

**ET201**  
**User's Manual**

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# Preface

Dear Users,

Thank you for choosing ET201 Digital storage waveform multimeter. Digital waveform multimeter. It's an inevitable way for measuring meter develop from simulate display (pin indicator), digital display to waveform display. I believe that the creative function combination and user-friendly design of the product will greatly facilitate your on-site inspection. Please read this user manual carefully before using, especially in the "Safety instruction" part, and please kindly keep it for your future reference.

## Intellectual Property Rights

The Product adopts a combination of proprietary technologies, to purchase or use the instrument doesn't mean the owner has the right to transfer any intellectual property. Any action of imitating or applying all or part of the technologies without our agreement may violate our intellectual rights any define as a tort. The intellectual property rights include but not limit to patents, trademarks, publications, website contents and so on.

- The information provide in this user manual replaces all the previously published information, any change shall only be announced on our official website.
- We reserve the right to change the product specifications, product price and software upgrading.
- We reserve the ultimate right of the interpretation for our product using manual and marketing activities.

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## Safety instruction


The design of digital storage waveform multimeter ET201 is in accordance with the safety standard of IEC 1010-1, CAT III-600V, the second category of excess voltage electrical measuring. pollution protect grade: 1<sup>st</sup> grade.

1. Please check if the housing being damaged or if any accessories lost before using. Crucially, please pay highly attention to check the insulation of the test pen and connection line. Do not contact the metal part of the test pen during your using.




2. Operation doesn't allow in below condition: High temperature, Moist, Rainy day, inflammable and explosive, or even your instrument become wet.

3. It's completely not permitted to exert overload current/voltage that the instrument can accept during your using.

Measuring Function	Input terminal	Max. Limit
V DC	V/ $\Omega$ , COM	1000V DC+AC Peak Value, within 10 second
V AC	V/ $\Omega$ , COM	750V DC+AC RMS, within 10 second
Hz	V/ $\Omega$ , COM	250V DC/AC RMS, within 10 second
mA AC/ DC	200mA, COM	500mA DC/AC RMS, 250V/400mA burnt fuse
A AC/ DC	20A, COM	20A DC/AC RMS, within 30 second, 15min cooling diapauses, 500V/20A burnt fuse
$\Omega$  	V/ $\Omega$ , COM	250V DC/AC RMS, within 10 second
Capacitance	V/ $\Omega$ , COM	250V DC/AC RMS, within 10 second

4. Please do remember to remove the pin of the test pen from the testing point when you are trying to exchange the measuring function, pull/insert the plug of the test pen or turn on/ shut off the instrument.
5. Please pay attention to the safety warning signal displayed on the instrument: when the input voltage exceeds DC1000V/AC750V, the buzzer will make a long alarm sound; and it will beep for three times when the input over the safety voltage (36VDC/25VAC) under the measuring range of DC1000V/AC750V.
6. Please do not organize voltage measuring job when the voltage-to-ground reach 500V which showing on the reference input terminus "COM" of the instrument.
7. It will be extremely dangerous in mistaken operation of voltage measuring even though there is a 500V fuse installed in the 20A measuring range
8. The test pen is definitely not allowed to touch the two terminal of the voltage source when choosing below measuring function: current, resistance, continuity, diode, capacitance and so on.
9. Before conducting the resistance and diode/continuity test, please cut off the power of the measurand and make sure the capacitor of the power supply circuit has discharge completely.
10. The instrument power must be cut off and the test pen must be removed from the circuit before replacing for the fuse in the backboard of the instrument. And the fuse specification should be kept in same accordingly.
11. Product and accessories should not be reconstructed, separated or taken into other usage beyond the original function design; meanwhile, all of the accessories or enclosure can't be random replaced.
12. Please don't electricize for ordinary batteries, and please replace the batteries when low power  prompted in the screen.

Safety Symbol :

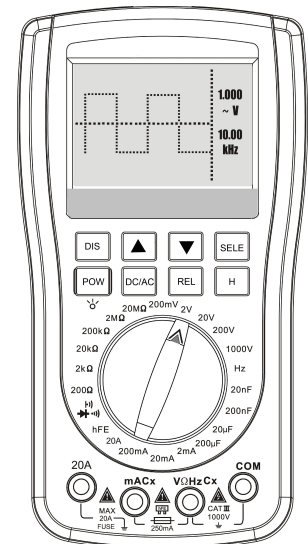
	<p>Dangerous! When this symbol marks beside other sign or lies near the socket terminal, it indicates that the operator must obey the manual instrument for use.</p>
	<p>Electric shock dangerous! When this symbol marks on one or more using terminals, it indicates that it may carry dangerous voltage during using. To guarantee your safety as much as possible, please don't touch the testing terminal of the test pen with your hand.</p>
	<p>When this symbol lies near the connection terminal, it indicates that the Max acceptant current between the terminal and the COM is 20A. "FUSE" means that there is a 20A internal fuse (250Ma) installed. And it's strictly forbidden to measure the circuit current when the AC voltage is over 250V</p>
<p>Prompt!</p>	<p>The Prompt statement indicates that you should be careful because mistaken operation may lead to wrong testing result or accessories damaged.</p>
<p>Attention!</p>	<p>The Attention statement indicates that you must be pretty careful because mistaken or disobeyed operation may damage the product or possibly cause extra properties loss.</p>
<p>Warning!</p>	<p>The Warning statement indicates that you should be as much as concentrated because mistaken or disobeyed operation may cause people injuries or even life danger.</p>












