

ELECTRIC BICYCLE

USER MANUAL



1. Important Tips

- Do not use the electric bicycle before reading the specification carefully and knowing its performance. And never lend it to those who do not know how to operate and drive.
- Frequent starting, braking, climbing, upwind driving, muddy road, overloading will consume the battery too much and affect the total range. So it is suggested to avoid the fact all the above when you drive the electric bicycle.
- If the storage battery is stopped using for a long time, Make sure to store it before charged adequately, and it needs to charge again after stored for more than a month.
- It is forbidden to driving when the motor or other electric parts are all into the water because of the short circuit.
- It is forbidden to disassemble or refit the bicycle without authorization; otherwise, CHAMPEDAL will not take responsibility for the entire fault caused by it.
- It is forbidden to discard the useless battery because of the environment protecting.

2. Spare parts



- | | |
|-----------------|-------------------------|
| 1. Brake lever | 16. Disc |
| 2. Grips | 17. Pedal |
| 3. Display | 18. Crank |
| 4. Handle bar | 19. Crankset |
| 5. Headlight | 20. Middle axle |
| 6. Throttle | 21. PAS sensor |
| 7. Stem | 22. Kickstand |
| 8. Battery | 23. Saddle |
| 9. Frame | 24. Wheel reflector |
| 10. Front fork | 25. Seat post clip |
| 11. Battery key | 26. Front reflector |
| 12. Tire | 27. Controller (inside) |
| 13. Rim | 28. Chain |
| 14. Brake clip | 29. Motor |
| 15. Spokes | 30. Seat post |

3. Assembling and adjusting

Step 1: Take the bike from the carton and take off all the protecting films and belts.

Step 2: Move the stem to the opposite side.



There are 4 screws for assembling of the handle bar.



Step 3: Before assembling the wheel inside the front fork. You must make sure the disc is inside the disc clips. Otherwise you cannot put the wheel in or will break the disc pads.

Remark: There is no hole and fork with front suspension fork.



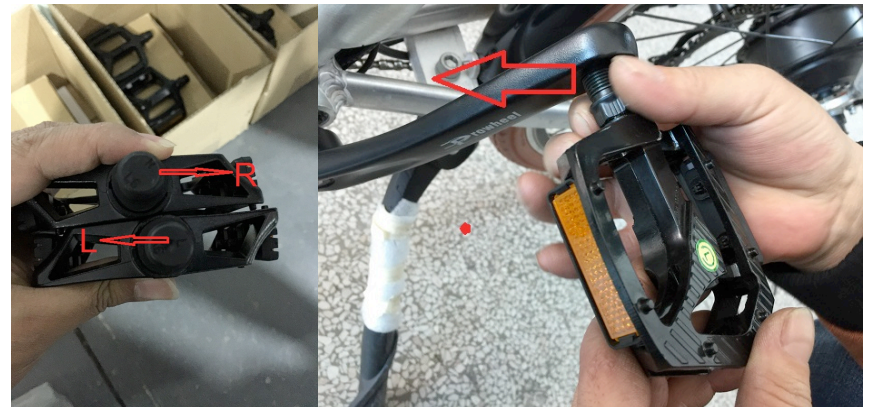
Step 4: Generally it is unnecessary to adjust the disc brake. But if necessary, use the screws below. The one with hand is for minor adjustment. Another one with spanner is for big adjustment.



Step 5: There is only 1 screw for the fender. Screw it. It is very easy.



Step 6: On the top of the pedal shaft, “L” shows the left side pedal and “R” shows the right pedal. Use a spanner to make the pedals tight. Please do not forget to cover the rubber cap of the stem screw.



4. Checking before riding

Make sure that the brakes and the front & rear lights are all working .

Check the pressure of the tires.

Check the display works well or not.

Check the battery capacity.

This bike is not designed for rough using such as jumping, riding on rough road and etc.

Please note: If you use your bicycle frequently, it is recommended to inspect the performance of the fork, the frame, the suspension and the brakes.

If you have any doubt, please contact your dealer. They will proceed with the necessary inspection.

5. Operation and Adjustment

5.1 Using the bike

◆ Start

Turn the system on with pressing the “C” (or on/off) button on the display for two seconds. The light on the display will indicate that you have started the e-bike. Use the throttle slightly if you have (do not use it to maximum at the beginning), you will find that the engine starts soon.

