

RADCOMM

RADIATION DETECTION SYSTEMS

**Leading Supplier of Innovative
Radiation Detection Systems**



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RADCOMM RADIATION DETECTION SYSTEMS

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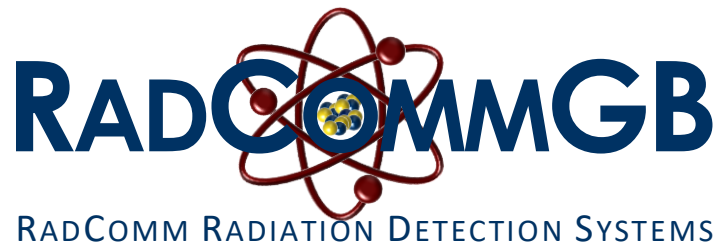
Steve Jobs once quoted that
"Innovation distinguishes between
a leader and a follower"

and this could not be any more true of RadComm Systems. Our approach, products and services have distinguished ourselves from our competitors and enabled us to continue to invest in ongoing research and development to maintain our leadership role in the industry. We pride ourselves on being the leader in the radiation detection industry and ensuring that through our innovative vision and execution, we will continue to be the leader for the future

Our innovative approaches to providing solutions to customers requirements, makes this ideal true of us too. Born out a relationship between *Higgins Balers Ltd* and *RadComm Europe*, we provide professional, impartial advice, and a full range of equipment along with the service and support to ensure your system runs continuously and smoothly. We are ideally placed to serve the whole of the British Isles with RadComm radiation detection equipment, helping to maintain your site's safety.

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PRODUCT GUIDE

Vehicle/Portal & Material Monitoring Systems

RC7000 Series

Enhanced radiation detection using NeuSpec Spectroscopic Technology. Multi-panel detector assemblies. Stand-alone NaI(Tl) technology or can be added onto existing PVT systems.

RC5000 Series

Enhanced radiation detection using NeuSpec Spectroscopic Technology. 1 – 2 panel Na(Tl) detector assemblies.

RC4000 Series

Best in class sensitivity. Designed to detect low Gamma Ray emissions hidden in high density materials.

RC2000 Series

Provides a high level of detection capability for buried Gamma Ray sources in materials, such as compressed waste and light density processed scrap.

RC2W34

Designed to quickly detect radioactive material contained in waste materials or scrap loads.

Laboratory Instruments

RADLAB

Laboratory Gamma Spectrometer developed specifically to provide the highest degree of accuracy in measured samples for its specific radiological content and activity. Recommended for certifying material to meet the IAEA Free for Release Limits.

RADSampler

Compact laboratory Gamma Spectrometer. Developed as a desk top unit that can accurately analyse any small sample to ensure it is free of radioactive contaminants.

Grapple and Magnet Systems

Cricket Grapple

World's first continuous monitoring grapple mounted radiation detection system, designed specifically to meet the needs of the scrap steel and waste industries. Provides radiation detection capability of low intensity radioactive sources on a continuous basis. Spectroscopic analysis available with NaI(Tl) Crystal Technology.

Cricket Magnet

World's first continuous monitoring magnet mounted radiation detection system, designed specifically to meet the needs of the scrap, steel and waste industries. Provides radiation detection capability for low intensity radioactive sources on a continuous basis. Spectroscopic analysis available with NaI(Tl) Crystal technology.

Handheld & Portable Systems

SYCLONE

Highly sensitive portable Gamma Ray Spectrometer. NaI(Tl) and Gieger Mueller tube scintillators. Optional neutron detection.

MSpec

Fast responding, palm sized CsI(Na) Spectrometer to instantly measure and identify isotopes. Optional neutron detection.

RC2^{Plus}

Zero in on potential radioactive sources quickly. Advanced option uses both a PVT scintillator and Geiger-Mueller tube to perform Region Of Interest analysis allowing the operator to see the distributed gamma energies in histogram form.

R22 & 23 Wand

Recommended for search and find applications where extended reach is needed.

Zero in on a potential radioactive source quickly and more effectively with an RC2^{PLUS}

- Improved sensitivity and great response
- Easy to use
- Larger high definition display with multiple languages
- Lightweight with longer battery life
- Two versions: Basic with Total Count; or Advanced ROI Analysis



RC2^{PLUS}

PORTABLE RADIATION DETECTION SYSTEM

Updated Design with Advanced Features

The Basic RC2^{PLUS} automatically sets an alarm threshold over the total background count rate average, upon each start up. This allows the RC2^{PLUS} to detect very low radiation levels even when hidden by shielding, such as scrap metal, waste, or other dense materials. The Basic model utilises a large internal, high grade PVT scintillator to maximise sensitivity.

The Advanced RC2^{PLUS} utilises both a PVT scintillator and a Geiger-Mueller tube to perform "Region Of Interest" (ROI) Analysis which allows the operator to see the distributed gamma energies in a histogram form. Once the ROI ranges are selected, a specific alarm threshold can be set for each ROI. This unique technology dramatically increases sensitivity while decreasing the adverse effects of "noise" caused by ambient background radiation. The RC2^{PLUS} provides many additional features such as Does Rate Alarm, Data Storage, and Graph Plotting.

Upgradable for Increase Flexibility

At any time the RC2^{PLUS} Basic can be easily upgraded to the RC2^{PLUS} Advanced. The RC2^{PLUS} Advanced stores operator results in a histogram record which can be downloaded via USB to RadComm's PC software for further analysis. All Reports can be saved in PDF format and archived for future reference. Remote servicing/diagnostics and potential future software updates of the RC2^{PLUS} can be achieved via an internet or network connection with RadComm's software application.

New technology for express analysing (< 5min) Radon concentration in air by using low energy resolution PVT plastic scintillator and high energy resolution Lanthanum Bromide inorganic scintillator as the gamma-detectors.

