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Cheffort AS8700A

Cheffort Handheld Carbon Monoxide Meter

MODEL: AS8700A INSTRUCTION MANUAL

1. Introduction

The Cheffort Handheld Carbon Monoxide Meter, Model AS8700A, is a professional-grade device designed for continuous monitoring of carbon monoxide (CO) gas concentration in various environments. This portable detector provides accurate readings and features an LCD backlit display for clear visibility. It is suitable for both industrial and home use, helping to detect gas leaks and ensure safety.





Image 1.1: Front view of the Cheffort Handheld Carbon Monoxide Meter AS8700A.

2. Safety Information

This device is intended for detecting the presence of CO gases. It is not a personal safety monitor. Always be aware of the effects of CO poisoning. Refer to the table below for CO concentration levels and their associated risks:

CO Concentration	Effects / Standard Level
0-1 PPM	Normal background level
9 PPM	ASHRAE Standard 62-1989 for living areas
50 PPM	OSHA enclosed space 8 hours average level

CO Concentration	Effects / Standard Level
100 PPM	OSHA exposure limit
200 PPM	Mild headache, fatigue, nausea, and dizziness
800 PPM	Dizziness, nausea, and convulsions. Death within 2 to 3 hours

Note: The CO concentration in any enclosed space shall be maintained at not more than 50 PPM (0.05%). Remove employees from enclosed space if the CO concentration exceeds 100 PPM (0.01%).

3. Product Features

- **Professional Tool:** Continuously monitors CO gas concentration accurately in the surrounding environment.
- **Powerful Function:** Features a sound alarm that activates when CO gas concentration reaches a user-set level. Includes auto shut-off after 10 minutes of inactivity and measures ambient temperature in both Celsius and Fahrenheit.
- **High Quality:** Equipped with a large LED backlight screen for easy reading in various conditions. Constructed from durable ABS engineering plastics, offering high toughness, wear-resistance, and stability with low power consumption and high precision.
- **Handheld Size:** Compact and lightweight design for comfortable handling, easy portability, and simple operation.



Image 3.1: Visual representation of the meter's key features.

4. Product Overview and Components

Familiarize yourself with the main components and controls of your Cheffort Carbon Monoxide Meter:

PRODUCT INTRODUCTION



Image 4.1: Labeled diagram of the meter's display and buttons.

- **LCD Display:** Shows CO concentration (PPM), temperature (°C/°F), battery level, and mode indicators.
- **Power Button:** Turns the device On/Off.
- **Mode Button:** Cycles through measurement modes (e.g., MAX, HOLD, SCAN).
- **°C/°F Switch Button:** Toggles between Celsius and Fahrenheit temperature units.
- **Backlight Button:** Activates/deactivates the display backlight.

5. Setup

5.1 Battery Installation

The Cheffort Carbon Monoxide Meter requires three (3) AAA batteries (not included) for operation.

1. Locate the battery compartment on the back of the device.
2. Slide open the battery compartment cover.
3. Insert three AAA batteries, ensuring correct polarity (+/-).

4. Close the battery compartment cover securely.



Image 5.1: Battery compartment for AAA batteries.

6. Operating Instructions

6.1 Power On/Off

- To power on, press the **Power** button. The device will initiate a 120-second countdown for sensor stabilization before displaying readings.
- To skip the stabilization countdown and go directly to readings, press the **Power** button again during the countdown.
- To power off, press and hold the **Power** button.

6.2 Measurement Modes

Press the **Mode** button to cycle through different measurement modes:

- **SCAN Mode:** Displays real-time CO concentration.
- **MAX Hold Mode:** Displays the highest CO concentration detected since entering this mode. The display updates only if a higher reading is registered.
- **HOLD Mode:** Freezes the current CO concentration on the display. Press **Mode** again to exit.
- **MIN Mode:** Displays the lowest CO concentration detected since entering this mode.

