SAM 940+ Radioisotope Identification Device (RIID)

Features

- One Click Reachback
- Built in Camera: Multi-Media Support
- Sourceless Automatic Real-time Stabilization
- Remote Operation and Mirroring Display
- Directional Radiation Detection
- RadResponder Enabled
- Internal Detector

Applications

- Homeland Security
- Emergency Response
- Safeguard and Nuclear Security
- Radiological Area Mapping
- Geological Radiation Survey

Model SAM 940+
Handheld Isotope Identifier

Model SAM 940+ Radioisotope Identification Device

SAM III 940+

Description

The new SAM 940+ is a re-engineered RIID (Radio Isotope Identification Device) features an internal detector and is designed to address a growing demand for fast, accurate isotope identification. The new instrument reduces the burden on the operator by leveraging state of the art communication protocols to quickly relay information to a management team. The lightweight design also limits fatigue in long operational scenarios and enables easy transport of your identifier in a belt holster or lanyard. In addition to ANSI compliant spectroscopic results and alarming, the user has quick access to the on-board camera for appending video or images to the spectroscopic reports.

The new design includes some of the most exciting technologies available in a handheld instrument. The internal GPS system includes 66 Tracking Channels (1-10Hz) to ensure high accuracy in the reported location data. A rechargeable Li-Ion battery allows for 7 hours of continuous use while a AA battery pack clips on for continued use when the internal battery is low. A gyro-sensor embedded in the SAM 940+ gives users immediate directional data to quickly locate and isolate alarming sources. Stand-off detection and ALARA standards are also met using the Smartphone Mirror application, allowing you to operate the unit from a distance. Existing SAM users will appreciate the add-on port, allowing the use of larger detectors, long detector cables or other needed peripherals.

While the front end of the SAM 940+ has been totally reworked for the first responder and inspection agents, the underlying spectroscopy and analysis ensure the health physicists and program management team reliable information. Disposition of non-threat alarms or naturally occurring radiation can be accomplished timely and with high levels of confidence. The exciting new design marries the demanding requests of the Police, Hazmat, Responder and Inspection communities with the performance expectations of the DOE and spectroscopic community.

SAM 940+ Evolution

The 3rd generation SAM is the most compact, lightest hand-held RIID in the world. Compared to its predecessors, the volume and weight is reduced by about 1/3, while retaining all the advanced features from previous generations.

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Model SAM 940+ Radioisotope Identification Device

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SAM 940+ External Probes

Increase Sensitivity Large Volume NaI/Plastics

External Siren for Area Monitor Applications

Special Function / X-Ray Detection

Internal or External Neutron Detection Options

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SAM 940+ One Click Reachback

SAM 940+ provides a “one-click reachback” solution for data transfer to the RadResponder Network or a command center. The multi-media support, GPS and communication capabilities enable the operator to rapidly deliver a complete, informative and actionable report to reach-back centers.

Command Center

Event data can be transferred to a command center via Wi-Fi network protocol. Peak ID application SW provides full analysis capability of event data.

RadResponder

Integration with FEMA’s free network for logging, transmitting, storing, analyzing, and presenting environmental radiation monitoring data.

SAM 940+ Key Features

1	Gamma detector	2	LCD display	3	Neutron detector (optional)	4	Replaceable battery pack
5	AA battery holder	6	Universal adaptor	7	Belt holster	8	Camera

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SAM 940+ Application Softwares

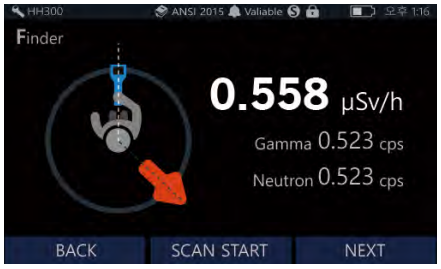
•Alarm Status

SAM 940+ provides four levels of alarm with intuitive graphical icons. Depending on dose rate and threshold settings, it informs the user 'move forward', 'move back', 'in range' and 'danger' based on alarm level.

Event Log

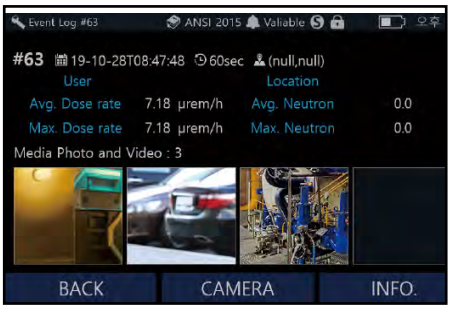
*•The **EVENT** is stored in the instrument and can be quickly emailed to Reachback. The **EVENT** ile includes spectroscopic data as well as general details such as GPS location and time/date.*

Finder



*•The **FINDER** mode uses a built- in Gyro-Sensor to assist the responder in quickly locating the source of radiation.*

High Resolution Camera



*•The user has quick access to the built in high resolution **camera** for adding video or images to the spectroscopic report.*

