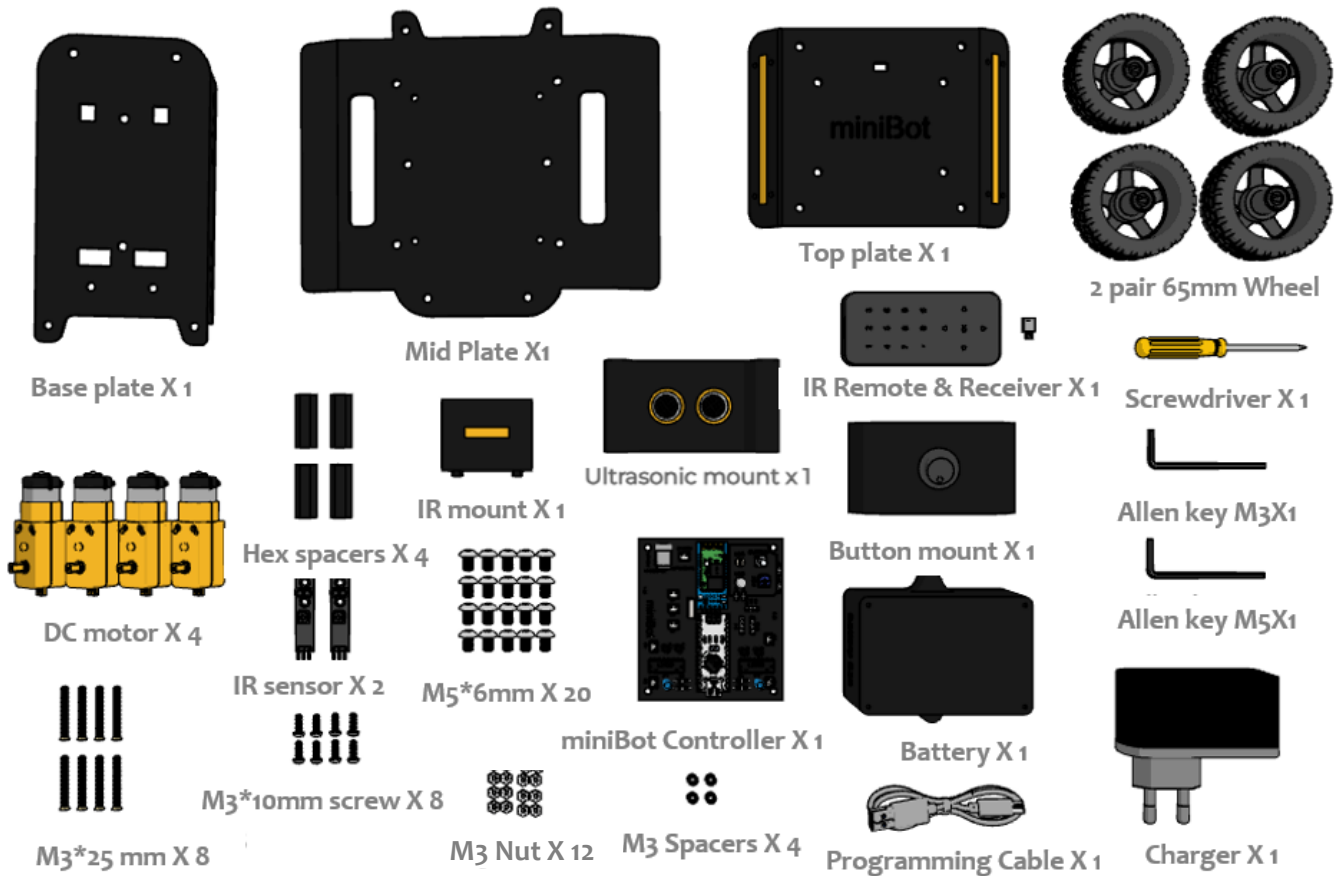
The miniBot is a versatile robotics kit designed to provide an educational and entertaining experience for students. This user guide will walk you through the assembly process and provide information on its various features and functionalities.

LEARN | BUILD | PROGRAM | PLAY
Learn Programming, Electronics and Robotics

FEATURES OF MINIBOT



Meet Components of MiniBot



- Aluminium Base plate X1
- Dc Motor X4
- M3*25mm Bolts X8
- 65 mm wheel X4
- Battery X1
- Allen Bolts M5*6mm X20
- IR Sensor mount X1
- IR Sensors X2
- Ultrasonic Sensor and Mount X1
- Button and Mount X1
- Allen Tool (M3 and M5) X1
- M3*10mm X8
- Screwdriver X1
- Aluminium Middle Plate X1
- Hex Spacer X4
- MiniBot Controller Board X1
- M3 Nut X12
- M3 Spacers X4
- Aluminium Top Plate X1
- Charger X1
- Programming Cable X1
- IR Remote & receiver X1

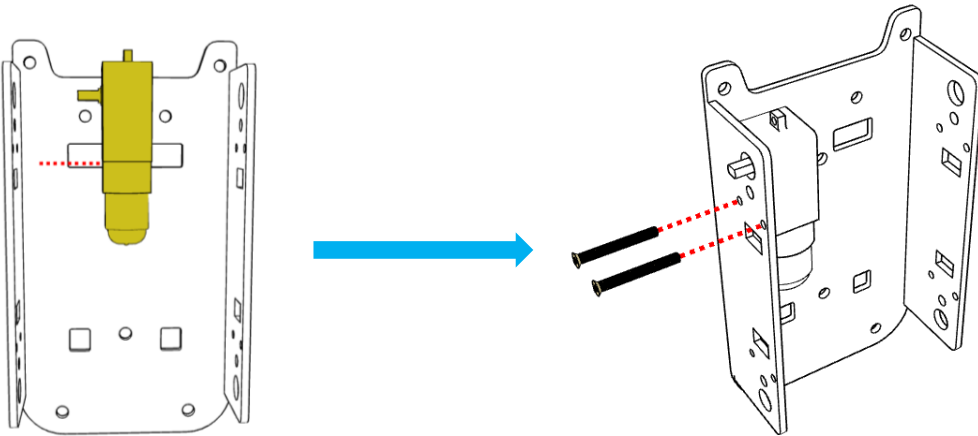
*Extra nuts and bolts are provided.



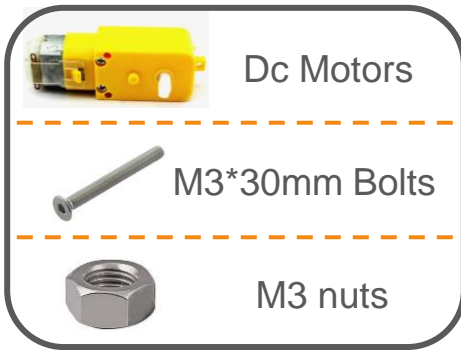
STEP BY STEP PROCEDURE

1

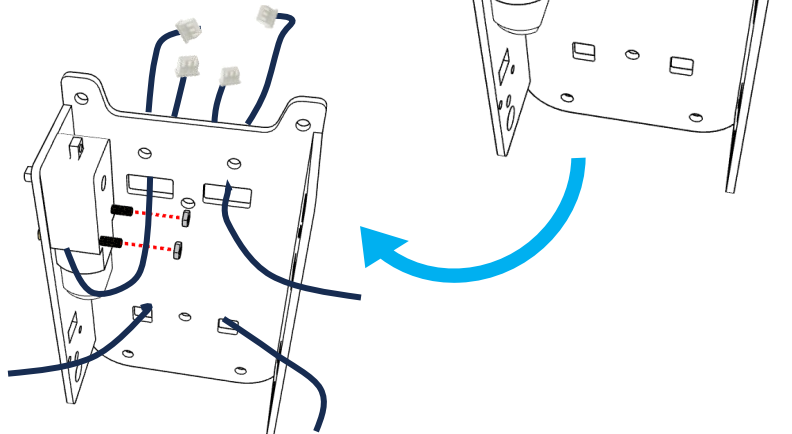
Take a dc motor and secure it with the screws.



