



WhalesBot

WhalesBot Technology (Shanghai) Co., Ltd.

Web: <https://www.whalesbot.ai>

Email: service@whalesbot.com

Tel: +008621-33585660

3/F, Building 19, No. 60, Zhonghui Road, Minhang District, Shanghai



WhalesBot

Controller Pro User Guide



WhalesBot **A7**

36 in 1

Contents

1. Controller	03
2. Sensors	09
3. Actuators	12
4. Logical Blocks	17
5. Connection Block	20

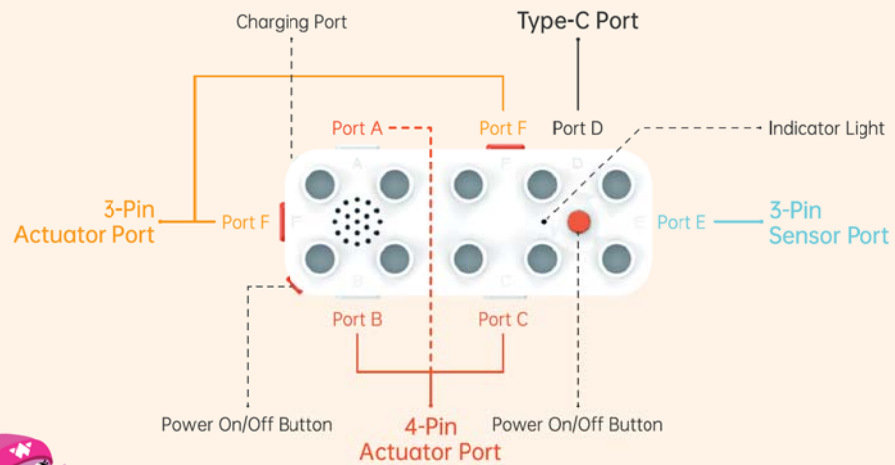
6. Remote Control	21
8. Sample Project	27
9. Frequently Asked Questions	43

* Visit <https://www.whalesbot.ai> for more information



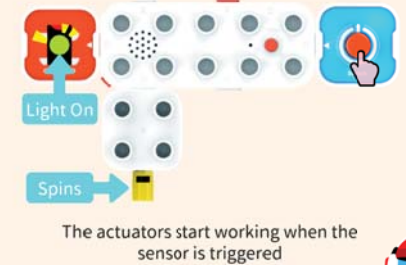
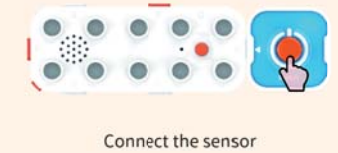
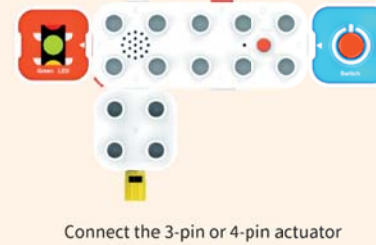
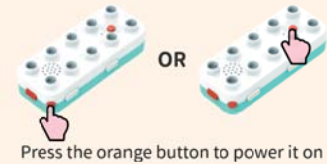
Controller

Ports



03-04

Getting Started



Charging

Charging



The indicator light turns red

Charging Completed



The indicator light turns green

Powering Off



OR



Press and hold the button to power it off

The diagram shows a LEGO Mindstorms EV3 brick connected to a custom-built robot chassis. The chassis has a central motor and four wheels. The EV3 brick is connected to the motor and four sensors: a touch sensor, a light sensor, an infrared sensor, and a sound sensor.



Sensors

09-10



Touch Button



Switch



Infrared Sensor



Light Sensor



Touch and hold to trigger



Release to stop



Press to trigger



Press again to stop



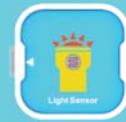
Move close to trigger



Move away to stop



Triggered when dark



Stop when bright





Sound Sensor



Triggered by sound



Stop when no sound



Actuators

11-12



Connected to the 3-pin port and spins after started

Forward Motor



Connected to the 4-pin port and spins after started

Magnetic Motor



Forward Motor



When the toggle switch is in the left position, the motor turns anti-clockwise



When the toggle switch is in the right position, the motor turns clockwise

Adjustable-speed Motor



If the arrow sign on the rotary switch points to the left, the motor speed reaches its lower limit



If the arrow sign on the rotary switch points to the right, the motor speed reaches its upper limit





