

B02 intelligent display instrument manual



Contents

FIRST, THE PRODUCT INTRODUCTION.....	3
1. NAME.....	3
2. PRODUCT MODEL.....	3
3. PRODUCT APPEARANCE	3
4. PRODUCT SPECIFICATIONS.....	3
5. THE MAIN INTERFACE IS DISPLAYED.....	5
6. BUTTON DEFINITION.....	8
7. GENERAL OPERATIONS	8
2. INFORMATION VIEWING AND SETTING.....	11
1. DISPLAY SETTINGS.....	11
2. INFORMATION VIEWING	14
3. LANGUAGE SELECTION.....	15
4. THEME MENU	16
5. PASSWORD SETTINGS	16
6. BLUETOOTH CONNECTION	19

First, the product introduction

1. Name

Smart display controller.

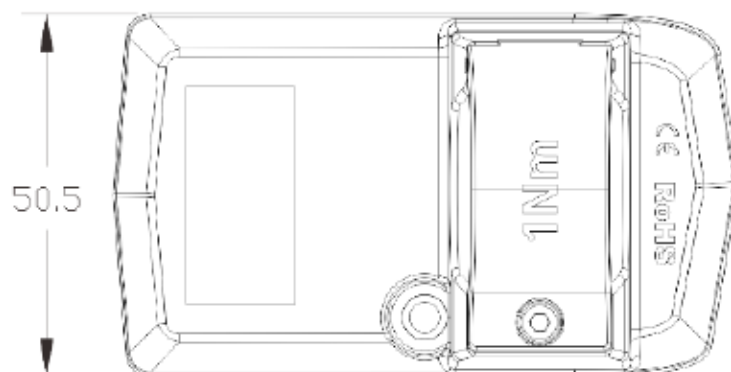
2. Product model

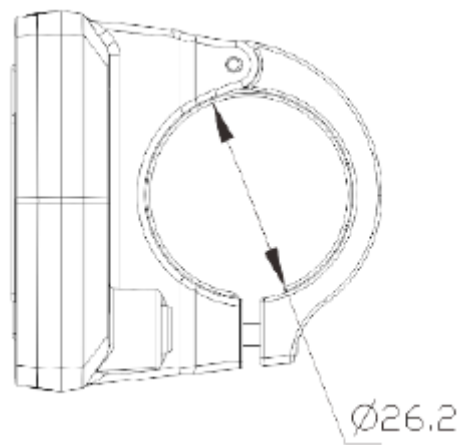
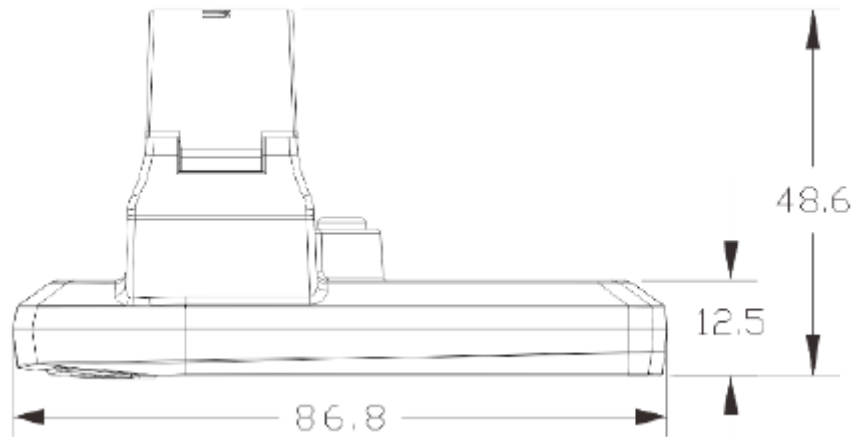
B02

