

# **RANDRIDE**

## **YX20M** product manuals

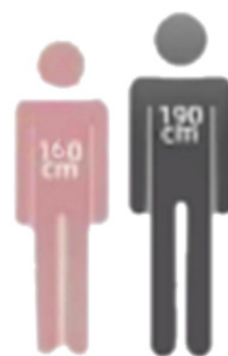


### ***Preface***

Dear friends, thank you for choosing randride, we wholeheartedly provide you with quality products and services. We uphold the principle of customer satisfaction first to provide you with high-quality design, technology and products. We are committed to do a good job in each product, if you have any questions about the product, please feel free to contact our customer service team.

## Ebike Size

The electric bicycle can be folded quickly, and the cushion and handlebar can be raised and lowered freely



Suitable for people  
160cm~190cm



E-bike Weight  
28kg



Recommended  
Rider Height  
160cm~190cm



Load Capacity  
MAX 120Kg

# Installation Steps

## 1. Installation of handlebars



## 2. Installation of front wheel



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Disc Brake Side



other side

### 3. Installation of front Light



### 4. Installation of pedal



## Operation Description

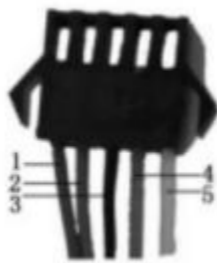
### 1. Open of electric



### 2. Removing the battery







Connected to the controller



Meter outlet end



To the terminal

**Note:**The lead wire of some products uses the waterproof connector, and the user cannot see the lead color in the wire harness

### 三、Function description:

#### 1.display function

Speed display, power indicator, fault indication, total mileage, single mileage

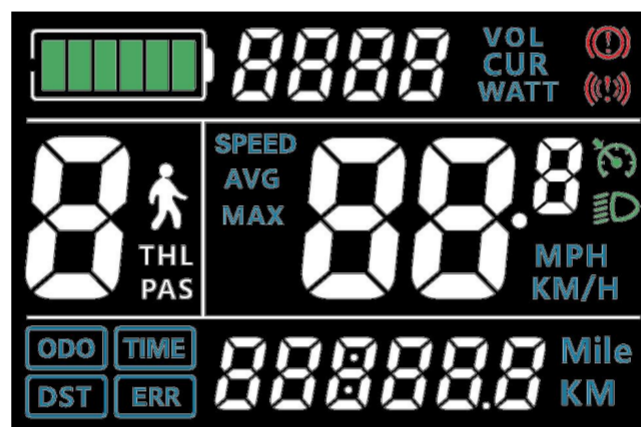
#### 2.Control, setting up functions

Power switch control, wheel diameter setting, idle automatic hibernation time setting, backlight brightness setting,

Start mode setting, drive mode setting, voltage level setting, controller limit value setting,

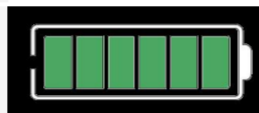
#### 3.Communication protocol:UART

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



Show content introduction

#### 3.1 Battery power display



#### 3.2 Multifunctional display area



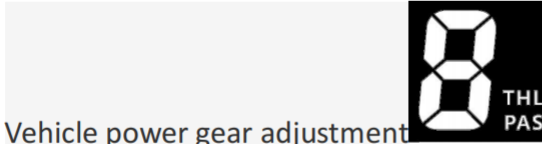
Total mileage ODO, single mileage TRIP(unit: mile, km), single boot time TIME, Error Code;



### 3.3 Speed display area

AVG: average speed, MAX: max speed, SPEED: current speed; 单位 Mp/h, km/h

The speed signal is taken from the Hall signal in the motor and sent to the instrument by the controller.(The time of a single Hall period, unit: 1MS) The instrument will calculate the true speed based on the diameter of the wheel and the signal data(the number of magnetic steel needed by the motor Hall)



### 3.4 Vehicle power gear adjustment

### 3.5 Vehicle status icon display :



Condition code meaning of number 2 vehicle:

Status code(Decimal system)	Condition meaning	Remark
E02	Brake	
E06	Battery under voltage	
E07	Electrical machinery problem	
E08	handle problem	
E09	Controller problem	
E10	Communication reception problem	
E11	Communication send problem	

## 4. Setting

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

**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; Precision: 0.1;

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, direct input of magnetic steel;

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 × deceleration ratio;

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

$20 \times 4.3$

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

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; Drive speed maintained at set value,

Error:  $\pm 1$ km/h; (Speed limit for power and steering)

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 set at this menu under the mile interface is not converted. Is inconsistent with the actual speed limit of the mile speed;

Note: P09-P15 menu is only valid in communication state

**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).

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

2: Power Drive and Electric Drive Coexistence

**P11:** Help sensitivity setting range: 1-24;

**P12:** Help start intensity setting range: 0-5;

**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 undervoltage

**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, 1: does not include 0


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


#### 四、Key Introduction:



1、Press and hold the  button to start the display when the display is off. After power-on, press  button to switch between ODO, DST and TIME.







2、Press and hold the  button to shut down the display when the display is on.

Press  button, PAS+1. Press  button, PAS-1.

3、 Press and hold  button to turn on/off the headlight under the normal display speed interface.

