(2) DC/AC Current Measurement
1. Connect red test lead to "V" input jack for current measurement up to 250mA, and black one to "COM".
2. Set range/function switch to desired "DC" or "AC" current position. If magnitude of current is not known, set range/function switch to the highest range and reduce until satisfactory reading is obtained.
3. Open the circuit to be measured, and connect test leads in series with the load in which current is to be measured.
4. Read current value on digital display.
5. Turn off all power to the circuit being tested and discharge all capacitors prior to disconnection of test leads.
6. To measure in the 10A range, use the "10A" jack as input jack. Be sure to measure within 10 seconds to avoid high-current hazard.

(3) Resistance Measurement
1. Connect red test lead to "V - Ω" input jack and black one to "COM".
2. Set range/function switch to desired "Ω" position.
3. If the resistance being measured is connected to a circuit, turn off power to the circuit being tested and discharge all capacitors.
4. Connect test leads to the circuit being measured. Whenever measuring high resistance, be sure not to contact adjacent points even if isolated, because some resistors have a relatively low insulation resistance, causing the measured resistance to be lower than the actual resistance.
5. Read resistance value on digital display.

(d) Diode Test
1. Connect red test lead to "V - Ω" input jack and black one to "COM".
2. Set range/function switch to "1" (same as 100 Ω resistance range).
3. If the semiconductor junction being measured is connected to circuit, turn off power to circuit being tested and discharge all capacitors.
4. Connect test leads to the device and read forward voltage on digital display.
5. If the digital display reads current (1), reverse the lead connections. The placement of test leads when forward reading is displayed indicates the orientation of diode. The red lead is positive and the black lead is negative. If overrange is displayed with both lead connections, the junction is open.

(i) Continuity Test
1. Connect red test lead to "V - Ω", and black one to "COM".
2. Set range/function switch to "10000" (same as 2000 resistance range).
3. Buster sounds if the resistance between two leads is less than approx. 10 ohms.

(ii) Signal Injector
1. Connect black test lead to the "COM" and red one to the "V - Ω" input jack.
2. Set range/function switch to the signal injector position (100 mV).
3. Sound test or oscilloscope.

4. Operation Maintenance
4-1 Battery & Fuse Replacement

**CAUTION**
BEFORE ATTEMPTING BATTERY REMOVAL OR REPLACEMENT, DISCONNECT TEST LEADS FROM ANY ENERGIZED CIRCUITS TO AVOID SHOCK HAZARD.
Fuse rarely needs replacement and blows almost always as a result of operator error. To replace Battery & Fuse remove the 3 screws in the bottom of the case. Simply replace the old, and replace with a new one. Be sure to observe polarity when replacing battery.

4-2 Calibration Procedure
It is normally not necessary to restandardize for long intervals. If needed, adjustment should be done with high accuracy standards (better than 0.1% accuracy). Remove the 2 Phillipshead screws. Carefully release the plastic back cover. With the instrument operating, set to the 100mA DC range, apply 100mA DC from an accurate source. With a small screwdriver inserted into the test jack, slowly turn the variable resistor into the reading until the reading reads 100mA.

5. SAFETY SYMBOIS

![WARNING](image)
This symbol denotes a hazard. It calls attention to a procedure, practice or the like, which if not correctly performed or adhered to, could result in personal injury.

![CAUTION](image)
This symbol denotes a hazard. It calls attention to a procedure, practice or the like, which if not correctly performed or adhered to, could result in damage or destruction of part or all of the instrument.

![SOOT MARK](image)
This symbol is to be used in association with hazards that may in normal use be subjected to particularly hazardous voltages. For example, safety, the instrument and its test leads should not be handled when these terminals are energized.

**WARNING**
READ AND UNDERSTAND THIS MANUAL BEFORE USING THE INSTRUMENT.
Failure to understand and comply with the WARNING and operating instructions can result in serious or fatal injuries and/or property damage.
1. FEATURES
- Wide measurement range: 27 ranges for AC/DC Voltage & Current, Resistance, Diode Test.
- AC Voltage
  - Range: 200mV, 10mV, 1V, 10V, 20V, 200V, 750V
  - Accuracy: ±1.5% of Full Scale
  - Maximum Input: 100mA

2. SPECIFICATIONS
2-1 General Specifications
- Display: LCD 0.8" x 15", max. reading of 9999.
- Pointer: Automatic "-" sign for negative polarity.
- Overrange Indication: Highest digit of "1" or "-1" is displayed.
- Operating Temperature: 0°C to 50°C
- Storage Temperature: -20°C to 50°C
- Power: 4 x 1.5V alkaline batteries (included)
- Battery Life: Approx. 1000 hours
- Dimensions: 171 x 81 x 36 mm
- Weight: Approx. 250g

2-2 Measurement Ranges (Accuracy: 1 Year, 10°C to 20°C)
- DC Voltage
  - Range: 200mV, 10mV, 1V, 10V, 20V, 200V, 750V
  - Accuracy: ±1.5% of Full Scale

NORMAL MODE REJECTION RATIO: greater than 60dB at 50Hz, 60Hz (1K ohms)

3. Operation
3-1 Preparation and Caution before measurement.
1. If the function must be switched during a measurement, always remove the test leads from the circuit being measured.
2. If the unit is used near noise generating equipment, be aware that the display may become unstable or indicate large errors.
3. Avoid using the unit in places with rapid temperature variations.
4. In order to prevent damage or injury to the unit, never fail to keep the maximum tolerable voltage and current, especially for the 10A current range.
5. Carefully inspect test lead. If damaged, discard and replace.

3-2 Panel Description
1. LCD Display
2. Rotary/Function switch
3. 10A input jack

4. OPTION
Signal Injector
- Frequency: 50 Hz square wave, 5V peak to peak voltage (10K ohm loading)
- Continuity Test
  - Range: Continuityeeper Response Time
  - 2mA 10s 40kHz
  - 10mA 100ms 10kHz

 option signal injector, buzzer, temperature.
- Method of Measurement
1. Connect test leads to "V/O" input jack and black one to "COM" jack.