3. Product appearance



4. Product specifications

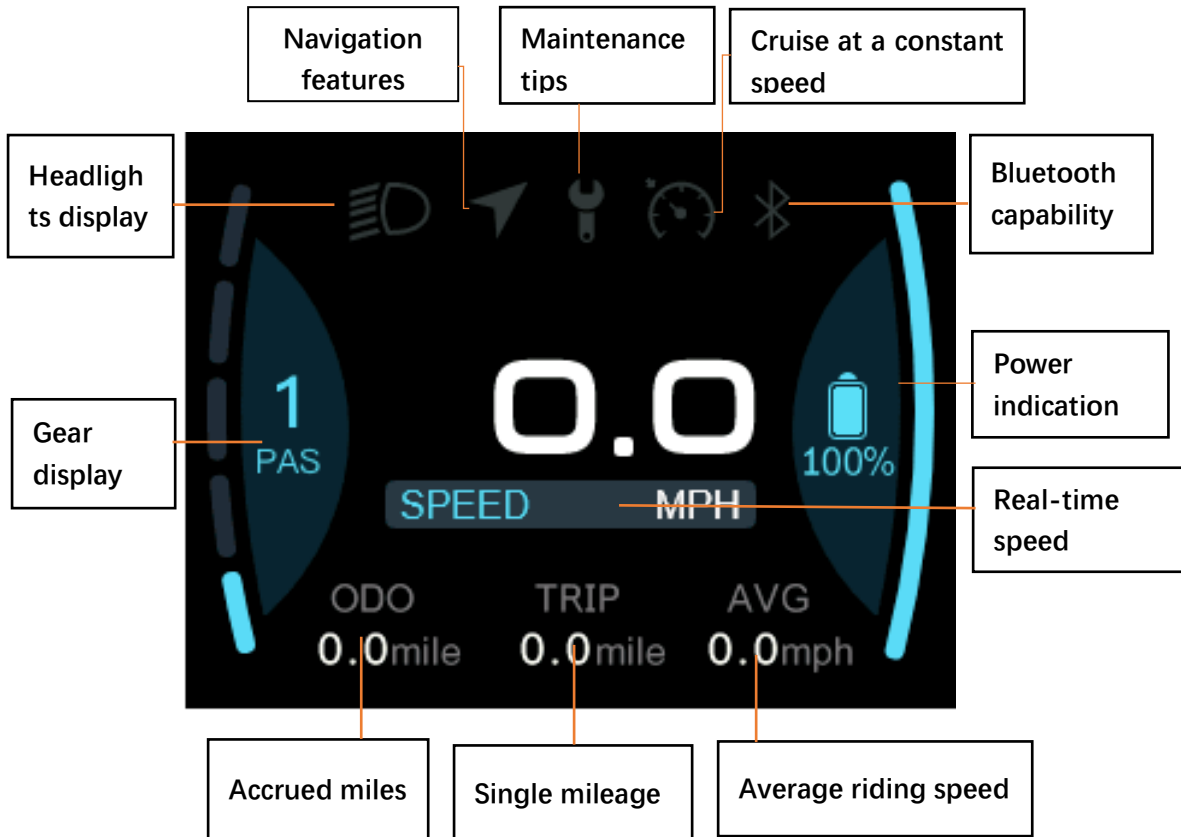




General Parameters

Dimensions	Length*Width*Height	86.8*50.5*12.5 (mm)
	Screen Dimensions	2.4"
	Handlebar Adaption	22.2/26 (mm)
Screen	Type	IPS
	Color	RGB
	Resolution	320*240px
Connector	Type	M5 Waterproof Connector
	Length	20 cm
General Feature	Voltage	12V/32V/48V/60V
	Working Temperature	-20 °C - +70 °C
	Waterproof Grade	IP67
	Weight	67g
Other Feature	Communication Protocol	UART/CAN
	Bluetooth	4.0 + BLE
	Type-C interface	Optional
Certification	CE / RoHS / REACH	Support Customization

5. The main interface is displayed



① Headlight display: headlights on/off state, display logo when the system headlights are lit;

② Navigation function: The mobile phone application is connected to the display, and the status bar logo lights up when the navigation starts (*real-time navigation requires a fee*).

③ Maintenance tips: reminder signs when the vehicle breaks down and needs regular maintenance;

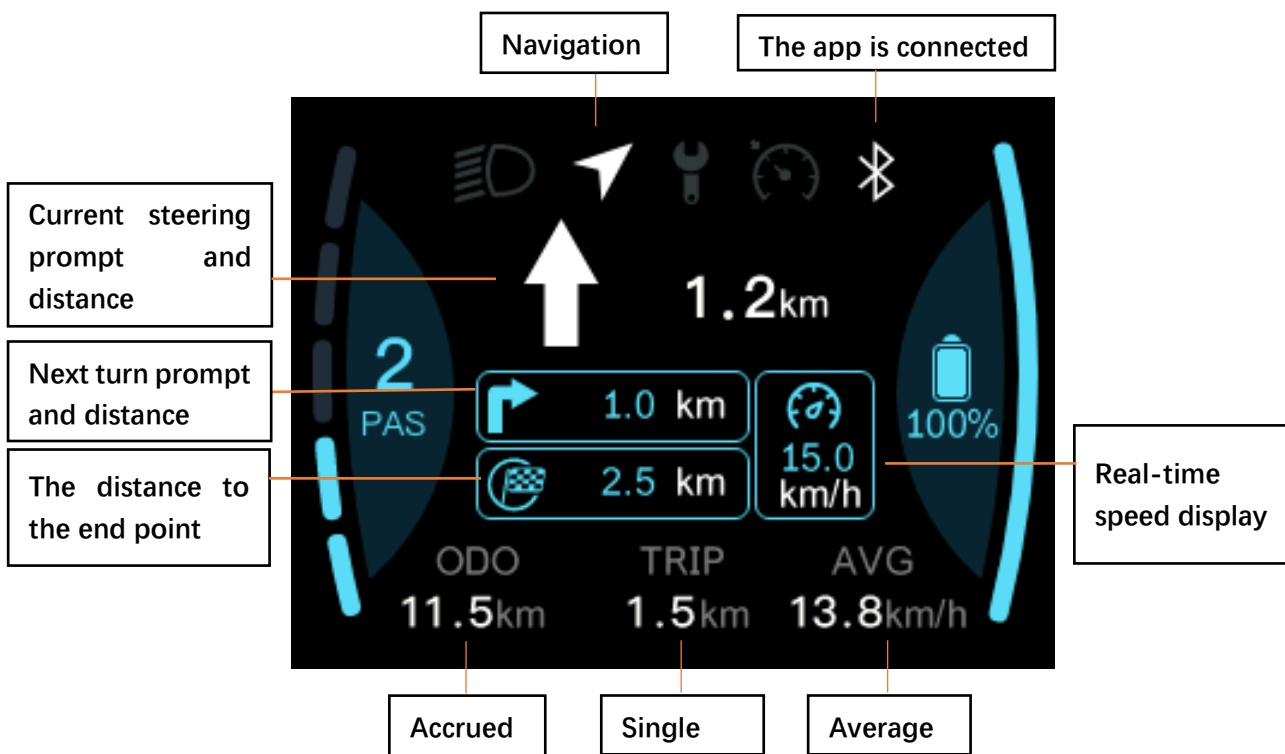
④ Cruise Control: The icon lights up when the vehicle enters cruise at a constant speed

