Qihan Technology Co.,LTD

Intelligent Robot
S1-B2
USER MANUAL
Sanbot

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Introduction

- Thank you for purchasing our product. This manual is for S1-B2.
- Our company will regularly improve and update the manual. Updated contents will be added into the new edition of this manual without further notice.
- This manual may have some inaccurate technical contents or operational contents not conforming to the product. If you confront with problems that you can't handle according to this manual, please contact our customer service or the technical support department of our company.
- Contents of this manual are only for reference and may not be in full accord with the real product. Statement in this manual is not any guarantee in any form. Please prevail in kind.
- Please do not allow babies and children under seven years old to use this product.
- Juveniles should use this product under the guidance of adults.
- If you allow juveniles to use this product, please be sure to instruct them all do's and don'ts as well as safe use of electricity.
- Please tell your children not to put their fingers into the gap between the robot's wings and its body as well as the gap between the robot's head and its body to avoid being jammed while the robot moves.

Part One To Know Your Robot

1. Packing List

Robot

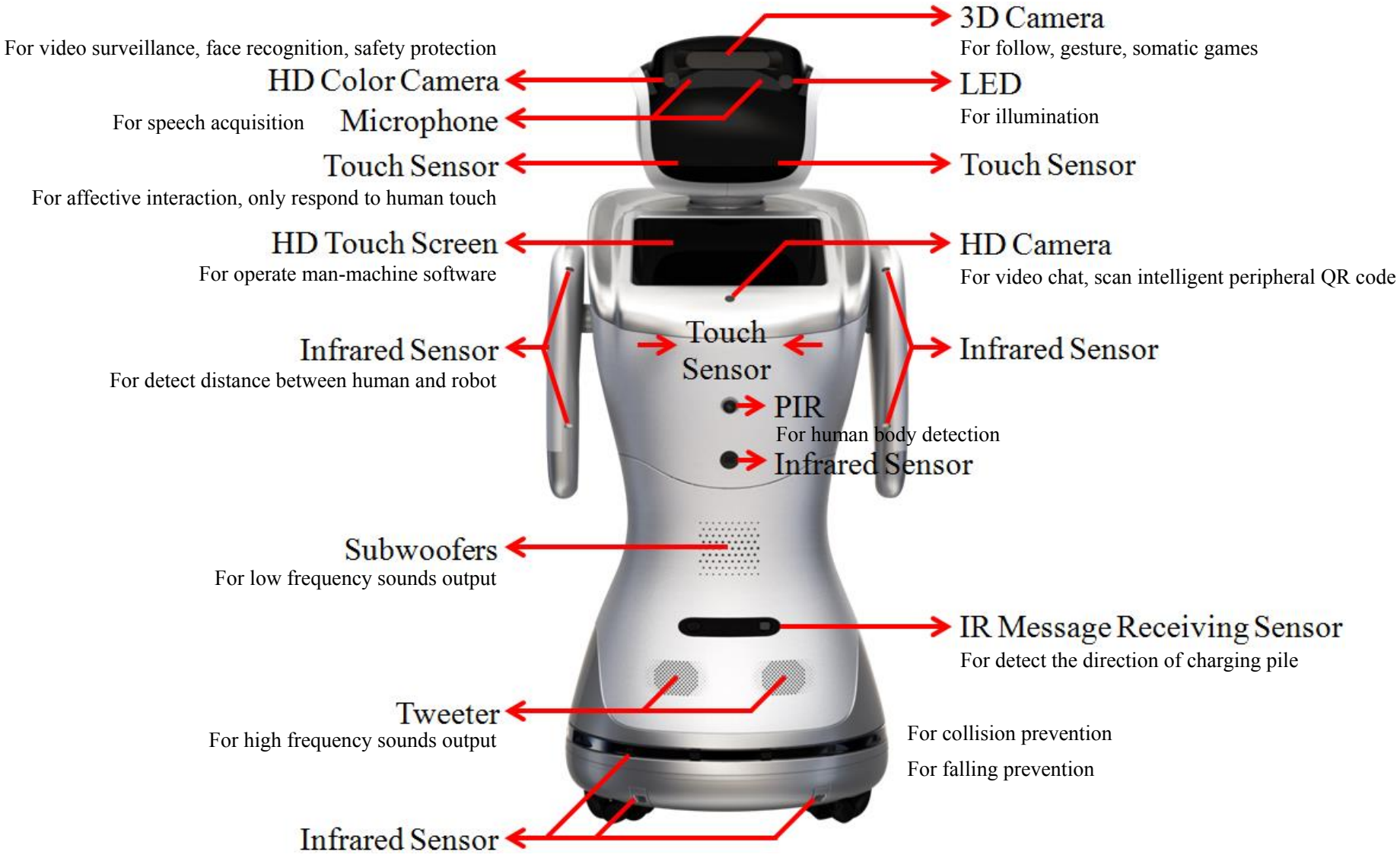
Charging pile (contains adaptor)

Power line

Quick guide manual

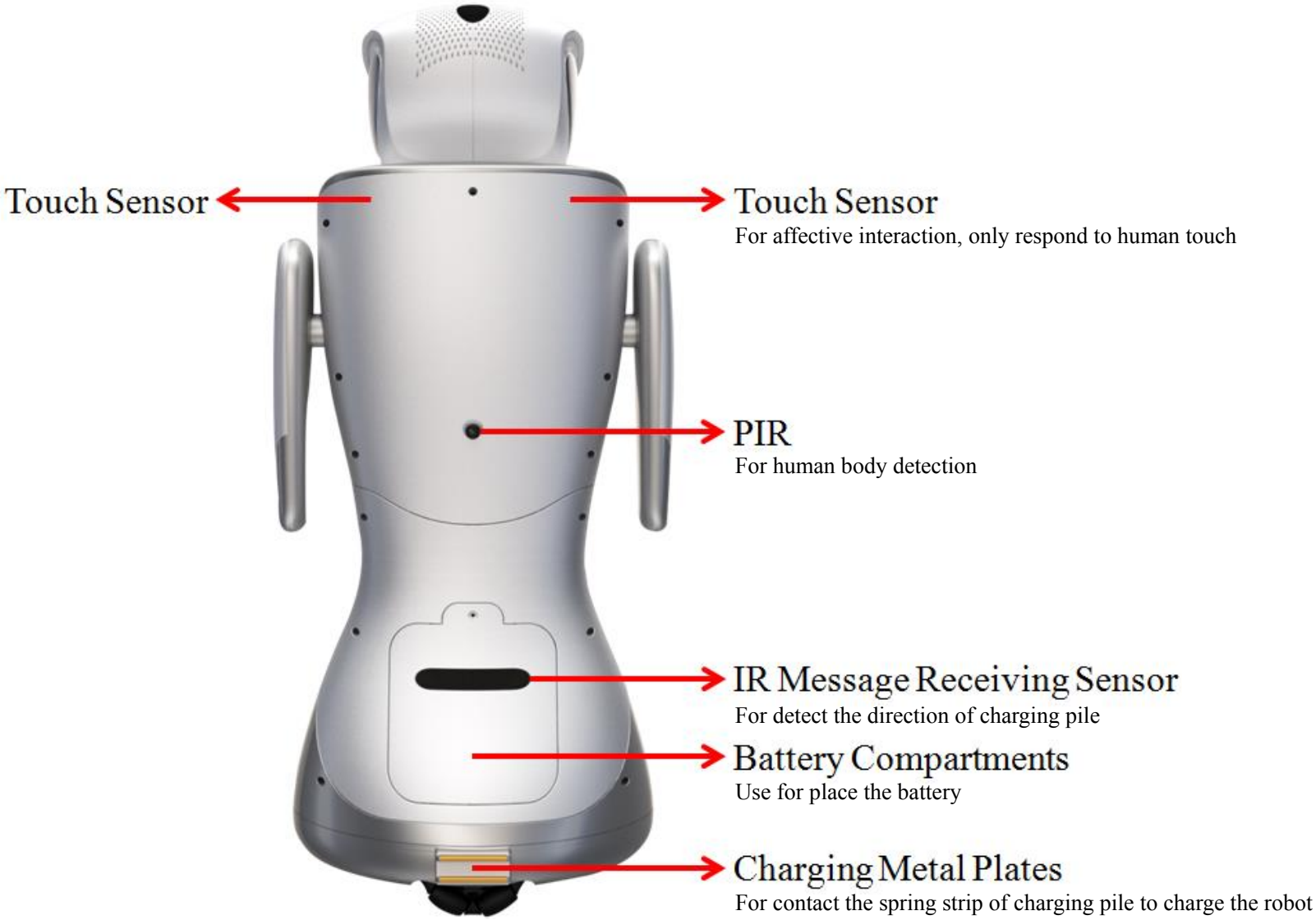
We will arrange the consignment according to your choice of purchase; the above picture is for reference only.

