

# REX8



GitHub  
rbt.ist/rexgithub

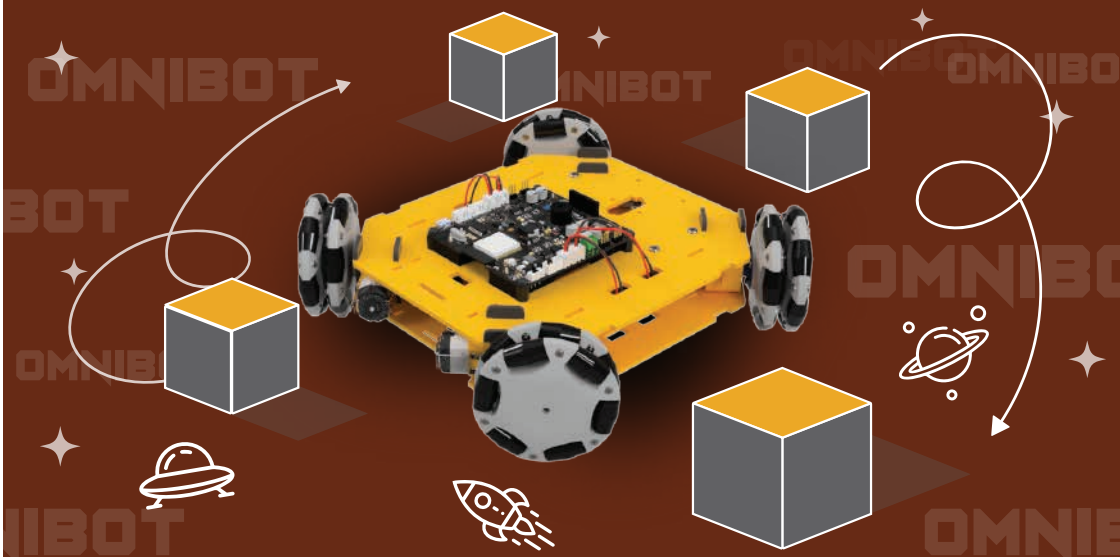


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# OMNIBOT SETUP GUIDE



## OmniBot

Unlike other REX robots, OmniBot uses specially designed omni wheels. These wheels enable 360° easy movement for OmniBot. Thanks to the omni wheels, OmniBot can move at any angle without the need for turning.

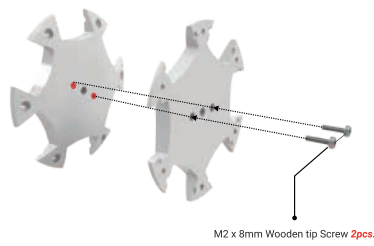
### How Does Omni Wheels Work?

OmniBot is a robot that utilizes 4 DC motors. Let's analyze how a robot using 4 omni wheels moves with the image below.



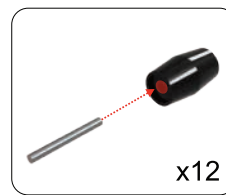
### The Installation Steps of The Omni Wheels

①



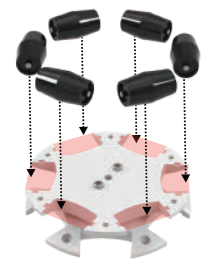
M2 x 8mm Wooden tip Screw 2pcs.

②



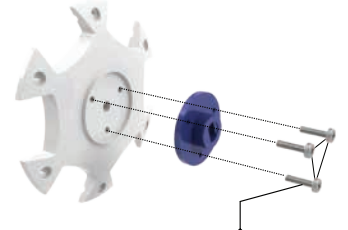
x12

③



M2 x 8mm Wooden tip Screw 3pcs.

④



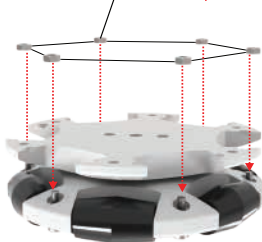
M2 x 8mm Wooden tip Screw 3pcs.

⑤



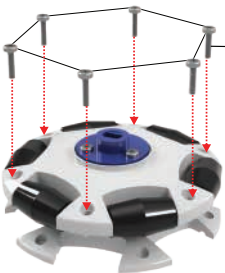
M2 x 8mm Screw 6pcs.

⑦



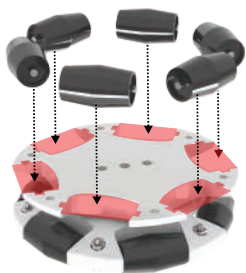
M2 Nut 6pcs.

⑥



M2 x 8mm Screw 6pcs.