# Meter introduction

## General Features

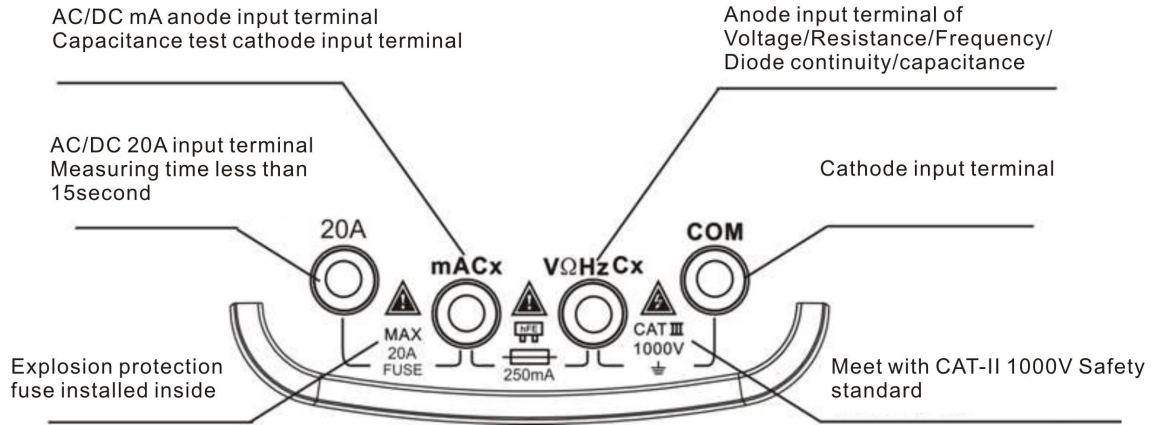
- 200k high-speed A/D data collecting, 2000 count digital multimeter, one-key transform to waveform function during measuring.
- With Panel calibration technology, more reliable since calibration factor setting inside and no need to adjust the potentiometer.
- 100 groups of data and 3 wave forms storage
- Waveform hold and data hold.
- Automatic waveform capture.
- Voltage/Current range auto-recording, which facilitates online test.
- Uniquely record readout; synchronously display historical data and real-time measurement.
- Relative value measurement, effectively eliminate lead-wire resistance or interference signals.
- Automatic shutdown and manually abolish automatic shutdown.
- With function of measuring DC/AC Current, DC/AC Voltage, resistance, capacitance, Frequency, Diode/Continuity, HFE and Remote control test
- 2 kHz~200 kHz automatically exchange measuring range of frequency detecting, Max. input 380V.
- 20A AC/DC Current measuring,  $\phi$  10X38 fuse installed inside.
- White backlight, manually control, which convenient for dim light operation and data readout



## Key-press Function

Key-press	Name	Function
   	Dis	Exchange between Multimeter/Waveform meter; waveform storage readout.
	Page up	Data storage/Waveform readout Page up
	Page down	Data storage/Waveform readout Page down
	Sele	Automatic select vertical amplitude and time base to display waveform
   	Pow 	Control instrument power and the backlight of LCD off/on
	DC/AC	Select measurement between direct current(DC) and alternating current (AC)
	REL	Measuring relative value
	H	Data hold/Waveform storage

## Input socket



## Basic operation

### Turn on/ Shut down

Press the key of “Power” and stay for more than 2 second, meter turn on, press again for more than 2 second, it will be shut down


Attention!

- Please do remember to remove the test probe form the test point before shut down.
- Keep the electric power turned off when finished the using.


## Auto shutdown

The meter will be shutdown in 15 minutes if there is none press operation. To cancel the automatic shutdown function, please press the key of “waveform readout” and “Power” in turn.

## Backlight Using

Using backlight function can improve the effectiveness of display under dim measuring condition, however, overuse the backlight may reduce the continuously working time of the batteries. Press the power key  to light it up, it will hold on for 30 second and then automatically shut off; press again to shut it off manually.

