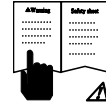
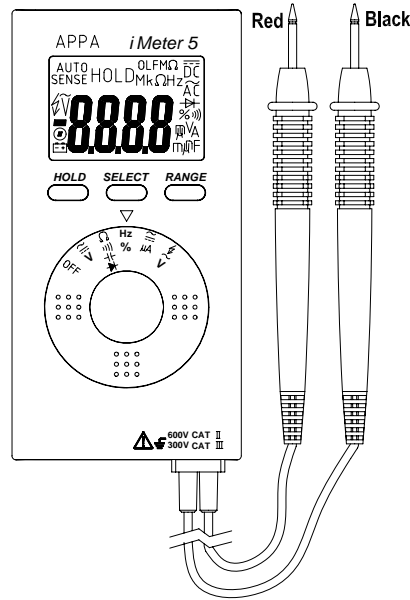




**APPA iMeter 5  
Card Meter**

*Instruction  
Card*



**Read First**



**Safety Information**

- Use the Meter only as specified in this manual or the protection by the Meter might be impaired.
- Always use proper terminals, switch position, and range for measurements.
- Do not apply more than the rated voltage, as marked on Meter, between terminals or between any terminal and earth ground.
- To avoid false readings that can lead to electric shock and injury, replace battery as soon as low battery indicator  $\text{⚡}$  appears.
- Disconnect circuit power and discharge all high-voltage capacitors before testing resistance, continuity, diodes, or capacitance.
- Do not use Meter around explosive gas or vapor.
- To reduce the risk of fire or electric shock do not expose this product to rain or moisture.

**Symbols as marked on the meter and Instruction card**

	Risk of electric shock
	See instruction card
	Equipment protected by double or reinforced insulation
	Battery
	Earth
	Conforms to EU directives
	Application around and removal from hazardous live conductors is permitted

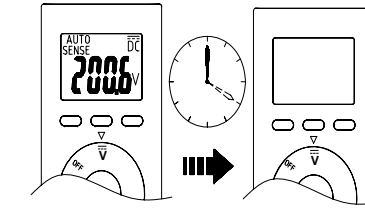
**Maintenance**

Do not attempt to repair this Meter. It contains no user-serviceable parts. Repair or servicing should only be performed by qualified personnel.

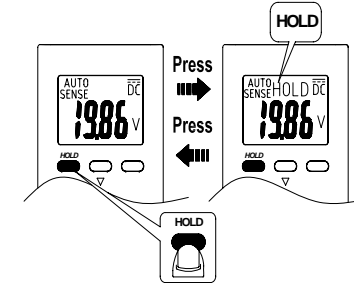
**Cleaning**

Periodically wipe the case with a dry cloth and detergent. Do not use abrasives or solvents.

**Auto Power Off**



**Display Hold**

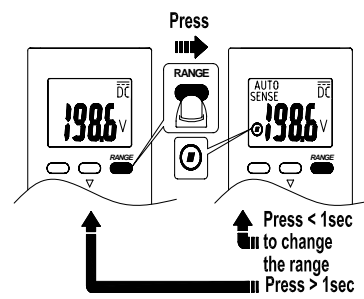


The internal sounder will operate continuously with LCD display flashing in two situations in the Data Hold mode:

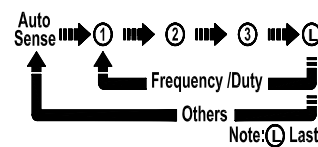
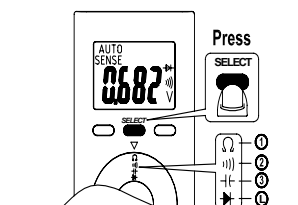
1. The Meter measure a signal different from the LCD reading.
2. The measured signal is the same unit as the LCD reading and is larger 50 counts than the LCD reading.

.1.

**Auto Range / Manual Range**



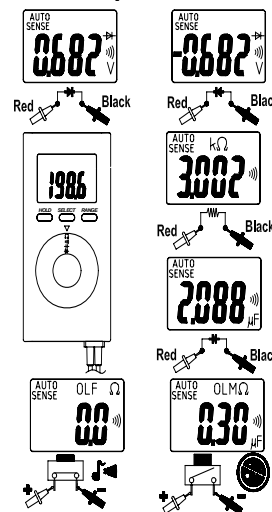
**Selecting Function**



.4.

.2.