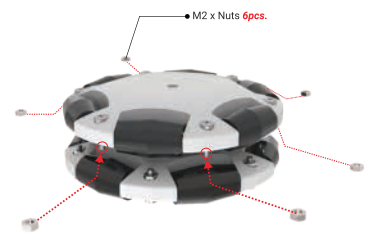
⑧



⑤

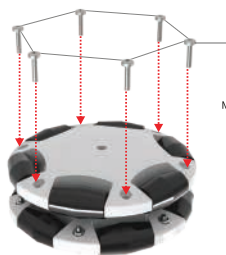


⑦



M2 x Nuts 6pcs.

⑥

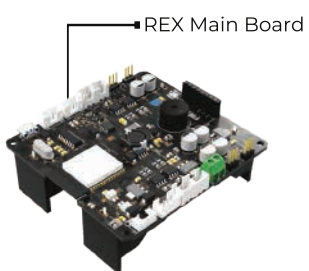


M2 x 8mm Screw 6pcs.

⑧



### Components of TrackerBot



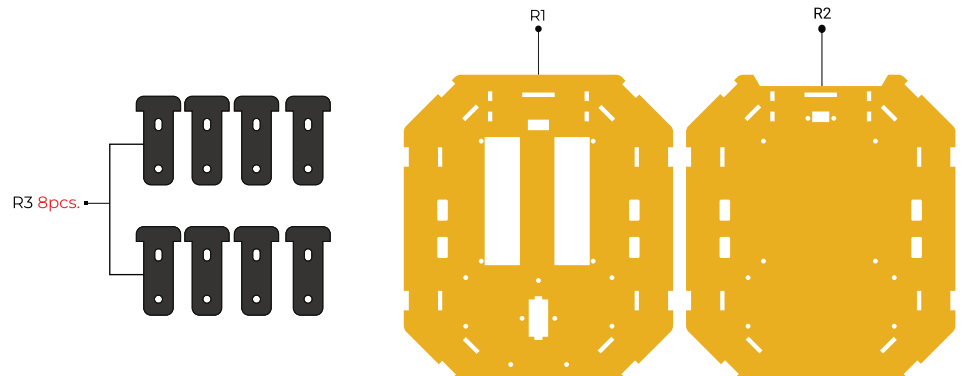
REX Main Board