## Batteries Replace

When it shows with low power sign  at the top right corner of the LCD screen during the using, please replace the batteries as soon as possible. It's better to take out the batteries if you don't use the meter very often, in case for electrolyte leakage which may damage the meter.

Warning!	Please don't recharge for the equipped batteries! Use the powerful batteries for replacement.
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## Multimeter Operation

### Multimeter pattern

Warning!	<ul style="list-style-type: none"><li>•Please thoroughly read, understand and obey the safety rules and operation standards mentioned below.</li><li>• Please remove the probe of the test pen from the test point when changing measuring function.</li></ul>
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## Measuring Function Exchange

Rotary switch, select the measuring function and the proper measuring range.

Voltage measuring range: 200mV, 2V, 20V, 200V, 1000V (Notice that AC measuring is 750V RMS)

Frequency measuring range is automatically select, included 2 kHz/20kHz/200kHz

4 Capacitance measuring ranges, from 20nF to 200  $\mu$  F

4 Current measuring ranges, from 2mA to 20A

6 Resistance measuring ranges, from 200  $\Omega$  to 20M  $\Omega$

Continuity test/ Remote test/ Diode test/ HFE test

## Relative value measuring (REL) pattern

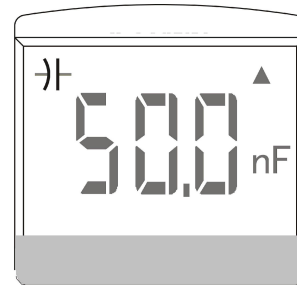
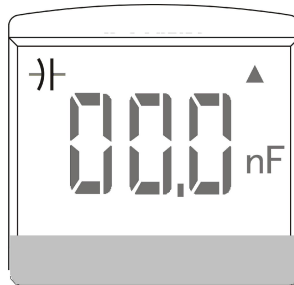
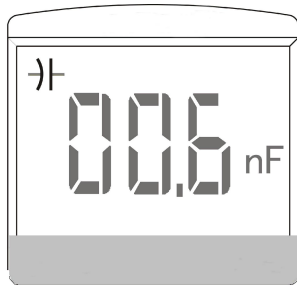
Relative value measuring pattern is the one that displays the D-value between the “real value” and “reference value”.

Most function of this meter can run the REL pattern.

1. When you press the “REL” key, the currently testing data will be storage as a “reference value”, and then the REL pattern will be active.
2. LCD will display symbol “▲” to represent that the REL pattern has been activated.
3. The data displayed on the screen is the D-value between the current “real value” and the stored “reference value”.
4. Press the “REL” key again to exit the “REL” pattern.
5. “REL” pattern will be automatically relieve when changing function or measuring range

## Application of Relative value measuring (REL)

1. Apply in Voltage measuring: If LCD has original data displayed, once you active the REL function, the LCD screens will display symbol “▲”, meanwhile, the original data will be counteract and showing as “000” (Resolution depends on your measuring range), and then go on to voltage test as normal.
2. Apply in Resistance measuring: Switch the testing range to “Resistance measuring” and then insert the test pen with two metal probe reliable connected (short-circuit), observe the reading, if initial reading existed, press the “REL” key and then the LCD screen will display symbol “▲”, meanwhile, the original data will be counteract and showing as “000” (Resolution depends on your measuring range), and then go on to Resistance test as normal.
3. Apply in Capacitance measuring: Switch the testing range to “Capacitance measuring” and then insert the test pen with two metal probe in open-circuit state, observe the reading, if initial reading existed, press the “REL” key and then the LCD screen will display symbol “▲”, meanwhile, the original data will be counteract and showing as “000” (Resolution depends on your measuring range), and then go on to Capacitance test as normal.



Prompt!	<ul style="list-style-type: none"><li>• Some measuring range may exist interference, it's normal that the reading can't return zero or will float slightly when active the REL measuring pattern.</li><li>• Please remember to relieve the REL measuring pattern after finished the measurement.</li></ul>
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## Measuring data hold and storage

Both holding and storing measuring data are completed with one key. The displaying reading will be stored once pressing the key of “storage”, and the LCD screen will display the data storage icon “H00-H99” at the same time. It will return to normal running if you press the key again, anyway, the holding data has been stored in the internal storage.

1. If you need to load the current measured value into the database, please press the “Storage” key to keep it down.
2. Once the data being stored, press the “waveform/readout” key and stay for 2 second to enter the database, you can check the stored data.
3. Once the meter gets into data holding state, it can only display the stored data when press the “waveform/readout” key, and it's unable to get into waveform state at this time.
4. Holding state will be existed automatically when changing measuring range or measuring function.

