

Smart Wheels

Preface

Dear customer:

Thank you for selecting the intelligent scooter product (hereinafter referred as scooter). Product Manual is an important document, it provides scooter's product information, operation methods and after-sales service information to you. Before use, please be sure to carefully read the Product Manual for correct operation and maintenance.



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01 / Safety precautions

Please carefully read the Safety section before use and properly use the product as guided by the Manual.

The safety reminders help use the product safely and properly.

In order to differentiate various degrees of harm and damage, the possible damage brought by misuse is categorized into “warning” and “caution”. The two are both critical reminders on safety and require strict compliance.

1.1 Signs



Warning

- Use of this sign indicates hazardous situations that may cause serious injury when neglected.



Attention

- Use of this sign indicates hazardous situations that may cause mild or moderate injury and material damage when neglected.

1.2 Indication

- This product is to help the disabled, the old and infirm whose are difficulty in walking to move in safe and level sidewalk for a certain distance (forbidden to drive on the motorway)

1.3 Contraindications



Warning

Contraindications: The patients with mental problems, including the users who temporarily or permanently lose attention or judgment, are not allowed to use this product.

1.4 Electrical safety



Attention

This scooter has passed the test in accordance with ISO 7176-9 Climatic Test.

- This test can ensure that the users of the scooter or attendants have sufficient time to move to safety place in a rainy day.
- DO NOT operate the scooter under thunderstorm;
- DO NOT place this scooter under rainstorm;
- DO NOT place this scooter in a wet place for a long time;
- DO NOT spray, wash or wash the scooter with an automatic car washer.

Direct exposure to rain, smoke, or humid air may cause electrical and mechanical failure of the scooter and may also cause rust.

1.5 Conditions of use



Attention

- Ambient temperature: 0°C~45°C; Relative humidity: 20%~80%;
- Atmospheric pressure: 80kpa~1,03kpa; With no strong electromagnetic interference.

1.6 Waste disposal



Attention

- According to local laws and regulations, your products should be treated separately from domestic waste. It should be put at the designated recycling point of local government. The classified collection and recycling of products help to save natural resources.

1.7 Attention

(1) Driving on slopes

This scooter has passed the test requirements of climbing on a slope of not exceeding 10° with a load of 100kg. DO NOT try to climb the slopes exceeding 10°

During reversing on a slope, please be sure to slow down the scooter. DO NOT reverse on a slope exceeding 10°, during reversing, please be extremely careful.

The ability of climbing slope and driving distance are affected by battery and following environment:

For example: The weight of the users; Topography (such as grass or gravel); Gradient of hill; Battery life and service life; Extreme temperature; Use and weight of the fittings, etc.

(2) Brake

When the scooter brakes, please sit properly, steadily hold the handrail and lose controller rocker, the scooter will stop in several seconds.

Note: Electromagnetic brake will not take effect immediately, it will take effect after the wheel rotates for 1/2 cycle.

(3) Emergency braking

In case of critical situation or unexpected movement, press the power switch key to make the scooter stop (Although this emergency brake is effective, it must not be used under normal conditions).

Note: Frequent use of emergency brake may lead to the motor fault, which further causes that the scooter cannot be operate normally.

(4) Use of mobile phone

During operating the scooter, DO NOT use mobile phones or wireless devices.

Use of mobile phones or wireless devices will generate strong electromagnetic fields, the electronic system of the scooter will be interfered. If the mobile phones or wireless devices have to be used, the scooter has to be stopped and powered off in advance.

Please follow the traffic rules.



1.8 Warnings (please carefully read)

- DO NOT try to pick up objects by bending down when sitting on the scooter, or, the scooter or user may roll over or be damaged.
- DO NOT use the scooter on escalators, which may increase the risk of being injured;
- DO NOT drive on vehicle lane or non sidewalks;
- DO NOT drive on the surface of water, oil, ice or other slippery objects. In case of violation, the scooter may be out of control;
- DO NOT attempt to cross over obstacles and ditches exceeding 45mm, violation of this operation may cause personal injury;
- DO NOT sharply bend or move backwards under high speed;
- DO NOT carry passengers;
- DO NOT try to drag another scooter;
- DO NOT operate the scooter without checking the fasteners, connectors or detachable parts for correct connection and fastening. Please always pay attention to the surrounding environment;
- DO NOT repair the parts, accessories or adapters of the scooter without authorization;
- DO NOT get on without braking;
- DO NOT connect other medical equipment (such as life support equipment and respirator, etc.) to the electronic system of the scooter;
- DO NOT operate the scooter when your judgement may be affected (such as drink, take drugs or take medicine);
- DO NOT operate the scooter when you are suddenly out of sorts;
- DO NOT operate the scooter when your sight is seriously weakened;
- For the injury accident caused by violation of local or international laws or regulations, we undertake no responsibility, hereby state;
- All the functions can only be operated after you correctly sit on the seat;
- DO NOT place your feet in any part out of the pedal;
- DO NOT stand on the seat of the scooter;
- DO NOT try to go up and down the slope exceeding 10°;
- DO NOT reverse on a slope exceeding 10°;
- When driving on a slope, release the rocker of the controller, the scooter may move back; When moving forward or backward, the scooter will roll back about 30 cm before the brake function takes effect;
- Before use of the scooter, please check the connection of all electric parts for safety and reliability;

- DO NOT disconnect, snip or modify the wiring harness parts which have been installed on the scooter or connected to the scooter under any condition.
- DO NOT use other unqualified batteries, for example, the lead acid batteries which cannot be recycled, etc.
- Before installation, please read the information related to batteries and battery charger.

In case of violation of the above requirements, there may be unexpected damages

1.9 Excerpts from EMC-related guidelines and statements in manufacturer's accompanying documents

Statements on electromagnetic compatibility (EMC)

Electromagnetic compatibility tests have been conducted strictly in accordance with the standard of GEVT18029-21 for your scooter. Here, we want to point out that, electromagnetic emission will interfere the electronic devices of the scooter, similarly, the electronic devices of the scooter will also interfere other electronic devices. To reduce the effects of electromagnetic interference, please carefully read the following warnings: Warning: The magnetic field emitted by the scooter may interfere other equipment within the range of the magnetic field.

Warning: The scooter may be interfered by other electromagnetic field (such as the electromagnetic fields of electric generator or high-power electrical appliance), which further affects the driving performance.

Warning: When your scooter is operating, DO NOT use portable television or radio receiver.

Warning: When your scooter is operating, DO NOT use interphone or similar devices.

Warning: Inspect the interference range of wireless transmitters, DO NOT use the scooter within the interference range.

Warning: If the scooter runs or stops due to non autonomous operation, please turn off the power immediately for the sake of safety.

