Diolor

TIGER MT-20

TIGER Plus
ELECTRIC BICYCLE
INSTRUCTION MANUAL

※ Please read this user note carefully ！ This instruction book contains important safety matters ！

⚠ Warning

1. It is strictly prohibited for people under 16 to drive electric bicycles on the road.
2. It is strictly prohibited to drive with one hand or take off the handlebars with both hands, or drive after drinking.
3. Electric bicycles shall be driven in non-motorized vehicles, and the maximum speed shall not exceed 15km/h; on roads without non-motorized vehicles, they shall be driven on the right side of the roadway; please obey the traffic rules, drive safely, and control the speed within the safe speed.
4. It is strictly prohibited to lend electric bicycles to people who cannot operate them, so as to avoid injury.
5. Electric bicycles shall be carried by people or articles in accordance with laws and regulations. In addition to the specified loading position, other parts shall not be arbitrarily carried or loaded. The loading standard: the rated load of the vehicle is 1 person (below 75kg), and the trunk or clothes rack shall carry less than 2kg.
6. Be sure to wear a helmet when riding.
7. When riding in rain or snow, the braking distance will be prolonged, so pay attention to slow down; try to avoid traveling in heavy rain and other bad weather.
8. Correct dress: wear bright colors, free movement of the whole body; try to wear less tight and open-cuffed clothes, and wear low-heeled shoes as much as possible.

⚠ Attention

1. Do not place cotton gauze or other easily entangled items near the front and rear brake parts or the electric motor
2. When washing the car, the battery should be removed, and water should not be directly poured onto the brake drum, motor, and front and rear axles. Steam or high-pressure water pipes are not allowed to be used to prevent water from entering and damaging components; Wash with a damp cloth and promptly absorb moisture with a soft cloth.
3. Before driving, it is important to focus on checking the braking effect of the front and rear brakes, confirming whether the switches, knobs, air pressure, lights, and horns are normal, and the fastening status of each axle to ensure reliable fastening of the front and rear wheel axles and handlebars, and whether the reflectors are contaminated or damaged. (If there are any abnormalities, please repair them in a timely manner or seek professional repair).
4. Electric bicycles should not be parked in building lobbies, evacuation stairs, walkways, and emergency exits.
5. Electric bicycles should not be charged or parked in residential buildings. When charging, they should be kept away from combustible materials and the charging time should not be too long.
6. The correct use and maintenance methods of batteries; Waste batteries cannot be dismantled without authorization, and should be recycled by relevant professional departments.
7. Safe usage methods and warnings for chargers: When replacing chargers, they should be matched with the battery.
8. When adjusting the handlebars or saddles, attention should be paid not to expose the safety line markings of the handlebars and saddle pipes (when applicable).

Directory

MAIN TECHNICAL PARAMETERS AND SPECIFICATIONS

Vehicle Parameters

External dimensions:	1800mm×700mm× 1113mm
Center distance between front and rear wheels:	1180mm
Vehicle mass:	46kg
Load capacity:	155kg
Maximum design speed:	40km/h
Continued mileage:	60km

Main technical parameters of battery

Battery type:	Lithium battery
Battery capacity:	15Ah/35Ah
Nominal voltage:	48V

Main technical parameters of motor

Motor type:	Permanent magnet brushless DC motor
Nominal power:	750W
Rated speed:	350r/min
Rated voltage:	48V

Other main configurations

Damping	Aluminum alloy hydraulic front fork & Rear dual shock absorber
Brake	QIOLOR Hydraulic Brake
Tire	20 * 4.0 Innova tires
Instrument	LCD Color screen

ILLUSTRATIONS OF THE ENTIRE VEHICLE AND ITS COMPONENTS

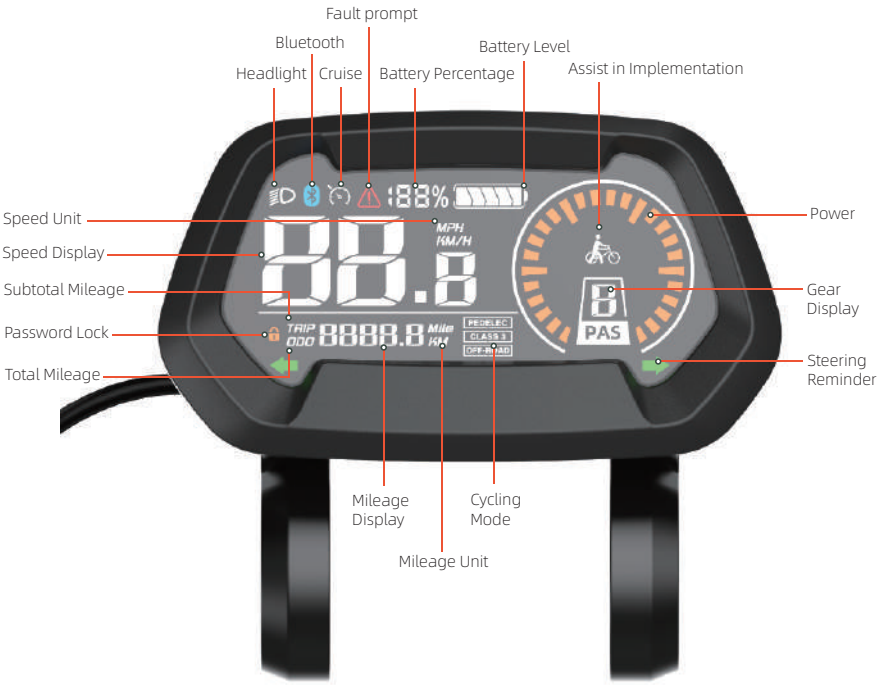
1.Battery
2.Cushion
3.Tail Lamp
4.Rear shock absorber
5.Rear fender
6.Electrical machinery
7.Rear tire
8.Chain extender
9.Chain
10.pedal
11.Front tire
12.Front fender
13.Shock-absorbing front fork
14.Frame number (bottom of head tube)
15.Front headlights

