B02NU Instrument specification

amendant record

version	Revisers	Revision date	revise content	remarks		
v1.0	Weiyahui	2025.5.23	Initial version			

catalogue

notes:

    1、 Due to the upgrade of our products, the display content of the products you obtain may be different from that in the manual, but it will not affect your normal use.

    2、 Do not plug and unplug with power on. Power on and unplug may damage the electronic control accessories.

一. product presentation
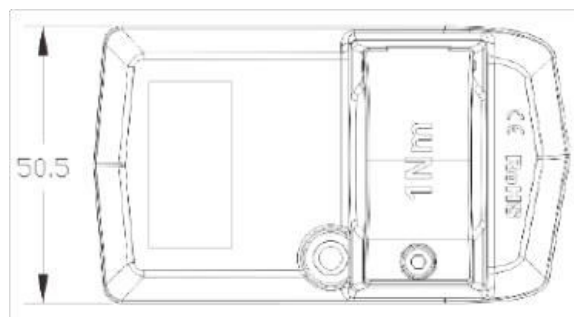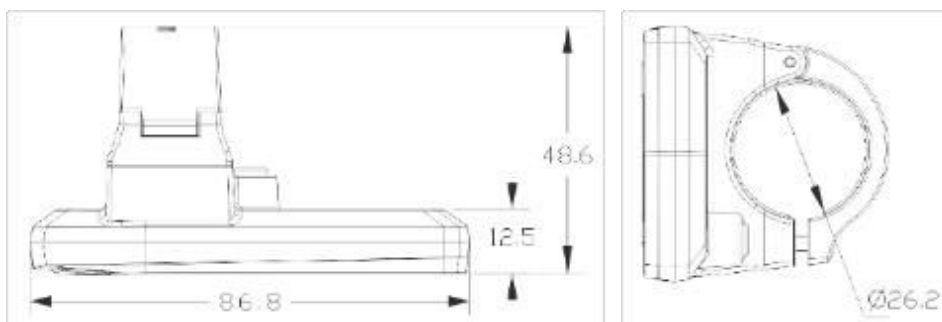
1. name