If the electromagnetic field is interfered, adverse effects may be caused to the operating system of the scooter, including:

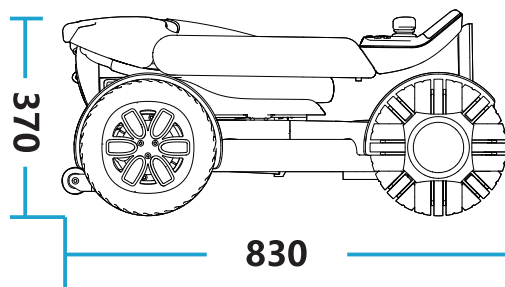
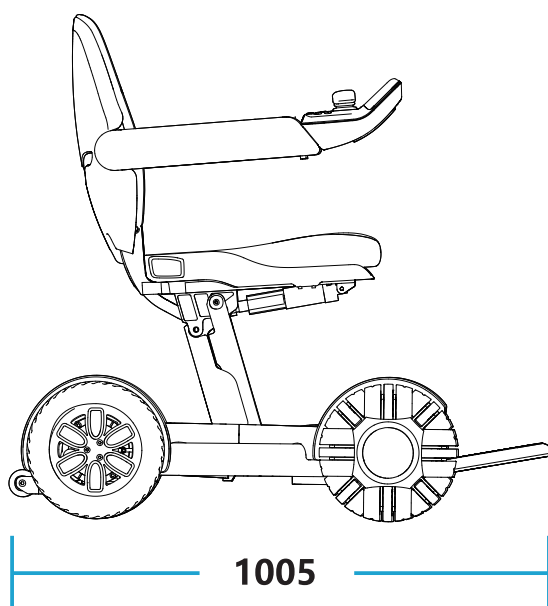
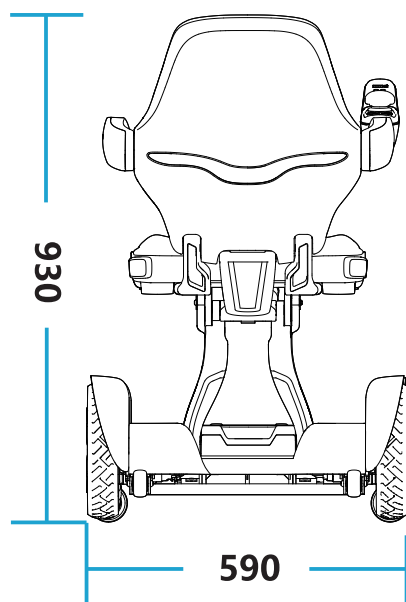
- The electromagnetic brake does not work
- The scooter is out of control
- Occurrence of movement not due to the active control of the user

02 / Product Introduction

2.1 Product features and functions

- The DC brush motor which is energy saving and efficient is the core part to drive the scooter. The motor is featured for its large torque, high efficiency and power saving.
- DC brush motor has the advantages of high performance, long service life and low power consumption. The noise of the motor can be controlled within 65dB.
- Using lithium battery as the green energy of the scooter has the advantages of high density energy, long life, energy saving and environmental protection.
- The intelligent control of motor is realized by using special controller with brush. The operation of independent rocker can realize the actions of forward, differential turning and low speed reversing, which makes the control of the walking vehicle easier.
- The frame structure uses patented technologies. Foldable four-bar linkage mechanism achieves quick and efficient folding and expanding actions. The scooter is equipped with the function of electric folding or manual folding, and the scooter has the advantages of being safe and reliable and simple to operate.
- The foldable frame structure has the advantages of portability, being compact and easy to carry (trunk and air transportation), and the scooter does not occupy too much space.
- The function of posture detection by gyro achieves voice warning of bumpiness and slant. When the speed of the scooter is lowered to gear 1, APP will alarm by popping up
- In case of no operation (no key, rocker or APP operation) within 30 minutes under power saving mode, the scooter will power off automatically
- For cruise control mode, keep a long press of "speed +" key to enter cruise control mode, and push the rocker forward to start cruise control
- Wireless controller. The wireless controller may use rocker to achieve the front, rear, left and right movement control of the scooter, and use key to control the electric folding and expanding of the scooter.
- Novice mode

2.2 Structure of the product



Unit: MM

2.3 Main technical indicators

Product model	BBRN-LY-01-01	BBRN-LY-02-01	BBRN-LY-01-02	BBRN-LY-02-02	BBRN-LY-01-03	BBRN-LY-02-03
Folding mode	Electric	Manual	Electric	Manual	Electric	Manual
Speed range	≤7KM/h					
Slope braking performance	12°					
Barrier crossing height	60mm					
Ditch width	100mm					
Hill climbing performance	10°					
Minimum radius of gyration	760mm					
Total weight	40.1+2kg		39.4+2kg		38.7+2kg	
Battery quantity	1		1		1	
Battery weight	3.6+0.3kg		2.9+0.3kg		2.2+0.3kg	
Front and rear wheel specifications	The front wheels are 10" omnidirectional wheel, and the rear wheels are 10" PU tire (2.4MPa~2.7MPa)					
Largest load	120kg					
Motor parameters	DC motor rated voltage 24V, Rated power 200W*2					
Lithium battery parameter	DC24V 20AH		DC24V 15AH		DC24V 10AH	
Charger parameters	The entered voltage is 29.4V and the output current is 3A					
Static stability	20° for longitudinal direction, and 15° for side direction					
Dynamic stability	10° for upslope, and 10° for downslope					
Power consumption	0.8AH/KM					
Brake on level road	60cm					
The largest slope for safe brake (10°)	80cm					
Overall dimensions	1,005mm long, 590mm wide, 930mm high; after folding 830mm long, 590mm wide and 370mm wide					
Seat wide	420+10mm					
The height of handle	220±5mm					
The largest user weight	100KG					
The largest current of the controller output	30A					
Theoretical driving distance	25 KM		18KM		12 KM	
Plane angle of the seat	-4+0.5°					
Effective seat depth	420+5mm					
Surface height of the front seat	540+5mm					
Backrest angle	16.					
Backrest height	450+5mm					
Distance from the plastic holder to the seat	423 + 5mm					
Angle between leg and seat surface	0-10±0.5°					
Horizontal shift of the shaft	95±5mm					
Vertical shift of the shaft	319±5mm					

