

# Radiation Monitoring Systems

 Southern Scientific Ltd.



Certificate No. 3250

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A guide to Southern Scientific radiation monitoring systems

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AGM3



AUTOMESS  
6150

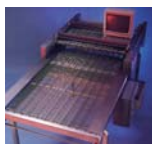
## Instrument Hire

Some of the instruments are available for hire. Please ask for details

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SCAFFOLD



LAUNDRY

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PRM470B



TRIATHLER  
L S COUNTER



FLOOR  
MONITOR



VEHICLE  
MOUNTED



RAD SURVEY



NANOPROBE  
PLUS



IDENTIFINDER



IDENTIFINDER U

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SMALL  
ARTICLE



BARREL AND  
BAG



BAG & BARREL  
MONITOR



BAG & BARREL  
MONITOR



SCINTISPEC  
MCA SYSTEM

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NRM477



NEUTRON  
IDENTIFINDER



NEUTRON  
CASES (PUMA)



GATE  
MONITOR



VEHICLE  
MONITOR

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AIL CAMERA

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## Portable Radiation Monitors

Please ask for details of our Portable Radiation Monitors shortform Catalogue





# Area Gamma & Interlock Systems



- Area Gamma and Interlock Monitor
- Internal/External Detector
- Direct Read Log Scale
- Continuous Logging and Monitoring
- Adjustable Alarm Trips
- Interlock Facility
- Audible Count Rate
- Process Monitoring
- RS232/485 Protocol
- Central Control and Data Processing Software
- UK manufactured



## AGM-3

### Area Gamma and Interlock Monitor

## System Capability



- Robust wall mounted unit
- Accommodates 6150AD meter
- Remote re-calibration
- Adjustable dose rate alarm levels
- Audible and visual alarms
- Range of remote probes available
- Networking available



## AUTOMESS 6150

### Gamma Alarm Station

# Contamination Monitors

## SS120

**Scaffold/Board  
Monitor**

- 2 rugged sealed prop counters
- Variable speed conveyor
- Emergency stop and reversing
- Detector height adjustment
- Audible and visual alarms



## LAUNDRY MONITOR

**Scaffold/Board**



The Laundry Monitor provides an accurate method of determining the remaining level of contamination after laundering. Alternatively, it may be used to scan active area clothing before laundering to avoid distributing contamination from heavily soiled items to clean ones during the washing process.

- Fast screening
- Large area proportional counter
- Two arrays of three detectors. Each detector views approx 100sq cm
- Variable speeds
- Clean and dirty scanned garment segregation
- Easily replaceable detectors
- UK manufactured



# Field Survey/Environmental Monitors



- Hand Held Unit
- Very Sensitive
- Plastic Detector
- Large Display
- User Settable Alarms
- Lightweight
- Automatic Background Count
- 60 hrs Operation



**PRM470B**  
**'Lost Source'**  
**Monitor**

- Compact three in one personal multilabel tester
- Liquid Scintillation Counter
- Gamma Well Counter
- Fluorescence Counter
- Portable
- Easy to use
- Small, manual single well instrument
- 12v operation



**TRIATHLER**  
**Liquid & Gamma**  
**Scintillation**  
**Counter**

- Optional Detectors for Beta/Gamma or High Efficiency Gamma Applications
- Detector Height Adjustment
- Lightweight and Compact
- Frisker Probe Option
- User Alarms
- Background Subtraction
- Rugged Construction
- Indoor and Outdoor Use



**FM-500**  
**& FRM-600**  
**Floor Monitor**

- Large Area Plastic and NaI(Tl) Detector
- Any Size Detectors
- GPS (Sub Meter Accuracy)
- GIS Mapping
- User Settable Alarms
- Display Panels



