UNI-T UT334E

UNI-T UT334E Handheld 4-in-1 Gas Leak Detector User Manual

Model: **UT334E** | Brand: **UNI-T**

1. INTRODUCTION

The UNI-T UT334E is a portable, voice-enabled 4-in-1 gas detector designed for continuous monitoring of gas concentrations. This device integrates advanced circuit technology, embedded microcomputer control, and high-quality imported gas sensors to provide excellent sensitivity and repeatability. It features a dot matrix LCD display with support for both Chinese and English interfaces and voice prompts, ensuring ease of use and maintenance. The robust shell is constructed from high-strength engineering plastic, offering good vibration resistance, high strength, and protection against dust, water, and explosions.

This manual provides detailed instructions for the safe and effective operation, maintenance, and troubleshooting of your UT334E gas detector.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in injury, damage to the device, or inaccurate readings.

- **Calibration:** Ensure the device is regularly calibrated according to manufacturer guidelines to maintain accuracy.
- **Operating Environment:** Use the device within the specified temperature and humidity ranges. Avoid extreme conditions.
- **Explosion Hazard:** This device is designed with explosion-proof features. However, always exercise caution in potentially explosive atmospheres. Do not attempt to open or repair the device in such environments.
- **Battery Safety:** Use only the specified battery type. Do not expose the battery to high temperatures or attempt to disassemble it.
- **Sensor Protection:** Avoid exposing sensors to high concentrations of gas for prolonged periods, as this may damage them or reduce their lifespan.
- **Maintenance:** Only qualified personnel should perform repairs or advanced maintenance.
- **Storage:** Store the device in a clean, dry environment away from direct sunlight and corrosive substances.

3. PRODUCT OVERVIEW

The UT334E is a compact and robust gas detector designed for reliable performance in various industrial and safety applications. Its ergonomic design ensures comfortable handheld operation.

(UT334E)

Detect gas	Range	Low alarm point	High alarm point	Resolution
EX	(0~100)%LEL	20.0%LEL	50.0%LEL	1%LEL
H_2S	(0~100)PPM	10.0PPM	35.0PPM	1PPM
CO	(0~1000)PPM	50.0PPM	150.0PPM	1PPM
O_2	(0~30)%VOL	19.5%VOL	23.5%VOL	0.1%VOL
For other combination gases, please contact our company				
Response time	T < 30S			
Display error	≤±5%FS			
Instructions	LCD liquid crystal display real-time data and system status, light, vibration, screen flicker and Real-life voice recording (Chinese and English) prompts			
Working environment	Temperature -20℃~50℃; Humidity < 95%RH condensation			
Operating Voltage	DC3.7V (lithium battery 1800mAh)			
Charging time	4h			
Standby time	Can be used continuously for more than 10 hours when fully charged			
Sensor life	2 years			
Physical dimension	140×73×32mm			
Weight	215g			

Figure 3.1: Front view of the UNI-T UT334E Handheld Gas Detector, showing the display and control buttons.

This device is capable of detecting four types of gases simultaneously, providing comprehensive air quality monitoring.

Figure 3.2: Illustration highlighting the four gases detected by the UT334E: EX (combustible gases), H2S (Hydrogen Sulfide), CO (Carbon Monoxide), and O2 (Oxygen).

4. Key Features

The UT334E gas detector incorporates several features to enhance its functionality and user experience:

- **Multi-language Support:** Switch between Chinese and English display interfaces and voice prompts.
- **Quadruple Alarm System:** Features sound, light, vibration, and screen flashing for comprehensive alarm indications.
- **High-Capacity Battery:** Equipped with a 5000mAh built-in lithium battery for extended operation.
- **Data Storage:** Automatic storage of records that can be viewed and deleted directly on the device.
- **Color LCD Display:** A 2.4-inch color LCD display provides clear visualization of gas detection indicators.
- **Durable Construction:** Made from high-strength engineering plastic, offering anti-compression, anti-drop, and explosion-proof properties.
- **High-Precision Sensors:** Utilizes imported sensors for sensitive induction, short response time, and accurate detection.
- **Curve Drawing:** Supports curve drawing functionality, allowing for easy observation of periodic gas concentration states.

Features

- Sound, light, vibration, screen flashing quadruple alarm prompt
- Chinese and English display interface, Chinese and English real voice prompts.
- Support curve drawing, easy to observe the periodic state of gas concentration
- Self-set high and low alarm value, and alarm prompt switch and other functions
- 2.4-inch ultra-high-definition LCD color screen, perfectly showing various gas detection indicators
- Imported gas sensor with high precision, strong stability, low error rate and good linearity
- 5000mAh high-capacity lithium battery, MicroUSB compatible with most Android phone chargers Electrical appliances, power bank
- Built-in high-precision ADC acquisition chip + 32-bit nano-level microprocessor, higher resolution, faster response;

Figure 4.1: Visual representation of the key features of the UT334E, including its display, alarm types, and robust design.

