Caboo Cargo

Caboocargo user manual

Model:Triogo K5351

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Triogo User Manual

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4.1. Introduction

Thank you for choosing this electric-assisted tricycle! As a transportation tool that combines efficient power with environmental protection, this product adopts **an intelligent and easy -assist system** and **high-capacity battery technology** , taking into account both the convenience of carrying goods and the long-distance range, and is suitable for various scenarios such as urban commuting and tourism .

This manual details the product's functions, operating procedures, and maintenance points. Please read it carefully before use to ensure safety and optimal performance. We are committed to improving user experience through technological innovation , and we hope this product will bring more convenience and eco-friendly features to your daily life!

4.1.1 Precautions

Please read this manual carefully before using this vehicle. Do not use it before you understand its functions.

Minors and people who do not know how to operate electric tricycles are not allowed to drive them.

When you receive the vehicle, please check whether any parts are missing or damaged.

It is not recommended to ride a bicycle after drinking alcohol or taking sedatives.

Please check that the brakes are functioning properly before traveling.

Overloading of vehicles is strictly prohibited. The maximum permissible gross weight of the vehicle is 180 kg.

4.1.2 Copyright

No part of the text may be copied, modified, or disseminated without permission.

Removing copyright notices or altering product parameters is prohibited.

Exceptions to authorization:

Allow users to use this service for personal, non-commercial purposes

Distributors must present a written authorization letter to distribute.

Those who steal or tamper with the content will be held legally accountable for ceasing the infringement and compensating for losses.

Product upgrades may result in updated instructions; older manuals should not be used as a basis for liability determination.

4.1.3 After-sales service

1. This warranty policy is only valid for vehicles purchased from the unitedebike website or authorized dealers and retailers.

2. The warranty period is calculated from the date you receive the vehicle.

3. Issues not related to product quality (such as damage caused by human error, natural disasters, or modifications) are not covered under warranty.

4. For warranty service, the original purchase invoice and product serial number are required.

5. The frame has a 5-year warranty; the battery, motor/display, and controller have a 2-year warranty; the charger, front fork, sprocket, bottom bracket, seatpost, handlebars, shock absorbers/shock absorbers, and braking system have a 1-year warranty ; the saddle and lights have a 6-month warranty ; and the rims, rear rack/stand, and freewheel have a 3-month warranty.

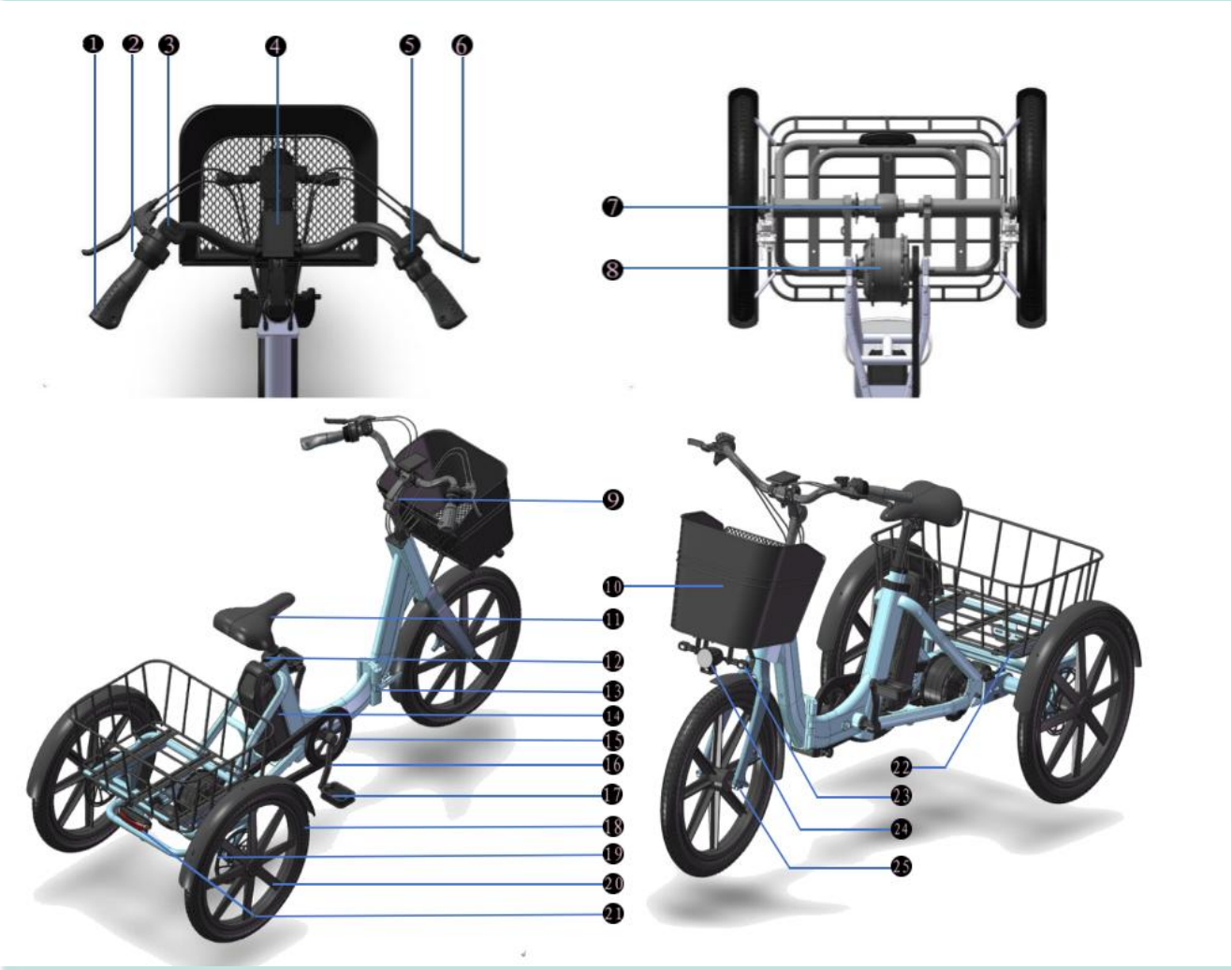
6. According to EU regulations, if you need to dispose of old batteries, we recommend that you go to a municipal recycling station / recycling center for recycling.

4.1.4 Help

If you have any questions while using this product, please contact us at sales@unitedebike.com to resolve your issues.

