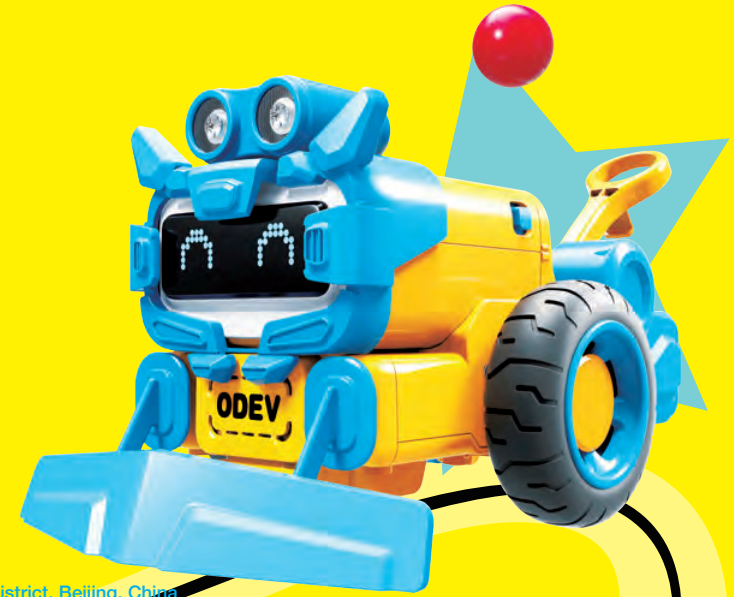
ROBY

ODEV



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ODEV

ROBY

Product Manual

Thank you for purchasing this product.
Please read the manual carefully to ensure
the normal usage of the product.

ENTERTAINING PROGRAMMING INTERACTING INTELLIGENCE
AGE 8+

ODEV

Plant a seed of dream for children

Precautions

- Please use your Roby under the instruction of manual.
- Roby is suitable for children of 8 years old and above, please use it under the supervision of parents.
- Small parts and small balls are contained in the Roby, which may cause the risk of suffocation to infants, young children and pets. Please place them in the location which is far away from infants, young children and pets.
- Do not shoot on eyes or face, and do not shoot with the object which is not provided by this toy.
- If your Roby is damaged, please collect all components immediately and store them in the safe place which is far away from the children.
- If the battery of your Roby is damaged and exposed, please do not use it. Do not touch or contact any liquid within the battery or cross the circuit of battery to prevent burns, electric shock or fires.
- Please do not try to disassemble, pierce, twist or repair your Roby, which may expose battery or electrical wiring. Please do not put your Roby into the water, which may cause it unable to operate.
- The appropriate operation temperature of Roby shall be 0°C to 30°C, the excess of operation temperature may increase the risk of fire.
- Please do not place any heavy object on your Roby, which may cause damage and exposure of battery or electrical wiring.
- Please do not try to clean your Roby by using solvent, denatured alcohol or flammable liquid. It may damage your Roby and may cause it unable to operate or cause fire.
- Please do not place your Roby within micro-wave oven and high-pressure vessel. It may cause fire or lead to explosion of battery.
- It is recommended to use Roby in the indoor even ground.
- Important information is contained in the package and manual, please retain them for use later.

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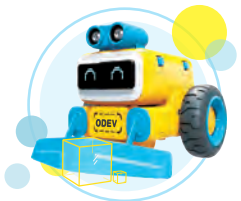
Product Introduction

Roby is an educational programming robot kit, including main cart and extension accessories.

Roby can be controlled and programmed through the APP ***ODEV Roby*** on the phone and tablet computer, or conducted graphical programming through APP ***Roby Blockly .***

Accessory I: Barrier Clearance Giant

Clear barrier for freely travel.



Accessory II: Body Protection Armor

Put up armor for cool transfiguration.

Accessory III: Miraculous Paint Brush

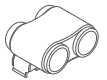
Enjoy the magic of programming combined with painting, and allow various novel creativity to be reflected in the paper.

Accessory IV: Stone-throwing Brave Warrior

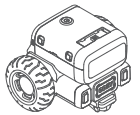
Aim at it and shoot, hit the target by one shot, and double the attack force of the knight.

