RadPack

Backpack-Based Radiation Detection System

The STE RadPack was developed in 2000 and was derived directly from government-produced equipment used by NEST and elite military units. In 2010 this design was augmented to add gamma radiation sensitivity, and to create the RadPack Max. RadPack Max is the most sensitive man-wearable neutron and gamma detector available. It employs an array of seven two-inch diameter Helium-3 tubes as neutron detectors, as well as six individual 1×4”cesium iodide gamma scintillators for gamma radiation sensing. Developed specifically for military operators, law enforcement, and first responders, the RadPack Max is lightweight, compact, and enjoys a level of ruggedness not approached by competing equipment.

When gamma rays or neutrons are detected at levels significantly above the natural background, the unit quickly alerts the operator by sounding an audio alarm and employing the graphical display on the handheld control module. The operator can easily locate the radiation source using the duty-cycle based audio alarm, and/or the graphical readout. The RadPack Max is designed for operators who need to quickly detect and locate a radiation threat in an unpredictable radiation background.

Like all of STE’s current products, the RadPack Max requires no regular maintenance or calibration. With an included five-year warranty, the full lifecycle cost associated with this device is limited to the purchase price and the cost of replacement batteries.

Features

Ruggedness

The Radpack and RadPack Max are unique as the only backpack-based radiation detection system designed to the stringent needs of military users. They have been engineered and tested to operate in the harshest environments and can even accompany operators on parachute jumps.

Sensitivity

With seven two-inch Helium-3 tubes employed for neutron detection, and six 1×4” gamma scintillators, significantly more than competing devices, the RadPack Max enjoys a measurably superior initial detection range against the most critical nuclear threat materials.

Bluetooth Communications

As either a factory-installed option or as a retrofit in the field, the RadPack Max can be equipped for Bluetooth communications. This capability allows real-time streaming of radiological data to mobile device applications and to centralized command and control networks.

Sensor Technology Engineering, LLC
30 S. Calle Cesar Chavez, Suite D, Santa Barbara, CA 93103
Phone: 805-964-9507 • sales@ste-sb.com • https://ste-sb.com

Specifications

Radiation Type		Gamma, Neutron
Gama	Detector Type	Cesium Iodide Scintillator
	Detector Size	6 x 51 cc
	Sensitivity	102 cps per μR/h at Cs-137 (662keV)
Neutron	Detector Type	Helium-3 Proportional Counter
	Detector Size	7 x 44.3 in^3 (39.3 psi)
	Sensitivity	680 cps/nv
Integration Time		<1 Second
Size		46 cm x 36 cm x 18 cm
Weight		8.6 kg
Battery		CR123A
Battery Life (Operating)		40 hours
Temperature Range		-15º to 50º C
Indicators		Visible, Audible, Vibration
Data Streaming		Optional Bluetooth
Data Streaming		Optional Bluetooth
Operational Availability		0.999

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