



**DRAPER**<sup>®</sup>

# POCKET ANALOGUE MULTIMETER

37317



**IMPORTANT:** Please read these instructions carefully to ensure the safe and effective use of this product and save these instructions for future reference. 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.

# 1. TITLE PAGE

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## 1.1 INTRODUCTION:

USER MANUAL FOR:

### POCKET ANALOGUE MULTIMETER

Stock no. 37317.

Part no. AMM1.

## 1.2 REVISIONS:

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Date first published March 2017

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As our user manuals are continually updated, users should make sure that they use the very latest version.

Downloads are available from: <http://www.drapertools.com/manuals>

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## 1.3 UNDERSTANDING THIS MANUALS SAFETY CONTENT:

**WARNING!** Information that draws attention to the risk of injury or death.

**CAUTION!** Information that draws attention to the risk of damage to the product or surroundings.

## 1.4 COPYRIGHT © NOTICE:

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No part of this publication may be stored in a retrieval system or transmitted in any other form or means without written permission from Draper Tools Limited.

In all cases this copyright notice must remain intact.

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## 3. GUARANTEE

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### 3.1 GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England.

Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

A proof of purchase must be provided with the tool.

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 period covering parts/labour is 12 months from the date of purchase except where tools are hired out when the guarantee period is 90 days from the date of purchase. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

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 guarantee period.

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

Draper Tools Limited.

# 4. INTRODUCTION

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## 4.1 SCOPE

A device to allow simple measurement of voltage, current and resistance.

## 4.2 SPECIFICATION

Stock no.....	37317
Part no.....	AMM1
DC voltage.....	2.5, 10, 50, 250, 500
AC voltage.....	10, 50, 250, 500
DC current.....	550 micro A, 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 (L x W x H).....	64 x 35 x 102mm
Battery type.....	1 x 1.5V AA type (not supplied)
Weight.....	100g
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.

## 4.3 HANDLING & STORAGE

Although this machine is small in size, care must still be taken when handling. Dropping this machine will have an effect on the accuracy. This machine is not a toy and must be respected.

The environment will have a negative result on its operation if you are not careful. If the air is damp, components will rust. If the machine is unprotected from dust and debris; components will become clogged: And if not cleaned and maintained correctly or regularly the machine will not perform at its best.

# 5. HEALTH & SAFETY INFORMATION

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## 5.1 SAFETY PRECAUTIONS

This instrument complies with IEC1010 (International Electrotechnical Commission promulgated safety standards). Design and production using the pollution level 2 safety requirements.

 **Warning**

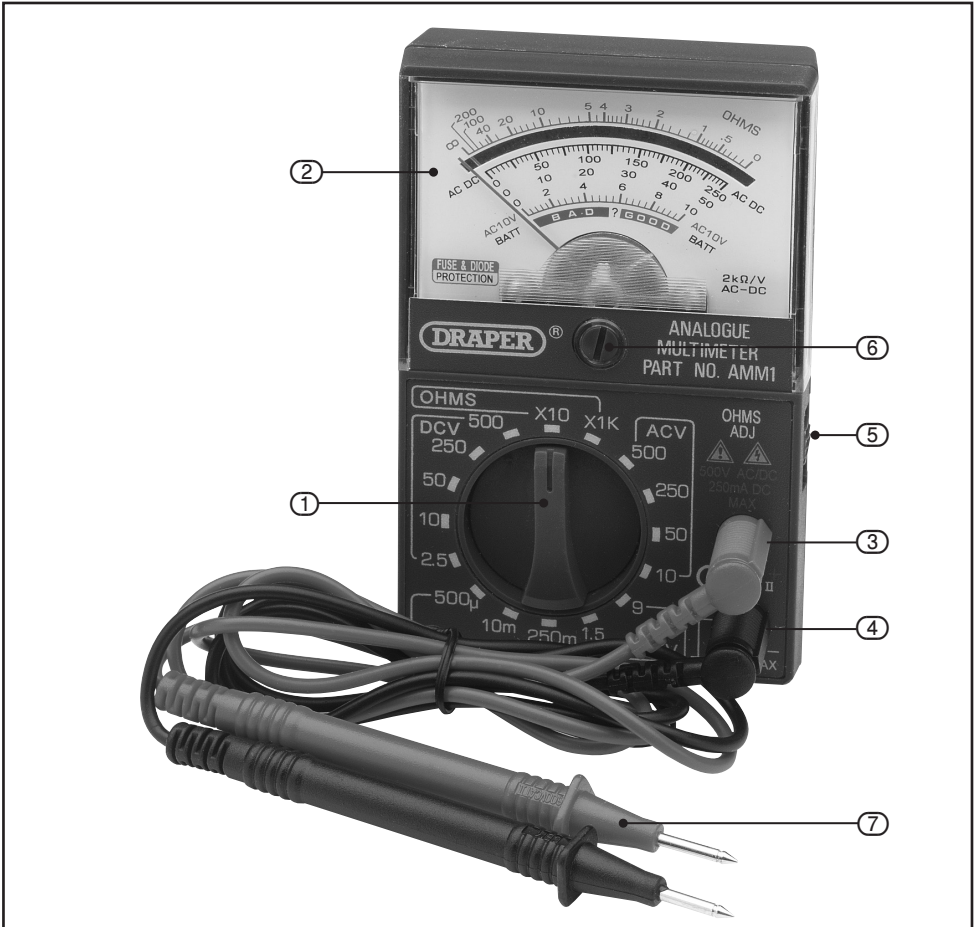
To avoid electrical shock or personal injury.

