

USERS GUIDE

SW_H



Content

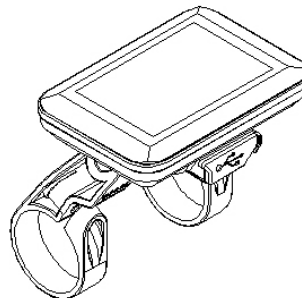
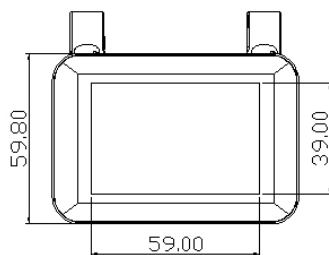
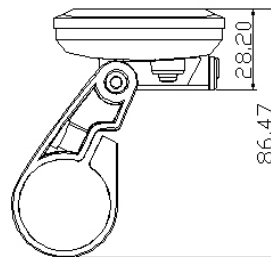
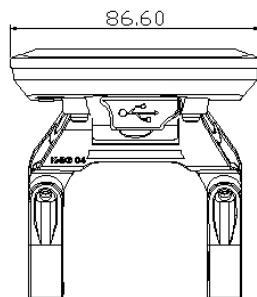
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1. Appearance and Size

1.1 Material and Color

SW-H products are made of black PC. Under the temperature of -20 to 60°C, the shell material can ensure normal usage and good mechanical performance.

Real product and dimension figure (unit: mm)



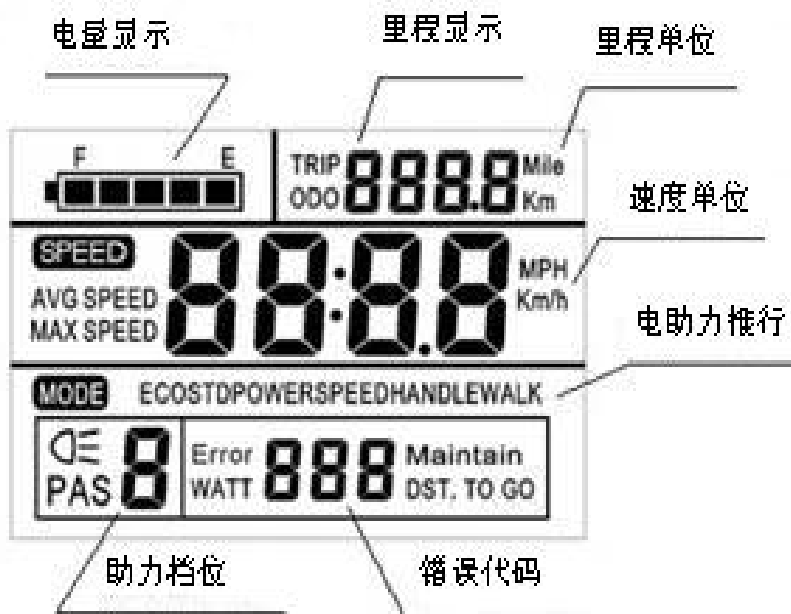
2.Function Summary and Button Definition

2.1 Function Description

SW-H provides a wild range of the functions and indicators to fit user's riding needs. The indicated contents are as following:

- ◆ Battery Indicator
- ◆ Motor Power Indicator
- ◆ Speed Display (including running speed, max speed and average speed)
- ◆ Distance(including single trip distance and ODO display)
- ◆ Single trip time display
- ◆ Walk assist function display
- ◆ Backlight on
- ◆ Error Code Indicator
- ◆ Multiple setting parameters
- ◆ Mobile phone charging

2.2 Monitor Area

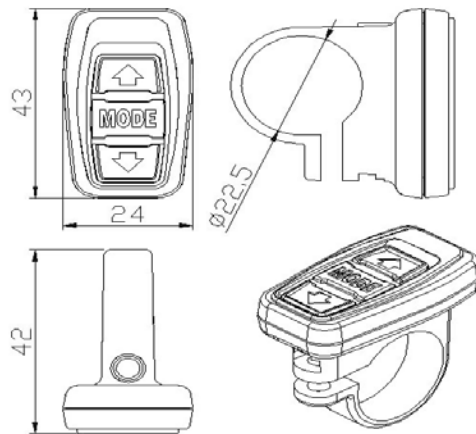


SW-H LCD normal display interface




2.3 Button Definition

SW-H is equipped with special 30 keys or N3 keys. The buttons can be installed on the left side of the handlebar or on the right side of the handlebar.