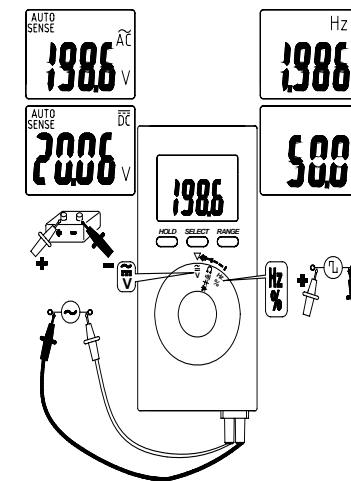
**Resistor / Capacitor / Continuity / Diode**



- For better measurement accuracy of small value capacitance, subtract the residual capacitance of the Meter and leads from measurement.
- Under diode mode, LCD displays "bad" when measuring a diode conducted at forward and reverse bias.
- LCD displays capacitance mode when no measurement at Auto-sense mode.

.5.

**AC V / DC / Hz / Duty**



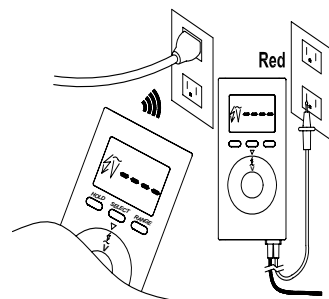
**Caution**

When connecting the test leads to the circuit or device, connect the black lead first, the connect the red lead ; when removing the test leads, remove the red lead first, then remove the black lead.

.6.

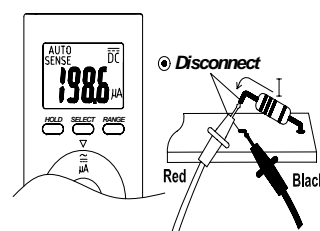
**APPA TECHNOLOGY CORP.**  
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Shin-Tien, Taipei, 23115, Taiwan.  
P.O.Box. 12-24 Shin-Tien, Taiwan.  
Tel: +886-2-29178820  
Fax: +886-2-29170848  
E-mail : info@appatech.com  
http: //www.appatech.com

### Volt Sense



- The number of dashes displaying on the LCD indicates the electric field intensity. If no indication, voltage could still be present.
- Using only red test probe to work as mains voltage indicator.

### AC A / DC A



.7.

**AC Conversion Type :** AC Coupled Average Sensing, RMS Indication.  
**Input Impedance :** 10M $\Omega$ , <100pF.  
**Overload protection :** 600V rms.

Function	Range	Resolution	Accuracy
DCV	400.0mV	0.1mV	$\pm (0.7\% + 5 D)$
	4.000V	0.001V	$\pm (0.6\% + 2 D)$
	40.00V	0.01V	
	400.0V	0.1V	
600V	1V	$\pm (0.7\% + 5 D)$	

**Input Impedance :** 10M $\Omega$ , <100pF.  
**Overload protection :** 600V rms.

Function	Range	Resolution	Accuracy
ohm	400.0	0.1	$\pm (0.9\% + 5 D)$
	4.000K	0.001K	$\pm (0.9\% + 2 D)$
	40.00K	0.01K	
	400.0K	0.1K	
	4.000M	0.001M	$\pm (1.5\% + 5 D)$
40.00M	0.01M		

**Open Circuit Voltage :** 0.4V  
**Overload protection :** 600V rms.

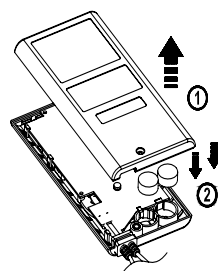
### CONTINUITY CHECK

**Continuity Threshold :** Approx. <50 $\Omega$   
**Continuity Indicator :** 2.7KHz Tone Buzzer.  
**Input Protection :** 600V rms.

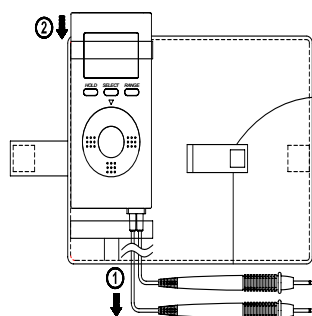
.11.

### Battery Replacement

Refer to the following figure to replace the Battery :



### Carry Case Assembling



.8.

