



# **OMC-1108**

## **PORTABLE OZONE MONITOR**

### **INSTRUCTION MANUAL** (CSA Certified)

**Low Concentration Unit 9.99 PPM**

#### **IMPORTANT:**

Please read these operating instructions completely and carefully before starting.

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## **1.1 WARRANTY**

The OMC-1108 series gas monitor is warranted against defects in material and workmanship for a period of one (1) year from date of shipment. During the warranty period, Ozone Solutions will repair or replace components that prove to be defective in the opinion of Ozone Solutions. We are not liable for auxiliary interfaced equipment, or consequential damage. This warranty shall not apply to any product, which has been modified in any way, which has been repaired by any other party other than a qualified technician or authorized Ozone Solutions representative, or when such failure is due to misuse or conditions of use.

## **1.2 LIABILITY**

All Ozone Solutions products must be installed and maintained according to instructions. Only qualified technicians should install and maintain the equipment. Ozone Solutions shall have no liability arising from auxiliary interfaced equipment, for consequential damage, or the installation and operation of this equipment. Ozone Solutions shall have no liability for labour or freight costs, or any other costs or charges in excess of the amount of the invoice for the products.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND SPECIFICALLY THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE THEREOF.

## **1.3 MODIFICATIONS AND SUBSTITUTIONS**

Due to an ongoing development program, Ozone Solutions reserves the right to substitute components and change specifications at any time without incurring any obligations.

## **1.4 PRODUCT RETURN**

All products returned for warranty service will be by prepaid freight and they will only be accepted with a repair number issued by Ozone Solutions. All products returned to the client will be freight collect.

## 2 PRODUCT INFORMATION

Monitor Part Number .....	OMC-1108
Monitor Serial Number .....	
Sensor Warranty Period .....	1 year
Power Supply Requirement .....	
Internal Battery (see note) .....	9 VDC, ALKALINE
Typical Battery Life (non-alarm) .....	500 hours
External DC Supply .....	12 to 24 VDC 300-1,000 mA
Operating Temperature .....	0 to 40°C
Recorder Output Range .....	0 to 1 VDC proportional to concentration

Sensor		Type of Gas	Range	Alarms	
Part No.	Ser. No.			Low	High
		Ozone	0 – 9.99 PPM	—	—

**Note:**

For proper operation, use only 9V ALKALINE battery (Duracell MN1604 or equivalent). The DC connection is a 2.1 mm post.

**Note:**

All Ozone Solutions systems must be installed and maintained according to instructions, to ensure proper operation. Only qualified technicians should install and maintain the equipment.

### 3 PRODUCT DESCRIPTION

#### 3.1 GENERAL DESCRIPTION

The OMC-1108 ozone monitor is a portable hand-held instrument designed to continuously or intermittently monitor surrounding air for traces of ozone. It comes with the following features, as shown in Figure 1.

##### 3.1.1 MONITOR SPECIFICATIONS

- |                                     |  |
|-------------------------------------|--|
| 1) POWER SWITCH                     | On/off power switch. (when power is on, the digital display is activated)  |
| 2) DIGITAL DISPLAY                  | Meter displays concentration of gas and has a build-in low battery indicator.  |
| 3) LED ALARM INDICATOR (OPTIONAL)   | A red LED indicates alarm levels of gas.<br>Flashing : indicates LOW alarm.<br>Continuous : indicates HIGH alarm.  |
| 4) AUDIO ALARM INDICATOR (OPTIONAL) | A buzzer indicates alarm levels of gas.<br>Intermittent : indicates LOW alarm.<br>Continuous : indicates HIGH alarm.   |
| 5) ZERO ADJUST (Z)                  | Calibrates the display to 0 with zero gas.   |
| 6) SPAN ADJUST (S)                  | Calibrates the sensitivity of the display with a known gas mixture.  |
| 7) EARPHONE JACK (EAR)              | Allows use of an earphone when in a noisy environment.   |
| 8) RECORDER JACK (REC)              | Provides a 0-1 VDC linear output signal proportional to the gas concentration. It can be connected to any recording or measuring device with a high-impedance input. |
| 9) EXTERNAL POWER JACK (EXT PWR)    | Allows the unit to be powered by an external 12-24 VDC power source.   |

