

YAOREA YRG01 Geiger Counter - User Manual (English Translation)

Manufacturer

Jinan YAOREA Electronic Technology Co., Ltd.

Panel Overview

Buttons and Indicators:

1. Display area
2. Power/Menu
3. Confirm/Time
4. Up/Unit
5. Down/Stats
6. Bluetooth Indicator Light
7. Reset Button

Features

- Radiation Detection: Measures alpha, beta, gamma, and X-rays to assess environmental radiation levels.
- Unit Conversion: Automatically switches units; displays cumulative dose, average dose, and real-time dose.
- Data Logging: Saves a value every minute for up to 170 days. Logged data shows trends over time.
- Alert Function: Audible and visual alerts when thresholds are exceeded.
- LED Indicator: Shows device status and alarm condition via color and brightness.

Display Units

- CPM/CPS: Counts per minute / per second.
- uSv/h: Microsieverts per hour.
- uR/h: Microroentgens per hour.
- uGy/h: Micrograys per hour.

Unit Conversion Reference

1. Sievert conversion: $1 \text{ Sv} = 1000 \text{ mSv} = 1,000,000 \text{ uSv}$
2. Roentgen conversion: $1 \text{ R} = 1000 \text{ mR} = 1,000,000 \text{ uR}$
3. $1 \text{ uSv/h} = 100 \text{ uR/h}$

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Button Functions - Main Screen

- Power/Menu: Short press opens menu. Long press turns off device.
- Confirm/Time: Toggles between date, day, hour.
- Up/Unit: Toggles between unit types: uSv/h, CPM, uR/h, uGy/h.
- Down/Stats: Switches between dose rate, average dose, cumulative dose, and dose limit. Use to clear limits when exceeded.

Using the Device

1. Power Off Mode: Press power/menu to start.
2. Low Power Mode: Press any button to wake up.
3. Main Screen Shows:
 - Current dose rate
 - Accumulated dose
 - Average dose
 - Max dose
 - Date/time
 - Battery level

Menu Navigation

- Power/Menu: Enter menu
- Confirm/Time: Exit menu
- Up/Unit: Scroll up
- Down/Stats: Scroll down

Log Data Viewing

- Shows trend graphs of historical values.
- First row: values and timestamps
- Second row: hour-by-hour dose graph
- Navigate to earlier dates with arrow keys.

Settings

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1. Alarm Levels:

- Low: 0.1s beep, stops after 1s
- Medium: 0.1s beep, stops after 5s
- High: 0.1s beep, stops after 0.2s

Alarm sounds only when measured value exceeds threshold.

2. Time Settings: Set current date/time.

3. Backlight Settings: Adjust screen brightness and off delay.

4. Sound Settings: Toggle beeps for button presses, alarms, and startup/shutdown.

5. Bluetooth: Toggle Bluetooth and set address.

6. Auto Power On/Off Settings

7. Reset Function: Resets settings (but NOT logged data).

8. Lighting (RGB LED) Settings:

- a. Touch-Off: Always off
- b. Touch-Normal: Low-power shuts it off, wakes on resume
- c. Touch-Always On: Always on
- Adjust color balance using RGB sliders

9. Language: English or Chinese

Measurement Range

- Dose Rate:

- 0.000 uSv/h to 999.999 uSv/h
- 0.000 uR/h to 999.999 uR/h
- 0.000 uGy/h to 999.999 uGy/h

- Counts:

- 0-999999 CPS (Counts per Second)

Warnings

1. Battery Polarity: Dont insert the battery backwards.

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2. Disassembly Warning: High voltage inside - do not disassemble.

Specifications

- Battery: 18650 lithium-ion, 3.6V
- Power Consumption:
 - Normal (30% brightness, standby mode): >70mA
 - Low-power mode (display and RGB off): >11mA