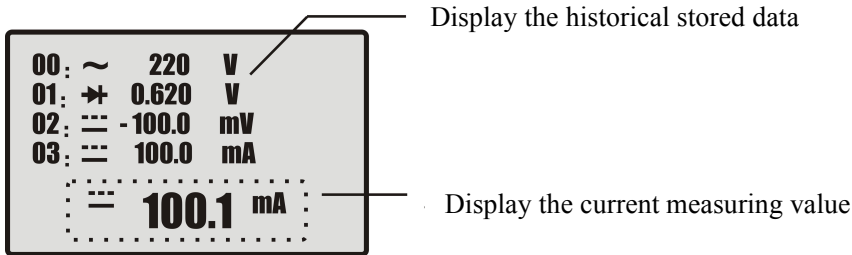
## Measuring data readout and delete

### Measuring data readout:

The database of this meter is equipped with the capacity of storing 100 DMM measuring data.

1. Press the “waveform/readout” key and stay at least 2 second to enter the database of the meter.
2. In the state of “data readout”, the bottom screen of the meter will appear a window (window of the real-time measuring data) and the data will be renovated all the time.

3. In the database, LCD will list out 4 storage location of the current page and indicates whether there has data being stored in this location
4. If there has data being stored in one location, both its numerical value and unit will be listed out.
5. The list sequence will change if pressing the “▲ ▼” key, and it counts form H00 to H99, besides, there will be 4 groups of stored data display on each page.
6. Press the “waveform/readout” key and stay at least 2 second to exit the “measuring data readout” state.



#### Stored data delete:

1. Press the “Auto” key and stay at least 2 second, LCD screen will display a symbol of “recycle bin”
2. Press the “Storage” key, LCD screen will display a symbol of “waiting”, it means the stored data is being deleted.
3. it's unable to delete the data for a single line or single page, as a result, once you active the delete program, all the stored data (H00-H99) will be deleted.



4. When data delete program finished, it will automatically get into measuring state.

Press “Storage” key to get into data storage state

Press “Auto” key to get into deleting program

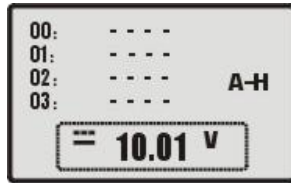
Press “storage” key again to confirm deleting  
Wait for a moment, symbol disappeared, deleting finished.

## Auto recording pattern

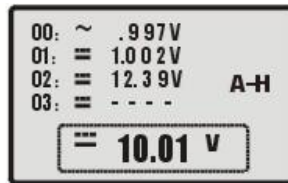
The auto recording pattern is able to display and auto record signals beyond 10 digits under the current measuring range. When the test pen removes from the testing point, it will run and record a new measurement with the amplitude verified rule.

- a. Press the “Storage” key and stay for 2 second, LCD screen will transform to Auto record frame, auto record function activated.
- b. Press the “Storage” key to cancel the A-H symbol and exit auto recording pattern. You can press the “▲ ▼” key to check the record list and store the data simultaneously. Once auto record data being stored, the current measuring data will only be listed behind when storing.
- c. Press the “Storage” key to cancel the A-H symbol and exit the auto recording pattern, and then press the “waveform/readout” key returning to normal measuring state.

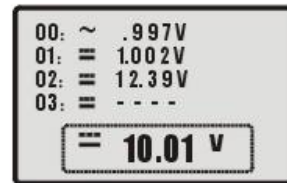
- d. Only when the testing data displayed stably can it being record and it needs a few second for the record completed.
- e. All previously stored data will be deleted once you get into the auto record pattern.



Press “Storage” key to get into Auto recording pattern.



Automatically record the measuring data for the test



Press the “Storage” key again to exit auto recording pattern, and then press the “▲ ▼” key to check the record

## AC/DC Voltage measuring

Prompt!	You should be careful when the measuring voltage exceed the “Safety voltage” (36V DC/25V AC).
Warning!	<ul style="list-style-type: none"> <li>• To avoid the meter from being damaged, it's not allow to input the voltage of 750V AV or 1000V DC more than ten seconds during testing.</li> <li>• The measuring voltage reach to the utmost degree, please operate carefully.</li> </ul>

1. Put the banana plug of the black P-wire into the cathode COM socket, and the red one to the anode V socket.
2. Spin the function switch to select a proper range (200mV~1000V) according to the testing signal.
3. Press the “AC/DC” key to determine the AC/DC function, and then there will be a “~” or “---”symbol displayed on the top left of the screen.

4. Connect the testing points with the test pen.
5. Read the voltage displayed on the screen, it may include the numerical value, decimal point and cathode/anode determined.