E-BIKE instrument

2. product model
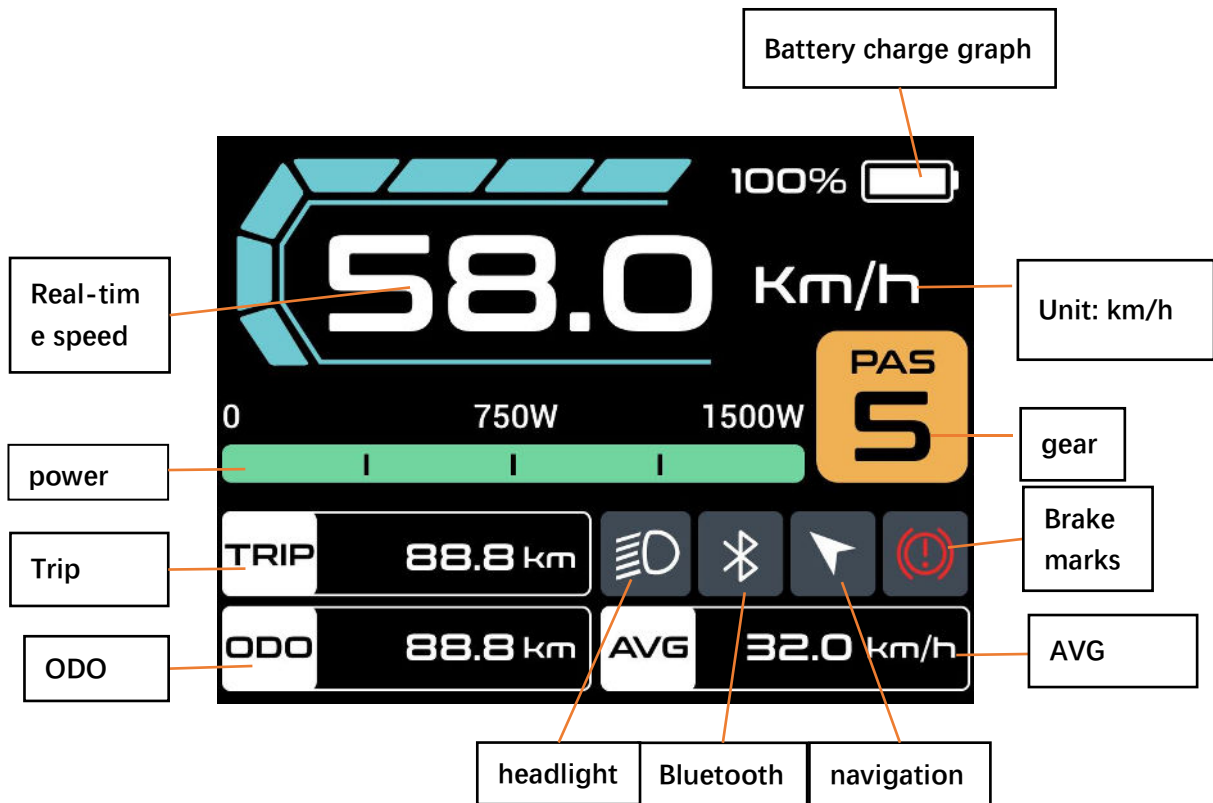
B02NU-SYZN

3. product appearance

4. size of product

Standard parameters		
size	Length * width * height	86.8*50.5*12.5（mm)
	screen size	2.4''
	Adapt to the horizontal	22.2/26(mm)
screen	type	IPSFull view screen
	colour	RGB
	pixel	320*240px
junctor	type	M5 water joint
	length	20cm
Core data	working voltage	12v-60v
	working temperature	-20℃-+70℃
	classification of waterproof	IP67
	all up	67g
	protocol	UART/CAN
additional function	Bluetooth	4.0+BLE
	Type-C joggle	support
attestation	CE/ROHS/REECH	customizable

5.The main interface and navigation interface are displayed

Battery charge graph	
Real-time speed	Unit: km/h
power	gear
Trip	Brake marks
ODO	AVG
headlight	Bluetooth	navigation

1) Headlight indicator: The headlight indicator graphic will be lit when the headlights are on.

2) Navigation indicator: If the BIKEGO application is connected to the instrument, the symbol will light up when navigation begins. (Real-time navigation is paid for)

3) Maintenance tip: The electronic system has a certain ability to self-diagnose and report limited faults. Faults will be reported as error codes displayed on the screen.

4) Bluetooth indicator: The symbol will light up after the APP is successfully connected to the instrument.

5) Battery charge graph: battery level The graph is a graphical representation of the remaining charge in the battery. After charging, more bars will appear in the graph. When the battery is exhausted, fewer bars will appear.

6) Real-time speed: shows the current speed of the electric bike.

7) Gear indicator: Displays the current assist gear of the electric bicycle.

8) One-way mileage: the number of miles traveled in a single trip.

9) Total mileage: The total number of miles a vehicle has traveled.

When the mobile app connects to the Bluetooth of the instrument, enter the navigation interface and select the destination to start the guide The main interface of the flight is displayed as follows:
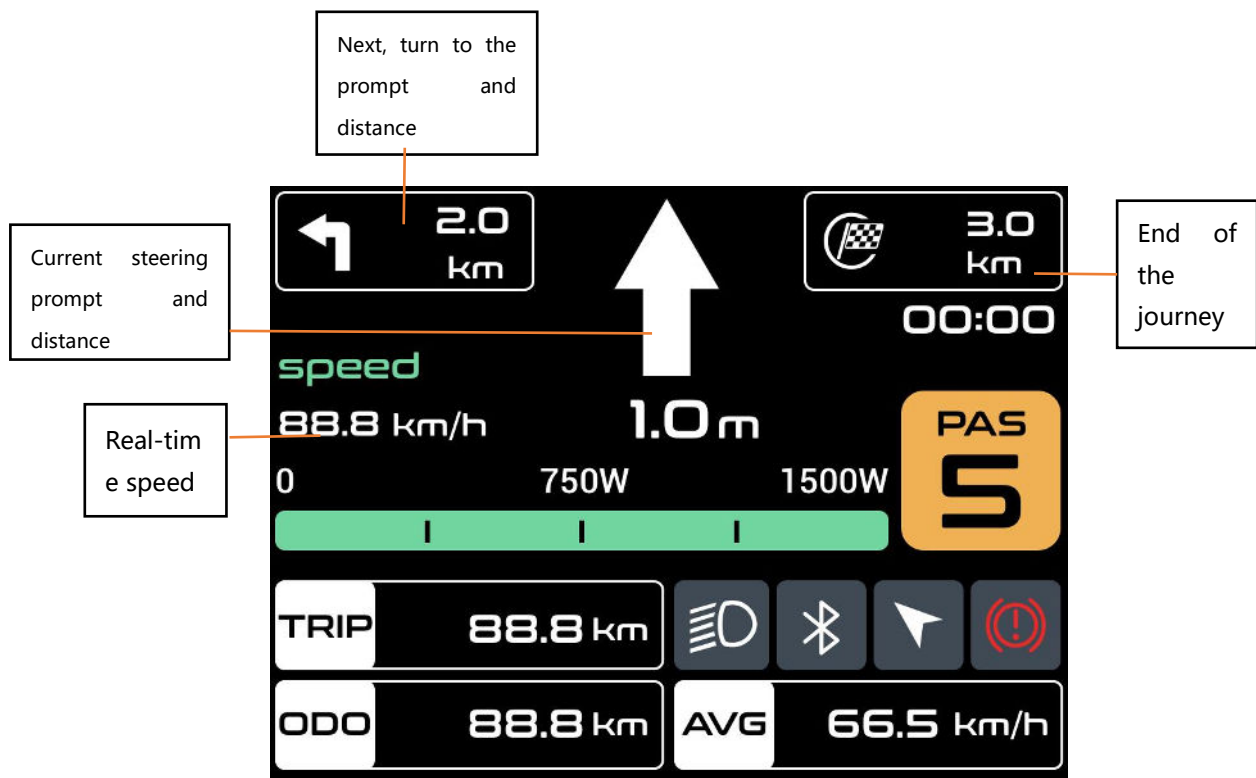
Next, turn to the prompt and distance

