



southern
scientific
experience & expertise

Health
Physics





EXPERIENCED SUPPLIERS OF RADIATION MEASURING INSTRUMENTS RANGING FROM PORTABLE MONITORS TO COMPLEX INSTALLATIONS

Based in Henfield, UK, Southern Scientific has been serving the health physics market for over 25 years and customers include nuclear power, processing and research sites; hospitals, industry and the Ministry of Defence.

The health physics product range contains both portable and installed radiation detection instruments for alpha, beta and gamma detection on surfaces, in air and in liquids.

More recently, the company has become increasingly involved in the supply and support of homeland security systems to detect illegal movements of nuclear materials at ports and establishments.

SERVICE TEAM

Southern Scientific has a team of fully qualified service engineers, who currently 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.

R&D TEAM

It is our policy to provide equipment that offers the very best value in terms of specification, performance, reliability and value. In order to achieve this, we supplement our excellent portfolio of distributed products with a range of instruments designed and manufactured by our development engineers, who work tirelessly to expand the Southern Scientific family of monitoring products. We have the capability for hardware and software design and we will always be pleased to consider special applications.

SYSTEMS SUPPORT

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.

ISO9001:2008

Southern Scientific Ltd is certified to ISO9001:2008, 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.

WEBSITE

Our website contains full details about our company, products and services, as well as downloadable catalogues and datasheets, and up to date news.



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DEVELOPED BY
SOUTHERN SCIENTIFIC



RADHOUND

OUR SIMPLE YET VERSATILE DIGITAL RATE-METER

The Radhound bench-top monitor and Radhound X portable monitor are powerful, general purpose ratemeters, suitable for use by anyone, from professional health physicists to basic users. They are currently finding use within a large range of sectors, including the nuclear industry, hospitals, research facilities and NDT labs. A broad selection of Geiger, sodium iodide and plastic scintillator based probes covers the whole spectrum of contamination and dose rate measurement requirements.

These cost-effective, feature-packed instruments are simple and easy to use. Count rate, integrated count and source-finder modes offer a versatility that makes the Radhound series of monitors the instruments of choice for a wide variety of applications.

APPLICATIONS

- Health physics: for contamination monitoring on surfaces, clothing and objects
- Nuclear medicine departments, suitable for ^{125}I , $^{99\text{m}}\text{Tc}$ etc.
- Radiological survey work and lab use
- Emergency planning, response and clean up
- Research applications



SOURCE FINDER SCREEN



INTEGRATOR SCREEN



ALPHA/BETA-GAMMA SCREEN



ERGONOMIC

Light weight, supported by adjustable tilt stand. Big buttons for use with gloves. Bright, clear LCD display, with large characters and a motion-sensitive backlight.

VERSATILE

Suitable for bench-top use, mobile applications and for wall-mounting, using the tilt-stand base plate.

POWERED

Runs on an internal rechargeable lithium-ion cell, giving over 12 hours use, or directly from the AC charger for installed or static use. A battery level indication is given on screen.



COMMON FEATURES

SIMPLE OPERATION

Single button toggling between modes and an easily navigable menu, which can be locked to protect user settings.

DATA TRANSFER

Connection to PC via infrared or wired link, for the real time transfer of measurements.

OVER RANGE

Message displayed in case of saturation, supported by active foldback protection.

SCALER TIMER

Scaler timer mode allows the integration of count for a preset time (or time to a preset count). Additionally in dose rate mode, time to dose can be indicated.



ALARM

Loud, audible tone suitable for use in active environments. Fully adjustable alarm thresholds, with separate settings for alpha and beta. Visual alarm indicated by flashing symbol.

SELF TEST

Integrity check is performed on start-up, covering battery, keyboard, menu configuration and high voltage.

SMART AVERAGING

Can be configured to slow, medium or fast depending on user preference. Averaging time scales automatically within these ranges to provide a steady, yet reliable reading.

ADVANCED USER MODE

Edit and lock device and probe settings in the fully configurable advanced menus

UNIQUE RADHOUND X FEATURES

FLEXIBLE

RADHOUND XI: Survey meter with internal GM detector, for probe free surveying in the field.

RADHOUND XE: External connector for use with the wide range of Southern Scientific probes.

PEAK READING

Can hold and display the peak count rate or dose rate

BATTERY

Runs from two standard C-cells or an internal rechargeable lithium-ion cell, as in the Radhound.

BALANCED

Comfortable to hold, carry and operate for extended periods.



ACCESSIBLE

Probe calibration can be performed entirely from the advanced menu, without needing to remove the case

MULTI-PROBE

The Radhound XE can be set up for use with multiple external probes. Changing the calibration is as simple as selecting the relevant entry from a list of pre-configured detectors.

RUGGED

Tough stainless steel case, waterproof to IP65 for weather resistance and safe decontamination. Impact resistant polymer ends allow the Radhound X to stand up to the rigours of daily use.



DEVELOPED BY
SOUTHERN SCIENTIFIC

HANDHOUND HANDS-FREE HAND MONITOR

Designed mainly for use in isotope handling areas where hands could be contaminated. The voice activated Handhound has been designed to help with HSE compliance, by keeping a record of hand contamination measurements for each user.

CONTAMINATION FREE

Hand sensor and voice activation means the Handhound can be operated entirely without touch

SENSITIVE DETECTION

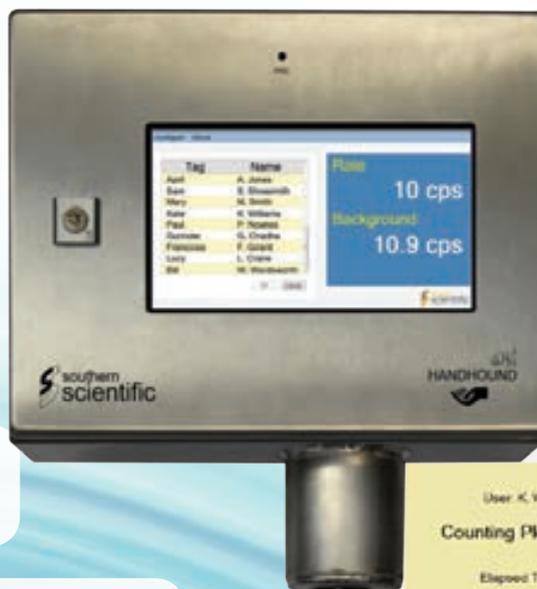
A lead-collimated scintillation probe provides an excellent response to gamma emitters

CLINICAL HOUSING

Stainless steel, easy-clean enclosure

COST EFFECTIVE

Based on the Radhound, the Handhound is a low-cost but effective hand monitoring solution



LOW FALSE ALARM RATE

A rolling background subtraction automatically adapts to changing environment

ACCOUNTABLE

All measurements are logged against a programmed user and can be easily downloaded onto USB



COUNTING PROGRESS SCREEN

FURTHER MONITORING SOLUTIONS ARE CURRENTLY IN DEVELOPMENT
SO KEEP AN EYE ON OUR WEBSITE OR VISIT US AT ONE OF THE
MANY EXHIBITIONS WE ATTEND FOR UPDATES

RADHOUND ALARM

LOW COST AREA MONITORING SOLUTION

Available with a range of probe options to suit most applications

Bright LED Beacon: Alarm status is clearly indicated by a green or flashing red output

Low Cost: The affordable price of the Radhound Alarm reflects the simplicity of the solution, making it ideal for customers such as hospitals and research facilities

Simply Mounted: The adjustable base plate is designed to be easily fixed to a wall

Klaxon Alarm: Optional sounder gives an additional indication of alarm

Weatherproof: Can be mounted in a sealed box for operation in all weathers

Networked Solution: Can be connected to a PC, for data-logging and real-time remote monitoring. Several systems can be used to form an area monitoring network

Range of Probes: Probe can be chosen to fit the application, from the SS340 compensated Geiger probe for area monitoring to the SS600 alpha/beta probe for frisking



CONTAMINATION PROBES

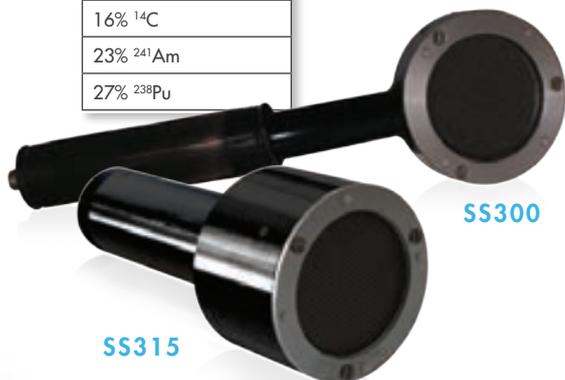
SS300 AND SS315 PANCAKE GEIGER PROBES

The SS300 is an uncompensated pancake (550V) Geiger based probe for alpha, beta and gamma contamination measurement. The SS315 is functionally identical, but with a different probe geometry.

