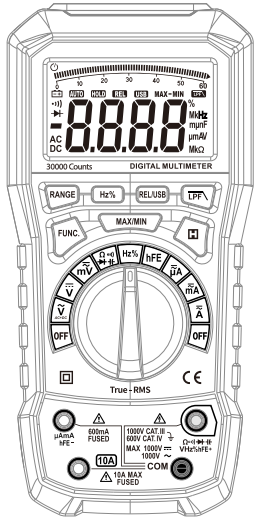
PEAKMETER®

USERS MANUAL

DIGITAL MULTIMETER



Designed and Conforms to IEC61010-1 CAT III 1000V

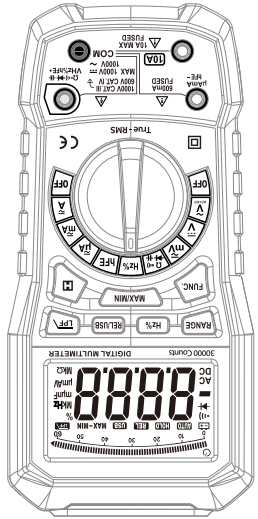
Before using the instrument,please read this manual carefully,and save it well for future using.

PEAKMETER®

华 谊 仪 表

使用说明书

使用本产品前请先仔细阅读本使用说明书，并将之妥善保存以备日后使用



真有效值数字万用表

Designed and Conforms to IEC61010-1 CAT III 1000V

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1. Statement

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1.1 Security Statement

⚠CAUTION

The **"CAUTION"** symbol indicates conditions and operations that can cause damage to the meter or equipment.

It requires carefulness when performing such operation and mis-operation or failure to follow this procedure may result in damage to the meter or equipment. Do not proceed with any related operation indicated by the CAUTION symbol without meeting these conditions nor fully understanding them.

⚠WARNING

The **"WARNING"** symbol indicates conditions and operations that may cause danger to the user.

It requires attention when performing such operation and mis-operation or failure to follow this procedure may result in personal injury or death. Do not proceed with any operation indicated by the WARNING symbol without meeting these conditions nor fully understanding them.

Please read the instruction manual carefully and pay attention to the relevant safety warning information before using the meter.

1.2 Security Information

The meter is designed in accordance with the safety requirements of IEC61010-1, the international electrotechnical safety standard, on electronic measuring instruments. The meter is designed and manufactured in strict compliance with IEC61010-1 CAT.III/1000V; CAT.IV/600V overvoltage safety standards and pollution class 2.

1.3 Safe Work Specifications

⚠ **WARNING : In order to avoid possible safety accidents such as electric shock or personal injury, please effectively comply with the following specifications:**

- Before using the meter, please read this manual carefully and pay special attentionto the safety warning messages.
- Before using the meter, please check the housing of the meter for cracks or damaged plastic parts. If so, please do not use it again.
- Before using the meter, please check if the meter is working properly. If it works abnormally or has been damaged, please do not use it again.
- Before using the meter, please check the insulator around the input terminals of the meter carefully. If it is damaged, do not use it again.
- Before using the meter, please check the probes for cracks or damages. If so, please replace the probe with the same specification before use.
- Before use, please check whether the insulation layers of the probes are damaged, whether there is exposed metal or signs of wear, check the connectivity of the probes. If there is damage, please do not use again.
- Before using the meter, verify whether the meter is working normally by measuring a known voltage with the meter.
- Use the meter in strict compliance with the operation of this manual, otherwise the protection provided by the meter may be damaged or weakened.

- Use the meter in accordance with the measurement category, voltage or current rated value specified on the meter or in this manual.
- Comply with local and national safety codes. Wear personal protective equipment (such as approved rubber gloves, masks and flame-retardant clothing) to prevent injury from electric shock and arcing when dangerous live conductors are exposed.
- Before connecting the meter to the circuit under test, be sure to select the correct input terminal and switch position.
- The voltage applied between the input terminals or between any of the terminals and the grounding point must not exceed the rated value indicated on the meter.
- Take special care when measuring AC true RMS beyond 30V, maximum value beyond 42V or DC beyond 60V, as there is a risk of electric shock from such voltages.
- When the low battery symbol of the meter appears, please replace the battery in time to prevent measurement errors.
- Do not use the meter around explosive gases or vapors or in a humid environment.
- When using the probes, hold your fingers behind the finger guard of the probes.
- When measuring, please connect the null or ground line first, then connect the live line; when disconnecting, please disconnect the live line first, then disconnect the null and ground lines.
- Remove the probes from the meter before opening the housing or battery cover. Never use the meter with the meter disassembled or the battery cover open.
- The meter can only meet the requirements of the safety standards when being used with the equipped probes. If the probe is broken and needs to be replaced, do replace with a probe of the same type and the same electrical specifications.

