



Target F900

FinderWear™ Backpack Detection System

Backpack system



Pedestrian portal



Use with a UAV



Area monitor



Wide Range of Applications



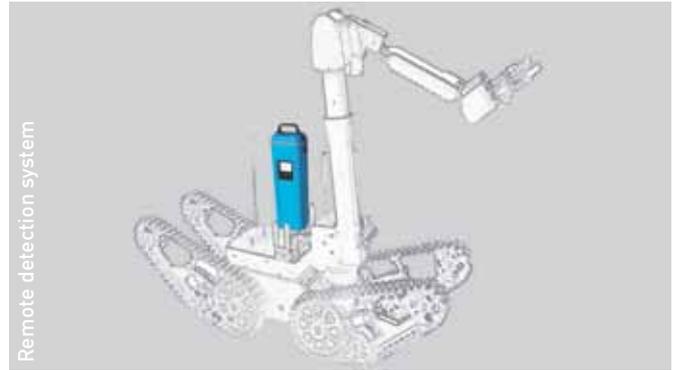
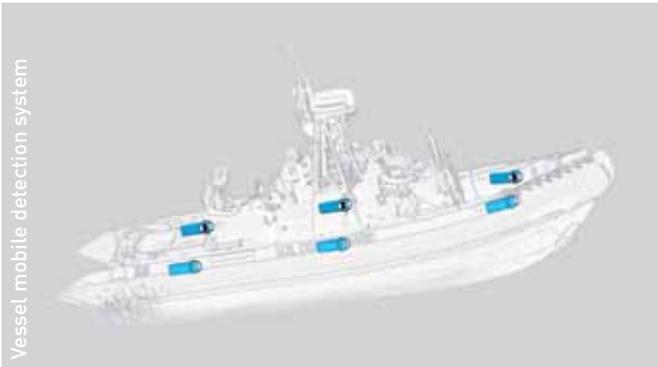
The Target F900 is a radio-nuclide identifier with a large single NaI^L™ (NaI:TI, ⁶Li) detector (2" x 4" x 8") packed into a rugged watertight housing.

The ultra-high-speed electronics in combination with the 2" x 4" x 8" NaI^L detector delivers superior sensitivity at an unmatched energy range of 10 keV to 10 MeV. The sophisticated and reliable gamma spectroscopy software identifies nuclides in real time and detects thermal and fast neutrons. The field proven source-less gain stabilization (patented) at a broad temperature range makes the F900 a completely worry-free detection package. The F900 offers best in class size to performance, weight to performance, price/performance ratio, and ruggedness (IP67).

With a long run-time of more than 20 hours with hot swappable lithium-ion batteries and the ability to be operated remotely makes the system an ideal solution for a wide range of applications.

At less than 7.7 kg it is lightweight enough to be used as a backpack, with the integrated stands the F900 can instantly be setup as a portable portal or be part of a flexible measuring wide area network.

It can be easily mounted to the walls of a pedestrian gateway. The platform will also support mobile applications such as attaching to a vehicle, vessel, robot or UAV.