Current steering prompt and distance

End of the journey

Real-time speed

Current steering prompt and distance: current steering prompt and distance during driving

Next turn prompt and distance: next turn prompt and distance during driving

End distance: the total distance from the current location to the end

Synchronization time display: After connecting the meter, the phone time will be synchronized to the meter

6. Button definition

The B02NU instrument has three buttons, including the "Power key", "+ key" and "-key". The button definition is shown in the following figure:


7. General operations

① Turn on/off

After pressing the "power button" for a long time, the instrument is powered on. In the on state, pressing the "power button" for a long time can make the system power off. In the off state, the leakage current of the instrument is less than 1uA. The on interface is shown in the figure below.

② Gear level selection

After entering the main display screen, click "+" or "-" to increase or decrease the gear level and change the motor output power. The default gear of the instrument is 0-5 (customization supported); 0 gear has no power output, 1 gear is the lowest power, and 5 gear is the highest power.
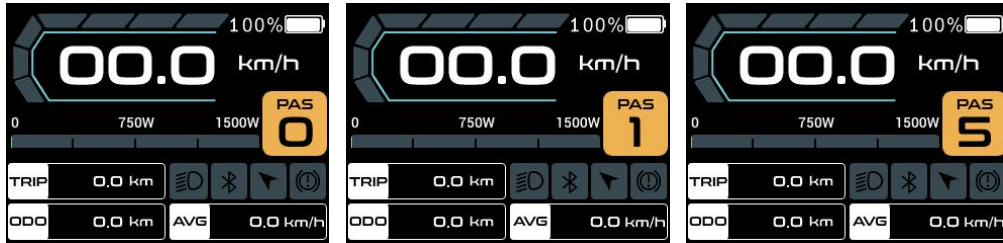
③ Headlight/backlight switch

Turn on the light: Long press the "+" key in the off state, the screen headlights logo will be brightened, and the controller will be notified to turn on the light.

Turn off the lights: In the on state, long press the "+" key. The headlights logo will not disappear, but become dark. At the same time, notify the controller to turn off the lights. The display interface of the headlights switch is shown in the following figure.
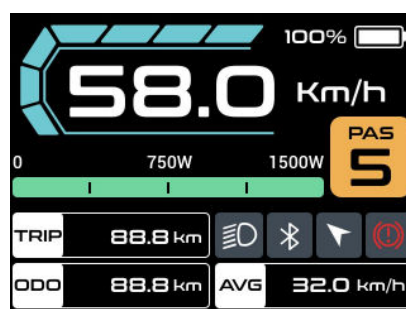
④ Boosting mode

Under any gear, long press "-" to enter the boost mode. The speed is 6km/h. When entering the boost mode, the icon "🚲" is static. Release the button "-" to exit the boost mode, and the boost icon "🚲" disappears and the speed returns to zero. The interface is shown below:

