



By Jeffrey Lindsey, PhD, EMT-P



Shock-proof and water-resistant, the nukeALERT can stand up to the demands of an emergency environment.

## The 951 nukeALERT Radiation detection pager

During my high school years, the Three Mile Island nuclear accident occurred. As the crow flies, we were located less than 20 miles from the nuclear reactor site. I can remember my teacher informing us that an incident had taken place and what steps we needed to take. A few years later, I took my first radiological class. It was exciting to learn all about radiological emergencies and what to do during such an incident, particularly because I had already lived through one.

The instructor showed us the Civil Defense Geiger counters we would use to detect radiological particles in the air. It's been many years since this class, and, frankly, I hadn't seen many changes in radiological detection devices until recently, when I discovered a radiation detector marketed by Berkeley Nucleonics Corp.: the Model 951 nukeALERT Radiation Detector.

The first thing that caught my eye about the 951 nukeALERT is that it looks like the pagers we're accustomed to wearing, which makes it inconspicuous during normal operations. The unit comes with a nylon carrying case to protect it and to allow you to wear it on your belt.

The nukeALERT 951 discreetly detects gamma radiation and notifies the wearer with either a vibration or an audible alarm. The alarm beeps increase in frequency and volume in correlation to the amount of radiation. In addition, an LED flashes a read-out that increases in frequency and changes color from orange to red as the strength of the radiation increases. The device displays a reading of 1-9, with nine being the highest radiation level.

A dose rate equivalence chart is provided in the detector manual. For easier

reference and availability, I photocopied the chart, had it laminated and attached it directly to the unit.

If the unit can't achieve detection mode for any reason, a FAIL indicator is displayed. To reset it, simply turn the unit off and back on again. This feature offers you the comfort of knowing you won't be operating in potentially hazardous environments with a false sense of security.

The unit operates on two AA alkaline batteries that give it a two-year operational life and will notify you (with an L on the display) that the batteries are low. It also automatically recalibrates itself in high background-radiation environments to ensure accurate readings.

According to Berkeley Nucleonics, when designing the 951, engineers took into account three specific first responder concerns (which differentiates it from other instruments on the market)—performance, packaging and interface.

**Performance**—Traditional handheld radiation detection devices use GM (Geiger Mueller) tubes. The nukeALERT 951 utilizes Cesium Iodide Scintillator (Cis) detectors, which offer far superior sensitivity, efficiency and response times over GM tube detectors. (At very high counting rates, GM tubes may become

“saturated,” and the meter reading will fall to zero, potentially causing a false sense of security.)

**Packaging**—Realizing that first responders need reliable, rugged equipment, Berkeley Nucleonics produced a product that is shock-proof and water-resistant. Test results show it to be far superior in drop and physical testing to other products—an important feature for EMS folks!

**Interface**—Traditional equipment offers radiation notification in the form of dose rates that can be confusing at times. Knowing that a variety of personnel will use this instrument, the designers felt they needed to offer features that are easy to understand and use. So they converted dose rates to a 1-9 level scale reading, offering a much clearer representation of the operator's environment.

The nukeALERT 951 has a number of features that make it a great device to have on each of your units. The threat of dirty bombs or a radiation event make this device a lifesaver at a reasonable cost.

**For more information, contact Berkeley Nucleonics Corp. at 800/234-7858, or visit [www.berkeleynucleonics.com](http://www.berkeleynucleonics.com).**



Jeffrey Lindsey, PhD, EMT-P, is executive officer for Estero (Fla.) Fire Rescue. He holds a doctorate in instructional technology and has more than 20 years' experience in EMS, fire and rescue. He is also a senior partner with International Consulting and Training Specialists (ICATS). Contact him via e-mail at [jlindsey1@aol.com](mailto:jlindsey1@aol.com).