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- , ECG /
- > ECG ML-370 Test Leads User Manual

#### **ECG ML-370**

# **ECG ML-370 Test Leads User Manual**

For Models DM-37, DM-71, DM-76, DM-310

#### 1. PRODUCT OVERVIEW

The ECG ML-370 Test Leads are essential accessories designed for use with various ECG digital multimeters, including models DM-37, DM-71, DM-76, and DM-310. These leads facilitate accurate electrical measurements by providing a reliable connection between the multimeter and the circuit under test. The set typically includes one red lead and one black lead, each equipped with a probe tip and a banana plug connector for secure attachment to the multimeter.



Image 1.1: The ECG ML-370 Test Leads set, showing the red and black probe tips, banana plug connectors, and included alligator clips for versatile connections.

# 2. SETUP

Before using your ECG ML-370 Test Leads, ensure your multimeter is turned off. Follow these steps to properly connect the leads:

- 1. **Identify Ports:** Locate the input jacks on your multimeter. Typically, there will be a common (COM) jack, a voltage/resistance (VΩmA) jack, and sometimes a dedicated current (A) jack.
- 2. **Connect Black Lead:** Insert the black test lead's banana plug into the multimeter's "COM" (Common) jack. This is usually a black-colored jack.
- 3. **Connect Red Lead:** For most measurements (voltage, resistance, continuity, small current), insert the red test lead's banana plug into the " $V\Omega$ mA" or " $V\Omega$ " jack. For high current measurements, refer to your multimeter's manual and connect the red lead to the appropriate "A" or "mA" jack.
- 4. **Secure Connection:** Ensure both leads are fully inserted and securely connected to prevent intermittent readings or electrical hazards.

#### 3. OPERATING INSTRUCTIONS

Once the test leads are connected to your multimeter, you can begin taking measurements. Always prioritize safety and refer to your multimeter's specific operating manual for detailed instructions on measurement modes.

# 3.1. Safety Precautions

- Always inspect test leads for any signs of damage (cracks, frayed insulation) before use. Do not use damaged leads.
- Ensure the multimeter is set to the correct function and range before connecting the leads to a circuit.
- Avoid touching the metal probe tips when connected to a live circuit.
- Do not exceed the maximum voltage or current ratings of the test leads or your multimeter.
- When measuring voltage, always connect the leads in parallel with the component. When measuring current, connect them in series.

## 3.2. Basic Usage

To take a measurement:

- Select Function: Turn your multimeter's rotary switch to the desired measurement function (e.g., V for voltage, Ω for resistance, A for current).
- 2. **Connect Probes:** Carefully touch the red probe tip to the positive point of the circuit and the black probe tip to the negative or common point.
- 3. Read Display: Observe the reading on your multimeter's display.

#### 4. MAINTENANCE

Proper maintenance extends the life of your test leads and ensures accurate readings.

- Cleaning: After each use, wipe the leads with a clean, dry, lint-free cloth. If necessary, a slightly damp cloth can be used, but ensure the leads are completely dry before storage or next use. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly inspect the insulation for cuts, cracks, or abrasions. Check the probe tips for bending or damage. Inspect the banana plugs for corrosion or looseness.
- **Storage:** Store test leads in a clean, dry environment, away from direct sunlight and extreme temperatures. Avoid sharp bends or kinks in the cables, which can damage the internal wiring.

# 5. TROUBLESHOOTING

If you encounter issues while using your test leads, consider the following common problems and solutions:

#### · No Reading or Erratic Reading:

- Ensure leads are fully inserted into the multimeter jacks.
- Check for continuity of the leads themselves using your multimeter's continuity function (if available).
- Verify the multimeter is set to the correct function and range.

• Inspect leads for internal breaks by gently flexing them while checking continuity.

#### • Inaccurate Readings:

- Ensure probe tips are making good contact with the circuit.
- Clean any dirt or corrosion from the probe tips and banana plugs.
- · Confirm the multimeter's battery is not low.

#### • Leads Feel Loose in Jacks:

- Inspect the banana plugs for damage or deformation.
- Ensure the multimeter jacks are clean and free of debris.

## 6. Specifications

Brand	ECG
Model Number	ML-370
Compatibility	ECG DM-37, DM-71, DM-76, DM-310 Multimeters
Туре	Test Leads (Red and Black)
First Available	August 7, 2012

# 7. WARRANTY AND SUPPORT

For specific warranty information regarding your ECG ML-370 Test Leads, please refer to the documentation provided with your original purchase or contact the manufacturer directly. For technical support or inquiries, please reach out to ECG customer service or the authorized seller from whom you purchased the product.

Note: This manual provides general guidance. Always adhere to the safety instructions and operating procedures outlined in your multimeter's specific user manual.

# Related Documents - ML-370



ECG ET 32303: Návod k obsluze a bezpečnostní pokyny pro elektrickou troubu s plotýnkami Kompletní uživatelský manuál pro elektrickou troubu ECG ET 32303 s plotýnkami. Obsahuje podrobné informace o bezpečném používání, funkcích, údržbě a technických specifikacích spotřebiče ECG.

