# B03N-U display manual



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# **1. Product introduction**

# 1. Name

Intelligent display controller.

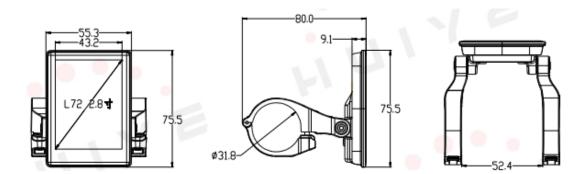
# 2. Product model

B03N-U

# 3. Product appearance



# 4. Product specifications



General parameters		
	Length * width *	75.5*55.3*9.1 (mm)

size	height	
	Screen size	2.8''
	Fit the handle	22.2/25.4/31.8(mm)
	type	IPS
screen	color	RGB
	pixel	240*320
	type	M5 waterproof
connector		connector
	length	20cm
	Operating	12V-60V
	voltage	
	Operating	-20°C~+70°C
Core data	temperature	
	Waterproof	IP67
	rating	
	Total weight	80 grams
	agreement	UART/CAN/SIF
Additional	Bluetooth	4.0+BLE
features	Light sense	Optional
authentication	EC/ROHS/REECH	Customizable



## 5. The main interface is displayed

 Headlight display: display the headlight on/off status, and display the logo when the system headlight is lit;

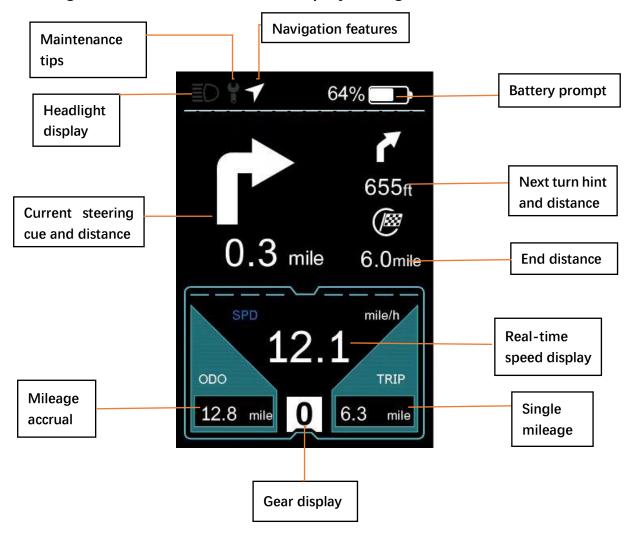
② Maintenance tips: display maintenance prompt signs;

③ Navigation function: the mobile phone APP is connected to the Bluetooth of the meter, and the instrument displays the logo when the mobile APP starts navigation

④ Bluetooth function: Bluetooth on/off status display, display identification after successfully connecting the instrument Bluetooth;

- (5) Battery prompt: prompt real-time power level;
- 6 Real-time speed display: display real-time speed values;
- ⑦ Gear display: display the current gear;
- ⑧ Single mileage: shows the mileage of this ride;
- (9) Miles accrued: Displays the number of miles accrued
- 1 Riding average speed: shows the average riding speed this time;

# When a cell phoneappConnect to the Bluetooth of the meter, enter the navigation interface and select the destination to start navigation, the main interface display changes as follows:



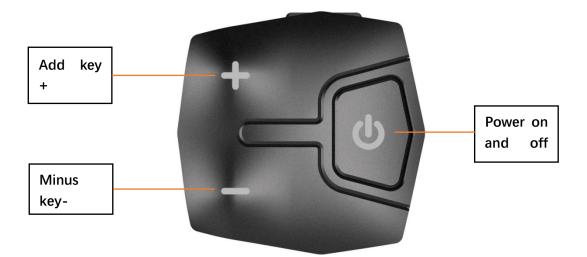
Current steering cue and distance: Steering prompt and distance during the current driving process

Next turn hint and distance: The next turn 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 B0 3 N gauge has 3 buttons. Including "power on and off key", "plus Okey +", "minus key -". The key definition is shown in the following figure



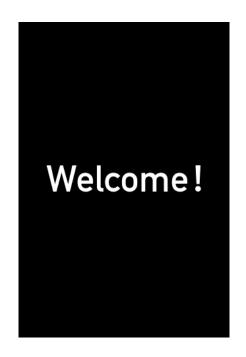
### 7. General operations

B0 3 N type meter provides 4 theme style UI and 3 Chinese words for user settings, this specification is based on Theme1, English version as an example to illustrate.