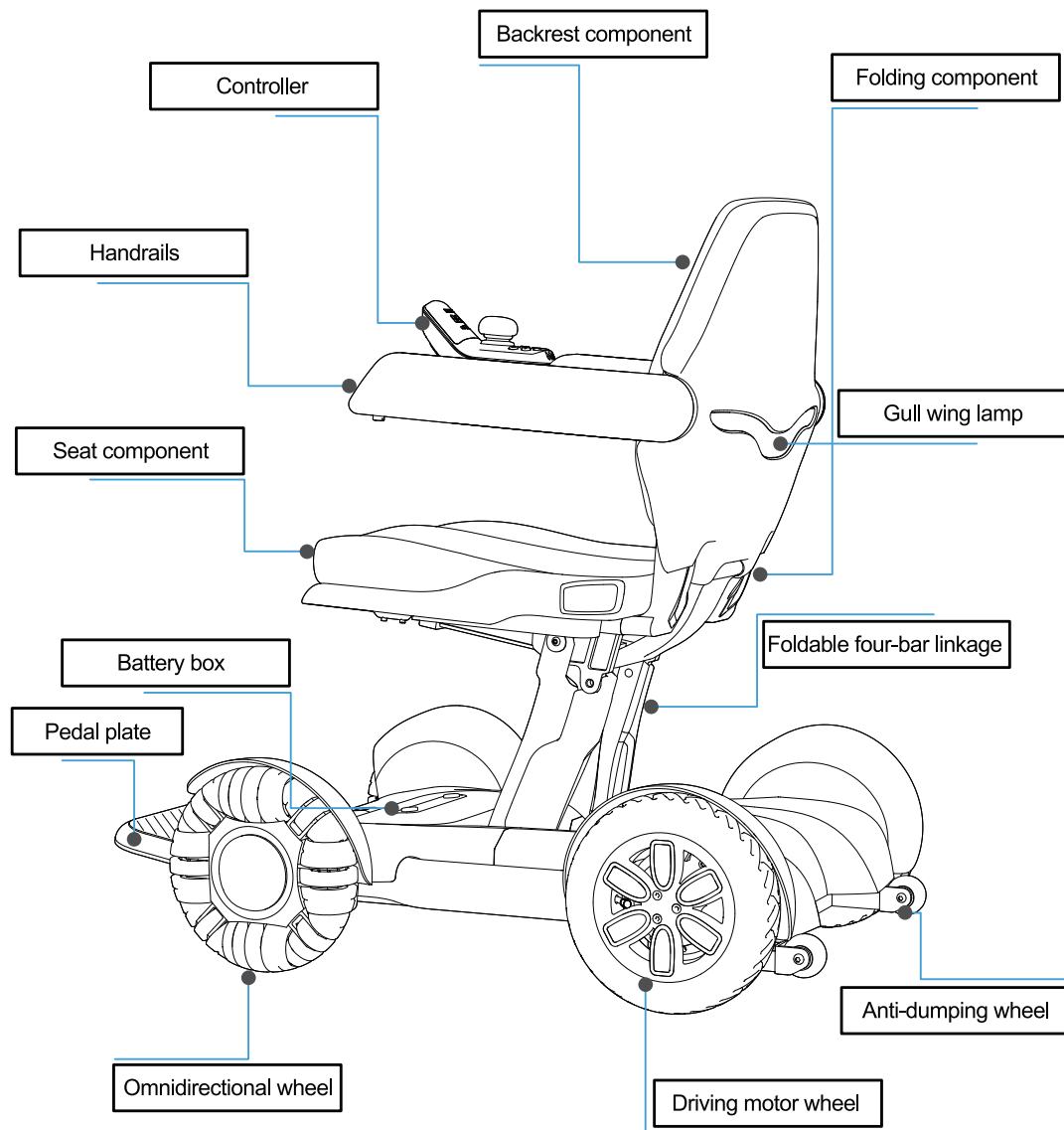
2.4 Model different instruction

Product model	Folding mode	Battery Model	Theoretical driving distance
BBRN-LY-01-01	Electric folding	20AH	≥25KM
BBRN-LY-02-01	Manual folding	20AH	≥25KM
BBRN-LY-01-02	Electric folding	15AH	≥18KM
BBRN-LY-02-02	Manual folding	15AH	≥18KM
BBRN-LY-01-03	Electric folding	10AH	≥12KM
BBRN-LY-02-03	Manual folding	10AH	≥12KM

2.5 Storage conditions

- The packaged scooter should be stored at a temperature of 0 ° C~50 ° C
- The relative humidity is no more than 95%
- Atmospheric pressure shall be 56~106kPa
- And the scooter shall be stored in the room without the harmful gas which may cause corrosion and with good ventilation, and it is not allowed to press and pile up
- Under packed status, the maximum piling height is three layers.
- DO NOT make the product stored in the places which get close to high temperature source or direct sunlight for a long term.
- If you need to store for a long time, please turn off the power switch after full charge.
- If the product is stored exceeding one month, please fully charge, and then continue storing and using.

03 / Component introduction



Main structural composition of products: Motor, storage battery, control system, wheel, seat, handrail and pedal