⑤ Speed limit / no speed limit switch

Speed limit mode: Fixed speed limit, which is fixed to 25km/h by default and cannot be modified. The speed limit in the advanced Settings menu cannot be modified either

Unlimited speed mode: Unrestricted speed. The default speed is 36km/h in this mode, which can be modified to other speed values. The speed limit in the advanced Settings menu can be modified

Under the main interface of the instrument, press the add/subtract button at the same time to enter the speed limit menu, and then press the power button to confirm the mutual switching between speed limit mode and no speed limit mode (default is no speed limit mode)

⑥ Reverse charging function

After the instrument is turned on, the Type-C interface of the instrument supports charging mobile phones and other devices. The interface specification is 5V 1A

二. Set the menu

Click the "Power button" to enter the Settings information list, use the "+" or "-" keys to move the cursor up and down, select"Display Setting",

"Information", "Language", "Themes", "Password", "Bluetooth", "Reset Factory"

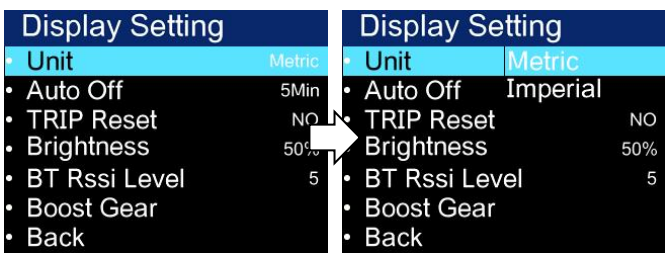and"Exit", Click the "Power button" to enter. The function selection interface is shown in the figure below.
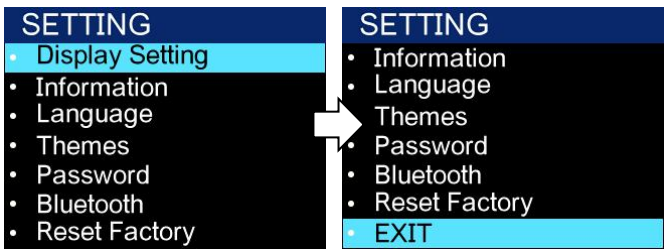
1. Display the menu

① Conversion between British and metric units

Enter the "Display Setting" menu, select "Unit," and click the "Power Button" to enter settings. After entering the settings, use the "+" or "-" keys to move the cursor up and down, select "Metric" / "Imperial," and click the "Power Button" to save and exit to "Unit." Exit to the main interface by pressing "Back" → "Exit." The unit conversion is shown in the following figure.

Note: The equipment is in default metric.

② auto shut off

Enter the "Display Setting" menu, use the "+" or "-" keys to move the cursor up and down, select "Auto Off", click the "Power Button" to enter the settings interface. The default automatic shutdown time is 5 minutes. Move the cursor to select "OFF", "1min", "2min", "3min", "4min", "5min",

"6min", "7min", "8min", "9min", "10min" (where "OFF" indicates turning off the automatic shutdown function, and "1min-10min" represents the automatic shutdown times). Click the "Power Button" to save and exit back to the "Display Setting" menu. Exit to the main screen by pressing "Back" → "Exit".

Note: When the instrument is connected to the BIKEGO APP via Bluetooth, the automatic shutdown function will be disabled; when the vehicle is in motion, the automatic shutdown function will also be disabled. The automatic shutdown time starts only after the vehicle has come to a stop; any operation during the automatic shutdown time will reset the timer, and the device will only shut down if the set time has elapsed without any operation.

③ Single mileage reset

Enter the "Display Setting" menu, use the "+" or "-" keys to move the cursor up and down, select "TRIP Reset", click the "Power Button" to enter settings. After entering the settings, move the cursor to select "NO" / "YES" ("YES" means reset, "NO" means no reset), click the "Power Button" to save and exit to "TRIP Reset". Exit to the main interface through "Back" → "Exit".

Note: A single zero will synchronize the removal of the avg data

④ Backlight brightness Settings

Enter the "Display Setting" menu, use the "+" or "-" keys to move the cursor up and down, select "Brightness," click the "Power Button" to enter settings. After entering the settings, move the cursor to select "30%" / "50%" / "75%" / "100%", short-press the "Power Button" to save and exit back to "Brightness." Exit to the main interface via "Back" → "Exit." The backlight settings are shown in the following figure.