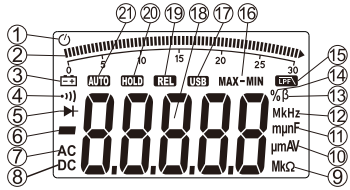
1.4. Security Symbol

	High voltage warning
	AC
	DC
	AC or DC
	Warning, important safety signs
	Grounding
	Fuse
	Equipment protected by double insulation or reinforced insulation
	Battery under-voltage
	The product complies with all relevant European legal requirements
	This additional product label indicates that this electrical/electronic product must not be disposed in household trash.
CAT.III 1000V	Class III 1000 V overvoltage protection
CAT.IV 600V	Class IV 600 V overvoltage protection

2. Overview

This meter is a handheld measuring instrument with a true RMS high precision multimeter with analog bar and digital dual display. It has the feature of large LCD display with backlight, which is easy for users to read. In addition, it has overload protection and battery under-voltage indication. Whether for professionals, factories, schools, hobbyists or homeuse, it is an ideal multifunction meter.

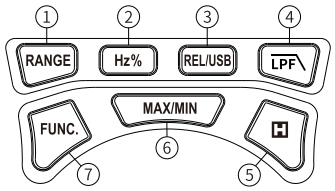
2.1 Display



①	Auto shutdown indicator	⑧	DC indicator	⑮	Low-pass filter activation indication
②	Analog bars indicating rapid change trends	⑨	Resistance unit	⑯	Maximum value and minimum value measurement
③	Battery under-voltage indicator	⑩	Voltage and current units	⑰	USB activation indication
④	Connectivity measurement indicator	⑪	Capacitance unit	⑱	Data display area

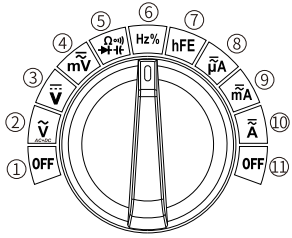
⑤	Diode measurement indicator	⑫	Frequency unit	⑲	Relative value measurement indicator
⑥	Negative sign	⑬	Transistor magnification indicator	⑳	Data hold indicator
⑦	AC power indicator	⑭	Duty cycle unit	㉑	Auto range indicator

2.2 Button



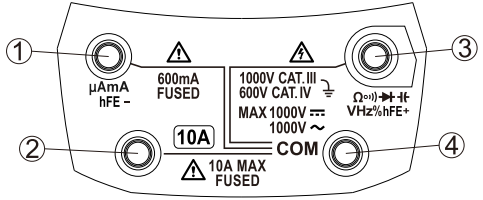
①	RANGE: Automatic and manual range switching button
②	Hz%: Frequency andduty cycle switching button
③	REL/USB: Relative measurement andUSB activation button
④	LPF: Low-pass filter activation button
⑤	H : Data hold activation button
⑥	MAX/MIN: Max, Min, Max-Min measurement activation button
⑦	FUNC.: Function selection switching button

2.3 Rotary Switch



①	Off position
②	AC position. Press FUNC. buttonto switch to AC+DC measurement
③	DC voltage position
④	AC, DC millivolts position.Press FUNC. buttonto switch
⑤	Resistance, connectivity, diode, capacitance position. Press FUNC. buttonto switch
⑥	Frequency, duty cycle position. Press Hz% buttonto switch
⑦	Triode magnification test position
⑧	AC/DC current microampere measurement position. Press FUNC. buttonto switch
⑨	AC/DC current milliamp measurement position. Press FUNC. buttonto switch
⑩	AC/DC current amperage measurement. Press FUNC. buttonto switch
⑪	Off position

2.4 Input Jack



①	Positive input jack for AC/DC microampere and milliamp measurements (up to 300mA), and multifunction test stand "COM" input jack for triode testing.
②	Positive input jack for AC/DC current measurements(up to10A)
③	Positive input jack for voltage, resistance, connectivity, diode, capacitance, frequency, duty cycle measurement; multi-function test stand "IN" input jack for triode testing.
④	Universal connector for all measurements except triode tests (hFE position).

Top

	① USB port for connecting to the USB port on computers.

