A LabLogic Company

CBRNe Detection

for Security and Policing Applications

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EXPERIENCE & EXPERTISE

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Second Sight MS

The Second Sight MS is a passive, long range chemical and toxic gas clouds detector that is ideally suited to military and civil security operations due to its compact, lightweight and modular design.

Designed for early warning and real time visualisation of suspicious gas clouds, it uses an infrared sensor which shows as an overlay localisation of dangerous gases such as toxic industrial gases or chemical warfare agents (nerve gases or vesicants). Second Sight can identify the family of the gas and measure its pathlength concentration.

- Large Field of View for a wide area of surveillance.
- Live detection for rapid action.
- Detection even is the gas is not listed into the system database.
- Easy to operate solution.

Griffin™ G460

The Griffin™ G460 mobile GC/MS is designed to identify chemicals in complex samples.

The self-contained system accepts liquid, solid, and air samples as well as direct liquid injections via syringe or solid phase micro extraction (SPME) fibres.

- Prepless sampling of air, water, solids and trace.
- 24/7 continuous air monitoring.
- Chemical identification with MS/MS confirmation.
- Remote handheld air sampler (X-Sorber).
- Tested to MIL-STD-810G for shock and vibration.
- Source holder for reproducible QC positioning.

Griffin™ G510

The Griffin G510 is a next-generation chemical detector and identifier for military, civil, forensic, and environmental responders.

Versatile and person-portable, the G510 provides the user with the ability to quickly identify unknown threats and confirm known hazards which in turn gives responders the confidence to take immediate action.

- Completely self-contained, including vacuum system, batteries, and carrier gas – no service module needed.
- Accepts all phases of matter (liquid, solid, vapour).
- Analyses unknowns via quadruple mass analyser.
- Large, 9" touchscreen can be operated in the Hot Zone while wearing full PPE.
- Decon-ready with IP65-rated enclosure that is dust-tight, spray-resistant.

Griffin™ X-Sorber

Designed for the collection and desorption of air samples, the Griffin™ X-Sorber is easy to operate weighing only 3 lbs. This handheld collection system is compatible with the Griffin G460 mobile GC/MS system.

The X-Sorber provides flexible options for a broad range of applications. Users can hand-carry the X-Sorber while sampling, utilise the clip accessory for hands-free operation in the field or employ the 'leave and retrieve' CONOP via programmable collection methods.

- Portable and simple to use.
- Provides legally defensible data with sample time/date stamp and integrated GPS receiver.
- Dual-tube sampling allows for both identification and chain of custody evidence.
- Intrinsically safe.

Serstech 100 Indicator

The Serstech 100 Indicator is a handheld Raman spectrometer designed to measure explosives, narcotics, hazardous substances and chemical warfare agents.

This easy to use handheld device is ideal for collecting data even in the most challenging conditions.

- Multiple scanning methods. Screen a sample for the presence of a restricted substance. Identify all the unknown substances in a sample or verify to search for a match to one specific substance.
- Measure through vials, transparent and translucid glass or plastic bottles, containers or bags. No sample preparation needed.
- Easily add new chemical substances or create bespoke libraries from your own measurements or from the ChemDash Spec Store.
- Weighs only 0.65 kg.

Fido® C2

Fido™ C2 agent disclosure spray complements electronic sensors by providing the ability to map chemical agent contamination for emergency response missions, as well as aid in the decontamination of personnel or equipment after exposure to CWAs, specifically nerve agents (G- & V-series) and sulphur mustard (HD).

After being sprayed directly onto a surface, the Fido C2 enzymes react by changing colour to red within 5 minutes of detecting CWAs. This colour change reveals the specific location of contamination. The forensic spray is translucent yet allows the threat to be seen under UV-light, a critical feature for covert operations.

