# Instruction Manual

## MT710




A. Introduction

This product is a battery-powered, true-rms, auto ranging digital clamp multimeter with a 4000 count LCD display and a backlight.

B. Safety Information

To avoid possible electrical shock, fire, or personal injury, please read all safety information before you use the product.

(1) Do **NOT** exceed the "**maximum value**" indicated in the Specification.
(2) Examine the condition of the test leads and the insulation of the product before measuring voltage higher than 36V DC or 25V AC.
(3) Disconnect the test leads from the circuit before changing the mode。
(4) Misuse of mode or range can lead to hazards, be cautious. "OL" will be shown on the display when the input is out of range.
(5) Safety symbols:

| | | | |
|---|---|---|---|
| ⚠ | Hazardous Voltage | ⏚ | Earth |
| ▣ | Double Insulated | | Low Battery |
| ⚠ | Risk of Danger. Check the User Manual. | ϟ | N/ L Wire Judgement |

C. Specifications

| Electrical Specifications | | | | | |
|---|---|---|---|---|---|
| Function | Range | Resolution | Accuracy | MAX.Value | Frequency Response |
| DC Voltage (V) | 4.000V | 0.001V | ±(0.5%+3) | 600V | |
| | 40.00V | 0.01V | | | |
| | 400.0V | 0.1V | | | |
| | 600V | 1V | | | |
| AC Voltage (V) | 4.000V | 0.001V | ±(1.0%+3) | 600V | 40Hz-1kHz |
| | 40.00V | 0.01V | | | |
| | 400.0V | 0.1V | | | |
| | 600V | 1V | | | |
| AC Current (A) | 4.000A | 0.004A | ±(5%+5) | 600A | 40Hz-1kHz |
| | 40.00A | 0.01A | ±(2.5%+8) | | |
| | 400.0A | 0.01A | | | |
| | 600A | 1A | | | |



| Function | Range | Resolution | Accuracy | MAX.Value | Frequency Response |
|---|---|---|---|---|---|
| Resistance | 4.000kΩ | 0.001kΩ | ±(1.5%+3) | 40MΩ | |
| | 40.00kΩ | 0.01kΩ | ±(0.5%+3) | | |
| | 400.0kΩ | 0.1kΩ | | | |
| | 4.000MΩ | 0.001MΩ | | | |
| | 40.00MΩ | 0.01MΩ | ±(1.5%+3) | | |
| Frequency | 4.000Hz | 0.001Hz | ±(0.1%+2) | 100kHz | |
| | 40.00Hz | 0.01Hz | | | |
| | 400.0Hz | 0.1Hz | | | |
| | 4.000kHz | 0.001kHz | | | |
| | 40.00kHz | 0.01kHz | | | |
| | 100.0kHz | 0.1kHz | | | |
| Continuity | √ | | | | |
| Inrush Current | √ | | | | |
| Peak Hold | √ | | | | |
| Flashlight | √ | | | | |

| General Specifications | |
|---|---|
| Display（LCD） | 4000 counts |
| Ranging | Auto |
| Material | ABS |
| Update Rate | 3 times/second |
| True RMS | √ |
| Data Hold | √ |
| Low Battery Alert | √ |
| Auto Power Off | √ |

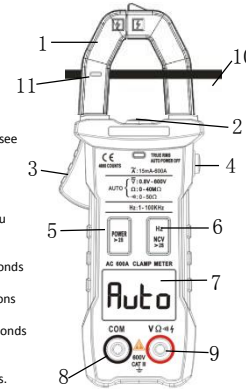
| Mechanical Specifications | | |
|---|---|---|
| Dimension | 172x64x32mm | |
| Weight | 172g | |
| Battery Type | 1.5V AAA Battery x2 | |
| Warranty | One year | |
| Jaw Size | Ø25mm | |
| Environmental Specifications | | |
| Operating | Temperature | 0~40℃ |
| | Humidity | ＜75% |
| Storage | Temperature | -20~60℃ |
| | Humidity | ＜80% |



D. Instruction

(1) Front Panel（see the picture on the right）

1. Jaw
2. Flashlight
3. Jaw release
4. Hold / Inrush Current / Peak Hold
   HOLD: To press this button once and you will see "HOLD" on the display;
   Inrush Current: To press this button twice and you will see "INRUSH" on the display;
   Peak Hold: To press this button twice after connecting test leads to the Terminals and you will see "Peak HOLD" on the display;
5. Power / Select
   Power: Press this button for more than 2 seconds to turn it on / off.
   Select: Press this button for switching functions after connecting test leads to the Terminals.
6. Frequency / NCV: Press this button over 2 seconds into NCV mode and release to exit.
7. LCD display
8. COM: Common terminal for all measurements.




9. V Ω ⇥ ϟ : Input terminal for voltage, resistance, frequency, and continuity measurements and judging N/L wires.
10. Wire to be measured
11. Marked position

(2) Measure AC/DC Voltage

1. The minimum voltage of this product is 0.8V. When the measured voltage is higher than 0.8V, the product will display the reading;
2. Connect the black test lead to the COM Terminal and connect the red test lead to the V Ω ⇥ ϟ Terminal;
3. The DC or AC voltage will be matched automatically;
4. Touch the probes to the correct test points of the circuit to measure the voltage;
5. Read the measured voltage on the display.