1.Front brake
2.Controls
3.Throttle
4.Display
5.Rear brake
6.Shift
7.Keys
8.Electronic locks

INSTRUCTIONS FOR INSTRUMENT USE

Specification Parameters

1. Power Supply: DC 24V/36V/48V
2. Rated Current: 42mA/36V
3. Shutdown leakage current: <1uA;
4. Screen specifications: 3.2" LCD (VA)
5. Communication method: Supports UART and CAN bus
6. Operating temperature: -20℃ ~ 60℃
7. Storage temperature: -25℃ ~ 70℃
8. Protection grade: IPX5



Key Definition

Display Interface

1. Headlights: displayed when the headlights are turned on; Headlights off or without this function, icon not displayed;
2. Fault prompt: When the system malfunctions, it flashes and does not display if there are no faults;
3. Battery percentage: displays the current battery percentage value;
4. Battery level: Five segment level and undervoltage indication;
5. Assist in promotion: displayed when assisting in promotion, other statuses are not displayed;
6. Motor power: Real time display of motor power in 26 segments;
7. Gear indication: Display the current assist gear;
8. Steering prompt: corresponding display when switching the steering function ;
9. Cycling mode: displays the current cycling mode;
10. Mileage unit: subtotal mileage, total mileage unit, Mile represents miles, KM represents kilometers;
11. Mileage display: Display the mileage value, with subtotals accurate to one decimal place and total mileage accurate to one decimal place;
12. Total mileage: displayed in Mile or KM;
13. Password lock prompt: displayed when entering or setting the power on password;
14. Subtotal mileage: Display subtotal mileage; Unit Mile or KM;
15. Speed display: Power on status, displaying the speed value, with two digits including one decimal place;
16. Speed unit: Display speed units, KM/H kilometers per hour, MPH miles per hour;

Normal Operation

1. On/Off

Maintain the normal connection state between the instrument and the controller, press and hold the ⏻ button (1 second) while the instrument is turned off, the instrument will display the startup interface, and then enter the cycling interface and start working; Press and hold the ⏻ button (1 second) in the power on state to turn off the instrument panel. If the rider does not perform any operation on the instrument panel (speed is 0) within 5 minutes after turning it on, the instrument panel will automatically close.

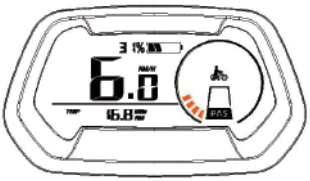
2. Headlight Switch

Press and hold the + button for 1 second, and the headlights will turn on (requiring controller support). The instrument panel will display the interface, and the headlight indicator icon will light up; Press and hold the + again, and after 1 second, the headlights will turn off and the headlight indicator icon will turn off.

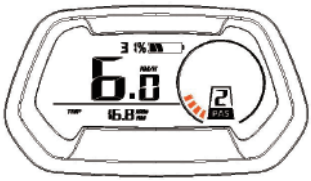
3.Assist in Promoting The Model

After pressing and holding the − for 2 seconds, enter the assist push state, display , and release the −,Exit the assistance promotion mode and return to the normal display interface.

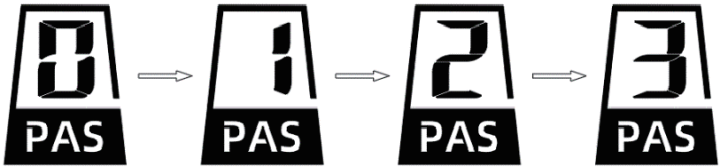
The interface for switching the assistance promotion mode is shown in the following figure (can only be in the promotion state)



Assist in Promoting The Model



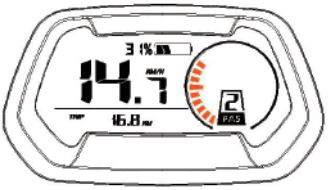
Normal Mode



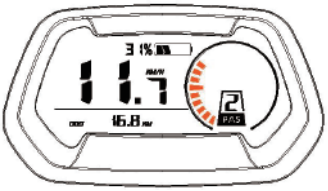
4.Display Information Switching

Short press the **M** in the power on state to switch between subtotal mileage and total mileage display information, and cycle through display: current speed/ subtotal mileage (TRIP) ->current speed/total mileage (ODO).