2. Robot Appearance



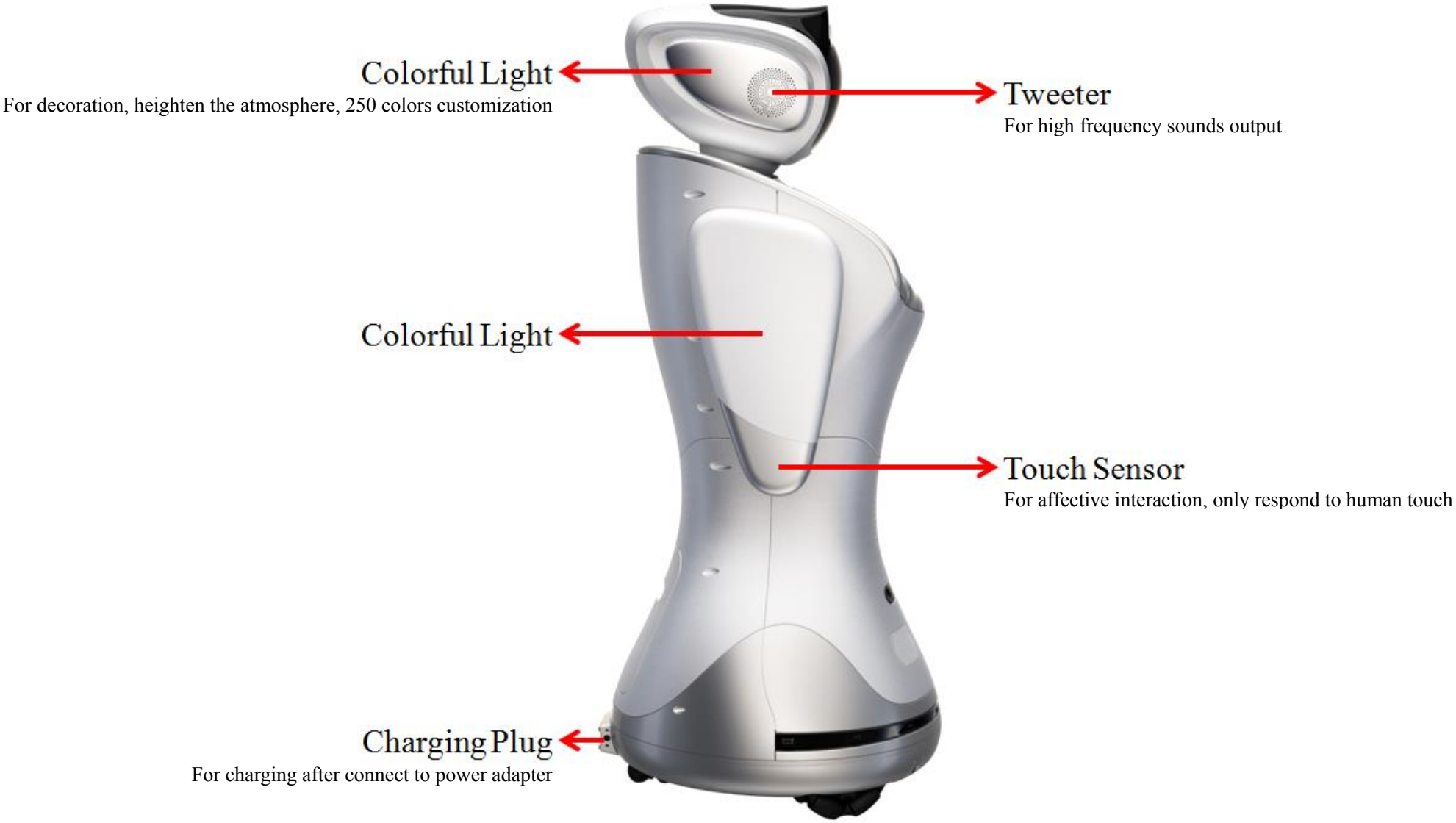
Front

2. Robot Appearance



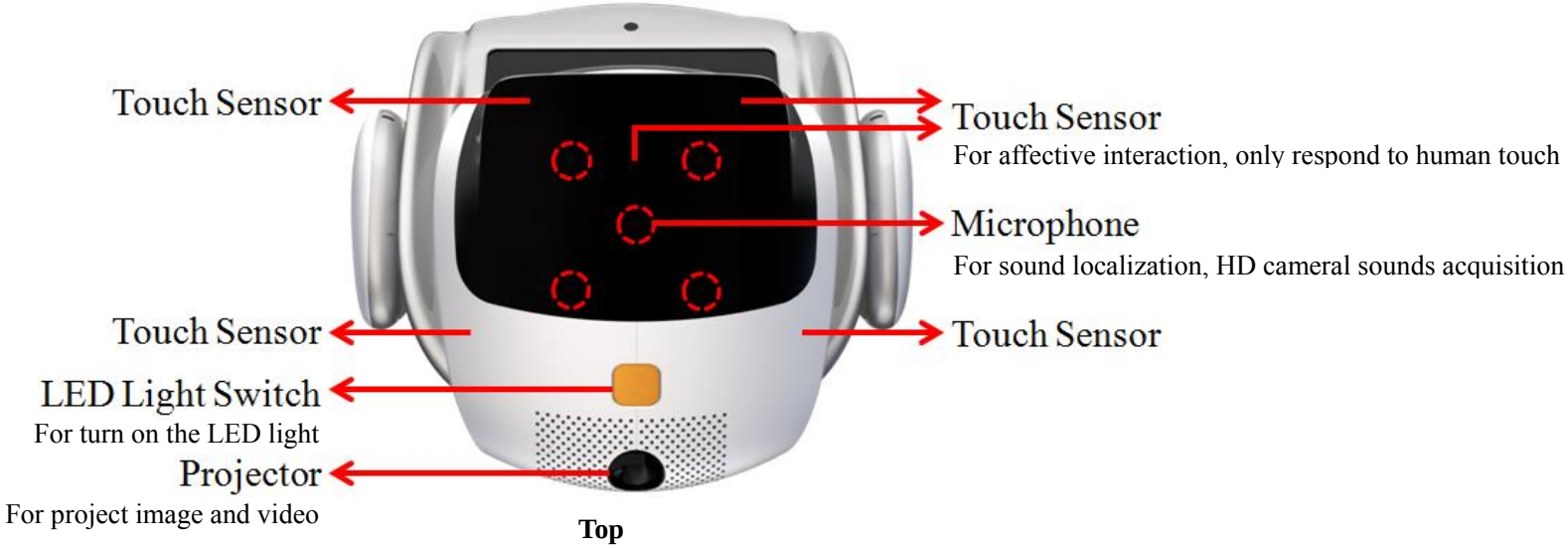
Back

2. Robot Appearance

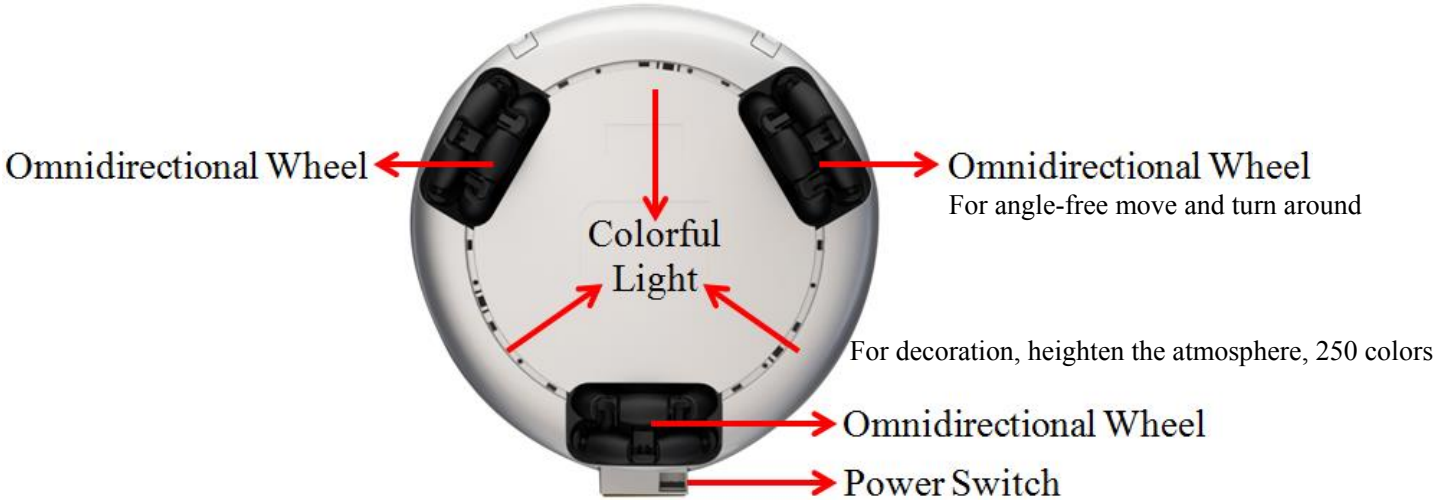


Lateral

2. Robot Appearance

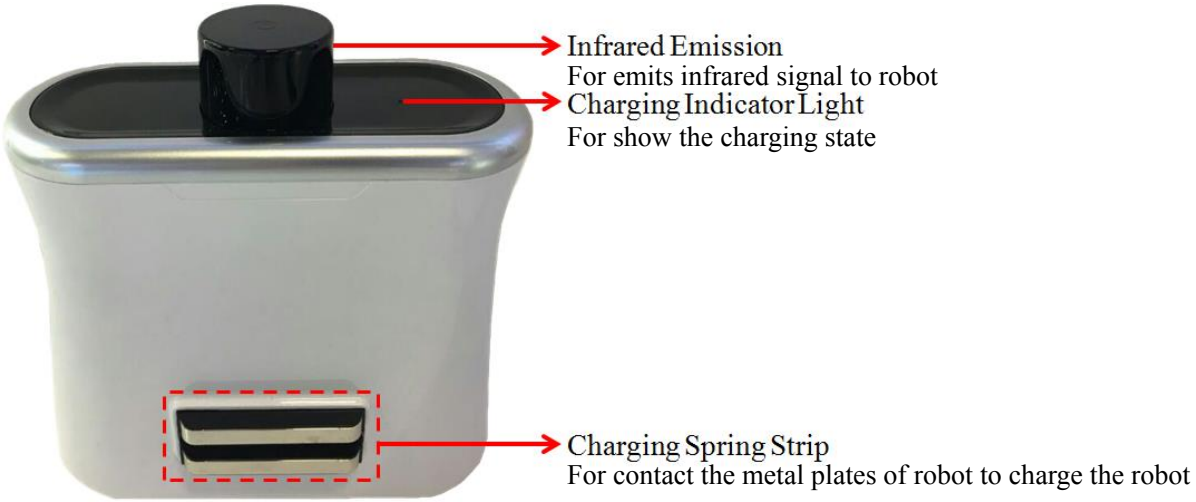


