

ROVERBOT

SETUP GUIDE



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RoverBot

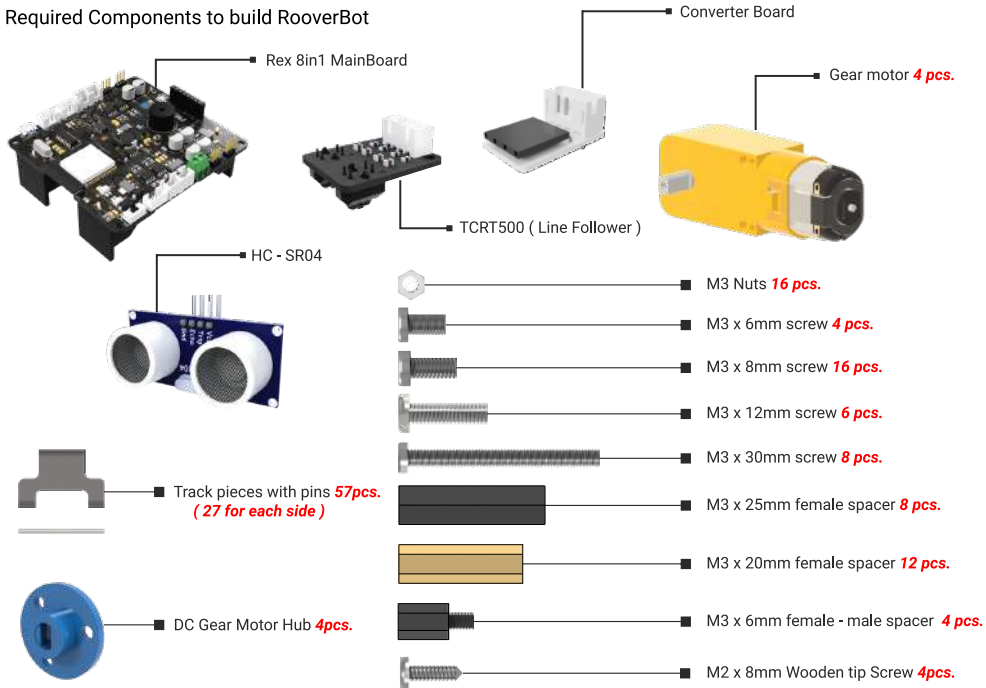
Unlike other REX robots, RoverBot uses pallets in its movement mechanism. Thanks to its tracked structure, it has more mobility in rugged terrain than the other REX robots.

