

radHUNTER[®]

Enhanced Hand-Held Radionuclide Identification Device

The radHUNTER is an extremely sensitive and accurate digital hand-held gamma radionuclide identification device (RID). It is the culmination of over eight years of development of micro-miniature, digital signal processing electronics; operating power conservation; and advancements in the scintillation detector, radionuclide template matching identification algorithm. The radHUNTER development was supported in part by the U.S. Government.

Fast Detection and Identification

The radHUNTER is able to quickly detect, rapidly locate, accurately measure and precisely identify sources of contamination from their gamma radiation signature. The radHUNTER uses a 0.75" thick by 4" diameter NaI(Tl) detector. This large cross section provides an excellent source to background ratio which rapidly locates gamma contamination. It comes with a GM tube for high gamma dose rate measurements and an optional sealed ³He detector with moderator for neutron detection. Each instrument is supplied in a carrying case with belt holster, wrist strap, battery pack and recharging unit.

Reliable and Accurate

The radHUNTER operating system and user interface is based on the proven identiFINDER 2 technology. The radHUNTER has been developed to correct for environmental conditions and other influences during field operation. The instrument performs an automatic calibration verification while powered up using intrinsic radiation and it is continuous stabilized during operation.



FEATURES

- Rapidly determine the primary location of the radiation
- Fast nuclide identification
- Alarms on doserate changes above background
- Continually stabilizes for temperature and other conditional changes
- 12 channel, SiRF III GPS
- Reach-back via Bluetooth[®] connected to DUN capable cell phone
- ANSI N42.42 output format
- Web Interface for monitoring and configuring instrument
- Transflective color display
- Visible, audible and tactile alarm annunciators
- Embedded Windows CE operating system
- User interface based on identiFINDER 2
- Expert Mode and Easy Mode



SPECIFICATIONS

DETECTORS

Gamma NaI	Crystal size 102 mm (4.016") × 19 mm (0.748")
Neutron ³He Proportional Counter Tube *2	19 mm (0.748") × 76 mm (2.992"); 8 atm
Gamma (High Dose Rate)	Geiger-Müller detector
GPS	12-channel SiRF III receiver

PERFORMANCE

Energy Range (Gamma)	20 keV – 3 MeV
Corrections	Real-time linearization of gamma spectrum
Gamma Spectrum	1024 channels; 3 MeV
Dose Rate Range	0.000 μSv/h – 10.00 mSv/h
Dose Range	0.000 μSv – 1 Sv
Stabilization	Calibration source; LED; ±1 % for temperature change rate of 0.5 °C (0.9 °F)/min

Nuclide Identification	According to ANSI N42.34
Typical Resolution	≤8 % FWHM at 662 keV at 20.0 °C (68.0 °F) ambient temperature

PHYSICAL

Dimensions (W × D × H)	129 mm (5.079") × 212 mm (8.346") × 323 mm (12.717")
Weight	2900 g (102.29 oz) including batteries
Housing Material	Aluminium

ENVIRONMENTAL

Operating Temperature	-20 °C – +55 °C (-4 °F – 131 °F)
Temperature Change	Sudden temperature change must not exceed 30.0 °C (54.0 °F) in order to avoid damage to the detector crystal
Relative Humidity	10 % – 80 %, non condensing
Protection Rating	IP54 according to IEC 60529

BATTERY

Type	FLIR powerPACK ultra (LSD NiMH, rechargeable)
Operating Duration	≥8 h at 20.0 °C (68.0 °F) in dose rate mode with dimmed display back light and GPS switched off

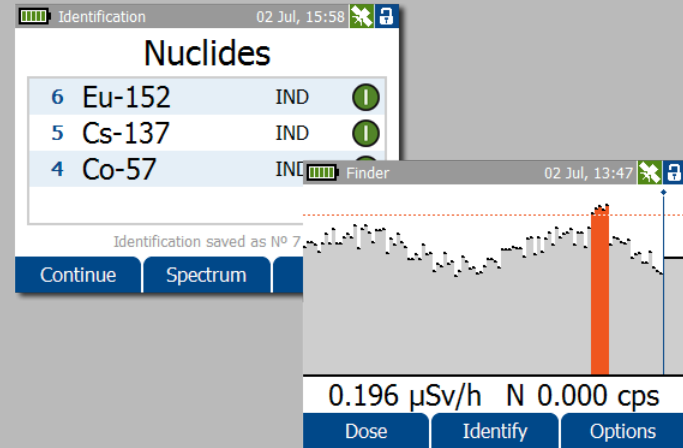
DISPLAY

Type	Transflective color LCD
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INPUT/OUTPUT

USB	USB 2.0; mini-B socket
Bluetooth	Class 2.0; ≤10 m (32'9.7") range

Complete specifications available on request.



VARIANTS

Following variations of this device are available. Specifications differing for the variants are marked in the table.

- *1 radHUNTER ULCS NG NaI detector; GM tube; LED stabilization; internal 3 nCi ¹³⁷Cs source
- *2 radHUNTER ULCS NGH NaI detector; GM tube; ³He tube; LED stabilization; internal 3 nCi ¹³⁷Cs source

For situations not covered by these variants please contact our Marketing and Sales Department at the email address or phone number listed below.

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