

**acibest**

# INSTRUCTION MANUAL

ELECTRIC BICYCLE





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# SERVICE

## IMPORTANT: FOR ACTBEST ONLY

For damaged or defective product, questions, replacement parts or any other service support, please contact our customer service department by the below methods:

[service@actbest.net](mailto:service@actbest.net)

Response Time: 24-48 hours. Please email us with the order number so we can offer more help and reply as soon as possible during peak business hours.

**PLEASE DO NOT RETURN THIS PRODUCT WITHOUT ASKING OUR CUSTOMER SERVICE.**



# IMPORTANT SAFETY WARNING

## **Battery and Charging:**

-Charge at 0°C ~ 45°C, discharge at -20°C ~ 60°C, keep the battery dry, do not put the battery in acidic or alkaline liquid, avoid rain, keep away from fire, heat and high temperature environment.

-It is strictly forbidden to connect the positive and negative poles of the battery reversely, and it is strictly forbidden to damage, insert the battery or short-circuit the battery.

-Please use the original special charger when charging, do not exceed 6 hours, and the charging current does not exceed 2A.

-When not in use for a long time, please store the battery in a cool and dry place, and charge the battery for five hours a month.

-The user must follow the instructions for use when charging, otherwise the consequences will be borne by the user.

-Pay attention to the battery type and applicable voltage that the charger can charge, and it is strictly forbidden to mix them.

-When charging, it should be placed in a ventilated environment, and it is strictly prohibited to charge in a confined space or in a hot sun or high temperature environment.

-When charging, first connect the battery and the charger, and then the power supply; when the battery is fully charged, first cut off the power supply, and then unplug the charger connector.

-When the green light is on, the power supply should be cut off in time. It is forbidden to connect the charger to the power supply for a long time without charging.

-During the charging process, if the indicator light is abnormal, a peculiar smell appears, or the charger casing is overheated, stop charging immediately and repair or replace the charger.

-Try not to carry the charger with the bicycle. If you really need to carry it, you should place it in the toolbox after the shock absorption treatment is done. Do not disassemble or replace the accessories in the charger by yourself.

### ***Riding:***

Do not use it until you read the instructions carefully and understand the performance of the product; do not lend it to someone who can't manipulate the product for riding. Before riding the bicycle, check whether the brakes are working. Pay attention to the brake tightness. If the brake is too loose, use an Allen key to tighten it. Pay attention to increasing the braking distance when riding in rain or snow.

Applicable age: 16 to 65 years old.

### ***Tips for Maximizing E-bike Range:***

-Pedal more for greater distance, and try to avoid frequent stops and starts.

-Cold weather can decrease battery capacity, so keep this in mind when planning your trip.

-Wind can be a factor, with tailwinds helping you go further and headwinds reducing your range.

-Smoother terrain, such as paved roads, can help you travel further.

Proper bike maintenance, including tire pressure and battery care, will help maximize range.

Please be sure to wear a safety helmet when riding a bicycle, follow the traffic rules, and do not drive on motorized lanes and roads with many pedestrians. Please check the tire pressure before riding, the recommended tire pressure is 40 ~ 65PSI.

Downhill and non-paved roads do not exceed 15MPH.

-When using the motor, please be careful not to hit it vigorously and keep the rotating shaft lubricated.

Riding beyond the maximum load is not allowed.

After use, the car can not be parked in the building hall, evacuation stairs, safety exits, and must be parked correctly in accordance with the safety rules.

### ***One-handed riding is prohibited!***

#### **Disclaimer:**

After riding, please store the bike in a place without sunlight and rain, not in residential buildings; always check the motor and brake; check the screws and the places that need to be fastened regularly, and tighten them regularly. The front and rear wheels of the vehicle should be located in the center of the front fork or frame.

Always check the tire for scratches, cracks or excessive wear. The inner tube and the valve should be perpendicular to the wheel hub. Damaged or excessively worn tires need to be replaced immediately. Please find a professional technician to replace your tire. If your tire accidentally punctures and leaks, please contact a professional technician for repair or replacement.

#### ***Maintenance and care:***

For the product model, specifications or related information mentioned in this User Manual, the company reserves the right of modification and final interpretation; the functions of the specific model mentioned in this User Manual are only applicable to that specific model.

The product models, specifications, or related information mentioned in the User Manual may be changed without notice; without prior written permission of the company, the User Manual may not be copied, modified, reproduced, transmitted, or published in any form. Please read the Manual carefully before using the product, and operate in accordance with the Manual, otherwise the company will not be liable for product damage or personal or property damage caused by improper use or error.

## ***SAFETY CHECKLIST***

Before first ride, it is important to carry out the following safety checks:

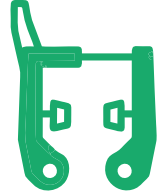
### 1. Brakes

Ensure front and rear brakes work properly.

Ensure brake shoe pads are not over worn and are correctly positioned in relation to the rims.