⑤ BT RSSI Level——Bluetooth distance level setting

Bluetooth distance level: 1 is the closest, and the rest are in order of increasing, and 5 is the farthest.

Note: There are slight differences between different mobile phones

and environments.

⑥Boost Gear——Helps with the gear menu

You can switch between 3, 5 and 9 gears. The default is 5 gears. You can switch between 3 and 9 gears respectively. Return to the main interface and increase or decrease the gear by pressing + and-keys
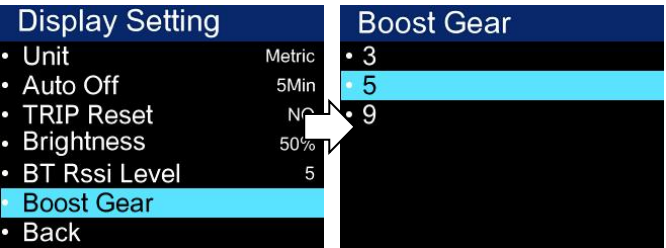
2.Information view

①Wheel diameter information

Enter the "Information" menu, use the "+" or "-" keys to move the cursor up and down, select "Wheel Size", click the "Power button" to enter the Settings. The wheel diameter is set to 26Inch by default, and the range can be set from 16Inch to 29Inch. After setting, exit to the main screen by pressing "Back" → "Exit". As shown in the following figure:
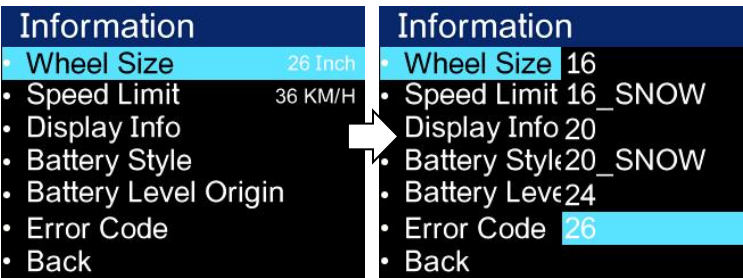

②Speed limit information

Enter the "Information" menu, when the unit is km, the default speed limit is 36km/h. Click the "Power button" to enter the Settings, 0-100km/h

is optional, click the "Power button" to confirm and return to Information, exit to the main interface through "Back" → "Exit". As shown in the following figure:

Information
- Wheel Size   26 Inch
- Speed Limit   36 KM/H
- Display Info
- Battery Style
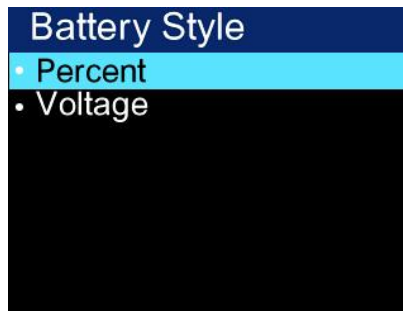- Battery Level Origin
- Error Code
- Back

③Instrument information

Enter the "Information" menu, use the "+" or "-" keys to move the cursor up and down, select "Display Info", click the "Power button" to confirm, the instrument interface displays the software and hardware version number of the instrument (the software and hardware version number may change due to different batches of products), exit to the main interface through "Back" → "Exit". As shown in the following figure:

Display Info
Back
SW:B02NU_SYZN_02_BF_N06
HW:B02NU_V1.01
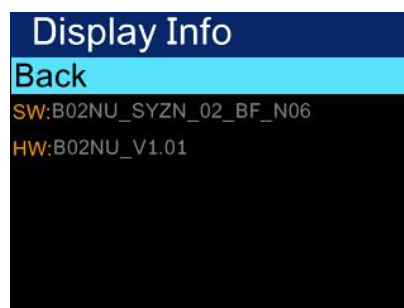
④Battery display style

Enter the "Information" menu, use the "+" or "-" keys to move the cursor up and down, select "Percent (Percentage)" or "Voltage (Voltage)". Exit to the main interface by pressing "Back" → "Exit". Select "Percent" for the battery icon on the left side of the main interface to display the percentage of charge, or select "Voltage" for the battery icon on the left side of the main interface to display the voltage.

⑤Battery power source

Enter the "Information" menu, use the "+" or "-" keys to move the cursor up and down, select "Battery Level Origin"; click to enter the default CON report power, which can be set separately at 36v-48v-52v; switch to different voltage settings, and the corresponding power display is shown on the main interface.