"Press and hold the key >2.5S" is replaced by "long press", and "Press and hold the key <0.5S" is replaced by "Tap".

① Power on/off

After long pressing the "power on and off button", theo instrument is powered on to work, and in the power on state, long pressing the "power on and off buttono" can make the system power down. In the shutdown state, the leakage current of the meter is less than 1uA. The boot interface is shown in the following figure. (You need to enter the password before entering the main interface, and the <u>initial password defaults to 0000</u>).



#### Assist in gear selection

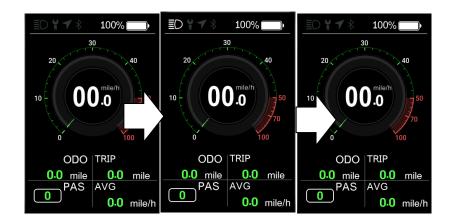
After entering the main interface, click the "+" key or "-" key, switch the assist gear, change the motor output power boost, the default gear of the instrument is 0--5 gear (or according to the order requirements), no assist output when 0 gear, 1Gear is the lowest power and 5th gear is the highest power. The default is 0 gear when the instrument is turned on. The assist gear selection interface is shown in the figure below.



#### ③ Headlight/backlight switch

Turn on the light: Press and hold the "+" key when the light is turned off, the screen headlight logo becomes bright, and the controller is notified to turn on the light.

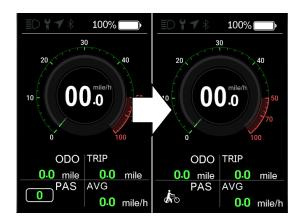
Turn off the light: Long press the "+" key when the light is on, the screen headlight logo does not disappear, but dims, and at the same time notifies the controller to turn off the light. After turning the lamp on and off, the light sensor function fails, and it resumes use after restarting. The headlight switch display interface is shown in the figure below.



#### ④ Boost mode

When the car body is stationary, tap the "-" key to 0 gear, and then tap the "-" key again to display the static boost logo, and then press and hold the "- 🍌 "

key to enter the boost mode. The boost interface is shown in the following figure.



In boost mode, the boost logo is dynamically displayed, the vehicle speed is less than 6km/h, release the button "-" to stop the boost state, the screen boost logo disappears and the static boost logo state is resumed. No button press within 5s under static boost automatically adjusts to 0 gear.

# 2. Information viewing and setting

### 1. Instrument settings

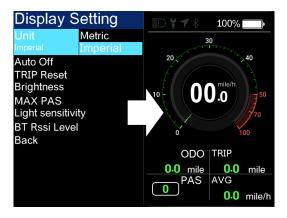
Click the "" key to  $\mathcal{O}$ enter the list of setting information, use the "+" key or "-" key to move the cursor up and down, select "Display Setting", "Information", "Language""Themes", "Password", "Bluetooth" and "Exit", click ""  $\mathcal{O}$ to enter. The function selection interface is shown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



① Imperial and metric unit conversion

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

Note: Devices are imperial.



Automatic shutdown

Enter the "Display Setting" menu, use the "+" key or "-" key to move the cursor up and down, select "Auto Off", click "" to enter the setting interface, move the cursor to select ""

OFF""1min", "2min", "3min", "4min", "5min", "6min", "7min", "8min", "9min", "10min" ("OFF" means to turn off the automatic shutdown function, and "1min-10min" means the time of automatic shutdown, respectively.) For the required automatic shutdown time, clicking "OSave" will exit to the "Display setting" menu via "Back"  $\rightarrow$  "Exit""Exit to the main interface.

