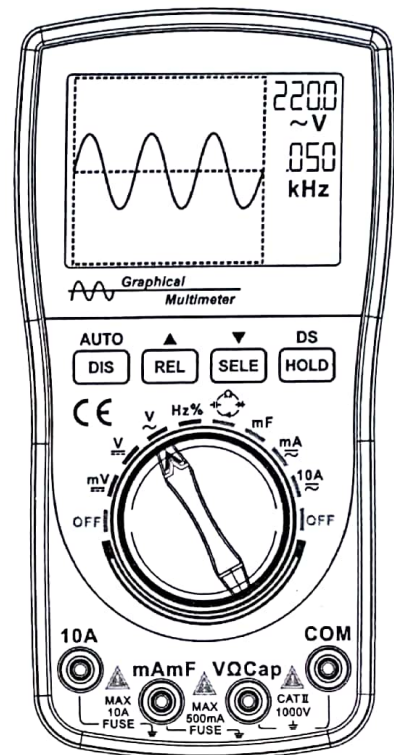




## User's Manual For MT8206

- ◆ Multimeter with 200K A/D sampling and 4000 counts auto-range
- ◆ One-button switch to graphical waveform display during measurement
- ◆ Reliable panel calibration technology , memory calibration coefficients
- ◆ Displaying historical data and real-time measurement on the same screen
- ◆ Featuring DC/AC voltage/current, resistance, capacitance/mF  
Frequency/duty cycle, diode/continuity test
- ◆ Innovative design for the one-key " silent mode", quiet in mastery



## **Introduction**

Dear users,

Thank you for purchasing the MT8206 Digital Graphical Multimeter. The digital graphical multimeter capable of displaying the waveform is inevitable in the development of the measuring instrument from analog (pointer). I believe that the innovative function combination and user-friendly design of MT8206 Digital Graphical Multimeter will be of great help to your on-site inspection. Please read the this manual carefully before use, especially the "Safety Instruction". Keep this manual properly after reading it for future reference.

## **Intellectual property**

This product features a number of proprietary technologies, and the purchase or use of this device does not represent the transfer of these intellectual property rights. It is an infringement of intellectual property rights to copy and apply all or part of the technology without the consent of our company. The intellectual property rights include, but are not limited to, patents, trademarks, publications and website.

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- The patents of this products awarded and applied are protected by the Patent Law of the People's Republic of China.
- Our company reserves the right to change product specifications, prices and software upgrades.
- Our company has the final interpretation of product manuals and marketing activities.

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## Safety instructions




The MT8206 digital graphical multimeter is designed in accordance with the requirements for the over-voltage category of CAT II-1000V and CAT III-600V and level 1 pollution protection in IEC1010-1 safety specification.

1. Check the case before use. Do not use the device with damaged case; check for cracks or missing plastic parts. Check the insulation of the probe and connecting wires. Do not touch the metal part of the probe when using it;
2. Do not operate it in high temperature, humidity, rain and flammable and explosive environment or when the instrument is wet;
3. Never measure the voltage/current beyond its maximum limits;

Measuring function	Input	Maximum limit
V DC	V/Ω, COM	1000V DC/AC peak, within 10 seconds
V AC	V/Ω, COM	750V DC/AC RMS, within 10 seconds
Hz	V/Ω, COM	380V DC/AC RMS, within 10 seconds
mA AC/ DC	400mA, COM	400mA DC/AC RMS, 250V/500mA fuse
A AC/ DC	10A, COM	10A DC/AC RMS, within 30 seconds, 15 minutes cooling interval, 250V/10A fuse
Ω / <del>Hz</del>	V/Ω, COM	250V DC/AC RMS, within 10 seconds
Capacitance/mF	V/Ω, COM	250V DC/AC RMS, within 10 seconds

