Yolin

Electric Bike Display

User's Manual

YL61F

Tianjin Yolin Technology Co. Ltd.

TABLE OF CONTENTS

1. Product name and model number 2
2. Specification 2
3. Appearance and Size 2
4. Function overview and Functional areas 3
4.1 Functional overview 3
4.2 Functional areas 3
4.3 Button definitions 3
5. Routine operation 3
5.1 Power on/off 3
5.2 Display interface switching 4
Figure 5-1 Display Interface Switching 4
5.3 Walk boost mode 4
5.4 Turning on/off lights 5
5.5 PAS level selection 5
5.6 Battery level display 5
5.7 Error code display 6
6. Personalized parameter settings 6
6.1 Backlight luminance setting 7
6.2 Metric and Imperial setting 7
6.3 Rated voltage setting 8
6.4 Auto Sleep Time Setting 8
6.5 PAS level setting 9
6.6 Wheel diameter setting 9
6.7 Number of speed sensor magnets setting 10
6.8 Speed limit setting 10
6.9 Start-up setting 11
6.10 Drive mode setting 11
6.11 Pedal assist sensitivity setting 12
6.12 Pedal assist strength setting 12
6.13 Number of pedal assist sensor magnets setting 13
6.14 Controller Current Limit Setting 13
6.15 Controller under voltage value setting 14
6.16 ODO reset operation 14
6.17 Cruise enable setting 15
6.18 Promotion function setting 15
7. Quality Assurance and Warranty 16
7.1 Warranty info 16
7.2 Warranty does not cover 16
8. Wire connection diagram 16
8.1 Standard wire connection sequence 16
9. Precautions 16
Schedule 1: Error Code Definition 17
Schedule 2: Error Code Definition 17

1. Product name and model number

Smart LCD display for electric bicycle; Model: 61F.

2. Specification

- 36V/48V power supply
- Display rated current 15mA
- Display maximum current 30mA
- Shutdown leakage current <1uA
- Supplied current to the controller 50mA
- Operating temperature -20～60℃
- Storage temperature -30～70℃

3. Appearance and Size



Figure 3-1 Physical pictture of the YL61F display

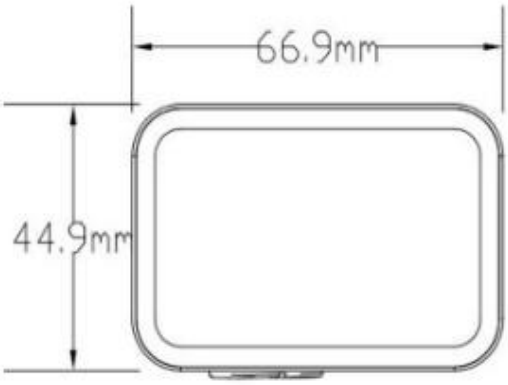


Figure 3-2 YL61F Front View Dimension

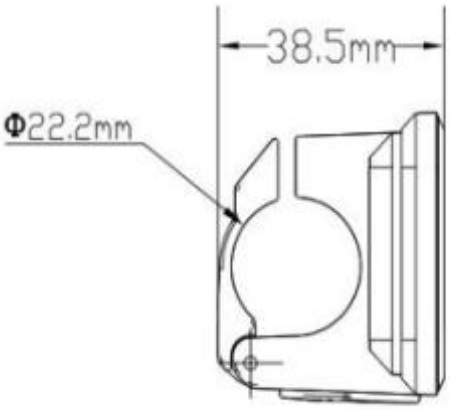


Figure 3-3 YL61F Side View Dimension

4. Function overview and Functional areas

4.1 Functional overview

The YL61F display offers a variety of features to suit riding needs, including:

- Battery level indicator
- Pedal assist (PAS) level indicator
- Speed (current speed, maximum speed, average speed)
- Mileage display (single and total mileage)
- Walk boost mode
- Light ON/OFF
- Error code indicator (optional)
- Cruise control indicator (optional)
- Bluetooth connection indicator (optional)
- Personalized parameter settings (e.g. wheel diameter, speed limit, battery power setting and PAS parameter setting, password setting, controller current limit setting, etc.).
- Factory default parameter recovery function

