R5700

REED INSTRUMENTS

Ground Resistance Tester

WARRANTY 1 YEAR WARRANTY

Instruction Manual

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Introduction

Thank you for purchasing your REED R5700 Ground Resistance Tester. Please read the following instructions carefully before using your instrument. By following the steps outlined in this manual your meter will provide years of reliable service.

Product Quality

This product has been manufactured in an ISO 9001 facility and has been calibrated during the manufacturing process to meet stated product specifications. If a certificate of calibration is required please contact the nearest authorized REED distributor or authorized Service Center. Please note an additional fee for this service will apply.

Safety

- Never attempt to repair or modify your instrument. Dismantling your product, other than for the purpose of replacing batteries, may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.
- Be aware of your surroundings, environment and measurement scope.
- If the instrument applies to ground resistance testing instead of current power frequency wire it will affect the clamps magnetic property and the accuracy of measurement.
- Before turning on the unit, press on the trigger a couple of times to confirm it can properly open and close.
- Do not press the trigger or clamp any wires when turning on the instrument.
- Only clamp the tested desired object after the display shows "OL Ω".
- Keep the contact surface of the jaws clean and refrain from using harsh cleaning products.
- When taking measurements the instrument will sporadically "hum".
- Do not exceed the max measurements.
- If instrument will not be used for a prolonged amount of time, remove the battery.
- If something is damaged, immediately stop using the instrument.

Features

- Auto-ranging ground resistance and leakage current measurements
- 0.001Ω resolution for low resistance measurements
- 9999-count backlit LCD display
- Internal memory stores up to 99 readings
- User adjustable alarms
- Data hold function
- Durable double molded conductor clamp
- 1.26" (32mm) jaw size for large ground rods
- Low battery indicator and auto shut off
- Cat. III 300V safety rating

Included

- 2 Resistance Calibration Loops (1Ω and 10Ω)
- Hard Carrying Case
- Batteries

Specifications

Ground Resistance

Ranges:	0.010 to 0.099Ω
	0.10 to 0.99Ω
	1.0 to 49.9Ω
	50.0 to 99.5Ω
	100 to 199Ω
	200 to 395Ω
	400 to 590Ω
	600 to 880Ω
	900 to 1200Ω
Accuracy:	0.010 to 0.099Ω: ±(1%+0.01Ω)
	0.10 to 0.99Ω: ±(1%+0.01Ω)
	1.0 to 49.9Ω: ±(1%+0.1Ω)
	50.0 to 99.5Ω: ±(1.5%+0.5Ω)
	100 to 199Ω: ±(2%+1Ω)
	200 to 395Ω: ±(5%+5Ω)
	400 to 590Ω: ±(10%+10Ω)
	600 to 880: ±(20%+20Ω)
	900 to 1200Ω: ±(25%+30Ω)
Resolution:	0.001Ω
	0.01Ω
	0.1Ω
	1Ω
	0.5Ω
	1Ω
	5Ω
	10Ω
	20Ω
	30Ω

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Current

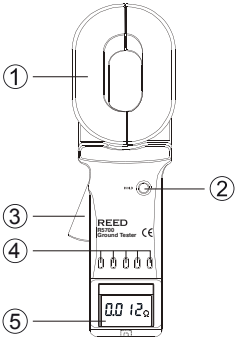
Ranges:	0 to 9.95A 10 to 99mA 100 to 300mA 0.30 to 2.99A 3 to 9.9A 10 to 30A
Accuracy:	0 to 9.95A: ±(2.5%+1mA) 10 to 99mA: ±(2.5%+5mA) 100 to 300mA: ±(2.5%10mA) 0.30 to 2.99A: ±(2.5%+0.1A) 3 to 9.9A: ±(2.5%+0.3A) 10 to 30A: ±(2.5%+0.5A)
Resolution:	0.5mA, 0.1mA, 1mA, 0.01A, 0.1A, 0.1A

