

The Chance to overtake competitors!  
**Possibility to expand the range of security equipment**

# Unique combined detector

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Detection of radiation and metal objects in a single detector  
Based on SCINTILLATOR CSI (TL) + SIPM

# Uniqueness

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Combined detectors with such characteristics have no analogues in the World.

- **Combining the functions** of the gamma-radiation indicator and the metal detector
  - **The ability to simultaneously detect** radioactive and nuclear materials by their gamma radiation, Detection of the shielded radiation sources, and detection of metal objects (*weapons*)
  - **High sensitivity** to the ionizing radiation (10keV...3MeV) over a wide range of the temperatures (-20°C ... +55°C)
  - **A short detection time** of the ionizing substance ( $\leq 2\text{sec}$ )
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# Advantages

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➤ **Two devices in one**

- Reduced cost of detection
- Reducing the size of equipment
- Reducing the detection process time

➤ **One person instead of two**

- Absence of special qualification requirements for personnel

➤ **Work in a complex meteorological setting**

➤ **Work in conditions of external electromagnetic field**

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# **Applications of**

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# From one patrol to security area



# Types of detectors

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Differences in sensitivity, electronics, modes of indication



## The detector of an initial level RT-3.x



	RT-3.0	RT-3.1	RT-3.21	RT-3.22
Indication types	Sound and light signal	Sound signal, color-light signal ( <i>3 levels</i> )	Sound signal, digital LCD signal of CPS level	Sound signal, digital LCD signal of CPS level and DER level

Detector RT-3.x is supplied complete with USB, CAN interfaces for communication with another equipment.

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# High sensitivity detector RT-40.x



	RT-40.0	RT-40.1	RT-40.21	RT-40.22
Indication types	Sound and light signal	Sound signal, color-light signal (3 levels)	Sound signal, digital LCD signal of CPS level	Sound signal, digital LCD signal of CPS level and DER level

Detector RT-40.x is supplied complete with USB, CAN interfaces for communication with another equipment.

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# Ready-made solutions

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Embedded in finished products

- Search for sources of radiation

- Detection and localization of sources of ionizing radiation
- The sound and light signals change depending on the level of the signal exceeding the threshold of operation
- “Noiseless” vibro-signal

- Searching for metal objects

- Detection of black and color of metals
- Detection of shielding containers for radioactive substances
- Sound and light signals (*Differ from signals of indication of radioactivity*)
- “Noiseless” vibro-signal



## Mobile control

Combined detector of metal and radioactive elements

«RAD-1000»

# RAD scanner variants based on RT-3.x

RT-3.0	RT-3.1	RT-3.21	RT-3.22
Sound and light signal	Sound signal, color-light signal ( <i>3 levels</i> )	Sound signal, digital LCD signal of CPS level	Sound signal, digital LCD signal of CPS level and DER level
<ul style="list-style-type: none"><li>• Power</li><li>• Light signal - metal</li><li>• Light signal - radioactivity</li></ul>	<ul style="list-style-type: none"><li>• Power</li><li>• Light signal - metal</li><li>• 3 light signals - to level radioactivity</li></ul>	CPS indication	CPS and DER indication
			

# Technical specifications RAD-1000



## The main characteristics of the radiation channel

Energy range	<b>0.015 ... 3.0 MeV</b> <i>at t° -20°C ... 55°C</i>
Time of the determination	<b>2sec</b>