Advantages of Tracked Vehicles Compared to Other Vehicles

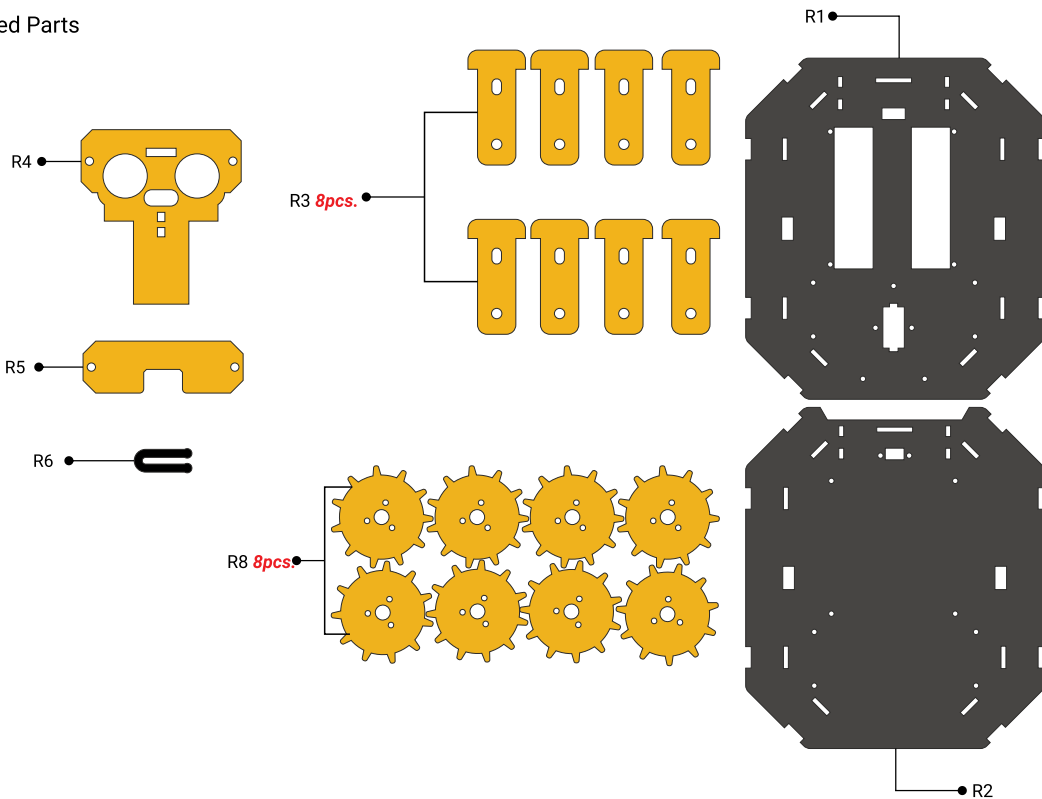
- It can move more easily on rugged terrain than other vehicles because the surface area of the part that provides the movement is wider.
- It can climb steeper ramps than other vehicles because it holds onto the ground better thanks to terrain.

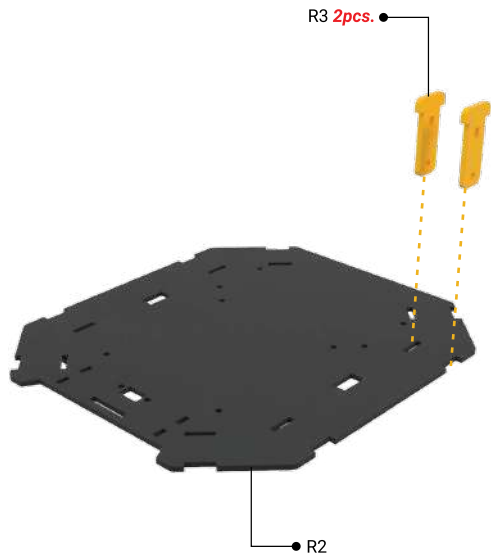
The Installation Steps

Required Components to build RooverBot

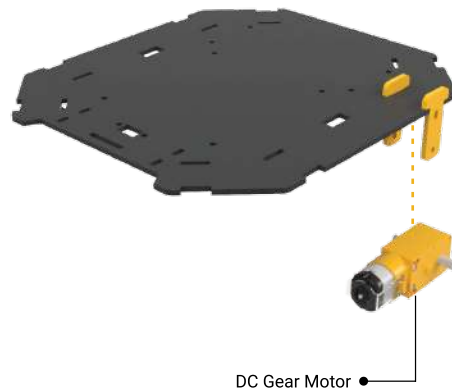


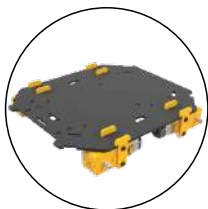
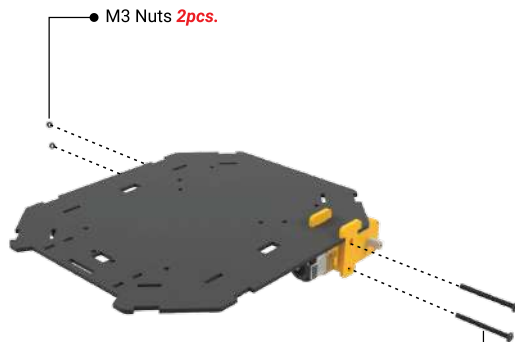
Required Parts



