

Simbow ALD-200 PRO HP

SIMBOW ALD-200 PRO HP Refrigerant Leak Detector User Manual

Model: ALD-200 PRO HP

1. INTRODUCTION

The SIMBOW ALD-200 PRO HP is a professional-grade refrigerant leak detector designed for identifying leaks in heat pump systems and other HVAC applications. It offers high sensitivity, a flexible probe for hard-to-reach areas, and clear visual and audible indicators to pinpoint refrigerant leaks efficiently.

1.1. Product Overview

This device is optimized for detecting refrigerants commonly used in heat pump systems, including R410A, R407C, R32, and R1234ze. Its advanced sensor technology ensures reliable and accurate leak detection.



Image 1.1: The SIMBOW ALD-200 PRO HP Refrigerant Leak Detector, shown with its USB-C charging cable and protective carrying case.

1.2. Package Contents

- SIMBOW ALD-200 PRO HP Refrigerant Leak Detector
- USB-C Charging Cable
- Protective Carrying Case
- User Manual (this document)

2. SAFETY INFORMATION

Read all safety instructions before operating the device. Failure to follow these instructions may result in injury or damage to the device.

- Always operate the device in a well-ventilated area.
- Avoid direct contact with refrigerants. Use appropriate personal protective equipment (PPE) such as gloves and eye protection.
- Do not expose the device to extreme temperatures, moisture, or corrosive substances.
- Keep the device away from open flames or ignition sources, as some refrigerants are flammable.
- Do not attempt to disassemble or modify the device. Refer all servicing to qualified personnel.
- Ensure the device is fully charged before use to avoid interruptions during critical detection tasks.

3. PRODUCT FEATURES

The ALD-200 PRO HP incorporates several features designed for effective and user-friendly leak detection:

- **Optimized for Heat Pumps:** Specifically engineered to detect R410A, R407C, R32, and R1234ze refrigerants.
- **High Sensitivity:** Detects leaks as small as 0.14 oz./year.
- **16-inch Flexible Probe:** Allows access to confined and hard-to-reach areas.
- **Audible and Visual Alarms:** Provides a multi-level bar graph display and an increasing audible beep frequency to indicate leak concentration.
- **Color Graphic Display:** A 2.8-inch high-resolution digital LCD display for clear data visualization.
- **3000mAh Rechargeable Battery:** Offers up to 6 hours of continuous operation on a single charge.
- **Adjustable Sensitivity:** Three selectable sensitivity levels (High, Medium, Low) for various detection scenarios.
- **Peak Function:** Records the maximum leakage value detected, aiding in pinpointing the largest leak source.
- **Automatic Reset:** Resets the sensitivity benchmark for accurate detection in changing environments.
- **Mute Function:** Allows for silent operation when audible alarms are not desired.

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DESIGNED ESPECIALLY FOR HEAT PUMPS

ALD-200 Pro ASHP specializes in detecting refrigerants used in heat pumps, including:

- ✓ R410A
- ✓ R407C
- ✓ R32
- ✓ R1234ze



Image 3.1: The ALD-200 PRO HP is specifically designed for refrigerants used in heat pump systems, including R410A, R407C, R32, and R1234ze.



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2.8" DIGITAL LCD DISPLAY

Get a better user experience with a large 2.8" high-resolution digital LCD display that shows data more clearly.

Image 3.2: The device features a 2.8-inch digital LCD display for clear visualization of leak levels and settings.

4. SETUP

4.1. Charging the Battery

The ALD-200 PRO HP is powered by a built-in 3000mAh rechargeable Lithium-Ion battery. Before first use, fully charge the device.

1. Connect the provided USB-C charging cable to the USB port on the device.
2. Connect the other end of the USB-C cable to a compatible USB power adapter (not included).
3. The battery indicator on the display will show charging status. A full charge typically takes approximately 4 hours with a standard 2.1W charging block, or less with a 5W block.
4. Disconnect the charger once the battery is full.