3. Measurement Operations

3.1 Manual and Automatic Ranges

The meter has the feature of manual and automatic ranges. In auto range mode, the meter selects the optimum range for the detected input signal, so that the user does not have to select ranges again when changing the measurement signal. The meter can also be set to manual range. Auto range mode is the default mode when the meter is turned on or after switching functions, and the "AUTO" symbol is shown. Enter or exit the manual range as follows:

1. In auto range mode, press " RANGE " button, and the "AUTO" symbol disappears.
2. Press " RANGE " button to increase the range and the meter will return to the minimum range when the maximum range is reached.
3. Press and hold " RANGE " button for more than 2 seconds to exit manual range mode and the "AUTO" symbol is shown.

Note: Duty cycle, connectivity, diode and triode measurement functions are available in only one range.

3.2 Relative value measurement

The meter has the feature of relative value measurement. In this mode, the value displayed on the meter = actual value - reference value set. Enter or exit the relative measurement operation as follows:

1. Set the meter to the measurement function you need, let the probes touch the object you want to set as the reference value, and the meter displays the measured value.
2. Press " REL/USB " button to set the currently displayed measurement value as the reference value and enter the relative measurement mode. The " REL" symbol is shown.
3. Measure, and the meter will display "actual value - reference value set ".

4. Press “ REL/USB ” button again to exit the relative value measurement mode, and the "REL" symbol disappears.

Note: There is no relative value measurement mode for frequency, duty cycle, diode, connectivity and triode measurements.

3.3 Max/Min/Max-Min hold

The meter has the feature of maximum value, minimum value and maximum-minimum value hold functions. Enter or exit this function as follows:

1. Set the meter to the measurement function you need.
2. Press " MAX/MIN " button to enter the maximum value hold mode and the "MAX" symbol is shown.
3. Press " MAX/MIN " button again to enter the minimum hold mode and the "MIN" symbol is shown.
4. Press " MAX/MIN " button again to enter the Max-Min hold mode and the "MAX-MIN" symbol is shown.
5. Press and hold " MAX/MIN " button for more than 2 seconds to return to normal measurement mode.

Note: This function is not available for frequency, duty cycle, diode, connectivity and triode measurements.

3.4 USB Port Function

The meter has the feature of USB port to upload the meter measurement data to computer or cell phone APP for display, recording and analysis through USB port. Activate or inactivate this function as follows:

1. Toggle the meter knob switch to any position except OFF.
2. Press and hold “ REL/USB ” button for more than 2 seconds, the "USB" symbol is shown and the meter data transfer function is activated.
3. Press and hold “ REL/USB ” button for more than 2 seconds, the "USB" symbol disappears and the meter data transfer function is inactivated.

Tip: To reduce the power consumption of the meter, turn on or off the LCD backlight by pressing and holding "H " button.

The desktop software needs to be downloaded from the official website at:

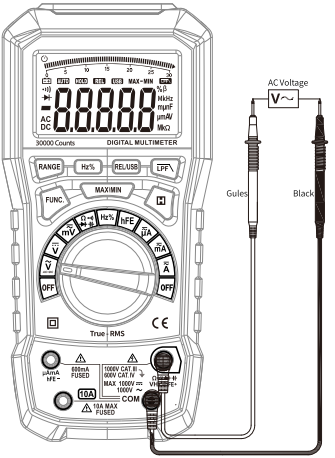
See the QR code on the back cover

Note: Please refer to the operating instructions of the PC software for software operation.

3.5 Measurement of AC Voltage

As shown in the figure to the right.

1. Turn the knob to " Ṽ " position to enter the AC voltage measurement. Press "FUNC." button to switch to AC+DC measurement mode and the AC voltage and DC voltage will be shown in cycle at intervals of about 3 seconds.
2. Plugs the red probe into the " Ω•))) VHz%hFE+ " jack and the black probe into the "COM" jack.
3. Touch the meter probes to the circuit to be measured (parallel to the power supply or circuit under test) and measure the voltage.
4. Select to turn on the LPF measurement function when the low-pass filtering function is required.
5. Read the measurement results from the display.



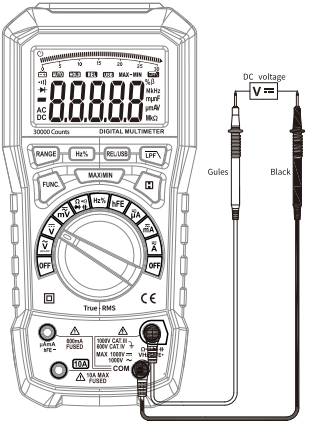
Note:

1. Under the AC voltage function, press Hz% button to measure the frequency and duty cycle of the AC voltage source.
2. The AC voltage values measured with this meter are true RMS (root mean square). These measurements are accurate for sine waves and other waves (without DC offset) such as square, triangle and step waves.