TYP. EFFICIENCIES
45% ¹³⁷ Cs
33% ⁶⁰ Co
50% ⁹⁰ Sr- ⁹⁰ Y
16% ¹⁴ C
23% ²⁴¹ Am
27% ²³⁸ Pu

EFFICIENCIES

Listed as percentage of 4pi emission rate from Ø44.5 - 50.8 mm source.



SS300

SS315

	SS300	SS315
OPERATING VOLTAGE	550 V	550 V
WINDOW	15.5 cm ² 1.6 to 2.0 mg/cm ² mica	15.5 cm ² 1.6 to 2.0 mg/cm ² mica
MEASUREMENT RANGE	0 - 5 kcps	0 - 5 kcps
PLATEAU LENGTH	150 V	150 V
TEMPERATURE RANGE	-10° to +50°C	-10° to +50°C
ENERGY RESPONSE	20 keV - 2 MeV Gamma down to 40 keV Beta above 3 MeV Alpha	20 keV - 2 MeV Gamma down to 40 keV Beta above 3 MeV Alpha
HOUSING CONNECTOR	MHV	MHV
DIMENSIONS	Ø 70 x 254 x 64 mm	Ø 70 x 180 mm
ACTIVE AREA	15.5 cm ²	15.5 cm ²
WEIGHT	280g	450 g

DOSE RATE PROBES

SS330 AND SS335 COMPENSATED PANCAKE GEIGER PROBES

The SS330 provides an excellent general purpose end window GM probe with H*(10) energy compensation, which permits reliable measurements from ambient background up to 1 mSv/hr. The SS335 is functionally identical but with a different probe geometry.

SS340 SIDE WINDOW
GEIGER PROBE

For ambient gamma radiation measurement, to H*(10).

Range: 0.1 µSv/hr to 2 mSv/hr

Energy: 45 keV - 2 MeV



SS330

SS340

SS335

	SS330	SS335	SS340
OPERATING VOLTAGE	550 V	550 V	500 V
MEASUREMENT RANGE	0.1 µSv/hr - 1 mSv/hr	0.1 µSv/hr - 1 mSv/hr	0.1 µSv/hr - 2 mSv/hr
PLATEAU LENGTH	150 V minimum	150 V minimum	200 V minimum
DEAD TIME	100 µs	100 µs	110 µs
TEMPERATURE RANGE	-10°C to +50°C	-10°C to +50°C	-10°C to +50°C
GAMMA SENSITIVITY	Typically 5 cps/µSv/hr	Typically 5 cps/µSv/hr	Typically 2 cps/µSv/hr
ENERGY SENSITIVITY	H*(10) for 20 keV - 1.5 MeV	H*(10) for 20 keV - 1.5 MeV	H*(10) for 45 keV - 1.5 MeV
HOUSING CONNECTOR	MHV	MHV	MHV
DIMENSIONS	Ø 70 x 254 x 64 mm	Ø 70 x 180 mm	Ø 25 x 135 mm
ACTIVE AREA	15.5 cm ²	15.5 cm ²	40 mm
WEIGHT	300 g	470 g	100 g



SCINTILLATION PROBES

SS404 Al PROBE

THIN-CRYSTAL NaI(Tl) PROBE FOR LOW ENERGY GAMMA MEASUREMENT

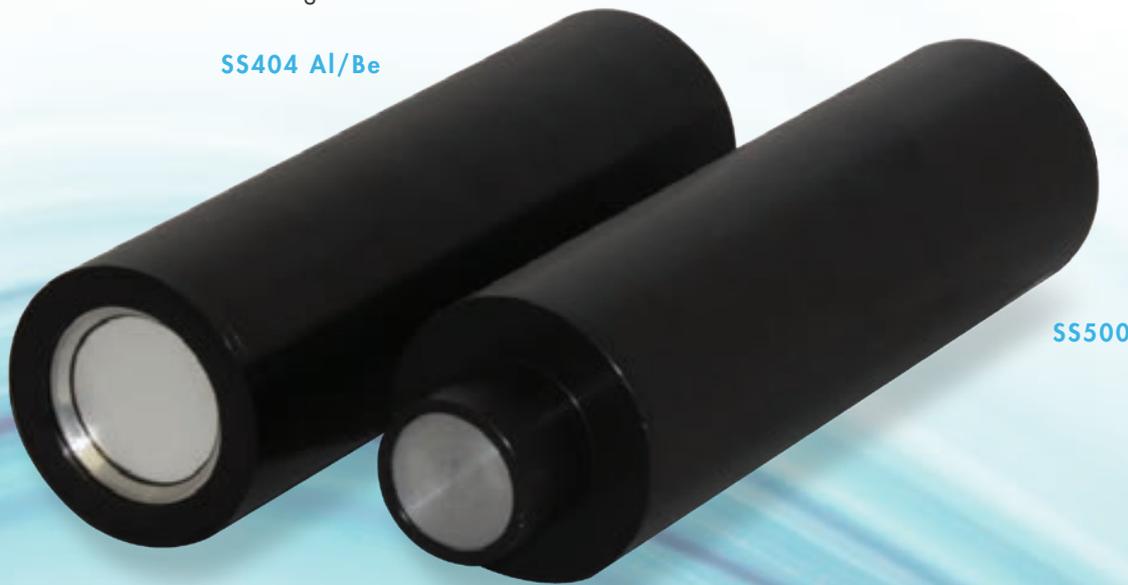
An end window scintillation probe designed to be an equivalent to the 44A.

It incorporates a Ø32 x 2.5 mm thick NaI(Tl) crystal mounted on an aluminium window and is fitted with an internal 3.15 mm lead collimator to reduce background counts.

SS404 Be PROBE

THIN-CRYSTAL NaI(Tl) PROBE FOR VERY LOW ENERGY GAMMA MEASUREMENT

Similar to the SS404 Al but fitted with a beryllium window, which extends the low energy response down to 5 keV, making it suitable for counting ⁵⁵Fe.



SS404 Al/Be

SS500

SS 404 AL/BE	
OPERATING VOLTAGE	Typically 650V DC
DETECTOR CRYSTAL	Ø32 x 2.5 mm NaI
ENERGY RESPONSE	SS404 Al: 15 keV to 250 keV SS404 Be: 5 keV to 250 keV
HOUSING CONNECTOR	MHV
DIMENSIONS	Ø54 x 185mm
WEIGHT	820g
TEMPERATURE	-10°C to +50°C

SS 500	
OPERATING VOLTAGE	650 V DC
DETECTOR CRYSTAL	25.4 x 25.4 mm NaI
WINDOW WEIGHT	35 mg/cm ²
GAMMA SENSITIVITY	300 cps/microSv/hr (¹³⁷ Cs)
ENERGY RESPONSE	50 keV - 2.0 MeV
HOUSING CONNECTOR	MHV
DIMENSIONS	Ø44.5 x 205 mm
WEIGHT	300g
TEMPERATURE	-10°C - +50°C
HUMIDITY	Up to 95% RH non-condensing

SS500 PROBE

END-WINDOW GAMMA SCINTILLATION PROBE

A very sensitive end window scintillation probe designed to provide a cost effective gamma monitor for energies of 50 keV upwards.

It has a 25.4 x 25.4 mm NaI(Tl) crystal.



EASILY REPLACEABLE
FOILS AVAILABLE

ALPHA/BETA CONTAMINATION PROBES

SS600 PROBES

LARGE AREA WINDOW
RANGE

A series of three large area (100 cm² window) probes.

