

**EN**

Original Instructions  
Version 2 – June 2023

**DRAPER**<sup>®</sup>

# POCKET ANALOGUE MULTIMETER

**37317**



**UK  
CA** **CE**

These are the original product instructions. This document is part of the product; retain it for the life of the product, passing it on to subsequent holders. Read this manual in full before attempting to assemble, operate or maintain this product.

This Draper Tools manual describes the purpose of the product and contains all the necessary information to ensure its correct and safe use. Following all the instructions and guidance in this manual will ensure the safety of both the product and the operator and increase the lifespan of the product.

All photographs and drawings within this manual are supplied by Draper Tools to help illustrate correct operation of the product.

Every effort has been made to ensure the information contained in this manual is accurate. However, Draper Tools reserves the right to amend this document without prior warning. Always use the latest version of the product manual.

## 1.1 Product Reference

**User Manual for:** Pocket Analogue Multimeter

**Stock No:** 37317

**Part No:** AMM1

## 1.2 Revisions

**Version 1:** March 2017

First release

**Version 2:** June 2023

General content and formatting updates

As our manuals are continually updated, always ensure that the latest version is used.

Please visit [drapertools.com/manuals](http://drapertools.com/manuals) for the latest version of this manual and the associated parts list, if applicable.

## 1.3 Understanding the Safety Content of This Manual



**WARNING!** – Situations or actions that may result in personal injury or death.



**CAUTION!** – Situations or actions that may result in damage to the product or surroundings.

**Important:** – Information or instructions of particular importance.

## 1.4 Copyright © Notice

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In all cases, this copyright notice must remain intact.

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## 3.1 Intended Use

This device is designed to measure voltage, current and resistance across AC and DC circuits. It may also be used to test the voltage of 1.5V and 9V batteries. Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

Part of our core range, this product is suitable for regular use by enthusiasts and tradespersons alike.



**WARNING! This product is not a toy and must be respected.**

Read this manual in full before attempting to assemble, operate or maintain the product and retain it for later use.

## 3.2 Specification

Stock No.	37317
Part No.	AMM1
Multimeter rating	CAT II
Dimensions	W 62 x H 102 x D 35mm
Battery	1 x 1.5V AA (Not supplied)
Weight	125g
Circuit protection	500mA/250V fuse
DC voltage	
Input impedance	10K $\Omega$ /V
Measurement range	2.5, 10, 50, 250, 500V
Accuracy	$\pm$ 0.5%
AC voltage	
Input impedance	4.5K $\Omega$ /V
Measurement range	10, 50, 250, 500V
Accuracy	$\pm$ 0.5%
DC current	
Measurement range	500 $\mu$ A, 10mA, 250mA
Accuracy	$\pm$ 0.5%
Resistance	
Measurement range	2k $\Omega$ , 200k $\Omega$ (centre scale 3.6)
Battery test range	1.5V, 9V
Pollution degree	II
Operating conditions	
Ambient operating temperature	0–50°C
Ambient operating humidity	<80%

**Important:** Read all the Health and Safety instructions before attempting to use this product. Non-compliance may result in serious injury or death.