4.2 Product Description

4.2.1 Product Components



① Handle cover ⑭ Battery
② Bell ⑮ Chain/Chain Cover
③ Instrument buttons ⑯ Crank
④ Instrument panel ⑰ Foot pedal
⑤ Throttle ⑱ Tires
⑥ Brakes ⑲ Discs
⑦ Differential ⑳ Integrated wheel hub
⑧ Wheel hub motor ㉑ Taillight
9. Handlebar adjuster 20. Rear basket
⑩ Front basket ㉓ Turn signal
⑪ Seat cushion ㉔ Front light
⑫ Seatpost adjuster ㉕ Front wheel through axle
⑬ Folder

4.2.2 Vehicle Specifications

4.2.2.1 Vehicle Specifications and Performance

Vehicle Name: Triogo

Vehicle dimensions: 1750L*650W*1050H (mm)

Folded dimensions: 1260L*810W*1050H (mm)

Wheelbase: 1235mm

Seat height adjustment range: 0-145 (mm)

Maximum riding speed: 25km/h

Assisted in pushing: 6km/h

Range: 50-65 km (depending on terrain, rider weight and assist level)

Net weight: 45kg

Load capacity: 200kg

Front basket maximum load capacity: 10kg

; Rear basket maximum load capacity: 50kg

Maximum rider weight: 100kg (±5kg)

4.2.2.2 Electrical Parameters

Motor brand: Fuerkang

Motor type: Rear wheel motor, DC 48V, rated power 250W

Motor torque: 40 N.M

4.2.2.3 Battery Parameters

Battery brand and specifications: Hailong No. 1 battery, Samsung cells

Battery cycle life: 800 cycles

Battery safety certification: GTG safety certification

4.2.2.4 Controller Parameters

Controller current: 14A, average current: 8A

Controller functions: 0-5 gears, pushable for 6 kilometers.

Speed limiter: 25km/h

Controller assist levels: Assist current level 1/5: 20%, 40%, 60%, 80%, 100%

4.2.2.5 Charger parameters:

Voltage: 48V

Current: 2A

Charging time: 6-8 hours (charging time may be shortened depending on the remaining battery level).

4.2.2.6 Transmission Parameters

Transmission brand: Fuerkang

Gearbox Model: IGH E-Bike

4.2.2.7 Braking Parameters

Disc brake brand: Yilun

Disc brake model: MD-M320 Φ180

4.3.1 Instrument Functions



4.3.2 Functional Overview

The K 5351 offers a variety of functions and displays to meet your riding needs. The displayed content includes:

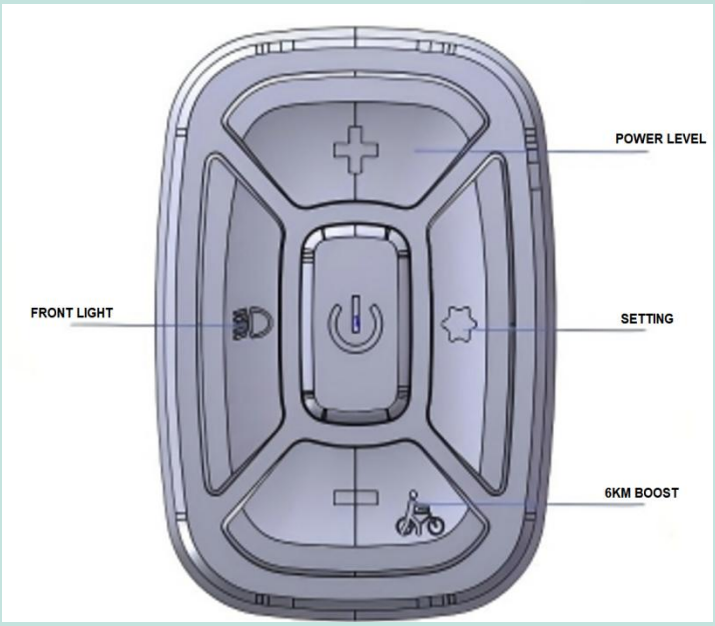
- ◆Battery display
- • Speed display
- ◆ Mileage display (including single trip mileage display and total mileage display)
- ◆Support the promotion of display
- ◆Backlight brightness
- ◆Error code display

K 5351 instrument cluster has five buttons. In the following description,  the buttons will be represented by the word " MODE " . The button  has been replaced with the text "[Settings]" .  The buttons are replaced with the text "UP",  the buttons are replaced with the text "DOWN" , and  the buttons are replaced with the text " headlight ".

4.3.3 Function Introduction





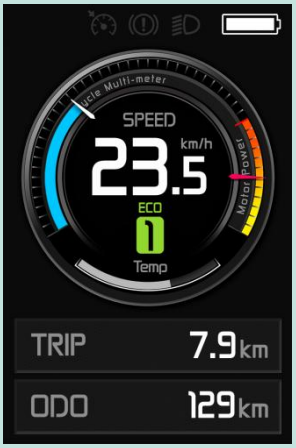


Press and hold the [MODE] button to activate the instrument panel and provide power to the controller. While the device is powered on, pressing and holding the [MODE] button will turn off the electric vehicle's power . A short press of [MODE] will switch between average speed (AVGSPEED), maximum speed (MAXSPEED), trip time (TRIP TIME), and power (WATT) .

When powered off, the instrument no longer uses battery power, and the leakage current of the instrument is less than 1uA.

4.3.4 Normal boot screen

The instrument panel will display the normal startup interface upon normal power-on. This interface can display the electric vehicle's real-time battery level, real-time speed (SPEED), single-trip distance (TRIP), total electric vehicle distance (ODO), and assist level (PAS) . A short press of [MODE] will switch to average speed (AVGSPEED), maximum speed (MAXSPEED), single-trip time (TRIP TIME), and power (WATT) .



Normal display interface

4.3.5 User Precautions


Take precautions to ensure safety during use ; avoid bumping or knocking the instrument.


The instrument uses a waterproof film; please do not peel it off to avoid affecting the instrument's waterproof performance.

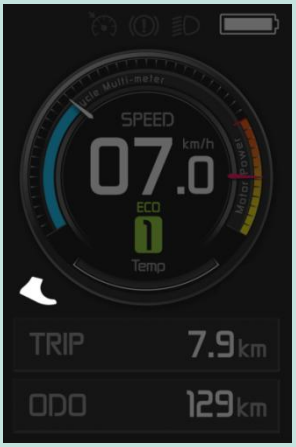
4.3.6 Battery level display

The meter displays five bars of battery level . When the meter is low on voltage , the battery level indicator flashes red; when the meter is fully charged, the indicator shows a full white bar .



4.3.7 Facilitate Implementation

Press and hold the [DOWN] button for 2 seconds, and the electric vehicle will enter the electric push-assist mode.



Help promote display

⚠ The push-assist function can only be used when the user is pushing the electric vehicle; please do not use it while riding.