◆ Speed up

With the vehicle’s starting, you can keep on using the throttle more and more. But please control your speed according to the situation. And also you can use the PAS to drive the bicycle. You only need to pedal like a normal bicycle. The PAS will start automatically. You can adjust PAS levels on the display.

◆ If you use the e-bike in the evening, make sure to turn on the front light. The button is on the handle bar or on the top of the light itself.

5.2 PAS System

◆ Introduction of PAS

PAS system is a pedal assisted sensor that installed in middle axis position. When you Pedal the bicycle, the sensor will receive the action of the user. And then send the signal to the controller. Then the controller will start the motor.

◆ How to start PAS System

Turn on the power of the bicycle and adjust PAS levels on the display. Then you only need to pedal like a normal bicycle, The PAS will start automatically.

5.3 Safety Height Mark

◆ Handle stem position

Adjustable handle bar can be adjusted according to your favorite driving position, but it is forbidden to be out of the safety mark.

◆ Method for adjustment:

1. Screw off the adjusting screw in the stem.
2. Move the angle of the stem to your favorite but in the safety mark (safety line).
3. Screw on the adjusting screw in the stem.

◆ Seat cushion position:

The height of the seat can also be adjusted according to your favorite by loosening the seat post clip. But do not make it out of the max line (safety line).

The angle of saddle is also adjustable. You can loose the screw between the seat and seat post to adjust.

5.4 Brake System

Brake system is the most important for your safety driving, so it is necessary to check the brake system carefully before driving.

The normal idea is that the bicycle should stop in a short distance if you brake the bicycle suddenly, but it is wrong. Suddenly brake will not make the bicycle stop in a short distance. The bicycle will slide inertially. It will not only cause danger but also increase the brake distance. So the brake system is only used for the adjustment of the speed of bicycle.

Generally, brake system is including the brake lever, braking device (disc brake, V brake and other brake types) and brake cable.

◆ Brake lever

The structure of the brake lever is shown in picture: the right brake lever controls the front brake and the left brake lever controls the rear brake. But it may be different in some countries because of the laws.

- * Adjustable screw is used for adjusting the distance between brake pads and rim.
- * Effective distance of the brake lever is half of the distance between the brake lever and the grip. If the brake lever is near to the grip before braking tightly, that means there is a very large distance between the brake pads and the rim.

◆ Disc brake (as shown in right Pic.)

Adjustment method for brake pads:

1. Screw off the position screw;
2. Adjust the distance of brake pads by left/right moving.
3. Screw on the position screw.



◆ V brake (as shown in left Pic)



Adjustment method for brake pads:

1. Loosen the fixed screw and you will see three holes on fixed base;
2. The elasticity will increase if you move the spring upon the hole. This will increase the distance between brake pads and rim. And the distance will decrease on the contrary.

◆ Brake cable



- * Bifurcation should be avoided for internal wiring. So it is better to wear a tail sleeve at the end of the wires.

- * The brake cable should be pull out and oiled

regularly to avoid rusting and resistance.

- * It is better to wire the brake cable on a line. but if it must be bent, try to avoid small radian bending as possible.
- * The brake cable should not be locked when the handlebar reaches the limit of left and right turning.

5.5 Shift System

Shift system includes: Shift, front & rear derailleur, chain, flywheel and speed changing wiring.

The speed changing levels is the number of front crankset plate \times the number of rear flywheel plate.

For example: 3 pieces of crankset plate (front) \times 7 pieces of flywheel plate (rear) = 21 speed.

◆ Shift

- * The shift includes: speed display and finger shift (as shown in the picture).
- * Shifts are on both sides of the handle bar. The left one controls the front transmission

and the right one controls the rear transmission.

* If there the speed of the bicycle is 6,7,8 or 9. That means there is only one plate for the crankset. So there is only a right shift to control the speed.

◆ Rear Transmission Parts

Rear Transmission parts include front derailleur and rear derailleur. If the speed changing wiring is too loose or too tight, you cannot change the speed smoothly. If so, we need to make small adjusting.

When you change the speed, if the chain cannot be changed from the bigger gear to the smaller gear. You should roll the screw to the up direction. If the chain cannot be changed from the smaller gear to the bigger gear, you should roll the screw to the down direction. This screw is for small adjustment. There is also a nut for a big adjustment. You need a banner to loose or tight the wire.



5.6 Carrier

Maximum loading of the carrier should be less than 15KGS.

