



***RATTAN***

**PRODUCT INSTRUCTION**

## **About US**

Rattan was founded on the belief that the company does not have to compromise to create great products at great prices. We are a team specialized in the manufacture of electric bicycles for more than 10 years, and the goal of Ratan is to develop the latest technology and affordable electric bicycle for all our friends.

We hope to pass a positive attitude towards life for all through our products. There is much to be gained from traveling and seeing the world. We must all embrace at least a walkthrough. However, let's not forget the ultimate goal; in wise words for T.S. Elliott, "We will not stop exploring, and the end of all our explorations will be to get where we started and find out the place for the first time." Now, ride your bike and let's go for a trip! Because you will not know how beautiful the world is before you go out. After that, you will find that we do not sell you a wonderful bike but a wonderful scenery along the mild.

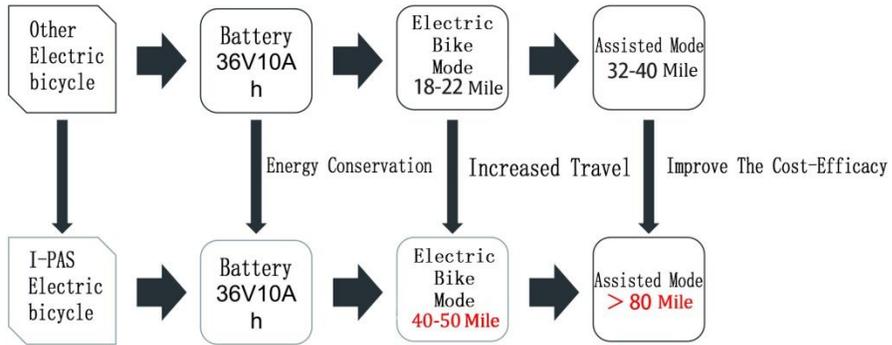
## **What is I-PAS?**

Intelligent power assist system (I-PAS) is patented technology of Rattan.  
Featured with energy conservation and rechargeable.

# I-PAS

Technical introduction:I

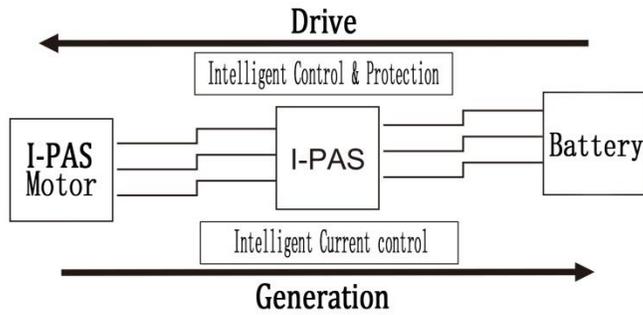
I-PAS Advantage I : (30% Energy Conservation )



# I-PAS

Technical Introduce:II

I-PAS Advantage II : Intelligence Dual Circulate System Drive and Generation Seamless Handover (Generation >60%)



## **CONTENTS :**

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**PART 5 After selling and Warranty (page 40-43)**

## PART 1 Introduce of the Product

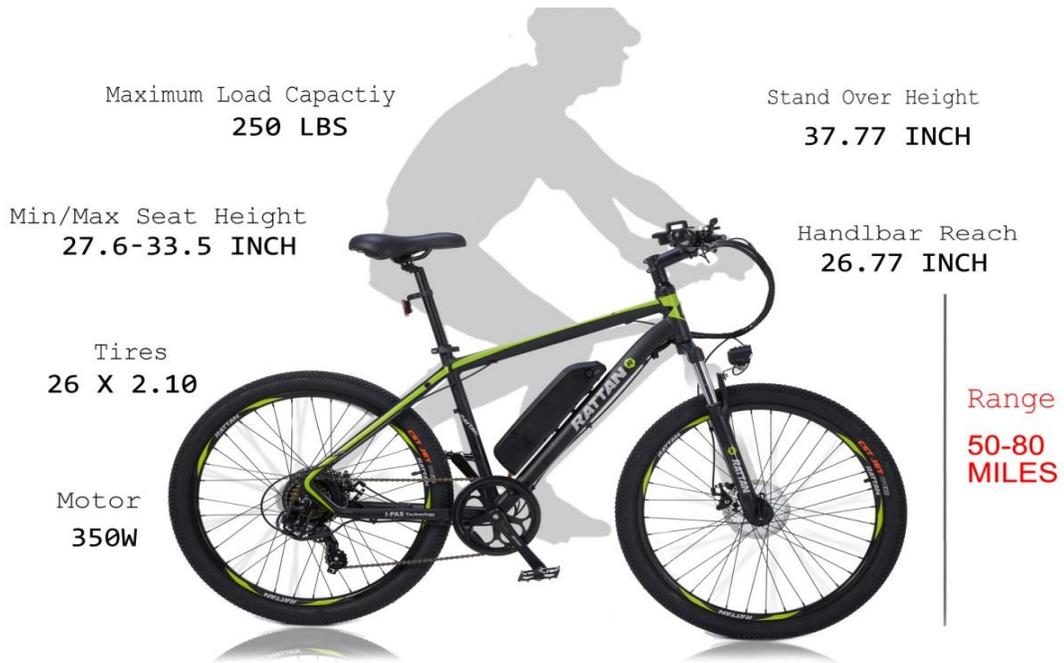
### 1. Specification

Brand	RATTAN	Fork	Suspension Fork
Model	CHANLLINGER	RIM	26inch
Frame	Aluminum 18inch	Transmission	Shimano 7speed
Motor	36V 350W	Tire	CST 26*2.10
Mode	PAS/Throttle	Weight	25KG
	<b>PRO Version</b>	<b>PLUS Version</b>	
Motor	Eco motor	Intelligent motor	
Controller	Eco controller	Intelligent controller	
Display	LCD	LCD color	
Throttle range	50mile	50mile +	
PAS range	80mile	80mile +	
Self-charge	No	Yes	
Password protect	No	Yes	
Headlight Automatic	No	Yes	
Mode option	No	Normal/Eco/Sport	