The RC2PLUS Specifications:

Size:

- Detector Dimensions (hxlxw): 7" (18cm) x 8¼"(21cm) x 4" (10cm)
- System weight: 3.4 lbs (1.5 kg)
- Detector Case: Durable plastic with protective silicone sleeve

Electronics:

- Integral PMT with EM Shielding
- Audio and Visual Alarm with Vibration
- Stable Low Noise, High Voltage Supply
- Battery: Internal Lithium ion with Charge Indicator
- Battery Life: up to 20 hours
- Battery Recharge Time: wall charger: 2.5 hours; PC USB: 6 hrs (estimated)

Environmental:

- Operating Temp: -20°C (-4°F) to +60°C (140°F)
- Shock Resistant: Complies with ANSI N42.34

Display:

- Backlit RGB colour LCD 320x240 resolution
- Viewing area: 3.5" (8.9cm) TFT LCD
- Basic: selectable units of measure (CPS, uSv/h; uR/r)
- Advanced: Histogram graph

Software for Advanced:

- Menu Driven User Interface
- Configurable Data Storage with Backup
- Email Capability (with network connection)

Response/Sensitivity:

- Energy Range: 30KeV – 2.0 MeV
- Gamma histogram: 256 channels, channel capacity, 16 bits

Detector Specifications:

- Basic & Advanced utilises PVT: Size 4" (101.6mm) x 3" (76.5mm) x 2" (50.8mm)
- Advanced also includes: Geiger-Mueller Tube: size: 0.59" (12mm) x 1.9" (45mm) for high dose rate

Each RC2PLUS Package Includes:

- RC2PLUS instrument charged and ready for use
- Hard Shell Carrying Case
- Smart Battery Wall Charger
- USB Key with Operation Manual Embedded
- Calibration certificate

RC2PLUS Docking Station (Optional)

- Docking Station Charges RC2PLUS Instrument
- Provides Area Monitoring whilst Docked
- Audio and Visual Alarm with Reset Button
- Wall Mounted with Security Lock



RC2PLUS Basic vs Advanced

Feature	Basic	Advanced
Search & Find	✓	✓
Total Counts	✓	✓
Dose Rate	✓	✓
Does Rate Alarm		✓
Histogram		✓
Graph Plotting		✓
ROI Analysis		✓
ROI Alarm Threshold Settings		✓
Data Storage		✓
Accumulated Dose		✓

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RADCOMM RADIATION DETECTION SYSTEMS

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Prevent costly radioactive contamination of your scrap yard, steel plant, equipment, product and personnel with the RC2000 series vehicle radiation detection system!

- Innovative Design, with Multiple Detector Sizes,
- User Friendly, Easy to Operate
- Detailed Data Storage
- Adjustable Alarm Threshold Settings
- Network Capability with Email
- Easy to Install and Setup

RC2000

VEHICLE RADIATION DETECTION SYSTEMS

Detection of Radioactivity in Moderate Density Materials

The RC2000 series of radiation detection systems have been designed for moderate density materials such as compressed waste and processed scrap metal. The vehicle size and type will help determine the appropriate detector panel size and configuration. The RC2000 detection systems all utilize RadComm's high quality specially prepared Polyvinyl Toluene (PVT) scintillators, electronics and Photomultiplier Tube (PMT).

Simplified System Operation

The RC2000 provides a high level of detection capability for buried Gamma Ray sources in low to moderate material densities. System operation is completely automated providing specific alarm thresholds in real-time during each scanning period. The RC2000 series utilize a User Friendly Graphical interface allowing the operator to easily move through the wide range of User options. Detailed alarms records are stored on the internal hard drive and can be easily retrieved.

Networkable Remote System Access

The RC2000 Controller is equipped with a network adaptor allowing remote monitoring, data retrieval and maintenance functions. The internal RC2000 software and hardware designs are extremely flexible allowing remote software updates and electronic hardware adjustments when necessary. With a network connection Supervisors can monitor the system operation in virtual real-time to ensure normal system operation is maintained.



The RC2000 Series consists of:

- Detector assemblies (1-5 panels)
- Touch screen monitor
- Remote communications option
- Smart infrared presence sensors
- RadLink embedded controller

RadLink Controller Features:

- Large Touch Screen LCD Monitor
- Large Storage Capacity for System Operational information and Alarms
- Easy to follow Multilingual Menu Outlines and Descriptions
- Multi-level Security Password Control
- Detailed Alarm Data Storage
- Easy to Set Alarm Configuration menu
- Radiation levels Displayed in Counts per Second (mR/h, nSv/h)
- Vehicle Speed Measurement in km/h and mph
- Adjustable Audio Alarm
- Various string outputs
- Detailed Alarm Information Displayed and Stored After every alarm
- Network Access for Remote Service and Monitoring (optional)
- Configurable email reporting

Energy Ranges: 20KeV to 3.0 MeV (Incident)

Options:

- Camera
- External alarms
- Supervisory Software



Model	RC2069	RC2110	RC2138
System Size (in ³)	4,216	5,264	8,432
System Size (L)	69	91	138
System is based on 2 panels: may be extended with more panels			
PER/Panel Size (in ³)	2,108	2,632	4,216
PER/Panel Size (L)	34.5	45.5	69
# of PMT's/panel	1	2	2
Detection Capability	2.3uCi	2.0uCi	1.6uCi
Overall Sensitivity/ Unshielded Source (Shielded Source)	(82mCi)	(71mCi)	(58mCi)
Radiation measurement of 137Cs (point source) at 1m from the face of the detector (the radiation exposure level is comparable to a 75mmØ x 150mm 137 Cs lead sealed source buried in 40 lbs/ft ³ (0.64 g/cm ³) of scrap metal)			

Detector Features:

- Large Premium Grade PVT Scintillators
- 34.5 to 69 L PVT Volumes Available (Single Panel)
- Low Density Shield on Face of Panel
- Dual Layer Thermal Insulation (-20°C to 55°C)
- High Signal to Noise Ratio PMT
- High Speed Micro-controller
- Single Input High Speed Pulse Processor
- Noise Reduction hardware/Software
- Background Characterisation for Variable Ambient Background Suppression
- Smart Infrared Vehicle Presence: Speed Monitor
- 8 Output Drivers (24V DC @ 50 mA) for Remote Indicators
- Internal Non-radioactive Test Source for Detailed and Repeatable System Checks
- 24V DC Input Voltage @ 1.5A

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Prevent costly radioactive contamination of your scrap yard, steel plant, recycling plant, equipment, product and personnel with the RC4000 series vehicle radiation detection system!

