

# SafetySiren® Pro4 Series Radon Gas Detector

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## **Welcome**

Thank you for choosing a SafetySiren product. Continuously monitoring your radon concentration levels is an important step in making healthy decisions to reduce exposure to radon and risk of lung cancer.

## **Facts and Concerns Regarding Radon Gas**

Radon is a radioactive gas that is colorless, odorless, and tasteless and is impossible to detect without the use of sensitive test equipment. Radon is a naturally occurring gas produced by the breakdown of uranium in soil, rock, and water and gets into the air you breathe. When allowed to accumulate to high levels, it can be hazardous to long-term health. The Surgeon General has warned that radon is the second leading cause of lung cancer in the United States. Only cigarette smoking causes more lung cancer deaths. If you smoke and your home has high radon levels, your risk of lung cancer is especially high.

## **Location of the Detector**

The detector should be placed in the lowest lived-in level of the home (for example, the basement if used frequently, otherwise first floor). It should be put in a room that is used regularly (like a family room, bedroom, den) but not in your kitchen or bathroom. Place the detector at least 20 inches above the floor and in a location representative of the air breathed in that living area. The audible alarm should be able to be heard from areas frequented on a daily basis. SafetySiren is intended for indoor use only.

## **Areas to Avoid**

- At least 5 ft. away from any drafts caused by heating, ventilating, air conditioning vents, fans, and any windows or doors to the exterior.
- Near excessive heat, such as fireplaces and direct sunlight.
- Areas of high humidity, such as bathrooms, kitchens, laundry rooms.

## Installation

The SafetySiren Pro4 Series Radon Detector is designed to plug into a standard 120-volt household outlet using the supplied power cord. The detector may be placed face-up on a tabletop, countertop, or any flat surface where the ventilation slots will not be blocked. The detector must be kept dust free. A proper airflow must be maintained through the detector to obtain an air sampling representative of the local environment.

**Note: Do not plug the detector into a wall outlet controlled by a light switch.**

## Start-Up

Upon initial power-up, the display shows “CAL” (calibration) with running dashes on the second line for approximately one minute. During this time the detector will conduct a self-test (and once every 24 hours thereafter), calibrate to the environment, and the audible alarm will sound (4 beeps). Afterwards, the display will default to the main screen and the radon levels will read “--”. The two dashes will remain until sufficient samples have been taken to create an accurate reading. For the short-term and long-term readings, samples need to be taken for 2 days (48 hours) before an accurate reading can be displayed.

**Please note;** initial 48-hour average radon readings should be observed as a radon level indication only. Because Radon levels tend to vary from day to day and season to season a longer timespan of radon monitoring is recommended to give you a more accurate year-round average radon level.

## Safety

Use a dry cloth to clean the detector. Make sure the detector is operating in the specified temperature range.

**WARNING: Risk of Electrical Shock! Do not remove the back cover. Sensor requires 250VDC and may cause severe electrical shock. Removal of the back cover will void your warranty.**



## KEY TO PICTURE ABOVE

- 1 Wrench icon** will flash on display if detector fails any 24-hour self-test. An Error code followed by a number will appear on the display screen. See page 9 for further details regarding Error Messages.
- 2 Warning Icon** is a visual indicator when a radon level (Fig. 8), is above or at recommended action level. The icon will flash simultaneously with radon level that's in alarm state.
- 3 Audible Alarm Mute Icon** will appear when mute option has been selected. See page 6 for further details.
- 4 Shield Icon** blinks during the initial 48 hours of monitoring. Stays solid once readings are displayed.
- 5 AVERAGE RADON CONCENTRATION**
- 6 SHORT TERM** - short term average.
- 7 LONG TERM** - long term average.
- 8 Radon Levels** Average of radon gas levels. Calculation is a rolling average.
- 9 Unit of Measure.** Displays pCi/L (Picocuries per liter of air) OR Bq/m<sup>3</sup> (Becquerel per cubic meter of air). This is a fixed feature.
- 10 Menu button** see page 5 for further details.
- 11 Power Input**

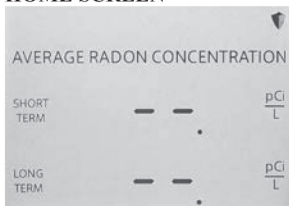
## Menu Button Operation

Enables viewing of six display screens and the ability to select personal settings. Scroll through screens by tapping on menu button. Please note; the detector will default back to home screen after 15 seconds of no interaction by user.