This luggage carrier is not designed for a trailer. Don't install the child-seat on the carrier. The bicycle performance maybe different (particularly when steering and braking) when the luggage carrier is loaded, please pay attention.

Please make sure that any luggage on the carrier should be safe.

Please put the luggage evenly to the two sides of the luggage carrier.



5.7 Battery

Installing and removing the battery

Remove the battery: turn off the lock located on the battery to the last level. Pull out the battery slightly.

Install the battery: Put the battery on its guide. Put the battery into its socket slightly. And lock it.

Charging the battery

Never let a battery be charged unattended.

The battery's autonomy is indicated with the LED lights located on the battery, and also on the display located on the handlebar.

Your battery must be charged in the regular temperature, non-flammable and dry place.

Also, it must not be covered.

On the battery, the charging place are covered by a rubber cap.

Here are the steps to be followed when charging your battery:



Step 1	Turn the battery off. The LED lights will be off.
Step 2	Plug the charger plug into the socket located on the charger (Pic.A). Make sure to make them tight. And also put the battery plug into the battery socket.
Step 3	Connect the charger to the socket in your house.
Step 4	Check the LED light on the charger: <ul style="list-style-type: none"> • The red LED light is on: the battery is being charged. • The green LED light is on: the battery is charged; you can unplug the charger.

(A)



(B)



It takes about 5-6 hours for a full charge when using the standard charger supplied by the original bicycle company. Faster charger is not suggested to be used.

Battery autonomy and life

Autonomy

Your bicycle's autonomy is from 45 to 70 with PAS. It depends on many different factors (level of PAS used, different road, rider's weight, frequent stops/start-ups, hills, tire pressure, etc...)

Battery

With the using of the battery, the capacity of the battery will be lower and lower gradually. If the available autonomy of the battery no longer satisfy your needs, you

will be able to obtain a new one from your dealer.

Maintenance

If you don't use your bike more than 45 days, store it in a dry place to protect the electronic components and also charge it every 45 days.

Note: *Never store a completely discharged battery .*

During the winter or long storage periods, it is recommended to charge the battery every 45 to 60 days. Don't forget to switch it off. Store your battery at a temperature between 15° to 25°.

Battery safety instructions

For your safety, you should follow these rules:

Always handle with great care

Always keep it away from children

Do not open, hit, pierce or submerge it

Keep it away from more than 60° temperatures.

Never create a connection between the +/- plugs.

Never let the battery charge unattended

Never sleep near a battery when it is charging

Only use the charger come with your bicycle or supplied by your dealer

If your battery is damaged, do not use it and take it back to your dealer as soon as possible



5.8 Lubrication

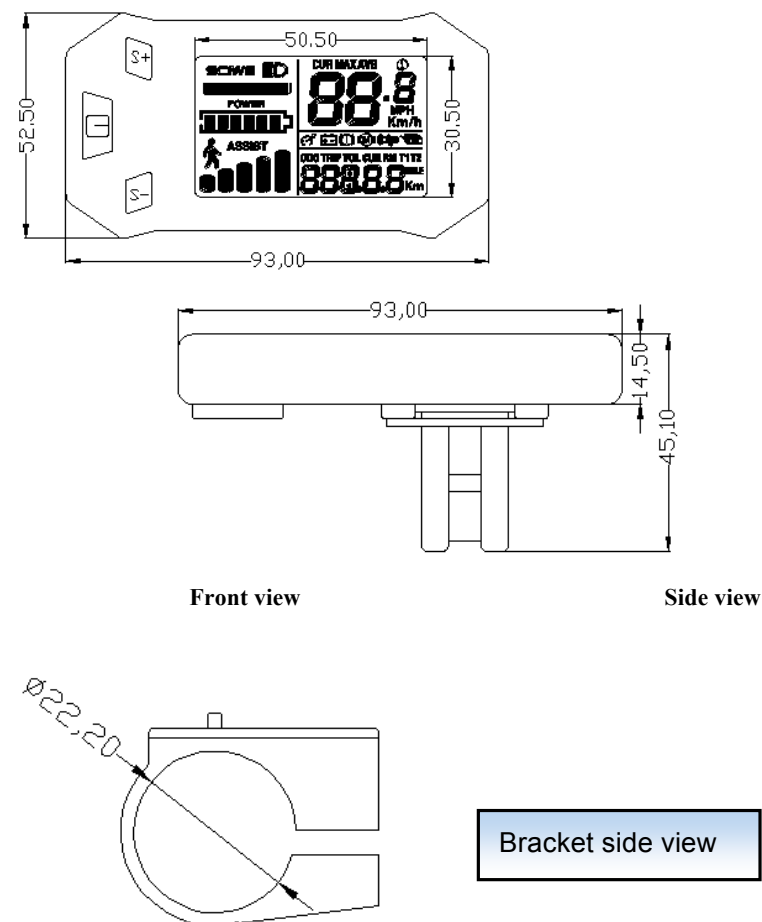
Frequency	Component	Lubricant	How to Lubricate
Weekly	Chain	Chain Lube	Brush On or Squirt
	Speed shift	Oil	Brush On or Squirt
	Pulleys	Chain Lube	Oil Can
	Deraillleurs	Oil	3 drops from oil can
	Brake Calipers	Oil	2 drops from oil can
	Brake Levers	Oil	
Monthly	Shift Levers	Lithium Based Grease	Disassemble
Every Six Months	Freewheel	Oil	2 squirts from oil can
	Brake Cables	Grease	Disassemble
Yearly	Bottom Bracket	Grease	Disassemble
	Pedals	Grease	Disassemble
	Derailleur	Grease	Disassemble
	Cables	Grease	Disassemble
	Wheel Bearings	Grease	Disassemble
	Headset	Grease	Disassemble
	Seat Post		

