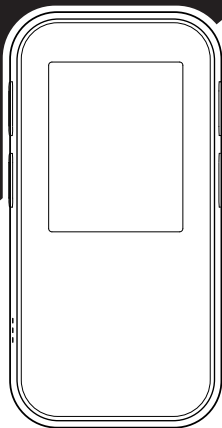




Model: RAB



USER GUIDE

Radon Detector

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1. Product introduction

This radon detector is a portable radon concentration monitor. It is mainly used to monitor the α ionizing radiation formed by radon decay. It is with an ultra-low power consumption LCD screen for display, along with 4 independent buttons for convenient operation. When the detected value exceeds the alarm threshold, it will alarm to promptly remind users to take safety measures.

NOTE: Please thoroughly read this user guide and save the document for future reference and to pass on to any subsequent owner. Images are representative only. Actual product may vary slightly.

Product Support: 1-800-880-6788

Please write down the below information and have this at hand when you call.

Date Code (on back): _____

Date of Purchase: _____

Where Purchased: _____

Date to Replace: _____

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

⚠ CAUTION: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions,

may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

⚠ WARNING: PLEASE READ CAREFULLY AND THOROUGHLY

- A battery powered alarm must have a battery of the specified type, in good condition and installed properly.

This alarm is not intended to alert hearing impaired individuals.

IMPORTANT: Radon detectors are designed to detect radon gas. They are NOT designed to detect smoke, fire, carbon monoxide or any other gas.

⚠ CAUTION: Radon detectors will only indicate the presence of radon gas at the sensor. Radon gas may be present in other areas.

⚠ WARNING: This product is intended for use in indoor residential locations. It is not designed to measure compliance with Occupational Safety and Health Administration (OSHA) commercial or industrial standards. This device is designed to help protect individuals from effects of radon exposure. It will not fully safeguard individuals with specific medical conditions. If in doubt, consult a medical practitioner.

- Radon detectors do not prevent radon from occurring, nor can they solve any existing radon problem.

2. Implementation standards and measures for radon concentration

The radon concentration standard varies from region to region (4 pCi/L or 148 Bq/m³ by default), but there are generally some basic standards.

EPA	≤ 4pCi/L (equivalent to 148Bq/m ³)
Standards of the WHO	≤ 2.7 pCi/L (100 Bq/m ³); when >8.1 pCi/L (300 Bq/m ³), it is strongly recommended to take corrective measures.
EURATOM	< 8.1 pCi/L (300 Bq/m ³)

The simplest way to reduce indoor radon concentration is to enhance indoor ventilation. When the radon concentration exceeds 4 pCi/L (148 Bq/m³), ventilate for at least 10 minutes. Note: 1 pCi/L = 37 Bq/m³.

3. Main features

- Utilizes a semiconductor radon sensor.
- Ultra-low power consumption LCD screen for display, along with 4 independent buttons.
- With air vents on sides with high diffusion effect, enabling radon gas to quickly diffuse into the device.
- Data is displayed for the first time 12 hours later. At the same time, it records various viewable data such as accumulated average, 0.5 day value, 1 day value, 3 days value. If the running time is equal to or longer than 1 day, the average value for the last 0.5 days will no longer be displayed.
- The side buttons allow for quick activation or deactivation of the alarm

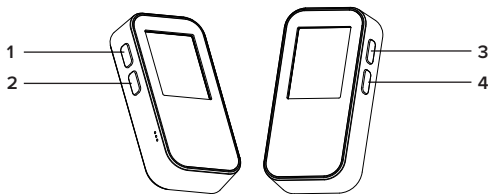
sound, switching of display units, viewing of radon concentration at different time periods, and restarting the measurement.

