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› [Greenlee](#) /

› [Greenlee DM-830A Digital Multimeter User Manual](#)

Greenlee DM-830A

Greenlee DM-830A Digital Multimeter User Manual

Model: DM-830A

INTRODUCTION

The Greenlee DM-830A is a high-performance True RMS (Root Mean Square) Digital Multimeter designed for professional use. It features AC+DC measurement capabilities and dual temperature measurement, making it a versatile tool for various electrical and electronic applications. This manual provides detailed instructions for the safe and effective operation, maintenance, and troubleshooting of your DM-830A multimeter.

Key features include a high visibility 10,000 count LCD dual digital display and a Beep-Jack audible and visible warning system to prevent incorrect terminal connections for current measurements.

SAFETY INFORMATION

Always adhere to the following safety precautions to prevent personal injury and damage to the multimeter or equipment under test.

- Read and understand all instructions before using the multimeter.
- Do not exceed the maximum input limits for any function.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Always disconnect the test leads from the circuit before changing functions or ranges.
- Inspect test leads for damaged insulation or exposed metal before use. Replace if damaged.
- Ensure the battery cover is securely closed before operation.
- Do not operate the multimeter if it appears damaged or is not operating properly.
- Refer to the "Beep-Jack" warning system for current measurements to avoid improper terminal connections.

PRODUCT OVERVIEW

The Greenlee DM-830A Digital Multimeter is designed for accurate and reliable measurements. Familiarize yourself with the components shown below.





Figure 1: Front view of the Greenlee DM-830A Digital Multimeter, showing the display, function dial, and input jacks.

Components:

- **LCD Display:** High visibility 10,000 count dual digital display for measurement readings.
- **Function Dial:** Rotary switch to select measurement functions (Voltage, Current, Resistance, etc.).
- **Input Jacks:**
 - **COM Jack:** Common terminal for all measurements.
 - **V-Ω-Hz Jack:** Input for voltage, resistance, frequency, and diode/continuity tests.
 - **mA µA Jack:** Input for milliampere and microampere current measurements.
 - **A Jack:** Input for ampere current measurements (up to 10A).
 - **T1+, T2+ Jacks:** Inputs for dual temperature probes.
- **Function Buttons:** Buttons for range selection, hold, backlight, and other advanced features.

SETUP

Battery Installation:

1. Ensure the multimeter is turned OFF.
2. Locate the battery compartment on the rear of the unit.
3. Use a screwdriver to loosen the screw securing the battery cover.
4. Remove the battery cover.
5. Insert the required batteries (typically 9V, refer to the battery compartment label) observing correct polarity (+ and -).
6. Replace the battery cover and tighten the screw securely.

Connecting Test Leads:

Always connect the black test lead to the COM jack. Connect the red test lead to the appropriate input jack based on the measurement you intend to perform (V-Ω-Hz, mA µA, or A).

OPERATING INSTRUCTIONS

This section details how to perform various measurements using your DM-830A multimeter.





Figure 2: Greenlee DM-830A Digital Multimeter being used to measure voltage in an electrical panel.

1. Measuring AC/DC Voltage (V):

1. Turn the function dial to the V~ (AC Voltage) or V- (DC Voltage) position.

2. Connect the black test lead to the **COM** jack and the red test lead to the **V-Ω-Hz** jack.
3. Connect the test leads in parallel across the circuit or component to be measured.
4. Read the voltage value on the display.

2. Measuring AC/DC Current (A, mA, µA):

Important: The DM-830A features a "Beep-Jack" warning system. An audible and visible warning will activate if the test leads are improperly connected for current measurements.

1. Turn the function dial to the appropriate current range (**A~**, **A-**, **mA~**, **mA-**, **µA~**, or **µA-**).
2. Connect the black test lead to the **COM** jack.
3. Connect the red test lead to the **A** jack for high current (up to 10A) or the **mA µA** jack for lower currents.
4. Connect the multimeter in series with the circuit to be measured.
5. Read the current value on the display.

3. Measuring Resistance (Ω):

1. Turn the function dial to the **Ω** position.
2. Connect the black test lead to the **COM** jack and the red test lead to the **V-Ω-Hz** jack.
3. Ensure the circuit or component is de-energized before measuring resistance.
4. Connect the test leads across the component.
5. Read the resistance value on the display.

4. Measuring Temperature (DUALTEMP):

1. Turn the function dial to the **°C/°F** position.
2. Connect the temperature probes to the **T1+** and **T2+** jacks.
3. Place the probe tips on the surface or in the medium whose temperature is to be measured.
4. Read the temperature value(s) on the display. The dual display allows for simultaneous reading of two temperatures.