The mode switching interface is as follows



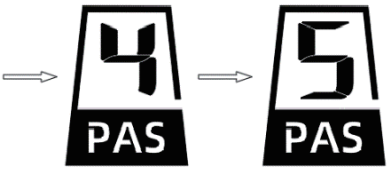
Speed/Total mileage (TRIP)/Motor power (WATT)



Speed/Total Distance (ODO)/Motor Power (WATT)

5.Assist In Gear Shifting

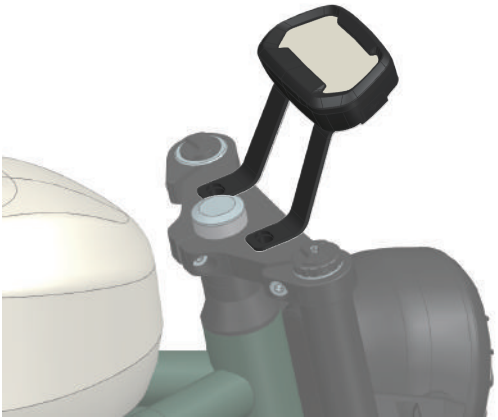
Press the + or − to switch the power assist gear and change the power assist mode. There are six modes by default: 0/1/2/3/4/5, which can open the number of gears. When the instrument is turned on, it defaults to 0 gear. When 0 gear is displayed, it is no power assist gear.

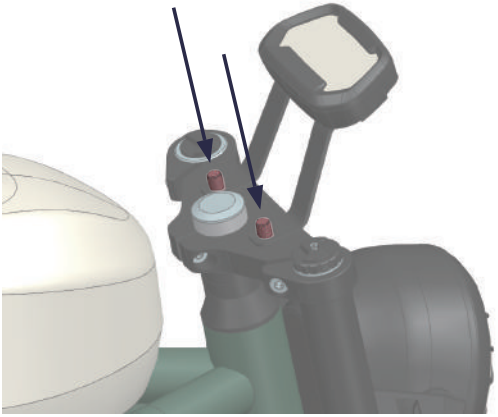


The assist gear selection interface is shown on the left

INSTALLATION OF INSTRUMENTS AND HANDLEBARS

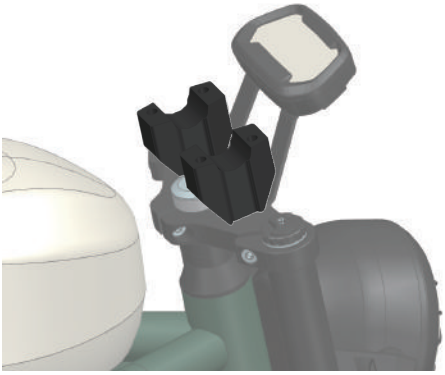
Instrument installation, as shown in the figure





Handlebar installation

1.Install the horizontal handle fixing block



2.Install the crossbar

BATTERY INSTALLATION

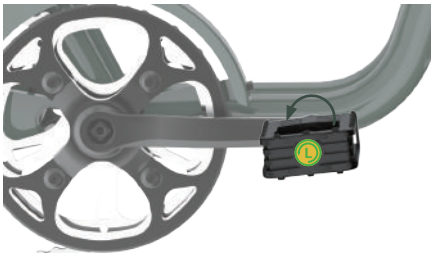
1.Fix it on the frame with a slide rail, and slide it to the right as shown in the figure

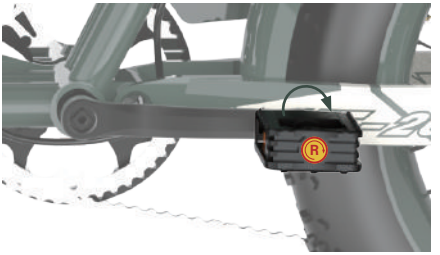
2.Use the key to lock the buckle, as shown in the figure, turn it to the right

FOOT PEDAL INSTALLATION

1. Pedal marked L has left-hand thread. Tighten counterclockwise.

2. Pedal marked R has right-hand thread. Tighten clockwise.





CHARGING METHODS AND PRECAUTIONS FOR BATTERIES

Charging and maintenance of batteries

This car's battery is lithium-ion

1. The use of temperature in the range of -15 °C - 45 °C, (battery use the best temperature of 20 °C ± 10 °C);
2. The winter temperature drop, battery capacity is affected by temperature, a charge, the driving range is a normal phenomenon;
3. The new car battery just began to use, to ensure full power (after the first time using up the power, charging time to reach about 12 hours);
4. Battery is an important part of the guarantee of electric vehicle driving, please do not use the power to the minimum allowable voltage when riding every time, when the undervoltage indicator flashing bright, you must charge the battery.It is best to develop the habit of charging after riding every day, which is very beneficial to the battery life.

Use and maintenance of chargers

1. Carefully check the charging rated input voltage (220V) and the grid voltage is consistent.
2. The battery can be directly placed on the car charging, can also be unloaded to indoors and other suitable place charging in cold winter areas suitable for indoor charging.
3. Please first connect the output end plug of the charger and the battery charging jack well, and then connect the input end plug of the charger to the AC power supply; this procedure is not allowed to reverse operation.

4. At this time the charging indicator of the charger is red, indicating that the charger is in working condition; when the green light is on, it indicates that the battery is full, and the charging time is about 4~8 hours (the length of the charging time depends on the amount of the remaining battery power).
5. In case of special circumstances, the maximum continuous charging time is not more than 12 hours.

