SPYMINNPOO S866

S866 Electric Bicycle LCD Display Meter User Manual

Model: S866 | Brand: SPYMINNPOO

1. Introduction

The S866 LCD Display Meter is a versatile control panel designed for electric bicycles, compatible with 24V, 36V, and 48V systems. It provides essential riding data, allows for control of various e-bike functions, and features a clear, backlit display for visibility in various conditions. This manual will guide you through the installation, operation, and maintenance of your S866 display.

Figure 1.1: Front view of the S866 LCD display meter, showing speed, battery, and trip information.

2. Setup and Installation

The S866 LCD Display Meter is designed for easy installation on handlebars with a diameter of 22.2mm. Ensure your e-bike controller uses communication protocol No. 2 for compatibility.

2.1 Package Contents

- S866 LCD Display Meter
- Mounting Bracket
- Waterproof Connector Cable

2.2 Installation Steps

1. Secure the mounting bracket to your bicycle's handlebar (22.2mm diameter) using appropriate tools.
2. Slide the S866 LCD Display Meter onto the bracket until it clicks into place.
3. Connect the display's waterproof plug to the corresponding port on your e-bike controller. Ensure the connection is firm and secure.
4. Verify that your controller uses communication protocol No. 2. This display is only compatible with this protocol.

Figure 2.1: Diagram illustrating the S866 LCD display dimensions, bracket diameter (approx. 22.2mm), line length (approx. 21cm), waterproof grade (IP65), and communication protocol (No. 2).

④-1 PARAMETER SETTING MODE

This is advanced function, advice not to use
Modification of parameters will cause malfunction. Please read carefully these instructions before modifying. And please write down the previous parameter values before you modify, so that if some problem happens, you can restore it.
Under normal interface, press + + − to enter parameter setting mode, the first screen shows P01, press ⏻ to switch to next parameter, and press + / − to increase or decrease the value of each parameter. Press + + − again to quit this mode.
Under this mode, in total 20 parameters:

P01: Backlight brightness, level 1- lowest, Level 3-highest
P02: Change metric, 0: KM; 1: MILE
P03: Select battery voltage 24V/36V/48V/60V, 36V by default
P04: Hibernate mode time： from 1 to 60 minutes, 0: never enter this mode
P05: Total assist levels, 0: 3 levels; 1:5 levels

Figure 2.2: The S866 LCD display mounted on an electric bicycle handlebar, demonstrating its compact size and clear visibility.

3. Operating Instructions

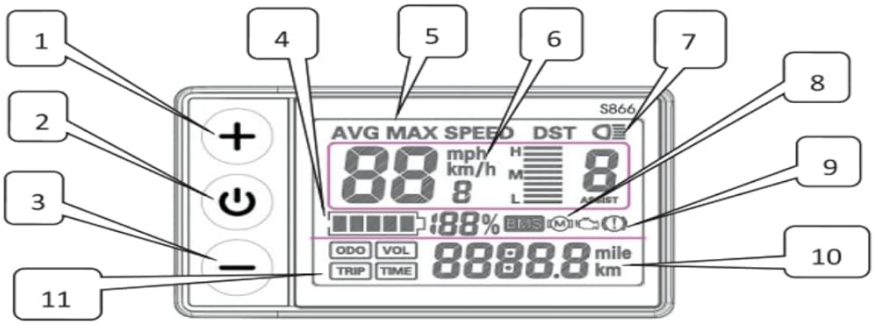
The S866 display provides various functions and information. Familiarize yourself with the buttons and display areas for optimal use.

① S866 DISPLAY PANEL INTRODUCTION

Please read carefully this manual before use.

The display shows: speed, PAS level, battery level, total mileage, single mileage, light indication, single trip time, error code

Overview:



1	+	Up button	7		Head light status
2	⏻	Power on/off button		(M)	Motor failure
3	−	Down button		(!)	Brake status
4		Battery level	9	mile	Distance in mile
5	AVG	Average speed		km	Distance in km
	MAX	Max speed	11	ODO	Total distance
	SPEED	Real time speed		TRIP	Single trip distance
6	mph	Speed in mph		VOL	Battery voltage in real time
	km/h	Speed in km/h		TIME	Single trip time

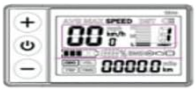
Operations:

1. Power on/off

Hold ⏻ button, to power on, and then hold ⏻ button, to power off.

When the e-Bike is not used for more than 10 minutes, the display will automatically turn off (hibernation mode).

2. Normal interface



Hold ⏻ button to power on, to enter normal interface。

Figure 3.1: Detailed diagram of the S866 LCD display panel, labeling buttons and display areas with corresponding functions.

3.1 Button Functions

- **+ Button:** Up button, used to increase values or assist levels.
- **Power Button:** Power on/off button, also used to switch information.
- **- Button:** Down button, used to decrease values or assist levels.

3.2 Basic Operations

- **Power On/Off:** Hold the **Power** button to power on. Hold it again to power off. If the e-bike is not used for more than 10 minutes, the display will automatically turn off (hibernation mode).
- **Normal Interface:** Hold the **Power** button to enter the normal interface.