4. When changing the measurement function, before inserting the probe plug and turning on and off the multimeter, be sure to remove the probe from the test point;
5. Pay attention to the safety Warning signal displayed by the meter. When the measured voltage exceeds DC1000V or AC750V, the buzzer will give long alarm; when the voltage range of DC1000V and AC750V exceeds the safe voltage (24V), the buzzer will sound three times and the high voltage sign ⚡ will be displayed to alert the operator for safety;
6. When the voltage to the ground on the reference input "COM" of the meter is 500V, do not measure voltage measurement;
7. Although the probe 10A range is connected with a 250V fuse, it is very dangerous to measure the voltage incorrectly, which may damage the instrument;
8. When the current, resistance, continuity test, diode, capacitor and other positions are selected, never connect the probe to both terminals of the voltage source;
9. Before performing resistance and diode/continuity tests, turn off the power to the device under test and discharge the capacitor in the circuit.
10. Before opening the back cover to replace the fuse, turn off the power supply and disconnect the probe from the circuit under test; replace the fuse with the same specifications;
11. Do not modify, disassemble or use the products and accessories for any purpose other than the design purpose of the product. Do not replace parts and accessories at will;
12. Do not charge the battery. Replace the battery in time when the low voltage symbol 🔋 is displayed on the screen.

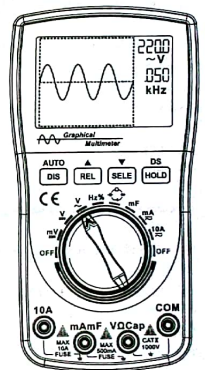
### Safety signs

	Caution! Danger! When this sign is found near other symbols or jack terminals, the users are prompted to follow the instructions in this manual to prevent instrument damage/personal injury.
	Caution! Electric shock! The presence of this sign near one or more terminals indicates that these terminals may carry dangerous voltages during use. For the sake of safety, do not touch the test probes of the probes when the terminals are energized.
	This sign found near the terminal block indicates that the maximum withstand current between the terminal and COM is 10A. FUSE indicates a built-in 10A (or 500mA) fuse; current measurement is not allowed on circuits with voltage of AC 250V or higher.
Prompt!	The prompt states that special care should be taken during operation. Incorrect operation can result in erroneous measurement results or damage to parts.
Attention!	The attention states that care must be taken during operation in case of damage to this product and other property.
Warning!	The Warning states that the operators should concentrate on the operation. Errors or violations may result in personal injury or even life risk.

### Instrument introduction

#### Features

- ◆ Digital multimeter with 200k high-speed A/D sampling, 4000 counts auto-range, one-button switch of graphical waveform display during measurement
- ◆ High reliability with panel calibration technology and memory calibration, sparing the need for adjustment with potentiometer
- ◆ Storing 100 sets of data and 10 waveforms independently
- ◆ Capable of holding waveform and data during measurement, easy to view and analyze
- ◆ Realizing one-button automatic waveform capture, operator-friendly to learn and operate



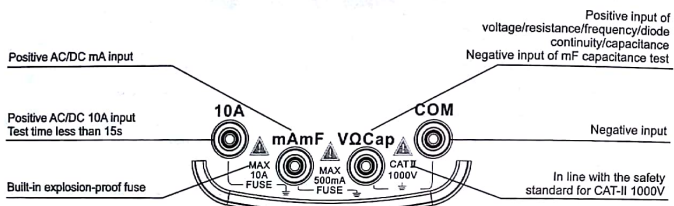
- ◆ Displaying historical data and real-time measurement on the same screen with unique record reading mode for easy comparison
- ◆ Effectively eliminating lead resistance, distributed capacitance or interference signals with relative value measurement (clearing)
- ◆ Extending battery life with automatic shutdown function
- ◆ Featuring DC/AC voltage/current, resistance, capacitance/mF (large capacitance) Frequency/duty cycle, diode/continuity test
- ◆ Frequency measurement with 5Hz ~ 5MHz automatic switching range and the maximum input of 380VAC
- ◆ 10A AC and DC current measurement with protection against voltage error
- ◆ AC voltage bandwidth up to 20kHz
- ◆ Innovative design for the one-key " silent mode", quiet in mastery