Green LED

Green LED

Glows green



Red LED

Red LED

Glows red



Buzzer

Buzzer

Plays a continuous prompt sound

**Rec & Play**

Plays a recording after started

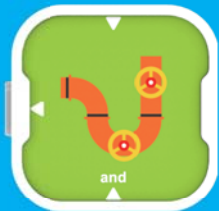
Record Button



1. Press the record button to record audio
2. Touch and hold the touch button to play the recording

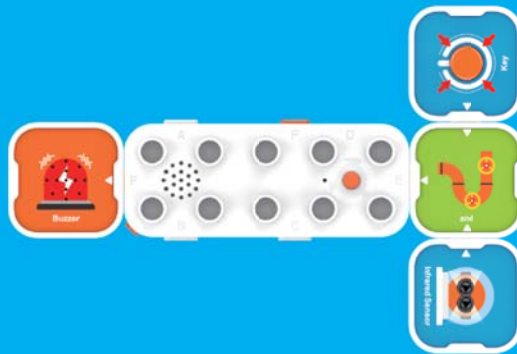


Logical Blocks



Logical AND

Put logical AND between two digital blocks. The controller starts the actuators only if both digital blocks are triggered



Example:
When the infrared sensor detects something and the touch button is touched at the same time, the buzzer plays sounds



Logical OR

Put logical OR between two digital blocks. The controller starts the actuators if one or both digital blocks are triggered



Example:
When the infrared sensor detects something or the touch button is touched, the buzzer plays sounds





Logical NOT

You can connect logical NOT to a sensor to reverse the condition where the sensor is triggered



Turned off in daytime and on in evening



Turned on in daytime and off in evening



Connection Block

Connection Wire



Use the connection wire to connect digital blocks that are not installed side by side.

Example



Remote Control

Overview

Forward/Backward 🏎️

Let the robot move forward or backward

⬅️ Left/Right

Let the robot turn left or right

Indicator Light (Unpaired)

Blue light flashing: Bluetooth unpaired
Red light flashing: low power

(Paired) Indicator Light

Blue light steady: low speed
Green light steady: medium speed
Red light steady: high speed

Power On/Off 🏎️

Press the button to power it on.
Press and hold the button to power it off.
After being paired with the controller, press the button to change speed

🔗 Pairing

Put the remote control close to the controller.
Then, press and hold the button to start pairing



Install Batteries



- * The remote control operates on two AAA batteries
- * We recommend that you use AAA alkaline batteries



Bluetooth Pairing



Turning on:

Press the power on/off button
 Remote control: Blue light flashing
 Controller: Blue light flashing



Pairing

Remote control: Put it close to the controller. Press and hold the pairing button until the blue light goes steady
 Controller: Put it close to the remote control





Pairing Succeeds

Remote control: Blue light steady

Controller: Blue light goes steady and plays prompt sound



Using

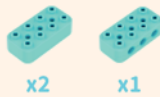
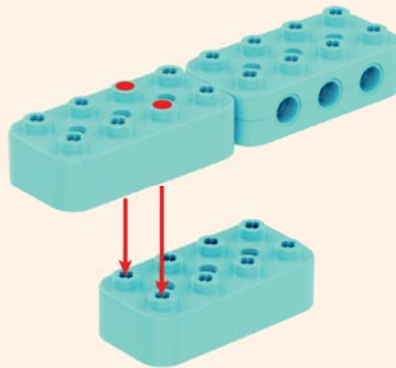
Remote control: Press the forward/backward and leftward/rightward buttons