⚠ Warning

1. When charging, it is strictly prohibited to place it in a safe place that children cannot touch.
2. It is strictly prohibited to start using the battery without fully charging it, otherwise it will affect the battery life.
3. It is strictly prohibited to use other brands of chargers for charging, and other types of batteries should not be used with this charger. The charger and battery must be matched before use.
4. The charger contains high-voltage circuits and unauthorized disassembly is strictly prohibited.
5. When using and storing, please prevent liquid and metal particles from infiltrating into the charger. Be careful not to drop and hit it, so as to avoid damage.
6. It is strictly prohibited to cover any objects on the charger during charging.
7. This charger is for indoor use. Please use it in a dry and well-ventilated environment.
8. When charging the charger, please keep it away from inflammable and explosive items (make sure there is no inflammable and explosive items within 3 meters).
9. When you smell strange smell or high temperature during charging, please stop charging immediately and send it to the sales office for repair.

PRE DRIVING INSPECTION

Tire Inspection

1. The tire pressure is normal.According to the ground part of the tire sag, judge whether the pressure is appropriate, the tire gauge should be used to check the abnormal pressure, and the pressure should be adjusted to the normal pressure. In general, the normal pressure of the front wheel is 240KPa, and the rear wheel is 240KPa.
2. The tire has no cracks and abnormal wear.
3. There are no nails, stones, glass and other foreign objects embedded in the tire.

⚠ Warning

Tire cracks, damage and abnormal wear are the causes of poor rotation and tire blowout. When the bump on the tire has worn off two-thirds, replace the tire with a new one. Abnormal tire pressure and depth of tread grooves.

Light Inspection

1. Turn on the power, operate the lighting switch, check whether the headlight, steering light, taillight are normal, and whether the headlight beam is normal.
2. Check the front and rear brake pads respectively, and check whether the brake off light is normal.

Inspection of Handlebars

1. Up, down, front, rear, left, right swing handlebars, whether there is a loose phenomenon.
2. Whether there is a tight phenomenon.
3. Whether there is a knock phenomenon, handlebars loose knock sound please contact the dealer maintenance site repair.

Inspection of Overall Auxiliary Cable

1. Whether there is a short circuit, broken circuit phenomenon;
2. Whether the connector parts are off, loose phenomenon;
3. Whether there is oxidation, cracking, aging phenomenon.

Inspection of Vehicle Frame, Front Fork And Flat Fork

1. Whether there is a strange noise phenomenon;
2. whether there are cracks, de-welding phenomenon.

Dirt and damage to reflectors and license plates

1. Check reflectors for dirt and damage.
2. Check if the license plate is securely installed, if the number is clear, and if there is any dirt or damage.

PROPER DRIVING

Start Method

Before starting: prop up the double support to see if the vehicle is abnormal.

1. Turn the power switch to the O N position, whether the lights are bright, whether the switches work, whether the horn sounds, and whether the switch is normal; Keep your feet up as if it's the same.
2. The motor starts, when you sit firmly in the car, then open the power lock, slowly rotate the speed control knob inward, and then slowly accelerate after starting (simple open the power lock start, uphill or resistance, it is best to accelerate slowly after human assistance).

Brake use: front and rear braking at the same time braking, the best effect.

1. Slow down before braking, and then hold the brake handle (with the foot brake on the foot brake) to stop driving.
2. Do not brake sharply, swerve, emergency brake, swerve easily lead to sideshift or rollover.

Precautions When Driving

1. Those who are not familiar with the essentials of cycling and traffic rules are strictly prohibited from driving;
2. Drive slowly on damaged roads or gravel paved roads;

3. It is strictly prohibited to drive at high speeds in rainy and snowy weather; When the accumulated water on the road exceeds the lowest position on the outer edge of the wheel motor, do not ride and use it to avoid water, short circuit, and burning of electrical appliances such as the motor, controller, and battery, as well as brake performance failure of the rear brake.
4. It is strictly prohibited for people to open the power lock and turn the speed control knob before riding steadily on the vehicle. When going downhill, turning, or reaching the finish line, slow down within 50 meters in advance;
5. It is not allowed to upload children or place any items on the pedals for cycling.

Parking Precautions

1. Within 50 meters of the parking place, turn on the turn signal, turn the speed control gradually back, slow down: pay attention to the rear and side vehicles, and stop slowly.
2. When the vehicle is completely stopped, the turn signal switch is OFF and the power key is turned off.
3. When parking, first turn off the power lock, then get off, stand on the left side of the car and prop up the car in a flat place.

⚠ Notice

Do not park on the ground on soft slopes to prevent the vehicle from tipping over. Temporary parking can be supported by a single brace. In order to prevent car theft, when you leave the car, be sure to lock the anti-theft lock and take the key.

REGULAR INSPECTION AND SIMPLE MAINTENANCE METHODS

In order to extend the service life of the vehicle and make it safe and comfortable to drive, please check and maintain it regularly. When the vehicle is out of use for a long time, regular inspection should also be carried out. When the new car is driving 300Km, it should be checked and maintained at the local maintenance station regularly every month.

Pay Attention to Safety During Inspection

1. Choose a spacious and flat area to support the main bracket.
2. When driving inspection is required, it should be carried out in a safe place and attention should be paid to the safety of the surrounding area.
3. If any abnormalities are found through inspection, you can call or consult with local maintenance personnel to guide the inspection and eliminate the abnormalities before driving.

Inspection of Operating Site

1. Check whether the front fork is bent or damaged
   If the front fork is damaged, shake the handlebars up and down to check whether the front fork is bent and other abnormalities.
2. Check the brake
   The free clearance of the brake is measured whether it is within the specified range (10-15mm). If it is not right, it should be adjusted. Brake skin wear serious (more than 2/3) requires timely replacement.

