

# identiFINDER® R-Series Handheld Radiation Detectors

Portable Gamma Spectroscopy Systems



identiFINDER R300



identiFINDER R400



identiFINDER R500

Entry Control Checkpoints  
Vehicle Screening Checkpoints  
Package/Baggage Inspection  
Mailroom Safeguards  
Critical Infrastructure Security  
VIP Protection  
Event Monitoring

The World's **Sixth Sense™**

# FLIR Family of Handheld Radiation Detectors

## SHARED FEATURES

Rapid and accurate detection and identification of radioactive material

Easy to operate user interface

Transflective color LCD display visible in all lighting conditions

No consumables, "self-health" check capability and extended service intervals

Meets or exceeds relevant ANSI standard for battery life

Integrated GPS receiver

Automatic stabilization and calibration

WebINTERFACE software requiring no dedicated PC for access to data

One Touch Reachback™

Integrated Bluetooth® technology for immediate data transmission from the field

Storage for up to 600,000 spectra

Standardized file format (n42) for spectrum files

FLIR Radiation prides itself for innovation and achievement of many "firsts" in the field of gamma spectroscopy. Along with being the first to design and utilize digital signal processing and LED stabilization techniques, FLIR released its first hand-held gamma isotope identification systems in 1998 when it launched the widely deployed original identiFINDER®. Over 20,000 identiFINDERS have been fielded to date. These units use FLIR's template matching algorithms to rapidly and accurately identify radioactive material. This robust and trusted algorithm has been improved and implemented across the family of handheld products now offered.

Through years of experience working with our customers, researching new products, and improving our existing technology, we have come to realize that no single product can meet all the various applications handheld systems are used for. Different applications require different detector sizes and sensitivities. Some applications require smaller more rugged devices while at other times increased sensitivity outweighs the importance of a compact, lightweight instrument. FLIR Radiation is the first company to launch a full line of isotope identification instruments ranging from small spectroscopic pagers to larger, extremely sensitive devices capable of rapidly scanning large areas in order to meet the variety of radiation monitoring scenarios.

Based on our customer feedback, the new devices operate with the same user interface that was utilized in the original identiFINDER which was well known for its ease of use and intuitive structure. The shared user interface allows a user trained on one instrument to operate them all without any additional training. This also allows agencies to cooperate more seamlessly, providing better protection against emerging and evolving threats.

We also realize the importance of supporting our responders in the field. FLIR's product line now offers enhanced communications allowing for the use of "One Touch Reachback". This feature allows a user to transmit data from the field through off the shelf cell phones, thus providing experts anywhere in the world with instant access to spectroscopic data.

## Variety of Detector Technologies



### CZT

The R300 utilizes CZT detectors. These detectors provide excellent resolution at <3.5% while having the advantage of being a smaller, more rugged detector.



### LaBr

LaBr detectors are available in both the R400 and R500. Although expensive, the large detector volume and high resolution of LaBr (<4.5%) provides a superb measurement quality for situations where high sensitivity and high quality measurements are needed.



### Nal

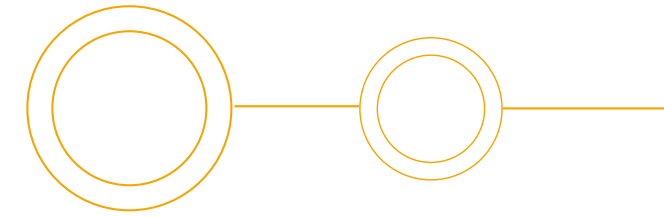
The R400 and R500 can be deployed with NaI detectors. These detectors provide a resolution of <8% and are a cost effective solution for many applications.





# The Right Tool for the Job

Each handheld identiFINDER can be used to detect, locate, and identify radioactive material. But, one size doesn't fit all. Our customers need the right tool for the job. The identiFINDER R-series handhelds come in appropriate form factors and sensitivities based on mission requirements.



## identiFINDER® R300

### Belt-worn passive scanning

One of the most effective methods for finding dangerous radioactive material is having responders wear devices to alert them of the presence of radiation. The R300 is less than a pound, can be worn on a belt and passively monitors for radiation. Unlike other non-spectroscopic devices that don't provide enough information to determine the next steps during an alarm, a user can obtain an identification quickly and provides the wearer the opportunity to make the appropriate decision to resolve the alarm. False alarms, which plague other pager devices, are virtually eliminated.



## identiFINDER® R400

### All purpose surveying and emergency response

Missions can vary and a versatile device capable of identifying radioactive material is needed for the job. The R400 is our best all-around product. Lighter and smaller than other radioisotope identifiers, it provides the sensitivity and rapid identification needed in a wide array of tasks. With over 15,000 deployed, it is the world's most popular device for detecting, locating, and identifying radioactive material. The R400 is commonly used in homeland security, environmental monitoring, and emergency response applications.