6.3 Alarm Settings

The device features an audible and visual alarm. The alarm value can be customized:

- While in SCAN mode, press and hold the **Mode** button to enter alarm setting mode.
- Use the **°C/°F** button to move the cursor between digits.

- Use the **Backlight** button to change the value of the selected digit.
- Press and hold the **Mode** button again to save the new alarm limit and return to SCAN mode. The default alarm limit is 24 PPM.
- When the set threshold is exceeded, the device will emit a loud beep and flash the backlight.

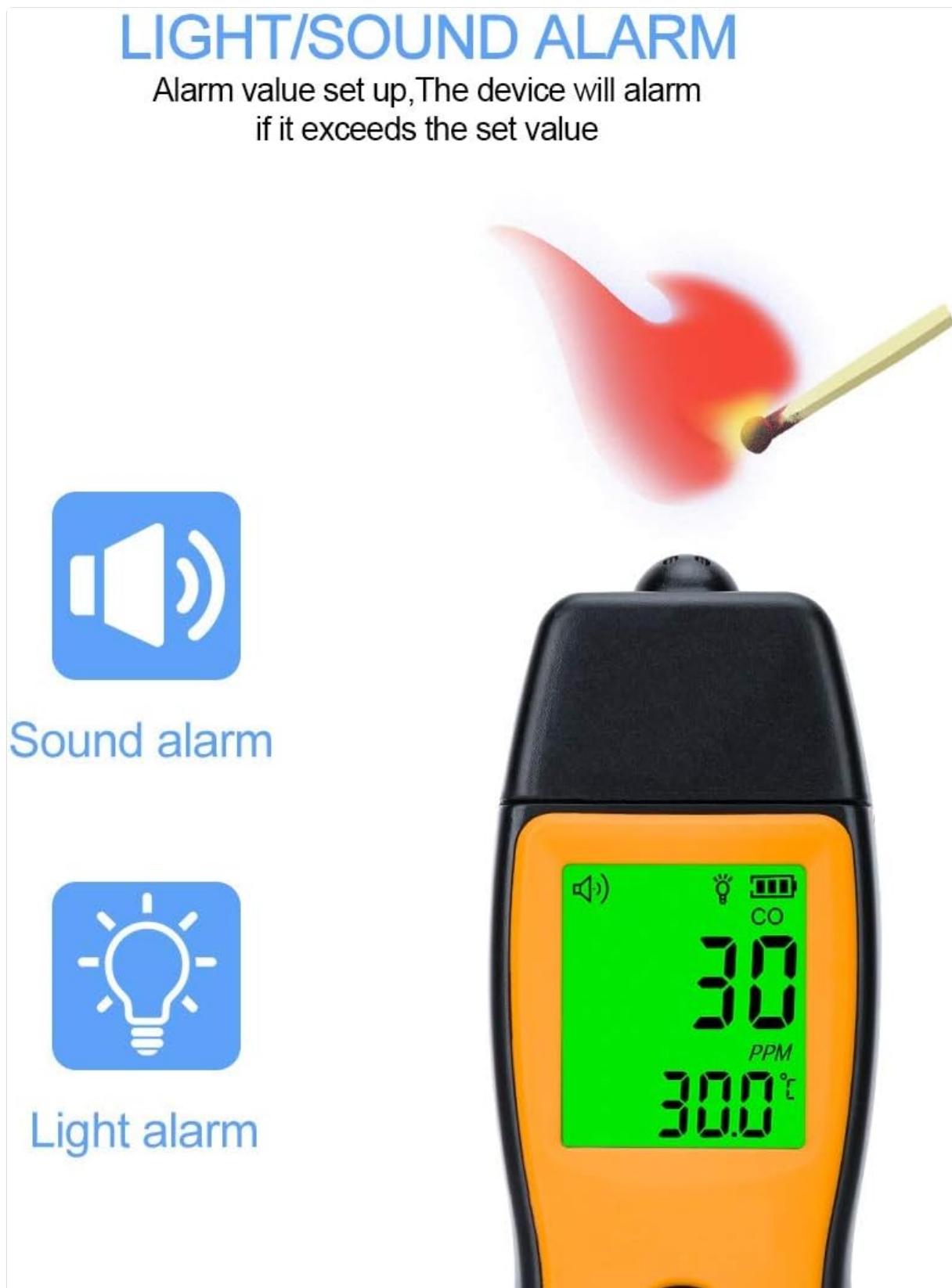


Image 6.1: The meter indicating light and sound alarm features.

