

# palmRAD 907 Nuclear Radiation Meter



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The palmRAD 907 is an easy-to-use, portable radiation meter designed to accurately detect and measure levels of radioactivity for a multitude of health and safety applications. Lightweight and compact in design, the palmRAD 907 is capable of detecting and measuring alpha, beta, gamma and x-ray radiation using a 2-inch pancake GM detector with high sensitivity to beta and alpha sources.

## **Applications**

- Compliance and Inspection
- Emergency Response
- Quality Control
- HAZMAT

## **Features**

- Alarm Threshold
- Acquisition Timer
- Loud Audible Chirp

The palmRAD 907 is an economical radiation detection solution for non-technical personnel in government, law enforcement or the private sector. The instrument offers the

highest sensitivity to radiation making it an excellent tool for various applications including industrial, medical or emergency response. A slide switch on the front panel turns the unit on or off and also allows toggling between audible and silent chirp modes. Another slide switch allows the user to reset total counts, or display the radiation activity in mR/hr, CPM, CPS, or mSv/hr.

The optional stainless steel Wipe Test Plate slides easily onto the 907 positioning the depression and wipe directly in front of the GM tube at a fixed distance of 1 centimeter. The Wipe Test Plate is removable for general surveying or decontamination. It can also be used for protecting the GM tube from damage and the instrument from being contaminated while the 907 is not in use.

The Total/Timer feature takes timed readings for periods from one minute to 24 hours for precise measurement of low-level contamination. Our “safety first” calibration feature can also eliminate radiation exposure to the calibration technician. The instrument’s user-adjustable alarms alert audibly and visually when radiation is present and when preset exposure limits are exceeded. The dose rate or cumulative dose is shown digitally on the instrument’s LCD display. The handheld unit comes with a protective pouch which secures to a user’s belt for convenience in operation or transportation. The palmRAD 907 meets CE certification requirements for Europe.



*The back panel of the palmRAD 907 (shown above) features the 2-inch pancake GM detector.*



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# palmRAD 907 Specifications

<b>Detector:</b>	Halogen-quenched Geiger-Mueller tube. Effective diameter 1.75" (45 mm). Mica window density 1.5-2.0 mg/cm
<b>Display:</b>	4-digit liquid crystal display with mode indicators
<b>Averaging Periods:</b>	Display updates every 3 seconds, showing the average for the past 30-second time period at normal levels. The averaging period decreases as the radiation level increases. User can select fast 3-second averaging period.
<b>Operating Range:</b>	mR/hr: .001 to 100.0; CPM: 0 to 300,000; Total: 1 to 9,999,000 counts; mSv/hr: .01 to 1,000; CPS: 0 to 5,000
<b>Efficiency:</b>	Sr-90 (546KeV, 2.3MeV $\beta$ max): approx. 75%; C-14 (156KeV $\beta$ max): approx. 11%; Bi-210 (1.2 MeV $\beta$ max): approx. 64%; Am-241 (5.5 MeV $\alpha$ ): approx. 36%
<b>Sensitivity:</b>	3500 CPM/mR/hr referenced to Cs-137
<b>Accuracy:</b>	$\pm 15\%$
<b>Timer:</b>	Can set 1-10 minute sampling periods in 1-minute increments, 10-50 minute sampling periods in 10-minute increments, and 1-24 hour sampling periods in 1-hour increments
<b>Count Light:</b>	Red LED flashes with each radiation event
<b>Audio:</b>	Beeper beeps with each radiation event; can be muted
<b>Outputs:</b>	Dual miniature jack drives CMOS or TTL devices, sending counts to computer or data logger. Submini jack allows for electronic calibration.
<b>Anti-Saturation:</b>	Readout holds at full scale in fields up to 100 times the maximum reading
<b>Temperature Range:</b>	-10° to +50° C , 14° to 122° F
<b>Power:</b>	One 9-volt alkaline battery; battery life is minimum 200 hours at normal background, minimum 24 hours at 1 mR/hr
<b>Size:</b>	150 x 80 x 30 mm (5.9"; x 3.2"; x 1.2")
<b>Weight:</b>	350 grams (12.5 oz) with battery
<b>Options:</b>	Wipe Test Plate



*palmRAD 907 (shown left) being used to locate radiation and measure in  $\mu$ R.*



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