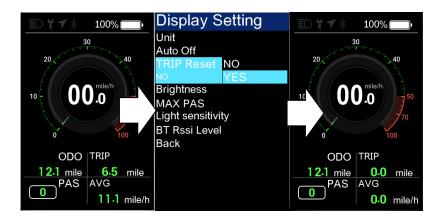
Note: Any operation performed during the automatic shutdown time will be re-timed, and the shutdown will not be completed until the set time is reached.

Display Setting		
Unit		
Auto Off	OFF	
OFF	1Min	
TRIP Reset	2Min	
Brightness	3Min	
MAX PAS	4Min	
Light sensitivi	5Min	
<b>BT Rssi Level</b>	6Min	
Back	7Min	
	8Min	
	9Min	
	10Min	

#### ③ Single mileage clearance

Enter the "Display Setting" menu, use the "+" key or "-" key to move the cursor up and down, select "Trip Reset", click "" to enter the settings, move the cursor after entering the settings and select "ONO" /"YES" ("YES" means zero, "NO" means no zero), click "" to save and exit to" Trip ResetO", exit to the main interface through "Back"  $\rightarrow$  "Exit".

WHEN THE MAXIMUM MILEAGE IS REACHED, IT IS AUTOMATICALLY CLEARED, AND THE MAXIMUM MILEAGE PER MILEAGE IS 655KM (The maximum value varies depending on the agreement, and when the 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.



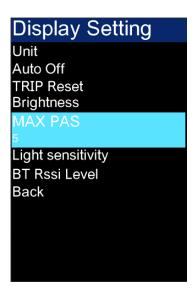
#### ④ Backlight brightness setting

Enter the "Display Setting" menu, use the "+" key or "-" key to move the cursor up and down, select "Brightness", click "" to enter the settings, move the cursor after entering the settings and select "10%" / 30%"/"50%"/"75%"/"100%", Short press "" to Osave and exit to "Brightness", exit to the main interface through "Back"  $\rightarrow$ "Exit". The backlight settings are shown in the following figure.

Display Setting					
Unit	Unit				
Auto Off					
TRIP Reset					
Brightness	10%				
100%	30%				
MAX PAS	50%				
Light sensitivi	75%				
BT Rssi Level	100%				
Back					

(5) Max Pas – Maximum gear setting

Enter the "Display Setting" menu, the maximum gear is not adjustable



6 Light sensitive – Light sensitivity

Enter the "Display Setting" menu, use the "+" key or "-" key to move the cursor up and down, check "Light sensitive", click "" to enter the settings, move the cursor after entering the settings and select "Low/Mid/ High", short press "" to save and exit to "Brightness", exit to the main interface through "Back"  $\rightarrow$  "Exit". The sensitivity of light is shown in the figure below.

Display Setting
Unit
Auto Off
TRIP Reset
Brightness
MAX PAS
Light sensitiv <sub>Low</sub>
Low Mid
BT Rssi Level <mark>High</mark>
Back

⑦ BT RSSI Level – Bluetooth distance level setting

Display S	Setting
Unit	
Auto Off	
TRIP Reset	
Brightness	
MAX PAS	
Light sensitiv	vity
BT Rssi Lev	/∈1
2	2
Back	
	4
	5

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

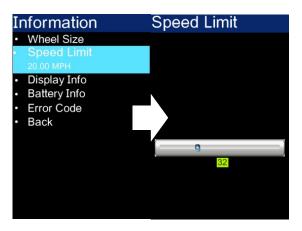
Note: There are slight differences depending on the phone.

## 2. Information viewing

(1) Wheel diameter information - enter the "Information" menu, use the "+" key or "-" key to move the cursor up and down, select "Wheel Size", click "" to enter the settings, the wheel diameter defaults to 26Inch $^{\circ}$ , The range can be set from 16 Inch-29 Inch. After the setting is completed, exit to the main interface through "Back"  $\rightarrow$  "Exit". As shown in the following figure.

