GR-110

Gamma-Ray Scintillometer

General

The GR-110 is a rugged, lightweight and portable scintillometer designed for the field geologist who requires the accuracy of a digital display, and large crystal volume for reliable statistics. Even under low light conditions, readings are easily visible on the large four digit Liquid Crystal display (LCD). In high sensitivity mode (0.08 to 3.0MeV) total counts are obtained at either 1 or 10 second intervals. For work where ground cover is highly variable, a 0.4 to 3.0MeV total count mode, "HE," provides significant geological information since the low energy portion of the spectrum is subject to the largest variations in Compton scatter absorption. The HE mode can also handle the high count rates found in drill core and mine face analysis applications.

Special calibration is not required to maintain high accuracy. The GR-110 uses digital counting and display of incoming radiation levels. All units are factory calibrated and are highly stable so that relative readings from unit to unit can be compared, or readings made at different times can be plotted on the same basis.

Features

* Large internal crystal provides high sensitivity.
* Versatile data collection with 2 energy thresholds & 2 accumulation periods.
* Adjustable audio threshold.
* Audio level proportional to rate.
* Calibration test source.
* Large 4-digit LCD display for easy viewing.
* Small size and lightweight: 1.5kg.
* Rugged and watertight case.
* Efficient power provides over 100 hours operation on two "D" cell batteries.
* Adjustable leather carrying case.

The small size and rugged construction of the GR-110, combined with its accuracy, ease of use, and operational features, make it a useful and advanced field portable scintillometer.

Terraplus Inc.
52 West Beaver Cr. Rd. #12, Richmond Hill, ON. Canada L4B 1L9
Tel: 905-764-5505
Fax: 905-764-8093
Email: sales@terraplus.ca
Website: www.terraplus.ca

Specifications

Rotary Switch Controls:

- Battery check/display test
- 1 second accumulate: 0.08MeV - 3.0MeV
- 10 seconds accumulate: 0.08MeV - 3.0MeV
- 1 second accumulate: 0.40MeV - 3.0MeV

Conversion Factors for Cesium:

- Range 1/10 (- B/G)-
- 1 cps = 0.14 x 10-3 mR/Hr
  = 1.25 x 10-3, µSv/Hr
- Range HE (- B/G)
- 1 cps = 0.36 x 10-3 mR/Hr
  = 3.23 x 10 3, µSv/Hr

Temperature Ranges:

- Operating -25°C to 50°C
- Storage: -30°C to 70°C

Audio Frequency Control:	Allows output tone to be range adjusted. Increases in count rate results in an increase in audio frequency
Internal Crystal:	1.5 x 1.5 x 2.0 inch (4.5 cubic inches) square cross section Nal (TI) detector with PMT, magnetic shield, and shock mounting Display: Liquid crystal type (LCD), 0.5 x 2.0" 4-digit, displays a maximum value of 9999cps
Audio Output:	Audio (adjustable threshold tone proportional to rate) via high efficiency loudspeaker
Time Constants:	Audio: 0.5 seconds for 0 to 2,500cps change
Construction:	Hardened aluminum lmm thick case
Dimensions:	Approximately 5.3 x 12.4 x 21cm
Weight:	1.5 kg
Power:	Two "D" Cells- 100 hours (Alkaline at 15°C)
Alarm:	Low battery alarm via audio and flashing display Signal alarm if threshold is exceeded.

Standard Components

GR-110 gamma-ray scintillometer, leather case with belt clip and shoulder strap, test source, two "D" cell batteries, PVC storage case, and instruction manual.

Terraplus Inc.
52 West Beaver Cr. Rd. #12, Richmond Hill, ON. Canada L4B 1L9
Tel: 905-764-5505
Fax: 905-764-8093
Email: sales@terraplus.ca
Website: www.terraplus.ca