

Part V

Transport, Cleaning and Storage

5.1 TransportingCruzr

If you need to transport your Cruzr, please place it in its box.

Warning: The robot contains a lithium battery. Transport should comply with local regulations. Contact Cruzr technical support for more information.

5.2 Cleaning

Before cleaning, please refer to the safety instructions in Section II.

5.2.1 Cleaning Cruzr

Caution: Abrasive, aerosol and other chemical liquid are not allowed as they may corrode the plastic outer shell of Cruzr. Spraying or soaking Cruzr with water is also not recommended as water may leak inside.

Cleaning Steps:

1. Disconnect the adapter from Cruzr.
2. Unplug the adapter from the outlet.
3. Press and hold the On/Off Button on the back of Cruzr for 3 seconds and make sure it is completely shut down.
4. Turn off the chassis and make sure it is completely off.
5. Wipe Cruzr with a soft, wet cloth.
6. Use a soft, dry cloth to dry off Cruzr thoroughly.
7. Check if the Cruzr is completely dry.

Caution: Please clean the dust on the cameras and sensors to avoid malfunction.

5.2.2 Clean AC Adapter

If there is dust inside:

1. Disconnect the adapter from the outlet.
2. Wipe the adapter with a soft, dry cloth.
3. Make sure the adapter is thoroughly dry.

5.3 Storage Notice

Adhere to the following steps carefully to guarantee the safety of your Cruzr robot and prevent damage.

- 1.If Cruzr will not be used for a long time, please store it in a dry and dust-free place. The temperature should be between 0°C-40°C (32°F-104°F).
- 2.The battery should naturally lose power during the storage period. Do not let it fully die. In order to maximize battery life, please fully charge the battery at least once every 3 months.

Storage Steps:

1. Disconnect the adapter from Cruzr.
2. Press and hold the On/Off Button on the back of Cruzr for 3 seconds and make sure it is completely shut down.
3. Turn off the chassis and make sure it is completely off.
4. As shown in (Figure5.3.a), put Cruzr in its optimal safety position.
5. Move Cruzr to the storage location. Do not push its head. Use two hands to hold its waist as shown in Figure 5.3.b.
6. Make sure that Cruzr is free of dust, especially the sensor on the base.



Figure 5.3.a

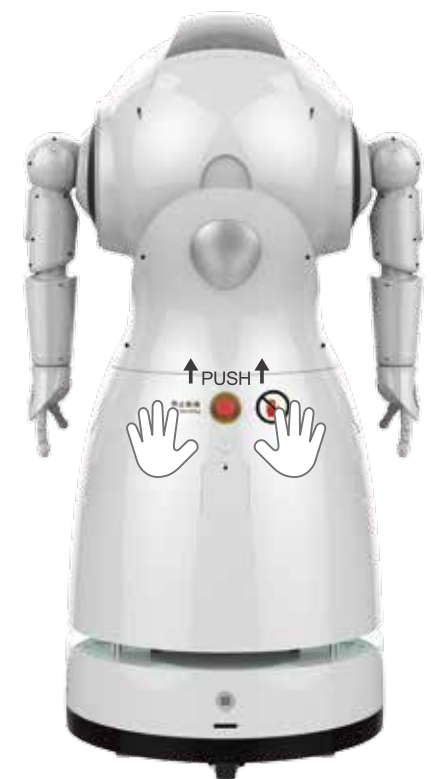


Figure 5.3.b

Part VI

Reference

6.1 Cruzr Specifications

Item	Specifications
Size	1210(H)*630(W)*537(D)(mm)
Weight	≈45KG
Color	White
Materials	Titanium Alloy Structure, PC+ABS Shell
Battery	25Ah 25.6V Iron Lithium Battery
Screen	11.6-inch HD touch Screen
Camera	1 13MP HD Photo, 1 RGBD Depth-Sensing Camera
Speaker	3 Full-Range Speakers
Sensor	Head: 6+0 MIC array*1+Cliff Sensor Waist: RGBD Depth-Sensing Camera*1 Arms: E-Skin 3*2 Chassis: Infrared *7(1 Recharge Infrared +6 Ground Inspection Infrared) Sonar Sensor*6 9-axis IMU *1 Laser Radar *1 Temperature and Humidity Sensor *1
DoF	15: 13 DoF (Arm 5*2, Head 1, Shoulder 2)+2Hub Motor
OS	Android (Application Layer) + ROS (Control Layer)
Networking	Wi-Fi 2.4G/5G,
Velocity	0.3m/s、 0.5m/s、 0.7m/s
Accessories	1 Recharging dock+1 power adapter +1 user manual
Interface	2 USB interface, 2 HDMI interface

