



# FORENSICS DETECTORS FD-91-RED Gas Leak Detector User Manual

[Home](#) » [FORENSICS DETECTORS](#) » FORENSICS DETECTORS FD-91-RED Gas Leak Detector User Manual 

## Contents

- [1 FORENSICS DETECTORS FD-91-RED Gas Leak Detector](#)
- [2 Product Information](#)
- [3 Product Usage Instructions](#)
- [4 INTRODUCTION](#)
- [5 Overview](#)
- [6 SPECIFICATIONS](#)
- [7 OPERATION & TIPS](#)
- [8 BUTTON FUNCTIONS](#)
- [9 APPLICATION NOTES](#)
- [10 CONTACT US](#)
- [11 Documents / Resources](#)
  - [11.1 References](#)
- [12 Related Posts](#)



**FORENSICS DETECTORS FD-91-RED Gas Leak Detector**



## Product Information

The GAS LEAK DETECTOR FD-91 by FORENSICS DETECTORS comes in three models, differentiated by color – RED for combustibles, YELLOW for sewer gas leaks, and BLACK for refrigerant gas leaks. All models have the same functional operation.

- **Gas Sensitivity:** Combustibles & Sewer Gases that include Acetone, Acetylene, Alcohols, Ammonia, Benzene, Butane, Ethanol, Diesel, Gasoline, Hexane, Hydrogen Sulfide, Methane, Naphtha, Natural Gas, Paint Thinners, Propane and Solvents
- **Range (Calibrated to methane per best practice):** 0-9999ppm 00 – 20.00%LEL
- **Gas Sensitivity:** Halogenated Gases, Freon Gases CFCs, HFCs, HCFCs, HCs, HFOs, R134a/R11/R22/R404a/R410a/R600a/R12 34yf and Blends such as AZ-50, HP62, MP39
- **Range:** 0-9999ppm
- **Battery power:** 3 x AAA 1.5V
- Auto-off after 10 minutes to preserve power

## Product Usage Instructions

1. Before taking a measurement, ensure the display is reading 00.00 %LEL or 0000 ppm. If it is not, allow the unit to remain in fresh air for 5 minutes.
2. If it has yet to reach zero, then a ZERO calibration is required. Press the ZERO button and then depress it, the display will now read 0000 and detection can begin.
3. The unit is now ready to find a gas leak. Select SENS-H if you are seeking the most sensitive option for small leaks and switch to PPM for the most sensitive scale.
4. Slowly approach the suspected gas leak area. Adjust the gooseneck so the sensor head is directed on the suspected location. Place the sensor head as close to the area of inspection and hold for a few seconds. Move around connections, piping, and other areas very slowly.

5. Depending on the size of the leak, reaction times will vary depending on gas, leak size, ventilation, dilution effects, and many others. If a crosswind or draft is present, slower more careful measurements are needed.
6. If a reading and/or alarm is triggered take the gas leak seriously. Act responsibly and be safe.
7. Press the POWER (red) button to turn it OFF.

**Button Functions:**

PPM/%LEL button: Change the unit of measure to display either part per million (ppm) or %LEL (lower explosive limit). Note the device is calibrated to methane CH<sub>4</sub>, and correcting factors to the displays will be necessary if detecting other combustibles such as propane, butane, or others. See product listing on the FD website for correcting factors.

Contact FORENSICS DETECTORS at [www.forensicsdetectors.com](http://www.forensicsdetectors.com) or email [sarah@forensicsdetectors.com](mailto:sarah@forensicsdetectors.com) for more information.

**INTRODUCTION**

You have purchased the GAS LEAK DETECTOR FD-91 by FORENSICS DETECTORSTM. The FD-91 comes in three models and are differentiated by their color. They all have the same functional operation.



<b>FD-91-RED</b> <b>Combustibles</b> Gas Leak Detector	<b>FD-91-YELLOW</b> <b>Sewer</b> Gas Leak Detector	<b>FD-91-BLACK</b> <b>Refrigerant</b> Gas Leak Detector
<b>Gas Sensitivity:</b>  Combustibles & Sewer Gases that include Acetone, Acetylene, Alcohols, Ammonia, Benzene, Butane, Ethanol, Diesel, Gasoline, Hexane, Hydrogen Sulfide, Methane, Naphtha, Natural Gas, Paint Thinners, Propane and Solvents		<b>Gas Sensitivity:</b>  Halogenated Gases, Freon Gases CFCs, HFCs, HCFCs, HCs, HFOs, R134a/R11/ R22/R404a/ R410a/R600a/R12  34yf and Blends such as AZ-50, HP 62, MP39
<b>Range:</b>		<b>Range:</b>
(Calibrated to methane per best practice): <b>0-9999ppm</b>		<b>0-9999ppm</b>
<b>00 – 20.00%LEL</b>		

#### ATTENTION

- KEEP DETECTOR AWAY FROM EMI SOURCES
- STORE DETECTOR WITHIN SPECIFICATIONS
- DO NOT INHALE ANY GAS LEAKS
- IF UNWELL, SEEK CLEAN AIR & HELP
- KEEP AWAY FROM DUST
- BE VERY CAREFULLY WHEN UNDERTAKING A MEASUREMENT OF GAS LEAKS
- NOT A PERSONAL PROTECTION DEVICE
- IF UNSURE CALL YOUR GAS COMPANY OR 911