**Buttons**



NAME	FUNCTIONS
DIS/AUTO	<ol style="list-style-type: none"> <li>1. Manually/automatically switching range during DMM measurement;</li> <li>2. Switching between multimeter/graphical waveform display mode (Hold down);</li> <li>3. Automatic capture during waveform measurement</li> </ol>
REL/▲	<ol style="list-style-type: none"> <li>1. Showing relative value measurement during DMM measurement;</li> <li>2. Paging up when reading stored data/waveform;</li> <li>3. Scaling down the waveform and displaying period during waveform measurement</li> </ol>
SELE/▼	<ol style="list-style-type: none"> <li>1. Selecting DC/AC mode;</li> <li>2. Measuring frequency/duty cycle;</li> <li>3. Paging down when reading stored data/waveform;</li> <li>4. Scaling up waveform and displaying period during waveform measurement</li> </ol>
HOLD/DS	<ol style="list-style-type: none"> <li>1. Saving data/waveform;</li> <li>2. Reading stored data/waveform (Hold down)</li> </ol>

**Insert plug**



**Basic Operation**

**Power on/off**

Turn the knob to the desired measurement position to turn the multimeter on. Turn the knob to the "OFF" position again to turn off the power.

<b>Attention!</b>	<ul style="list-style-type: none"> <li>• Move the test probe away from the test point before turning the knob (shutdown).</li> <li>• When the meter is used, turn off the power in time. Avoid the instrument sleeping to use the battery caused over-discharge of the battery.</li> </ul>
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**Auto Sleep**

The meter will automatically go the sleep mode if it is not used in 15 mins. Turning the rotary switch to OFF and then turn it on again, the meter enters the normal measurement state.

When the user is in the off state, press and hold the AUTO button to turn it on again for two seconds, then the "auto sleep" function can be cancelled. In the off state, press and hold the AUTO button to turn it on and then release it for two seconds to resume "auto sleep". Features.

<b>Tips</b>	<ul style="list-style-type: none"> <li>• The main chip and display power are only turned off when the meter is automatically turned off, but there is still a part of the circuit working, which will have an operating current of about 4 mA.</li> </ul>
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### Quiet Mode

When the user is in the off state, press and hold the SELE button to turn it on again for two seconds to enter the "quiet mode"; in the off state, press and hold the SELE button to turn it on and then release it for two seconds to exit the "quiet mode". All beeps will be turned off, when the meter is in the state of "silent mode".

### Battery replacement

When the meter is in use and the low-voltage symbol  appears in the upper right corner of the LCD screen, the user should replace the battery as soon as possible.

When the meter is not used for a long time, take out the battery to prevent the battery from leaking and damaging the meter.

Warning!	Pay attention to the safety of the battery.
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## Operation of Multimeter

### Enabling the multimeter mode

Warning!	<ul style="list-style-type: none"><li>• Read, understand and follow the safety rules and practices outlined in the following context.</li><li>• When changing the measurement functions, be sure to remove the test probe from the test point.</li></ul>
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### Switching measurement functions

Rotate the function switch to select the measurement function and the appropriate range.

The voltage range includes 400mV, 4V, 40V, 400V and 1000V (Note that 750V RMS is available in AC voltage measurement).

The frequency range is auto range from 5Hz to 5MHz

The capacitance range is auto range from 51.2nF to 100µF, and the large capacitance range is 10mF.

The current range is auto range from 40mA to 10A

The resistance range is auto range from 400Ω to 40MΩ.

Continuity test/diode detection

### Relative value measurement (REL) mode

The relative value mode is a measurement mode that displays the difference between the measured value and the reference value. Relative value mode is available for most functions of this meter.

1. After pressing the REL button, the measured value currently displayed is saved as a reference value and then the relative value mode is activated.
2. The "▲" displayed on the LCD screen indicates that the relative value mode has been activated.
3. The value displayed on the screen is the difference between the current measured value and the reference value saved previously.
4. Press the REL button again to exit the relative value mode.
5. When the measurement function or range changes, the relative value mode will be automatically disabled.

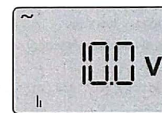
### Application of relative value measurement (REL) mode

1. Voltage range: If the LCD display has the initial reading, enable the relative value function; press the REL button, the LCD screen displays the "▲" symbol, and the initial reading is subtracted; "000" is displayed (Vary in different ranges), and then perform measurement according to the voltage measurement method.
2. Resistance range: Turn the range to the resistance position; insert the test probes and contact the two metal probes reliably (short circuit); observe the reading on the LCD, and press the "REL" button if there is an initial reading; the "▲" symbol appears on the LCD screen. The initial reading is "000" (Vary in different ranges), and

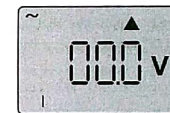
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then measure the resistance in the method stated.