26.77 Inch



Maximum Load Capacity  
250 LBS

Stand Over Height  
37.77 INCH

Min/Max Seat Height  
27.6-33.5 INCH

Handbar Reach  
26.77 INCH

Tires  
26 X 2.10

Motor  
350W

Range  
50-80  
MILES

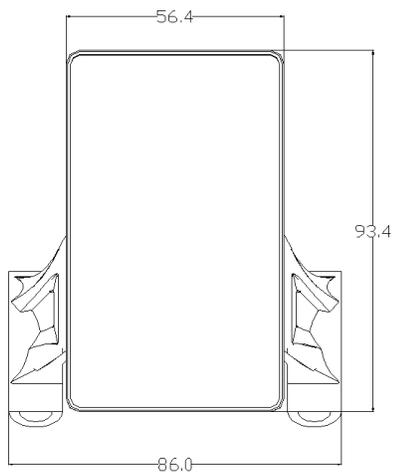
## 2. Display instruction

### MODEL: LCD-M5

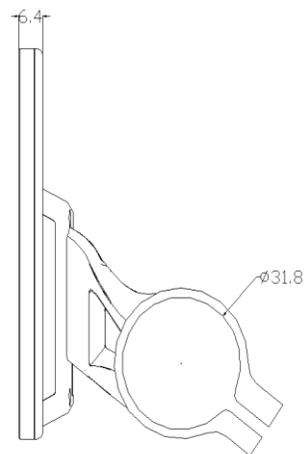
Instructions for operating the manual control panel (PRO Version)

#### (1) .LSD display Size and Material

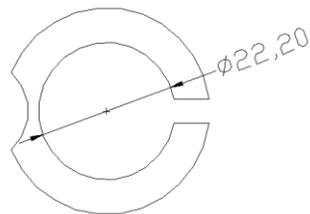
LSD display, material is [ABS] Liquid crystal transparent window material is high hardness acrylic.



**Frontal view**

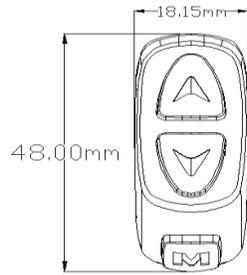


**lateral view**

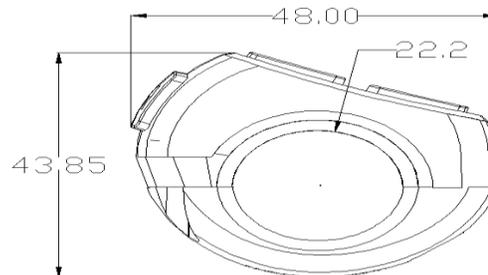


**31.8mm stent is available**

**22.2mm、25.4mm、28.6mm Transfer Ring Selection [throttle].**



Frontal view



lateral View

## (2) Function of bike components

### 1- Function of LCD Display;

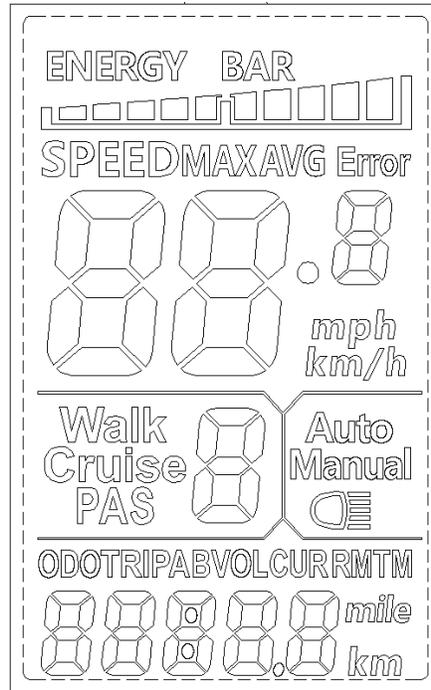
- Speed display.
- Power level display.
- Power indicator.
- Failure warning.
- Total mileage.
- Individual mileage.
- Headlight display.
- Single driving time display.

### 2. Control, setting up functions

- Power switch control.
- Headlight switch control.
- 6Km/h point control.
- Wheel diameter setting.
- Maximum speed setting.
- Auto idle time setting.
- Backlight brightness setting.
- Voltage level setting.

### 3. Communication protocol: UART

All the contents of the display screen (full display in boot 1S)



## Bike Components



**3.1 Headlight** . The instrument can be manually turned on.



**3.2 Battery power display**

**3.3 Multi-functional display area**

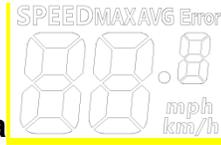
ODO TRIP A B VOL CUR RMTM

- Total mileage ODO.
- Single mileage TRIP A.
- Single mileage TRIP B.
- Battery current voltage VOL.
- Current operating current CUR.
- Remaining mileage RM.
- Instrument boot time TM.



**3.4 Vehicle mode**

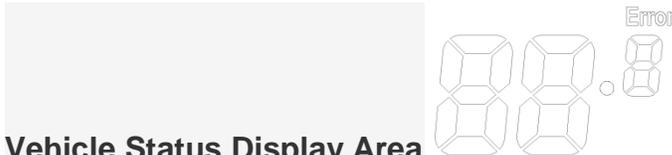
- Walk boost mode.
- Cruise: constant speed Cruise mode.
- PAS: Power file position: 0 ~ 9 ajustable.



### 3.5 Speed display area

- Maximum speed MAX.
- Average speed AVG
- Unit MPH.
- KM/H

[The meter will calculate the true speed based on the wheel diameter and signal data]



### 3.6 Vehicle Status Display Area

- Vehicle Status Code Meaning.

Status Code(Decimal)	State Meaning	Remarks
0	Normal	
1	Reservation	
2	Brakes	
3	Power Sensor Fault(Riding Mark)	Not Realized Here
4	6KM/H cruise	
5	Real-time cruising	
6	Battery undervoltage	
7	Motor failure	
8	turn malfunctioning	
9	Controller failure	
10	Communication reception failure	
11	Communication dispatch failure	
12	BMS communication failure	
13	Headlight failure	

## 5.6 Protocol Vehicle Status Code Meaning:

Status Code(Decimal)	State Meaning	Remarks
33	Current anomaly	
34	Turn the anomaly	
35	Motor phase deficiency	
36	Motor Hall anomaly	
37	Brake anomaly.	
30	Communication anomaly	

## 3.7. Install

**P01:** Backlight brightness, the darkest level 1, the brightest level 3;

**P02:** mileage unit, 0: KM; 1: MILE;

**P03:** Voltage level: 24V, 36V, 48V, 60V, 64V default 36V;

**P04:** Dormancy time: 0, not dormancy; Other numbers are dormancy times, range: 1-60; Unit minutes;

**P05:** Help file bit: 0, 3 file mode: 1,5 gear mode:

**P06:** Wheel diameter: unit, inch;

- Protocol 2 wheel diameter value: 5.0 ~ 50 Precision: 0.1 inch  
5S protocol wheel diameter value: 0:16 inch, 1:18 inch, 2:20 inch, 3:22 inch, 4:24 inch, 5:26 inch, 6:700 C, 7:28 inch.
- This parameter is related to the meter display speed and needs to be entered correctly;

**P07:** Speed gauge magnetic steel number: Range 1-100.

This parameter is related to the meter display speed and needs to be entered correctly.

