

Multi Function Meter ME-1600

APPLICATIONS & FEATURES

The 5 in 1 digital multi-tester has been designed to combine the functions of Sound Level Meter, Light Meter, Humidity Meter, Temperature Meter and Digital Multimeter. It is an ideal multi-function Instrument with scores of practical applications for professional and home use.

The Sound Level function can be used to measure noise in factories, schools, offices, airports, home, etc., checking acoustics of studios, auditoriums and hi-fi installations.

The Light function is used to measure illuminance in the field. It is fully cosine corrected for the angular incidence of light. The light sensitive component used in the meter is a very Stable, long life silicon diode.

The Humidity/Temperature is for use a humidity/semiconductor sensor and K type thermocouple.

The digital Multimeter performs AC/DC Voltage, DC Current, Resistance measurement and Audible Continuity, Diode, Transistor hFE test.

Delivered with following accessories:

- Battery
- Manual

TECHNICAL DATA

Display:	1999 counts LCD display with function of Lux, oC, % and dB indication.
Polarity:	Automatic, (-) negative polarity indication.
Over-range:	"OL" mark indication.
Low battery indication:	The "BAT" is displayed when the battery voltage drops below the operating level.
Measurement rate:	1.5 times per second, nominal.
Operating environment:	0 oC to 50 oC (32 oF to 122 oF) at < 70 % relative humidity.
Storage temperature:	-10 oC to 60 oC (14 oF to 140 oF) at < 80 % relative humidity.
Power:	One standard 9V, NEDA1604 or 6F22 battery.
Dimensions:	121.5 (H) x 60.6 (W) x 40 (D) mm
Weight:	Approx.: 280g including holster.
Accuracy	is given at 18 °C to 28 °C (65 °F to 83 °F), less than 70 % RH



Sound Level

Measurement range:	35-100dB
Resolution:	0.1dB
Typical instrument frequency range:	30Hz-10KHz
Frequency Weighting:	C –weighting
Time Weighting:	Fast
Accuracy:	+3.5 dB at 94 dB sound level, 1KHZ sine wave.
Microphone:	Electric condenser microphone.

Light

Measuring Range:	200, 20,000lux (20,000lux range reading x10)
Overrate Display:	Highest digit of "1" is displayed .
Accuracy:	+5% rdg + 10 dgts (calibrated to standard incandescent lamp at color temperature 2856 k) .
Repeatability:	+ 2%.
Temperature Characteristic:	+0.1% / oC.
Photo detector:	One silicon photo diode with filter.

Humidity/Temperature

Measurement Range:	Humidity, 25%~95%RH Temperature -20°C~+200°C, -20°C~+1300°C
Resolution :	0.1% RH, 0.1°C, 1.0°C.
Accuracy (after calibration):	Humidity: + 5%RH (at 25°C, 35%-95% RH). + 6%RH (at 25°C, 10%-35% RH).
Temperature:	+3%rdg + 1°C(at -20°C~+200°C) +3.5%rdg + 5 dgts (at -20°C~+1300°C
Response Time:	humidity 45% RH→95% RH ≤10 min. 95% RH→45% RH ≤15 min. Temperature : 1°C/ 2 sec

Multimeter

DC Voltage

Range	Resolution	Accuracy
200.0mV	0.1mV	+0.5% of rdg + 2 dgts
20.00V	10mV	+0.5% of rdg + 2 dgts
600V	1V	+1.0% of rdg + 2 dgts

Input Impedance: 1MΩ.

Overload Protection: 220Vdc or ac rms. for 200mV range and 600V dc or 600V ac rms. for other ranges.

AC Voltage

Range	Resolution	Accuracy
200.0V	100mV	+1.2%of rdg + 10dgts
600V	1V	+1.2%of rdg + 10dgts

Input Impedance: 1MΩ

Frequency Range: 45 to 450Hz

Maximum Input: 600V dc or 600V ac rms.

DC Current

Range	Resolution	Accuracy
200.0uA	0.1uA	+1.0% of rdg + 2 dgts
200.0mA	100uA	+1.2% of rdg + 2 dgts
10A	10mA	+2.0% of rdg + 5 dgts

Overload Protection: 0.2A / 250V fuse (10A range unfused).

Measuring voltage drop: 200mV.

Resistance

Range	Resolution	Accuracy
200.0Ω	0.1Ω	+0.8% of rdg + 4 dgts
2.000kΩ	1Ω	+0.8% of rdg + 2 dgts
200.0kΩ	100Ω	+0.8% of rdg + 2 dgts
2.000MΩ	1kΩ	+1.0% of rdg + 2 dgts

Overload Protection: 15 seconds maximum 250V dc or 250V ac rms. on all ranges.

Maximum open circuit voltage: 2.8V.

Transistor h_{FE}

Range: 0~1000

Base current: 10 μA dc approx. (Vce=2.8V dc)

Diode and Continuity check

Diode: Test current 1.4mA dc and open circuit voltage 2.8V dc.

Continuity:

Built in Buzzer will be sound if the circuit resistance is less than 100Ω

Overload Protection: 15 seconds maximum 250V dc or 250V ac rms.