### DIODE TEST

**Test Current :** 500 $\mu$ A (Typical)  
**Open Circuit Voltage :** 1.8V DC (max).  
**Input Protection :** 600V rms.

Function	Range	Resolution	Accuracy
Cap	40.00nF	0.01nF	$\pm (5\% + 0.4nF)$
	400.0nF	0.1nF	$\pm (2.9\% + 5 D)$
	4.000 $\mu$ F	0.001 $\mu$ F	
	40.00 $\mu$ F	0.01 $\mu$ F	
	400.0 $\mu$ F	0.1 $\mu$ F	

**Overload protection :** 600V rms.

Function	Range	Resolution	Accuracy
Hz	40.00Hz	0.01Hz	$\pm (0.3\% + 5 D)$
	400.0Hz	0.1Hz	
	4.000KHz	0.001KHz	
	40.00KHz	0.01KHz	

**Sensitivity :** > 3Vp (40KHz range)  
 > 0.4Vp (other range)

**Max.Sensitivity :** 600V

**Overload protection :** 600V rms.

.12.

## Specifications

### 1-1 General Specifications

**LCD display digits :**  
 4000 counts digit large scale LCD readout.  
**Measuring rate :** 3 times / sec.  
**Polarity Indication :**  
 Automatic, positive implied,  
**Overrange display :** "OL" or "-OL"  
**Unit symbol indication.**  
**Automatic power off time :**  
 Approximately 20 minutes after power on.  
**Low battery indicator :** is displayed.  
**Power requirement :** 1.5V x 2 batteries.  
**Battery life :** 100 hours (GPA76P)

### 1-2 Environmental Conditions

**Indoor Use.**  
**Calibration :** One year calibration cycle.  
**Operating temperature :**  
 0°C ~ 30°C ( $\leq 80\%$  RH)  
 30°C ~ 40°C ( $\leq 75\%$  RH)  
 40°C ~ 50°C ( $\leq 45\%$  RH)  
**Storage temperature :**  
 -20 to +60°C, 0 to 80% RH (batteries not fitted).  
**Temperature coefficient :** Add 0.2 x (Specified accuracy) / °C, < 18°C, > 28°C .  
**Overvoltage category :**  
 IEC 61010-1 300V CAT.III.  
 600V CAT.II.

.9.

Function	Range	Resolution	Accuracy
%	0.1 - 99.9%	0.1%	$\pm (0.5\% + 3 D)$

**Sensitivity :** 1.0Vp for 30%  $\leq$  Duty  $\leq$  70%  
 (Square Wave : 5 Hz ~ 5KHz )  
**Overload protection :** 600V rms.

Function	Range	Resolution	Accuracy
ACA	400.0 $\mu$ A	0.1 $\mu$ A	$\pm (1.5\% + 5 D)$
	4.000mA	0.001mA	

**Frequency Response :** 50 ~ 500Hz  
**AC Conversion Type :** AC Coupled Average Sensing, RMS Indication.

**Input Impedance :** Approx. 3K $\Omega$

**Overload protection :** 600V rms.

Function	Range	Resolution	Accuracy
DCA	400.0 $\mu$ A	0.1 $\mu$ A	$\pm (0.9\% + 5 D)$
	4.000mA	0.001mA	

**Input Impedance :** Approx. 3K $\Omega$

**Overload protection :** 600V rms.

.13.

### CAT. Application field

CAT.	Application field
I	The circuits not connected to mains.
II	The circuits directly connected to Low-voltage installation.
III	The building installation.
IV	The source of the Low-voltage installation.

**Operating altitude :** 2000m (6562 ft)  
**Pollution degree :** 2  
**EMC :** EN 61326-1  
**Shock vibration :** Sinusoidal vibration per MIL-T-28800E (5 ~ 55 Hz, 3g maximum).  
**Drop Protection :**  
 4 feet drop to hardwood on concrete floor.  
**Dimensions (WxHxD) :** 56 x 12 x 112mm  
**Weight :** 115g  
**Accessories :** Battery (installed), carry case and Instruction Card.

### 1-3 Electrical Specifications

Accuracy is  $\pm$ (% reading + number of digits) at 23°C  $\pm$  5°C < 80%RH.

Function	Range	Resolution	Accuracy
ACV	400.0mV	0.1mV	$\pm (1.5\% + 5 D)$
	4.000V	0.001V	$\pm (0.9\% + 5 D)$
	40.00V	0.01V	
	400.0V	0.1V	
600V	1V		

**Frequency Response :** 50 ~ 500Hz

.10.

### Limited Warranty

This Meter is warranted to the original purchaser against defects in material and workmanship for One year from the date of purchase. During this warranty period, manufacturer will, at its option, replace or repair the defective unit, subject to verification of the defect or malfunction. This warranty does not cover fuses, disposable batteries, or damage from abuse, neglect, accident, unauthorized repair, alteration, contamination, or abnormal conditions of operation or handling. Any implied warranties arising out of the sale of this product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. The manufacturer shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expense or economic loss. Some states or countries laws vary, so the above limitations or exclusions may not apply to you.

.14.