TELEDYNE FLIR

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 the R440 offers optional, proven, higher resolution detection capability.

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

ABILITY TO POWER THROUGH MISSIONS

Power flexibility, and usability means the 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 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 R440 makes it easier than ever before, no matter the method.

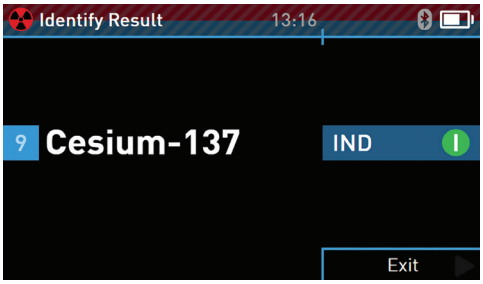
- Remote viewing operation, GPS, and reach-back over Bluetooth/WiFi via available app (iOS/Android) or over USB via intuitive Web Interface.
- Universal API and ANSI N42.42 data format enables reach-back with user deployed networks such as Mobile Field Kit, ATAC, Sigma Edge, Safe Environment Gateway,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

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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 – NaIL (optional)	2.0 x 2.0 in (51 x 51 mm)
Gamma with Neutron Mea- surement – 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/NaIL) 985 cps/µSv/h – (CLLBC) 780 cps/µSv/h – (LaBr)
Neutron Sensitivity	≥2.8 cps/nv – (NaIL – 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)
High 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 NaIL detector at 20 °C ≤4.5% FWHM at 662 keV with CLLBC detector at 20 °C ≤3% FWHM at 662 keV with LaBr detector at 20 °C
Data Analysis	
Threats	Detects gamma and/or neutron radiation emitted from natu- ral occurrences in the environment, special nuclear material, industrial, or medical material
Nuclide Identification	Exceeds ANSI N42.34
Library Categories	SNM, IND, MED, NORM

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	0 to 100%
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



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

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