Note: Refer to Product Package List for part list

04 / Use of scooter

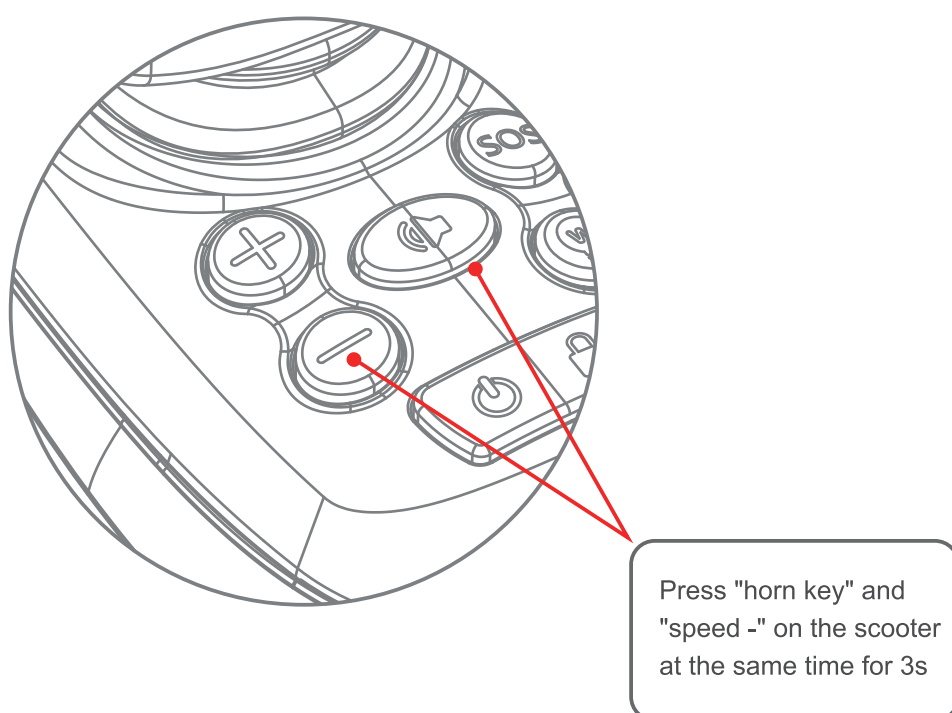
4.1 Notice

- (1) When operating the scooter for the first time, try to choose a flat and hard ground to ensure that there are no obstacles and pedestrians around you;
- (2) The largest load of the scooter is 120Kg, DO NOT drive under overload; Limited for 1 person;
- (3) Ensure that the scooter is under completed expanded status;
- (4) Ensure that you have fastened the safety belt of the scooter;
- (5) Correctly sit on the scooter, slightly push the rocker of the controller forwards, the scooter will move forwards and backwards, and turn left or turn right; After release, the scooter will stop. Please practice these basic functions, until you are proficient in operation;
- (6) During steering, please clear the barriers nearby;
- (7) DO NOT steer on pedestrians or during driving;
- (8) When the scooter operates under relatively bad environment (such as entering the door or steering), please slowly operate the scooter. It is suggested that the speed of scooter should be transferred to the lowest level in harsh environment;
- (9) Check whether the conditions of the scooter are good, such as whether the performance is normal
- (10) The scooter will shut down automatically after standing for 30 minutes.

4.2 Expand and fold

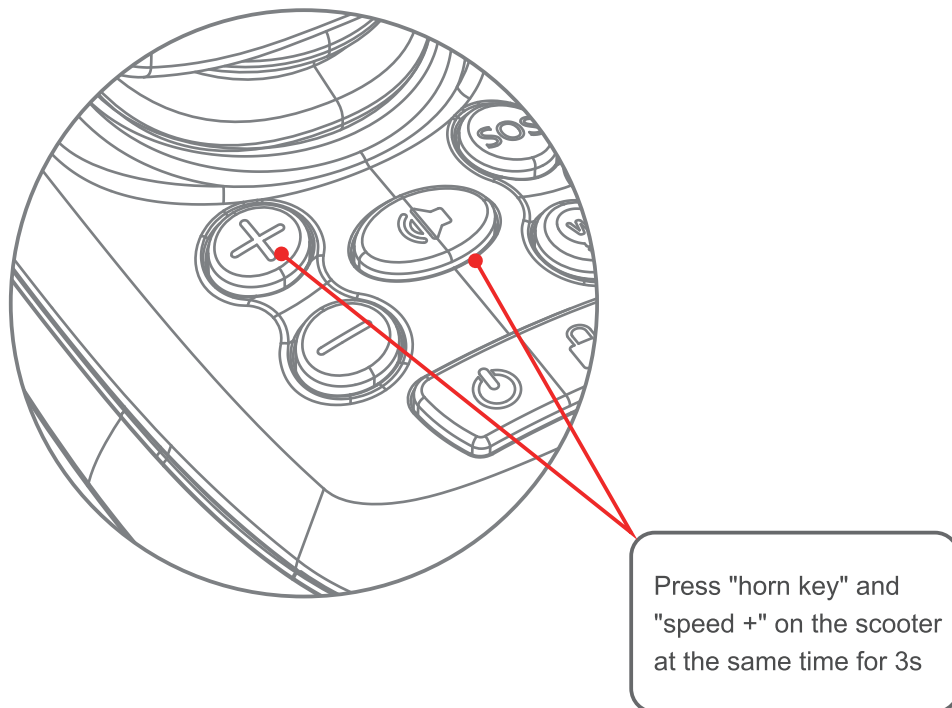
In the process of folding or expanding, swing the rocker will stop folding or expanding. After the intermediate stop, the folding or expanding can be continued according to the operation of 1 and 2.

4.2.1 Folding of the scooter



Folding scooter, if there is no other command, it will stop automatically after folding

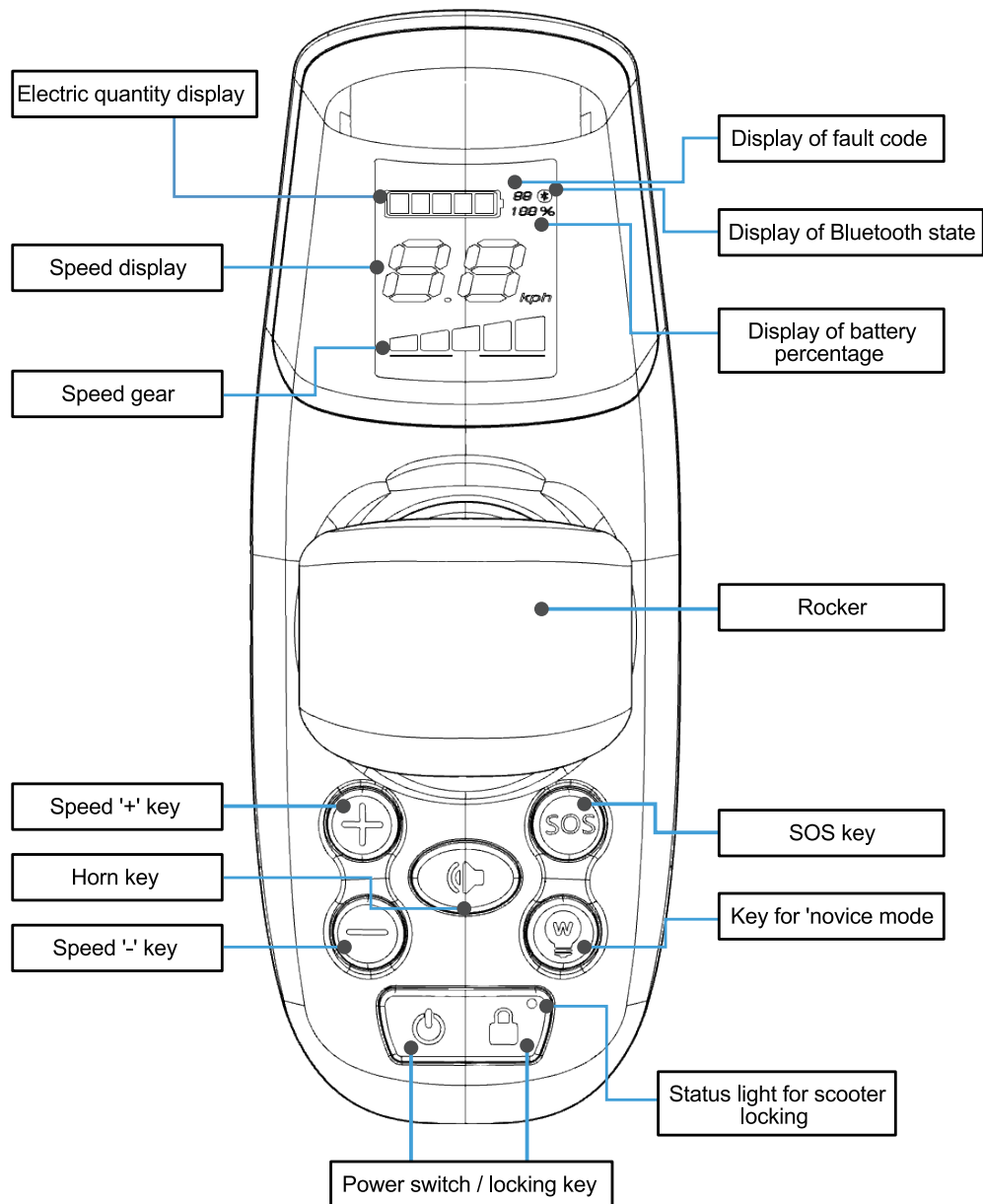
4. 2. 2 Expanding of the scooter



Expanding scooter, if there is no other command, it will stop automatically after unfolding