4.2 Functional areas

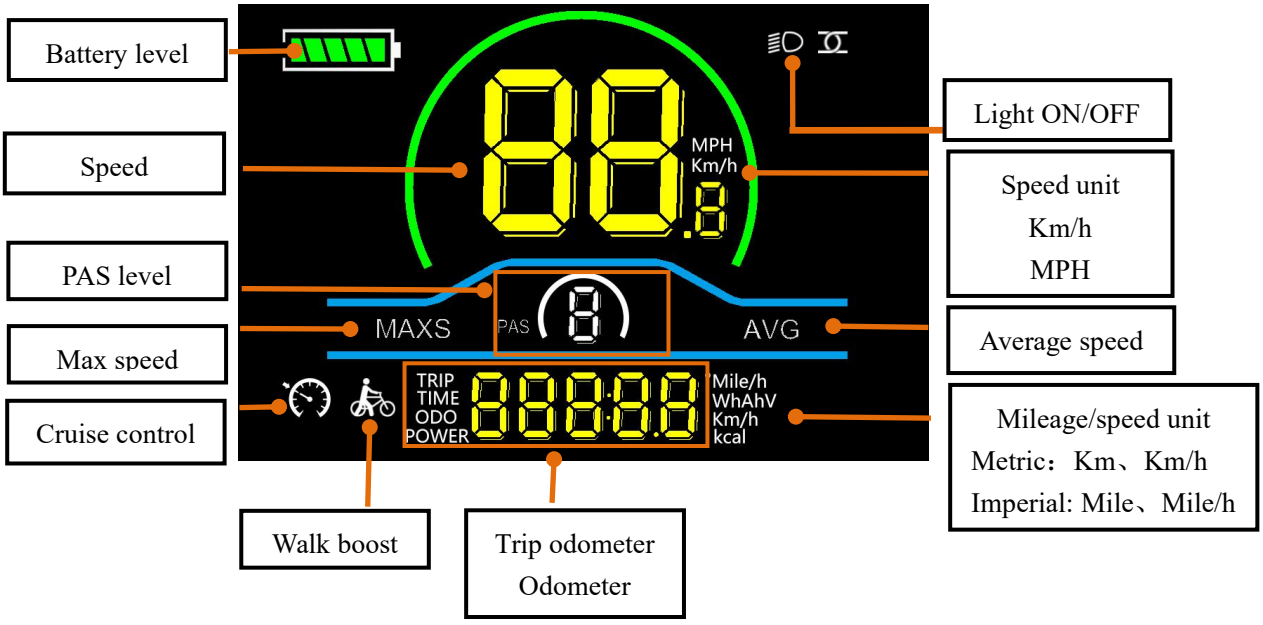


Figure 4-1 YL61F functional area distribution interface

4.3 Button definitions

The YL61F display is equipped with three buttons on the correctionding operating unit: power on/off ⏻, plus ➕ and minus ➖.

5. Routine operation

5.1 Power on/off

Long press ⏻ to power on/off the display. When the display is off, it will not use the battery power and the leakage current is less than 1uA.

⚠ **The display will automatically shut off if it is not used for more than 10 minutes.**

5.2 Display interface switching

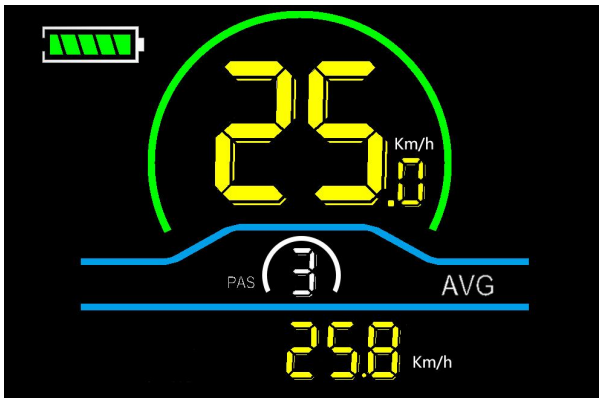
When the display is powered on, it will show the Current Speed (Km/h) and trip Odometer (km) by default. Short press  to switch between Trip Odometer (km), Odometer (km), Maximum Speed (km/h), and Average Speed (km/h).



Trip Odometer



Odometer



Average Speed



Maximum Speed

Figure 5-1 Display Interface Switching

5.3 Walk boost mode

Long press and hold , the electric bicycle enters the walk boost mode. The electric bicycle will walk ata a fixed speed of 6km per hour and the display shows . Release the button to stop the power output immediately and restore to the state before walk boost.

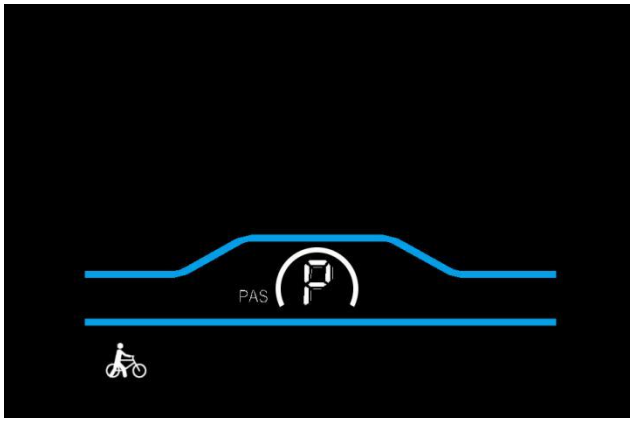


Figure 5-2 Helping to implement the display screen

⚠ **The walk boost mode can only be used when pushing the electric bicycle, please do not use it while riding.**

5.4 Turning on/off lights

Long press the ⊕ to make the controller turn on the lights and display backlight becomes dim. Long press ⊕ again to make the controller turn off the lights and the backlight restore brightness.



Figure 5-3 Backlight display interface

5.5 PAS level selection

Press ⊕/⊖ to switch PAS level of electric bicycle, thus changing the motor output power.



Figure 5-4 PAS level display interface

5.6 Battery level display

The Battery level is shown as 5 bars. When the battery is full charged, all of the 5 bars lighten up. When the battery is fully depleted, the bar will begin to flash, warning the user to charge the battery as soon as possible.



Full power **Four bars power** **Three bars power** **Two bars power** **One bar power** **Empty power flashing**

Figure 5-5 Battery Level Display Interface

5.7 Error code display

If there is a fault occurs in the electric system of the electric bicycle, the display will automatically show an error code, see Schedule 1 for a detailed definition of the error code.