Attach the motor to the Aluminium Base Plate using two M3*30 mm bolts and M3 nuts. Use the screwdriver to tighten the nut and the bolts. Do the same process for all four motors.



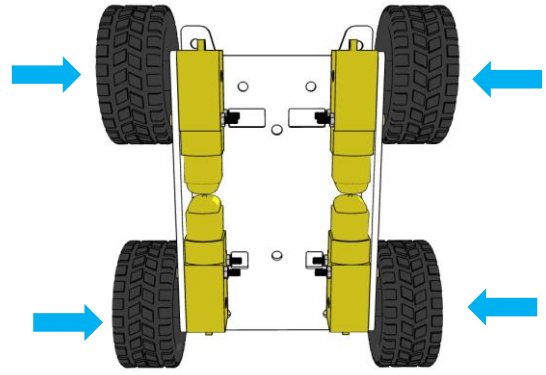
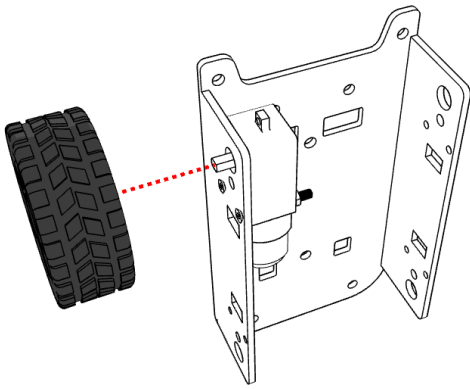
Take the motor connectors and pass them through the holes given in the Aluminium Base Plate.



2

Attach all the Four Wheels.



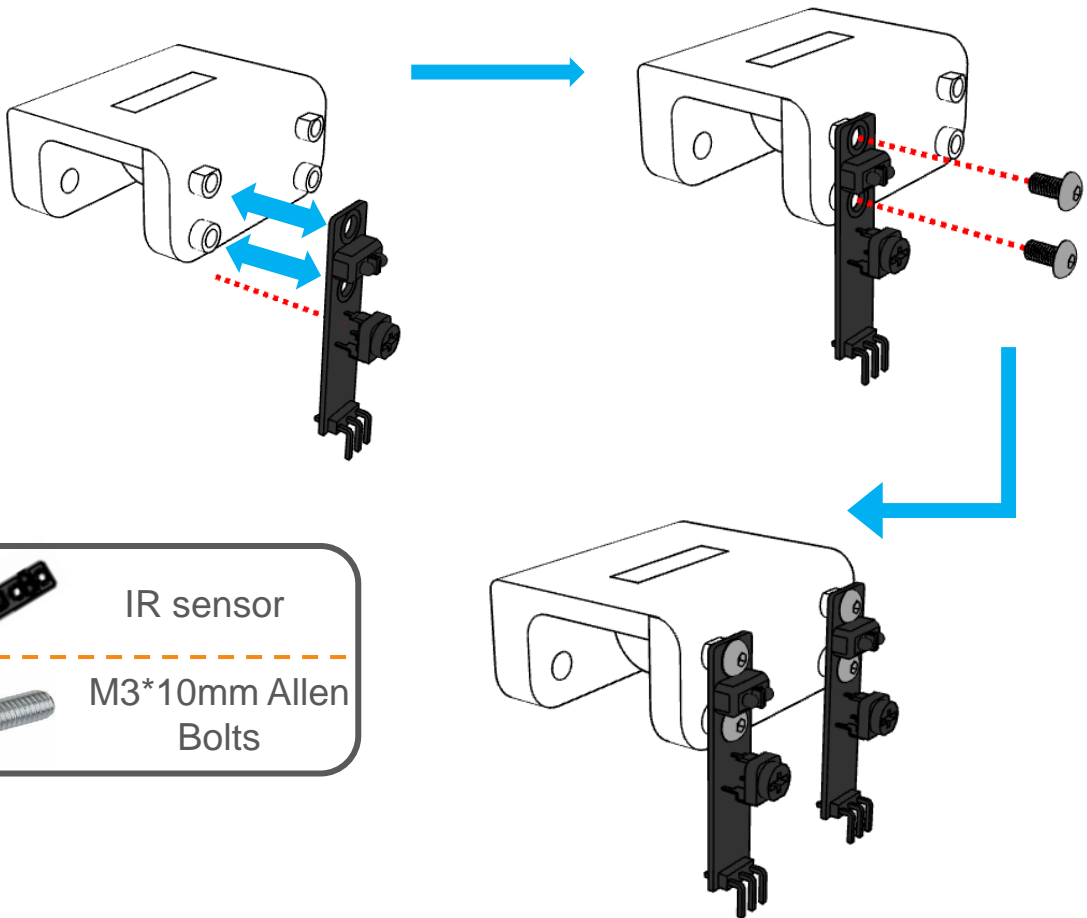


Take a wheel and connect to the shaft of the motor keeping in mind the pattern of the shaft.
Attach all the wheels in the same way.

3

Insert the IR sensor and secure it with the screws.

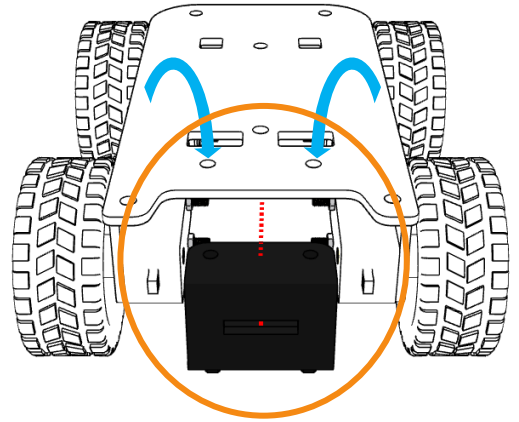
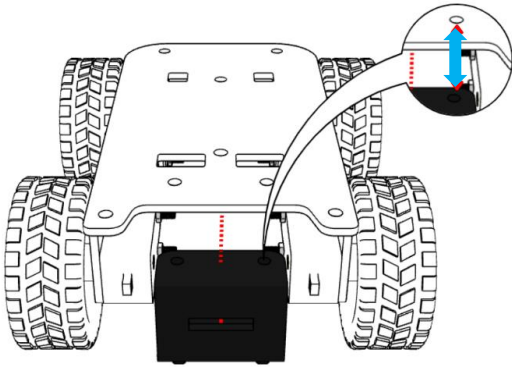
* Skip this step if already connected.



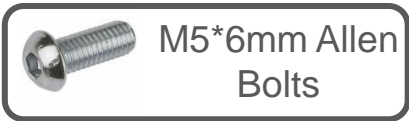
Take the IR mount fitted with LED. Take IR sensor and join them with the IR Mount with the bolts using a screwdriver. Keep in mind the direction of the IR sensors. Do it as shown.

4

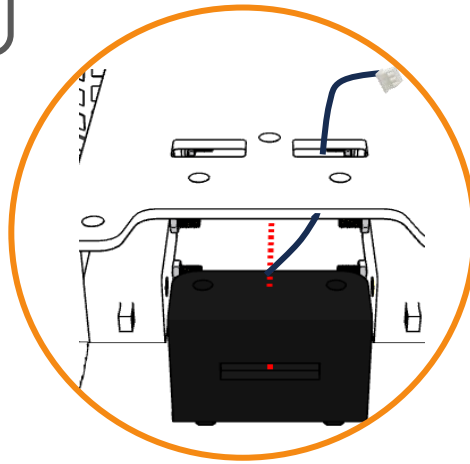
Screw the IR mount to the Aluminium Base plate.