Image 4.1: The device features a 3000mAh rechargeable battery and charges via a USB-C port.

4.2. Powering On/Off

Press and hold the power button (usually marked with a power symbol) to turn the device on or off.

4.3. Warm-up

After powering on, the device will undergo a warm-up period, typically lasting about 30 seconds. During this time, the display may show a "WARM UP" indicator. Wait for the warm-up to complete before beginning leak detection.

5. OPERATION

Follow these steps for effective refrigerant leak detection:



Image 5.1: Key operational buttons on the ALD-200 PRO HP: PEAK, RSET, SENS, and MUTE.

5.1. Sensitivity Adjustment

The device has three sensitivity levels: High, Medium, and Low. The default sensitivity level is typically the lowest (L). Press the **SENS** button to cycle through the sensitivity modes. Higher sensitivity is suitable for detecting very small leaks, while lower sensitivity helps to narrow down the leak source in areas with higher background refrigerant levels.

5.2. Leak Detection Procedure

1. Turn on the detector and allow it to complete its warm-up cycle (approximately 30 seconds).
2. Ensure the area is free of known refrigerant concentrations before starting. If necessary, move to a fresh air environment and press the **GAS/RSET** button to reset the baseline.
3. Slowly move the sensor probe at a distance of approximately 0.25 inches (6mm) per second near the suspected leak area.
4. Observe the display and listen for audible alarms. The alarm frequency and visual bar graph will increase as the probe approaches a leak source.
5. Once a leak is detected, move the probe away briefly and then return to confirm the location.

QUICK START GUIDE



Turn on the detector and it will take 30s to warm up.



Default sensitivity level is the lowest. Press the [SENS] button to adjust the sensitivity.



Slowly move the probe at a distance of 0.25 inch near the suspected leak area.



Buzzer alarm when leak is detected and the TFT LCD screen bar graph will show the leakage intensity

Image 5.2: A quick guide illustrating the basic steps for operating the leak detector, from warm-up to leak detection.

5.3. Understanding Alarms (Audible & Visual)

When a leak is detected, the device provides both audible and visual feedback:

- **Audible Alarm:** A buzzer will sound, increasing in frequency as the concentration of refrigerant gas rises.
- **Visual Display:** The color graphic display features a bar graph that indicates the leakage level. The bars will illuminate and change color (e.g., from green to yellow to red) as the leak concentration increases, helping to visually pinpoint the source.

AUDIBLE & VISUAL ALARM

Three levels of unique bars graph and the audible buzzer help you point out the gas leak location



Image 5.3: The device provides clear audible and visual alarms, with a bar graph indicating the intensity of the detected leak.

5.4. Peak Function

Press the **PEAK** button to activate the peak function. This feature records and displays the maximum leakage value detected during continuous operation. This is useful for identifying the most significant leak point in complex environments.

PEAK FUNCTION

Records the max. value of leaks, get faster to find the largest leakage point in the complex working environment