3. Capacitance range: Turn the range to the capacitance position; insert the test probes and disconnect the two metal probes; observe the reading on the LCD, and press the "REL" button if there is an initial reading; the "▲" symbol appears on the LCD screen. The initial reading is "000" (Vary in different ranges), and then measure the capacitance in the method stated.



Initial reading



Press the REL button to reset reading



Measuring voltage in stated method

Prompt!

- Some ranges are subjected to interference. It is normal that the reading is not reset or changes in a small range after the relative value measurement is enabled.
- After the measurement is completed, pay attention to the relative value measurement status.

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### Holding and saving measurement data

The measurement can be held and saved with a single button. When the "HOLD" button is pressed, the reading being displayed will be saved (This function cannot be used when there is no input in the frequency range), and the icon "H00-H99" for data storage will appear on the LCD screen. Press the "HOLD" button again to resume normal operation. However, the data is already stored in the internal memory.

1. To save the current measurement to the database, press the "HOLD" button to save this data.
2. After the data is held, hold down the "HOLD" button for 2 seconds to enable the database function, which can display the saved data.
3. When the meter is in the data hold state, press "HOLD" to exit the data hold state; press and hold the "HOLD" button to display the stored data.
4. When the range is switched or the measurement function is changed, the hold status is automatically disabled.

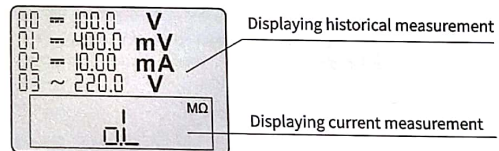
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### Reading and deleting measurement data

#### Reading measurement data;

The database can store 100 DMM measurement data.

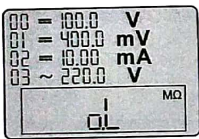
1. Hold down the "HOLD" button for more than 2 seconds to enable the database.
2. When reading the data, a window (real-time measurement data window) appears in the lower part of the screen. The data in this window is refreshed.
3. In the database, the four storage locations on this page and the data therein are indicated on the LCD.
4. If there is data stored in a location, the value and unit of this data will be listed.
5. Press the "REL/▲;SELE/▼" button, the sequence of the data will change from H00 to H99 in turn; 4 groups of stored data are displayed per page.
6. To disable the stored data reading, press the "HOLD" button and stay for 2 seconds.



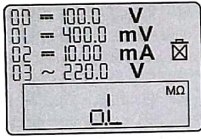
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**Deleting saved data;**

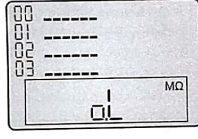
1. Press the "DIS" button and hold it for more than 2 seconds. The LCD displays the "Recycle Bin" icon.
2. Press the "HOLD" button to delete the stored data.
3. The data cannot be deleted in a single line or on a single page. Once the data deletion is enabled, all stored data (H00-H99) in the memory will be deleted.
4. After the deletion is completed, the measurement status is automatically entered.



Press the HOLD button the enable data saving



Hold down the DIS button to delete data



Press the HOLD button again to check if the data are deleted

**AC and DC voltage measurement**

Prompt!	Pay attention to safety when measuring voltage exceeds "safe voltage" (24V).
Warning!	<ul style="list-style-type: none"> <li>• To avoid damage to the meter, do not apply 750V AC or 1000V DC voltage to the measuring terminal for more than 10 seconds.</li> <li>• Take care when the measured voltage reaches the limit.</li> </ul>

1. Insert the banana plug of the black test probe into the negative COM jack and insert the plug of the red test probe into the positive V jack.
2. Rotate the function switch to select the ACV or DCV function. When selected, the ~ or = symbol will appear in the upper left corner of the screen.
3. Contact the test point with the test probe.
4. Read out the voltage value displayed by the meter. The displayed results include values, decimal points, and polarity.