Controller: Connect the magnetic motors to the controller and make them spin

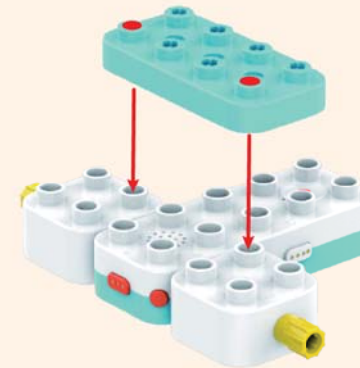


Sample Project

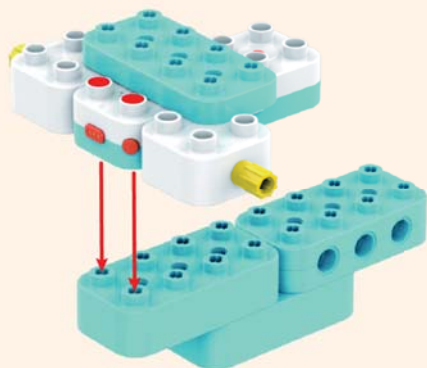
1



2



3



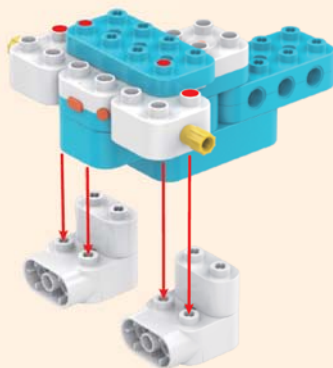
4



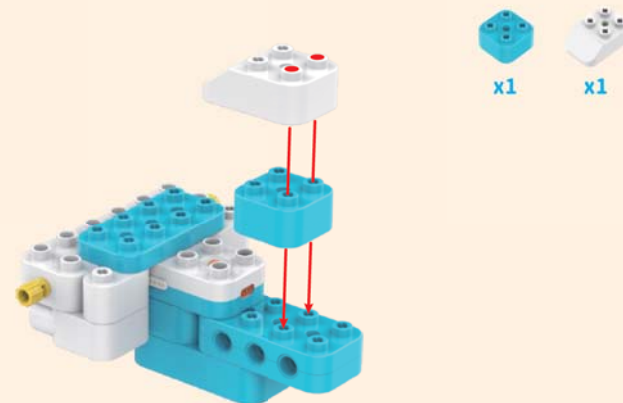
x2



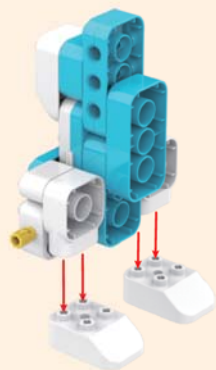
5



6



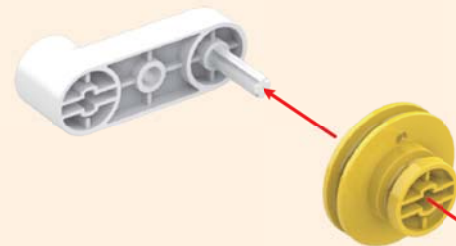
7



x2



8



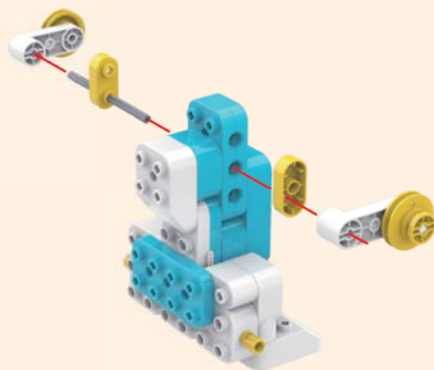
x2

x2

x2



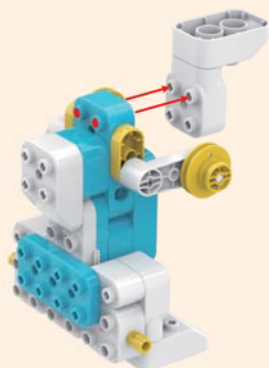
9



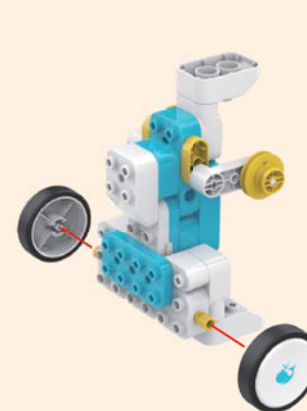
10



11



12



13

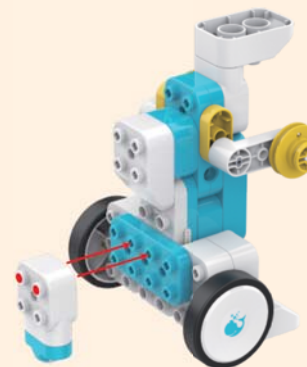


x1

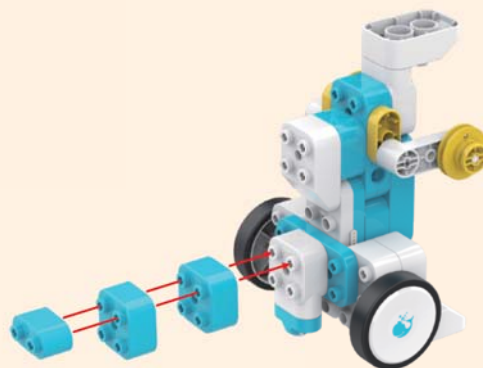


x1

14



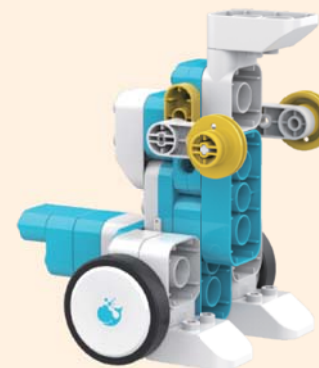
15



x1

x2

16



Frequently Asked Questions

How to Charge

1. The controller uses a 3.7V/430mAh lithium battery, which is fixed inside the product and cannot be disassembled.
2. The lithium battery of this product must be charged under the supervision of an adult. It should be charged according to the method or equipment provided by the company. It is forbidden to charge without supervision.
3. Once the power is low, please charge it in time and follow the charging operation.
4. Please avoid using controllers, actuators, sensors, and other components in a humid environment to prevent liquid from flowing in, causing a short circuit of the battery power supply or power terminals.
5. When the product is not in use, please fully charge it and place it for storage. It needs to be charged at least once every three months.
6. Please use the recommended adapter (5V/1A) to charge this product.