⚠ Notice

After brake adjustment, be sure to tighten the brake wire fixing screw to prevent danger when braking; At the same time, keep the power off before braking

Braking Effect

Driving at a low speed on a dry flat road, use front and rear brakes separately to check their respective braking effects.

⚠ Notice

When holding the brake lever, if it still can not play the effect, the distance between the brake block and the wheel should be adjusted, and the braking distance should be increased in rain and snow.

If you do not have special mechanical tools and measuring instruments, or do not have the ability to detect, please go to the maintenance station for inspection and replacement, do not disassemble before you have mastered its technology, and damage other parts.

Tyre Inspection

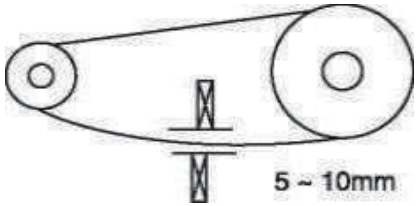
When the tire is cooled, check it with a tire barometer.

⚠ Notice

Abnormal tire pressure, cracking, damage and abnormal wear are one of the causes of poor steering and tire burst.

Chain Adjustment

First loosen the rear axle nut and turn the adjusting nut left or right to correct the slack of the chain. When adjusting the chain, it is also necessary to keep the front and rear sprockets aligned to become a straight line. After adjustment, re-fix the rear shaft nut, lock the adjustment nut and carry out the final check to make the chain winding 5-10 mm.



⚠ Notice

The adjustment chain should be checked before each driving, and excessive relaxation of the chain may cause an accident of chain detachment, or cause serious damage.

The Depth of Tire Grooves

Check the tire wear, check the depth of the grooves, wear out 2/3 of the tire bumps should be replaced. When the tire is abnormal, please purchase a new tire in time to replace. (Rear wheel locking torque ≥30N.m, front wheel locking torque ≥ l8N.m)

Check The Fluid Level of The Battery

This car is a lithium battery, if you need to check, or feel abnormal, please go to the vehicle purchase shop repair station to check and repair, is strictly prohibited

⚠ Notice

Do not disassemble the battery without permission. The battery is not used for a long time due to natural discharge, the power will gradually become less, and it should be supplemented regularly. If stored on the car, the "+" and "-" poles should be disconnected.

Check the lubrication and maintenance of various parts of the vehicle body

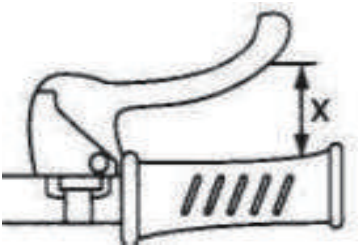
1. Front axle, front fork eight bowls, middle axle and other parts, regular testing, need to use grease lubrication maintenance (calcium-based grease 2#-3#GB491)
2. The chain is cleaned with gasoline every year. (Brand N10-22GB443)
3. Inject a small amount of oil (brand N10-22GB443) into the brake tube every six months, and do not drip oil inside the switch. When the inspection before driving or the regular inspection is completed, it is necessary to carry out some necessary supplements, adjustments and replacement and other simple maintenance. Generally applicable maintenance methods are described here.

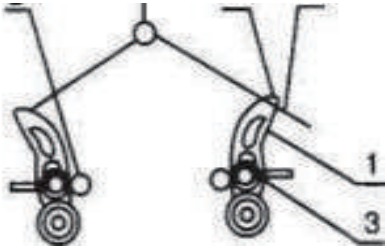
⚠ Notice

Maintenance should pay full attention to safety, choose a flat, open, well-ventilated, no danger around the place and in the parking state, be sure to support the main support to choose the appropriate tools.

Brake Adjustment Method

1. Check the right brake handle. When the corresponding travel of the brake handle reaches 1/2X, complete braking should be achieved.
2. Loosen the screw on the brake wire fixing seat, and then tighten or relax the brake wire, so that the average distance between the two brake blocks and the rim is 1.5-2mm, and then tighten the screw. If the brake block is not equal to the clearance on both sides of the rim, the spring adjustment screws on the two brake arms can be adjusted until the clearance on both sides is equal, and the adjustment is repeated until the requirements are met.

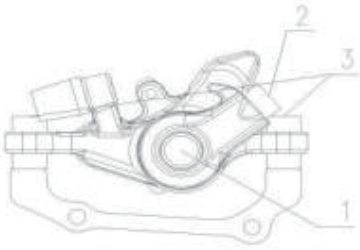




1 Brake Arm
2 Brake Block
3 Spring Adjusting Screws
4 Brake Wire Fixing Seat
5 Brake Wire

Adjustment of The Rear Brake System

1. Check the left brake handle in the same way as the front brake handle.
2. Adjust the adjusting screws until the requirements are met. If the adjustment is not effective, loosen the nut on the brake wire fixing seat and tighten or relax the wire until the requirements are met.



1 Adjusting Nut
2 Brake Wire Fixing Seat
3 Gap Trimming Screws

Change The Fuse

Power switch off state, pull out the fuse box, open, take off the fuse tube, see if the fuse is intact. If the fuse is disconnected, replace it immediately.

