retrospec

Display Manual
D19

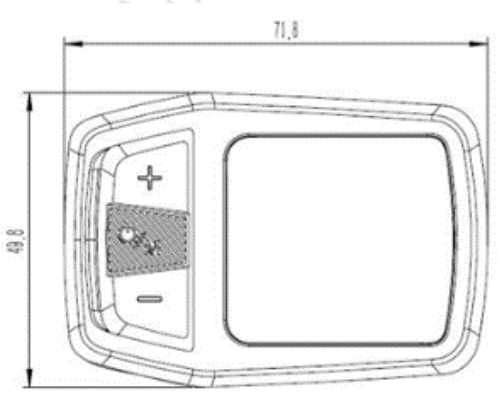
OWNER'S MANUAL

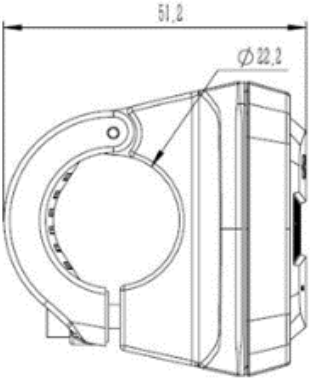
I. About the User's Guide

To ensure proper use of your electric bicycle, please read this user guide for the D19 display carefully before use. This manual provides concise instructions covering hardware installation, configuration, and everyday operation. It is designed to help eliminate confusion and resolve potential issues efficiently.

II. Appearance and Dimensions

Primary material and color (surface color subject to the real product). The D19 features an LED display with a 3-button interface, offering a lightweight and user-friendly design. It uses a four-layer PCB, a nylon buckle, and an ABS shell. These materials allow the unit to function reliably within a temperature range of -20°C to 60°C while ensuring good mechanical durability.





Specifications

① Power supply: DC 48V
② Rated working current: 35mA@48V
④ Screen specification: LED screen
⑤ Communication mode: UART
⑥ Operating temperature: -20°C to 60°C
⑦ Storage temperature: -20°C to 70°C
⑧ Waterproof grade: IP65

III. Function Overview

① 3 buttons for easy operation Power button, (+) button, (-) button
② Metric/Imperial unit
③ Speed display: real-time speed (mph)
④ 5-level control: 1, 2, 3, 4, 5
⑤ Battery power indicator: battery power indication, battery SOC (State of Charge) indication (with battery communication), and undervoltage prompt
⑥ Headlight indication: headlight on/off status indication
⑦ Mileage indication: TRIP and ODO
⑧ Cable communication interface for easy system maintenance and parameter setting
⑨ 2.2mph assisted walk function
⑩ Fault code indication

IV. Display Interface

1. Basic Interface

① Power assist gear: 5 levels, namely, Level 1,2, 3, 4, 5 in an ascending order. Level 0 indicates no assistance.
② Real-time speed: Display the current cycling speed and unit.
③ TRIP: Display the trip value and unit, with a maximum of 999.9.
④ Battery power indicator: Displays the battery power divisions. The indicator box flashes in the undervoltage status.
⑤ Battery SOC indicator: Displays the percentage of battery power remaining.
⑥ Headlight indicator: Lights up when the headlight is turned on.

2. Functional Interface

Full-Screen Display at Startup

The full-screen information above will appear for around 1 second and then go to the screen shown below.

Single press the Power button to view the cycling time and trip value.

Single press the Power button to view the ODO value.

Single press the Power button to view the battery SOC (The two O after the digits represent %).

Single press the Power button to view the cycling speed.

V. Button Definitions

Sleep/Wakeup button: /M; level adjustment button: +/-

1. Functional Operation

Sleep/Wakeup

Keep the normal connection between the product and the controller. Press and hold the Sleep/Wakeup button (1.5s) in the sleep mode to enable the product to wake up and start running. The basic interface will appear. Press and hold the Sleep/Wakeup button (2s) in the power-on status to power off the product.

VI. Power Assisted Level Change

Press "+" or "-" to change the power-assisted level. There are five options: Level 0/1/2/3/4/5. Product will run at the previous level when the system restarts. Level 0 indicates no power assistance. (See the figure below for the power-assisted level.)

Level 0

Level 1

Level 2

Level 3

Level 4

Level 5

Power Assisted Walk Mode

Press and hold "-" for 2s to enable the power-assisted running mode. "  " will appear in the bottom left corner of the screen. Release "-" to exit the power-assisted walk mode. The interface of the power-assisted running mode is shown below.

Headlight ON/OFF

Press and hold "+" for 2s to turn on the headlight (supported by the controller). The headlight icon on the screen will light up. Then, press and hold "+" for 2s to turn off the headlight. The headlight icon on the screen will be OFF. When the headlight is on, the overall LED brightness of the product will drop. When the headlight is off, the overall LED brightness of the product will return to normal.

Headlight ON

Headlight OFF

Battery Power Indication

The battery power information is obtained from the battery or controller and displayed in 1-5 divisions on the screen.
Priority is given to the SOC value sent by the battery.
In case of failure in battery communication, the battery power divisions will flash 3s after startup. Then, the simulated SOC value will appear under normal circumstances.

The battery power information is obtained from the controller and displayed as follows:

Function Settings

Press and hold "+" and "-" for 3s at the same time to enable the setting mode.

