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› JOYSOG E-Bike DZ41 LCD Display Meter User Manual

JOYSOG DZ41

JOYSOG E-Bike DZ41 LCD Display Meter User Manual

Model: DZ41

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your JOYSOG E-Bike DZ41 LCD Display Meter. This display is designed to provide essential riding data for electric bicycles, compatible with 24V, 36V, and 48V systems, and specifically engineered for Bafang BBS01, BBS02, and HD MID motors using the UART communication protocol. Please read this manual thoroughly before use to ensure proper function and longevity of your device.

2. SAFETY INFORMATION

- Always ensure your e-bike is powered off before installing or removing the display.
- Do not attempt to open or modify the display unit. This may void the warranty and cause damage.
- Keep the display away from extreme temperatures and direct sunlight for prolonged periods.
- Ensure all connections are secure and waterproof to prevent electrical issues.
- Regularly check the display and its mounting for any signs of damage or loose components.
- When cleaning, use a soft, damp cloth. Avoid abrasive cleaners or solvents.

3. PACKAGE CONTENTS

Please verify that all items are present in your package:

- 1x JOYSOG E-Bike DZ41 LCD Display Meter
- 1x Handlebar Mount (integrated with display)
- 1x Waterproof Connector Cable (UART protocol)

4. PRODUCT OVERVIEW

The JOYSOG DZ41 LCD Display Meter provides a clear interface for monitoring your e-bike's performance. It features a high-brightness white nixie tube display and robust ABS material construction for outdoor use.



Figure 4.1: Overall view of the DZ41 LCD Display Meter mounted on an e-bike handlebar, showing the display unit and a separate remote button unit.

DZ41 HD Display

Applicable voltage
24V/36V/48V



Figure 4.2: Detailed view highlighting the display's features, including the '+' and '-' buttons, 'M' button, power button, and the high-brightness white nixie tube display.

Display Components:

- **Display Screen:** Shows speed, distance, battery level, and other parameters.
- **'+' Button:** Increases parameter values or assist level.
- **'-' Button:** Decreases parameter values or assist level.
- **'M' (Mode) Button:** Cycles through display modes and enters/exits settings.
- **Power Button:** Turns the display on/off.
- **Waterproof Connector:** For secure connection to the e-bike system.



Figure 4.3: Labeled diagram of the DZ41 display interface, indicating areas for Gear, Speed, Kilometer values, Mode, and Power display.

Dimensions:

NEW

DZ41

<ul style="list-style-type: none"> 2" Display screen,LED 4 Hard plastic buttons 	<ul style="list-style-type: none"> Dark semi transparent PC window material Functional division of color
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Figure 4.4: Physical dimensions of the DZ41 display unit (66.5mm x 49.3mm) and the handlebar clamp (suitable for ≤ 22 mm diameter handlebars).

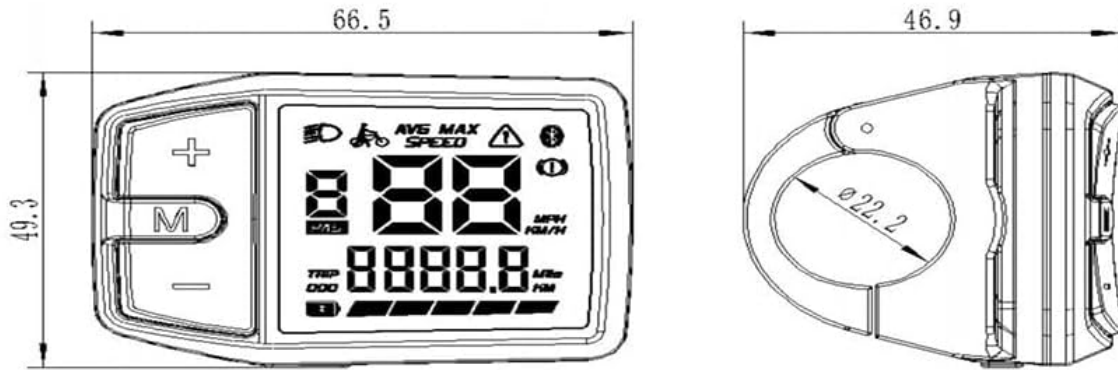
5. INSTALLATION

The DZ41 LCD Display Meter is designed for easy installation on your e-bike's handlebar.

1. **Prepare the Handlebar:** Ensure the handlebar area where you intend to mount the display is clean and free of obstructions. The display is suitable for handlebars with a diameter of 22mm or less.
2. **Mount the Display:** Position the display unit on your handlebar. Secure it firmly using the integrated clamp. Do not overtighten to avoid damage.
3. **Connect the Cable:** Locate the UART communication cable from your Bafang motor system. Connect the waterproof connector of the DZ41 display to the corresponding connector on your e-bike. Ensure the connection is fully seated and secure to maintain its waterproof integrity.
4. **Cable Management:** Route the cable neatly along your e-bike frame, securing it with cable ties if necessary, to prevent it from interfering with moving parts or getting damaged.
5. **Initial Check:** After installation, power on your e-bike to confirm the display powers on and communicates with the motor system.

