Model Number: Alpha1 Pro

FCC ID: 2AHJX-ALPHA1PRO

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

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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

UBTECH
Dream Make Robots
UBTECH ROBTICS CORP.
www.ubtrobot.com
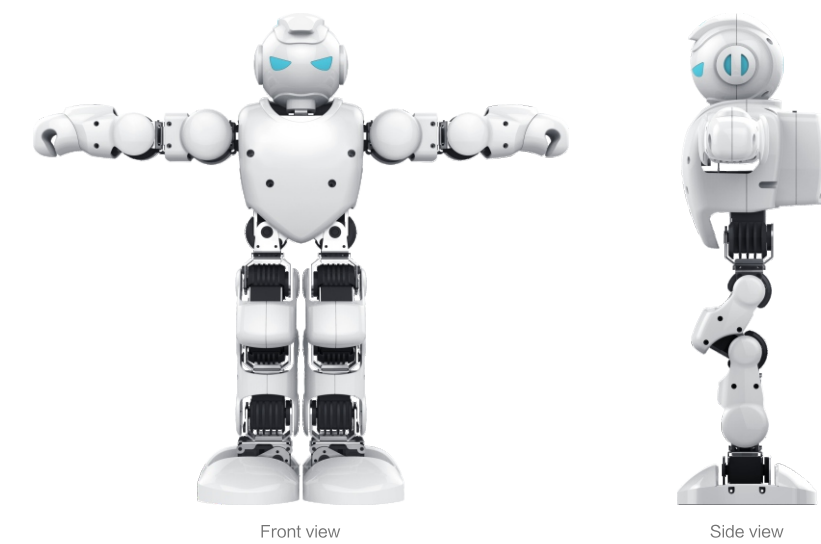
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04 Operating Alpha

Power On/Off

Power on: Press and hold "ON/OFF" for about 3 seconds. If the LED light in Alpha's eyes is blue, then he has successfully booted. Alpha will also appear to stand with both legs together and both arms stretched out (as shown in the follow figure).

Power off: Press and hold "ON/OFF" for about 3 seconds. If the LED light in Alpha's eyes goes out, then he has successfully shut down.

Note: In reset mode, the movement range is relatively wide. Please hold Alpha's backpack to avoid falls. After booting, do not force Alpha to move, as this will cause damage to joints already in operation.

Reset position

Front view   Side view

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04 Operating Alpha

An Alpha series robot may be remotely controlled through the mobile phone app. For expanded functions, users can download various actions and apps, and create new actions for Alpha through the action programming software for mobile app or PC.

The action programming software for mobile app and PC can be downloaded through the following ways:

Important:

❶ Mobile APP helps you better operate the Robot.Please scan the QR code on the user manual cover, or search "Alpha 1" in Apple APP Store and Google Play to download and install the APP.

❷ You can program the robot to create new movements with PC software designed for Alpha 1S.The PC software can be downloaded from the "Service & Technology" page of the UBTECH Robotics website http://www.ubtrobot.com.

❸ For software user manual and other technical support ,please go to "Service & Technology" page of http://www.ubtrobot.com.

Action Program Run

When Alpha is powered on, unplug the USB cable after the action program has been downloaded. Turn on Bluetooth of a mobile phone and connect it to Alpha through the app. Click an action of the app's "Action List" to execute the action program just downloaded.

Prompt:
1. Several robots can be controlled simultaneously with iOS client end;
2. You can edit various actions for the robot using action editing software on the PC end.

❗ **Note**
Before pressing "Reset/Start", please keep Alpha away from your face and eyes. In addition, do not insert your fingers or any other objects into Alpha's joints. Please shut off the power immediately when he is not in his normal operating state. In addition, do not place Alpha on the edge of anything high as to prevent him from falling down and being damaged.

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05 Troubleshooting

1. After starting and reset, some individual joints of the robot cannot work
A: The wires of some servo might become loosened or short-circuited. Detect whether the wires of the servo are connected or worn;
B: Whether the servo gives out a "buzz" sound of the motor rotating. If yes, it needs to be fixed.

2. After connecting to the computer, the robot cannot be controlled or download programs
A: The contact between the download wire of the robot with the port becomes loosened. It needs to be re-inserted or replace the USB data line;
B: The program of the robot has crashed, please restart it and download again;
C: The battery has too little power left, recharge it first;
D: The memory card is loosened or is defective, replace the memory card;
E: The format of the program is incorrect. Modify the format of the program by referring to the format of the case offered with the machine.

3. After downloading the program, the robot cannot work normally
A: A grammar problem in the program;
B: The battery has too little power left, please recharge it first;
C: The wires of some servo might be loosened or short-circuited, detect whether the wires of the servo are connected or worn.

4. The robot moves but has no sound
A: Please check whether the TF card has got loosened (in most cases it's because the TF card gets loosened).

5. The robot has sound, but does not move
A: Please check whether the plug of connection wires all over the robot has become loosened, or the connection wires do not connect well.

6. After the robot is started and reset, some servos remains soft
A: The robot is out of power. Please turn it off and recharge it.

