



#61-796

# Earth Ground Resistance Tester Instruction Manual

## 796 FEATURES

- Measures ground rod resistance using 3-poles
- Measures earth voltage
- Does not trip ground fault breakers in the circuit under test
- Includes test leads and electrodes
- 0Ω adjustment
- Data hold
- Low battery indicator



## Read First: Safety Information

Understand and follow operating instructions carefully. If this tester is not used in a manner specified by IDEAL, protection provided by the product may be impaired.

## WARNING

To avoid possible electric shock, personal injury or death, follow these instructions:

- Do not use if tester appears damaged. Visually inspect the tester to ensure case is not cracked and back case is securely in place.
- Inspect and replace leads if insulation is damaged, metal is exposed, or probes are cracked. Pay particular attention to the insulation surrounding the connectors.
- A shock hazard exists during normal testing as a voltage is present across the measuring terminals.
- Do not use tester if it operates abnormally as protection maybe impaired.
- Do not use during electrical storms or in wet weather.
- Do not use around explosive gas, dust, or vapor.
- Do not use tester on energized circuits.
- Do not use without the battery and the back case properly installed.
- Replace battery as soon as the low battery indicator “” appears to avoid false readings.
- Remove the test leads from unit prior to removing battery cap.
- Use the proper terminals, function and range for your measurements.
- Do not attempt to repair this unit as it has no user-serviceable parts.
- Comply with local and national safety requirements, including the use of appropriate personal protective equipment.

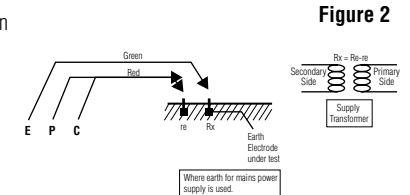
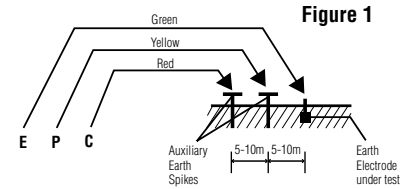
## CAUTION

To protect yourself, think “Safety First”:

- Voltages exceeding 30VAC or 60VDC pose a shock hazard so use caution.
- Use appropriate personal protective equipment such as safety glasses, face shields, insulating gloves, insulating boots, and/or insulating mats.
- Never ground yourself when taking electrical measurements.
- Always work with a partner.
- When using the probes, keep fingers as far behind the probe tips as possible.


## Operating Instructions

- Before proceeding with measurement, if the “” symbol appears on the display, replace with new batteries.
- Short the tips of the leads. Adjust the 0Ω. ADJ control to set the reading to zero.
- Rotate the function switch to the “EARTH VOLTAGE” position and press to test. Earth voltage will be displayed on the LCD. If earth voltage is more than 10V, an inaccurate reading may be obtained.
- Precision earth resistance measurement method:
  - (1) Connect the green, yellow and red test leads to instrument terminals E, P and C with auxiliary earth spikes P1, C1 placed into the soil “IN A STRAIGHT LINE”. (Fig. 1)
  - (2) Rotate the function switch to a suitable range then press the pushbutton to test and take the reading.
- Simplified earth resistance measurement method
  - (1) This method is recommended where an earth resistance higher than 10Ω is measured or where it is not possible to drive auxiliary earth spikes. An approximate value of earth resistance can be obtained by the two wire system shown in Fig. 2.
  - (2) Rotate the function switch to “EARTH VOLTAGE” position and press to test. Make certain that earth voltage is less than 10V.
  - (3) First rotate the function switch to the “200Ω” position and press to test. Read earth resistance. If the display shows “1” (MSD), switch to the “2KΩ” position and read earth resistance.
  - (4) The reading obtained (Rx) is an approximate earth resistance value. There is no need for external shorting as P and C terminals are shorted by using the test leads specified for the simplified measurement.