⑥Fault code

Enter the "Information" menu, use the "+" or "-" keys to move the cursor up and down, select "Error Code", then exit to the main interface via "Back" → "Exit". "E-CODE 0" represents the last error message, while "E-CODE 4" represents the fifth previous error content. This record can hold up to five entries; an error code of "00" indicates no error. For other codes, refer to the error code definition table as shown in the following figure:

3.language selection

The B02NU instrument offers 10 languages for users to choose from. Click the "Power Button" to enter the settings list, use the "+" or "-" keys to move the cursor up and down, select "Language," click the "Power Button" to enter the language selection interface, move the cursor to switch between English, German, Dutch, French, Italian, Spanish, Czech, Vietnamese, Russian, and Simplified Chinese; then short-press the "Power Button" to confirm. Exit to the main interface by pressing "Back" → "Exit." The language selection is shown in the following figure:

4.The main menu

The B02NU instrument offers four different styles of themes for users to choose from. Click the "Power Button" to enter the settings list, use the "+" or "-" keys to move the cursor up and down, select "Themes," click the "Power Button" to enter, then use the "+" or "-" keys to switch between "Theme1" - "Theme2" - "Theme3" - "Theme4," and short-press the "Power Button" to confirm. Exit to the main interface by pressing "Back" → "Exit." The UI selection is as shown in the following figure:
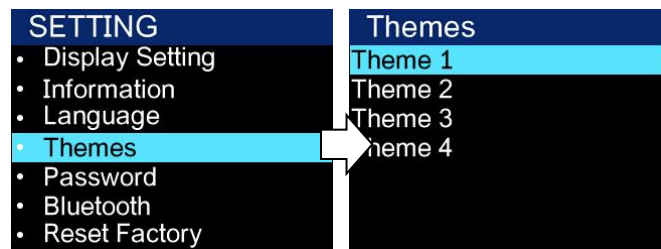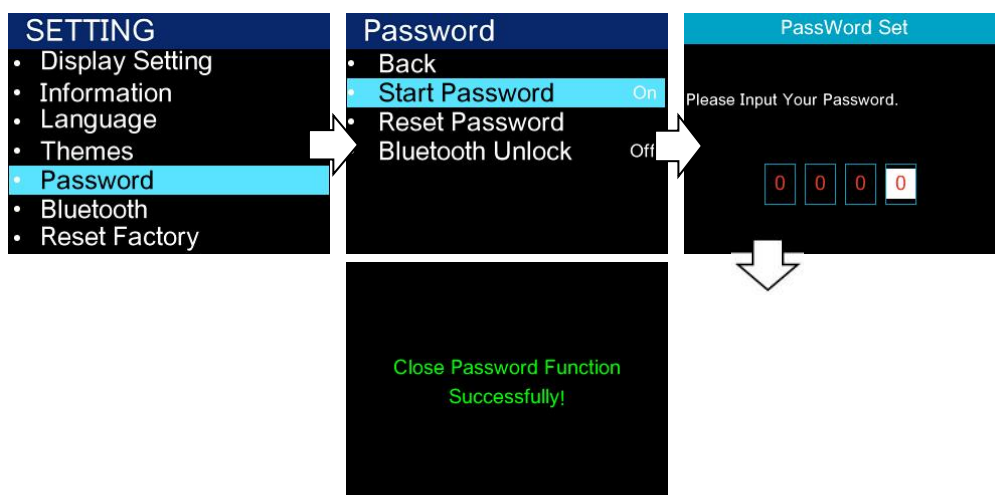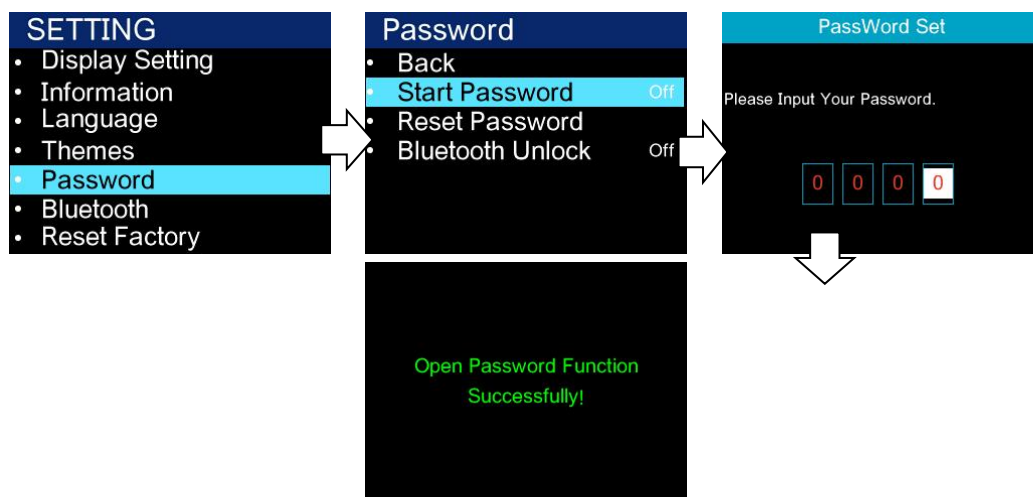
5.Password Settings