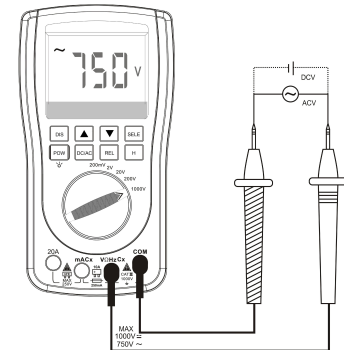
Voltage measuring menu:

REL Pattern	Data hold/Auto record Pattern	AC/DC Function	Waveform/Readout Function
REL	H00/A-H	~/---	
REL(Clear)	Store	AC/DC	Waveform/Readout

- a. Press the “REL” key to enter REL pattern.
- b. Press the “Storage” key to enter Data hold/store/Auto record pattern.
- c. Press the “AC/DC” key to select the AC/DC function
- d. Press the “Waveform/Readout” key to enter the waveform pattern; it will display the waveform of the current voltage or a list of stored data and waveform.

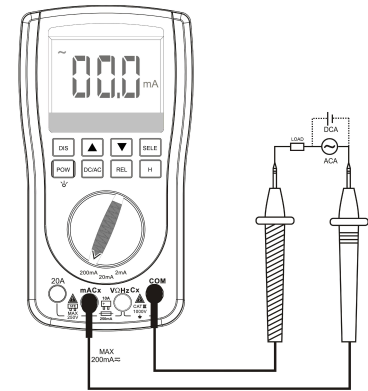
### AC/DC Current (mA, 20A) measuring

Warning!	<ul style="list-style-type: none"> <li>• It's strictly prohibit using the 20A input terminal to measure the voltage; please don't operate a AC current measuring in a circuit with voltage over AV 250V.</li> <li>• Do not test over 15 second in every 15 minutes when using the 20A Current measuring range. Otherwise, the meter and test pen connecting wire may be damaged.</li> </ul>
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**AC/DC Voltage measuring illustration**

1. Put the banana plug of the black P-wire into the cathode COM socket, and the red one to the anode mA socket. (20A measuring should insert in the 20A input terminal)
2. Spin the function switch to select a proper range (2mA~200mA (20A) ) according to the testing signal.
3. Press the “AC/DC” key to determine the AC/DC function, and then there will be a “~” or “---” symbol displayed on the top left of the screen.
4. Connect the circuit with the test pen.
5. Read the current displayed on the screen, it may include the numerical value, decimal point and cathode/anode determined.

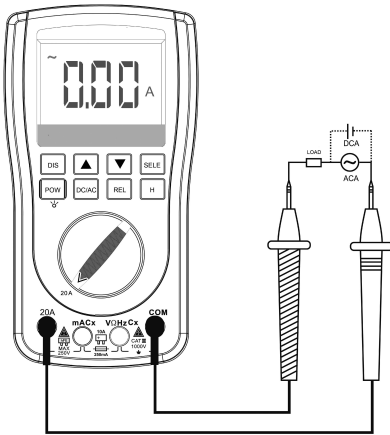


**mA Current measuring illustration**

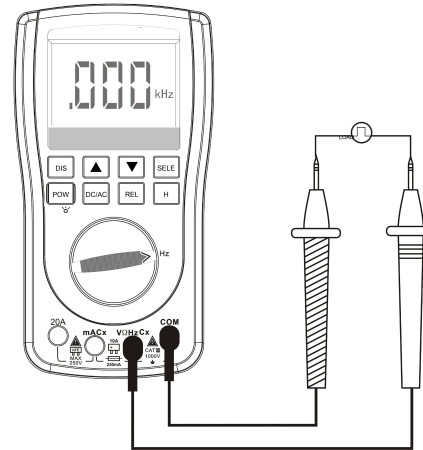
**Current measuring menu:**

REL Pattern	Data hold/Auto record Pattern	AC/DC Function	Waveform/Readout Function
REL	H00/A-H	~/---	
REL(Clear)	Store	AC/DC	Waveform/Readout

- a. Press the “REL” key to enter REL pattern.
- b. Press the “Storage” key to enter Data hold/store/Auto record pattern.
- c. Press the “AC/DC” key to select the AC/DC function
- d. Press the “Waveform/Readout” key to enter the waveform pattern; it will display the waveform of the current voltage or a list of stored data and waveform.



**20A Current measuring illustration**



**Frequency measuring illustration**

## Frequency measuring

Frequency measuring, a extended function of the AC Voltage measuring.

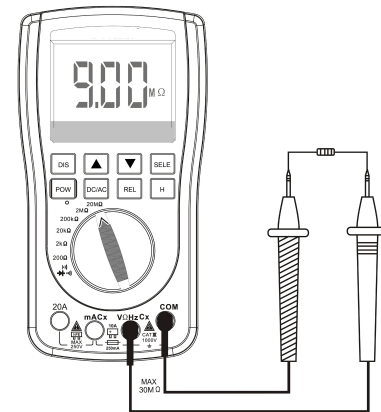
1. Put the banana plug of the black P-wire into the cathode COM socket, and the red one to the anode V socket.
2. Spin the function switch to the Hz measuring range.
3. Connect the testing point with the test pen.
4. Read the Frequency displayed on the screen, it may include the numerical value, decimal point and cathode/anode determined.