Equivalent to the BP6/AP2, there are three versions: alpha only, beta only and alpha/beta (dual phosphor with zinc sulphide bonded to a plastic scintillator) which avoids the traditional use of anthracene in this application and with a comparable response.



FOR PERFORMANCE
FIGURES SEE TABLE BELOW

SS700 PROBES

SQUARE WINDOW RANGE

A series of three ergonomically balanced probes with a square window of 50 cm² and a 64° angled handle.

Equivalent to the BP7, there are three versions: alpha only, beta only and alpha/beta (dual phosphor with zinc sulphide bonded to a plastic scintillator) which avoids the traditional use of anthracene in this application and with a comparable response.



SS440 B PROBE

BETA SCINTILLATION

A beta scintillation probe designed to be an equivalent to the NE BP4.

The probe uses a Ø57 x 1.5 mm scintillator, with an active area of 19.6 cm², and provides comparable sensitivity for beta radiation to anthracene.

A choice of grill spacing is available:

- SS440 B-A: 3 mm
- SS440 B-B: 6 mm
- SS440 B-C: 9 mm



ALPHA	WINDOW AREA	TYPICAL ALPHA EFFICIENCY ²⁴¹ AM % OF SURFACE EMISSION (2π)	BACKGROUND RESPONSE	WEIGHT
SS600 A	100 cm ²	30	Less than 1 cps	500g
SS700 A	50 cm ²	30	Less than 1 cps	500g

BETA	Window Area	Beta Efficiency ¹⁴ C ⁹⁰ Sr/Y % of surface emission (2π)	Background Response	Weight
SS600 B	100 cm ²	8 40	Less than 20 cps	500g
SS700 B	50 cm ²	8 40	Less than 10 cps	500g
SS440 B	19.6 cm ²	~8 40	Less than 5 cps	400g

ALPHA/BETA	WINDOW AREA	TYPICAL EFFICIENCY ²⁴¹ AM ⁶⁰ CO ⁹⁰ Sr/Y % OF SURFACE EMISSION (2π)	BACKGROUND RESPONSE	¹³⁷ CS RESPONSE CPS/ SV/HR	WEIGHT
SS600 AB	100 cm ²	30 15 30	Less than 20 cps	50	500g
SS700 AB	50 cm ²	30 15 30	Less than 10 cps	25	500g





6150 AD 5/6

SMART UNIVERSAL RADIATION MONITOR

Automes 6150 AD 5/6 can be used as stand-alone survey meters or with a wide range of smart probes to cover a number of applications.

6150AD 5:	2 µSv/hr - 10 mSv/hr	45 keV - 2.6 MeV
6150AD 6:	200 µSv/hr - 1 Sv/hr	60 keV - 1.3 MeV

FEATURES

- Built-in compensated GM counter
- Automatically recognises and calibrates to any smart probe in the Automes range
- Displays both dose and dose rate
- Programmable dose and dose rate alarm
- Non-volatile dose memory (data is not lost if switched off)
- Display range and units adjusted automatically
- Battery life: Approx. 1000 service hours
- PTB and GSF approved (recognised by HPA)
- Sturdy, waterproof aluminium die cast housing
- Intrinsically safe version available (SEE PAGE 11)
- Connects to PC, for real time transfer of measurements

SMART PROBES

THE INTERNAL GM TUBE OF THE 6150 AD 5/6 AUTOMATICALLY DISCONNECTS WHEN A PROBE IS CONNECTED & THE NUMBER OF THE PROBE APPEARS ON THE SCREEN.

6150 AD-B PROBE

HIGH SENSITIVITY DOSE RATE SCINTILLATION PROBE

- High sensitivity, down to 5 nSv/hr
 - Ø7.62 x 7.62 cm / 3" x 3" plastic scintillator
 - Wide energy range: 23 keV - 7 MeV



6150 AD-15 & 18 PROBES

AUTOMESS HIGH AND LOW DOSE RATE GAMMA PROBES

- GM tubes
- Water resistant
- Intrinsically safe version available
- Energy range: 65 keV - 1.3 MeV
- 6150 AD-15 Dose rate range: 1 mSv/hr - 10 Sv/hr
- 6150 AD-18 Dose rate range: 2 µSv/hr - 10 mSv/hr



6150 AD-T

TELETECTOR PROBE

Automess telescopic detector arm permits measurement where access is difficult and reduces exposure to operator.

6112M

TELETECTOR

A stand-alone telescopic detector from Automess, with built in digital/analogue display.

FEATURES

- Gamma and beta detection
- Automatically switches between 2 GM tubes to cover wide dose rate range: 2 $\mu\text{Sv/hr}$ - 10 Sv/hr (up to 10 mSv/hr (beta))
- Extends to 4.12 m



6150 AD-T

6112 M

SCINTOMAT

X-RAY AND GAMMA RADIATION PROTECTION INSTRUMENT



Automess highly sensitive instrument, with a large tissue equivalent scintillation probe.

- High sensitivity down to 25 keV
- Wide dose rate range: 0.01 $\mu\text{Sv/hr}$ - 15 Sv/hr
- Shows background dose rate
- Dose rate and dose alarm
- Optional 2 line mini recorder for graphical recording of measurement
- Probe can be removed and held separately from instrument body

6150 AD 5-EX DOSE RATE METER & 18-EX LOW DOSE RATE PROBE

INTRINSICALLY SAFE DOSE RATE METER

For use in potentially explosive atmospheres

- Complies with ATEX 100A directive
- Wide dose rate range
- Easy to use
- Use alone or with separate 6150 AD 18-Ex probe
- Suitable for the Oil and Gas industry





6150 AD-K SURFACE CONTAMINATION MONITOR

COMPACT, LIGHT AND MANOEUVRABLE SURFACE AND FLOOR MONITOR

FEATURES

- Sealed proportional detector
- 100 cm² active area
- Switch for alpha, beta and gamma counting
- Alpha and alpha/beta gamma discrimination
- Microprocessor controlled compensation of detector
- Automatic range switching
- View count rate, average count rate, max. count rate or accumulated number of pulses
- Settable alarm thresholds

6150 AD-17 PROBE FOR ALPHA, BETA & GAMMA CONTAMINATION MEASUREMENT

- End window GM
- Suitable for low intensity X-ray or gamma radiation

859.1 GAMMA ALARM STATION



861.1 GAMMA ALARM STATION

GAMMA ALARM STATION

859.1: This Gamma Alarm Station is a robust wall mounted unit which accommodates the 6150 AD meter.

861.1: A multiprobe station (inset) capable of managing up to 10 Gamma probes.

This is a multiplexing system and cycles round the detectors giving updates and the local display.

- Remote re-calibration
- Adjustable dose rate alarm levels
- Audible and visual alarms
- Range of remote probes available
- Networking available
- 6 days autonomy using back up battery



DOSERAЕ II

SOLID-STATE DOSIMETER FOR A HUGE RANGE OF X-RAY AND GAMMA APPLICATIONS

The DoseRAE II makes use of both a PIN diode and CsI crystal to provide a fast responding doserate display, ensuring users can react quickly in dangerous scenarios.

Wide dose rate range H*(10): 10 µSv/hr - 10 Sv/hr

Broad energy range: 20 keV - 6 MeV

Accountability: Onboard memory for up to 3,000 measurements

Long life: 200 hours operation between battery charges

Discrete: Small unit, weighing less than 50 g

Standard package includes: Charging cradle, USB connector and ProRAE Configuration and Data Management software

This high spec instrument is ideal for use as part of a complete dosimetry system for a low relative cost.



GAMMARAЕ II R

Intrinsically safe portable threat detector

- Internal CsI scintillator provides rapid response to incident gamma radiation, whilst an energy-compensated PIN diode produces accurate dose measurements
- ATEX certified as intrinsically safe, suitable for use in explosive environments
- Audible buzzer, flashing LEDs and pulsed vibration alarm modes
- AA batteries (600 hours)
- Water resistant for decontamination
- Bluetooth interface for data download to PC

NEUTRON RAE II

Intrinsically safe portable threat detector

Offers all of the features of the GammaRAE, with the addition of a neutron detection capacity.