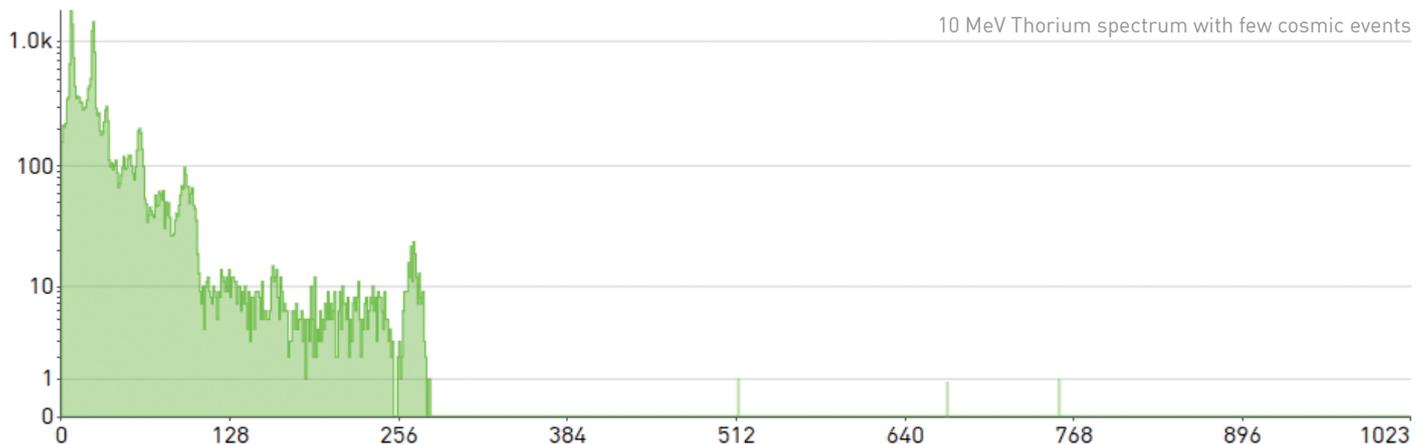


Quantum Gain Stabilization™

Excellent gain stabilization is critical to accurate and consistent radionuclide identification in unpredictable environments.

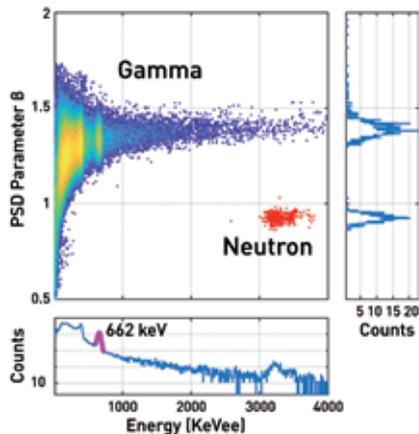
The gain stabilization used in the F900 system delivers better stability over large temperature ranges than has previously been available in backpack detection systems. Measured deviations obtained from very taxing temperature cycle testing that simulate extreme operating examples over the entire operating temperature range show deviations of less than 0.5% in peak position. The patented Quantum Gain Stabilization method is based on methods that derive information dependent upon individual quantum events rather than by measuring gross effects (such as the current flowing through the PMT).

The consistent performance of the F900 under all conditions and environments, while maintaining the highest accuracy in the results, reduces false positives and expedites decision-making in the field.





Single Detector Design



Pulse Shape Discrimination

Highly sophisticated analog and digital electronics make it possible for the first time to measure a wide gamma dose rate range.

The wide energy range from 10 keV to 10 MeV and a dose rate capability of 100 mSv/h is indispensable when it comes to field operations dealing with unknown threats. Minute radiation levels can be detected earlier, quicker and with higher accuracy than with other comparable portable instruments. Strong radiation sources are measured and identified even at mega-count per second input rates.

The F900 FinderWear system uses the innovative NaIL single detector for neutron detection and gamma-ray spectroscopy.

The standard NaI(Tl) material is co-doped with a low percentage (of the order of 1%) elemental Lithium that is enriched to 95% of the neutron sensitive radionuclide ^6Li . The resulting detector leverages the advantage of the fully industrialized NaI(Tl) spectroscopic gamma-ray scintillator. The pulse shape difference between the light pulses arising from gamma-rays to those from neutrons is so large that simple pulse shape discrimination achieves rejection of false neutron pulses due to gamma-ray events.

In addition to the thermal neutron detection the F900 FinderWear system employs a new method that enables it to detect fast neutrons. The method (patent applied for) relies upon the recoil reactions that occur when a fast neutron interacts with Na nuclei in the NaIL crystal.



2" x 4" x 8" detector



The Trailblazing Finder

The newly developed Pointer mode supports the operator in searching for radioactive sources.

By alternating radial scanning, turning and moving forward the F900 collects and interprets data, then pinpoints the exact location of a source so everyone can easily navigate and respond to threats.



