



MIRION
TECHNOLOGIES

AccuRad™ PRD

Personal Radiation Detector



The AccuRad PRD is a discreet and robust gamma radiation detector, specifically designed for law enforcement and first responders to interdict nuclear and radioactive materials. It excels in emergency response situations by accurately measuring low dose rates to ensure public safety and high dose and dose rates during critical missions.

DESIGNED BY EMERGENCY RESPONDERS FOR EMERGENCY RESPONDERS

The AccuRad PRD is the first of its kind, developed in close collaboration with state and federal law enforcement and first responders. It seamlessly integrates into their routines and addresses the most critical field requirements for a radiation detection device.

FEATURES

- ✓ **Rugged & Durable:** Impact-resistant design for repeated use in harsh conditions.
- ✓ **Discreet & Hands-free:** Low-profile with top-screen display for easy reading.
- ✓ **Waterproof:** Suitable for challenging environments like firefighting.
- ✓ **User-friendly:** Minimal training required, with a tutorial library in the app.
- ✓ **Directional Precision:** Built-in directionality for locating hot spots in busy environments.
- ✓ **Long Battery Life:** 900 hours of field use, with easily replaceable AA batteries.
- ✓ **High-energy Photon Measurement:** Compliant with IEC 60846-1 for use near nuclear facilities.
- ✓ **Low Dose Rate Measurement:** Ensures public safety by delimiting safe zones.

ACCURAD PRD PERSONAL RADIATION DETECTOR

MADE BY RADIATION EXPERTS & FIELD PROFESSIONALS AT MIRION

Only be alerted to genuine threats. The AccuRad Personal Radiation Detector (PRD) operates using innovative Variable Background Suppression (VBS) technology, enabling it to function effectively in diverse background environments. It will only trigger an alarm for genuine threats or hazards.

Obtain precise radiation exposure readings. The AccuRad PRD delivers accurate tissue-equivalent dose measurement and dose alarms for radiological events, leveraging Mirion's extensive expertise in the radiation safety industry.

Analyze real-time data. The accompanying app offers real-time data visualization and relay capabilities, enhancing situational awareness across multiple PRDs and other detectors. It is compatible with various platforms, including RadResponder, Sigma, and SpirVIEW Mobile™ software.

The AccuRad PRD is built to withstand the realities of fieldwork.

A DEVICE FOR ALL SCENARIOS

Law Enforcement and Security



Emergency Response



ACCURAD PRD PERSONAL RADIATION DETECTOR

SPECIFICATIONS

CHARACTERISTICS

Physical

- Weight: 7 oz (200 g), including clip
- Size: 4.25 x 2.4 x 1.4 in. (108 x 61 x 36mm) without clip

Batteries

- Two AA batteries for > 900 hours of continuous operation; Tool-less battery cover

Environment

- Protection rating: IP67 (dust and 1 m (3 ft 3 in.) water immersion)
- Temperature: -13 °F to 140 °F (-25 °C to 60 °C)
- Drop: 1.5 m (4 ft 11 in.) on concrete
- Innovative heavy-duty bi-material construction
- Replaceable fiber-reinforced clip

USER INTERFACE



Modes of Operation

- Dose or count rate
- Search with trend or radar
- 0-9 display indicator

Display

- Top display enables hands-free visual readout and alarm assessment
- Reverse contrast option
- Languages: Arabic, Chinese, English, French, German, Italian, Japanese, Korean, Polish and Spanish

Buttons and Navigation

- Intuitive to use even without training
- Comfortable for one-handed operation
- Usable with thick gloves and reduced visibility (gas mask)

Alarming

- Vibration
- Visual LED
- Audible sound: 85 dB(A) at 30 cm (11.8 in.)

