

# TRACEABLE® MULTIMETER INSTRUCTIONS

## Specifications

<b>AC Voltage</b>	<b>Range</b>	<b>Resolution</b>	<b>Accuracy</b>
	3V	1mV	$\pm 2.0\% + 3$ digits
	30V	10mV	$\pm 2.0\% + 3$ digits
	300V	100mV	$\pm 2.0\% + 3$ digits
<b>DC Voltage</b>	<b>Range</b>	<b>Resolution</b>	<b>Accuracy</b>
	300mV	100uV	$\pm 1.2\% + 2$ digits
	3V	10mV	$\pm 0.5\% + 2$ digits
	300V	100mV	$\pm 1.2\% + 2$ digits
<b>Resistance</b>	<b>Range</b>	<b>Resolution</b>	<b>Accuracy</b>
	750v	1V	$\pm 2.0\% + 4$ digits
	300Ω	0.1Ω	$\pm 1.2\% + 3$ digits
	3KΩ	1Ω	$\pm 1.2\% + 3$ digits
	30KΩ	10Ω	$\pm 1.2\% + 3$ digits
	300KΩ	100Ω	$\pm 1.2\% + 3$ digits
<b>Continuity</b>	<b>Range</b>	<b>Frequency</b>	<b>Accuracy</b>
	3MΩ	1KΩ	$\pm 1.2\% + 3$ digits
	30MΩ	10KΩ	$\pm 3.0\% + 5$ digits
	Buzzer	4.1KHz	$<20\Omega \pm 10\Omega$
<b>Diode</b>	<b>Max</b>	<b>Resolution</b>	<b>Accuracy</b>
	0.8mA	1mV	$\pm 8.0\% + 2$ digits
<b>Battery</b>	<b>Range</b>	<b>Resolution</b>	<b>Load</b>
	1.5V	1mV	1.5mA
	9V	10mV	9mA

**Maximum display:** 1999

**Range:** Auto-range

**Indicator:** Bar graph

**Maximum Display Count:** 3200

**Display:** LCD, 4-digit  $\frac{5}{8}$ "

**Features:** Data hold, low battery alert, auto power off

**Power:** Two 1.5V batteries

**Size:**  $4\frac{1}{4} \times 2\frac{1}{2} \times \frac{3}{8}$  inches

**Accessories** red and black test leads, red and black alligator clip leads,

**Supplied:** batteries, protective case, Traceable® Certificate, instructions

## Description

1. Display
2. DATA HOLD/RESET Button
3. Function Dial
4. Positive Jack
5. Negative Jack
6. Continuity Buzzer Sound On/Off
7. AC Voltage
8. DC Voltage
9. Battery test
10. Continuity/Diode
11. Resistance



Figure 1

## PROBES

Select either the probe test leads or the clip leads. Plug the red test leads into the positive "+" jack and the black test lead into the negative "-" jack (4 and 5 Fig. 1).

## AUTO-OFF

If the reading has not changed for ten minutes the unit provides warning beeps and then automatically turns off to conserve battery life. To turn the unit back on and resume readings press the RESET button (2, Fig. 1).

## ACV/DCV/BATTERY/OHM MEASUREMENT

1. Turn the function switch to AC, DC BATTERY, or OHM function (7, 8, 9, or 11, Fig. 1).
2. Touch or connect leads to the desired circuit and read the display.

## CONTINUITY/DIODE MEASUREMENT

1. Turn the function switch to the Continuity/Diode function (10 Fig. 1).
2. Press the Continuity Buzzer Sound On/Off button (6 Fig. 1), until the sound ON signal is shown on the display ".)))"
3. For Continuity measurement connect the leads across the desired circuit and read the display. If the impedance of the circuit is less than 20 ohms then the buzzer will sound.
4. For Diode measurement connect the red test lead to the positive "+" pole of the diode and the black test lead to the negative "-" pole of the diode. Read the forward voltage drop on the display.

## BATTERY READINGS

1. Turn the function switch to the Battery function (9, Fig. 1).
2. Touch or connect leads to the battery and read the display.
3. Incorporated in the circuitry is a resistive load to test batteries.

## HOLD

Press the D-HOLD (Display-Hold) button (2, Fig. 1) to "freeze" the display and capture a reading. Press it again to release the "freeze" and return to the current reading.

## LOW BATTERY

The appearance of the low battery signal, " ", erratic readings, a faint display, or no display are all indicators that the battery is low and needs to be replaced. To prevent electrical shock, do not remove the battery when the test leads are in place. To replace the battery, remove the battery cover located on the back of the unit and insert two new 1.5V batteries with the positive side facing you (Control Company Cat. No. 1039). Incorrectly installed batteries may damage electronics. Replace the Battery Cover. To prolong the life of the unit, remove the batteries when the unit is not in use for an extended period.

## ALL OPERATIONAL DIFFICULTIES

If this multimeter does not function properly for any reason, please properly replace the battery with two new 1.5V batteries (see Low Battery section, above). Low battery power can occasionally cause any number of "apparent" operational difficulties. Replacing the battery with a new fresh battery will solve most difficulties.

## WARNINGS

Do not exceed 750 volts when in the AC or DC function. Do not exceed 500 volts when in all other functions. OL on the display means over range. Before testing in ohms or continuity/diode, OL will be on the display. To avoid electrical shock, never touch your body to the metal part of the test lead when making a measurement. Do not use the OHM or Continuity/Diode functions to test voltage. It may damage the meter's electronics.

## WARRANTY, SERVICE, OR RECALIBRATION

For warranty, service, or recalibration, contact:

## CONTROL COMPANY

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Control Company is ISO 9001 Quality-Certified by DNV and ISO 17025 accredited as a Calibration Laboratory by A2LA.