- Innovative Design, with Multiple Detector Sizes
- User Friendly, Easy to Install and Operate
- Energy Specific Alarm and Background Statistical Analyses
- Real Time Density Tracking Algorithm
- Network Capability with Email



RC4000

VEHICLE RADIATION DETECTION SYSTEMS

Detection of Radioactivity in High Density Materials

The RC4000 series of radiation detection systems have been designed to detect very low gamma emissions in high density materials. The RC4000 is supplied in three detector panel sizes with any configuration with up to 8 detector panels. These systems all utilise RadComm's high quality specially prepared polyvinyl toluene (PVT) scintillators, electronics and Dual Photomultiplier Tubes (PMT's).



Simplified System Operation

The RC4000 utilises real-time statistical algorithms that are based on Gamma Energy Distribution to ensure alarm thresholds levels are optimized. It has a User Friendly Graphical interface allowing easy navigation through the many user options. All detailed Clean Scan, Testing and Alarms records are stored on the internal hard drive and can be easily retrieved and interpreted as required.



Remote System Access

The RC4000 Controller is equipped with a network adaptor allowing remote monitoring, data retrieval and maintenance functions. The software and hardware designs are extremely flexible allowing remote software updates and electronic hardware adjustments when necessary, & emailing of alarms (with network connection). Supervisors can monitor the system operation in real-time.



The RC4000 Series consists of:

- Detector assemblies (1-8 panels)
- Touch screen monitor
- Remote communications option
- Smart infrared presence sensors
- RadLink embedded controller

Detector Features:

- Large Premium Grade PVT Scintillators
- 34.3 to 69 L PVT Volumes Available (Single Panel)
- Low Density Shield on Face of Detector Panel
- Dual Layer Thermal Insulation (-20°C to 55°C)
- High Signal to Noise Ratio PMT
- High Speed Micro-controller with Programmable CPLD Technology for Signal/Alarm Analysis
- Dual Input High Speed Pulse Processor
- Noise Reduction hardware/Software
- Background Characterisation for Variable Ambient Background Suppression
- Smart Infrared Vehicle Presence: Speed Monitor
- 8 Output Drivers (24V DC @ 50 mA) for Remote Indicators
- Internal Non-radioactive Test Source for Detailed and Repeatable System Checks
- 24V DC Input Voltage @ 2.3A
- System auto-stabilisation & remote control
- Suitable for Vehicle, Rail, Charge Bucket, Off gas, Conveyor Systems

RadLink Controller Features:

- Large Touch Screen LCD Monitor
- Large Storage Capacity for System Operational information and Alarms
- Easy to follow Multilingual Menu Outlines and Descriptions
- Multi-level Security Password Control
- Detailed Alarm Data Storage
- Manual Scanning for Pinpointing Source Location within the Vehicle's Load
- Easy to Set Alarm Configuration menu
- Network access for Remote Service & Monitoring
- Radiation levels Displayed in cps (mR/h, nSv/h)
- Vehicle Speed Measurement in km/h and mph
- Ambient Temperature Displayed in °C and °F
- Adjustable Audio Alarm
- Counter for Number of Scans in a 24 hour Period and To-date
- Detailed Alarm Information Displayed and Stored after every Alarm
- Various String Outputs
- Configurable email reporting
- Adaptable for specific customer needs

Energy Ranges: 18KeV to 3.0 MeV (Incident)

Model	RC4069	RC4110	RC4138
System Size (in ³)	4,216	5,264	8,432
System Size (L)	69	91	138
System Size is based on 2 panels: may be extended with additional panels			
PER/Panel Size (in ³)	2,108	2,632	4,216
PER/Panel Size (L)	34.5	45.5	69
# of PMT's/panel	1	2	2
Detection Capability Overall Sensitivity/ Unshielded Source (Shielded Source)	1.6uCi (58mCi)	1.4uCi (50mCi)	1.1uCi (41mCi)
Radiation measurement of 137Cs (point source) at 1m from the face of the detector (the radiation exposure level is comparable to a 75mmØ x 150mm 137 Cs lead sealed source buried in 65 lbs/ft ³ of scrap metal)			



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RADCOMM RADIATION DETECTION SYSTEMS

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Detect hidden radioactivity contained in Waste and Scrap Loads with the RC2W34-2 series vehicle radiation detection system!

- Excellent detector technology and coverage
- User friendly, easy to operate
- Maintenance friendly
- Unique ease of installation
- Lowest cost of ownership
- Easily Upgradeable to RadComm's RC2000 series and RC4000 Series software

RC2W34-2

VEHICLE RADIATION DETECTION SYSTEM

Best in Class Coverage

The RC2W34-2 series of radiation portal monitoring system was specifically designed to detect radioactive material contained in a moving vehicle loaded with waste and scrap metal/material. The innovative design of the RC2W34-2 is the result of customers' demands for best in class scanning coverage of vehicles with the lowest cost of ownership.

High Detection Capability with Low False Alarms

The RC2W34-2 series utilizes high quality Polyvinyl Toluene (PVT) scintillators, highly sensitive Photomultiplier Tubes (PMT's), coupled with high grade electronics and proven signal processing alarm algorithms. With the click of a mouse, the system can instantaneously relearn background levels providing accurate scanning while maintaining a low false alarm rate. If radiation signatures are present in a load of waste or scrap material, the system will immediately alarm and flash red to alert the user that a potential radioactive source has been detected.



