Yato YT-73080

Yato YT-73080 Digital Multimeter Instruction Manual

Model: YT-73080

1. Introduction

Thank you for choosing the Yato YT-73080 Digital Multimeter. This device is designed for safe and accurate measurements of various electrical parameters. It is suitable for a wide range of applications, including electrical diagnostics and automotive testing. Please read this manual thoroughly before use to ensure proper operation and to prevent damage to the device or injury.

2. Safety Information

WARNING: Always observe safety precautions when working with electricity. Failure to do so may result in electric shock, injury, or damage to the multimeter or equipment under test.

- Read and understand all instructions before operating the multimeter.
- Do not attempt to measure voltages or currents exceeding the maximum rated values for this device.
- Ensure the test leads are in good condition, without any cracks or damaged insulation.
- Always disconnect power to the circuit before connecting or disconnecting test leads, especially when measuring current or resistance.
- Do not operate the multimeter if it appears damaged or if the case is open.
- Replace the battery when the low battery indicator appears to ensure accurate readings.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC, as these pose a shock hazard.

3. Product Overview

The Yato YT-73080 Digital Multimeter features a clear LCD display, a rotary function switch, and multiple input jacks for versatile measurements. It comes with a protective rubber housing for durability.

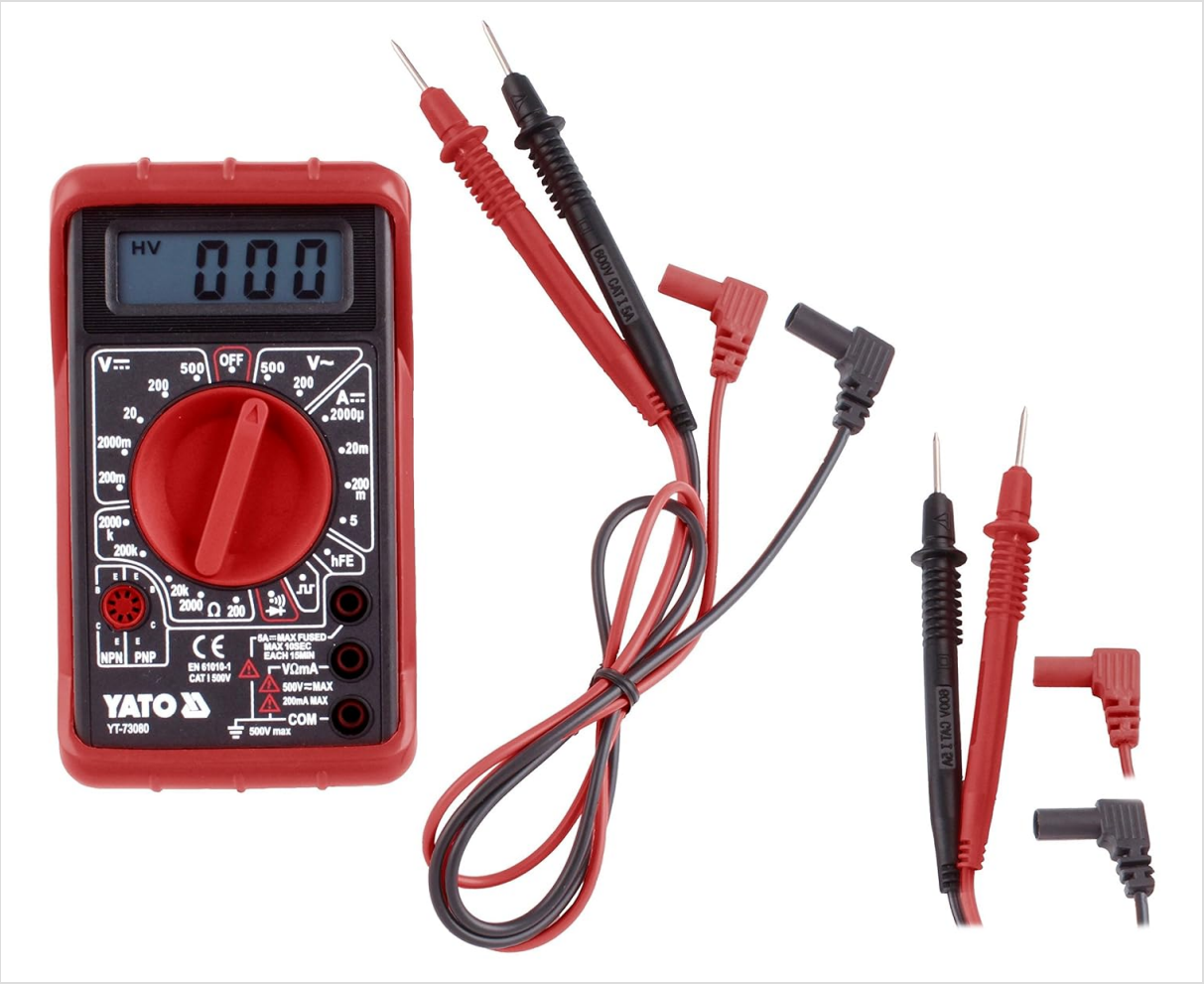

Image: The Yato YT-73080 Digital Multimeter, showing the LCD display, rotary switch, input jacks, and connected red and black test leads.

Components:

- **LCD Display:** Shows measurement readings and indicators.
- **Rotary Function Switch:** Used to select the desired measurement function and range.
- **VΩmA Input Jack:** For voltage, resistance, and low current measurements (red test lead).
- **COM Input Jack:** Common terminal for all measurements (black test lead).