Ensure brake control cables are lubricated, correctly adjusted and display no obvious wear.

Ensure brake control levers are lubricated and tightly secured to the handlebar.



### 2. Wheels and tires

Ensure tires are inflated to within the recommended limit as displayed on the tire sidewalk.

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 levers 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 the 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 extensions, 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. Bearings

Ensure all bearings are lubricated, run freely and display no excess movement, grinding or rattling.

Check headset, wheel bearings, pedal bearings and bottom bracket bearings.



#### 6. Cranks and Pedals

Ensure pedals are securely tightened to the cranks.

Ensure cranks are securely tightened to the axle and are not bent.

#### 7. Derailleurs

Check that the front and rear mechanisms are adjusted and function properly.

Ensure shift and brake levers are attached to the handlebar, shift and brake.

Ensure derailleurs, shift levers and shift and brake cables are properly lubricated.



#### 8. Frame and Fork

Check that the frame and fork are not bent or broken either. If bent or broken, they should be replaced.

## 9. Accessories

Ensure that all reflectors are properly fitted and not obscured.

Ensure all other fittings on the bike are properly and securely fastened, and functioning.



## 10. Motor Drive Assemble and Throttle

Ensure all motor drive components are correctly mounted and functioning properly.

## 11. Battery Pack

Ensure the batteries are in good operation condition and kept fully charged.



# POWER SUPPLY PRECAUTIONS

	Parameter	standard Edition
<b>Dimensions</b>	Main material	Aluminum alloy
	Size	68*26*43 inches
	Pedal Distance from the Ground	4 inches
	Tire size	26 inches
	Package size	56.3*9.8*30.7 inches
<b>Performance Parameter</b>	Weight	56lbs
	Best Riding Speed	20MPH
	Maximum Speed	22MPH
	Range	30-35 Miles (throttle mode) 45-50 Miles (pedal assist)

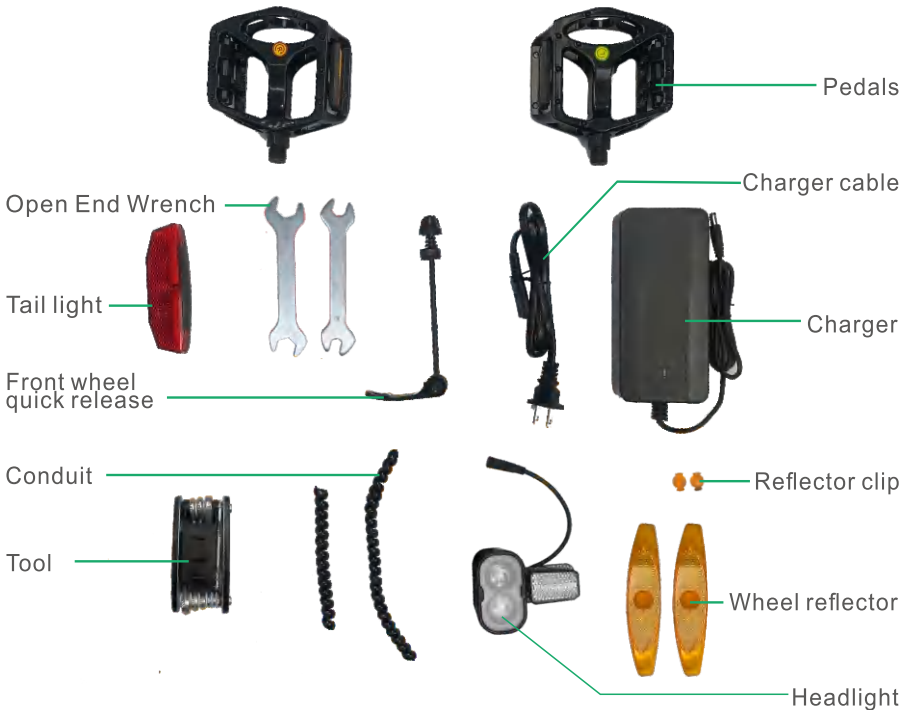
	Parameter	standard Edition
<b>Performance Parameter</b>	Maximum Climbing Angle	30 degrees
	Operating Temperature	-10 ~ 45 degrees
	Waterproof Level	Ip54
<b>Electrical Specifications</b>	Battery Type	18650 lithium-ion power battery
	Battery Capacity	13AH
	Rated Battery Voltage	36V
	Motor Line Type	Power
	Motor Rated Voltage	36V
	Motor Rated Power	500W
	Charging Voltage	DC42V/2A
	Input Voltage	AC110V
	Undervoltage Protection Value	110V
	Overcurrent Protection Value	1.5A
Charging Time	6~8 hours	
<b>Features</b>	Display	Multi-function LCD Screen
	Front Light	Yes
	Braking Method	Front and Rear Disc Brakes
	Speed Transmission	7 SPEEDS

**Remarks:** Electricity, load, tire pressure, road environment, chain and wheel axle lubrication, etc. will affect the maximum speed; the range refers to the data obtained from continuous testing from fully charged to completely exhausted with a riding speed of 15-25MPH and a load of 60kg on a flat hardened road; driving habits, temperature, load, tire pressure, road environment and other factors will affect the range.