- Ability to detect submicrogram (trace) levels of agents.
- Three applicator sizes: handheld, man-portable backpack, and wide-area cart-based system.
- Reveals exact location of agent on surface to reduce decontamination costs.
- Optional fluorescent additive enhances the visual response when used with an ultraviolet (UV) light in poor lighting conditions.
- Rapid response (within 5 minutes).
- Training completed in less than 1 hour.

BioThreat Alert™ Test Strips

The best defence option for rapid, on-site screening of unknown biological threats.

Test strips currently available for: Anthrax, Plague, Tularemia, Ricin, Botulinum Toxin, Staph Enterotoxin B (SEB), Orthopox, Brucella, Abrin, BW Simulants, Proficiency Test, Sample Collection Kit.

BioThreat™ Alert Reader CX

The BioThreat Alert™ Reader offers a convenient, easy to use, consistent way of analysing unknown samples for the rapid detection of potential bio-warfare agents.

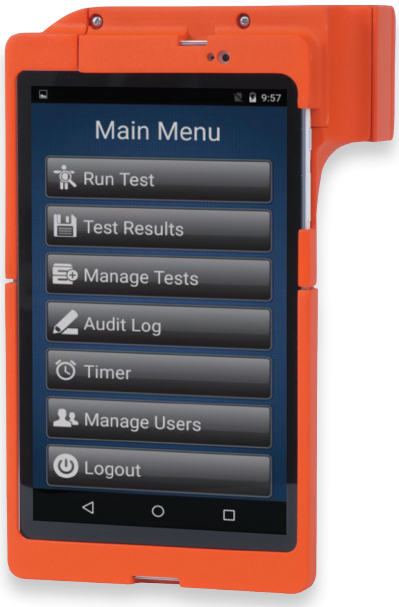
The BioThreat Alert™ Reader CX is a cell phone version of the reader.

- Fully functional, ultra-portable Android-based cell phone reader capable of storing data on thousands of readings.
- Obtains results in less than 30 seconds.
- WIFI and Bluetooth connectivity
- Handheld (270 grams).
- Dimensions 16 x 7 x 5 cm.
- Includes rugged carrying case.

BioThreat™ Alert Reader TX

The BioThreat Alert™ Reader TX has all the same features as the CX model, except:

- Tablet form factor.
- Larger screen at 15 x 23 x 5 cm.
- Handheld, (590 grams).



Fido B2 (IBAC™)

The Fido B2 (IBAC™) is a continuously operating monitor that provides early warning of biological aerosol threats.

It can operate independently or as part of a network configuration to form the 'first tier' of a building air-security system. In addition to providing real time alerts to biological aerosol threats, it can trigger a secondary aerosol sampler for subsequent identification.

- Rugged design and high sensitivity allow the IBAC to be deployed in severe environments such as HVAC systems and outdoor environments.
- Provides near real time warning capability for biological aerosol threats.
- Government validated with over 125,000 hours of run time in relevant environments.
- Alert can automatically trigger a particular sampler for subsequent identification.
- Operates unattended 24/7 without consumables.
- Complete self-diagnostic system.
- Battery or line powered with up to 16 hour run time per battery charge.
- Easily integrated with most building monitoring and control systems.
- Alert algorithms validated for both indoor and outdoor environments.

Personal Electronic Dosimeter (PED)

Ideal for users who are not specially trained to measure radiation exposure, the PED family have been specially designed to be easy to use and understand. Encased in weather, shock and drop proof housings each PED features a smooth clean design and simple to use DoseVision™ software.

- Detects X-rays and gamma rays from 33 keV - 1.33 MeV.
- One touch operation.
- Easy to read large Amoled display screen displaying dose rate, accumulated dose and animated silhouette indicating dose received.
- Multiple languages.
- Multiple users.
- Waterproof up to 1 m.

PED-IS

This intrinsically safe PED is perfect for both radiation specialists and those who do not work with radiation every day. Robust and reliable, it is safe to use in potentially explosive areas, making it ideal for challenging environments.