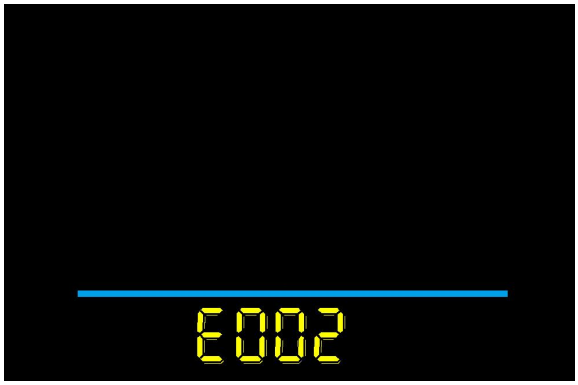


Figure 5-6 Error Code Display Interface

⚠ **When the error code appears on the display, please troubleshoot the problem in time, the electric bicycle will not be able to drive normally after the problem occurs.**

6. Personalized parameter settings

⚠**Each setting needs to be done with the bicycle stationary.**

The personalized parameter setting procedure is as follows

When the display is ON and the speed shows 0,

The following options are available on the personalized parameter setting interface:

(1) Press and hold + and − simultaneously for more than 2 seconds to enter the personalized parameter setting interface.

(2) Press +/− to toggle between the personalized parameter setting interface, and press ⏻ to enter the parameter changing state.

(3) Press +/− to select the parameter, long press + for addition operation, long press − for subtraction operation.

(4) Press ⏻ to save the parameter settings and return to the personalized parameter setting interface.

(5) Long press ⏻ to save the parameter settings and exit the personalized parameter setting interface.

6.1 Backlight luminance setting

01P refers to the backlight luminance setting option. The adjustable range is: 1-3, 01 for the minimum luminance, 02 for the standard luminance, 03 for the maximum luminance.

Press ⏻ to enter the parameter changing state. Press the +/− to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

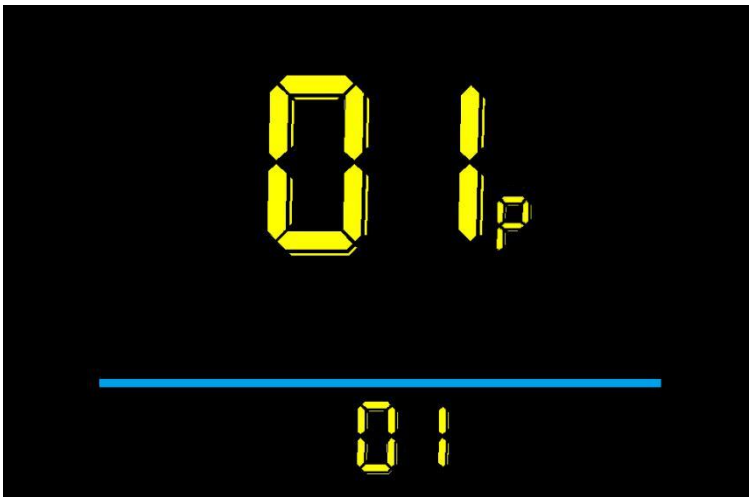
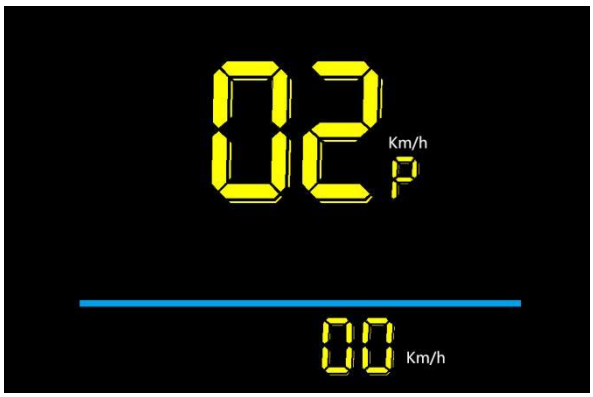


Figure 6-1 Backlight luminance setting interface

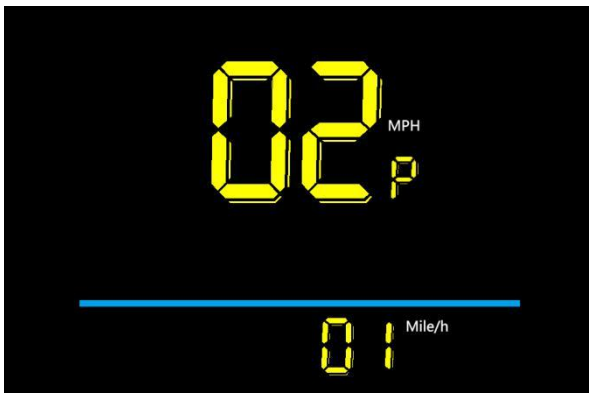
6.2 Metric and Imperial setting

02P is the metric and imperial setting option, 00 for metric and 01 for imperial.

Press ⏻ to enter the parameter changing state. Press the +/− to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.



Metric display interface



Imperial display interface

Figure 6-2 Metric and Imperial Units Setting Interface

6.3 Rated voltage setting

03P is the rated voltage setting option. The available rated voltage range is: 36V/48V.