# PRECAUTIONS FOR INSTALLATION

**▲ Important Reminder:** Before installation, please confirm that all product components and assembly parts are present and accounted for. Please check the product structure and make sure there are no missing parts or components before assembly. (Check the following PACKAGE LIST & PRODUCT STRUCTURE)

## PACKAGE LIST



*Accessories list, as shown above*

# PRODUCT STRUCTURE



Figure 1 (Bicycle Diagram)

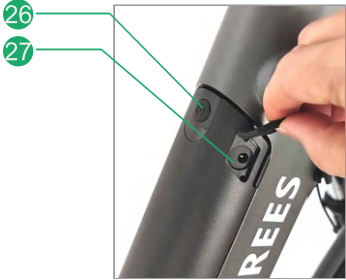


Figure 2 (Right side of the frame)

- 1 Shift Lever
- 2 Central Display
- 3 Brake Lever
- 4 Stem
- 5 Headlight
- 6 Front Fender
- 7 Tire
- 8 Rim
- 9 Brake Disc
- 10 Front Wheel Quick Release
- 11 Front Fork
- 12 Disc Brake
- 13 Chain Cover
- 14 Chainwheel
- 15 Pedal
- 16 Chain
- 17 Rear Derailleur
- 18 Motor
- 19 Tail Light
- 20 Rear Carrier
- 21 Seat Tube Adjustment Quick Release
- 22 Seat Tube
- 23 Saddle
- 24 Battery Lock Key Hole
- 25 Lithium Battery
- 26 Power Light Switch Button
- 27 Battery Charging Hole

# ASSEMBLY

The state of the bicycle after being taken out of the carton is as shown in the figure above. First, cut all the nylon straps to ensure that the front wheel can be smoothly separated from the frame when the rear wheel can rotate freely.



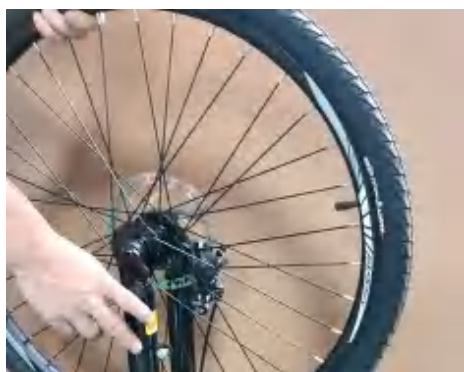
Turn the bicycle upside down as shown above to facilitate the installation of the front wheels. Make sure the direction of the handlebar stem is outward.



Loosen the fixing screws of the front fork protection rod with an adjustable wrench and remove the front fork protection rod.



Place the front wheel on the front fork for installation, pay attention to the disc brake pad and the disc brake to match in place.



Open the accessory small carton, take out the front axle quick release inside, loosen the nut and separate it from the screw.



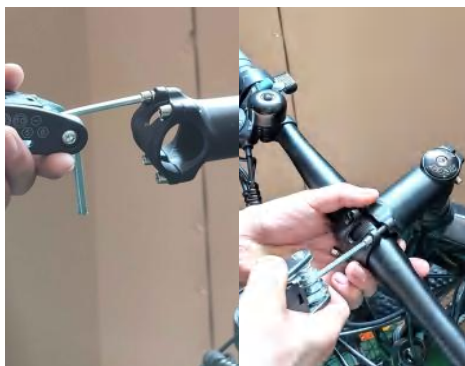
Insert the front axle quick release screw into the front axle core, Tighten it with the nut, and then press the quick release handle to lock the front fork.



After the front wheel is installed, remove all the protective foams, and then place the bicycle as shown above.

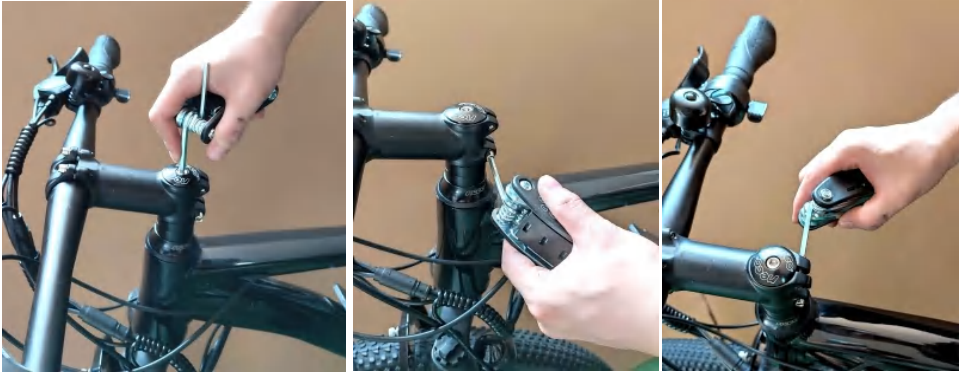


Loosen the 4 screws of the handlebar stem, place the handlebar and adjust the horizontal angle of the handlebar, and then fix it with the pipe clamp screws.





