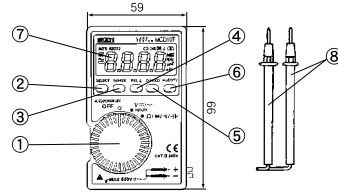


GENERAL SPECIFICATIONS

- Display : LCD, max. reading of 4000
 Polarity : Automatic (-) negative indication
 Over range indication : "OL" mark on LCD readout
 Low battery indication : "B" mark is displayed when the battery voltage drops below operating voltage
- Sampling : 3 times/sec.
 Operating temperature : 0~40°C, <80%RH
 (non-condensing)
 Storage temperature : -10~50°C, <70%RH
 (non-condensing)
- Power Supply : Lithium battery CR2032(3V)×1
 Power consumption : Approx. 6.0m W(typical at DCV)
 Size & weight : 99(H)×59(W)×8.6(D)mm
 Accessories : Book type Cover case 1
 Instruction Manual 1
 Battery 1

NAME & EXPLANATION OF EACH PART



- ① ROTARY SWITCH
Power On/Off, Measuring Ranges for DCV, ACV, Resistance, Diode Test, Continuity Check, Capacitance.
- ② SELECT KEY
When the position of rotary switch is at V \rightarrow /~-, can select measuring range of DCV or ACV by pressing this Key. When the position of rotary switch is at Ω /4/10/ μ /+/-, can change measuring range from Ω \rightarrow 4 \rightarrow 10 \rightarrow μ \rightarrow +/- by turns.
- ③ RANGE KEY
At the measurement of ACV, DCV & Ω , can change range by pressing this Key. (if necessary to get back to Auto Range, suspend the measurement and set the range again by select key).
- ④ RELATIVE KEY
By pressing this key, can enter the relative value mode. Memorizes the display value as a fundamental X1 and the display will get 0, the display value becomes X×1 to the input value after the sign of Δ on the display. cannot use this key at Hz/Duty measurement. To release, press once again this key and Δ sign will disappear.
- ⑤ DATA HOLD KEY
By pressing this key, the display value will be hold (DH sign will appear) and it will be released by pressing once again. (DH sign will disappear).
- ⑥ Hz/DUTY Key
When the position of rotary switch is at V \rightarrow /~-, the measuring range changes from Voltage \rightarrow Frequency \rightarrow Duty by pressing this key by turns. The voltage measuring ranges will be automatically fixed when selected Hz/Duty measurement (400mV at DCV and 4V at ACV). To get back Auto Range, Once suspend the measurement and set the measuring function again.
- ⑦ DISPLAY
LCD display for measuring value, annunciator, battery sign, etc.
- ⑧ TEST LEADS
Red is for \oplus polarity and Black is for \ominus .

SAFETY SUMMARY

The Cautions and Warnings which appear on the following must be followed to ensure operator safety and retain the operating condition of the multimeter.

- ⚠ WARNING: This symbol indicates the contents "Possibilities of the death or the serious wound can be supposed" caused from mis-operations.
- ⚠ CAUTION: This symbol indicates the contents "Possibilities of the injury or only the material damage can be supposed" caused from mis-operations.

- The CAUTIONS and WARNINGS which appear on the following pages are started to prevent the operator & other people from the dangers and their properties from the damages beforehand.

⚠ WARNING

POSSIBLE ELECTRICAL SHOCK

- This instrument is for the use of low voltage circuit.
- Do not make measurements of power lines carrying more than AC 250V.
- Do not make measurements, leaving battery cover removed.
- Before attempting to replace the batteries, first disconnect the test leads from any energized circuit.
- Do not handle the instrument with wet hands. It is very dangerous, when measuring voltage is high.

POSSIBLE DAMAGE OF INSTRUMENT

- When making resistance measurement, do not apply any voltage to the test probes. It will cause the defect.
- Confirm the position of rotary switch before measurement.
- Keep storage this instrument in cool and clean place.
- For cleaning of this instrument, do not apply chemicals such as thinner, benzine, etc.

Pocket Multimeter Model MCD-107 INSTRUCTION MANUAL

Thank you very much for selecting our model MCD-107 pocket digital multimeter.

This model is complex instrument and employ a very reliable mechanical/electronic design. Before you use your new instrument, read this Instruction Manual completely and familiarize yourself thoroughly with all functions. With proper use and care, your tester will give you years of satisfactory service.