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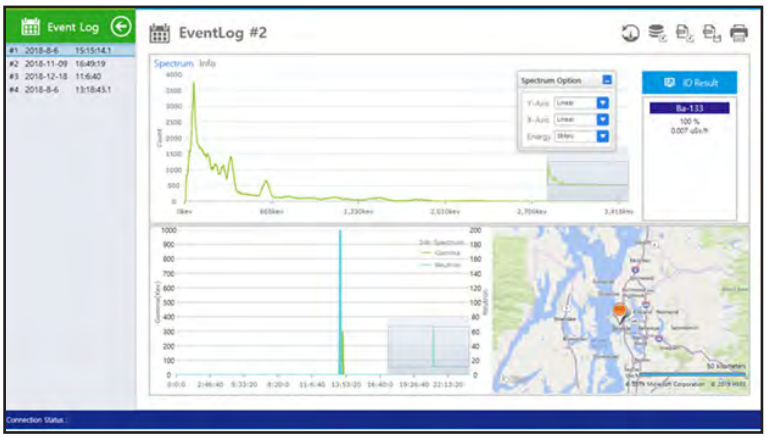
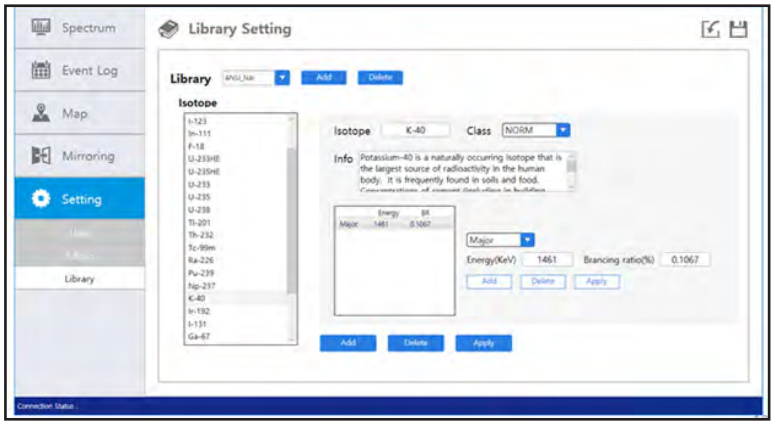
SAM 940+ Application Softwares



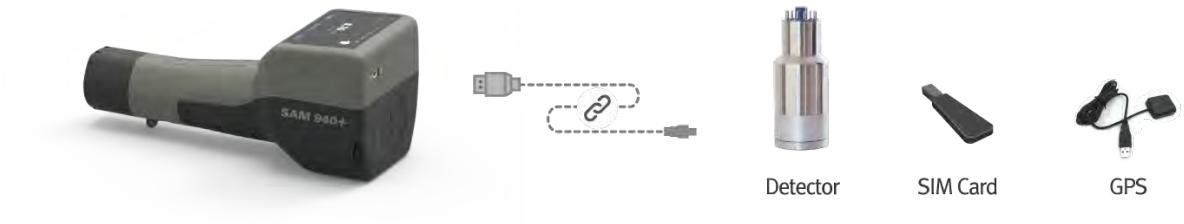
An included software package for the PC or APP, can analyze the **EVENT** logs in more detail as well as offer **EVENT PLAYBACK**

Management teams may wish to modify library data as well. This is possible with the APP or using a PC.



SAM 940+ Connectability

One of most advanced features of SAM 940+ is its high connectivity to external devices. It can easily connect to external detectors from BNC only, SIM card for 4G/LTE network and others with the USB port.



Connect to External Detectors from BNC, Sim Cards, GPS and others, easily with the front facing USB port.

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BNC

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SAM 940+ Specifications

Detectors	
Gamma	2x2 inch NaI(Tl), CeBr3, LaBr3. 2x1 inch CeBr3 or LaBr3
Neutron	1.5x1.5 or 2x2 CLLBC, CLYC
External Probe	NaI, CeBr3, LaBr3, 3He and GM Detector (Pancake Probe)
Performance	
Energy Range	20 keV - 10 MeV (Gamma)
Linearization	Real-time linearization by firmware
Dose rate range	10nSv/h -250uSv/h (0-10 mR/h)
Dose rate range	10nSv/h -100mSv/h (10 mR/h - 100R/h)
Stabilization	"K-40 Finder": sourceless automatic real-time stabilization
Identification	ANSI N42.34 compatible | ANSI 2015
Library Categories	SNM, IND, MED, NORM
Typical Resolution	NaI(Tl) < 7%, CeBr3 < 5%, LaBr3 < 4% @ 662 keV, CLLBC < 3.5%, CLYC < 5%
MCA Channel	11 bit 2048 ch.
Physical	
Dimension	102 x 243 x 97 (mm)
Weight	1.2 kg
Environmental	
Operating Temp	-20°(-4°)~50°(122°)
Relative Humidity	10 to 80%, non condensing
Protective Rating	IP65
Testing Conditions	IEC 62706, EN 61326
Battery	Replaceable Li-ion (2 ea.)
Operation time	>7h in dose rate mode with display back light off, maximum run time: > 7x2 h
Display	LCD
Size	3.5inch
Resolution	480 x 320, configurable up to 1920x1080
Input/output	
USB	Micro USB 3.0
Bluetooth	Class 4.0
WLAN	802.11n Wireless LAN
Miscellaneous	
GPS	22tracking, 66channels, 1-10Hz
CCD Camera	CMOS 8MP
GYRO sensor	Linearity 0.1 ±% FS
Optional Accessories	
Case	Pelican Carrying Case
Holster	Belt holster
Lanyard	Carrying Strap
Charger	USB Charger, Vehicle Charger
Connection	Mini USB Cable
Battery Backup	4 AA alkaline batteries (> 4h backup)

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