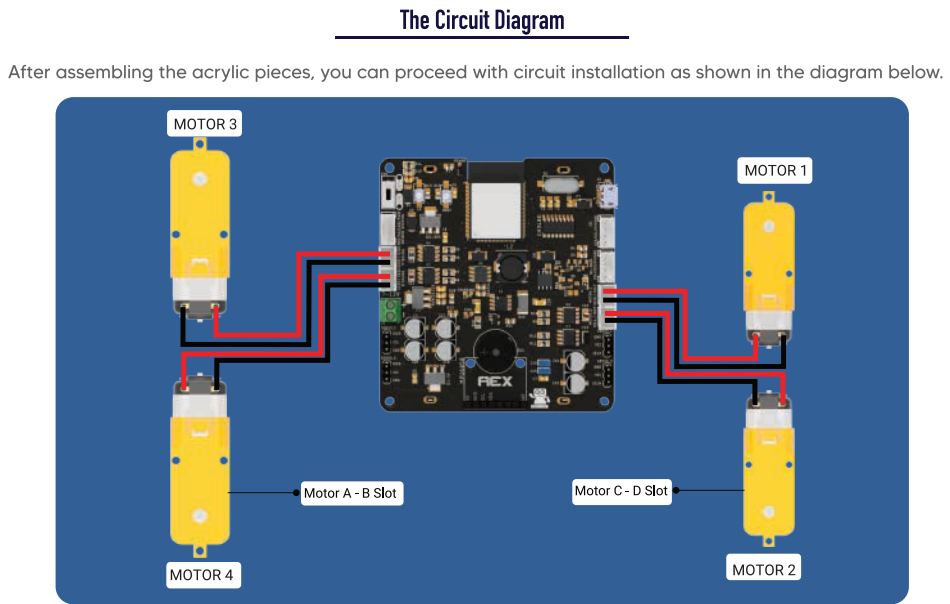
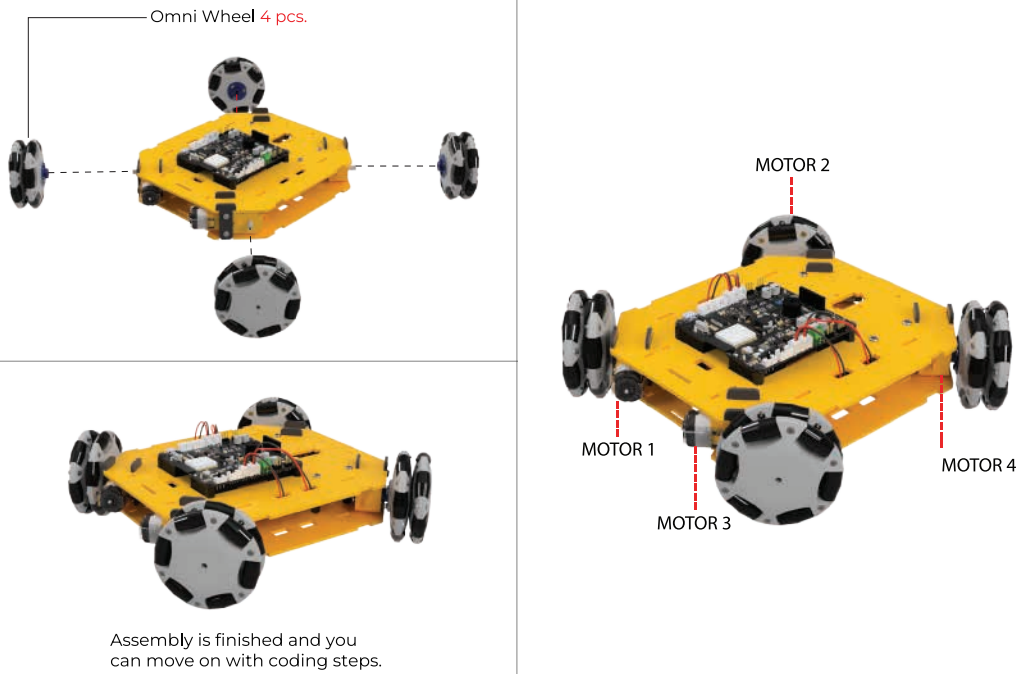
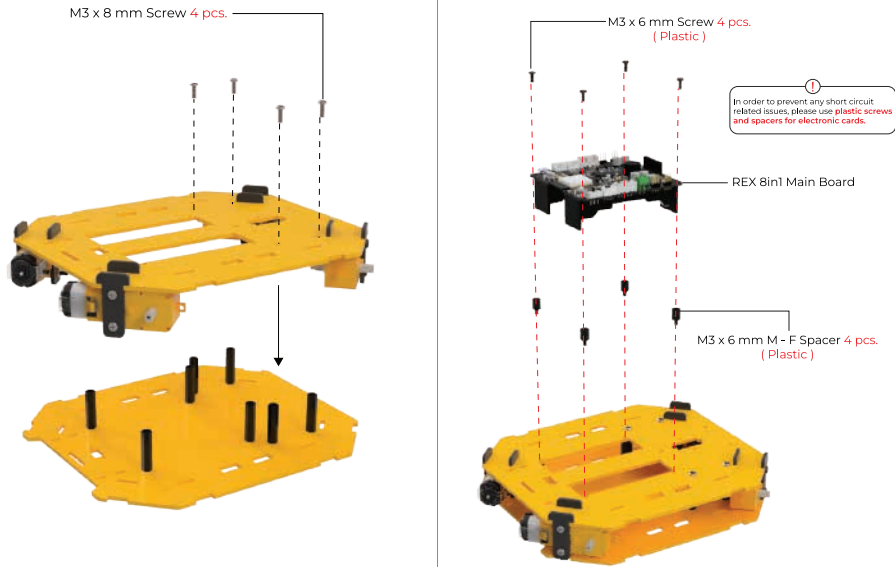
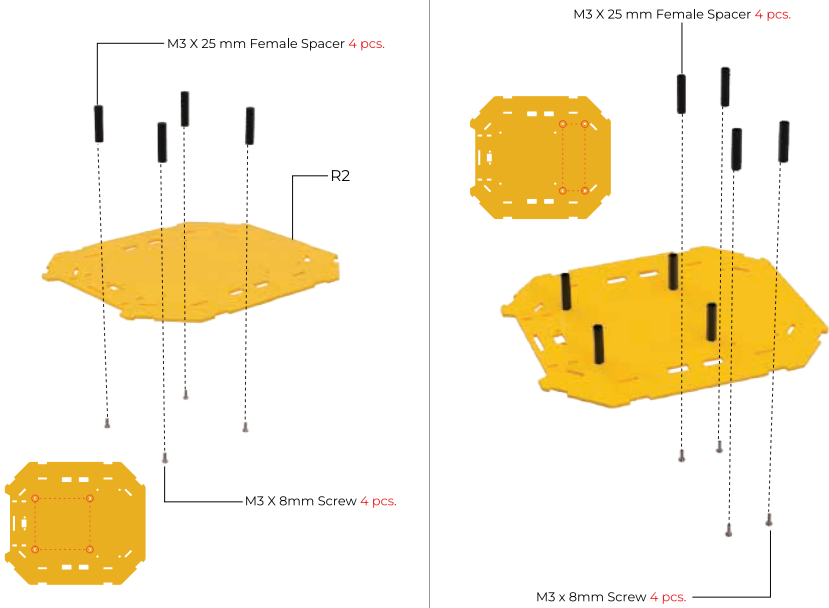
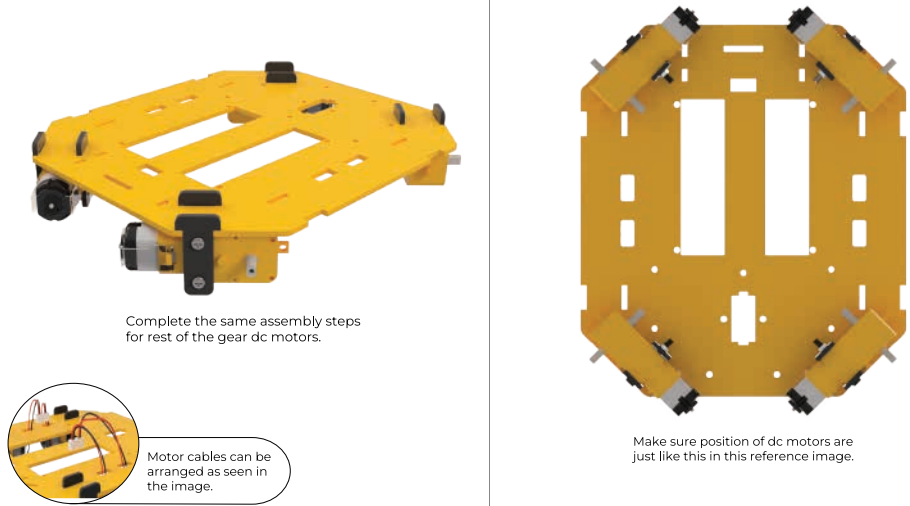
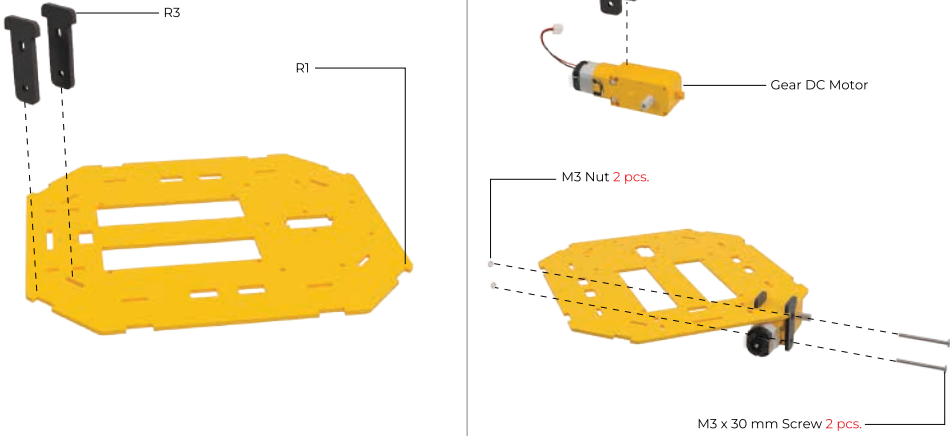
DC Gear Motor 4pcs.