4、 Under the interface of normal speed display, when the vehicle is stationary, press and hold  button will enter 6KM/h in walk mode, and then let go and exit.

3、 Press and hold  button and  button enter Settings

Parameter value modification: under a parameter state , press  button switch Parameters, press  button value plus one, press  button value minus one. And when it's modified, press  button switch to the next parameter and save the previous parameter value; Press and hold  button and  button again to save and exit the settings. If not, wait 8 seconds to automatically exit and save the parameters.

**Note: due to the upgrade of the company's products, the content of the product will be different from the specifications, but it will not affect your normal use.**

**Address:** Room 1011, Building B, 213 Yulong South Road, Zhonglou Economic Development Zone, Changzhou City, Jiangsu Province

**telephone:** 0519-69656597

**Web:**[www.lhzn85.cn](http://www.lhzn85.cn)



# **Battery Charging and Maintenance**

Two keys are provided to lock or unlock the battery.

The battery can be charged in the compartment or taking off.

- Please do not use any other chargers. Select a suitable charger based on applicable voltage.
- The charging environment should be cool, dry and non-conductive.
- Unplugging the socket immediately as soon as the battery gets charged fully (Green light on).
- Do not store the battery at the temperature above 60°C or below -20°C.
- In winter, the effective power of the battery can decrease by 1/3 when working in 0°C.
- The power volume will return to normal after the environment temperature raise to 20°C or higher.
- In summer, heat dissipation is important to keep the battery healthy. The battery should not be charged immediately after exposure to the strong sunshine.

Charging battery immediately after cycling or power consumption can to a large extent avoid the loss of battery capacity and lifetime.

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## **Warning!**

The battery contactor cannot touch metals. Many cases shows the battery can be burned out if the customers use metals to touch the battery contactor.

# Troubleshooting

## Disc brake system fault

### Brake level

The display shows error code , which illustrates the failure to stop the bike by brake lever.

This means the wires are not connected well or the brake lever is damaged. We suggest the customer can check whether any screw is loose and the lever can be returned to the position after grabbing. Ruling out the reasons above, the customer should replace the brake lever.

### Disc brake

After bike assembly, the rubbing noise from disc brake can be heard when riding, which means the disc brake needs adjustments. Notice: The abnormal condition of disc brake usually results from the crush of shipment. This is a universal situation in our industry. The customer should do adjustment after assembly. The customer can search “bike disc brake adjustment” on Google or contact us to get a video link. The customers can turn to local bike shop’s staff for help if they fail to do adjustment. Please do not grip the brake lever before assembling the brake disc, otherwise the oil will leak.

## Shifter system fault

The failure to change the speed by shifter with the noise or chain beating illustrates the adjustment is not complete. The customer needs to adjust the shifter lever and rear shifter. (Please contact us to get a video link)

Notice: The abnormal condition of shifter usually results from the crush of shipment. The customer should do adjustment after assembly. This is a universal situation in our industry. The customer can search “bike shifter adjustment” on Google or contact us to get a video link. The customers can turn to local bike shop’s staff for help if they fail to do adjustment.

## Driver system fault

### Error code

Error code on display and no response from throttle could be caused from controller wires damage, throttle extension wire damage or the loose of wires connections. Ruling out the reasons above, the customer should replace the throttle and extension wires.

### The sensor issue

No power assist in power assist riding mode. The customer should check whether the wires damage or loose connection between the sensor and controller. Ruling out the reasons above, the customer should replace the sensor.

### **Battery fault**

#### **Battery voltage loss**

Even if the customers had not ridden the bike for a long time, the battery should be charged one time in sixty days to avoid the battery voltage loss. The original charger cannot be used to charge the battery when the battery voltage is lower than the charger voltage.

#### **The battery cannot get charged(The charger green light on)**

The battery voltage loss can lead to the failure to charge the battery through the original charger. The customer needs to look for a lower voltage charger to charge the battery. For instance, the customer can try to charge 48V battery deeply one time by 36V charger till the red light turn to green light, then continuing to charge by original 48V charger to see whether red light of the charger is on. The issue will be solved after the light turns green. If the issue cannot be solved, the customer should replace a battery.

#### **Endurance mileage decrease**

The battery gets charged fully in a few minutes, but running out shortly. The endurance mileage is much less than described, which can be caused by the protective board or electric core fault. The customer should replace the battery to local bike shops staff for help if they fail to do adjustment.

#### **The battery stops working when the bike climbing**

The battery always stops working when the bike goes up the hill, but works normally on flat roads. This can be caused by the protective board or electric core fault. The customer should replace the battery.

### **Motor fault**

The display shows error code , which means the motor stops working because the Hall sensor got burned, or motor overload got burned, or motor gear got damaged with noise. The customer should replace the motor.

**Notice: The customer should check whether the wires loose, the function buttons are in the normal place.**

**The customer should rule out the problem caused by controller and display before checking the motor**

### **Charger fault**

The red light of charger will be on when charging, while the green light will be on when it stops charging. The normal charging time is 4 to 6 hours.

# ***Warning***

- (1) You are required to wear a helmet to protect yourself during cycling.
- (2) You have to learn and obey the local law for cycling.
- (3) You have to check the bike carefully before riding.
- (4) You should charge and store the battery according to our guidance.

