

UNI-T UT334-NH3

UNI-T UT334-NH3 Portable Single Gas Detector User Manual

Model: UT334-NH3

1. INTRODUCTION

The UNI-T UT334 series portable single gas detector is designed for the detection of specific gases, utilizing a free diffusion method. This model, the UT334-NH3, is specifically calibrated for Ammonia (NH3) detection. It incorporates high-quality gas sensors to ensure excellent sensitivity and repeatability in measurements. The device is engineered for ease of use and maintenance, meeting the demands for reliable safety monitoring in industrial environments. Its robust casing, constructed from high-strength engineering plastic, provides durability, a comfortable grip, and features waterproof, dustproof, and explosion-proof capabilities. This detector is suitable for various industries, including petroleum, chemical, environmental protection, metallurgy, refining, gas transmission and distribution, biomedicine, and agriculture.

2. PRODUCT OVERVIEW

2.1 Key Features

- Equipped with high-quality and sensitive sensors for accurate detection.
- High-definition color screen display for clear readings.
- Multiple alarm methods: audible, visual (alarm light), and vibration.
- Ability to display measurement data as a curve graph over time.
- Certified explosion-proof design for safe operation in hazardous environments.

2.2 Device Components

The UT334-NH3 detector features a clear display, intuitive control buttons, and a robust housing. Refer to the image below for a visual representation of the device's main components.





Figure 1: Front view of the UNI-T UT334-NH3 Portable Single Gas Detector. The display shows the model number, current date and time, battery status, and alarm indicators. The main reading area indicates "Ammonia" (氨气), a temperature

of 31°C, a gas concentration of 0 PPM, and a "Normal" status. Below the screen are navigation buttons (left, MENU, right) and a power button.

- **Display Screen:** High-definition color screen showing gas concentration, temperature, time, battery status, and alarm indicators.
- **Control Buttons:** Includes navigation buttons (left/right arrows), a MENU button for accessing settings, and a power button.
- **Sensor Inlet:** Located at the bottom, protected by a grille, for gas sampling.
- **Alarm Indicators:** Visual (LEDs) and audible (speaker) alarm components.

3. SETUP

3.1 Battery Installation and Charging

1. Ensure the device is powered off before installing or replacing batteries.
2. Locate the battery compartment cover, typically on the rear or side of the device.
3. Open the cover and insert the specified rechargeable battery, observing correct polarity.
4. Close the battery compartment cover securely.
5. For initial use or after prolonged storage, fully charge the device using the provided charger. Connect the charger to the device's charging port and a suitable power source. The charging indicator on the display will show charging status.

3.2 Initial Power-On

1. Press and hold the power button (usually marked with a power symbol) for a few seconds until the display illuminates.
2. The device will perform a self-test and warm-up sequence. During this time, do not expose the sensor to gas.
3. Once the self-test is complete, the device will enter normal measurement mode, displaying the current gas concentration, temperature, and other relevant information.

4. OPERATING INSTRUCTIONS

4.1 Power On/Off

- **Power On:** Press and hold the power button until the screen turns on.
- **Power Off:** Press and hold the power button until a power-off prompt appears, then confirm the shutdown.

4.2 Reading the Display

The high-definition color screen provides real-time information:

- **Gas Concentration:** The large central number indicates the current gas concentration in Parts Per Million (PPM).
- **Gas Type:** The detected gas type (e.g., "Ammonia" for UT334-NH3) is displayed.
- **Temperature:** Ambient temperature is shown in degrees Celsius (°C).
- **Date and Time:** Current date and time are displayed.
- **Battery Status:** An icon indicates the remaining battery life.
- **Alarm Indicators:** Icons for sound, vibration, and visual alarms are present.

- **Status Message:** Messages like "Normal" indicate safe operating conditions.