Tighten each fixing screw with a hexagonal key to fix the handlebar stem to ensure that there is no looseness of the handlebar.

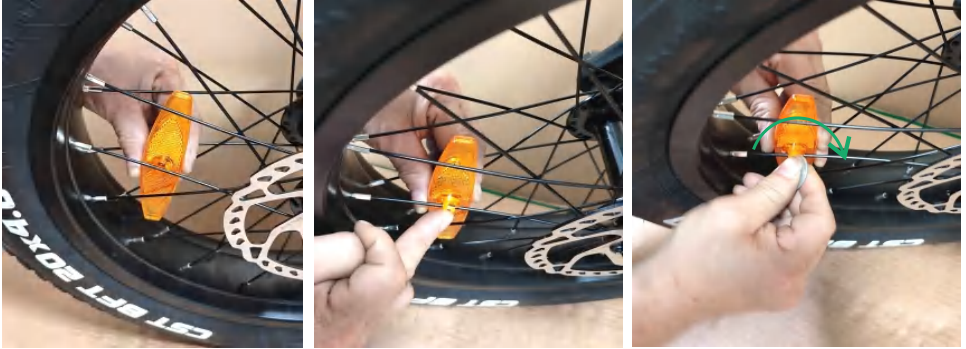


The front fender and headlight need to be installed at the same time. First, insert the front fender into the front fork as shown in the picture (pay attention to the front and back directions), then fix the headlight to the same screw hole.

Finally, as shown in the picture, fix both sides of the front fender to the front wheel.



Place the wheel reflector on the spoke, press the clip into the hole, and use a tool to rotate the clip to lock.



Loosen the headlight fixing screw on the front fork, fix the front mudboard fixing hook and the headlight bracket together with the screw on the front fork, and then use the screw to fix the front mudboard support on the front fork, as shown in the right picture above.

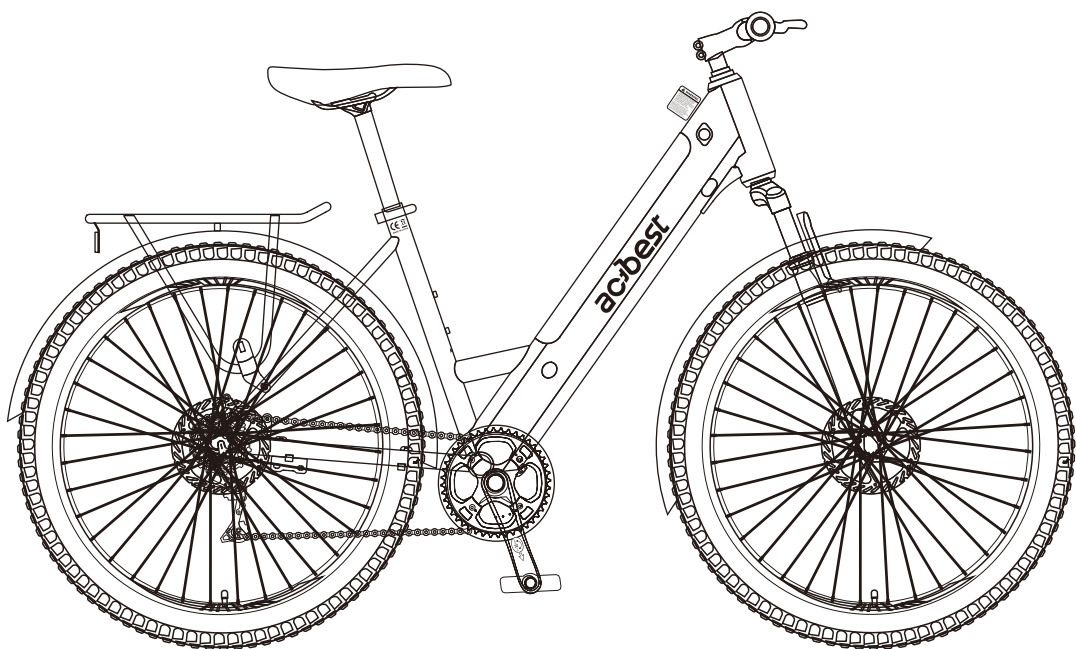


Install the tail light : first connect the control wire of the tail light to the tail light, and then fix the tail light to the rear hanger with screws.



Finally, make sure to align all the wires by their colors before inserting them. After completing the installation, you can test the front and rear brakes and whether the headlights are functioning properly. The packaging includes a spring wire that can be used to secure all the wires together for a neat appearance.