PED Blue

This is the non-intrinsically safe version of the PED-IS. Lighter, it retains the same high quality design and features a direct micro USB connection.

PED+

An advanced version of the PED Blue, it can be used as both a PED and a hand held dose rate survey meter. The PED+ has a number of added features, such as Bluetooth, GPS and pop-up message alarms.

DMC 3000 / DMC 3000 PRD

The DMC 3000 Personal Electronic Radiation Dosimeter features superior gamma and X-ray energy response, programmable alarms with visual LED, audible, and vibrating alarm indicators, simple 2-button navigation, and the ability to be fitted with external modules for expanded capabilities.

The DMC 3000 has a complete line of attachable modules that expand the detection and communications capabilities of the dosimeter these are: DMC 3000 Beta Module, DMC 3000 Neutron Module and DMC 3000 Telemetry Module.

Features include:

- Designed for ruggedness and durability.
- Loud audible alarms, coupled with ultrabright LEDs and vibration capability.
- Simple 2-button operation and navigation of display options.
- Meets or exceeds applicable IEC and ANSI standards.
- Operates for up to 9 months on a single standard AAA battery.

The add-on PRD Module attaches to the DMC 3000 dosimeter and provides radiation counting information for source and hot spot location assessment, while providing dosimetry protection to the operator. It is powered by the DMC 3000 for over 1000 hours of use.

PDS-GO

The PDS-GO is a lightweight, small, sensitive, personal gamma radiation detector, designed to meet the ANSI N42.32 radiation detection requirements.

The PDS-GO boasts a measuring range from background radiation level to 500 µSv/h (50 mR/h) with a sensitivity of 110 cps/µSv/h (1100 cps/mR/h) and is therefore ideal to use as a highly sensitive survey meter.

- Scintillation crystal for high efficiency and extended energy storage.
- Excellent sensitivity and very fast response.
- Excellent temperature stability.
- Two operation modes (Detect and Search).
- Low power consumption – extended operating hours.
- Instrument setup (alarm thresholds and other parameters) using a user-friendly software.
- Record of event history.
- Rechargeable battery – charging via USB connection inside the cradle.
- Accessories include: protective silicon cover, belt clip, charging cradle, USB cable.

PDS-100

The PDS-100G/ID and PDS-100GN/ID are sensitive pocket-sized devices designed to detect, locate, quantify and identify radioactive sources. They are able to discriminate between, Naturally Occuring Radioactive Material (NORM), main medical isotopes against industrial sources or Special Nuclear Materials on the spot. High sensitivity provides better spectra in a shorter time. Isotopes list is displayed and spectra are retained in memory for transfer and analysis on a computer.

- Small, rugged, compact, user-friendly.
- High sensitivity and fast response time.
- Embedded identification, automated and manual mode.
- Visual, audio and vibration alarms.
- Wireless communication interface.
- Detection; search; identification mode.
- Source indication alarm and danger alarm.
- Easy-to-read display (OLED technology).
- 100 512 ch/50 1024 ch. spectra and >1000 events.
- IRDA and Bluetooth® technology communication.

identiFINDER R100®

The rugged FLIR identiFINDER R100 personal radiation detector (PRD) delivers immediate threat alarms to keep front-line responders safe and features integrated Bluetooth® connectivity that enables situational awareness beyond the front-line and up the chain of command.

- R100 supports everyday use in challenging, harsh responder environments.
- IP67-rated to protect against dust, water-submersible up to 1 m, and drop-test compliant to 1.5 m.
- Mobile apps display real-time output and send dose rate and geotag.
- Clear, backlit memory display outperforms the competition in every lighting condition.
- Eliminates information blind spots and increases operator safety.

identiFINDER R200®

A rugged, pager-sized Spectroscopic Personal Radiation Detector (SPRD), it provides full ANSI N42.32 Personal Radiation Detector (PRD) compliance and features next-generation solid state detector read-out technology that delivers ANSI N42.48 SPRD compliance with nuclide identification.