MULTI

MEASURING RANGES & ACCURACY

(23°C \pm 5°C, <80%RH, non-condensing)

Function	Range	Accuracy	Test Leads Resistance more than 100M Ω	Remark
DC Voltage (DCV \rightarrow)	4000mV	\pm (0.7%rdg+3dgt)	approx. 1M Ω	
	4000V	\pm (1.3%rdg+3dgt)		
	400.0V	\pm (1.3%rdg+3dgt)		
	500V	\pm (1.3%rdg+3dgt)		
AC Voltage (ACV \rightarrow)	4000V	\pm (2.3%rdg+10dgt)	approx. 1M Ω	
	400.0V	\pm (2.3%rdg+10dgt)		
	40.00V	\pm (2.3%rdg+10dgt)		
	500V	\pm (2.3%rdg+10dgt)		
Resistance Ω	4000.0 Ω	\pm (2.0%rdg+5dgt)	Opening Voltage : approx. 0.4V Current Voltage is changing up to resistance value to be measured	
	400.0k Ω	\pm (2.0%rdg+5dgt)		
	40.00k Ω	\pm (2.0%rdg+5dgt)		
	4000M Ω	\pm (10%rdg+5dgt)		
Capacitance μ F	400.0nF	\pm (5.0%rdg+10dgt)	Accuracy: after cancelled the display value by relative function	
	40.00 μ F	\pm (5.0%rdg+10dgt)		
	400.0 μ F	\pm (5.0%rdg+10dgt)		
	100.0 μ F	\pm (10%rdg+15dgt)		
Frequency Hz	50.00kHz	\pm (0.7%rdg+5dgt)	* At AC sine wave Sensitivity of input voltage 5.000Hz ~ 500.0kHz: more than 10Vrms 50.00kHz: more than 40Vrms	Input Sensitivity & Frequency Characteristic (Rectangular Wave Input/Duty50%) 25V0 to peak input \geq 1kHz 6V 0 to peak input \geq 10kHz 40V 0 to peak input \geq 70kHz
	50.00Hz	\pm (0.7%rdg+5dgt)		
	500.0Hz	\pm (0.7%rdg+5dgt)		
	5000kHz	\pm (0.7%rdg+5dgt)		
Duty	0.1 ~ 99%			
Continuity Check \rightarrow)		Beeper: 10-60z		
Diode Test \rightarrow)		Opening Voltage : approx. 1.5V		

WARRANTY

This instrument is sent out from our factory after the sufficient internal inspections but if you find any defect due to the fault in our workmanship or the original parts, please contact the dealer where you bought the instrument.

The warranty period is 12 months from the date of purchase and the instrument shall be repaired at free of charge, provided that we judge the cause of defect is obviously resulted from our responsibility.

GURANTEE REGULATIONS

1. This instrument is warranted for the operation under normal use for 12 months from the date of purchase.
2. This warranty does not cover the following defects:
 - a. Defect caused from the improper use and operation.
 - b. Defect caused from the use, operation and storage beyond the original specifications, designs and conditions.
 - c. Defect caused from the renovations or repairs done by someone else than us or our representatives.
 - d. Defect not caused from our responsibilities.

MULTI MEASURING INSTRUMENTS CO., LTD.
 Santono Bldg., Kanda Matunagacho 15
 Chiyoda-ku, Tokyo Japan
 Tel: 81-3-3251-7013 Fax: 81-3-3253-4278
 Home Page : <http://www.multimic.com/>
 E-mail : multimic@multimic.com

■ MEASURING METHOD

1. DC VOLTAGE (DCV)

- 1) Set the position of rotary switch from OFF to V. (= sign will be displayed)
- 2) According to the drawings, let red test lead contact to ⊕ polarity of battery etc. and black one to ⊖.
- 3) Read the voltage value on the display. (Can measure up to 500V automatically).

2. AC VOLTAGE (ACV)

- 1) Set the rotary switch position to V and press once the select key to chose 「~」.
- 2) According to the drawings, insert the test leads to the outlet, etc. to be measured. (In case of ACV measurement, red or black test lead and polarity of ⊕ or ⊖ are no concern).
- 3) Read the voltage value on the display. (Can measure up to 500V automatically).

