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## SPABOY ZJLCD-BT01

# User Manual

## SPABOY ZJLCD-BT01 TURBINE FLOW METER

### Introduction

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This manual provides detailed instructions for the installation, operation, and maintenance of the SPABOY ZJLCD-BT01 Turbine Flow Meter. Please read this manual thoroughly before using the device to ensure proper function and longevity. The ZJLCD-BT01 is an electronic PVC LCD digital display flowmeter designed for accurate measurement of liquid flow, commonly used in farm and garden irrigation systems.

### Product Overview

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Figure 1: Front view of the ZJLCD-BT01 Turbine Flow Meter, showing the LCD display, SET button, and CLEAR button.



Figure 2: Angled view of the flow meter, highlighting the PVC pipe connections on both ends.



Figure 3: Close-up of the LCD display, showing the digital readout for flow measurement.



Figure 4: The LCD display indicating both instantaneous flow rate (top) and total accumulated flow (bottom).

## Without cable



Figure 5: The flow meter model without an external power cable, typically battery-powered.

## With cable



Figure 6: The flow meter model with an external power cable for continuous power supply.

## Specifications

Feature	Detail
Model	ZJLCD-BT01
Brand	SPABOY
Display Type	LCD Digital Display
Voltage	5 Volts (DC)
Material	PVC
Pipe Sizes	1", 1-1/2", 2", 2-1/2", 3" (depending on variant)
Application	Farm/Garden Irrigation, Industrial Flow Measurement

## Setup and Installation

Proper installation is crucial for accurate readings and long-term performance. Follow these steps carefully:

1. **Choose Location:** Select a section of pipe where the flow is stable and free from turbulence. Ensure there is sufficient straight pipe length before and after the meter (typically 10x diameter upstream and 5x diameter downstream).
2. **Prepare Piping:** Turn off the water supply and drain the pipe section where the flow meter will be installed. Cut the pipe to the appropriate length to accommodate the flow meter.
3. **Install Meter:** Insert the flow meter into the pipe, ensuring the flow direction arrow on the meter body aligns with the direction of water flow. Use appropriate PVC cement or threading tape for a watertight seal, depending on your pipe type and meter connections.
4. **Power Connection:**
  - **Battery Powered Models:** Ensure batteries are correctly inserted into the battery compartment.
  - **Wired Models:** Connect the 5V DC power supply wires according to the color coding (typically red for positive, black for negative). Ensure connections are secure and insulated.
5. **Leak Check:** Slowly restore water pressure to the system and check for any leaks around the flow meter connections. Tighten or re-seal as necessary.

## Operating Instructions

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The ZJLCD-BT01 features a simple interface for monitoring flow and total volume.

- **Display Readout:** The LCD screen typically displays the instantaneous flow rate (e.g., L/min, GPM) on the upper line and the total accumulated volume (e.g., Liters, Gallons) on the lower line.
- **SET Button:** Press the **SET** button to cycle through different display modes or to enter calibration/setting mode (refer to advanced settings for calibration).
- **CLEAR Button:** Press the **CLEAR** button to reset the accumulated volume to zero. Hold the button for a few seconds to confirm the reset.
- **Unit Conversion:** Some models may allow unit conversion (e.g., Liters to Gallons). Consult the specific model's advanced settings if this feature is available.

## Maintenance

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Regular maintenance ensures the accuracy and longevity of your flow meter.

- **Cleaning:** Periodically inspect the flow meter for any debris or sediment buildup, especially if used with unfiltered water. If necessary, remove the meter and gently clean the turbine impeller and internal passages.
- **Battery Replacement:** For battery-powered models, replace batteries when the low battery indicator appears on the LCD, or if the display becomes dim. Use the recommended battery type (e.g., AAA, AA).
- **Leak Inspection:** Regularly check all connections for leaks. Address any leaks promptly to prevent water damage and ensure accurate readings.
- **Winterization:** In freezing climates, ensure the flow meter is drained and protected from freezing temperatures to prevent damage to the PVC body and internal components.

## Troubleshooting

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<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
No display/Display is dim	Dead or low batteries (battery models); No power supply (wired models); Loose power connection.	Replace batteries; Check power supply and connections; Ensure proper voltage (5V DC).
Inaccurate readings	Air in the line; Debris in the meter; Incorrect installation direction; Turbulence in flow.	Purge air from the system; Clean the meter; Verify flow direction arrow; Ensure sufficient straight pipe length.
Flow reading stuck at zero	No flow; Impeller jammed by debris; Sensor malfunction.	Verify water flow; Inspect and clean impeller; Contact support if issue persists.
Leaks at connections	Improper sealing; Damaged threads/gaskets.	Re-seal connections with appropriate sealant/tape; Replace damaged components.

## Warranty and Support

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SPABOY products are designed for reliability and performance. For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official SPABOY website.

Please retain your proof of purchase for warranty claims.

