

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.



DRAPER®

GENERAL INFORMATION

These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. 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 the 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

1.1 INTRODUCTION:

USER MANUAL FOR:

ANALOGUE MULTIMETER

Stock no. 37317

Part no. AMM1

1.2 REVISIONS:

Date first published January 2014.

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/b2c/b2cmanuals.pgm>

DRAPER TOOLS LIMITED

HURSLEY ROAD

CHANDLER'S FORD

EASTLEIGH

HAMPSHIRE

SO53 1YF

UK

WEBSITE: www.drapertools.com

PRODUCT HELPLINE: +44 (0) 23 8049 4344

GENERAL FAX: +44 (0) 23 8026 0784

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.

NOTE! Important information.

1.4 COPYRIGHT © NOTICE:

Copyright © Draper Tools Limited.

Permission is granted to reproduce this publication for personal & educational use only.

Commercial copying, redistribution, hiring or lending is prohibited.

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.

2. CONTENTS

2.1 CONTENTS

		<i>Page</i>
<i>Page content</i>		
1	TITLE PAGE	
	1.1 INTRODUCTION	2
	1.2 REVISION HISTORY	2
	1.3 UNDERSTANDING THIS MANUAL	2
	1.4 COPYRIGHT NOTICE	2
2	CONTENTS	
	2.1 CONTENTS	3
3	GUARANTEE	
	3.1 GUARANTEE	4
4	INTRODUCTION	
	4.1 SCOPE	5
	4.2 SPECIFICATION	5
	4.3 HANDLING & STORAGE	5
5	TECHNICAL DESCRIPTION	
	5.1 IDENTIFICATION	6
6	OPERATING THE MULTIMETER	
	6.1 OPERATING THE MULTIMETER.....	7
7	MAINTENANCE	
	7.1 MAINTENANCE	8
8	DISPOSAL	
	8.1 MAINTENANCE	9
9	EXPLANATION OF SYMBOLS/PICTOGRAMS	
	9.1 EXPLANATION OF SYMBOLS	10
10	NOTES	
11	CONTACTS	
	DECLARATION OF CONFORMITY	ENCLOSED

3. GUARANTEE

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 ninety days from the date of purchase. The guarantee is extended to 24 months for parts only. 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

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 Ω
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 and lifting. Dropping this machine will have an effect on the accuracy and may also result in personal injury. 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. TECHNICAL DESCRIPTION

5.1 IDENTIFICATION



- ① Function and range switch.
- ② Scale.
- ③ Positive (+) input socket.

- ④ Negative (-) input socket.
- ⑤ Ω Adjuster.
- ⑥ Mechanical zero adjust.

6. OPERATING THE MULTIMETER

6.1 OPERATING THE MULTIMETER – FIG. 1

- **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 jack sockets.

- **DC VOLTAGE MEASUREMENT**

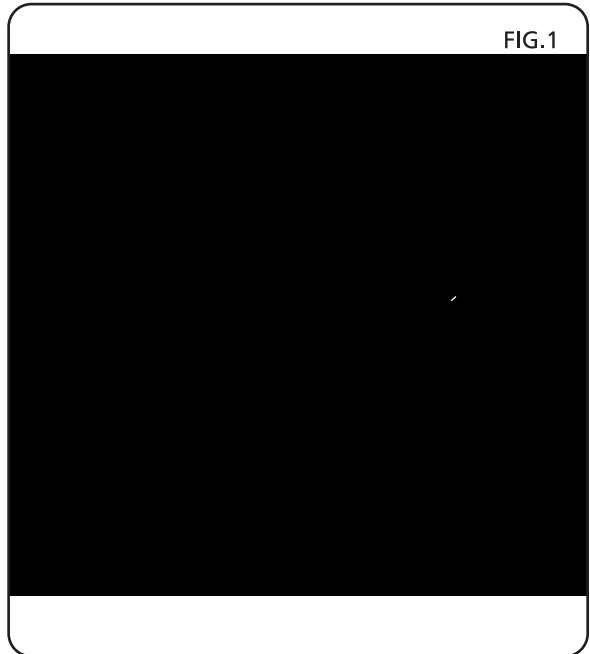
1. Connect the red test lead to the positive (+) jack socket and the black lead to the negative (-) jack socket.
2. Set the selector switch to the desired DCV range.
3. Connect the test leads to the circuit to be measured.
4. Turn on the power to the circuit to be measured, the voltage value should be 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.



7. MAINTENANCE

7.1 MAINTENANCE

Apart from replacing the battery when depleted, or replacing the test leads if damaged in anyway, there are no user serviceable items on this multimeter.

Wipe clean occasionally with a dry soft cloth. DO NOT use any liquid or spray cleaning agents as they will damage the multimeter.



8. DISPOSAL

8.1 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.

9. EXPLANATION OF SYMBOLS/PICTOGRAMS

9.1 EXPLANATION OF SYMBOLS

μA , mA , A Units for DC current measurements (microamps, milliamps and amps).

Ω/Ohms Units for resistance measurements (ohms).

V Units for voltage measurements (volts).







CONTACTS

- **DRAPER TOOLS LIMITED,**
Hursley Road, Chandler's Ford,
Eastleigh, Hampshire. SO53 1YF. U.K.
- **Helpline:** (023) 8049 4344
- **Sales Desk:** (023) 8049 4333
- **Website:** www.drapertools.com
- **E-mail:** sales@drapertools.com
- **Sales Fax:** (023) 8049 4209
- **General Enquiries:** (023) 8026 6355
- **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.

YOUR DRAPER STOCKIST

PJDH051015