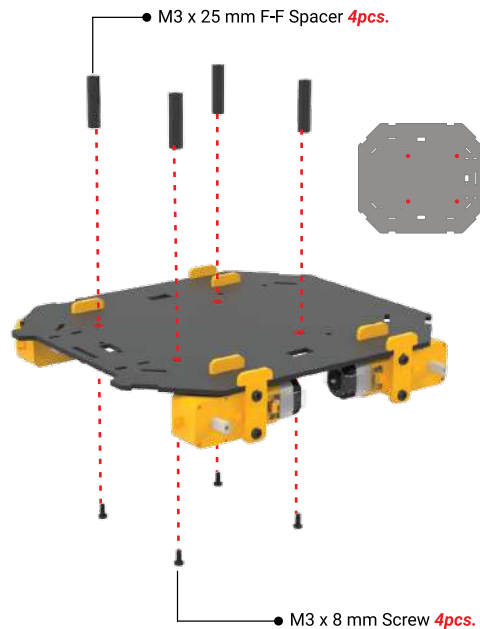


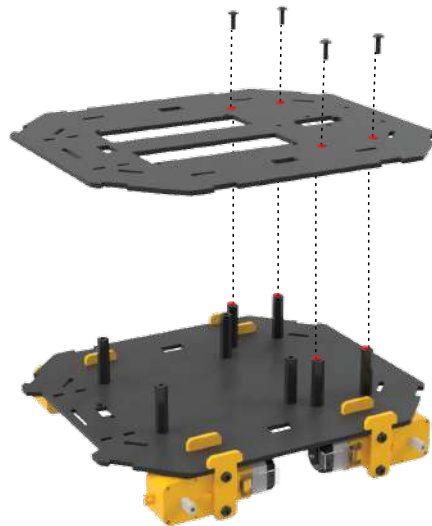
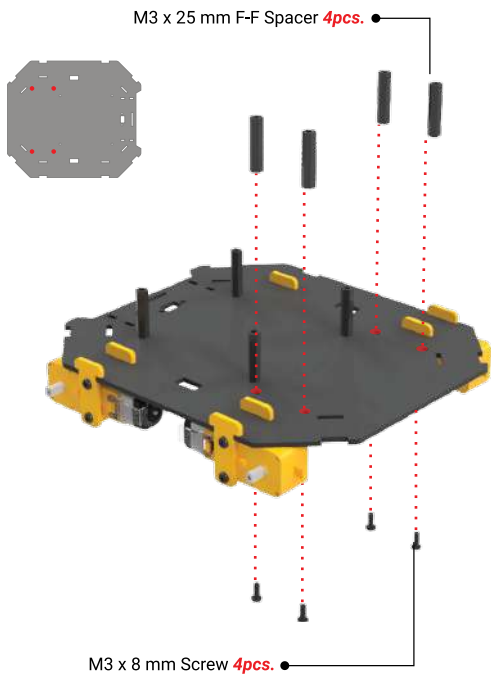
Cables should be oriented inward.