Top

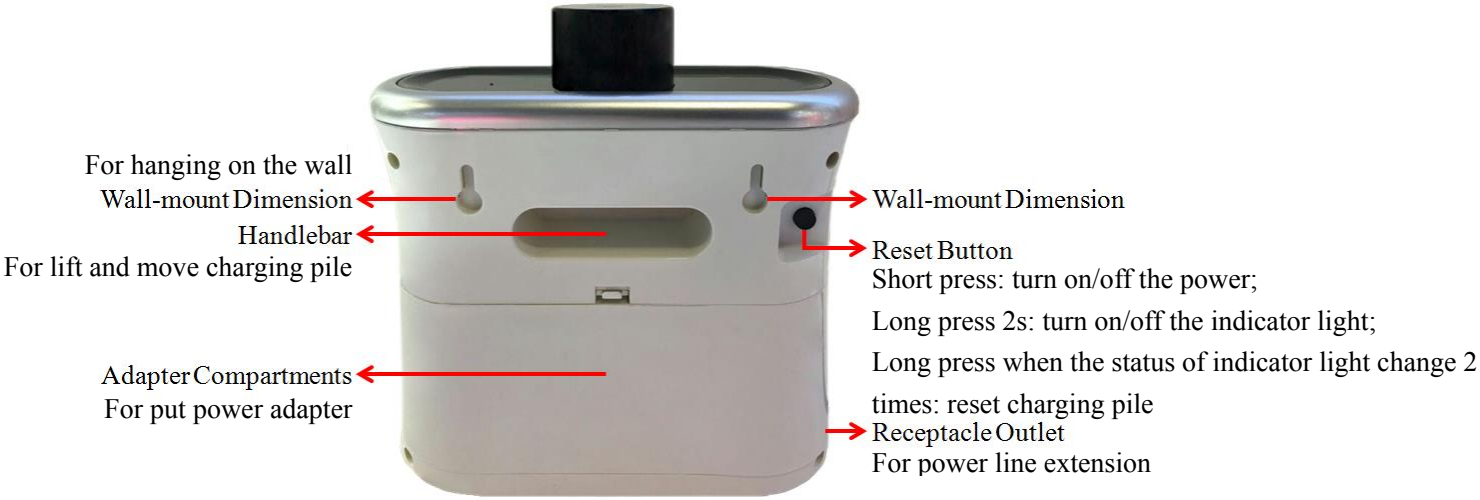


Button

3. Charging Pile Appearance



Front



Back

Part Two How to Operate the Robot

1. Turn On\Off

Press the power switch at the bottom of the robot to turn on or turn off the power.