⑤ Bluetooth function: After the mobile phone application successfully connects to the display, the Bluetooth logo lights up;

⑥ Power Alert: Prompt real-time power;

- ⑦ Real-time speed display: real-time speed value of the vehicle;
- ⑧ Gear display: current gear;
- ⑨ Single mileage: the number of miles for this ride;
- ⑩ Accumulated Mileage: The number of miles accumulated
- ⑪ Average riding speed: Displays the average riding speed of this time;

When the mobile phone **application connects the Bluetooth of the display, selects the destination to start navigation after entering the navigation interface, the main interface display changes as follows (real-time navigation requires a fee):**



Navigation icon: The icon lights up to indicate that it is now in the navigation interface

Bluetooth icon: The phone app has the display connected

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

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

End Distance: A hint of the total distance from the current location to the end point

6. button definition

The Type B02 display has 3 buttons. Includes "Switch button "Switch key"⊕, "Plus key+", "Minus key -". The key definition is shown in the following figure:



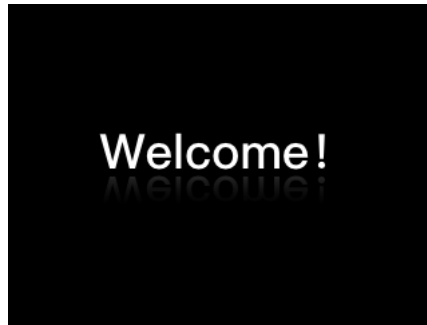
7. General operations

B02 type display provides 4 kinds of theme style UI and 3 Chinese for users to set, this datasheet is Theme1, The English version is illustrated by example.

"Press and hold the key>2.5S" is replaced by "Long press", "Hold down the key<0.5S" is replaced by "Click".

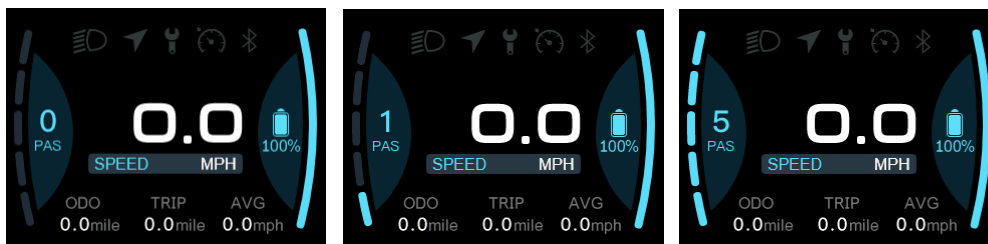
① On/off

After long pressing the "switch button",⊕ the instrument is powered on and working, and in the boot state, long press the "switch button"⊕ to power down the system. In the shutdown state, the leakage current of the display is less than 1uA. The boot interface is shown in the following figure. (You need to enter the password before entering the main interface, the initial password defaults to 0000).



② Power gear selection

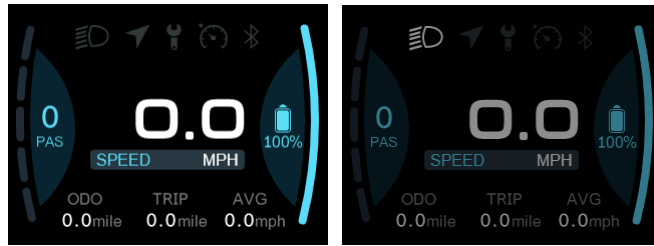
After entering the main interface, click the "+" button or "-" button to switch the power boost gear, change the motor output power boost, the default gear of the instrument is 0--5 gears (or according to the order requirements), no power output at 0 gears, 1 Gear is the lowest power and 5th gear is the highest power. The display defaults to Variable 0 when powered on. The power gear selection interface is shown in the following figure.




③ Headlight/backlight switch

On the light: Long press the "+" key when the light is off, the screen headlight logo lights up, and the brightness of the instrument is dimmed.

