

Quickly locate
radiation threats

Thermo Scientific PackEye
Radiation Detection Backpack



Natural Background Rejection (NBR) is a technology used to eliminate fluctuating natural background levels while measuring radiation. This proprietary and patented technology is used to quickly differentiate between natural and artificial radiation by stripping away any natural background radiation that is registering, delivering you a more accurate result of artificial radiation levels.

Quickly locate orphaned material, contamination or maliciously introduced sources

The Thermo Scientific™ PackEye™ Radiation Detection Backpack is ideal for field use to quickly locate orphaned sources, radiation contamination and potential malicious intent sources. Our advanced approach delivers high neutron detection sensitivity without the need for He-3.

Simple to use: LED based operations ensure you are proficient in minutes with limited training

Lightweight: models range between 5 and 7.5kg (10 and 16.5lb)

Extended use: 30 hours of operation time

Safe: High neutron detection sensitivity achieved with He-3 free detector technology

Ease of use: Simple green and red notification system

Cost of ownership: Stable product over lifetime with no need for regular optimization or stabilization

High sensitivity: levels as low as 1uR/h (10 nSv/h) discover heavily shielded sources or dirty bombs

Minimize nuisance alarms: immediate discrimination between natural (NORM, natural background changes) and artificial radiation via Natural Background Rejection algorithm

Stealth mode: Standard earphone mutes audible level indication or alarm

Telemetry: Bluetooth™ data transfer to optional PDA or add optional radio module for direct reachback via 900Mhz, 2.4GHz or commercial cellular



Product Information:

- Gamma only version available
- 2 flat Li-6 scintillation detectors with proprietary measurement technique, allowing minimal crosstalk while achieving a very low net alarm threshold level
- Highly sensitive NBR plastic scintillation detector with voltage divider and Photomultiplier
- Low power controller (type FHT 681) with attached high capacity battery module and user friendly interface (LED based indicator unit)
- Accessory case with connection cables to PC or notebook, spare battery pack, earphone, set of international power socket plugs for charger, car adapter as alternative power supply for the battery charger and rain cover



LED based indicator unit

Optional Accessories:

- Thermo Scientific™ RadEye™ SPRD Spectroscopic Personal Radiation Detector for flexible source location, dose rate survey and nuclide identification in case of alarm
- PDA set for convenient data display including GPS (connected to the PackEye Backpack via Bluetooth)
- Transportation case with outside power socket
- Tripod for transportation case provides temporary, covert, stationary gate monitoring capability at vehicle height



Easily tied into the Thermo Scientific™ ViewPoint™ Enterprise platform or other remote monitoring software, allowing for a customizable remote monitoring solution which will provide real-time command and control data.



Specifications and Thermo Scientific PackEye ordering information

Specifications	FHT 1377 GN-2	FHT 1377 G
Order Number	4255061	4255056
Gamma detector	770cm ³ (9x12 cm) plastic scintillator	
Gamma energy range / sensitivity	20 keV to 3 MeV / > 30 cps / μ Rem/h [3000 cps / μ Sv/h] at 662 keV	
Artificial gamma alarm	Typically better than 20 % of natural background	
Neutron detectors	2 ea. Li-6 doped flat scintillation detectors ea. 22 x 23 x 2.3 cm	-----
Neutron efficiency (Cf-252)	40 cps per n / s/cm ²	-----
User Interface	LED based indicator unit at the belt. Optional PDA with Thermo PackEye software and GPS function	
Signal update	100 ms	
Power supply	Rechargeable NiMH - power pack (7.2 V)	
Operation time	approx. 30 h	approx. 60 - 70 h
Dimensions	58cm x 30cm x 18cm (23 x 12 x 7inches)	58cm x 30cm x 18cm (23 x 12 x 7inches)
Weight	approx. 7.5 kg (16.5lbs)	approx. 5 kg (11lbs)
Communications	RS232/USB or Optional Bluetooth	
Accessory aluminum case	1 ea. user manual, 1 ea. USB connection cable with driver software, 1 ea. RS 232 serial connection cable, 1 ea. rain cover for backpack, 1 ea. earphone, 2 ea. rechargeable battery packs (one in exchange), 1 ea. charger for 120/240 V AC and 12 V DC, 1 ea. package of black bands to secure the cables and belts of the backpack.	
Accessories for immediate indication of artificial gamma alarm (NBR)	Exempt check source Cs-137 3.7 kBq (0.1 μ Ci), sealed in a 1" resin chip Lutetium Test Adapter 50 g 50 Bq/g, 62 mm dia. disc (aluminum housing)	SM149479010 4254948



Fast, autonomous, reliable radiation identification

With multiple configurations available, Thermo Scientific RadHalo™ Spectroscopic Area Monitors can adapt to any application, from special event monitoring to rapid response for a nuclear power plant accident.

Learn more at www.thermofisher.com/radhalo



Definitive answers through pin-point accuracy

The RadEye SPRD Spectroscopic Personal Radiation Detector helps you locate and identify radioactive nuclides including nuclear weapons, dirty bombs, orphaned or purposely-masked sources.

Learn more at www.thermofisher.com/sprd