If it is an ordinary hub motor, the number of magnetic steel is input directly.

If it is a high-speed motor, it is also necessary to calculate the deceleration ratio, and the input data = the number of magnetic steel x deceleration ratio.

For example: number of motor magnets 20, deceleration ratio 4.3: input data is:  $86 = 20 \times 4.3$ .

**P08:** Speed limit: Agreement No. 2 range 0-100km / H, 100 means no speed limit.

5S protocol 0-41km / H;

The input data here represents the maximum operating speed of the vehicle: for example, input 25, indicating that the maximum operating speed of the vehicle will not exceed 25km/h; The drive speed is maintained at the set value,

Error:  $\pm 1$ km/h; (The speed limit for power and turning is equal).

Note: The value here is based on kilometers.

When the unit setting is converted from kilometers to miles, the speed value of the display interface automatically converts to the correct mile value, but the speed limit value data set at this menu under the mile interface is not converted. Is inconsistent with the actual speed limit of the mile speed.

P09: zero start, non-zero start setting, 0: zero start; 1: Non-zero start.

P10: The drive mode is set to 0: Power Drive (how much power is output is determined by the power file bit and the switch is invalid at this time).

1: Electric drive (by turning the handle drive, the power file bit is invalid at this time).

2: Power Driven and Electric Driven Coexistence.

P11: Help sensitivity setting range: 1-24.

P12: Help start intensity setting range: 1-5.

P13: Power Magnetic Steel Disk Type Setting 5, 8, 12 Magnetic Steel Types.

P14: Controller limit value set default 12A range: 1-20A.

P15: Controller under voltage.

P16: ODO zero setting length press key 5 seconds ODO zero

P17:0: No enabling cruising, 1: enabling cruising; Automatic cruise optional (valid for protocol 2 only)

P18: Display speed ratio adjustment range: 50 % ~ 150 %,

P19: 0 power bit, 0: 0 file, 1: does not include 0 file

P20:0:2 Protocol 1:5 S Protocol 2: Standby 3: Standby

#### (4) Key Introduction:

- ❖ The specific combination of keys is as follows



Press the button to use the brief, Key operation is divided into short press, long press, and combination key length press Short press is used for rapid/frequent operations, such as the specific key combination position as follows;

1. When riding, if you want to modify the power/speed state that through short pressing to



or



2. Toggle display data for multi-function areas during cycling, short click



Single key length is mainly used to switch the mode / switch state.

Composite keys (long presses) are used to set parameters because the operation is complex, which can reduce errors

(Short press does not make the composite key, because it is easy to trigger mistakenly, so it is too difficult to do) .

#### 3. Specific operational explanations:

- Modify the power ratio / power state, let's say the current is power mode.

Short press  Help + 1

Short press  Help - 1

- **Toggle speed display**

Long press,  +  Toggle speed display

- **Set / Disable 6Km/h Cruise, Switch Headlight, ODO Clear Zero**

Static state of vehicles, long press  will enter 6KM/h cruise mode.

Let go of cruise mode; long press  Turn the lights on and off.

P16Menu Interface, long press  five seconds, ODO clear zero.

- **Switching liquid crystal display [LCD]**

If the current display is working, long press  will turn off the screen, instead turn on the screen

- **Toggle multi-function display area content**

Short press to  Can switch the value of the multifunction display area.

- **Set Parameters**

Long press  +  will enter the parameter-setting interface. Parameters that can be set include, Wheel diameter (in: inches), number of magnetic steel, liquid crystal brightness, low pressure points, etc.(see settings: P01-P20).

Under Settings Interface, Can be short press  or  Set the value to perform a minimum-precision unit value operation , you can also long press  or  Continuous Fast Modify Parameters:

Short press  Switch to Next Parameter; Exit settings and save parameters. If not operated, the modified parameters will automatically exit and be saved after 8 seconds.

**Note: Due to company product upgrades, product content will differ from specifications, but will not affect your normal use.**

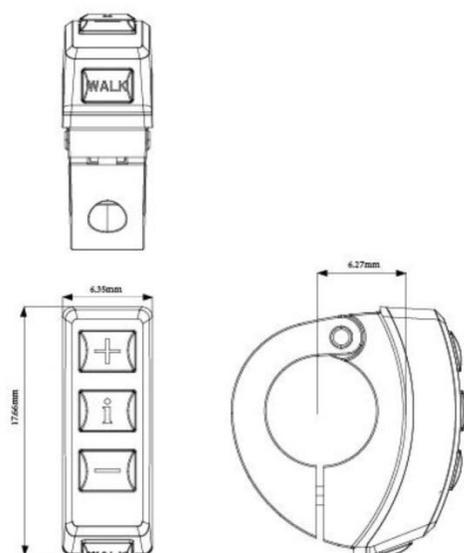
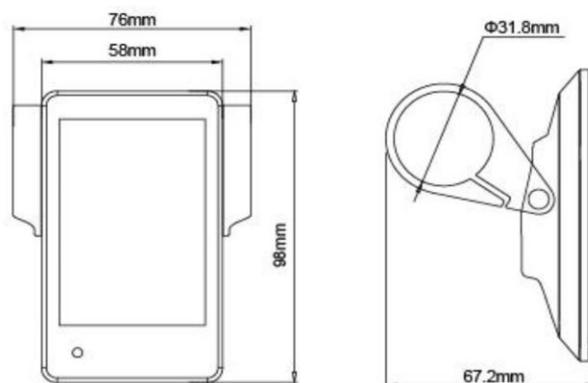
Intelligent LCD display (PLUS Version)  
Model: RT918

### Specifications

- Power Supply 24V/36V/48V
- Rated working current: 10mA
- The maximum working current: 30mA
- leakage of current: <1uA
- The supply controller working current ; 50mA
- Operating temperature: -20°C~ 60°C
- Storage temperature: -30°C~ 70°C

### Appearance and Size

- Display appearance and dimension (unit: mm)



## **A summary explaining the components of the bike**

**RT918 can provide many functions to fit the User's needs. The indicating contents are as below:**

- Battery and battery percentage indication.
- Motor Power indication
- Assistance-level indication
- Pedaling frequency indication(optional)
- USB connection indicator (optional)
- The remaining range indication(optional)
- Various Parameters Settings (e.g., wheel size, speed-limited, battery level bar,
- Speed indication (incl. running speed, Max. speed and Ave. speed)
- Odometer and trip distance
- The push-assistance function
- Trip time indication
- Backlight On/Off
- Error code indication
- Assistance level, controller limited current, password enable, etc.)
- Recover Default Settings.