It is easy to move the robot in the state of power-on**.** But **when you need to move the robot in the state of power-off, please push its front body forward, i.e. push it go backwards, or push its back slowly at constant speed.**

2. Start-up Guide

When starting the robot for the first time, you will see that the touchscreen displays the start-up guide settings, i.e. Start-up loading, Robot self-introduction (you can choose to skip the cartoon), Choose menu language, Agree terms for usage, Wait for hardware self-checking, Choose your WiFi and input the password, choose screensaver role, Set administrator password, Scan OR code by mobile App Q-Link to add admin, Other settings, Finish.

The above settings will not show in the following start-up.

3. Log-in

Touch the screensaver of the robot to access the control interface, click any APP and you will see the log-in window. Input your password to log in.

Note: The default login password for administration is *admin*. If you do not log in or log in as non-administrator, some functions will be limited. If you want to change your password or do permission assignment, Please refer to Authority Management.

4. Hover Button

Click the hover button to return to previous menu where click the hover button to return to screensaver of the robot.

Touch, hold and drag the hover button to change the location of the button.

Touch and hold the hover button and an adjustment window pops up. Click button, Click the control bar or drag the slider to adjust volume. Click to return to the screensaver. Click button, Click the control bar or and drag the slider to adjust brightness. Click to prohibit the robot from being roused by sound of surroundings. If there is no operation in about five seconds since the window pops up, the window will close automatically.

5. Menu Operation

For some operation interfaces, if there is no operation within about 24 seconds, the system will return to the screensaver automatically. For those apps which need to keep the screen bright, such as video, music, dance, third-party applications, etc. it will not return to the screensaver.

[Settings]

- WIFI: Open the wireless network of the robot, choose your WIFI and input the password to connect.
- Display & brightness: Click the control bar or drag the slider to adjust the brightness of the screen.
- Voice: Click the control bar or drag the slider to adjust the volume of the robot.

- Robot: Choose robot face, language, voice-wake-on sensitivity, speed, intonation for the robot. Whether enable the black line filtration, human detection, stranger collect. You need to choose appropriate wake-on-voice sensitivity according to such factors as operating environment, users' character, etc. The higher the sensitivity is, the more easily the robot can be awakened and the more likely the robot will be awakened inappropriately in the same time. If the function of black line filtering is not enabled, the robot will regard wider black strips as barrier and stop moving. But if this function is enabled, the function of fall resistance and obstacle avoidance will fail. So use this function with caution. When you start the human detection, while someone is behind the robot, the robot will turn about to face the person. When you open the stranger collect function, when robot awakened by stranger, it will ask the person who is he, at the same time, it will auto collect and record other user's face and answer.
- Battery: Enable the function of automatic charging for the robot and set a minimum level of residual capacity for the robot to charge automatically. When you choose the power-saving mode and do not operate or wake the robot on voice in about 1 minute, the screen will automatically go dim. When someone appears in the front or back of the robot within a certain distance, say 4 meters, or touches the screen or the touch-sensitive parts, the screen will light up automatically. When you choose the performance operation mode, the screen will keep lighting up.
- LED: Choose the brightness of LED white light for the robot.
- Time setting: Enable automatic net time service or manually set system date and time for the robot and choose date format and time format.
- Language &region: Set menu language.
- About: This setting displays some information about the robot's name, ID number, model number, software version number, memory information, legal information, etc. Click Factory Reset to reset to its factory default setting. Click QR code to show the QR code of the robot and scan this code by using the mobile APP Q-Link to apply for adding the robot into the friend list.

[Contacts]

Who first scan the QR code, he will be the administrator. Each robot can only have one administrator, so please set with caution.

The contact list shows all users who have added the robot as a friend. You can change friends among groups. Touch and hold the name of a friend to delete it.

You can select a certain friend and send him/her messages, invite him/her for voice chat or video chat. When a friend sends messages to the robot or ask for video chat, you can receive and respond those messages on the touchscreen to enjoy your happiness with your family and friends at any time.

[Safety Home]

- Enable the defence intrusion mode and edit alarm strategy:

Select “Invade Mode”. Click four times on the screen to form an intrusion detection region (only support convex quadrilateral). Click “Back” to undo former operations. Click “Reset” to reset detection region. Click “Open” to confirm detection region. If you also set such linkage forms as taking photos, videos and alarm, etc and click the “Finish” button, the robot will take alarm images, record videos and/or sound the alarm when it detects abnormal situations.

Select “Cross Mode”. Click two times on the scree to form a detection line for overstepping a boundary. Set the detection direction for overstepping. Click “Reset” to reset detection line. Click “Open” to confirm the detection line. If you also set such linkage forms as taking photos, videos and alarm, etc and click the “Finish” button, the robot will take alarm images, record videos and/or sound the alarm when it detects abnormal situations.

Note: Please do not move the robot after setting the above-mentioned defence mode. It needs to stick to its post.

Select “Cover Mode” and click “Open”. If you set such linkage forms as taking photos, videos and alarm, etc and click the “Finish” button, the robot will take alarm images, record videos and/or sound the alarm when its high-definition color camera be covered or have some be covered risks.

- Emergency strategy：Not open temporarily.
- Stranger strategy：Not open temporarily.

[Movies]

This menu displays local movies of the robot. Please refer to File Manager for means of copying files. Select one video to play it. During the video playing, touch the screen and the control button will pop up so you can pause or play, move to next, select episodes, play a certain part and so on.

[Music]

Open the local music player of the robot. Please refer to File Manager for means of copying files. During the music playing, you can select the former one or the next one, pause or play, play a certain part, adjust the volume, select songs, etc.

[App Market]

Download or update those applications of the robot at any time.

After finishing downloading some APPs, some will display on home screen and some will not, so you should click “Come into my life”, find this application in the list and select “Add Desktop Shortcut”.

[Dance]

How to edit your exclusive dancing:

① Select background music for your dancing in the music select list and click “Next”.

② Select dance step for head, left hand, right hand and feet (in accordance with your creative ideas, and no need to designate movements for all body parts).

③ Select beats for this dance step, i.e. time intervals for the next dance steps: 2 seconds for 1\2 beat, 3 seconds for 1 beat and 4 seconds for 2 beats.

④ Click “Create Step” after designing the dance step. You can also click “Random Edit” if you think there is too much trouble to design dance steps by yourself.

⑤ Design movements and beats for the next dance step until you finish setting all dance steps. One dancing can support 50 dance steps at most.

⑥ In the dancing procedure list, click a certain dance step to view, alter or delete it and click “Save dance steps” if there is no need to alter the step.

Click “Dancing list” to view all saved dancing. Select one dancing and the robot begins to dance. Pause the dancing by clicking the pause button or touching the robot’s touch-sensitive parts. Click “Play” to continue dancing and click the hover button to exit dancing. On the dancing list interface, you can touch and hold the dancing to edit, rename and delete the dancing.

[Camera]

Click the camera button or use voice commands (see Voice Control) to take pictures.

After taking photos, click the photos in the bottom right corner to access the gallery to browse photos.

[Wander]

Once you enable this function, the robot will walk around like children and will not run into anyone or anything. Disable the function or touch the touch-sensitive parts or awaken the robot can all make the robot stop walking freely.

[Gesture control]

Once you enable this function, the 3D depth camera in the robot begins to capture the movement of your hands. Please raise one of your hands and directly face the robot’s

head with a distance about 1 to 3 meters. The distance between your hand and 3D depth camera should be neither too far nor too close since they can both influence hand gesture recognition. Please adjust the distance in the process of gesture recognition. You can move the control icons on the screen by moving your hand. To make a fist and open it means to click, to keep clenching your fist and move left/right means to turn pages left/right.

