

# PROFESSIONAL MULTIGAS DETECTOR FORENSICS DETECTORS™



## \*\* WARNING \*\*

- FOLLOW MANUAL. **DETECTOR IS VERY SENSITIVE**
- KEEP DETECTOR **AWAY** FROM ELECTROMAGNETIC & MAGNETIC INTERFERENCES (i.e. PHONES & MAGNETS)
- STORE DETECTOR **WITHIN SPECIFICATIONS**
- IF UNWELL, SEEK CLEAN AIR & MEDICAL HELP.
- **DO NOT OPEN THE ALARM UNIT**
- **KEEP AWAY** FROM DUST & PARTICULATE AND NEVER EXPOSE TO EXHAUST GAS or CONCENTRATED VAPORS, HARSH CHEMICALS OR EXTREMELY HIGH CONCENTRATION LEVELS AS IT MAY POISON THE SENSOR
- CALIBRATE DEVICE **EVERY 6 MONTHS**
- **SENSOR LIFE IS 2-3 YEARS**

### ACCESSORIES IN PACKAGE

- 1 x 4-gas Multi-Gas Detector
- 1 x calibration cap (black), 1 x screw for calibration cap & sling
- 1 x manual & 1 x calibration certificate
- 1 x recharge cable (no charger include as any USB charger or USB computer port will be OK, fast charge > 1.0Amp rating)

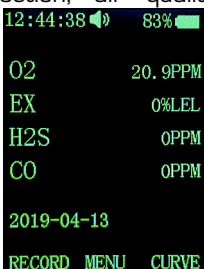
### INTRODUCTION

You have purchased the **PROFESSIONAL MULTIGAS DETECTOR** by **FORENSICS**. This detector features the most advanced 32-bit microprocessor with Color LCD, graphing & alarm recording capability. The detector is factory calibrated. This detector is made with a robust ATEX certified design using high quality electrochemical sensors. The detector can send data to a computer for data logging using our software, see our website. The detector has time, alarm functionality, adjustable alarm levels and is calibration friendly. Made to detect toxic gases in indoor or outdoor air environments. Applications include toxic gas protection, air quality detection & inspectors, laboratory & R&D. Industrial use for utility workers, refinery workers, firefighters, maintenance engineers, confined space, waterworks, underground storage tanks, oil rigs, in tanks and silos.

### OPERATION

**ON/OFF:** Press MIDDLE button for 3 seconds. After 10 sec countdown gas detection begins and real time detected gas levels are show - **normal detection screen** (see right figure). Once ON, begin use. To turn OFF, press MIDDLE button.

**MENU MODE:** Press MIDDLE button to enter the main MENU SELECTION. Use UP and DOWN buttons to make your selection, press MIDDLE button to select. Menu option selections are explained in the next section.



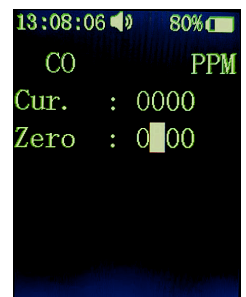
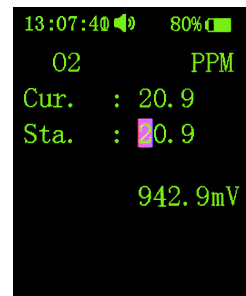
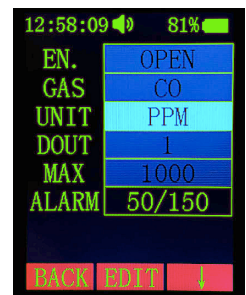
### MENU OPTIONS

**Esc:** Select to exit MENU mode and back to gas detection.

**Set:** Select to enter Set mode. Password 0000 enter. Then select gas and make unit selection. This menu is not used often & changes only for professional users. Enter ALARM sub-menu to edit the Low Alarm and High Alarm trigger values.

**Calib (Span):** Select passcode 0000 by pressing middle button. Select Gas to Span Calibrate. Expose to CAL gas for 1 min. For O2, expose the to fresh air with 20.9% of O2. Maintain a flow of about 0.5L/min when using gas bottles and use the sensor cap provided to deliver the gas to the detector. Press middle button to change calibration gas concentration, then enter to save. When complete, "SAVE SUCCESS" is displayed. Use an appropriate multigas mixture is OK or single gas mixture is also OK to calibrate a single sensor.

**ZERO:** Enter passcode 0000 by pressing MIDDLE button. Select Gas to ZERO. Expose to ZERO air for 1 min. Use fresh air for H2S, CO and %LEL. For O2 expose to pure N2. Maintain a flow of about 0.5L/min when using gas bottles and use the sensor cap provided to deliver the gas to the detector. Then press MIDDLE button to



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## MENU OPTIONS, continued...