①To disable the password function: —— Click the "Power Button" to enter the settings list. Use the "+" or "-" keys to move the cursor up and down, select the "Password" option, then click the "Power Button" to confirm. Enter the Password options interface. Select "Start Password" (the Start Password state is on) and click the "Power Button" to confirm. The interface will prompt you to enter a password. At this point, use the "+" or "-" keys to switch between the digits "0-9," and click the "Power Button" to change the number. After completing the input, the system will prompt you to disable the password function. Once the password is successfully removed, the interface will automatically revert to the original settings page. Exit to the main screen by pressing "Back" → "Exit." The operation steps are shown in the following figure.

②To enable the password function: —— Click the "Power Button" to enter the settings list. Use the "+" or "-" keys to move the cursor up and down, select the "Password" option, and click the "Power Button" to

confirm. Enter the Password options interface. Select "Start Password" (the Start Password state is off) and click the "Power Button" to confirm. The interface will prompt you to enter a password. At this point, use the "+" or "-" keys to switch between the numbers "0-9," and click the "Power Button" to confirm the number in the current cursor position. After completing the input, the system will prompt that the password function has been successfully enabled. Once the password function is set up, the interface will automatically revert to the original settings page. Exit to the main screen by pressing "Back" → "Exit." The operation steps are shown in the following figure.

③Set and modify the password —— Click the "Power button" to enter the Settings information list, use the "+" or "-" keys to move the cursor up and down, select the "Password" option and click the "Power button" to confirm, enter the Password option interface, select the "Reset Password" with the cursor and click the "Power button" to confirm,

1、 The interface prompts "Please enter your old password", at this time, use the "+" key or "-" key to switch the number "0-9", click the "power button" to switch the number,

2、 After the input is complete, the interface prompts "Please enter your password". At this time, use the "+" key or "-" key to switch the

number "0-9", and click the "power button" to switch the number,

3、 After the input is complete, the interface prompts "Please confirm your password". At this time, use the "+" key or "-" key to switch the number "0-9", and click the "power button" to switch the number,

Note: After the initial password is changed, if you want to open the instrument password function, you need to enter a new password to open it. Do not change the initial password unless necessary

After the password is successfully changed, the interface will automatically jump to the original setting interface. Exit to the main interface through "Back" → "Exit". The operation steps are shown in the following figure.
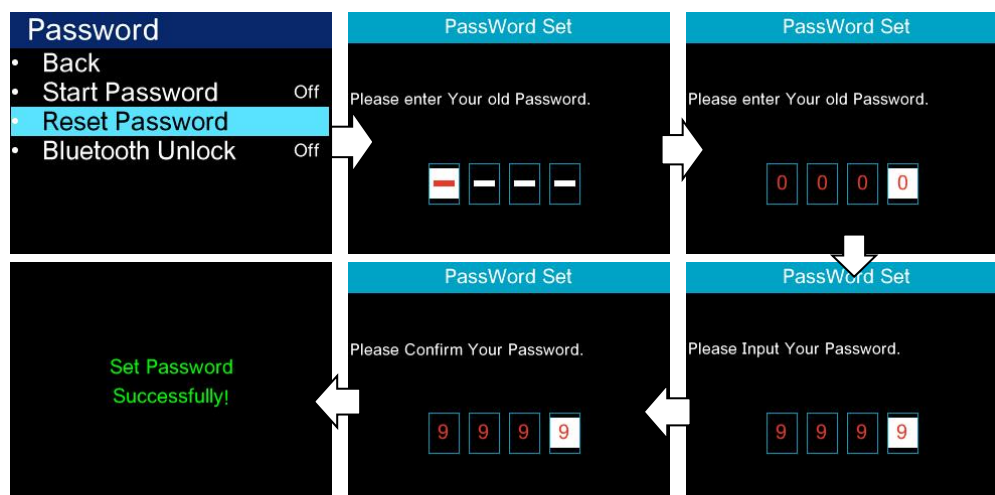
③ Bluetooth lock Settings (Bluetooth unlock is off by default)