[Follow]

If you enable this function, the robot's head will return to its proper place. Please directly face the robot with a distance about 1 to 3 meters. Raise your arm and shake gently in accordance with the gesture indicated by the screen. Please adjust the distance in the process of gesture recognition. When the robot recognizes you, it will move forward and you can lower your arm. Then the robot will be your shadow, following you to move forward and make a turn whether you directly face it or not. In the process of following, the robot will stop moving forward if it run into barriers, steps, etc. When the screen displays the prompt illustrated in the right picture, it means that the robot has lost you since you may walk or turn too fast or due to the complex site conditions. So you need to do as the gesture indicated by the screen so that the robot can recognize you.

[Charge]

When the charging pile has been successfully added to the robot and the power line of the charging pile have plugged into the power socket, the robot will find the charging pile and begin to charge immediately once this function is enabled.

[Hardware Test]

Select those items which are needed to be detected. The robot can automatically detect some items while others require your participation in accordance with the prompt displayed on the screen. The detection result will display on the screen.

[Family]

Click the add button on the top right corner and choose "Add family member" or "Add from Contacts". Set the head portrait, account number, name, gender, birth day of this family member and input at least three photos with different angles and different distance. Click "Save". The robot can recognize 20 family members at most.

While the robot is in sleep mode and one family member say "Sanbao, Sanbao" to awaken it, it will say hello to you, for example, "Hi, dear mommy".

After enabling the stranger detection function in robot settings, while the robot is in sleep mode and awakened by a stranger, it will ask who she/he is, acquire the face of the stranger and record his/her answer. The robot can recognize 20 visitors at most.

In addition, you can edit and delete family members' information in the family member list.

[Weather]

You can check the local weather forecast by this menu. And you can add other cities.

When the robot is connected to the internet, you can ask it about the weather, for instance "How's the weather like today?"

[My Device]

- How to add intelligent home devices:

  ① If you access this interface for the first time, click "Scan QR code to add devices". If you have already added the device, click "Add peripherals".

  ② Scan the QR code on the intelligent home device.

  ③ Edit the name of the device and click "Confirm".

  ④ Reset the intelligent home device.

  ⑤ Refresh the device list (pull down the list, or re-access the My Device interface, or restart the robot). The robot connects with the device when the device displays "Online".

  Notes: When you add a charging pile for the robot, you need to touch and hold the button on the back of the charging pile to reset the charging pile and release the button after the indicator light of the charging pile changes twice. If the indicator light of the charging pile goes out, touch and hold the reset button until the indicator lights up and goes out, then release the button. The indicator light will blink and the reset finishes. If the indicator lights up, touch and hold the reset button until the indicator goes out and lights up, then release the button. The indicator light will blink and the reset finishes. Please refer to the corresponding manual to reset other intelligent home devices.

- How to delete the intelligent home device:

  On the My Device interface, slide certain device from right to left and click "Confirm" to delete it.

- How to edit the name of the intelligent home device:

  On the My Device interface, click button beside a certain device name to edit its name. Click button beside the robot icon to edit remarks of the robot.

- How to control the intelligent home device:

  On the My Device interface, click a certain device to check device state and to control device switch. We recommend using the mobile APP “Q-Link” to remotely start your intelligent life with one button.

  If you don’t want to use a certain device or receive alarm messages from it for the time being, click “Ignore this device”. If you want to use the device again, click “Add to my device” to undo the former operation.

[Upgrade]

View the current version number of the software. If there is any new update program, this interface will prompt a new version. Click “Upgrade now” to update your software.

[File manager]

View the local files of the robot. Touch and hold any file or folder to copy, cut, delete, hide files and view details.

Steps to copy video/music/photos into the robot: ① Copy the files you need into a U disk. ② Use a screwdriver to loosen the screw in the battery cover on the back of the robot. Take off the battery cover and you will see the USB interface. ③ Plug the U disk into the USB interface. ④ Access the file management interface, select “U disk” and find the files you need to copy. ⑤ Touch and hold a certain file, select video/music/photo files or folders, click “Copy” or “Cut” and then select “Video/music/photo”, click “Paste”. We do not recommend using this means too much since it will occupy the limited volume of the local storage on one hand and on the other hand the robot provides abundant online resources for you to enjoy lots of music, video, audio books, etc. at any moment.

[Permission]

After the user start up the robot, he/she is required to input the login password before he/she can use functions with corresponding authority.

Login the administrator account and you may change the login passwords of every group of users as well as allocating operating authorization. The default of the

administrator account and password are both “admin”.

When there is someone applying for adding the robot as a friend (see Part Four “Operate mobile APP”), the administrator will receive the application message on his/her smartphone. He/she can decide whether or not to agree to the application and divide them into groups for easier management.

When you enable and set lock function for a certain application, the robot will open this application automatically in about 15 seconds as you start up the robot next time. Other applications are hidden unless you unlock them by clicking the hover button and input the admin password.

[Projector]

Turn on or off the projector.

Set whether or not to turn on the projector automatically while playing videos.

Set it to Wall Mode or Roof Mode. The robot will automatically adjust the vertical angle of its head to project frames onto a wall or a roof. You can reasonably move the robot or its head to adjust projection location.

If the shape of the projecting pictures is kind of trapezoid instead of rectangle, you can move the robot or its head angle as well as using “Keystone correction” to adjust it.

If the projecting pictures are not clear, you can dim the indoor light, adjust the position of the robot or use “Image settings” to adjust the pictures.

If the projecting pictures need to be overturning, you can use “Mirror adjustment” to do flip horizontal or flip vertical or do both of them.

If there is double image and the pictures are still not good enough after using the above-mentioned means, you can dim the indoor light and then control phase and optic axis through “Definition Settings”. According to screen prompts, click the “+” or “-” button and make the lines projected on the wall or the roof coincide.

[Story Pocket]

This is an audio APP designed especially for children under 10 years old and their parents, providing audio books such as children’s stories, children’s songs, bedtime fairy tales, popular science tales, celebrity stories, idioms and their stories, classic enlightened reading materials, English songs, prenatal music, poetry of the Tang Dynasty, Three Character Classic, etc. You can listen to anything you want to listen to. Stories are the most beautiful present for children and children are born to love stories. Good stories can help children to mold character, enrich vocabulary, develop intelligence, and form good reading habit and keen interest in studying.

[KugouPlayer]

This APP provides a lot of services such as online music audition, music downloads, global radio service and MV playback and so on.

[Reminders]

- How to assign a timed-reminder task to the robot:

  ① Click “New” to add a reminder for today or select another date to create a new agenda for that very day.

  ② Select a type for the task. If you select “Voice Reminder”, you need to input the information that you want to play and then click the trumpet icon to listen to the voice reminder. If you select “Music” or “Dance”, you can select the music or dancing you want to play in the list.

  ③ Set the starting and ending time for the reminder.

  ④ Set repetition time.

  ⑤ Click “Finish”.

- How to view or delete timed reminders:

  Click a certain date to view the timed-reminder task of the very day. Click to delete the reminder.

[Duck Run]

This is a game with which you can interact with the robot. Enable this function then the robot can recognize the person standing in front of it. It will turn round 180 degree and move straight for a distance. If it meet someone or other barriers in this process, it will move again (not turning 180 degree this time) and keep shyly avoiding the person standing in front of it. But eventually, the robot will turn back to interact with you. You can guide the robot to a certain place by using this game.

[Gallery]

View all picture or photo files of the robot. Touch and hold one or several files, click the delete button to delete it or them.

