AMERICAN RECORDER TECHNOLOGIES

User's Guide

Pocket Autoranging DMM

Safety Precautions

1. Improper use of this meter can cause damage, shock, injury or death. Read and understand this users manual before operating the meter.
2. Make sure any covers or battery doors are properly closed and secured.
3. Always disconnect the test leads from any voltage source before replacing the battery or fuses.
4. Do not exceed the maximum rated input limits.

Input Limits	
Function	Maximum Input
V DC or V AC	600V DC/AC
Resistance, Diode & Continuity Test	250V DC/AC

5. Use great care when making measurements if the voltages are greater than 25VAC rms or 35VDC. These voltages are considered a shock hazard.
6. Always discharge capacitors and remove power from the device under test before performing Capacitance, Diode, Resistance or Continuity tests.
7. Remove the battery from the meter if the meter is to be stored for long periods.

Safety

International Safety Symbols

This symbol, adjacent to another symbol or terminal, indicates the user must refer to the manual for further information.

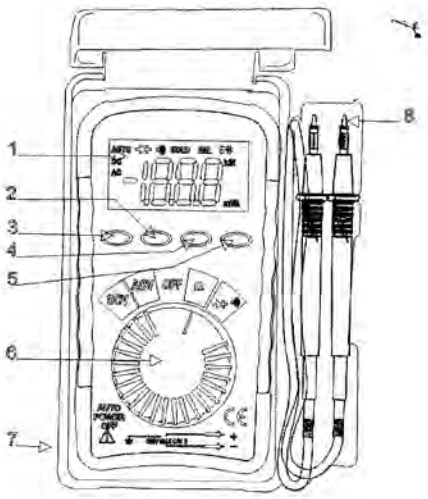
This symbol, adjacent to a terminal, indicates that, under normal use, hazardous voltages may be present.

Double insulation

Description

Meter Description

1. 3 1/2 Digit (2000 count)
2. SELECT button
3. MAX button
4. RANGE button
5. DATA HOLD button
6. Function switch
7. Plastic case
8. Test leads



Specifications

Electrical Specifications

Function	Range	Accuracy
DC Voltage	200.0mV, 2.000V, 20.00V, 200.0V, 600V	±(1.3% rdg + 3d)
AC Voltage 40-400Hz	200.0mV, 2.000V, 20.00V	±(1.0% rdg + 10d)
	200.0V, 600V	±(2.3% rdg + 5d)
Resistance	200.0Ω, 2.000kΩ, 20.00kΩ, 200.0kΩ	±(2.0% rdg + 5d)
	2.000MΩ	±(5.0% rdg + 5d)
	20.00MΩ	±(10.0% rdg + 5d)

Diode Test	Test current 1mA max., open circuit voltage of 1.5V typical
Continuity Check	Audible signal if the resistance is< 150Ω
Display	2000 count 3-1/2 digit LCD
Over range indication	LCD displays "OL"
Polarity	Minus (-) sign for negative polarity.
Low Battery Indication	"BAT" symbol indicates low battery condition.
Battery	CR2032 3V Lithium
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	14°F to 122°F (-10°C to 50°C)
Weight	1.7oz (50g)
Size	4.25x2.2x.5" (108x56x11.5mm)
Standard	IEC1010 CAT II 600V Pollution degree II, CE Approved

Operation

AC or DC Voltage Measurement

1. Set the function switch to the "**DCV**" position for DC voltage measurements, or "**ACV**" position for AC voltage measurements.
2. Touch the test probe tips to the circuit under test. Be sure to observe the correct polarity (red lead to positive, black lead to negative).
3. Read the voltage on the display

Resistance/Continuity Measurement

WARNING: To avoid electric shock, disconnect power to the unit under test and discharge all capacitors before taking any resistance measurements. Remove the batteries and unplug the line cords. Never measure continuity on circuits or wires that have voltage on them.

1. Set the function switch to the " Ω or ▶•))) " position.
2. Connect the test leads to the circuit to be measured.
3. Read the value on the display.
4. For Continuity tests, Set the function switch to the "▶•))) " position. press the SELECT button until the "•)))" symbol appears in the display.
5. If the resistance is less than 150 ohms, an audible tone will sound.

Diode Test

WARNING: To avoid electric shock, do not test any diode that has voltage on it.

1. Set the function switch to " ▶•))) "position.
2. Press the SELECT button once to enter Diode Test. The "▶" symbol will appear in the display.
3. Touch the test probe tips to the diode or semiconductor junction you wish to test. Note the meter reading.
4. Reverse the test lead polarity by reversing the red and black leads. Note this reading.
5. The diode or junction can be evaluated as follows:
   A. If one reading shows a value and the other reading shows OL, the diode is good.
   B. If both readings show OL, the device is open.
   C. If both readings are very small, or 0, the device is shorted

Features

MAX Hold

To hold the highest reading on the LCD, press the MAX hold button. The MAX hold button is located on the left side of the meter (bottom button). The meter reading will not change as readings change, rather it will only display the highest reading encountered since the MAX hold button was pressed. Press the MAX hold button again to return to normal operation.

Manual Ranging

The meter turns on in the autoranging mode. Press the Range button to go to manual ranging. Each press of the range button will step to the next range as indicated by the units and decimal point location. Press and hold the Range button for two seconds to return to autoranging. Manual ranging does not function in the Diode and Continuity check functions

Data Hold Button

The Data Hold function allows the meter to "freeze" a measurement for later reference

1. Press the "**DATA HOLD**" button to "freeze" the display, the "**HOLD**" indicator will appear.
2. Press the "**DATA HOLD**" button to return to normal operation.

Auto Power Off

The auto off feature will turn the meter off after 15 minutes.

Maintenance

WARNING: Disconnect the test leads from any source of voltage before removing the back cover or the battery/fuse door. Do not operate your meter until the rear housing is in place and fastened securely.

Replacing the Battery

1. Remove the rubber holster (if in place)
2. Remove Philips head screw and lift off the rear housing of the meter.
3. Replace old battery with fresh CR2032 type button battery.
4. Replace the rear cover and secure the screw.