

# Handheld Isotope Identification Instrument

**GEORADIS**

**RT-30 series**

The RT-30 SUPER IDENT series introduces a new generation of compact handheld isotope identification instruments. The RT-30 integrates a radiation survey meter, dose meter and radionuclide identification device in a weather protected, lightweight and easy to use instrument.



The large volume scintillation detector provides high sensitivity paired with excellent resolution for fast and reliable isotope identification. Together with optional GM tube and Neutron detector, the RT-30 series is the right answer to all scanning applications under most difficult conditions.

- **Highest Sensitivity**
- **Fast and Reliable Isotope Identification**
- **Lightweight, Rugged and Compact design**
- **One Button Operation**
- **Automatic Stabilisation on Natural background**
- **USB and Bluetooth connections**
- **Weather protected**
- **2-Year Warranty**

Quickly determining the location of lost radioactive sources in the environment or scrap, monitoring of waste in hospitals or waste incinerators, scanning people or baggage to disclose illicit trafficking of nuclear materials; all are typical applications for the RT-30 series.

Georadis is acknowledged as a foremost producer of innovative radiation detection products, devices and solutions. Highly sophisticated and optimized algorithms are part of the state-of-the-art design of the RT-30.

Built-in Bluetooth connectivity allows for integrated GPS location with the measurement. It also provides access for wireless headsets for audio feedback in high noise areas.

**Applications**

- *Security and surveillance operations*
- *Customs and Border protection*
- *Hospitals*
- *Nuclear facilities*
- *Waste Recycling and Incineration plants*
- *Scrap metal recycling*
- *Research laboratories*
- *Production facilities*

The versatile GeoView software package provides all necessary data download onto PC, data presentation and evaluation for multiple instruments in an orderly way.

Georadis is committed to high standards in quality and design of their instruments, this is matched with a standard 2 year warranty on the RT-30 series.



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## Easy Operation and Reliable Isotope Identification



The RT-30 uses an advanced method of Automatic Stabilisation on Natural Background Radiation throughout its operation. This unique method eliminates the need for an additional radioactive check source.

In **Survey** mode, the RT-30 provides excellent feedback to the user about count rate (in cps) in large characters, dose and dose rate in selectable units, battery status and a graphical histogram over last 80 seconds. Additional indicators are showing GPS activation, Bluetooth and Data recording.

Activating the **Identification** mode starts a predefined acquisition of a full gamma ray spectrum. The RT-30 measures the radiation level and instructs the user to move closer, move away or keep in position. A moving bar graph indicates the progress of the measurement.

- Survey Meter
- Dose Rate Meter
- 1024 Ch Spectrometer
- Highly Sophisticated Algorithms
- Automatic Stabilisation on Natural background

On completion of spectrum acquisition, an automatic analysis is performed using highly sophisticated algorithms. The **Analysis Results** are listed in descending order to the nuclide intensities, indicated with small histograms. Acquisition can be easily extended for improved analysis or sensitivity by the user. The RT-30 contains a comprehensive Isotope Library that can be modified by experienced users to fit a specific application.

The RT-30 has 1Gb internal memory available to store spectra, analysis results and GPS location, such huge memory provides practically unlimited data storage. A recording mode is available to store each second the count rate of all detectors in the instrument, recording continues even during spectrum acquisition.



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**RT-30 Product Range**



The RT-30 series has an IP65 dust- and water resistant, lightweight aluminium cast housing and a detachable plastic boot with shoulder strap for additional protection under harsh environments. The unit is powered by a handy quick change battery pack containing four AA type batteries (Alkaline or Rechargeable). A fully automatic charger is integrated in the unit for use with rechargeable (NiCd or NiMH) batteries.

**Common Features**

- Large 2" scintillator
- Single button operation
- Automatic Stabilisation on Natural background
- Selectable audio alarm threshold
- Sophisticated Nuclide Identification procedures
- Bluetooth communication
- Connectivity with GPS
- 1Gb internal memory
- Lightweight, robust design
- Optional Telescopic arm, Integrated GM tube or Neutron Detector
- LCD Graphic display
- Simple graphical user interface
- Removable protecting boot with shoulder strap

<b>GEORADIS</b>		RT-30	RT-30T	RT-30G	RT-30N
<b>Standard Comparison Table</b>					
Display	Numerical				
	Graphical	•	•	•	•
Data acquisition	Gross Counting	•	•	•	•
	Spectroscopy	•	•	•	•
Connectivity	USB	•	•	•	•
	Bluetooth	•	•	•	•
Memory	Medium (4Mb)				
	Large (1Gb)	•	•	•	•
Software	GeoView Package	•	•	•	•
	Isotope Identification	•	•	•	•
	Assay mode				
Detector type	NaI, 30 x 30mm				
	NaI, 51 x 51mm	•	•	•	•
	BGO, 51 x 51mm				
	GM tube			•	•
	Neutron Detector				•
Mechanical	Handheld	•		•	•
	Telescopic arm		•		



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## Technical data

### Detectors

NaI(Tl),  $\Phi 51 \times 51$  mm (2" x 2"), 104 cm<sup>3</sup> (6.3 in<sup>3</sup>), all models  
 Energy compensated GM tube with RT-30G and RT-30N  
 He-3 Neutron tube with RT-30N

### Spectrometer

1024 channel MCA, bipolar pulse shaping  
 Energy range 20keV - 3,0 MeV

### Scintilometer

Sampling period 20/second

### Gamma ray sensitivity at 1m

160 cps/1MBq for Cs-137  
 75 cps/1MBq for Am-241  
 270 cps/1MBq for Co-60

### Dose meter

Energy corrected dose rate for NaI detector  
 Extended range with GM tube 10 mSv/h (1R/hr)

### Display

Graphic LCD 128x64 pixels 28 x 60 mm  
 Automatic Backlight

### Acoustic indication

miniature piezo speaker, audio frequency is proportional to measured count rate

### Data Storage and Transfer

1 Gb memory for spectra, search profiles and dose  
 USB 2.0 and Bluetooth 1.2 Class 2

### GPS Support

NMEA 0183

### Environmental

IP-65 Dust and Water resistant  
 Operating temperature range -10°C to +50°C  
 RFI/EMF Shielding complies with FCC(47 CFR part 15) for Class A CE Certification

### Size and weight

LxWxH 260 mm x 81 mm x 96 mm (10.2" x 3.2" x 3.8")  
 Weight 2 kg (4.4 lb) including batteries

### Package

RT-30 instrument  
 Protective boot with Carrying Strap  
 USB Cable  
 AC Net power adaptor  
 GeoView Software  
 Spare battery cartridge  
 User guide  
 Rugged Pelican storage and transportation case



Specifications are subject to change without notice

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