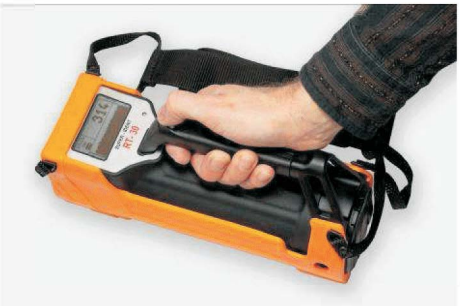
Handheld Isotope Identification Instrument

BERTHOLD

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.

Compagny 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.

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

Compagny 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.

Applications

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

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Easy Operation and Reliable Isotope Identification

Survey	Identification	Analysis Results

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.

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

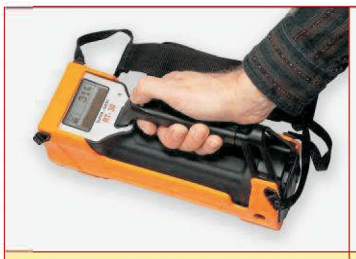
Activating the ***Identification*** mode starts a predefined acquisition of a full gamma ray spectrum. The RT-30 measures the radiation level and instructs the user to move closer, move away or keep in position. A moving bar graph indicates the progress of the measurement.

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.




RT-30 Product Range



RT-30

RT-30G

RT-30GT

RT-30N

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.

Standard Comparison Table		RT-30	RT-30T	RT-30G	RT-30GT	RT-30N
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		•		•	

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

Technical data

Detectors
NaI/(Tl), Φ51 x 51 mm (2" x 2"), 104 cm^3 (6.3 in^3), all models
Energy compensated GM tube with RT-30G, RT-30GT 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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