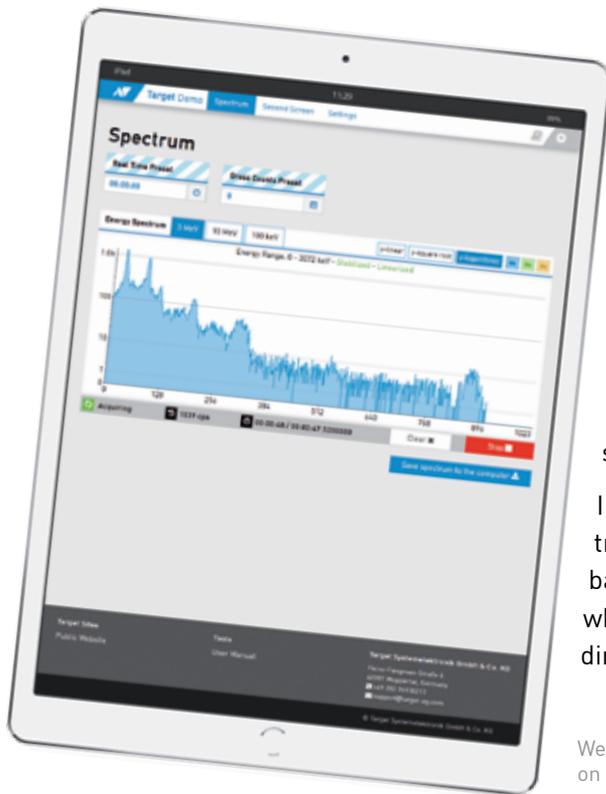
Perfect Usability in Any Position

Due to the versatility of the F900, it may happen that the F900 is used upside down.

When standing upside down, the F900 rotates its display content, but leaves the button labelling next to the buttons. In this way, the F900 can be safely and easily operated, whether it is in a backpack, on its supplied feet or mounted on a wall.



Remote Control



Use any mobile device to remote operate the F900.

Connect your Android device with the F900 via Bluetooth. The Target Android app makes your device work as an external display and gives you full control to the F900.

With its built-in Wi-Fi server, the F900 provides an easy way to connect to any Wi-Fi enabled device such as cell phones or tablets.

In this ways it is possible to control the F900 when hidden in the backpack on the operator's back or when the F900 cannot be operated directly for other reasons.

Web interface of the F900 on a Wi-Fi-connected tablet



Target-Android-App on a mobile phone connected via Bluetooth to the F900.

Track Your Measurements



Built-in GPS for mapping purposes

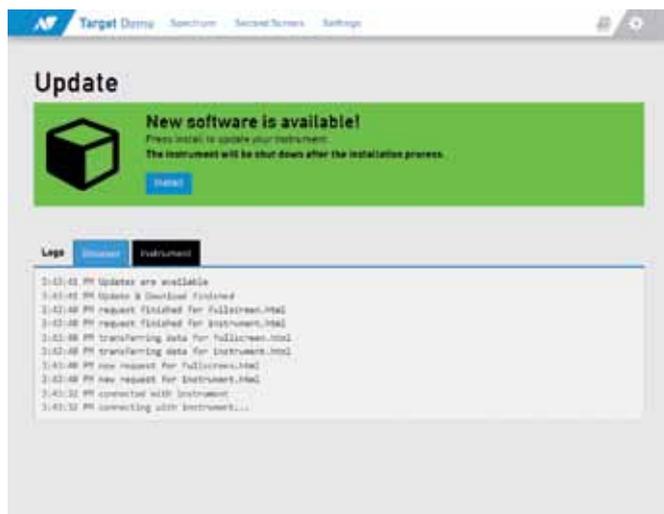
Track survey routes and associate dose rate measurements, alarms and identifications to the route. Add the GPS position data to every N42.42 measurement result on the instrument.



Easy Maintenance

Get on board with the built in web interface.

Its multiple interfaces and the built in web interface allow reach-back operation. The interfacing mechanism also provides for secure remote maintenance and remote operation of the instrument. All measurements saved on the instrument (32 GB storage capacity) can easily be transferred without special software.



Rugged Construction

Drop-tested up to 1 meter and built to survive rigorous missions

The hermetically sealed waterproof device is well suited for its mission on land, on water, and even underwater to 1 meter diving depth.





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