5. SPECIFICATIONS

The following table details the technical specifications of the UNI-T UT334E gas detector:

Parameter	Value / Range	Low Alarm Point	High Alarm Point	Resolution
Detect Gas: EX	0~100%LEL	20.0%LEL	50.0%LEL	1%LEL
Detect Gas: H2S	0~100PPM	10.0PPM	35.0PPM	1PPM
Detect Gas: CO	0~1000PPM	50.0PPM	150.0PPM	1PPM
Detect Gas: O2	0~30%VOL	19.5%VOL	23.5%VOL	0.1%VOL
Response Time	T < 30S			
Display Error	≤ ±5%FS			
Instructions	LCD liquid crystal display real-time data and system status, light, vibration, screen flicker and Real-life voice recording (Chinese and English) prompts			
Working Environment	Temperature -20°C~50°C; Humidity < 95%RH condensation			
Operating Voltage	DC3.7V (lithium battery 5000mAh)			
Charging Time	4h			
Standby Time	Can be used continuously for more than 10 hours when fully charged			
Sensor Life	2 years			
Physical Dimension	140 × 73 × 32mm			
Weight	215g			

Additional Specifications:

- **Item Weight:** 1.32 pounds
- **Product Dimensions:** 6.5 x 4.33 x 4.72 inches
- **Material:** Acrylonitrile Butadiene Styrene (ABS)
- **Power Source:** Battery Powered
- **Wattage:** 5 watts
- **Measurement Accuracy:** ±0.1%
- **Certifications:** CE, ISO 9001, RoHS, UKCA

6. Setup

6.1. Charging the Device

Before first use, fully charge the UT334E gas detector. The device is equipped with a 5000mAh lithium battery. Use a standard MicroUSB cable and a compatible power adapter (not included) to charge the device.

1. Connect the MicroUSB cable to the charging port on the device.
2. Connect the other end of the cable to a USB power source (e.g., wall adapter, power bank).
3. The display will show a charging indicator.
4. Charging typically takes approximately 4 hours for a full charge.

Figure 6.1: The UT334E connected to a power source via MicroUSB for charging, with the battery charge indicator visible on the screen.

6.2. Initial Power On

After charging, press and hold the power button (usually marked with a power symbol) for a few seconds until the device powers on and the display illuminates. The device will perform a self-test upon startup.

7. OPERATING INSTRUCTIONS

7.1. Power On/Off

- **Power On:** Press and hold the power button until the screen lights up.
- **Power Off:** Press and hold the power button until the shutdown prompt appears, then confirm.

7.2. Language Selection

The device supports both Chinese and English interfaces. Refer to the device's menu options (typically accessible via the 'OK' or menu button) to navigate to language settings and select your preferred language.

7.3. Understanding the Display

The 2.4-inch color LCD displays real-time gas concentrations for EX, H2S, CO, and O2. It also shows battery status, time, and other operational indicators. Familiarize yourself with the layout to quickly interpret readings.

7.4. Gas Detection and Alarms

The UT334E continuously monitors the ambient air for the four specified gases. When gas concentrations exceed the preset low or high alarm points, the device will activate its quadruple alarm system:

- **Sound Alarm:** An audible buzzer will sound.
- **Light Alarm:** Indicator lights on the device will flicker.
- **Vibration Alarm:** The device will vibrate.
- **Screen Flashing:** The display background may change color (e.g., red) and flash to draw attention to the alarm condition.

Figure 7.1: Visual representation of the quadruple alarm system, showing lights flickering, buzzer alarm, red background reminder on the screen, and body vibration.