4.3 Controller

4.3.1 Introduction to controller



4.3.2 Instruction of controller

Rocker

By pushing the controller rocker, the direction and speed of the scooter can be controlled;

Power switch / locking key

Long press for 2 seconds to turn on the power, long press for 2 seconds to turn off the power;

Press the power key, the locking indicator of the scooter is off, the scooter is unlocked

Press the power key, the locking indicator of the scooter is on, the scooter is locked

Speed '+' key

When it is pressed, the speed is up-regulated;

Keep a long press of "+" key to enter cruise control mode, and push the rocker forwards to start the machine

Speed '-' key

When it is pressed, the speed is down-regulated;

Horn key

Keep a short press of the hone key, the horn will ring for once; The horn complies with national noise standard;

Status light for scooter locking

After powering on, the locking function will be entered in default; During use, locking mode can be entered under any control mode;

Under locking function, the rocker cannot control the chassis motor to move. After unlocking, the chassis motor can be controller to move

Under locking mode, after the APP is connected, there will be a pop-up box to remind locking mode

SOS key

Press the button for 3 seconds, the Walkman will sound the alarm, and the BBR will record that the user presses SOS

Key for 'novice mode'

The driving parameters of the scooter are automatically adjusted to gear and data suitable for novices to practice

4. 3. 3 Instruction for LCD screen menu

Electric quantity display

The device controls the electric quantity display light, displays the electric quantity in real time, and displays it in 5 grids

Speed display

LCD screen displays the driving speed of the scooter in km/h
The precision of the displayed speed is $\pm 5\%$

Speed gear

Press '+' key for once, the speed will be increased to the next gear, gear 5 is the highest. Press '-' key for once, the speed will be decreased to the next gear, gear 1 is the lowest.
The above function can be achieved in APP

Display of fault code

For the diagnostic code displayed by the built-in information diagnoser of the product, refer to 5.3 troubleshooting for the content

Bluetooth status display

When Bluetooth is not connected, the Bluetooth indicator on the LCD screen is off
When Bluetooth is connected, the Bluetooth indicator on the LCD screen is on

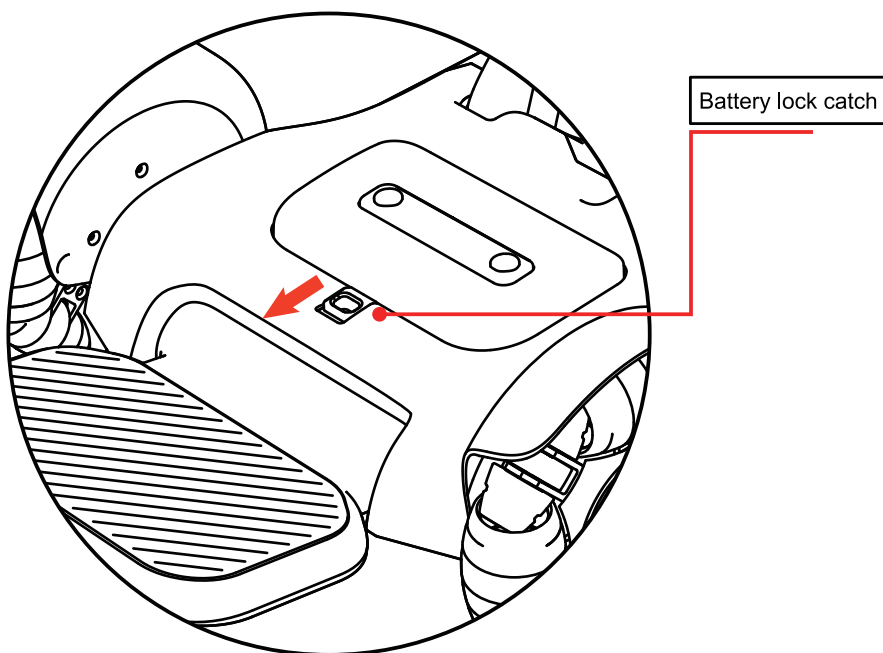
Percentage of Electric quantity displayed

The Electric quantity is displayed in percentage, and the above function can be achieved in APP