Press ⏻ to enter the parameter changing state. Press the ⊞/⊟ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

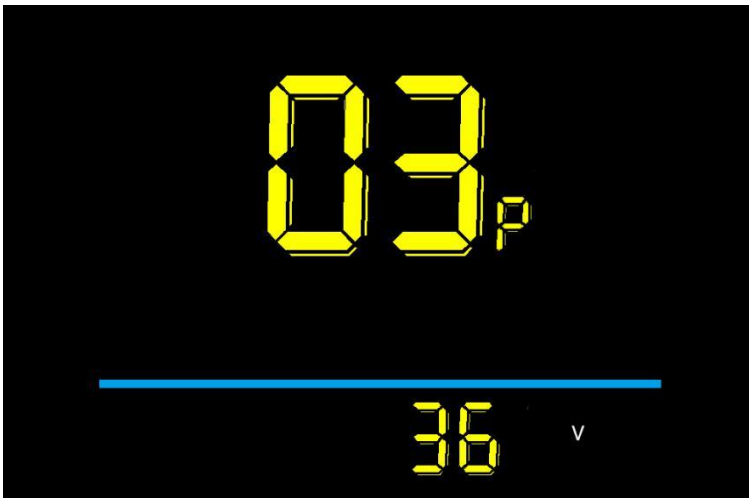


Figure 6-3 Rated voltage setting interface

6.4 Auto Sleep Time Setting

04P is the auto sleep time setting. To save the battery power and reach higher range, this dispaly will be turned off after it has not been used for a time. The adjustable range is: 1~60min, 00 means no auto shutdown. The factory default setting is 10 minutes.

Press ⏻ to enter the parameter changing state. Press the ⊞/⊟ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

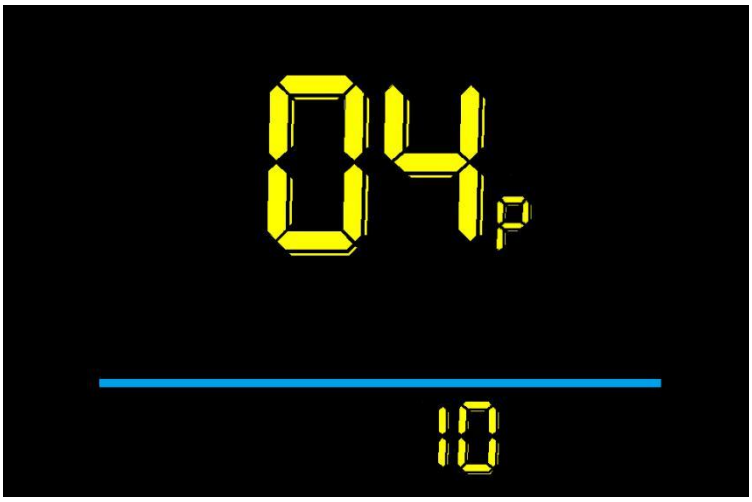


Figure 6-4 Auto Power Off Time Setting Interface

6.5 PAS level setting

05P is the Pedal assist (PAS) level setting option. The available Pedal assist level settings are: 0~3, 1~3, 0~5, 1~5, The factory default setting 0~5.

Press ⏻ to enter the parameter changing state. Press the ➕/➖ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

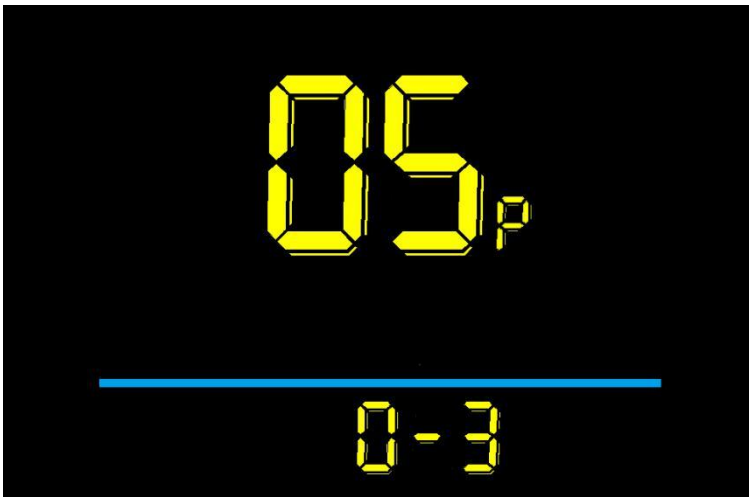


Figure 6-5 PAS level setting interface

6.6 Wheel diameter setting

06P is the wheel diameter setting option. Unit: inch, accurace: 0.1, The adjustable wheel diameter range is: 0~50inch.

Press ⏻ to enter the parameter changing state. Press the ➕/➖ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

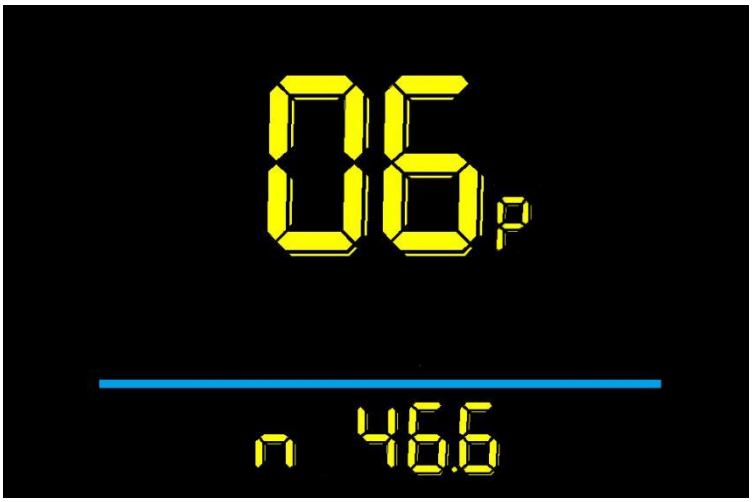


Figure 6-6 Wheel diameter setting interface

6.7 Number of speed sensor magnets setting

07P is the speed sensor magnet number setting option. The adjustable speed sensor magnet number range is: 01~255pcs.