- Pager-sized and wearable.
- SiPM technology with CsI provides ≤ 7.5% resolution.
- iOS/Android apps available.
- Crisp, clear display in full sunlight and low light conditions.
- Single-hand operation with three-button control.
- Common user interface with other FLIR radiation detectors.
- ≥ 36-hour battery life, plus additional 18-hour replaceable battery.
- No consumables or user maintenance.
- Internal web server for easy data retrieval.
- OneTouch Reachback.

identiFINDER R300

Providing the highest detector resolution available in a pager-sized device, the R300 virtually eliminates the false alarms and false positives that are so common to personal radiation detectors.

- Transflective colour display.
- 24 hour battery life.
- IP63 compliant enclosure protection.
- Data storage for up to 600,000 identifications and spectra and over 1 million alarms.
- Designed to meet ANSI N42.48.
- Standard ANSI N42.42 data output format as preferred by triage teams as well as the government and scientific communities.
- Designed and built to meet the most rugged field environments.
- Easy to read display, even in bright sunlight.
- Ease of use in high background environments.
- Highly reliable, accurate results.
- Small enough to be carried on a belt or in a pocket.
- Almost identical user interface with other FLIR radiation detectors.
- No consumables and maintenance intervals of 5 years.
- Configuration and data download through a standard web browser. No need for a dedicated PC software.

identiFINDER R400

The R400 is able to rapidly detect, quickly locate, accurately measure and precisely identify gamma emitting radionuclides.

- TFT LCD 64k colour display.
- LED stabilised.
- 12 channel, SIRF III GPS.
- Reachback via Bluetooth® connected to DUN capable cell phone.
- ANSI N42.42 output format.
- Web interface for monitoring and configuring instrument.
- Original three button operation.
- 1GB event data storage.
- Visible, audible and tactile alarm annunciators.
- Embedded windows CE operating system.
- Meets ANSI N42.34 shock conditions.

identiFINDER R440

The identiFINDER R440 is a next generation instrument, vastly improving on its predecessor. The R440 uses the same algorithms that have proved themselves in the R400, whilst building and expanding upon its advantages. This new device raises the standard of the modern RIID, and should be at the forefront of a responder's arsenal.

This device comes packed with innovative features, including:

- 2 x 2 NaI Detector – The R440 is 3.5 x more sensitive than other all-purpose RIIDs, whilst including up to 10% superior resolution.
- Sourceless Stabilisation – Automatic stabilisation reduces false positives when taking measurements in the field, improving data collection and decision making.
- IP67-Rated – The R440 is protected from total dust ingress and water immersion, up to 1 meter in depth for 30 minutes. This coves you for rain, splashing and accidental submersion of the device.
- Rugged Construction – Built to survive rigorous use, the device is drop tested to 1 meter and has a fully encloses crystal. Fully meeting the ANSI N42.34 standard.
- 360° Easyfinder Mode – Easily navigate and respond to threats. The 360° Easyfinder mode collects and interprets data, pinpointing the exact location of a source.
- Wireless Communications – This in-built feature enhances interagency standardisation, improving response options.

identiFINDER R500

The identiFINDER R500 is an extremely sensitive and accurate digital hand-held gamma radionuclide identification device (RIID).

Available in two configurations (NaI and LaBr), the R500 is able to quickly detect, rapidly locate, accurately measure and precisely identify sources of contamination from their gamma radiation signature.

- Rapidly determine the primary location of the radiation.
- Determine the nuclide identification in as little as a few seconds.
- Alarms on doserate changes above background.
- Continually stabilises for temperature and other conditional changes.
- Real time visual, audible and tactile alarm annunciators.
- Reach-back via Bluetooth with event data.
- Easy operation with hazmat gloves.
- Radionuclides are labelled as NORM, industrial, medical or SNM.
- Expert mode.
- Gamma spectrometer functions.
- Change settings and operational parameters.

