

3. OPERATION

1) DC Volts measurement (DCV)

- a. Set the FUNCTION switch to the DCV, and select a proper range, if the Volts is unknown, set the FUNCTION switch to the highest range and work down.
- b. Connect the test lead to the circuit.

2) DC current measurement (DCA)

- a. Set the FUNCTION switch to the DCA, and select a proper range.
- b. Connect the test lead in series to circuit.

3) AC Volts measurement (ACV)

- a. Set the FUNCTION switch to ACV, and select a proper range.
- b. Connect the test lead to circuit.

4) Resistance measurement (Ω)

- a. Set the FUNCTION switch to Ω , and select a proper range.
- b. Connect the test lead to circuit.

5) Battery Check (9V)

- a. Set the FUNCTION switch to 9V.
- b. Connect the test lead to Battery.



6) Transistor measurement (hFE)

- a. Set the FUNCTION switch to hFE.

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- b. Determine whether the transistor is NPN or PNP and locate the Emitter, Base and Collector leads. Insert the leads into the proper holes in the socket on the front panel.


7) Diode and Audible Continuity test

- a. Set the FUNCTION switch to  or .
- b. Connect the test lead to the Diode, circuit or resistance.

4. MAINTENANCE

Your digital Multimeter is a precision electronic device. Do not tamper with circuitry.

To avoid damage:

- a. Never connect more than 400 Volts DC/AC rms.
- b. Never connect a source of voltage with Function Switch in Ω position.
- c. Never operate the DMM unless the battery cover is in place and fully closed.
- d. Battery replace should only be done after the test leads have been disconnected and POWER IS OFF.
- e. Replace the Battery if the indicator  is display on the LCD, or the accurate is no granted.

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M017

MINI DIGITAL MULTIMETER

FOR:

DT83A

DT83B

DT83C

OPERATOR'S MANUAL

WARNING: READ AND UNDERSTAND
THIS MANUAL BEFORE USING
THE INSTRUMENT.

1. GENERAL CHARACTERISTICS

DT83 instruments are a series of compact pocket-sized and integration design 3½ digit multimeters for measuring DC and AC Voltage, DC current, resistance and diode. Some of those also provide transistor measurement and audible continuity test function and battery check. They are ideal instruments for use in fields, such as hobby, home and DIYs user applications.

Maximum Display: 1999

Polarity indication: Auto

Over range: "1" Figure only in the display

Operating Temperature: 0°C to 40°C

Storage Temperature: -15°C to 50°C

Power Supply: 12V(23A)

Size: 100*57.6*21 mm

Weight: 80g(including 12V battery)

2. SPECIFICATIONS

Accuracies are $\pm(\% \text{reading} + \text{No. of digits})$ Granted for 1 year, 23°C $\pm 5^\circ\text{C}$ less than 75%RH.

1) DC Voltage

Range	Accuracy	Resolution
200mV	$\pm(0.5\% + 3)$	100uV
2000mV	$\pm(1.0\% + 5)$	1mV
20V		10mV
200V		100mV
400V	$\pm(1.2\% + 5)$	1V

Input impedance: 1M Ω

Maximum input Voltage: 400V DC or peak AC

2) DC Current

Range	Accuracy	Resolution
2000uA	$\pm(2.0\% + 2)$	1uA
20mA		10uA
200mA		100uA

3) Resistance

Range	Accuracy	Resolution
200 Ω	$\pm(1.0\% + 10)$	0.1 Ω
2000 Ω	$\pm(1.0\% + 4)$	1 Ω
20K Ω		10 Ω
200K Ω		100 Ω
2000K Ω		1K Ω

Overload protection: 250V DC/AC rms

Open circuit voltage: less than 2.8V

4) AC Voltage

Range	Accuracy	Resolution
200V	$\pm(2.0\% + 10)$	100mV
400V		1V

Frequency Range: 40 ~ 200Hz



Maximum input voltage: 400 rms AC

Indication: Average (rms of sine wave).

5) Battery Check (9V) (DT83A, DT83B only)

Check 9V Battery bearing power.

6) Diode and Audible Continuity test

Range	Description	Test Condition
	Display read approx forward voltage of diode	Forward DC current approx 1mA. Reversed DC voltage approx 2.8 Volts.
	Built-In buzzer sounds if resistance is less than approx 30 Ω	Open circuit Voltage approx 2.8 Volts

7) Transistor Measurement (DT83C only)

Base current approx 10uA, Vce approx 2.8V

Display range: 0 ~ 1000