1. Press the Power button once to enable the metric/imperial unit setting status:

2. Press "+" or "-" to set the metric/imperial unit.

Metric Unit

Imperial Unit

After selecting the unit, press and hold the Power button for 3s to save the setting and automatically return to the previous menu.

VII. Resetting to factory default settings

1. Press "+" to display "PASS":

2. Press the Power button to enter the "Enter Password" status. Enter the password "6262"

3. Press "+" or "-" to increase or decrease the number. Press the Power button again to skip to next figure, and so on.

4. After entering the password “6262”, press the Power button to open the next menu. “Frt” will appear, indicating that default settings are restored.

5. Press the Power button once to open the next menu. “ON” will appear on the screen. If you do not want to restore default settings, press and hold the Power button to return to the previous menu.

6. If you want to restore default settings, press “+” or “-” once. “YES” will appear on the screen. Press and hold the Power button to confirm the setting and automatically return to the previous menu. Thus, default settings are restored successfully.

7. Press and hold "+" or "-" for 3s at the same time to exit the secondary menu and return to the primary menu.

8. Continue to press "+" in the primary menu to enter the data clearing setting status. Press the Power button once to set the data clearing status.

9. Press "+" or "-" to set whether to clear data.

10. Press the Power button once to enter the data clearing status. "NO" will appear on the screen. If you do not want to clear data, press and hold the Power button to exit the data clearing status, indicating that data will not be cleared.

11. If you want to clear data, press "+" / "-" once until "YES" appears on the screen. Then, press and hold the Power button to clear data and automatically return to the previous menu.

VIII. Setting how long the bike will stay on before powering down.

1. When "CLr" appears, press "+" once to enter the sleep time setting status. "SLP" will appear on the screen. Wait for 4s in the SLP status. The product will automatically display the set sleep time:

1. Press the Power button once to enter the sleep time setting status:

Setting of 5min Sleep

2. Press "+" to increase sleep time by 5 minutes. The product will display the following information:

Setting of 10min Sleep

3. Continue pressing "+" until desired sleep time is reached, up to a maximum of 30 minutes. The product will display the following information:

Setting of 15min Sleep

Setting of 20min Sleep

Setting of 25min Sleep

Setting of 30min Sleep

After setting the sleep time, press and hold the Power button for about 3s to save the settings and automatically return to the previous menu.

IX. Setting the wheel diameter

When the product is in the SLP setting status, press "+" once to view the wheel diameter. "dIR" will appear on the screen.

Wait for 4s with the DIR interface. The product will automatically display the current wheel diameter.

Press the Power button once to view the matching wheel diameter.

Press and hold "+" and "-" for 3s at the same time to return to the main interface.

X. Fault Information

The instrument provides fault prompts and warnings. Fault codes will appear on the interface if any faults are detected. Below is an example.

Appendix: List of UART Error Code Definitions

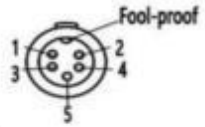
21	Bus current abnormality
22	Handlebar abnormality
23	Brake abnormality
24	Motor Hall signal abnormality
25	Phase current abnormality
26	Undervoltage fault
28	Fault in European standard
30	Instrument communication failure
31	Power switching failure
32	Running failure
33	Microprocessor failure, voltage reference failure

If the 5-core wire connecting the instrument and controller is faulty:

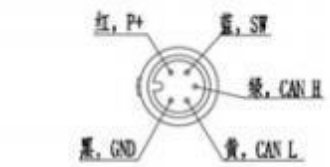
The instrument cannot be turned on, and the LCD screen will not display any information. Possible causes: Incorrect connection of the main power cord/phase los the controller.

The instrument can be turned on, but stops working in 3s. Possible causes: open cir of any one of the green and yellow signal cables connecting the instrument and controller.

7. Wiring Definition



connector model	JULET JL-F-Z509AG				
Pin NO.	1	2	3	4	5
Color	Red	Blue	Black	Green	Yellow
Definition	VCC	LOCK	GND	RX	TX



XI. Precautions

Pay attention to safety during operation. Do not plug or unplug the instrument in the power-on status.

Minimize the use in harsh environments such as heavy rain, snow, and direct sunlight.

If the instrument malfunctions, send it for repair as soon as possible.

We reserve the right to modify the specifications.

XII. Q&A

Q: I can't turn on the instrument?

A: Check whether the instrument's harness is in reliable contact with the controller's connector.

Q: How to deal with the fault codes displayed on the instrument?

A: Identify faults by the displayed error code. If you cannot solve the problem, please send the e-bicycle to the maintenance center for repair in a timely manner.

XIII. Quality Commitment and Warranty

In the event of any faults arising from quality problems during normal operation, our company will provide restricted warranty services within the warranty period.

Exclusions:

The following is excluded from the warranty:

1. Disassembly or modification without permission;

2. Fault or damage arising from incorrect operation, installation, or debugging of the user or third party;

3. Casing scratch or damage after delivery.

4. Damage to the lead wire after delivery.

5. Fault or damage caused by force majeure (e.g. fire, earthquake, etc.) or natural disasters (e.g. lightning strikes, etc.);

6. Expiration of the warranty.

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Contact Us

Need some help with your new gear? Just want to say “hey” and talk to someone on our team? We’re here for that too.

Give us a follow, while you’re at it:
@retrospec
#retrospec
#readytooutdoor