RADIOLOGICAL PERFORMANCE

Detectors

- CsI(Tl) scintillation detector with temperature compensated SiPM for interdiction missions and public safety
- Silicon diode for integrated dose and high and low dose rate measurements to ensure proper health and safety in emergency response situations

Detection Performance

- Alarms at 50 $\mu\text{rem/h}$ (0.5 $\mu\text{Sv/h}$) within two seconds
- VBS: Authenticates true alarms in variable backgrounds
- Energy range: Detects all radionuclides of concern, from 25 keV to 10 MeV; Dose rate response +/-25% from 55 keV to 10 MeV

IEC rated Dose and Dose rate range (rem)

- Low dose rate range (CsI): 1 $\mu\text{rem/h}$ to 100 mrem/h (for Cs-137). Minimum displayed 0.1 $\mu\text{rem/h}$.
- High dose rate range (Diode): 100 mrem/h to 1000 rem/h (for Cs-137)
- Dose range: 10 μrem to 1000 rem (for Cs-137). Minimum displayed 1 μrem .
- Dose rate linearity and range: +/-10 % from 10 $\mu\text{rem/h}$ to 1000 rem/h
- Dose linearity and range: +/-10% from 10 μrem to 1000 rem








IEC rated Dose and Dose rate range (Sv)

- Low dose rate range (CsI): 0.01 $\mu\text{Sv/h}$ to 1 mSv/h (Cs-137). Minimum displayed 0.001 $\mu\text{Sv/h}$
- High dose rate range (Diode): 1 mSv/h to 10 Sv/h (Cs-137)
- Dose range: 10 μSv to 10 Sv (minimum displayed 1 μSv)
- Dose rate linearity and range: +/-10 % from 0.1 $\mu\text{Sv/h}$ to 10 Sv/h
- Dose linearity and range: +/-10% from 0.1 μSv to 10 Sv

CONNECTIVITY

- Bluetooth® Low Energy with Near Field Communications (NFC) pairing to smartphone
- USB type C for earphones, maintenance and charging

APPLICATION ENABLED FEATURES

Remote display, settings, access to history and logs, batch configuration and updates	  
Reachback/streaming: email, SMS, SpirVIEW Mobile software, RadResponder	 
Learning section with how-to videos and documentation	 

ACCURAD PRD PERSONAL RADIATION DETECTOR

INCLUDED AND RELATED PRODUCTS

- Standard: AccuRad PRD, AA alkaline batteries, quick guide, spare clip
- Radiation safety training modules for law enforcement, fire rescue and other responders
- SpirVIEW Mobile command center software

SOURCELESS TRAINING SIMULATORS

- AccuRad simulator kit-1, including 1 GS-4 source and 1 AccuRad PRD-SIM: ref ACCURAD-SIMKIT1
- AccuRad simulator kit-4 including 1 GS-4 source and 4 AccuRad PRD-SIM: ref ACCURAD-SIMKIT4
- AccuRad simulator kit-6 including 1 GS-4 source and 6 AccuRad PRD-SIM: ref ACCURAD-SIMKIT6



Learn more about the AccuRad PRD-SIM Kit by referring to the corresponding spec sheet.

ACCESSORIES & SPARE PARTS

- 2xAA Ni-Mh battery pack: ref 168911 (EMEA/APAC only)
- Complete car mount including RAM Mount with suction mount ref 7093826 + adapter for the AccuRad ref 7093823: ref 7093393
- AccuRad rugged case for 1 device: ref 7093824
- AccuRad rugged case for 25 devices: ref 7094666
- USB A to USB C cable: ref 7094665 (America qty 1), or 7094665 (America qty 10), or AC0005104 (other countries, qty 1)
- USB headphones, for USB-C (analog): ref NOM005479
- Test tool with 8 μ Ci US exempt source of Cs-137 (USA only): ref 7095627
- Spare clip: ref NOM005274 (x10)
- Spare battery tab: ref NOM006778 (x10)
- Spare battery cover + clip: ref NOM004540-SAV
- AccuRad spare screen protector, ref NOM005358 (x1)

STANDARDS & ORDERING INFORMATION

Accurad PRD are all compliant with PRD standards ANSI N42.32-2016 and IEC 62401:2017

Radioprotection standards and AccuRad versions:

Product	Standards	Reference
AccuRad PRD Hp(10)	ANSI N42.32-2016, ANSI N42.20-2003, ANSI N42.17A	ACCURAD (Americas) or NOM005331 (other countries)
AccuRad PRD H*(10)	IEC 62401:2017, IEC 60846-1:2009, IEC 60846-2:2015	NOM008516



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