Press ⏻ to enter the parameter changing state. Press the +/− to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

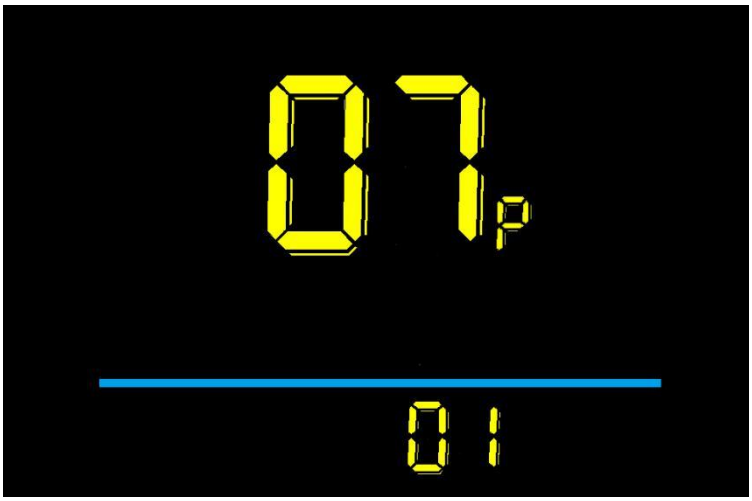


Figure 6-7 Number of speed sensor magnets setting interface

6.8 Speed limit setting

08P is the speed limit setting option. Change this value to set the maximum riding speed of the electric vehicle; The adjustable speed limit range is: 0~100km/h, 100 means no speed limit.

Press ⏻ to enter the parameter changing state. Press the +/− to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

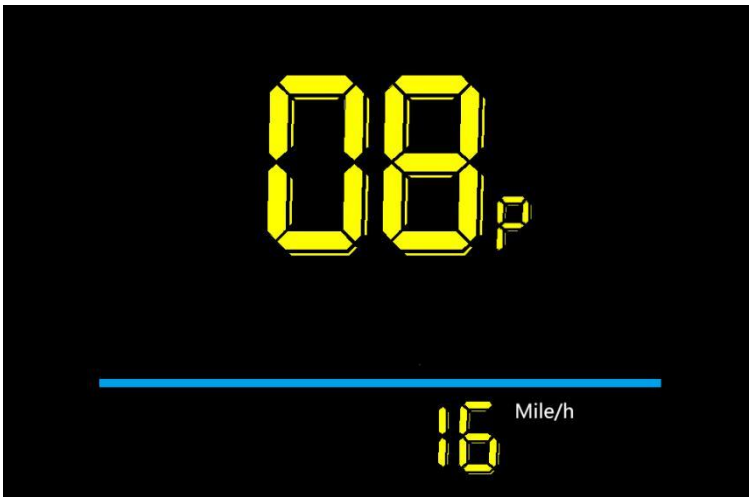


Figure 6-8 Speed limit setting interface

6.9 Start-up setting

09P is the start-up setting option. The display can choose the following start modes: 00 → zero start, 01→ non-zero start.

Press ⏻ to enter the parameter changing state. Press the ➕/➖ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

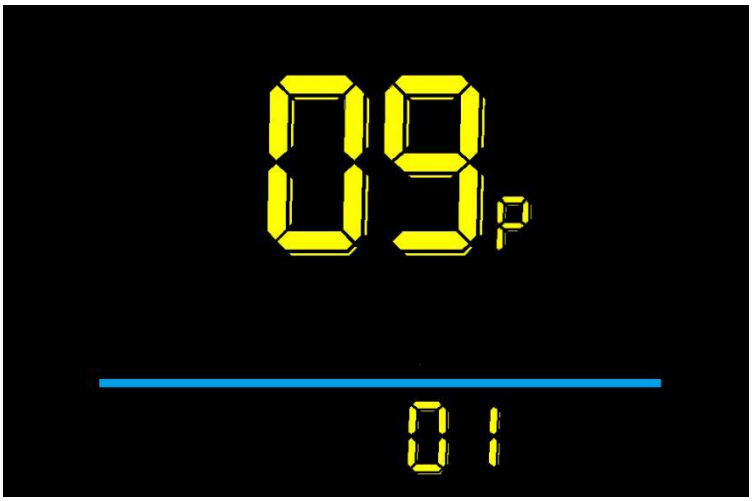


Figure 6-9 Start-up setting interface

6.10 Drive mode setting

10P is the drive mode setting option. The available drive modes are: 00 → Pedal assist only, 01 → Electric only, 02 Both Pedal and assist electric.

Press ⏻ to enter the parameter changing state. Press the ➕/➖ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

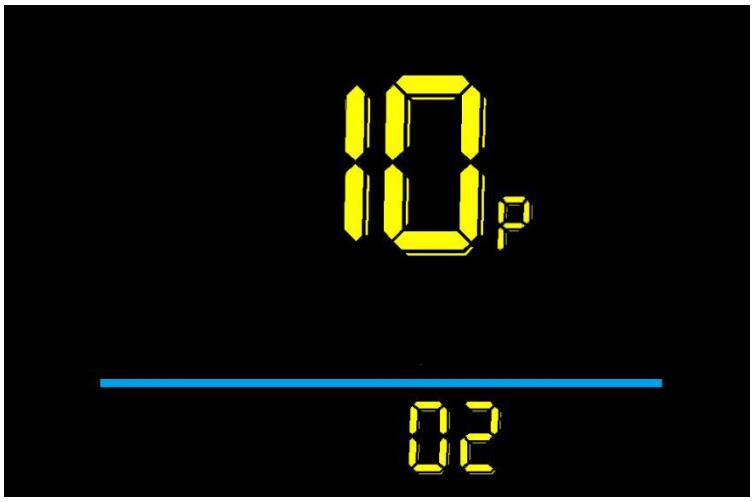


Figure 6-10 Drive mode setting interface

6.11 Pedal assist sensitivity setting

11P is the pedal assist sensitivity setting option. The adjustable range is: 1~24.