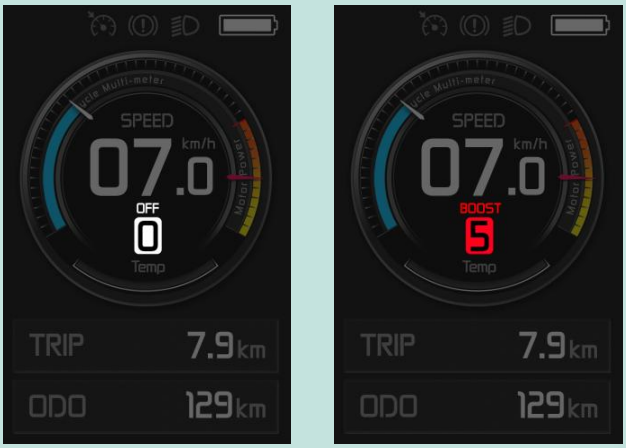
4.3.8 Turn on the headlights

A short press of the [Headlights] button turns on the instrument panel headlights and simultaneously notifies the controller to turn on the headlights. A short press of the [Headlights] button again turns off the instrument panel headlights and simultaneously notifies the controller to turn off the headlights.



4.3.9 Assist Gear Selection

Briefly press the [UP] or [DOWN] button to switch the electric vehicle's power assist gear and change the motor's output power. The instrument panel's default output power range is 0-5 .



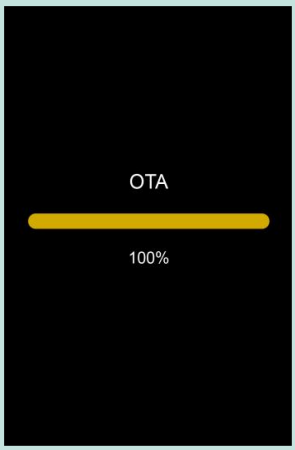
Power steering gear selection interface

4.3.10 OTA Upgrade

The instrument can be upgraded via mobile hotspot. Upgrade method:

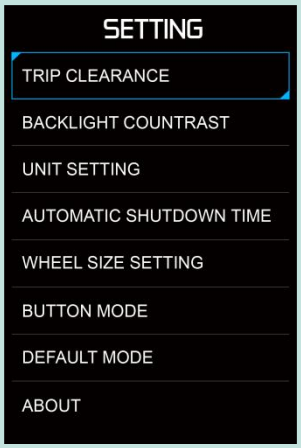
Set your mobile hotspot to: network name: kingmeter; network password: kingmeter123, and ensure it is turned on.

With the speedometer at zero, briefly press the [Settings] button to enter the settings interface, then press and hold the [Settings] button again to enter the OTA upgrade interface for automatic upgrade. Once the percentage reaches 100%, the instrument will automatically shut down, indicating a successful upgrade.



4.4 General Settings

When the instrument is powered on and there is no speed reading, briefly press the [Settings] button to enter the settings mode. Within the settings list, briefly press the [UP] or [DOWN] button to switch settings.



Settings list interface

4.4.1 Trip Clearance

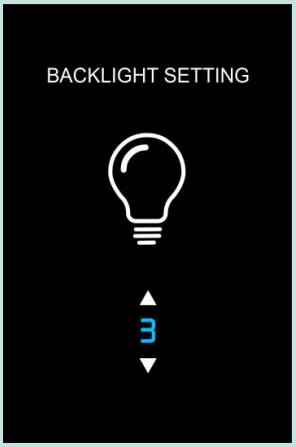
Short press [MODE] to enter the settings . Within the interface, short press the [UP] or [DOWN] button to adjust to YES or NO. YES means odo is reset, and NO means odo is not reset . Long press [MODE] to exit and save changes.



Total mileage reset setting

4.4.2 Backlight Contrast

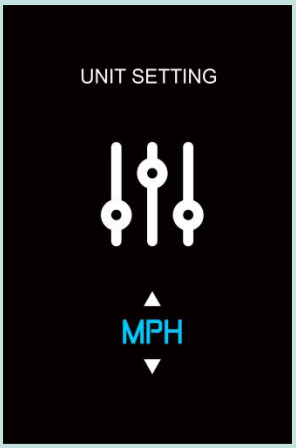
Short press [MODE] to enter the settings menu. Within the settings menu, short press [UP] or [DOWN] to switch backlight brightness levels . Long press [MODE] to exit the settings menu. Backlight levels are adjustable from 1 to 3; the higher the number, the brighter the backlight.



Backlight brightness settings interface

4.4.3 Unit Setting

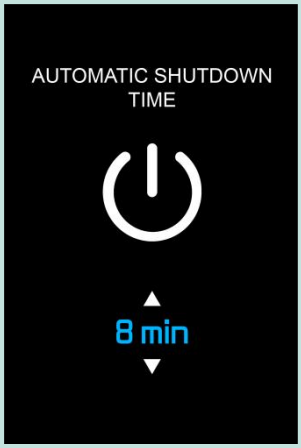
Briefly press [MODE] to enter the settings menu. You can adjust the options KM/H (metric) and MPH (imperial). Within the settings interface, briefly press the [UP] or [DOWN] key to switch units . Long press [MODE] to exit the settings menu.



Unit settings interface

4.4.4 Automatic Shutdown Time Setting

Briefly press [MODE] to enter the settings menu. In the settings menu, briefly press the [UP] or [DOWN] button to adjust the automatic shutdown time . Long press [MODE] to exit the settings menu. The setting range is 5 minutes to 30 minutes.



Automatic shutdown settings interface

4.4.5 Wheel Size Setting

Short press [MODE] to enter the settings menu. Wheel diameter is controlled by the controller and cannot be adjusted. Long press [MODE] to exit the settings menu .

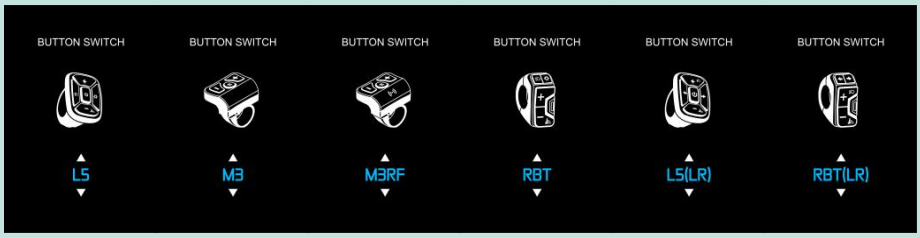


Wheel diameter setting interface

4.4.6 Button Settings (BUTTON SWITCH)

Short press [MODE] to enter the settings menu. Settings parameters include L5, M3, M3RF, RBT, L5(LR), and RBT(LR). Use the [UP] and [DOWM] buttons to select the button type. Long press [Power] to exit and save changes .

Note: If there is no corresponding button, do not change the button type, otherwise the instrument may not function properly.