General Specifications

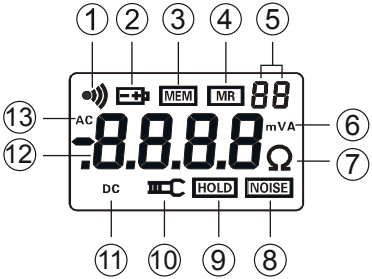
Range Selection:	Autoranging
Sampling Time:	0.5 seconds
Display:	9,999 count LCD display
Backlit LCD:	Yes
User Selectable Alarms:	Yes
Display Hold:	Yes
Internal Memory:	Yes up to 99 data points
Autoshut Off:	Yes (after 5 minutes)
Power Supply:	4 x AA Batteries
Over Range Indicator:	Yes
Low Battery Indicator:	Yes
Jaw Opening:	1.26" (32mm)
Overvoltage Category:	CAT. III 300V
Product Certifications:	CE, RoHS
Operating Temperature:	32 to 131°F (0 to 55°C)
Operating Humidity:	10 to 90%
Storage Temperature:	-4 to 140°F (-20 to 60°C)
Dimensions:	11.2 x 3.3 x 2.2" (285 x 85 x 56mm)
Weight:	2.6lbs (1160g)

Instrument Description

1. Clamp Jaw Assembly
2. Data Hold Button
3. Measurement Trigger
4. Multi-Function Buttons
5. LCD Display



Display Description

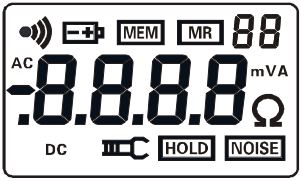


1. Alarm Indicator
2. Low Battery Indicator
3. Internal Memory Full Indicator
4. Data Inquiry Indicator
5. Number of Stored Values
6. Current, Voltage Measurement Indicator
7. Resistance Measurement Indicator
8. Noise Signal Indicator
9. Data Hold Indicator
10. Clamp Jaw Open Indicator
11. DC Input Signal Indicator
12. Measurement Values
13. AC Input Signal Indicator

Operating Instructions

Power ON/OFF

1. To turn the instrument ON/OFF press the ⏻ button.
2. At power up, the LCD display will light up while displaying the symbols shown below.



3. During that time, the instrument will also go through a quick internal calibration and enter resistance measurement mode if it passes. Refer to *Resistance Measurement Mode* for details.

Note: The instrument automatically enters the resistance measurement mode at start up regardless of the last saved setting.

4. If the instrument does not pass calibration, the LCD display will indicate "ER" as shown below.

Note: This error could be caused by the clamp jaw not being properly closed or from any dirt build up on the metal surface of the jaw clamp.

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Auto Power OFF

To preserve battery life, the instrument is programmed to turn itself OFF after 5 minutes of inactivity. Prior to the instrument turning OFF, the LCD display will blink for approximately 30 seconds. Press the ⏻ button to delay the auto power OFF function and resume normal operation.

Resistance Measurement Mode

1. When instrument is turned on and passes calibration, "OL Ω" appears on the LCD display as shown below confirming that you can now measure the resistance.

2. Pull the trigger to open the clamp and clamp onto the calibration loop being measured.
3. The LCD will display the resistance value.
4. If the instrument beeps and the LCD display flashes, the resistance measurement is exceeding the critical set alarm. Refer to *Setting the Critical Alarms* for details.

Current Measurement Mode

1. After the instrument has powered up and passed calibration, press the **A** button to enter the current measurement mode.
2. The LCD display will now indicate AC 0.00mA as shown below.

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3. Pull the trigger to open the clamp and clamp onto the wire.
4. The LCD will display the current value.
5. If the instrument beeps and the LCD display flashes, the current measurement is exceeding the critical set alarm. Refer to *Setting the Critical Alarm* for details.

Note: If the current being measured exceeds the instruments max range, the display will indicate OL A: as show below.