*Caution:

a. Do not measure voltage that exceeds the MAX Value as indicated in the Specifications;
b. Do not touch high voltage circuit during measurements.

(3) Measure AC Current Only

1. Remove the probes from the jacks, turn power switch on;
2. Push the jaw release and center the wire within the clamp jaws (as in the picture). The wire should be in the marked position to keep measurement accuracy.
3. Read the measured current on the display.

*Caution:

a. Do not measure current that exceeds the MAX Value as indicated in the Specifications;
b. Measure one wire at a time because current moving in different directions will cancel each other out.

(4) Measure Resistance

1. Connect the black test lead to the COM Terminal and connect the red test lead to the V Ω Terminal;
2. The resistance will be matched automatically;
3. Touch the probes to the desired test points of the circuit to measure the resistance;
4. Read the measured resistance on the display.

*Caution:

a. Disconnect circuit power and discharge all capacitors before you test resistance.
b. Do not input voltage at the Resistance Mode.

(5) Measure Continuity

1. Connect the black test lead to the COM Terminal and connect the red test lead to the V Ω Terminal;
2. Press SEL / Power once to toggle to the Continuity/Diode Mode;
3. Touch the probes to the desired test points of the circuit;
4. The built-in beeper will beep when the resistance is lower than 50Ω, and the indicator light will be on.

*Caution:

Do not input voltage at the Continuity / Diode Mode.

(6) Measure Frequency

1. Connect the black test lead to the COM Terminal and connect the red test lead to the V Ω Terminal;
2. Press Hz / NCV button once for AC current frequency without connecting the test lead to Terminals.
3. Press Hz / NCV button once to enter the Frequency Mode for DC voltage frequency after connecting the test lead to Terminals;
4. Touch the probes to the desired test points of the circuit;
5. Read the measured frequency value on the display.



(7) Measure NCV

1. Press Hz / NCV over 2 seconds to toggle to the NCV Mode;
2. Hold the product and move it around, the built-in beeper will beep when the inner sensor detects AC voltage nearby. The stronger the voltage is, the quicker the beeper beeps.
3. Put the red probe into the V Ω terminal, then use the black probe to touch the Live line and Neutral line of the Main supply. You can judge the L-line or N-line by the beeps, If you can hear the strong beeps,this is the L-line, or it's a N-line.

(8) Measure Inrush Current

1. Turn power on, pull out the probes and press HOLD twice to toggle to Inrush Current Mode, the display will show "INRUSH";
2. Push the jaw release and center the wire within the clamp jaws. The wire should be in the marked position to keep measurement accuracy;
3. Turn on the engine or motor equipment, and the product will capture the maximum current within 100ms when motor is starting;
4. Read the measured temperature on the display.

(9) Peak Hold

1. Turn power on, and press HOLD twice after connecting the test lead to Terminals to toggle to Peak Hold Mode, the display will show "PEAK HOLD";
2. Touch the probes to the desired test points of the circuit;
3. Read the measured voltage value on the display.

(10) Auto Power Off

1. The product automatically powers off after 15 minutes of inactivity;
2. The built-in beeper beeps 5 times 1 minute before power off;
3. To restart the product, press SELECT button;
4. To disable the Auto Power Off function, hold down the Hz / NCV button when turning on the product, you will hear five beeps if you have successfully disabled the function.



E. General Maintenance

Beyond replacing batteries and fuses, do not attempt to repair or service the product unless you are qualified to do so and have the relevant calibration, performance test, and service instructions.

(1) Do not operate the product around hot, wet, flammable, explosive or magnetic environments.
(2) Clean the product with damp cloth and mild detergent; do not use abrasives or solvents.
(3) Remove the input signals before you clean the product.
(4) Remove the batteries if you will not use the product for a long time to prevent possible battery leak.
(5) When "🔋" is shown on the display, batteries shall be replaced as below:
    1. Loosen the screw and remove the battery cover;
    2. Replace the used batteries with new batteries of the same type;
    3. Place the battery cover back and fasten the screw.
(6) Replace fuses as above steps. Use only fuses of the same type as the original ones.

**Warning:**

**1. Do NOT exceed the "maximum value" indicated in the Specification;**
**2. Do NOT input voltage on the Current Mode, the Resistance Mode, the Diode Mode, the Continuity Mode, or the Temperature Mode;**
**3. Do NOT use the product when the batteries or the battery cover is not replaced properly;**
**4. Turn off the product and remove the test leads from the test points before changing batteries or fuses.**

F. Troubleshooting

If your product does not function as normal, the following steps may help you. If the problem still cannot be solved, please contact your dealer.

| Problem | Possible Reason |
|---|---|
| Display Malfunction | Low battery; replace batteries |
| 🔋Symbol | Replace batteries |
| No current input | Replace fuse |



**LIMITED WARRANTY**
**AND LIMITATION OF LIABILITY**

Customers enjoy one-year warranty from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from neglect, misuse, alternation, contamination, or abnormal conditions of operation or handling.



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