- Internal LiI scintillation detector provides effective neutron sensitivity
- Detect neutrons from weapons grade plutonium or gamma rays from potential dirty bomb materials



PM1208M

COMBINED SENSITIVE GM GAMMA DETECTOR & SWISS WRISTWATCH



- Continuous monitoring and measuring of ambient gamma dose and dose rate
- Indicates dose/dose rate and dose accumulation time
- Audible alarm, with alarm clock and calendar functions
- Record and store up to 500 events
- PC communication via infrared

MYDOSE PERSONAL DOSIMETERS

SMALL, SIMPLE ELECTRONIC PERSONAL DOSIMETERS

Weighing only 55 g, they can be worn comfortably and discreetly in order to monitor both dose rate and accumulated dose.

The internal solid state detector provides sensitivity to low energies, whilst the lithium battery can operate for up to 700 hours on a single charge. Four different models offer a range of specifications, depending on requirement.

EPD	Dose Rate Range (H*10)	Accuracy	Energy Threshold	Energy Dependence	Alarm Function
PDM-122	10 µSv/hr - 1 Sv/hr	±10% for 10 µSv - 10 Sv	40 keV	±30% for 50 keV - 1.5 MeV	No
PDM-127	10 µSv/hr - 1 Sv/hr	±10% for 10 µSv - 1 Sv	20 keV	±30% for 30 - 200 keV	No
PDM-222	10 µSv/hr - 1 Sv/hr	±10% for 10 µSv - 10 Sv	40 keV	±30% for 50 keV - 1.5 MeV	Yes
PDM-227	10 µSv/hr - 1 Sv/hr	±10% for 10 µSv - 1 Sv	20 keV	±30% for 30 - 200 keV	Yes



NEXT GENERATION
MODEL

IDENTIFINDER 2

NEXT GENERATION UPDATE TO THE WIDELY USED IDENTIFINDER ORIGINAL

The IdentifINDER 2 offers the same level of detection and identification capability as the original IdentifINDER:

- Detects, locates, measures and identifies radionuclides
- 6 selectable nuclide libraries, covering nuclear, medical, industrial, customs, security and OSI
- Indication of gamma dose rate
- Visual, audible and tactile alarms for exceeded dose and dose rate thresholds
- Continuous LED stabilisation (Ultra versions only) and automatic calibration from internal or external source (^{137}Cs or ^{40}K)
- Underwater, telescopic and safeguard models available, all with optional neutron detection

Annunciators and Displays

All components clearly marked:

- 1 12 channel GPS, SIRF III antennae
- 2 Display: Alarm visualization
- 3 Red LED (dose rate alarm)
- 4 Blue LED (neutron alarm)
- 5 Tacticle alarm vibrator (inside housing)
- 6 powerPACK Ultra (inside removable base)



- 1 Green LED (external power)
- 2 Orange LED (charging)
- 3 Audible alarm speaker (inside housing)
- 4 USB 2.0, micro-B connector
- 5 Bluetooth® (inside housing)



NEW IDENTIFINDER 2 FEATURES

Easy to use: Simple and intuitive interface, requiring minimal training

Reachback technology: Transmit spectra from the field for remote analysis and advice

Clear isotope classification: Comprehensive on-board libraries, with detected isotopes marked as either innocent, suspicious or threatening in order to aid further action

Transflective colour display: Viewable in all weather conditions

Neutron monitoring: Optional ^3He tube to aid detection of SNM

Simplified PC communication: View live feed, change settings and operate the device remotely, all through the web browser interface, with no proprietary software required

NANORAIDER

HIGH RESOLUTION GAMMA SPECTROMETRY

The mobile phone sized NanoRaider uses high quality CZT crystals to locate and characterise a nuclear threat. Secured in an IP63 rated rubberised housing, the nanoRaider provides rugged and reliable performance in the field.



FEATURES

Reliable identification: Significantly higher resolution than NaI(Tl) and LaBr₃: <3.5% at 662 keV

Intrinsically stable technology: No temperature stabilisation required

Easy to use: Simple and intuitive interface, requiring minimal training

Reachback technology: Transmit spectra from the field for remote analysis and advice

Transflective colour display: Viewable in all weather conditions

Long life: Up to 24 hours use between battery charges

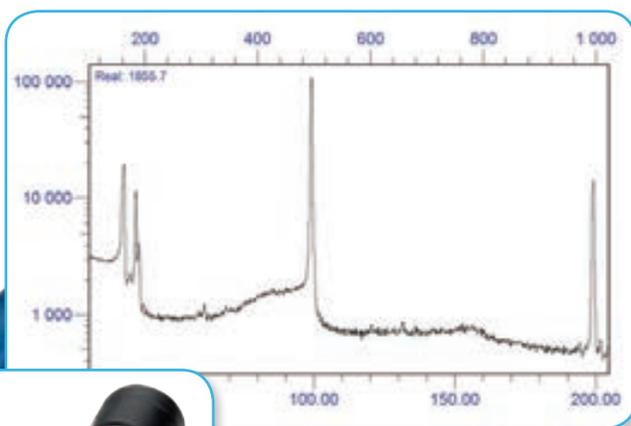
Optional neutron monitoring: ^3He tube to aid detection of SNM



SCINTISPEC (USB) & DSCISPEC (ETHERNET)

PLUG AND PLAY MCAs FOR NaI(Tl) AND LaBr₃ DETECTORS

- Mounts directly on all detectors with a 14-pin socket
- All power and communication through USB or Ethernet
- Compatible with NaI and LaBr₃ detectors
- Includes basic software for spectra analysis
- Networking capability (DSCiSPEC)
- Run multiple detectors through one PC



RADSURVEY

RADIOLOGICAL MAPPING SYSTEM

Southern Scientific have developed the RadSurvey to be simple to use, light weight and fully weatherproof.

The unit utilises state of the art Trimble GPS technology and a 7.62 x 7.62 cm / 3" x 3" NaI(Tl) detector to obtain precise radiological mapping information.

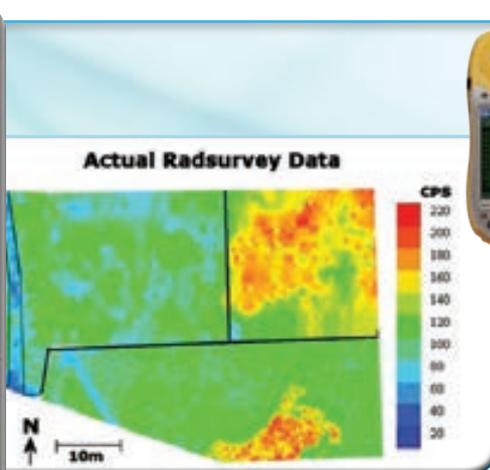
The system gives an unprecedented improvement in survey times over traditional systems.

FEATURES

- Handheld, streamlined and easy to use
- Robust and weatherproof
- Count rate display with alarms
- On the spot spectrum analysis (MCA)
- Status and Position display
- Stores data on SD cards in CSV format
- Long battery life (8 hours)
- Sub-metre accuracy Trimble GPS
- Vehicle mounting/detector options are available



GPS DATA SCREEN



300SL

COMPACT AUTOMATIC LSC

The Hidex 300 SL uses three photomultiplier tubes for sophisticated triple coincidence counting, making it the only commercially available TDCR¹ counter. The 300 SL has been used, verified and purchased by a number of metrology labs.

