



REID®

Display Manual

Blacktop 2.0

E trail 2.0

Quest 2.0

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I. Product Introduction

1. Product Name and Model

LED instrument. Model: D19 C5B/U5B C
CANBUS communication;
U UART communication;
5 Host model;
B Bluetooth (optional);

2. Product Features

Simple structure and exquisite appearance
LED screen of ultra-high contrast
Excellent outdoor design with IP65 waterproof ability
Waterproof port for serial communication and convenient maintenance services
Optional Bluetooth function, suitable for mobile Apps

3. Scope of Application

This product is suitable for electric powered bicycles that comply with EN15194 regulations.

4. Appearance and Dimensions



II. Product Description

1. Specifications

① Power supply: DC 36V

- ② Rated working current: 35mA@36V
- ④ Screen specification: LED screen
- ⑤ Communication mode: UART/CANBUS
- ⑥ Operating temperature: -20°C to 60°C
- ⑦ Storage temperature: -20°C to 70°C
- ⑧ Waterproof grade: IP65

2. Function Overview

- ③ buttons for easy operation
Power button, + button, - button
- ④ Metric/Imperial unit
- ⑤ Speed display: real-time speed (km/h)
- ⑥ Level control: 1/2/3/4/5
- ⑦ Battery power indicator: battery power indication, battery SOC indication (with battery communication) and undervoltage prompt
- ⑧ Headlight indication: headlight on/off status indication (to be supported by the controller)
- ⑨ Mileage indication: TRIP and ODO
- ⑩ Cable communication interface for easy system maintenance and parameter setting
- ⑪ km/h assisted running function
- ⑫ Fault code indication

3. Installation

- ① Open the clip, place it on the left handlebar (standard handlebar tube specification: Φ 22.2), and adjust it to an easy-to-operate position. Tightly secure it with M4 socket head screws. Maximum tightening torque: 1N. m. * **Product damage arising from excessive tightening torque is excluded from the warranty.**
- ② Connect the 5-pin connector of the product to the connector of the controller as indicated in the figure.

4. Display Interface

4.1 Basic Interface

- ① Power assisted 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, maximum 999.9.
- ④ Battery power indicator: display the battery power divisions. The indicator box flashes in the undervoltage status.
- ⑤ Battery SOC indicator: display the percentage of battery power in the mode of battery communication.

⑥ Headlight indicator: it lights up when the headlight is turned on.

4.2 Functional Interface

Full Screen Display at Startup



The full screen information disappears in 1s. The product is in the working status:



4.2.1 Press the Power button to view the cycling time and trip value.



4.2.2 Press the Power button to view the ODO value.



4.2.3 Press the Power button to view the battery SOC.



With battery communication



Without battery communication

4.2.4 Press the Power button to view the cycling speed.



5. Button Definitions

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

6. Functional Operation

6.1 Sleep/Wakeup

Keep the normal connection between the product and 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.

6.2 Power Assisted Level Change

Press “+” or “-” to change the power assisted level. There are five options: Level 0/1/2/3/4. The

product will run at Level 1 by default after startup. 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

6.4 Power Assisted Running 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 running mode. The interface of the power assisted running mode is shown below:



6.5 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

6.6 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:



6.7 One-click Startup with Battery

~~The product will automatically start running after the battery is put into use.~~ This function has been eliminated.

6.8 Function Settings

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

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



6.8.1.1 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.

6.8.2 Press “+” to display “PASS”:



6.8.2.1 Press the Power button to enter the “Enter Password” status. Enter the password “6262” to set the Bluetooth status (Bluetooth is enabled by default) and restore default settings.



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



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



6.8.2.2.1 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.



6.8.2.2.2 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.



6.8.2.3 Press “+” or “-” until “bLE” appears for Bluetooth setting:



6.8.2.3.1 Press the Power button once to enable or disable the Bluetooth. Bluetooth is enabled by default. If you do not want to disable the Bluetooth, when “ON” appears on the screen, press and hold the Power button to return to the previous menu.



6.8.2.3.2 If you want to disable the Bluetooth, press “+” or “-” once until “YES”. Press and hold the Power button to confirm the setting and automatically returns to the previous menu, indicating that the Bluetooth function has been successfully disabled.



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

6.8.3 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.



6.8.3.1 Press “+” or “-” to set whether to clear data.



6.8.3.2 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.

6.8.3.3 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.



6.8.4 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:



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



Setting of 5min Sleep

6.8.4.2 Press “+” once. The product will display the following information:



Setting of 10min Sleep

6.8.4.3 Press “+” once. The product will display the following information:



Setting of 15min Sleep

6.8.4.4 Press “+” once. The product will display the following information:



Setting of 20min Sleep

6.8.4.5 Press “+” once. The product will display the following information:



Setting of 25min Sleep

6.8.4.6 Press “+” once. The product will display the following information:



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.

6.8.5 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.



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



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

6.8 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 loss of the controller.

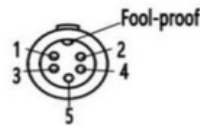
The instrument can be turned on but stop working in 3s. Possible causes: open circuit of any one of green and yellow signal cables connecting the instrument and controller.

Appendix: List of CANBUS Error Code Definitions

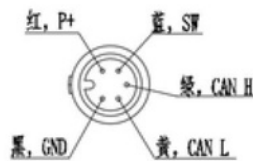
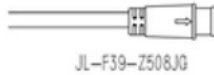
| Fault Code | Fault Description | Troubleshooting |
|------------|---|---|
| 01 | Overcurrent fault of phase line of controller | Restart the system. If the fault persists, please apply for warranty from an authorized dealer. |
| 02 | Overcurrent fault of controller bus | Restart the system or replace the controller. If the fault persists, please apply for warranty from an authorized dealer. |
| 03 | Controller HALL fault | Check whether the cable is properly connected. If the fault persists after reconnecting the cable, please seek help from an authorized dealer. |
| 05 | Controller temperature fault | If the fault persists, please apply for warranty from an authorized dealer. |
| 30 | Instrument communication failure | Check whether the instrument is properly connected. If the fault persists after reconnecting the instrument, please replace the instrument or controller or extend the cable. |
| 31-50 | Controller nonconformity to new European standard | Reconnect the controller, update the software, or replace the controller. |
| 60 | Instrument MCU failure, voltage reference failure | Replace the instrument. |
| 06 | Motor temperature fault | Check whether the motor is overloaded. Stop and restart the instrument, and check whether |

| | | |
|----|---|---|
| | | the error code disappears. If the fault persists, please seek help from an authorized dealer. |
| 20 | Running and power switch failure | Check whether the button is stuck. If the button is stuck, replace the instrument. |
| 04 | Brake failure, handlebar failure | Check the brake cable or check whether the brake is released before starting the system. |
| 08 | Controller communication failure | Check whether the controller is connected properly. If the fault persists after reconnecting the controller, please replace the instrument or controller or extend the cable. |
| 09 | Controller overvoltage and undervoltage fault | Check the battery voltage. |

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 |



III. 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.

IV. Q&A

Q: can't I 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.

V. Quality Commitment and Warranty

Warranty information:

1. In case of any faults arising from the quality problems in normal operation, our company will provide restricted warranty services within the warranty period.
2. The warranty period is 30 months from the date of production.

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. Scratching or damage of the lead wire;
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.

VI. Version Information

The instrument software versions of some bicycles may differ from that in this manual. The actual version shall prevail.



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