Note: The frequency of maintenance should increase with using in wet or dusty conditions. Do not over lubricate. Never use a degreaser to lubricate your chain

5.9 LCD display operation

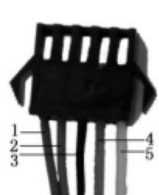
□. Shape, Size and Material

The shell of this product is ABS , The transparent LCD window is imported high hardness Acrylic. It is as harder as the toughened glass.



□.Working voltage and wiring

- 1、 working voltage : DC24V /36V compatible、 36/48V compatible (set on LCD) , Other voltage can be customized.
- 2、 Wiring :
Standard connector wiring



Connector to the controller



LCD outlet terminal



abutment terminal

Standard connector wiring turns

wiring turns	color	function
1	Red (VCC)	Power wire
2	Blue (K)	Controller and power controlling wire
3	Black (GND)	Earth wire
4	Green (RX)	Data receiving wire
5	Yellow (TX)	Data sending wire

EXTENTION FUNCTION :

Headlight : Brown (DD) : headlight positive pole ,
White (GND) : headlight negative pole.

P WM Voltage type assistance controlling out independence speed sensor,
Order new function for different color of wire.

Marks : Some products are using water-proof connector , User cannot see the color inside.

□.Functions :

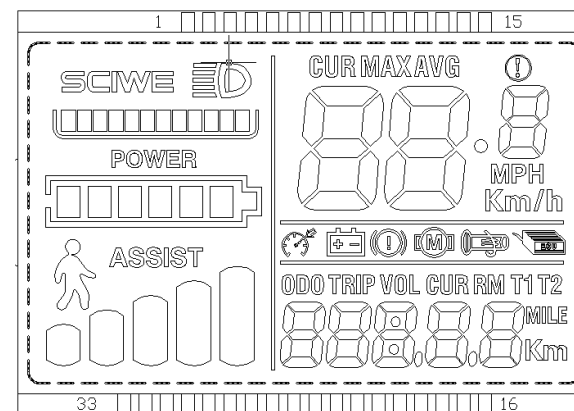
1、 Display function

Speed display、 Assistance display、 Battery power display、 Fault display、 Total range display、 current range display、 fix-speed cruise、 brake display、 headlight display

2 . Control and set function

Power control 、 headlight control 、 6Km/h control 、 fix-speed cruise control、 rim size set、 5 levels assistance set、 max speed set、 Automatic dormancy set、 back light brightness set、 Starting method set、 driving method set、 assistance sensibility set、 assistance magnet disc type set、 voltage set、 current-limit of controller set ,
3.communication protocol : UART

ALL ON DISPLAY (power on within 1S)



Display introduction

1 Headlight

2. Current levels This function needs a software support in controller.

3. Voltage levels POWER

4.Multifunction display area

Total range ODO、 Current range TRIP、 Voltage VOLT、 Current CURRENT、 Rest of range RM (a software support in BMS needed), working time TIME



5. Speed display area

Current speed CUR、Max speed MAX、Average speed AVG



Unit MPH, KM/H

The display will calculate the speed according to the rim size and signal data (Motor hall need to set the magnet quantity).