Turn off the lights: Long press the "+" key in the light state, the screen headlight logo does not disappear, the gray display, the headlight switch display interface is shown in the following figure.



④ Booster mode



When the car is stationary, click the "-" button to 0 gear, click the "-" key again to display the static boost logo" and "press the "-" key again  to enter the boost mode. The booster interface is shown in the following figure.

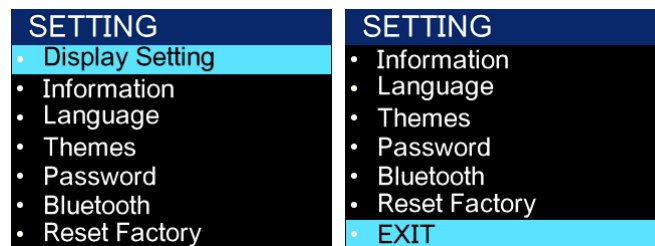


In the push mode, the boost logo is dynamically displayed, the vehicle speed is less than 6km/h, the push state is stopped, the screen boost logo disappears and the static boost logo state is restored. Under static boost, no button press within 5s is automatically adjusted to 0 gear.



2. Information viewing and setting

1. Display settings

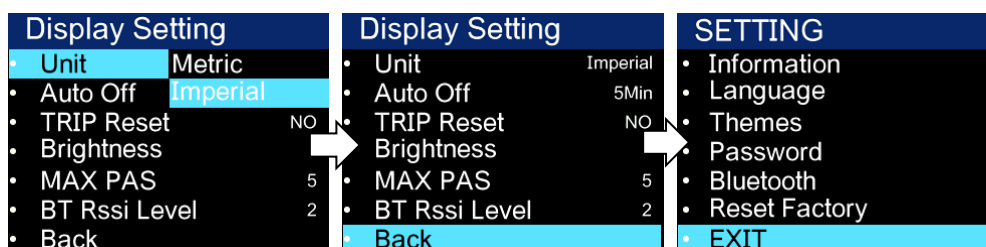
Click the "" key  to enter the list of setting information, use the "+" key or the "-" key to move the cursor up and down, select "Display Setting", "Information", "Language", "Themes", "Password", "Bluetooth", "Reset Factory" and "Exit", click ""  to enter. The function selection interface is shown in the following figure.



① Imperial and metric unit conversion

Go to the "Display Setting" menu, check "Unit", click "" to enter the settings, after entering the settings use the "+" key or the "-" key to move the cursor up and down, select "Metric /"Imperial", click "" to save and exit to "Unit", via "Back" → "Exit" Exit to the main interface. The unit conversion is shown in the following figure.

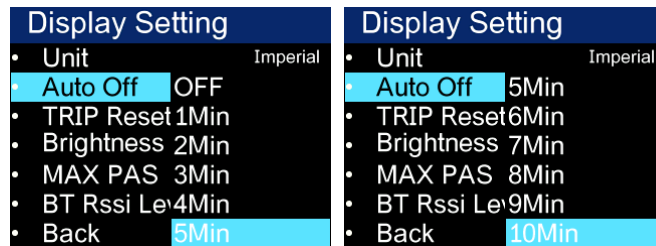
Note: The device defaults to the imperial system.



② Auto power off

Go to the "Display Setting" menu, use the "+" key or the "-" key to move the cursor up and down, select "Auto Off", click "" to enter the settings interface, move the cursor to select "OFF" "1min", "2min", "3min", "4min", "5min", "6min", "7min", "8min", "9min", "10min" ("OFF" means to turn off the auto-shutdown function, and "1min-10min" means the time of auto-shutdown, respectively.) To get the time to shut down automatically, click Save and exit to the "Display Setting" menu, via "Back" → "Exit." "Exit to the main interface.

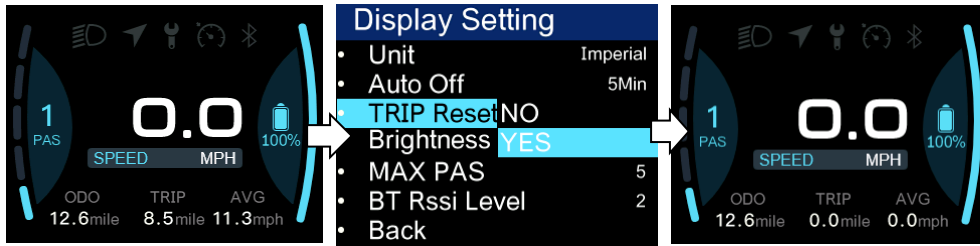
Note: Any operation during the auto-shutdown time will be re-timed, and the power will not be shut down until the set time is not operated.



③ Zero mileage in a single visit

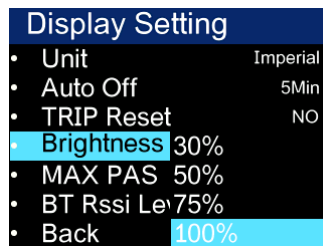
Go to the "Display Setting" menu, use the "+" key or the "-" key to move the cursor up and down, check "Trip Reset", click "Enter Settings", enter Settings and move the cursor to select "NO" / "YES" ("YES" means clear zero, "NO" means clear zero), click "" Save and exit to "Trip Reset", pass " Back" → "Exit" exit to the main interface.