7. When the lithium battery cannot be charged or is deformed or overheated during charging, immediately disconnect the power supply and contact the after-sales service department of WhalesBot to deal with it. It is strictly forbidden to disassemble the battery without permission.
8. Do not expose the battery to open flames or dispose of it in a fire.



WARNING:

- Do not C878mix old and new batteries.
- Do not mix alkaline, standard (carbon-zinc), or rechargeable batteries.

Warning and Maintenance

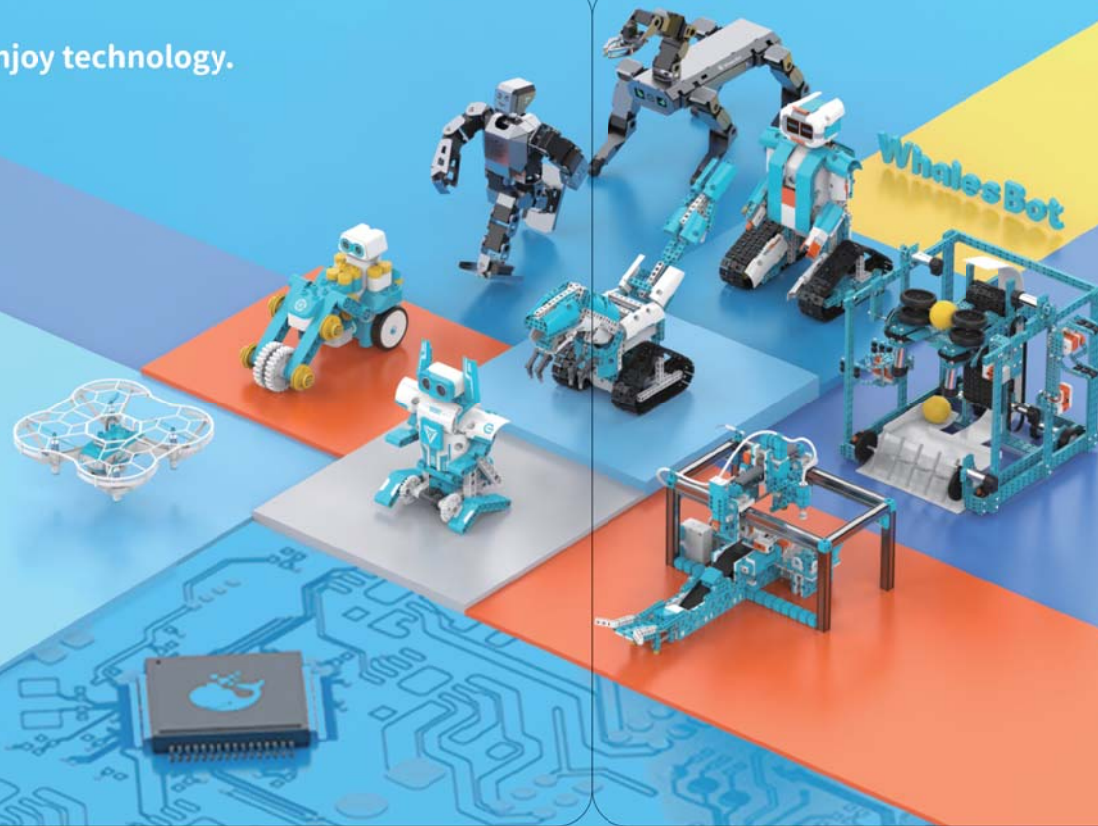
⚠ | Warning

- Regularly check whether the wires, plugs, casings, or other parts are damaged. If any damage is found, stop using the product immediately until it is repaired.
- This product contains small balls and parts that pose choking risks, and is not suitable for children under 3 years old.
- Children should use this product under the supervision of an adult.
- Do not disassemble, repair, or modify this product by yourself to avoid product failure and personal injury.
- Do not place it in water, fire, humidity, or high-temperature environment to avoid product failure or safety accidents.
- Do not use it in an environment beyond the product's operating temperature range (0-40°C).

⊗ | Maintenance

- If not in use for a long time, please store it in a dry and cool environment.
- When cleaning it, please turn off the product and wipe it with a dry cloth or disinfect it with less than 75% alcohol.

To help youth understand and enjoy technology.



FCC Warning

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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.