Button selection settings interface

4.4.7 Default Mode Setting

Short press [MODE] to enter the settings menu . Within the interface, short press [UP] or [DOWN] to adjust the position of TRIP, ODO, TRIP TIME, AVG SPEED, MAX SPEED, and WATT displayed on the main screen. Short press [MODE] to switch to the next module, and long press [MODE] to exit and save the changes.



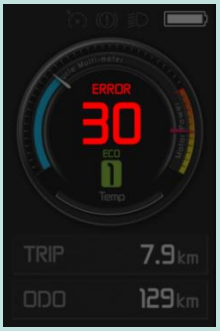
Default mode settings

Version 2.4.8 information screen (About)

Press [MODE] briefly to enter the settings menu. This interface displays information such as the company name and software/hardware version numbers, facilitating future instrument maintenance.

4.4.8 Error Code Display

When the electric vehicle's electronic control system malfunctions, the instrument panel will automatically display an error code .



Error code display


The fault display screen can only be exited after the fault has been resolved. Once a fault occurs, the electric vehicle will no longer be able to move. (If a fault code appears on the instrument panel, contact the appropriate service station immediately for assistance .)

Error code	definition
0x 21	abnormal current
0x 22	Throttle abnormality
0x 23	Motor phase loss
0x 24	Motor Hall signal abnormality
0x 25	Brake malfunction
0x 30	Communication failure
0x 31	Power button stuck

5 Instructions for use

5.1 Battery and Charger Installation and Use



Precautions:

1. Only use the original charger. Using other brands of chargers may pose a risk of flammability and battery damage.

2、Do not charge in damp, waterlogged, or other places where the battery may get wet. Charge in a well-ventilated, dry, and cool environment , avoiding direct sunlight and high temperatures.

3、For long-term storage, maintain the battery charge at 50%-70%; if stored for more than one month, recharge the battery every three months.

Keep the input/output interfaces clean and dry, and prevent metal objects (such as keys, coins) or liquids from entering to avoid short circuits.

5.1.1 Charger Installation



First, remove the charger. Refer to the image above and insert the male end of the charger into the female end, aligning and tightening it.

5.1.2 Battery Charging Status and Introduction



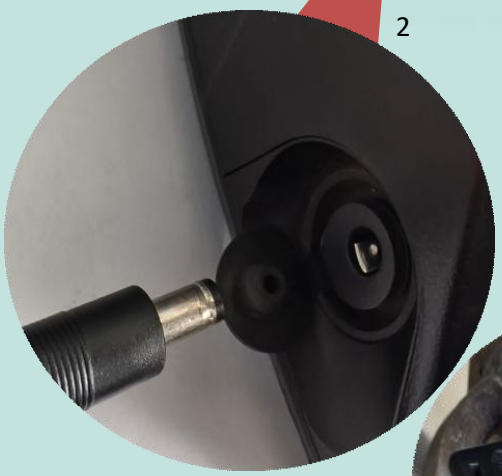
1



2



3



4



5

1. When charging the battery, pay attention to its charging status. Refer to Figure 4 for the DC terminal insertion of the battery. If the battery current is insufficient, the charging indicator light will be red (Figure 2). If the battery is fully charged or the DC terminal is not fully inserted into the battery, the indicator light will be green (Figure 1).
2. The charging port is on the right side of the battery and the battery locking device is on the left side. Press and hold the power button in the middle of the battery (Figure 3) to check the remaining battery current. From the current picture, the current is 100%, 75%, 50%, and 25% from top to bottom.

5.1.3 Installing the battery



Figure 1

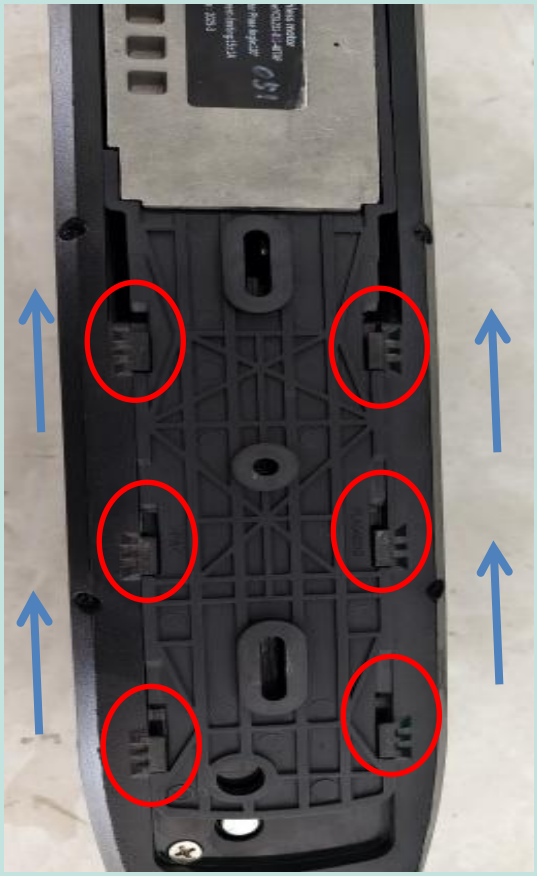


Figure 2

Install the battery onto the battery box guide rail (Figure 1). The metal pieces at both ends need to be aligned during installation. Refer to (Figure 2) for the battery installation onto the battery box guide rail. (When you receive the vehicle, the battery box guide rail is installed on the vehicle body. For the sake of convenience, the battery box guide rail has been removed here.) Push the battery box towards the end of the guide rail until it fits.
the battery is installed, turn the key counterclockwise to fix the battery on the battery box rail, and turn it clockwise to lift the battery out (Figure 3).