Attach the IR mount on the Aluminium base plate as shown using Allen Bolts with the help of M5 Allen key.



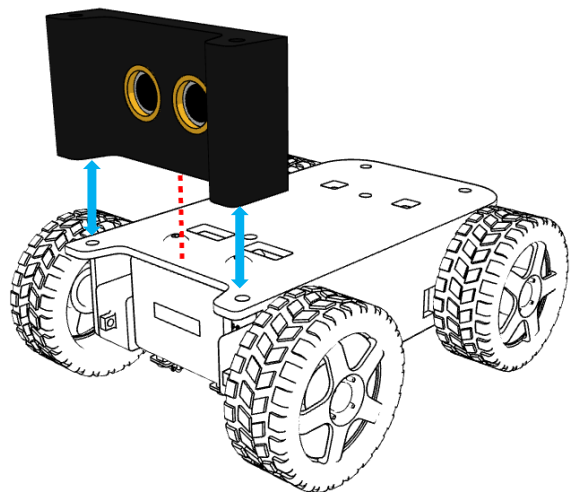
Pass the LED connectors and IR sensor connectors through the holes as shown.



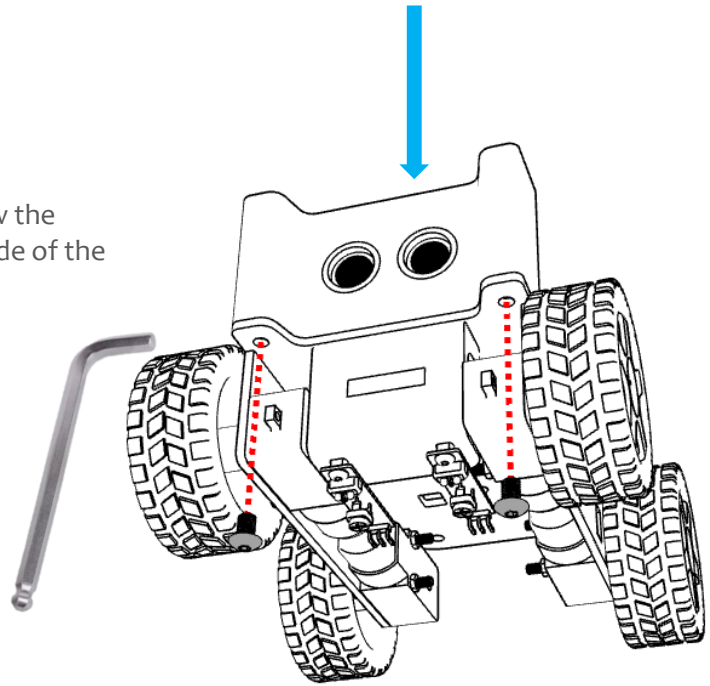
5

Attach the Ultrasonic Mount.

Moving on to the Upper portion of the Aluminium Base Plate. Take the Ultrasonic Mount fitted with an Ultrasonic Sensor.

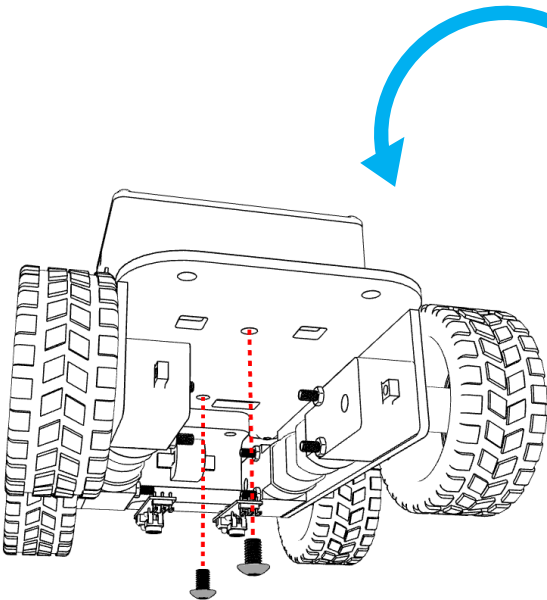
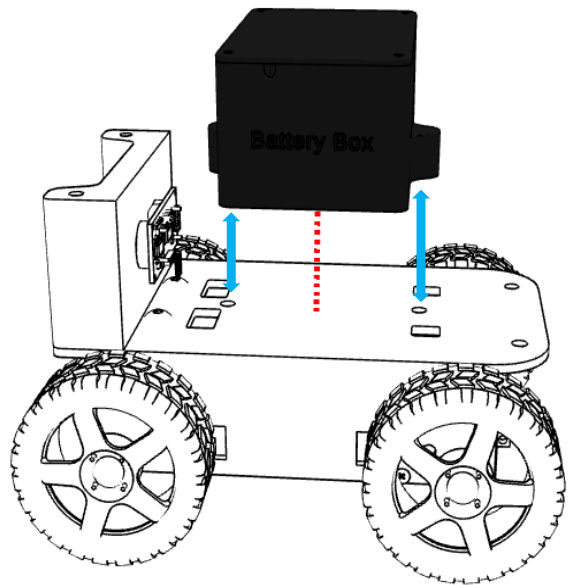
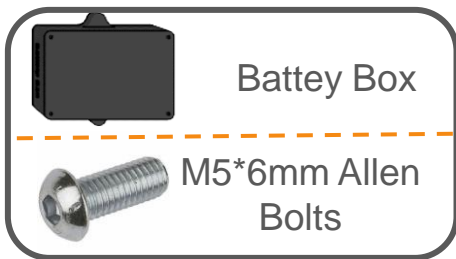


Use two M5 Allen bolts to screw the Ultrasonic mount from the lower side of the Aluminium Base plate.



6

Attach the Battery in the middle of the plate.



Now, Adjust the battery Box in the middle of the Aluminium Base Plate. Screw it in place using two M5 Allen Bolts from the backside of the base plate and tighten the allen Bolts using the allen key.

7

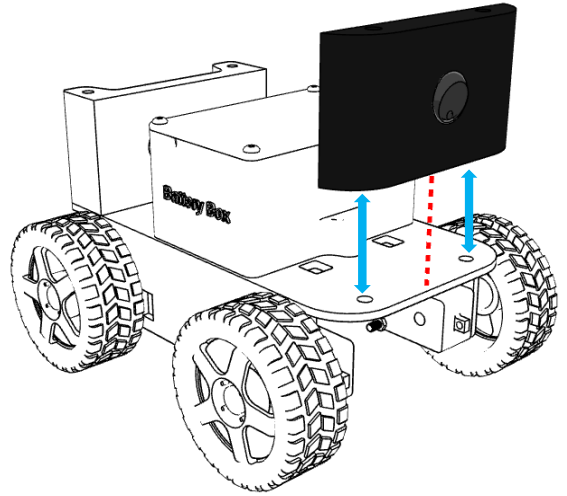
Attach the Button Mount.



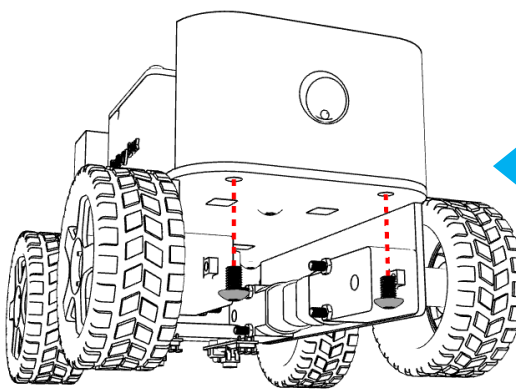
Switch
(already Fitted)



M5*6mm Allen
Bolts

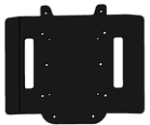
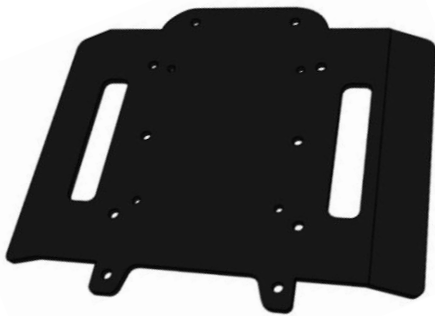


Similarly, attach the button mount on the other side of the Aluminium Base plate.



