

RS-232 BGO Super-SPEC

Handheld Gamma-Ray Spectrometer

APPLICATIONS



FEATURES

- High sensitivity with large 2" x 2" BGO (Bismuth Germanate Oxide) crystal, 6.3 in³ (103 cm³)
- 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

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.



RS-232 BGO Super-SPEC

Handheld Gamma-Ray Spectrometer

Bismuth Germanate Oxide (BGO)

The performance of the higher density 6.3 in³ (103 cm³) BGO crystal is approximately 80% of a 21 in³ (345 cm³) 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.



SPECIFICATIONS

Large 2" x 2" BGO crystal, 6.3 in³ (103 cm³)

- 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 via miniature speaker

- 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

Specifications subject to change without notice 02/2024



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