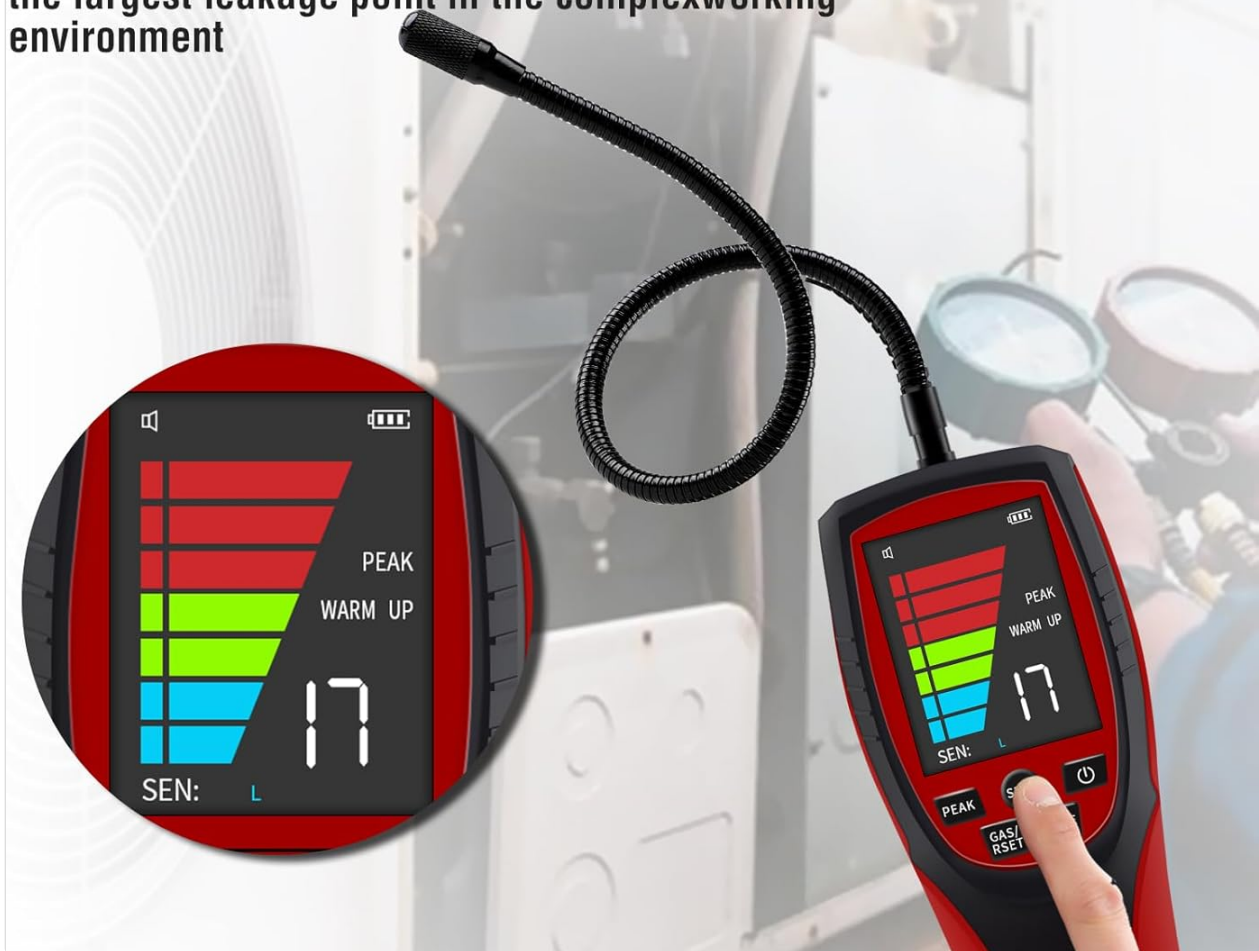


Image 5.4: The PEAK function helps identify the highest concentration of refrigerant detected, aiding in locating the primary leak source.

5.5. Automatic Reset (GAS/RSET)

The **GAS/RSET** button allows you to automatically reset the sensitivity benchmark. Press and hold this button for 3 seconds to reset the device's baseline. This is particularly useful when moving from an area with a high concentration of refrigerant to a cleaner area, ensuring accurate detection of new leaks.

5.6. Mute Function

Press the **MUTE** button to turn the audible buzzer on or off. This allows for discreet operation in noise-sensitive environments while still relying on the visual display for leak indications.

6. MAINTENANCE

6.1. Sensor Probe Care

The 16-inch flexible sensor probe is a critical component. Handle it with care to prevent damage. Avoid bending it sharply or exposing it to excessive force. Keep the probe tip clean and free from debris.



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HIGHER SENSITIVITY
LONGER PROBE

Easy to reach hard-to-reach areas

0.14oz/YR
Max.Sensitivity

16 Inch
Sensor Probe

Image 6.1: The 16-inch flexible sensor probe allows for detection in hard-to-reach areas.