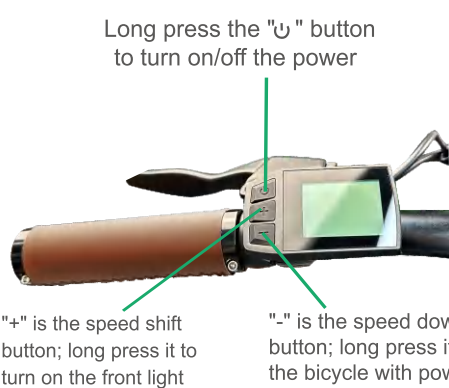


The state of the bicycle after the installation is completed, as shown in the figure above.

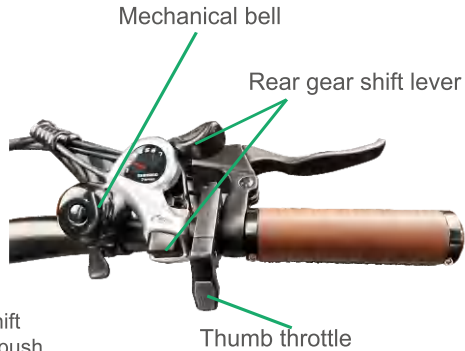
# OPERATION



**Figure 3 (Handlebar)**

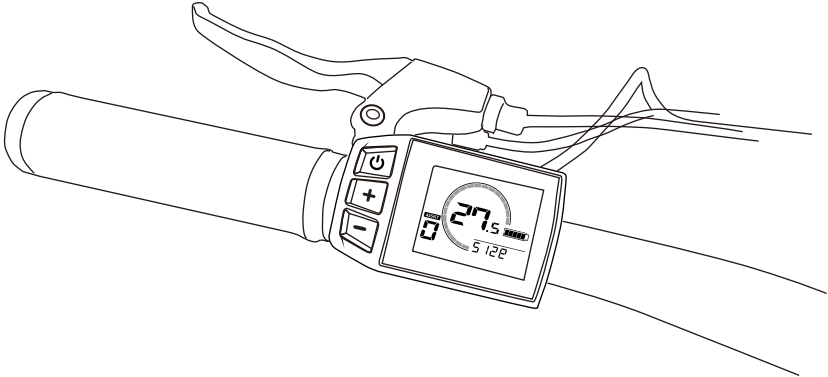


**Figure 4 (Left Handlebar)**

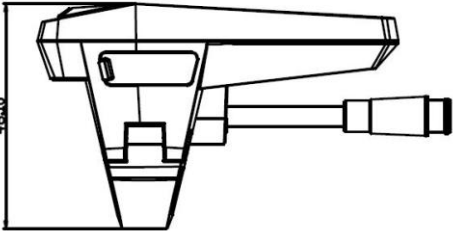
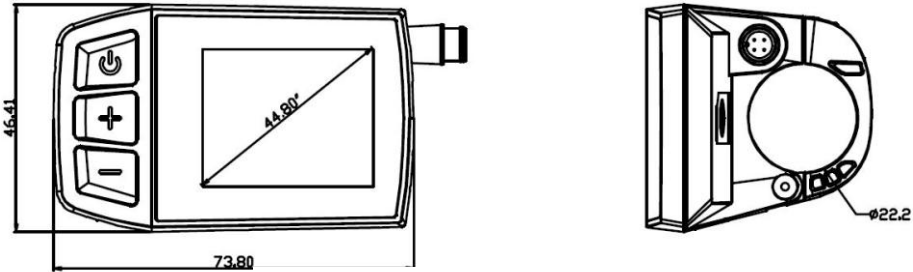


**Figure 5 (Right Handlebar)**

# Display user instructions






Dimensions of the dashboard



Size

## ***Dashboard function***

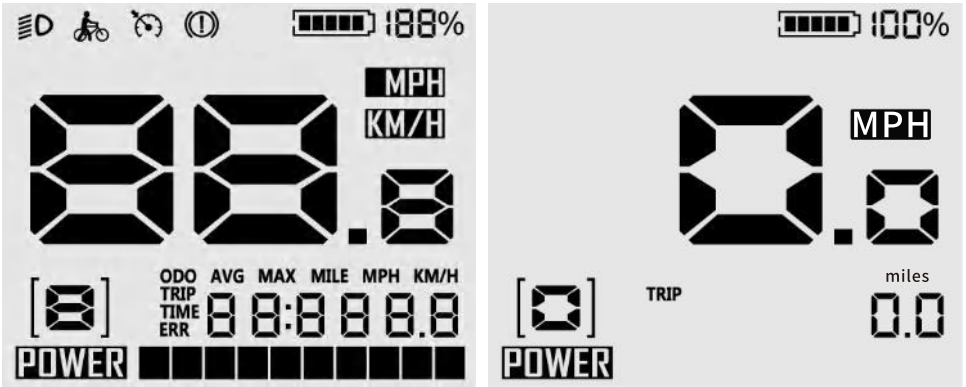
- USB (5V/500mA)
- Real time speed, maximum speed, average speed
- Real time motor power
- Battery power
- Boost gear
- Total mileage, Trip mileage
- Trip time
- Calories burned
- Car light indication
- Metric/Imperial switching
- Error code
- Backlight adjustment
- Automatic shutdown time
- USB port (5V/500mA)