QUENCH CORRECTION

TDCR provides automatic counting efficiency, with no internal standards or external source required

LUMINESCENCE FREE

Triple counting neutralises the detrimental effects of luminescence, allowing samples to be counted straight away

ALPHA-BETA

Clear and intuitive alpha/beta separation, with 2D graphic display for a more accurate PLI setting*

AUTOMATIC CHANGER

Accepts up to 96 vials per tray. Optional stacker for multiple trays extends capacity to 768 vials

SELECTABLE OPTIONS

Choose only the features you need from the wide range of available options, including temperature regulation, alpha/beta separation, external source and metrology models

HIGH EFFICIENCY

Up to 70% counting efficiency for ³H unquenched samples

SMALL FOOTPRINT

Compact design and low weight (150kg) ideal for small labs

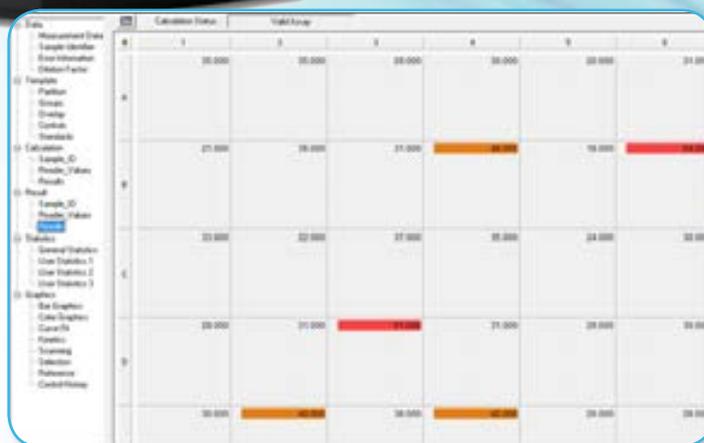
DUAL LABEL COUNTING

Dual label counting achievable with an 80:1 label ratio for variable quench standards when using optional external source*



MIKROWIN SOFTWARE

Includes comprehensive data analysis software with colour-coded exceeded threshold indication and automatic report generation in CSV or spreadsheet format



COLOUR CODED EXCEEDED THRESHOLD INDICATION

¹TRIPLE TO DOUBLE COINCIDENCE RATIO

*MODEL SPECIFIC

THE NEW SUPER LOW LEVEL VERSION BOASTS MORE SHIELDING, AND ACTIVE CANCELLATION OF BACKGROUND RADIATION

Background levels down to 4.7 CPM for ³H in water with the Low Level and new Super Low Level versions

LOW LEVEL



TRIATHLER

SMALL, MANUAL LIQUID SCINTILLATION COUNTER FOR LABORATORY AND FIELD WORK

Utilising a single, highly sensitive PMT, the market-leading Hidex Triathler is extremely portable, allowing samples to be counted anywhere.

COMPLETE SOLUTION

Measurement capability can be expanded to cover alpha, beta and gamma for full detection coverage

EXPANDABLE CAPABILITY

External NaI(Tl) 50 x 50 mm well detector with thick lead shielding for larger samples and lower level counting*

ALPHA-BETA

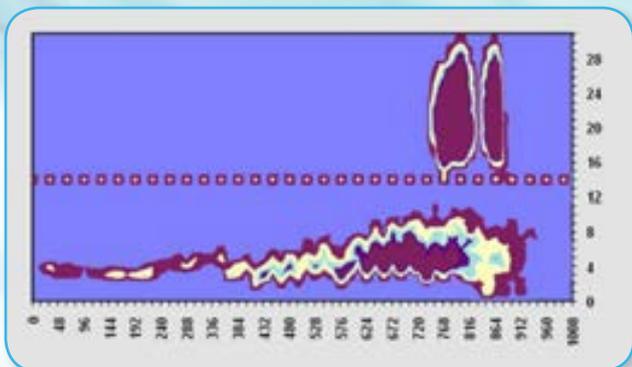
Alpha and beta counting with 2D graphic display for a more accurate PLI setting. The efficiency of alpha counting is equal to that of lab-based counters

PRE-PROGRAMMED WINDOW SELECTION

Preset nuclides: ^3H , ^{14}C , ^{32}P , ^{33}P , ^{35}S , ^{51}Cr , ^{125}I , with spare channels for user additions

HIGH-ENERGY BETAS

Plastic scintillator adapter for direct measurement of ^{32}P and other high energy betas, avoiding the use of liquid scintillants*



ALPHA/BETA SEPARATION WITH VISIBLE PLI

FLEXIBLE

Fully functional as a stand alone counter or with PC connection for full analysis and reporting

GAMMA DETECTION

Separate internal NaI(Tl) well detector with 8 mm lead lining for gamma counting*

LUMINESCENCE MEASUREMENT

Luminometer option for measurement of luminescent samples, in vials up to 20ml*

PORTABLE POWER

Power in the field provided by a case with built in battery or vehicle socket adapter

MULTI-APPLICATION

Wide variety of applications including wipe tests, liquid effluent, ^{14}C urea breath tests for helicobacter pylori and ^{222}Rn in water

RESULTS STORAGE

Memory capacity for storage and post-analysis of several hundred measurements

*MODEL SPECIFIC

ALSO AVAILABLE

Southern Scientific also offers Capintec dose calibrators and a variety of automatic swab counters.

Please visit our website for more details:

WWW.SOUTHERNSCIENTIFIC.CO.UK

SOUTHERN SCIENTIFIC SUPPLIES LIQUID SCINTILLATION COCKTAILS, SOLUBLE WIPES & VIALS



DECONTAMINATION GEL

CBI POLYMERS HAVE DEVELOPED A RANGE OF EASILY PEELABLE DECONTAMINATION GELS TO SUIT ALL APPLICATIONS

Extensive testing against competitors has shown them to be effective on a vast range of smooth and porous surfaces, encapsulating and removing up to 99% of loose and fixed contamination.

- In addition to industrial decontamination, the gels can be used to fix contamination or to form a protective barrier
- Extensively used to recommission contaminated instruments and glove boxes
- Film can be analysed in a laboratory afterwards by HPGe or LSC
- Cleaner, more effective and safer than alternative decontamination methods
- Minimises contaminated waste output

TYPE	APPLICATION METHOD	OPTIMISED FOR
1101	Brush or paint on	Heavy nuclear and toxic industrial chemical and material decontamination
1108	Brush or paint on	Extremely heavy nuclear and toxic industrial chemical and material decontamination
1102	Brush or paint on	Oil and grease decontamination, including crude oils, diesel and PCB's
1120	Spray on using light-duty sprayer	Heavy nuclear and chemical decontamination from hard, smooth surfaces (glass, steel etc)
1121	Spray on using industrial sprayer	Heavy nuclear and chemical decontamination from hard porous and non-porous surfaces (concrete, wood, stone etc)
1128	Spray on using heavy-duty industrial sprayer	Extremely heavy nuclear and chemical decontamination from hard porous and non-porous surfaces (concrete, wood, stone etc)



1101, 1108 & 1102



1120, 1121 & 1128

BIND-IT™ DECONTAMINANTS

ELIMINATE RADIOACTIVE IODINE CONTAMINATION



- Highly effective at removing radioactive iodine
- Can be used to decontaminate fume hoods
 - Clean outgoing packages, syringes, capsule containers
 - Non-corrosive
- Bind-It™ hand soap is gentle, yet very effective
- Reduces patient and staff exposure
- Safely clean delicate NaI(Tl) wells, thyroid probes etc.
- Suitable for post-thyroid procedure cleanup (sinks, toilets etc.)



TYNE 7043

PORTABLE TRITIUM-IN-AIR MONITOR

The Tyne 7043 is a robust, portable instrument suitable for low and high range use.

FEATURES

- Simple to use: 1 operating switch with 4 settings
- Gamma compensation achieved using 4 large ion chambers; 2 for measuring air flow, and 2 for compensation
- Reading changes by less than 10% in 200 $\mu\text{Sv/hr}$
- High sensitivity, the total effective volume of the 2 active measuring chambers is 500cc
- Sensitivity is 111 kBq/m^3 , competitive with similar hand held monitors
- Ion traps are built into each ion chamber to improve sensitivity
- Radon and noble gas compensation
- Internal cartridge heater for effective purging



TYNE TAM

TRITIUM-IN-AIR MONITOR

The Tyne TAM is an installed, dual ion chamber, tritium-in-air monitoring system for stack or plant monitoring.

FEATURES

- Measures total tritium (including HTO)
- User settable visual and audible alarms
- Automatically compensates for gamma, environmental effects and plate out
- Large touch-screen display
- Bakeable, washable ion chambers
- Easily accessible dust filter
- Long life pump for minimal maintenance
- Total sampling volume of 2 litres



TYNE 7001-SAM

SURFACE ACTIVITY MONITOR $^3\text{H}/^{63}\text{Ni}$

The Tyne 7001-SAM smear activity meter quickly, conveniently and directly measures fixed and removable tritium or ^{63}Ni (as an option) activity on flat surfaces and can measure removable tritium on all surfaces.