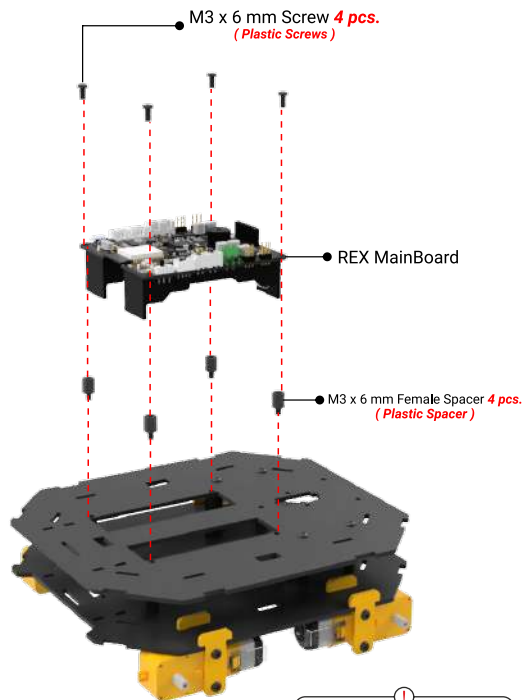




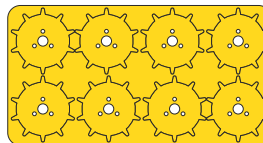
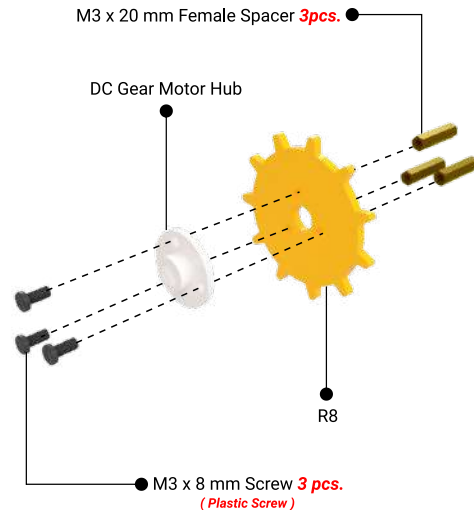
Complete the same steps
for rest of the DC gear motors.





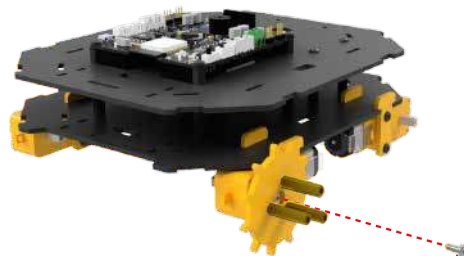


①
In order to prevent any short circuit issues, please use **plastic screws and spacers for electronic cards.**

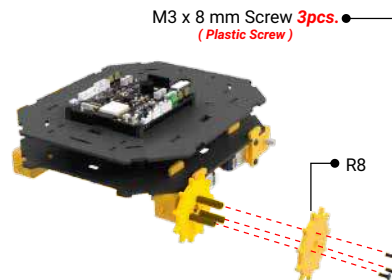


In order to prevent tracks beign demounted please use R8 part from this plate.

(If you don't have this plate inside the package that means you have updated version of kit and you can proceed.)

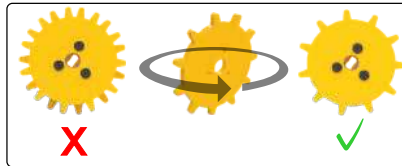


M2 x 8 mm Wooden Screw



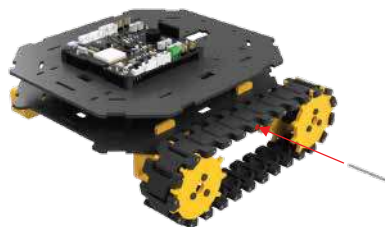
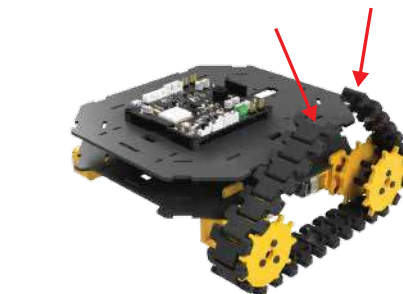
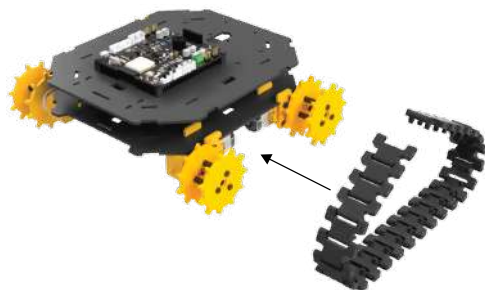
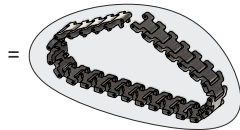
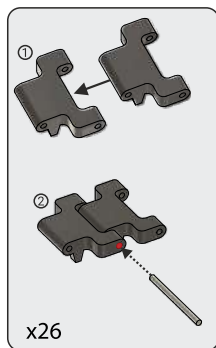
M3 x 8 mm Screw **3pcs.**
(Plastic Screw)