Omni Wheel 4 pcs.

- M3 Nut 10 pcs.
- M3 x 6 mm Screw 4 pcs. - ( Plastic )
- M3 x 8 mm Screw 12 pcs.
- M3 x 30 mm Screw 8 pcs.
- M3 x 6 mm M-F Spacer 4 pcs.
- M3 x 25 mm Female Spacer 8 pcs.





### Arduino Code

```
OmniBotino
1 //***REX Bin1 Omni Bot***
2 //Check the web site for Robots https://rex-rbt.reaibedus.com/en/latest/
3
4 #define CUSTOM_SETTINGS
5 #include <Arduino.h>
6 #include <ESP8266.h>
7 #include <ESP8266.h>
8 #include <ESP8266.h>
9 #include <ESP8266.h>
10 #include <ESP8266.h>
11
12
13 //define pins of motors
14 //DC Motor 1
15 #define MotorA1 21
16 #define MotorA2 15
17
18 //DC Motor 2
19 #define MotorB1 31
20 #define MotorB2 21
21
22 //DC Motor 3
23 #define MotorC1 16
24 #define MotorC2 17
25
26 //DC Motor 4
27 #define MotorD1 14
28 #define MotorD2 27
29 #define horn 2
30
31 #define low_s 300
32 #define mid_s 250
33 #define high_s 250
34
35 int i = 0;
36 void setup() {
37   //active pins which is defined
38   pinMode(horn, OUTPUT);
39   pinMode(MotorA1, OUTPUT);
40   pinMode(MotorA2, OUTPUT);
41   pinMode(MotorB1, OUTPUT);
42   pinMode(MotorB2, OUTPUT);
43 }
```

<http://rbt.ist/omnibotcode>



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