## identiFINDER® R500

### Truck, cargo, or large area scanning

Freight and large area search missions create additional need for sensitivity. If a large area needs to be rapidly scanned or sources need to be found that are low level or concealed due to shielding, the R500 is the ideal instrument for the job. Its highly sensitive, large volume detector can collect more data while minimizing the effects of background radiation than the smaller detectors found in other instruments. This increases the instrument's ability to find and identify sources in these difficult situations. Although larger and heavier than other devices in the family, the instrument is provided with a shoulder strap that allows it to be carried with comfort.

## An In-Depth Look

### Spectroscopic Pager for Radiation Detection & Identification

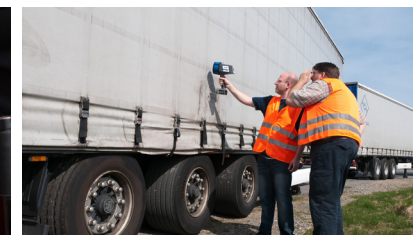
The FLIR identiFINDER R300 is the world's highest performing, pager-sized Spectroscopic Personal Radiation Detector (SPRD). It provides continuous detection capability and full threat identification. The R300 can be deployed in place of existing Personal Radiation Detectors (PRD) with the added capability of identifying the radioisotope present. The simple two-button user interface facilitates expedited threat response. Visible, audible, and tactile alarms rapidly alert the operator via the easy-to-read color display. On-board Bluetooth®, web server, and GPS technologies make interagency communication easier than ever. From One Touch Reachback™ to reliable radioisotope identification, the R300 is the most advanced SPRD available. With enough detector resolution to resolve complex spectra and enough stopping power to identify the full ANSI N42.48 library, the identiFINDER R300 is the ideal solution for belt-worn passive scanning, security checkpoints, border patrol, and first response.

### Handheld Spectroscopic Radiation Detection & Identification

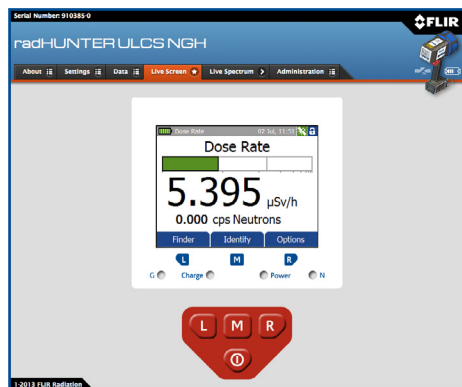
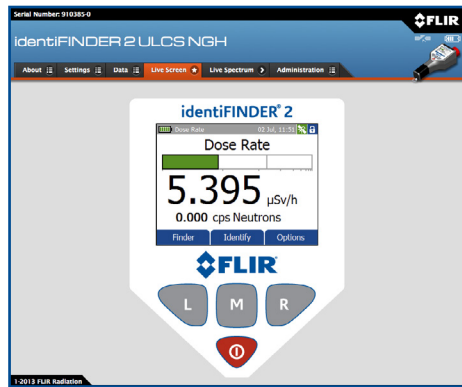
The FLIR identiFINDER R400 is the most widely deployed handheld radiation detection and identification product in the world. At half the size and weight of competitive radio-isotope identification devices (RIID), the R400 helps operators feel comfortable using the instrument even in the most hazardous and stressful environments. Operators use the handheld R400 to detect, quickly locate, measure, and identify the source of radioactive material. Like other identiFINDER R-series products, the R400 contains on-board Bluetooth, web server, and GPS technologies and produces rapid visible, audible, and tactile alerts that expedite response measures. The common operating interface reduces training time and costs, while increasing operator confidence and inter-operability between agencies using FLIR products. The identiFINDER R400 provides operators the ideal balance of size and weight for a wide variety of monitoring scenarios including all-purpose surveying, emergency response, and environmental monitoring. With over 15,000 devices deployed globally, it is the most trusted RIID in the world.

### Highly Sensitive Handheld Spectroscopic Detection & Identification

The FLIR identiFINDER R500 is the most sensitive radio-isotope identification device (RIID) available and is capable of rapidly locating and identifying radioactive material in difficult monitoring scenarios. Like other identiFINDER R-series products, the R500 contains on-board Bluetooth, web server, and GPS technologies. It produces rapid visible, audible, and tactile alerts that expedite response measures and enable field operators to make a next step determination. The common operating interface and template matching technology provides immediate comfort and confidence when using the device. The additional detector volume allows the R500 to identify radioactive material where other instruments cannot. When large areas need to be screened rapidly or there is potential for shielding, as in truck and cargo scanning, the identiFINDER R500 provides superior sensitivity and performance compared to other RIID devices.