6.4 Temperature Unit Conversion

- From any displayed mode on the main screen, press the **°C/F** button to toggle the ambient temperature display between Celsius (°C) and Fahrenheit (°F).

- To change the CO unit display between PPM and umol/mol, press and hold the $^{\circ}\text{C}/^{\circ}\text{F}$ button. Each press and hold will toggle the unit.

TEMPERATURE UNIT CONVERSION



Image 6.2: Display showing temperature unit conversion options.

6.5 Backlight

Press the **Backlight** button (bulb icon) to turn the green backlight on or off.

6.6 Auto Shut-off

- The device has an auto shut-off feature that powers down the meter after 30 minutes of no operation.
- To toggle this feature, press and hold the **Backlight** button while in SCAN mode, then press the button again to switch the mode ON or OFF. A clock icon on the display indicates when Auto Shut-off is active.

7. Applications

The Cheffort Carbon Monoxide Meter can be used in various settings for CO detection:

- Carbon monoxide detection in gas pipelines.
- Car exhaust carbon monoxide detection.
- Carbon monoxide detection in underground mines.
- Industrial waste carbon monoxide detection.



Image 7.1: Examples of environments where the CO meter can be applied.

8. Maintenance

- Keep the device clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Store the meter in a cool, dry place when not in use.
- The typical sensor life is 3 years. Regular testing and calibration are recommended to ensure accuracy, especially after this period.
- Replace batteries promptly when the low battery indicator appears on the display.

9. Troubleshooting

- **No Reading / Displaying '0' for low PPM:** The device has an initial 120-second stabilization period. If no reading appears after this, ensure batteries are correctly installed and charged. Some units may display '0' for CO levels between 1-9 PPM, even if an alarm is set to trigger at these levels.
- **Inaccurate Readings:** Ensure the sensor is not obstructed. Allow the device to stabilize for the full 120 seconds after power-on. If readings remain consistently inaccurate, the sensor may need calibration or replacement (typical sensor life is 3 years).
- **Alarm Not Triggering:** Verify the alarm limit setting (refer to section 6.3). Ensure the device is in SCAN mode for continuous monitoring.
- **Device Not Turning On:** Check battery installation and ensure batteries are fresh.

10. Specifications

Specification	Value
Brand	Cheffort
Model	AS8700A
Style	Gas Detector
Power Source	Battery Powered (3x AAA, not included)
Color	Orange + Black
Product Dimensions	1.38"D x 1.97"W x 5.31"H

Specification	Value
Item Weight	3.14 ounces (89 Grams)
Alarm	Audible
Operating Humidity	0-99% RH (non-condensing)
Operating Temperature	0°C - +50°C (32°F - 122°F)
Storing Temperature	-30°C - +60°C
Measurement Range	0 - 1000 PPM
Resolution	1 PPM
Accuracy	±10%
Response Time	< 120 Seconds
Sensor Type	Stabilized electrochemical Gas-specific (CO)
Typical Sensor Life	3 years
UPC	612409905314

11. Warranty and Support

For warranty information, technical support, or service inquiries, please contact Cheffort customer service through the retailer's platform or the official Cheffort website. Keep your purchase receipt as proof of purchase.

Related Documents - AS8700A

	<p>Smart Sensor Gas Detectors and Monitors - Product Catalog</p> <p>Explore the comprehensive range of Smart Sensor gas detectors and monitors, including multi-gas, single-gas, and specialized detectors for various industrial and safety applications. View specifications, features, and packing details.</p>
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