I. Overview

This product is an automatic range digital multimeter with 2000 words display. The instrument is driven by battery
Move, bring true effective value.

Safety instructions:

To avoid possible clicks, fire, and personal injury, please read before using
Safety Precautions. Please use the product only for its designated purpose, otherwise it may weaken the product
For protection.
Please check the casing before using the product to check for cracks or plastic defects. Please carefully check the insulator near the input port.
Please follow the "User's Manual" and use the correct gear setting to measure within the specified range.
Do not use this product around explosive gas and biogas or in a humid environment.
'When the DC voltage to be tested is higher than 36V, or the AC voltage is higher than 25V, it may cause serious injury to the human body. Users should take care to avoid electric shock.
Please select the correct test gear and range to avoid instrument damage or personal injury. When the measured parameter exceeds the instrument range, the screen will display "OL".
When the battery voltage is low, it may affect the accuracy of the test results. Please replace the battery in time. Do not use this product when the battery back cover is not closed properly.

User Manual of Auto Range Digital Multimeter

Product Introduction
Key functions

⏻	Press and hold this key for 2 seconds to turn on/off the product. If the measurement operation is not performed within 15 minutes after turning on, the product will Automatic shutdown One minute before the automatic shutdown, the buzzer built into the product will sound five times
H / ☼	Short press the key, the product will keep the current reading on the LCD screen.
SEL NCV	Long press the key without releasing your hand will enter the NCV mode, during the measurement process Don't let go, it will exit NCV mode. In current mode, NCV measurement is not possible.
	Press the button once to turn on the flashlight, and press it again to turn it off.

Measurement methods
Measuring DC/AC voltage

1. The threshold voltage of this product is 0.8V. When the measured voltage is higher than 0.8V, this product will display the reading.
2. Insert the red test lead into the right VΩ jack, and the black test lead into the public jack.
3. AC and DC voltage can be automatically identified.
4. Use the test probe to touch the correct test point on the circuit.
5. Read the voltage value displayed on the display.

Measuring resistance

1. This product can automatically identify resistance measurement.
2. Insert the red test lead into the right VΩ jack, and the black test lead into the public jack.
3. Touch the test point of the desired circuit with a probe probe.
4. Read the resistance value measured on the display.

Test continuity

1. This product can automatically identify the continuity test.
2. Insert the red test lead into the right VΩ jack, and the black test lead into the public jack.
3. Connect the two points of the circuit to be tested with the test probe.
4. If the resistance value is less than 50Ω, the buzzer will sound, and the central indicator light of this product will be always on.

Non-contact voltage detection

1. Press and hold the NCV key to enter the NCV mode, and hold it down.
2. Move around with the product. If the built-in sensor senses an AC electromagnetic field, the buzzer built in the product will emit a "beep, beep" sound. .

Measuring current

1-1 (A type only) Insert the test lead into the current channel, the product will automatically switch to the current measurement mode, which can automatically recognize AC and DC currents. Insert the red test lead into the left mA jack,

Black test pen inserted into public jack

1-2 (Type B) Press and hold the switch key to switch the gear to the test A current display, insert the red test lead into the “mA/A/⊣⊢” jack on the left, and the black test lead into the public jack.

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2. Connect the two points of the circuit to be tested with the probe of the test lead (be careful not to directly measure the AC voltage at this position, it may cause burning of the meter).
3. Read the current value measured on the display.

note:

1) When the current above 200mA is input, the measurement time should be less than 3 seconds. (Type A only)
2) When the test lead is inserted into the current jack, no measurement is made, the product will continue to alarm every four seconds, to avoid misoperation.

Measuring capacitance (type B only)

1. The power-on display is in the automatic scanning state “----”
2. Insert the black test lead into the "COM" jack and the red test lead into the “mA/A /⊣⊢” jack
3. If you need to measure the capacitance value, you need to manually switch to the screen where F (capacitance symbol) appears

note:

1) When measuring capacitance with 10nF file, there may be residual readings on the screen display value. This number is the distributed capacitance of the test pen. It is an accurate reading. You can subtract this value after measurement;
2) When measuring large leakage or breakdown capacitance, large capacitance files will display some values and are unstable; when measuring large capacitance, the reading will take several seconds to stabilize, which is normal when measuring large capacitance
3) Before testing the capacity of the capacitor, the capacitor should be fully discharged, otherwise it will enter the voltage measurement mode.
4) Unit: 1uF =1000nF 1nF=1000pF

Technical index

General Technical Index		
Screen（LCD）		2000 counts
Range		Auto
Material		ABS/PVC
Sample Rate		3/sec
True Valid Value		√
Data Last		√
Back Light		√
Flashlight		√
Auto Shut off		√
Low Battery Warning		√
Environmental Technical Index		
Working Temperature	Temperature	0~40℃
	Temperature	<75%
Stock Environment	Temperature	-20~60℃
	Humidity	<80%

Technical index

Function	Range	Resolution	Precision	Max Value
DC Voltage (V)	200mV	0.0001V	±(0.5%+3)	600V
	2.000V	0.001V		
	20.00V	0.01V		
	200.0V	0.1V		
	600V	1V		
AC Voltage (V)	2.000V	0.001V	±(1.0%+3)	600V
	20.00V	0.01V		
	200.0V	0.1V		
	600V	1V		
AC (mA)	20mA/200mA	0.1mA	±(1.0%+3)	200mA
AC (A) B only	2A	0.001A	±(1.0%+3)	10A
	10A	0.01A	±(1.5%+3)	
DC (mA)	20mA/200mA	0.1mA	±(2.0%+4)	200mA
DC (A) B only	2A	0.001A	±(1.0%+5)	10A
	10A	0.01A	±(2.0%+3)	
Resistance	2.000kΩ	2.000 kΩ	±(1.5%+3)	20MΩ
	20.00 kΩ	20.00 kΩ		
	200.0 kΩ	200.0 kΩ	±(0.5%+3)	
	2.000MΩ	2.000MΩ		
	20.00MΩ	20.00MΩ	±(1.5%+3)	
Capacity (B only)	20.00uF	0.01uF	±(5%+3)	20000uF
	200.0uF	0.1uF		
	2.000uF	10uF		
	200.0uF	100uF		
Diode Test Temeasurement	√			
Continuity	√			
NCV	√			
frequency response under AC：40Hz~1KHz				

Digital multimeter is a precision instrument should pay attention to maintenance

1. Do not connect to a voltage higher than 600V DC or 600V AC;
2. Do not use the instrument before the cover is completely closed;
3. Replace the battery to turn off the power, please replace the new battery according to the specifications;
4. Fuse specification: A type 200mA/250V fuse;
   B type 10A/250V fuse
5. Feel free to modify the internal circuit to avoid damage.