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Gentex GN-503 Combination Smoke and Carbon Monoxide Alarm User Manual

Model: GN-503 | Brand: Gentex

1. INTRODUCTION

The Gentex GN-503 Series combination photoelectric smoke and electrochemical carbon monoxide alarms are designed for use in all dwelling units, including homes, apartments, hospitals, nursing homes, hotels, and motels. These devices serve as an essential evacuation tool, complying with ANSI/UL 217, ANSI/UL 2034, applicable IBC/IFC/IRC Standards, NFPA 72, and NFPA 720. This manual provides detailed instructions for the proper installation, operation, and maintenance of your GN-503 alarm to ensure optimal performance and safety.

2. SAFETY INFORMATION

- **DO NOT PAINT** the alarm. Painting the unit may interfere with the sensors and prevent proper operation.
- Upon alarm activation, immediately **Move To Fresh Air**. Do not re-enter the premises until the source of the alarm has been identified and resolved, and the area has been properly ventilated.
- This device is an evacuation alarm. It is not intended to replace proper fire prevention practices or carbon monoxide detection protocols.
- Regularly test the alarm as instructed in this manual to ensure it is functioning correctly.
- Do not attempt to repair the alarm yourself. Refer all servicing to qualified personnel.

3. PRODUCT OVERVIEW

The Gentex GN-503 is a dual-sensor alarm designed to detect both smoke and carbon monoxide. Key components and indicators are detailed below.



This image displays two Gentex GN-503 combination smoke and carbon monoxide alarms. Each alarm is round and white, featuring a speaker grille, indicator lights for smoke, carbon monoxide, and power, and a push-to-test/reset button. Text on the alarm indicates 'Smoke and Carbon Monoxide Alarm', 'DO NOT PAINT', and instructions for twisting to install or remove. A 9V Duracell battery is shown in the foreground, ready for installation.

Key Features:

- Photoelectric smoke sensor for reliable smoke detection.
- Electrochemical CO sensor for accurate carbon monoxide detection.
- 120VAC primary power with 9V battery back-up for continuous operation during power outages.
- Low or missing battery indicator to alert you when battery replacement is needed.
- Push button for self-test and functional test.
- Quick disconnect wiring harness for easy installation and maintenance.
- Non-latching (self-restoring) alarm.

4. SETUP AND INSTALLATION

Follow these steps for proper installation of your Gentex GN-503 alarm.

1. **Unpack the Alarm:** Carefully remove the alarm and the included 9V battery from its packaging.
2. **Battery Installation:** Open the battery compartment and connect the 9V battery to the battery clip. Ensure proper polarity. The alarm may chirp briefly to indicate battery connection. Close the battery compartment securely.
3. **Mounting Location:** Choose a suitable location for the alarm. For smoke detection, install on every level of your home, inside bedrooms, and outside sleeping areas. For carbon monoxide detection, install near sleeping areas and on every level of the home. Avoid installing near combustion appliances, in garages, or in extremely dusty, dirty, or humid areas.

- Wiring:** The GN-503 operates on 120VAC. Connect the quick disconnect wiring harness to the appropriate household wiring according to local electrical codes. Ensure power is off at the circuit breaker before wiring.
- Mounting:** The mounting hardware adapts to standard junction boxes. Secure the mounting bracket to the junction box or ceiling/wall using the provided screws. Once the wiring harness is connected to the alarm, align the alarm with the mounting bracket and twist clockwise to secure it in place. The alarm should click into position.
- Restore Power:** Turn on the power at the circuit breaker. The alarm should power on and may perform a brief self-test.

5. OPERATING INSTRUCTIONS

Understanding the alarm's indicators and test functions is crucial for its effective operation.

Alarm Indicators:

- Power Indicator:** A steady green light indicates the unit is receiving AC power.
- Smoke Indicator:** A flashing red light indicates smoke detection.
- Carbon Monoxide Indicator:** A flashing red light indicates carbon monoxide detection.
- Low Battery Indicator:** A chirp approximately every 30-60 seconds indicates a low or missing battery.

Alarm Sounding Patterns:

- Smoke Annunciation:** The horn will sound in a Temporal 3 pattern (three long beeps followed by a pause). The horn frequency is 3100Hz.
- Carbon Monoxide Annunciation:** The horn will sound in a Temporal 4 pattern (four short beeps followed by a pause). The horn frequency is 3100Hz.

Testing the Alarm:

It is recommended to **Hold To Test Weekly**.

- Self-Test:** Press and hold the 'Push To Reset' button for a few seconds. The alarm will perform a self-test, sounding both the smoke and CO alarm patterns. Release the button once the test begins.
- Functional Test:** This test verifies the sensor's functionality. Follow the self-test procedure. If the alarm sounds correctly, it is functioning properly.

The alarm is non-latching, meaning it will automatically reset once the smoke or carbon monoxide clears from the sensor.

6. MAINTENANCE

Regular maintenance ensures the longevity and reliability of your GN-503 alarm.

- Weekly Testing:** Test the alarm weekly using the push button as described in the Operating Instructions.
- Battery Replacement:** When the low or missing battery indicator chirps, replace the 9V battery immediately. Use only recommended replacement batteries. Turn off AC power before replacing the battery.
- Cleaning:** Gently vacuum the alarm's vents and cover monthly to remove dust and debris. Do not use cleaning solvents or spray directly on the alarm.
- End of Life Signal:** The alarm will provide an end-of-life signal when the CO sensor has reached its depletion state. This indicates that the unit needs to be replaced. Refer to the manufacturer's guidelines for the expected lifespan of the CO sensor.

7. TROUBLESHOOTING

If your Gentex GN-503 alarm is not functioning as expected, refer to the following common issues and solutions:

Problem	Possible Cause	Solution
Alarm chirps every 30-60 seconds	Low or missing 9V battery.	Replace the 9V battery immediately. Ensure proper polarity.
Alarm sounds intermittently or falsely	Dust or debris in the sensor chamber; high humidity; cooking fumes; steam.	Clean the alarm regularly. Ventilate the area. Press the 'Push To Reset' button to clear the alarm. Relocate the alarm if false alarms persist due to environmental factors.
CO alarm sounds, but no visible CO source	Presence of carbon monoxide; sensor malfunction.	Evacuate the premises immediately and call emergency services. Do not re-enter until the area is deemed safe. If false alarm, ensure proper ventilation and test the unit.
Alarm provides an 'end of life' signal	CO sensor has reached its operational limit.	The alarm unit needs to be replaced. Purchase a new Gentex GN-503 alarm.
Alarm does not power on	No AC power; battery not installed or dead; wiring issue.	Check circuit breaker. Ensure 9V battery is correctly installed and charged. Verify wiring connections. Consult a qualified electrician if necessary.

8. SPECIFICATIONS

Technical specifications for the Gentex GN-503 Combination Smoke and Carbon Monoxide Alarm:

Specification	Detail
Manufacturer	GENTEX
Part Number	GN-503
Product Dimensions	15.88 x 4.57 x 15.88 cm
Power Source	120VAC with 9V Battery Back-up
Item Package Quantity	1
Sensor Type	Photoelectric (Smoke), Electrochemical (CO)
Horn Frequency	3100Hz
Smoke Annunciation Pattern	Temporal 3
CO Annunciation Pattern	Temporal 4
ASIN	B005Y6I778

Specification	Detail
UPC	808226784847
Date First Available	Jan. 24 2022

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your Gentex GN-503 alarm, please contact Gentex customer service directly. Refer to the product packaging or the Gentex official website for the most current contact details and warranty terms.