Maintenance Friendly with Remote System Access

Utilizing RadComm's experience and success in remote access the RC2W34-2 has incorporated internet connectivity so that testing and maintenance could be performed 24 hour a day/7 days a week. Most issues can be resolved within a matter of minutes from RadComm's Service centre or any one of our fully licensed RadComm service agents

The RC2W34-2 consists of:

- 2 Detector assemblies
- Power supply control units
- Windows™ based software
- Remote communications package
- Large touch screen PC (optional)

Software features:

- Windows based PC software for menu
- East to follow multilingual menu outlines and descriptions
- Easy to set alarm configuration menu
- Radiation levels displayed in counts per second (CPS) or R/h, Sv/h
- Adjustable audio alarm
- Network access for remote service and monitoring
- Display radiation level in selected unit of measurement, battery life, background level and alarm threshold

Customer to provide own computer with following requirements:

- Windows™ 7 or greater
- 2GB of RAM with 60GB o dedicated Hard Drive space
- 1.6 GHz or greater processor
- Internet connection
- Dotnet Framework 4.0
- USB or RS232 serial port
- Audio speaker
- Screen Resolution of 1024 x 768

Energy Range: 50KeV to 2.0MeV

Radiation measurement of 137Cs (point source) at 1 meter from the face of the detector (in brackets) the radiation exposure level is comparable to a 75mmØ x 150mm 137Cs lead sealed source buried in 0.7 g/cm3 of scrap metal

Detection features:

The RC2W34-2 series provides an extremely high degree of detection capability for a wide variety of radioactive elements. The detectors utilize large plastic scintillation panels that are extremely sensitive to Medical and Industrial Radiation. The geometrical shape of the detectors has been designed specifically for monitoring a wide range of vehicles.

- Large premium grade PVT scintillators
- Total 34.5 litres PVT volume
- Low density shield on face of detector panel
- Dual layer thermal insulation protection (-20 to 50°C)
- High signal to noise ration PMT
- High speed pulse processor
- Noise reduction hardware/software
- 2 output drivers (24dc @ 50mA) for remote indicators
- Internal non-radioactive test source for detailed and repeatable system checks
- 24V dc input voltage @ 1/5A

Model	RC2W34-2
System Volume (in ³)	2,108
System Volume (L)	34.5
PER/Panel Volume (in ³)	2,108
PER/Panel Volume (L)	34.5
# of PMT's/panel	1
Specific Sensitivity (counts/s/cm ³ /nSv/h)	0.005
Detection Capability Overall Sensitivity	3.3uCi (116mCi)

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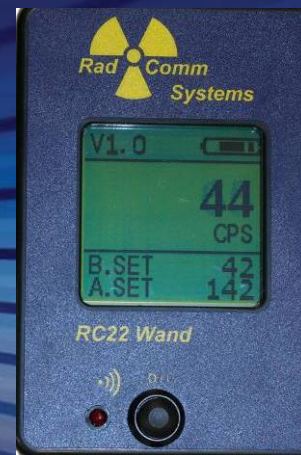


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Pinpoint a potential radioactive source quickly and safely with an RC22 or RC23 Wand.

- Fully automatic and easy to use
- Light weight
- Extendible for longer reach
- Easy to read backlit display
- Quick response time with variable alarm tone



RC22 & 23 WAND

TELESCOPIC RADIATION DETECTOR

Fully Automatic and Operator Friendly

The RC22 and RC23 were designed to allow fast and easy inspection of areas, containers or vehicles that may contain radioactive material. Upon start up the unit will perform a background check and automatically set an alarm threshold for the user. In only seconds the RC22 and RC23 are ready for use.

Easy to Read Display with Audible Alarm

When radiation is detected the display will immediately show the increasing radiation levels. An audio alarm will also be activated to help locate the exact source of the radiation. The tone varies based upon the proximity and intensity of the radioactive source.

Available in Two Lengths and Two Head Sizes

The RC22 is telescopic for a reach of 49" (124.5cm) to 99" (251.5cm). The telescopic pole serves two functions: to reach and scan an area that would normally be out of reach; and to provide a safer operating distance between you and the potential radioactive source.

The Wand is available in two different detector head sizes. The RC22 has a detector head size of 2" (5.1cm) for a total volume of 193cc. For greater sensitivity, the RC23 has a detector head size of 3" (7.6cm) for a total volume of 442cc.



RC22 and RC23 Specifications:

Display

- Large 2.17" (55mm) x 2.17" (55mm) backlit LCD display
- Display radiation level in selected unit of measurement, battery life, background level and alarm threshold

Operation

- Single button activation automatically sets audio alarm threshold level and displays unit of measurements (CPS, nSv/h, uR/h)

Energy Response Range

- From 30Kev – 2.0Mev

Temperature Range

- -10°C to +50°C (+14°F to +122°F)

Battery

- 2 sets of NiMH 10,000 mA/h rechargeable or 2 x size 'D' cell batteries

Each RC22 and RC23 Package Includes:

- RC22 or RC23 fully charged and ready for use
- Carrying case
- Rubber tip boot cover (2)
- Earphone
- Universal battery charger
- Operation manual



Size

Model	Head Size	Extendible Length	Weight	Detector Size
RC22 Short	2" (5.1cm)	49" (124.5cm) to 68" (172.2cm)	5.2lbs (2.36kg)	193cc
RC22 Long	2" (5.1cm)	68" (172.2cm) to 99" (251.5cm)	5.4lbs (2.71kg)	192cc
RC23	3" (7.6cm)	49" (124.5cm) to 68" (172.2cm)	6.0lbs (2.45kg)	442cc

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Find radioactive sources that other radiation detection systems miss! CRICKET is the world's leading, most rugged, highest sensitive radiation detection grapple mounted system on the market!

- Proven, tested, innovative leading edge technology
- Unparalleled durability
- User friendly, easy to operate
- East to install and maintenance friendly
- Supervisory software capable
- NeuSpec Spectroscopic Radiation detection (optional)



CRICKET GRAPPLE

MOUNTED RADIATION DETECTION SYSTEM

Fit to any grapple, in any application

The CRICKET radiation detection system is designed specifically to meet the needs of the scrap, steel, and waste industries. The CRICKET's revolutionary, yet simple design provides an optimum level of detection capability for low intensity radioactive sources, on a continuous basis, in applications where radiation detection systems never existed before. The level of detection capability will far exceed any conventional radiation detection system, including detection systems that are mounted on the boom of a crane, regardless of detector size

Get closer, scan longer, with more accuracy

Mounting the CRICKET in a grapple application allows direct exposure to all the material being handled. There are three different opportunities to analyse all the scrap material during the handling process. Firstly, because the CRICKET system scans on a continuous basis, material is scanned on the surface before the load is even picked up. Secondly, the load is scanned while in the grapple. Finally, the material is scanned just as it is released. These three scanning conditions allow the CRICKET to provide the highest degree of detection capability for low level radioactive material.