7. The robot cannot stand steadily when performing certain dances
A: The skewing of the robot has changed. You can reset the skewing by yourself or send it to the factory for repair.

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05 Troubleshooting

8. Some part of the robot gives out a "buzz noise" of the motor rotating
A: The servo of the robot might have some problems - you need to send it to the factory for repair.

9. After recharging for a long time, the robot still cannot start up
A: Please confirm that you use the standard adapter to recharge the product and keep it off while recharging. If it still cannot be recharged, you need to send it to the factory for detection.

10. The servo light of some area of the robot cannot switch on
A: Please check whether the connection wires of the servo of the fault location are abnormal, whether the plug has become loosened or been pulled out.

11. While the robot is recharged, the indicator light keeps flashing or the green light remain on
A: The recharging is abnormal, you need to send it to the factory for inspection.

12. How often does the robot need to be recharged and how long it can work after it's recharged
A: It can work for 60-80 minutes after it's recharged for 2-3 hours.

13. The robot cannot connect with the mobile phone
A: Restart the App on your mobile phone and restart the robot.

14. The robot cannot connect with the computer
A: Reinsert the USB connection line.

15. Can new dance actions be added to the robot
A: Yes, our official website will regularly renew dances. After downloading and unzipping the package, put the "HTS" file in to the "action" folder of the memory card and put the "mp3" file in to the "music" folder.

16. How to confirm that the robot has connected with the mobilephone
A: After the robot is connected with the App of the mobilephone, the eye lights of the robot will begin to flash.

17. Whether the robot stays on or off while recharging
A: It's recommended to recharge it while it's off, because the heavy recharge current while it's on will affect the machine.
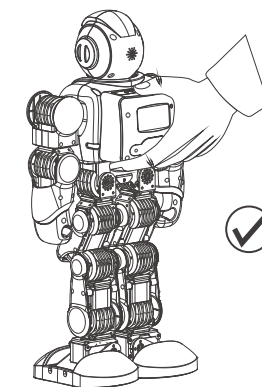
Scan the QR code to download the APP

User Guide
Alpha1 Pro

Alpha1 Pro_EN_V1.0

❗ Safety Instructions

Dear User, Congratulations! You are now the official owner of Alpha, the intelligent robot. Before using Alpha, please read this manual carefully and scan the QR code to download the control App.

• Users of this product should be aged 10+(Users aged 10 or less should use the product under adult's supervision).

• When using this product, keep it away from an open flame, In addition, keep it dry and clean.

• Please take good care of this product, Never hold it with too much force.

• Please operate the robot on a flat surface.

• When operating, please keep a certain distance from the robot to avoid being injured.

• When operating, never move the robot's joints with force to avoid personal injury or damage to the robot.

• Please recharge the robot with the original recharger.

• The servo of the robot's joints is a sophisticated product. Do not randomly disassemble it. If you need to disassemble it, please contact our company.

• If you need to disassemble and repair the robot, please visit your nearest after-sales service outlet or contact our after-sales service team.

• When debugging, if the robot operates abnormally, please cut the power at once to avoid personal injury or damage to the robot.

• When in use, please take proper care of the robot. Do not place the robot at high elevations or on an edge to prevent falls and damage.

• Any damage to the robot caused by manmade factors is beyond the warranty scope of our company.

• To guarantee the longest service life of the servo, it is suggested that the time the robot is in use should not exceed 1 hour.

⚠ **To better protect Alpha, hold him by his backpack when he is moved or used!**

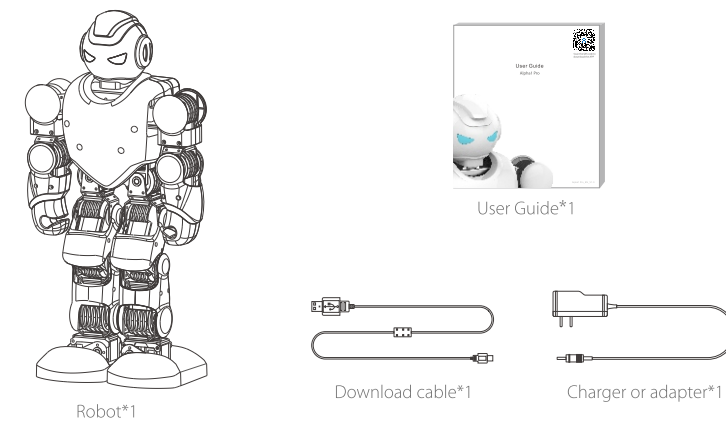⚠ **Do not turn Alpha's joints when he is in operation to avoid being pinched or causing damage to him.**

Example of Correct Use:

❗ If any of the following circumstances occur, please shut off the power immediately and contact our customer service team:

a. Alpha emits smoke or smells.
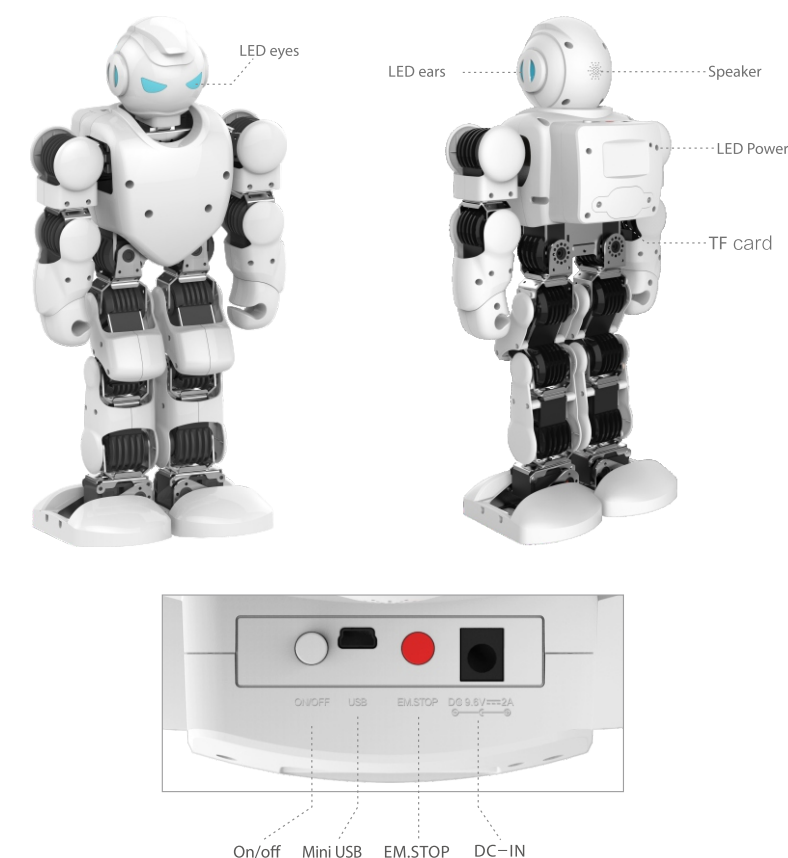b. Water or other foreign objects penetrate Alpha.
c. Alpha becomes damaged.

This packaging contains useful information, Please keep it!

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01 Package Contents

Robot*1

User Guide*1

Download cable*1   Charger or adapter*1

Product parameters	
Product dimension:	401x208x124(mm)
Product weight:	1.71kg
Working voltage:	DC6.8V～DC9.6V(Standard: 7.4V)
Working current:	1A～3A
Battery capacity:	2200mAh
Audio:	4Ω 3W
Connection:	1) Mini USB port: USB 2.0
	2) Micro TF card port: 128MB～32GB
	3) Communication port: Dual mode Bluetooth 3.0/4.0 BLE+EDR
Servo parameters:	1) Output torque: DC6.5V: 8kg·cm, DC8.5V: 12 kg·cm
	2) Running speed: DC6.5V: 0.238S/60°, DC8.5V: 0.198S/60°
Working temperature:	-5℃ ～85℃

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02 Parts and Components

LED eyes   LED ears   Speaker

LED Power

TF card

On/off   Mini USB   EM.STOP   DC~IN

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02 Parts and Components

Controller
The mainboard is stored in Alpha's chest with operation buttons on his back. The mainboard serves as his brain, which controls and coordinates all his joints allowing them to move simultaneously.

The human-robot interaction is done through the control panel on the mainboard, which contains an external power interface, a power switch, a USB port, and a "Reset/Start" button. Their positions are shown below.

Servo
The servo can feedback information such as moment of force, electric current, temperature and angle based on the orders of the controller, can more precisely reach the designated angle and respond to the control command more quickly. The servo is equivalent to a man's joints when making the robot move, which embodies a great deal of precision parts. Please keep protect it well.

Battery
The battery is located in Alpha's abdomen. It is a special large-capacity li-ion battery with a built-in over-charge and over-discharge protection circuit.

Charging
Before using Alpha, make sure is fully charged. Insert one end of the adapter to the charging port labeled " DC 9.6V==2A " and connect the other to a 220V /110V AC power socket. When the charging indicator turns red, it indicates that Alpha is being charged. When charging is completed, the indicator will turn green, which indicates that the battery is fully charged. Please pull the adapter out of the charging port. Alpha can be debugged when charging.

Accessory Charger
• Equipped with a built-in 7.4V battery that is not detachable and irreplaceable.If damaged, please contact our Customer Service Department for repairs.
• The charger should be used by an adult or under adult supervision.
• Regularly check the charger wire, plug, housing,and other components for damage. If damage is found, please discontinue use until repaired or replaced.
• Alpha is only compatible with the recommended charger(100V-240V input, 9.6V 2A output).
• You may use a damp cloth to wipe the surface of Alpha. Please disconnect him from the charger before cleaning.

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03 Servo distribution of the robot

Servo distribution
In Alpha 1 Pro, there are 16 servos in total, which is equivalent to the number of joints in humans. Every servo has a fixed ID that corresponds to each joint as shown in the figure. The turning angle and speed of the relevant joints can be controlled by operating the corresponding servos. This allows Alpha to move in a highly precise way, cope with various dazzling stunts, and realize humanoid simulation.