3.3 Advanced Operations

Figure 3.2: Instructions for operating the S866 LCD display, including headlight control, assist level changes, 6km/h push mode, and multi-function area navigation.

- **Headlight Control:** Hold the **+** button to turn on the backlight and headlight simultaneously. Hold the **+** button again to turn them off.
- **Change Assist Level:** Press the **+** or **-** button to increase or decrease assist levels. Level 1 is the lowest, Level 5 is the highest. Level 0 disables PAS mode. The display returns to the default assist level each time it powers on.
- **6km/h Push Mode:** Hold the **-** button to enter 6km/h push mode, which moves the vehicle forward at a stable speed (approx. 6km/h). This is useful when pushing the vehicle. Release the button to exit this mode.
- **Multi-function Area:** Press the **Power** button to switch between different information displayed in the multi-function area: ODO (Odometer), TRIP (Trip Distance), VOL (Voltage), TIME (Ride Time), and back to ODO.

4. Parameter Setting Mode

This is an advanced function. It is advised not to modify parameters unless you fully understand their implications, as incorrect settings can cause malfunction. Please read these instructions carefully before modifying and note down previous parameter values so you can restore them if needed.

Under the normal interface, press the **+** and **-** buttons simultaneously to enter parameter setting mode. The first screen shows P01. Press the **Power** button to switch to the next parameter, and press the **+** or **-** buttons to increase or decrease the value of each parameter. Press **+** and **-** again to quit this mode.

In this mode, there are a total of 20 parameters (P01-P20):

④-2 PARAMETER SETTING MODE

P06: wheel size in inch, step： 0.1

P07: number of magnets for speed calculation, range： 1-255

P08: speed limit,range:0-100km/h，

Remark: this value is always in km/h even if the metric changed from km to mile.

P09: Zero speed start, 0: zero stat; 1: Non zero start (which means need to provide vehicle with initial speed then turn throttle will activate motor)

P10: Driving mode selection, 0： Only assist mode, 1： Only electric mode 2： Both mode –

P11: assist sensitivity: range 1-24, it sets the delay between the pedaling and motor start, smaller value means, after the user pedals over just a little angle, the motor will start working

P12: Assist starting power: range : 1-5, it sets the starting power of motor, bigger value means higher starting power

P13: Assist disc type: 5 magnets, 8 magnets, 12 magnets

P14: Current limit of controller, range 1-20A, 12A by default

P15: Low voltage protection setting of controller

Figure 4.1: Parameter settings P01-P05 for the S866 LCD display, including backlight brightness, metric change, battery voltage, hibernate mode, and assist levels.

- **P01: Backlight brightness** (1-lowest, 3-highest)
- **P02: Change metric** (0: KM; 1: MILE)
- **P03: Select battery voltage** (24V/36V/48V/60V, 36V by default)
- **P04: Hibernate mode time** (from 1 to 60 minutes, 0: never enter this mode)
- **P05: Total assist levels** (0: 3 levels; 1: 5 levels)

④-3 PARAMETER SETTING MODE

P16: ODO distance reset, hold + for 5 seconds to reset this value,hold − for 5 seconds to reset factory settings

P17: 0: cruise mode disabled，1: cruise mode enabled；auto-cruise mode or cruise mode enabled by pressing 1 button(controller should be compatible)

auto-cruise mode: cruise mode is enabled automatically by holding the throttle position for several seconds(this function is realized by controller)

P18: speed ratio, range:50%~150%, used to correct the speed if the user finds it is not accurate

P19: assist level 0 enable/disable, 0: with level 0 , 1: without level 0

P20: Protocol selection, 0: NO.2 PROTOCOL, 1: 5S PROTOCOL, 2：RESERVED 3：RESERVED

Figure 4.2: Parameter settings P06-P10 for the S866 LCD display, including wheel size, magnet number, speed limit, zero start, and driving mode selection.

- **P06: Wheel size in inch** (step: 0.1)
- **P07: Number of magnets for speed calculation**(range: 1-255)
- **P08: Speed limit** (range: 0-100km/h. This value is always in km/h even if the metric changed from km to mile.)
- **P09: Zero speed start** (0: zero stat; 1: Non zero start - means need to provide vehicle with initial speed then turn throttle will activate motor)
- **P10: Driving mode selection** (0: Only assist mode; 1: Only electric mode; 2: Both mode)

Made of ABS material, lightweight, waterproof and durable
Comes with LCD screen bracket for 22.5mm handlebars
LCD screen clearly shows status and data
Backlight allows you to see the screen clearly in low light

Figure 4.3: Parameter settings P11-P20 for the S866 LCD display, including assist sensitivity, starting power, disc type, current limit, low voltage protection, ODO reset, cruise mode, speed ratio, assist level 0, and protocol selection.

