

connected the prods to the diode, display shows over-load.

2.5 CONTINUITY CHECK

1. Connect the BLACK test lead to the "COM" socket and RED test lead to the "V Ω mA" socket.
2. Set the selector switch to \odot position.
3. Connect the prods across the circuit to be tested, if the resistance is less than approx. 400ohm, buzzer will be activated.

3. FITTING AND REPLACING THE BATTERY AND FUSE

1. Ensure that the instrument is not connected to any external circuit, set the selector switch to "OFF" position and remove the test leads from the terminals.
2. Remove the screws on the bottom of the case and lift bottom case.
3. Replace the battery or fuse with the same type and rating.
4. Replace the bottom case, tighten the securing screws.

**Rapid
Electronics**

208 Digital
Multimeter

Order code 85-0676

Operation Manual

Rapid Electronics

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208 Digital Multimeter

Operation Manual

1. SPECIFICATION

1.1 GENERAL SPECIFICATIONS

Display:	3½ digit LCD with a max. reading of 1999
Polarity:	Automatic (-) negative polarity indication
Zero adjustment:	Automatic
Over-range indication:	Only the Most Significant Digit "1" displayed
Power:	Single, standard 9-volt battery, NEDA 1604 IEC 6F 22
Dimensions:	68.5 (W) x 124.5 (H) x 27 (D) mm
Weight:	Approx 250g (including battery)

1.2 ELECTRICAL SPECIFICATIONS

Accuracies are \pm (% of reading + number of digits) at $23^{\circ} \pm 5^{\circ}\text{C}$, $< 75\% \text{ RH}$.

DC Voltage		Resistance	
200mV, 2V, 20V,		200ohm, 2kohm,	
200V, 1000V:	$\pm 0.8\% + 1$	20kohm, 200kohm:	$\pm 1.0\% + 3$
Impedance:	1Mohm	2000kohm:	$\pm 1.2\% + 5$
AC Voltage		Overload protection:	250V DC/AC
200V, 750V:	$\pm 1.2\% + 10$	Diode	
Impedance:	450kohm	Test current:	1.0 \pm 0.6mA
Frequency response:	40 Hz - 400 Hz	Test voltage:	Approx. 2.4V
DC Current		Audible Continuity	
200µA, 2000µA, 20mA:	$\pm 1.0\% + 2$	Buzzer sounds when resistance less	
200mA:	$\pm 1.2\% + 2$	than approx. 400ohm.	
10A:	$\pm 2.0\% + 5$		
Overload protection:	Fast 0.2A/250V fuse		

2. OPERATION

WARNING

1. When measuring voltage ensure that the instrument is not connected or switched to a current or resistance, or to the diode check/continuity range. Always ensure that the correct terminals are used for the type of measurement to be made.
2. Use extreme care when measuring voltage above 50V, especially from sources where high energy exists.
3. Avoid making connections to "live" circuits whenever possible.
4. When making current measurements ensure that the circuit is not "live" before

opening it in order to connect the test leads.

5. Before making resistance measurements or continuity/diode test, ensure that the circuit under test is de-energised.
6. Always ensure that the correct function and range is selected. If in doubt about the correct range, start with the highest and work downwards.
7. Extreme care should be taken when using the instrument in conjunction with a current transformer connected to the terminals. High voltage may be produced at the terminals if an open circuit occurs.
8. Ensure that the test leads and prods are in good condition with no damage to the insulation.
9. Take care not to exceed the over-load limits as given in the specifications.
10. FUSE FOR REPLACEMENT MUST BE OF THE CORRECT TYPE AND RATING.
11. Before opening the case of the instrument to replace the battery or fuse, disconnect the test leads from any external circuit, set the selector switch to "OFF" position.

2.1 DC AND AC VOLTAGE MEASUREMENT

1. Connect the BLACK test lead to the "COM" socket and RED test lead to the "VΩmA" socket.
2. Set the selector switch to the desired DC V or AC V position and connect the test prods across the source or load under measurement.

2.2 DC CURRENT MEASUREMENT

1. Connect the BLACK test lead to the "COM" socket and RED test lead to the "VΩmA" socket for measurements up to 200mA.
2. Set the selector switch to the desired current range position.
3. Connect the prods in series with the current source to be measured.
4. For current measurement from 200mA to 10A follow generally the above procedure but connect the RED test lead to "10A" socket.

2.3 RESISTANCE MEASUREMENT

1. Connect the BLACK test lead to the "COM" socket and RED test lead to the "VΩmA" socket.
2. Set the selector switch to the desired resistance range position.
3. Connect the prods across the circuit to be measured.

Caution: Ensure that the circuit to be tested is "dead".

Max. input over-load : 250V rms $<$ 10 sec.

2.4 DIODE TEST

1. Connect the BLACK test lead to the "COM" socket and RED test lead to the "VΩmA" socket.
2. Set the selector switch to \rightarrow position.
3. Connect the BLACK and RED test prods to the cathode (-) and anode (+) ends of the diode to be tested respectively.
4. Read the forward voltage drop (junction) value from the display. If reverse