R8

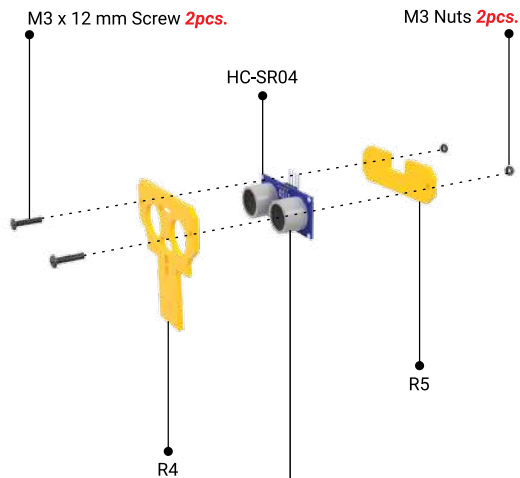


If you encounter any issues with misaligned gears or misaligned holes, we highly recommend flipping the piece as a solution. This straightforward action will effectively resolve the problem.





Apply same assembly steps for the other side.

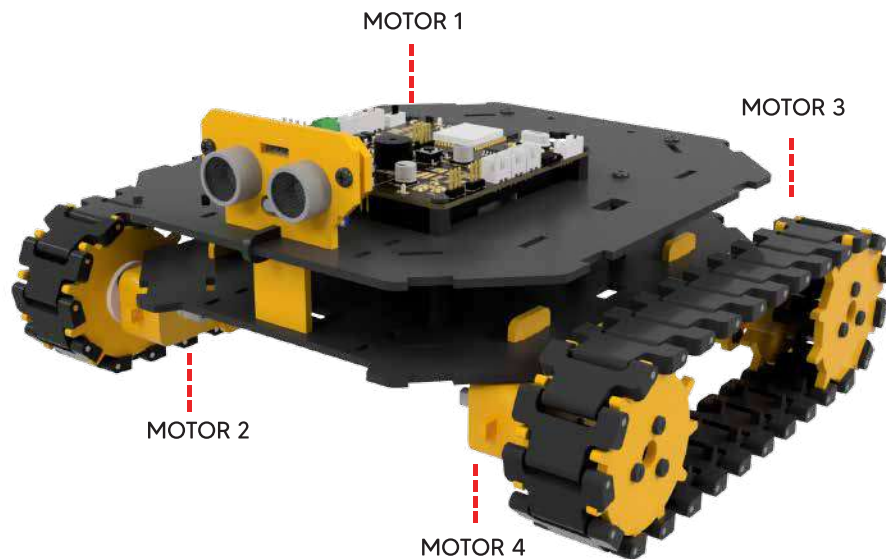


Make sure HC-SR04 pins are facing upward as in the image.