⚠ WARNING

It is not allowed to measure any voltage higher than 1000V DC or 1000V AC RMS, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

It is not allowed to apply a voltage exceeding 1000V DC or 1000V AC RMS between the common terminal and the earth, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.



3.5 Measurement of DC Voltage

As shown in the figure to the right.

1. Turn the knob to " V̄ " position to enter DC voltage measurement.
2. Plug the red probe into the " VHz%hFE+ " jack and the black probe into the "COM" jack.
3. Touch the meter probe to the circuit to be measured (parallel to the power supply or circuit under test) and measure the voltage.
4. Read the measurement results from the display.

⚠ WARNING

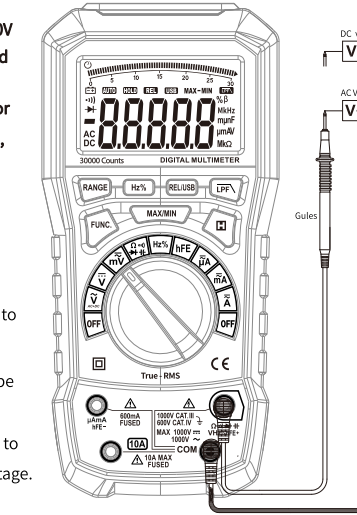
It is not allowed to measure any voltage higher than 1000V DC or 1000V AC RMS, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

It is not allowed to apply a voltage exceeding 1000V DC or 1000V AC RMS between the common terminal and the earth, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

3.6 Measurement of DC or AC mV Voltage

As shown in the figure to the right.

1. Turn the knob to " mV " position and press "FUNC." to switch to the DC or AC voltage function.
2. Plug the red probe into the " VHz%hFE+ " jack and the black probe into the "COM" jack.
3. Touch the meter probe to the circuit to be measured (parallel to the power supply or circuit under test) and measure the voltage.
4. Read the measurement results from the display.



Note:

1. Under the AC voltage function, press Hz% button to measure the frequency and duty cycle of the AC voltage source.

2. The AC voltage values measured with this meter are true RMS (root mean square). These measurements are accurate for sine waves and other waves (without DC offset) such as square, triangle and step waves.

3. AC/DC millivolt voltage measurement has the maximum range at 300.00mV, the input impedance at about 1GΩ, and no attenuation when measuring weak signals, so the measurement accuracy is high. However, the display will show number in the case the probes are open circuited, which is normal. As long as the probes are short circuited, it will return to zero, or when the probes contact the circuit under test, the reading will be stable.

⚠ WARNING

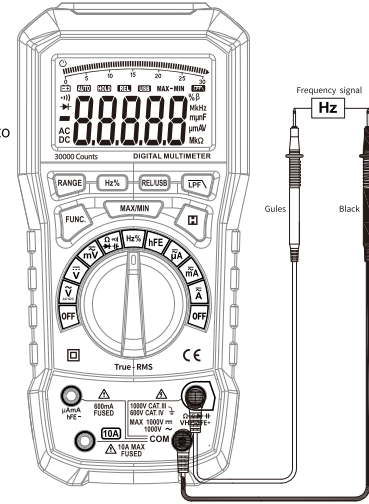
It is not allowed to measure any voltage higher than 1000V DC or 1000V AC RMS, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

It is not allowed to apply a voltage exceeding 1000V DC or 1000V AC RMS between the common terminal and the earth, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

3.7 Measurement of Frequency and Duty Cycle

As shown in the figure to the right.

1. Turn the knob to "Hz%" position and press "Hz%" to switch to frequency and duty cycle. (Or frequency and duty cycle can also be measured in AC voltage or AC current position)
2. Plug the red probe into the " VHz%hFE+ " jack and the black probe into the "COM" jack.
3. Touch the meter probe to the circuit to be measured (parallel to the source or circuit under test) and measure the frequency or duty cycle.
4. Read the measurement results from the display.



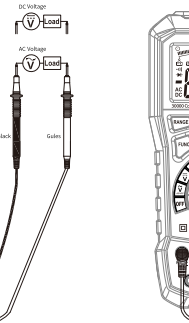
⚠ WARNING

1. **It is not allowed to measure any frequency or duty cycle signal higher than 20V RMS, otherwise the meter may be damaged.**
2. **It is not allowed to apply a voltage exceeding 1000V DC or 1000V AC RMS between the common terminal and the earth, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.**

3.8 Measurement of AC or DC Currents

As shown in the figure below.

