

## QUICK START GUIDE

### 1 Install batteries

Open the battery compartment on the back of the unit and insert two (or one) AAA size batteries. Follow the picture inside the battery compartment for the proper alignment.



### 2 Turn the device ON

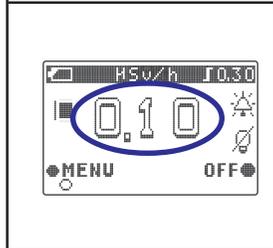
Simply push and hold the big button on the lower right-hand side until the screen is on. As soon as "RD1706" appears, the unit has started taking its first measurements.



### 3 First results

The measurements taken by the Geiger Counter are updated every 10 seconds.

The numbers will change constantly - this is normal, as the natural background radiation fluctuates. The most accurate reading is displayed once all 4 sides of the little square graphic are drawn (left side of the screen).



### 4

#### Menu

To enter the options menu, push the top-left **Menu** button. The contents of the menu will appear.

#### Default settings

units:  $\mu\text{Sv/h}$   
 level: 0.30  $\mu\text{Sv/h}$   
 sound: off  
 back-light: on

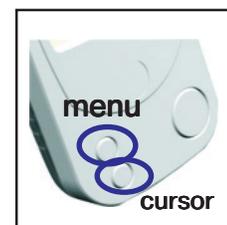


### 5

#### Navigating Menu

To navigate the menu, use the **Cursor** button - the one on the lower left side of the device.

To select or change an option to which the cursor is pointing, use the **Menu** button.

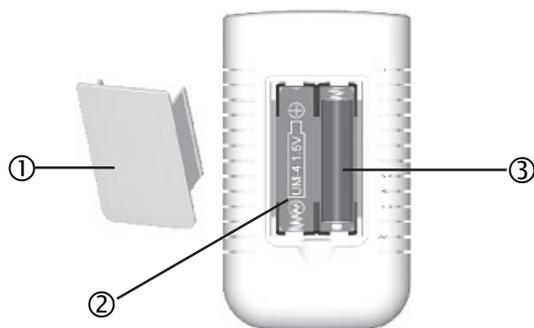


### 6

#### Exit Menu / Switch OFF

The same large button that is used to turn the device ON is used to exit the Menu or to switch the device OFF.

Note: your settings will be saved.

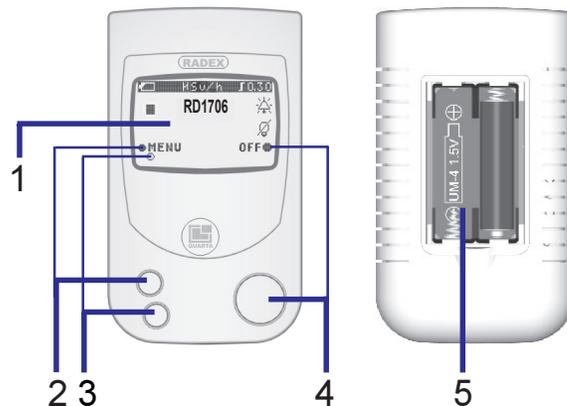


1. Remove the cover of the battery compartment ①
2. Install AAA batteries ③ into the battery compartment ② as illustrated by the graphic inside the compartment.
3. Close the battery compartment by reattaching the plastic cover ①.

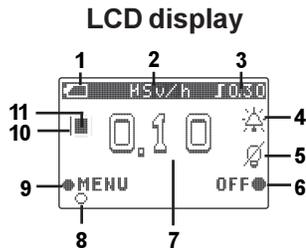
TIP: For long-term measurements we recommend using 2 batteries, otherwise a single battery is enough.

Don't mix old and new batteries together.

If you don't expect the unit to be used for a long time, remove the batteries altogether.



1. LCD screen
2. The MENU button. Has three functions: enter Menu, Select Option, and Change Option.
3. The CURSOR Button. Used to move the cursor and to activate the back-light of the LCD screen for a few seconds.
4. The ON/OFF Button. Also exits the menu.
5. Battery compartment



### 1. Battery charge

- fully charged
- almost drained
- replace the battery

### 2. Units

- micro Sieverts per hour (modern units)
- micro Roentgens per hour (older units)

### 3. Audio alarm threshold (alarm will sound if $\geq$ ) in micro Sieverts:

- 0.30  $\mu$ Sv/h
- 0.60  $\mu$ Sv/h
- 1.20  $\mu$ Sv/h

### in micro Roentgens:

- 0.30  $\mu$ Rem/h
- 0.60  $\mu$ Rem/h
- 1.20  $\mu$ Rem/h

or

- Audio Alarm threshold is turned off. The unit will click at every reading.

### 4. Audio Alarm (clicking)

- sound alarm is on
- sound alarm is off

### 5. Back-light option for LCD screen

- back-light is on
- back-light is off

### 6. OFF — Turn off the device by holding down the big button.

### 7. Measurements of the current radiation level.

### 8. Quick Back-light option (Cursor Button)

### 9. Access the Menu

### 10. Detection rate indicator — blinks as often as the particles are detected by the sensor.

### 11. Detection cycle counter — draws a “side” of the square frame as the measurement cycles progress. The most accurate reading is shown once the full frame is drawn (4 cycles = 40 seconds).

## Basic operations

Switch the device ON by pressing and holding the big button until the LCD screen activates.

### Scanning for radiation

As soon as the unit is activated, it starts taking measurements automatically. The first readings will appear after 10 seconds. Every time radiation particles (including the normal background radiation) hit the sensor, a black square icon blinks for a moment. The more particles hit the sensor, the more frequently the square blinks: frequency of blinking is proportional to dose rate.



As the measurement cycles continue, their progression is shown by the little frame that is being drawn around the black square.



- first measurement cycle
- second measurement cycle
- third measurement cycle
- fourth measurement cycle — the most reliable result !

The second and the third measurement cycles are averaged automatically.

**Important:** The first cycle is intended to give an approximate preliminary result. The most reliable measurement is displayed after about 40 seconds, when the frame icon is completely drawn and has 4 sides — the fourth measurement cycle.

## How much is dangerous?

Not all radiation is the same, so scientists use the ‘sievert’ to measure the health risks of radiation.

A one-sievert dose of radiation would cause immediate radiation sickness. But most radiation doses are much smaller, so you’ll see them measured in millisieverts or even smaller microsieverts.

1 sievert = 1000 millisieverts

1 millisievert = 1000 microsieverts

### uSv/h micro Sieverts per hour.

- 0.10 This is low, it does not get any lower.
- 0.21 Pretty normal. Depends on local geology.
- 0.42 Happens occasionally with no real reason. Just keep an eye on it.
- 0.83 ALERT - No need to panic, but try to figure out what is going on, stay out of the rain and avoid unnecessary trips.
- 1.25 Real risk of cancer if exposed for a year.
- 4.17 Real risk of cancer if exposed for 90 days.

20,000 Annual limit for Nuclear Plant Workers.

100,000 Annual limit for Fukushima workers.