

## Sealey MM20HV

# Sealey MM20HV Digital Multimeter Instruction Manual

Model: MM20HV

## 1. INTRODUCTION

This manual provides detailed instructions for the safe and effective use of your Sealey MM20HV Digital Multimeter. The MM20HV is a heavy-duty, general-purpose multimeter designed for various electrical measurements, featuring a clear LCD display, data hold function, temperature probe, and diode test facility. It is housed in a rugged rubber boot with an integral stand for durability and convenience.

Please read this manual thoroughly before operating the device and retain it for future reference.

## 2. SAFETY INFORMATION

Always observe basic safety precautions when using electrical testing equipment to reduce the risk of fire, electric shock, and personal injury.

- **Read Instructions:** Understand all operating instructions and safety warnings before use.
- **Inspect Device:** Before each use, inspect the multimeter and test leads for any damage. Do not use if damaged.
- **Proper Range:** Always select the correct function and range for the measurement.
- **Voltage Limits:** Do not exceed the maximum input limits specified for each range.
- **Live Circuits:** Never measure resistance, continuity, or diode on a live circuit. Ensure power is off and circuits are discharged.
- **Insulation:** Keep fingers behind the probe barriers during measurements.
- **Environment:** Do not use the multimeter in wet conditions or in the presence of explosive gases or fumes.
- **Servicing:** Refer all servicing to qualified personnel. Battery and fuse replacement are the only user-serviceable parts.

## 3. WHAT'S IN THE BOX

Upon unpacking, ensure all items listed below are present and undamaged:

- Sealey MM20HV Digital Multimeter
- Test Leads (Red and Black)

- 

## 4. SETUP

---

## 4.1. Battery Installation

The Sealey MM20HV requires two AAA batteries for operation.

1. Locate the battery compartment cover on the back of the multimeter.
2. Use a screwdriver to remove the screw securing the cover.
3. Insert two AAA batteries, observing the correct polarity (+ and -) as indicated inside the compartment.
4. Replace the battery compartment cover and secure it with the screw.

## 4.2. Connecting Test Leads

Proper connection of test leads is essential for accurate and safe measurements.

- Insert the black test lead into the "COM" (Common) jack.
- For most voltage, resistance, and continuity measurements, insert the red test lead into the "VΩmA" jack.
- For high current (up to 10A DC) measurements, insert the red test lead into the "10A DC" jack. Ensure the function dial is set to the appropriate current range.



Figure 2: Multimeter with black lead in COM and red lead in VΩmA jack.

## 5. OPERATING INSTRUCTIONS

The Sealey MM20HV offers 8 functions for various electrical measurements.

## 5.1. Power On/Off

Rotate the central function dial from the "OFF" position to any desired measurement function to turn the multimeter on. To turn off, rotate the dial back to "OFF".

## 5.2. Measuring DC Voltage (V=)

1. Insert the black lead into the "COM" jack and the red lead into the "VΩmA" jack.
2. Set the function dial to the desired DC Voltage range (e.g., 200mV, 2V, 20V, 200V, 600V). If the voltage is unknown, start with the highest range and decrease as necessary.
3. Connect the test probes across the component or circuit to be measured.
4. Read the voltage value on the LCD display.

## 5.3. Measuring AC Voltage (V~)

1. Insert the black lead into the "COM" jack and the red lead into the "VΩmA" jack.
2. Set the function dial to the desired AC Voltage range (e.g., 200V, 600V).
3. Connect the test probes across the AC voltage source.
4. Read the voltage value on the LCD display.

## 5.4. Measuring DC Current (A=)

**Caution:** Never connect the multimeter in parallel with a voltage source when measuring current. Always connect in series with the load.

1. Insert the black lead into the "COM" jack.
2. For currents up to 200mA, insert the red lead into the "VΩmA" jack. For currents up to 10A, insert the red lead into the "10A DC" jack.
3. Set the function dial to the appropriate DC Current range (e.g., 2mA, 20mA, 200mA, 10A).
4. Open the circuit where current is to be measured and connect the multimeter in series.
5. Read the current value on the LCD display.

## 5.5. Measuring Resistance (Ω)

**Warning:** Ensure the circuit is de-energized and all capacitors are discharged before measuring resistance.

1. Insert the black lead into the "COM" jack and the red lead into the "VΩmA" jack.
2. Set the function dial to the desired Resistance range (e.g., 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ).
3. Connect the test probes across the component whose resistance is to be measured.
4. Read the resistance value on the LCD display.

## 5.6. Audible Continuity Test

This function allows for quick checks of circuit continuity with an audible tone.

1. Insert the black lead into the "COM" jack and the red lead into the "VΩmA" jack.
2. Set the function dial to the continuity symbol (often shared with diode test).
3. Connect the test probes across the circuit or component.
4. An audible tone indicates continuity (low resistance). The display will show the resistance value.

## 5.7. Diode/Transistor Verification

This function allows for testing diodes and transistors.

1. Insert the black lead into the "COM" jack and the red lead into the "VΩmA" jack.

2. Set the function dial to the diode symbol.
3. For diode testing, connect the red probe to the anode and the black probe to the cathode. The display will show the forward voltage drop. Reverse the probes; the display should show "OL" (Open Loop) for a good diode.
4. For transistor (hFE) testing, insert the transistor leads into the appropriate NPN or PNP sockets on the multimeter. The display will show the hFE value.

## 5.8. Measuring Temperature (°C)

The multimeter includes a thermocouple for temperature measurements.