8

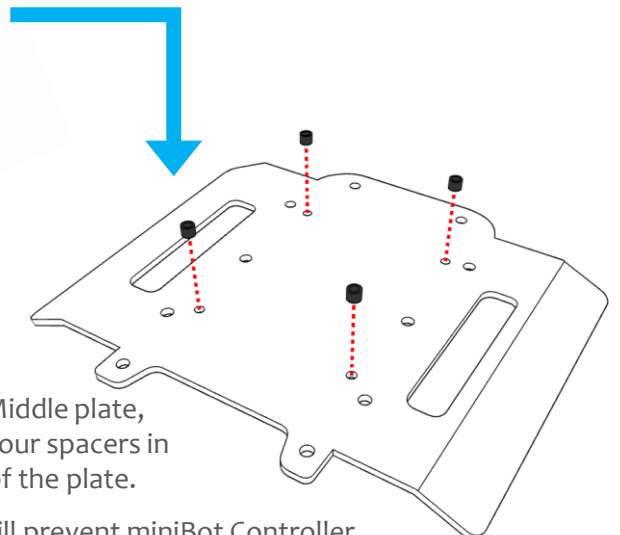
Fix the spacers in the Aluminium middle plate.



Middle Plate



M3 Spacers



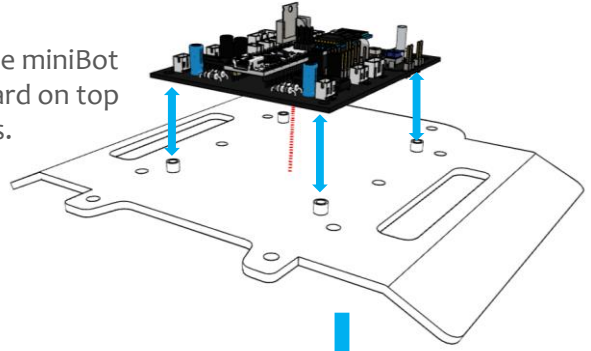
Coming to the Middle plate,
Place the given four spacers in
the inner holes of the plate.

These spacers will prevent miniBot Controller
Board from touching the Aluminium Plate.

9

Fix the miniBot Controller and tighten up the screws.

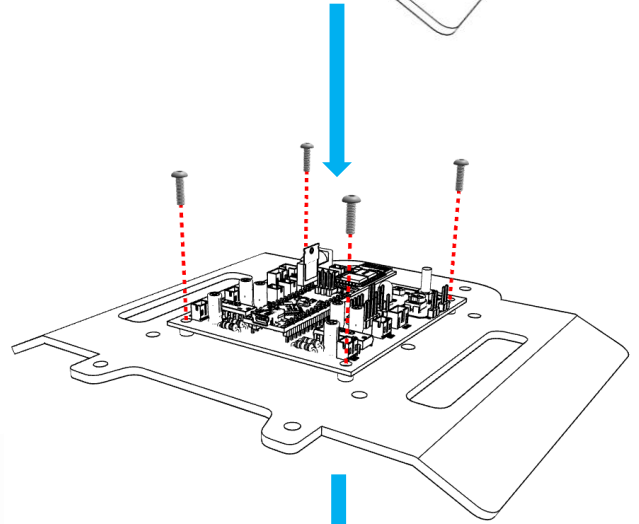
Now, place the miniBot controller board on top of the spacers.



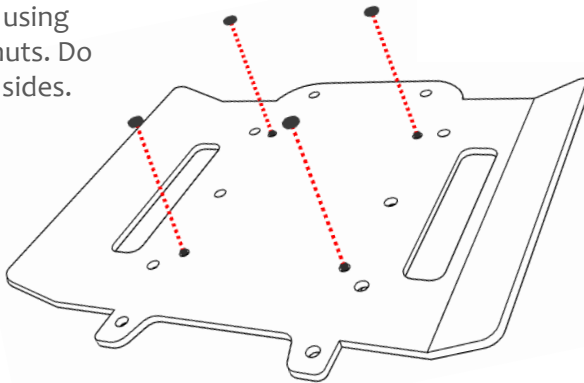
miniBot Controller Board



M3*10mm bolts & nut



Mount the Controller Board and spacers in place using M3*10 mm bolts and nuts. Do the same for all four sides.



10

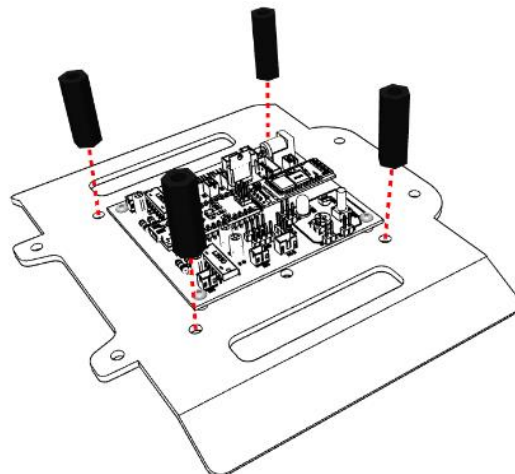
Attach the hex spacers and screw them up.



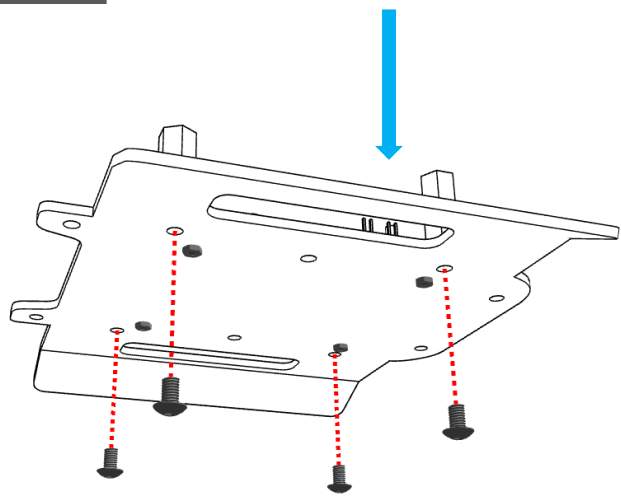
Hex Spacer



M5*6mm Allen Bolts



Mount 4 Hex Spacers on the Aluminium middle plate. Secure them up from the lower side of the Plate using Allen Bolts.