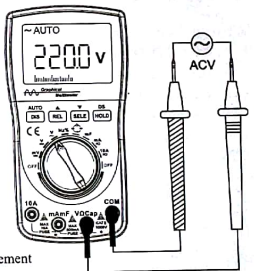



Diagram of AC voltage measurement

The menu for voltage measurement:

Function	Relative value mode	Holding/reading data	Manual/automatic switching	Waveform display function
Button	REL	HOLD	AUTO	DIS (Hold down)
Display	▲	H00-H99	AUTO/---	

- Press the "REL" button to enable the relative value mode.
- Press the "HOLD" button to enable the data holding; hold down the "DS/HOLD" button to enable the data storage and waveform storage list.
- If the graphical waveform display mode is selected (Enabled only in automatic range state), hold down the "DIS" button to display the waveform and data of the current voltage.
- Press/hold down the "DIS/AUTO" button to enable manual/auto range.

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### AC and DC current (mA, 10A) measurement

**Warning!**

- Do not measure voltage with the 10A input; do not measure AC current on circuits with AC 250V or above voltage.
- When using the 10A current range, the measurement time should not exceed 15 seconds every 15 minutes, otherwise the meter and test probes may be damaged.

- Insert the connecting plug of the black test probe into the negative COM jack and insert the banana plug of the red test probe into the positive mA jack. (Insert into the 10A jack when measuring 10A current)
- Rotate the function switch based on the size of the test signal and point the arrow on the knob to the 400mA/10A range.
- Press the "SELE" button to select the AC or DC measurement. When selected, the ~ or = symbol will appear in the upper left corner of the screen.
- Connect the test probes into the circuit under test in series.
- Read the current value displayed on the meter. The displayed results include values, decimal points, and polarity.

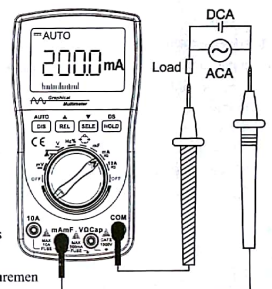


Diagram of mA current measurement

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The menu for current measurement:

Function	Relative value mode	Holding/reading data	AC/DC conversion	Manual/automatic switching	Waveform display function
Button	REL	HOLD	SELE	AUTO	DIS (Hold down)
Display	▲	H00-H99	~ / —	AUTO/—	~ / —

- Press the "REL" button to enable the relative value mode.
- Press the "HOLD" button to hold data; hold down the "DS/HOLD" button to enable data storage and waveform storage list.
- Press the "SELE" button to select the AC or DC measurement function.
- If you select the graphical waveform display mode (only in automatic range state); press and hold the "DIS" button to display the waveform and data of the current voltage.
- Press/hold down the "DIS/AUTO" button to enable the manual/auto range.

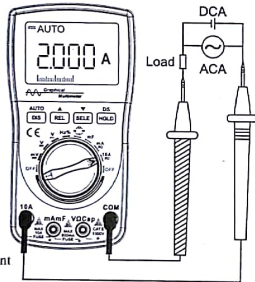


Diagram of 10A measurement

Frequency/duty cycle measurement

Frequency measurement is an extended function of AC voltage measurement.

- Insert the connecting plug of the black test probe into the negative COM jack and the connecting plug of the red test probe into the positive V jack.
  - Rotate the function switch and point the arrow on the knob to the Hz/% range (Press the "SELE" button to switch between the frequency "Hz" and duty cycle "%" function).
  - Touch the test point with the test probe.
  - Read the frequency value displayed on the meter.
- The displayed results include values, decimal points, and polarity.

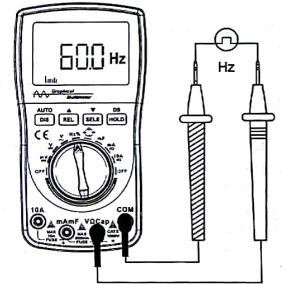


Diagram of frequency measurement

Prompt!

- The graphical waveform display method cannot be used in frequency count measurement, and the relative value (REL) function cannot be used either!
- In the frequency measurement, the amplitude of the signal under test shall not be less than 2Vp-p, and the maximum input voltage shall not be lower than 380V.

### Resistance measurement

**Warning** To avoid electric shock, when performing resistance measurements, first turn off the power to the device under test (Disconnect the battery/unplug the power cord) and discharge the capacitor in the power supply.