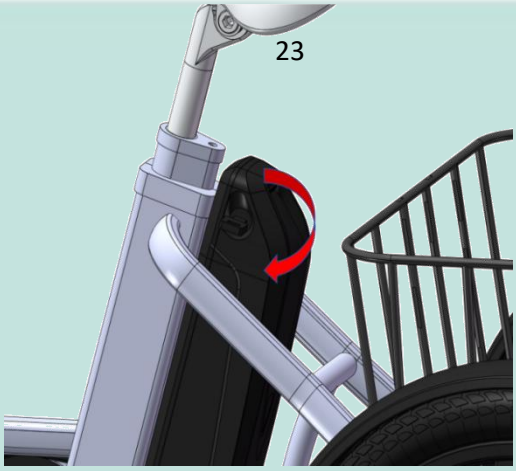


Figure 3

5.2 Handlebar angle adjustment



图 1

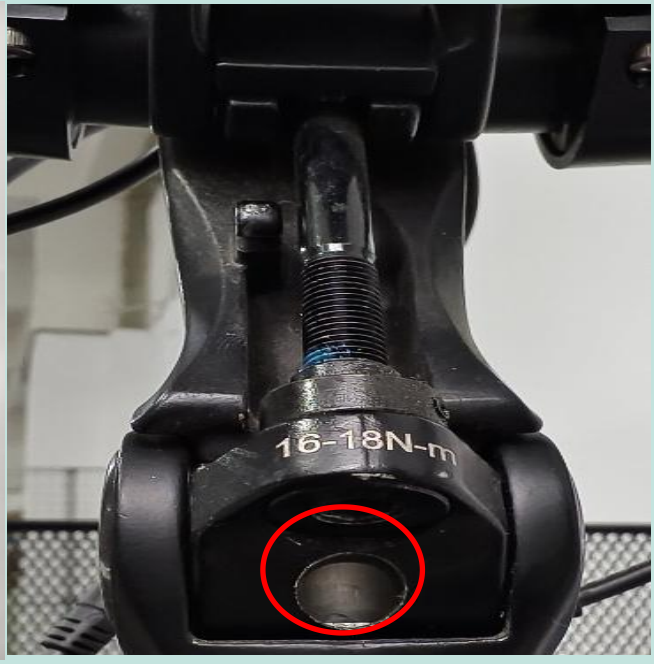


图 2

The handlebar angle can be adjusted according to personal comfort. Next, let's see how to adjust the handlebars.

Refer to Figure 1. Press down the slider and move it in the direction of the arrow. Lift the end of the handlebar and pull it up to open the handlebar adjuster.

After opening (as shown in Figure 2), use a 5mm Allen wrench to turn clockwise 3-4 times to loosen the adjusting screw. Then adjust the handlebars to the appropriate angle and tighten the screw.

Note! After adjusting the handlebars, the screws need to be tightened to the recommended torque value for the vehicle (16-18 N-M). Then tighten the handlebars. If there is no wobble when testing the handlebars, it is ready for normal use.

5.3 Seat height adjustment

3.3.1 Adjust the seat height to a suitable level

1. Hip height calculation method
Measure the vertical distance from your crotch to the ground when standing (it is recommended to take off your shoes to measure), and multiply it by a factor of 0.883 to get the initial sitting height.
2. Heel Test
Adjust the seat so that your heels can rest flat on the pedals and your legs are fully extended (when the pedals are perpendicular to the ground). When actually riding, the balls of your feet should be in contact with the pedals, and your knees should be slightly bent.
3. Dynamic Verification
When riding, observe your knee angle: when the pedal is at the 6 o'clock position, the angle between your thigh and lower leg should be between 145 and 155 degrees.
A seat that is too high can cause you to tiptoe or sway your waist, while a seat that is too low can cause your knees to bend excessively.

5.3.2 How to adjust the seat height

Before adjusting the seat height, we need to prepare the tools, starting with a 6mm Allen wrench.

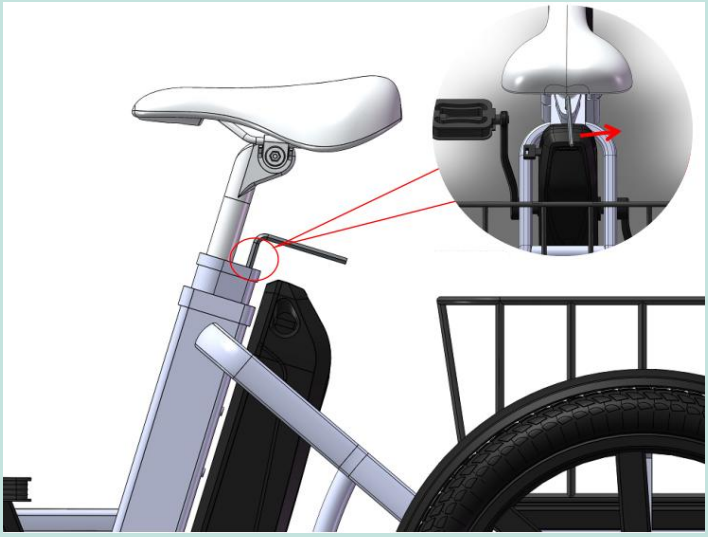


图 1

1. Then, referring to (Figure 1), use a 6mm Allen wrench to turn the seat adjustment screw clockwise about 4-6 turns to adjust.
2. Adjust the seat height to a comfortable position, and then use a 6mm Allen wrench to turn counterclockwise until the screw is tightened. The torque value is (21 ~ 22Nm) .
3. **Caution!** After tightening the screws, please be sure to rock the seat left and right to check for any wobbling. If it wobbles, the seat is not properly installed, posing a significant safety hazard while riding and potentially causing the rider to lose control of the vehicle and fall. Tighten the screws until the seat no longer wobbles.

5.4 Use of turn signals, reversing and gear shift lever

5.4.1 Turn signals and reversing function

As shown in the following diagrams, these represent: left turn signal, right turn signal...
Turn signals and reverse function.
When you press the left or right turn signal button, the left and right turn signals will...
The flashing continues until the turn signal button returns to center and then stops.
Flashing.
Reverse function: Press and hold the reverse button (R) for about 3 seconds and the vehicle will reverse at a speed of 6km/h. Release the reverse button to stop reversing or press the brake.



5.4.2 Use of the throttle



图 1

The throttle has three gears, each with its own unique features to suit different environments.

①. First gear (low gear)

Gear ratio characteristics: This is the gear with the lowest transmission ratio. The rear wheel rotates the fewest times per revolution of the pedal. It's equivalent to a car's "low gear" or "first gear." It requires the least effort to pedal, but also covers the shortest distance per revolution.

Applicable scenarios:

Uphill: This is the primary use! Whether it's a steep slope or a long, gentle slope, switching to gear 1 allows you to pedal with less force, making it easier to overcome gravity and avoid situations where you "can't pedal" or even need to push the bike.

Riding against the wind: When facing strong headwinds, wind resistance will significantly increase the difficulty of riding. Switching to gear 1 will make it easier for you to keep pedaling.

Starting or riding with a heavy load: If your bicycle is carrying heavy loads (such as panniers or items on a rack) or you are carrying a heavy backpack, switching to gear 1 will make it easier to start or ride at low speeds.

Extremely soft or high-resistance surfaces: such as sand, muddy roads, thick grass, etc., where resistance is high, first gear can provide stronger torque to overcome the resistance.

Very low cruising speed: When you need to maintain a very slow speed (such as when riding carefully on a sidewalk or in a congested area).

Important Notes:

Avoid using first gear on high-speed flat roads or downhill! If you need to pedal in this position, the pedal will rotate very quickly ("free pedaling"), which is not only extremely inefficient and wastes energy, but also places unnecessary and excessive rotational load on the planetary gear system inside the gearbox. Over time, this will accelerate wear and even damage the hubs. This is one of the most common incorrect ways to use internal three-speed gears.