7.5. Data Logging and Curve Drawing

The device automatically stores detection records. Users can access these records through the menu to view historical data. The curve drawing function allows for a graphical representation of gas concentration changes over time, aiding in the analysis of periodic states.
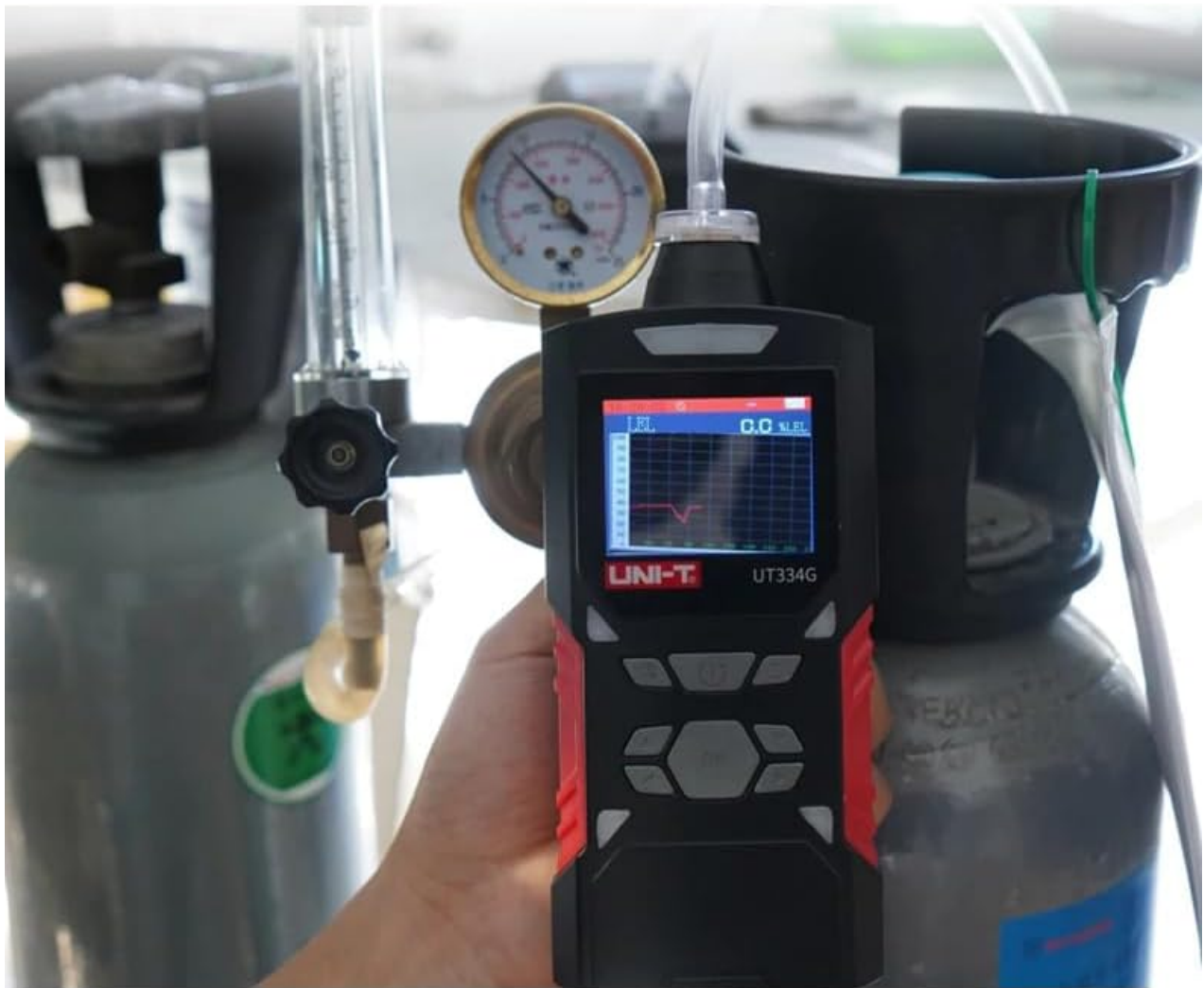

Figure 7.2: The UT334E display showing a gas concentration curve, illustrating the device's ability to track and visualize changes over time.

8. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your UT334E gas detector.

- **Cleaning:** Wipe the device with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no liquid enters the sensor openings or charging port.
- **Sensor Care:** Keep the sensor area clean and free from obstructions. Avoid direct contact with the sensors.
- **Battery Care:** Recharge the battery when the low battery indicator appears. Avoid fully discharging the battery

frequently. If storing for an extended period, charge the battery to approximately 50% and recharge every few months.

- **Calibration:** Regular calibration is crucial for maintaining measurement accuracy. Refer to the device's menu for calibration options or contact UNI-T support for service.
- **Storage:** Store the device in a cool, dry place, away from direct sunlight, extreme temperatures, and corrosive chemicals.

9. TROUBLESHOOTING

If you encounter issues with your UT334E, refer to the following common problems and solutions:

- **Device does not power on:** Ensure the battery is fully charged. If the issue persists, contact support.
- **Inaccurate readings:** Check if the sensor area is clean and unobstructed. The device may require calibration. Avoid using the device in environments outside its specified operating conditions.
- **Alarm constantly active:** Move to a well-ventilated area to confirm if there is a real gas leak. If the alarm persists in a clean environment, the sensor might be faulty or require calibration.
- **Display issues:** If the screen is blank or flickering abnormally, try restarting the device. Ensure the battery is charged.
- **Charging issues:** Verify the MicroUSB cable and power adapter are functioning correctly. Ensure the charging port is clean.

For problems not listed here or if troubleshooting steps do not resolve the issue, please contact UNI-T customer support.

10. WARRANTY AND SUPPORT

UNI-T products are manufactured to high-quality standards and are backed by a limited warranty. Please refer to the warranty card included with your product for specific terms and conditions, including warranty period and coverage details.

For technical support, service, or warranty claims, please contact UNI-T customer service through their official website or the contact information provided in your product packaging. When contacting support, please have your product model (UT334E) and purchase information ready.

UNI-T Official Website: www.uni-trend.com