

# DRAPER®

## INSTRUCTIONS FOR **Digital Multimeter**

Stock No.52320 Part No.DMM7

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.



CE

01/2005

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### GENERAL INFORMATION

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product. Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

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We :  
 Draper Tools Ltd.,  
 Hursley Road,  
 Chandler's Ford,  
 Eastleigh, Hampshire.  
 SO53 1YF  
 England.

Declare under our sole responsibility that the product:


Stock No:- **52320.**

Part No:- **DMM7.**

Description:- **Digital Multimeter.**

To which this declaration relates is in conformity with the following directive(s) 73/23/EEC, 93/68/EEC & 89/366/EEC.

With reference to: EN61010-1, EN61010-2-31, EN50081-1 & EN50082-1.



J.N. Draper  
 Managing Director

06/08/1997



## SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

Stock No. .... 52320  
Part No. .... DMM7  
Battery type ..... 1x12V  
Dimension ..... 55x112x40mm  
Weight ..... 70g

- **AC VOLTAGE** Input impedance: 450K , Input protection: 500V RMS,  
Frequency Range: 40Hz-400Hz.

Range	Accuracy
200V	+/- 2.0% rdg +/- 5 dgts
500V	

- **DC CURRENT** Overload protection: 200mA/250V fuse.

Range	Accuracy
2000 $\mu$ A	+/- 2.0% rdg +/- 4 dgts
20mA	
200mA	

- **RESISTANCE**

Range	Accuracy
200	+/- 1.5% rdg +/- 4 dgts
2000	
20k	
200k	
2000k	

- **DIODE CHECK** Test Current: 1.6mA typical.

Range	Accuracy
3.2V DC Typical	~

reading = accuracy of the measurement circuit

digits = accuracy of the analogue to digital conversion

**WARNING:** Ensure the test leads are fully engaged prior to carrying out any measurements, to avoid an electric shock.

Draper Tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for a period of 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase.

Should the machine develop any fault, please return the complete tool to your nearest authorized warranty repair agent or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF England. Telephone: (023) 8026 6355.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accident, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the 12 month period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.









- ① Function Selector.
- ② Power Switch.
- ③ L.C.D. Screen.
- ④ Probes.
- ⑤ V, mA (Voltage, Resistance, Amperage) Jack Socket.
- ⑥ Common Earth Jack Socket.

- **UNPACKING:** After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the digital multimeter and contact the dealer from whom it was purchased.

The packaging materials (plastic bags, polystyrene, etc.), must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

## - OTHER METER MARKINGS

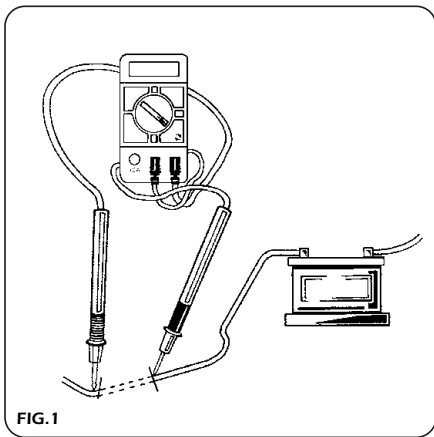
	Diode check.
	Indicates that the meter battery voltage has dropped excessively.
	Units of measuring current (AMPS).
	Units of measuring voltage (VOLTS).
	Units of measuring resistance (OHMS).
	Caution.
	Risk of electric shock.

## ASSEMBLY

Remove the rubber case. Turn the meter over and remove the screws holding the housing together. Carefully part the front and back housing of the meter. Do not touch any of the internal components. Insert the appropriate battery taking note of the polarity. Close the housing (do not force) and resecure. The internal fuse can be replaced in the same manner.

To ensure an accurate reading, ensure the test probe are fully engaged.

- **WARNINGS:** Each time before you use this analyser, inspect the test leads, connectors and probes for damage, e.g. cracks or breaks in the insulation. Any defective leads should be replaced immediately. If the value to be measured is not known, set the selector switch to the highest range and reduce until a satisfactory reading is obtained.
- **VOLTAGE MEASUREMENT:**
  1. Connect the red test lead to the 'V/ mA' jack socket and the black lead to the 'com' jack socket. Ensure the leads are correctly plugged in.
  2. Position the selector switch to the desired voltage range and switch the meter 'ON'.
  3. Connect the test leads to the circuit to be measured.
  4. Turn on the power to the circuit to be measured, the voltage value should appear on the digital display along with the voltage polarity (if reversed only).
- **CURRENT MEASUREMENT (Fig. 1.):**
  1. Connect the red test lead to the 'V/ mA' jack socket and the black lead to the 'com' jack socket (max 10A).
  2. Position the selector switch to the desired amp range and switch the meter 'ON'.
  3. Open the circuit to be measured, and connect the test leads in series to bridge the gap.
  4. Turn on the power to the circuit to be measured, the 'current' value should appear on the digital display.
- **RESISTANCE MEASUREMENT:**
  - **WARNING:** If the resistance to be measured is part of a circuit, turn off and disconnect the power and discharge all capacitors before measurement
    1. Connect the red test lead to the 'V/ mA' jack socket and the black lead to the 'com' jack socket.
    2. Position the selector switch to the desired ohm range and switch the meter 'ON'.
    3. Connect the test leads to the circuit to be measured.
    4. The resistance value should now appear on the digital display.



The fuse rarely needs replacing, and almost always a blown fuse is the result of an operator error.

- **WARNING:** If the resistance to be measured is part of a circuit, turn off and disconnect the power and discharge all capacitors before measurement

If the meter battery is in need of replacement (see Assembly section) the '🔋' symbol will appear on the display.









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