6.2 How to Use the Charging Dock



Front View of the charging dock



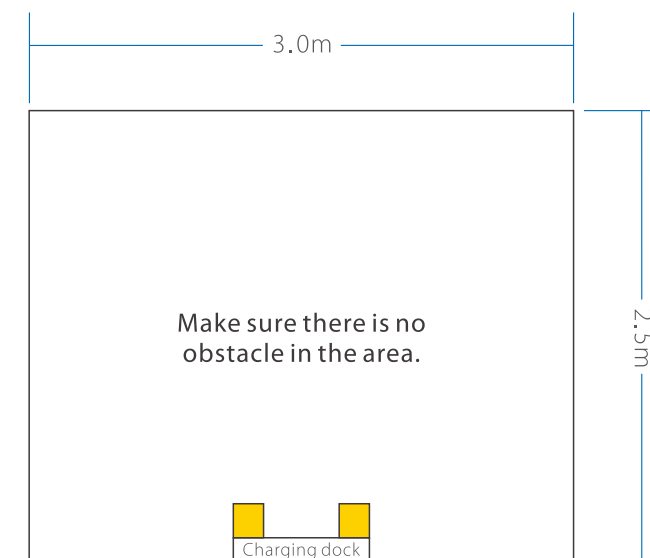
Rear View of the charging dock with the adapter connected

Setting the Charging Dock Location in a Map:

"The charging dock location in a map" should be set about 0.8 m to 1.2 m in front of the real location.

Precautions for Installing a Charging Dock:

1. Connect the adapter with the charging dock and place it against a wall.
2. The floor should be smooth and dry. A place with low foot traffic is recommended.
3. Placing the charging dock in an area with at least 2.5 m of space in front and 1.5 m of space on each side is recommended, as shown in the figure below:
4. Avoiding a smooth white wall 3.5 m in front of the charging dock is recommended.



6.3 FAQs

Question	Solutions
Cruzr cannot be turned on	<ul style="list-style-type: none">- Check whether the Power Button under the chassis is loose.- Check whether the On/Off Button on the back is loose.- If the battery is low, please charge the battery for 10 minutes and then turn it on. See 2.1.1 Power on.- If the problem cannot be solved, please contact Cruzr technical support.
Cruzr cannot be charged	<ul style="list-style-type: none">- Check whether the AC adapter is plugged into the outlet;- Check whether the AC adapter is connected to Cruzr properly.- Battery charger LED on:- Green: The battery is fully charged or the adapter is connected to the outlet but not connected to Cruzr.
Cruzr cannot be charged	<ul style="list-style-type: none">- Red: The battery is charging.
The AC adapter is very hot	<ul style="list-style-type: none">- If the adapter is too hot to be touched, it may be caused by a malfunction.- Please disconnect the adapter from the outlet immediately and contact Cruzr technical support.
Cruzr cannot connect to the InternetCruzr's network connection is off: On the display screen app interface:	<ul style="list-style-type: none">- When Cruzr starts up, touch the display screen to show the app interface.- Open the "Settings" page.- Go to "Network" settings and re-enter your Wi-Fi information.- If Cruzr still cannot connect to Internet, please check your network status.- Check if other devices can connect to the same network.
Facial recognition failure	<p>Under certain circumstances, Cruzr may not be able to recognize you:</p> <ul style="list-style-type: none">- Check whether the camera is covered with dust- If the surrounding light is too strong or too weak,Cruzr may not be able to recognize you.- If the problem cannot be solved, please contact Cruzr technical support.
Voice commandsresponse failure	<ul style="list-style-type: none">- Check the network status for Cruzr. If it is not connected to the network, please connect it.- Please enhance the network signal, if the network signal is unstable or weak.- If the problem cannot be solved, please contact Cruzr technical support.
Response of wake wordfail	<p>The following situations may occur:</p> <ul style="list-style-type: none">- The surrounding environment is too noisy. Cruzr cannot recognize your voice.- The distance between you and Cruzr is too far. Please stand closer to Cruzr and try again.- Your words are too fast or not clear enough.Cruzr only recognizes Standard English pronunciation.- If the problem cannot be solved, please contact Cruzr technical support.