	Power Button	<ol style="list-style-type: none"><li>1. Power on and off</li><li>2. Function view</li></ol>
	<b>【+】</b> Button	<ol style="list-style-type: none"><li>1. Parameter adjustment</li><li>2. Turn on and off the lights</li><li>3. Menu operation</li></ol>
	<b>【-】</b> Button	<ol style="list-style-type: none"><li>1. Parameter adjustment</li><li>2. Turn on/off the boost function</li><li>3. Menu operation</li></ol>

# Operation method

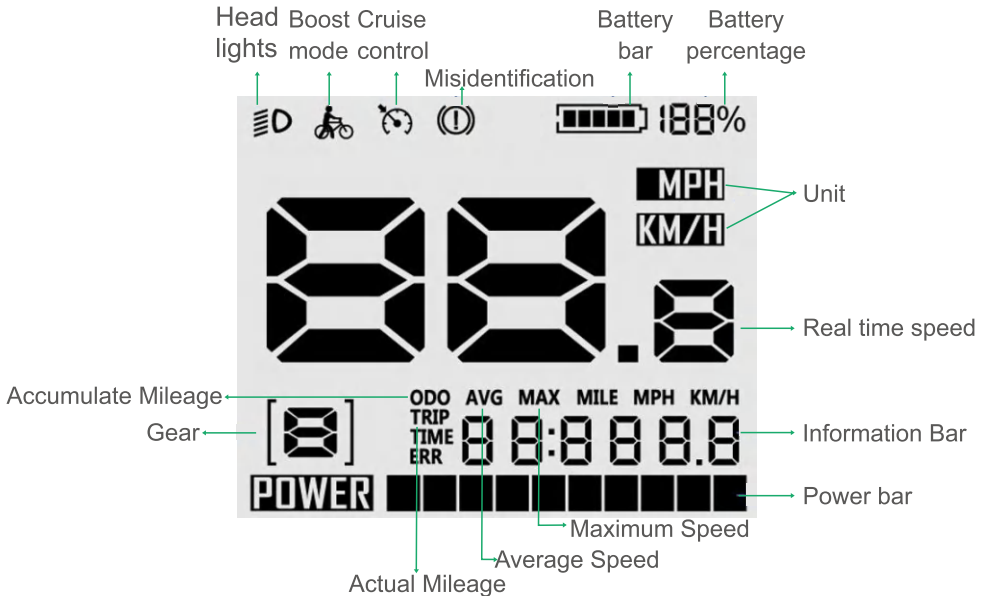
## Power on and off

In the off state, press and hold the [Power] button to enter the boot full display interface, enter the boot interface after 1 second, and enter the riding interface after 2 seconds:



On any interface after booting, press and hold the [Power] button to shut down.

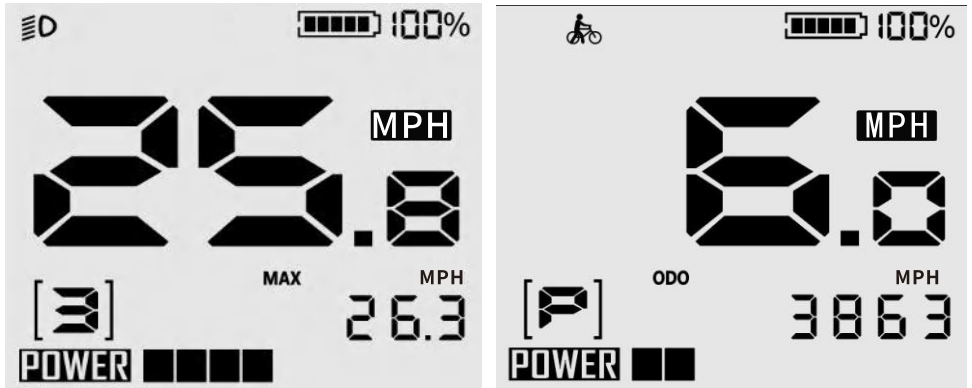
## Cycling display interface





Click the [+] button/[-] button to switch gears

Press and hold the [-] button for 2 seconds to start the 6MPH boost mode, and release the [-] button to exit the boost mode.