4.3 Menu Navigation

Press the **MENU** button to access the device's settings and functions. Use the left (◀) and right (▶) arrow buttons to navigate through menu options. Press **MENU** again to select an option or confirm a setting. Common menu options may include:

- **Alarm Settings:** Adjust alarm thresholds (low and high), enable/disable audible, visual, or vibration alarms.
- **Zero Calibration:** Perform a zero calibration in fresh air to ensure accurate baseline readings.
- **Unit Settings:** Change temperature units or other display units if applicable.
- **Data Logging:** Access historical data or curve graphs.
- **System Information:** View device details, firmware version, etc.

4.4 Alarm Functionality

The detector is equipped with multiple alarm types to alert users to hazardous gas levels:

- **Audible Alarm:** A loud sound alerts users to a gas event.
- **Visual Alarm:** Flashing LED lights provide a clear visual warning.
- **Vibration Alarm:** The device vibrates, useful in noisy environments or when worn on the body.

Alarms are triggered when the detected gas concentration exceeds the preset low or high alarm thresholds. Refer to the menu settings to adjust these thresholds according to safety regulations and specific application requirements.

5. MAINTENANCE

5.1 Cleaning

- Regularly wipe the exterior of the device with a soft, damp cloth.
- Do not use abrasive cleaners, solvents, or corrosive chemicals, as these can damage the casing or sensor.
- Ensure the sensor inlet is free from dust and debris. Use a soft brush if necessary.

5.2 Sensor Calibration

To maintain accuracy, periodic calibration of the gas sensor is essential. This typically involves:

- **Zero Calibration:** Performed in a clean, fresh air environment free of the target gas. This sets the baseline for zero concentration.
- **Span Calibration:** Performed using a certified calibration gas of known concentration. This adjusts the sensor's response to the target gas.

Refer to the device's menu for calibration options. It is recommended to follow a regular calibration schedule as per industry standards or manufacturer guidelines, typically every 6 to 12 months, or if readings appear inaccurate.

5.3 Battery Care

- Charge the battery fully before first use and whenever the low battery indicator appears.
- Avoid completely draining the battery frequently, as this can reduce its lifespan.

- If storing the device for an extended period, charge the battery to approximately 50% and store in a cool, dry place.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Low or depleted battery; faulty battery; power button issue.	Charge the battery. Ensure battery is correctly installed. If problem persists, contact support.
Inaccurate or fluctuating readings.	Sensor contamination; need for calibration; environmental interference.	Perform zero calibration in fresh air. Check sensor inlet for obstructions. Consider span calibration.
Alarm not sounding/vibrating.	Alarm settings disabled; low battery; speaker/vibrator malfunction.	Check alarm settings in the menu. Ensure battery is charged. If still no alarm, contact support.
Display is blank or frozen.	Software error; extreme temperature exposure; hardware malfunction.	Attempt a forced restart (refer to specific model instructions if available). Move to a suitable operating temperature. If problem persists, contact support.

If you encounter issues not listed here or if the suggested solutions do not resolve the problem, please contact UNI-T customer support for further assistance.

7. SPECIFICATIONS

Feature	Detail
Brand	UNI-T
Model	UT334-NH3
Item Model Number	UT334G+
Power Source	Battery Powered
Product Dimensions (D x W x H)	1.89" x 2.67" x 5.5"
Item Weight	1.1 Pounds
Alarm Type	Audible, Visual, Vibration
Included Components	Gas Detector
Detection Method	Free Diffusion
Sensor Type	High-quality gas sensors

Feature	Detail
Casing Material	High-strength engineering plastic
Environmental Protection	Waterproof, Dustproof, Explosion-proof

8. WARRANTY AND SUPPORT

UNI-T products are manufactured to high-quality standards. This product comes with a standard manufacturer's warranty. For specific warranty terms, duration, and conditions, please refer to the warranty card included with your product or visit the official UNI-T website. For technical support, service, or inquiries regarding your UT334-NH3 detector, please contact UNI-T customer service through their official channels. Keep your purchase receipt as proof of purchase for warranty claims. You can find more information and support on the [UNI-T Store on Amazon](#).