SPIR-ID

The SPIR-ID is an advanced handheld identifier designed to efficiently search for radioactive and nuclear materials, using 'on the fly' threat discrimination.

The SPIR-ID quickly and reliably identifies and categorises radionuclides for demanding scenarios including heavily shielded or masked threats. Thanks to a large volume detector powered by the Identpro/SIA algorithm the SPIR-ID can provide instantaneous identification of multiple sources.

The SPIR-ID is a ruggedised version suited for field use in harsh environments, and the SPIR-ID LT is a lighter version.

- Real-time continuous identification due to large detector and unique algorithm.
- Homeland Security and Nuclear accident libraries.
- Reliable ID of shielded/mixed/ masked complex scenarios.
- Exceeds ANSI N42-34 (2006) ID and level requirements by factor of 10.
- Fully automated energy stabilisation.
- Embedded GPS with mapping software.
- Optional external contamination probe.

SPIR-Ace

The SPIR-Ace is a versatile Radio-Isotope Identifier (RIID), utilising SPIR technology in a compact, user-friendly package. Useful for a variety of applications that require efficient detection and identification of radiological threats. These include security applications, such as civil defence, border & customs. The SPIR-Ace is also useful for obtaining accurate assessments of nuclear materials for nuclear power plants, safeguarding labs, and more.

- Continuous acquisition: dose rate, countrate and detection.
- Multiple specific nuclide libraries depending on application.
- Source searching guidance.
- Enclosure class: IP54.
- Connection to external alpha/beta probe.
- Can be connected to other warning and surveillance devices (e.g. watch, tablet).

SPIR-Pack

The SPIR-Pack is a backpack device which provides discrete search and identification of radiological and nuclear materials. It is also a powerful tool for mapping of contaminated areas that may be difficult to access by vehicle. The SPIR-Pack is based on the 'detection by identification' concept, which limits alarms to cases of real threats only while filtering out any false alarms generated by background variation or anomalies such as medical isotopes. It is a high performing system for heavily shielded and complex masking scenarios seen in radiological security endeavours.

- Human portable radiation detection system.
- Real-time mapping.
- Hand-free operation.
- Discrete monitoring in densely populated areas or crowds during events.
- Instant identification of complex scenarios of masking and/or shielding.
- Direct confirmation of the detection and the nature of the threat.
- Expert or simplified mode.
- Information transfer to Smartphone or Tablet PC.
- Remote supervision with SpirVIEW MOBILE or any other installed supervision system.

SPIR-Ident Mobile

The SPIR-Ident Mobile Platform utilises large advanced gamma spectroscopic detectors, various neutron detection modules and sophisticated algorithms to deliver fast and reliable detection and real-time nuclide identification capabilities for military, homeland security, law enforcement, and environmental applications. It is a modular and scalable system that can be configured for easy deployment in vehicles, compact transportable modules, or in low profile (stealth) configurations.

- Can be powered by a single USB connection from a Laptop computer.
- SPIR View software provides mapping, data reach back and mission replay capabilities.
- Very sensitive nuclear detection and real-time nuclide identification.
- Modular design suitable for multiple configurations: car, boat, or aircraft.
- Advanced algorithm for nuclide identification, categorisation into NORM, medical, industrial, and Special Nuclear Materials (SNM), and nuclear threat assessment.
- Post event contamination level mapping.
- Supervision software.

SPIR-Explorer Sensor

The SPIR-Explorer Sensor allows detection, measurement and identification of radiological sources over a very large range. It is intended to be mounted on demanding carrier, such as UAVs or robots.

It may also be used within fixed or deployable systems. Typical uses are searching for any unexpected radiological sources and checking for radiological risk in case of accident, and mapping of contaminated areas.

