

FLIR Systems, Inc. - radHUNTER



GENERAL DESCRIPTION:

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.



TECHNICAL DESCRIPTION:

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 19 mm (0.7") thick by 102 mm (4.0") diameter NaI(Tl) detector or a 38 mm (1.5") thick by 38 mm (1.5") LaBr 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.

CONTACT INFORMATION

FLIR Systems, Inc.
 2800 Crystal Drive, Suite 330
 Arlington, VA 22202
 410-540-8685 or 703-915-9014
 www.flir.com

COST

N/A

Tier Selection

Final tier assignment is based on overall product score.

- Top Tier ◐ Second Tier ○ Third Tier
- ◑ Fourth Tier ● Bottom Tier

RANKINGS

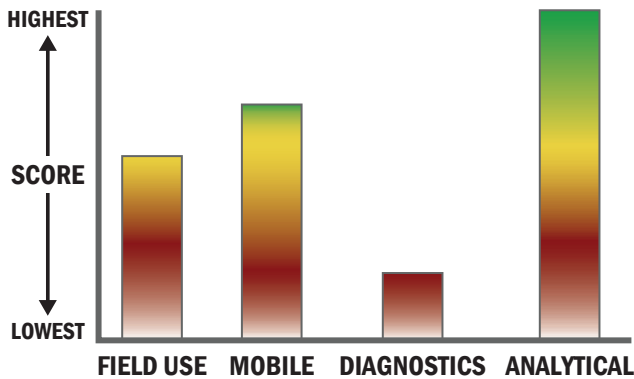
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	●
MOBILE Laboratory	N/A	N/A	●
DIAGNOSTIC Laboratory	N/A	N/A	●
ANALYTICAL Laboratory	N/A	N/A	●

Survey Source

Vendor Supplied Information

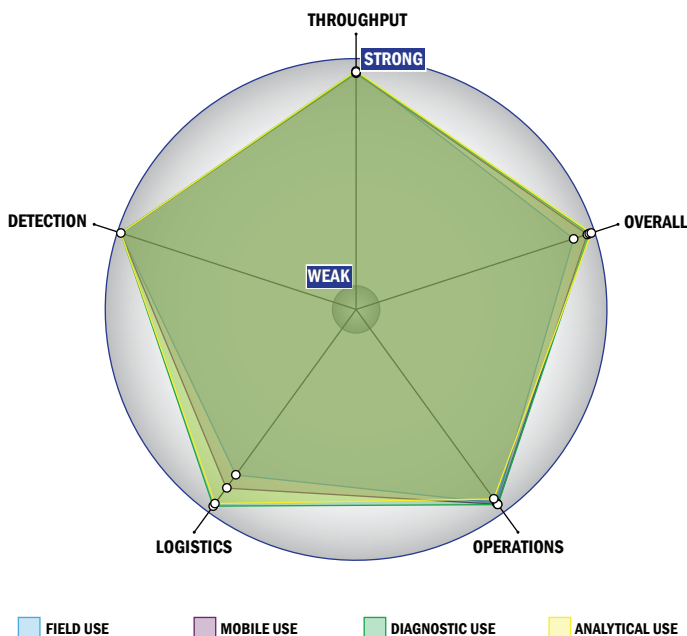
Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



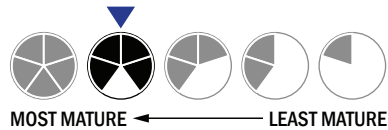
Evaluation Criteria

Throughput:

- Detection is instantaneous
- Continuous operation with no defined runs
- Greater than 750 samples every 2 hours
- The system or device is currently fully automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 0 components
- Less than 5 minutes is required for set-up
- Automatic detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a toaster
- Between 5 and 25 kg
- Wireless and wired connections are available
- System or device uses batteries
- 4-8 hours battery life



Operations:

- Can be used from -21 °C to 41 °C
- Performance is not influenced by relative humidity
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system could easily be adapted into a fully autonomous system
- The system software is closed and not available for modification
- The system hardware is closed and not available for modification

Detection:

- This system does not test liquids
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- Total dose, dose rate and count rate with operator selection to show the display, may differentiate between types of radiation
- Down to background level radiation for dose rate
- Down to background level radiation for count rate
- System is used for personnel detection