## OMC-1108 Portable Monitor

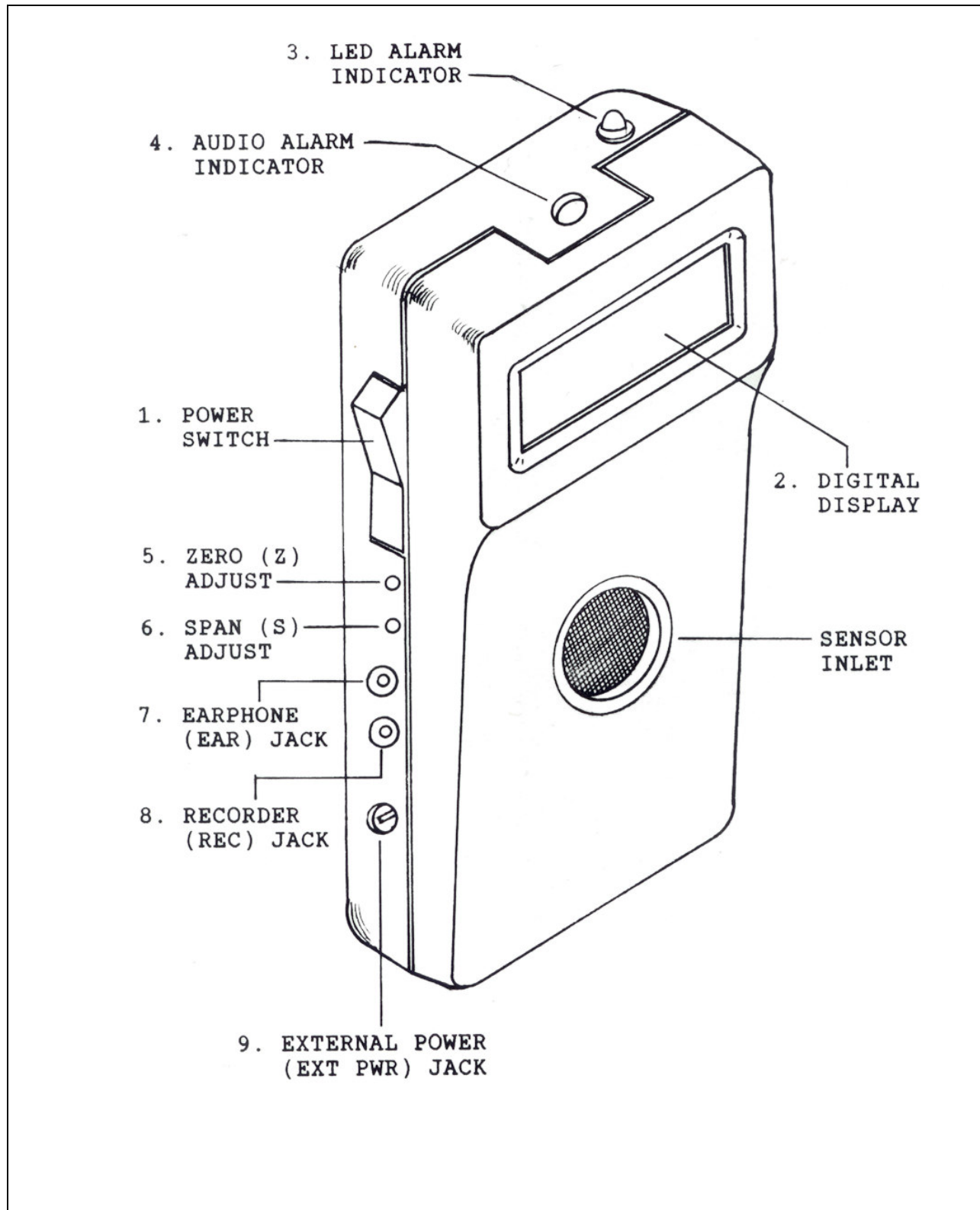


FIGURE 1: OMC-1108 series, portable gas monitor.

## 4 OPERATION AND CALIBRATION

### 4.1 OPERATION

When the unit is switched-on, a reading can be taken after a warm up period of about two minutes. The display will start in the negative range and go up to 0.00-PPM. After warming up, if a negative (-) is displayed before the 0.00, or 0.01, this is okay. Ozone concentrations are indicated in PPM on the digital display.

***(Optional - must be ordered with unit before shipment)***

ALARMS : At the LOW alarm level, the LED flashes and the buzzer beeps intermittently.

At the HIGH alarm level, the LED stays lit and the buzzer sounds continuously.

BATTERY : The word "BAT" appears on the display as a warning to replace the battery.

### 4.2 CALIBRATION

Recalibration is necessary when replacing the sensor. Verification of calibration should be done at least once every 6-12 months for safety reasons; weekly testing is recommended for highly demanding applications. If the monitored environment is dirty & has high VOC levels, calibration is required more frequently.

Factory or on-site calibration services, customer training, and/or calibration kits can be provided. Specify the sensor type and gas when requesting any of the above.

#### **CAUTION:**

**Only qualified personnel should perform the actual calibration. Contact Ozone Solutions for any specific inquiries regarding calibration or operation.**

#### 4.2.1 ADJUSTMENTS

The only adjustments required for full recalibration are Zero and Span (NOTE: clockwise adjustment will increase the display reading). Ozone Solutions strongly recommends the sensor be shipped back to the supplier for calibration.

Zero: When there is no gas present (clean air or zero gas), the digital display should read 0. Attach the two zeroing plugs to the calibration adapter and wait for the display reading to stabilize, then adjust the zero (Z) trimmer. Remove the zeroing plugs when finished.

Span: To adjust the sensitivity of the sensor, connect the hose from a known ozone source to the calibration adapter. Adjust the span (S) trimmer until the displayed value matches the gas concentration applied.

## **5 PREVENTIVE MAINTENANCE**

### **5.1 GENERAL**

The portable monitor unit should be brushed or wiped clean once a year or more, depending on the accumulation rate of dust or dirt. To avoid sensor damage, the unit **MUST NOT** be submerged in any liquid. Hosing or splashing the unit with any liquid must also be avoided.

### **5.2 VERIFICATION OF OPERATION**

To verify the operation of the portable monitor unit ensure that it is still responding to gas. This test should be performed every few months but for more demanding applications verification should be performed on a weekly basis.

### **5.3 SENSOR REPLACEMENT**

If the display reading is erratic or unusually low when the unit is exposed to gas, the sensor might need to be replaced. Only Ozone Solutions should replace this sensor as it must also be calibrated with an ozone gas at the time of installation. This gas must be continuously generated at a specific concentration since it cannot be stored. Please contact Ozone Solutions at 712-722-0337.