- **10A Input Jack:** For high current measurements (red test lead, if applicable for your model).
- **hFE Socket:** For transistor testing.
- **Test Leads:** Red and black probes for connecting to circuits.

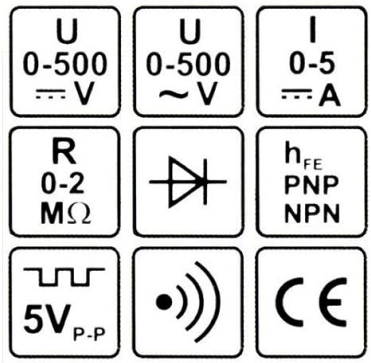

Image: A diagram illustrating common multimeter symbols for voltage (AC/DC), current, resistance, diode, hFE, continuity, and CE compliance.

4. Setup

4.1 Battery Installation

The Yato YT-73080 Multimeter requires a 9V battery (not included). To install or replace the battery:

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

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

Image: The red and black test leads with their angled connectors, ready for insertion into the multimeter.

- Always insert the **black** test lead into the **COM** (Common) jack.
- For most measurements (voltage, resistance, diode, continuity, low current), insert the **red** test lead into the **VΩmA** jack.
- For high current measurements (e.g., 10A), insert the **red** test lead into the dedicated **10A** jack (if present on your model).

5. Operating Instructions

Before taking any measurement, ensure the test leads are correctly connected and the rotary switch is set to the appropriate function and range.

5.1 Measuring DC Voltage (V—)

1. Connect the red lead to the VΩmA jack and the black lead to the COM jack.
2. Set the rotary switch to the desired DC Voltage (V—) range. Start with the highest range if the voltage is unknown.
3. Connect the test probes in parallel across the component or circuit to be measured.
4. Read the voltage value on the LCD display.

5.2 Measuring AC Voltage (V~)

1. Connect the red lead to the VΩmA jack and the black lead to the COM jack.
2. Set the rotary switch to the desired AC Voltage (V~) range. Start with the highest range if the voltage is unknown.
3. Connect the test probes in parallel across the component or circuit to be measured.
4. Read the voltage value on the LCD display.

5.3 Measuring DC Current (A—)

CAUTION: Never connect the multimeter in series with a voltage source when set to current measurement, as this can blow the fuse or damage the meter.