- **P11: Assist sensitivity** (range 1-24, sets the delay between pedaling and motor start; smaller value means the motor starts working after less pedal movement)
- **P12: Assist starting power** (range: 1-5, sets the starting power of the motor; bigger value means higher starting power)
- **P13: Assist disc type** (5 magnets, 8 magnets, 12 magnets)
- **P14: Current limit of controller** (range 1-20A, 12A by default)
- **P15: Low voltage protection setting of controller**
- **P16: ODO distance reset** (hold **+** for 5 seconds to reset this value; hold **-** for 5 seconds to reset factory settings)
- **P17: Cruise mode** (0: cruise mode disabled; 1: cruise mode enabled; auto-cruise mode or cruise mode enabled by pressing 1 button - controller should be compatible. Auto-cruise mode is enabled automatically by holding the throttle position for several seconds - this function is realized by the controller)
- **P18: Speed ratio** (range: 50%~150%, used to correct the speed if the user finds it is not accurate)
- **P19: Assist level 0 enable/disable** (0: with level 0; 1: without level 0)

- **P20: Protocol selection** (0: NO.2 PROTOCOL; 1: SS PROTOCOL; 2: RESERVED; 3: RESERVED)

5. Maintenance

To ensure the longevity and optimal performance of your S866 LCD Display Meter, follow these maintenance guidelines:

- **Cleaning:** Wipe the display screen and body with a soft, damp cloth. Avoid using abrasive cleaners or solvents, as they may damage the ABS material or the screen.
- **Water Exposure:** While the display is IP65 waterproof, avoid submerging it in water or exposing it to high-pressure water jets. Ensure the waterproof connector remains sealed.
- **Connection Check:** Periodically check all cable connections to ensure they are secure and free from corrosion or damage.
- **Storage:** If storing your e-bike for an extended period, keep the display in a dry, cool place away from direct sunlight.
- **Impact Avoidance:** Protect the display from physical impacts, which can damage the screen or internal components.

6. Troubleshooting

This section provides solutions to common issues and explanations for error codes you might encounter.

6.1 Error Codes

The S866 display can show various error codes to indicate specific issues. Refer to the table below for their meanings:

③ S866 DISPLAY ERROR CODES

Code(Decimal)	Description
E00	Normal
E01	Reserved
E02	Brake Error
E03	Assist sensor error
E04	6KM/H push mode
E05	Cruise mode
E06	Battery low voltage protection
E07	Motor Error
E08	Throttle Error
E09	Controller Error
E10	COM receive Error
E11	COM send Error
E12	BMS communication Error
E13	Head light Error

Figure 6.1: Table listing S866 LCD display error codes (E00-E13) and their corresponding descriptions.

S866 Display Error Codes

Code (Decimal)	Description
E00	Normal
E01	Reserved
E02	Brake Error
E03	Assist sensor error
E04	6KM/H push mode
E05	Cruise mode
E06	Battery low voltage protection
E07	Motor Error

Code (Decimal)	Description
E08	Throttle Error
E09	Controller Error
E10	COM receive Error
E11	COM send Error
E12	BMS communication Error
E13	Head light Error

6.2 Common Issues and Solutions

- **Display Not Powering On:**
  - Check if the battery is charged and properly connected.
  - Ensure the display cable is securely plugged into the controller.
- **Incorrect Speed/Distance Readings:**
  - Verify the wheel size (P06) and number of magnets (P07) settings in the parameter mode are correct for your e-bike.
  - Adjust the speed ratio (P18) if necessary.
- **Motor Not Responding:**
  - Check for error codes (E07, E08, E09).
  - Ensure the communication protocol (P20) is set to NO.2 PROTOCOL.
  - Verify assist sensitivity (P11) and starting power (P12) settings.
- **Display Shows E10 Error:**
  - This indicates a COM receive error. Ensure your controller uses communication protocol No. 2. The display is only compatible with this protocol.
  - Check the connection between the display and the controller.

7. Specifications

Detailed technical specifications for the S866 LCD Display Meter:

- **Model:** S866
- **Compatible Voltage:** 24V, 36V, 48V
- **Display Type:** LCD
- **Material:** Acrylonitrile Butadiene Styrene (ABS)
- **Waterproof Grade:** IP65
- **Bracket Diameter:** Approx. 22.2mm / 0.9in
- **Line Length:** Approx. 21cm / 8.3in

- **Communication Protocol:** Protocol No. 2
- **Dimensions (Package):** 11.6 x 7.9 x 7.4 cm
- **Weight:** 100 grams
- **Manufacturer Reference:** SPYMINNPOOwxb12da94k1645

8. Warranty and Support

SPYMINNPOO is committed to providing quality products and customer satisfaction. If you have any questions or encounter issues with your S866 LCD Display Meter, please contact us.

8.1 Service Guarantee

If you have any questions about your S866 LCD Display Meter, you can contact us via email at any time. We are committed to responding and resolving your problems promptly, providing better service.

8.2 Contact Information

For support, please refer to the contact details provided with your purchase or visit the official SPYMINNPOO brand store on Amazon: SPYMINNPOO Brand Store.