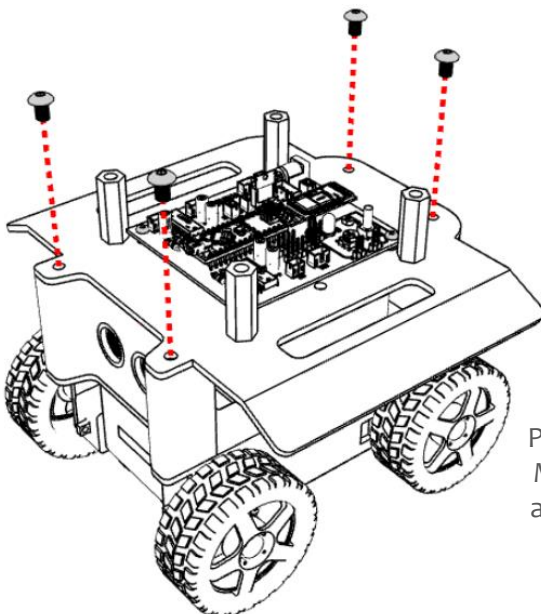
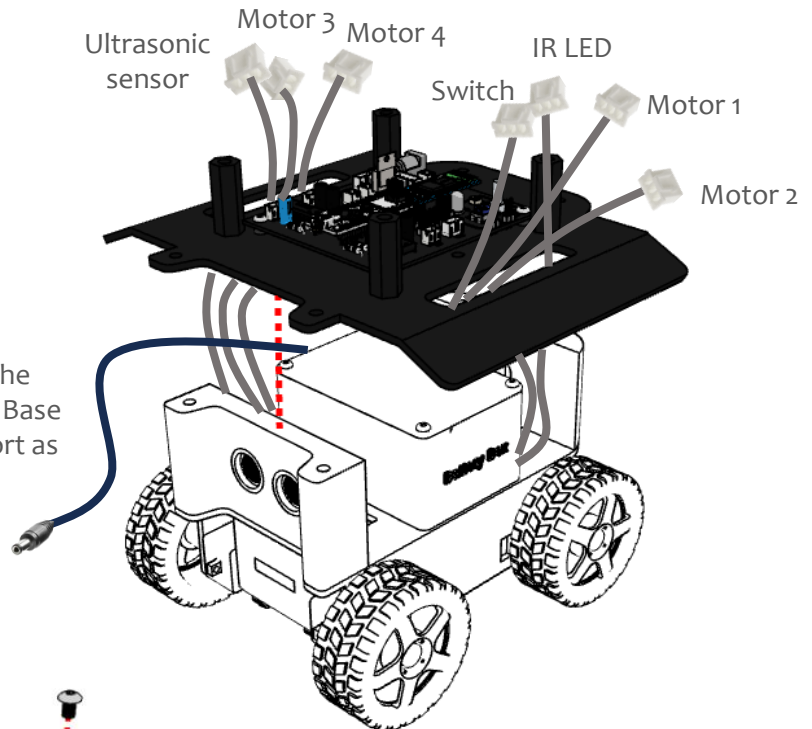
11

Mount the Middle part on the lower assembly.



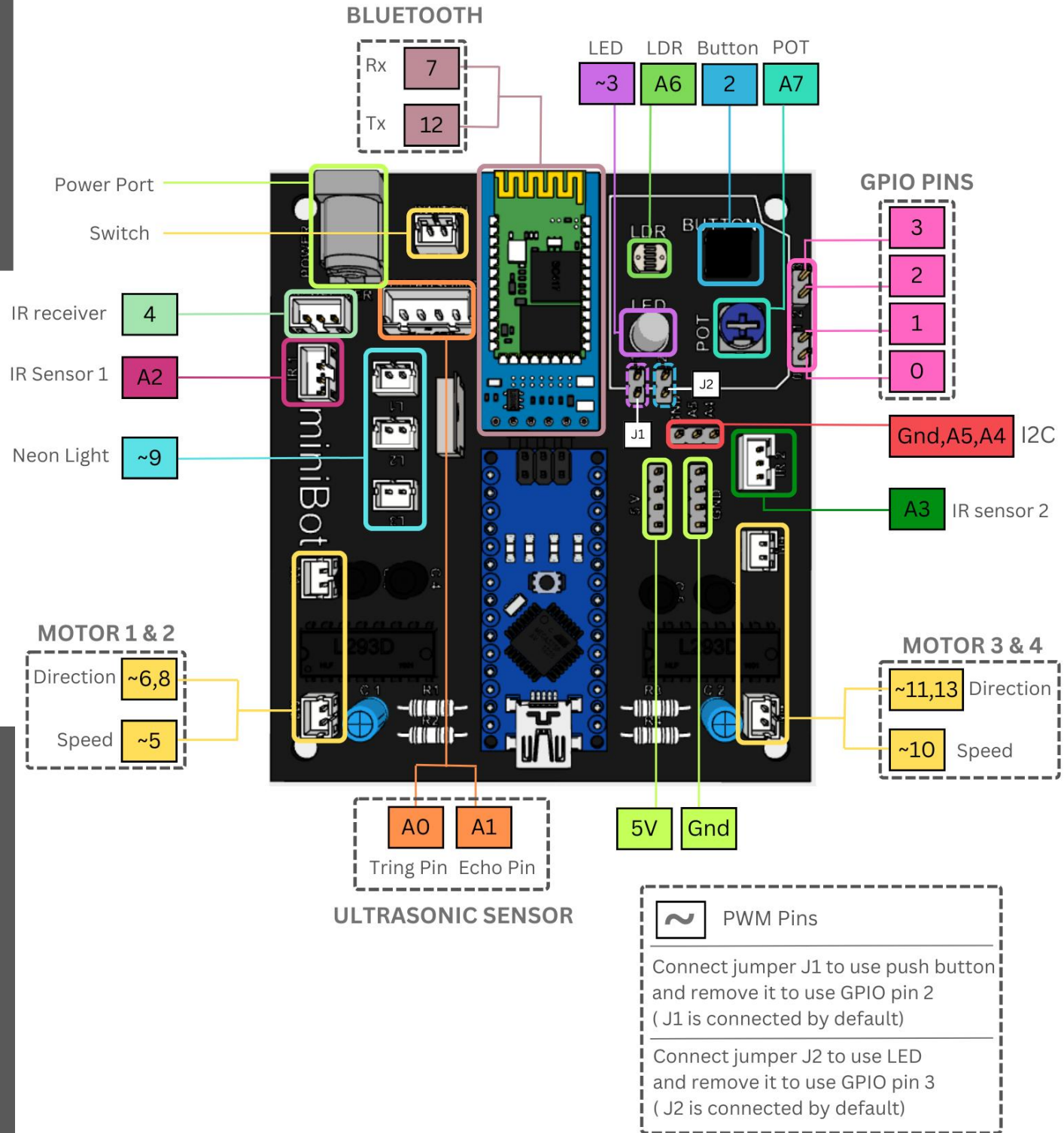
M5*6mm Allen Bolts

Pass all the Connectors of the components attached on the Base plate including the battery port as shown.



Place the Aluminium Middle Plate on top and fix it using Allen Bolts.

Pinouts of miniBot Controller Board

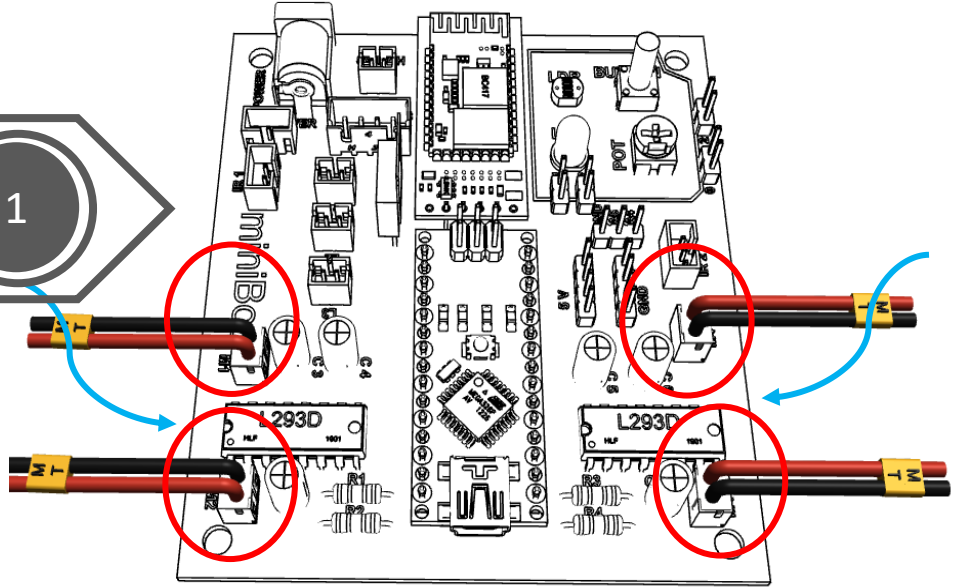


*These pinouts will come handy during programming for the reference purpose.