## **General Operation**

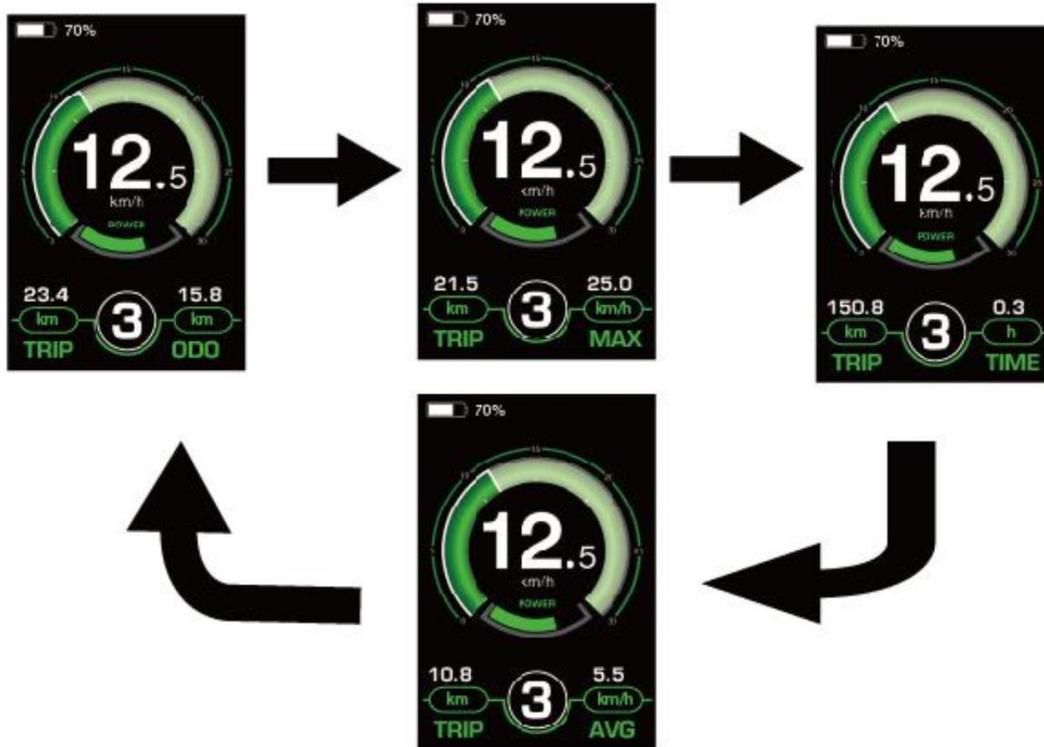
### **Switching the E-bike System On/Off**

- Briefly press the power button to switch on the E-bike system, and provides the power Supply for the controller. To hold the power button for 2s, the E-bike system will be switched off. The E-bike system no longer use the battery power.
- When switching off the E-bike system the leakage current is less than 1 uA.
- When parking the E-bike for more than 10 minutes, the E-bike system switches off.

### **Display Interface**

- After switching on the E-bike system, the display will show Speed and Trip Distance.
- Pressing the "i" button will show more riding data as below:
- 

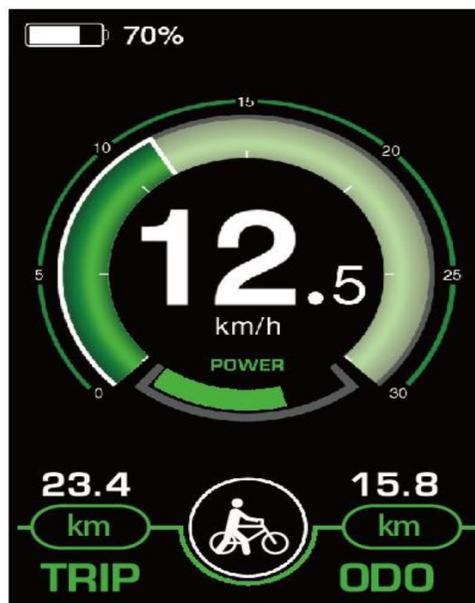
Trip Distance (Km) → Total Distance (Km) → Max. Speed (Km/h) → Ave. Speed (Km/h)  
→ Ride Time (Min.)



Switch the display interface

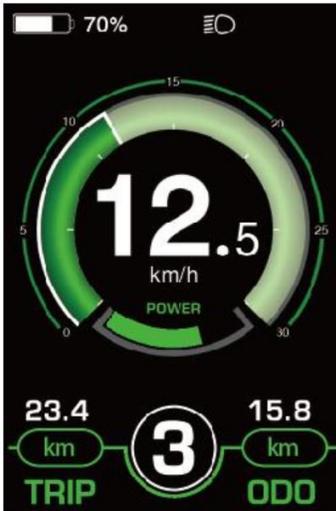
### Switching Push-assistance Mode On/Off

- To activate the push-assistance function, hold the button always after 2 s.
- E-bike drive is activated at a uniform speed of 6 Km/h. While the screen displays.
- The push-assistance function is switched off as soon as you release the button on the operating unit .The E-bike system stop the power output immediately.



## Push-assistance Mode;

- Push-assistance function may only be used when pushing the E-bike. Danger of injury when the wheels of the E-bike do not have ground contact while use the push-assistance function.
- Switching the Lighting On/Off.
- To switch on the headlight, hold the button for 2s. The backlight brightness is To switch on the headlight, hold the button for 2s. The backlight brightness is automatically reduced. In the same way to press the bbutton for 2s, the lighting can be switched off.



## Switching the Lighting Mode On/Off Interface

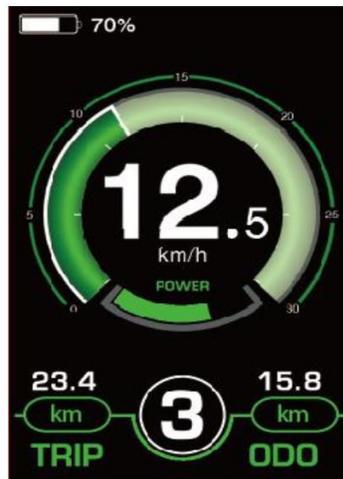
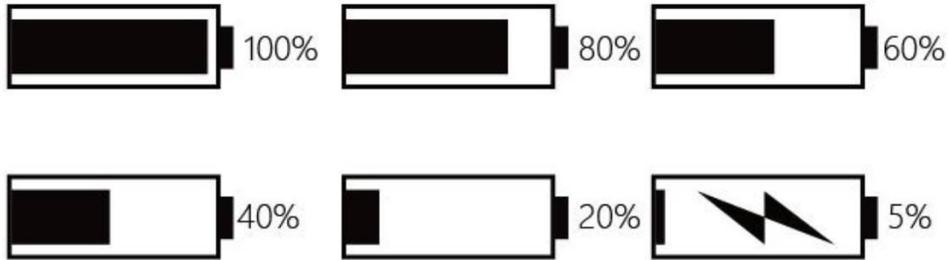
- Briefly, press "+" or "-" button to switch the E-bike system assistance level.
- Change the motor output power.
- The default assistance level ranges from level "0" to level "5", The output power is zero on Level "0". Level "1" is the minimum power. Level "5" is the maximum power.
- When you reach "5", press the "+" button again, the interface still shows "5", and blinks at "5" to indicate the power highest.
- After the power down shift reaches "0", press the "-" button again, the interface still shows "0" and blinks at "0" to indicate the power minimum.
- The default value is level "1".

