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WG Advanced Backpack Radioisotope Identifier

The WG Radioisotope Identifier Backpack delivers the latest detection and advanced radioisotope location mapping and identification capabilities.

Built with Discovery Technology®, the market leading technology for isotope identifiers, the Backpack supports wide area survey and disaster response with resilient start-up and accurate ID in high dose fields.

The WG Backpack's identification capabilities have been selected by the US Government for Border Protection and Coast Guard missions based on ID performance, ease of use, and the built-in calibration that eliminates annual maintenance.

Advanced algorithms enhance the performance of the gamma detection system and the optional neutron detector is 3He-free, employing 6Li:ZnS technology to achieve class leading wearable sensitivity with low detector mass.

STANDARD FEATURES

- Backpack, mobile and area monitoring
- Class leading isotope ID
- Continuous calibration [±0.5% @ 662keV]
- Detects and identifies radioactive threats
- Fast, accurate, rugged and simple to use
- GPS, 3G, wireless and Bluetooth comms
- Interchangeable hard and soft shell models for changing deployments
- Minimized total cost of ownership with no annual maintenance or user calibration
- Real time command and control and reachback
- Remote capability monitoring
- Simultaneous correct ID of multiple isotopes in 30 seconds or less

Configuration	Hard Shell	Soft Shell
Gamma detector	3" NaI crystal with Discovery Technology®	
Neutron detector	Standard 6LiZnS 3He-free neutron detection blade option	Advanced 6LiZnS 3He-free neutron detection blade system
Weight	8kg (17.6lb)	~8kg (18lb) dependent on shell choice
Dimensions	51 x 37 x 23cm (20 x 14.5 x 9inch)	System can be deployed in a choice of 40L shell options
Performance		
Gamma Identification	Exceeds ANSI N42.53 - 2013 Class leading isotope identification, isotope classification and NORM identification in varying backgrounds	Exceeds ANSI N42.53-2013 Class leading isotope identification, isotope classification and NORM identification in varying backgrounds
Neutron option	252Cf 20,000 n/s @1.2m/s @1m	Advanced: meets ANSI N42.53-2013
Masked source detection	Unique spectrum processing extends the performance of NaI to Identify masked isotopes that cannot be resolved when analysing raw spectra with traditional tools (e.g., Peak Easy).	
Response time	Start-up 30 seconds. Continuous operation through temperature shock.	
High dose start-up	Unique stabilization system that enables unit power on and calibration in high radiation fields without user input for disaster response.	
Calibration	Automatic and continuous calibration [±0.5% at 662 keV in standard operation]. Stabilized throughout operation during temperature shock and following instant recovery from high dose.	
Energy response	30keV-3MeV	
Neutron GARRn	0.9 ≤ GARRn ≤ 1.1 252Cf and 137Cs (10mR/hr) @ 2m	
Dose rate range (137Cs)	1 μ R/hr to 100 R/hr (137Cs) 10 nSv/hr to 1 Sv/hr (137Cs)	
Global positioning	Worldwide GPS	
Battery life	12 hrs	
Mapping	Real time mapping and fleet management	
Connectivity	3G, WIFI, Bluetooth	
Operational modes	Backpack, mobile and are monitoring with remote control	
*Discovery Technology outperforms other systems with the same scintillator by increasing the effective resolution during identification.		
Environmental		
Operating temperature	-20˚C to 50˚C (-4˚F to 122˚F)	
Relative humidity	93% RH at an ambient temperature of +40˚C	
Ingress protection	IP54	
EMC	Designed for RF Immunity, Radiated emissions compliance, operates in magnetic fields and resistance to ESD	