

TRACKERBOT

SETUP GUIDE



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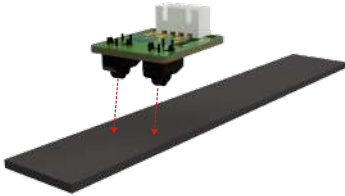
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TrackerBot

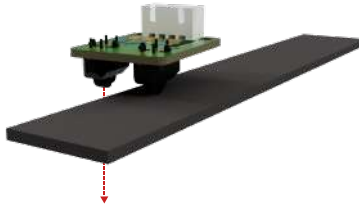
TrackerBot detects the black lines on the track and follows these lines, thanks to the line follower sensor under it. There are two IR transceiver sensors on the line follower sensor. According to the value read by these sensors, TrackerBot detects the lines on the track. Different colored lines give different analog values. According to the adjustments you make in the code, TrackerBot can also follow lines of different colors.

How Does Line Follower Sensor Algorithm Work?

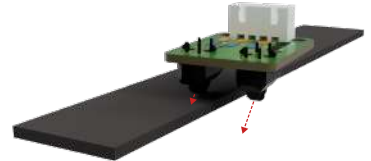
TrackerBot decides its actions by taking different values from the line follower sensor. These three different values are explained in the image below.



L=1 R=1



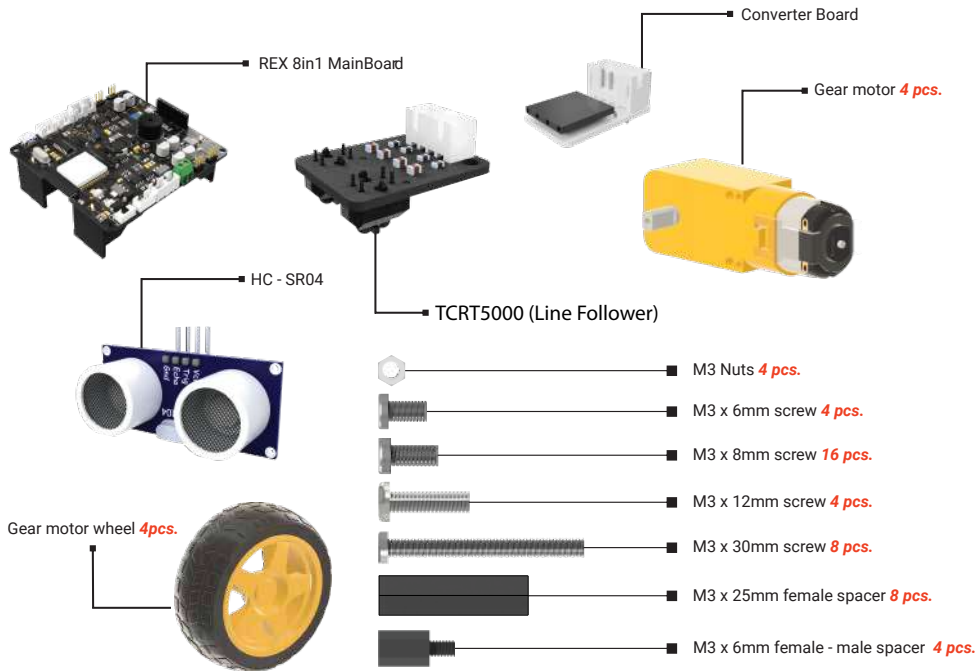
L=1 R=0



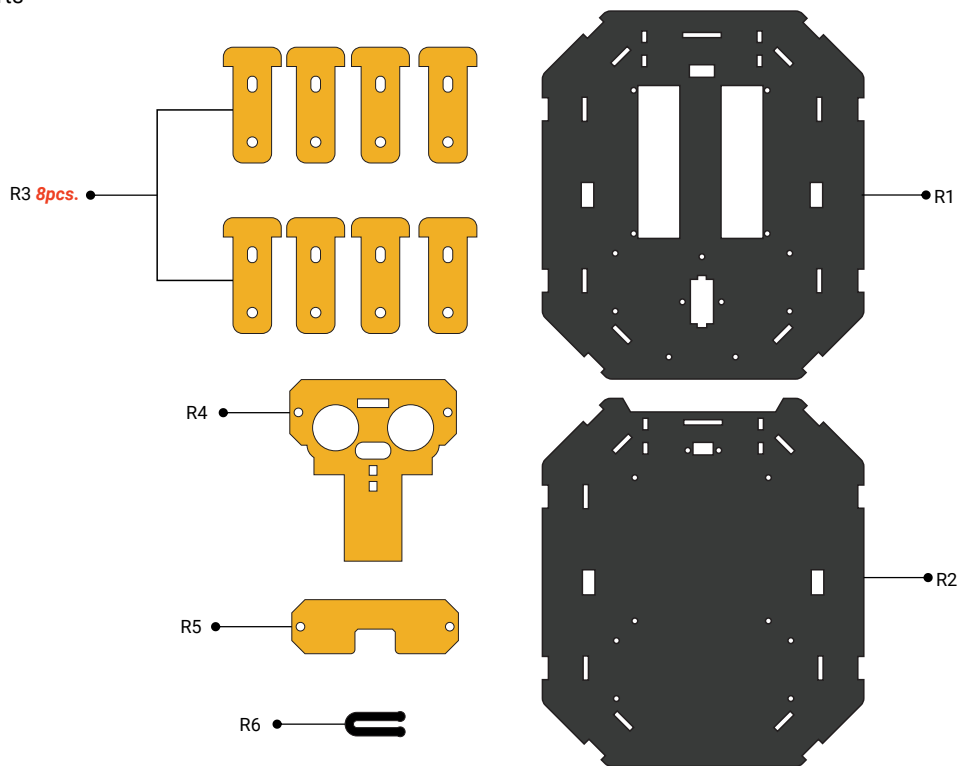
L=0 R=1

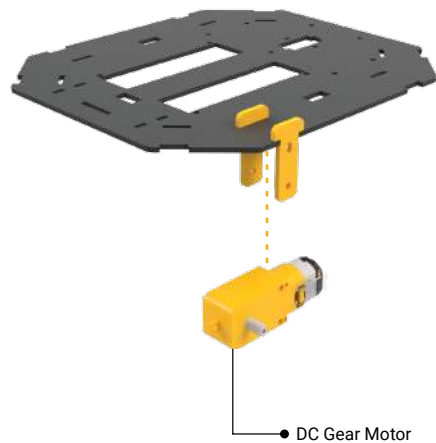
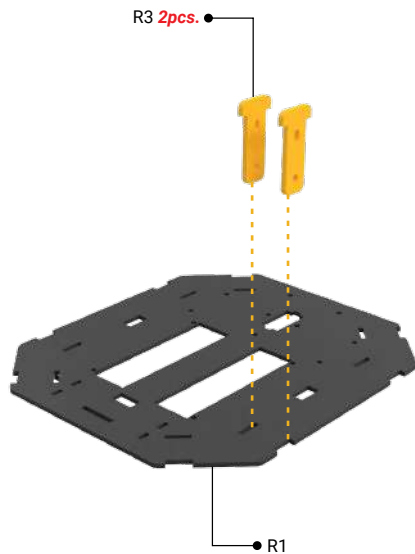
The Installation Steps

