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RS-230 BGO Super-SPEC

Handheld Gamma-Ray Spectrometer

Providing Search, Assay and Scan Modes of Operation

RS-230 BGO - Ideal For Field Exploration

The RS-230 BGO Spectrometer is the state-of-the art in portable hand-held radiation survey search devices for the geophysical industry. It offers an integrated design with a large detector, direct Assay data, data storage, full weather protection, ease of use and highest sensitivity in the market segment. In addition, it has **Bluetooth (BT) connectivity** providing for wireless connection to a Bluetooth equipped external GPS receiver, earphone or computer.

The spectrometer is auto-stabilizing on the naturally occurring (K, U, & Th) radioactivity and does not require any test sources.



Features include

- Large BGO (Bismuth Germanate Oxide) detector, 6.3 in³ (103 cm³)
- Extreme sensitivity (3x greater than NaI crystal of the same volume)
- Lightweight 4.5 lb (2.04 kg) including batteries
- Easy to use, single button - **survey**, **scan**, and **assay** modes of operation
- **Assay** mode readout in %K, ppm of U & Th
- Auto-stabilizing on naturally occurring radio elements
- 5-digit LCD display with high count rate - 65,535 cps
- scrolling histogram graph display of last 100 readings
- Fast audio output with adjustable audio threshold set point
- BT earphone audio support for noisy area surveying
- Bluetooth and USB equipped with external GPS integrated into data stream via BT
- Special rugged design to withstand typical field usage, full IP66 weatherproofing with protection against streaming water and fully dust protected
- Low power (4 x AA batteries) - typical 8-12 hour battery life at 20° C
- No radioactive sources required for proper operation



RADIATION SOLUTIONS INC

RS-230 BGO Super-SPEC

Handheld Gamma-Ray Spectrometer

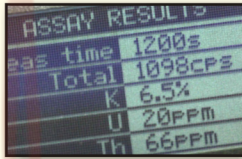
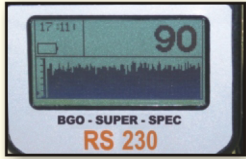
Providing search, assay and scan modes of operation



This convenient, handheld instrument offers the equivalent performance of much larger, and more costly, portable units. For example, a 120 second measurement with the RS-230 BGO handheld provides comparable quality as the same measurement using the much larger 21 in³ NaI portable detector.

Bismuth Germanate (BGO)

The performance of the 6.3 in³ (103 cm³) higher density Bismuth Germanate (BGO) is approximately **80% of a 21 in³ (390 cm³) Sodium Iodide (NaI)** commonly used with larger portable units and approximately **3x more** than the same size NaI crystal.



Survey and Scan Modes

Total Count readout at a 1x / sec rate in the Survey Mode or variable (1 - 20 sec.) in the Scan Mode. When used with a GPS receiver, data can be stored and profiles produced. Ideal for both area and drill core.

Assay Mode

The assay mode provides the concentrations of K, U and Th as shown in the display below. The user can select the desired sample time.

RS-Analyst Software

The RS-230 is provided with utility software to download the data that is stored in memory. All data in memory is output via Bluetooth or USB to the RS-Analyst program on a PC. This may take the form of 1024 channel spectra, data or Scan data + GPS. The program also gives graphical and numeric views of the data. The data can also be re-exported as a text file for further processing.

Standard Accessories

- RS-230 BGO Scintillometer with carrying handle
- Removable protective boot with shoulder strap
- Battery cartridge with 4 x AA rechargeable batteries & charger
- Spare battery holder cartridge
- RS-Analyst utility software
- USB cable
- User guide
- Delivered in hard case with foam insert

Temperature Range

- -20° C to +50° C

Control

- Single one button, Thumb activated

Alarm

- Audio via miniature speaker
- Variable audio threshold set point
- Audio proportional to count rate

Weight

- 4.5 lb (2.04 kg) including batteries

Size & Package Style

- 10.2" x 3.2" x 3.8" (259 mm x 81 mm x 96 mm)
- 1 mm aluminum outer case
- In a flashlight configuration with side support strap, wrist strap and optional detachable handle

Memory

- 2MB
 - Memory can be partitioned for desired storage
- Example
- Scan Total Count only - 94,000 readings
 - Scan + Assay - more than 1000 readings
 - Assay only - more than 400 readings (plus full spectrum)

Data Input / Output

(Using supplied RS-Analyst software)

- USB
- Bluetooth (BT)
- GPS link via BT

Display

- 128 x 64 pixels, 1 1/8" x 2 3/8"
- Graphic LCD display with white back light and automatic dimming

Readout

- Search Mode: Counts in CPS from 0 to 65,535 and Histogram chart
- Assay Mode: Display in %K, ppm of U & Th (ROIs per IAEA)

Energy Response

- 30 keV 3000 keV

Internal Sampling

- 20 / second

Batteries

- Internal battery pack module (4xAA) easily replaceable
- Rechargeable or alkaline
- Life: 8 + hours at 20° C

Specifications subject to change without notice #1/08



Radiation Solutions Inc. is a Canadian company specializing in nuclear instrumentation for the detection, measurement and analysis of low level ionizing radiation from both naturally occurring or man made sources.

RSI's focus is the design and manufacture of airborne and mobile systems using advanced DSP (Digital Signal Processing) technology. This technology provides a level of quality previously only attainable in laboratory equipment.

RSI's philosophy is to work as closely as possible with customers in all aspects of the product life cycle including; product requirement, application, training, support and product improvement. It is this philosophy that will enable RSI to supply industry leading software techniques and hardware components that not only meet, but exceed the customer's requirements.



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