②. Second gear (medium speed)

Gear ratio characteristics: This is a direct drive gear. With one pedal stroke, the number of rotations of the rear wheel is proportional to the number of rotations of the chainring, without any reduction or increase in speed through the planetary gear set. The pedaling effort and travel efficiency are relatively balanced.

Applicable scenarios:

For everyday riding on flat roads: This is the most frequently used and core gear! On flat city roads, bike paths, or rural roads, gear 2 provides a comfortable, efficient, and effortless pedaling rhythm (cadence), which is the cruise gear .

Slightly undulating road surfaces: When encountering small, gentle slopes or gentle downhill sections, there is usually no need to shift gears; simply maintaining second gear is sufficient to handle the situation easily.

Starting: For internal three-speed transmissions, it is strongly recommended to start in second gear (unless you are stopped on a steep slope). Starting in second gear requires

much less effort than starting in third gear and is more efficient than starting in first gear (because you might pedal too fast when starting on flat ground in first gear). Shift gears as needed after a smooth start.

Moderate headwind or tailwind: In light wind conditions, level 2 is usually sufficient.

General gear selection: When you are unsure which gear to use, or when the road conditions frequently change between flat roads and gentle slopes, keeping gear 2 is usually the safest and most worry-free choice.

③. Third gear (high speed gear)

Gear ratio characteristics: This is the gear with the highest transmission ratio. With one full pedal stroke, the rear wheel rotates the most times (more than 2nd gear). It's equivalent to a car's "high gear" or "overdrive." It covers the longest distance with one full pedal stroke, but requires more leg strength.

Applicable scenarios:

Downhill: When using gravity to accelerate, switching to 3rd gear allows your pedaling action to keep up with the increasingly faster wheel speed, avoiding "losing your footing" (the pedals not keeping up with the wheel speed) and allowing you to accelerate further by pedaling.

Strong tailwind: There is very little resistance in the tailwind. Switching to gear 3 allows you to use the wind to achieve higher speeds with fewer pedal strokes.

Long-distance cruising on flat roads (at higher speeds): When you have accelerated to a certain speed on flat roads using 2nd gear (e.g., 20-25 km/h or higher, depending on your leg strength) and feel that pedaling is a bit "light" and the cadence is too fast, you can shift to 3rd gear. At this point, pedaling will be a bit "heavier," but each pedal stroke will propel the bicycle further, theoretically requiring less effort (provided you can maintain this speed and power), and the cadence will also be more comfortable.

Pursuing higher speeds: When you want to ride faster under favorable conditions (flat roads, tailwind, slight downhill).

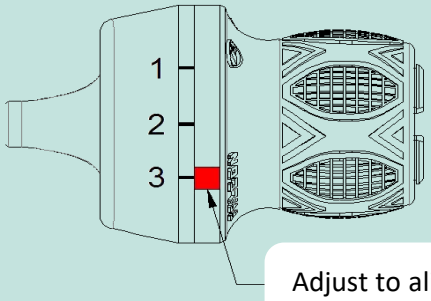
Important Notes:

Avoid forcing your way into third gear at low speeds, uphill, or when there is high resistance! At this time, you will feel the pedals become extremely heavy, as if you are "moving" the bicycle. This is not only extremely strenuous and slow, but it also transmits a huge torque load to the chain, chainring, freewheel, and internal derailleur, which can easily cause chain breakage and damage to the internal gears/clutches. This is another common mistake when using internal third gear.

Starting in third gear is very difficult and is generally not recommended.

5.4.3 Controller Debugging

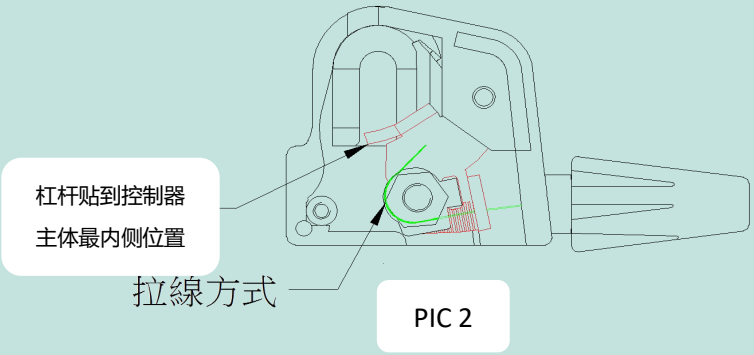
1.First, switch the throttle grip to the 3rd gear position (as shown in pic 1 on the right).



Adjust to align with the 3rd position.

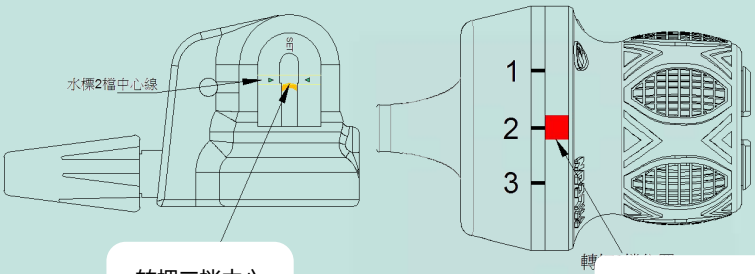
PIC 1

2..Thread the cable through the throttle grip, guide housing, and controller body. Before securing the cable, push the lever to its innermost position. When routing the cable through the controller, ensure that it passes through the clamping plate and then wraps around the outer curved edge, reaching the position shown in the figure on the right (PIC 2). Finally, pull the cable taut and tighten it using a 9mm open-end wrench (tightening torque: 40 kgf·cm).



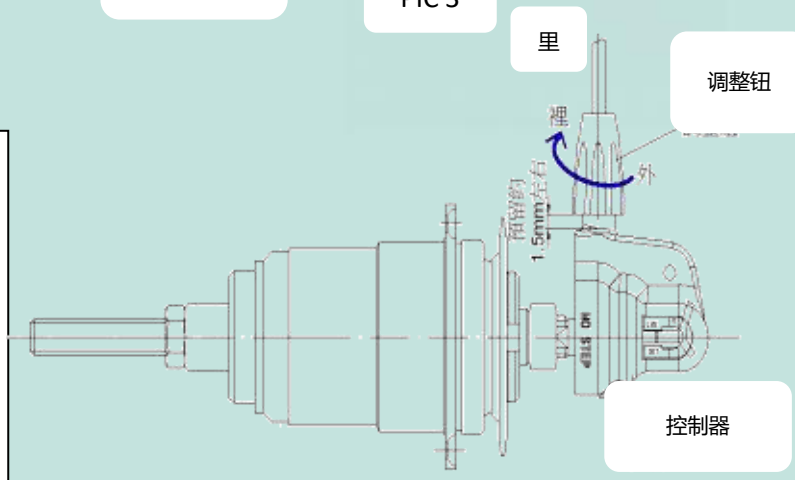
PIC 2

3.Once all wiring connections for the throttle grip are complete, switch the throttle gear selector to the 2nd position. Verify that the controller is correctly positioned (the lever indicator tab should be situated just inward of the center line of the label), as shown in the adjacent figure (pic 3). When adjusting the knob, do not tighten it all the way down immediately; leave a clearance of approximately 1.5 mm to facilitate subsequent fine-tuning. Once you have verified that there are no issues, trim any excess wire and securely fasten the top cover.