Spectroscopic Radiation Detection

Optional NeuSpec NaI (TI) technology for isotopic identification



The CRICKET Grapple consists of four assemblies:

- The protective shield
- A controller
- The detection unit
- Battery pack

Detector protective shield

- Fits to any type of mechanical, hydraulic, electro-hydraulic grapple
- The shields high strength and wear resistance design is capable of withstanding severe impacts on a continuous basis
- Easy to install and service
- Equipped with doors for easy access to the internal detector assembly(s)
- Detector occupies a small volume of the grapple that does not affect the scrap handling operations



Battery pack for Grapples

- The battery pack: 5.5" x 3.75" x 1.25" (13.97 cm x 9.53 cm x 3.17 cm) and incorporates a rugged steel box housing: 8.25" x 6" x 5" (20.96 cm x 15.24 cm x 12.7 cm)
- The box is welded in a protected area on the tube of the grapple centre section
- A small 1/2" (13mm) hole is drilled in the tube to allow communication cable access to the battery pack connections
- Battery pack includes a shock mounted standard 7.4V DC 8.4 A/hr lithium polymer and wireless communication system

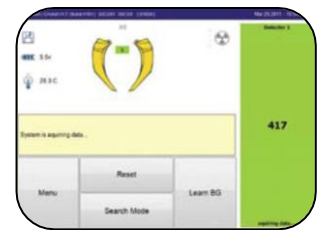


Detection Unit

- The primary component of the detector system
- Size of the detection system is configured to the size of the grapple
- Contains the electronic and detection assemblies which are designed to withstand SEVERE repeated impacts and vibration associated with these applications
- The system electronics include several sensors that are used to monitor the operating conditions of the grapple such as temperature and motion
- The internal assemblies are mounted specifically so that they are isolated from the direct transfer of energy.

Cricket Control

- Battery powers the detection unit's electronic circuits and wireless system
- Bluetooth available
- Touchscreen LCD display



Options

- NeuSpec Na(Tl) technology isotopic identification
- Supervisory Software
- Neutron detection



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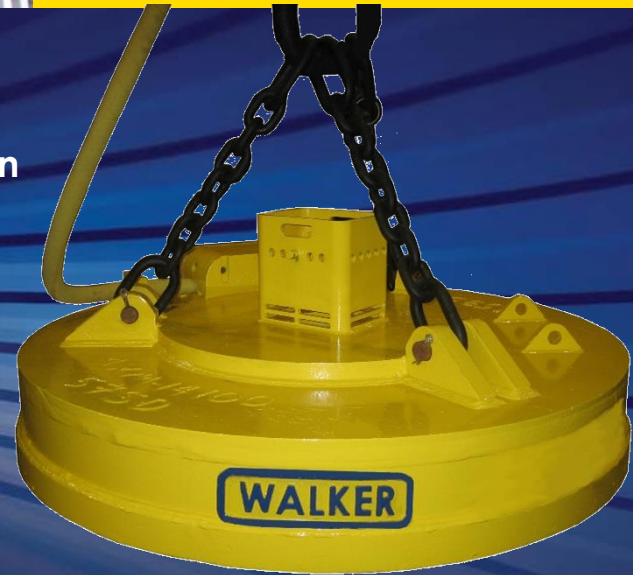
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Find radioactive sources that other radiation detection systems miss! CRICKET is the world's leading, most rugged, highest sensitive radiation detection magnet mounted system on the market!

- Proven, tested, innovative leading edge technology
- Unparalleled durability
- User friendly, easy to operate
- East to install and maintenance friendly
- Supervisory software capable



CRICKET MAGNET

MOUNTED RADIATION DETECTION SYSTEM

Fit to any grapple, in any application

The CRICKET radiation detection system is designed specifically to meet the needs of the scrap, steel, and waste industries. The CRICKET's revolutionary, yet simple design provides an optimum level of detection capability for low intensity radioactive sources, on a continuous basis, in applications where radiation detection systems never existed before. The level of detection capability will far exceed any conventional radiation detection system, including detection systems that are mounted on the boom of a crane, regardless of detector size.

Get closer, scan longer, with more accuracy

Mounting the CRICKET in a magnet application allows direct exposure to all the material being handled. There are two different opportunities to analyse all the scrap material during the handling process. Firstly, the CRICKET system can scan on a continuous basis. Material may be scanned on the surface before the load is even picked up. Secondly, once the magnet is energized the load is scanned while in the magnet allowing for the highest level of sensitivity.



The CRICKET Magnet consists of three assemblies:

- The protective shield
- A controller
- The detection unit



Detector protective shield

- Fits to any type of mechanical, hydraulic, electro-hydraulic
- The shields high strength and wear resistance design is capable of withstanding severe impacts on a continuous basis
- Easy to install and service
- Equipped with doors for easy access to the internal detector assembly(s)
- Detector occupies a small volume of the grapple that does not affect the scrap handling operations

CRICKET Control Console

- High speed microprocessor
- Easy to read 8.4" touch screen LCD
- System displays radiation level, temperature, magnetic field ON, detector voltage level
- Manual scanning mode
- Audio and visual alarms
- Alarm data storage
- Wireless transceiver with antenna
- Mounting bracket