1. Insert the connecting plug of the black test probe into the negative COM jack; Insert the connecting plug of the red test probe into the positive resistance  $\Omega$  jack.
2. Connect a test probe to the circuit or component under test. Disconnect one end of the component to be tested from the original line to ensure that the rest of the circuit does not affect the correctness of the reading.
3. Read the resistance value, unit and decimal point displayed on the meter.

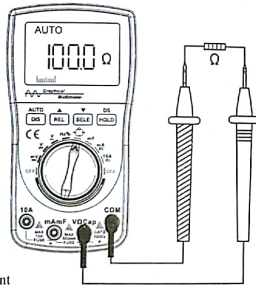


Diagram of resistance measurement

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### Diode/continuity test

#### Diode test

**Warning!** To avoid electric shock, do not test the diode carrying the voltage.

1. Insert the connecting plug of the black test probe into the negative COM jack; insert the banana plug of the red test probe into the positive resistance  $\Omega$  jack.
2. Rotate the switch, point the arrow on the knob to the  $\Omega \rightarrow \nabla \rightarrow \text{Cap}$  range, and press the "SELE" button to switch to the  $\nabla$  range.
3. Connect the test probe to both ends of the diode or semiconductor's PN junction under test. Pay attention to the readings of the meter.
4. Swap the positions of the test probes to reverse the polarity. Pay attention to the readings.
5. The nature of the diode or semiconductor's PN junction can be judged as follows:  
 If the reading in the first measurement is a voltage value (approximately 0.2V to 0.7V), and the reading in the second measurement shows ".0L", the diode can be used normally.  
 If the readings in both measurements are ".0L", the diode is opened circuited.  
 If the readings in both measurements are slight or ".000", the diode is shorted.

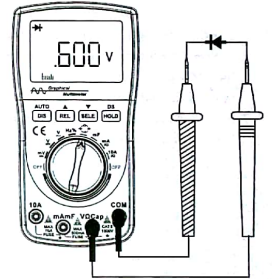


Diagram of diode measurement

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### Continuity test

**Warning!** To avoid electric shock, do not test the continuity on the line carrying voltage.

1. Insert the connecting plug of the black test probe into the negative COM jack; insert the connecting plug of the red test probe into the positive resistance  $\Omega$  jack.
2. Rotate the function switch, point the arrow on the knob to the  $\Omega$   $\rightarrow$  Cap range, and press the "SELE" button to switch to the  $\Omega$  range.
3. Contact the circuit under with test probes. If the resistance is lower than  $50\Omega$ , the buzzer will beep.

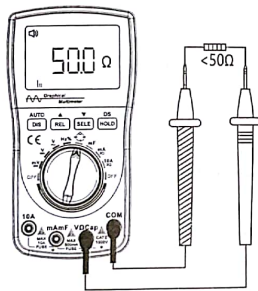


Diagram of continuity test

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### Capacitance measurement

**Warning!** To avoid electric shock, do not test the capacitor carrying voltage. Discharge the capacitor shortly before measuring the large capacitor.

1. Insert the connecting plug of the red test probe into the positive Cap jack and the connecting plug of the black test probe into the COM jack.
2. Rotate the function switch to point the arrow to the  $\Omega$   $\rightarrow$  Cap range; press the "SELE" button again to switch to the Cap range.
3. Measure the small capacitance; press the "REL" button to remove the lead resistance and distributed capacitance before measurement.
4. Contact the test probe and the metal lead of the capacitor under test.
5. Read the capacitance value displayed on the meter. The displayed results include values, decimal points, and polarity.

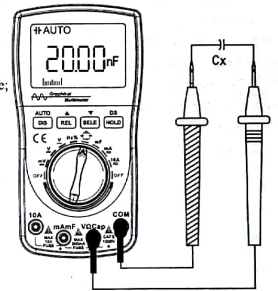


Diagram of capacitance measurement

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### mF (large capacitance) measurement

1. Insert the connecting plug of the red test probe into the positive mF jack, and the connecting plug of the black test probe into the Cap jack.
2. Rotate the function switch and point the arrow on the knob to the mF range.
3. To measure the small capacitance, press the "REL" button to remove the lead resistance and distributed capacitance before measurement.
4. Contact the test probe and the metal pins of the capacitor under test.
5. Read the capacitance value displayed on the meter.  
The displayed results include the value, decimal point and polarity.

