

# Guardian Patriot

## Portable Radiation Search Tool



Patriot User Interface shown; wired and wireless



### OVERVIEW

Nucsafe has been working with military and first response professionals from around the world in the development of the Guardian Patriot® Portable Radiation Search Tool (PRST).

Guardian Patriot® is built to detect the presence of NORM, legal, and illicit radioactive materials. The system incorporates state of the art passive scanning technology to detect changes in radiation levels emitted by gamma, high energy beta, and neutrons contained on persons and in objects, vehicles, or containers.

The Guardian Patriot® exceeds the strict requirements that military professionals, law enforcement, and emergency responders demand on today's complex missions. Guardian Patriot provides a detection system that is highly accurate, has maximum sensitivity, is rugged, and can be human or vehicle portable for multiple mission requirements.

The Guardian Patriot® is capable of detecting and identifying a wide range of radioactive material. Additionally, the Guardian Patriot® identifies a wide variety of more common radionuclide and materials, including 40K, 60Co, 57Co, 137Cs, 192Ir, 226Ra, 241Am, 232Th and 201Tl.

Depending on user requirements and configuration, the system is designed to distinguish between special nuclear material, naturally occurring radioactive materials (NORM), medical isotopes, and industrial isotopes in a way that minimizes operator interaction with the system controls and indicators.

The Guardian Patriot® can be remotely connected to a phone, tablet, or Notebook PC. Mission critical data can be sent to and monitored from a command and control center and a central reach-back facility.

System configuration is done with an intuitive Windows interface featuring content-specific help. All system parameters can be adjusted utilizing this interface. Simply connect a PC to the device, either wired or wirelessly, and connect with a PC or Tablet running Windows. Configuration changes and firm-ware updates can be performed utilizing the interface, allowing quick and easy upgrades to the latest code when it becomes available.

There are several advanced features in the Android and IOS Applications. The Patriot® backpack also includes: GPS coordinates logging with each data point, onboard data logging, Data logging directly on the Android or IOS device, radionuclide dictionary, Units and display settings as well as Mapping on certain models.

### FEATURES

- Lightweight
- Directionality (Left vs. right)
- Highly sensitive
- Rugged
- Water resistant
- Display visible in direct sunlight
- One button, easy operation
- Gamma spectroscopy
- Long battery life, allowing prolonged operation
- Data logging with GPS coordinates
- Mapping
- Wireless communication capable
- Encrypted network support
- Available in backpack and custom configurations

# Guardian Patriot

## SPECIFICATIONS

Form Factors	Backpack, or custom packaging
Detectors	2 each 2"x4" NaI(Tl) spectroscopic gamma detectors
Probes (optional)	Neutron (solid-state)
Integration Time	200 ms (0.2s)
Battery	Rechargeable, > 9 hours operation <ul style="list-style-type: none"> <li>Hot swappable</li> <li>Extended life battery optional</li> </ul>
GPS	Integrated 12-channel receiver
Wrist Display (optional)	Direct sunlight readable, single push button operation
Operator Display	Android device (Phone, tablet) includes: <ul style="list-style-type: none"> <li>Directionality</li> <li>Mapping</li> <li>Bread crumbing</li> <li>Reach back</li> <li>Spectral analysis</li> <li>Live 1024 channel spectrum</li> </ul>
Data Recording	>8 hours continuous data logging (standard)
Wireless	802.11b/g, Blue tooth
Operating Temperature Range	-4°F to +122°F (-20°C to +50°C)
Total Weight	~17lbs. (~7.1 kg) - less if Gamma only.
Size	20" x 13" x 6" (50 cm x 33 cm x 21 cm)

- System Options
- Solid-state neutron detector
  - Geiger-Mueller probe
  - Alpha (ZnS) probe
  - Wrist display
  - Spectroscopy
  - Cell phone application
  - Extended-life battery