Parts List

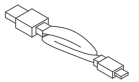
1× ultrasonic sensor



1× main cart

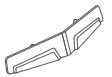


1× USB charging cabl

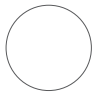


2× connection part of bulldozing arm

1× bulldozing arm



1× small ball



1× main body of armo

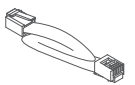
1× left ear of armor

1× right ear of armor

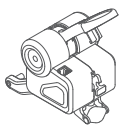
1× pen clip

1× shield

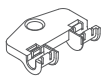
1× communication line



1× stone-throwing cart



1× connection part of stone-throwing cart



2× spring pin

1× tracking map

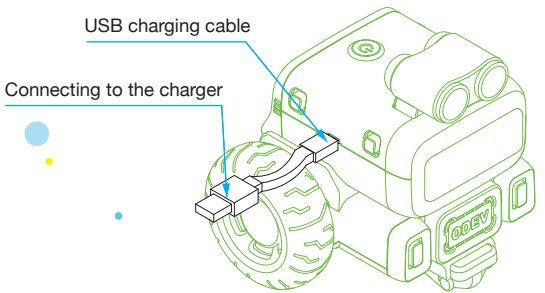
* Partial components within the packaging box have been assembled in advance

Battery and Charging Precautions

1. 3.7 V rechargeable lithium battery is adopted in the product, which cannot be disassembled and replaced. If it is damaged, contact customer service to repair.
2. The rechargeable battery shall be charged within the toy, and must be charged by the adult or under the supervision of adult.
3. Charger is not attached with the product, and charger recommended by the Company shall be used for the toy (the rated voltage of charger shall be 5.2 V ± 5%, and the rated current shall be no less than 2 A), so the power adapter of phone or tablet computer meeting above conditions can be used;
4. Roby cannot be connected to more than a power supply.
5. To extend the service life of rechargeable battery, please conduct charging/discharging for battery for every 3 months.
6. Check regularly the power supply and USB charging cable to check if there are damages occurred in power supply, plug, enclosure and other components. If any damages occur, those components shall not be used before the repair.
7. Please do not charge near flammable material, flammable surface (timber floor, carpet, etc.) or conducting surface.
8. Please do not use the Roby while charging. Unplug the USB charging cable immediately after completing charging of Roby.
9. Do not cover Roby during the charging process.
10. Please ensure to correctly use Lithium battery (charging, discharging and storing) according to the instruction of manual. You have to assume all responsibilities if any losses are caused by non-compliance of operational specifications. The manufacturer and dealer shall not assume any responsibilities for personal injury or property damage related to the usage of Lithium battery.
11. Lithium battery will cause pollution to the environment, please do not discard it randomly.

Instruction on Charging

Ⅱ Charging



Battery Capacity

Parameter of Lithium battery	
Battery capacity	1650mAh
Rated voltage	3. 7V
Charge final voltage	4. 2V
Discharge voltage	2. 75V

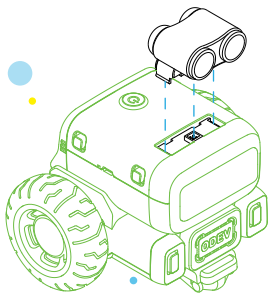
Remarks:

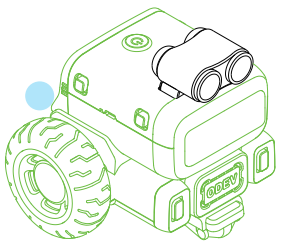
① When the power of the battery is too low, the power supply status indicator shall be red, and the power supply status indicator shall be blue during charging, and power supply status indicator shall be off after completing battery charging.

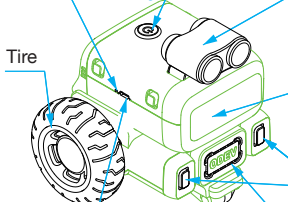
② Enter into charging mode during charging, with LED screen displaying charging status. There will be no reaction when pressing the power button, and APP cannot control it as well. Please unplug USB charging cable after completing battery charging and re-start it.

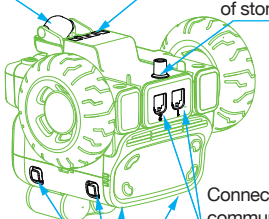
Brief Introduction on Main Cart

- Please install ultrasonic sensor correctly first before using.