1. **Turn off power to the circuit.**
2. For low current, connect the red lead to the VΩmA jack. For high current (if applicable), connect the red lead to the 10A jack. Connect the black lead to the COM jack.
3. Set the rotary switch to the desired DC Current (A—) range. Start with the highest range.
4. Break the circuit and connect the multimeter in series with the circuit.
5. Restore power to the circuit.
6. Read the current value on the LCD display.
7. **Turn off power before disconnecting the multimeter.**

Image: A hand holding the Yato YT-73080 multimeter, with probes connected to an electrical component, demonstrating a measurement in progress.

5.4 Measuring Resistance (Ω)

1. Connect the red lead to the VΩmA jack and the black lead to the COM jack.
2. Set the rotary switch to the desired Resistance (Ω) range.
3. Ensure the component under test is de-energized and isolated from the circuit.
4. Connect the test probes across the component.
5. Read the resistance value on the LCD display.

5.5 Diode Test

1. Connect the red lead to the VΩmA jack and the black lead to the COM jack.
2. Set the rotary switch to the Diode symbol (→|).
3. Connect the red probe to the anode and the black probe to the cathode of the diode. The display should show a forward voltage drop (e.g., 0.5V to 0.7V for silicon diodes).
4. Reverse the probes. The display should show "OL" (Open Loop) for a good diode.

5.6 Continuity Test

1. Connect the red lead to the VΩmA jack and the black lead to the COM jack.
2. Set the rotary switch to the Continuity symbol (♫).
3. Connect the test probes across the circuit or component.
4. If continuity exists (low resistance), the multimeter will emit an audible beep. The display will show the resistance value.

5.7 Transistor Test (hFE)

1. Set the rotary switch to the hFE position.
2. Identify the type of transistor (NPN or PNP) and its emitter, base, and collector leads.
3. Insert the transistor leads into the corresponding holes in the hFE socket.
4. Read the hFE (DC current gain) value on the LCD display.

Image: A close-up view of the Yato YT-73080 multimeter's display and rotary switch, indicating a measurement being taken.

6. Maintenance

6.1 Cleaning

To clean the multimeter, wipe the case with a damp cloth and a mild detergent. Do not use abrasives or solvents. Ensure the device is completely dry before use.

6.2 Battery Replacement

Refer to Section 4.1 for battery replacement instructions. Always replace the battery promptly when the low battery indicator appears to maintain measurement accuracy.

6.3 Storage

When not in use for extended periods, remove the battery to prevent leakage. Store the multimeter in a cool, dry place, away from direct sunlight and extreme temperatures.

7. Troubleshooting

- **No display or faint display:** Check the battery. Replace if necessary.
- **Incorrect readings:**
  - Ensure the correct function and range are selected.
  - Check test lead connections.
  - Verify the battery level.
  - Ensure the circuit under test is properly isolated or de-energized as required.
- **"OL" (Overload) displayed:** The measured value exceeds the selected range. Switch to a higher range.
- **Fuse blown (during current measurement):** Replace the internal fuse with one of the same type and rating. Refer to the specifications for fuse details.

8. Specifications

Feature	Specification
Model Number	YT-73080
Manufacturer	Yato
Dimensions (LxWxH)	13.5 x 7.9 x 4 cm
Weight (without protective casing)	140 grams (approx. 209g with casing)
Power Source	9V Battery (not included)
DC Voltage Range	Up to 500V
AC Voltage Range	Up to 500V
DC Current Range	Up to 5A (or 10A depending on jack)
Resistance Range	Up to 2MΩ
Diode Test	Yes
Continuity Test	Yes (with audible buzzer)
Transistor Test (hFE)	Yes

Feature	Specification
Certifications	CE

9. Warranty and Support

For warranty information or technical support regarding your Yato YT-73080 Digital Multimeter, please refer to the documentation provided with your purchase or contact Yato customer service directly. Keep your purchase receipt as proof of purchase.

Yato products are designed for reliability and performance. If you encounter any issues not covered in this manual, please reach out to authorized service personnel.