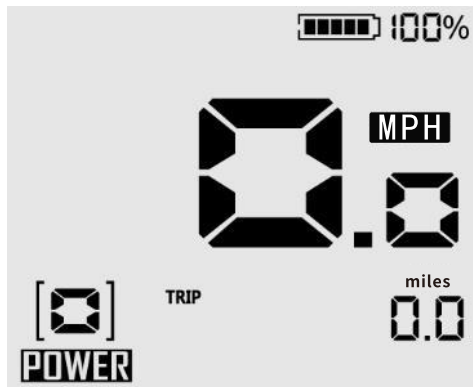


Switch lights

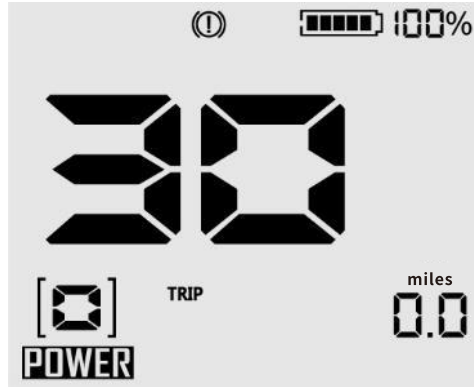
Long press the [+] button for 2 second to switch the heading & rear lights on and off.

### Clear Trip Miles

Long press the [Power] button and the [+] button combination to clear the trip mileage:



## Error display



Common error codes (the fault codes are related to other vehicle accessories, the following information is for reference only):

Error code (hexadecimal)	Meaning	Solution
21	Abnormal current or MOS tube damage	Take out the battery, wait 1 minute, and then install it. It also shows 21 that the controller needs to be replaced
23	Motor phase missing, this motor is waterproof wire	If this error occurs, disconnect the waterproof wire of the motor and plug it in again
24	Motor Hall, this motor is waterproof wire	If this fault occurs, disconnect the motor waterproof wire and plug it again. If 24 still occurs, change the motor
25	Brake handle abnormal	Brake handle switch is not returned to position, forcefully knead carbon release power brake to position or shut down and restart

26	Undervoltage	Battery overdischarge, or controller undervoltage, charging or shutdown restart
30	Communication failure	Check whether the waterproof cable at the instrument end still exists. Replace the instrument or controller

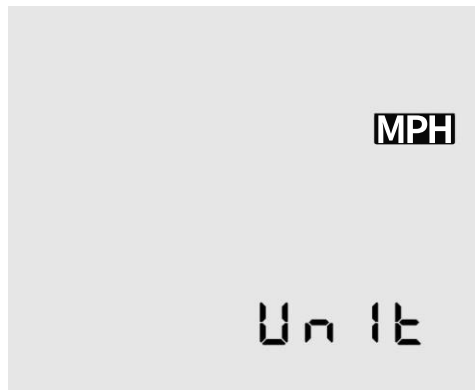
## User menu

In the state of stillness and no fault, long press the [+] button [-] button combination on the main interface for 1 second to enter the user menu interface. In this interface, you can set the data unit, speed limit, automatic shutdown time, and backlight brightness.

When there is no operation on this interface for more than 60s, it will automatically return to the riding interface.

### 1. Unit settings

After entering the interface, the speed unit flashes, prompting that the unit can be switched at this time, click the [+] button /[-] key to button the unit, click the [Power] button to confirm the save and switch to the next menu interface.



## 2.Speed limit adjustment

At this time, the numerical display area flashes, prompting that the speed limit can be adjusted at this time, click the [+] button /[-] button to adjust the speed limit value, and click the [Power] button to confirm and save and switch to the next menu interface.



## 3. Automatic shutdown time setting

After entering the interface, the numerical display area flashes to display the current automatic power-off time (unit: minute), at this time, it can be adjusted by clicking the [+] button / [-] button , the adjustment range is 0-99, and 0 is to disable the automatic power-off function.

Click the [Power] button to confirm saving and enter the next menu interface.



## 4. Backlight brightness setting

After entering the interface, the value display area will flash and display the current backlight brightness, and you can click the [+] button /[-] button to adjust at this time, and the adjustment range is 1-5.

Click the [Power] button to confirm saving and enter the next menu interface.



### **Precautions**

1. Before plugging and unplugging the instrument, please be sure to turn off the power first, plugging and unplugging with power on will cause permanent electrical damage to the instrument;
2. Do not immerse the meter in water;
3. When cleaning the meter, use a soft cloth dipped in water to wipe the surface, but do not use any detergent or spray liquid on the surface;
4. The USB port of the meter cannot provide waterproof protection when in use. When riding in the rain, please ensure that the protective rubber plug of the USB port is tightly closed, and it is forbidden to use the meter to connect external devices in the rain.

## Removable battery with two charging methods

Two charging methods are available:

1. Charging directly through the charging port on the bike,
2. Charging the battery externally by first unlocking it with a key and removing the seat.

**Warning: Stick to the IMPORTANT SAFETY**



Removing the battery: Insert the key, twist it to the right with your right hand, and pull the battery out with your left hand.

After the battery is removed, it can be charged alone with the charger.

