



2.2.5 BACK LIGHT

Press “” button , the back light will light.

3. HOW TO USE THE MULTIMETER

PRELIMINARY NOTE

1. If the battery is weak. a “” sign will appear on display.

The battery should be replaced

2. The FUNCTION switch should be set to the range to be used before operation.

3.1 Resistance Measurement

(1) Connect the BLACK test lead to the “COM” jack and the RED test lead to the “ Ω ” jack .

(2) Set the FUNCTION switch to “OHM ” range to be used

(3) Connect the test leads across the resistance under measurement.

Note:

1. If the resistance value being measured exceeds the maximum value of the range selected, an over-range indication will be displayed (“1 or -1”). Select a higher range .For resistance of approximately 1 Megohm and above . the meter may take a few seconds to stabilize . This is normal for high resistance readings.

2. when the input is not connected , input is open circuit .the sign “1 or -1” will be displayed for the overrange condition . when checking in-circuit resistance, be sure the circuit under test has all power removed and that all capacitors are fully discharged .

3.2 Capacitance Measurement

(1) Set the FUNCTION switch to “C” to be used.

(2) Insert the capacitor under measurement into the two jacks “LC-” and “LC+” at the left on the front panel.

Note :

1. Capacitors should be discharged before being inserted into the test-jacks.

2. When testing large capacitance, note that there will be a certain time lag before the final indication.

3. Do not connect an external voltage or charged capacitor (especially larger capacitors) to measuring terminals.

3.3 Inductance Measurement

(1) Set the FUNCTION switch to “L” to be used.

(2) Insert the inductor under measurement into the two jacks “LC-” and “LC+” at the left on the front panel.

3.4 Transistor hFE Test

(1) Set the FUNCTION switch the “hFE” range.

(2) Determine whether the transistor is NPN or PNP and locate the Emitter. Base and collector leads. Insert the leads into the proper holes in the socket on the front panel.

3) The display will read the approximated hFE value at the test condition Base current 10uA , Vce 3V.

4. MAINTENANCE

(1) The multimeter is a precision electronic device. Do not tamper with the circuitry . to avoid damage :


A : Never connect a source of voltage under the condition of resistance measurement .

B : Never operate the meter unless the cover is in place and fully closed .

C : Battery replacement should be done after the test

leads have been disconnected and POWER IS OFF .

(2) turn off the power if the meter is not in use , removed the battery if the meter will be free for long period .

(3) If a sign “” appear on the display, open the compartment cover, remove the spent battery and replace it with a battery of the same type.

(4) Contact with the maintenance service center of our company if you have trouble.

(5) Please take out the battery when not using for a long time.

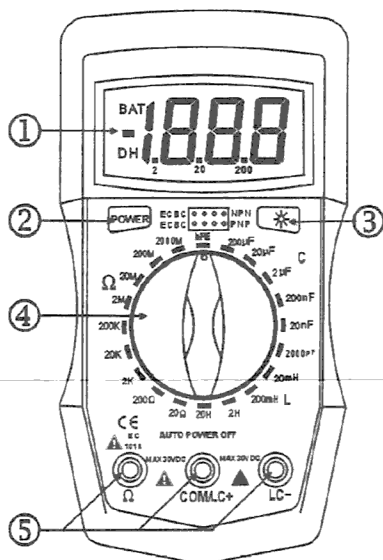
Above picture and content just for your reference. Please be subject to the actual products if anything different or updated. Please pardon for not informing in advance.

3 1/2 DIGITAL LCR MULTIMETER OPERATION MANUAL

1. INTRODUCTION

This instrument is a compact, battery operated, handheld, with safety protector, streamline 3 1/2 digital LCR multimeter designed for use by technicians, servicemen, students, and hobbyists who required an instrument that is accurate, reliable, and always ready for use. The Dual-slope-A/D converter uses C-MOS technology for auto-zeroing, polarity selection and over-range indication. Full overload protection is provided. It is powered by a standard 9V transistor radio type battery, please read this manual that describes various useful message before using the multimeter.

2. Panel Layout



- ① LCD Display: 3½ digits, character 16MM high
- ② POWER Switch
- ③ Back Light Button Switch: Press this button to switch on back light. If the dark circumstance light makes the reading difficult when measuring, the light will be automatically turned off in 5 seconds. Press again to switch it on again. If the battery is in weak power, the light will be dimmed.
- ④ Rotary Switch: use this switch to select functions and ranges
- ⑤ Ω Input Jack, LCX Input Jack, COM/LCX Input Jack

2. SPECIFICATION

2.1 GENERAL CHARACTERISTICS

- 2.1.1 3 1/2 digit big LCD max. Indication 1999.
- 2.1.2 Auto-Zero & Auto-Polarity.
- 2.1.3 Over-range: indication of "1" or "-1".
- 2.1.4 Low battery indication: "BAT"
- 2.1.5 Power supply: 9V Zinc-carbon battery.
- 2.1.6 Safety standards:
 - The meter is up to the standards of IEC1010 Double Insulation, Pollution Degree 2, overvoltage Category III.
- 2.1.7 Temperature for guaranteed accuracy: 23°C ± 5°C

- 2.1.8 Temperature range:
 - Operating: 0°C to 40 °C Storage: -20°C to 60 °C
- 2.1.9 Humidity range:
 - Operating: max 75%RH Storage: max 80%RH
- 2.1.10 Size: 143x75x32mm
- 2.1.11 Weight: Approx 200g (including battery).
- 2.1.12 Accessories:

operation manual	1 piece
test leads	1 pair
packing box	1 piece

2.2 MEASUREMENT SPECIFICATION

Environment:

Temperature: 23°C ± 5°C relative humidity: max .75%

2.2.1 Resistance

Range	Accuracy	Resolution
20 Ω	±(1.0% of rdg + 20dgts)	0.01 Ω
200 Ω		0.1 Ω
2k Ω		1 Ω
20k Ω		10 Ω
200k Ω		100 Ω
2M Ω	±(2.0% of rdg + 20dgts)	1k Ω
20M Ω	±(2.0% of rdg + 25dgts)	10k Ω
200M Ω	±(5.0% of rdg + 25dgts)	100k Ω
2000M Ω	±(10.0% of rdg + 35dgts)	1M Ω

Overload protection: 250V DC/250Vrms AC for all range.

2.2.2 Capacitance

Range	Accuracy	Resolution
2000pF	±(2.5% of rdg + 30dgts)	1pF
20nF	±(2.5% of rdg + 25dgts)	10pF
200nF	±(2.5% of rdg + 30dgts)	100pF
2 μ F	±(2.5% of rdg + 30dgts)	1nF
20 μ F		10nF
200 μ F	±(7.0% of rdg + 50dgts)	0.1 μ F

2.2.3 Inductance

Range	Frequency	Accuracy	Resolution
20mH	100Hz	±(2.5% of rdg + 25dgts)	0.01mH
200mH	100Hz		0.1mH
2H	100Hz		1mH
20H	100Hz		10mH

2.2.4 Transistor hFE test

Range	Description	Test Condition
hFE	Display read approx .hFE value (0~1000) of transistor under test (NPN and PNP Type)	Base Current approx 10 μ A Vce approx 3V