

R9100

# REED INSTRUMENTS

## Ultrasonic Leak Detector



Instruction  
Manual

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## Introduction

Thank you for purchasing your REED R9100 Ultrasonic Leak Detector. 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 ISO9001 facility and has been calibrated during the manufacturing process to meet the 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.

- Do not use near an electrical appliance which emits electromagnetic waves
- If not used for a long period, remove the batteries
- Do not operate if the leaking gas or liquid is explosive or flammable
- Do not operate around explosive or flammable gas, vapor, or dust

## Features

- Locates leaks generated by pressure, vacuum, water, gas or air
- Visible (LED) and Audible (ticking) alarms assist in pinpointing leaks
- Earphone jack for loud environments (earphones included)
- User adjustable sensitivity wheel
- Ultrasonic Transmitter generates a 40kHz signal

## Included

- Transmitter
- Earphones
- Carrying Case
- Batteries

## Specifications

### Leak Detector (Receiver)

Frequency Response:	40kHz $\pm$ 2kHz
Sensitivity Adjustment:	Yes (wheel)
Alarm:	Audible (Ticking)/Visual (LED)
Earphone Jack:	Yes (Earphones included)

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## Transmitter

Output Frequency: 40kHz

Power Indicator: LED

## General Specifications

Power Supply: 2 x 9V Batteries

Product Certifications: CE, RoHS

Operating Temperature: 32 to 104°F (0 to 40°C)

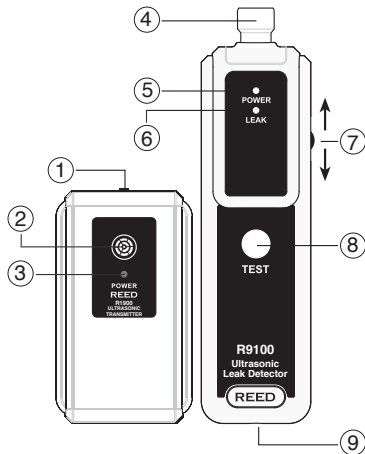
Storage Temperature: -4 to 122°F (-20 to 50°C)

Dimensions: Receiver: 7.6 x 2 x 1.2" (192 x 50 x 30mm)  
Transmitter: 3.9 x 2.3 x 1.1" (101 x 59 x 28mm)

Weight: Receiver: 4.1oz (115g)  
Transmitter: 3.2oz (90g)

## Instrument Description

1. POWER Button
2. Speaker
3. POWER LED Indicator
4. Detector
5. POWER LED Indicator
6. LEAK LED Indicator
7. Sensitivity Wheel
8. TEST Button
9. Earphones Jack



# Operating Instructions

## *Leak Detector*

1. Plug the headphones into the headphone jack.
2. Press and hold the TEST button. At this point, you can hear a "ticking tone" through the headphones confirming that the detector is activated.
3. Start by adjusting the volume of the headphones to a suitable level, then adjust the detector sensitivity to a desired level.

**Note:** Rotate the sensitivity wheel upwards to decrease sensitivity. Rotate downwards to increase sensitivity.

4. Continue to press and hold the TEST button while moving the probe around the seals of the suspected area. Once the detector picks up the ultrasonic sound generated by a leak, the "ticking tone" will increase in frequency and the "LEAK" LED light will turn ON. The closer the probe moves towards the leak, the frequency of the "ticking tone" increases.
5. Once the leak is located and repaired, retest with the detector to confirm there is no longer a leak.

### **Notes:**

- There are many factors involved in the ultrasonic leak detection, such as the pressure within the vessel under test, shape & size of the hole, temperature, etc. In some cases, the ultrasonic sound emitted is very weak. Always start by setting the detector's sensitivity to the highest level at the beginning of the test.
- If the detected ultrasonic sound is too intense making it difficult to pinpoint the leak because the "ticking tone" is too high, decrease the sensitivity.
- As ultrasonic sound attenuates rapidly when it travels over a distance, move the detector as close as possible to the suspected leak. Remember to always decrease the sensitivity if necessary. During testing, move the probe slowly.

## *Transmitter*

The transmitter can supply ultrasonic signals where gas/air leaks do not have sufficient pressure to create an ultrasonic sound.

*continued...*

1. Turn on the transmitter. If the "POWER" LED light does not light up, replace the 9V battery (see *Battery Replacement* section for details).
2. Place the transmitter inside the compartment under test, then close the compartment.
3. The ultrasonic sound emitted by the transmitter will pass through any orifice or faulty seal.
4. Scan the outside surface of the compartment with the receiver.
5. The ultrasonic sound escaping from the compartment will be detected by the receiver.

## Battery Replacement

Follow the instructions below to replace the battery on either the receiver or transmitter.

1. To replace the battery, slide the battery cover open.
2. Replace the 9V battery.
3. Secure the battery cover back into place.

## Applications

- Verifying and checking for leaks in refrigeration and air conditioning systems
- Compressed air systems
- Engine seals
- Windshields
- Windows
- Doors

## 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](mailto: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](mailto:info@reedinstruments.com).

Please visit [www.REEDINSTRUMENTS.com](http://www.REEDINSTRUMENTS.com) for the most up-to-date manuals, datasheets, product guides and software.

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