# TROUBLESHOOTING

Problem	Possible Cause	Remedy
<b>Gear shifts not working properly</b>	-Derailleur cables sticking/stretched/damaged	-Lubricate/tighten/replace cables
	-Front or rear derailleur not adjusted properly	-Adjust derailleurs
	-Indexed shifting not adjusted properly	-Adjust indexing
<b>Slipping chain</b>	-Excessively worn/chipped chainring or freewheel sprocket teeth	-Replace chainring, sprockets and chain
	-Chain worn/stretched	-Replace chain
	-Stiff link in chain	-Lubricate or replace link
	-Non-compatible chain/chainring/freewheel	-Seek advice at a bicycle shop
<b>Chain jumping off freewheel sprocket or chainring</b>	-Chainring out of true	-Re-true if possible, or replace
	-Chainring loose	-Tighten mounting bolts
	-Chainring teeth bent or broken	-Repair or replace chainring/set
	-Rear or front derailleur side-to-side travel out of adjustment	-Adjust derailleur travel
<b>Constant clicking noises when pedaling</b>	-Stiff chain link	-Lubricate chain/Adjust chain link
	-Loose pedal axle/bearings	-Adjust bearings/axle nut
	-Loose bottom bracket axle/bearings	-Adjust bottom bracket
	-Bent bottom bracket or pedal axle	-Replace bottom bracket axle or pedals
	-Loose crankset	-Tighten crank bolts

<p><b>Grinding noise when pedaling</b></p>	<ul style="list-style-type: none"> <li>-Pedal bearings too tight</li> <li>-Bottom bracket bearings too tight</li> <li>-Chain fouling derailleurs</li> <li>-Derailleur jockey wheels dirty/binding</li> </ul>	<ul style="list-style-type: none"> <li>-Adjust bearings</li> <li>-Adjust bearings</li> <li>-Adjust chain line</li> <li>-Clean and lubricate jockey wheels</li> </ul>
<p><b>Freewheel does not rotate</b></p>	<ul style="list-style-type: none"> <li>-Freewheel internal pawl pins are jammed</li> </ul>	<ul style="list-style-type: none"> <li>-Lubricate. If problem persists, replace freewheel</li> </ul>
<p><b>Brakes not working effectively</b></p>	<ul style="list-style-type: none"> <li>-Brake blocks worn down</li> <li>-Brake blocks/rim greasy, wet or dirty</li> <li>-Brake cables are binding/stretched/damaged</li> <li>-Brake levers are binding</li> <li>-Brakes out of adjustment</li> </ul>	<ul style="list-style-type: none"> <li>-Replace brake blocks</li> <li>-Clean blocks and rim</li> <li>-Clean/adjust/replace cables</li> <li>-Adjust brake levers</li> <li>-Center brakes</li> </ul>
<p><b>When applying the brakes they squeal/squeak</b></p>	<ul style="list-style-type: none"> <li>-Brake blocks worn down</li> <li>-Brake block toe-in incorrect</li> <li>-Brake blocks/rim dirty or wet</li> <li>-Brake arms loose</li> </ul>	<ul style="list-style-type: none"> <li>-Replace blocks</li> <li>-Correct block toe-in</li> <li>-Clean blocks and rim</li> <li>-Tighten mounting bolts</li> </ul>
<p><b>Knocking or shuddering when applying brakes</b></p>	<ul style="list-style-type: none"> <li>-Bulge in the rim or rim out of true</li> <li>-Brake mounting bolts loose</li> <li>-Brakes out of adjustment</li> <li>-Fork loose in head tube</li> </ul>	<ul style="list-style-type: none"> <li>-True wheel or take to a bike shop for repair</li> <li>-Tighten bolts</li> <li>-Center brakes and/or adjust brake block toe-in</li> <li>-Tighten headset</li> </ul>



<p><b>Wobbling wheel</b></p>	<ul style="list-style-type: none"> <li>-Axle broken</li> <li>-Wheel out of true</li> <li>-Hub comes loose</li> <li>-Headset binding</li> <li>-Hub bearings collapsed</li> <li>-QR mechanism loose</li> </ul>	<ul style="list-style-type: none"> <li>-Replace axle</li> <li>-True wheel</li> <li>-Adjust hub bearings</li> <li>-Adjust headset</li> <li>-Replace bearings</li> <li>-Adjust QR mechanism</li> </ul>
<p><b>Steering not accurate</b></p>	<ul style="list-style-type: none"> <li>-Wheels not aligned in frame</li> <li>-Headset loose or binding</li> <li>-Front forks or frame bent</li> </ul>	<ul style="list-style-type: none"> <li>-Align wheels correctly</li> <li>-Adjust/tighten headset</li> <li>-Take bike to a bike shop for possible frame realignment</li> </ul>
<p><b>Frequent punctures</b></p>	<ul style="list-style-type: none"> <li>-Inner tube old or faulty</li> <li>-Tire Tread/casing worn</li> <li>-Tire unsuited to rim</li> <li>-Tire not checked after previous puncture</li> <li>-Tire pressure too low</li> <li>-Spoke protruding into rim</li> </ul>	<ul style="list-style-type: none"> <li>-Replace Inner tube</li> <li>-Replace tire</li> <li>-Replace with correct tire</li> <li>-Remove sharp object embedded in tire</li> <li>-Correct tire pressure</li> <li>-File down spoke</li> </ul>

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