- Simple and easy to use
- No waste
- Optional calibrated source is available
- No P10 gas required
- Measure directly or wipe samples



H3R 7000

INNOVATIVE, FAST ACTION TRITIUM CONDENSER

The H3R 7000 from SDEC collects samples of tritium in its vapour form and produces results in less than 40 minutes.

The sample obtained can be measured down to a detection limit of 0.01 Bq/m³ by liquid scintillation counting.

FEATURES

- Traps tritium in its vapour form either indoors or outside
- Trapping yield of 100%: cryogenisation principle of the water vapour
- Fast trapping which allows several samples/day to be taken
- No dilution factor of the samples
- Achievable detection limit: 0.01 Bq/m³
- Easy to use and transportable



MARC 7000 TRITIUM SAMPLER

Airborne and gaseous form tritium sampling device from SDEC.

Collects tritium vapour from the air stream by bubbling in water in the first two vials, then the gaseous tritium is oxidised in a catalytic oven and trapped by bubbling in the last two vials. The tritium activity is given in relation to the volume of air which passes through the unit.

- Excellent trapping efficiency (close to 99%)
- Cooling system to increase sampling duration (optional)
- Connectable to all sampling lines

HAGUE 7000 ¹⁴C SAMPLER

Airborne and organic form ¹⁴C sampling device from SDEC.

¹⁴C is trapped in a sodium hydroxide solution or a scintillating liquid for further spectrometry analysis in a laboratory. The ¹⁴C contained in the sampled air is either as CO₂, CO or organic C.

- Provides optimum sampling efficiency with ergonomics adapted to all utilisation conditions
- Excellent trapping efficiency (close to 99%)
- Cooling system to increase sampling length (optional)
- Connectable to all sampling lines



FOR LIQUID SCINTILLATION
COUNTERS FOR POST-ANALYSIS
SEE P16-17



CF 1000 BRL HI-VOL SERIES

HIGH VOLUME, BRUSHLESS AIR SAMPLER

Portable and maintenance free sampler from Hi-Q.

Variable speed operation air-sampler ideal for continuous or intermittent sampling.

FEATURES

- **Maintenance free** brushless motors
- Portable - Weighs less than 5kg
- Adjustable flow rate
- Digital display of flow rate and total volume, as well as min. & max. flow
- Elapsed, resettable electronic timer
- 230 V AC or 115 V AC options

MODELS

Three available models:

- 1001 - (60 - 230 LPM)
- 1002 - (250 - 800 LPM)
- 1003 - (400 - 1400 LPM)



MRV SERIES

MOBILE CART

Hi-Q's mobile cart continuous duty, constant flow, air sampling system.

FEATURES

- Max. flow rate: 196 LPM
- Telescopic Gooseneck for breathing zone sampling
- Automatic flow control valve
- Elapsed, resettable electronic timer
- Dual vacuum gauges for measuring across filter media
- Sturdy frame
- Weatherproof housing available



CF 900 SERIES

HIGH VOLUME AIR SAMPLER

Ideal for radio-iodine, particulate and continuous duty air sampling.

FEATURES

- Low cost air sampler
- Manually adjustable flow rate
- Weighs less than 5kg
- Rugged housing
- Range of filter holders
- Digital option for flow rate and total volume
- 230V AC or 115V AC options

MODELS

Three available models:

- 901 - (60 - 340 LPM)
- 902 - (150 - 1000 LPM)
- 903 - (300 - 1400 LPM)



PLEASE NOTE: Various sizes of filter paper & cartridge holders are available for the Hi-Q air samplers, as well as kinetic impactor heads, hoses, tripods & calibrators.



RADON MONITORS

Radon is the most significant contributor to the annual background dose received by the public, and poses a particularly high risk to workers in a number of industries.

Possible radon monitor applications include radiation protection monitoring in residential, nuclear, industrial, environmental, research and mining environments or for meteorological, geological or academic studies.

RADON STACK/AREA MONITOR

THE PYLON CRM1 AND CRM2 ARE EASY TO USE, ACTIVE AND PASSIVE, INSTALLED, INDUSTRIAL RADON MONITORS

FEATURES

- Fast and accurate measurements
- Lockable chassis that is designed for inclement weather (to IP65)
- Remote output to PC via RS-232 link
- Detachable control module and detector for easy maintenance
- Active or passive detector available
- Wall mountable



AB-6

The Pylon AB6 radon monitor is a modernised version of the widely popular AB5.

The AB-6 utilises the same core Lucas cell detection technology, whilst offering a more developed user interface. The monitor itself is compact and lightweight, designed specifically for use in the field, with an internal PMT and rechargeable battery.

- Available with both passive and active Lucas-type detection cells
- Continuous sampling, for stand-alone operation over long periods, or grab sampling, for single point radon measurement
- Includes PC software to view measurements, generate reports and remotely monitor the AB6
- High sensitivity radon detection, down to 25 Bq/m³, well below the UK advised action limit in homes of 200 Bq/m³



RAD 7

VERSATILE RADON MONITOR

The Durridge RAD 7 utilises a solid state detector and electrostatic collection to provide identification and measurement via spectral analysis

- Fast response and recovery times
- Measure down to 150 Bq/m³
- Operating range 4 - 750,000 Bq/m³
- Recovery from high measurements in minutes
- Removable wireless infrared printer
- RS-232 and USB interface
- Rechargeable battery
- Memory capacity for up to 1000 measurements
- Nominal 1 LPM pump flow rate
- Powered by 12 V DC or internal battery, providing up to 24 hrs operation (mode dependent)



RANGE OF WIRED OR WIRELESS NETWORKS AVAILABLE

ENVIRONMENTAL, EMERGENCY AND PERIMETER MONITORING

WORLD LEADING RADIOLOGICAL AND METEOROLOGICAL MONITORING NETWORKS FROM SAPHYMO, FOR A VARIETY OF APPLICATIONS

GammaTRACER

AUTONOMOUS, NETWORKED GAMMA PROBE

Autonomous, fully waterproof, networked Gamma probe designed to store and transmit environmental dose rate in the field

- Low power electronics mean they can operate from battery for up to 10 years, removing the need for mains supply
- Can transmit via wired connection, UHF radio, GSM, GPRS or ISDN



MiniTRACE

PERSONAL, NETWORKED RADIATION DETECTOR

- Small enough to be worn on the belt, the MiniTRACE can measure, store and transmit dose rate readings up to 20km as part of a wireless network.
- GPS to allow both the position and local dose rate to be tracked for each member of personnel



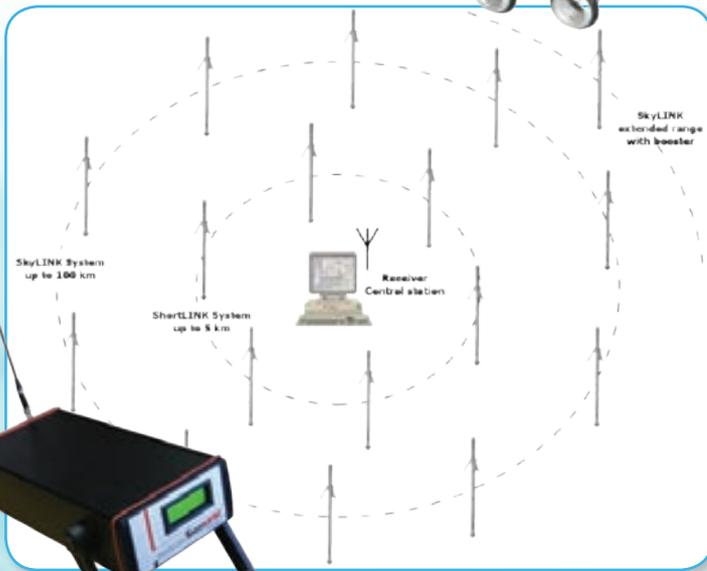
ShortLINK/SkyLINK

WIRELESS DATA TRANSMISSION SYSTEM

ShortLINK/SkyLINK systems allow the transfer of measured data across distances of up to 5 - 100 km via UHF radio transmission.