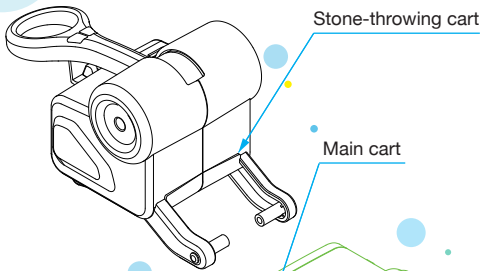


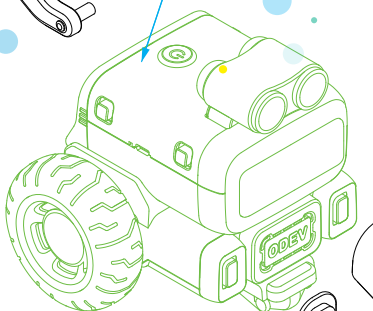


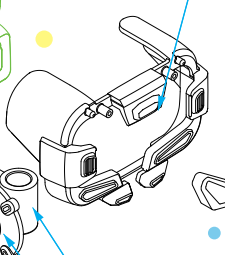


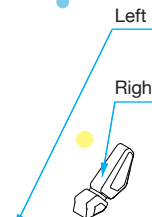


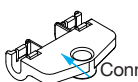
Extension Accessories

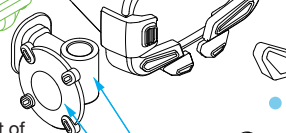


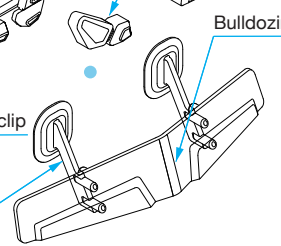










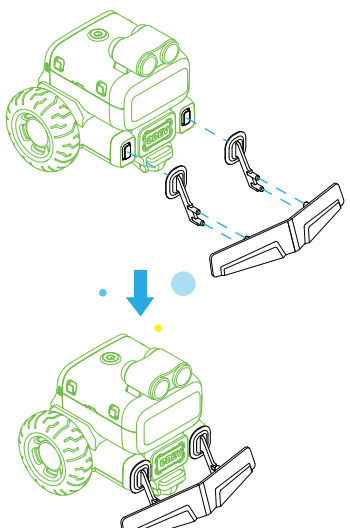


Extension Accessories

Accessory I: Barrier Clearance Giant

2× connection part of bulldozing arm

1× bulldozing arm

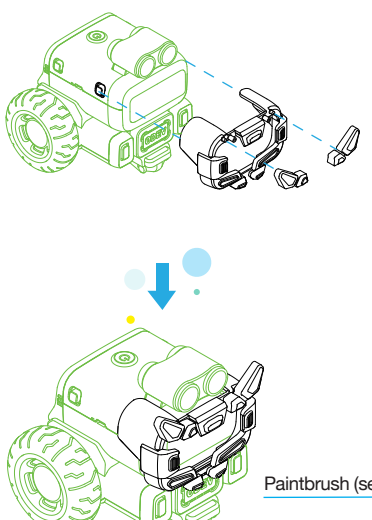


Accessory II: Body Protection Armor

1× main body of armorm

1× left ear of armor

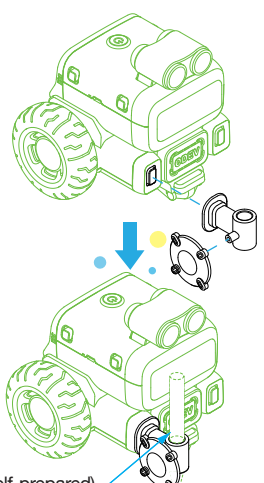
1× right ear of armor



Accessory III: Miraculous Paint Brush

1× shield

1× pen clip



Remarks:

Prepare the paintbrush by yourself, and water color brush is recommended to use.