**VEHICLE**  
**MOUNTED**  
**MONITOR**



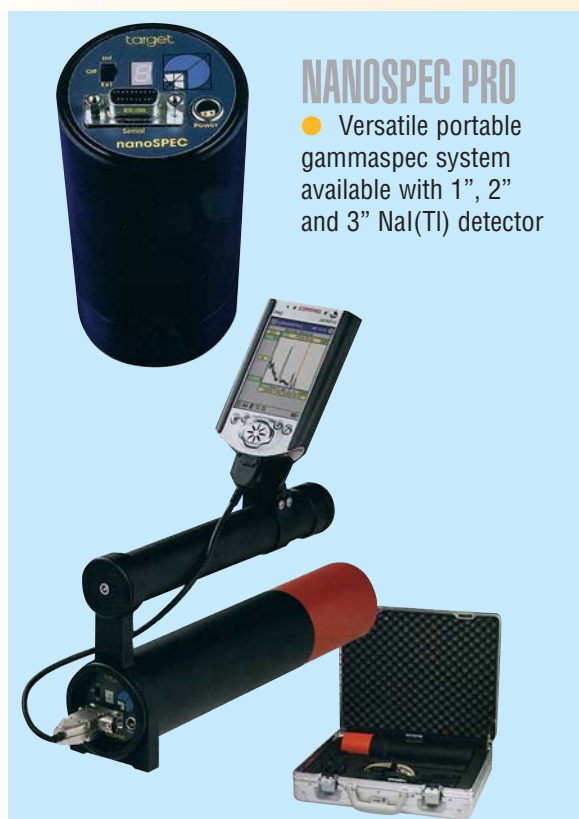
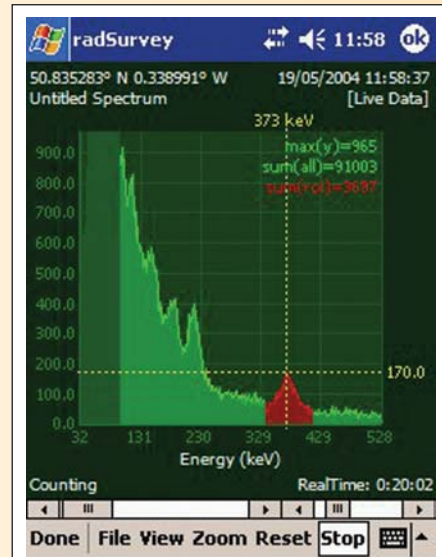
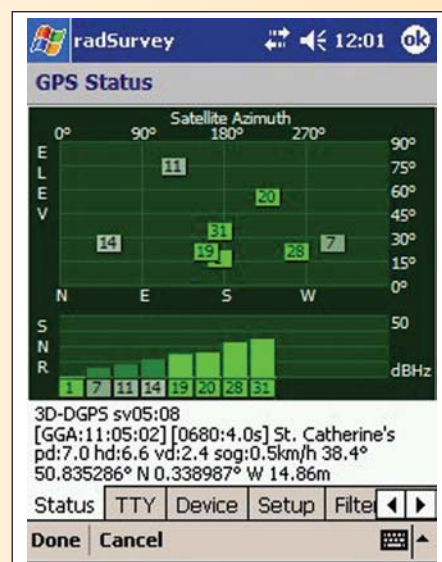
## RAD SURVEY

Environmental survey monitor for Gamma detection, positional and data logging

- Industrial
- Medical
- Power Plants
- Scrap Analysis
- Large Area Surveys
- Site Clearance
- Radiological Data
- Positional Data
- Live Spectrum Analysis
- GIS Compatible
- Sub Meter Accuracy
- 50 Days Storage
- Weatherproof

The basic system consists of a pocket computer (IPAQ), memory storage card, GPS receiver with Nanospec portable gamma spectrometer and pole mounting system.

During use, RadSurvey gathers radiological information together with positional data (e.g. OSGB or Lat Long), which is displayed on the screen and also stored onto an SD card. The data can later be transferred to GIS mapping software, to produce a visual radiological survey map and thus used in reporting.



### NANOSPEC PRO

- Versatile portable gammaspec system available with 1", 2" and 3" NaI(Tl) detector



### NANOPROBE PLUS

- Complete gamma spectroscopy system integrating into scintillation counter detector housing. (Suitable for borehole and drain monitoring applications - IP67)



# Field Survey/Environmental Monitors



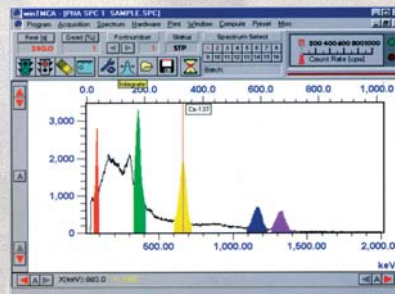
- Transport monitoring
- Emergency
- Waste monitoring
- Contamination monitoring
- Environment control
- leak identification
- scrap metal analysis



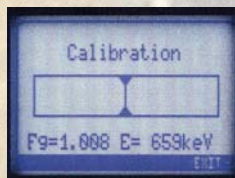
**identifINDER - CH** (yellow)  
CZT and neutron detector version

**identifINDER - N** (red)  
Standard version

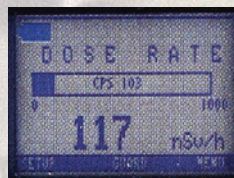
**identifINDER - NH** (blue)  
Standard version with neutron detector



**Spectrum Display**  
Versatile Windows based software  
for NaI-spectroscopy



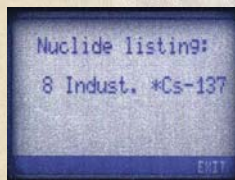
Automatic system calibration



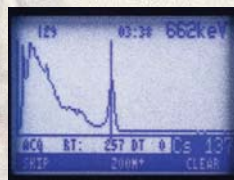
Doserate



Advanced mode functions



Nuclide identification



Live spectrum display



Source finder

- Portable underwater spectrometer with doserate, nuclide identification, source finder.
- Available with NaI(Tl) x-ray and neutron detectors.
- Suitable to 30m depth



**identifINDER**  
Digital  
spectrometer and  
doserate  
instrument for  
portable  
applications

Radiation safety  
Medicine  
Nuclear power plants  
Industry  
Customs control  
Fire departments

**identifINDER U**

## ST100

### Sort Table

**REDUCE YOUR  
WASTE COSTS**



### **A new Sort Table for monitoring of high, medium and low level waste.**

Built specifically to customer requirements the Sort Table can reduce the cost of waste considerably, usually paying for itself within the first twelve months of use.