## Assistance Level Selection



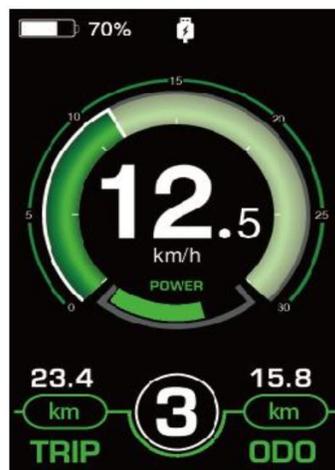
## Battery Indicator

- The 0-100% represent the capacity of the battery. The 100% bright when the battery is in high voltage.
- When the battery is in low voltage, battery frame will flash at the frequency of 1HZ to notice that the battery needs to be recharged immediately.
- The power of the motor can be read via the interface



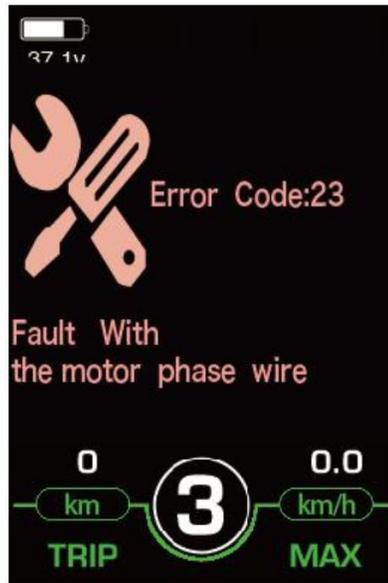
## USB connection indication (optional)

- When the display is inserted into a USB external device, the display interface will show as below.



## Error Code Indication

- The components of the E-bike system are continuously and automatically monitored.
- When an error is detected, the respective error code is indicated in text indication area.
- Here is the detail message of the error code in Attached list 1.
- Make the display repaired when error code appears. E-bike will not be able to drive normally.



## General Settings

- Press the power button to turn on the display, to access general settings menu, hold both the “+” button and the “-” button for 2s.
- All the Settings are operated in the case of parking the E-bike.



## Determine the trip distance

- Clear Trip represents trip distance clearance setting.
- To clear trip distance, press the “+” button or the “-” button to select the Yes or No.
- Yes, represents clearing a single ride distance.
- No represents not clearing a single ride distance.
- To store a changed setting, press the “i” button and then access

DisPlay Setting		DisPlay Setting	
Toggle Unit	Imperial	Toggle Unit	Imperial
LCD Luminance	100%	LCD Luminance	100%
Dormancy	5Min	Dormancy	5Min
SOC View	Percent	SOC View	Percent
TRIP Reset	Cleared.	TRIP Reset	NO
AL Sensitivity	3	AL Sensitivity	3
Password	>	Password	>
BACK		BACK	

## Unit Conversion km/mile

Set Unit represents unit settings.

To convert unit, press the “+” button or the “-” button to choose the desired setting item, and then press the “i” button to confirm.

To store a changed setting, press the “i” button and then exit general settings.

The default value is “Metric (km)”.

Mile and Kilometer Conversion Settings Interface.

DisPlay Setting		DisPlay Setting	
Toggle Unit	Metric	Toggle Unit	Imperial
LCD Luminance	100%	LCD Luminance	100%
Dormancy	5Min	Dormancy	5Min
SOC View	Voltage	SOC View	Percent
TRIP Reset	NO	TRIP Reset	NO
AL Sensitivity	3	AL Sensitivity	3
Password	>	Password	>
BACK		BACK	

## Wheel Diameter Settings

- Wheel Diameter represents wheel diameter settings.
- To change basic settings, press the “+” or the “-” button to increase or decrease until the desired value is displayed.
- The default value is 26 inch.
- To store a changed setting, press the “i” button to confirm, display OK" words prompt operation is completed.
- Then access the General Settings interface.

Advanced Settings	
Wheel	30Inch
Speed Limit	22 mph
Current Limit	18A
Speed Sensor	06
Assistant Num	12
Set Voltage	36-3
Power Set	1-3
Slow Start	-2-
BACK	

## speed-limit Settings

- The default value is 25Km/h.
- Speed Limit represents the limit speed settings.
- When the current speed is faster than speed limit, the E-bike system will switch off automatically.
- Speed limit range is 12Km/h to 40Km/h.
- To change basic settings, press the “+” or the “-” button to increase or decrease until the desired value is displayed. Press the “i” button to confirm, display "OK" words prompt operation is completed.
- To store a changed setting and exit General Parameter Settings, hold the “i” button for 2s

Advanced Settings	
Wheel	30Inch
Speed Limit	22 mph
Current Limit	18A
Speed Sensor	06
Assistant Num	12
Set Voltage	36-3
Power Set	1-3
Slow Start	-2-
BACK	

## Battery Power Bar Settings

- Set Voltage represents voltage settings.
- Each bar represents a voltage value.
- 5 bars voltage values must be entered one by one. For example, VOL 1 is first bar voltage value.
- The default value is 31.5V.
- To set battery power bar, press the “+” or the “-” button to increase or decrease the number. To store a changed setting and access the second bar, press the “i” button.
- By analogy, after 5 bars voltage values is entered, hold the “i” button to confirm and then return to the previous menu.

Advanced Settings		Advanced Settings	
Wheel	30Inch	Wheel	30Inch
Speed Limit	22 mph	Speed Limit	22 mph
Current Limit	18A	Current Limit	18A
Speed Sensor	06	Speed Sensor	06
Assistant Num	12	Assistant Num	12
Set Voltage	48-2	1 - 41.2V	48-2
Power Set	1-3	2 - 43.9V	1-3
Slow Start	-2-	3 - 45.7V	-2-
BACK		4 - 47.8V	
		5 - 49.9V	
		BACK	

## Assistance Level Settings

- Assistance Level Option
- Set Power Set represents assistance-level settings. In assistance level settings, there are 8 modes to select: 0-3, 1-3, 0-5, 1-5, 0-7, 1-7, 0-9, 1 9.
- The default value is 0-5.
- To change the mode of assistance-level, press the “+” or the “-” button to choose the desired mode, and then press the “i” button to confirm, then access the General settings page automatically.