3. FREQUENCY/DUTY (Hz/DUTY)

- 1) Set the rotary switch position to V and press once the select key to chose 「~」.
- 2) Press Hz/DUTY switch once to chose 「Hz」 and press once more to get 「%」 for duty measurement.
- 3) Make contact red and black test leads respectively to the circuit to be measured.
- 4) Read the value on the display. (Can measure up to 50.00KHz automatically).

⚠ WARNING

1. Do not apply the input signal more than max. rated input voltage (500V).
2. During measurement. do not change rotary switch position.
3. Do not hold and or touch the nearer position of test leads to the tip over collar during measurement.
4. POSSIBLE ELECTRIC SHOCK
Confirm that there is no damage in the isolated wire of test leads before connecting. In case of out of order, stop the operation and repair them.
5. POSSIBLE DAMAGE & FIRE HAZARD
Connect test leads firmly. The wrong connection may cause spark.

4. RESISTANCE (Ω)

- 1) Set the rotary switch position to Ω/⊕/⊖/⊕/⊖ and chose Ω by select key.
- 2) According to the drawing, contact test leads to the both sides of the resistor to be measured. (It does not matter about ⊕/⊖ polarity).
- 3) Read the resistance value on the display. (Can measure up to 40MΩ automatically).

5. DIODE TEST (⊕)

- 1) Set the rotary switch position to Ω/⊕/⊖/⊕/⊖ and chose ⊕ by select switch.
- 2) In case of measurement for the forward voltage, contact the test leads as in the way of drawing. The measuring range of general diode is between 0.4 and 0.7V.
- 3) In case of the backward voltage, contact the test leads according to the drawing. In this case, the display becomes OL generally.

6. CONTINUITY (••)

- 1) Set the rotary switch position to Ω/⊕/⊖/⊕/⊖ and chose •• by select switch.
- 2) Contact the test leads to the two point to be checked for continuity.
- 3) The continuity resistance value will be displayed and the beep sounds in case of less than approx. 60Ω.

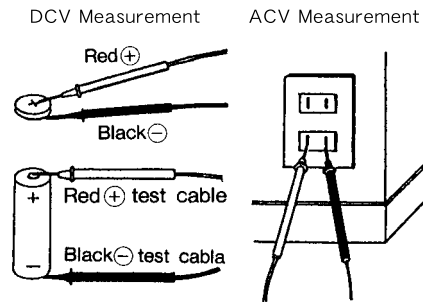
7. CAPACITANCE (⊕)

- 1) Set the rotary switch position to Ω/⊕/⊖/⊕/⊖ and chose ⊕ by select switch.
 - 2) Push the relative key and get the display 0.00nF. (Δ sign appears).
 - 3) Contact the test leads to the condenser to be measured.
 - 4) Read the capacitance value on the display. (Can measure up to 100 nF automatically).
- Must discharge the charged electrostatic from condenser before measurement.
 - At the time of releasing test leads at 40nF range, the displayed values remains but it is not defect. Clear it to 0.00nF by using RELATIVE switch.
 - In case of bigger capacitance values, it takes longer time for measurement.
 - The display may not be stable sometimes by influence of external noise and or floating capacitance of test leads.

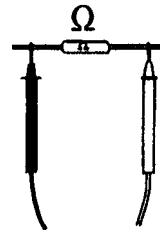
⚠ CAUTION

POSSIBLE DAMAGE

It may cause the internal damage, if apply the voltage mistakenly at the rotary switch position of Ω/⊕/⊖/⊕/⊖.

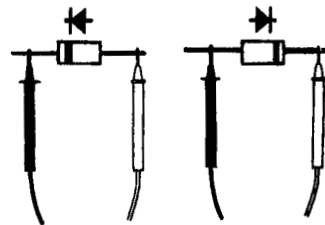


Resistance Measurement

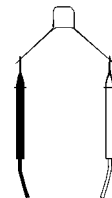


DIODE TEST

Forward Voltage Backward Voltage



Capacitance Measurement (Condenser)



■ REPLACEMENT OF BATTERY

⚠ WARNING

POSSIBLE ELECTRIC SHOCK & HAZZARD
Do not operate with the back case removing.
Do not replace the battery at the time of measuring voltage.

⚠ CAUTION

In case of not using the instrument for a long time, keep stock with battery removing.

- Remove the screw on the back side of instrument and take off the back case.
- Take out the exhausted battery and replace it to new one, taking care of the polarity ⊕/⊖.
- Set again the back case and tighten the screw.

※ Applying Battery

Coin Type Lithium Battery CR2032 (3V) × 1

