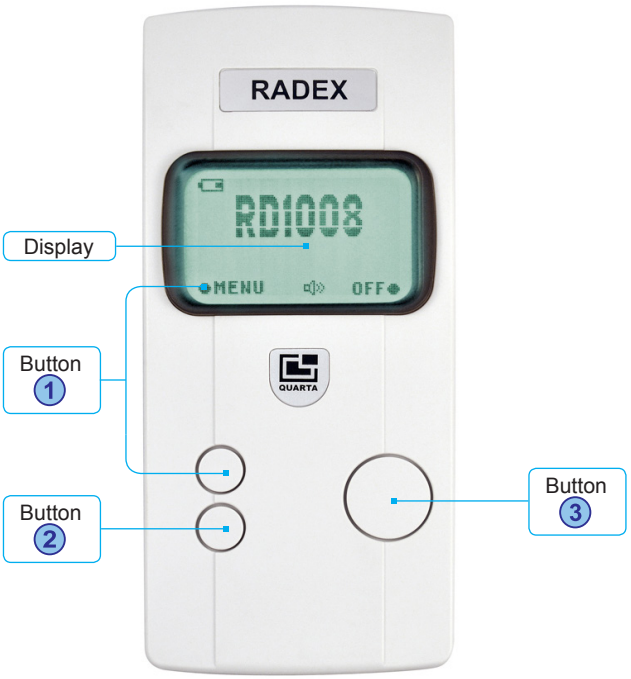
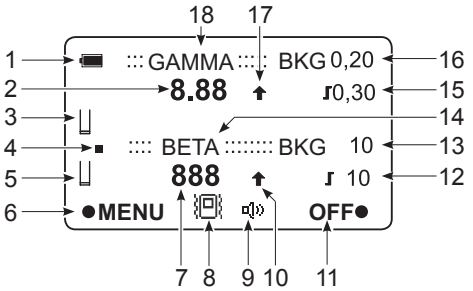
RADEX RD 1008 radioactivity indicator is used for evaluation of out-door and in-door radiation level, for evaluation of radio-contamination of articles, items, currency units, materials, food products etc. by gamma-ray and beta-ray sources.

Device view



1, 2, 3 functions can be changed depending on application.

Display View



1. Charge level of batteries:
   – high
   – low (change batteries).
2. Result of gamma-ray radiation measurement
3. Indication of performed measurement cycles for gamma-ray radiation Gamma-Strahlung
4. Indication of registration of quantum
5. Indication of performed measurement cycles for beta-ray radiation
6. Function of button 1
7. Result of beta-ray radiation measurement
8. Vibration signal
9. Acoustic signal
10. Excess over the upper limit of the range of beta-ray radiation measurements
11. Function of button 3
12. Alarm threshold for beta-ray radiation
13. Dose rate of beta-ray radiation background
14. Indicator of radiation type (beta-ray radiation)
15. Alarm threshold for gamma-ray radiation
16. Dose rate of gamma-ray radiation background
17. Upper limit of the range of gamma-ray radiation measurements has been exceeded
18. Indicator of radiation type (gamma-radiation).

PREPARATION FOR USE

Installation of battery

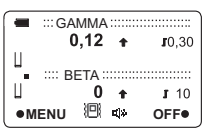
1. Open battery compartment cover.
2. Install AA type battery, check polarity.
3. Close battery compartment cover.

Switch-on

1. Remove the blind which covers the window of beta-ray detector.
2. Press button 3, the symbol «RD1008» will appear on the display.

Result

Result of the first measurement will appear on the display in 21 seconds



Switch-off

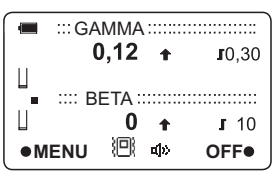
1. Press button 3 and hold till all symbols will disappear from the display.
2. Use blind to close the window of beta-detector.

Menu navigation

- to enter menu, press button 1, main menu will appear on the display.
- press button 2 and set the ▶ near the required item, then press button 1, and you will enter sub-menu.
- move the ▶ and select the required function, then enable/disable it by pressing the button 3, near the selected item the symbol ✓ will appear/disappear.
- to exit menu, press button 3

Measurement

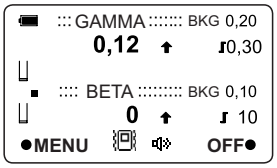
Measurement will start automatically when the device is switched-on.