Press ⏻ to enter the parameter changing state. Press the ⊞/⊟ to select the parameter and press ⏻ to save the parameter setting and reyurn to the personalized parameter setting interface.

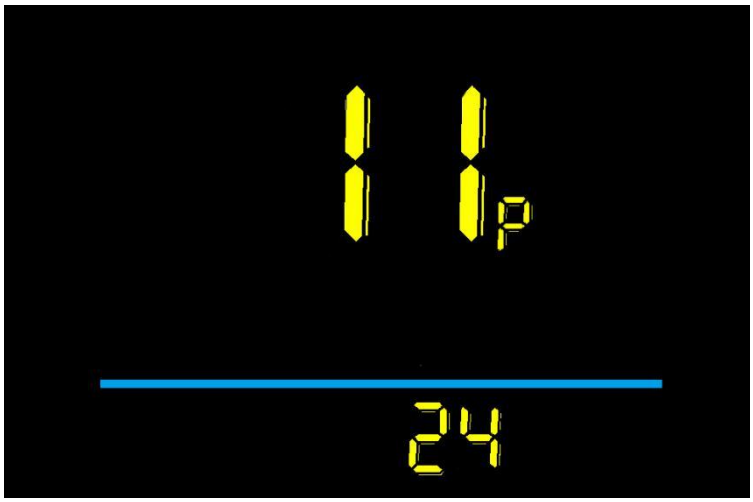


Figure 6-11 Pedal assist sensitivity setting interface

6.12 Pedal assist strength setting

12P is the Pedal assist strength setting option. The adjustable range is 0~5. 0 is the weakest strength and 5 is the strongest.

Press ⏻ to enter the parameter changing state. Press the ⊞/⊟ to select the parameter and press ⏻ to save the parameter setting and reyurn to the personalized parameter setting interface.

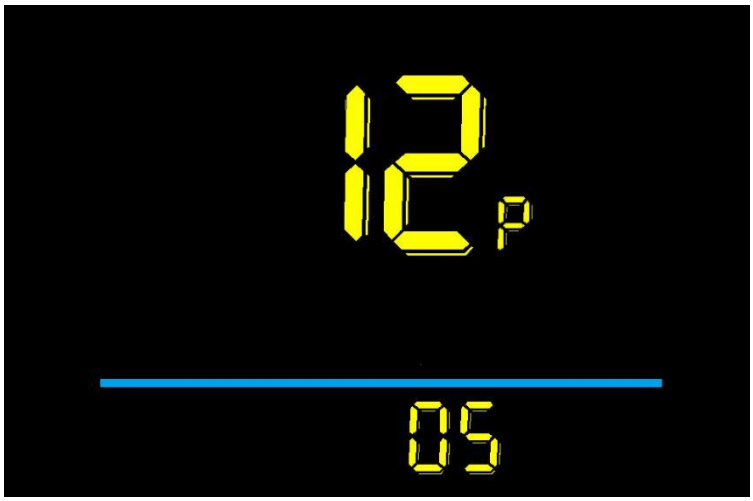


Figure 6-12 Pedal assist strength setting interface

6.13 Number of pedal assist sensor magnets setting

13P is the number of pedal assist sensor magnets setting option. The adjustable range: 5pcs, 8pcs,12pcs.

Press ⏻ to enter the parameter changing state. Press the ⊞/⊟ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

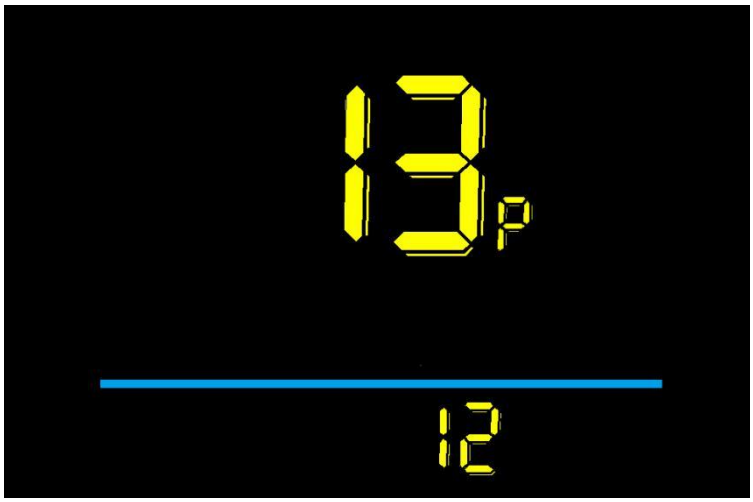


Figure 6-13 Number of pedal assist sensor magnets setting interface

6.14 Controller Current Limit Setting

14P is the controller current limit setting option. The adjustable range is: 1~50Ah, The factory default setting is 12Ah.