PIC 3

4.If you experience any shifting inaccuracies, please perform fine-tuning as follows (refer to PIC 4 on the right):
A. If the inner cable is too loose and prevents shifting into a higher gear, please adjust the controller's adjustment knob outward (using 0.5 turns as the adjustment increment).
B. If the inner cable is too tight, please adjust the controller's adjustment knob inward (using 0.5 turns as the adjustment increment).



PIC 4

5.5 Use of the parking function



图 1

The parking function of the brake lever has many significant advantages and is particularly suitable for the safety needs of tricycles .

5.5.1 Operating Procedures

Using the parking function is very simple; you can reliably park the vehicle by keeping it stationary. Follow these steps:

1. Squeeze the brakes firmly to stop:

Use both your left and right hands to firmly and completely squeeze the brake levers, ensuring the tricycle comes to a complete stop. This is the most crucial step!

2. Triggering the parking lock mechanism:

While keeping the brake pedal firmly in place, pressing the metal button indicated by the circle at the top of the brake lever (Figure 1) with your finger will usually give you a distinct feeling of it locking in, indicating that the locking mechanism has been activated.

3. Slowly release the brake lever:

At this point, you still need to press the metal button to confirm that the parking lock is securely engaged before slowly and carefully releasing your hand from the brake lever.

At this time, the parking mechanism will automatically maintain the tension of the brake cable, and the brake pads will continue to clamp the wheel hub or brake disc, so the vehicle should remain stationary.

4. Verify parking effectiveness:

After releasing the brake lever, gently try to push the tricycle (both forward and backward). If parking is successful, the wheels should be firmly locked and the vehicle should not move at all.

5. If the vehicle slides, it means the parking brake was not successfully locked. Immediately tighten the brake lever again and repeat steps 2-4 to ensure the parking brake lever is fully engaged.

5.5.2 Important Tips and Precautions :

1. Must be operated while the vehicle is completely stopped: The parking lock must be engaged only after the vehicle has come to a complete stop. Locking the parking lock while

the vehicle is in motion or not fully stopped will severely damage the braking system and locking mechanism, and is extremely dangerous!

2. Applying firm pressure to stop is fundamental: The parking lock is merely a "holding" device. If you don't apply enough pressure to the brakes (the brake pads aren't fully engaged), even if the lock is engaged, the braking force won't be sufficient to hold the vehicle on a slope for an extended period, and the vehicle may slowly roll away. Therefore, the first step is to firmly squeeze the brakes all the way in!

3. Releasing the Parking Lock: To release the parking lock and resume riding, simply squeeze the brake lever firmly again. This action usually releases the parking lock automatically (you'll hear a "click" sound). After squeezing, release the brake lever; the vehicle should return to normal riding mode, and the brakes should no longer be locked. Do not directly pull the parking lever to unlock!

5.5.3 Advantages and Usage Scenarios of Parking Function

1. Excellent slope stability (anti-slip):

Core Value: This is the most important and crucial advantage of the parking function. It reliably locks the wheels on slopes (uphill or downhill), preventing the vehicle from rolling due to gravity. This is essential for people with mobility issues getting in and out of the vehicle, loading and unloading goods, or temporary parking on slopes, greatly improving safety.

In contrast, a regular brake lever requires continuous hand pressure and becomes ineffective when released, making it unsuitable for parking on slopes.

Free your hands and improve convenience:

No need for continuous force: Once locked, the rider can completely release the brake lever and use their hands freely for other operations (such as: getting on and off the bike safely, organizing cargo, retrieving items, operating mobile phone navigation, adjusting clothing and helmet, etc.).

Easy to operate: Especially for users with weak hand strength (such as the elderly or those undergoing rehabilitation) or those who need to frequently stop to load and unload, it avoids the fatigue and discomfort caused by squeezing the brake lever for a long time.

2. Prevent accidental movement:

Safe even on non-slope scenarios: Even when parking on seemingly flat surfaces, vehicles can unexpectedly roll due to wind, slight ground inclination, external impacts, or movement of passengers/cargo. The parking function provides an extra layer of safety.

More stable getting on and off: The transfer of body weight when getting on and off a tricycle can easily cause the vehicle to sway. The parking function can effectively lock the vehicle, provide a stable platform, and reduce the risk of falling.

3. Assisted Hill Start:

Smooth Start: When needing to restart on a slope (especially uphill), the parking function locks the vehicle, giving the rider ample time to begin.

Place your foot on the pedal and prepare to pedal.

Shift to the appropriate starting gear in advance (usually a low gear).

Once you're ready, simply squeeze the brake lever firmly to release the parking brake. The vehicle won't roll backward, and you can then smoothly pedal to start, avoiding the dangers of being flustered and rolling backward while starting.

4. Reduce wear and fatigue in conventional braking systems:

Protects the brakes: When parking for extended periods (especially on a slope), it avoids the need to continuously squeeze the brake lever to maintain braking, thus reducing unnecessary wear and fatigue on the brake cables, brake lever pivot points, and brake pads/blocks.

Extended lifespan: The mechanical structure of the parking lock takes on part of the "holding the brake" task, which helps extend the lifespan of conventional braking systems.

Intuitive operation and simple deactivation:

5. One-button locking: The parking switch is designed intuitively and is relatively easy to operate (squeeze the brake → lock).

6. Natural Release: The way to release the parking brake is very intuitive—simply squeeze the brake lever like you would a normal brake to immediately unlock and resume normal riding, without any additional operation of the unlocking device.

5.6 Daily Use and Maintenance

3.6.1 Tire Inspection (Core Safety Feature!)

Tire pressure: Press with your finger or use a pressure gauge to check. Refer to the tire pressure markings on the sidewall for specific information .

Wear and foreign objects: Rotate the tire to check for cracks in the tread or embedded glass shards/pebbles, and remove them promptly.

Scratches and bulges: If cracks or bulges appear on the sidewall, the device must be replaced immediately!

5.6.2 Chain Cleaning and Lubrication (Extend Drive Life!)

Cleaning: Use an old cloth or toothbrush dipped in a small amount of chain cleaner to wipe away the grease and grime (do not rinse the bearings directly with water!).

Apply oil: Apply 1 drop of chain oil per joint, let it sit for 5 minutes, then wipe off any excess oil (crucial! To avoid attracting dust).

