

# DRAPER®

## INSTRUCTIONS FOR Analogue Multimeter

Stock No.37317 Part No.AMM1

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



CE

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DRAPER®

### 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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# DECLARATION OF CONFORMITY

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

Declare under our sole responsibility that the product:

Stock No:- **37317.**

Part No:- **AMM1.**

Description:- **Analogue Multimeter.**

To which this declaration relates is in conformity with the following directive(s) 89/336/EEC & 73/23/EEC.

With reference to: EN50081-1, EN50082-1, EN55022, EN 61000-4-2/3/8, ENV50204, EN61010-1 & EN61010-2-031.

J.N. Draper  
 Managing Director

22/10/1999



## SPECIFICATION

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

Stock No. ....	37317
Part No. ....	AMM1
DC Voltage .....	2.5, 10, 50, 250, 500
AC Voltage .....	10, 50, 250, 500
DC Current .....	500A, 10mA, 250mA
Resistance .....	x 10, x 1K $\Omega$
Battery test .....	1.5V, 9V
Accuracy DC/AC voltage, DC current, resistance +/-5% of full scale.	
Dimensions .....	102(H)x64(W)x35(D)mm
Weight .....	100g
Battery type .....	1x1.5V AA type (not supplied)
Fuse and diode protected.	

**WARNING:** To avoid electrical shock remove test leads before opening battery cover. To prevent risk of fire only use the correct size/type fuse, as fitted.



## GUARANTEE

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 and Range Switch.
- ② Scale.
- ③ Positive (+) Input Socket.
- ④ Negative (-) Input Socket
- ⑤  $\Omega$  Adjuster.
- ⑥ Fuse.

- **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 analogue 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

Symbol	Description
<b><math>\mu\text{A}</math>, mA, A</b>	Units for DC current measurements (microamps, milliamps and amps).
<b><math>\Omega</math>/Ohms</b>	Units for resistance measurements (ohms).
<b>V</b>	Units for voltage measurements (volts).

- **WARNINGS:** Before you use the instrument, inspect the test leads, connectors and probes for damage e.g. cracks or breaks, in the insulation. Replace any defective leads before use. If the voltage to be measured is not known, set the selector switch to the highest range and reduce until a satisfactory reading is obtained.

Always ensure that the test leads are inserted correctly into the jack sockets.

- **DC VOLTAGE MEASUREMENT**

1. Connect the red test lead to the positive (+) jack socket and the black lead to the negative (-) jack socket.
2. Set the selector switch to the desired DCV range.
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 be indicated by the pointer on the scale.

- **AC VOLTAGE MEASUREMENT**

1. Connect the red test lead to the positive (+) jack socket and the black lead to the negative (-) jack socket.
2. Set the selector switch to the desired ACV range.
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 will be indicated by the pointer on the scale.

- **DC CURRENT MEASUREMENT (Fig. 1):**

1. Connect the red test lead to the positive (+) jack socket and the black lead to the negative (-) jack socket.
2. Set the selector switch to the desired DCA range.
3. Open the circuit to be measured, and connect the test leads IN SERIES with the load in which current is to be measured.
4. Turn on the power to the circuit to be measured, the 'current' value will be indicated by the pointer on the scale.

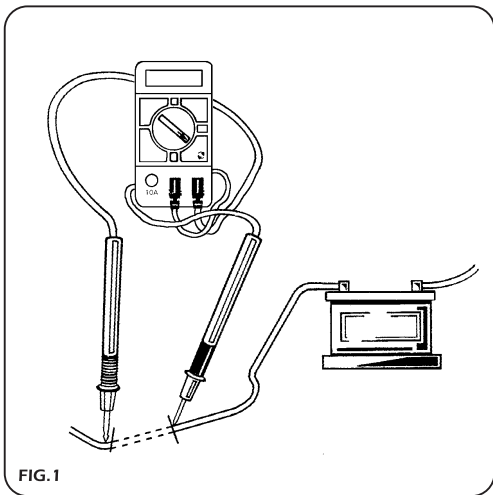


FIG. 1

**- RESISTANCE MEASUREMENT**

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

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

1. Connect the red test lead to the positive (+) jack socket and the black lead to the negative (-) jack socket.
2. Set the selector switch to the desired range.
3. Set the scale to zero using the adjuster.
4. Connect the test leads to the circuit to be measured.
5. The resistance value should now be indicated by the pointer on the scale.

**- TESTING A BATTERY**

1. Connect the red test lead to the positive (+) jack socket and the black lead to the negative (-) jack socket.
2. Set the selector switch to the desired BATT voltage range.
3. Connect the test leads to the battery to be tested.
4. The battery condition will be indicated by the pointer on the scale.

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