#### Overview



PPM or LEL

Solid  
Gooseneck

Bar Graph  
Level &  
Numeric

Sensor  
Head

Made in  
Japan  
Metal Oxide  
Sensor

Large Color  
Display

Fast ZERO  
Function

Rubber  
Buttons

3 x AAA  
Batteries

## SPECIFICATIONS

- **Accuracy:** 5% F.S.
- **Response Time:** < 2 seconds
- **Warm-up:** 30 seconds
- **Display:** Color LCD, numeric ppm or %LEL, bar graph
- **Alarm:** Visible and Audible
- **Alarm Point:** 1000ppm or 2%LEL
- **Zero Calibration:** Auto and Manual
- **Auto Off:** Yes after 10 minutes
- **Dimensions:** 6 x 2.4 x 1.2 inches
- **Weight:** 11 oz
- **Power:** 3 x AAA 1.5V Batteries
- **Temperature:** 30-122F
- **Working Humidity:** 10%-90%RH
- **Gooseneck Length:** 10 inches
- **Packing Items:** Detector, Manual & Batteries
- **Sensor FD-91-RED:** Semiconducting Metal Oxide
- **Sensor FD-91-YELLOW:** Semiconducting Metal Oxide
- **Sensor FD-91-BLACK:** Heated Semiconducting Diode

## INTRODUCTION

You have purchased the GAS LEAK DETECTOR FD-91 by FORENSICS DETECTORSTM. The FD-91 comes in three models and are differentiated by their color. They all have the same basic operation.

- Gas Leak Detectors are used to find gas leaks.
- The FD-91 model series is made with a flexible gooseneck and sensor with a protecting metal cover.
- The objective of the gooseneck is to place the sensor close to suspected gas leak locations and for the gooseneck to allow for easier access at hard-to-reach locations.

## OPERATION & TIPS

1. Press the POWER (red) button to begin. Ensure turn-on occurs in fresh air (this is very important – fresh air).
2. A 30 second countdown will begin. Before taking a measurement, ensure the display is reading 00.00 %LEL or 0000 ppm.
3. If it is not, allow the unit to remain in fresh air for 5 minutes. The unit is made up of a sensitive sensor, so thermal equilibrium may take longer depending on environmental factors.
4. If it has yet to reach zero, then a ZERO calibration is required. Press the ZERO button and then depress it, the display will now read 0000 and detection can begin.
5. The unit is now ready to find a gas leak. Select SENS-H if you are seeking the most sensitive option for small leaks and switch to PPM for the most sensitive scale.
6. Slowly approach the suspected gas leak area. Adjust the gooseneck so the sensor head is directed on the suspected location. Place the sensor head as close to the area of inspection and hold for a few seconds. Move around connections, piping, and other areas very slowly.
7. Depending on the size of the leak, reaction times will vary depending on gas, leak size, ventilation, dilution effects and many others. If a crosswind or draft is present, slower more careful measurements are needed.
8. If a reading and/or alarm is triggered take the gas leak seriously. Act responsibly and be safe.
9. Press the POWER (red) button to turn OFF.

## BATTERY POWER

Your gas leak detector is powered by 3 x AAA 1.5V. To preserve power, the unit has AUTO-OFF after 10 minutes. Since it has AUTO-OFF, DO NOT rely on this as continuous monitoring for combustible personal protection equipment.

## BUTTON FUNCTIONS

- **PPM/%LEL button:** Change the unit of measure to display either part per million (ppm) or %LEL (lower explosive limit). Note the device is calibrated to methane CH<sub>4</sub> and correcting factors to the displays will be necessary if detecting other combustibles such as propane, butane, or others. See the product listing on the FD website for correcting factors.
- **SENS button:** SENS-L and SENS-H, adjust the sensitivity. If max sensitivity is required, ensure on SENS-H.
- **C/F button:** changes the temperature unit of measure
- **ZERO buttons:** press to undertake a ZERO calibration.
- **SPEAKER button:** enables /disables the audible alarm. Alarm triggers when reading > 1000ppm or 2%LEL.

## APPLICATION NOTES

## NATURAL GAS LEAKS:

Gas leak detectors are used to find leaks in natural gas pipes, fittings, and connectors. Gas leaks tend to occur with natural gas or propane supplied to the home or business. They can also happen with propane when cooking on the grill, in an RV, or camping with heater products. Gas leak detectors are used to monitor leaks in confined spaces, silos, and tanks for any combustible gas and vapor build up.

## SEWER GAS LEAKS:

Sewer gas is composed of hydrogen sulfide, ammonia, carbon dioxide, and methane. It is a natural by-product of human waste and becomes a problem for homeowners when there are leaks, clogged vents, or broken pipes. Most term this the "rotten egg smell" found commonly in older sewer plumbing and buildings. Sewer detectors are made for plumbers, inspectors, water works, HVAC, contractors, and maintenance engineers.

## REFRIGERANT GAS LEAKS:

The refrigerant gas is used in refrigeration systems to transfer heat and cool the air. Leaks occur as seals and joints in the refrigeration system may become worn and corroded, allowing the refrigerant gas to leak out. Gas Leak Detectors also allow for confirmation of proper connections. Problems can also occur when the refrigerant is not at the correct pressure, adding stress on the seals and joints.


## CONTACT US



- Web: [www.forensicsdetectors.com](http://www.forensicsdetectors.com).
- Email: [sarah@forensicsdetectors.com](mailto:sarah@forensicsdetectors.com).

Product Made in China, Manual Printed in the USA, Copyright © 2020.

## Documents / Resources

	<p><a href="#">FORENSICS DETECTORS FD-91-RED Gas Leak Detector</a> [pdf] User Manual FD-91-RED, FD-91-YELLOW, FD-91-BLACK, FD-91-RED Gas Leak Detector, FD-91-RED, Gas Leak Detector, Leak Detector, Detector</p>
---	---

## References

- [Forensics Detectors Gas Detectors](#)