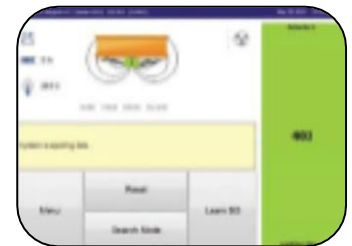


Detection Unit

- The primary component of the detector system
- Size of the detection system is configured to the size of the apparatus
- Contains the electronic and detection assemblies which are designed to withstand SEVERE repeated impacts and vibration associated with these applications
- The system electronics include several sensors that are used to monitor the operating conditions of the grapple such as temperature, motion and impact levels
- The internal assemblies are mounted specifically so that they are isolated from the direct transfer of energy.
- Wireless system utilises a low powered digital non-licensed frequency that can transmit up to 1000ft (300 m) line of sight

Options

- Neuspec NaI(Tl) technology for isotopic identification
- Supervisory Software
- Neutron detection



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RADCOMM RADIATION DETECTION SYSTEMS

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The SYCLONE is a highly sensitive handheld Gamma-Ray spectrometer capable of identifying single or multiple isotopes simultaneously. The SYCLONE also provides the user with various functions such as Search and Find, optional Neutron Detection, Nuclide ID, Dose Rates and accumulated Dose Rate.

- Large Isotope Library
- Lightweight and Battery Operated
- Large Backlit Display and Easy to Follow Menus
- 4 Position Joystick
- Large Integral Memory



SYCLONE

PORTABLE GAMMA-RAY SPECTROMETER (WITH OPTIONAL NEUTRON DETECTION)

Detect and Identify Specific Radioactive isotopes in a Sample

The SYCLONE Gamma-Ray spectrometer utilises the highest quality Thallium doped Sodium Iodide crystal, combined with an integral high signal to noise ratio PMT and state-of-the-art electronics and embedded microcontroller firmware. All of these enhanced features allow the SYCLONE to be one of the most accurate portable Gamma-Ray spectrometers when it comes to identifying specific and/or multiple isotopes even with weak gamma sources. The mechanical assembly of the SYCLONE is robust and designed for field applications where harsh environments are commonplace.

Simplified and Flexible

The SYCLONE operating system utilises sensible easy to read and follow menus. The multi-position joystick and large LCD backlit display provides easy navigation through menu selections. Detailed spectral information is clearly and precisely displayed so knowledgeable users have the ability to identify peaks in the histogram. Various on-screen messages assist when immediate attention is required for issues such as pre-set timing, high radiation levels, alarm settings and warning messages.

Remote SYCLONE PC Spectral Analysis and Data Storage Software

The SYCLONE is equipped with a high capacity internal memory that allows large amounts of data to be stored by record number, date and time. Stored data such as spectral and dose rate information can be easily downloaded to a PC via a mini USB or Bluetooth (optional). The downloaded data can then be displayed and managed with the powerful SYCLONE PC software. Primary features such as the selection and highlighting of Region Of Interest (R.O.I.) details and Zoom In/Out of the gamma energy histogram can be easily performed. The SYCLONE PC software has all the necessary features that will meet the needs of virtually any user.

The SYCLONE portable Gamma-Ray Spectrometer:

Detector Case consists of:

- Detector Case (hxlxw): 7" (18cm) x 9" (23cm) x 4" (10cm)
- Outer Detector Case: Durable plastic with protective silicone sleeve
- System Weight: 3.6 lbs (1.63kg)

Electronics:

- Integral PMT with EM shielding
- High Speed DSP Circuitry with High SNR
- Ultra Stable High Voltage
- Software Adjustable
- Mini USB and Optional Bluetooth
- Battery: Internal Lithium Ion rechargeable
Operating Time: 8 hrs Opt. battery pack

Environmental:

- Operating Temperature: -20°C (68°F) to +60°C (140°F)
- Relative Humidity: 93% non-condensing at 40°C (104°F)
- Shock: Complies with ANSI N42.34
- EM Compliance: Complies with ANSI 42.34 and CE requirements for Safety RFI and EMI directives FCC CFR47, Part 15, Subpart B, Class B compliant

Software:

- Windows™ Based SYCLONE Application Software
- Easy to use Menu Drive Interface
- Configurable Data Storage with Backup
- Email Capability with Network Connection
- Data Storage: 100,000 Dose Rate Samples / 428 Spectra
- Data format complies with ANSI N42.42
- RadView software for integration

Spectrometer Specifications:

- Gamma Nal Size: 1.5" (38mm) x 2" (51mm)
- Geiger-Mueller Size: 0.59" (12mm) x 1.9" (45mm)
- Energy Resolution: 8.0% or better for 662 KeV
- Energy Range: 30KeV to 3.0 MeV (gamma)
- Optional Neutron Detector – Sensitivity: 5.1 CPS/NV
- Sensitivity Calibration: Software Monitor with Operator Alert
- Accumulate Dose up to 5 Sv, Custom Increase
- Manual Stabilisation via 0.25 uCi Cs-137 source
- Gamma Spectrum: 1024 Channels, channel Capacity 16 bits
- Correction: Non-linear Energy Calibration
- Pre-set Time: Up to 5400 seconds

Display:

- Backlit RGB colour LCD 320 x 240 resolution
- Viewing Area: 3.5" (8.9cm) TFT LCD

RadView Analysis Software:



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RADCOMM RADIATION DETECTION SYSTEMS

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Fast responding palm sized Spectrometer and Dose Rate Meter will instantly measure and identify any material for the present of radioactivity.

- Light weight and palm sized
- Large Nuclide isotope library
- Simplified use and easy to understand operation
- Manual or Automatic operation modes
- Automatic Stabilisation (no check source required)
- RadView software for integration

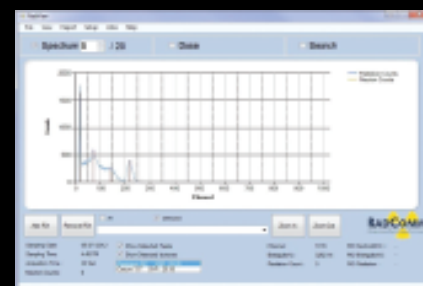


MSPEC

HANDHELD GAMMA RAY SPECTROMETER (WITH OPTIONAL NEUTRON DETECTION)

Locate and Identify Specific Isotopes

The MSpec palm sized gamma ray spectrometer utilises a Sodium doped Caesium Iodide crystal with high signal to noise ratio PMT and state of the art electronics for the most accurate results. The MSpec scans suspect material and quick analyses it to determine what nuclide isotope is present and then categorizes the result as Medical, Industrial, Natural Occurring Radioactive Material (NORM) or Special Nuclear Material (SNM).