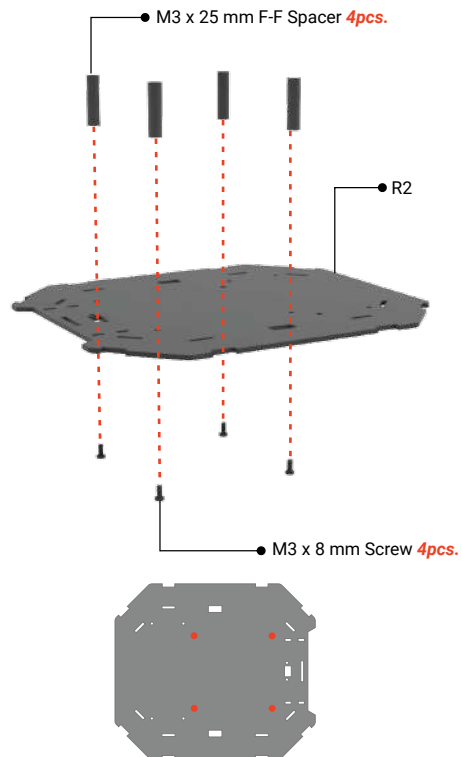
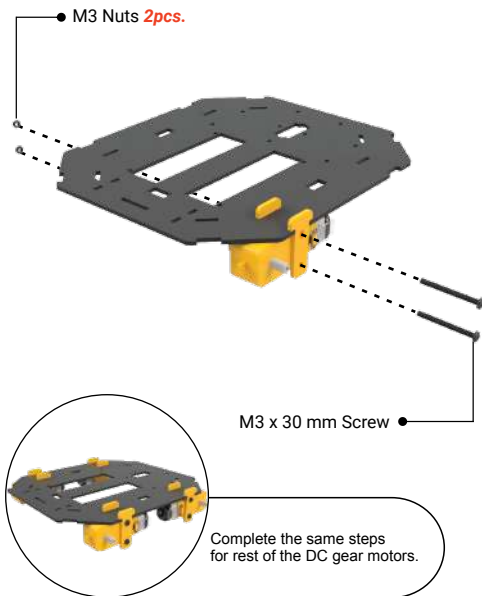
Required Components to build TrackerBot

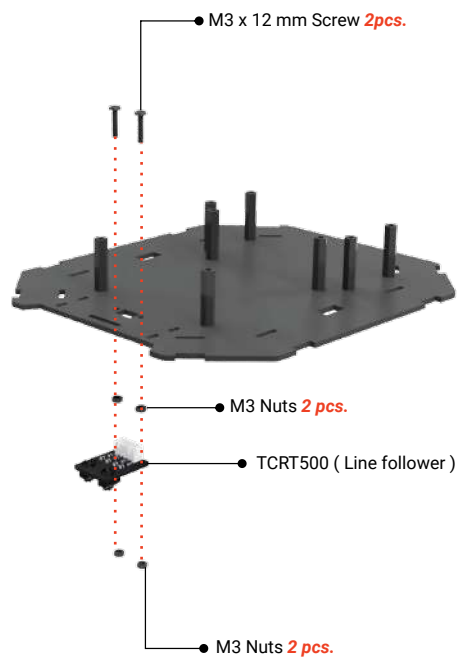
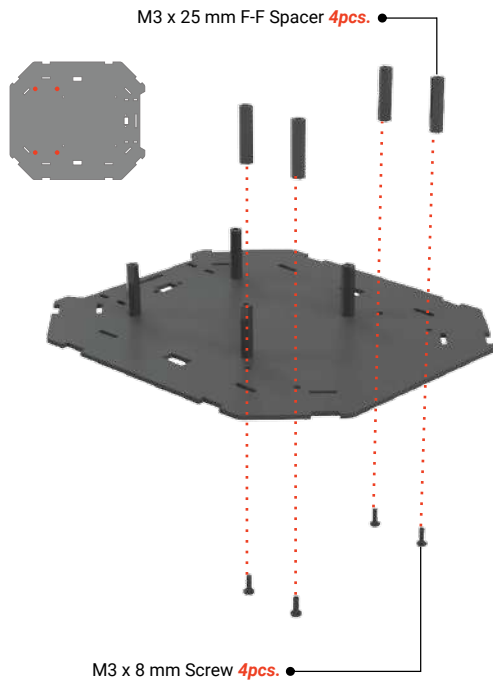


