

## LAFAYETTE DMB-6

# Lafayette DMB-6 Digital Multimeter User Manual

Model: DMB-6

## 1. INTRODUCTION AND OVERVIEW

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The Lafayette DMB-6 Digital Multimeter is a versatile 6-in-1 environmental measurement tool designed for both professional and amateur use. This device integrates multiple functions into a single unit, providing comprehensive measurement capabilities.

It combines the functions of a sound level meter, luxmeter, hygrometer, thermometer, non-contact AC voltage detector, and a professional digital multimeter. This manual provides essential information for the safe and effective use of your DMB-6 multimeter, including setup, operation, maintenance, and technical specifications.

## 2. SAFETY INFORMATION

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**WARNING: To avoid possible electric shock, fire, or personal injury, please read all safety information before using the product.**

- Always ensure the multimeter is in good working condition before use.
- Do not apply voltage or current that exceeds the maximum specified limits for the meter.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Replace the battery immediately when the low battery indicator appears to ensure accurate readings.
- Do not operate the meter around explosive gas, vapor, or dust.
- Always disconnect the test leads from the circuit before changing functions.
- Ensure the test leads are properly seated in the correct input jacks for the desired measurement.

## 3. PACKAGE CONTENTS

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Verify that all items are present and undamaged upon opening the package:

- Lafayette DMB-6 Digital Multimeter
- Pair of Test Leads (Red and Black)

- Temperature Probe
- User Manual (this document)

## 4. PRODUCT FEATURES

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The DMB-6 multimeter offers a comprehensive set of features for various measurement tasks:

- **6-in-1 Functionality:** Integrates Sound Level Meter, Luxmeter, Hygrometer, Thermometer, Non-Contact AC Voltage Detector, and Digital Multimeter.
- **Automatic Range Selection:** Simplifies operation by automatically selecting the appropriate measurement range.
- **Data Hold Function:** Allows users to freeze the displayed reading for convenient recording.
- **Automatic Power-Off:** Conserves battery life by automatically shutting down after a period of inactivity.
- **4000-Count LCD Display:** Provides clear and precise digital readings.
- **Backlit Display:** Enhances visibility in low-light conditions.
- **Compact Design:** Dimensions of 121 x 40 x 60.6 mm and a weight of 280 g for portability.

## 5. SETUP

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### 5.1 Battery Installation

The DMB-6 multimeter requires batteries for operation. (Specific battery type not provided, assume common types like AAA or 9V).

1. Locate the battery compartment cover on the back of the device.
2. Use a screwdriver (if necessary) to open the cover.
3. Insert the batteries, observing the correct polarity (+ and -).
4. Replace the battery compartment cover and secure it.

### 5.2 Connecting Test Leads

For electrical measurements, connect the provided test leads to the appropriate input jacks.

1. Insert the black test lead into the "COM" (Common) jack.
2. Insert the red test lead into the "VΩmA" jack for voltage, resistance, or current measurements.
3. Ensure the leads are fully inserted and securely connected.



Figure 1: Back view of the DMB-6 Multimeter showing test lead storage.

## 6. OPERATING INSTRUCTIONS

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The DMB-6 features a rotary switch for selecting different measurement functions.

### 6.1 Power On/Off

- To power on the device, rotate the function switch from "OFF" to any desired measurement function.
- To power off, rotate the function switch back to the "OFF" position.
- The device will automatically power off after a period of inactivity to save battery.

### 6.2 Multimeter Functions (Voltage, Current, Resistance, Capacitance)

1. Select the desired measurement function (e.g.,  $V\sim$  for AC Voltage,  $V-$  for DC Voltage,  $\Omega$  for Resistance,  $A$  for Current,  $F$  for Capacitance) using the rotary switch.
2. Connect the test leads to the circuit or component under test. Ensure correct polarity for DC measurements.
3. Read the measurement value on the LCD display.

### 6.3 Environmental Measurement Functions

Rotate the function switch to the respective symbol for environmental measurements:

- **Sound Level (dB):** Position the meter in the environment to be measured. The display will show the sound pressure level in decibels.
- **Luxmeter (Lux):** Point the light sensor (typically located at the top of the device) towards the light source. The display will show the illuminance in Lux.
- **Hygrometer (%RH):** The built-in sensor will measure the relative humidity of the surrounding air.
- **Thermometer ( $^{\circ}C/^{\circ}F$ ):** Use the included temperature probe for contact temperature measurements, or the internal sensor for ambient temperature.

### 6.4 Non-Contact AC Voltage (NCV) Detection

The NCV function allows for detection of AC voltage without direct contact with conductors.

1. Select the NCV function on the rotary switch.
2. Bring the top of the meter near an AC voltage source (e.g., an electrical outlet or insulated wire).
3. The meter will indicate the presence of AC voltage through an audible beep and/or visual indicator.

## 6.5 Data Hold Function

Press the "HOLD" button (if available) to freeze the current reading on the display. Press it again to release the hold function.

## 7. MAINTENANCE

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### 7.1 Cleaning

To clean the meter, wipe the case with a damp cloth and a mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before use.

### 7.2 Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly to maintain measurement accuracy. Refer to section 5.1 for battery installation instructions.

### 7.3 Storage

If the meter is not to be used for an extended period, remove the batteries to prevent leakage and damage. Store the device in a cool, dry place, away from direct sunlight and extreme temperatures.

## 8. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Check battery polarity; replace batteries.
No reading or "OL" (Overload) displayed.	Incorrect function selected; leads not connected properly; measurement exceeds range.	Select correct function; ensure leads are secure; check if measurement is within meter's range.
Inaccurate readings.	Low battery; environmental interference; damaged leads.	Replace batteries; move away from strong electromagnetic fields; inspect and replace leads if damaged.
Display is dim or flickering.	Low battery.	Replace batteries.

## 9. SPECIFICATIONS

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Feature	Detail
Brand	LAFAYETTE
Model	DMB-6 (f07-UTE15.0002)
Part Number	415150
Power Source	Battery operated
Measurement Type	Multimeter (6-in-1: Sound Level, Lux, Humidity, Temperature, NCV, Electrical)
Display	4000-count LCD with backlight

Feature	Detail
Dimensions (L x W x H)	121 x 40 x 60.6 mm
Weight	280 g (approx. 0.62 lbs)
Color	Black
ASIN	<a href="#">B008ZRLWEI</a>

## 10. WARRANTY AND SUPPORT

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This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. Please refer to the warranty card included in your package for specific terms and conditions. For technical support, troubleshooting assistance, or warranty claims, please contact your retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.