⚠ Notice

1. If the insertion part of the fuse is loose, it can cause the cleaning wire to heat and lead to accidents.
2. When replacing the burned fuse, be sure to use the specified model specifications of the original car.
3. If more than the specified capacity of the fuse is used, it will cause the main line bundle to heat up or burn out. If the fuse can be blown after replacement, reasons other than the fuse should be considered, and a new fuse should be replaced after the cause is identified and adjusted. When cleaning the vehicle, care should be taken to avoid strong water impact on the fuse tube.

DIAGNOSIS AND TROUBLESHOOTING OF COMMON FAULTS IN ELECTRIC BICYCLES

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
1	Indicator light is not on, motor is not running	1. No voltage between controller and motor: A. The internal circuit of the controller is disconnected. B. Speed control handle is broken; C. The speed control handle line is broken; D. The lead between the speed control handle and the controller is connected incorrectly; 2. The brake power off switch is broken; 3. The motor winding is burnt, open circuit, short circuit, or the brush or brush bracket is damaged; 4. There should be a voltage of 4.3V between the Hall circuit or speed control handle of the controller. If not, the controller is faulty; 5. The speed control voltage between the controller and the speed control handle should be between 1.1 and 4.3V. If it remains unchanged or there is no voltage, and the controller has no problem, it indicates that the speed control handle is faulty.	Replace the controller; Clean the photosensitive film and tube in the handle or replace the speed control handle; Reconnect; Adjust or replace; Replace the motor

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
2	The motor cannot be controlled to spin after the power lock is opened	1. The three leads between the speed control handle and the controller are connected incorrectly; 2. The photosensitive film of the speed control handle is dirty, falls off, emits light, or breaks, or the solder joint falls off; 3. The components inside the controller are damaged.	Reconnect; Clean the photosensitive film, replace parts or speed control handle; Replacing the controller
3	Slow motor speed	1. Speed control handle inside the photoconductor or Photocell or photocell is dirty; 2. The components in the speed control handle are partially damaged. part of the components in the speed control handle is damaged; 3. Battery power is insufficient, can not be charged The battery is insufficiently charged or cannot be charged; 4. Motor failure; 5. Controller failure	Clean or replace; Replace the speed control handle according to serial number 5; Replace the motor; Replacing the controller

DIAGNOSIS AND TROUBLESHOOTING OF COMMON FAULTS IN ELECTRIC BICYCLES

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
4	Motor rotates and stops	1. The battery is in an undervoltage critical state; 2. Poor contact of battery contacts; 3. Poor contact between the fuse tube and the socket inside the battery box; 4. The lead wire of the speed control handle seems to be broken but not broken; 5. Brake power off switch failure: 6. Poor contact of the power lock; 7. The voltage between the speed control handle and the controller cannot be adjusted, and the speed control handle is faulty; 8. Poor contact of connectors; 9. There is a faulty soldering in the controller; 10. Poor contact of the brush inside the motor, faulty soldering or connection of the motor winding	Charging; Adjust, clean, and polish; Adjust, polish or replace; Reconnect; Adjust or replace; Clean the photosensitive film or tube; If it still cannot be reconnected, replace it; Repair or replacement
5	The battery is not charged or undercharged	1. End of battery life; 2. The fuse in the battery box is broken; 3. The fuse tube is in poor contact; 4. The charger has no output; 5. Low output voltage of charger; 6. The charger plug is in poor contact with the power socket; 7. The charger indicator is incorrect.	Replace the wire tube; Polishing or adjusting; Replace the charger; Replace the plug-in or replacement parts; Charge your own time

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
6	High motor noise or abnormal sound	1. Motor bearing clearance is large; 2. Motor rotor sweep; 3. The magnetic steel is loose; 4. Motor body deflection 5. Motor commutator surface gasification, burning, oil, wear, commutator loose;	Bearings; Adjust the clearance between the stator and rotor, and align the shaft with the latest paste; Adjustment, cleaning, repair, replacement of stator and rotor with commutator correction, adjustment
7	Excessive motor current	1. The positioning magnetic steel is too high. 2. Uneven gap between brush and commutator, ring fire; 3. Short circuit between positive and negative electrodes of the motor; 4. Turn intermittent circuit; 5. Short circuit of commutator; 6. Zero start overfrequency of electric vehicle: 7. Too tight match between shaft and bearing; 8. Excessive load or driving resistance.	Alignment, rebonding; Adjust the gap or run-in; To eliminate; Change the coil or rewinding; Clean and polish commutator pieces; Try to avoid; Grinding shaft; Pedal power
8	Controller components burned out	1. The positive and negative terminals of the power supply are reversed; 2. Water enters the controller. 3. Individual components are damaged; 4. Virtual welding and de-welding of components.	Proper connection; Replace the controller; Replace components; Symptomatic correction

DIAGNOSIS AND TROUBLESHOOTING OF COMMON FAULTS IN ELECTRIC BICYCLES

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
9	The power indicator on the instrument panel is off and the motor is running normally	1. No voltage between positive and negative dial leads: 2. The connector is in poor contact or the lead is broken. 3. There is a break on the dial circuit board; 4. The instrument is damaged.	Re-plug or change the cable; Replace or repair the instrument circuit board; Change instrument
10	Turn on the power, the controller works normally, turn the handle, the motor does not rotate	1. Check whether the right hand speed control cable falls off, and whether the controller or motor connector falls off; 2. Left and right handles are damaged; In braking mode; 3. Whether the governor handle is damaged; 4. Check whether the motor hall is damaged; 5. Motor winding short circuit motor damage, maintenance and replacement; 6. One section of the battery pack is disconnected; 7. The rear taillight brake filament is connected to the headlight filament and is in the braking state (this situation will be found when the headlight is turned on)	Replace parts or repair