FLIP AT WILL

I have enough magnetic attraction, but I just want to be a quiet little magnetic sucker



VERSATILE DESIGN

Serial communication interface to facilitate maintenance service
Communication Protocol : Bafang CAN Communication Protocol

2. Functional overview

- ① Four buttons, easy to operate
- ② Metric / imperial switch selection
- ③ Mileage display: subtotal mileage (trip), total mileage (ODO)
- ④ Speed display: real time speed (speed), maximum speed (max), average speed (AVG)
- ⑤ Power assist control: 0-5 levels default (maximum 9 levels are supported, and the number of levels is optional)
- ⑥ Six levels of electricity instructions: 1-5 level power, and under voltage prompts
- ⑦ Headlamp indication: headlamp switch status indication (supported by controller)
- ⑧ 6km/h walk assist function
- ⑨ Error code indication
- ⑦ The communication interface of the connecting line is convenient for system maintenance and parameter setting

Figure 5.1: Key features of the DZ41 display, including its 2-inch LED screen, durable PC window, and four physical buttons for control.

6. OPERATING INSTRUCTIONS

The DZ41 display offers intuitive controls and clear data presentation.

6.1 Power On/Off

- Press and hold the **Power Button** (often integrated with the 'M' button or a separate button as shown in Figure 4.2) for a few seconds to turn the display on or off.

6.2 Display Functions

The display provides various data points:

- **Speed Display:** Real-time speed (current, maximum, average).
- **Mileage Display:** Trip distance (TRIP) and total odometer (ODO). Press the 'M' button to cycle between these.

- **Power Assist Control (PAS):** Adjust assist levels (0-5 levels default, up to 9 levels supported depending on controller). Use '+' and '-' buttons to change.
- **Battery Level:** Indicated by 1-5 level power bars.
- **Headlamp Indication:** Headlamp switch status (supported by controller).
- **6km/h Walk Assist Function:** Typically activated by holding the '-' button.



Figure 6.1: Functional overview of the DZ41 display, detailing button operations and the various data points displayed, including error code indications.

6.3 Settings (Metric/Imperial)

The display supports switching between Metric (km/h, km) and Imperial (mph, miles) units. Refer to your e-bike controller's manual or specific display settings instructions for how to access and change this parameter, usually by holding the 'M' button to enter a settings menu.

7. MAINTENANCE

- **Cleaning:** Wipe the display screen and body with a soft, slightly damp cloth. Do not use harsh chemicals, solvents, or abrasive materials, as these can damage the screen or casing.
- **Connection Check:** Periodically inspect the waterproof connector for any signs of corrosion or damage. Ensure it remains securely connected.
- **Physical Inspection:** Check the display and its mounting bracket for any cracks, loose screws, or other physical damage. Address any issues promptly to prevent further damage or loss of function.
- **Storage:** If storing your e-bike for an extended period, ensure the display is clean and dry. Store in a cool, dry place away from direct sunlight.

8. TROUBLESHOOTING

If you encounter issues with your DZ41 display, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Display does not power on.	Loose connection, low battery, faulty wiring.	Check all cable connections. Ensure e-bike battery is charged. Consult e-bike technician if wiring is suspected.

Problem	Possible Cause	Solution
Display shows incorrect speed/distance.	Incorrect wheel diameter setting, sensor issue.	Verify wheel diameter setting in display parameters (if accessible). Check speed sensor for proper alignment and function.
Error code displayed.	System malfunction (motor, controller, sensor).	Refer to your e-bike's main controller manual for specific error code meanings and troubleshooting steps. Common error codes are often related to motor, controller, or brake sensor issues.
Buttons are unresponsive.	Dirt/debris, internal fault.	Clean around buttons. If issue persists, contact support.

For issues not listed here, or if solutions do not resolve the problem, please contact JOYSOG customer support or a qualified e-bike technician.

9. SPECIFICATIONS

Feature	Detail
Model Name	DZ41 LCD Display Meter
Brand	JOYSOG
Display Type	LCD
Applicable Voltage	24V / 36V / 48V
Communication Protocol	UART
Rated Current	25mA
Waterproof Level	IPX65
Material	ABS + LED LCD display
Applicable Handlebar Diameter	≤22mm
Operating Temperature	-30°C to 80°C
Instrument Connection Cable Length	595mm

10. WARRANTY AND SUPPORT

JOYSOG products are manufactured to high-quality standards. For warranty information and customer support, please refer to the documentation provided with your purchase or visit the official JOYSOG website. Keep your proof of purchase for warranty claims.

For further assistance, you may contact JOYSOG customer service through their official channels.

