



User Manual

PCE-RDM 10 | Geiger Counter



User manuals in various languages (français, italiano, español, português, nederlands, türk, polski, русский, 中文) can be found by using our product search on: www.pce-instruments.com

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1 Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. Damage or injuries caused by non-observance of the manual are excluded from our liability and not covered by our warranty.

- The device must only be used as described in this instruction manual. If used otherwise, this can cause dangerous situations for the user and damage to the meter.
- The instrument may only be used if the environmental conditions (temperature, relative humidity, ...) are within the ranges stated in the technical specifications. Do not expose the device to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not expose the device to shocks or strong vibrations.
- The case should only be opened by qualified PCE Instruments personnel.
- Never use the instrument when your hands are wet.
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth. Use only pH-neutral cleaner, no abrasives or solvents.
- The device must only be used with accessories from PCE Instruments or equivalent.
- Before each use, inspect the case for visible damage. If any damage is visible, do not use the device.
- Do not use the instrument in explosive atmospheres.
- The measurement range as stated in the specifications must not be exceeded under any circumstances.
- Non-observance of the safety notes can cause damage to the device and injuries to the user.
- Always keep the sensor clean.
- Do not touch the sensor with your hands.

We do not assume liability for printing errors or any other mistakes in this manual.

We expressly point to our general guarantee terms which can be found in our general terms of business.

2 Specifications

Specifications	Explanations
Measurement range	0 ... 99.99 $\mu\text{Sv/h}$
Resolution	0.01 $\mu\text{Sv/h}$
Accuracy	0.25 cps / $\mu\text{Sv/h}$
Sensor	Geiger-Müller tube
Types of radiation	beta / gamma / X-ray radiation
Unit	$\mu\text{Sv/h}$
Power supply	3.7 V / 2000 mAh rechargeable LiPo battery
Automatic power off	OFF / 10 min / 20 min / 30 min / 60 min
Interface	USB-C
Display	2.8" 16-bit TFT colour display
Alarm	OFF / 0.30 $\mu\text{sv/h}$ / 0.50 $\mu\text{sv/h}$ / 1.00 $\mu\text{sv/h}$ / 2.00 $\mu\text{sv/h}$
Memory	167 857 values
Environmental conditions	-20 ... +50 °C / 20 ... 85 % RH
Dimensions	165 x 90 x 32 mm
Weight	220 g

3 Delivery scope

1 x PCE-RDM 10 geiger counter
 1 x micro-USB cable
 1 x device bag
 1 x user manual

4 Description of the device



No.	Description
1	Display
2	ON/OFF / Menu / Enter
3	Arrow up
4	Memory / Back
5	Arrow down
6	Next
7	USB interface

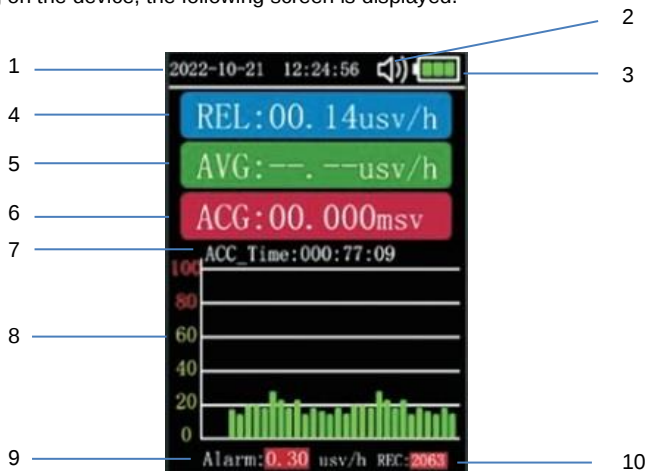
5 Menu

5.1 On/Off

Switch the device on using the ON/OFF key. To switch it off, press and hold the ON/OFF key for several seconds.

5.2 Main screen

After switching on the device, the following screen is displayed.