They are used worldwide as part of emergency and routine radiological monitoring networks.

- Probes deployed or installed in the field, such as the GammaTRACER, collect and transmit readings in real time. The ShortLINK or SkyLINK receiver assimilates this data and passes it to a central monitoring terminal
- The wireless transmission is unidirectional and highly reliable, and has been proven to have a high tolerance to electromagnetic interference. It offers a flexible, convenient and simple way to monitor over long distances with no cabling

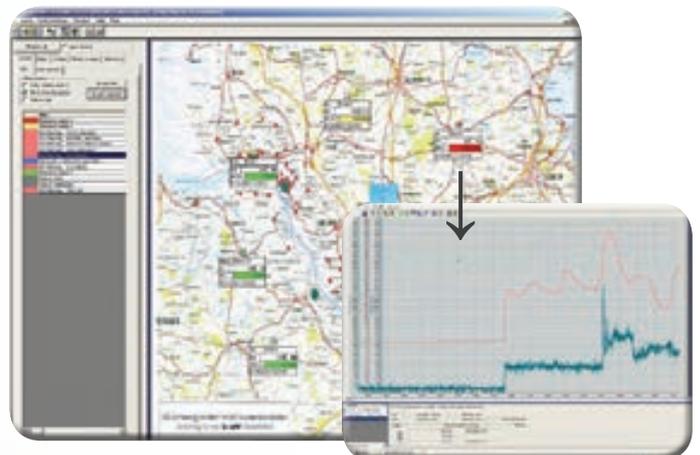


DataEXPERT

DATA LOGGING, VISUALISATION AND ANALYSIS SOFTWARE

DataEXPERT is an advanced software package that forms the backbone of the Saphymo monitoring networks.

It displays and plots the real time readings from all probes in the network, maps the probe positions and flags up any alarms. It can export readings as necessary and is able to interface with SQL databases for maximum flexibility.





2222A

³HE NEUTRON MONITOR

The KWD 2222A is a digital survey instrument for portable neutron detection.

- ³He filled counter, offering excellent sensitivity to neutrons
- Polyethylene and boron plastic shielding provides effective moderation at high energies
- The device spans 9 orders of magnitude in neutron energy, from 0.025 eV to 17 MeV, with an energy dependence in accordance with the ICRP Sievert response curve
- Dose rate and accumulated dose are displayed in both digital and analogue logarithmic format
- Excellent gamma rejection – 1 Gy/hour of ¹³⁷Cs changes the reading by less than 5 µSv/h
- Powered by alkaline batteries, for quick and easy replacement in the field
- Five configurable dose rate alarms for protection of personnel

725

MULTI-TRIGGER DIGITAL DELAY GENERATOR

The BNC 725 co-ordinates, integrates and synchronises complicated experimental set-ups.

FEATURES

- 8 independent channels with programmable logic, unique timing modes and 10ns resolution
- Each channel operates in any of a range of modes: clock, delayed-pulse, toggled output, noise-suppression, fixed, passive and timer
- Channels can be triggered together to function as a traditional multi-channel delay generator
- Synchronise cameras, lasers, shutters, choppers, solenoids, igniters, safety interlocks, switches, etc.
- Easily controlled and configured via Labview or customised software, timerPRO
- "Dynamic delay triggering" based on a real time measurement or event, for example – the passing of a projectile



575

DIGITAL PULSE GENERATOR

A versatile unit from BNC with trigger, gate, delay, pulse and sync capabilities.

- Accurate timing with minimal error. 250ps delay and width resolution and 200ps internal jitter
- 8 connection channels, customisable to be high voltage, optical or standard electrical channels
- Additional inputs/outputs for syncing multiple units with an external clock or with the Mode Lock Oscillation of a laser
- Programmable via USB, Ethernet, RS-232 or GPIB connections
- Auto-save function, with automatic recall of setup configuration on power-down
- Other features include complex burst sequences, settings profiles, dual gating, clock divider, pulse picking and negative delay



SCINTILLATION DETECTORS

INORGANIC AND ORGANIC SCINTILLATORS TO MEET PRACTICALLY ANY REQUIREMENT FOR PHOTON AND PARTICLE DETECTION

- Extensive range of scintillation plastics, selectable for attenuation length, response time, decay time, emission wavelength and capture efficiency
- Liquid scintillants, each loaded to provide specific attributes, such as high light yield, spectrometry, preferential neutron capture or neutrino capture, low flash point and pulse shape discrimination
- Scintillating, waveshifting and reflective paints
- All associated extras, including optical cement, silicone grease, protective adhesive tape and mylar are available from Southern Scientific
- Standard sizes and bespoke solutions available
- Plastics can be provided with all common connectors: 12 pin, 14 pin, MHV, SHV and BNC
- Expert advice to help select most suitable product



BIN MONITOR

Portal design with barrier to prevent the incorrect disposal of radioactive waste (The Radioactive Substances Act).

FEATURES

- NaI(Tl) or plastic scintillation detectors
- Monitors the entire contents of waste bins
- Satisfies the requirements of the Environment Agency
- Large volume plastic scintillation detectors
- Traffic light and barrier
- Low maintenance



SCAFFOLD MONITOR

Conveyor belt monitoring system to automatically monitor scaffold planks for alpha, and beta/gamma contamination.

FEATURES

- High sensitivity proportional gas scintillation counters
- Independent monitoring & alarms for upper and lower surfaces
- Automatic background subtraction
- Emergency stop and reversing controls
- Adjustable height and guide rails
- Lead shielding



DEVELOPED BY
SOUTHERN SCIENTIFIC



VEHICLE/RAIL PORTAL

NUCSAFE ADVANCED RADIATION CONTROL SYSTEM (ARCS)

Designed for the steel, aluminium and scrap metal industries, and nuclear power plants, to monitor all vehicles entering or exiting a controlled area.

ARCS can be configured to suit the vehicles to be monitored, in terms of height and width. Sensitivity can be increased by adding more detection panels. Below are nominal values for ⁶⁰Co when measured in a typical background of 700 nSv/hr.

FEATURES

- High sensitivity
- Very effective detection algorithms and patented Threat Matrix
- Customisable configuration to suit any sensitivity or budgetary requirement
- Gamma and/or neutron sensitive
- NORM discrimination
- Very low false alarm rate (1:15,000)
- Source location profile
- Clear, user-friendly interface
- Robust and rugged
- Easy maintenance, modular construction
- Operate at speeds up to 20mph (30kph)
- Complete data logging
- Optional ANPR (automatic number plate recognition)
- Remote monitoring for reach back and maintenance
- Battery backup >3 hrs (optional)

GUIDELINE

# OF DETECTOR PANELS	DISTANCE BETWEEN PANELS	EXPECTED SENSITIVITY
Two Panels	3.6 meters	35-50 kBq
Three Panels	3.6 meters	25-40 kBq
Five Panels	3.6 meters	15-30 kBq

PLEASE NOTE: Sensitivity figures based on a typical background of 700 nSv/hr.

VEHICLE/RAIL PORTAL



ARCS



ADVANCED PEDESTRIAN PORTAL FOR THE EFFICIENT SCREENING OF PERSONNEL.

FEATURES

- Operates at walking speeds up to 5 mph (8 kph)
- Gamma and neutron sensitive
- Very low false alarm rate (1:50,000)
- Remote monitoring capability
- Windows based software
- Minimizes nuisance alarms from medical patients
- Multiple portals monitored on a single PC
- Battery Backup >3 hours (optional)
- Overview camera (optional)
- Video of alarms (optional)
- Isotope identification (optional)



STRIDE SYSTEM RANGE

NaI(Tl) DETECTORS FOR DISCREET MONITORING APPLICATIONS

The five Stride models from FLIR lend themselves to various applications, but share the same fundamental properties, including spectroscopic measurements for threat identification, source or LED stabilisation and data and control communication capability.