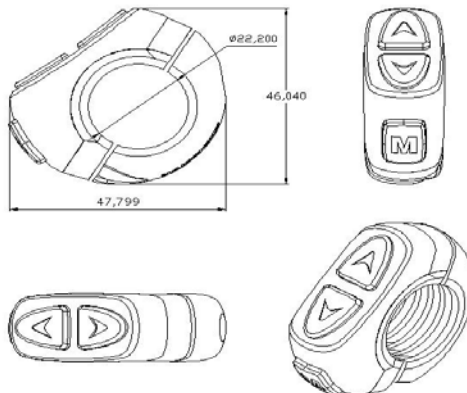
30 buttons shape is as follows:






30-button is connected to SW-H display bottom via lead wire

In the following instructions, the key  is named as **MODE**. The key  is named as **UP**, and the key  is named as **DOWN**.

The shape of N3 button is as follows:



N3 key is connected with the bottom lead of SW-H display

In the following description, the key  is named as **MODE**.The key  is named as **UP**, and the key  is named as **DOWN**.

3.Note for Users

Be care of the safety use. Don't attempt to release the connector when battery is on power.



Try to avoid hitting.



Don't split the waterproof sticker to avoid affecting the waterproof performance.



Don't modify system parameters to avoid parameters disorder.



Make the display repaired when error code appears.

4. Installation Instructions

Fix the display onto the handlebar and adjust to an appropriate visual angle when power off the E-bike, to plug the connector of the display with the connector corresponding to the controller to complete the installation.

5.Operation Instructions

5.1 Power On / Off

Long hold **MODE** button, the display will power on, also power on the controller. When the display on, hold **MODE** for a while to turn off power supply of the e-bike. When the display off, the display will not use any power from battery. The leakage current is less

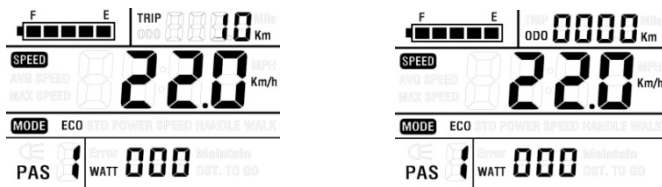
than 1 uA.



When not using e-bike for more than 10 minutes, the display will turn off automatically.

5.2 User Interface

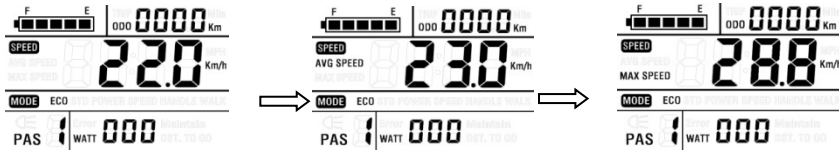
After the display powers on, it will show the current default speed. Then press the **MODE** button for a short time to switch the display information. The sequence of display is: Odometer (Km/h)→ Single trip distance (Km/h) → Odometer (Km/h)



Single trip distance

Odometer

Press **MODE** and **DOWN** button for a long time to switch the display information, the sequence of display is: Real-time speed (Km/h) → Average speed of this trip (Km/h) → Maximum speed of this trip (Km/h) → Real-time speed (Km/h)



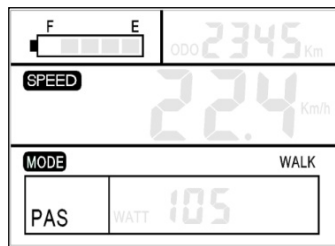
Real-time speed

Average speed of this trip

Maximum speed of this trip

5.3 Walk Assist

Hold **DOWN** button for 3 seconds to enter the mode of walk assistant. The e-bike will go on at speed of 6 Km/h.



Walk assist mode interface

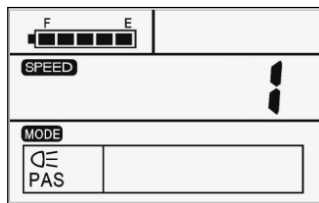


The walk assist mode can only be used when the user is pushing the E-bike. Do not use it when riding.

5.4 Turn on Backlight

Press the **UP** and **MODE** button for 3 seconds to turn on the backlight of the SW-H. When the external light is insufficient or riding at night, user can turn on the LCD backlight. To press the **UP** and **MODE** button for 3 seconds again to turn off the backlight.

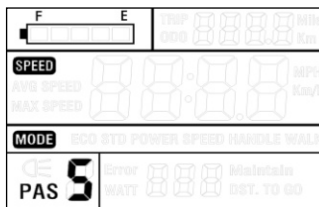
The headlights are turned on (if there are headlights on the e-bike),While the backlight is turned on; Which the function is added according to customer's requirements.



Backlight indicator

5.5 PAS Level Selection

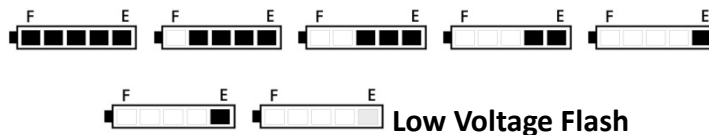
Hold **up** or **DOWN** button for a short time to switch the the PAS level, to change the output power of the motor. The display default output power range is 1-5, and the display default power-on level is level 1.