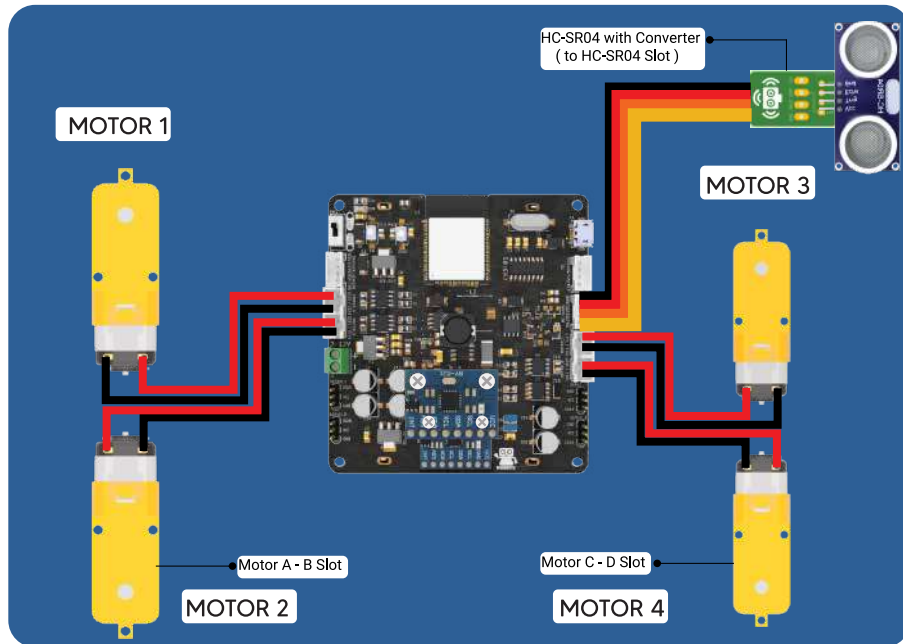


R6

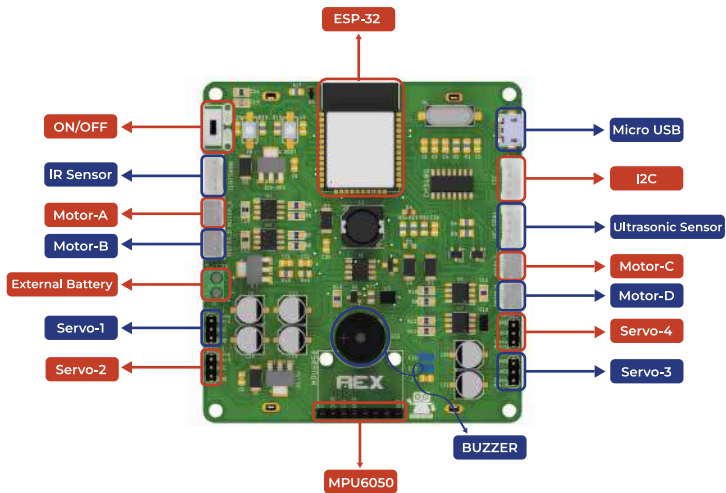




The Circuit Diagram



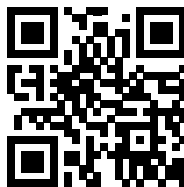
REX Main Board Diagram



Arduino Code

RoverBot.ino

```
1  //""REX SInI Rover Bot""
2  //Check the web site for Robots https://rex-rdt.readthedocs.io/en/latest/
3  // you can also control arm bot in this code.
4  #define CUSTOM_SETTINGS
5  #define INCLUDE_GAMEPAD_MODULE
6
7  #include <DabbleESP32.h>
8  #include <Arduino.h>
9  #include <analogWrite.h>
10 #include <ESP32Servo.h>
11
12 enum MOTOR_TYPE {
13     DC_MOTOR,
14     SERVO_MOTOR
15 };
16 enum MOTOR_TYPE motorType = DC_MOTOR;
17
18 int position1 = 90;
19 int position2 = 90;
20 int position3 = 90;
21 int position4 = 90;
22
23 #define MotorA1 23
24 #define MotorA2 15
25
26 #define MotorB1 33
27 #define MotorB2 32
28
29 #define MotorC1 16
30 #define MotorC2 17
31
32 #define MotorD1 14
33 #define MotorD2 27
34
35 #define horn 2
```



Scan the QR code to go to
the whole code and the
necessary libraries.





GitHub

rbt.ist/rexgithub



Rex DOC

rbt.ist/rexrdt



Shop.robotistan/Rex

rbt.ist/rexrdt