miniBot Controller Guide

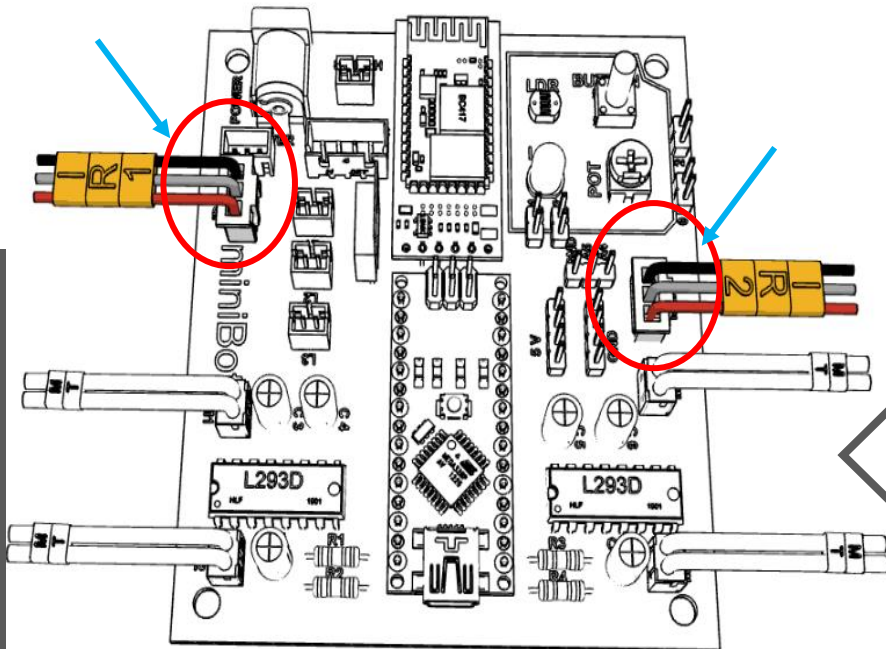
Connect all the motors.

1



Join the IR sensors Connectors

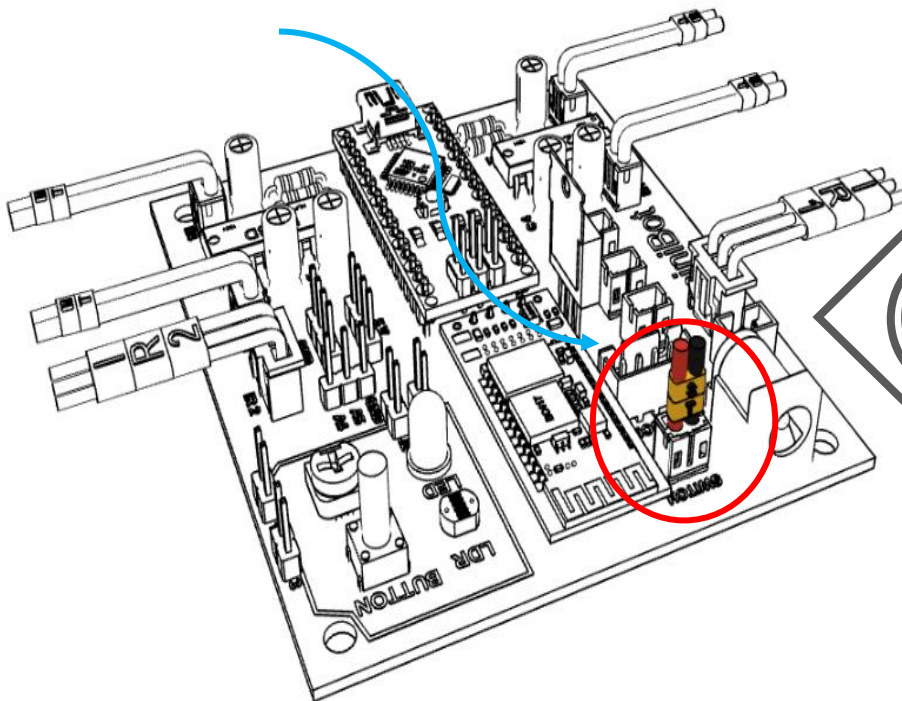
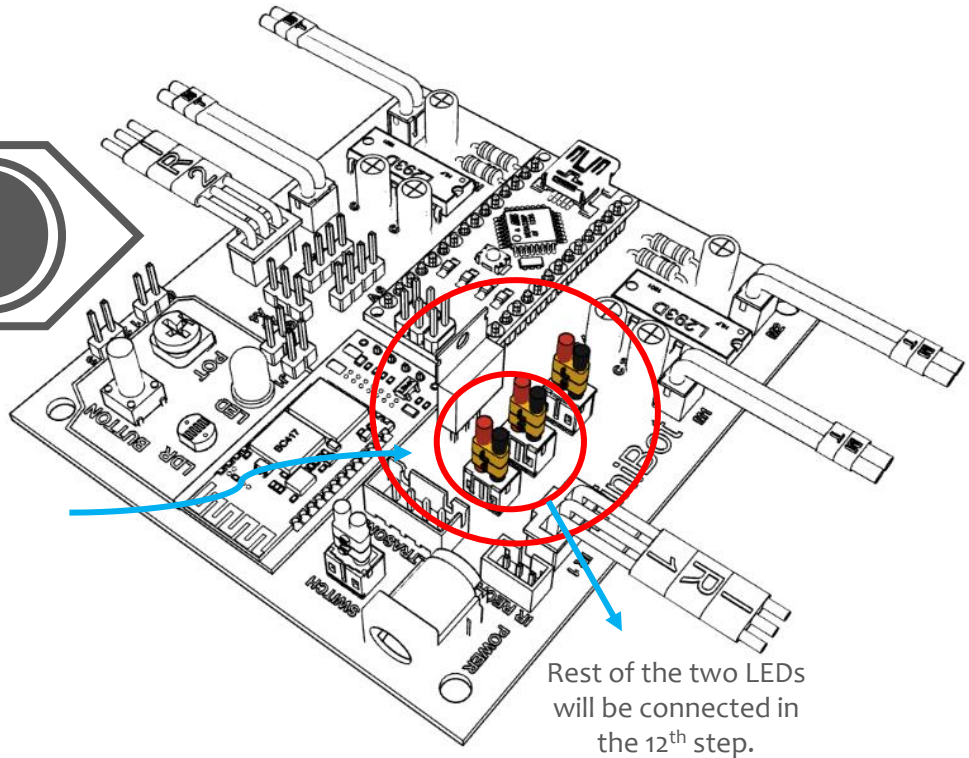
2