The maximum number of miles per mileage is 6 55KM (the maximum value of a single mileage is 655KM (the maximum value varies from protocol to agreement, and when a single mileage is cleared, the single mileage and the average speed are cleared at the same time.) The interface is shown in the following figure.



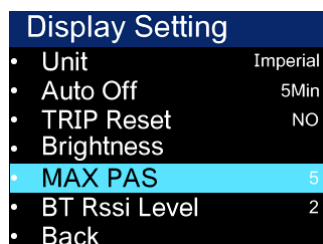
④ Backlight brightness setting

Go to the "Display Setting" menu, use the "+" key or the "-" key to move the cursor up and down, check "Brightness", click "Enter Settings, enter Settings and move the cursor to select "30%"/"50%"/"75%"/"100%", press "Enter" Save and exit to "Brightness", exit to the main interface via "Back" → "Exit". The backlight settings are shown in the following figure.

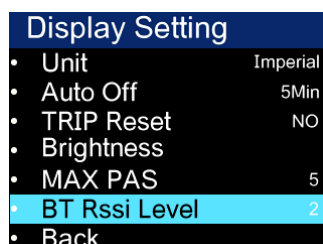


⑤ Max Pas – Maximum gear setting

Go to the "Display Setting" menu, the maximum gear is not adjustable



⑥ BT RSSI LveL – Bluetooth distance class setting

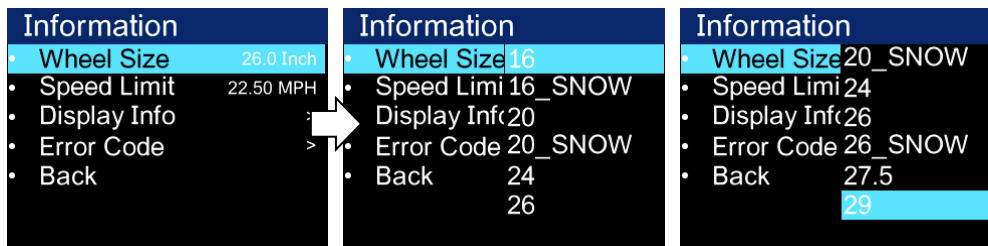


Bluetooth distance class: 1 is near, 5 is far.

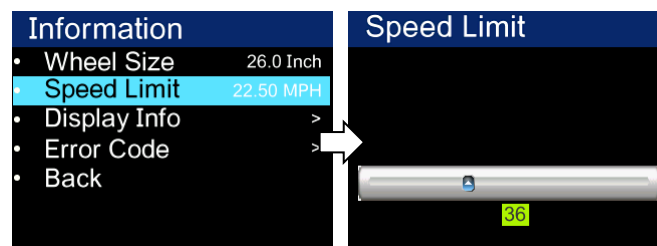
Note: Phones are different, slightly different.

2. Information viewing

(1) Wheel diameter information - enter the "Information" menu, use the "+" key or the "-" key to move the cursor up and down, select "Wheel Size", click "" to enter the settings, the wheel diameter defaults to 26Inch (660mm), can be set from 16Inch (410mm)-29Inch (740mm) 。 The setup is complete by exiting to the main interface via "Back" → "Exit". As shown in the following figure:

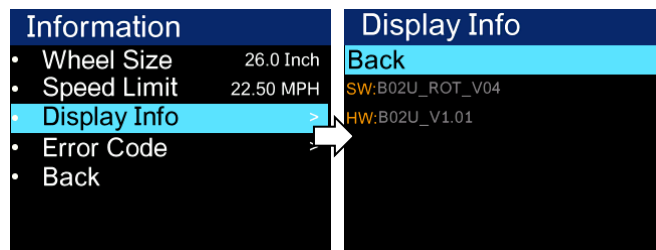


(2) Speed limit information - enter the "Information" menu, when the unit is km metric, the speed limit defaults to 36km/h; When the units are mile imperial, the speed limit defaults to 2.50MPH. Click "" to enter the settings, 0 ~ 100km/h optional, click "" to confirm and return to Information, Exit to the main interface via "Back" → "Exit". As shown in the following figure:

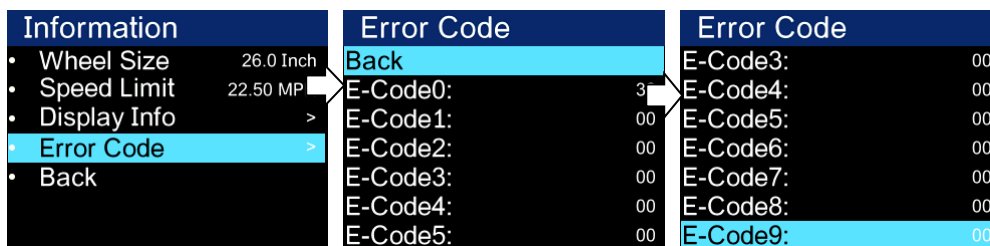


(3) Instrument information - enter the "Information" menu, use the "+" key or "-" key to move the cursor up and down, select "Display Info", click "OK", the instrument interface displays the instrument software and hardware version number, (Hardware and software version numbers may change depending on the batch of

the product) exit to the main interface via "Back" → "Exit". As shown in the following figure:

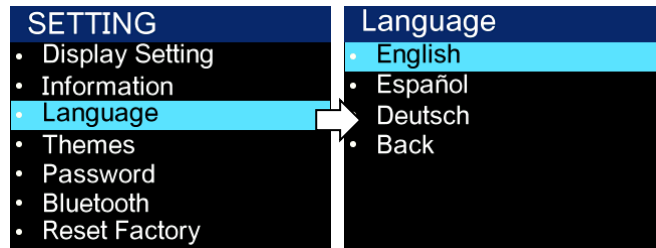


(5) Fault code - enter the "Information" menu, use the "+" key or the "-" key to move the cursor up and down, select "Error Code", pass the "Back" → "Exit" exit to the main interface. "E-CODE 0" represents the last error message, and the relative "E-CODE 9" represents the tenth error report upwards, and this record can record up to ten records by pressing "+" Or "-" toggle, the error code is "00" means no error, for other code meanings, please refer to the error code definition table. As shown in the following figure:






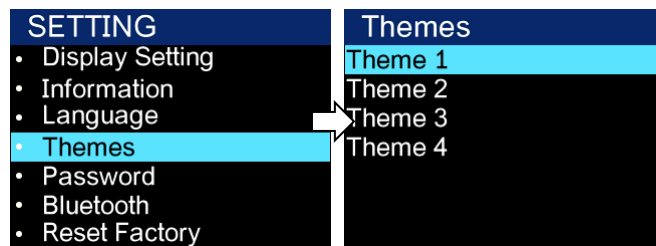
3. Language selection

The B02 display provides 3 Chinese for users to choose. Click "" key to enter the list of setting information, use the "+" key or "-" key to move the cursor up and down, select "Language", click "" to enter the selection language interface, move the cursor to switch "English", " Deutsch" and "Español" and then press "" to confirm. Exit to the main interface via "Back" → "Exit". The language selection is shown in the following figure:







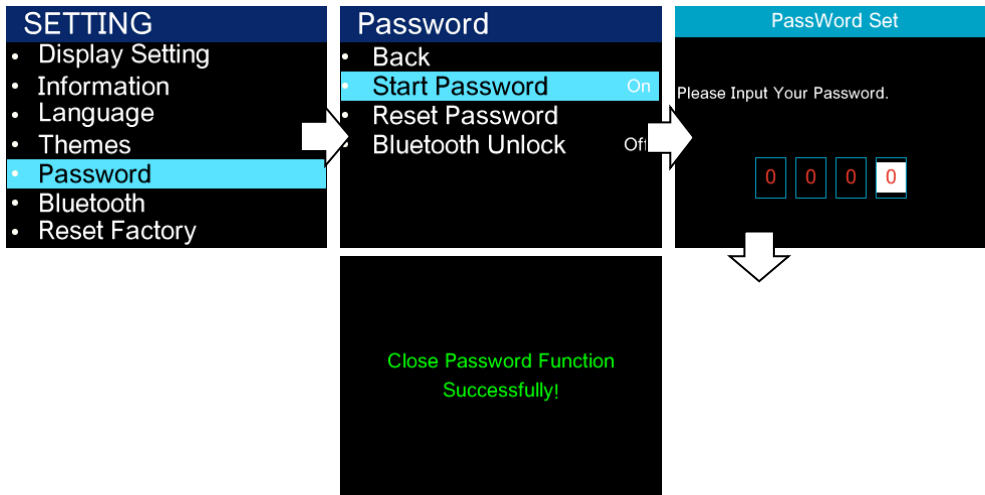
4. Theme menu

The B02 display offers 4 different styles of themes for users to choose from. Click the "" key to  enter the list of settings information, use the "+" key or the "-" key to move the cursor up and down, select "Themes", click "" Enter and use the "+" key or the "-" key to toggle Theme1" - "Theme2" - "Theme3" - "Theme4", press "" again to  confirm. Exit to the main interface via "Back" → "Exit". The UI selection is shown in the following figure:

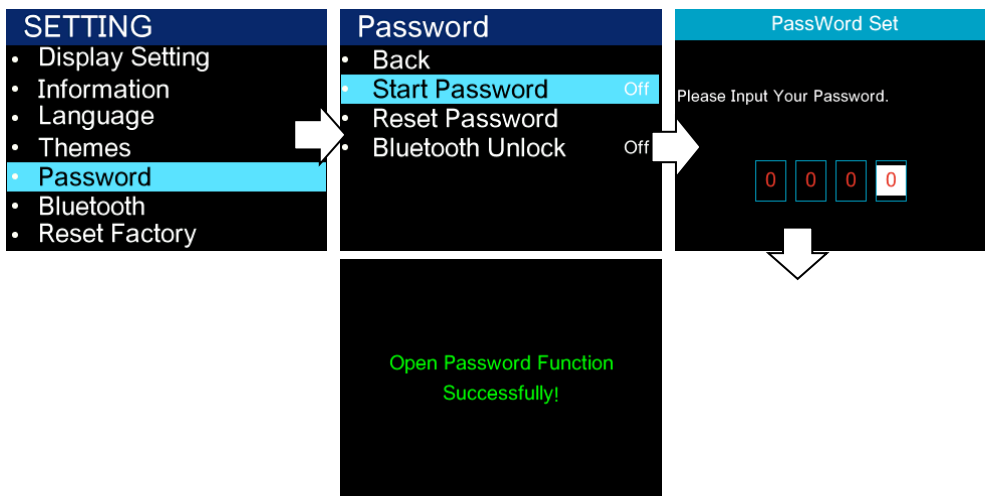


5. Password settings

(1) Turn off the password function - click the "" key to enter the list of setting information, use the "+" key or the "-"  key to move the cursor up and down, select the "Password" option and click "OK" to enter  _ Password options interface, the cursor checks "Start Password" and clicks  After confirmation, the interface prompts for a password, at this time use the "+" key or the "-" key to toggle the number "0-9", click "" Switch the digits, after the input is completed, the system prompts to close the password function, the interface automatically jumps to the original setting interface after the password is successfully canceled, and exits to the main interface through "Back" → "Exit". The operation steps are shown in the following figure.



(2) Turn on the password function - click the "" key to enter the list of setting information, use the "+" key or the "-" key to move the cursor up and down, select the "Password" option and click "OK", enter the Password option interface, the cursor is selected "Start Password" (Start Password status is off) and click "" After confirmation, the interface prompts for a password, At this time, use the "+" key or the "-" key to toggle the number "0-9", click "" to confirm the number in the current cursor, and after entering it, the system prompts to open the password function successfully. After the password function is successfully set, the interface automatically jumps to the original setting interface, and exits to the main interface through "Back" → "Exit". The operation steps are shown in the following figure.



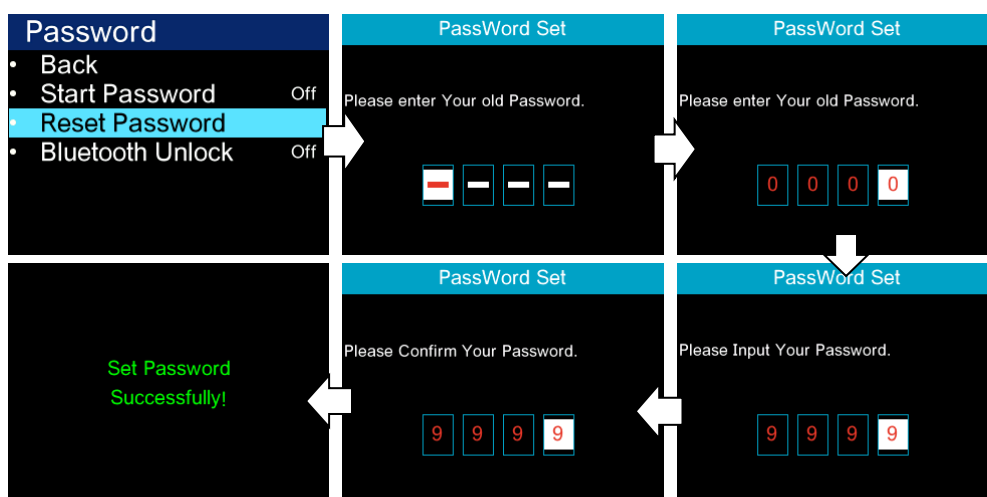
(3) Set and modify the password - click the "" key to enter the list of settings information, use the "+" key or the "-" key to move the cursor up and down, select the "Password" option and click "OK" to enter the Password Options interface, after the cursor selects "Reset Password" and clicks "" to confirm

- 1、 The interface prompts "Please enter your old password", at this point use the "+" key or the "-" key to toggle the number "0-9" and click "Switch digits",
- 2、 After entering the interface prompt "Please enter your password", then use the "+" key or "-" key to switch the number "0-9", click "" to switch digits,
- 3、 After entering the interface prompt "Please confirm your password", then use the "+" key or "-" key to switch the number "0-9", click "" to switch digits,

Note: After the initial password is modified, to enable the display password function, you need to enter a new password to turn it on.

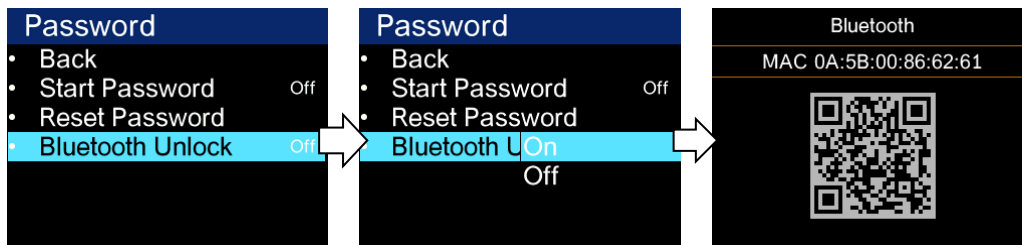
Do not change the initial password unless it is necessary

After the password is successfully modified, the interface automatically jumps to the original settings interface, and exits to the main interface through "Back" → "Exit". The operation steps are shown in the following figure.