6.4 Fault

Fault	Solutions
Cruzr cannot turn its head	<ul style="list-style-type: none">- Check whether objectjammed the movement track of Cruzr'shead.- If not, contact Cruzr technical support.
Cruzr's hands/arms cannot move/ movements are blunt	<ul style="list-style-type: none">- Check whether objectjammed arm joints.- If not, please contact Cruzr technical support.
Cruzr's shell is loose	<ul style="list-style-type: none">- Shut down Cruzr.- Unplug the adapter and store it.- Contact Cruzr technical support.
The speaker has no sound	<p>Check if the volume is off.</p> <p>On the display screen app interface:</p> <ul style="list-style-type: none">- When Cruzr starts up, touch the display screen to show the app interface.- Go to "Settings" to adjust the volume.- If the problem cannot be solved, please contact Cruzr technical support.
The AC adapter's LED lights do not light up	<p>Check for the following:</p> <ul style="list-style-type: none">- Check if the AC adapter cable is connected to Cruzr.- Check if the AC adapter is properly plugged into the outlet.- If the problem cannot be solved, please contact Cruzr technical support.

Instruction configuration table

Model name	Order title	Order content	Administrator mode
Display	Screen brighter	Brighten the screen, The screen is too dark, Increase the brightness, Your screen is too dark, Your face is too dark, The screen is a little dark, Your screen is a little dar, Your face is a little dark, Still too dark	No
Display	Screen darker	Darken your screen, The screen is too bright, Darken your face	No
Power off	Power off	Shutdown	Yes
Battery & Charge	Check battery	Battery usage, Check your Power, Check your battery, Check battery, How much power do you have, How much power do you left, Check battery life, Check your battery life, Check the battery usage, Check your battery usage	No
Battery & Charge	How long can it works	Estimated time, How long can you last, Tell me your estimated time, How long can you wor, What's your estimated time, How long can you use	No
Battery & Charge	Go to charge	Charge, Go charge, Charge yourself, Go charging, Go to charge, Go to charge yourself, Get yourself charged	Yes
Voice	Raise volume	Volume up, Raise your volume, Turn up the volume, Turn up your volume, Turn the volume up, Turn your volume up, Make yourself louder, Louder, Raise more, Turn up more	No
Voice	Lower volume	Volume down, Lower your volume, Turn down the volume, Turn down your volume, Turn the volume down, Turn your volume down, You're too loud, Quiet, Lower, You're still too loud, Still too loud	No
Voice	Maximum volume	Turn up to the maximum volume, Turn up to the max volume, Turn the volume up to the maximum, Turn the volume up to the max	No
Working mode	Automatic service	Automatic service, Automatic service mode	No
User management	Register facial info	Register information, Register my information, Add my information, Create new user, User registration, Register new user, Facial recognition, Open facial recognition, Do you know me, Do you recognize me	No
User management	Facial recognition	Face recognition, Open face recognition, Have you ever seen me, Have we met before, Do you know who I am, Automatic service, Automatic service mode	No
Customer service	Call customer service	Call the customer serAvice, ustomer service, call customer service, get me customer service, contact customer service, call customer service for me, contact customer service for me, can you call customer service, can you call customer service for me, please call customer service	No
Map	Check map	Open the map, View the map	
Location	Locating	Locate the location, Start to locate the location, Manually locate the location	Yes
Location	Cancel location	Cancel the location	Yes
Navigation	Guiding	Go to xxx	No
Move	Go ahead	Move forward, Walk	Yes