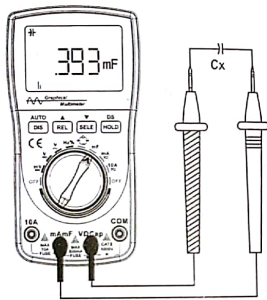


Diagram of mF capacitance measurement

### Waveform display operation

#### Enabling waveform display mode

Hold down the "DIS" button for 2 seconds to select the waveform display mode.

Prompt! The waveform display function is only available in the voltage/current range.

#### Buttons and main menu

The buttons for waveform display are located in the lower part of the LCD screen, which can be in combination to realize a variety of functions.

The basic operations are described specifically as follows:

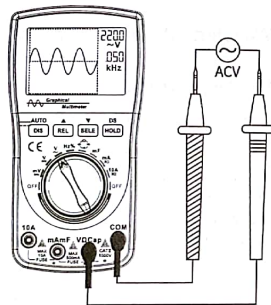


Button	DIS	AUTO	REL/SELE	HOLD
Function	Enabling waveform display (Hold down)	Displaying stable waveform	Change time base	Saving waveform (10 groups)

After manually entering the ACmV position, press and hold the SELE button to enter the waveform display.

### Waveform of voltage measurement

1. Insert the connecting plug of the black test probe into the negative COM jack; insert the connecting plug of the red test probe into the positive V jack.
2. Rotate the function switch to select the AC or DC range. When selected, the  $\sim$  or  $\text{—}$  symbol will appear in the upper left corner of the screen.
3. Touch the test point with the test probe.
4. Hold down the "DIS" button for 2 seconds (Enable the waveform display mode in auto-range state). The waveform of the current voltage can be displayed.

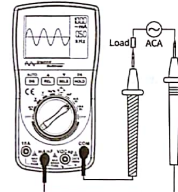


Waveform of voltage measurement

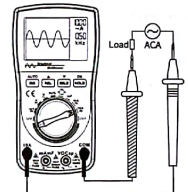
Tips	Only repeatable waveform can be measured for DC voltage (DCV); when measuring waveform, press the "AUTO" button several times to automatically capture the waveform. ACmV small signal waveform, you need to manually enter the ACmV range, then long press the "SELE" button to enter the waveform display
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### Waveform of current measurement

1. Insert the connecting plug of the black test probe into the negative COM jack, and insert the connecting plug of the red test probe into the positive mA/10A jack.
2. Rotate the switch. Depending on the size of the test signal, point the arrow on the knob to the mA/10A range.
3. Press the "SELE" button to select the AC or DC range. When selected, the  $\sim$  or  $\text{—}$  symbol appears in the upper left corner of the screen.
4. Connect the test probes into the circuit under test in series.
5. After holding down the "DIS" button for 2 seconds (Enable the waveform display mode in auto-range state), the waveform and data of the current can be displayed.



Waveform of mA current measurement



Waveform of 10A current measurement

#### Automatic measurement of waveform

The multimeter can automatically measure the amplitude and frequency of the current waveform, and the measurement results are displayed in the right side of the waveform display area.

The waveform measurement is the effective value directly sampled by the multimeter A/D.

Press the "AUTO" button to realize a one-button automatic capture and display a stable waveform. When the frequency is above 10 kHz, the one-button automatic capture time will be longer.

#### Holding and saving signal waveform

The main purpose of holding waveform is to hold the current waveform for closer observation. Save the current waveform when you need to save it in the database.

Method of holding waveform: Press the "HOLD" button, the waveform is held/stored; H0-H9 are displayed in the lower right part of the LCD screen, indicating the order in which the 10 waveform groups are stored.

#### Saving and reading signal waveform

The database of the instrument has a memory capacity for 10 waveform groups, which can be saved as follows:

1. Press the "HOLD" button to enable the waveform hold/storage function.
2. Press the "HOLD" button and hold for 2 seconds to enter the waveform database.
3. The locations of the 10 waveform groups from H0 to H9 will be listed on the display.
4. If there is data stored in the selected position, the thumbnail of the waveform and the associated parameters will be displayed in the waveform preview area. When there is no data in the memory location pointed by the selection marker, blank coordinates will be displayed in the waveform preview area.


