



DM73C

Digital Multimeter

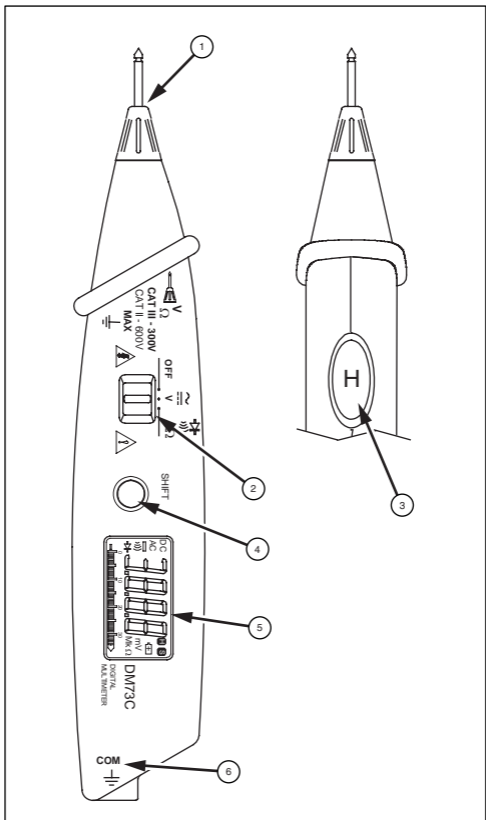
Pen Style DMM

Users Manual

- Manual de uso
- Mode d'emploi
- Bedienungshandbuch
- Manuale d'Uso

99 Washington Street
Melrose, MA 02176
Fax 781-665-0780
TestEquipmentDepot.com

**Test Equipment
Depot**
A graphic of a test equipment display showing a grid with a fluctuating orange line representing a signal waveform.
1-800-517-8431





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PN 2728873

August 2006

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English

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WARRANTY

Your Amprobe® product will be free from defects in material and workmanship for 1 year from the date of purchase. This warranty does not cover fuses, disposable batteries or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Amprobe's behalf. To obtain service during the warranty period, return the product with proof of purchase to an authorized Amprobe® Test Tools Service Center or to a Amprobe® dealer or distributor. See Repair Section above for details. THIS WARRANTY IS YOUR ONLY REMEDY. ALL OTHER WARRANTIES - WHETHER EXPRESS, IMPLIED OR STAUTORY - INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, ARE HEREBY DISCLAIMED. MANUFACTURER SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

CERTIFICATIONS AND PRECAUTIONS

■ The DM73C instrument is UL, cUL, and EN61010-1 certified for Installation Category II – 600V and Category III – 300V. It is recommended for use with local level power distribution, appliances, portable equipment, etc, where only smaller transient overvoltages may occur, and not for primary supply lines, overhead lines and cable systems. ■ Do not exceed the maximum overload limits per function (see specifications) nor the limits marked on the instrument itself. Never apply more than 600VDC between the test lead and earth ground. ■ Exercise extreme caution when: measuring voltage >20V // servicing CRT equipment. ■ Inspect DMM, test leads and accessories before every use. Do not use any damaged part. ■ Never ground yourself when taking measurements. Do not touch exposed circuit elements or probe tips. ■ Do not operate instrument in an explosive atmosphere.

EXPLANATION OF SYMBOLS

	DANGER High Voltage		Direct Current
	ATTENTION Refer to Manual		Alternating Current
	This Instrument has double insulation		Protective Conductor Terminal

INTRODUCTION

The DM73C is a probe-type digital multimeter capable of measuring DC and AC voltage, resistance, diode and continuity. Its controls are: Volts (V), Ohms (Ω), Diode Test and Continuity Beeper (⋈), On- Off, AC/ DC and Hold. (See page 3) 1. V - Ω input. 2. Function selector. 3. HOLD button. 4. SHIFT button for AC / DC or Diode /Continuity. 5. LCD Display. 6. COM input.

MEASURING PROCEDURES

Note: When connecting or disconnecting test leads to or from a circuit, always first turn off power to the circuit under test and discharge all capacitors.

DC / AC Voltage Measurement

Set the Function switch to "V". Select AC or DC by pressing the mode selector button (AC or DC is displayed). Connect the instrument to the circuit and read the measured voltage in the display.

Resistance Measurement

Set the Function switch to " Ω ". Connect the instrument across the resistance and read the value in the display. When measuring high resistance values, take care not to touch the test leads.

Continuity Measurement

Set the Function switch to Ω . Press the mode selector button once, so that appears (⏏) in the LCD. Connect the instrument across the device or wire to be tested. Beeper will sound when continuity is established. The beeper also sounds when changing functions, modes, or for Probe Hold.

Diode Measurement

Set the Function switch to Ω . Press the mode selector button twice, so that appears (▶) in the LCD. Connect the instrument across the device to be tested. The forward voltage drop of a good diode is about 0.6V. An open or reverse biased diode will read "OL".


Data Hold

Push the HOLD button to "freeze" the measurement reading and then remove the test leads while the reading remains displayed. HOLD is useful when it is necessary to pay very close attention to your work. Pushing the HOLD button again releases the display.

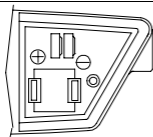
Automatic Shutdown

This function causes the meter to enter power saving mode after approximately 10 minutes. Disable automatic shutdown by holding the shift button down while turning the meter on.

MAINTENANCE

In Case of Difficulties In the case of improper operation of the meter, first review the operating instructions for possible errors in operation. Inspect and check test leads for continuity. Check the condition of the batteries. The battery "  " symbol appears when the voltage falls below the level where accuracy is guaranteed. Replace batteries immediately.