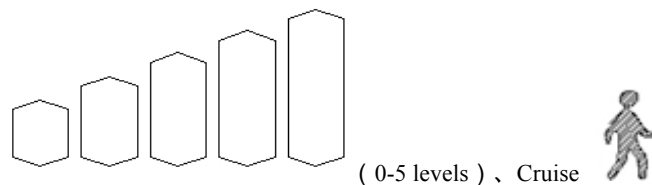
6. Fault display area

Motor fault 、Throttle fault 、controller fault 、brake lever

fault 、protecting of under voltage 



7 . Assistance display area



Assistance (0-5 levels)、Cruise 

8.Setting

P01 : Brightness of the backlight , 1 is the lowest level , 3 is the highest level ;

P02 : Unit of the range , 0 : KM ; 1 : MILE ;

P03 : Voltage : 24V , 36V , 48V , Default 36V ;

P04 : Dormancy time : 0 , no dormancy ; Other numbers is the dormancy time , unit is 0-60 minutes ;

P05 : Assistance level : 0-3levels : 1 level 2V , 2 level , 3V , 3 level , 4V ;

1-5levels: 1 level 2V , 2 level , 2.5V , 3 level , 3V ,
4 level , 3.5V , 5 level,4V;

P06: Rim size : Unit , inch ; precision : 0.1 ;

P07: Number of magnet steel : Range : 1-100 ;

P08: Speed limit : Range 0-50km/h , 50 means no speed limit ,

1. No signal communication condition (Display controlling) :When the actual speed larger than setting speed , Turn off the PWM output ;When the actual speed less than the setting speed ,Turn on the PWM output automatically , Driving speed is the current speed ± 1 km/h ;(Only limited to PAS not Throttle)
2. Signal communication condition(Controller controlling):Driving speed will be kept to the setting speed.

Tolerance : ± 1 km/h ;(Limited to both PAS and throttle)

Mark: The data here is based on KM. When the unit setting is Mile, The speed on the display is correct Mile. But the data setting in this menu will not be changed. So it is different to the actual speed.

P09 :Zero starting、Unzero starting setting , 0 :Zero starting ; 1 :Unzero starting ;

P10 : Driving method setting

0 : Assistance driving(Throttle is unusable)。

1 : Throttle driving(PAS is unusable)。

2 : Both Assistance and throttle driving(The Zero starting is unusable when under throttle driving)。

P11 : Sensitivity of PAS Range : 1-24 ;

P12 : Strength of PAS starting Range : 0-5 ;

P13 : Magnet types of PAS setting 5 , 8 , 12 three types

P14 : Current limit of controller Default 12A Range : 1-20A

P15 : This function has not developed

P16: ODO set to 0. Long press the top button for 5s.

□. Button introduction :

Buttons will be like this



Button using introduction

Button operations are short press, long press and combination long press.

Short press is used for convenient and frequent operations. For example:



1. When riding , If you need to change the assistance or speed , short press.



2. Change to multifunction area when riding, short press.

Single button long press is used for mode and switch.

Combination press(long press) is used for parameter setting.

Operation details :

1. Modify assistance levels



- 1.Short press  , Assistance + 1

- 2.Short press  , Assistance - 1

- 2.Change to speed display

- Long press  + 

- 3.set/clear 6KM/H cruise, headlight turn on/off

Stop vehicle ,long press  ,will be 6KM/h cruise ;Long press  when riding , it will be fix speed cruise , If it is under fix speed cruise currently , it will release cruise ;

- Long press  turn on/off headlight.

- 4.Turn on/off display

- Long press 

5.Change to multifunction display area



Short press

6.Setting parameter



Long press + will be into parameter setting page , the

parameter setting can be including ,

Rim size(inch),number of magnet steel , brightness of the display, under voltage point and etc. (setting : P01-P14);



In the page of parameter setting , short press +parameter , or short press



-parameter , parameter will be shining after setting , after choose the

parameter ,



4.a.Long press to save, shining will be stop.



b.short press to change to next parameter and save the last parameter

at the same time.



2. Press , quit setting and save , If you do not press , it will quit and save automatic after 10S.

Marks :Because of the updating of the products, there may be some difference between the product you get and the manual. But it will not affect your using.