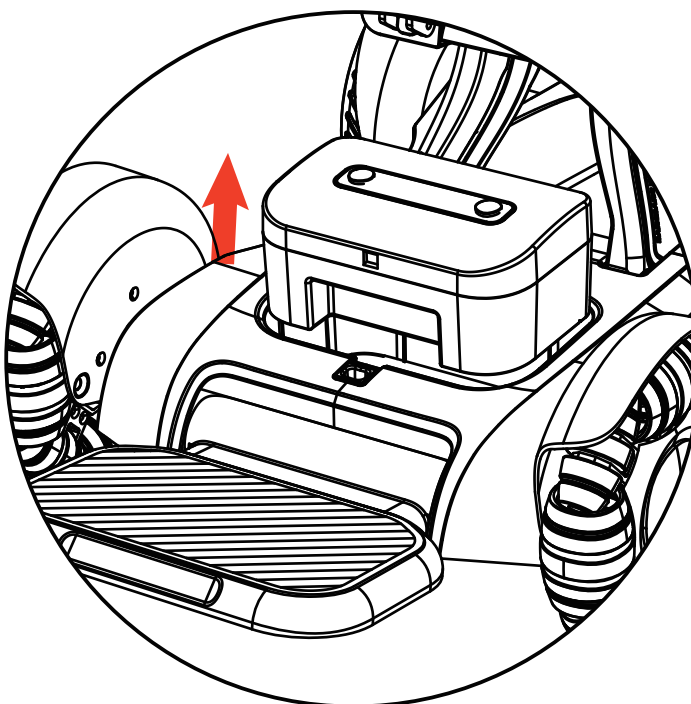
4.4 Battery

4.4.1 Battery removal

- 1 ▪ Open the battery lock catch on the scooter chassis

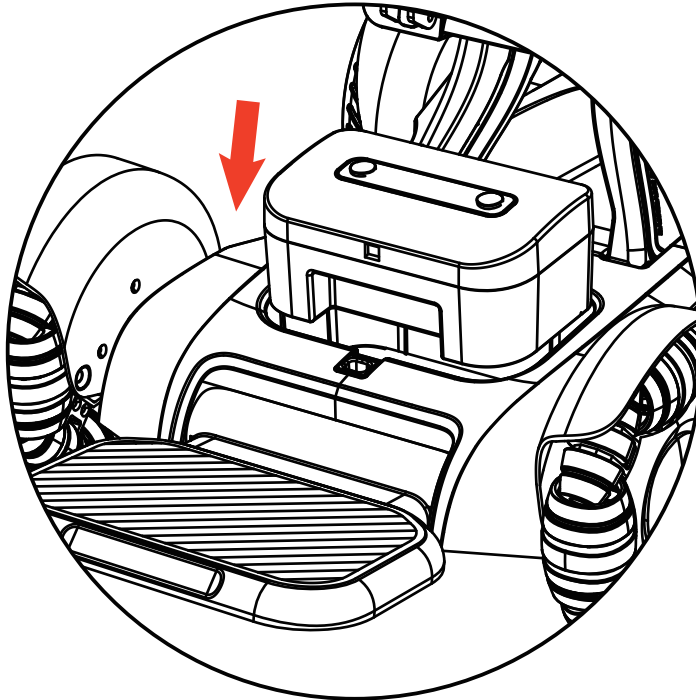


- 2 ▪ Take out the battery upwards

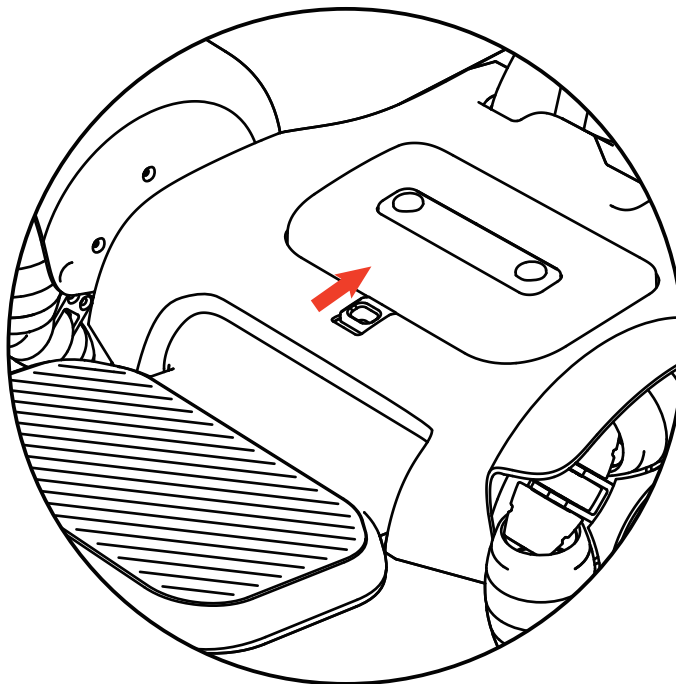


4. 4. 2 Replacement of battery

- 1 ▪ Place the battery into the battery slot

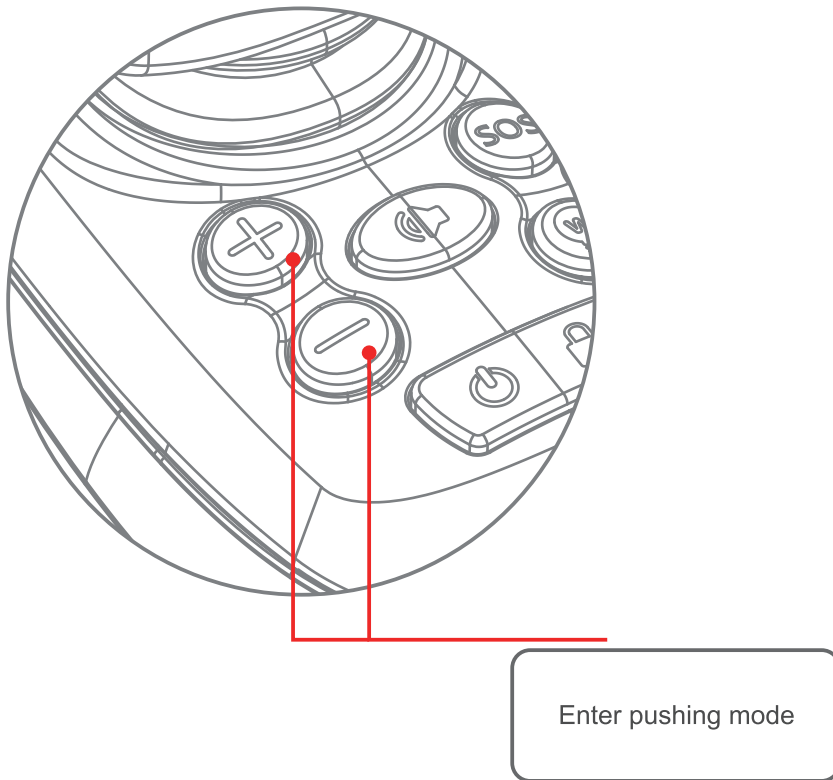


- 2 ▪ Close the battery lock catch



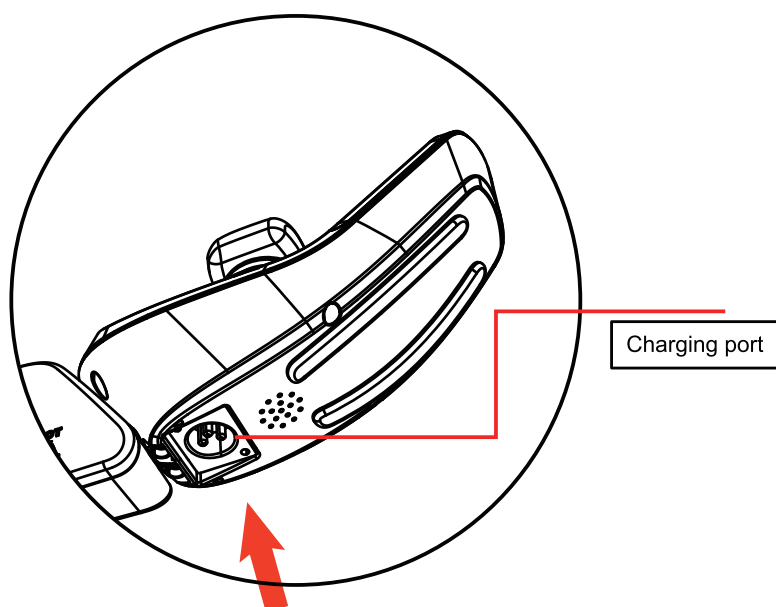
4.5 Switch to pushing mode

- 1 ▪ Press '+' key and '-' key at the same time to enter pushing mode, and wing the rocker can quit pushing mode