Prompt!	<p>It's neither able to use the waveform display nor the REL function in the frequency measuring!</p> <p>In the function of frequency measuring, the width of the testing signal should be no less than 2Vp-p, and the utmost input voltage should lower than 380V.</p>
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## Resistance measuring

Warning!	<p>To prevent electric shock, you should firstly cut off the electric power of the measurand ( take off the batteries/ pull out the power wire), and discharge the capacitance of the electric power supplier.</p>
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1. Put the banana plug of the black P-wire into the cathode COM socket, and the red one to the anode  $\Omega$  socket.
2. Spin the function switch to select a proper range ( $200\Omega\sim 20M\Omega$ ) according to the magnitude of the Resistance.
3. Cross connect the circuit or component with the test pen, it's better to take off the tested component for the measuring to make sure other part of the circuit won't affect the accuracy of the measuring result
4. Read the Resistance displayed on the screen, it may include the numerical value, decimal point and cathode/anode determined.




**Resistance measuring illustration**

## Diode/Continuity/Remote test


### Diode detecting:

Warning!	To prevent electric shock, please do not detect the diode with voltage carried.
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1. Put the banana plug of the black P-wire into the cathode COM socket, and the red one to the anode  $\Omega$  socket.
2. Spin the function switch to select the  measuring range.
3. Cross connect to both sides of the tested diode or the PN-junction of the semiconductor. Be notice to the reading displayed on the meter.
4. Exchange the position of the test pen to reverse its polarity. Be notice to the reading displayed on the meter.
5. The performance of the Diode or PN-junction of the semiconductor can be determined according to below situation:
  - If one reading displayed a voltage value (approximately 0.2V-0.7V) and the other displayed as "O.L". It means the diode is fine.
  - If both readings displayed as "O.L", it means the diode break.
  - If both readings are low or shown as zero, it means the diode short-circuited.

### Continuity test:

Warning!	To prevent electric shock, please do not operate a continuity test in a circuit carried with voltage
----------	--

1. Put the banana plug of the black P-wire into the cathode COM socket, and the red one to the anode  $\Omega$  socket.
2. Spin the function switch to select the  measuring range.

3. Connect the circuit with the test pen, if the Resistance less than  $100\Omega$ , the buzzer will sound.




Continuity test illustration

Remote test illustration

### Remote test:

Prompt!	It's specialized designed for the 38kHz frequency remote control test.
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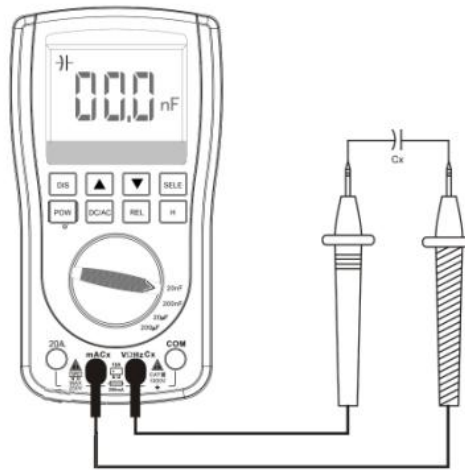
1. Spin the function switch to select the  measuring range.
2. Turn on the power of the tested Remote control, press a key randomly and make the transmitting terminal aim at the top of the meter, if the buzzer makes a sound, it means the remote control work healthily, and otherwise, something may be wrong with it.

### Capacitance measuring

Warning!	To prevent electric shock, please do not detect the Capacitance with voltage carried.
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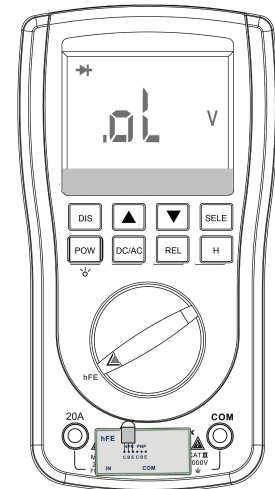
1. Put the banana plug of the black P-wire into the cathode mA socket, and the red one to the anode Cx socket.
2. Spin the function switch to select a proper range (20nF~200  $\mu$  F) according to the magnitude of the Capacitance..
3. When measuring for small Capacitance, please press the “REL” key to counteract the lead-wire or distributed capacitance.
4. Contact the metal pins of the Capacitance with the test pen.
5. Read the Capacitance displayed on the screen, it may include the numerical value, decimal point and cathode/anode determined.