Walk assist mode interface

5.6 Battery Indicator

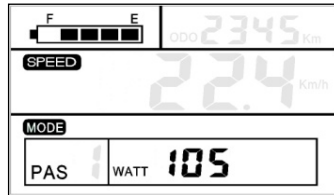
The 5 battery bars represent the capacity of the battery. When the battery voltage is high, the battery frame is all on. When the battery is in low voltage, battery frame will flash to notify that the battery needs to be recharged immediately.



Battery indicator

5.7 Power Display

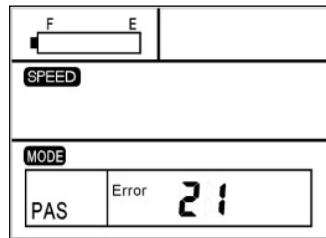
The display can show the output power of current motor, the motor power showed as below:



Motor power output indicator

5.8 Error Code Information

When the E-bike electric system fails, the display will show the error code automatically. The detailed information of the error code to see Appendix list.



Error code indicator



Only after the fault is eliminated, the error code interface can be cleared, the E-bike will not be able to ride when error code occurs.

6. User Settings

Long Press **MODE** button to turn on the display, then hold both **UP** and **DOWN** button for 2 seconds to enter the setting menu.

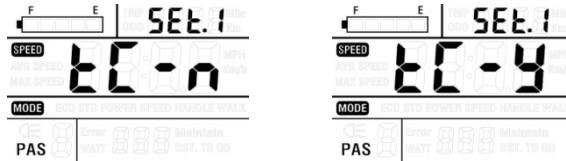
6.1 Single Trip Distance and Trip Time Clearance

According to customer's different needs, there are two ways to choose single trip distance clearance.

Method one:

TC means Single trip distance clearance, the setting parameter can be **N / Y**. The default setting **N** means the single trip distance is not cleared. **Y / N** can be selected by pressing the **UP** and **DOWN** button. **Y** means the single trip distance needs to be cleared, and **N** means the single trip distance does not need to be cleared.

Single trip distance and trip time clearance at the same time



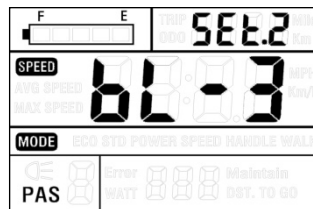
Single trip distance clearance interface

Method two:

Short press **MODE** to switch the trip display mode to single trip display, press and hold the **MODE** and **DOWN** keys for 3 seconds at the same time to clear the single trip distance and single riding time.

6.2 Backlight Brightness Setting

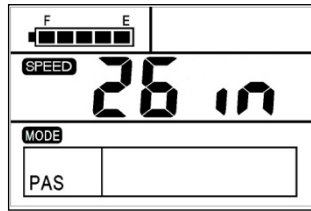
BL means backlight. Setting option levels are **1, 2 and 3**, is to indicate backlight brightness. The default level is 1. Press **UP** or **DOWN** to modify the backlight brightness. Level 1 is the lowest brightness. Level 3 is the highest brightness.



Backlight Brightness Setting interface

6.3 Backlight Brightness Setting

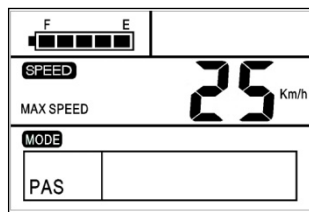
The setting option values are: 16, 18, 20, 22, 24, 26, 700C, 28 and 29. Press **UP** and **DOWN** to select the value. Select the wheel diameter corresponding to the E-bike to ensure the accuracy of speed and distance display. Default value is 26 inch.



Wheel size setting interface

6.4 Speed Limit Setting

The default maximum riding speed setting of the display is 25Km/h. Changing this value can set the maximum riding speed of the E-bike. When the electric power exceeds the setting value, the controller will stop supplying power to the motor to protect the safe driving of the rider. The maximum speed setting value can be selected from 12Km/h to 40Km/h. You can modify by pressing **UP/DOWN** button.



Speed limit setting interface



Note: According to the requirements of local laws and regulations, the default speed limit value can be customized or set to be non-adjustable by users.

6.5 Exit Setting

In the personalized parameter settings state, short press **MODE** button to confirm the input and enter into next setting; long press **MODE** button for saving the setting, then quit the setting state. Long press **DOWN** button to cancel the operating but not saving the setting data.

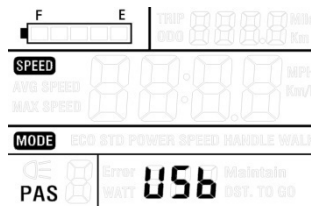


Note: If there is no any operating in one minute, display will exit the setting state automatically.

