



**RADIATION  
SOLUTIONS INC**

# RS-232 BGO Super-SPEC

## Handheld Gamma-Ray Spectrometer



Sales, Support and Customisation

[www.GeoResults.com.au](http://www.GeoResults.com.au)

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### Providing Survey, Scan & Assay Modes of Operation

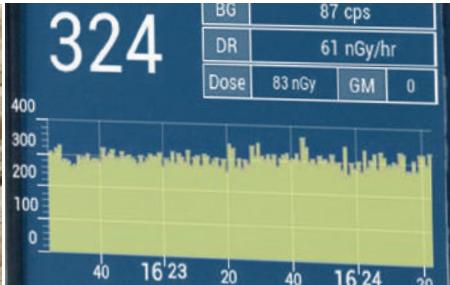
The RS-232 BGO Spectrometer is the industry standard in portable handheld gamma ray survey devices for geophysical applications. It offers an integrated design with a large detector, direct Assay data, data storage, full weather protection, ease of use and the highest sensitivity in the market.

### APPLICATIONS



### FEATURES

- High sensitivity with large 2" x 2" BGO (Bismuth Germanate Oxide) crystal, 6.3 in<sup>3</sup> (103 cm<sup>3</sup>)
- Extreme sensitivity (3 x greater than NaI crystal of the same volume)
- The advanced spectrometer offers shorter measurement times
- User friendly illuminated joystick menu navigation
- Survey, Scan, and Assay modes of operation
- Assay mode readout in %K, ppm of U & Th
- Auto-stabilizing on naturally-occurring radio elements
- Large LCD screen with sun readable automatic backlight
- Fast audio output with adjustable threshold set point
- Calibration and evaluation method utilize the entire spectrum, not only three Regions of Interest (ROI)
- Wireless Connectivity, Wi-Fi and USB-C equipped with internal GPS integrated into data stream
- Special rugged design to withstand typical field usage, weatherproof, water and dust protection
- Typical 8-12 hour battery life at 20°C (rechargeable Li-ion battery)
- Supplied in hard case with foam insert for shipping and storage



# RS-232 BGO Super-SPEC

## Handheld Gamma-Ray Spectrometer

### Bismuth Germanate Oxide (BGO)

The performance of the higher density 6.3 in<sup>3</sup> (103 cm<sup>3</sup>) BGO crystal is approximately 80% of a 21 in<sup>3</sup> (345 cm<sup>3</sup>) Sodium Iodide (NaI) crystal, commonly used with larger portable instruments. The BGO crystal (2" x 2") is approximately three times more sensitive than an NaI crystal of the same size.

### Survey Mode

The total count read out is typically set at a once per second rate. The range is variable from 1-20 sec. integration. When used with the GPS receiver, data can be stored, and profiles produced. It is ideal for both area and drill core scanning. Expandable for On-the-fly Assay, where K, U, and Th precursors are evaluated while surveying.

### Assay Mode

The assay mode provides readouts in %K, and ppm of U and Th. Sample times are user selectable and can be between 30 and 1800 seconds. On-the-fly Assay is available when automatically recording the data and is at a minimum of 30 second intervals.

### RS-Analyst Software

RS-Analyst utility software is included in the RS-232 to download data stored in the instrument's memory. All data in memory is output via Wireless Connectivity, Wi-Fi or USB-C 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 views of the data that can also be re-exported as a text file for further processing.



### Radiation Solutions Inc.

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

RSI's industry-leading radiation detection technology incorporates a fully digital system design, spectral analysis and advanced data processing. RSI deploys this technology in stationary systems, airborne and mobile systems, portable and handheld spectrometers. This provides a level of quality previously only attainable in laboratory equipment.

RSI is committed to working closely with customers in all aspects of the product life cycle including product requirement, application, training, support and product enhancement. Our comprehensive approach results in state-of-the-art hardware components, and software that produce outstanding results exceeding expectations.



RADIATION SOLUTIONS INC

### SPECIFICATIONS

#### Large 2" x 2" BGO crystal, 6.3 in<sup>3</sup> (103 cm<sup>3</sup>)

- 1024 channel spectrometer
- Energy Range 20 keV to 3 MeV

**Assay and survey modes** with automatic recording of data

#### On-the-fly Assay

**Auto-stabilizing** on naturally occurring radio elements

#### Readout

- Survey mode: entire energy range
- Assay mode: display in %K, ppm of U & Th
- (adjustable)

#### Audio

- Variable audio threshold set point
- Audio proportional to count rate, internal sampling 20/second

#### User Friendly Illuminated Joystick

- User friendly menu navigation

**Large LCD screen** with sun readable automatic backlight

#### Memory

- 4GB, memory can be partitioned for desired storage
- More than 250,000 readings or 70 hours of readings

#### Data Input / Output

- Via USB-C, Wireless Connectivity, or Wi-Fi (using supplied RS-Analyst software)

#### Communication

- Wireless Connectivity
- Wi-Fi
- USB-C
- GPS
- Internal - GNSS engine for GPS
- External GPS connectable (if required)

#### Temperature Range

- -10°C to + 50°C

#### Size and Weight

- 11.4" x 3.9" x 6.3"  
(289 mm x 99 mm x 160 mm)
- 7.4 lb (3.4 kg) including battery

#### Battery

- Internal battery pack
- Typical Life 8+ hours at 20°C
- Rechargeable Li-Ion 7.2 V/ 6600 mAh

#### Standard Package

- Delivered in hardcase with foam insert
- RS-Analyst software
- USB-C Charging Cable
- Users Guide
- Shoulder carrying harness

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