



Radiac Set AN/UDR-13

UDR-13

Description

The AN/UDR-13 is a compact, hand-held or pocket-carried tactical dosimeter capable of measuring gamma dose and dose-rate from nuclear fallout. A push-button pad enables mode selection, functional control and the setting of audio and visual alarm thresholds for both dose-rate and mission dose. A "sleep" mode with automatic wake up is provided to enhance battery life. Data readout and warning/mode messages are provided by LCD display.

The UDR-13 was originally designed to also measure prompt gamma and neutron doses from nuclear detonation. However in 2012/2013, the Army conducted a series of tests to document the performance of the AN/UDR-13 measuring the prompt gamma and neutron doses from a nuclear detonation and its general performance in a nuclear war environment.

These tests were more rigorous than the original testing of the device in 1994. The 2012/2013 tests showed that the AN/UDR-13 does not properly measure the radiation dose in the event of a nuclear detonation. Testing indicates that the detection elements can give false positives, false negatives, and are not accurate for the measurement of radiation immediately following a nuclear detonation (the prompt gamma and neutron dose). In addition, the tests showed that neutron damage to the device may cause subsequent false dose readings with temperature increases. Finally, the tests showed that exposure to the nuclear detonation radiation environment may cause the battery life to be reduced.

If an AN/UDR-13 is in the vicinity of a nuclear detonation (within 2 km) at the time of detonation, then that AN/UDR-13 should only be used for dose rate, not dose. Service members should use measurements from the AN/PDR-75A/DT-236A (wrist watch dosimeter) or equivalent alternative dosimetry system for the dose determination to determine personnel dose from a nuclear detonation event.

Mission

Detect and measure radiation from nuclear fallout.

Capabilities

- Radiological Point Detection
- Combined Ratemeter and tactical dosimeter
- Settable audio and visual rate and dose alarms
- Measures dose rate up to 999 cGy/hr with minimum dose-rate sensitivity of 0.1 cGy/hr

Users

US Marine Corps, US Army

Status

Sustainment



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