5. Continuity Test:

1. Turn the function dial to the **Ω** position and press the **SELECT** button until the continuity symbol (speaker icon) appears.
2. Connect the black test lead to the **COM** jack and the red test lead to the **V-Ω-Hz** jack.
3. Connect the test leads across the circuit or component.
4. An audible beep indicates continuity (low resistance).

6. Diode Test:

1. Turn the function dial to the **Ω** position and press the **SELECT** button until the diode symbol appears.
2. Connect the black test lead to the **COM** jack and the red test lead to the **V-Ω-Hz** jack.
3. Connect the red test lead to the anode and the black test lead to the cathode of the diode.
4. Read the forward voltage drop on the display. Reverse the leads to check for open circuit (OL) indication.

MAINTENANCE

Cleaning:

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the multimeter is completely dry before use.

Battery Replacement:

When the battery indicator appears on the display, replace the batteries as described in the "Battery Installation" section under Setup.

Fuse Replacement:

If the current measurement functions cease to operate, the internal fuses may need replacement. Refer to the detailed instructions in the full product manual for fuse specifications and replacement procedures. Always use fuses with the specified voltage and current ratings.

Storage:

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

TROUBLESHOOTING

Problem	Possible Cause	Solution
No display or dim display	Dead or low batteries	Replace batteries.
"OL" (Overload) displayed	Input value exceeds selected range or maximum input.	Select a higher range or ensure input is within specifications.
Incorrect current reading	Blown fuse; Incorrect test lead connection (Beep-Jack warning should activate).	Check and replace fuse if necessary; Ensure leads are connected to correct current jacks.
"InEr" displayed (as per customer review)	Internal error, possibly related to solder joints or internal components.	This indicates an internal fault. Contact Greenlee customer support for service. Do not attempt to repair unless qualified.

SPECIFICATIONS

- Model:** DM-830A
- Measurement Type:** True RMS Digital Multimeter
- Display:** High visibility 10,000 Count LCD dual digital display
- Voltage Measurement:** AC+DC
- Temperature Measurement:** Dual Temperature (DUALTEMP)
- Power Source:** Battery Powered
- Color:** Black
- Item Weight:** Approximately 1 Pound

- **Product Dimensions:** Approximately 10 x 10 x 12 inches (L x W x H)
- **Material:** ABS
- **Safety Rating:** C/UL US Listed, CE Listed (CAT IV 600V, CAT III 1000V) -Note: *CAT rating inferred from typical professional DMMs, not explicitly stated in provided data but common for 1000V DMMs.*
- **Country of Origin:** China
- **UPC:** 783310087458

WARRANTY AND SUPPORT

Warranty Information:

The Greenlee DM-830A Digital Multimeter comes with a **1-year manufacturer warranty**. This warranty covers defects in materials and workmanship under normal use. For specific terms and conditions, please refer to the warranty card included with your product or visit the official Greenlee website.

Customer Support:

For technical assistance, service, or warranty claims, please contact Greenlee customer support. You can find contact information on the official Greenlee website or through the documentation provided with your multimeter.

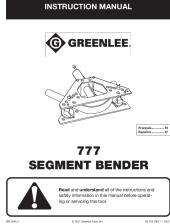
Website: www.greenlee.com

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This manual is for informational purposes only. Specifications are subject to change without notice.

Related Documents - DM-830A

	<p>Greenlee DM-810A, DM-820A, DM-830A, DML-430A Digital Multimeters Instruction Manual Instruction manual for Greenlee DM-810A, DM-820A, DM-830A, and DML-430A Digital Multimeters. Covers features, safety information, and operation.</p>
	<p>Greenlee DM-40 Digital Multimeter Instruction Manual User guide for the Greenlee DM-40 Digital Multimeter, detailing its features, operation, safety instructions, and specifications for electrical testing.</p>

	<p><u>Greenlee DM-20 Digital Multimeter Instruction Manual</u></p> <p>Instruction manual for the Greenlee DM-20 Digital Multimeter, covering its features, safety precautions, operation, typical measurements, accuracy, specifications, and maintenance.</p>
	<p><u>Greenlee 777 Segment Bender Instruction Manual</u></p> <p>Instruction manual for the Greenlee 777 Segment Bender, providing detailed guidance on safe operation, setup, bending techniques, maintenance, and parts identification for this conduit bending tool.</p>
	<p><u>Greenlee TG-1000 Infrared Thermometer Instruction Manual</u></p> <p>Comprehensive instruction manual for the Greenlee TG-1000 Infrared Thermometer. Learn about its features, safe operation, maintenance, and troubleshooting for accurate non-contact temperature measurements in various applications.</p>
	<p><u>Greenlee TG-2000 Infrared and Contact Thermometer Instruction Manual</u></p> <p>Instruction manual for the Greenlee TG-2000 Infrared and Contact Thermometer, detailing its features, safety precautions, operation, troubleshooting, emissivity, accuracy, specifications, and maintenance.</p>