

### Electronic Devices Introduction

### Controller Interface and Status Display

### Controller Battery Installation

The Controller requires 6 AA/LR6 batteries. AA alkaline batteries are recommended. To insert the batteries into the controller, press the plastic on the side to remove the battery cover. After installing 6 AA batteries, put the battery cover.

**Battery Use Precautions:**

- AA alkaline battery size and other types of batteries can be used.
- Non-rechargeable batteries cannot be charged.
- The battery should be placed with the correct polarity (+/-).
- The power terminals must not be short-circuited.
- The used battery should be taken out of the controller.
- Remove the batteries when not in use for a long time.
- Note: It is recommended not to use rechargeable batteries!

**Note: If your battery power is low, after pressing the "start" button, the status light may still be on, red, and dimming.**

**Energy-saving Precaution:**

- Please remove the battery when not in use.
- Remove the battery group of all should be placed in a respective storage container with waste together.
- Power of the controller when not in use.

**Warning:**

- 1. The used battery should be taken out of the controller.
- 2. The used battery should be placed in a respective storage container with waste together.
- 3. Please be protected away from water.

### Controller ON/OFF

**Power On:** To turn on the controller, press and hold the power button. The controller status light will become white and you will hear the audio playing "Hello, I am the whalebot".

**Running the Program:** To run the program when the controller is on, press the power button on the controller. When the program is running, the status light on the controller will flash.

**Stop System:** To turn off the controller when it is on or running program, press and hold the power button. The controller will then enter the "OFF" state and the light will be off.

**Controller Technical Specification**

- Controller: 32-bit Cortex-M3 processor, 144MHz frequency, 528KB, 512KB Flash/ROM, 64K RAM.
- Storage: 528KB independently memory chip with multiple sound effects, which can be extended with software upgrade.
- Effect: 12 channels of various input and output interfaces, including 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485, 1x 4-wire RS485.

### Actuators

**1. Closed-loop Motor**  
Closed-loop Motor for robots is the source of power used to perform various actions.

**2. Expression Screen**  
Expression screen gives the robot a rich expression. Users are also free to customize emotions.

**3. Touch Sensor**  
Touch sensor can detect when a button is pressed or when the button is released.

**4. Integrated Graycode Sensor**  
Integrated graycode sensor can detect the intensity of light entering the sensor surface of the device.

**5. Infrared Sensor**  
Infrared sensor detects infrared light reflected from objects. It can also detect infrared light signals from remote infrared sensors.

### Sensors

**3. Touch Sensor**  
Touch sensor can be connected to any port of controller I/O.

**4. Integrated Graycode Sensor**  
Integrated graycode sensor can be connected to any port of controller I/O.

**5. Infrared Sensor**  
Infrared sensor can be connected to any port of controller I/O.

Al lights up children's future!

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**RoHS** **CE** **FC** **REACH**

Made in China

### Programming Software

**1. WhalesBot APP**

WhalesBot APP is mark aimed at children and teenagers. It provides construction instructions, remote control, programming and other functions for AI Module 1S robot users. It is intended to cultivate children's creativity, hands-on skills and logical thinking ability. To play better with the AI Module 1S, download the APP now.

Download "WhalesBot APP":  
For iOS, please search for "WhalesBot" in APP Store.  
For Android, please search for "WhalesBot" in Google Play.

### Bluetooth Connectivity

Bluetooth module is designed internally for MC1018 controller, and supports Bluetooth 4.2 and above. It can be used with Android or iOS smart mobile devices for device pairing to control robot and also supports Bluetooth communication pairing so as to use the module programming software for wireless programming.

**1. Connect Bluetooth**  
Enter the remote control or module programming interface. The system will then automatically search for nearby Bluetooth devices and display them in a list. Select the Bluetooth device to be connected.

**2. Disconnect Bluetooth**  
To disconnect the Bluetooth connection, click the Bluetooth icon on the remote control or the module programming interface.

### Programming Software

**2. WhalesBot Scratch**

WhalesBot Scratch software supports mainstream programming, including Scratch programming and standard C programming. The Scratch module contains all parts functions, support various functionality and other visual programming. Including motion, sensor, detection, control, function, data, advanced and panel. The function modules, based on new cross-platform technology, available for operating systems like Windows, Mac. It also supports multi-device programming.

Download Links:  
<http://www.whalesbot.com>

### AI Module 1S Parts List

**Structural Parts**

**Decorative Parts**

**Sensors**

**Actuators**

**Controller**

### Founder of AI Robot + Edu

WhalesBot strives to develop mechanical tools to break through the limitations of our physical strength, and to develop intelligent devices to break through the perception.

AI Module 1S Robot is released by WhalesBot in 2018. To apply the intelligent servo motors by self-development, and also it merges artificial intelligence technology on voice, vision and emotional expression successfully. It provides the different programming languages: modular programming, Scratch, Python, C language and Scratch.

WhalesBot will help teenagers to unlock the secrets of the brain, to seek the frontier of the brain. This is how artificial intelligence comes into being.

### AI Module 1S Quick Start Guide

A new generation of youth partners

切线  
折线

FCC Statement

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.
- 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.

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

RF Exposure Information

The device was evaluated to meet general RF exposure requirements. This equipment should be installed and used with a minimum distance of 0 mm between the radiator and your body.