## Device characteristics

Mass, kg	Dimensions, mm	Moisture/Dust
0.32	432x55x31	IP44

## Basic characteristics of metal detection

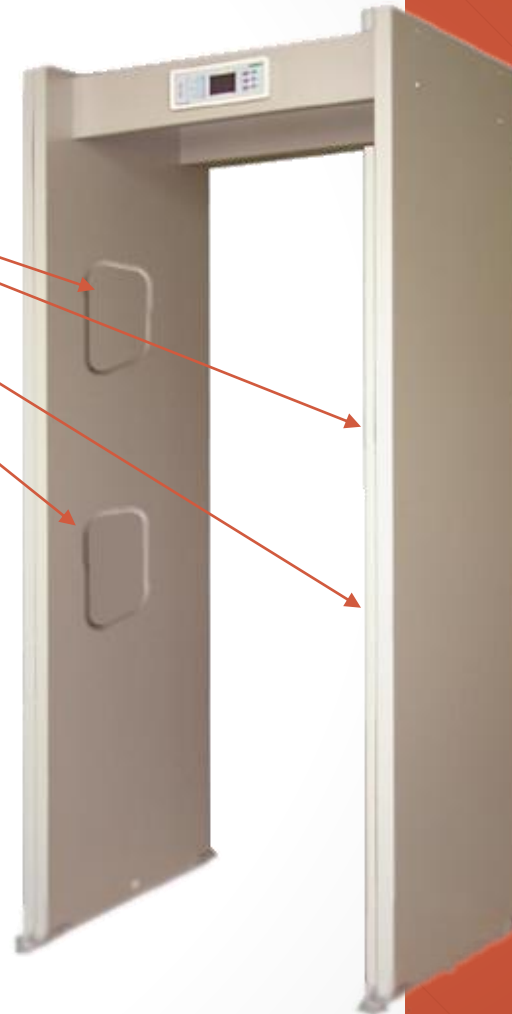
Detection object	Detection distance	Scanning speed
Metal container for radioactive materials	200mm	0...0.5 m/sec
Steel plate 100×100×1mm	100mm	
Pistol	200mm	
Knife	130mm	

- Search for sources of radiation

- Detection and localization of sources of ionizing radiation
- 4 detector RT-40.0-01 is used
- The sound and light signals change depending on the level of the signal exceeding the threshold of operation

- Searching for metal objects

- The complex is intended for performance of individual control for availability of firearms and other metal subjects, hidden in clothes, footwear and on the human body
- Detection of black and color of metals
- Detection of shielding containers for radioactive substances
- Sound and light signals (*Differ from signals of indication of radioactivity*)



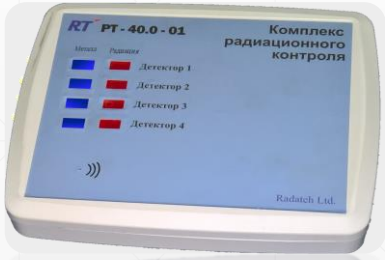



## Walk-through control

Electronic complex for detection of metal subjects and radioactive elements

«RAD-3MR»



# Walk-through scanner variants based on RT-40.x

RT-40.0	RT-40.1	RT-40.21	RT-40.22
Sound and light signal	Sound signal, color-light signal ( <i>3 levels</i> )	Sound signal, digital LCD signal of CPS level	Sound signal, digital LCD signal of CPS level and DER level
<ul style="list-style-type: none"> <li>Power</li> <li>Light signal - metal</li> <li>Light signal - radioactivity</li> </ul>	<ul style="list-style-type: none"> <li>Power</li> <li>Light signal - metal</li> <li>3 light signals - to level radioactivity</li> </ul>	CPS indication	CPS and DER indication
			



# Technical specifications RAD-3MR

The main characteristics of the radiation channel

Energy range	<b>0.03 ... 3.0 MeV</b> <i>at t° -20°C ... 55°C</i>
Setting range thresholds DR	<b>0.01 ... 500 uSv/h</b>
Time of determination of the minimum amount of ionizing material	<b>2sec</b>

The main characteristics of the metal detection

Detection object	Minimal dimension
Metal subject	1x10x100mm

A set of detectors can be mounted on an already  
installed walk-through metal detector (*Or on any other  
portal*)

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**BYk 'cddcfh b]h]Yg''**

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# 9ei Jda YbhZcf`l 5 J`fKfcbYgk

Our new development is a compact small-sized high-sensitivity gamma detector NaI (tl) 40x40. It is a functionally complete unit with its own power supply and GPS module, allowing it to be placed on any UAV without additional. Refinement. The functionality of this detector allows writing to the internal flash DER, with GPS coordinates, and also to register gamma spectra with the specified period of accumulation and measurement time. The time of continuous operation from the built-in power supply is at least 8h.

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## 8 YhYW]cb`cZYI d`cg]j Yg

The proposed detectors can be combined with devices of the "electronic nose" family-the detection of explosive and narcotic substances by residual nanoparticles.

An optional concentrator for collecting microparticles of explosives on a special filter. It can be combined with a hand-held Rad-1000 detector.



# Offer for potential partners

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We are interested in long-term, reliable mutually beneficial co-operation!

# **We offer manufacturers of security and police equipment to expand the range of manufactured products**

- 1) Introduction of RT xx.x detectors into customer's products.
    - a. Sale of ready-made detectors with parameters set by the developer
    - b. Modification and finalization of the form-factor under the hulls and landing dimensions of products of customers
    - c. Development of detectors with special characteristics, as well as software
  - 2) Sale of production license
  - 3) Ready to discuss other formats of cooperation
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