

WIPCOOL[®]

IDEAL PRODUCTS FOR HVAC



ALD-1 Infrared Refrigerant Leak Detector

-Operation Manual-

1. Notice for Use

- Thank you for buying WIPCOOL ADVANCED series infrared refrigerant leak detector, we are dedicated to providing you with high quality products.
- Please check if your ordered goods in good shipment condition, with the correct accessories, any damage during transportation, please contact us or the local distributors in time if you find any problems.
- If there is any change in the product (including the specification), we won't inform any more.

Warning!

Please read and understand this manual thoroughly before operation and maintenance.

Please do NOT disassemble the detector by yourself.

If you have any technical questions, please feel free to contact us.

1. Please ONLY install clean filter before detection or it may damage the sensor.

2. Please charge the detector promptly to ensure sufficient battery level for the detection*.

3. Do NOT use the probe to touch or detect any charged objects.

4. Do not let water enter the air inlet of the probe.

5. Please protect your eyes and skin while using the UV LED during detection.

Never look directly to the UV ray.

6. Please avoid breathing the refrigerant vapors. Inhalation of high concentration refrigerants harmful and may cause unconsciousness or death.

7. The battery is hazardous. Be extra careful when using it. Never dispose of used batteries in regular trash can (but in the battery recycle box) to avoid danger or harm to environment.

*The detector has a built-in rechargeable lithium battery, please do not change to other battery types.

2. Specifications



| | |
|---------------------|---------------------|
| 1.Flexible Probe | 5.USB Port (Type-c) |
| 2.UVLED | 6.Display Screen |
| 3.Filter Components | 7.Buttons |
| 4.Headphone Jack | 8.Buzzer |

Included:

| | |
|----------------------------|-----------------------|
| Infrared Leak Detector x 1 | Plastic Case x 1 |
| UV LED x 1 | Charging Cable x 1 |
| User Manual x 1 | Filter Components x 5 |

3. Technic Data

| | |
|--------------------------|---|
| Sensor life | 10 years |
| Sensitivity | Maximum 3g/yr |
| Sensor Principle | Infrared (IR) absorption spectroscopy |
| Alarm Mode | Audible and visual alarm; TFT indication |
| Auto OFF | After 10 minutes of inactivity |
| Battery | 2×18650 lithium battery (see Battery Replacement Diagram) |
| Working Hour | 8h continuous use on a single charge |
| Storage Temperature | -20°C~60°C(-4°F~140°F) |
| Operating Environment | Temperature: -10°C~52°C; Humidity: Maximum 90%RH(non-condensing) |
| Dimensions | 201 x 72 x 35mm (7.9"x 2.8"x 1.4") |
| Compliance | CE, EN14624:2012, RoHS,SAE_J1627, SAE_J2791,SAE_J2913 |
| Detectable Gases | CFCs, HFCs, HCFC Blends and HFO-1234YF |
| Charging Voltage/Current | DC 5V, 1A |
| Charging Time | Approx.4h |
| Weight | 450g (15.9oz) |



Battery Replacement Diagram

4. Functions

| | |
|--------------------|-------|
| Model | ALD-1 |
| Leak indication | ✓ |
| Sensitivity levels | ✓ |
| Buzzer ON/OFF | ✓ |
| Peak function | ✓ |
| UV LED | ✓ |

4.1 Button Functions



ON/OFF Press and hold for 2 seconds to turn on the detector; press again to turn it off.

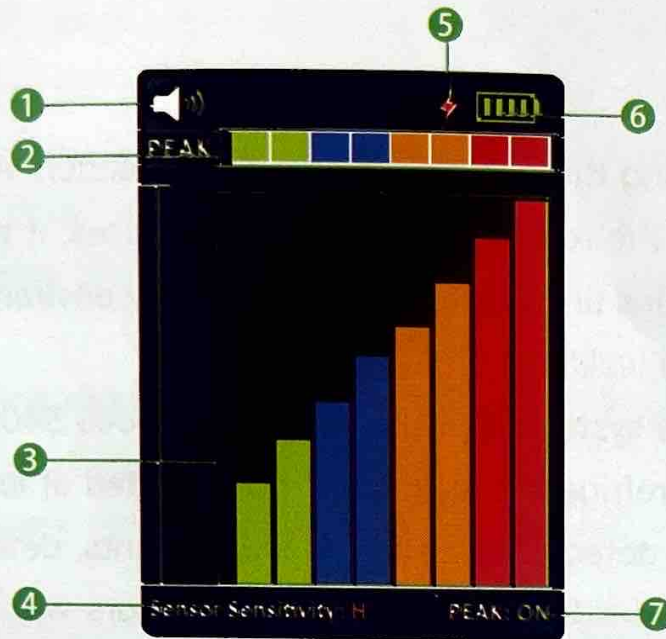
RESET SENS Press to select preferred sensitivity level among Low, Medium and High.

MUTE Press to turn on/off the buzzer.

PEAK Press and release to mark or unmark the maximum leak. If unmarked, the peak value will be cleared.

MODE Release soon

4.2 Display



- ① Buzzer: Indicates buzzer status. Red icon: disabled; Green icon: enabled.
- ② Peak value: Indicates the maximum detected leak.
 Note: PEAK function must be ON or it will not show peak value.
- ③ Leak value: Indicates the current detected leak. Higher leak concentration, higher the bars.
- ④ Sensitivity level: Displays current sensitivity level. 3 levels are available for different needs.
 H: high sensitivity; M: medium sensitivity; L: low sensitivity.
- ⑤ Battery charging status.
- ⑥ Battery level: Displays current battery level.
 Green: Full battery; Yellow: Low battery; Red: Extreme-low battery, please charge ASAP.
- ⑦ PEAK ON/OFF: Indicates PEAK function status. The display shows ON or OFF to indicate the peak function is enabled or disabled (To turn off PEAK will clear all recorded peak values).

