

GAMMARAE II R

Radiation Detector and Dosimeter



The RAE Systems GammaRAE II R is a rapid gamma radiation detector and dosimeter in a single instrument. The GammaRAE II R is designed specifically to meet the needs of national security and emergency responders.

Due to its high sensitivity at low radiation levels, GammaRAE II R can alert users of the presence of a radiation threat well before reaching health-threatening levels. Its high range and dosimeter functionality allow security and emergency responders to track their dose.

- Combined Detector and Dosimeter
- Intrinsically Safe
- Immersible
- Loud Alarm
- Dose Accumulation

GAMMARAE II R KIT INCLUDES:

- GammaRAE II R personal radiation detector/dosimeter
- Belt clip
- 2 AA alkaline batteries
- Wrist strap
- User's guide
- Calibration certificate
- ProRAE Studio Radiation software

APPLICATIONS

Customs and border patrols

Law enforcement

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

Military

Government agencies

HazMat teams

Fire departments

KEY FEATURES

- Sensitive CsI scintillator for fast search capability and response
- Energy-compensated PIN diode sensor for high dose rate range and accurate dosimeter capabilities
- Prominent visible, audible and vibration alarms
- Immersible in water for easy decontamination
- Top-mounted, invertable display
- Continuous digital readout in Rem/hour ($\mu\text{R/h}$ & mR/h) or in Sievert/hour ($\mu\text{Sv/h}$ & mSv/h) and counts per second (cps)
- Two AA alkaline batteries last up to 600 hours
- Large, 30,000-point datalog capacity, down loaded via cable-free Bluetooth® connection

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SPECIFICATIONS Specifications subject to change without notice

Radiation Sensors	3cc CsI (TI) with Photodiode (Low channel) Energy-Compensated PIN Diode (High channel)	Datalog Size	30,000 data points (20 days at 60-second intervals)
Energy Range	0.06 to 3.0 MeV	Datalog Modes	Continuous: Logs data at all times, Event-Driven: Starts logging data on alarm
Dose Equivalent Rate (DER) Range for 137Cs	1 µR/h to 600 R/h (0.01 µSv/h to 6 Sv/h)	Datalog Interval	User programmable, 1 to 3,600 seconds
Accuracy of DER	±20%	Communication	Built-in Bluetooth® radio interfaces with computer for datalog download and configuration changes
Dosage Range	1 µR to 999.9 R (0.01 µSv to 9.9 Sv)	Battery	2 AA alkaline batteries
Background Reference	Background level reference automatic on start-up, plus user-initiated as needed (Search Mode only)	Battery Runtime	Up to 600 hours
Calibration	None required. Periodic functional test recommended using 1 µCi and 16 µCi 137Cs check sources. Factory calibration available if needed.	Temperature	-4° F to 122° F (-20° C to 50° C)
Time to Alarm	<2 seconds	Temperature Alarm	Temperatures above 122° F (50° C) cause a high-temperature alert message
Alarms	Loud audible buzzer (85+ dB @ 30 cm), built-in vibration alarm, highly visible LED lights on both sides of LCD graphic display	Humidity	0% to 95% (non-condensing)
Alarm Settings	<p>Dose Rate:</p> <p>Search Mode: Alarm threshold based on variations in local background level</p> <p>Safety Mode: User-programmable low and high alarm thresholds based on dose rate</p> <p>Dose:</p> <p>User-programmable low and high alarm thresholds based on dose</p> <p>Stay Time: Alarms vary by time (3 min to 2 hrs, once per minute; <3 min, once every 5 sec; 0 min and beyond, same as dose alarm)</p>	Shock Resistance	Passes drop test from 59" (1.5 m)
		IP Rating	IP-67 (immersible)
		Intrinsic Safety	Certified to meet Class I, Div. I, Groups A, B, C, D, T4 ATEX II IG EEx ia IIC T4
		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 or dosage rate in divisions of R/h or Sv/h
		Direct Readout	Dose rate, peak, min, total dose, battery status, time, temperature
		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	9.5 oz (270 g)
		Attachments	Rugged metal belt clip and wrist strap



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