1. Remove the test leads from the input jacks.
2. Insert the thermocouple plug into the "VΩmA" and "COM" jacks, observing polarity if indicated.
3. Set the function dial to the "°C" range.
4. Place the tip of the thermocouple on or near the object whose temperature is to be measured.
5. Read the temperature value in Celsius on the LCD display.

## 5.9. Data Hold Function

Press the "HOLD" button (typically a green button on the front panel) to freeze the current reading on the display. Press it again to release the hold and resume live readings.

# 6. MAINTENANCE

---

## 6.1. Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the device is off and disconnected from any circuits before cleaning.

## 6.2. Battery Replacement

When the battery indicator appears on the display, replace the batteries as described in Section 4.1. Always use fresh AAA batteries.

## 6.3. Fuse Replacement

If the current measurement function stops working, the fuse may need replacement.

1. Ensure the multimeter is turned off and all test leads are disconnected.
2. Remove the battery compartment cover and batteries.
3. Locate the fuse(s) inside the compartment. The MM20HV typically uses a 200mA/250V fast-blow fuse for the mA range and a 10A/250V fast-blow fuse for the 10A range.
4. Carefully remove the old fuse and replace it with a new fuse of the exact same type and rating.
5. Replace the batteries and battery compartment cover.

**Important:** Never use a fuse with a different rating or bypass a fuse. This can damage the multimeter and pose a serious safety hazard.

# 7. TROUBLESHOOTING

---

Problem	Possible Cause	Solution
---------	----------------	----------



Problem	Possible Cause	Solution
No display or dim display	Dead or low batteries	Replace batteries (Section 4.1)
Incorrect readings	Incorrect range selected, poor lead connection, damaged leads	Select appropriate range, ensure leads are fully inserted, inspect leads for damage and replace if necessary
Current measurement not working	Blown fuse	Replace fuse (Section 6.3)
"OL" (Overload) displayed	Measurement exceeds selected range, open circuit (for resistance/continuity)	Select a higher range, check circuit for breaks

## 8. SPECIFICATIONS

The following table outlines the technical specifications for the Sealey MM20HV Digital Multimeter.

Specification	Value
Model No.	MM20HV
Brand	Sealey
Functions	8 (AC/DC Voltage, DC Current, Resistance, Temperature, Audible Continuity, Diode/Transistor Verification)
AC Voltage (Accuracy)	200V, 600V (±2%)
DC Voltage (Accuracy)	200mV, 2V, 20V, 200V, 600V (±0.5% to ±0.8%)
DC Current (Accuracy)	2mA, 20mA, 200mA, 10A (±1% to ±2%)
Resistance (Accuracy)	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ (±0.8% to ±1%)
Temperature Range	Up to 1000°C (with thermocouple)
Power Source	2 x AAA Batteries
Item Weight	0.29 Kilograms (approx. 10.2 ounces)
Dimensions (L x W x H)	1.97 x 4.33 x 6.18 inches
Safety Standard	IEC 1010






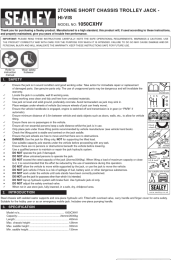
*Note: Specifications are subject to change without notice.*

## 9. WARRANTY AND SUPPORT

For information regarding warranty coverage, technical support, or service, please refer to the warranty card included with your product or contact Sealey customer service directly. Contact details are typically available on the manufacturer's official website.



## Related Documents - MM20HV

	<p><a href="#">Sealey TM102 8-Function Professional Auto-Ranging Digital Multimeter - User Manual</a></p> <p>Comprehensive user manual for the Sealey TM102 8-Function Professional Auto-Ranging Digital Multimeter. Includes safety instructions, specifications, operation guide, and maintenance procedures.</p>
	<p><a href="#">Heavy-Duty Mobile Tool &amp; Parts Trolley with 5 Drawers and Lockable Top - Sealey AP890MHV</a></p> <p>Instructions and specifications for the Sealey AP890MHV heavy-duty mobile tool and parts trolley. Features include 5 drawers with ball-bearing slides, a lockable top lid, and high-visibility design.</p>
	<p><a href="#">Sealey RS1312HV 900A 12V RoadStart Emergency Jump Starter - Hi-Vis Green User Manual</a></p> <p>Comprehensive user manual for the Sealey RS1312HV 900A 12V RoadStart Emergency Jump Starter. Includes safety instructions, specifications, features, operation guide, charging procedures, troubleshooting, and battery recycling information.</p>
	<p><a href="#">Sealey 1050CXLE v3 Trolley Jack Hydraulic Oil Safety Data Sheet</a></p> <p>Safety Data Sheet for Sealey 1050CXLE v3 Trolley Jack 2 Tonne Low Profile Short Chassis Hydraulic oil, detailing product identification, hazards, first aid, fire-fighting, handling, storage, physical properties, and disposal.</p>
	<p><a href="#">Sealey SGL01 Rechargeable Spray Gun Light 5W SMD LED - User Manual</a></p> <p>Detailed instructions and specifications for the Sealey SGL01 Rechargeable Spray Gun Light. Learn about its features, operation, safety precautions, and charging for automotive and workshop use.</p>
	<p><a href="#">Sealey 1050CXHV 2 Tonne Short Chassis Hi-Vis Trolley Jack - User Manual &amp; Safety Guide</a></p> <p>Comprehensive user manual and safety guide for the Sealey 1050CXHV 2 Tonne Short Chassis Hi-Vis Trolley Jack. Includes operation, maintenance, troubleshooting, and safety instructions.</p>