5. Operation

Warning!

- Please keep moving the detector during the detection. As ALD-1 are designed to detect the relative concentration of gases, if the detected concentration remains unchanged in the stationary environment, it will not be able to pinpoint the leakages.
- Please ensure the system pressure is at least above 340Kpa (50psi) before detection as many refrigerant leaks can't be detected at low pressure.
- Do not place the detector close to organic solvents, detergents or high voltage power supplies. Please wipe up the detectors with a clean towel.
- Before start, please confirm the battery is sufficient for this detection (it normally takes about 30 minutes for one detection).

Steps

1. Turn on the detector. Wait for the warm-up count down in order to reach the optimal detection status. It takes about 30 seconds before it enters the main interface.
2. Press button to adjust to your preferred sensitivity level (default level is High).
3. Locate places that refrigerant leaks are most likely to occur, such as: Joints in refrigerant lines, Points that have changes in cross section, Points that have changes in vertical section. Visually trace the entire refrigerant system for all lines, hoses, fittings, couplings, service valves, etc. and signs of lubricant leak, damage and corrosion as the likely leak points.
4. Move the probe slowly (about 3ft/s or 75mm/s) at these suspicious places, move back and forth but no more than 0.25"/6mm away from the leak areas.
Note: A closer probe position and slower "sweeping" movement usually improves the possibility of finding a leak.

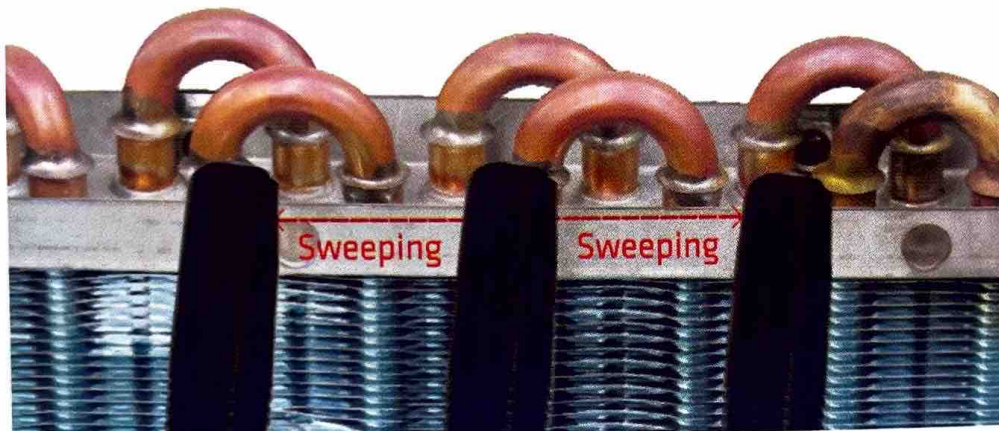
5. The buzzer and LCD display will indicate the detected leak at the same time:
 Buzzer: The sound will increase in proportion to the leak intensity.

The faster the buzzer beeps, the higher the leak has been detected.

LCD display: The bar graph will increase from bottom to top in proportion to leak intensity. The higher the bar graph rises, the higher the leak has been detected.

6. Follow the operations above to detect the entire refrigerant system and mark every leak that has been found.

See the illustration below for visualized detection method:



6. Maintenance

Battery Charging & Maintenance

⚠ Warning!

Avoid complete discharging and frequent charging or it may affect battery life.

Do not disassemble the built-in rechargeable lithium battery.

If the detector will not be used for a long time, please charge it before hand to prevent battery life reduction due to self-discharging. Do not store it for more than 6 months.

Use DC 5V/1A power adapter to charge the detector.

Charging indicator in Orange: the battery is charging now;

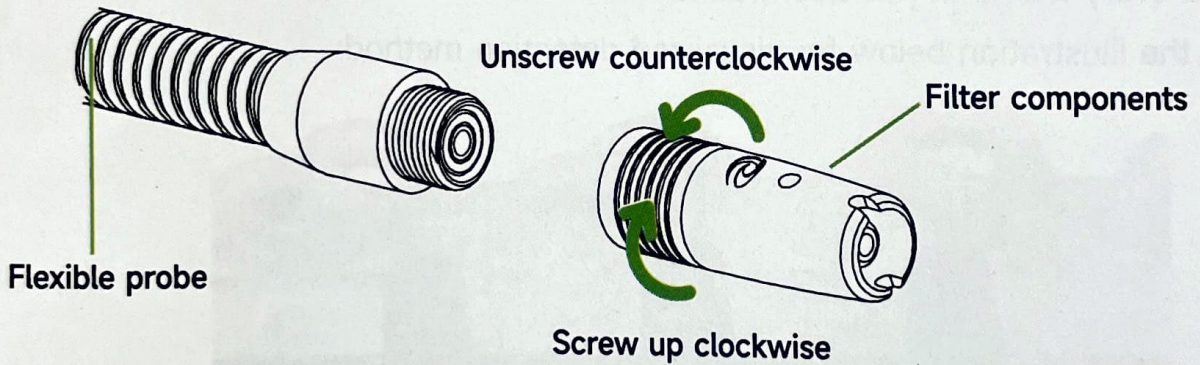
Charging indicator in Green: the battery is fully charged.

Filter Replacement

The filter can block large particle contaminants and moisture to reduce false alarms caused by excessive humidity. Please replace the filter in time when it is seriously polluted (black and clogged).

Follow the steps below:

1. Unscrew the filter components counterclockwise.
2. Screw filter components clockwise.



7. Warranty

One year since the date of original purchase.