

FRESH AIR FACTS SYMPTOMS OF CARBON MONOXIDE EXPOSURE

Concentration in the Air PPM*	Resulting Conditions and Effects On Humans
25	Permissible Exposure Level, ACGHI - 8-HOUR TWA
35	Permissible Exposure Level, NIOSH - 8-HOUR TWA
50	Permissible Exposure Level, OSHA - 8-HOUR TWA
200	Possible mild frontal headache in 2 to 3 hours NIOSH CEILING LIMIT
400	Frontal headache and nausea after 1 to 2 hours. Occipital after 2 1/2 to 3 1/2 hours.
800	Headache, dizziness and nausea in 45 minutes. COLLAPSE AND POSSIBLY DEATH IN 2 HOURS.
1500	IDLH (Immediately Dangerous to Life or Health)
1600	Headache, dizziness and nausea in 20 minutes. COLLAPSE AND POSSIBLY DEATH IN 2 HOURS.
3200	Headache, dizziness in 5 to 10 minutes. UNCONSCIOUSNESS AND DANGER OF DEATH IN 30 MINUTES.
6400	Headache, dizziness in 1 to 2 minutes. UNCONSCIOUSNESS AND DANGER OF DEATH IN 10 TO 15 MINUTES.
12,800	Immediate Effect, UNCONSCIOUSNESS AND DANGER OF DEATH IN 1 TO 3 MINUTES.

NOTE:
All values are approximate. The effects can vary depending on the individual's health and the type of physical activity be performed.

Source: AIHA,
OSHA, ACGIH and
NIOSH

* PPM = Parts Per Million / 10,000 PPM = 1% by volume

Furnished to you by **SATA Canada Inc.**
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125 Buttermilk Ave.
Vaughan, ON, L4K 3X5



Warranty Registration Card

Company	<input type="text"/>	
Name	Last <input type="text"/>	First <input type="text"/>
Street/P.O. Box	<input type="text"/>	
City & Prov.	<input type="text"/>	
Country	<input type="text"/>	Tel. (<input type="text"/>) <input type="text"/>
E-mail	<input type="text"/>	Postal Code <input type="text"/>
Product Type	<input type="text"/>	
Serial No.	<input type="text"/>	

X-144 ICOM



Easily attaches to the
SATA® airvision™ 5000
& SATA® vision™ 2000

IMPORTANCE OF CALIBRATION:

"Like many CO detectors, the ICOM uses an electrochemical sensor to detect carbon monoxide. The readings from this type of sensor can drift with environment and time, resulting in inaccurate measurements.

Calibrating with a known concentration of carbon monoxide gas allows the ICOM to compensate for this drift, and thus maintain good accuracy.

****We strongly recommend calibrating the ICOM at least once per year, or whenever the accuracy of the reading is critical.****

Failing to do so may result in inaccurate measurements, and worse, the failure of an alarm to trigger during a hazardous situation.

Calibration can be performed through KWJ's mail-in calibration service.

Part No. X144

Please Read and Understand
Operating Instructions Before Use

X-144 ICOM



Patent
Pending

**Individual
Carbon
Monoxide
Monitor**



SATA Canada Inc.

Part No. X144

Please Read
and Understand
Operating
Instructions
Before Use



German Engineering

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X-144 ICOM

Individual Carbon Monoxide Monitor

Please read the entire manual before using the ICOM. Many factors can affect the air quality. This instrument will give an indication of the CO levels, but should not be considered an all inclusive monitor for overall air quality. The ICOM is only one tool for CO measurement or CO dosimetry for personal use.

However, at the same time it is a very small but rugged tool that can be used for its primary purpose, CO detection, by following these simple steps:

ALL DAY MONITORING

1. To turn the unit on, press the button once.
2. Display will read 8HR, SELF, TEST, PASS, then level of CO in ppm (should be 0 if no CO present).
3. During operation, if CO is found, the level will show on display, read as ppm CO.
4. If reading is 5 ppm or greater, the alarm will actuate.
5. If button is not pressed, after 8 hours the ICOM will turn off.

If you want to turn on the backlight briefly, press the button once.