1. Turn the knob to one of the " uÃ ", " mÃ ", " Ã " positions according to the measured current, and press "FUNC. " button to switch AC current or DC current function.
2. Plug the red probe into the " μAmA hFE " jack or "10A" jack and the black probe into the "COM" jack according to the measuring position.
3. Disconnect the power to the circuit under test, connect the meter in series to the circuit under test, and then turn on the circuit power again.
4. Read the measurement results from the display.



⚠ WARNING

It is not allowed to measure any voltage higher than 1000V DC or 1000V AC RMS, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury. The power supply of the circuit under test must be disconnected before the meter can be connected to the circuit under test in series, otherwise it may be subjected to electric shock or personal injury.

⚠ CAUTION:

To avoid damaging the meter or equipment, check the fuse before measuring and use the correct input jack.

3.9 Measurement of Resistance

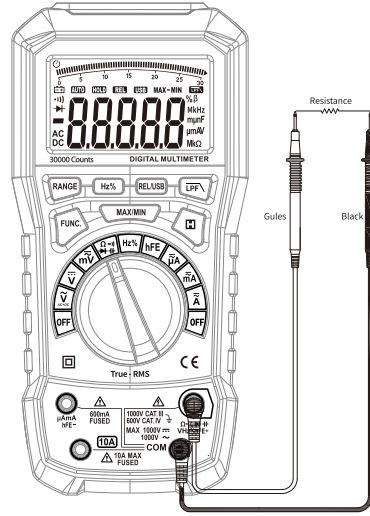
As shown in the figure to the right.

1.Turn the knob to " Ω ", press "FUNC." to switch to the resistance measurement function, and make sure the power of the measured circuit has been disconnected.

2. Plug the red probe into the " VHz%hFE+ " jack and the black probe into the "COM" jack.

3. Touch the probes to both ends of the circuit or resistance under test.

4. Read the measurement results from the display.

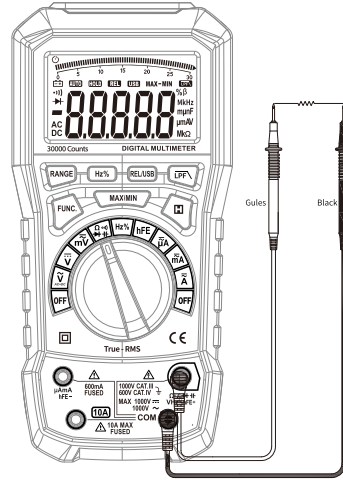


⚠ WARNING

Disconnect from the power supply and discharge all high voltage capacitors before measuring resistance, connectivity, capacitance or diodes, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

Note:

Since the measured current will flow through all routes between the probes, the measured resistor value in the circuit will usually be different from the resistor rated value.



3.10 Measurement of Connectivity

As shown in the figure to the right.

1. Turn the knob to " ", press "FUNC." to switch to the 18 connectivity measurement function and make sure the power to the measured circuit has been disconnected.
2. Plug the red probe into the " " jack and the black probe into the "COM" jack.
3. Touch the probes to both ends of the circuit or resistance under test.

4. If the resistance value of the resistance or circuit under test is less than about 50Ω, the buzzer beeps.
5. The resistance value of the circuit being measured is shown on the display at the same time.

⚠ **WARNING**

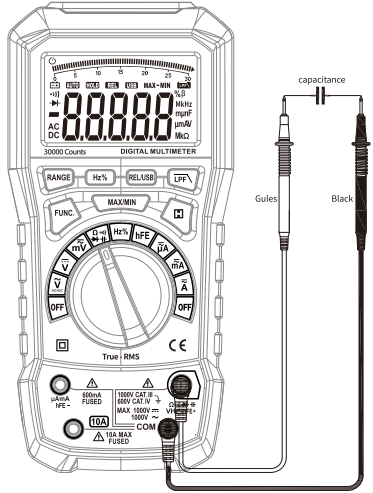
Disconnect from the power supply and discharge all high voltage capacitors before measuring resistance, connectivity, capacitance or diodes, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

3.11 Measurement of capacitance

As shown in the figure to the right.

1. Turn the knob to " ⊣⊢ " position and press "FUNC." to switch to the capacitance measurement function.
2. Plug the red probe into the " VHz%hFE+ " jack and the black probe into the "COM" jack.
3. Touch the probes to both ends of the capacitor under test.
4. After the reading is stable, read the measurement result from the display.