Extension Accessories

Accessory IV: Stone-throwing Brave Warrior

①: Connection part of stone-throwing cart

1× connection part of stone-throwing cart

1× spring pin

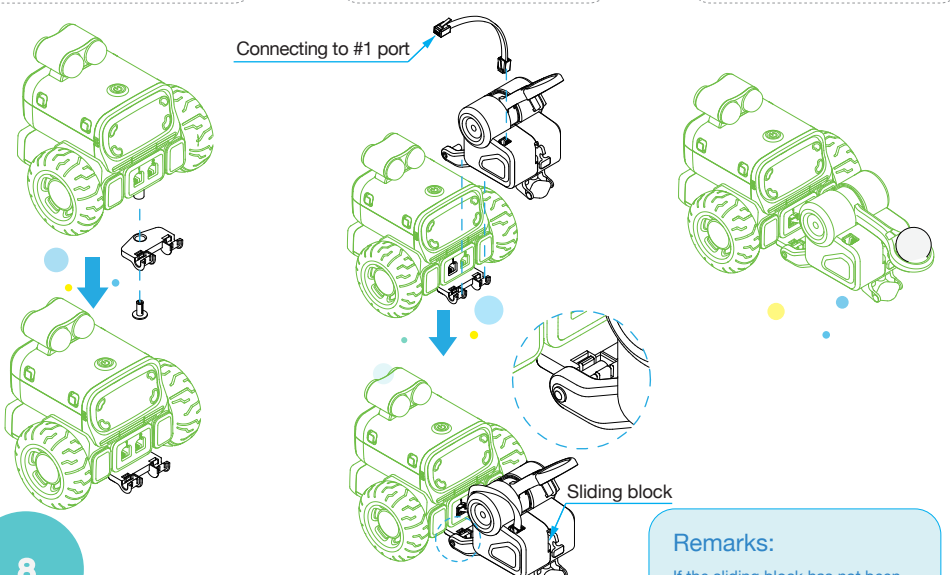
②: Cart body of stone-throwing cart

1× stone-throwing cart

1× communication line

③: Small ball

1× small ball



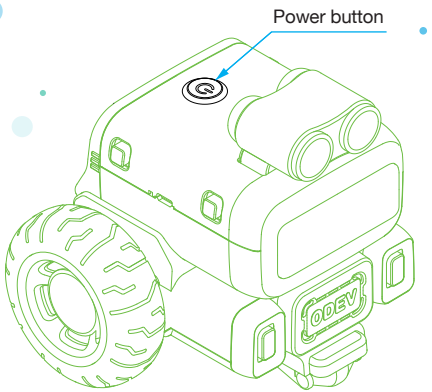
Remarks:

If the sliding block has not been reset, please gently pull out the sliding block from the back.

Startup and Shutdown

Startup

Press the power button for **3 seconds** for startup. After that, the Roby will say hello to you happily.



Shutdown

Press the power button for **3 seconds** for shutdown. Only after shutdown for 3 seconds, it can be re-started.

Instruction on Bluetooth Connection

Bluetooth Connection

After successful startup of your Roby, please open the bluetooth of your mobile device and enter to APP application, click the bluetooth icon button in the upper-right corner of the APP application interface, select the name of Roby you want to connect, or get your mobile device as close as possible to the Roby, so it will be connected successfully.

Device Rename

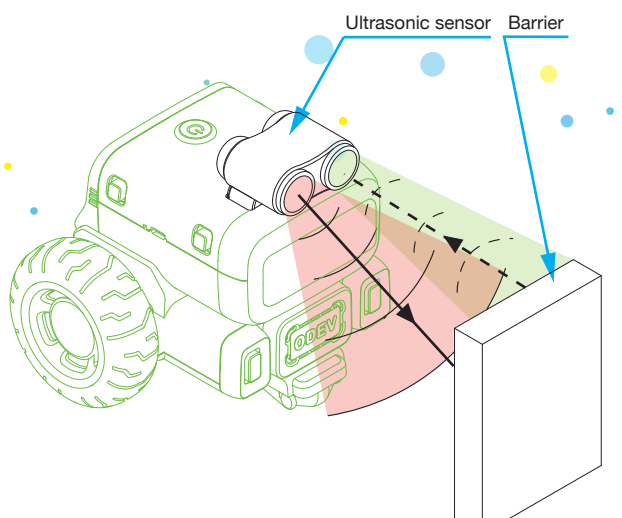
After successful connection of bluetooth to your Roby through APP software, there will be a reminder in the interface. You can control the Roby through APP, and click the button of "modify", so you can define the name of connected Roby by yourself.

Brief Introduction on Ultrasonic Sensor

Ultrasonic sensor can detect the barriers in the certain distance of the horizontal direction, and the transmitting and receiving angle is about 45 degrees.

