

(Oxygen / Hydrogen Sulfide Detector)

Model XOS-2200

Instruction Manual

- Thank you for purchasing XOS- 2200 .
- Keep this manual where it is readily accessible for quick and easy reference when necessary.
- Thoroughly read this manual before using the equipment so that it can be used safely and correctly.
- The descriptions in this manual are subject to change without notice.
- This package contains items as listed below. Please check carefully when unpacking.If any of the contents are missing, contact your authorized distributor or representative.

- | | |
|--|---|
| <input type="checkbox"/> O ₂ /H ₂ S Detector | 1 |
| <input type="checkbox"/> Calibration test certificate | 1 |
| <input type="checkbox"/> Instruction manual | 1 |
| <input type="checkbox"/> Alkaline AAA Battery | 2 |
| (One battery pre-installed) | |
| <input type="checkbox"/> Safety Pin Adaptor (C-10) | 1 |
| (with 4 screws) | |



Note

The pre-installed battery was used to adjust XOS-2200 in our factory. We recommend replacing the battery with a new one (provided) before using the product.

Warranty

New Cosmos Electric Company Limited (New Cosmos) offers the following as the sole and exclusive limited warranty available to Customer.

This warranty is in lieu of, and customer waives, all other warranties of any kind or nature, expressed or implied, including without limitation, any warranty for merchantability or fitness for a particular purpose. The remedies set forth herein are exclusive.

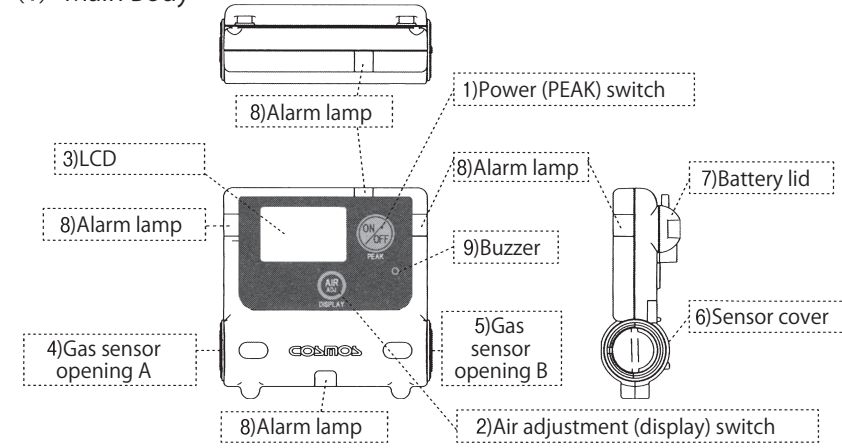
New Cosmos warrants to the original purchaser and no other person or entity (customer) that gas detection product supplied by New Cosmos shall be free from defects in materials and workmanship for a period of one (1) year from the date of purchase. This warranty does not include consumables, such as fuses, filters, etc. Certain other accessories not specifically listed here may have different warranty periods.

After examination of allegedly defective product return to New Cosmos, with freight prepaid, should the product fail to conform to this warranty, customer's only remedy and New Cosmos's only obligation shall be, at New Cosmos's sole option, replacement or repair of such non-conforming product or refund of the original purchase price of the non-conforming product. In no event will New Cosmos be liable for any other special, incidental or consequential damages or losses of any kind whatsoever, including but not limited to, loss of anticipated profits and any other loss caused by reason of non-operation of the product.

This warranty is valid only if the product is maintained and used in accordance with New Cosmos's instructions and /or recommendations. New Cosmos shall be released from all obligations under this warranty in the event repairs or modifications are made by persons other than its own or authorized service personnel or if the warranty claim results from physical abuse or misuse of the product.