miniBot Controller Guide

Join all the LEDs connector

3

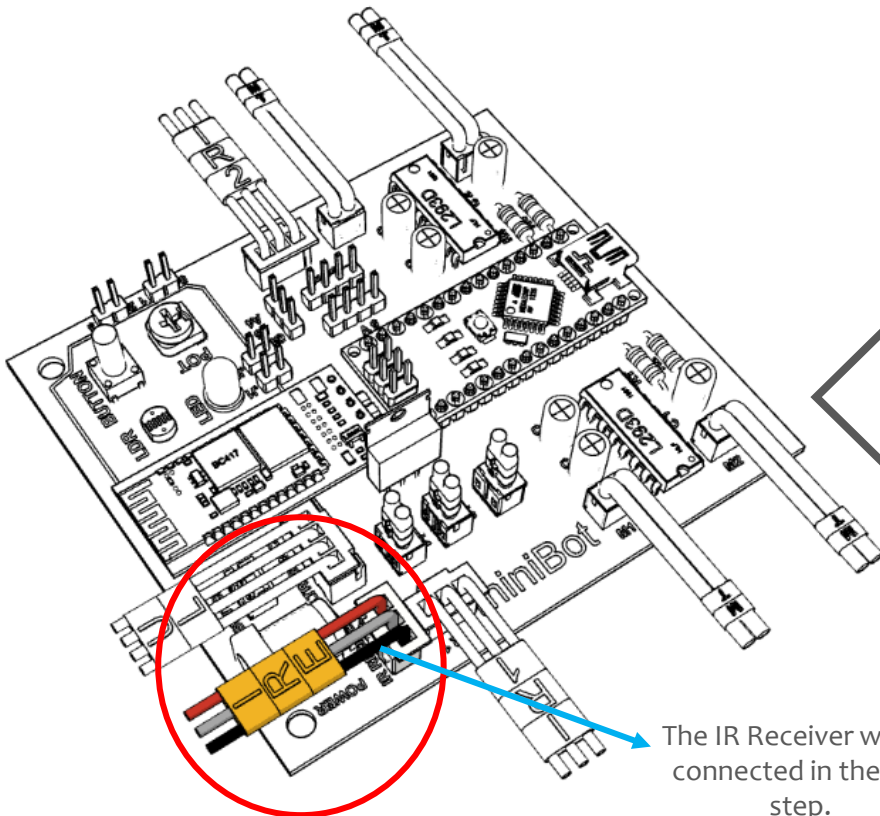
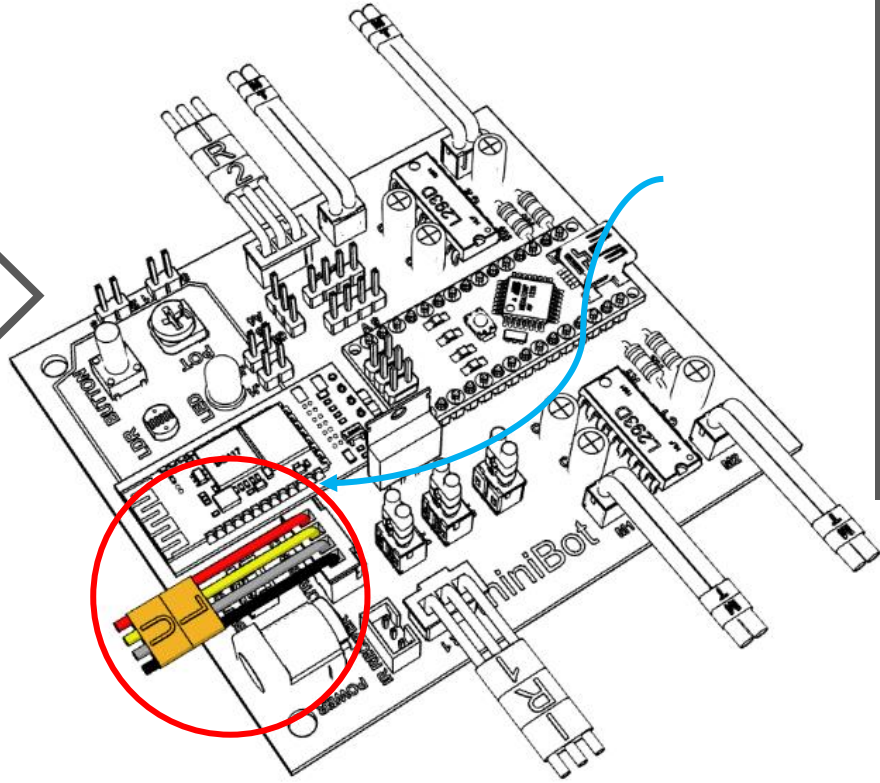


4

Connect the button connector

Connect the
Ultrasonic
sensor

5



6

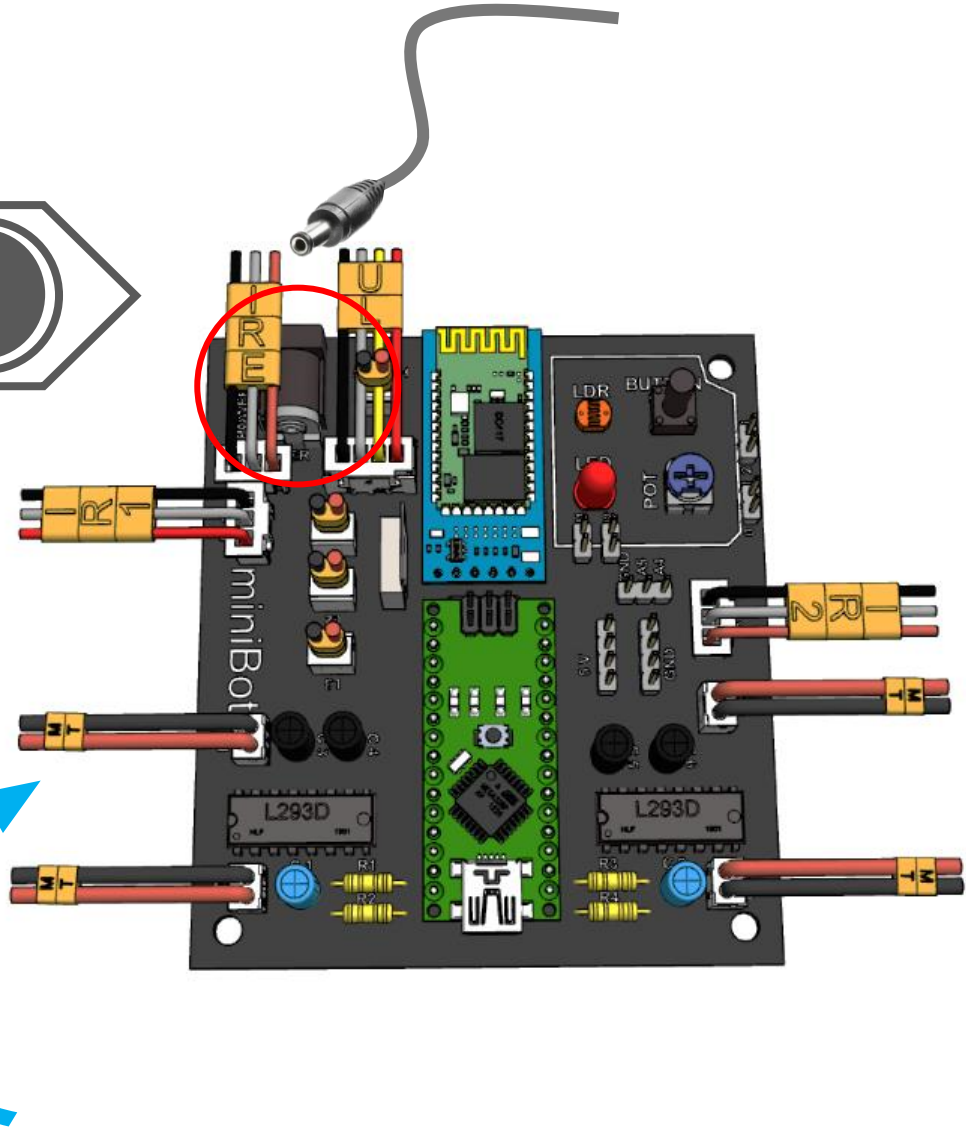
Connect the
IR Receiver

The IR Receiver will be
connected in the 12th
step.

miniBot Controller Guide

Connect DC
jack (Battery
Port)

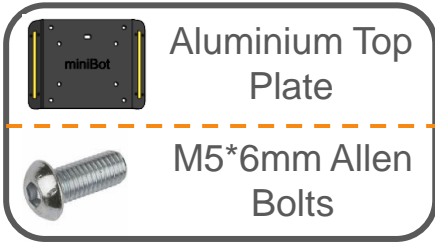
7



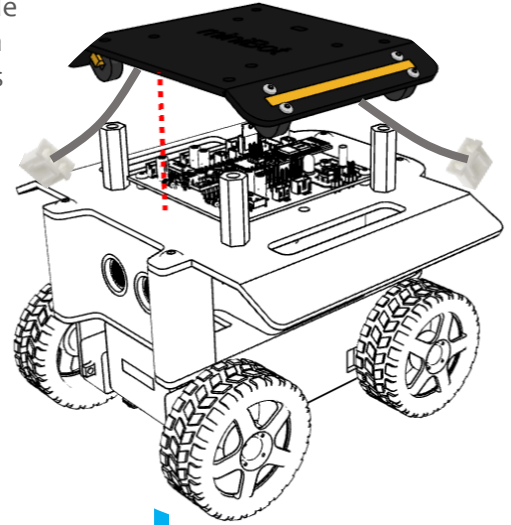
miniBot Controller Board is
ready!