Advanced Settings	
Wheel	30Inch
Speed Limit	22 mph
Current Limit	18A
Speed Sensor	06
Assistant Num	12
Set Voltage	48-2
Power Set	0-5
Slow Start	-2-
BACK	

## PAS Ratio Settings

- To modify the value of PAS ratio, press the "+" button or "-" button to choose the desired value, and then press the "i" button to confirm
- For example, the range is "50 percent" of "1" level, bottom value can be modified
- the default value is 50 percent.
- To store the modified setting, press the "i" button and turn to the next PAS ratio settings.
- After all PAS ratio inputted, hold the "i" button for 2s to confirm and then return to previous menu.
- Please refer to Attached list 2.

Advanced Settings	
Wheel	30Inch
Speed Limit	22 mph
Current Limit	18A
Speed Sensor	06
Assistant Num	12
Set Voltage	48-2
1 - 50%	1-3
2 - 74%	-2-
3 - 92%	
BACK	

## Controller Over-current Cut Settings

- Current Limit represents controller over-current cut settings.
- The current value can be changed from 7.0A to 25.0A.
- To change basic settings, press the "+" or the "-" button to increase or decrease the value of the current.
- To store a changed setting, hold the "i" button and then return to previous menu.

Advanced Settings	
Wheel	30Inch
Speed Limit	22 mph
Current Limit	18A
Speed Sensor	06
Assistant Num	12
Set Voltage	48-2
Power Set	0-5
Slow Start	-2-
BACK	

## Power Assistant Sensor Settings [PAS]

- Assistant num represents the sensitivity of PAS settings.
- The sensitivity value is “5” to “24”.
- To store a changed setting, press the “i” button and then access the general settings.
- To change the sensitivity of PAS settings, press the “+” or the “-” button to select sensitivity value.

Advanced Settings	
Wheel	30Inch
Speed Limit	22 mph
Current Limit	18A
Speed Sensor	06
Assistant Num	12
Set Voltage	48-2
Power Set	0-5
Slow Start	-2-
BACK	

## Speed Sensor (optional)

- Speed Sensor represents speed sensor settings.
- The default value is “01”
- To change speed sensor settings, press the “+” or the “-” button to select the quantity of magnet head (the range is from 1 to 15).
- To store a changed setting
- g, hold the “i” button and then return to previous menu.

Advanced Settings	
Wheel	30Inch
Speed Limit	22 mph
Current Limit	18A
Speed Sensor	01
Assistant Num	12
Set Voltage	48-2
Power Set	0-5
Slow Start	-2-
BACK	

## Backlight Contrast Settings

- LCD Luminance represents backlight contrast settings. Level “0” is the low brightness, Level “100%” is high brightness.
- The default level is “100%”.
- To modify the backlight brightness, press the “+” button or the “-” button to choose the desired setting item.
- To store a changed setting, press the “i” button and then access the General settings interface.

DisPlay Setting	
Toggle Unit	Metric
LCD Luminance	100%
Dormancy	5Min
SOC View	Voltage
TRIP Reset	NO
AL Sensitivity	3
Password	>
BACK	

## Password Settings

- Password Settings on the screen means power-on password settings. The default password is 1212.
- To access the password settings, press the “+” or the “-” button to modify the value and then press the “i” button to confirm digit one by one until the correct 4-digit password is completed, and then press the “i” button to access power-on password enable settings interface, otherwise stay on the password input state.



## Password Disable/Enable/Change

- To change power-on password enable/disable settings, press the “+” or the “-” button to select.
- Disable means not require a power-on password. Enable means a power-on password is required.
- If select Enable, press the “i” button and then access power-on password modify interface, otherwise exit the power-on password settings interface.
- The default value is Enable Password.



## Password Modify

- When the display shows Password Set, Enter Password 0000, to set new power-on password, press the “+” or the “-” button to modify the value and then press the “i” button to confirm digit one by one until the new 4-digit password is completed.
- To store the new power-on password, hold the “i” button for 2s and then exit settings.
- When switching the E-bike system on next time, the display will show Password interface, please input the new password to power on.



## **Exit Settings**

- In the settings state, press the “i” button (short than 2s) is to confirm the input.
- Hold the “i” button (for more than 2s) is to store the settings, and then exit the current settings.
- Hold the “-” button is to cancel the operating but not storing settings data, and then return to previous menu.
- If there is not any operations in one minute, the display will exit.

## **PART 2 RIDING POSITION**

### **Seat Height**

- In order to obtain the most comfortable riding position and offer the best possible pedaling efficiency, the seat height should be set correctly in relation to the rider's leg length.
- The correct saddle height should not allow leg strain from over extension, and the hips should not rock from side to side when pedaling.
- While sitting on the bicycle with one pedal at its lowest point, place the ball of your foot on the pedal.
- The correct saddle height will allow the knee to be slightly bent in this position; the leg should be almost straight.

### **Handlebar Height**

- Maximum comfort is usually obtained when the handlebar height is equal to or slightly higher than the height of the seat.
- You may wish to try different heights to find the most comfortable position.

### **Safety Check List**

- **Before every ride, it is important to carry out the following safety checks:**

#### **1. Brakes**

- Ensure front and rear brakes work properly.
- Ensure brake shoe pads are not over worn and are correctly positioned in relation to the disc.
- Ensure brake control cables are lubricated, correctly adjusted and display no obvious wear.
- Ensure brake control levers are lubricated and tightly secured to the handle bar.

#### **2. Wheels and Tires**

- Ensure tires are inflated to within the recommended limit as displayed on the tire sidewall
- Ensure tires have tread and have no bulges or excessive wear.
- Ensure rims run true and have no obvious wobbles or kinks
- Ensure all wheel spokes are tight and not broken.
- Check that axle nuts are tight. If your bicycle is fitted with quick release axles, make sure locking are correctly tensioned and in the closed position.

#### **3. Steering**

- Ensure handlebar and stem are correctly adjusted and tightened, and allow proper steering.
- Ensure that handlebars are set correctly in relation to the forks and the direction of travel.

- Check that the headset locking mechanism is properly adjusted and tightened.
- If the bicycle is fitted with handlebar end extension, ensure they are properly positioned and tightened.

