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## Introduction

The DM200 ElectroMate™ will perform everyday basic electrical tests easily and economically. Connect the test leads, turn the DM200 on, set the function switch to the proper setting and you are ready to take AC/DC volt, continuity or resistance measurements.

### Features include

- 600 Volts AC and DC
- Continuity
- Resistance to 200 ohms
- Manual ranging
- 3-1/2" digit, 2000 count display
- Protective rubber boot
- UL and CE listed CAT II

## Safety Notes

Before using this meter, read all safety information carefully. In this manual the word "**WARNING**" is used to indicate conditions or actions that may pose physical hazards to the user. The word "**CAUTION**" is used to indicate conditions or actions that may damage this instrument.













### WARNING!

*Exceeding the specified limits of this meter is dangerous and can expose the user to serious or possibly fatal injury.*

- **DO NOT** attempt to measure any voltage that exceeds 600 volts with this meter - UEi offers numerous alternatives for measuring high voltage and current
- Voltages above 60 volts DC or 25 volts AC may constitute a serious shock hazard
- **DO NOT** attempt to use this meter if either the meter or the test leads have been damaged. Send unit in for repair by a qualified repair facility
- Test leads must be fully inserted prior to taking measurements
- Always turn off power to a circuit (or assembly) under test before cutting, unsoldering or breaking the current path. Even small amounts of current can be dangerous
- Always disconnect the live test lead before disconnecting the common test lead from a circuit
- When measuring high voltage, disconnect the power source before making test lead connections. Connect the test leads to the meter first then to the circuit under test. Reapply power
- If any of the following indications occur during testing, turn off the power source to the circuit under test:
  - Arcing
  - Flame
  - Smoke
  - Extreme Heat
  - Smell of Burning Materials
  - Discoloration or Melting of Components

- Read the safety precautions associated with the equipment being tested and seek assistance or advice when performing unfamiliar tasks.
- Keep your fingers away from the test lead metal probe contacts and bus-bars when making measurements. Always grip the instrument and test-leads behind the hand guards (molded into the probes).
- In the event of electrical shock, ALWAYS bring the victim to the emergency room for evaluation, regardless of the victim's apparent recovery. Electrical shock can cause an unstable heart rhythm that may need medical attention.

## International Symbols

 Dangerous Voltage	 Ground
 AC Alternating Current	 Warning or Caution
 DC Direct Current	 Double Insulation (Protection Class II)
 Either AC or DC	 Fuse
 Not Applicable to Identified Model	 Battery

## Operating Instructions



### WARNING!

*Electric shock, instrument damage, or equipment damage, may result if input voltages exceed 600 volts DC or AC RMS. Do not attempt to take any unknown voltage measurement that may be in excess of 600 volts DC or AC RMS.*

### DC/AC Voltage Measurement

1. Connect the black test lead to the terminal marked "**COM**" and the red test lead to the terminal marked "**V** Ω".
2. Set the rotary switch to the desired function (DC V or AC V).
3. Select the desired range. The safest practice is to set the range to exceed the suspected value of the supplied voltage. If the value is unknown, start at the highest range and reduce that setting until the scale provides an acceptable reading. Touch the probes to the circuit under test and read the display.

**NOTE:** *If the input voltage exceeds the selected range the indicator will display the overload "1.", indicating that a higher range must be selected. If a negative DC voltage is being measured the "--" symbol will appear on the left side of the display.*

## Continuity Testing

1. Connect the black test lead to the terminal marked “COM” and the red test lead to the terminal marked “V  $\rightarrow$ )  $\Omega$ ”.
2. Set the rotary switch to the continuity/resistance function, and note the overload symbol on the display.
3. For continuity testing, touch the red lead to one side of the circuit (i.e. wire) and the black lead to the other side. Ensure your circuit is isolated from other circuit paths to prevent testing the wrong path. If the circuit resistance is approximately 50 $\Omega$  or less a continuous tone will sound.

## Maintenance

### Periodic service



**WARNING!**  
Repair and service of this instrument is to be performed by qualified personnel only. Improper repair or service could result in physical degradation of the meter. This could alter the protection from electrical shock and personal injury this meter provides to the operator. Perform only those maintenance tasks that you are qualified to do.

These guidelines will help you attain long and reliable service from your meter:

1. Calibrate your meter annually to ensure it meets original performance specifications.
2. Keep your meter dry. If it gets wet, wipe it dry immediately. Liquids damage electronic circuits.
3. Whenever practical, keep the meter away from dust and dirt, which can cause premature wear.
4. Although your meter is built to withstand the rigors of daily use, it can be damaged by severe impacts. Use reasonable caution when using and storing the meter.

### Cleaning and Decontamination

Periodically clean your meter’s case using a damp cloth. **DO NOT** use abrasives, cleaning solvents or strong detergents, as they may damage the finish or affect the reliability of the structural components.

### Battery Replacement

When the “EAT” symbol appears on the left side of the display, the battery must be replaced immediately. Low battery voltage can cause incorrect readings and consequential damage. To replace the battery remove the meter from the boot. To do this remove the meter leads, pull the top of the boot away from the meter and slide the meter out of the boot. Remove the two screws securing the battery access cover using a number one Phillips screw driver. Replace the battery with the specified 9V Alkaline battery.

**NOTE:** There are no replacement fuses. (This meter has thermistor protection)



**WARNING!**  
To avoid electric shock, be sure to turn off the meter’s power and disconnect both test leads from any equipment before you remove or install batteries.



**WARNING!**  
Under **NO** circumstance should you expose batteries to extreme heat or fire as they may explode and cause injury.

**NOTE:** If you do not plan to use the meter for a month or more, remove the battery and store it in an area that won’t be damaged by a leaking battery.

## Specifications

Max. voltage between any terminal and earth ground	600 V
Digital display	3-1/2” digits, 2000 counts with automatic polarity indication
Reading time	2-3 readings per second
Input impedance	10M $\Omega$
Storage temperature	14° to 122°F (-10° to 50°C)
Operating temperature	32° to 104°F (0° to 40°C)
Battery type	9V, NEDA 1604 or IEC 6LR61
Battery life	200 hours (typical alkaline)
Size (H x W x L)	
Without boot	36 x 70 x 140 mm
With boot	54 x 80 x 154 mm
Weight	
Without boot	220 g (7.7 oz.)
With boot	380 g (13.4 oz.)

### Electrical Specifications

Accuracy is given as +/- (% of reading + number of least significant digits) at 65° to 80°F with relative humidity up to 80%, valid for a period of one year after calibration. AC conversions of this meter are average responding and calibrated to the RMS value of a sine wave input.

Function	Range	Resolution	Accuracy	Overload Protection
DC V	20 V	100 mV	$\pm 1.5\% + 3$ dgts	600 V
	200 V	10 mV		
	600 V	1 V		
AC V (45 HZ TO 450 HZ)	200 V	10 MV	$\pm 1.5\% + 5$ dgts	600 V
	600 V	1 V		
Resistance	200	0.1	$\pm 1.5\% + 3$ dgts	600 V

## Standard & Optional Accessories

### Standard

Test leads ..... ATL55



# DM200

## Digital Multimeter

### Limited Warranty

The DM200 is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase. If within the warranty period your instrument should become inoperative from such defects, the unit will be repaired or replaced at UeI's option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance. Batteries and consequential damage resulting from failed batteries are not covered by warranty.

Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. UeI shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss. A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered. Instruments out of warranty will be repaired (when repairable) for a service charge. Return the unit postage paid and insured to:

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This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