#### Deleting signal waveform saved

1. Press the "DIS" button and hold for more than 2 seconds. The Recycle Bin icon appears on the LCD.
2. Press the "HOLD" button to delete the data in the memory.
3. The data cannot be deleted in a single line or on a single page. Once the data deletion is enabled, all stored data (H0-H9) in the memory will be deleted.
4. After the deletion is completed, the measurement status is automatically entered.

## Technical Parameters and Packing List

### Features and technical parameters

#### General features

Display	128 × 64 dot matrix graphic LCM	Viewing area	60mm x40mm
Backlight	White	Input resistance	10MΩ
Battery	3 AA batteries	Auto Sleep	Yes (The meter automatically auto Sleep in 15 minutes without any operation of button)
Low power		Power consumption	About 40mA
Battery life	Approx. 30 hours	Storage capacity	DMM data:100 groups, waveform record: 10 groups
Operating environment	0°C→40°C;<75%RH	Storage conditions	-10°C ~ +60°C ; <90%RH
Dimensions	83 mm × 160 mm × 32mm	Weight	Approx. 190g (without battery and other accessories)

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### Features of digital multimeter

All range uncertainty is expressed in ± (a% reading + unit). The calibration interval is one year.  
Environmental conditions for guaranteed uncertainty: 23 °C ± 5 °C, < 75% RH.

Analog Bandwidth	ACV/DCV/ACA/DCA	20kHz	Maximum Real-Time Sampling Rate	200ksps
Features	Range	Resolution	Uncertainty	
DC voltage	400mV	0.1mV	± (0.75%rdg + 10dgt)	
	4V/40V/400V/1000V	1mV/10mV/100mV/1V	± (1.5%rdg + 10dgt)/1000V	
AC voltage	400mV	0.1mV	50Hz ~1kHz / ± (2.0%rdg + 10dgt) No more than 1kHz	
	4V/40V/400V	1mV/10mV/100mV	50Hz~400Hz / ± (1.0%rdg + 10dgt) 400Hz~20kHz/ ± (5.0%rdg + 10dgt)	
	750V	1V	50Hz ~1kHz / ± (1.5%rdg + 10dgt) No more than 1kHz	
DCA	40mA /400mA	10μA /100μA	± (1.2%rdg + 10dgt)	
	4A/10A	1mA/10mA		
ACA	40mA /400mA	10μA /100μA	± (1.5%rdg + 10dgt)	
	4A/10A	1mA/10mA	50Hz~5kHz (No more than 5kHz)	

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Resistance	400Ω/4KΩ/40KΩ/400KΩ/ 4MΩ/40MΩ	0.1Ω/1Ω/10Ω/100Ω/1K Ω/10kΩ	± (1.0%rdg + 5dgt) ± (3.0%rdg + 5dgt)/40MΩ
Capacitance	51.2nF/512nF/5.12μF/ 51.2μF/100μF	10pF/100pF/1nF/10nF/ 100nF	± (3.0%rdg + 10dgt)
	10mF	1μF	± (5.0%rdg + 15dgt)
Frequency	5Hz~5MHz	1Hz	± (1.0%rdg + 5dgt), (Signal amplitude not less than 2Vp-p, ACV, MAX380V)

Diode test	Open circuit voltage: about 1.5 V, maximum test current: about 1.5mA
Continuity test	Reference resistance: about 50Ω
Fuse specification	500mA/250V ,10A/250V

#### Description of symbols and icons

A	Ampere (unit of current)	AC ~	AC
COM	Measuring reference (near the input reference jack)	DC =	DC
F	Farad (unit of capacitance)	mF	mF (unit of capacitance)
HOLD	Data/holding waveform	Hz	Hz (unit of frequency)
mA	mA (unit of current)	%	Duty cycle
nF	nF (unit of capacitance)	mV	mV (unit of voltage)
V	Volt (unit of voltage)	▲	Relative value (clearing)
Ω	Ohm (unit of resistance)	μF	μF (unit of capacitance)
🔊	Buzzer, continuity test	🔋	Remaining power of battery
⚡	Diode	⚠	Safety warning (Reminder of hazardous or limit voltage and current)

#### Packing list

One MT8206 unit, one bag, one pair of probes, one copy of Operator's Manual and package box