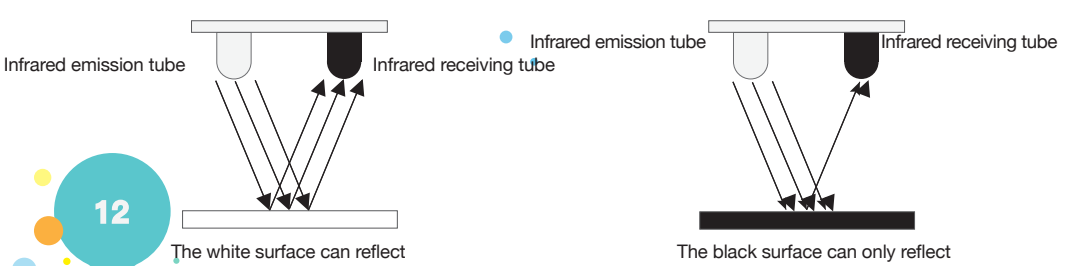
The principle of ultrasonic sensor is derived from the bat, and its two probes are respectively transmitting probe and receiving probe. Through transmitting and receiving ultrasonic signal, calculate the distance between ultrasonic sensor and target object. This function can be applied in the projects such as automatic barrier avoidance and distance measurement etc.

The ultrasonic transmitting probe will shoot the ultrasonic wave forward, and start timekeeping at the same time of transmitting. The ultrasonic wave will propagate in the air and will be reflected back when it contacts with barrier during the route, and the ultrasonic receiving probe will stop timekeeping immediately after receiving the reflecting wave. The propagation velocity of ultrasonic wave in the air is about 340 m/s, according to the time t recorded by timer, the distance s between transmitting point and barrier can be calculated, s=340×t/2, which is the so-called distance measurement method of time difference.



Brief Introduction on Tracking Sensor

The tracking sensor can recognize the black lines in tracking map through infrared emission tube and infrared receiving tube, which can allow Roby to move along the black lines in the white paper.



Introduction on APP Software ODEV *Roby*

ODEV Roby is an APP software which is used to control your Roby robot, after downloading and installing APP ***ODEV Roby***, you can control the robot through connecting the bluetooth. Please scan the QR Code on the left to download the APP ***ODEV Roby***. (ODEV Explore can be found from Google Play or Apple App Store).

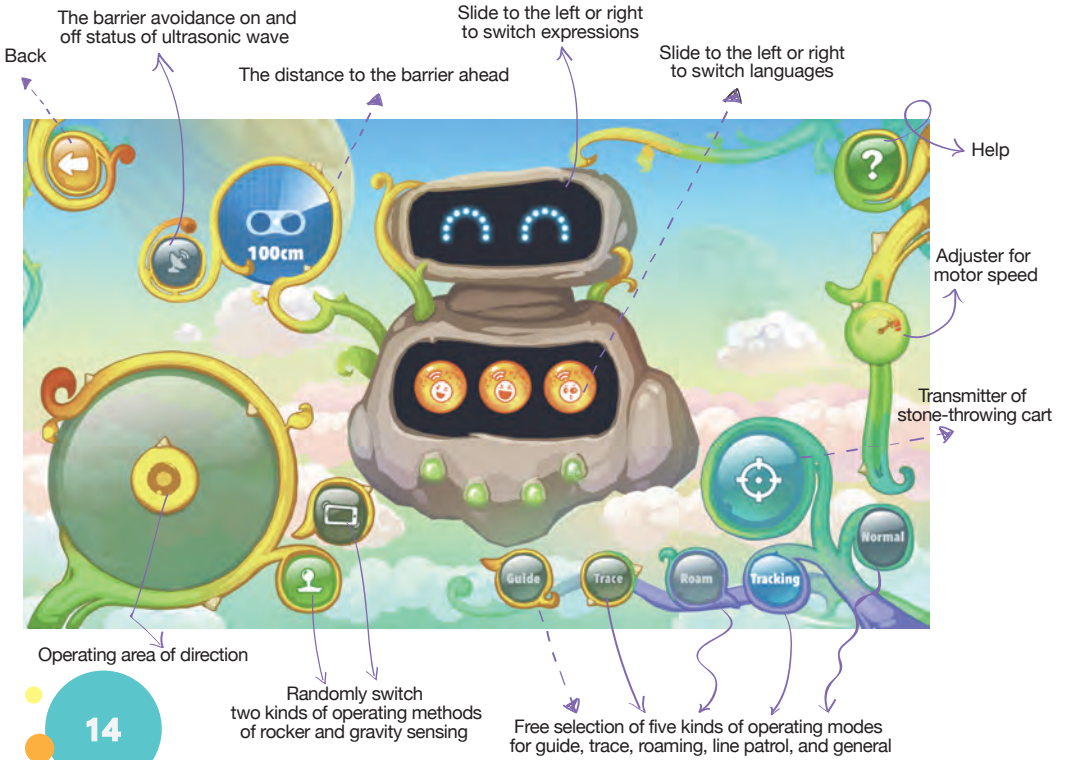
ODEV Roby: including four modules of remote control, tasks (game level), programming and cloud. With the increasing of your using time and cloud sharing, your level will be increased as well, and your little pet will accompany you to grow up.