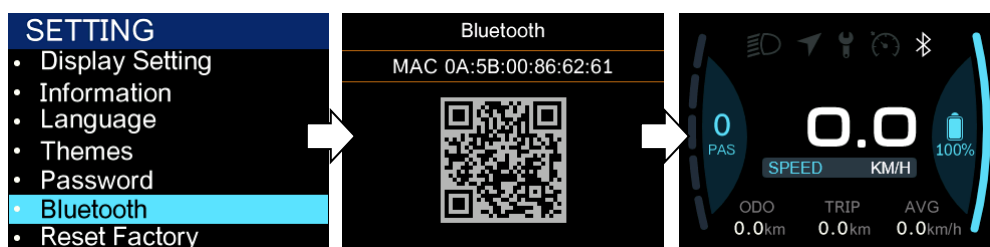
③ Bluetooth lock settings (Bluetooth unlock is turned on by default).

Click "" key to enter the list of setting information, use the "+" key or "-" key to move the cursor up and down, select the "Password" option and click "OK" to enter the Password option interface, the cursor selects "Bluetooth Unlock" Click "" to enter the settings, enter the settings and click the "+" key or "-" key to select " On" / " Off" ("On" means to turn on the Bluetooth lock, "Off" means to turn off the Bluetooth lock), click " Save Status, Opening the Bluetooth lock when there is no connection to the mobile phone application will pop up the Bluetooth QR code interface, and the "Password" interface will be fed back after the binding is successful, and the "Back" → will be passed Exit" exits to the main interface. The operation steps are shown in the following figure:



6. Bluetooth connection

Click the "" key to enter the list of setting information, use the "+" key or the "-" key to move the cursor up and down, select the "Bluetooth" option and click "OK" to enter the Bluetooth QR code interface, which can be accessed through the mobile APP Scan the two-dimensional code to bind the device, after binding the device, the device interface automatically jumps to the main interface, and the Bluetooth function ID is lit. The operation steps are shown in the following figure.



Error code comparison table

The error code	Fault description	Troubleshooting methods
"04"	The speed control put is not returned	Check whether the speed control is in place
"05"	Speed regulation put fault	Check the speed gauge
"07"	Overvoltage protection	Check the battery voltage
"08"	Motor Hall signal line failure	Check the motor module
"09"	The motor phase line is faulty	Check the motor module
"10"	The temperature inside the motor is too high	Check the motor
"11"	Motor temperature sensor failure	Stop riding
"12"	Current sensor failure	Check the controller
"13"	Failure of temperature inside the battery	Check the battery
"14"	The temperature inside the controller is too high	Check the controller
"15"	Controller temperature sensor failure	Stop riding
"21"	Speed sensor failure	Check the mounting position of the tachydisplay sensor
"25"	Torque sensor torque signal failure	Check the torque
"26"	The torque sensor speed signal is faulty	Check the torque
"30"	Communication failure	Check the controller connector
"27"	Controller overcurrent	Check the controller
"33"	The brake detects a circuit failure	Check the controller
"35"	The 15V power supply detects a fault	Check the controller
"36"	The key detects a circuit fault	Check the controller
"37"	Watchdog malfunction	Check the controller
"61"	The transmission is stuck	Check the transmission

"62"	The transmission cannot be reset	Check the transmission
"81"	Bluetooth module failure	Check Bluetooth
"41"	The total voltage is too high	Check the battery
"42"	The total voltage is too low	Check the battery
"43"	The total current is too large	Check the battery
"44"	The monomer voltage is too high	Check the battery
"45"	High temperature (battery)	Check the battery
"46"	Temperature too low (battery)	Check the battery
"47"	SOC is too high (battery).	Check the battery
"48"	SOC is low (battery).	Check the battery
"71"	The electronic lock is stuck	Check the electronic lock

Menu descriptions are not
commonly used

Menu function		Functional description
drive mode	shifter	Turnbar drive
	assistance	Power drive
	s&a	Turnbar power drive
boost magetic	2--63	Power magnet number
speed magetic	0--15	Measure the number of magnetic steels for speed
boost ratio	0--255	Power Speed Follow Adjustment (0-255)

boost funct	off	Turnbar 6km function (0-normal turnbar, 1-turnbar 6Km)
	on	
soft start	0	Power starting strength (0-3)
	1	
	2	
	3	
gear step	off	Whether the turn is divided with the gear position (0-none, 1-min)
	on	
current limit	0--63	Current-limit value
boost signal	positive	Positive Positive Negative Signal Direction (positive-positive-negative)
	negative	
pwm set	1--255	The change of the maximum gear and the corresponding pwm of each gear