Introduction

The ROBOMASTER™ S1 is an educational robot inspired by the DJI™ RoboMaster competition. The S1 offers comprehensive control and an immersive driving experience, thanks to the omnidirectional chassis, agile Mecanum wheels, flexible gimbal, and stable, low-latency image transmission in first person view (FPV). Users can also target objects and battle other robots with the S1’s blaster.

The S1 supports Scratch and Python programming. With DJI’s project-based graded tutorials, users can gradually master programming theory and robot system knowledge.

The S1 features Solo mode and Battle mode where users can practice their skills and compete against others. To control the robot, users can choose from the RoboMaster app on a mobile device, the gamepad, or the keyboard and mouse.

Downloading the RoboMaster App and Watching Tutorial Videos

Search for the RoboMaster app in the App Store or Google Play or scan the QR code to download the app on your mobile device.

Visit the official DJI website https://www.dji.com/robomaster-s1/video or go to the app and enter the Guide page to watch the tutorial videos for assembly and use. You can also assemble the robot according to the assembly guide in the quick start guide.

- The RoboMaster app supports iOS 10.0.2 or later or Android 5.0 or later.
- Users can also download the RoboMaster software for Windows from the official DJI website on a computer to control the robot with a keyboard and mouse. https://www.dji.com/robomaster_app

After assembly, use your DJI account to activate the robot in the RoboMaster app. Activation requires an internet connection.

Specifications

<table>
<thead>
<tr>
<th>Structure</th>
<th>Intelligent Battery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>Capacity 2400 mAh</td>
</tr>
<tr>
<td>Weight</td>
<td>Charging Voltage 12.6 V</td>
</tr>
<tr>
<td>Intelligent Controller</td>
<td>Battery Type LiPo 3S</td>
</tr>
<tr>
<td>Operating Frequency</td>
<td>Energy 25.92 Wh</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2.4 GHz, 5.8 GHz, 5.1 GHz (limited to indoor use)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions 320 × 240 × 270 mm (L × W × H)</td>
<td></td>
</tr>
<tr>
<td>Weight Approx. 3.3 kg</td>
<td></td>
</tr>
</tbody>
</table>

In the Box

Check that all of the following items are in your package. If any item is missing, contact DJI or your local dealer.
Top Layer:

- A
  - Manuals
    - Quick Start Guide
    - Disclaimer and Safety Guidelines - At a Glance

- B
  - Vision Marker

- C
  - B1 Mecanum Wheel Roller

- D
  - D1 M3508i Brushless Motor and ESC

- E
  - E1 Damping Ring Bracket

- F
  - E2 Bottled Gel Beads
  - F1 Gimbal

- G
  - G1 Camera

- H
  - H1 Front Axle Cover
  - H2 Front Axle Module Base
  - H3 Chassis Cover
    Attached to the chassis middle frame before delivery.

Middle Layer:

- D
  - D1 M3508i Brushless Motor and ESC

- E
  - E1 Damping Ring Bracket

- F
  - E2 Bottled Gel Beads
  - F1 Gimbal

- G
  - G1 Camera

- H
  - H1 Front Axle Cover
  - H2 Front Axle Module Base
  - H3 Chassis Cover
    Attached to the chassis middle frame before delivery.

* (+x) refers to the quantity of spare items included in the package.
H4 Chassis Middle Frame (Intelligent Battery included)

H5 Chassis Cabin Cover
Attached to the chassis middle frame before delivery.

I1 Hit Detector

J1 Intelligent Controller

K1 Speaker

Bottom Layer:

L1 Left-Threaded Inner Hub

L2 Left-Threaded Outer Hub

L3 Right-Threaded Inner Hub

L4 Right-Threaded Outer Hub

L5 Mecanum Wheel Damping Ring

L6 Motor Mounting Plate

L7 Screwdriver Handle

M1 Intelligent Battery Charger
The screw box includes the following items:

1. Front Rubber Stop  
2. T3 Screw  
3. M3-B Screw  
4. M3-A Screw  
5. T2 Screw  
6. M4-B Screw  
7. M4-A Screw  
8. Rubber Shock Ring  
9. Screwdriver Bit

* (+x) refers to the quantity of spare items included in the package.
R1
Motion Controller

S1
X-Shaped Front Shaft Cover

S2
Cable Retainer

S3
Mecanum Wheel Mounting Plate

S4
Grease

S5
Masking Tape

S6
Camera Cable

S7
Data Cables

S8
23 cm x2

S9
12 cm x4
1. Preparing the Gel Beads

Refer to the label on the bottle for more information on how to soak the gel beads properly before assembly.

2. Charging the Battery

Charge the battery to bring it out of hibernation before using for the first time.

3. Preparing the Screwdriver

The package includes a screwdriver handle and a double-head bit. The smaller end of the bit is for the T2 screws, and the bigger end is for the other screws.

4. Legend

- **Indicates that the bottom of the robot is displayed.**

- **Refers to where the required accessories are located in the screw box.**

5. Cable Connection Instructions

Connect the **black** and **orange** cables to the ports with the corresponding color.

- **Follow the instructions for cable connection and wiring to avoid cable damage.**

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**Preparation**

- **Wear the safety goggles to avoid injuring your eyes while assembling the components.**

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**2. Charging the Battery**

Charge the battery to bring it out of hibernation before using for the first time.

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**3. Preparing the Screwdriver**

The package includes a screwdriver handle and a double-head bit. The smaller end of the bit is for the T2 screws, and the bigger end is for the other screws.

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**4. Legend**

- **Indicates that the bottom of the robot is displayed.**

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**5. Cable Connection Instructions**

Connect the **black** and **orange** cables to the ports with the corresponding color.

- **Follow the instructions for cable connection and wiring to avoid cable damage.**
Overview

1. Left-Threaded Mecanum Wheels
2. Right-Threaded Mecanum Wheels
3. Chassis Cover
4. Chassis Middle Frame
5. Front Axle Cover
6. Front Axle Module Base
7. X-Shaped Front Shaft Cover
8. Motion Controller
9. Chassis Left Armor
10. Chassis Right Armor
11. Chassis Rear Armor
12. Hit Detectors
13. Chassis Front Armor
14. M3508I Brushless Motors and ESCs
15. Motor Mounting Plates
16. Gimbal
17. Blaster
18. Gel Bead Container
19. Speaker
20. Intelligent Controller
21. Camera
22. Chassis Cabin Cover
23. Intelligent Battery
Assembly Guide

Each item has a code. Refer to the In the Box section and check the corresponding code to find out where each item is located in the package.
Powering On and Activating the S1

Insert the Intelligent Battery into the S1, press and hold the power button on the Intelligent Battery to power it on, and connect to the app to activate the S1.

Visit the product page on the official DJI website for more information.

https://www.dji.com/robomaster-s1