12

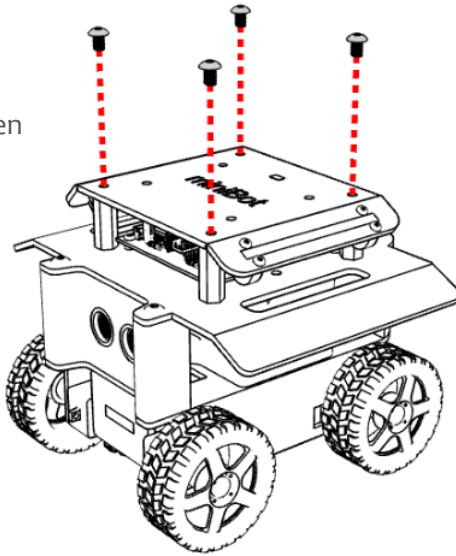
Fix the Aluminium top plate with allen bolts.



Before attaching Aluminium Top Plate to the Aluminium Middle Plate, connect both the LED Connectors and IR Receiver connector to the miniBot Controller Board.

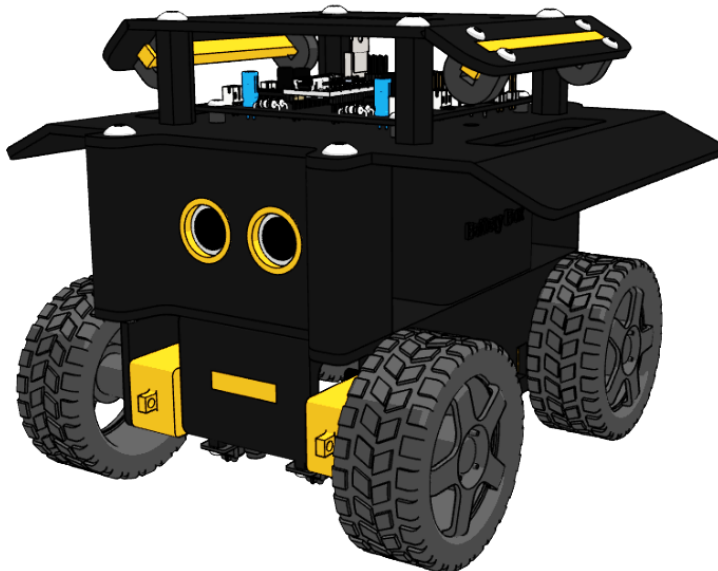


screw it up using Allen Bolts from all four sides.







13

miniBot assembly is completed.



IR Remote Controls

ENABLE DIFFERENT MODES

- IR Remote mode 
- Bluetooth App Control 
- Obstacle Avoiding Mode 
- Line Tracking Mode 





SPEED CHANGE

-  Decrease Speed
-  Increase speed

LED MODES

-  LED Blinking Mode
-  LED Breathing Mode
-  LED Off

DIRECTION CONTROL

- Move Forward 
- Move Left  
- Move Right
- Move Backward 



Don't forget to remove the protective polythene covering to start using the IR remote.

REMOVE IT

Battery box

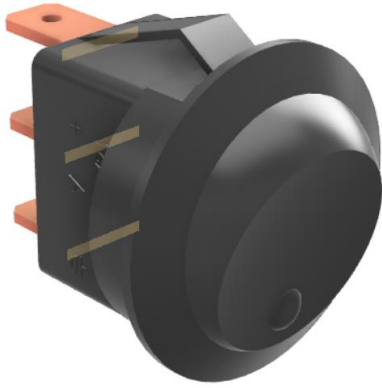


Minibot comes with a battery box that is designed to prevent damage while you learn from your mistakes. The rechargeable battery also comes with a circuit protection to prevent both over charging & over discharging.

Features of battery Box



- worry-free charging and usage.
 - Complete charge in just 1.5 hours
 - onboard short- circuit protection.
- Connect the port here to Charge



Activate the miniBot by flipping the switch 'ON'.

CHARGING TIME

When the battery is discharged, it will automatically cut off. If this happens, don't panic, it is time to charge your miniBot.

***For downloading and checking miniBot Controller app, refer to the miniBot mobile app guide.**



FOLLOW US ON



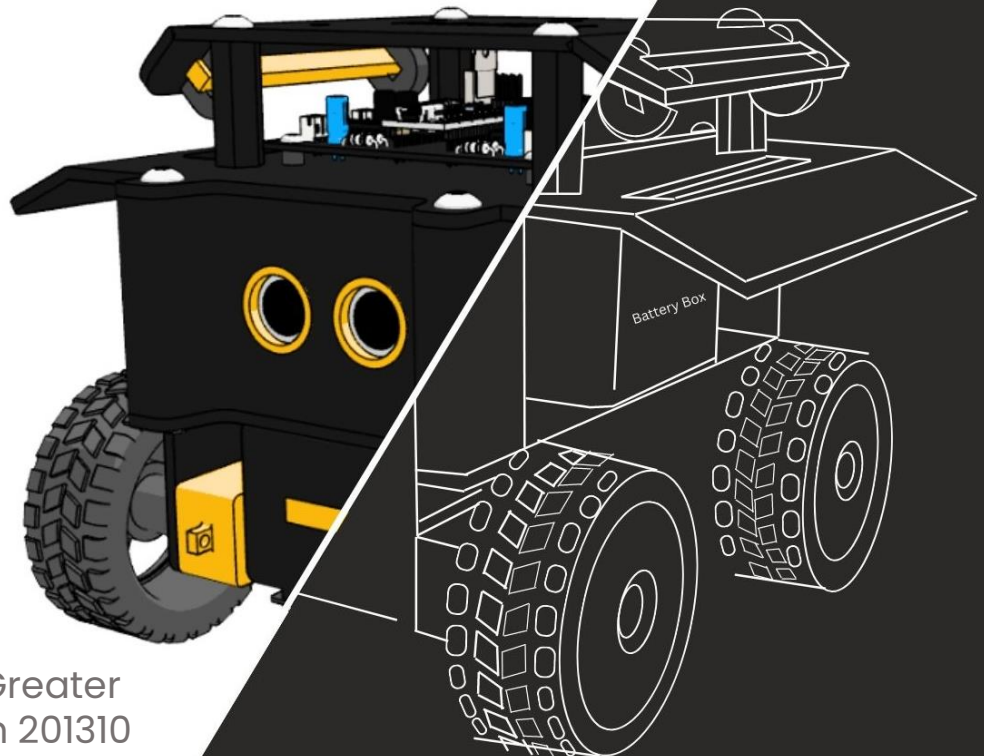
hadronrobotlabs.com



[Hadronrobo Labs](https://www.youtube.com/Hadronrobo Labs)



[hadronrobo_labs](https://www.instagram.com/hadronrobo_labs)



Knowledge Park III, Greater
Noida, Uttar Pradesh 201310
contact@hadronrobotlabs.com
9310371260
Copyright ©2023