**Capacitance test illustration**

### HFE measuring:

1. Insert the accessories of the measured transistor into the mA and COM input terminals
2. Spin the function switch to the HFE range
3. Judge the polarity of the measured transistor and insert its metal pins into the corresponding EBC jacks of the (NPN or PNP) transistor.
4. Check the amplification (HFE value) displayed on the screen. If there is no display on the LCD, check whether the transistor pins are contacted correctly, if not, it indicates that the measured transistor may have been damaged.



Attention!	You can't measure the voltage signal with the input terminal if you haven't inserted the accessories, otherwise, the meter will be damaged!
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Dynatron test illustration

# Waveform Function Operation

## Waveform pattern

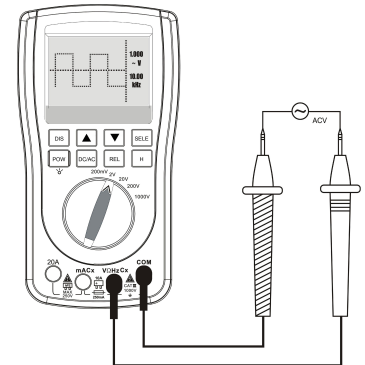
Press the "Waveform/Readout" key to select the waveform function.

Prompt!	Waveform function only applies in the Voltage/Current measuring range.
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## Function key and Main menu

The waveform function key lies below the LCD screen. Coordinated with the different key enables you operate with multiple functions.

Prompts of the meter's basic operation written detailed below:



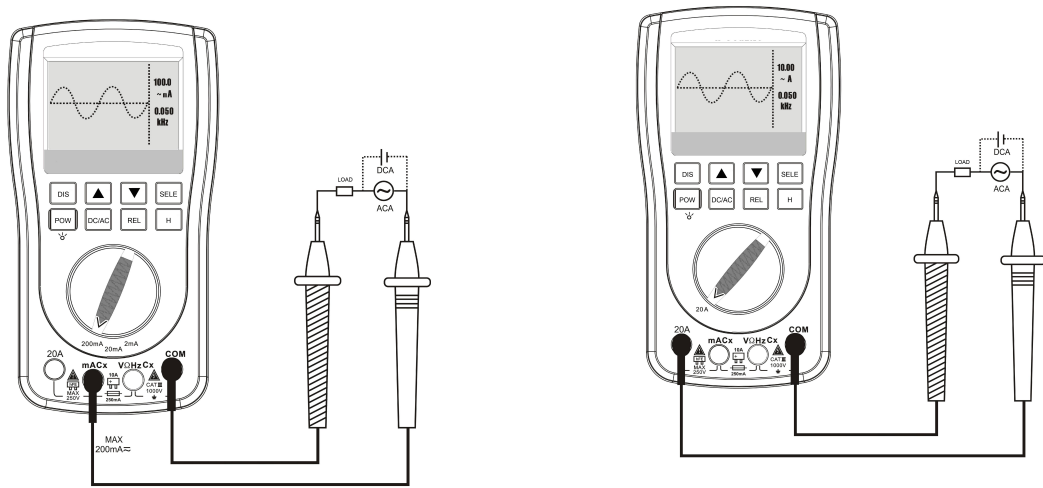
Waveform pattern	Amount of waveform display	Auto measuring	Waveform store
Waveform/Readout	Page up/Page down	Auto	Storage
Measuring/Waveform	Change Period/Frequency	Stable waveform display	5 groups of waveform

### **Voltage measuring Waveform:**

1. Put the banana plug of the black P-wire into the cathode COM socket, and the red one to the anode V socket.
2. Spin the function switch to select a proper range (200mV~1000V) according to the magnitude of the measured signal.
3. Contact the test points with the test pen.
4. Press the “Waveform/Readout” key to display the present Voltage waveform.

### **Current measuring Waveform:**

1. Put the banana plug of the black P-wire into the cathode COM socket, and the red one to the anode mA socket.
2. Spin the function switch to select a proper range (20mA~200mA) according to the magnitude of the measured signal.
3. Use the test pen series-connected to the circuit.
4. Press the “Waveform/Readout” key to display the present Current waveform.
5. Please refer to the Current measuring section for the connected pattern of the 10A Current waveform measuring.



**Waveform Auto measuring**

The waveform meter can automatically measure the Width and Frequency of the current waveform, and the test result will show on the left of the waveform display area.

The measuring result of the waveform width is a RMS value due to the direct sampling way of the multimeter. (A/D)

Press the “Auto” key and the LCD will display the stable waveform.

### **Waveform hold and storage**

The main function of waveform hold is to preserve the current waveform for the meticulous observation. Beside, to store the current waveform in the database, it needs to be hold previously.

The way to hold the waveform: press the “Storage” key and the waveform will be hold, meanwhile, it will display H0~H4 on the down right area of the LCD which indicates the sequence of the 5 groups of waveform.