- There is a countdown timer for the first data update, allowing for a more intuitive understanding of when the data will be updated.
 - The equipment can automatically enter a low-power mode, enabling long battery life while still being able to perform normal data detection and radon concentration alerts.
 - The screen can indicate changes in radon concentration values. When the value exceeds the threshold, it will automatically flash to give a warning.
 - After the operation time exceeds 12 hours, it could be manually switched or automatically switched at intervals of 10 seconds to display the average radon concentration values for different time periods.
-

4. Technical specifications

- Sensor: Semiconductor radon sensor
- Measurement range: 0.09 ~ 1,000 pCi/L (3.33 - 37,000 Bq/m³)
- Time for first data display: 12 hours
- Reliable data measurement time:
 - 12 hours later (when radon concentration is higher than 6.4 pCi/L (235 Bq/m³));
 - 24 hours later (when radon concentration is 4.2~6.4 pCi/L (156~235 Bq/m³));
 - 48 hours later (when radon concentration is lower than 4.2 pCi/L (156 Bq/m³));
- Data update time: 60 minutes
- Battery life: One year minimum (in screen-off state). **NOTE:** Constant exposures to high or low temperatures or high humidity may reduce battery life.
- Alarm time: alarm for 20 seconds every hour after exceeding the limit.
- Detection environment: 14 - 113 °F (-10 - 45 °C), RH<90% (non-condensing) (inaccurate data when working out of range).
- Size and weight: 4.2*2.1*0.9 in (107*54*23 mm), 0.27 lbs (121 g).
- Battery: AAA(3pcs), 1.5V. Use Energizer E92.

5. Key instructions



1. **“UNIT”**: Short press to switch units (pCi/L or Bq/m³).
 2. **“RESET”**: Long press to restart the measurement, short press to switch and view radon concentration values for different time periods.
 3. **“MUTE”**: Short press to turn the alarm sound on/off.
 4. **“POWER”**: Long press to power on or off.
-

6. Operating instructions

1. Power on

Press and hold the **“POWER”** button for 3s, the buzzer beeps once, and the screen lights up to complete the power-on.

2. Power off

Press and hold the **“POWER”** button for 3s. The buzzer will beep once, and the display will show “OFF” to complete shutdown.

3. Unit Switching

Short press the **“UNIT”** button to switch the radon concentration display unit (pCi/L or Bq/m³). The default unit is pCi/L.

4. Alarm Mute Switching

Short press the **“MUTE”** button to toggle the alarm on or off. After switching, a

corresponding icon will appear in the upper-left corner of the screen. The alarm is enabled by default.

5. Measurement Data Switching

- After running for over 12 hours, short press the “**RESET**” to view the average values for the past 0.5-day, 1-day, 3-days, and 7-days (if the runtime is 1 day or longer, the past 0.5-day average will not be displayed).
- If the running time is longer than or equal to 7 days, the display will automatically cycle through the 1-day average, 3-day average, and 7-day average radon concentrations every 10 seconds.

If the running time is greater than or equal to 3 days but less than 7 days, the display will automatically cycle between the 1-day average and 3-day average radon concentrations every 10 seconds.

If the running time is greater than or equal to 1 day but less than 3 days, only the 1-day average radon concentration is displayed without automatic switching.

If the running time is greater than or equal to 0.5 days but less than 1 day, only the 0.5-day average radon concentration is displayed without automatic switching.

6. Reset

Press and hold the “**RESET**” for 3s. The system will automatically clear the data, initiate a new measurement, and enter a new 12-hour measurement cycle.

7. Turn on the backlight

Short Press any button to automatically turn on the backlight. If no operation for 30 seconds, the backlight will automatically turn off.

7. Battery information

This model contains three replaceable AAA batteries. Under normal conditions, fresh batteries will last at least one year. **NOTE:** Constant exposure to high or low humidity or temperatures may reduce battery life.

Replace batteries with the following approved brand, taking

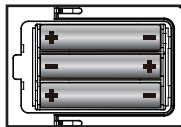


Figure 8

note of the battery polarity shown in Figure 8: Energizer E92. These batteries can be purchased at your local retailer.

⚠ WARNING: Use only the batteries specified. Use of different batteries may have a detrimental effect on the alarm. Do not mix old and new batteries. Do not mix alkaline, standard, or rechargeable batteries.

NOTE: Do not use lithium batteries in this unit. A good safety measure is to replace the batteries at least once a year, or at the same time you change your clocks for daylight saving time. A missing or improperly installed battery will render the unit inoperable.

⚠ WARNING: Failure to install batteries in the correct orientation, will prevent proper operation of this alarm and will prevent its response to Radon hazards.

