

RGU-100 High Sensitivity Military Pocket Radiac

Features

- Detects and quantifies prompt gamma dose as well as residual gamma dose and dose rate
- Pre-settable audio and visual alarms
- Uses time tested "Time-to-Count" technology
- Infrared Optical Port for computer control and data downloads

Key Benefits

- Ultra small size and weight
- Ease of use for setup and operations; minimal user training required
- Secure data tracking

Applications

- Personnel
- Aircraft and vehicle

Description

The RGU-100 Military Pocket Radiac detects and quantifies prompt gamma dose as well as residual gamma dose and dose rate in support of both tactical and non-tactical use. This rugged dosimeter is equipped with a back lit LCD as well as presettable audio and visual alarms that provide clear, real time indications of radiological conditions in demanding environments. Its built-in sleep mode offers enhanced operational flexibility by extending battery life. An infrared RS-232 port that resides in the RGU-100 enables its data to be accessed by a computer.

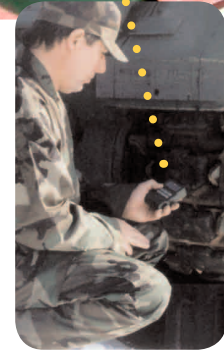
This simple to operate, compact device is suitable for both tactical and non-tactical radiation protection use. Its wide dynamic ranges for dose and dose rate and ability to measure prompt as well as residual gamma radiation make it an essential tool for the foot soldier.



The RGU-100 also lends itself to use in military vehicles and helicopters.

The Pocket Radiac easily fits within the space-constrained interiors of aircraft and fighting vehicles (see circled RGU-100 below).

Use of the infrared RS-232 port and the RGU-100 dose storage capability enables the efficient dose management of personnel in a field organization. The serial number of the user can easily be stored in the unit. The user's total accumulated daily or weekly dose can then be read by a computer and, with minimal operator attendance, be assigned to the user's Radiation Dose file. The infrared port may also be used to upload control of key function restrictions to the device in order to safeguard the integrity of the user's data and assure that alarm levels are maintained. This functionality can safeguard the equipment from accidental erasure of accumulated dose or incorrect setting of alarm levels by a user.



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Specifications

DATA PROVIDED

- RESIDUAL GAMMA RADIATION – 0.001 $\mu\text{Gy/hr}$ to 350 cGy/hr (dose rate) and 0.001 to 999 cGy (total dose), and gamma dose initial radiation 1 to 999 cGy . Rad units available.

FEATURES

- PRE-SETTABLE AUDIBLE AND VISUAL – Dose and dose rate alarms.
- SETUP TIME – Less than one minute for all checks and alarms.
- ACCURACY – $\pm 15\%$.
- ENHANCED BATTERY LIFE – Sleep mode provides 1500 hrs battery life.
- CIRCUIT PROTECTION – Nuclear and EMP hardened.
- OPERABLE AND READABLE – By persons wearing Arctic and MOPP protective clothing.
- WEIGHT – 270 g (9.5 oz).
- VOLUME – 172 cc (10.5 in³).
- DIMENSIONS – 100 x 66 x 28 mm (3.875 x 2.50 x 1.25 in.).

DETECTORS

- PMOS-FET (prompt gammas) and GM detector (residual gammas).
- Separate detectors for prompt and residual gammas are combined to provide a single dose reading.
- TOTAL (Cumulative) DOSE READ OUT – Will not be erased when read, resettable to zero as desired.
- DOSE RATE – Minimum detectable level 0.2 $\mu\text{Gy/hr}$. Rad units available.
- RESPONSE TIME – Within 10% of final reading in four seconds at 1.0 cGy/hr , returns to background within four seconds. Rad units available.

DISPLAY

- An auto-ranging LCD that can be read at 3 ft, back lit for night use, updated every two seconds.
- Data downloadable via optical (IR) communications port.
- Provides data in units of grays or rads for dose or dose rate.

ALARMS

- Has selectable Visual and Audible indicators for day or night use.
- Alarm levels are settable over entire dynamic range.

POWER

- Four AAA 1.5V batteries.
- Minimum battery life of 150 hr during continuous monitoring and 1500 hr during inactive (sleep) mode.
- Low battery LCD indication with 5 hr of battery life remaining, a "Go/No Go" feature provides battery status.

RELIABILITY AND MAINTAINABILITY

- MEAN TIME TO REPAIR (MTTR) – 15 minutes.

ENVIRONMENTAL PARAMETERS

- OPERATING TEMPERATURE – $-51\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ ($-59.8\text{ }^{\circ}\text{F}$ to $122\text{ }^{\circ}\text{F}$).
- STORAGE/TRANSPORT TEMPERATURE – $-60\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$ ($-76\text{ }^{\circ}\text{F}$ to $158\text{ }^{\circ}\text{F}$).
- OPERATING HUMIDITY – 0-95%.
- IMMERSION – 3 feet for at least 2 hrs.
- SAND/DUST – Operates in winds to 1750 ft/min with exposure to fine dust and to 5700 ft/min to sand particles.
- VIBRATION – Withstands vibration associated with transport.
- EXPLOSIVE ATMOSPHERES – Will not cause ignition of explosive gas mixtures.
- ALTITUDE – 4572 m (15000 ft).

QUALIFICATION TESTING

The RGU-100 is derived from the military qualified AN/UDR-13,14,15 Radiac Sets (Pocket Radiacs) that were developed by Aptec-NRC, now CANBERRA, under contract to the US Army. The RGU-100 is built to meet Mil-Std 810G tests. A range of testing documentation for the RGU-100 is also available to confirm suitability for military use.

ORDERING INFORMATION

- RGU-100-GO – High Sensitivity Military Radiac.
 - UNIT – Gray
 - COLOR – Olive
- RGU-100-RG – High Sensitivity Military Radiac.
 - UNIT – Rad
 - COLOR – Grey



FOR MORE INFORMATION CONTACT:

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