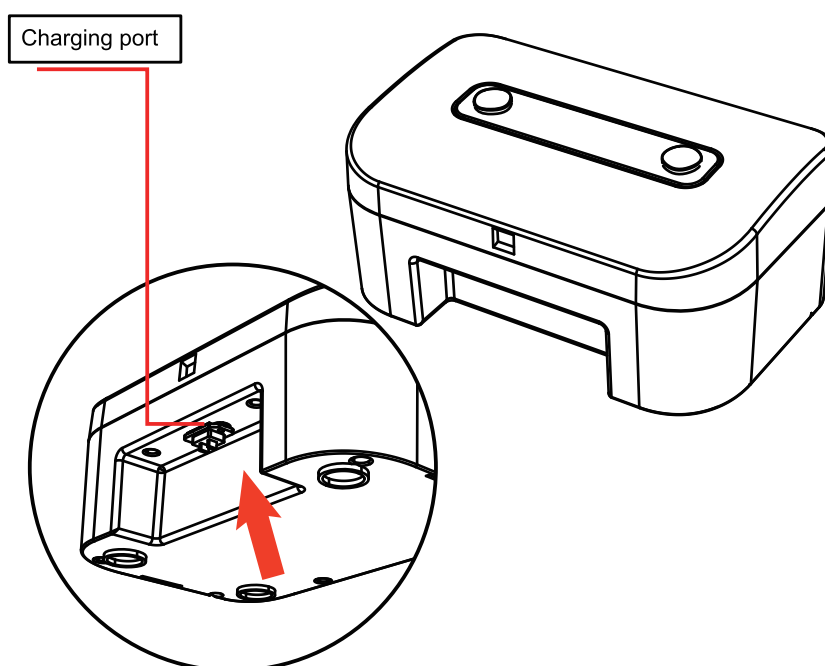


4.6 Charging of scooter

Charging method I: Connect the charger, and plug the charger to the port below the controller



Charging method II: Take out the battery box, and plug the charger to the charging port of the battery box



05 / Maintenance and troubleshooting

5.1 Daily spot inspection and maintenance scheme

- Regularly (weekly or monthly, depending on the use frequency) check the connecting parts, such as screws and nuts, etc. of the frame for loosening, falling and corrosion, etc.;
- Regularly check the movable joint parts for jam and falling, etc.;
- Regularly check the tires for aging and serious wear, etc.;
- During use of the scooter, in case of rain or wet weather, the scooter shall be wiped dry as soon as possible to prevent rust due to dampness;
- Solarization of the scooter under high temperature weather shall be avoid.

5.2 Troubleshooting

When you call after-sales service at 4000-400-882 for repairing, please provide the fault code

For the function of built-in information diagnoser of the product, the displayed diagnostic code can react the abnormalities.

Fault code	Abnormal state	
E1	Key abnormality	Fault alarm
E2	Rocker abnormality	Fault alarm
E3	GPRS fault	Fault alarm
E4	Battery fault	Fault alarm
E5	Relay fault	Fault alarm
E6	Equipment loss	Fault alarm
E7	Bluetooth fault	Fault alarm
E8	Motor fault	Fault alarm
E9	Driver fault	Fault alarm
EA	FLASH fault	Fault alarm

5.3 Instruction of safety warning

Warning voice	Corresponding scenario
Enter novice mode	Press the key for novice mode
Quit novice mode	Press the key for novice mode again
Alarm	Keep a long press of SOS key
Lock	The default boot mode is lock mode, and the non lock to lock state transition
Unlock	Switch locking status to non-locking status
Wireless remote mode	Operate by the control key on the remote
Quit remote control mode	Operate by the control key on the remote
fold	Keep a long press of horn key and SPD- key at the same time
Expand	Keep a long press of horn key and SPD+ key at the same time
Upgrade mode	When the APP detects new version, click to upgrade
Upgrade finished	It will be triggered after single module is upgraded
Upgrading	The equipment is upgrading
Attention, reserve	Reserving, warning tone
Powering on tone	Power on, and the powering on tone will ring after 3 seconds
Charging	Charging
Charging completed	It will be triggered after charging is completed
Band-type brake open	The band-type brake of the equipment opens
Power off tone	Power off, and the powering off tone will ring after 3 seconds
Equipment bumpiness	It will be triggered for equipment bumpiness
Equipment slant	It will be triggered when the equipment is under slant, the angle of left and right, front and rear exceeds 5°
Sharp bend	It will be triggered when the equipment is under sharp bend
Upgrade failed	There is something wrong during upgrading
Version V1.0	Voice version
Lower power, please charge	The battery life is lower than 20%, and it will be triggered in each minute
Stop scooter folding	Stop scooter folding

Stop scooter expanding	Stop scooter expanding
Pushing mode	Press the "+" and "-" keys simultaneously
Quit pushing mode	Push the rocker at will to quit mode under pushing mode

5.4 Production date and service life

- The service life of this product is within 5 years from the date of delivery. Please use it within the period of validity. Do not use it beyond the service life to avoid accidents.
- Refer to product label for date of production

5.5 Clean product

- Cleaning of scooter: Please use clean and soft cloth to swipe the surface of the scooter

06 / APP operation guide of scooter

Scan the QR code on the right to download APP



Banghui Android

6.1 Status page of the scooter



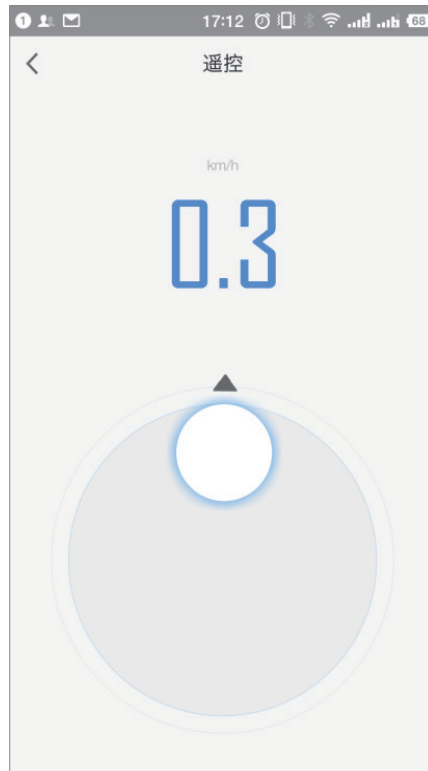
6.2 Remote folding control of the scooter