# Features



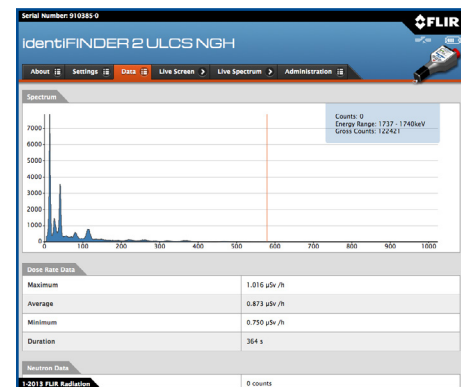
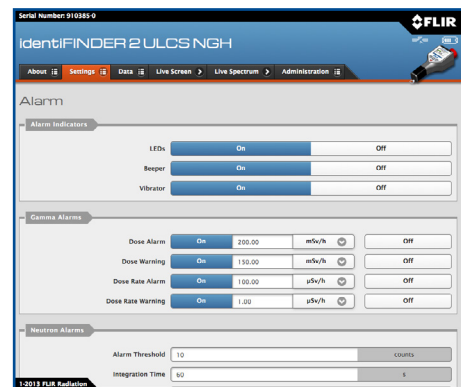
## Shared Graphical User Interface

All FLIR radiation instruments share a common operating interface. When operating in stressful and hazardous environments, the easy to use common operating interface allows users to complete the task at hand without worrying about how to operate the instrument. The common screens and data presentation means that users familiar with other instruments in the FLIR family of handhelds will be able to operate a new device immediately. The commonality between products reduces training time and costs, while increasing inter-operability between agencies using FLIR Radiation instruments.

## Web Interface

With today's familiarity with internet browsing, FLIR has implemented a web-INTERFACE in every handheld product. No longer will users have to learn dedicated PC software. The device serves up a webpage which allows users to configure the instrument to their preferences, download data, or even field update their software. Users are immediately comfortable browsing the instruments files and settings as they use their standard web browsing software such as Internet Explorer, Mozilla Firefox, and others.

Not only do operators feel more comfortable accessing the data and settings, but the internal software can be accessed from any PC. The device contains a driver that allows the unit to communicate directly over a standard USB cable eliminating the need for a dedicated PC or outside internet connection. This improvement offers many advantages including the ability to save and load user configured settings, operate the instrument via the PC, or download and view saved spectra and screenshots.



# System Benefits

## One Touch Reachback™

All FLIR radiation instruments utilize the most advanced communications features available. This enables FLIR to provide the "One Touch Reachback" feature where users can immediately provide full spectroscopic data as well as detailed device information, time, and GPS location to as many people as necessary with the push of a button.

No longer do users have to physically connect their device to a computer, install secondary software, or use external email to provide alarm notifications. Through a simple Bluetooth® connection, notifications are all but automatic. This unique capability provides added security by retaining all detection and identification data on the instrument itself and not on a local computer.

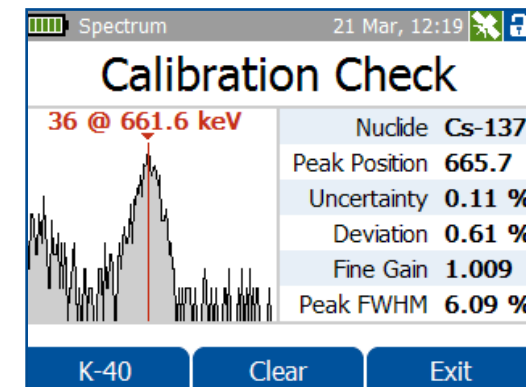
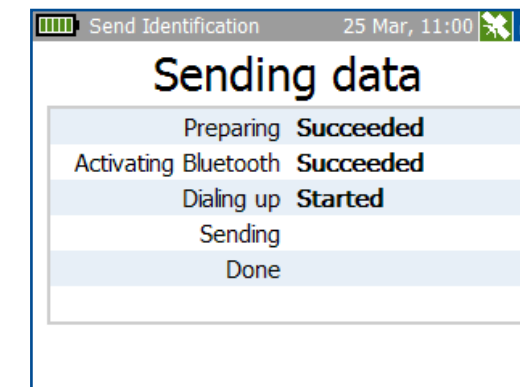
## Lower Cost of Ownership

FLIR Systems works with our customers to help maintain and update the instruments currently in the field. Supplementing our extended warranty service package, we now offer extended service intervals with our latest generation products. Users can now upgrade their firmware through the webINTERFACE to install the latest algorithms and features without returning the instrument to the factory.

The additional processing power and software architecture in these instruments provide additional capabilities of the system's "self-health check". The instruments monitor electronics, hardware, and detectors to ensure peak performance in the field. If parameters move out of factory defined ranges, the instrument will prompt the user to run a field optimization. The automated optimization procedure requires no operator interaction, and within a few minutes, increases the reliability and performance of the instrument. Like a car engine, regular maintenance is required to optimize performance of the identiFINDER. The five year factory maintenance schedule ultimately benefits our customers by ensuring continued exceptional performance and prolonging the useful life of the instrument.

## New Technologies

FLIR constantly evaluates and researches new technologies to improve upon our current detectors as well as to develop new products. The dedication to improve and produce new products is what makes us the world leader in portable gamma spectroscopy product.



The World's Sixth Sense™

Contact:

detection@flir.com  
US: +1.877.692.2120  
EMEA: +32 366 55 106  
AP: + +65 6822 1598



FLIR Systems, Inc.  
Headquarters  
27700 SW Parkway Ave  
Wilsonville, OR 97070 USA  
[www.flir.com/threatdetection](http://www.flir.com/threatdetection)