Operation is fully automated and results are shown and memorised at an associated radiological base station. The SPIR-Explorer Sensor is using proven technology from the 'SPIR-Ident' and 'SPIR-ID' product family in a much smaller and lighter form factor.

- Real-time, instant detection, measurement and identification.
- Wide dose rate range: from natural background to high accident levels.
- Light and robust.
- Simple and fully automated use.

GeGI

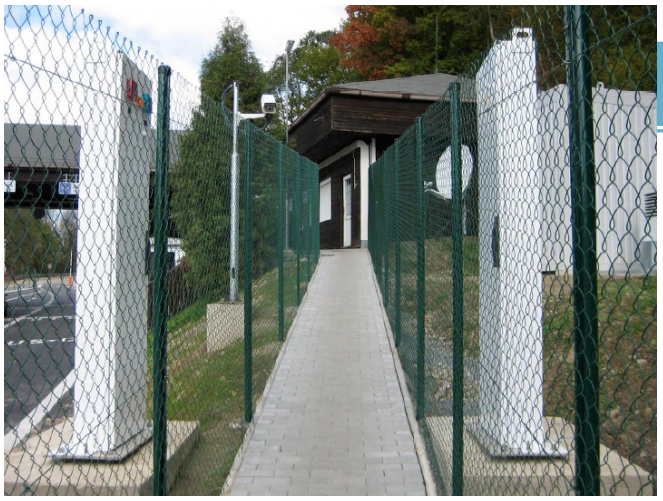
Designed for fast and accurate location, identification and quantification, the PHDS GeGI features a wide-angle optical camera combined with a gamma-ray imaging spectrometer which captures the nuclear environment quickly and accurately.

- Standoff location detection identification distance range 10 cm - 50 + metres.
- Automatically specifies SNM, NORM, IND, MED.
- Germanium gamma-ray spectroscopy (16k ch).
- Full 360° standoff visualisation (Compton), 235-U (186 keV), 239-Pu (375 keV, 414 keV).
- User-friendly single-button glove-touch operation.
- Hot swappable battery operation.
- Full session save and reload capability.
- Full data-stream availability.
- Wireless capable/wireless option can be disabled.
- Twist-lock mil-spec power connector.
- Long-lived internal cooler (5 years +).
- Reachback file: ANSI N42.42 format.
- Remote operation.

SPIR-Ident Vehicle and Pedestrian Portal

The SPIR-Ident Vehicle and Pedestrian is a gamma and neutron spectrometric portal. It is intended for dynamic detection and identification mode for protecting sites and critical infrastructure from the intrusion of special nuclear materials (SNM) or radiological dispersion devices (RDD) by controlling pedestrian, luggage, small items, parcels and vehicles. It can be configured for use with occupancy detector or ancillary cameras to provide a complete protection solution.

- Gamma and neutron detectors.
- Dynamic pass through mode.
- Effective real-time Medical and NORM rejection.
- Single, double sided and multiple pillars for passage ways.
- Masked and shielded SNM and RDD identification.
- Automated operation with full camera support.
- 'Easy' display and advanced modes.
- Automated log with spectrum and image capture.
- Masked and shielded SNM and RDD identification.



TSA PM700 Portal Monitor

The PM-700AG's large detectors and unique detection algorithm improve its performance to the point that it can achieve ASTM Standard C 1169 Category III sensitivity for SNM (special nuclear materials).

All of the essential components are contained in the pillars: radiation monitors / detectors, controller, occupancy detector. The system operates from an internal battery which is constantly charged from the site's ac line during normal operation. In the event of a power outage, the battery permits continued operation for at least 12 hours.

The PM-700AGN adds neutron detection capability to the basic PM-700AG. Both models are equipped with RS-232 and Ethernet communications capability.