#### **4. Chain**

- Ensure chain is oiled, clean and runs smoothly.
- Extra care is required in wet or dusty conditions.

#### **5. Cranks and Pedals**

- Ensure pedals are securely tightened to the cranks.
- Ensure cranks are securely tightened to the axles are not bent.
- 

#### **6. Derailleur**

- Check that front and rear mechanism are adjusted and function properly.
- Ensure shifter and brake levers are attached to the handlebar ,shifter and brake
- Ensure derailleur ,shifter and shift and brake cables are properly lubricated

#### **7. Motor drive Assembly and Throttle**

- Ensure all motor Drive components are correctly mounted and functioning properly.

#### **8. Battery pack**

- Ensure the battery is in good operation and kept fully charged.

## **Helmets**

- It is strongly advised that a properly fitting, ANSI or SNELL approved, bicycle safety helmet be worn at all times when riding your bicycle.

#### **The correct helmet should:**

- ✓ be comfortable
- ✓ be lightweight
- ✓ have good ventilation
- ✓ fit correctly
- ✓ cover forehead.

## **RIDING SAFETY**

#### **Wet Weather**

- It is recommended to not ride in wet weather.
- This hybrid electric bicycle is not meant for use in the water (damp roads,puddles,rain,streams,etc) Never immerse this product in water as the electrical system may be damaged.

- Although the electrical components are water resistant and there is risk Of electric shock from wet weather, you should exercise caution and strongly consider not riding in such conditions, especially heavy rain.
- In wet weather, you need to take extra care.
  - ✓ Brake earlier, stopping distance is up to 6 times longer
  - ✓ Decrease your riding speed, avoid sudden braking and take corners with additional caution.
  - ✓ Be more visible on the road
  - ✓ Wear reflective clothing and use safety lights.
  - ✓ Potholes and slippery surface such as line markings and train tracks all become more hazardous and more difficult to see when wet.

### ***Pedaling Technique***

- Position the ball of your foot on the center of the pedal.
- When pedaling, ensure your knees are parallel to the bicycle frame.
- To absorb shock, keep your elbows slightly bent.
- Learn to operate the gears properly.

### ***Hill Technique***

- Gear down before a climb and continue gearing down as required to maintain pedaling speed.
- If you reach the lowest gear and are struggling, stand up on your pedals, you will then obtain more power from each pedal revolution.
- On the descent, use the high gears to avoid rapid pedaling.
- Do not exceed a comfortable speed, maintain control and take additional care.

### ***Cornering Technique***

- Brake slightly before cornering and prepare to lean your body into the corner.
- Maintain the inside pedal at the 12o'clock position and slightly point the inside knee in the direction you are turning.
- Keep the other leg straight; do not pedal through fast or tight corners. While going through the turn, keep your eyes parallel to the horizon and look as far ahead of you as possible.

### ***Storage***

- Keep your bicycle in a dry location away from the wet weather and the sun.
- Direct sunlight may cause paint to fade or rubber and plastic parts to crack.
- Before storing your bicycle for a long period, clean and lubricate all components and wax the frame.
- Deflate the tires to half pressure and hang the bicycle off the ground, charge your batteries and make sure they are protected from water.
- Batteries should be charged every 30 days to avoid capacity loss.
- Do not cover bicycle with plastic as "sweating" will result which may cause rusting.
- Please notice that your bicycle warranty does not cover paint damage ,rust,corrosion,dry rot or theft.

### ***Security***

- **It is advisable that the following steps be taken to prepare for and help prevent possible theft.**
  - ✓ Maintain a record of the bicycle's serial number, generally located on the frame underneath the bottom bracket or on the head tube.
  - ✓ Register the bicycle with the local police.
  - ✓ Invest in a high quality bicycle lock that will resist hacksaws and bolt cutters.

- ✓ Always lock your bicycle to an immovable object if it is left unattended.

## **General Notice**

1. In winter or cold area, the battery performance will be down; the mile range will be shorter than above 20 degree.
2. Do not use other company charger for charging our bicycle battery.
3. Do not refit our bicycle arbitrary, our company will not guarantee such kind of refit bicycle.
4. Juvenile's , pregnant woman and old person forbid to use this electric bicycle.
5. When riding at high speed, do not braking front brake, it is risk gravity forward.
6. Do not disassemble the battery arbitrary; Keep the battery away from the fire and hazardous air.
7. This electric should ride under on person. Do not over load.
8. This bicycle should not climb the slope over 25 degree.
9. Do not use this bicycle under -10 degree and over 40 degree.
10. Please ride this bicycle at bicycle lane.

## PART 3 Assembly instruction



1. Put the fork stem into head tube.
2. Put the spacer as the photo, step1 plastic spacer step2 silver spacer step3 alloy cover
3. Note: put the step1 plastic spacer inside the gap; make sure the fork tube cannot move
4. Step4 alloy 3\*10mm spacer.
5. Put the stem inside the fork tube.
6. Tighten the screw by the Allen key.
7. Tighten the screw by the Allen key.
8. Make sure no gap between the headset and the fork crown.
9. Put the front wheel on the fork arch and quick release into the hub as the photo, same direction.
10. Tighten the screw on the another side.
11. Put the pedal inside the crank hole, please make correct on left and right side.
12. Tighten the screw by the wrench.
13. Do not pass the safety line on the seat post when you rise the saddle.

## **PART 4**

### **Riding instructions**

#### **Before riding the bike [some notes about the battery]**

- Please check the battery status before you ride the bike, make sure the battery full charged, do not use the battery in low energy, it will kill the battery.
- It is the best to use PAS when starting and climbing in order that the better energy economized.
- In order to protect the electrical components, please starting in low speed.
- Please charge the battery once finished the riding.
- If long time no use the battery, it should be charge one time per month at least to keep the battery alive.

#### **Using of the battery groups**

##### **Daily recharging of the battery groups**

- Daily recharging of the battery groups
- Connect the charger to the 110V AC input, the charging indicating light shows red, said it is charging.
- When the battery is full, the charging indicating light changes from red to green or red and green flashes.
- The charging time takes about 5 hours, After the battery is full charged, the charger will still charge in a small balanced current.
- If you can keep 1 to 2 hours of balanced charging, this will help the battery within the battery groups to achieve a balanced coherent state.
- Battery charging can be performed on the bicycle or remove the battery to do the charging.
- When the battery can be full of power to deposit, which is conducive to use at any time.