Model name	Order title	Order content	Administrator mode
Move	come here	Come here, come to me, come come, i am here, i'm here	
Power off	Stop	Stop	Yes
Move	Turn left	Turn left	Yes
Move	Turn right	Turn right	Yes
Move	Turn around	Turn back, Turn around, Turn round	Yes
Move	Rotate	Rotate your body	Yes
Music	Play music	Music, sing, sing a song, can you sing, can you sing for me, play music, sing a song for me, i want you sing, would you sing for me, sing for me, play a song, play a song for me, let's sing, what kind of music do you like	No
Music	Pause music	pause the music, pause the song, pause, freeze the music	No
Music	Cotinue playing music	Continue the music, continue the song, continue to sing, restore the song, go back to sing, go back to play music, restore the song	No
Music	Previous one	Previous song, Play previous song, Previous one	No
Music	Next one	Skip, I want more, anything else, what else, can you switch to another one, can you sing a different song, i still want to listen, i still want to listen to music, can you sing another for me, anything more, give me another one, next song	No
Music	Stop playing	Stop music, stop playing, no more music, stop singing, i don't want to listen any more, no more singing, cease the song, cease the music, cease to play, cease playing	No
Video	Play video	Play a movie, play a video, watch a movie, watch a video, i want to watch a movie, i want to watch a video, i want you play a video, i want you play a movie, play a video for me, play a movie for me, i want you play a video, i want you play a movie, show me a video, show me a movie	No
Video	Pause the video	Pause the video, pause the movie, freeze, freeze the video, freeze the movie, hold on, pause	No
Video	Continue playing	Continue to watch, continue the movie, continue the video, go back to the movie, go back to the video, restore the video	No
Video	Previous one	Previous one, previous video, play the previous video	No
Video	Next one	Next movie, next video, play a different one, play another one, i want to watch more, play another video, play another movie, show me another one, show me a different one	No
Video	Stop playing	Stop watching, stop playing, exit, stop, no more movie, i don't want to watch any movie, i don't want to watch any video, i don't want to watch any more, no more videos, exit from playing, quit from playing, quit, i want to watch no more, play previous movie, play previous video	No
Album	Open album	Photo album, Open the photo album, I want to look photos, Show me the photo album, Photo Gallery, Open the photo gallery, I want to look some photos, Show me the photo gallery, I want to look some pictures, Show me some pictures, Close the photo album, Exit	No

Instruction configuration table

Model name	Order title	Order content	Administrator mode
Album	Take photo /video	Turn on camera, I want to take a photo, Enable camera, Take a photo for me, Please take a photo for me, Exit from video camera, Exit from camera, Turn off the camera, Turn off the video camera, Take photos, Take photos, I want to record a video, Record a video for me, Please record a video for me, Record a video, Start to record, Will you record a video for me, Stop recording, Finish recording	No
Dance	Dance	Dance, Can you dance, Will you dance, Dance for me, Would you dance for me, Will you dance for me, I wanna see you dancing, I want to see you dancing, Dance for us, Show me some moves, Show us some moves, How do you dance, Show your best dance, Show your best moves	No
Dance	Flamenco	Flamenco, Dance Flamenco, Show your Flamenco, Show your Flamenco dance, Do you know Flamenco, Do you know how to dance Flamenco, Can you dance Flamenco, Do you know any Spanish dance	No
Dance	Arabian dance	Arabian dance, Do Arabian dance, Show an Arabian dance, Show your Arabian dance, Do you know Arabian dance, Do you know how to do Arabian dance, Can you do an Arabian dance	No
Dance	Robot dance	Robot dance, Do Robot dance, Show a Robot dance, Show your Robot dance, Do you know Robot dance, Do you know how to do Robot dance	No
Dance	Play violin	Play the violin, Play the violin for me, Play the violin for us, Would you play the violin, Can you play the violin	No
Dance	Pock and roll	Rock and roll, Can you rock and roll, Let's rock and roll	No
Dance	Next one	Next one, last one	No
Dance	Stop dancing	Stop, Enough	No
Date	Date	What's date, what is date, what's date today, what is date today, what day is today, what day is it today, tell me the date, tell me the date today, what's the date, what is the date, what's the date today, what is the date today, what is today's date	No
Time	Time	What's the time, what is the time, what is the time now, what's the time now, what time is it, what time is it now, tell me the time, have you got the time, do you have the time	No
Emotion model	Age	How old are you, When is your birthday, When were you first built, Tell me your birthday, When's your build-day, When were you born, What's your age, Tell me your age	No
Emotion model	Height	How tall are you, You're short, Tell me your height, What's your height	No
Emotion model	Gender	Are you a boy or a girl, Are you a girl, Are you a boy, Tell me your gender, Do you have a gender, What gender are you, What gender are you really, What's your gender	No
Emotion model	Weight	How much do you weigh, You look fat, Do you have a fat problem, How heavy are you, What's your weight, You're kind of chubby, Tell me your weight	No