Data Hold & Memory Storage

The instrument has the capability of storing up to 99 values. Stored values are not lost when instrument is turned on or off.

1. While taking a measurement, press the **HOLD** button to save the current reading.
2. While in this mode "HOLD" will appear along with the current stored value and sequence number.

3. Press the button again to resume normal operation.

Note: When the Data Hold feature is active the instrument will not turn OFF.

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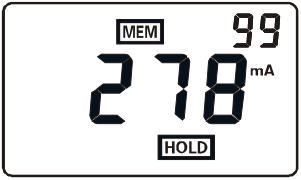
4. Repeat steps 1 to 3 to hold/store new values during testing.

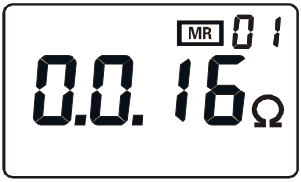
Note: When the memory is full, "MEM" will flash on the LCD display as shown below.



Memory Recall

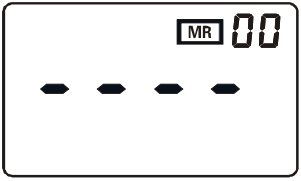
In order to recall the stored values, you must follow the steps below:

1. Press the **SAVE** button to enter memory recall mode and the first stored value will be displayed.



2. Press the ◀ and ▶ arrows to scroll through the stored values.
3. To clear the stored values, press the **SAVE** and ⏻ buttons simultaneously.

Note: If no values are stored or if the memory is cleared the display will appear as shown below.



4. Press the **SAVE** button to exit memory recall mode and resume normal operation.

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Setting the Critical Alarms

1. Press the **AL** button to turn the critical alarm mode ON or OFF.
2. Hold the **AL** button for approximately 3 seconds to enter the critical alarm set up mode.
3. Press the **AL** button to toggle between digits.
4. Press the ◀ and ▶ arrows to adjust the flashing digit.

Note: The maximum set critical alarm value that can be set is 199Ω/499mA.

5. Press the **AL** button to confirm your selection and proceed to the next digit.
6. Hold the **AL** button for approximately 3 seconds to exit the critical alarm set up mode and resume normal operation.

Note: When the critical alarm is enabled, the instrument will begin to beep if the measured vale exceeds the selected alarm.

7. Follow steps 1 to 6 to set the critical alarm in mA.

Battery Replacement

When the icon appears on the LCD display, you will need to replace the batteries. Remove the battery cover using a Phillips head screwdriver, insert 4 x new AA batteries and secure the cover.

Product Care

To keep your instrument in good working order we recommend the following:

- Store your product in a clean, dry place.
- Change the battery as needed.
- If your instrument isn't being used for a period of one month or longer please remove the battery.
- Clean your product and accessories with biodegradable cleaner. Do not spray the cleaner directly on the instrument. Use on external parts only.

Product Warranty

REED Instruments guarantees this instrument to be free of defects in material or workmanship for a period of one (1) year from date of shipment. During the warranty period, REED Instruments will repair or replace, at no charge, products or parts of a product that proves to be defective because of improper material or workmanship, under normal use and maintenance. REED Instruments total liability is limited to repair or replacement of the product. REED Instruments shall not be liable for damages to goods, property, or persons due to improper use or through attempts to utilize the instrument under conditions which exceed the designed capabilities. In order to begin the warranty service process, please contact us by phone at 1-877-849-2127 or by email at info@reedinstruments.com to discuss the claim and determine the appropriate steps to process the warranty.

Product Disposal and Recycling

Please follow local laws and regulations when disposing or recycling your instrument. Your product contains electronic components and must be disposed of separately from standard waste products.

Product Support

If you have any questions on your product, please contact your authorized REED distributor or REED Instruments Customer Service by phone at 1-877-849-2127 or by email at info@reedinstruments.com.

Please visit **www.REEDINSTRUMENTS.com** for the most up-to-date manuals, datasheets, product guides and software.

Product specifications subject to change without notice.