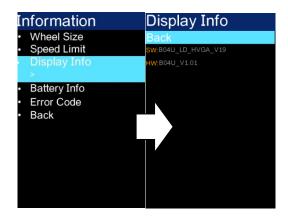
Information • Wheel Size 26 Inch • Speed Limit • Display Info • Battery Info • Error Code • Back	Information Wheel Siz 16 26 Inch 16_SNOW • Speed Limi20 • Display Inf:20_SNOW Battery Inf:24 Error Code 26 Back 26_SNOW 27.5 29	16 寸轮径 410mm 16 寸雪地轮径 460mm 20 寸轮径 510mm 20 寸雪地轮径 570mm 24 寸轮径 610mm 26 寸 轮径 660mm 26 寸雪地轮径 710mm 27.5 寸轮径 700mm 29 寸轮径 740mm
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(2) Speed limit information - enter the "Information" menu, when the unit is km metric, the speed limit is 32km/h by default; WHEN THE UNIT IS MILE IMPERIAL, THE SPEED LIMIT DEFAULTS TO 20MPH. Click "" to O enter the settings, 0~100km/h optional, click "O" to confirm and return to Information, Exit to the main interface through "Back"  $\rightarrow$  "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 O interface displays the instrument software and hardware version number, (Software and hardware version numbers may change due to different batches of products) exit to the main interface through "Back"  $\rightarrow$  "Exit".

As shown in the following figure.



(4) Battery information - enter the "Information" menu, the battery information is not adjustable, exit to the main interface through "Back"  $\rightarrow$  "Exit". (The software and hardware version numbers may change due to different batches of the product, so they are indicated by "--".)

This is shown in the figure below.

Information	Battery Ir	nfo	Battery Inf	o
Wheel Size	BACK		BACK	
Speed Limit	Next Page		Next Page	
<ul><li>Display Info</li><li>Battery Info</li></ul>	TEMP	°C	Cycle Times	
> Dattery 1110	TotaVolt	°C V A	M.N.T	H
Error Code	Current	A	L.N.T	H
Back	Res Cap	AH	Total Cell	
	Full Cap	AH % %	Page: 2/	5
	RelChargeState	%		
	AbsChargeState			
	Page: 1	/5		
Battery Info	Battery In	ifo	Battery Inf	0
ВАСК	ВАСК		ВАСК	
Next Page	Next Page		Next Page	
SW:	Cell Volt01	mV	Cell Volt09	mV
HW:	Cell Volt02	mV	Cell Volt10	mV
Page: 3/5	Cell Volt03	mV	Cell Volt11	mV
	Cell Volt04	mV	Cell Volt12	mV
	Cell Volt05	mV	Cell Volt13	mV
	Cell Volt06	mV	Page: 5/5	5
	Cell Volt07	mV		
	Cell Volt07 Cell Volt08	mV mV		
	Cell Volt07	mV mV		

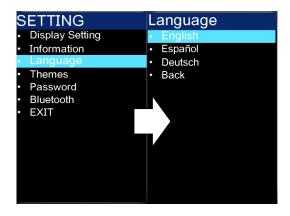
(5) Fault code - enter the "Information" menu, use the "+" key or "-" key to move the cursor up and down, check "Error Code", pass the "Back"  $\rightarrow$  "Exit" to exit to the main screen. "E-CODE 0" represents the last error message, and the opposite "E-CODE 9" represents the tenth error report content, and this record can record up to ten items, by short pressing "+"or "-" switch, error code "00" means no error, other code meaning, please refer to the error code definition table.

Information	Error Code	
<ul> <li>Wheel Size</li> </ul>	Back	
<ul> <li>Speed Limit</li> </ul>	E-Code0:	00
<ul> <li>Display Info</li> </ul>	E-Code1:	00
<ul> <li>Battery Info</li> </ul>	E-Code2:	00
Error Code	E-Code3:	00
>	E Code4:	00
<ul> <li>Back</li> </ul>	ode5:	00
	de6:	00
	E Jode7:	00
	E-Code8:	00
	E-Code9:	00

As shown in the following figure.