6. Recommended safety instructions and maintenance

6.1 Recommended safety instructions

Helmet

Use a bicycle helmet.

Tires

Inspect the abrasion of your tires on a regular period and check the tire pressure at least once a month.

Reflector

Please make sure that the position of reflectors and lamps are not obscured when luggage is attached to the luggage carrier

Battery

Cf. Chapter. 4.7

6.2 Maintenance

Caution:

Bike maintenance and repairing needs more skills and professional tools. Do not repair your bike or change any settings by yourself. Contact your dealer to do that. Any bad adjustment or repairing can damage the bike and lead to accidents. Using the replacing parts from your dealer only.

Cleaning

Always remove the battery when cleaning. Use soapy water or water mixed with a gentle detergent, and then rinse with clean water.

Make sure to keep the controller dry.

Do not use a high-pressure washer!

Maintenance

Your electric bicycle is safe for the environment.

A battery that no longer works must be returned to your dealer so that he may pass it to a recycling company.

The engine does not require maintenance.

7. Regular maintenance

7.1 Recommended values of the nut torque

Front Wheel Nuts	22-27	Newton Meters	16.2-19.8	ft.-lb.
Rear Wheel Nuts	24-29	Newton Meters	17.5-21.3	ft.-lb.
Seat Binder Nut	12-17	Newton Meters	8.8-12.5	ft.-lb.
Seat Pillar Clamp Nut	15-19	Newton Meters	11.0-14.0	ft.-lb.
Brake Anchor Nut	7-11	Newton Meters	5.1-8.1	ft.-lb.
Handlebar Clamp Nut	17-19	Newton Meters	12.5-14.0	ft.-lb.
Head Stem Expander Nut	17-19	Newton Meters	12.5-14.0	ft.-lb.
Crank Cotter Pin Nuts	9-14	Newton Meters	6.6-10.3	ft.-lb.
Brake Centre Bolt	2-17	Newton Meters	1.5-12.5	ft.-lb.

7.2 Recommended Checklist

Frequency	Task
Before every ride	Be sure batteries are fully charged Check tire pressure Check brake operation Check spokes loosening
After every ride	Be sure to fully charge batteries Wipe the water quickly
Weekly	Lubrication as per schedule 4.8
	Inspect wires

Monthly	Inspect connectors Check derailleur adjustment Check brake adjustment Check brake and gear cable adjustment Check tire abrasion and pressure Check wheels and spokes tightness Check hub, head set, crank and bearings looseness Check pedals tightness Check handlebars and stem tightness Check seat and seat post tightness and comfortably adjusted Check frame and fork for safety Lubrication as per schedule 4.8 Safety check
Every six months	Lubrication as per schedule 4.8 Check all points as per monthly service Check and replace brake pads if required Check chain abrasion
Yearly	Lubrication as per schedule 4.8

8. Fault and Solving

NO.	Fault	Reason	Solving
1	Speed adjustment is not sensitive or the max speed is too low	1.Low battery voltage 2.Something is wrong with the throttle 3.Something is wrong with controller	1.Recharge the storage battery 2.Replace the throttle and controller

2	The motor does not work when the power is on	1. Something is wrong with the throttle 2. Bad connecting of the power lock and plugs 3. Something is wrong with controller 4. Something is wrong with PAS sensor	1. Replace the throttle, controller or PAS sensor 2. Weld the connecting part again 3. Adjust the distance between the two parts of the PAS sensor.
3	Less mileage for once charge	3. Tire pressure is less 4. Wrong charge or the fault of charger 5. Storage battery is damaged or end of life 6. Frequent braking starting and overloading	1. Make the tire with more pressure 2. Right charge the storage battery or replace charger 3. Replace the storage battery
4	The charger fails to charge	1. The connection of the charger is loose or damaged 2. The welding points of the storage battery falls off or damaged	1. Weld connections or replace it 2. Weld connections or replace it
5	The PAS fails to assist power	1. Bad contact of the sensor or it is damaged 2. Bad contact of PAS or it is damaged	1. Adjust the place of the sensor or replace it 2. Connect the lines

9. Warranty

Information regarding your electric bicycle warranty coverage terms is available from your dealer. When you need a replacement or repairing under your warranty, you should send the numbers of frame, motor, battery and controller. And also provide pictures or videos to prove the damage and not caused by human.

Have a pleasant riding!