Measurement with allowance for background

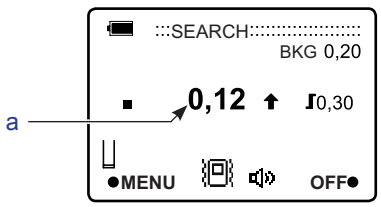
During measurement with allowance for background two values for each type of radiation will show on the display.

- for gamma-ray radiation - excess of the dose rate over the background dose rate and value of the background dose rate;
- for beta-ray radiation - excess of flux density over the background flux density and value of the background flux density.



Search

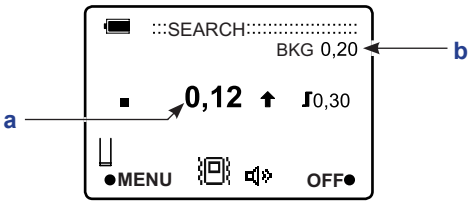
When this function is enabled, the aggregate measurement of gamma-ray and beta-ray radiation measurement is performed.



a. Dose rate

Search with allowance for background

When this function is enabled, the aggregate measurement of gamma-ray and beta-ray radiation measurement is performed.



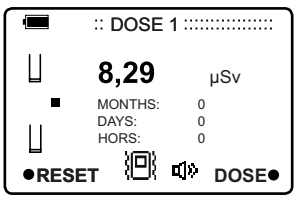
a. excess of current dose rate over the background dose rate

b. background dose rate

Dose

When this function is enabled, the aggregate count of gamma-ray and beta-ray measurement is performed, as well as of the time period during which it has been accumulated.

The device provides the possibility to accumulate and store doses for two independent users.



Please be advised that the measurement results obtained with the use of this device should NOT be relied upon as official and conclusive. No official government body has approved the use of this device.

TECHNICAL CHARACTERISTICS

Dose rate measurement range	mcSv/h	from 0,1 to 999
Flux density measurement range	1/(cм2*min)	from 6 to 999
Dose measurement range	mcSv	from 0,01 to 999
Range of energies of registered: • photon ionizing radiation • beta-ray radiation	MeV	 from 0,05 to 3,0 from 0,5 to 3,5
Error: • for dose rate, not more than, *where H – dose rate in mcSv/h ist.* • for flux density, not more than, *where P – flux density, 1/cm2*min.* • for dose, not more than	%	 ± (15+3/H) ± (20+200/P) ± 15
Range of acoustic alarm thresholds • for dose rate • for flux density	 mcSv/h 1/(cм2*min)	 from 0,2 to 1,2 from 10 to120
Measurement time: • for dose rate • for flux density	sec	 21 21
Power supply: battery type «AA»	pc	1
Period of continuous operation	h	950*
Dimensions of device height x width x depth	mm	140x64x26
Mass of device (without batteries)	kg	0,175

* At factory settings of device, in conditions of natural background radiation.

Factory settings: Mode – «MEASUREMENT», Dose rate threshold – «0,30 mcSv/h», Flux density threshold – «10 1/cm2*min», Background – «OFF», Settings: acoustic signal – «SILENCE», Vibration signal – «OFF», dose – «OFF».

RECOMMENDATIONS ON ANALYSIS OF OBJECTS

Analysis of radio-contamination of food products, household items etc.

1. Measure radiation background (not less than 10 cycles) at the distance of several meters from the object of analysis.
2. Bring the switched-on device very close to the object of analysis. Measure dose rate (not less than 10 cycles).
3. Compare results of measurements. If the value of the second measurement exceeds the first measurement by more than 1,5 times, the object of analysis has radio-contamination.

Search for the place of location of radiation source

1. Disable the threshold function.
2. Enable the acoustic and/or vibration signal function.
3. Move the device in the supposed place of location of radiation source. Make attention not only to the readings of measurements, but to the frequency of signals. The frequency of signals will increase with approaching the source and decrease with distancing from the source.