SERIES 200

- Basic detection unit in a dust and moisture proof aluminium enclosure

SERIES 300

- Security stanchion housing with option of wireless communication and batteries

SERIES 400

- Ruggedised in a stainless steel enclosure and watertight to a depth of 50 m

SERIES 700

- Large detector in an innocuous pedestal, with continuous power ensured by an UPS

SERIES 800

- Similar to the Series 700 but with twice the detector volume, for sensitive portal monitoring applications



SERIES	200*	300	400*	700*	800*
NAI(TL) CRYSTAL SIZE	Ø51 x 76mm (Ø2" x 3")	Ø51 x 76mm (Ø2" x 3")	Ø51 x 51mm (Ø2" x 2")	51 x 102 x 406mm (Ø2" x 4" x 16")	2 of 51 x 102 x 406mm (Ø2" x 4" x 16")
COMMUNICATIONS	Ethernet	Ethernet / Wireless	RS-232	Ethernet	Ethernet
POWER SUPPLY	PoE	PoE / Rechargeable battery	Rechargeable battery	UPS	UPS

*Optional ³He tubes for neutron detection and/or high dose rate GM tube available



GUARDIAN DEFENDER® MOBILE & MARITIME VEHICLE-MOUNTED GAMMA AND NEUTRON DETECTION AND IDENTIFICATION SYSTEMS

Nucsafe have designed the Guardian Defender® to provide high-sensitivity for both stationary and mobile applications.

FEATURES

- Transportable radiation detection
- Tried and tested neutron sensitive glass fibre detectors
- Gamma and neutron sensitivity
- Isotope identification
- Dual mode: Mobile or stationary
- Physically rugged
- GPS (and mapping option)
- Does not require a dedicated vehicle
- NORM dedicated vehicle
- Very low false alarm rate
- Battery backup >8 hours (optional)
- Can be used as a temporary portal monitor
- Windows based software
- Configurable to requirements



PLEASE NOTE: Guardian Defender® Maritime has specialised mounting and case.



GUARDIAN DEFENDER® BACKPACK PORTABLE RADIATION SEARCH TOOL

Nucsafe's discreet wide area monitoring and source finding instrument.

FEATURES

- Gamma and neutron detection modules
- Classification and identification of gamma sources
- Fits in rucksacks, book bags, brief cases or laptop bags
- Real time readout and mapping via tablet or Smart Phone
- Patented detection algorithms
- Audio and vibration alarms
- Wireless communication and network capability
- Data logging
- Configurable to requirements



RADHUNTER™

NEXT GENERATION HANDHELD RADIONUCLIDE IDENTIFICATION DEVICE

Sharing the same simple user interface as the identiFINDER™ 2 and nanoRAIDER™, the radHUNTER™ offers the ultimate sensitivity for locating and identifying orphan sources.

FEATURES

High sensitivity: A large 20 x 100 mm NaI(Tl) crystal provides a wide cross section for detection. Or, optionally, enhanced energy resolution can be achieved with LaBr₃.

Dedicated search tool: The on-screen display, flashing LEDs and an audible tone allow radiation sources to be found quickly and easily

Easy to use: Simple and intuitive interface, requiring minimal training

Transflective colour display: Viewable in all weather conditions

Neutron monitoring: Optional ³He tube to aid detection of SNM

Reliable results: Energy stabilisation is achieved with an internal LED, making the Radhunter impermeable to shifts in temperature



RADIONUCLIDE-SPECIFIC INDICATORS

- **Personal Hazard:** All 4 LEDs blinking
- **Threat:** Blinking red LED, tactile & audio
- **Innocent:** Green LED on
- **Suspicious:** Blinking yellow LED, tactile & audio



FOR OTHER HANDHELD GAMMA SPECTROSCOPY INSTRUMENTS
SEE PAGE 14

DEVELOPED BY
SOUTHERN SCIENTIFIC



THE POCKET SIZED SOURCE FINDER/PAGER

Using a well proven, high sensitivity CsI detector and compact PMT, the Nemo gives a very rapid response for its discreet size, making it a valuable tool for finding (or avoiding) gamma radiation sources.

FEATURES

- Highly sensitive and easy to use
- Faster than 1 second response
- Audio or vibration alarm
- Infrared port for PC communication
- Belt clip and protective pouch
- Weather proof
- Size: 117 x 79 x 24 mm / 200g

APPLICATIONS

- Customs and border security
- First responders/Emergency services
- Military
- Airports and building security
- Event security



AN/UDR13 POCKET RADIAC

This small, rugged and reliable Military Pocket Radiac is designed for reliability and performance.

FEATURES

- Detects and quantifies dose rate of residual radiation from 10 $\mu\text{Gy/hr}$ - 10 Gy/hr
- Measures neutron and gamma dose from initial prompt and residual radiation from 10 cGy - 10 Gy/hr
- Presettable audio and visual alarms
- Ultra small size at 26.7cm³
- Meets MIL-STD-810E for military environments
- Not affected by EMP
- Nuclear hardened
- Operable/readable by personnel
- Automatic self calibration
- Probes available for radiation and contamination monitoring
- Infrared port for data download to PC



APPLICATIONS

- Troops
- Vehicles and Helicopters
- Personnel Dose Management

AN/UDR13 VEHICLE MOUNTING UNIT

- A mounting unit for the pocket radiac is available for use in vehicles and aircraft
- While located in the vehicle mount, the UDR13 draws its power from the vehicle
- Can be easily removed from vehicle when necessary. i.e for calibration or repair



TAM 73 PORTABLE TRITIUM-IN-AIR MONITOR

- Six decade range from 37 kBq/m³
- Flow-through ion chamber
- Vibrating read electrometer for low-drift operation
- Automatic gamma background and radon subtraction
- Operates on 120 V AC power 50/60 Hz
- Positive displacement air pump
- Front panel Zero-offset pot



ADM300

AMBIENT GAMMA & CONTAMINATION MONITOR

A single instrument capable of detecting, measuring and quantifying radiation levels from any ionising radiation source, when combined with optional probes and accessories.

The ADM300 can send data to a computer including date, time, activity and location.

- Gamma dose rate and accumulated dose measurable up to 100 Sv/hr. This means only one instrument is required for 10 decades of measurement
- Modular design is easily repairable
- Patented "Time-to-Count" technology provides data accurate to $\pm 10\%$, and calibration can be performed with license free sources
- Beta window can be used for monitoring beta radiation levels and for contamination
- Simultaneous analogue and digital displays



ADM300 SMART PROBES

The ADM300, in addition to its standard built-in GM detectors, can control a host of different independent external radiation probes.

These "Smart" probes have built in high voltage, pre-amp and signal output. A nonvolatile memory within the probe stores the detectors identity and calibration factors.

Telescopic detector arm permits measurement where access is difficult and reduces exposure to operator.

ALPHA PROBE: Active area: 100 cm²

ZnS (Ag) scintillator detector designed to demonstrate compliance with alpha contamination criteria contained in the U.S. NRC regulatory guide 1.86 or in ANSI N13.12

BETA PROBE: Active area: 15 cm²

Pancake style GM tube for convenient personnel or material contamination checks.

BETA GAMMA PROBE

- Gamma and beta detection
- Automatically switches between 2 GM tubes to cover wide dose range

X-RAY PROBE: Active Area: XP-100 10 cm² (Ø1.5") XP-110 125 cm² (Ø5")

Designed to find gross contamination under cover of dust, snow, etc. where alpha detectors would not have the required sensitivity.

RDS-100

RADIATION DETECTION SYSTEM

FEATURES

- Storage of up to 300 data points, including dose rate, date and time
- GPS compatible
- Compatible with "SMART" Probes
- Outstanding linearity over a wide dynamic range
- Can be calibrated using license-free source
- Compatible with Training Probes
- Can be operated and read whilst wearing fire or hazmat protective clothing
- Will not ignite explosive atmospheres - intrinsically safe
- Waterproof to 1 meter
- Background Subtract feature
- Electronic filter to reduce fluctuations in readings
- Built-in RS-232 interface
- Automatic self-calibration





WE HAVE MOVED!
Please take note of
our new contact details



Based in Henfield, West Sussex, Southern Scientific has been serving the health physics market for over 25 years and customers include hospitals, nuclear power, processing and research sites, industry and the Ministry of Defence.

Southern Scientific Ltd. is an ISO-9001:2008 & ISO-13485:2003 company.

All our products are CE marked

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scan this QR code for instant
access to our website



A  LabLogic Company