1. Date and time

You can display the current date and time here. To set the date and time, see chapter 5.4.1.

2. Alarm

As soon as the alarm threshold is exceeded, the device emits an acoustic alarm. Pressing the arrow up key deactivates the audible alarm and the loudspeaker icon is displayed with an "X". To activate it, press the arrow up key again.

3. Battery

You can display the current battery status here. To charge the battery, use the included USB cable. Connect the device to a PC using this cable.

4. REL | Real-time dose

Displays the current value in the unit $\mu\text{sv/h}$. It is updated every second to display the current radiation value.

5. AVG | average dose

Indicates the average value in the unit $\mu\text{sv/h}$. It records the total amount of energy over a certain period of time and converts it into a measured value for analysis. To set the measuring rate, see chapter 5.4.3.

The average value is displayed after 5 minutes of measurement. If you switch the device off and on again, the average value is reset to zero. You must wait another 5 minutes before you can see the value on the display.

6. ACC | Accumulated dose

Displays the accumulated dose. If the device is switched off, the accumulated dose is not lost. The timer is just stopped. When the device is switched on again, the count continues. To reset the accumulated dose to zero, see chapter 5.4.6.

7. ACC_Time

Indicates how long the cumulative dose has already been calculated.

8. Graph

You can have the development of the last 30 values displayed graphically. This graph is constantly updated.

9. Alarm

Displays the set alarm threshold. To set the alarm threshold, see chapter 5.4.2.

10. REC | Storage

Displays the total number of values saved in the memory. Storage of the values begins 5 minutes after the device is switched on (at this time, the average value can be displayed on the screen).

Note

If you are on the main screen, you can switch off the screen (not the device) by pressing the arrow down key. To switch it back on, press the arrow down key again. This function is only active on the main screen.

5.3 Memory

Press the left key to access the memory. The "History List" screen is the index of the measurement history. The values are sorted by date. The number of saved values is displayed on the right-hand side.

Hint

A new file is created each time the device is switched on (after 5 minutes of measurement).

History List		
Item	Date	Quant
1	12024-01-08	128
2	22024-01-10	87
3	32024-01-12	34
4	42024-01-15	77
5	52024-01-18	12

Select the desired file using the up and down arrow keys. The selected file appears in red. To enter the selected file, press the ON/OFF key. The following screen is displayed:

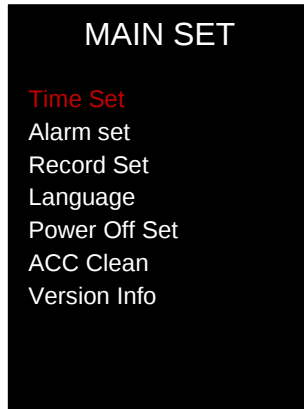
Data List			
Item	Time	REAL	AVG
1	11:16:59	3	7
2	11:17:19	3	7
3	11:17:40	11	7
4	11:18:00	13	8
5	11:18:20	8	8
6	11:18:40	11	8
7	11:19:00	3	8
8	11:19:20	5	7
9	11:19:41	11	7
10	11:20:05	5	7
11	11:20:25	8	7
12	11:20:45	6	7

Use the arrow up and down keys to move within the file.

To clear the memory, press and hold the next key (right) in the memory overview until "Clearing" is displayed. When "Clear Finish" appears in the display, the memory has been deleted. The device automatically switches back to measuring mode.

5.4 Settings

To call up the settings menu (MAIN SET), briefly press the ON/OFF key when you are on the main screen. The following screen appears:



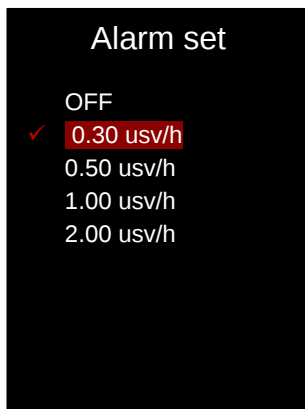
Select the setting using the arrow up and down keys. The selected setting appears in red. To accept the setting, press the ON/OFF key.