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
11	The ride is laborious and slow	1. Check whether the brake is locked; 2. Whether the inner tube pressure is suitable; 3. Battery voltage is sufficient; 4. Whether it exceeds the restricted slope or head wind; Whether the speed limit line is connected; 5. The inner bearing of the motor is damaged, and the stator and the magnetic steel sheet are combined with the wheel hub to rotate.	Repair
12	Short driving distance with full battery charge	1. Long-term battery placement: please recharge first; 2. Whether the tire pressure is insufficient 3. Check whether the brake is too tight; 4. Whether false charging occurs during battery charging; 5. Whether it meets uphill or headwind; 6. Whether the temperature is too cold: battery energy can not be emitted; 7. Motor starting and driving current is large; 8. The controller is faulty. 9. The battery ages naturally.	Adjust the brake; Supplementary charging; Pedal assisted driving; Check and replace the motor, controller and battery

DIAGNOSIS AND TROUBLESHOOTING OF COMMON FAULTS IN ELECTRIC BICYCLES

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
13	Turn on the power switch, the instrument lights up, but turn the speed control handle, the motor does not turn	1. The controller is damaged. 2. The governor handle is damaged; 3. The brake power off handle is damaged; 4. Motor internal damage; 5. The conductor on the car is disconnected: reconnect the line. 6. Virtual connection of line internal connector; 7. The battery string or one battery is faulty. 8. Long-term battery placement: please recharge first;	Replace the controller, speed control handle, motor; Reinsert to make good contact
14	After the battery is charged at 8/h, the electric vehicle only runs 10 kilometers	1. Battery aging; 2. Partial short circuit of the motor; 3. The controller is damaged. 4. The charger output voltage is low, the battery is not charged	Replace or repair batteries, motors, chargers
15	The speed of electric cars is obviously not as fast as before	1. Partial short circuit of the motor; 2. The controller is damaged. 3. The governor handle is damaged; 4. Mechanical failure is not flexible: maintenance, lubricating oil	Replace or repair
16	When the battery is charged for an hour, the green light will be on (once the battery isfull, once it is used up)	1. The charger is low, which makes the battery charge seriously insufficient; 2. The battery enters the decline period and cannot meet the long-term discharge; 3. The battery string or one battery is faulty.	Replace or repair

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
17	Charging for 8 hours, the green light of the charger does not light up, and the battery heats up	1. The charging voltage of the charger is high; 2. The battery string or one battery is faulty. 3. Battery aging; 4. Battery water shortage.	Replace or repair the charger and battery
18	When cycling manually, it feels slow and heavy	1. Friction between the front brake or lock brake (brake expansion) and the rotating part; 2. The chain is too tight; 3. The front, rear shaft stop and central shaft parts are too tight or the parts are worn; 4. Insufficient inflation of front and rear tires; 5. Front wheel hub or motor inner bearing damaged.	Adjust the clearance between the front and rear brakes and rotating components; Adjust the front and rear positions of the rear axle; Loose fasteners or replace or repair worn components
19	The lamp and the horn does not work	1. The converter is damaged; 2. The converter fuse is blown; 3. Poor contact between the safety tube and the safety seat; 4. The connector plug-in is in poor contact, so that it is in good contact; 5. The bulb or horn is damaged; 6. Lamp switch horn switch is damaged;	Change and adjust the contact position

DIAGNOSIS AND TROUBLESHOOTING OF COMMON FAULTS IN ELECTRIC BICYCLES

Number	Fault Phenomenon	Fault Diagnosis	Elimination Method
20	Sufficient battery, but two red lights under load (undervoltage light, overcurrent protection light, motor stop)	1. The charger output voltage is low; 2. Short battery charging time is not enough: 3. The capacity of the battery pack or one of them decreases; 4. Electrode damage or poor contact; 5. The main power supply has poor contact;	Replace or repair the charger and recharge to extend the charging time

AFTER-SALES SERVICE AND WARRANTY COVERAGE

Dear user:

Thank you for using the company's production of "Weituo viya" brand electric vehicles, in order to protect your legitimate rights and interests, improve the product quality responsibility system, please keep this manual.When you buy this vehicle, please check, debug and have the right to require the business service personnel to provide, guide the correct operation method and maintenance of the spoon to provide effective purchase invoice, certification and warranty card and maintenance unit, address and contact number.The "Weituo viya" brand electric bicycle commitment to the implementation of the three guarantees, all refer to the "National Three Packages Laws and Regulations", "Consumer Rights and Interests Protection Law", "Shanghai Electric Bicycle Consumer Disputes Settlement Measures" formulated.The "three guarantees" period depends on the vehicle and the main components, as follows:

"Three Guarantees" service scope:

Accessories Category	Part Name	Standard For Replacement or Maintenance	Warranty Period
Four major items	Electric motor	1. Coil ablation or magnetic steel degradation, fall off 2. Motor shaft is broken	12 Months
	Controller	1. Internal short circuit, open circuit and non-work or other quality problems affecting use 2. The outlet end should be intact without human modification	12 Months
	Recharger	Performance Failure	12 Months
	Battery	1. The surface and terminal of the battery should be kept intact 2. The battery engraving number must be complete and consistent, and the label must be clear 3. The whole battery group capacity is more than 60% shall not be replaced	24 Months
Electrical Appliances	Switch assembly with five-piece switch	Performance Failure	12 Months
	Instrument	Performance Failure	12 Months
	Lock	Performance Failure	6 Months
	Speed Control Handle	Performance Failure	12 Months
	Brake Lever	Performance Failure	12 Months