6.2. Cleaning

Wipe the device's exterior with a soft, dry cloth. Do not use abrasive cleaners, solvents, or immerse the device in water. Ensure the sensor probe tip is clean for optimal performance.

6.3. Storage

When not in use, store the ALD-200 PRO HP in its protective carrying case in a cool, dry place, away from direct sunlight and extreme temperatures. Ensure the battery is partially charged (not fully depleted or fully charged for long-term storage) to prolong battery life.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Device does not power on.	Low battery.	Charge the battery using the provided USB-C cable.
Inaccurate or inconsistent readings.	Sensor contamination; High background refrigerant; Incorrect sensitivity setting.	Clean the sensor probe tip; Move to a fresh air environment and perform an automatic reset (GAS/RSET); Adjust sensitivity level.
Audible alarm not working.	Mute function activated.	Press the MUTE button to deactivate the mute function.
Device not detecting leaks.	Low sensitivity setting; Probe not close enough to leak; Sensor malfunction.	Increase sensitivity; Move probe slowly and closer to suspected area; Contact customer support if issue persists.

8. SPECIFICATIONS

Feature	Specification
Model	ALD-200 PRO HP
Sensitivity	Max. 0.14 oz./year
Sensor Probe Length	16 inches
Refrigerants Detected	R410A, R407C, R32, R1234ze, and other halogenated gases (CFCs, HCFCs, HFCs, HFOs, Blends)
Battery Type	3000mAh Rechargeable Lithium-Ion
Continuous Working Time	Up to 6 hours
Warm-up Time	Approx. 30 seconds
Recovery Time	Less than 10 seconds
Reset Time	Less than 3 seconds
Display	2.8-inch Color Graphic LCD
Item Weight	2.2 pounds (approx. 1 kg)
Package Dimensions	14.17 x 8.27 x 2.36 inches

9. WARRANTY AND SUPPORT

9.1. Limited Warranty

The SIMBOW ALD-200 PRO HP Refrigerant Leak Detector comes with a limited warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official




SIMBOW website.

9.2. Customer Support

For technical assistance, troubleshooting, or service inquiries, please contact SIMBOW customer support. Contact information can typically be found on the product packaging or the official SIMBOW website.

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Related Documents - ALD-200 PRO HP

	<p>APRVTIO ALD-200 PRO Series Refrigerant Leak Detector: User Manual & Specifications</p> <p>Comprehensive user manual for the APRVTIO ALD-200 PRO and ALD-200 PRO HP handheld refrigerant leak detectors. Learn about setup, operation, accessories, specifications, and safety guidelines for accurate leak detection in HVAC and refrigeration systems.</p>
	<p>Elitech ILD Series Infrared Refrigerant Leak Detector User Manual</p> <p>Comprehensive user manual for the Elitech ILD series infrared refrigerant leak detectors (ILD-100, ILD-200, ILD-300), covering specifications, operation, maintenance, and features. Learn how to effectively detect refrigerant leaks with this advanced device.</p>
	<p>APRVTIO ALD-100 Electronic Refrigerant Leak Detector User Manual</p> <p>User manual for the APRVTIO ALD-100 Electronic Refrigerant Leak Detector. This document details the specifications, features, setup, operation, and maintenance of the ALD-100 for detecting refrigerant leaks in A/C systems.</p>
	<p>Elitech IR-200 Infrared & Heated Diode Leak Detector User Manual</p> <p>Comprehensive user manual for the Elitech IR-200, a dual-sensor leak detector featuring infrared and heated diode technology. Learn about its specifications, operation, maintenance, and features for detecting refrigerant leaks.</p>



User manual for the Elitech ILD series infrared refrigerant leak detectors (ILD-100, ILD-200, ILD-300). Provides detailed information on operation, specifications, features, and maintenance for accurate refrigerant leak detection.

Comprehensive details on the INFICON Sensistor XRS9012 hydrogen leak detector, covering its advanced features for precise leak location, robust design for demanding environments, technical specifications, and available accessories. Ideal for industrial maintenance and safety applications.