- \* **Follow the proper connection as shown in Fig. 1. The LED (red) indicator will light. This indicates that a correct current flow is taking place.**

### Battery replacement:

When the symbol " appears on the display, replace with new batteries as follows:

- Disconnect the test leads from the instrument and turn off the power.
- Unscrew the cover, then slide the cover, take out the batteries and replace with new batteries, type AA.
- Replace back cover and secure with 2 screws.
- If the meter is not to be used for periods of longer than 60 days, remove the batteries and store them separately.

### Maintenance:


Clean the case with a damp cloth and mild detergent : do not use abrasives or solvents.

### Service and Replacement Parts:

This unit has no user-serviceable parts.

For replacement parts or to inquire about service information, contact IDEAL INDUSTRIES, INC. at 1-877-201-9005 or visit our website [www.testersandmeters.com](http://www.testersandmeters.com).

### SPECIFICATIONS

|                         |  |
|-------------------------|--|
| Measurement System:     | Operating Frequency - 820Hz, 2mA approx.   |
| Earth resistance:       | Range: 20/200/2000 $\Omega$  |
| Resolution:             | 0-19.99 $\Omega$ (0.01 $\Omega$ )<br>0-199.9 $\Omega$ (0.1 $\Omega$ )<br>0-1999 $\Omega$ (1 $\Omega$ )                             |
| Earth voltage:          | 0-200V AC, 40-500Hz  |
| Accuracy:               | Earth resistance: $\pm(2\% \text{reading} \pm 2 \text{digits})$ or $\pm 0.1\Omega$ , whichever is greater.                         |
| Earth voltage:          | $\pm(1\% \text{reading} \pm 2 \text{digits})$  |
| Display:                | LCD 3½ digit (2000 counts)   |
| Low battery indication: | "  " Symbol appears on the display.               |
| Data hold indication:   | " <b>HOLD</b> " Symbol appears on the display.   |
| Over range indication:  | " 1 " (MSD).   |
| Safety standard:        | IEC/EN 61010-1, Installation CATIII - 200V.  |
| Power source:           | (8) 1.5V (AA) batteries required.  |
| Dimensions:             | 8.3"Hx8.3"Wx4.0"D (210mmLx210mmWx100mmD)   |
| Weight:                 | Approx. 3 Lbs(1361g) (batteries included).   |
| Accessories included:   | Hard Case, Test leads (red-33m, yellow-33m, green-5m), 2 Auxiliary earth spikes, simplified measurement probe, Instruction manual. |



Double Insulation

Instrument has been evaluated and complies with insulation category III (overvoltage category III). Pollution degree 2 in accordance with IEC-644. Indoor use.

### Dispose of waste electrical and electronic equipment



In order to preserve, protect and improve the quality of environment, protect human health and utilize natural resources prudently and rationally, the user should return unserviceable product to relevant facilities in accordance with statutory regulations. The crossed-out wheeled bin indicates the product needs to be disposed separately and not as municipal waste.

### Disposal of used batteries/accumulators!



The user is legally obliged to return used batteries and accumulators. Disposing used batteries in the household waste is prohibited! Batteries/accumulators containing hazardous substances are marked with the crossed-out wheeled bin. The symbol indicates that the products forbidden to be disposed via the domestic refuse. The chemical symbols for the respective hazardous substances are Cd = Cadmium, Hg = Mercury, Pb = Lead. You can return used batteries/accumulators free of charge to any collecting point of your local authority, our stores, or where batteries/accumulators are sold. Consequently you comply with your legal obligations and contribute to environmental protection.



### Warranty Statement:

This tester is warranted to the original purchaser against defects in material and workmanship for two years from the date of purchase. During this warranty period, IDEAL INDUSTRIES, INC. will, at its option, replace or repair the defective unit, subject to verification of the defect or malfunction. This warranty does not cover fuses, batteries or damage from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the instrument.

Any implied warranties arising out of the sale of an IDEAL product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. The manufacturer shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss.

State laws vary, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.