5.4.1 Time Set | Date and time



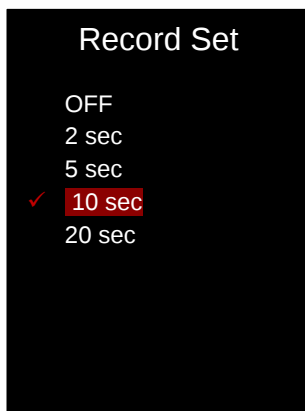
Use the arrow up and down keys to change the value. Use the right key to change the position (year - month - day - hour - minute - second). Once you have set the date and time, press the left key (history) to return to the main menu.

5.4.2 Alarm Set | Setting alarm limit values



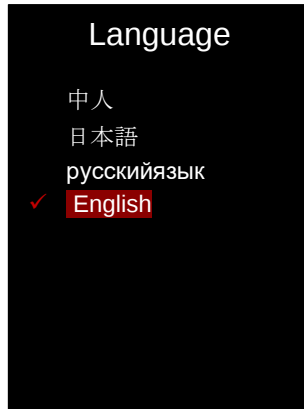
Use the arrow up and down keys to select the threshold value. Confirm with the ON/OFF key. Once you have set the alarm threshold, press the left key (history) to return to the main menu.

5.4.3 Record Set | Storage rate



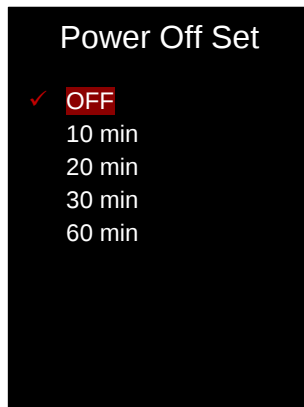
Use the up and down arrow keys to select the storage rate. Confirm with the ON/OFF key. Once you have set the storage rate, press the left key (history) to return to the main menu.

5.4.4 Language



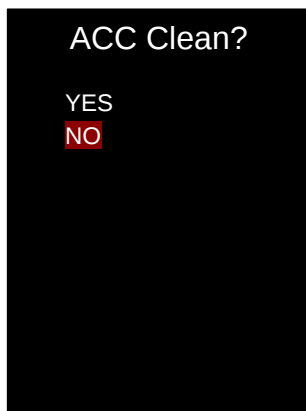
Use the arrow up and down keys to select the menu language. You can select the following languages: Chinese, Japanese, Russian and English. Confirm with the ON/OFF key. Once you have set the language, press the left key (history) to return to the main menu.

5.4.5 Power Off Set | Automatic power off



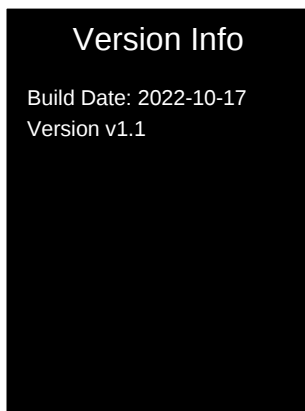
Use the arrow up and down keys to select the desired time at which the meter should switch off automatically. Confirm with the ON/OFF key. Once you have set the automatic power off, press the left key (history) to return to the main menu.

5.4.6 ACC Clean? | Zero setting of the accumulated dose



Use the arrow up and down keys to select whether you want to reset the accumulated dose to zero. Confirm with the ON/OFF key. Then press the left key (history) to return to the main menu.

5.4.7 Version Info | Firmware information



You can view the firmware data in this screen. When you have finished, press the left key (history) to return to the main menu.

6 Contact

If you have any questions, suggestions or technical problems, please do not hesitate to contact us. You will find the relevant contact information at the end of this user manual.

7 Disposal

For the disposal of batteries in the EU, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.

In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.

For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations.

If you have any questions, please contact PCE Instruments.



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