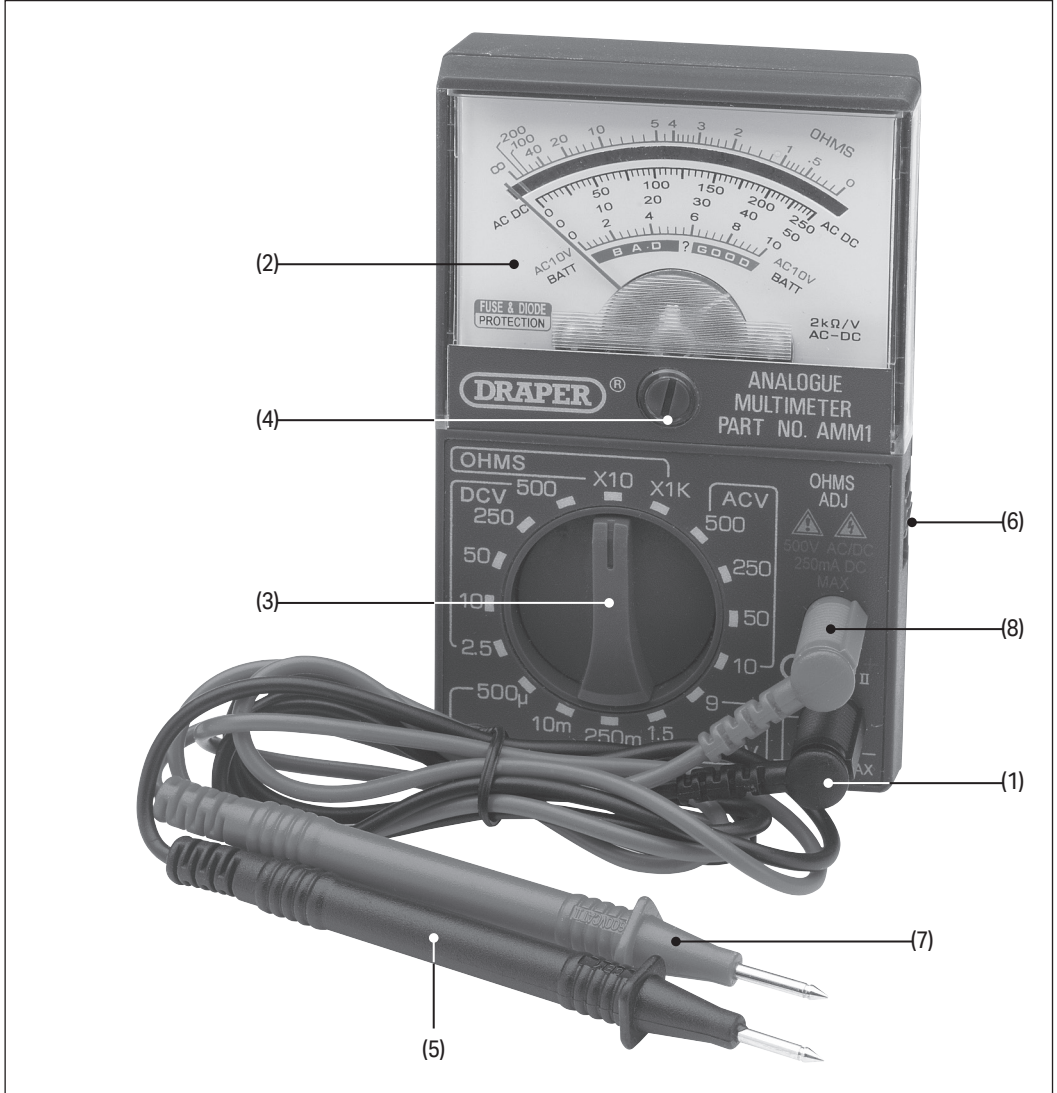
**WARNING! Contact with live circuits can result in severe electrical shock. When measuring voltage above 30A, current above 10mA or AC power with an inductive load, take care not to touch the exposed contacts as they may give a serious electric shock.**

- **ONLY** trained and competent personnel may operate this device.
- Use this product **ONLY** as instructed in this manual.
- This product is rated for use on single-phase appliances, portable tools and other household loads **ONLY**.
- Use **ONLY** accessories and spare parts supplied by Draper Tools.
  - **DO NOT** use any other leads with this product than those supplied. Contact Draper Tools for replacement options if the leads become damaged.
  - If the fuse must be replaced, use an identical item with the same specification.
  - If the battery must be replaced, use only identical batteries.
- Observe all standard precautions and good practices when working with live electrical currents.
- Inspect the product for damage before every use, particularly the contact tips.
  - **DO NOT** use this product if the device or probe cables are damaged in any way or if there is evidence of battery leakage.
  - If battery acid comes into contact with your skin, wash it off immediately with plenty of clean water.
  - If battery acid comes into contact with your eyes, flush them with plenty of clean water and seek immediate medical attention.
- Ensure that the device is clean, dry and free from grease before use.
- Ensure that the function dial is in the correct position before contacting a load with the probes.
- Ensure that the gauge needle is positioned at zero while the product is not in use.
- **DO NOT** use this product if it exhibits abnormal behaviour and have it checked by a qualified and authorised technician before next use.
- **DO NOT** exceed the maximum rated capacity per function for this device as it may expose you to a shock hazard.
- Ensure that the probe contacts are disconnected from the load or test circuit before moving the function dial.
- Assess any specific additional risks to the operator before each use.
- **DO NOT** expose this product to excessive ambient temperatures, high humidity, flammable substances or environments that produce a strong magnetic field.
- **DO NOT** use this product around explosive gases, vapours or dust.
- **DO NOT** immerse this device in water or expose it to wet conditions.
- **ALWAYS** wear protective insulated gloves while using this product.
- Keep your fingers behind the guards at all times during use.
- **ALWAYS** remove the contact cables from the device before removing the rubber cover or opening the back panel.
- **DO NOT** operate this device with the rear housing open or missing and **DO NOT** use it if the rear housing cannot be closed properly.
- **NEVER** insert the probe contacts into the device terminals.
- **DO NOT** abuse, mutilate or burn the battery.
- Remove the batteries when the product is stored for extended periods.
- **DO NOT** attempt to repair this device; it contains no user-serviceable parts.
- Keep this product out of reach of children.



