



# palmRAD 907 Nuclear Radiation Meter

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 rugged 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.

The palmRAD 907 features an easy-to-read digital display indicating readings in your choice of mR/hr, CPM, CPS, or mSv/hr. The instrument also automatically compensates for GM tube "dead time" which is the time after a single event that the tube is incapable of detecting a second event. Anti-saturation circuitry prevents jamming in high radiation fields. This feature eliminates failure in the event of a reading that "maxes out" the operating range of the instrument.



*palmRAD 907 Nuclear Radiation Meter with 3 Second Update*

## Applications

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

## Features

- ✦ Rugged for Field Use
- ✦ Acquisition Timer
- ✦ Loud Audible Chirp
- ✦ palmGRAPH Software



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

The palmRAD 907 is the ideal radiation detector 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.

Designed for maximum ease-of-use, the user need only point and measure to get a reading. 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 or CPM.

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 palmRAD 907 display provides a 3-second update of a reading during an exercise to assure that users are aware of the latest radiation levels. The handheld unit, comes complete with a protective pouch which secures to the belt of the user while in operation or for transportation. The palmRAD 907 meets CE certification requirements for Europe.

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 from damage and the instrument from being contaminated while the 907 is not in use.

## Technical Support and Training

Berkeley Nucleonics provides technical support and training for the palmRAD 907 by phone from the corporate headquarters in San Rafael, California. Guidance is provided on the optimal use of the instrument, setting alarms, basic nuclear and radiation theory, dose quantities and units, and measurement of alpha, beta, gamma and x-ray radiation. On-site training on use of the palmRAD 907 is available by arrangement. The number to call for assistance or to schedule on-site training is 800-234-7858.

## Software Package Included

palmGRAPH™ is a Windows-compatible software package designed to record graph radiation measured by the palmRAD 907 over time. When run in conjunction with an operating palmRAD 907, the software will notify the user when user-adjustable alert levels are exceeded by actual radiation counts. This software utility also allows the user to measure, record and display radiation readings over any period of time. With palmGRAPH, one can view current palmRAD readings or display and print graphs showing changes in radiation levels over time. The palmGRAPH software is also useful for demonstrating gross count measurement theory in a classroom or training setting.

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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 above. Used to locate radiation and measure in uR.*

Berkeley Nucleonics Corporation 

3060 Kerner Blvd., #2, San Rafael, California 94901 Tel: 415-453-9955 Fax: 415-453-9956 [www.berkeleynucleonics.com](http://www.berkeleynucleonics.com)