

Sealey MM19

Sealey MM19 Digital Multimeter 7 Function User Manual

1. INTRODUCTION

This manual provides instructions for the safe and effective use of the Sealey MM19 Digital Multimeter. The MM19 is a general-purpose multimeter designed for measuring various electrical parameters, including AC and DC voltage, DC current, resistance, audible continuity, and diode/transistor verification. Please read this manual thoroughly before operation and retain it for future reference.

2. SAFETY INFORMATION

Always observe basic safety precautions when using electrical test equipment to reduce the risk of fire, electric shock, or personal injury. This device complies with IEC 1010 and CE CAT II safety standards.

- **Do not exceed the maximum input limits** for any function. Refer to the specifications section for details.
- **Never apply voltage to the meter when the rotary switch is set to Resistance (Ω), Diode, Continuity, or Current (A) functions.**
- **Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC.** These voltages pose a shock hazard.
- **Ensure the test leads are in good condition** without cracked or broken insulation.
- **Always connect the common (COM) test lead first** and disconnect it last.
- **Disconnect power to the circuit under test** before measuring resistance or continuity.
- **Replace the battery immediately** when the low battery indicator appears to ensure accurate readings.

3. PRODUCT OVERVIEW

The Sealey MM19 Digital Multimeter features a clear LCD display, a central rotary switch for function selection, and input jacks for test leads.



The Sealey MM19 Digital Multimeter, shown with its yellow casing, large LCD display, rotary function switch, and red and black test leads connected to the input jacks.

Components:

- **LCD Display:** Large (46 x 25mm) digital display for reading measurements.
- **Rotary Switch:** Used to select the desired measurement function and range.
- **VΩmA Input Jack:** For voltage, resistance, and current measurements up to 200mA.
- **10ADC Input Jack:** For high current measurements up to 10A DC (unfused).
- **COM Input Jack:** Common (negative) input for all measurements.
- **hFE Socket:** For transistor (NPN/PNP) testing.
- **Test Leads:** Red (positive) and Black (negative) leads for connecting to circuits.

4. SETUP

4.1. Battery Installation

The Sealey MM19 Multimeter requires a 9V battery for operation. If the display does not illuminate or shows a low battery indicator, the battery needs to be installed or replaced.

1. Ensure the multimeter is turned OFF.
2. Locate the battery compartment cover on the back of the unit.
3. Remove the screw(s) securing the cover and carefully lift it off.
4. Connect a new 9V battery to the battery clips, observing correct polarity.
5. Place the battery inside the compartment and replace the cover, securing it with the screw(s).

4.2. Connecting Test Leads

The multimeter is supplied with a pair of test leads (red and black).

- Insert the **black test lead** into the **COM** (Common) input jack.
- For most measurements (voltage, resistance, low current), insert the **red test lead** into the **VΩmA** input jack.
- For high DC current measurements (up to 10A), insert the **red test lead** into the **10ADC** input jack.

5. OPERATING INSTRUCTIONS

To operate the multimeter, select the desired function and range using the rotary switch.

5.1. Measuring DC Voltage (DCV)

1. Insert the red lead into the VΩmA jack and the black lead into the COM jack.
2. Set the rotary switch to the desired DCV range (e.g., 200m, 2000m, 20, 200, 1000). Start with the highest range if the voltage is unknown.
3. Connect the test leads across the component or circuit to be measured.
4. Read the voltage value on the LCD display.

5.2. Measuring AC Voltage (ACV)

1. Insert the red lead into the VΩmA jack and the black lead into the COM jack.
2. Set the rotary switch to the desired ACV range (e.g., 200, 750). Start with the highest range if the voltage is unknown.
3. Connect the test leads across the component or circuit to be measured.
4. Read the voltage value on the LCD display.

5.3. Measuring DC Current (DCA)

1. **For currents up to 200mA:** Insert the red lead into the VΩmA jack and the black lead into the COM jack.
2. **For currents up to 10A:** Insert the red lead into the 10ADC jack and the black lead into the COM jack.
3. Set the rotary switch to the desired DCA range (e.g., 200μ, 2000μ, 20m, 200m, 10A). Start with the highest range if the current is unknown.
4. **Turn off power to the circuit.** Open the circuit where the current is to be measured.
5. Connect the multimeter in series with the circuit.
6. Apply power to the circuit and read the current value on the LCD display.

5.4. Measuring Resistance (Ω)

1. Insert the red lead into the VΩmA jack and the black lead into the COM jack.
2. Set the rotary switch to the desired Resistance (Ω) range (e.g., 200, 2000, 20k, 200k, 2000k).
3. **Ensure the circuit under test is de-energized.**
4. Connect the test leads across the component to be measured.
5. Read the resistance value on the LCD display.

5.5. Audible Continuity Test

1. Insert the red lead into the VΩmA jack and the black lead into the COM jack.
2. Set the rotary switch to the continuity symbol (speaker icon).
3. **Ensure the circuit under test is de-energized.**
4. Connect the test leads across the component or wire.
5. If continuity exists (low resistance), the meter will emit an audible tone. The display will show the resistance value.

5.6. Diode/Transistor Verification Mode (hFE)

1. Insert the red lead into the VΩmA jack and the black lead into the COM jack for diode testing.
2. Set the rotary switch to the diode symbol.
3. Connect the red lead to the anode and the black lead to the cathode of the diode. The display will show the forward voltage drop. Reverse the leads; the display should show 'OL' (open loop) for a good diode.
4. For transistor hFE measurement, insert the transistor leads (Emitter, Base, Collector) into the appropriate sockets (E, B, C) in the hFE test socket, ensuring correct NPN or PNP type selection.
5. Read the hFE value on the LCD display.

6. MAINTENANCE

6.1. Cleaning

Wipe the meter casing with a damp cloth and a mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before use.

6.2. Battery Replacement

Refer to Section 4.1 for battery installation instructions. Replace the 9V battery when the low battery indicator appears on the display to maintain measurement accuracy.

7. TROUBLESHOOTING

- **No Display:** Check battery installation and ensure the battery has sufficient charge.
- **'OL' or '1' on Display:** This usually indicates an over-range condition or an open circuit. Select a higher range or check connections.
- **Incorrect Readings:** Ensure the correct function and range are selected. Check test lead connections and battery condition.
- **No Continuity Tone:** Verify the circuit is de-energized and the leads are making good contact.

8. SPECIFICATIONS

Parameter	Value
Brand	Sealey
Model Number	MM19
Power Source	Battery Powered (9V)
Display	Digital LCD (46 x 25mm)
DC Voltage (DCV)	200mV, 2000mV, 20V, 200V, 1000V
AC Voltage (ACV)	200V, 750V
DC Current (DCA)	200μA, 2000μA, 20mA, 200mA, 10A
Resistance (Ω)	200Ω, 2000Ω, 20kΩ, 200kΩ, 2000kΩ
Continuity	Audible tone below approx. 30Ω
Diode Test	Forward voltage drop display
Transistor Test	hFE (NPN/PNP)
Safety Rating	CE CAT II, IEC 1010
Dimensions (L x W x H)	1.93 x 4.21 x 6.06 inches
Item Weight	9.5 ounces (0.27 Kilograms)

9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation provided with your purchase or contact Sealey customer service directly. Keep your proof of purchase for any warranty claims.