Constructed from lead and covered in stainless steel for ease of decontamination the Sort Table will accept waste direct from a standard 200L drum onto the table, so the user does not come into contact with the contents.

The waste is then spread across the table allowing the user to measure using a variety of detectors, and is then pushed into one of three shielded containers for disposal.

- **Reduce Waste Costs**
- **Alpha Beta Measurement**
- **Gamma Measurement**
- **Drum Tipping Mechanism**
- **Operator Fully Shielded**
- **Selection of Detectors**
- **User Selectable Alarms**
- **Custom Systems**



# Waste Monitoring

## **Monitor incorporating large area plastic scintillation detectors**

- $4\pi$  Detector Geometry
- Efficiency >35% for  $^{60}\text{Co}$
- Energy Range 30 KeV to 2 MeV (Gamma)
- Variable Scan Times
- Accurate Go/No Go Analysis
- Disposable PVC Liners



**BM185**  
**Small Article  
Monitor**

## **Barrel/Large bag monitor incorporating large area plastic scintillation detectors**

- Accommodates 500lb Containers (BM285)
- Accommodates 55 Gallon Drum (BM286)
- 6 Plastic Detectors (= 60 Litres)
- Isotope Identification
- Energy Range 40 KeV to 1.6 MeV (Gamma)
- Waste Stream Management
- Weighing Machine
- Analysing Software
- NaI additional detector option



**BM285/286**  
**Bag/Barrel  
Monitor**

## **Barrel/Large bag monitor incorporating sodium iodide scintillation and counter based detectors**

- High sensitivity
- Nuclide identification
- Based on Target 'Scintispec' counters
- Adjustable speeds
- Standard flexible software PC based Windows operating platform
- 2,3 and 4 detector configurations
- Single or 3-phase supply - automatic operation if required
- UK manufactured



**BM 204S**  
**Barrel Monitor for  
contamination**

## **Barrel/Large bag surface doserate monitor incorporating two environmental geigers**

- Fast screening
- Geiger based
- Adjustable speeds
- Standard flexible software PC based Windows operating platform
- Single or 3-phase supply - automatic operation if required
- UK manufactured



**BM 212D**  
**Barrel Monitor  
for doserate  
measurement**

## NRM477A Neutron Monitor



- Hand Held Unit
- $^3\text{He}$  Detector
- Large 4 Digit Display
- User Settable Alarm
- Exceeds ASTM STD
- 60 hrs Continual Use
- Small and Compact

## identiFINDER with Neutron plus x-ray



- Transport monitoring
- Emergency
- Waste monitoring
- Contamination monitoring
- Environment control
- Leak identification
- scrap metal analysis

## PUMA Neutron sensitive security monitor



- Scintillating glass sensors
- Discrete suitcase packaging
- Suitable for a wide range of applications including airports, border crossings, nuclear fuel security etc.



# Security & Neutron Monitoring



● TSA's vehicle portal monitor consists of two, self-contained, weather resistant pillars placed on either side of the roadway to be protected. Each pillar contains two plastic scintillation detectors, an occupancy detector, and an amplifier/controller. The master pillar also has a battery, power supply/battery charger and an SC-770 system controller.

- Fast response
- Gamma and neutron detectors
- High sensitivity
- Minimal false alarms
- Easy installation
- Many systems installed



## PORTAL VEHICLE MONITOR

These monitors are designed to automatically scan personnel without the need for frequent calibration. They are intended for applications where the relatively low energy emissions from  $^{235}\text{U}$  and  $^{239}\text{Pu}$  are the main concern.

- Fast response
- High sensitivity
- Optional Neutron measurement capability
- Minimal false alarms
- Easy installation
- Many systems installed



## PERSONNEL PORTAL MONITOR

# Gamma Camera

## AIR CAMERA

**Portable Gamma  
Ray Imaging  
System**



- Remote Surveys
- Evaluation of Shielding
- Dynamic Monitoring
- Sorting of Waste
- High Radiation Environments

- Portable
- Easy Set Up
- High Spatial Resolution
- High Sensitivity
- Mapping
- Analysis Software
- Minimal Operator Exposure

## HOT CELL SYSTEMS

**SSL has engineered special systems for in-cell dose (up to 100 Sv/hr) and contamination measurement.**

**These systems are individually engineered to customer requirements. Our engineering staff are available to discuss specific customer applications.**