7.USB Charging Function

Display with USB interface, which provides charging power for mobile phone and outputs 5VDC/500mA. When the display is off, to connect the mobile phone's data cable. At this time, the display will show "USB" every 3S, indicating that the phone is charging. If the display is turned off at this time, the USB interface still provides the charging function of the mobile phone. In any state, if you unplug the phone, the charging will be terminated automatically.

If you plug in a mobile phone after turning on the display, the display will not activate the charging function by default setting. At this time, press **UP**, **DOWN** and **MODE** simultaneously for 3 seconds, the display will show the program number, while the charging function will be activated.



Mobile phone charging interface

8. FAQ

Q: Why can't turn on the display?

A: Please check whether the battery is turned on or the leakage lead wire is broken

Q: How to deal with the error code display?

A: Contact the e-bike maintenance station in time.

Q: The display flashes "30", and why the e-bike cannot work?

A: Which means that the communication between display and controller is abnormal.

Firstly to check the following three points.

1. Whether the sequence of the connection cable between the display and the controller is correct, whether it is loose or broken;

2. Whether the communication protocol between the display and the controller is consistent;

3. If possible, to replace the display and controller separately. After that, if the display can begin to work, which means that the replaced parts may have an unexpected failure.



After above checking, If the issue still can not be solved, please send it out for repair or contact the e-bike maintenance in time:

9. Quality Assurance and Warranty

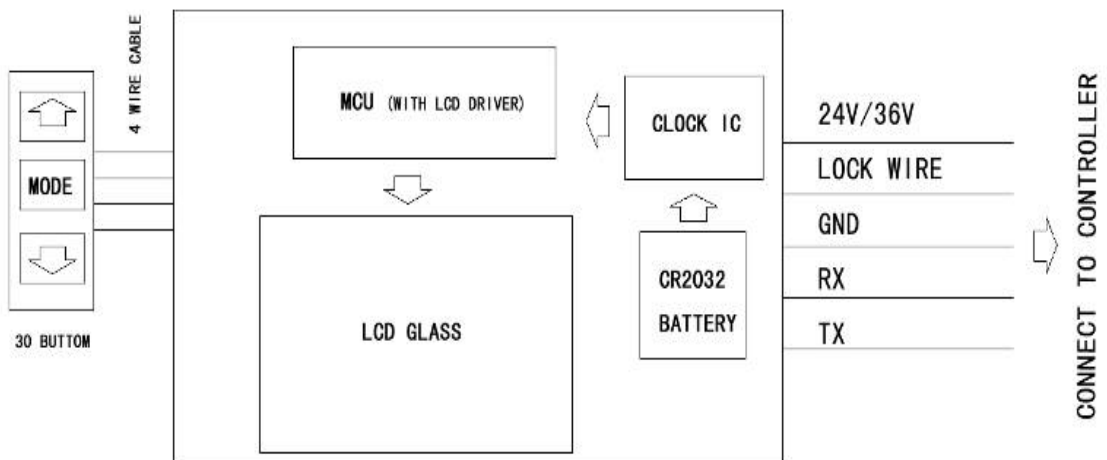
一、 Warranty information

- 1, Any quality problems in normal case and during guarantee period, our company will be responsible for the warranty.
- 2, The warranty time is 24 months when display is out of the factory.

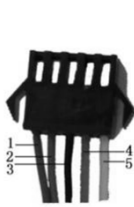
二、 Other items beyond warranty

- 1, Shell opened.
- 2, Connector damaged.
- 3, After display out of factory, the shell is scratched or damaged.
- 4, Lead wire of display scratch or break.
- 5, The fault or damage is caused by the force majeure (such as fire, earthquake, etc.) or natural disasters (such as lightning, flooding, etc.)
- 6, Product exceeded warranty period.

10. Connection Layout



Standard connector cable sequence



Controller's terminal connector



Display outlet



Terminal cable

Table: Cable sequence table of standard connectors

Standard cable sequence	Standard cable color	Function
1	Red (VCC)	Display power cable
2	Blue (K)	Controller power cable
3	Black (GND)	Display ground cable
4	Green (RX)	Display data receiving cable
5	Yellow (TX)	Display data transmission cable

Note: The wire leads of some products adopts waterproof connectors, and users cannot see the color of the wire leads in the harness.

11.Version

This display manual is the general software version (version 1.0) of Tianjin King-Meter Technology Co., Ltd. When there is slight difference between this software version during using e-bike and this manual, which should depends on the actual use version.

Appendix 1: Error Code Definition

Error Code	Definition
21	Current Abnormal
22	Throttle Abnormal
23	Motor phase problem

24	Motor Hall defect
25	Brake Failed
30	Abnormal Communication

KING-METER