**LANG:** Enter and select ENGLISH or CHINESE language.

**INFO:** Factory and software information.

**KEY:** Change password to your selected four digit key. Default key password is 0000.

**TIME:** Used to change the detector time and date.

**LIGHT:** Used to change time the backlight stays on.

## GRAPHING

On the **normal detection screen** press the CURVE option. A graph with HIGH and LOW alarm set points are shown while the detected gas concentration is plotted real time with 10 second graph history. To toggle gas to graph (O2, CO, LEL, H2S) press UP or DOWN buttons. Press middle button to go back to the **normal detection screen**.

## RECORD

On the **normal detection screen** press RECORD. A date and time stamp is recorded and saved when alarms are triggered beyond the set LOW/HIGH alarm values.

## ALARMS

Alarms are triggered (LED, vibration and buzzer) when alarms points are met/exceeded. To **mute/release** alarms press the middle button. Change alarm set points via the SET menu (see prior section). When alarms are triggered a warning symbol is shown on the top line of the **normal detection screen** and the gas type that has triggered the alarm is highlighted in **YELLOW** (LOW alarm) or **RED** (HIGH alarm) on the **normal detection screen**.

## BATTERY & CHARGING

BATTERY life percentage is displayed on the top of the screen. The detector has a built-in lithium battery and can be charged via micro-USB. Before charging, TURN OFF the detector to avoid any potential damage. When the detector is ON and the charger is plugged in, the detector can continue to detect gas whilst charging (continuous mode).

**DO NOT charge in test location to avoid fire or explosion.**

## MULTIGAS DETECTOR SPECIFICATIONS

Gas Type	Range	Default LOW ALARM	Default HIGH ALARM	Resolution
LEL	0-100%LEL	20%LEL	50%LEL	1%
H2S	0-100ppm	10ppm	35ppm	1ppm
CO	0-1000ppm	50ppm	150ppm	1ppm
O2	0-30%vol	19.5%	23.5%	0.1%

**Warranty:** 1 year limited warranty

**Sensor:** Electrochemical Sensor (H2S, CO, O2), Catalytic Bead Sensor (CH4), NIST traceable calibration certificate

**Sensor Life:** 2-3 years

**Error:** <±5% F.S.

**Recovery/ Response Time:** < 30 seconds

**Storage / Operating Temperature:** 32 - 122°F

**Storage / Operating Humidity:** <95%RH

**Battery:** DC3.7V Li-Ion battery 2000mAh

**Charging Time:** 4 hours

**Operation Time:** >20 hours (without alarming)

**Dimension/Weight:** 130\*67\*30mm, 400grams

**Rating:** ATEX certified EXib IIB T3 Gb. IP65 certified.

## What is CALIBRATION?

This product is already calibrated. Calibration is an important function to be performed to ensure your gas detector operates accurately (EVERY 6 MONTHS). Accuracy and Calibration drift can happen over time because of chemical degradation of sensors and the natural drift in components. There are two parts to the calibration, ZERO Calibration and SPAN Calibration.

**ZERO CALIBRATION:** Ensures a good baseline to ZERO target gas exposure. This ensures the detector reads a true ZERO for CO, H2S and %LEL. Always do this first!

**SPAN CALIBRATION:** Ensures accurate gas concentration reading via exposing the sensor to gas concentrations by using a certified gas bottle. This process ensures the detector works within specs and the displays gas level readings that are accurate & true.

## What is Bump Testing?

Bump testing is to expose the gas detector to a small amount "blast" of target gas to ensure the detector operates and alarms as programmed. The function of this test is to verify detection operation and build user confidence, particularly in hazardous and critical user applications. Recommended to bump test when first purchased and unpacking detector and weekly thereafter especially in LIFE THREATENING and/or DANGEROUS applications in order to verify detector operation.

## Which Calibration Gas?

The detector comes with a calibration cap that screws to the detector. The cap has a nipple that connects via a tube to the calibration gas regulator. Recommended Calibration Gas is "multigas" mix on the FD website.

## Can I do Data Logging?

The detector has the capability of sending data to a computer where data can be logged, stored, displayed and manipulated. Please go to our website and download the software required and follow the YouTube instructional on software installation and usage.

## Do I need a Gas Sample Pump?

Sometimes one needs to sample gas in hard to reach locations OR the location is isolated and may contain high level of toxic gas that would not be safe to enter OR area is rampant with air turbulence/drafts where a reliable reading via diffusion will not suffice. In such cases, a gas sampling pump probe is required.

**Sold Separately. Amazon.com ASIN: [B07GKJDCKQ](#)**

Product Designed in CA, USA, Product Tested, QA/QC in California, USA, Product Made in China

## SUPPORT & SALES:

**WEB:** [www.forensicsdetectors.com](http://www.forensicsdetectors.com)

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