Press ⏻ to enter the parameter changing state. Press the ⊞/⊟ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

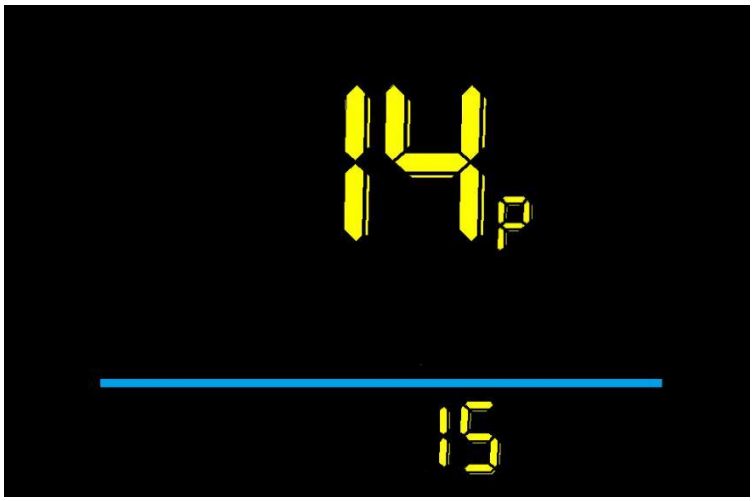


Figure 6-14 Controller Current limit setting interface

6.15 Controller under voltage value setting

15P is the controller under voltage value setting option.

Press ⏻ to enter the parameter changing state. Press the ⊞/⊟ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

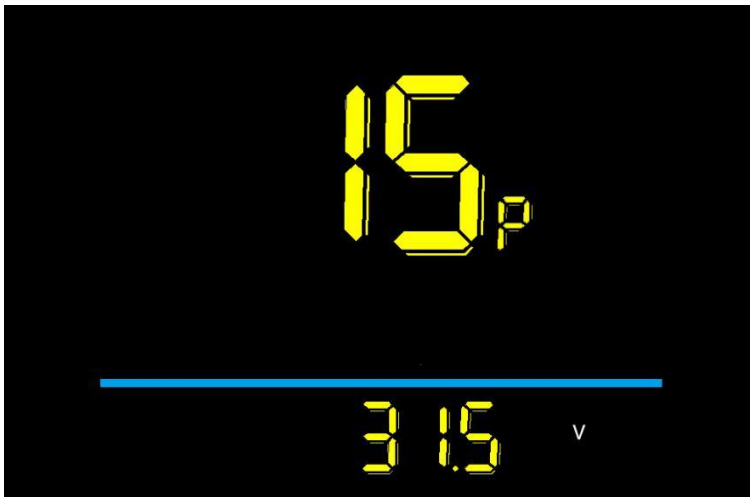


Figure Controller under voltage value setting interface

6.16 ODO reset operation

16P is the odometer reset setting option. Optional 00、01.

Press ⏻ to enter the parameter changing state. Press the ⊞/⊟ to select the parameter and press ⏻ to save the parameter setting and return to the personalized parameter setting interface.

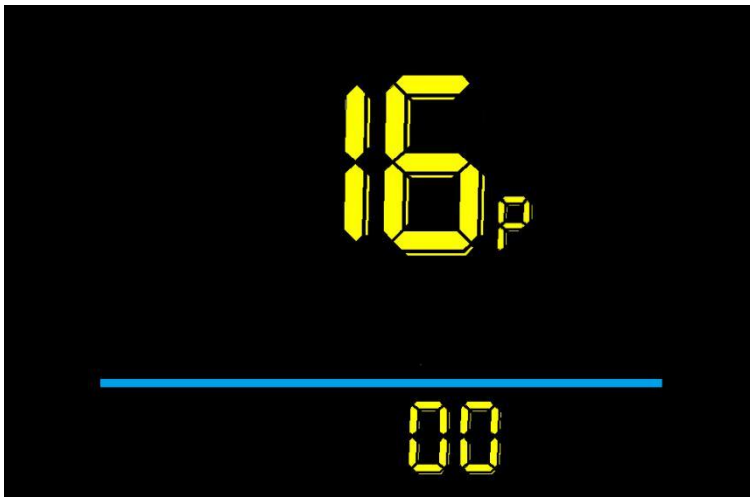


Figure 6-16 ODO reset operation

6.17 Cruise enable setting

17P is the cruise enable setting option. 00 means disabled cruise, 01 means enable cruise, The factory default 00.

Press to enter the parameter changing state. Press the +/- to select the parameter and press to save the parameter setting and return to the personalized parameter setting interface.

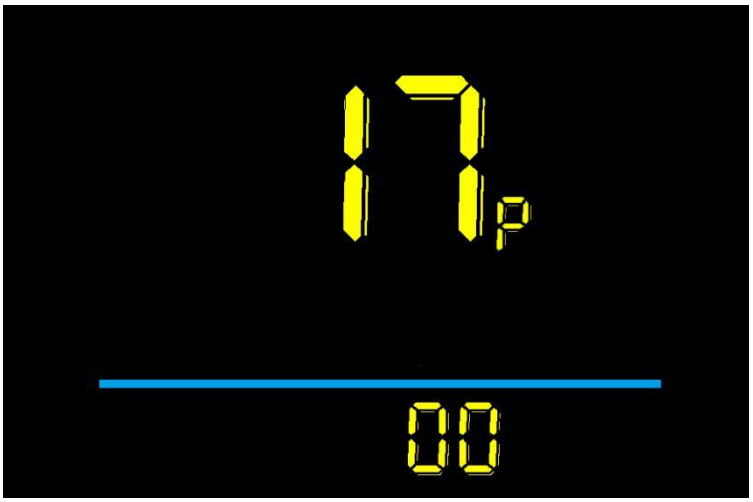


Figure 6-17 Cruise enable setting interface

6.18 Promotion function setting

18P is the promotion function setting option. 00 represents no 6km, 01 represents 6km. The factory default 00.