Frequency: Must be done after riding in the rain; once every 100-200 kilometers in dry conditions.

5.6.3 Pre-ride inspection

Before riding, you need to check the condition of your tires and ensure the tire pressure meets the requirements for riding.

Check the braking system and perform a braking force test: Squeeze the front and rear brake levers tightly; the wheels should lock instantly and the levers should not touch the handlebars .

Wheel tightening and sway check: Lift the wheel and spin it freely, observing whether the distance between the rim and the brake pads is uniform . **Chain lubrication:** Visually inspect the chain joints for dryness and rust, quickly apply lubricant and wipe away excess oil (dry lubricant is more dust-resistant).

Gear shifting test: Lift the rear wheel, turn the pedal and shift all gears to confirm that the shifting is smooth and there is no skipping of gears .

Stem/Handlebars: Clamp your legs between the front wheel and twist the handlebars forcefully to check for any looseness or unusual noises .

Foot pedal/crank: Crank the crank by hand to check for wobbling, and check the threads of the foot pedal for stripping.

5.7 What should be done when the device is not in use for an extended period of time?

1. Battery disposal (of paramount importance!)

Battery Removal: Always remove the battery from the vehicle and store it separately.

Battery status: Charge/discharge the battery to 40%-60% (ideally around 50%). Never fully charge or completely discharge the battery before storing!

Storing a fully charged battery accelerates electrolyte decomposition and cathode material degradation, shortening its lifespan.

Storing the battery with a low charge (<20%) may cause it to be over-discharged and damaged, or even prevent it from being charged (BMS protection).

Storage environment:

Temperature: Store in a cool, dry place. The optimal temperature range is 10°C - 20°C. Strictly avoid: Extreme cold (<0°C): May freeze and damage the cells, leading to irreversible capacity loss. High temperature (>30°C) or direct sunlight: Accelerates aging and increases safety risks. Avoid low humidity environments and damp conditions (such as garage floors or uninsulated basements).

Storage location: Lay the batteries flat away from flammable materials, metal objects (to prevent short circuits), radiators, direct sunlight near windows , and avoid being squeezed by heavy objects.

Regular checks (Important!): Check the battery level every 1-2 months (using the battery indicator light or charger display). If the level is below 20%, charge it to 50%-60% immediately. Even when stored properly, lithium batteries will have a slow self-discharge.

2. Vehicle cleaning and protection

Thorough cleaning: Wash the vehicle body, tires, chain (if applicable), and drivetrain to remove dirt, salt, and grime. Dry thoroughly, especially metal parts and electrical connections.

Lubrication of critical components: Apply a thin layer of specialized lubricant (such as bicycle chain oil or general-purpose lubricant) to the chain (if applicable), derailleur cables (internal

derailleur system), brake cables, and pivot points (folding bikes). Avoid splattering grease onto the brake discs/rims! Note: Keep the disc brake system dry; do not lubricate the discs or brake pads.

Tire protection: Inflate tires to the recommended tire pressure range . If possible, lift the vehicle (using a parking bracket or special frame) so that the tires are completely off the ground to avoid deformation or cracking caused by prolonged single-point pressure (especially for several months). If lifting is not possible, periodically (e.g., monthly) slightly move the vehicle to change the tire pressure point.

Release the brakes (Important!): The brake lever has a mechanical parking function; ensure the parking position is released. This allows the braking system (calipers/V-brakes) to be in a relaxed position, preventing brake pads from sticking or springs from fatigued due to prolonged pressure.

3. Storage environment selection :

Preferred: Dry, moderately warm (avoid freezing), and well-ventilated indoor spaces (such as bedrooms, insulated garages, and storage rooms). **Secondary Choice (requires more caution):** Covered balconies or well-ventilated garages (special attention must be paid to moisture, cold, and dust prevention). **Avoid:** Complete exposure to the outdoors (wind, rain, snow). Extremely damp basements or garages (mold, corrosion). Enclosed spaces near heat sources (heaters, boilers) or direct sunlight (high temperatures accelerate rubber/plastic aging). Locations with drastic temperature fluctuations.

5.8 How to reactivate a device that has not been used for a long time?

Do not use after storing for several months! Check and test in the following order:

1. Check the battery:

Confirm that the battery has no visible damage, swelling, leakage, or unusual odor.

Measure or check the remaining battery level. If the battery is low (<20%), charge it using the correct method first.

First charge: Charge using the original charger at a suitable temperature (above 10°C). During charging, observe for any abnormal heating or malfunctioning indicator lights. Disconnect when fully charged.

2. Install the battery:

Clean the contacts at the battery and frame interfaces (using a dry, soft cloth).

Securely install the battery and ensure the locking mechanism is in place.

Turn on the power switch and check if the display screen (if present) lights up normally and displays information such as battery level.

3. Comprehensive inspection of the mechanical system:

Tires: Check tire pressure and inflate to the recommended value (tires usually deflate after storage).

Carefully inspect the inside and outside of the tires for cracks, bulges, severe wear, or embedded foreign objects.

Braking system: Test the brake lever travel and force. The brake lever should feel firm when squeezed, without being excessively soft or sticky.

Slow-speed pushing test: Push the vehicle and test whether the front and rear brakes can effectively stop the vehicle and whether there is any dragging feeling after releasing them (no abnormal noise/friction from the disc brakes).

If it has a parking function, test whether locking and unlocking are smooth and effective.

4. Transmission System:

Check the chain (if any) for rust, excessive looseness, or jamming. Clean and relubricate. Internal derailleur system: Try shifting gears to ensure smooth and distinct gear changes. Wheelset: Lift the vehicle and rotate the wheels to check for rim wobble (left-right wobbling) and smooth rotation (no unusual noises or jamming from the bearings). Check that the quick-release levers or axle nuts are tight. Frame and Steering: Check the frame and rack for cracks or obvious deformation. Check that the handlebars are responsive and have no play. Lights and Instruments (if any): Test all lights (headlights, taillights, turn signals) and instrument displays to ensure they are functioning correctly.

5. Trial operation (proceeding gradually):

Low-speed push/push test: Find a safe, open area, push the bike a short distance without power assist, and then confirm that the brakes are smooth, the steering is flexible, and there are no abnormal noises. Basic riding (without power assist): Ride a short distance like a regular bicycle, feeling whether each component operates smoothly. Short-distance test with power assist: Choose a flat, safe road section, ride for a few minutes with low power assist, and test the motor response and gear shifting (if any) to ensure they are normal. Listen carefully for any abnormal noises (motor, transmission, brakes).

6. Final Confirmation:

After completing all the above checks and tests and confirming that there are no problems, you can proceed with normal riding. If you encounter any issues, please contact us or consult the dealership where you purchased the bike.

6. Conclusion

Thank you for your trust in our products. Every journey deserves to be gently protected, and we will always be with you .