6.3 Remote speed gear control of the scooter



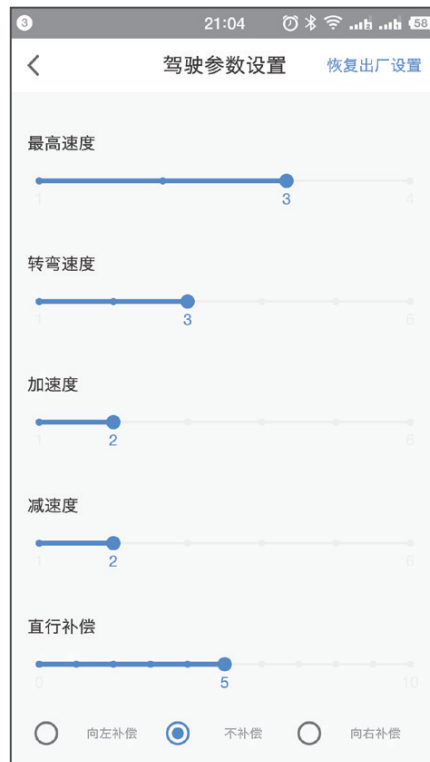
6.4 Remote control mode of the scooter



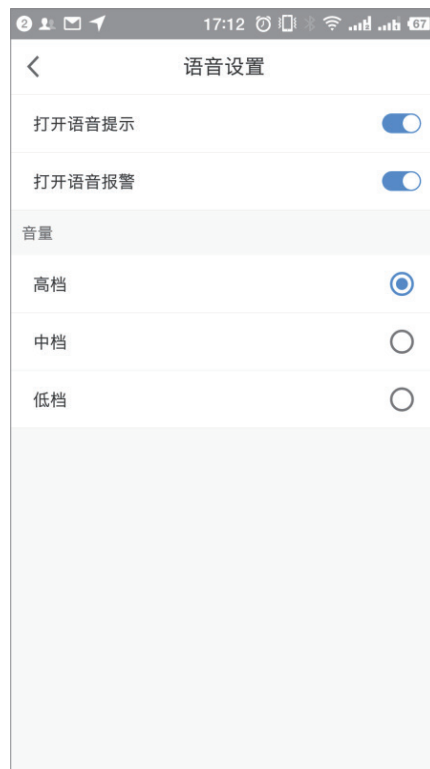
6.5 Remote locking mode of the scooter



6.6 Driving parameter setting of the scooter



6.7 Voice setting of the scooter



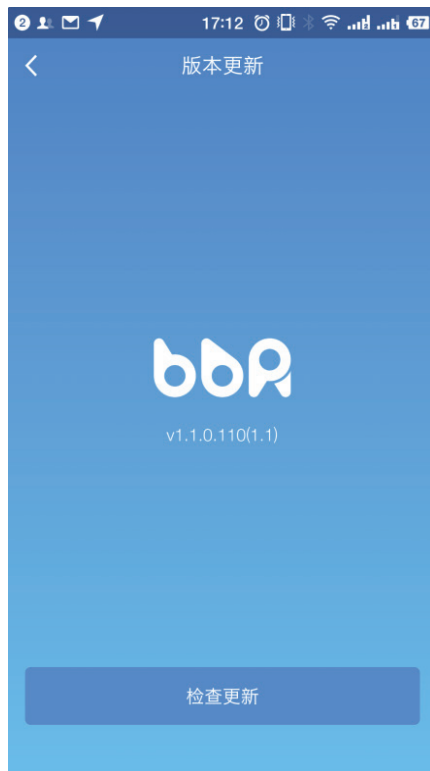
6.8 Gyro setting



6.9 Battery information



6.10 Scooter App version upgrade



07 / Instruction to scooter product service

7.1 Quality warranty dictionary and period for wearables

List of wearables	"Three guarantees" term	Range of "three guarantees"
Roller of omnidirectional wheel	1,200km or 6 months (the earlier one shall prevail)	The roller has degumming or slip
Driving wheel	1,200km or 6 months (the earlier one shall prevail)	The surface of the tire cracks
Cushion	3 months	The issues of fading or sick seam, etc., due to non-human factor
Backrest	3 months	The issues of fading or sick seam, etc., due to non-human factor
Safety belt	3 months	The issues of fading or sick seam, etc., due to non-human factor
Key	3 months	Misfunction
Enclosure and pedal cushion	Not in the range of warranty	

7.2 Service obtaining

In case of warranty services are required, users can directly contact the authorized service agencies we will arrange after-sales technicians to serve.

When users apply for warranty, please provide effective proof of purchase and "three guarantees" certificate. During product purchase, users shall ask the distributor for invoice with complete information and well keep that. If the contents of the invoice do not comply with the products, or they are modified or cannot be clearly identified, the invoice will be deemed as invalid. If the product has been repaired or replaced, users shall well keep corresponding maintenance or replacement record.

In the case that the user cannot provide the above documents, if we can confirm that the product or part is still within the warranty period, we can also provide warranty for the user, but the above contents are not our obligation. When users apply for warranty service, they need to follow some of our necessary procedures, including providing necessary relevant information and following specific identification and problem solving steps.

Excepting for specified herein, warranty services are provided the authorized service agency of relevant products. In case of multiple authorized service agencies, users can select a near one.

Excepting for the Company instructs otherwise, product replacement or product return is generally conducted by the distributor of the product. In case of replacement or return, you shall submit the product to the distributor, the distributor will replace or return for you in accordance with the process.

In this document, distributor means the merchants provide product to the users by sales or other methods. The original manufacturer authorized service agencies and distributors providing warranty in accordance with the regulations of this document are collectively called as "service provider".

08 / Disclaimer

Content of the Product Manual is the intellectual property of the original manufacturer (hereinafter referred to as the “Company”) and copyright is reserved by the Company. All parts of the Products, including accessories and software, are owned by the Company. Without written consent of the Company, no one shall copy, extract or translate to other languages the Manual or any content included in any form. The Company carefully compiles the Product.

Manual with a sense of responsibility for users, but does not guarantee completeness or accuracy of its content. The Product Manual, as a pure technical document, includes no implied content or content with oblique reference to any third party and assumes no responsibility for understanding ambiguity by the users for typo reasons. In the case of direct or indirect loss of information or career termination caused by the Product Manual or all the information on the products mentioned inside, the Company bears no responsibility in this regard.

In use of all the products, the users shall strictly follow the Product Manual and instructions to operate the Robot and not violate any prohibition marked in the Product Manual in the process of using the Robot. In the case of physical injury or property damage to the users or third parties caused by their operation without strictly abiding by the instructions for use or in violation of the prohibitions marked in the Product Manual, the above-mentioned actors shall bear corresponding legal responsibilities.

As the Company keeps improving and updating the Products, it's necessary to regularly log onto its official website to inquire latest instructions for use and use conditions or contact the distributor for the latest user manual. The Company reserves the right to revision to the Product Manual without further notice.

Right to ultimate interpretation reserved by the Company.