**WARNING! ALWAYS ensure that the operator is not in contact with the ground while taking measurements, using insulating materials to prevent the current from earthing.**

## 5.1 Product Overview



- |                                  |   |
|----------------------------------|---|
| (1) Common earth probe terminal  | (5) Negative (black) probe                          |
| (2) Display gauge                | (6) Ohms adjustment dial                            |
| (3) Function dial                | (7) Positive (red) probe                            |
| (4) Manual zero adjustment screw | (8) Voltage, amperage and resistance probe terminal |

## 5.2 What's in the Box?

Carefully remove the product from the packaging and examine it for any signs of damage that may have occurred during shipment.

Before assembling the product, lay the contents out and check them against the parts listed below. If any part is damaged or missing, do not attempt to use the product. Please contact the Draper Helpline; contact details can be found at the back of this manual.

- (A) 1 x Digital multimeter
- (B) 1 x Positive probe contact
- (C) 1 x Negative probe contact

## 5.3 Packaging

Keep the product packaging for the duration of the warranty period for reference should the product need to be returned for repair.



**WARNING! Keep packaging materials out of reach of children. Dispose of packaging correctly and responsibly and in accordance with local regulations.**

Please visit [drapertools.com](https://www.drapertools.com) for our full range of accessories and consumables.

**Important:** Before operating this product, read and understand all the safety instructions listed in this manual.

**Important:** Inspect the device for signs of damage, particularly the probes and insulated cables. Replace faulty leads immediately.

For each measurement type, connect the positive probe (7) to the voltage, resistance and amperage probe terminal (8), and connect the negative probe (5) to the common earth probe terminal (1).

If the display gauge needle does not move during operation, check the polarity of the probes at the component contacts and the device terminals.

## 6.1 Installing the Battery

This product requires 1 x 1.5V AA battery (not supplied) to operate.



**WARNING! To prevent an electric shock, the test cables MUST be disconnected from the device before accessing the battery.**

1. Remove the screw on the back of the device to loosen the battery compartment cover.
2. Separate the front of the device from the rear casing at the divide around the tapered edge of the housing.
3. Install the battery between the two contacts above the circuit board, observing the polarity indicated.
4. Reassemble the device housing and tighten the rear screw securely.

## 6.2 The Function Dial

Use the function dial (3) to select the value that most accurately represents the anticipated measurement range from the appropriate measurement type. If the value to be measured is not known, set the function dial to the highest available range and reduce it until a suitable reading is displayed.

The dial can be rotated 360° through the following zones:

- DC voltage (DCV)
- AC voltage (ACV)
- DC current (DCA)
- Resistance (OHMS)
- Battery voltage (BATT V)

**Important:** Disconnect the probes from any load before adjusting the function dial.


## 6.3 Voltage Measurement

1. Use the function dial (3) to select the appropriate range from the DC voltage ranges or AC voltage ranges zone as appropriate.
2. Position the probe contacts across the source of the circuit to be measured, observing the correct polarity.
3. Enable power to the circuit to be measured and read the value from the appropriate scale on the gauge.  
**Important:** If the reading is not appropriate for the circuit, disconnect the probes from the circuit and adjust the function dial to a more appropriate range.

## 6.4 DC Current Measurement

1. Use the function dial (3) to select the appropriate range from the DC current ranges zone.
2. Open the circuit to be measured and connect the probes in series, using the correct polarity, to bridge the gap.
3. Enable the power to the circuit to be measured and read the value from the appropriate scale on the gauge.  
**Important:** If the reading is not appropriate for the circuit, disconnect the probes from the circuit and adjust the function dial to a more appropriate range.

## 6.5 Resistance Measurement

1. If the resistance to be tested is part of a circuit, switch the circuit off, disconnect the power and allow all capacitors to discharge before measurement.  
 **WARNING! NEVER measure resistance across a voltage source or on a powered circuit.**
2. Use the function dial (3) to select the appropriate range from the resistance ranges zone.
3. Touch the two probes together to short-circuit the leads and use the ohms adjustment dial (6) to set the gauge needle to a zero reading (top-right of the gauge).
4. Touch the probe contacts at either side of the resistance to be measured and read the value from the appropriate scale on the gauge.  
**Important:** If the reading is not appropriate for the circuit, disconnect the probes from the circuit and adjust the function dial to a more appropriate range.