Operator Friendly

The MSpec has two modes a user may choose from: Manual or Automatic.

Automatic is the quickest and easiest to use mode. Set in Automatic, the MSpec will search for and detect radioactive material. Once in range the instrument will automatically begin isotopic identification and display the results.

Manual mode gives the user greater control including the ability for longer scan times which increases the accuracy of results. This is especially important if there are multiple isotopes present in the same sample.

RadView Software

RadComm's exclusive RadView software interfaces with a user's PC and enables a user to see detailed results of recorded scans in a histogram format. Each result can be edited with comments, saved as a PDF and archived for future reference or email capability.

The MSPEC Gamma Spectrometer System Consists of:

Handheld Device:

- Detector dimensions (LWH):
- 4.75" (12.1cm) x 2.5" (6.4cm) x 1.22" (3.1cm)
- Instrument weight: 0.44 lbs (200g)

Electronics co/Mechanical:

- Five push button actuation;
- Audio and Visual Alarm with Vibration;
- Micro Controller based architecture;
- CsI (Na) (Sodium doped Caesium Iodide crystal): ½" x 1¾" (13mm x 38mm);
- Battery: Internal Lithium Ion battery with charging LCD indicator;
- Battery Life: up to 10 hours
- Battery recharging time: up to 4.5 hours using wall charge or PC USB.

Display:

- Viewing area: 2 ½" L (6.35cm);
- LCD with backlight 128 x 128 resolution
- Backlight auto-off: 180 seconds with push button auto-on;
- Battery level indicator;
- Warning Messages: move close; move away; high dose move away; CPS exceeds threshold; dose rate above threshold; stabilisation off no ID; stabilisation required; re-calibration required; memory full; neutrons detected (with optional Neutron Detector);
- Real-Time Spectrum display shows accumulated spectrum

MSpec & RadView Software:

- Menu Driven User Interface
- LCD with backlight 128 x 128 resolution
- Menu Feature Selection Controlled by a Five Push Button Actuation
- Selectable Features: Automatic or Manual mode; Stabilisation mode; CPS Alarm Threshold; Dose Alarm Threshold; Identification Time
- PC Configuration: Reports; date and time; units of measure; language; etc.;
- Selectable Displayed Units: CPS; R/hr; Sv/hr

Environmental:

- Operating Temperature: 14°F (-10°C) to 113°F (45°C);
- Shock resistance: up to 1 meter drop test.

Response/Sensitivity:

- Energy Range: 30KeV – 3.0 MeV (Gamma);
- Dose Rate Range: Very Low Dose (VLD) 0.01 uSv/hr up to Moderate High Dose (MHD) 10.0 mSv/hr;
- Resolution: 9% or better at 662 KeV;
- Gamma spectrum: 1024 channels;
- Optional Neutron Detector Sensitivity: 0.6 CPD/NV
- Supports Auto Stabilisation: Range 5 to 55°C

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 The logo for RADCOMMGB features the text 'RADCOMMGB' in a bold, blue, sans-serif font. A stylized atom with a red nucleus and three red electrons orbiting in a red elliptical path is superimposed over the 'O' in 'COMM'. The nucleus of the atom is a small globe showing the Earth.

RADCOMM RADIATION DETECTION SYSTEMS

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The RADLAB was developed specifically for the metal industries to provide the highest degree of accuracy in measured samples for their specific radiological content and activity.

- Full scale isotope analysis
- Full scanning times between 1-5 minutes: quick scan feature
- Full network capabilities for system monitoring and servicing
- Large 6" (152mm) diameter WELL to accommodate different sample sizes



RADLAB

LABORATORY GAMMA SPECTROMETER

Detect and identify specific radioactive isotopes in same sample

The RADLAB spectrometer utilises only highest quality thallium doped sodium iodide crystal, combined with state of the art electronics and software. The result is the ability to distinguish between multiple isotopes and specific gravity levels in the same sample. Results are quickly displayed and a report is generated.

Simplified and Flexible

The RADLAB system uses a Windows™ based environment and the user based interface software utilises a systematic approach to the step by step sequences when stabilising the system, taking measurements and filling in data. There are no complex steps that are required to ensure the system is calibrated and taking measurements correctly. Connecting the RRADLAB to the outside world is a TCP/IP connection and a serial port. All system functions can be accessed remotely via a network connection.

International Atomic Energy Association (I.A.E.A.)

The I.A.E.A. has released a document specifying recommended release limits. The RADLAB's design has focussed on these limits. The user interface software is extremely flexible, allowing the user to configure the RADLAB to best suit the applications library requirements.

The RADLAB Gamma Spectrometer System Consists of:

Detector Case consists of:

- Detector Case (hxlxw): 24" (60cm) x 24" (60cm) x 16" (40cm)
- Outer Detector Case: Painted Aluminium
- Shielding Material: Lead and Copper
- System Weight: 450 lbs (204kg)
- Max Sample Well Size: 6" (15cm) dia x 6" (15cm)

Electronics consist of:

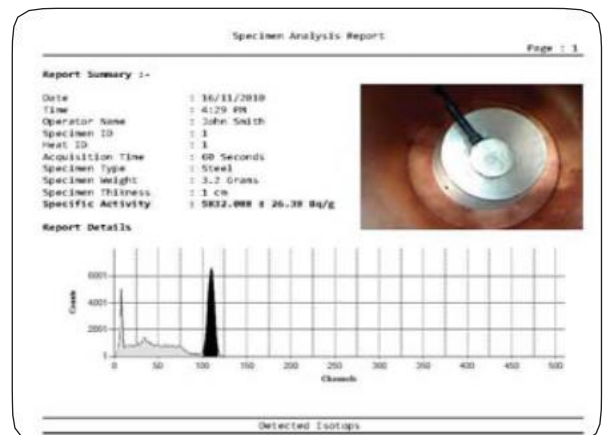
- Detection Material: 21 inches³ (0.35L) sodium Iodide, thallium doped (Na(Tl))
- Integral PMT and EM Shielding
- High Speed DSP Circuitry with High SNR
- Ultra Stable High Voltage Software Adjustable
- Controller with FPGA Technology
- Internal Memory: RAM 2 GB
- Hard Drive: 120 GB
- Serial and Parallel Ports
- TWO USB Ports (2.0)
- RJ45 10/100 Network Port
- High Resolution Touch Sensitive LCD Display
- 110/220V 50/60Hz Auto-Selectable

Software consists of:

- Windows™ Based Operating System with Intel Processor
- Windows™ Based RADLAB Software
- Easy to Use Menu Driven Interface with Touch Screen Applications
- Configurable Data Storage with Backup
- Live data Analysis, report generation
- Fully Remote Access with Software and Hardware Service Capability

Calibration Details consists of:

- Energy Resolution 8.5% or better for 662 KeV
- Number of channels: 512
- Energy Range: 30 KeV to 3.0 MeV (Gamma)
- Sensitivity Calibration: covers entire energy range
- System Software Monitor with Operator Alert.



RADLAB OPTIONS:

- Scale: used to weigh sample and download directly into RADLAB system
- Digital Camera@ photograph the sample and include this with the evaluation report
- UPS Backup: UPS battery backup
- Quick Scan Mode: Counts Per Second mode

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RADCOMM RADIATION DETECTION SYSTEMS

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Next Level in Radiation Detection

- Industry leading technology
- Fast reacting alarm response with isotopic identification
- Utilises gamma spectra energy deconvolution technique
- State of the art large volume, high resolution Thallium Doped Sodium Iodide crystal (NaI(Tl)) scintillation detectors
- Standalone technology or can be added onto existing PVT based systems
- Flexible installation allowing for use in a variety of applications and industrial settings
- Stabilisation without a radioactive check source
- Neutron detection capability (Optional)



NEUSPEC

SPECTROSCOPIC RADIATION DETECTION SYSTEMS

NEUSPEC utilizes gamma spectra energy deconvolution techniques, which is a significant improvement over conventional PVT scintillator based systems. The NEUSPEC Spectroscopic technology is specifically designed to enhance a radiation detection systems ability to recognize specific Gamma energies which can adversely affect alarm thresholds. NEUSPEC utilizes a series of advanced isotopic identification algorithms in conjunction with RadComm's industry-leading and proven Region Of Interest (R.O.I.) analyses to provide best in class detection and identification capability.

NEUSPEC incorporates large Sodium Iodide Thallium Doped crystals (NaI(Tl)) specifically selected for high resolution signal response. The crystals are protected inside a stainless steel case with a low density aluminium door. To ensure the best possible spectral analyses, the sodium iodide crystals must be continuously stabilized. NEUSPEC stabilizes these crystals with specific Gamma energies associated with the ambient background energies, thus eliminating the need for a supplied radioactive source(s).

Recommended for Vehicle/Portal, Conveyor, Charge Bucket, Off-Gas, Slab/Billet, Consteel System, Grapple, Magnet and other critical monitoring applications.

RC5000

1 – 2 Spectroscopic Radiation Detection System

RC7000

Multi-panel Spectroscopic Radiation Detection System

Flexible design allows for both PVT and NaI(Tl) scintillator detectors

NEUSPEC consists of:

- Detector assemblies
- RadLink embedded controller
- Smart Infrared presence sensors
- Large touch screen LCD monitor
- Remote communications package (optional)

Radlink Controller Features:

- Large storage capacity for system operational information and alarms
- Easy to follow multilingual menu outlines and descriptions
- Multi-level security password control
- Detailed alarm and scan data storage
- Easy to set alarm configuration menu
- Network for remote service & monitoring
- Radiation levels displaying: CPS; R/h; Sv/h
- Vehicle speed in km/h or mph
- Internal operating temperature in °C & °F
- Adjustable audio alarm
- Counter for number of scans in a 24 hour period for incoming and outgoing scans
- Detailed alarm information displayed and stored after every alarm
- Configurable email reporting
- Various string outputs available

Spectrometer Specifications:

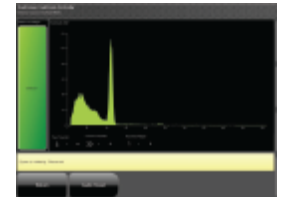
- NaI(Tl) Crystal – Variety of sizes available
- Energy Resolution 8.0% or better: 662 KeV
- Energy Range: 20KeV to 3.0MeV (Gamma)
- System Calibration Software Monitor with Operator Alert
- Dose Rate Range 1nSv/h to 1.0 mSv/h Auto-ranging
- Gamma Spectrum – 512 channels, channel capacity 16 bits
- Correction – non-linear energy calibration
- Detector Specification: ANSI 42.38 (2006)

Detector Features:

- Detector Case (h x l x w): 36" (915cm) x 24" (60cm) x 6" (15cm)
- Outer Detector Case: Painted Aluminium
- Nema 4 (IP65) Rated
- Integral PMTs with EM Shielding
- High Speed DSP Circuitry with High SRN
- Ultra Stable High Voltage Software Adjustable
- Temperature Sensor
- Internal operating temperature: -20°C (68°F) to 55°C (131°F)
- Relative Humidity: 93% non-condensing at 40°C (104°F)
- Vibration: 2g for 15 min at 10-33 Hz in XYZ directions (ANSI N42.34, ANSI N42.38)
- EM Compatibility: ANSI N42.34, ANSI 42.38 compliant
- CE compliant (EU safety, FRI & EMU directives)

Options:

- Camera
- External Alarms
- Supervisor Software
- Neutron Detection



Caesium-137 Spectra



Cobalt-60 Spectra



Thorium-232 Spectra

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