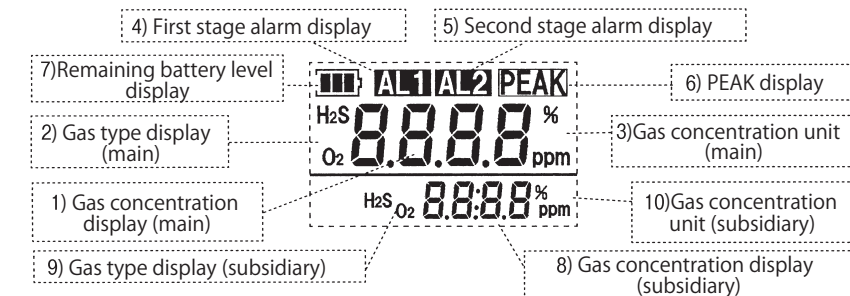
2. Part Names and Functions

(1) Main Body



1) Power (PEAK) switch	Turns the power ON/OFF. Or used for the PEAK holding function.
2) Air adjustment (display) switch	Performs zero / 21% adjustment. Switches between main and sub display.
3) LCD	Displays the different types of indications including gas concentrations (refer to page 4).
4) Gas sensor opening A	Port to detect hydrogen sulfide.
5) Gas sensor opening B	Port to detect oxygen.
6) Sensor cover	For storing the gas sensor.
7) Battery lid	For storing the battery.
8) Alarm lamp	Blinks when an alarm is activated.
9) Buzzer	Sounds when an alarm is activated.

(2) LCD



1) Gas concentration display (main)	Displays digital indication of gas concentration value.
2) Gas type display (main)	Displays gas type. (H ₂ S or O ₂)
3) Gas concentration unit (main)	Displays gas concentration unit.
4) First stage alarm display	Blinks when the concentration exceeds the first stage alarm level.
5) Second stage alarm display	Blinks when the concentration exceeds the second stage alarm level.
6) PEAK display	Displays when the gas concentration indicates the PEAK value.
7) Remaining battery level display	Displays remaining battery level.
8) Gas concentration display (subsidiary)	Displays digital indication of gas concentration value.
9) Gas type display (subsidiary)	Displays gas type. (H ₂ S or O ₂)
10) Gas concentration unit (subsidiary)	Displays gas concentration unit.

1. Introduction

- This product is an O₂/H₂S detector to prevent from occurring oxygen deficiency or gas poisoning by alarm buzzer, lamp and vibration when the gas concentration exceeds the alarm set value.

● Description of Symbols

In order to use the Gas Detector safely, be sure to observe the following symbols.

	Failure to observe the precautions indicated by this symbol will create a imminently dangerous or hazardous condition resulting in serious injury or death.
	Failure to observe the precautions indicated by this symbol will create a potentially dangerous situation that may result in serious injury or death.
	Failure to observe the precautions indicated by this symbol will create a potentially dangerous situation resulting in minor injury or property damage.
Note	This symbol indicates advice on how to handle the instrument.

● Explosion-proof Requirements (Japan)

CAUTION

XOS -2200 is explosion-proof (Japan) .
Use the detector as directed below.

Explosion-proof: Ex ib IIB T3 Gb
Power Source: 1.5 VDC alkaline AAA battery x 1 pc
Battery to use: Panasonic alkaline AAA battery (LR03X) x 1 pc, or
Toshiba alkaline AAA battery (LR03) x 1 pc

Ambient temperature: -20°C to +40°C
Conditions of Use

- This product should not be used in hazardous areas outside of Japan.
- Do not replace the battery in hazardous areas.
- Do not use this product for measuring the oxygen concentration in any mixture other than a mixture of air and combustible gas or a mixture of vapor and toxic gas.
- Only use specified battery.

● Safety Precautions

In order to use the Gas Detector safely, be sure to observe the following items.