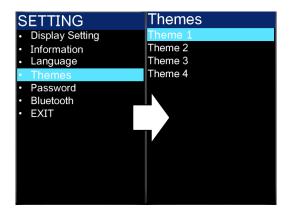
## 3. Language selection

B04U\_MEEMIKE meter provides 3 Chinese words for users to choose. Click the "" key to enter the Osetting information list, use the "+" key or "-" key to move the cursor up and down, select "Language", click "" to enter the language selection interface, and move the cursor to switch between "English" O and "Deut" sch" and "Español" again press "O" to confirm. Exit to the main interface through "Back"  $\rightarrow$  "Exit". The language selection is shown in the following figure.



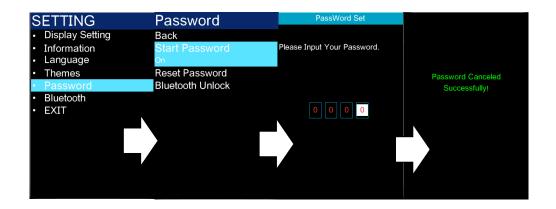
### 4. Theme menu

B04U\_MEEMIKE Meter provides 4 different styles of themes for users to choose from. Click the "" key to enter the Osetting information list, use the "+" key or "-" key to move the cursor up and down, select "Themes", click "" to enter and use the "O+" key or "-" key to switch Theme1"-"Theme2"-"Theme3"-"Theme4", press "" again to Oconfirm. Exit to the main interface through "Back"  $\rightarrow$  "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 setting information list, use the "+" key or "-" Okey to move the cursor up and down, select the "Password" option and click "" OK to enter O Password options interface, cursor select "Start Password" (<u>Start Password status is on</u>) and click "OAfter confirmation, the interface prompts for a password, at this time, use the "+" key or "-" key to switch the number "0-9", click ""O Switch the digits, after entering the system, the system prompts to turn off the password function, the interface will automatically jump to the original setting interface after the password is canceled successfully, and exit to the main interface through "Back"  $\rightarrow$  "Exit". The operation steps are shown in the following figure.



(2) Turn on the password function - click the "" key to enter the Osetting information list, use the "+" key or "-" key to move the cursor up and down, select the "Password" option and click "OK" to enter the OPassword option interface, the cursor is selectedStart Password" (Start Password status is off) and click "O" to confirm, the interface prompts for the password, At this time, use the "+" key or "-" key to switch the number "0-9", click "" to Oconfirm the number in the current cursor, and after entering, the system prompts that the password function is turned on successfully. After the password function is successfully set, the interface will automatically jump to the original setting interface, and exit to the main interface through "Back"  $\rightarrow$  "Exit". The operation steps are shown in the following figure.

SETTING	Password	PassWord Set	
<ul> <li>Display Setting</li> </ul>	Back		
Information	Start Password	Please Input Your Password.	
Language	Off		
Themes	Reset Password		Set Password
<ul> <li>Password</li> </ul>	Bluetooth Unlock		Successfully!
Bluetooth			
• EXIT		0 0 0	

(3) Set and modify the password - click the "" key to enter the setting information list, use the "+" key or "O-" key to move the cursor up and down, select the "Password" option and click "" OK to enter Password Options interface, cursor selected "Reset Password" and click "O" after confirmation 1、 The interface prompts "Please enter your old password", at this time, use the "+" key or "-" key to switch the number "0-9", click "**心**"Switch digits,

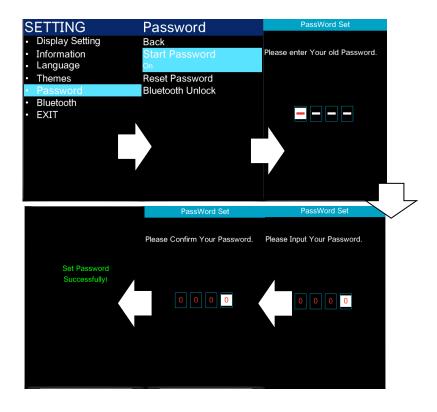
2. After entering, the interface prompts "Please enter your password", use the "+" key or "-" key to switch the number "0-9", click "" $^{\circ}$  to switch the number

3. After entering, the interface prompts "Please confirm your password", at this time, use the "+" key or "-" key to switch the number "0-9", click "" <sup>O</sup>to switch the number

Note: After the initial password is modified, if you want to open the instrument password function, you need to enter a new password to turn it on.