Press to enable the parameter changing state. Press the +/- to select the parameter and press to save the parameter setting and return to the personalized parameter setting interface interface.

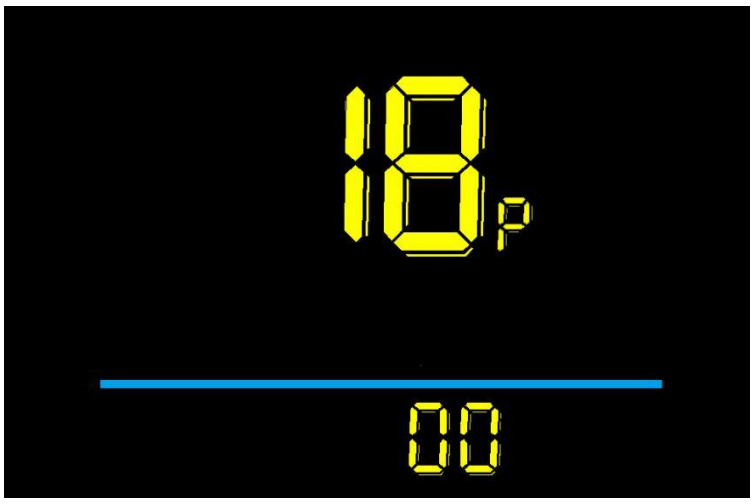


Figure 6-18 Promotion function setting interface

7. Quality Assurance and Warranty

7.1 Warranty info

● Yolin will offer a limited warranty for any failure caused by the product defects under normal use during the warrant period.

● The product is warranted for 12 months from the date out of factory.

7.2 Warranty does not cover

● The shell is opened.

● The connector is damaged.

● Scratches on the appearance after the product is out of factory.

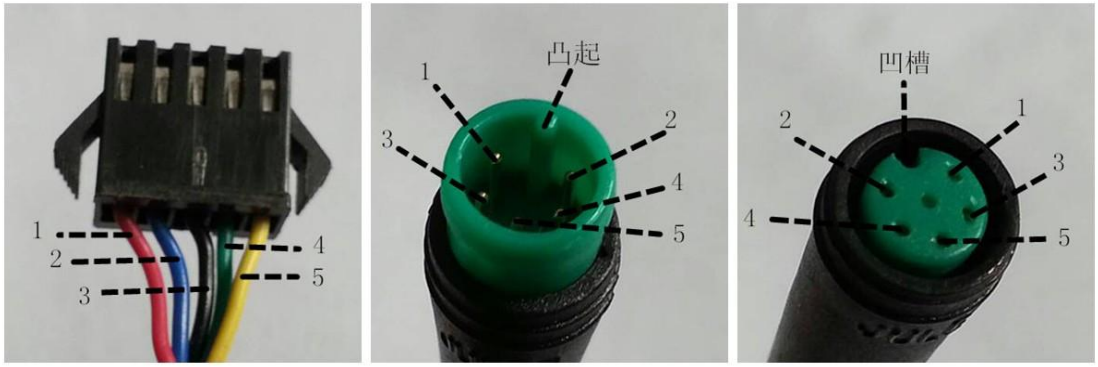
● Scratched or broken wires

● Failure or damage caused by force majeure (e.g. fire, earthquake, etc.) or natural disaster (e.g. lightning strike, etc.)

● Out of warranty period.

8. Wire connection diagram

8.1 Standard wire connection sequence



Controller connector **Display connector (Female terminal)** **Display connector (Male terminal)**

Figure 9-1 Wire Connection Diagram

Table 9-1 Standard connector wire sequence table

Standard Wire Sequence	Standard wire color	Function
1	Red (VCC)	Display power wire
2	Blue (Kp)	Controller power wire
3	Black (GND)	Display ground wire
4	Green (RX)	Display data reception wire
5	Yellow (TX)	Display data transmit wire

■ **Some models are equipped with waterproof connectors and color inside wires can not be seen.**

9. Precautions

Pay attention to all the general operating when using the products and do not plug and unplug the display while it is powered on.

◆ Avoid bumping to all the general operating when using the products and do not plug and unplug the display while it is powered on.

◆ Please do not change the parameter settings at will, otherwise normal riding cannot be guarantteed.

◆ If display does not work properly, please send it to the repair center as soon as possible.

◆ There may be differences between the physical products and this manual due to normal upgrade. Please refer to the physical products.

Schedule 1: Error Code Definition

YL-01、YL-02 Error codes：				
Error code	Definition		Error code	Definition
E001	Controller failure		E004	Throttle failure
E002	Communication failure		E005	Brake failure
E003	Hall failure		E006	Motor phase failure

Schedule 2: Error Code Definition

Customized YL-02（LKLS）Error codes：		
Error code	Status significance	Processing method
Error05	Brake failure	Whether the brake is in position; Replace the brake handle
Error06	Battery undervoltage	Requires battey charging
Error07	Motor fault	Check whether the power line is loose
Error08	Throttle failure	Whether the handle is returned; Check the handle link. If it is normal, replace the handle
Error09	Controller failure	Check the controller hall connection
Error10	Communication reception failure	Check whether the instrument cable is connected properly
Error11	Communication transmission failure	Check whether the instrument cable is connected properly

Tel: 022-86838795 Fax: 022-86838795
Email: yolin@yolintech.com
Website: www.yolintech.com
Address: Tianjin Beichen District, Tianjin Beichen Economic Development Zone, Medical Equipment Industrial Park, East of Jingfu Highway, Ugu New Science Park 52-1 plant