⚠ **WARNING**



Disconnect from the power supply and discharge all high voltage capacitors before measuring resistance, connectivity, capacitance or diodes, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

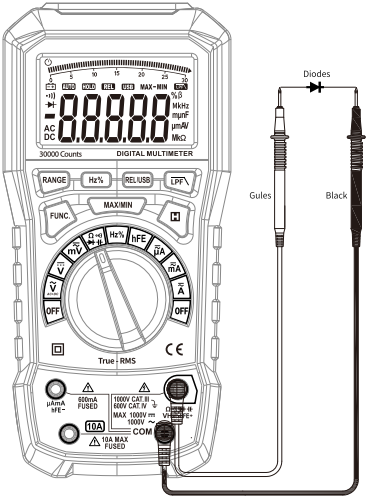
Note:

1. If the input is open, the meter may display the reading, then press "REL" to return to zero and measure again.
2. When measuring small capacitance (below 100nF), it is better to turn on the relative value measurement function to reduce the measurement deviation caused by the base value of the probes or the meter.

3.12 Measurement of Diodes

As shown in the figure to the right.

1. Turn the knob to " " and press "FUNC." buttonto switch to the diode measurement function.
2. Plug the red probe into the " " jack and the black probe into the "COM" jack.
3. Touch the red probe to the anode of the diode undertest and the black probeto the cathode of the diode.



4. Read the measurement results from the display.

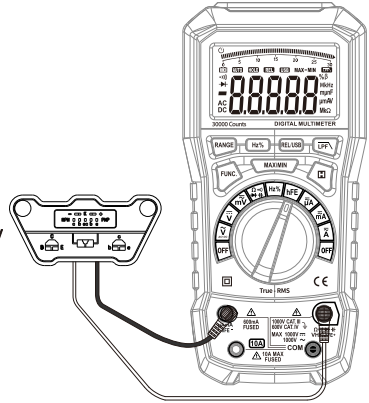
5. If the probe polarity is opposite to the diode polarity, the meter displays "OL", which can be used to distinguish between the anode and cathode of the diode.

⚠ WARNING

Disconnect from the power supply and discharge all high voltage capacitors before measuring resistance, connectivity, capacitance or diodes, otherwise the meter may be damaged and you may be subjected to electric shock or personal injury.

Note:

The meter can display a diode forward bias of approximately 3.0V. Typical diode forward bias is in the range of 0.3V to 0.8V; however, the reading may vary depending on the different resistance of other paths between the probes.



3.13 Measurement of Triodes

As shown in the figure to the right.

1. Turn the meter knob to the "hFE" position and remove the probe from the meter.
2. The multifunctional test stand is connected as shown in the figure.

   The red plug is inserted into " Ω•))) VHz%hFE+ " jack and the black plug is inserted into " µAmA hFE - " jack.
3. Place the triode in the corresponding position of the multifunction test stand.
4. Read the measurement results from the display.

⚠ **WARNING**

Do not use the multifunctional test stand for voltage and current measurement. Otherwise, the meter may be damaged and you may be subjected to electric shock or personal injury.

Note:

When using the multifunctional test stand, please pay attention to the direction of insertion, for that reversed insertion will lead to wrong results.

4. Auto Shutdown Function

- If there is no operation within 10 minutes after power on, the meter will automatically shut down to save battery energy.
- If pressing "FUNC." button after the automatic shutdown, the meter will resume working.
- If pressing and holding "FUNC." button while turning on the power, the automatic shutdown function is inactivated.

Note: The meter will not go to sleep when the USB function is turned on.

Under-voltage alert function

When the battery voltage is ≤4.5V, the display shows "" (under-voltage) symbol.

5. Data Retention

1. During the measurement, if you need the reading to be held, press“ ”button and the displayed value on the display will be held.
2. Press“ ”button again to cancel the reading retention state.

6. General Technical Specifications

- Environmental conditions for use:
  600V CAT. IV or 1000V CAT.III
  Pollution level: 2
  Altitude < 2000m.
  Working environment temperature and humidity: 0~40°C (<80% RH, <10°C non-condensing)
  Storage environment temperature and humidity: -10~60°C (<70% RH, remove the battery)
- Temperature coefficient: 0.1×accuracy/°C (<18°C or >28°C)
- Maximum voltage allowed between measurement ends and earth: 1000VDC or 1000V AC RMS
- Fuse protection: mA position: Fuse F300mA/1000V fast-fusing fuse; 10A position: F10A/1000V fast-fusing fuse
- Update display rate: about 3 times/sec.
- Display: 30,000 count display, automatic display of unit symbols according to the measurement function positions.
- Over-range indication: "OL" is displayed.
- Battery low voltage indication: " " will be displayed when the battery voltage is below the normal operating voltage.
- Input polarity indication: The " − "number is automatically displayed.