If, during operation, you want to know what has happened so far during the working period, press the button twice. You will see

TWA - (time weighted average),

TE - (total exposure in ppm-hrs),

MAX - (the highest reading encountered),

TIME - (minutes when the MAX occurred after startup),

RUN - (total minutes running since startup) then the ICOM returns to normal operation.

Alarm will actuate every 5 seconds when CO reaches 5 ppm or greater.

User should immediately investigate source of CO.

NOTICE: If you press the button at startup more than one time in rapid succession, the display will show "DOSM" and "MENU". If X144 shows DOSM, it will show you the TWA, etc, from the last use and then turn off. At the beginning of each operator period, always confirm that the display goes through its initial turn-on sequence and settles at 0 or slightly above (1 or 2).

Storage: When not in use, X-144 **must be stored in an airtight container** to minimize exposure to contaminants such as paint fumes. This container

should also have some activated carbon for additional air purity. Failure to do this may damage the X-144's CO sensor over time in some environments, causing it to read CO levels above 0 even when taken to fresh air. Such damage can be reversed by leaving the X-144 in a clean air environment until the reading returns to 0 (up to 5 days), after which X-144 can again be used but should be stored as described.

Storage containers of the type described are available for purchase from SATA (part #1010), though any air-tight container can be used.

Maintenance Repairs

The X-144 ICOM has a user replaceable CR2450 coin battery. Instruments can still be sent back to KWJ for this, but it isn't necessary. A sticker underneath the battery cover indicates the date of the next recommended calibration. Check this date every time you change the battery. Calibration can be performed through KWJ's mail-in calibration service.

TERMS OF SERVICE:

Payment form: Mastercard or Visa prior to return shipment.

Shipping: Via US Priority Mail within USA included, insurance not included.

WARRANTY

KWJ Engineering, the manufacturer, warrants to the original purchaser that this product shall be free from any defect in the materials or workmanship for 2 years from the date of purchase. This warranty does not cover wear and tear due to normal use. It does not apply to any product that has been subjected to misuse, abuse, neglect, accident, tampering or unauthorized re-pairs. KWJ Engineering may elect to replace the unit, at no extra cost, with the same or similar unit rather than repair it. The sensor is warranted for one year.

NOTICE: OPENING THE CASE (EXCEPT TO CHANGE BATTERY) VOIDS THE WARRANTY FOR ALL COMPONENTS INCLUDING SENSOR.

If a defect covered by this warranty should occur, promptly return the product with a dated sales receipt and a brief explanation of the problem to:

KWJ Engineering Inc
8440 Central Ave.
Newark, CA 94560
Toll free: 1-877-794-4296

SPECIFICATIONS

Size:	2.66 x 1.40 x 0.61 inches (67.6 x 35.6 mm x 15.5 mm)
Weight:	< 1 ounce (28 grams)
Range:	0-500 ppm CO
Response time:	10-90% response time in < 90 seconds
Operating temperature:	32-105 F, 0-40 C displayed; readings automatically compensated
Pressure effect:	Reading decreases with decreasing pressure, down to 70% at 10,000 ft.
Humidity limits:	15-85% RH, non-condensing
Alarms: (82 dB buzzer @ 24 inches, LED, Backlight)	Audible & Visual at 5 ppm Temperature above 50°C / 122°F: "HOT" displayed Temperature below 0°C / 32°F: "COLD" displayed Low battery warning: "BATT" displayed
Sampling mode:	Gaseous diffusion
Interferences:	None significant, except hydrogen
Periods of operation:	8 hour
Display:	Digital LCD with backlight in increment of 1 ppm
User interface:	Single button operation
Dosimetry	Calculates and records: "MAX" maximum exposure (ppm), "TIME" time of max. exposure (minutes since turned on), "TE" total exposure in ppm-hours, 8-hour "TWA" time weighted average.
Tests:	Self-Test on startup checks circuitry, alarms, battery and operating temperature. Does not check sensor.
Calibration:	Recommended at least 1x per year, or whenever accuracy of reading is critical
Sensor:	Transducer Technology T-Series electrochemical.
Battery information:	Battery check on startup and during operation. User replaceable CR2450 coin battery.
Warranty:	Instrument: Two years.



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