8. Precautions

- This device is not waterproof. Please do not drop or subject the instrument to severe vibration to avoid damage.
- Avoid using low-quality batteries, as battery leakage may corrode the equipment.
- Avoid strong vibrations of the instrument as much as possible to prevent affecting the detection accuracy.
- **Due to the randomness of radon gas alpha decay, when measuring low-concentration radon, the count value may exhibit an uneven distribution phenomenon, or there may be slight differences in measurement results between different devices. This is a normal phenomenon and not an inaccuracy of the instrument. Therefore, long-term measurements are recommended, such as using an average value over 7 days or more as a reference.**
- After measuring high-concentration radon gas, residual radon and radon daughters will be adsorbed inside the equipment. Depending on the degree of radon pollution, it takes 24 hours to a maximum of 3.8 days for complete decay. Therefore, after measuring high-concentration radon gas, it is recommended to wait 24-48 hours before obtaining effective measurement data every time the measurement location is changed.

9. Q & A

1. The screen doesn't show data and the value shows "--". What does it mean?
Answer: The minimum test time for the first data appearance is 12 hours. Please continue to wait.
 2. Why does the buzzer sound intermittently?
Answer: When radon concentration exceeds 4 pCi/L (148 Bq/m³) and the screen displays "⚠" in the upper left corner, the device will sound for 20 seconds every hour. This alerts users that the average radon concentration has exceeded the threshold over the past day.
-

10. What is radon ?

Radon is a dangerous radioactive gas. It is colorless, odorless, and tasteless, and cannot be detected by human senses alone. Its density is eight times of air. Basements, schools, and houses with underground facilities are prone accumulate high concentrations of radon gas, which is very dangerous! The half-life of radon is 3.82 days, but it is always present in our surrounding environment. Moreover, the period with the highest radon concentration is at dawn when most people are sleeping.

- Hazards: When inhaled into the body, the alpha particles emitted during radon decay can cause radiation damage to the human respiratory system and lead to lung cancer. Infants and pregnant women are at higher risk of radiation damage.
- Sources: Radon mainly exists in the soil, and natural building materials are the most important source of indoor radon.
- Common control measures: The simplest and most effective way to reduce indoor radon concentration is to enhance indoor ventilation. When the radon concentration exceeds 4 pCi/L (148 Bq/m³), ventilate for at least 10 minutes.

11. Service and Warranty

One-Year Limited Warranty

Kidde warrants that the enclosed alarm (but not the batteries) will be free from defects in material and workmanship or design under normal use and service for a period of one year from the date of purchase.

The obligation of Kidde under this warranty is limited to repairing or replacing the alarm or any part which we find to be defective in material, workmanship or design (part replacement only, no installation), free of charge, upon receiving the alarm with proof of date of purchase, postage and return postage prepaid, to Warranty

Service Department, Kidde, 1016 Corporate Park Drive, Mebane, NC 27302. Before shipping the product, please remove the batteries from the battery compartment.

This warranty shall not apply to the alarm if it has been damaged, modified, abused or altered after the date of purchase or if it fails to operate due to improper maintenance or inadequate power. Any implied warranties arising out of this sale, including but not limited to the implied warranties of description, merchantability and fitness for a particular purpose, are limited in duration to the above warranty period. In no event shall the Manufacturer be liable for loss of use of this product or for any indirect, special, incidental or consequential damages, or costs, or expenses incurred by the consumer or any other user of this product, whether due to a breach of contract, negligence, strict liability in tort or otherwise.

The Manufacturer shall have no liability for any personal injury, property damage or any special, incidental, contingent or consequential damage of any kind resulting from radon exposure, gas leakage, smoke, fire or explosion. Since some states do not allow limitations of the duration of an implied warranty or do not allow the exclusion or limitation of incidental or consequential damages, the above limitations or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights which vary from state to state.

The above warranty may not be altered except in writing signed by both parties hereto. Your Kidde Alarm is not a substitute for property, fire, disability, life or other insurance of any kind. Appropriate insurance coverage is your responsibility. Consult your insurance agent. Opening the unit will void the warranty. If there are any differences between this printed warranty and the online limited warranty, then the terms of the online warranty supersede those in this user guide or other printed materials. Visit www.kidde.com for the latest warranty statement.



QUESTIONS OR FOR MORE INFORMATION

Call Kidde Product Support line at **1-800-880-6788**
or contact us at www.kidde.com

Kidde

1016 Corporate Park Drive, Mebane, NC 27302

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