Click the "Power Button" to enter the settings information list. Use the "+" or "-" keys to move the cursor up and down, select the "Password" option, then click the "Power Button" to confirm. Enter the Password option interface, and select "Bluetooth Unlock" with the cursor. Click the "Power Button" to enter the settings. After entering the settings, click the "+" or "-" key to choose "On" / "Off" ("On" means enable Bluetooth lock, "Off" means disable Bluetooth lock). Click the "Power Button" to save the state. When Bluetooth lock is enabled without

connecting to a mobile app, a Bluetooth QR code interface will pop up. After successful binding, it will return to the "Password" interface. Exit to the main screen by pressing "Back" → "Exit". The operation steps are shown in the following figure:

Note: To use the Bluetooth automatic lock release function, you need to enable the password function and set the Bluetooth lock switch to on

6.bluetooth connection

Click the "Power Button" to enter the settings information list. Use the "+" or "-" keys to move the cursor up and down. Select the "Bluetooth" option and click the "Power Button" to confirm. Enter the Bluetooth QR code interface. You can scan this QR code with your phone's APP to bind devices. After binding the device, the device interface will automatically switch to the main interface, and the Bluetooth function indicator will light up. The operation steps are shown in the following figure.

7. factory data reset；restore factory setting

This function only restores the backlight level, light sensitivity

level (if applicable), Bluetooth distance level, language, theme (if applicable), and password menu to their factory settings; other parameters are not restored. Select the "Restore Factory Settings" menu, click the "Power Button" to enter the factory reset interface. Choose confirm, short press the "Power Button," and the instrument will restart and return to its factory settings; choose cancel, short press the "Power Button," and you will return to the previous menu, as shown in the following figure:
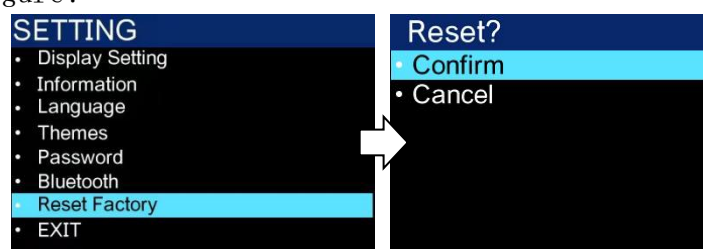
8. Fault code explanation

BF Fault code			
order number	Status number occupy	Error code	meaning
1	0X01	blank	whack
2	0X03	blank	Brake
3	0X04	Error 04	The power-on detection of the controller indicates that the signal level of the steering wheel is greater than the start-up level
4	0X05	Error 05	Short circuit the throttle signal to the throttle GND, short circuit the throttle signal to the throttle +5V, and disconnect the throttle GND
5	0X06	blank	The battery voltage is lower than the low pressure protection valve value of the controller
6	0X07	Error 07	The battery voltage is higher than the low pressure protection valve value of the controller
7	0X08	Error 08	Motor Hall signal is abnormal
8	0X09	Error 09	Motor phase short circuit or open circuit
9	0X10	Error 10	The motor temperature reaches the

			protection threshold
10	0X11	Error 11	The motor temperature sensor is abnormal
11	0X12	Error 12	The current sensor is abnormal
12	0X13	blank	The temperature sensor in the battery is abnormal
13	0X14	Error 14	The controller temperature reaches the protection threshold
14	0X15	Error 15	The temperature sensor in the controller is faulty
15	0X21	Error 21	The internal and external speed sensors in the battery are abnormal
16	0X22	blank	The controller does not receive the battery pack BMS data
17	0X23	blank	The headlights are abnormal
18	0X24	blank	The headlights sensor is abnormal
19	0X25	Error 25	Torque sensor torque signal is abnormal
20	0X26	Error 26	The torque sensor speed signal is abnormal
21	0X30	Error 30	The instrument does not receive data from the controller