DANGER

- In the event of an alarm, immediately take all necessary treatment to prevent gas poisoning.
- Do not block the gas detection intake in use.
- In case liquid spill is happened from the sensor element (by mechanical shock etc.), immediately wash clothes in water when liquid is adhered.
- In case of getting liquid in eyes or ears, immediately submit to medical treatment after receiving first aid by water.
- Be sure to execute daily check and periodic check.
- Do not disassemble or modify XOS -2200 because it could cause to lose explosion-proof design.
- Use the product in compliance with applicable laws and regulations.
- Do not drop or hit the product to avoid intense mechanical shocks and vibrations. It may affect the functions.
- Avoid storing the product or leaving it for a long period of time in places or car subject to high temperatures and high humidity or low temperatures and low humidity.
- Do not use the product at outside the operating temperature/humidity range, and under rapid temperature/humidity change. It may affect the functions.
- When the pressure of the measurement environment is different from the standard atmospheric pressure (at high altitudes, etc.), perform a pressure correction of the measured values to avoid a pressure dependence of oxygen sensor.
- Keep the product away from exposure to water or condensation.
- In case of condensation, dry completely before using the product.
- Wear the detector where audible, visible and vibration alarm can be noticed easily.
- Only use specified battery (Panasonic alkaline AAA battery LR03X or Toshiba alkaline AAA battery LR03). The use of unspecified battery may impair the detector's explosion-proof performance and product performance.

WARNING

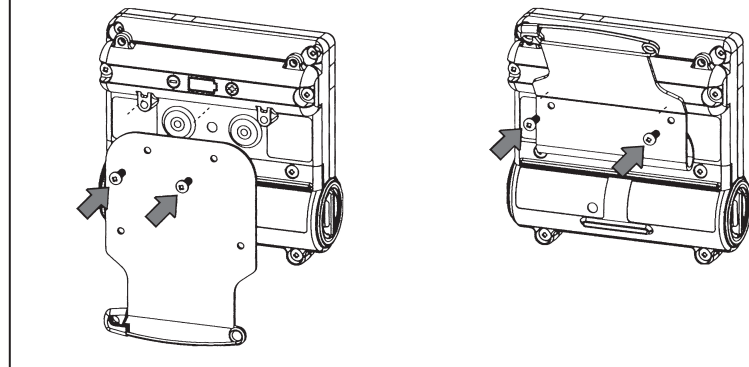
CAUTION

(3) Safety pin adaptor (C-10) installation procedure

Installing the safety pin adaptor onto the battery lid allows wearing of the device with the safety pin. Follow the installation procedure described below:

① Install the safety pin adaptor on the rear surface of the product body chassis using the binding screws.

② Bend the safety pin adaptor from below and install it on the battery lid using the tapping screws.



(4) Optional Items (sold separately)

Item name	Part No.	Description
Leather case	C-11	Covers the whole device to protect it from dirt and water (IPX1).
Heat-resistant leather case	C-12	Covers the whole device to protect it from dirt and water (IPX1). It uses heat-resistant material to reduce temperature increases from high temperature radiation heat. (No change in operating temperature range of the product)
Strap with clip	ST-3	Prevents the gas detector from dropping.

(5) Replacement Parts (sold separately)

Item name	Part No.	Description
Filter element (10 pcs)	FE-116	Filter to protect the gas sensor opening from dust and water exposure.

3. Operational Procedure

① Turning the power on



Press and hold the [Power (PEAK)] switch for approx. 3 seconds. "on" will be displayed, a countdown will begin with "3," "2," and "1", the gas alarm settings will be displayed, and then air adjustment will be automatically performed. Upon the completion of air adjustment, the measured gas concentrations will be displayed.



WARNING

Make sure to turn on the power in clean air. Since air adjustment will be conducted automatically, the incorrect gas concentrations will be displayed when turned on in gas atmosphere.

Note

- After switch operation, the LCD light (backlight) turns on for approx. 5 seconds and then turns off automatically.

● Gas alarm concentration setting

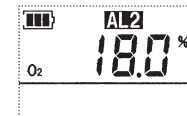
Displays in the following order:

[H₂S 1st stage alarm setting value] → [H₂S 2nd stage alarm setting value] → [O₂ 1st stage alarm setting value] → [O₂ 2nd stage alarm setting value]

[H₂S 1st stage alarm setting value] [H₂S 2nd stage alarm setting value]



[O₂ 1st stage alarm setting value] [O₂ 2nd stage alarm setting value]



- Gas alarm concentration setting value (Standard setting value)

Target gas	Hydrogen Sulfide (H ₂ S)	Oxygen (O ₂)
1 st stage alarm	AL1 10.0ppm	19.5%
2 nd stage alarm	AL2 15.0ppm	18.0%