Accessories Category	Part Name	Standard For Replacement or Maintenance	Warranty Period
Electrical Appliances	Vehicle Cable	1. Internal short circuit and break due to cable quality in normal use 2. The normal use of the line occurs and short circuit damage	9 Months
	Reflector	Performance Failure	3 Months
	Horn	Performance Failure	12 Months
	Sensor	Performance Failure	12 Months
Category of frame and iron parts	Frame, handlebar, handlebar stand	Welding, fracture, serious deformation	12 Months
	Kickstand	1. Fracture, dewelding 2. The height of the double brace is more than 1cm	6 Months
	Front Fork	Derailing, Cracking	12 Months
		Severe Oil Leakage	6 Months
Brake	Rear expansion brake, front and rear hub brake	1. The brake is stuck and the brake is not flexible 2. The brake is broken and damaged due to material quality problems	12 Months
Plastic Seat Cushion	Baked Paint Plastic Parts	The paint is placed so that the surface paint layer and decal are seriously bubbled more than 2 square centimeters, the paint is off, the cracks are cracked, and the color is discolored	6 Months
	Base Plate	Cracking and Cracking	6 Months
Lamps	Chrome plating for lamps	During use, the chrome coating of the lamp falls off, rusts, damages, and deforms	12 Months
Inner and outer tires	Tire	Trachoma and air leakage in the inner tube; Outer tire cracking	Tire 1 month; Inner tube within 15 days
Other	Mid-axle	Broken or severely deformed due to quality issues	12 Months
	Seat Post	Severe deformation or fracture due to quality issues	3 Months
	Crank, Toothed disc	Severe deformation or fracture due to quality issues	6 Months

Category of non-three contract parts (other non-three contract matters are detailed in the scope of non-three contract)	
Note	1. Wear parts, consumables: bulb (LED), brake shoe, bumper, brake oil, the whole car pull line, pedal, chain, fuse, brake shoe, pedal, connector, soft shaft, reflector, net basket, standard parts, spokes and other non-three guarantees; 2. Using non-factory parts or no driving ability caused by damage or accidents;and in the maintenance, maintenance of the indirect costs (such as car rental, telephone fees, freight, demurrage, etc.), not three guarantees compensation; 3. Not in the table "parts three packs service scope and period" in the embodiment of any other parts of the three packs;

Not Belong To The "Three Packs" Service Scope:

a. Vehicle VIN code and motor number is not consistent, no car purchase receipts, warranty card, vehicle certification and three packs of manuals and not in accordance with the requirements of the instructions to the correct operation and maintenance of the vehicle;a warranty card but the card, invoice, the vehicle is not consistent, not three packs;
b. Warranty period of the product users repair or replace the parts themselves not three packs;
c. Due to irresistible disasters (such as fire, flood, storm, landslide, traffic accidents, etc.) caused by damage;
d. Users of artificial damage (cut the line), self modification, adding, modification, disassembly and use of non-company accessories caused by failure damage, impact hammering or overload, chemical corrosion caused by damage not three packs;
e. Because of the use, maintenance, preservation improper, caused by the product parts damage, not three packs;
f. Distributors to the user commitment, beyond the scope of agreement with the company or beyond the provisions, not three packs;
g. Label, nameplate was torn open without authorization of the accessories, not three packs;

"three packs" valid since the date of invoice. Does not belong to the "three guarantees" scope of maintenance and "three guarantees" period of service, the company in the local dealers, service providers and maintenance sites, depending on the specific circumstances charge repair or replacement;

- Return, replacement depreciation rate: battery is 3%, the vehicle or parts are 1%

- In line with the vehicle parts replacement conditions, according to the "three guarantees parts replacement standard" implementation of damaged what to change what.

- Three guarantees: to "repair, replacement for the auxiliary" "who distribution, who service" general principle.

AFTER SALES SERVICE WARRANTY CARD

Shop Filling	Product Name		Type Number	
	Frame Number		Complexion	
	Battery Number		Motor Number	
User Filling	Owner's Name		Gender	
	Age		Telephone	
	Site			

Shop Stamp

Date of Purchase:

Maintenance records

*First copy retained by the sales store

AFTER SALES SERVICE WARRANTY CARD

Shop Filling	Product Name		Type Number	
	Frame Number		Complexion	
	Battery Number		Motor Number	
User Filling	Owner's Name		Gender	
	Age		Telephone	
	Site			
Shop Stamp Date of Purchase:				
Maintenance records				

*Second copy retained by the custom

AFTER SALES SERVICE WARRANTY CARD

Shop Filling	Product Name		Type Number	
	Frame Number		Complexion	
	Battery Number		Motor Number	
User Filling	Owner's Name		Gender	
	Age		Telephone	
	Site			

Shop Stamp

Date of Purchase:

Maintenance records

*Third copy retained by the manufacturer

TIGER Plus
ELECTRIC BICYCLE

Users do not use electric bicycles before carefully reading the manual and understanding the performance of electric bicycles, and please keep the manual properly. There may be some differences between the picture and the actual vehicle, depending on the actual finished vehicle.