Please read the safety information and “warnings and precautions” before use.

Warning: When measuring voltage above 30V, current above 10ma, AC power with an inductive load. Use caution not to touch exposed contacts due to the risk of electric shock, only use approved probes or clamps.

1. Before measuring, check whether the measurement function switch is in the correct position, check whether the test probe is connected correctly to avoid electric shock.
2. The meter is only to be used in conjunction with the supplied test leads to comply with safety standards. If the test leads are broken or damaged, replace the test leads of the same type or the same electrical specifications.
3. Do not use an unapproved fuse to replace the fuse inside the meter. Only replace with the same model or the same specifications of the fuse. Before changing, remove the test leads to ensure that there is no signal input.
4. Do not use unapproved batteries to replace the battery inside the meter. Replace only with the same model or the same electrical specifications of the battery. Before changing, remove the test leads to ensure that there is no signal input.
5. During electrical measurements, the body must not be directly in contact with the earth, use insulating materials to keep your body insulated from the earth.
6. Do not store or use in high temperature, high humidity, flammable, explosive and strong magnetic field environments.
7. Measurements exceeding the limit values of the instrument may damage the instrument and endanger the safety of the operator.
8. Do not attempt to calibrate or service the instrument.
9. Do not insert the test leads to be inserted into the current terminals to measure the voltage!

## 6. IDENTIFICATION



- ① Function and range switch.
- ② Scale.
- ③ Positive (+) input socket.
- ④ Negative (-) input socket.
- ⑤  $\Omega$  Adjuster.

- ⑥ Mechanical zero adjust.
- ⑦ Test probe.

# 7. UNPACKING & CHECKING

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## 7.1 PACKAGING

Carefully remove the product from the packaging and examine it for any sign of damage caused during shipping. Lay the contents out and check them. If any part is damaged or missing, do not attempt to use the tool and contact the Draper Helpline immediately (see back page for details).

Retain the packaging material at least during the guarantee period: in case the machine needs to be returned for repair.

Warning! Some of the packaging materials used may be harmful to children, keep them out of reach from children.

Disposed of any packaging correctly and according to local regulations.



## 8. OPERATING INSTRUCTIONS

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**WARNING:** 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 probe sockets.

### 6.1 DC VOLTAGE MEASUREMENT

1. Connect the red test lead to the positive (+) probe socket and the black lead to the negative (-) probe 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.

### 6.2 AC VOLTAGE MEASUREMENT

1. Connect the red test lead to the positive (+) probe socket and the black lead to the negative (-) probe 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.

### 6.3 DC CURRENT MEASUREMENT - FIG. 1

1. Connect the red test lead to the positive (+) probe socket and the black lead to the negative (-) probe 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.

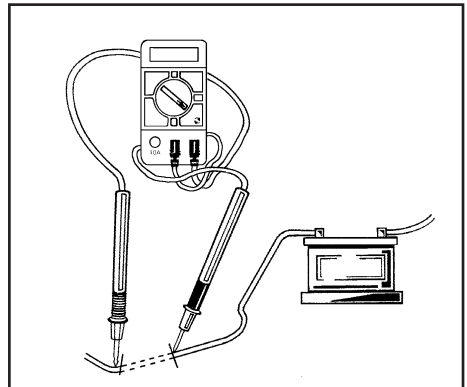


FIG.1

# 9. EXPLANATION OF SYMBOLS

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## 9.1 EXPLANATION OF SYMBOLS

Carefully remove the product from the packaging and examine it for any sign of damage



WEEE  
Do not dispose of Waste Electrical & Electronic Equipment in with domestic rubbish



Attention.



For indoor use.  
Do not expose to rain.



High voltage / current!  
Danger.



Class II construction  
(Double insulated)



Conforms to all relevant safety standards.



Earth



Fuse



Voltage AC



Voltage DC



Current DC



Warning!  
Read instruction manuals before operating and servicing this equipment.



Resistance in Ohms

### 10.1 DISPOSAL

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not abandon in the environment.
- Do not dispose of WEEE\* as unsorted municipal waste.



\* Waste Electrical & Electronic Equipment.

## CONTACT US

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Service/Warranty Repair Agent:

For aftersales servicing or warranty repairs, please contact the  
Draper Tools Helpline for details of an agent in your local area.

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