Instruction configuration table

Model name	Order title	Order content	Administrator mode
Emotion model	Ability	Do you have any super power, What can you do, What else can you do, What's your special skills, Show me what you've got, What have you got, Show me your special skills, Show me your super power	No
Emotion model	Proud	Good job, You're good, You're smart, You're on the ball, You're really on fire, You're on a roll	No
Emotion model	Self introduction	Introduce yourself	No
Emotion model	Shakehand	Can I hold your hand, Shake hands, Give me a handshake, Can we shake hands, Let's shake hands	No
Emotion model	Shy	You're so sweet, You're a sweet robot, You're adorable, You're lovely, Cute, Adorable, Lovely, Sweet	No
Emotion model	Sad	Why are you so stupid, You're so stupid, How stupid are you, How silly are you, You're so silly, You look silly, You're a stupid robot	No
Emotion model	Hug	I adore you, Give me a hug, I like you, Hug, Let's hug, I want to cuddle, Can I hug you	No
Emotion model	Bye	Bye, See you, Goodbye, See you around, See you later, So long, It's time to say goodbye	No
Emotion model	Guard	I feel bad, I'm depressed I'm unhappy, I'm not feeling well, I want to cry, I wanna cry, I don't feel well, I don't feel good, I'm not well, I'm stressful	No
Emotion model	Welcome	Welcome, We have guests, Greeting, Come on , we have guests, Come on , we have some guests	No
Emotion model	Name	What's your name, Do you have a name, Tell me your name, How do I call you, How do I address you	No
Emotion model	Pretty	Isn't she a beauty, He is handsome, She is pretty, He is handsome, She is lovely, She is pretty , right, She is pretty, isn't she, I'm pretty, right, I'm handsome, right, Am I a pretty girl, Am I a handsome boy, What a pretty girl she is, What a handsome guy he is, How pretty she is, How handsome he is, He looks sloppy, She is not pretty enough, She is ugly, What an ugly girl she is, What a sloppy man he is, Mirror on the wall, Who's the fairest one of all, Do you think I'm pretty, Don't you think I'm a pretty girl, Do you think I'm handsome, Don't you think I'm a handsome guy	No
Emotion model	Group photo	Group photo, Can I take a photo with you, Group photo, will you, I want to take a photo with you, Let's take a photo together	No
Emotion model	Thanks	I appreciate it, Thank you very much, I really appreciate your help, Thanks for your help, Thanks, I'm really grateful	No
Tour		Give us a tour, Show us the place, Show us the area, Go touring, Take us visit the place, Show us this place, Take us visit this place, Start touring, Start to tour, Let's visit the place, Let's start the touring, Pause, Stop for a moment, Stop touring for a moment, Cease for a moment, Cease tour for a moment, Freeze, Freeze for a moment, Freeze the tour for a moment, Continue, Keep going, Keep touring, Go back to tour, Restore, Restore the tour, Stop, Stop the tour, Stop touring, Exit, Terminate, Terminate the tour, Cease to tour, Cease to tour, Stop here, Once more, One more time, Talk again, Introduce again, Introduce once more, Would you introduce it again, Can you introduce it again, Will you introduce it again	

FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and

This device must accept any interference received, including interference that may cause undesired operation.

Warning: 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.

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 20cm between the radiator & your body.