##### **Battery groups charging for the first time**

- After buying the battery, user's need to charge the battery fully for 1-3 times, That is :when charging is completed (the light from red turns into green),continue a balanced charge for the 3-5hours,the charging time of about 8-10 hours, this will fully activate each battery within the battery groups to achieve the best results.
- When the battery is in storage for a long time (more than one month), it needs to be recharged fully for 1-3 times, operating as mentioned above

##### **Connection between the battery groups and the bicycle**

- Firstly, put the battery into the battery slot of the bicycle smoothly and lock the battery.
- Connecting the battery discharging port and the electrical wire terminal of the bicycle, and insure that the connection is reliable.
- Opening the discharging switch or the key, the battery groups will start working.
- Reversing polar connection can damage the battery device or equipment, or even be dangerous.

##### **Notes**

- The battery groups should be used in conjunction with the special charger.

- Our supporting charger is specially designed for the characteristics of the battery groups, which can efficiently ensure the performance, expand the life span of the battery.
- The undesignated battery charger will cause damage or etc to the batter groups.
- If users hope to use the battery groups in other areas, please contact with the manufacturer for technical support.
- During the using and transport of the battery groups, severe vibration, shock, or extrusion, should be avoided and exposure to sunshine and rain should be prevented.
- Prohibit demolition, shock ,open or cut the battery groups and the charger.
- Short-circuit of the battery or the battery groups are strictly prohibited.
- Do not put more batteries or battery groups into one box in case of any short circuit between each other or with other metal objects.
- Directly welding to the battery is forbidden.

### Common failures and check

NO.	Problem	Possible cause	Remedy
1	The speed adjuster not works or the maximum speed is too low	<ol style="list-style-type: none"> <li>1. Battery voltage is too low.</li> <li>2. Speed adjusting handle connection becomes loosened.</li> <li>3. the spring is stuck or failure inside the speed adjusting handle.</li> </ol>	<ol style="list-style-type: none"> <li>1. make the battery fully charge</li> <li>2. hold faster after recheck</li> <li>3. exchange the spring</li> </ol>
2	The motor not works	<ol style="list-style-type: none"> <li>1. The connection of the battery wires becomes loosened.</li> <li>2. the left the right brakes didn't return back after the cutting off of the electricity.</li> <li>3. Connecting wire of the motor wheel become loosened or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair and reconnect.</li> <li>2. Contact our after sale team.</li> </ol>
3	Lack of mileage	<ol style="list-style-type: none"> <li>1. lack of charging</li> <li>2. battery aging or damaged</li> <li>3. More uphill, larger upwind, more frequent braking, starting with too heavy load.</li> <li>4. The tire is lack of pressure.</li> </ol>	<ol style="list-style-type: none"> <li>1. full charged</li> <li>2. replace battery</li> <li>3. suggest pedal</li> <li>4. fill air</li> </ol>
4	Charger not work	<ol style="list-style-type: none"> <li>1. The charger socket goes off or the connection between the plug and the socket become loosened.</li> <li>2. the fuse inside the charger is burn out</li> <li>3. The connecting wire of the battery goes off or the fuse blown.</li> </ol>	<ol style="list-style-type: none"> <li>1. fasten the socket and the connectors</li> <li>2. replace the fuse</li> <li>3. weld the connecting wire and exchange the fuse</li> </ol>
5	The indicating light doesn't turn green ,the battery becomes seriously hot	The charger and the battery parameters don't match	Turn to the supplier for adjustment or replace the charger

6	Others	<ol style="list-style-type: none"><li>1. When you cannot eliminate the failures according to the above instructions or cannot distinguish the failures.</li><li>2. When the motor wheel, controller, charger and the battery groups exist inside damages.</li></ol>	In case of the above conditions, please turn to the designated store or sales dealer for help, and remember not to open the above components by yourself, or it will lose our warranty.
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## PART 5

### After selling and Warranty

#### After selling

- Dear customer, thank you for choosing Rattan Ebike for your green travel solution, lets ride together to keep our earth and home green.
- Any question of our product and more newest information's, please contact us or follow us:

[www.rattanebike.com](http://www.rattanebike.com)

500 S Etiwanda Ave

Ontario, CA 91761

Service hotline: +1 626 803 7678  
+1 818 858 8487



: rattan ebike



: rattan ebike

Service email: **service@rattanebike.com** (Official Store)  
**Petreill2019@gmail.com** (Ebay store)  
**reibokservice@gmail.com** (Amazon store)  
**rattan00868@gmail.com** (Amazon store)

- In order to provide the best customer service and reply in time, please email us according to which store your bike purchased.

## Warranty

### The main parts of the warranty provisions

Component	Warranty period	Depreciation rate /day	Performance failure	Remark
Frame fork handle bar	2year	0.2%	<ul style="list-style-type: none"><li>• Natural sealing off.</li><li>• Fracture key parts crack.</li><li>• Fork fracture.</li></ul>	Except human destroy
Motor	2year	0.2%	<ul style="list-style-type: none"><li>• Internal gear break.</li><li>• Bearing broken.</li><li>• The wheel hub shell cracking.</li><li>• Coil burned.</li><li>• Magnets off.</li><li>• clamping stagnation or have serious noise, not the normal operation</li></ul>	Except human destroy
charger	2year	0.3%	Not be charged	Disassemble personally will not be replaced
controller	2year	0.3%	<ul style="list-style-type: none"><li>• Short circuit or open circuit.</li><li>• Burnout.</li><li>• Coaster related protection function failure.</li></ul>	Disassemble personally will not be replaced
Battery	2year	0.3%	Not working	Disassemble personally will not be replaced
Display	2year	0.2%	Not working, no display	Disassemble personally will not be replaced

## Common part warranty

Component	Warranty period	Depreciation rate/day	Performance failure	Remark
Switch	1year	0.1%	Not work	
Freewheel ,chain	1year	0.1%	Skid ,fracture freewheel stagnation	
Crank	1year	0.1%	Not work	
Expansion brake	1year	0.1%	Not work	
Throttle	1year	0.1%	Not work	
Front and middle axle	1year	0.1%	Quality problem	
Rim. Hub	1year	0.1%	Bending, breaking	

### Other parts warranty:

- Stem, seat post, pedal, kickstand, disc brake ,for quality problems or electric plating damage fracture blister of large area to replace in six months(except artificial damage)
- Saddle, luggage carrier, seat post clamp, spoke and fender for quality problem will be replacing in six months.
- Inner tire with leakage will be replaced in one month. The outer tire will be replaced in three months if crank naturally.

**Failure caused by the following cases are not included in the warranty contents,however,the designated store or sales dealer has the responsibility and obligation to provide paid repair service:**

- Without invoice and the warranty.
- Using and maintenance without complying with the user's manual.
- Using the electrical bicycle for other purposes or dangerous acts.
- Dismantling the parts without permission or improperly use and storage.
- Without using the original parts.
- Traffic accidents or other accidents.

