NEUTRONRAE II

Personal Radiation Detector

RAE Systems NeutronRAE II is a personal radiation detector that provides rapid detection of both gamma and neutron sources.
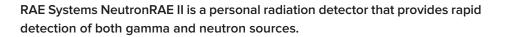
The NeutronRAE ll's high sensitivity can alert users to the presence of a radiation threat well before they might be exposed to health-threatening levels.

The NeutronRAE II features a loud audible alarm, bright flashing LEDs, and a vibration alarm. Each alarm can be disabled separately. NeutronRAE Il's water-resistant design makes for reliable operation in wet environments and for easy decontamination.

- Quick detection of radiological threats
- Alerts the wearer with a loud audible buzzer, bright flashing LEDs, and a built-in vibration alarm
- Water resistant/immersible
- Dose accumulator tracks total dose exposure from gamma radiation
- NeutronRAE II is designed in compliance with IEEE ANSI N42.32 standard

DETECTOR KIT INCLUDES :

- NeutronRAE II personal radiation detector
- Belt clip
- 2 AA alkaline batteries
- Wrist strap
- User's Guide
- Calibration certificate
- ProRAE Studio II software

APPLICATIONS

Alerts first responders to radioactive threats

Customs and border patrols

Security officers in nuclear power facilities, banks, government laboratories, medical facilities

Military

Government agencies

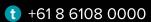HazMat teams

Police and fire departments

KEY FEATURES

- **Detects neutrons from weapons-grade Plutonium (239Pu)**
- **Sensitive CsI and LiI scintillators for excellent search capability and fast response**
- **Continuous digital dose rate readout in µR/h or µSv/h for gamma radiation, and counts per second (cps) for neutron radiation**
- **Continuously accumulated total dose readout for gamma radiation**
- **IP-67, immersible in water for easy decontamination**
- **Two operation keys, simple intuitive programming**
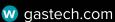- **Continuous datalogging with a large 10,000-point datalog capacity**

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SPECIFICATIONS

Specifications subject to change without notice

Radiation Detector	Gamma: 1cc CsI (Tl) with Photodiode Neutron: 1cc LiI (Eu) with Photodiode	**Datalog Size**	10,000 data points (20 days at 180-second intervals)
Energy Range	Gamma: 0.06 to 3.0 MeV Neutron: thermal to 14 MeV	**Datalog Modes**	Continuous: Logs data at all time Event-Driven: Starts logging data on alarm
Dose Equivalent Rate (DER) Range for 137Cs	1 to 20 mR/h (0.01 to 200 µSv/h)	**Datalog Interval**	User programmable, 1 to 3,600 seconds
		Communication	Built-in Bluetooth® radio interfaces with computer for datalog download
Accuracy of DER	±20%	**Battery**	2 AA alkaline batteries
Neutron Measuring Range	1 to 100 cps	**Battery Runtime**	500 hours
		Temperature	-20° C to 50° C (-4° F to 122° F)
Dose Range	1 µR to 999 R (0.01 µSv to 9.9 Sv), gamma only	**Temperature Alarm**	Temperatures above 50° C (122° F) cause a high temperature alert message
Background Reference	Background level reference automatic on start-up, plus user-initiated as needed (Search Mode only)	**Humidity**	0% to 95% (non-condensing)
		Shock Resistance	Passes drop test from 59" (1.5 m)
		IP Rating	IP-67 (immersible)
Calibration	None required. Periodic functional test recommended using 0.5 µCi or higher 137Cs check source. Factory calibration available if needed.	**Display**	Graphic LCD with 1.2" x 0.75" (30.5 mm x 19 mm) viewable area can be flipped for view by user; Radiation intensity displayed in cps (gamma, neutron) or dose rate in µR/h or µSv/h (gamma only)
Alarm Alerts	Loud audible buzzer (85+ dB @ 12"/30 cm), built-in vibration alarm, highly visible LED lights on both sides of LCD graphic display, can be separately enabled or disabled	**Direct Readout**	Dose rate, peak rate, minimum rate, total gamma dose, battery status, current time and date, current time since start-up, internal temperature
Alarm Modes	Search Mode: Gamma alarm threshold based on variations in local background level Safety Mode: User-programmable low and high gamma alarm thresholds based on dose rate (applies to gamma alarm only)	**Ergonomics**	Nonslip rubber housing with grippable ridges securely fits hand or glove
		Keypad	2 operation/program buttons
		Size	4.92" x 2.68" x 1.38" (125 mm x 68 mm x 35 mm)
		Weight	10 oz (283 g)
		Attachments	Rugged metal belt clip and wrist strap