Required Parts

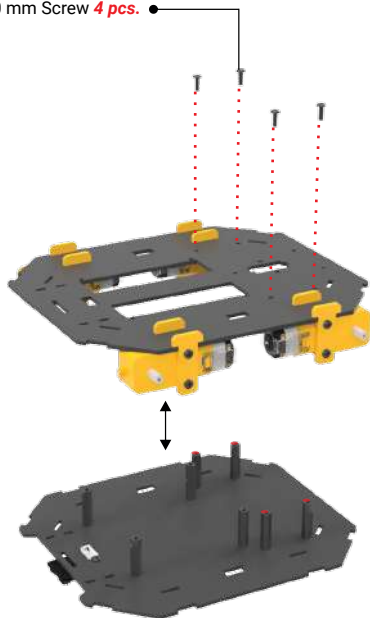




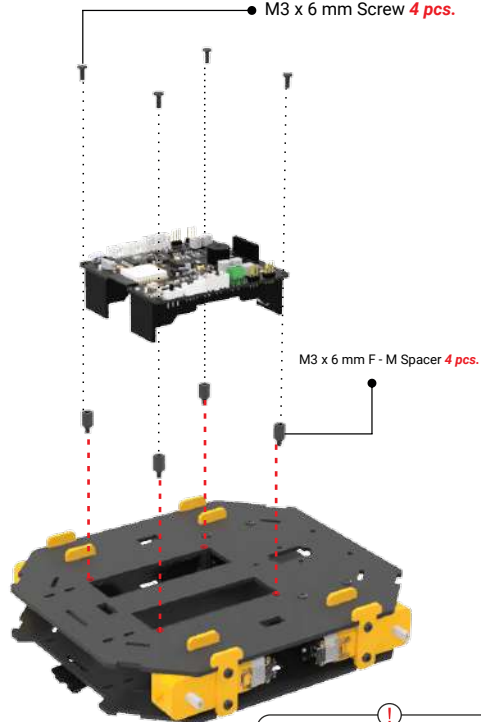




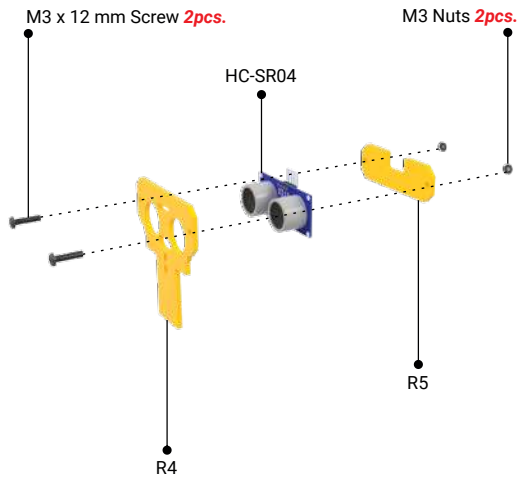
M3 x 10 mm Screw **4 pcs.**

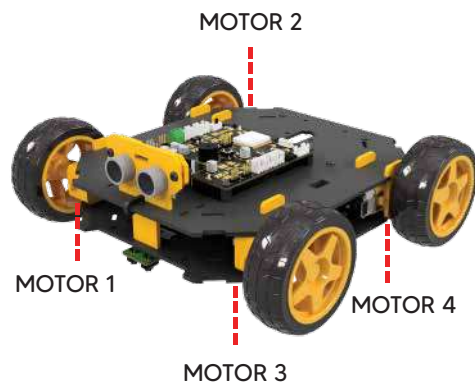
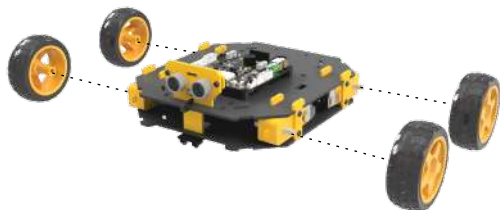