[Trumpet]

Steps to enable the robot to play voice/music:

① Click “New”.

② Input a name and click “OK”.

③ If you need the robot to loop the playback of a certain section of voice, click “Text” to input characters and select a template for its movement.

④ If you need the robot to loop the playback of a piece of music or a long audio file, click “Select file” to select a piece of music or text file (first you should put it on video directory of the file management) and select a template for its movement.

⑤ Click “Save”.

⑥ Click “Play” to begin play the voice or music. Click “Details” to view or edit texts, files and movement templates. Click to delete them.

When the trumpet is in the loop playback mode, the wake-on-voice function and the touch-sensitive function are both disabled. You need to touch the screen and click the hover button to exit.

[Patrolling]

Enable this function and the robot will walk around without running into someone or something while the robot will synchronously record audio and video of the surroundings and save them. Disable this function or touch the touch-sensitive parts of the robot or waken the robot, then the robot will stop cruising freely.

Notes:

1. **Since some functions support voice control command, you don’t need to operate on the screen. Please refer to “6. Voice Control” in the next page.**
2. **You can stop or pause playing film and music, dancing, freely walking, Duck Run, Patrolling, etc. by touching the touch-sensitive parts of the robot or speak “Sanbao, Sanbao” to waken the robot.**
3. **More Apps are on the way. Welcome to the App Market to download anytime.**

6.Voice Control

(1) Wake-on-voice:

The ear light goes out when the robot is in sleep state. Speak the robot's name "Sanbao, Sanbao" to waken it and the ear light turns green. Now you can control the robot by voice command and chat with it if it is connected to the network.

Notes: You are able to waken the robot within 4 meters around it. But it may be affected by the ambient noise. The best way to waken the robot is that you directly face the robot in a distance about 1.5 meters. The robot will get into sleep if it doesn't detect voice within 10 seconds to 30 seconds after it is wakened.

(2) Voice Command

The robot can directly respond to those commands with wake-up words, for example, "Sanbao, Sanbao, Sing a song".

Only in the wake-up state, the robot can respond to those commands without wake-up words, for example, "play music".

(3)Control Command:

Function	Voice Command
Awaken robot	Sanbao, Sanbao
Voice interruption	Keep silent, Stop talking(Silent mode) Be quiet (Sleep state)
Go forward	Go forward, Move forward, Move on
Turn left	Turn left
Turn right	Turn right
Stop moving	Stop
Get away	Get out
Start to wander	Start to wander, Walk freely
Stop wandering	Stop wandering, Stop walking freely
Enable gesture	Enable gesture
Disable gesture	Disable gesture
Turn on projector	Turn on the projector
Turn off projector	Turn off the projector
Turn on LED light	Light on
Turn off LED light	Light off
Play music	Play music, Sing a song

Function	Voice Command	
Pause music	Pause music	
Resume music	Resume music	
Previous music	Previous music	
Next music	Next music	
Exit music	Exit music, Stop music	
Play movie	Play movie, See a movie, Play video	
Pause movie	Pause movie	
Resume movie	Resume movie	
Previous movie	Previous movie	
Next movie	Next movie	
Exit movie	Exit movie, Stop movie	
Start dancing	Start dancing, Have a dance, Take a dance	
Pause dancing	Pause dancing	
Resume dancing	Resume dancing	
Stop dancing	Stop dancing	
Start follow mode	Follow me, Start follow, Walk with me	
Stop follow mode	Stop follow, Do not follow me, Exit follow	
Start self-introduction	Who are you, What can you do	
Start auto-recharge	Time for charging, Out of power, Go to charge	
Volume up	Be louder, Volume up	
Volume down	Volume down	
Open APP	Open+ “APP”	“APP” is related APP name
Close APP	Exit+ “APP”	
Start duck run	Let's play a game, Play with me	
Stop duck run	I am done with you, Stop the game	
Start take photos	Take a photo, Take photo, Take a picture, Take picture	
Exit camera	Exit camera, Close camera	

Reminder: More voice commands are adding now…

Part Three To Operate Mobile APP

1. Download and Install

Download and install the “Q-Link” APP from the APP Store on your phone.

We recommend that you use a phone running Android 4.0 + or IOS 8.0+.

2. Log-in

Open the “Q-Link” APP, click “Register” to input user information. If you have already had an account, please input the correct user name and password and click “Login”.

Note: When you create a new account, the user name should be 6 to 18 letters or a combination of letters and numbers and the password should be a combination of 6 to 18 letters and numbers.

3. Add the Robot / Intelligent Home Devices / Friends

(1) Add friends

Click the button on the top right corner of the “Q-Link” APP and select “scan QR code” of your relatives and friends (open his/her “Q-Link” APP → Click “Me” →Click blank space beside the portrait → Click the QR code icon) to add each other. Or you can select “Add Friends”, input his/her Q-Link account, search and add as friends. And in “Add Friends”, it will also show your account name and QR code.

(2) Add the robot/ intelligent home devices

Click the button on the top right corner of the “Q-Link” APP and select “scan QR code” to scan QR codes of the robot (Click “Settings” on the robot → About → QR code) to add the robot. Or you can scan the QR code on the intelligent home devices to add devices.

4. Browse Videos

Click on the top left corner or click “Devices” → choose a robot → robot eye, browse videos in the high-definition color camera of the robot.

Click and to record or take pictures of the current video. Click again to stop recording.

Click to open the live video sound of the robot. Click (not touch and hold) the button below and talk to the phone. The APP will automatically recognize your voice and change it into characters so that you can send them to the robot or directly send characters, expression, etc.

Click to respectively select the robot’s head, left hand, right hand and base plate and then click the control panel to control the direction of movement for the selected parts.

When you view the video from the camera of the robot via mobile APP, the ear light of the robot will turn red. It can only support one user one time to view videos.

5. Remote Voice

Click to access the remote voice interface. Select the robot and click to chat with the robot remotely or speak your voice command, like “Sing a song”, then the robot will automatically recognize your command and play music.

6. Message

On the “Chats” interface, you can:

- Receive alarm messages, such as alarms from intelligent home devices.
- Manage session messages and send messages to contacts or chat with them via video, etc.
- Receive notification messages. If you are the administrator, you will receive information when someone is applying for adding your robot as a friend. You can decide

whether or not to agree to add him/her and assign certain authority for him/her.

7. Life

On the “Life” interface, you can:

- Add common functions so that you can remotely control the robot via mobile APP, for example, open the projector, music, film, dancing, agenda, etc.
- Manage your contacts, your contacts include your friends and robots whom you have added to it, you can view message, delete contacts, set remarks, send message to your contacts (include words/voice/picture), voice call, video call, etc.
- Recommend some useful and interesting applications and intelligent devices, etc. and discover applications everybody likes and new developments and so on.

8. Devices

On the “Devices” interface, you can:

- You can scan the QR code on the robot to add the robot if you haven’t added it.
- After you have added the robot, you can select certain robot from the list, click the button on the top right corner of the “Q-Link” APP to add intelligent home devices for it, to modify the robot remarks and view its residual battery capacity, manage friends of the robot (only for admin), remote control of take pictures, and to browse videos in the camera of the robot, remote enable the protection strategy, edit alarm strategy and so on.
- After the robot has added intelligent home devices, you can view the state of the intelligent home devices and control them.

9. Me

On the “Me” interface, you can:

- Change your head portrait, nickname, password and open your QR code.