- Designed to automatically scan pedestrian traffic without the need for frequent calibration.
- Intended for applications where the relatively low energy emissions from ^{235}U and ^{239}Pu are the main concern.
- Currently in use at uranium enrichment plants, weapons manufacturing plants, weapons storage sites, nuclear laboratories, nuclear waste disposal, and storage sites where protection of SNM is essential.

TSA VM250 Automatic Vehicular Traffic Screener

The TSA VM250 automatically screens vehicular traffic without the need for frequent calibration.

High sensitivity allows the VM250 to be used at locations such as uranium enrichment plants, weapons manufacturing and storage plants, nuclear laboratories, and nuclear waste disposal and storage sites where detection of Special Nuclear Materials (SNM) is essential. The VM250 is designed for use in harsh environmental conditions.

- Portal monitor for vehicles.
- Continuously screens moving traffic.
- High throughput.
- Cost effective.

Guardian RPM Radiation Portal Monitor

A customisable system for vehicle and freight radiation monitoring.

- Permits throughput speeds up to 20 mph (30 kph).
- Gamma and neutron sensitive.
- NORM discrimination.
- Very low false alarm rate (1:15,000 typical).
- Fully digital systems design.

Fido® X2

Fido X2 is an ultra-lightweight, handheld explosives trace detector (ETD). It features FLIR's proprietary TrueTrace™ technology to detect a broad range of chemicals used in the manufacture of homemade, commercial, and military explosives with best-in-class sensitivity.

- TrueTrace detection in ≤10 seconds.
- Detects broad range of threats.
- Quick three-minute start-up.
- Rapid clear-down in seconds.
- Intuitive, go/no-go alarms.
- On-screen guided operation.
- On-device video training.
- Ultra-lightweight <680 g.
- Reusable sampling swipes.
- No radioactive ionisation source.
- No hazardous chemicals.

Fido® X3

Designed with transportation security in mind, the Fido® X3 is the lightest and most sensitive Handheld Explosives Trace Detector on the market.

Housed in a magnesium case with a splash-proof seal, the Fido's rugged design meets the rigorous MIL-STD 810-G specifications. It has an 8 hour battery, starts from cold in under 5 minutes, and clears in seconds, reducing time waiting and providing more time for sampling.

Adding to the capabilities of the previously fielded Fido® NXT, the Fido® X3 adds broad threat detection including Ammonium Nitrate, TATP, and emerging liquid threats like Hydrogen Peroxide and Nitromethane. Using FLIR's exclusive Sensing Element technology, the detection channels can be controlled to alert on the threat materials you care most about. As new threats emerge, the Fido® X3 will be field upgradable to incorporate new detection chemistries that are specifically designed to detect the new threats.

- Broad Threat Detection – responds to traditional, homemade and liquid explosive threats.
- Can readily identify threat materials by class.
- Weighs under 1.5 kg.
- MILSTD 810 g tested to survive the toughest environments.
- Long-lasting user replaceable 8 hour battery.
- Responds only to the threats you care about.
- Field upgradable potential for detection of new threats.
- Easy to use – simplified Go / No Go interface.
- Provides value-added capability to canine detection efforts.

Service and Support

Southern Scientific has a team of fully qualified service engineers, who support customers spanning the length and breadth of the UK. We can provide factory or on-site service as required, based on single visits, planned maintenance or full support under contract. We maintain a high level of spare parts, ensuring lifetime support capability.

Our systems group can offer its service for the larger installed equipment, from initial planning to installation, completion and training. We can provide expert knowledge and experience, gained through involvement in a number of large-scale projects throughout the years.

ISO Certified

Southern Scientific Ltd is certified to ISO9001:2008, ISO 13485:2003 and EN ISO 13485:2012 representing the high level of quality assurance and management that we provide at every stage of the supply process, whether a product is distributed on behalf of our trusted manufacturers or constructed in our UK workshop. This accreditation means that our customers can place an order knowing that the delivered product will be suitable for its intended use, fully compliant with EU legislation and in full working order.

All our products are CE marked.

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