- Power supply: 4 x 1.5V AA batteries.
- External dimensions:204(L) x 94(W) x 57(H) mm.
- Weight: about 360g (without battery).

7. Accurate Indicators

Accuracy is applicable for one year after calibration.

Baseline conditions: Ambient temperature at 18°C to 28°C, relative humidity at not greater than 80%, Accuracy: ±(%reading+ deviation)

7.1 DC Voltage

Range	Resolution	Accuracy	
300.00mV	0.01mV	±(0.1% reading+5 digits)	Input impedance: 10MΩ (DC mV input impedance is about 1GΩ). Overload protection: 1000V DC or 1000V AC (RMS). Maximum input voltage: 1000V DC. **Note:** **In DC mV voltage measurement, the input impedance at about 1GΩ, and no attenuation when measuring weak signals, so the measurement accuracy is high. However, the display will show number in the case the probes are open circuited, which is normal. As long as the probes are short circuited, it will return to zero, or when the probes contact the circuit under test, the reading will be stable.**
3.0000V	0.1mV	±(0.05% reading+5 digits)	
30.000V	1mV		
300.00V	10mV		
1000.0V	0.1V	±(0.1% reading+5 digits)	

7.2 AC Voltage

Range	Resolution	Frequency response	Accuracy	
300.00mV	0.01mV	40Hz～1kHz	±(1.0% reading+10 digits)	Input impedance:10MΩ (300mV range is about 1GΩ) Overload protection: 1000V DC or 1000V AC (RMS) Maximum input voltage: 1000V AC (RMS)
		1kHz～10kHz	±(1.5% reading+30 digits)	
3.0000mV	0.1mV	40Hz～1kHz	±(0.8% reading+10 digits)	
		1kHz～10kHz	±(1.2% reading+50 digits)	
		40Hz～100Hz(LPF)	±(1.2% reading+50 digits)	
30.000V	1mV	40Hz～1KHz	±(0.8% reading+10 digits)	**Note:** In millivolt (300mV) voltage measurement, the input impedance at about 1GΩ, and no attenuation when measuring weak signals, so the measurement accuracy is high. However, the display will show number in the case the probes are open circuited, which is normal. As long as the probes are short circuited, it will return to zero, or when the probes contact the circuit under test, the reading will be stable.
		1kHz～10kHz	±(1.2% reading+50 digits)	
		40Hz～100Hz(LPF)	±(1.8% reading+50 digits)	
300.00V	10mV	40Hz～1kHz	±(0.8% reading+10 digits)	
		1kHz～10kHz	±(2.0% reading+50 digits)	
		40Hz～100Hz(LPF)	±(2.0% reading+50 digits)	
1000.0V	0.1V	40Hz～1kHz	±(1.2% reading+10 digits)	
		1kHz～10kHz	±(3.0% reading+50 digits)	
		40Hz～100Hz(LPF)	±(3.0% reading+50 digits)	

7.3 DC Current

Range	Resolution	Accuracy	Overload protection μA/mA range: 300mA/1000V fuse (fast-fusing fuse) 10A range: 10A/1000V fuse (fast-fusing fuse) Maximum input current mA jack: 300mA 10A jack: 10A When measuring high currents, the continuous measurement time should not be longer than 15 seconds, and the meter should be allowed to cool down for more than twice the measurement time after the measurement,and then enter the small current measurement.
300.00μA	0.01μA	±(0.5% reading + 10 digits)	
3.0000mA	0.1μA		
30.000mA	1μA		
300.00mA	10μA		
10.000A	1mA	±(1.2% reading + 50 digits)	

7.4 AC Current

Range	Resolution	Frequency response	Accuracy	Overload protection: μA/mA range: 300mA/1000V fuse (fast-fusing fuse) 10A range: 10A/1000V fuse (fast-fusing fuse) **Maximum input current** mA jack: 300mA 10A jack: 10A When measuring high currents, the continuous measurement time should not be longer than 15 seconds, and the meter should be allowed to cool down for more than twice the measurement time after the measurement,and then enter the small current measurement.
300.00μA	0.01μA	40Hz～1kHz	±(0.8% reading + 10 digits)	
		1kHz～10kHz	±(3.0% reading + 50 digits)	
3.0000mA	0.1μA	40Hz～1kHz	±(0.8% reading + 10 digits)	
		1kHz～10kHz	±(3.0% reading + 50 digits)	
30.000mA	1μA	40Hz～1kHz	±(1.2% reading + 10 digits)	
		1kHz～10kHz	±(3.0% reading + 50 digits)	
300.00mA	10μA	40Hz～1kHz	±(1.2% reading + 10 digits)	
		1kHz～10kHz	±(3.0% reading + 50 digits)	
10.000A	1mA	40Hz～1kHz	±(1.2% reading + 10 digits)	
		1kHz～10kHz	±(3.0% reading + 50 digits)	