Battery Replacement



Warning: In order to avoid electrical shock, remove the test lead before opening the case. To replace the batteries (2 – LR44) unscrew the battery hatch screw and remove the old batteries. Install the new batteries observing the diagram in the battery area.

Cleaning Procedure

Gently wipe dirt from the surface of the unit with a soft cloth moistened with a small amount of water or neutral cleanser. Do not use benzene, alcohol, acetone, ether, paint thinner, lacquer or ketone solvents on the units, under any circumstances as these may cause deformation or discoloration.

REPAIR

All test tools returned for warranty or non-warranty repair or for calibration should be accompanied by the following: your name, company's name, address, telephone number, and proof of purchase. Additionally, please include a brief description of the problem or the service requested and include the test leads with the meter. Non-warranty repair or replacement charges should be remitted in the form of a check, a money order, credit card with

expiration date, or a purchase order made payable to Amprobe® Test Tools.

In-Warranty Repairs and Replacement – All Countries

Please read the warranty statement and check your battery before requesting repair. During the warranty period any defective test tool can be returned to your Amprobe® Test Tools distributor for an exchange for the same or like product. Please check the “Where to Buy” section on www.amprobe.com for a list of distributors near you. Additionally, in the United States and Canada In-Warranty repair and replacement units can also be sent to a Amprobe® Test Tools Service Center (see below for address).

Non-Warranty Repairs and Replacement – US and Canada

Non-warranty repairs in the United States and Canada should be sent to a Amprobe® Test Tools Service Center. Call Amprobe® Test Tools or inquire at your point of purchase for current repair and replacement rates.

In USA

Amprobe® Test Tools
Everett, WA 98203
Tel: 888-993-5853
Fax: 425-446-6390

In Canada

Amprobe® Test Tools
Mississauga, ON L4Z 1X9
Tel: 905-890-7600
Fax: 905-890-6866

Non-Warranty Repairs and Replacement – Europe

European non-warranty units can be replaced by your Amprobe® Test Tools distributor for a nominal charge. Please check the “Where to Buy” section on www.amprobe.com for a list of distributors near you.

European Correspondence Address*

Amprobe® Test Tools Europe

P.O. Box 1186 / 5602 BD Eindhoven / The Netherlands

*(Correspondence only – no repair or replacement available from this address. European customers please contact your distributor.)

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SPECIFICATIONS

General Specifications

Display: 3- 3/ 4 digit LCD, 3400 count

Measuring rate: 2.5/ second nominal

Bargraph: 34 segments – updated 20 readings per second

Operating Temp. range: 0 to 40° C, 80% RH

Storage Temp. range: -20 to 60° C, 70% RH

Environmental: Intended for Indoor use, Altitude up to 2000 m.

Measurement Accuracy: $\pm 0.1/ C^{\circ}$

Batteries: 2x LR44, SR44 or S76

Life: 100 hours nominal

Auto Power Off: after 10 minutes

Dimension: 7.8" x 1.1" x 1.4"

Weight: .21 lb.

Accessories: Operating manual, test lead with alligator clip, 2 batteries (installed), spare tip.

Approvals:

Safety: Conforms to EN61010- 1: Cat II - 600V, Cat III – 300V ;

Class 2, Pollution degree II; UL3111-1. EMC: Conforms to EN61326-1.

The TL73B test lead and alligator clip is UL approved for use only with the DM73C.



This product complies with requirements of the following European Community Directives: 89/ 336/ EEC (Electromagnetic Compatibility) and 73/ 23/ EEC (Low Voltage) as amended by 93/ 68/ EEC (CE Marking). However, electrical noise or intense electromagnetic fields in the vicinity of the equipment may disturb the measurement circuit. Measuring instruments will also respond to unwanted signals that may be present within the measurement circuit. Users should

exercise care and take appropriate precautions to avoid misleading results when making measurements in the presence of electronic interference.

Electrical Specifications

Accuracy at 23°C ± 5°C, < 75 % RH, guaranteed for one year.

DC Volts

Ranges: 340mV, 3.4, 34, 340V, 600V

Accuracy: ± (0.5% rdg + 2 dgt)

Input Impedance: 340 mV range: >100MΩ , other ranges: 10MΩ

Protection: 600VDC or AC rms

AC Volts

Ranges: 3.4V, 34, 340, 600V

Accuracy: ± (1.5 % rdg + 8 dgt) (50 - 500Hz)

Input Impedance: 10MΩ

Protection: 600VDC or AC rms.

Resistance

Ranges: 340 Ω , 3.4, 34, 340 kΩ , 3.4, 34 MΩ

Accuracy:

340Ω - 340kΩ: ± (1.0 % rdg + 4 dgt)

3.4MΩ: ± (1.5 % rdg + 4 dgt)

34 MΩ: ± (3.0 % rdg + 5 dgt)

Max. open circuit voltage: 340Ω range - 1.2V; all others: - 0.45V

Protection: 500VAC or DC.

Diode Test

Range: 3.4V

Accuracy: ± (2.0%rdg + 3 dgt)

Resolution: 0.1mV in 3.4V range

Short circuit current: 1.0mA

Max open circuit voltage: 3.0VDC

Audible indication: < 0.2V

Overload prot.: 500VDC or AC rms

Continuity

Display response: <0.5s

Continuity threshold: $\leq 35 \Omega$

Overload prot.: 500VDC or AC rms

Accessories / User Replaceable Parts

TL73B Test lead with alligator clip

VC11 Vinyl Case

TP73B Replaceable Probe tip

Battery Type SR44, LR44, or S76