### **Waveform storage and readout**

The database of the meter can accommodate 5 groups of the waveform data. Please check below for the storage operation:

1. Press the “Storage” key to enter the waveform storage function
2. Press the “Waveform/Readout” key and stay for 2 second to enter the waveform database.
3. The LCD screen will illustrate the state of the position where 5 groups of waveform listed.( H0-H4)
4. If there has data being stored in the selecting position, thumbnail and relative parameter will be displayed on the

waveform preview area. And it will display a blank coordinate instead if there is no stored data.

### **Deleting of the stored waveform**

1. Press the “Auto” key and stay at least 2 second, then the LCD will display a symbol of “recycle bin”.
2. Press the “Storage” key, LCD screen will display a symbol of “waiting”, it means the stored data is being deleted.
3. It’s unable to delete the data for a single line or single page, as a result, once you active the delete program, all the stored data (H00-H99) will be deleted.
4. When data delete program finished, it will automatically get into measuring state.

## **Technology parameter and Meter package**

### **Meter Features and Technology Parameter**

**General Features:**

Display	128 × 64 dot-matrix LCD display	Observe area	60mm x40mm
Backlight	White	Resistance	10MΩ
Batteries	AAA 1.5V × 4	Auto power off	yes
Low power warning	□	Power dissipation	Lower than 20mA
Using time expectancy	About 50 hours	Storage	100 groups DMM, 5 groups of waveform
Using condition	0°C~+40°C;<75%RH	Store condition	-10°C ~ +60°C ; <90%RH
Dimension	100 mm × 186 mm × 45mm	Weight	370g (exclude other accessories)

**Digital Multimeter Features:**





The Accuracy of all measuring range expressed as:  $\pm (a\% \text{ rdg} + \text{dgt})$  . The meter should be regulated periodically and normally once a year. It should meet below environment condition to keep the accuracy: 23°C±5°C、<75%RH



Analog bandwidth	10kHz	Max. current sampling rate	200ksps
Function	Range	Resolution	Accuracy
DC Voltage	200.0mV	0.1mV	± (0.75%rdg + 10dgt)
	2.000V	1mV	
	20.00V	10mV	
	200.0V	100mV	
	1000V	1V	± (1.5%rdg + 10dgt)
AC Voltage	200.0mV	0.1mV	± (1.0%rdg + 10dgt) 50Hz~400Hz
	2.000V	1mV	
	20.00V	10mV	
	200.0V	100mV	
	750V	1V	± (1.5%rdg + 10dgt) 50Hz~400Hz
DC Current	2mA/20mA/200mA	1μA /100μA	± (1.2%rdg + 10dgt)
	20.00A	10mA	
	200.0Ω	0.1 Ω	
	2.000kΩ	1 Ω	

Resistance	20.00k $\Omega$	10 $\Omega$	$\pm (1.0\%rdg + 5dgt)$
	200.0k $\Omega$	100 $\Omega$	
	2.000M $\Omega$	1k $\Omega$	
	20.00M $\Omega$	10k $\Omega$	$\pm (3.0\%rdg + 5dgt)$
Capacitance	20.00nF	10pF	$\pm (2\%rdg + 10dgt)$
	200.0nF	0.1nF	$\pm (1\%rdg + 3dgt)$
	20.00 $\mu$ F	10nF	$\pm (1\%rdg + 3dgt)$
	200.0 $\mu$ F	0.1 $\mu$ F	$\pm (1.5\%rdg + 3dgt)$
Frequency	2KHz~200KHz	1Hz	$\pm (1.0\%rdg + 5dgt)$ , (signal width should be no less than 2Vp-p,AC V, MAX380V)
Diode test	The open-circuit voltage is about 1.5V and the Max. measuring current is about 1.5mA		
Continuity	The detected Resistance is about 100 $\Omega$		
Remote test	38kHz Carried Frequency		
HFE	30~1000 (Check the Attachment)		
Fuse's specification	$\Phi$ 5×20, 250mA/250V		

## Displaying symbol and icon

A	Ampere	AC ~	Alternating current
COM	Measuring reference terminal(near the plug of the input reference terminal)	DC	Direct current
F	Farad(Capacitance unit)	$h_{FE}$	Magnification of the transistor
HOLD	Data/Waveform hold	Hz	Hertz (Frequency unit)
mA	Milliamp	mV	Millivolt
nF	Nanofarad (Capacitance unit)	▲	Relative value (REL)
V	Volt	$\mu F$	Microfarad (Capacitance unit)
$\Omega$	Ohm (Resistance unit)	▲ ▼	Page up/down
	Sound, Continuity test		Remaining electric power
	Diode		Safety warning (Prompt of the Harmed or the utmost voltage/current)

## The Package and Accessories

Package:

ET201 test set × 1, Double-plastic molding test pen × 1, Oxford bag × 1, Product manual × 1