## 6.6 Battery Test Function

**Important:** This product can be used to test batteries of up to 9V.

1. Use the function dial (3) to select the battery test function.
2. Touch the probe contacts against the contacts of the battery, observing the correct polarity.
3. Read the value from the appropriate scale on the gauge.

**Important:** If the reading is not appropriate for the circuit, disconnect the probes from the circuit and adjust the function dial to a more appropriate range.

## 6.7 Manual Zero Adjustment

The needle of the display gauge (2) should rest at the far left of the scale when the device is not in use. If the needle does not return to this position, it can be manually adjusted by using a plain slot screwdriver to rotate the manual zero adjustment screw (4).

**Important:** After adjusting the zero screw, test the device to ensure that it delivers accurate readings and returns to the zero position as appropriate.

# 7. Product Care and Disposal

**Important:** Disconnect the probes from the terminals and any other source of voltage before performing any maintenance on this product.

## 7.1 Maintenance and Storage

- Keep the product clean and free from dust, debris and grease.
- Use a dry cloth **ONLY** to clean the housing of this device.



**CAUTION! DO NOT use abrasives, solvents or other aggressive chemicals as these may damage plastic or insulated parts.**

- Replace the probes **IMMEDIATELY** if they are damaged in any way or the conductors are exposed; contact Draper Tools for replacement options.  
**Important:** Replacement probes must be rated CAT II.
- If the fuse must be replaced, access the device circuit board (see **6.1**), remove the fuse from its holder and install an equivalent fuse in its place.  
**Important:** This product requires a F200mA/250V fuse.
- Remove the battery when storing the device for extended periods.
- Store the device in a cool, clean and dry environment, out of direct sunlight and out of reach of children.

## 7.2 Disposal

For spare parts, servicing, and repair and replacement options, please contact the Draper Tools Product Helpline for details of your nearest authorised agent.

Draper Tools will endeavour to hold any spare parts, if applicable, for seven years from the date that it sells the final matching stock item.

Any servicing or repairs carried out by unauthorised personnel or installation of spare parts not supplied by Draper Tools will invalidate your warranty.

At the end of its working life, dispose of the product responsibly and in line with local regulations. Recycle where possible.

- **DO NOT** dispose of this product with domestic waste; most local authorities provide appropriate recycling facilities.
- **DO NOT** burn or mutilate batteries; this may release toxic or corrosive substances.
- Dispose of batteries separately and in accordance with local regulations.



Draper Tools products are carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, return the complete tool to your nearest distributor or contact Draper Tools directly. Contact information can be found at the back of this manual.

Proof of purchase must be provided.

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 warranty period covers parts and labour for 12 months from the date of purchase. Where tools have been hired out, the warranty period covers 90 days from the date of purchase.

This warranty does not apply to any consumable parts, batteries or 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 Tools repair agent.

In all cases, to make a claim for faulty workmanship or materials within the standard warranty period, please contact or return the product to the place of purchase. Proof of purchase may be required.

If the place of purchase is no longer trading or if you experience any difficulties with your warranty, please contact Customer Services with the product details and your proof of purchase. Contact details can be found at the back of this manual.

If the tool is not covered by the terms of this warranty, repairs and carriage charges will be quoted and charged accordingly.

This warranty supersedes any other guarantees expressed or implied and variations of its terms are not authorised.

Your Draper Tools guarantee is not effective until you can produce, upon request, a dated receipt or invoice to verify your purchase within the guarantee period.

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

### **Draper Tools Limited**



Read the instruction manual



**Warning!**



**Warning!** –  
risk of shock



Do not incinerate or throw onto fire



Measures DC voltage



Measures AC voltage



Measures resistance



Measures the voltage of 1.5V and 9V batteries



Internal fuse rating



Requires 1 x 1.5V AA battery



WEEE –

Waste Electrical & Electronic Equipment

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



European conformity



UK Conformity Assessed

## Contact Details

### **Draper Tools**

Draper Tools Limited  
Hursley Road  
Chandler's Ford  
Eastleigh  
Hampshire  
SO53 1YF  
UK

**Website:** [drapertools.com](http://drapertools.com)

**Email:** [sales@drapertools.com](mailto:sales@drapertools.com)

**Product Helpline:** +44 (0) 23 8049 4344

**Telephone Sales Desk:** +44 (0) 23 8049 4333

**General Enquiries:** +44 (0) 23 8026 6355

**General Fax:** +44 (0) 23 8026 0784

### **Delta International**

Delta International BV  
Oude Graaf 8  
6002 NL  
Weert  
Netherlands

Please contact the Draper Tools Product Helpline for repair and servicing enquiries.