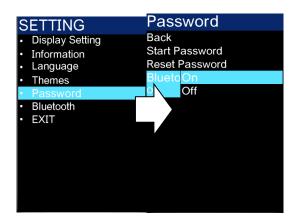
#### Do not modify the initial password unless necessary

After the password is successfully modified, the interface will automatically jump to the original setting interface, and exit to the main interface through "Back"  $\rightarrow$  "Exit". The operation steps are shown in the following figure.



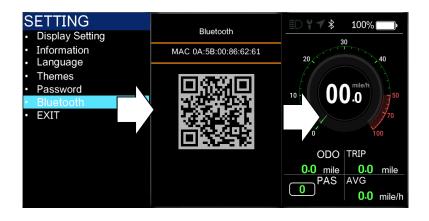
③ Bluetooth lock settings (Bluetooth unlock is on by default).

Click the "" key to enter the  $\bigcirc$ setting information list, 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" / O ff" ("O n" means to turn on the Bluetooth lock, "Off" means to turn off the Bluetooth lock), click "" to save the selection and exit to" Bluetooth U nlock", exit to the main screen through "Back"  $\rightarrow$  "Exit". The operation steps are shown in the following figure.



### 6.Bluetooth connection

Click the "" key to enter the Osetting information list, use the "+" key or "-" key to move the cursor up and down, select the "Bluetooth" option and click "" OK, enter the OBluetooth QR code interface, through the mobile APPScan the QR code to bind the device, after binding the device, the device interface will automatically jump to the main interface, and the Bluetooth function logo will light up. The operation steps are shown in the following figure.



# Error code comparison table

Error code	Description of the fault	Troubleshooting methods
"02"	Brake handle failure	Stop riding and check that the brakes are back in place and damaged
"04"	The speed control put has no homing	Check that the speed control handle is in position
"05"	Speed regulation put failure	Check the speed control handle
"06"	Undervoltage protection status	Check the battery voltage
"07"	Overvoltage protection	Check the battery voltage
"08"	The motor Hall signal line is faulty	Check the motor module
"09"	Motor phase line failure	Check the motor module
"10"	The temperature inside the motor is too high	Check the motor
"11"	The motor temperature sensor is faulty	Stop riding
"12"	Current sensor failure	Check the controller
"13"	Temperature failure 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

"16"	Controller failure	Stop riding
"17"	Abnormal brakes	Stop riding and check that the brakes are back in place and damaged
"21"	Bafang: The speed sensor is faulty KM5S: Current abnormality	Bafang: Check the installation location of the speed sensor KM5S: Check the controller plugin
"22"	KM5S: Handle abnormal	Check the speed control handle
"23"	KM5S: Motor phase loss	Check the motor
"24"	KM5S: Motor Hall abnormality	Check the motor
"25"	Bafang: Torque sensor torque signal failure KM5S: Abnormal brake	Bafang: Check the torque KM5S: Stop riding
"26"	Torque sensor speed signal failure	Check the torque
"29"	Controller communication failure	Check the controller connector
"30"	Instrument communication failure	Check the controller connector
"27"	Controller overcurrent	Check the controller
"33"	Brake detection circuit failure	Check the controller
"35"	The 15V power supply detects faults	Check the controller
"36"	Press the key to detect circuit failures	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"	Excessive temperature (battery)	Check the battery
"46"	Temperature too low (battery)	Check the battery
"47"	The SOC is too high (battery).	Check the battery
"48"	How low the SOC is (battery).	Check the battery
"71"	The electronic lock is stuck	Check the electronic lock

FCC Caution.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.