



The instrument is designed for portable or backpack application of radiation detection and monitoring in a variety of environments. The system is auto calibrated by natural photo peaks, consisting of a detector unit, integrated with GPS, and a data logger unit based on Android portable devices, such as a smart-phone, a tablet or a notebook. The detector can be equipped with a NaI(Tl) crystal of various volumes ranging from 0.347 liter up to 2 liters.

## Benefits

- Recording of full spectra
- Real dose calculation from spectra
- RIID
- Automated synchronisation of data with GPS
- Real-time display of measures data
- Identification of man-made radionuclides
- Light-weight, portable and user-friendly device
- Built in Navigation function

## Key Figures

50 keV - 3 MeV

➔ Gamma energy range

0.3L - 1L - 2L

➔ Detector Volumes

## Specification Highlights

### PGIS-2

- Detector Volume 0.347 L, NaI(Tl) (or BGO optional)
- Integrated GPS (external GPS receiver connection possible)
- Wireless Data Logger – Android based smart phone
- Removable handle
- Weight 5kg (11lb)

### PGIS-2-1

- Detector Volume 1 L, NaI(Tl)
- Integrated GPS (external GPS receiver connection possible)
- Wireless Data Logger – Android based smart phone or tablet
- Shock absorbing detector case
- Weight 7.5kg (16.5lb)

### PGIS-2-2

- Detector Volume 2 L, NaI(Tl)
- Integrated GPS (external GPS receiver connection possible)
- Wireless Data Logger – Android based smart phone or tablet
- Shock absorbing detector case
- Weight 12kg (26.5lb)



## Technical Specification

|  |   |
|--|---|
| <b>MCA Resolution</b>                      | 8196 channels (DSP/FPGA Technology)   |
| <b>Channels in use</b>                     | 256/512/1024  |
| <b>Energy detection range</b>              | 50 keV to 3 MeV   |
| <b>Data handling</b>                       | Individual detector processing and calibration  |
| <b>Differential nonlinearity</b>           | <0.1%   |
| <b>Integral nonlinearity</b>               | <0.01%  |
| <b>Gain stabilization</b>                  | Automatic - Real time stabilization (1sec)  |
| <b>Dynamic throughput</b>                  | Up to 250,000 cps per detector  |
| <b>Dead time</b>                           | Virtually zero, achieved with digital pulse processing  |
| <b>Baseline restoration</b>                | Digital (IPBR) Individual Pulse Baseline Restoration. The baseline is established for each individual pulse for maximum pulse height accuracy |
| <b>Pulse shaping</b>                       | Digital Pulse Shaping   |
| <b>Pile up Rejection</b>                   | Digital (<40ns)   |
| <b>Data processing</b>                     | Data complies with NASVD processing requirements. Fully linearized output, the Poisson Distribution is unaffected.                            |
| <b>Sampling rate</b>                       | Dynamic mode: 1 sec; or Accumulation mode: selectable time  |
| <b>Power</b>                               | Internal LI-Ion battery - 24 hours run time typical   |
| <b>Calibration</b>                         | Automatic using natural background radiation, multi-peaks algorithm by statistic presence. No radioactive sources required                    |
| <b>Dimension and weight</b>                | depends on a configuration  |
| <b>System stabilization</b>                | Cold startup - less than 1 min  |
| <b>Data output</b>                         | USB; Bluetooth  |
| <b>Radio Nuclide Identification (RIID)</b> | Norm · Industrial · Threat · Medical · Customizable   |
| <b>Control</b>                             | High level of self-diagnostics  |
| <b>Software</b>                            | Real time data acquisition, supporting software for data QC, visualization, export to ASCII (CSV), GIS, XML, or N 42.42 formats               |
| <b>Energy Resolution</b>                   | 7.5% ( at 662 keV)  |