7.5 Resistance

Range	Resolution	Accuracy	
300.00Ω	0.01Ω	±(0.5% reading + 10 digits)	Open circuit voltage: approx. 0.65V. Overload protection: 1000V AC (RMS) or 1000V DC.
3.0000kΩ	0.1Ω		
30.000kΩ	1Ω		

300.00kΩ	10Ω		
3.0000MΩ	100Ω	± (0.8% reading + 10 digits)	
30.000MΩ	1kΩ	± (1.5% reading + 10 digits)	
300.00MΩ	10kΩ	± (3.0% reading + 10 digits)	

7.6 Capacitance

Range	Resolution	Accuracy	
30.000nF	1PF	± (3.0% reading + 5 digits)	Overload protection: 1000V AC (RMS) or 1000V DC. **Note:** **The deviation caused by the capacitance of the probe and the capacitance base (the base value is displayed when the probes are in the small capacitance position in an open circuit) can be reduced by using the relative value measurement function.**
300.00nF	10PF		
3.0000uF	100PF		
30.000uF	1nF		
300.00uF	10nF	± (4.0% reading + 5 digits)	
3.0000mF	100nF	± (4.0% reading + 5 digits)	
30.000mF	1uF	± (10.0% reading + 5 digits)	
300.00mF	10uF	± (20.0% reading + 5 digits)	

7.7 Frequency and Duty Cycle

Range	Resolution	Accuracy	
10Hz-300MHz	0.01Hz ～ 0.01MHz	± (0.01% reading + 5 digits)	1. Input voltage range: 0.18~20V RMS (As the measured frequency increases, the amplitude of the input signal should increase accordingly). 2. Overload protection: 1000V DC or 1000V AC (RMS).
0.1%~99.9%	0.1%	± (2.0% reading + 5 digits)	

7.8 Diode

Range	Resolution	Function	
⊢▶	1mV	Display of approximate diode forward voltage values	1. Open circuit voltage about3V. 2. Overload protection:1000V DC or 1000V AC (RMS).

7.9 Connectivity

Range	Function	
•)))	If the resistance of the line under test is less than about 50Ω, the buzzer in the meter will sound.	Overload protection:1000V DC or 1000V AC (RMS).

7.10 Triode

Range	Resolution	Remarks
1000β	1β	Triode magnification display value is for reference only.

8. Maintenance

8.1 Clean the Meter

If there is dust on the terminals or it is humid, it may produce incorrect measurements. Please clean the meter as follows:

1. Turn off the meter and remove the probes.
2. Turn the meter over and shake out dust accumulated in the input jacks. Wipe the housing with a wet cloth and mild detergent, do not use abrasives or solvents. Wipe the contacts in each input jack with a clean Q-tip soaked in alcohol.

⚠ WARNING

Always keep the inside of the meter clean and dry to prevent electric shock or damage to the meter.

8.2 Battery and fuse replacement

Battery replacement.

1. Turn off the meter and remove the probe.
2. Unscrew and remove the battery cover.
3. Remove the old batteries and replace with new batteries. Please pay attention to the battery polarity, which is shown in the battery box.
4. Reinstall the battery cover and secure the battery cover with screws to lock it tight.

⚠ WARNING

1. **To avoid incorrect readings that could result in electric shock or personal injury, please replace the battery as soon as it is low. Do not discharge the battery by short-circuiting it or reversing its polarity.**
2. **To ensure safe operation and maintenance of the meter, remove the batteries when the meter will not be used for a long period of time to prevent damage to the product from battery leakage.**

Fuse replacement:

1. Turn off the meter and remove the probes.
2. Unscrew the four screws securing the back cover (four corners of the meter) and remove the back cover.
3. Remove the burnt fuse, replace it with a new fuse of the same specification, and ensure the fuse is installed in the fuse clip and clamped tightly.
4. Put the back cover in place and secure the back cover with screws to lock it tight.

⚠ **WARNING**

To prevent possible electric shock, personal injury, or damage to the meter, use a fuse of the same specification or specified specification.