

IDENTIFINDER® R440

Highly Sensitive, Sourceless Handheld RID



The identiFINDER R440 is a lightweight, sourceless radionuclide identification device (RID) that delivers sensitive detection and fast results for routine survey or secondary screening response missions. The R440 is available with NaI, NaIL, CLLBC and LaBr detector options to respond to radiological threats from farther away, behind heavier shielding, and with better resolution than similarly-sized RIDs. The extended energy range provides neutron indication in the NaI (G) version. Its light weight makes single-handed operation easy during extended operations, while the IP67-rated enclosure is built to survive. The bold, easy-to-read interface with 360° EasyFinder™ mode expedites decision-making to keep personnel and the community safe. Hot swappable batteries facilitate continuous operation on extended missions and the ability to charge batteries outside the instrument while the instrument is on standby ensures instant readiness in the response vehicle.

HIGHER PERFORMANCE IN A RUGGED FORM FACTOR

Adding to the advanced spectroscopic algorithm and sensitivity of the original R440, the new R440 adds optional, proven, higher resolution detection capability.

- New high-resolution detectors join to the R440 family.
- Detector options offer higher sensitivity and better resolution than comparatively sized RIDs.
- Sourceless stabilization improves data collection, reducing false positives.
- Improved ruggedness. Improved shock protection and a locking battery cap provides additional ruggedness.

ABILITY TO POWER THROUGH MISSIONS

Power flexibility, and usability means the new R440 will go the distance and complete the mission with you.

- Power and performance for the entire mission. Hot swappable batteries allow the mission to continue... uninterrupted.
- Ready when you are. When seconds count, the R440's new power management system allows the unit to be plugged in and on while charging batteries, allowing the instrument to be ready to go at a moment's notice.

SITUATIONAL AWARENESS WHEN YOU NEED IT

When threat detection occurs, getting results communicated as quickly as possible is critical. The new R440 makes it easier than ever before, no matter the method.

- Remote viewing operation, GPS, and reach-back over Bluetooth/WiFi via available app (iOS/Android) or over USB via intuitive Web Interface.
- Universal API and ANSI N42.42 data format enables reach-back with user deployed networks such as Mobile Field Kit, ATAC, Sigma Edge, Safe Environment Gateway, and others.



SPECIFICATIONS

General		idf R440
Technology		Radionuclide Identification Device (RID)
Gamma with Neutron Indication – NaI(Tl)		2.0 x 2.0 in (51 x 51 mm)
Gamma with Neutron Measurement – NaI (optional)		2.0 x 2.0 in (51 x 51 mm)
Gamma with Neutron Measurement – CLLBC		1.4 x 1.5 in (36 x 38 mm)
Gamma – LaBr (optional)		1.5 x 1.5 in (38 x 38 mm)
Neutron – ZnS(Li) (optional)		2ea. Moderated Panels (27 x 58 x 5 mm)
Energy Range (Gamma)		10 keV to 10 MeV (All detectors)
Gamma Sensitivity (Cs-137)		1850 cps/μSv/h – (NaI/NaI) 985 cps/μSv/h – (CLLBC) 780 cps/μSv/h – (LaBr)
Neutron Sensitivity		≥2.8 cps/nv – (NaI – not applicable to NaI) 17 cps/nv – (CLLBC) 7.8 cps/nv – (LaBr)
Gamma Spectrum Length		1024 channels
Dose Rate Range (Cs-137, All)		10nSv/h - 10mSv/h (1μrem/h - 1rem/h) / ±10 %
Dose Rate Range ID Mode (Cs-137, All)		10nSv/h - 250μSv/h (1μrem/h - 25mrem/h)
Overload Dose Rate Range (Cs-137, All)		10mSv/h - 500mSv/h (1rem/h - 50rem/h)
Stabilization		Sourceless “Quantum gain” stabilization (patents pending)
Linearization		Real-time linearization of gamma energy
Typical Resolution		≤7% FWHM at 662 keV with NaI and NaI detector at 20 °C ≤4% FWHM at 662 keV with CLLBC detector at 20 °C ≤3% FWHM at 662 keV with LaBr detector at 20 °C
Service Interval		5 year factory maintenance recommended, not required

Data Analysis	
Threats	Detects gamma and/or neutron radiation emitted from natural occurrences in the environment, special nuclear material, industrial, or medical material
Nuclide Identification	Exceeds ANSI N42.34
Library Categories	SNM, IND, MED, NORM

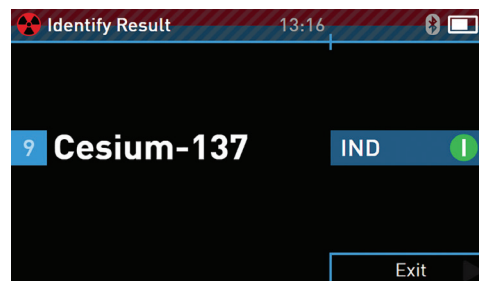
Specifications are subject to change without notice.
For the most up-to-date specs, go to www.teledyneflir.com

System Interface	
Display & Alerts	Transflective color LCD / 3" (2.72" x 1.61") Color TFT Display, Resolution: 800 x 480 pixels
Communication	USB 2.0, USB OTG; Bluetooth® Class BLE 4.0 and 2.1 with EDR ≤30m range, WiFi 802.11 g/n (can be disabled at manufacture)
Data Storage	32GB internal memory
Training Requirements	<10 mins for operator; 1 day for advanced user
GPS	72-channel u-blox M8 engine
Software	On-board web server software

Power	
Input Voltage	100-240V AC (wall adapter and USB cable supplied)
Battery Specs	Supplied: 2x rechargeable Li-Ion smartpacks and 1x 4x AA pack ≤6h runtime per Li-Ion smartpack; ≤4h runtime with AA battery pack. Recharge time ≤4h when using AC; recharge >4h when using USB; run times may vary depending on operating mode.
Hot swap feature	Internal battery allows > 10 mins operation with battery pack removed to allow ‘hot swapping’ of main battery packs. Unit remains in operation with no data loss.
Cold Start Time	<2 mins from cold start.

Environmental	
Operating Temp (ambient)	-4 to 122 °F (-20 to 50 °C)
Operating Humidity	10 to 100% non-condensing (IP67)
Storage Temp	-4 to 122 °F (-20 to 50 °C)

Physical Features	
Dimensions (W x L x H)	≤ 4 x 10.6 x 3.7 in (10.2 x 26.9 x 9.4 cm)
Weight	≤3.2 lbs (≤1.5 kg)
Enclosure & Protection	Aluminum housing; protection rating IP67 according to IEC 60529


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