M3 x 6 mm Screw **4 pcs.**

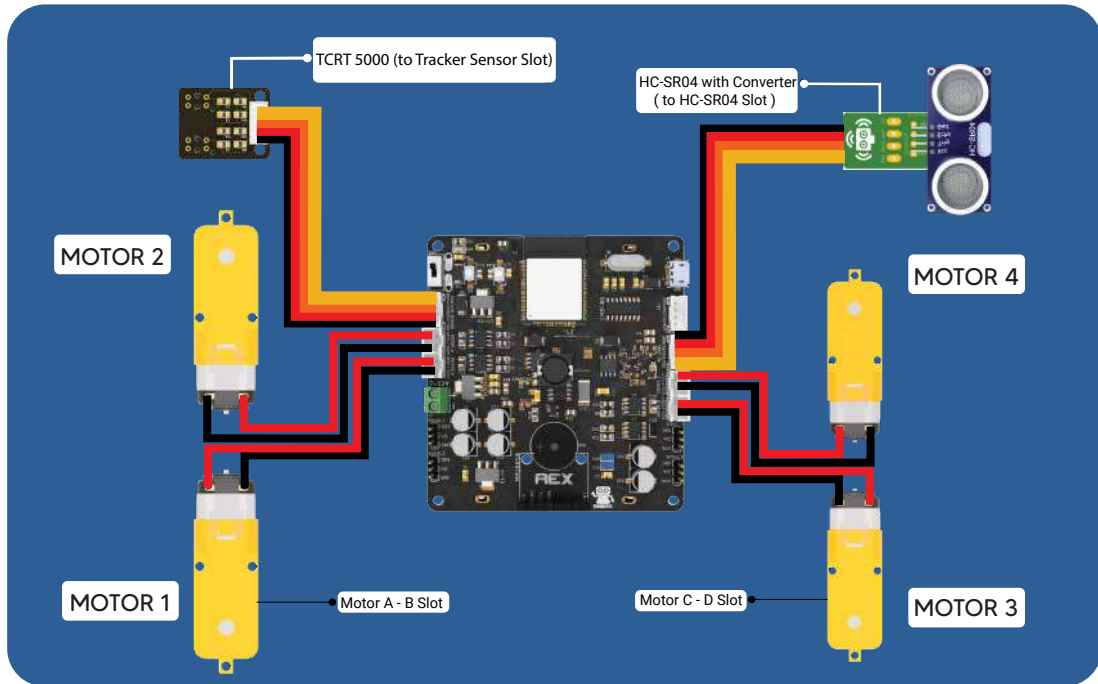


In order to prevent any short circuit issues, please use **plastic screws and spacers for electronic cards.**

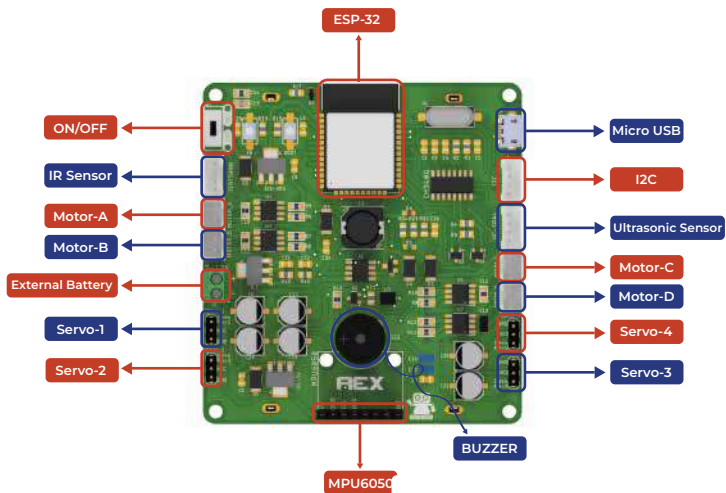




The Circuit Diagram



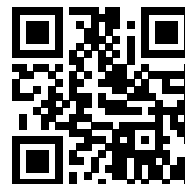
REX Main Board Diagram



Arduino Code

TrackerBotino

```
1  /**REX 8in1 Tracker Bot**  
2  //Check the web site for Robots https://rex-rdt.readthedocs.io/en/latest/  
3  #define left_sensor 34 // IR pins  
4  #define right_sensor 35 // IR pins  
5  
6  int trigPin = 4; // Trigger  
7  int echoPin = 5; // Echo  
8  long duration, cm;  
9  
10  
11 //define motor pins and speeds  
12 #define MotorA1 15  
13 #define MotorA2 23  
14  
15 #define MotorB1 32  
16 #define MotorB2 33  
17  
18 #define MotorC1 17  
19 #define MotorC2 16  
20  
21 #define MotorD1 27  
22 #define MotorD2 14  
23  
24 #define mid 160  
25 #define slow 150  
26 #define reverse 120  
27  
28 #define STOP 0  
29 #define FWD 1  
30 #define BWD 2  
31 #define RIGHT 3  
32 #define LEFT 4  
33 #define THRESHOLD 2500  
34  
35  
36 uint8_t directionStt = STOP;  
37 uint8_t oldDirection = STOP;  
38  
39 unsigned long reverseTime = 0;  
40
```



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