- Show your personal information and QR code.
- Manage family members.
- Manage the added robot and intelligent home devices.
- Manage those photos and videos that you take and record when you use the mobile APP to browse videos of the robot.
- Manage the added friends and chats message, quick contact your friends.
- Change the login password of each group, and edit their operating authorization (only for administrator).
- Set video 3G/4G reminder, remind no wifi situation.
- View APP version.
- Exit the log-in account.
- View voice command words of the robot, view FAQ, and seek online help, etc.

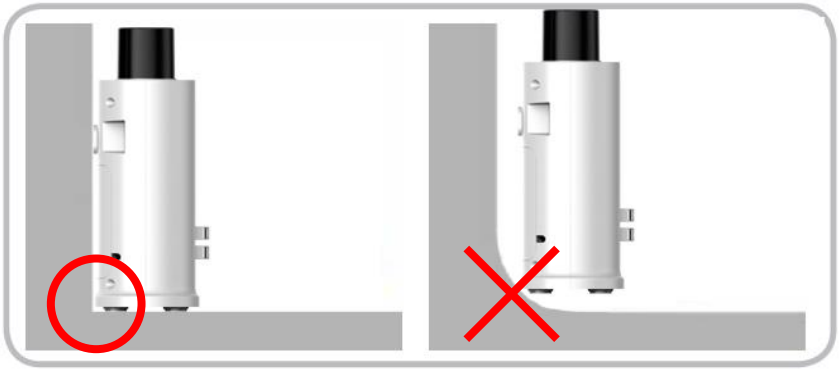
Part Four About Battery Charging

1. Place the Charging Pile

There are two ways to place the charging pile of the robot.

(1) Placing on the ground flat

Let the charging metal sheet of the charging pile outward and lean it against a smooth wall. In order not to disturb the robot when it moves, please place the power wire along the wall and make sure there is no barriers, wires, cords, etc. within two to three meters around the charging pile. Because when robot receive infrared signal reflection by other obstacles will lead charging failure.



(2) Placing on the ground flat and wall-mounted

Place the charging pile on the ground. Choose a position with appropriate height on the wall and drive two nails into the wall. Make sure that the distance between the two nails should be in accord with the distance between the two wall-mounted holes in the charging pile. Raise the charging pile, let the two nails fix the wall-mounted holes and then put the charging pile on the ground so that the charging pile is fixed to avoid from tottering.

2. Charge Mode

When you use the charging pile for the first time, please open the cover of the adapter box and take the adapter out. Connect the power wire in the packing box with the

adapter and then put the adapter back to its original position. Collect wires extending from the left side of the adapter and put them into card slot. Put the power wire into the outlet of the right-hand side and put the cover on the adapter box.

Mode one: Auto-charging

(1) Plug the power wire of the charging pile into the power socket.

(2) Add the charging pile to the robot (no need to add again hereafter).

① Click “My Device” on the touchscreen of the robot.

② If you access this interface for the first time, click “Scan QR code to add a device”. If you have added the device, click “Add device”.

③ Scan the QR code on the charging pile.

④ Change the device name (such as “charging pile”) and click “OK”.

⑤ Touch and hold the button on the back of the charging pile and release the button after the state of the indicator light of the charging pile changes twice. If the indicator light of the charging pile is out, touch and hold the reset button until the indicator lights up and goes out again. Release the button and the indicator light will blink to finish reset. If the indicator light is on, touch and hold the reset button until the indicator light goes out and lights up again. Release the button and the indication will blink to finish reset.

⑥ Refresh the device list (pull down the list, or re-access the Intelligent Circle interface, or restart the robot). At this moment, only one robot around would be the best. The robot connects with the charging pile when the charging pile displays “Connected”.

(3) Battery settings.

Click the “Settings” on the touchscreen of the robot → Battery → Enable auto-recharge → set a minimum residual battery capacity for auto-recharge.

(4) When the robot is being used, its residual capacity is lesser than the setting value or its charging mode is enabled by clicking “Charge”, the robot will look for charging piles to charge itself automatically.

Mode Two: Manually charging

Plug the power wire into the power sock. Move the robot and make the charging sheet metal on the back of the robot contact with the charging metal sheet. Press the emergency charging button on the charging pile.

Mode Three: Wire charging

Take out the power adapter in the charging pile. Connect one end to the charging socket on the back of the robot and the other end to the power socket.

Note: Since the robot cannot move in the mode of wire charging, all functions related to movement, such as moving forward, circling, wandering, following, dancing, etc., will be forbidden. But other functions, such as playing films and music, turning on the projector, etc., will not be affected. When it charges via the charging pile, the robot can move freely. Charging will stop if the robot disconnect with the charging pile.

3. Battery Indication

- **For the robot (Power on status):**

  When it isn't charging, the wing indicator light flashes red which means the residual battery capacity is equal to or less than 40%. The touchscreen also displays current residual battery capacity.

When it is charging, if the wing indicator light flashes red, the residual battery capacity is equal to or less than 40%, and if the light keeps yellow, the residual battery capacity is between 40% and 80% (not including 80%) , and if the light keep green, the residual battery capacity is equal to or more than 80%. The indicator light goes out after stopping charging.

- **For the charging pile:**

When it isn't charging, you can press the emergency charging button to charge it when the indicator light keeps yellow.

When it is charging, the indicator light blinks as BLN. The lower the residual battery capacity is, the faster the BLN blinks and vice versa. When the robot is fully charged, charging pile will be auto closed, and the indicator light will be turned off. Touch and hold the emergency charging button for 2 seconds to turn on or turn off LED indicator light.

4. Electrical Safety

Infrared signals from the charging pile can be opened and projected only when the robot is searching for the charging pile. When the robot finds the charging pile away from it about 50cm, the charging metal sheet is only electrified with 19V which is within safety limits. You and your family member can rest assured.

Part Five FAQ

1. Points for Attention

- Please do not allow children under seven years old to use this product alone.
- Juveniles should use this product under the guidance of adults.
- If you allow juveniles to use this product, please be sure to instruct them all do's and don'ts as well as safe use of electricity.
- Please tell your children not to put their fingers into the gap between the robot's wings and its body as well as the gap between the robot's head and its body to avoid being jammed while the robot moves.
- Please gently operate the vertical moving parts of the head.
- Please do not immerse the product or the charging pile into any liquid.
- Please pay attention to those places where the product may fall or tumble to the ground.
- Please use the configured charging pile to charge up the product. Be sure not to use other types of power adapters.
- Please do not throw or kick the product and the charging pile, which may result in mechanical failure, abnormal function as well as degradation of performance.
- Please do not use or store the power adapter in the high temperature, humid or high voltage conditions. Once such abnormal situations as leakage, strange smell, deformation, etc. appear, you should cut the power immediately.
- When you move the robot on power-off, please push its front body forward, i.e. push it go backwards, or push its back slowly at constant speed.

2. FAQ

(1) What if the robot can't find the charging pile?

- Make sure that the power wire of the charging pile is connected to the power supply.
- See if you have not added the charging pile for the robot. If so, please refer to the charging mode in Part Four.
- See if there are barriers blocking the robot or the induction area of the charging pile from transmitting and receiving infrared rays. If so, please move those barriers.
- Check if the robot and the charging pile are in the different rooms. If so, it takes the robot more time to find the charging pile. Please move the robot to the same room where the charging pile is.

(2) Why the robot can't charge automatically?

- Check if you disable the auto-charging function of the robot. If so, please access Settings → Battery → Enable auto-charging.
- Check if the charging pile is not connected to the power supply.
- Check if you haven't added the charging pile for the robot.
- Check if the battery of the robot has been used up or the robot is powered off.
- Check if the bottom of the charging pile is on the same level with the bottom of the robot.
- Take out of the power adapter of the charging pile and charge up the robot to check if there is adapter failure.

