

RADPACK MAX

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 increase gamma radiation sensitivity, thereby creating the RadPack Max. In 2020 the product was revised again to add wireless communications and improve EMI resilience.

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 1x4" 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.



SENSITIVITY

With seven two-inch Helium-3 tubes employed for neutron detection, and six 1x4" gamma scintillators, the RadPack Max is the most sensitive commercially-available radiation detection backpack in the world. With a neutron detection sensitivity up to ten+ times that of competing units, the RadPack Max represents a singular capability for the detection of critical nuclear threat materials at standoff range.

RUGGEDNESS

The RadPack and RadPack Max are unique as the only backpack-based radiation detection system designed to address 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.

WIRELESS

Factory-installed, the RadPack Max is equipped for wireless communications. This capability allows real-time streaming of radiological data to mobile device applications and to centralized command and control networks.

SPECIFICATIONS

Radiation Type	Gamma, Neutron
Gamma Detector Type	Cesium Iodide Scintillator
Gamma Detector Size	6 x 51 cm ³
Gamma Sensitivity	102 cps per μ R/h at Cs-137 (662keV)
Neutron Detector Type	Helium-3 Proportional Counter
Neutron Detector Size	7 x 726 cm ³ (39.3 psi)
Neutron Sensitivity	680 cps/nv
Integration Time	<1 second
Size	46 cm x 36 cm x 18 cm
Weight	8.6 kg
Battery	CR123
Battery Life	40 hours
Temperature Range	-15° to 50° C
Communication	Wireless