Initial tap on menu button will illuminate the display for easier viewing. The back-light will automatically turn off after 25 seconds of no interaction by user.

Review the next few pages for details of each display screen.

### HOME SCREEN



\*Displays average radon concentration levels for short and long-term levels in either pCi/L or Bq/m<sup>3</sup>. Depending on model purchased.

**Short-Term** is an average of the levels of radon gas over the past 48 to 168 hours, (max. 7 days). Radon level is updated once an hour. The short-term reading allows the user to monitor short-term fluctuations in the home and provide a better feel for problems relating to seasonal and weather-related variations in the radon levels.

**Long-Term** is an average of the levels of radon gas for the length of time that the detector has been powered up or since the last clear of memory. Maximum 365 days. Radon level is updated once an hour. This reading relates to the average radon level that you would be exposed to if you were in the continual presence of the SafetySiren Pro4 Series Radon Detector.

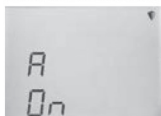
## LENGTH OF MEASUREMENTS



Short Term displays the total hours the detector has been powered up and since last clear of memory. Short term ranges from 0 to 168 Hours. Once display reaches 168 hours it will continue to show the most current 168 hours of run time until the detector is reset.

Long Term displays the total days of power since the detectors last clear of memory. Long term ranges from 0 to 365 Days. Once display reaches 365 days it will continue to show the most current 365 days of run time until detector is reset.

## AUDIBLE ALARM SCREENS/MODES



Audible Alarm-On



Audible Alarm Muted for 90 Days



Audible Alarm Muted for 30 Days

### How to Select an Audible Alarm Mode

Tap menu button until the alarm screen is displayed. Press and hold the menu button down until desired alarm mode is displayed. See options above. Release the menu button as soon as your preferred setting is displayed. When the menu button is released, the detector will return to normal condition and display your alarm setting. Alarm mode can be changed by repeating the same process.

**Note:** When alarm is muted (OFF30 or OFF90). The Audible Alarm Mute Icon (Fig. 3) will display on the top of the screen. The detector will start a visual count down and display number of days remaining

until audible alarm is reactivated. Countdown is displayed on the audible alarm screen.

*Example; OFF90 after 24 hours will read; OFF89, and so on.*

### Audible Alarm Function

When the detector goes into an alarm state, (preset by manufacturer), the buzzer will sound 4 short chirps. This sound will be repeated every hour until the radon level drops below action level or until the user mutes the alarm.

The detector will alarm in both long-term and short-term modes. The detector will alarm when:

- Short-term displays a gas level that is at action level or above for 30 consecutive days.
- Long-term displays a gas level that is at action level or above, after initial 168 hours of measurement time.

The predefined action levels are listed below as the threshold at which action should begin to correct the radon problem within the home.

- US EPA recommends fixing your home if your radon level is 4.0 pCi/L or higher.
- Health Canada's maximum allowable radon level is 200 Bq/m<sup>3</sup>.
- World Health Organization (WHO) recommends that the annual average concentration of indoor radon should be below 100 Bq/m<sup>3</sup>.

**Note:** The SafetySiren model you purchase determines which predefined alarm state above is preset in the detector.

### Visual Alarm Function

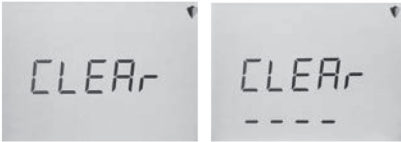
When the detector is in an alarm state the Visual Alarm (Warning Icon/Fig. 2) will appear on the display. The Warning Icon will flash simultaneously with the Radon Level (Fig. 8) that is reading high, until the radon reading reaches a safe level.

## TEST MODE



This function is used to manually test the detector's audible alarm and internal processes. Press and hold the menu button until a dash appears on display below the word "test", refer to second image above. Release the menu button once the dash/es appear. The alarm will sound 4 chirps and dashes will continue to move across the display until the test is complete. At the end of the test, it will display the outcome of the test. If the test results in an Error, please contact the manufacturer for assistance.

## RESET/CLEAR MEMORY



This function allows the user to clear all memory and personal settings will default to factory settings. This should be done anytime the detector is moved to a different location.