(3) How to prevent the robot from out of service as the result of dead battery?

- Access Settings to open the auto-charging mode.
- Add the charging pile for the robot. Place the charging pile in the right place and connect it to power supply.

(4) What if the robot is silent?

- Access the voice settings to check whether or not the volume is minimized. If so, raise the volume.
- Restart and try again.

(5) What if I have trouble in wakening the robot:

- Make sure that there isn't too much noise around the robot.
- Make sure that you do not speak from a distance too far away from the robot.
- Make sure that you do not speak too fast or unclearly since Sanbot can only recognize clear words.
- See if you set a relatively low sensitivity for the robot. If so, you can access the settings to adjust the sensitivity of wake-on-voice.

(6) What if the robot can't be wakened?

- See if the silent mode is enabled. Touch and hold the hover button and check the state of the button. means that the silent mode is enabled. You can click this button to undo the silent state.
- Restart and try again.

(7) What if the pictures projected from the projector are askew or unclear?

- If the shape of the projecting pictures is not rectangle, you can move the robot or its head angle as well as using "Keystone correction" to adjust it.
- If the projecting pictures are unclear, you can dim the indoor light, adjust the position of the robot or use "Image settings" to adjust the pictures.
- If there is double image and the pictures are still not good enough after using the above-mentioned means, you can dim the indoor light and then control phase and optic axis through "Definition Settings". According to screen prompts, click the "+" or "-" button and make the lines projected on the wall or the roof coincide.

(8) What if the robot isn't able to chat?

- Make sure the robot is connected to the internet by checking the network settings. Input the correct password and connect it to the internet.
- Check if the network signal that the robot connects to is weak.
- Check if there is any network failure.

(9) What if you can't browse video via your mobile APP?

- Check if there is other person who is browsing videos since it can only support one user one time to view videos.

- Check if the robot is not connected to the internet.
- Check if the battery of the robot has been used up or the robot is powered off.
- Check if your mobile is not connected to the internet.
- Check if the “Remind no wifi situation” has been enabled or the “Auto open video” function has been disabled in the APP’s system settings.
- Check if you do not have operating authorization. If so, please contact with the administrator of the robot.

(10) What’s the role of the ear light?

The ear light goes out when the robot is in sleep state.

The ear light turns green when the robot is wakened. You can control the robot via voice and chat with the robot.

The ear light turns red when someone is browsing videos via mobile APP.

The ear light turns blue when you press the silent button. Then the robot will not be wakened by environmental sounds.

(11) What formats does the robot support for video and audio files?

Video formats that the robot supports：MP4、WMV、RMVB、AVI、3GP、MKV、MPG、VOB、MOV、RM、MPEG、M4V、FLV

Audio formats that the robot supports: MP3、flac、wav、ogg、wma、imy、mid、ac3、au、mka、wv

(12) What if the robot turns black screen?

- The robot is in power-saving mode by default, that is, if no one operates or wakes the robot on voice in about 1 minute, the screen will automatically go dim. When someone appears in the front or back of the robot within a certain distance, say 4 meters, or touches the screen or the touch-sensitive parts, the screen will light up automatically. You can access Settings → Battery → select demo mode to keep the screen light up in operation.
- If you touch the touch-sensitive parts of the robot and cannot waken it, please check if the battery of the robot has been used up or the robot is powered off.

3. Specification

(1) Robot specification parameter

Items	Specifications		
Size	92cm(Height)x 30cm(Depth)x 40cm(Width)		
Weight	19kg		
Battery	Lithium battery Capacity: 20Ah/300W Running time: about 10 Hours, standby for over 20hours		
Sensor	Head	Mic x 7, RGB Camera x 2, 3D sensor x 1, Touch sensor x 7	
	Body	Gyroscope sensor x 1, Human body induction sensor x 2, IR evading obstacle sensor x 3, IR message receiving sensor x 6, Touch sensor x 4, electronic compass sensor x 1	
	Hand	IR evading obstacle sensor x 4, Touch sensor x 2	
	Leg	IR evading obstacle sensor x 10, Omni Wheel x 3	
Moving parts	Head	2 x DOF	180 degree at horizontal direction, 30 degree at vertical direction
	Hand	1x2(L/R) DOF	270 degree swing back and forth
	Leg	3 x DOF	Free angle
Video	8.0MP HD camera 1.0MP HD color camera with 140 degree aspheric surface angle		

Items	Specifications
Display	10.1 inch 1080P HD capacitance 10-point touch display
Projection	Laser 1920 x 720 HD wide gamut output, 60Hz, aspect-ratio: 16:9
Platform	ROS1.1
Sound	Voice control, 360 degree sound localization 4 x tweeter, 1 x woofer
WIFI network	IEEE 802.11 b/g/n(2.4GHz)
Wireless network	Blueteeth4.0、ZigBee
Atmosphere lamp	250 kinds customized colors, 2 cycles for ears , 2 pcs for hands, and 1 cycle for chassis
Moving speed	0.8m/s max
Grade	1.5cm max

3. Specification

(2) Charging pile specification parameter

Item	Specifications
Size	242.7mm (Height) x 110mm (Depth) x 248.5mm (Width)
Weight	1.35kg (with adaptor)
Display LEDs	1pcs for Respiration display
Auto recharging IR distance	0~5 meters, 180 degree signal covering
Installation	Indoor floor type or wall-mounted

Caution:

Use the product in the environment with the temperature

Between-10℃ and 45℃; Otherwise, it may damage your product. It can be Operating under 2000m。

For the following equipment:

Product Name: Intelligent Robot

Model / Brand Name: S1-B2/Sanbot

Epudo(DongGuan)Digital Technology Co. Ltd michael@epudo.com

hereby declares that this [Name: Intelligent Robot, Model: S1-B2] is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

CE

The product shall only be connected to a USB interface of version USB2.0 or higher, and that the connection to a power USB is allowed.

Adapter shall be installed near the equipment and shall be easily accessible.

Only can use adapter as Output: 19.0V⎓4.74A which comply with CE or the charging Pile sale together

The plug considered as disconnect device of adapter

The RF distance between body and product is 0mm

This product can be used across EU member states

CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED
BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING
TO THE INSTRUCTIONS

Technical Characteristics of EUT	
Bluetooth	
Bluetooth Version:	V4.0
Frequency Range:	2402-2480MHz
Max.RF Output Power:	2.001dBm (EIRP)
Type of Modulation:	GFSK, Pi/4 DQPSK, 8DPSK
Data Rate:	1Mbps, 2Mbps, 3Mbps
Quantity of Channels	79/40
Channel Separation:	1MHz/2MHz
Type of Antenna:	Integral Antenna
Antenna Gain:	1.65dBi
Wi-Fi	
Support Standards:	802.11b, 802.11g, 802.11n-HT20
Frequency Range:	2412-2472MHz for 802.11b/g/n(HT20)
Max.RF Output Power:	9.69dBm (EIRP)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels	13 for 802.11b/g/n(HT20)
Channel Separation:	5MHz
Type of Antenna:	Integral Antenna
Antenna Gain:	1.65dBi
ZigBee	
Support Standards:	IEEE802.15.4
Frequency Range:	2405-2480MHz
Max.RF Output Power:	3.247dBm (EIRP)
Type of Antenna:	Integral Antenna
Antenna Gain:	1.65dBi

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 10mm between the radiator & your body.

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.

NOTE 1: 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Love life love Sanbot