



Guide to using the RADOS RDS-120 - Ionising radiation meter

The Rados RDS-120 is a general use handled meter that can be used for measuring ionising radiation around the home. The meter measures gamma radiation in dose rate units of microSieverts per hour ($\mu\text{Sv/h}$) and radiation dose in units of microSieverts (μSv).

More information can be found on the [understanding radiation page](#) on our website.

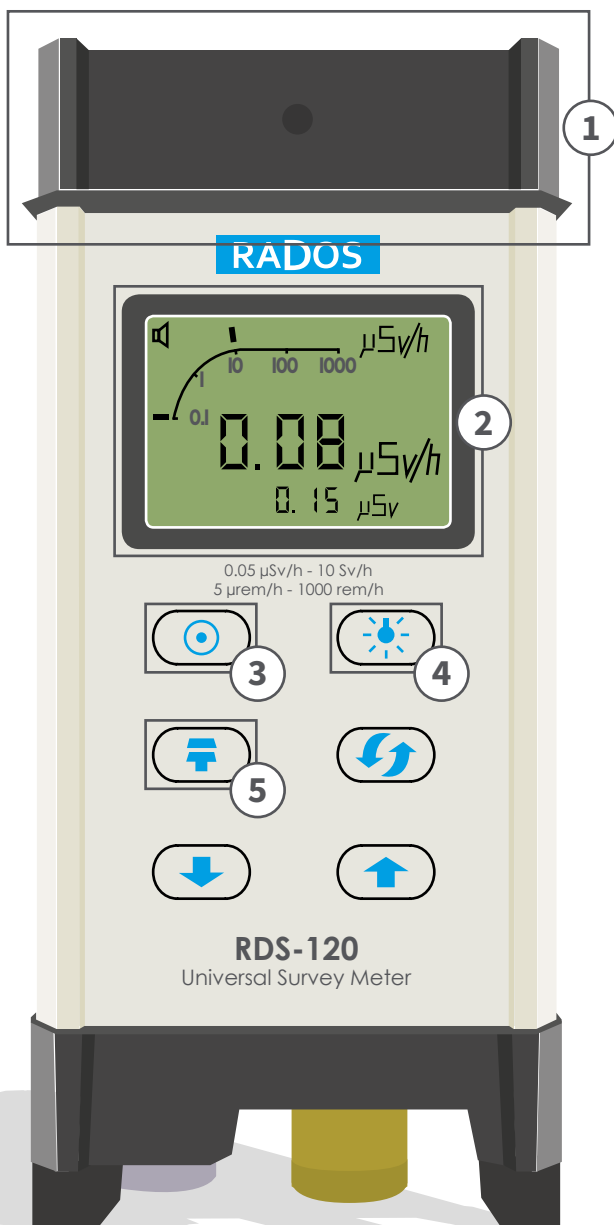


Figure 1: image of RADOS RDS-120

Key

- 1 Detection centre
- 2 Display window
- 3 Power button
- 4 Display illumination
- 5 Audible button

Instructions

- Step 1** Turn on unit by pressing and holding the power button for one second.
- Step 2** Allow five minutes for RDS-120 to take a background measurement. Do this by holding the detector, or placing it in a location which you do not wish to measure e.g. placing it on a bed. Note down the dose rate displayed.
- Step 3** When you have determined an area you wish to measure, place RDS-120 in that location for five minutes to take a measurement (see figures 3 and 4 as examples). Note down the dose rate displayed.
- Step 4** Repeat step 3 for as many locations as you wish to measure.
- Step 5** Turn off unit once finished by pressing power button for one second.

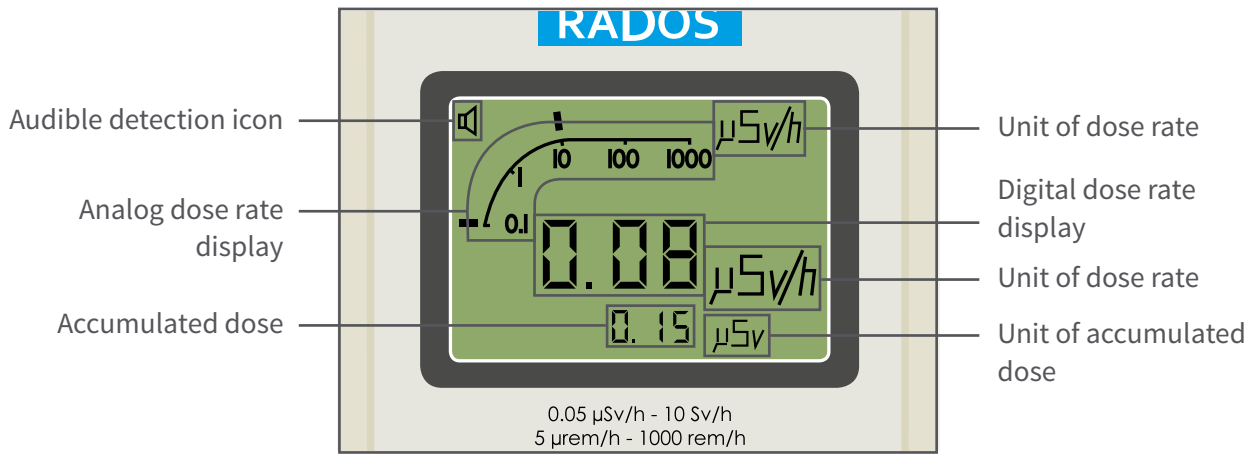


Figure 2: zoomed-in image of the display window

Measurement source	Typical gamma dose rate ($\mu\text{Sv/h}$)
Natural background in Australia	0.05–0.4
Granite bench top (on contact)	0.1–0.3
House bricks (on contact)	0.1–0.3
Flying at 36 000 ft	2.0–5.0
Springs of Paralana, Arkaroola, Australia	1.0–5.0
Some locations in Guarapari Beach, Brazil	10.0–20.0
Radiation source (30 cm from 1MBq Cs-137)	1.0

Should you wish to obtain advice on the measurements you have taken, please contact the ARPANSA Talk to a scientist team:

Phone: 1800 022 333 / Email: info@arpansa.gov.au

- If the dose rate measured is between 1.0–10.0 $\mu\text{Sv/h}$, please inform ARPANSA at your earliest convenience or on return of device.
- The dose rate alarm is set to 10.0 $\mu\text{Sv/h}$. If this alarm is triggered, please contact ARPANSA immediately.
- The accumulated dose alarm is set to 100.0 μSv . If this alarm is triggered, please contact ARPANSA.

More information can be found on the [understanding radiation page](#) on our website.



Figure 3: measurement of a bench top



Figure 4: measurement of an item (milk jug)