Press and hold the menu button until dash/es appear below the word "Clear", refer to second image above. Release the menu button and allow the detector to run the clear feature. During this process the detector will flash the word "Clear", chirp four times, and perform a self-test. CAL will appear on screen with running dashes. Once completed the detector will default back to the Home screen, as depicted on page 6. The radon levels will read " \_ \_ " for 48 hours until enough samples have been taken to provide an accurate reading. On the Length of Measurement screen, the hours and days will reset back to 0.



## DETECTOR UNIQUE IDENTIFIERS



- First row identifies the Model #
- Second row identifies the firmware version.

You can locate the detector's serial number and manufacturer information on the label adhered to the underside of the detector.

### **Error Messages**

Every 24 hours, the detector will conduct an internal self-test. If there is a failure during self-test an error message will appear in the display window. If an "Error" is displayed, power cycle the detector (unplug detector then power back up). If the "Error" persists, contact the manufacturer for support.

**For more product information, services and how-to-videos refer to our website: [www.fspi-radon.com](http://www.fspi-radon.com).**

## Specifications

Power Source Adapter	100-240V, 50/60Hz, 0.18A Switching Power Supply
Input for Gas Detector	5.0V, 1.0A max.
Sensor Voltage	250VDC
Sensor	State of the Art, Diffused-Junction Photodiode
Full Scale Reading	pCi/L Model: 0.0 to 9999.9 Bq/m <sup>3</sup> Model: 0 to 99999 Bq/m <sup>3</sup>
Operating Environment	41°F (5° C) to 104°F (40°C)
Storage Environment	Temperature: 77°F (25°C) +/-5° Relative Humidity: 50 +/-20% Store in a dark and dust free area.
Audible Alarm	85dB at 10cm Can be muted by the user.
Averaging Frequency	Levels will be updated on the display every hour.
Short-Term	Average over the past 7 days, (168 hours). Calculation method is a rolling average.
Long-Term	Average over the past 1 year, 365 days. Calculation method is a rolling average
Accuracy/Precision at 25 pCi/L (Typical)	7 days +/- 12% pCi/L 1 month +/- 5%
Dimensions	4 5/8" x 3 3/8" x 2"
Weight	.36 ounces

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## One Year Limited Warranty

Family Safety Products, Inc. warrants this product to the original retail purchaser, to be free from defects in material and workmanship except as otherwise provided herein. This warranty is not transferable and is effective from the date of original retail purchase.

Units returned to Family Safety Products, Inc. that are determined to be within the warranty period and found to be defective, will be repaired or replaced free of charge to the original purchaser. If you suspect that your detector is defective, please follow the instructions found under **Procedures for Warranty Service.**

### Procedures for Warranty Service:

1. Contact Family Safety Products, Inc. by phone at 800-748-0298, by email at [info@fspiradon.com](mailto:info@fspiradon.com) or by mail at 2879 Remico St. SW, Grandville, MI 49418 **to receive a return authorization (RA) number.** Products returned without an RA number will be refused and returned to the purchaser.
2. Include with the detector the RA number, your name, address, phone number and description of the problem you are experiencing. All returns must also include a copy of the original purchase receipt showing the date of purchase.
3. Package the detector carefully to ensure that no damage occurs during return shipment. Write the RA number you received on the outside of the package near the address label.
4. Send the package, postage prepaid, to Family Safety Products, Inc. 2879 Remico St. SW, Grandville, MI 49418.

## **This Warranty Does Not Cover:**

1. Cost of shipping the product to Family Safety Products.
2. Normal wear, scratches or fading of product.
3. Damage caused by abuse, misuse, tampering with the product including the removal of the back cover.
4. Damage caused by failure to follow installation and use directions found in this manual.
5. Consequential damages, incidental damages or expenses, including damages to property and personal injury.

This warranty is limited to the provisions clearly stated herein. Any implied warranties, warranties of merchantability, warranties of fitness for a particular use are excluded.

If any of this warranty is prohibited by federal, state or local law, that cannot be preempted, that provision shall not be applicable. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

NOTES:

NOTES:

Family Safety Products, Inc.  
2879 Remico St. SW  
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616-530-6540  
[www.fspi-radon.com](http://www.fspi-radon.com)

For more product information, services and how-to-videos, refer to our website: [www.fspi-radon.com](http://www.fspi-radon.com).

Made in the USA