Please click the official website below to get the operation instructions of app and more exciting content: www.odevbot.com

Introduction on APP Software ODEV *Roby*

Remote Control

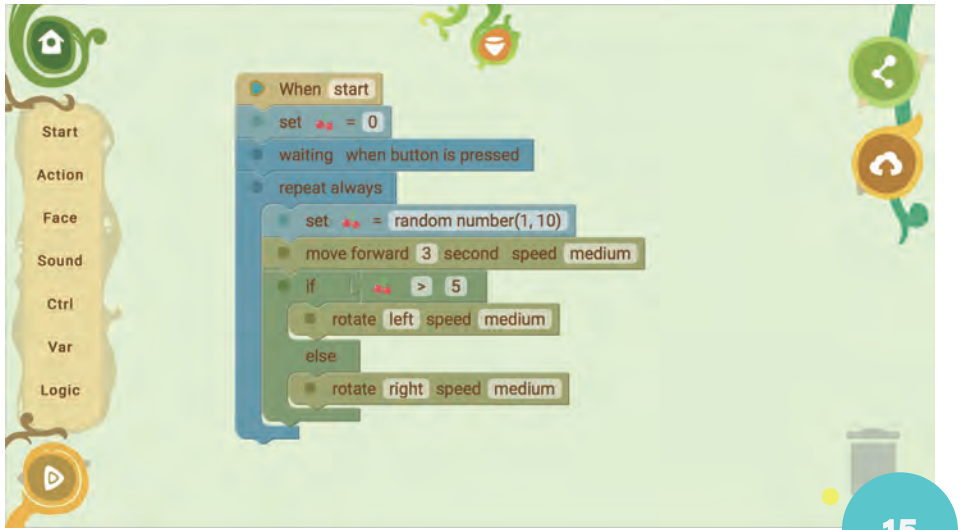
Remote control includes: normal, tracking, roam, trace, and guide, totally five kinds of operating modes.



Please click the official website below to get the operation instructions of app and more exciting content: www.odevbot.com

Introduction on APP Software *Roby Blockly*

Roby Blockly is a graphical programming tool. Drag and drop various programming modules by the method the same as toy block placement to let children create a small piece of program. *Roby Blockly* can enable the children to understand it quickly and write a piece of code to realize the control over Roby. Please scan the QR Code on the left to download the APP *Roby Blockly* (Roby Blockly can be found from Google Play or Apple App Store).



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Firmware Upgrading

Firmware upgrading

If you open the APP, and find that there is a version to be upgraded, click *Confirm* to start upgrading, which will take a few minutes, please wait patiently. Do not close the power supply of Roby during the upgrading process, and do not shut down the APP and disconnect the wifi and bluetooth. *Update Successfully* will be shown after successful upgrading, and the Roby is still keeping the startup status.

Firmware Upgrading

Upgrade Failed

If it fails to upgrade, the screen of Roby will be off. Press the power button of Roby now, and reconnect to bluetooth in APP, a reminder of firmware damaged will be prompted, press "Confirm" to re-upgrade.

FAQs

Q: Why there is no reaction when pressing the power button of Roby?

1. Please check if the power of battery for Roby has been used up.
2. It is required to press 3 seconds for startup of Roby, please confirm if you have pressed for 3 seconds.
3. If the Roby is in the charging state.
4. If the Roby is in the upgrading mode for the failure of firmware upgrading in the last time.

Q: Why the Roby cannot be connected through the bluetooth of mobile device?

1. Please confirm if the bluetooth of mobile device has been started.
2. Please try to re-start APP or Roby. If it still fails to connect, please try to re-start your phone.

Q: Why the tracking sensor cannot work normally?

1. Please do not use Roby under high exposure light.
2. Please confirm the tracking map is clean and flat.

Please click the official website below to get the operation instructions of app and more exciting content: www.odevbot.com

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.