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- › [FNIRSI](#) /
- › [FNIRSI GC-03 Geiger Counter Electromagnetic Detector User Manual](#)

FNIRSI GC-03

FNIRSI GC-03 Geiger Counter Electromagnetic Detector

Model: GC-03 | Brand: FNIRSI

1. INTRODUCTION

The FNIRSI GC-03 is a versatile 3-in-1 detection device designed for comprehensive environmental monitoring. It integrates capabilities for detecting nuclear radiation, electric fields, and magnetic fields, providing users with a broad range of safety assessments. This manual provides detailed instructions for the proper use, maintenance, and troubleshooting of your GC-03 detector.



Image: The FNIRSI GC-03 detector, highlighting its 3-in-1 capabilities for nuclear radiation, magnetic field (MF), and electric field (EF) radiation detection.

2. WHAT'S IN THE BOX

Please check the contents of your package upon receipt to ensure all items are present and undamaged.

- FNIRSI GC-03 Detector Unit
- USB Type-C Data Cable
- User Manual

Three Smart Modes for Flexible Monitoring

Switch freely between Curve, Professional, and Quick View Modes—Visualize changes, analyze deeply, or monitor instantly.



Image: A visual representation of the FNIRSI GC-03 package contents, including the device, a Type-C cable, and the user manual.

3. PRODUCT FEATURES OVERVIEW

3.1. 3-in-1 Detection Capabilities

The GC-03 is equipped to detect three types of environmental factors:

- **Nuclear Radiation:** Detects Gamma, Beta, and X-rays.
- **Electric Fields:** Measures electric field strength.
- **Magnetic Fields:** Measures magnetic field strength.

Upgraded

All IN One Detection



GC-01



GC-03



NUCLEAR Detector



ELECTRIC Detector



MAGNETIC Detector

Image: The GC-03 device displayed next to an older model (GC-01), illustrating its upgraded capability for all-in-one detection of nuclear, electric, and magnetic fields.

3.2. Applicable Scenarios

The detector can be used in various environments:

- **Nuclear Radiation:** Nuclear power plants, radioiodine therapy areas, marble, uranium glass, and other potentially radioactive materials.
- **Electric Fields:** Near microwaves, laptops, TVs, game consoles, and other electronic devices.

- **Magnetic Fields:** Near refrigerators, air conditioners, washing machines, and other appliances with motors.

NUCLEAR

Nuclear Power Plants,
Radioiodine Therapy,
Marble, Uranium Glass...



MF

Refrigerator, Air Conditioner,
Washing Machines...

EF

Microwave, Laptop
TV, Game Consoles...



Image: Visual examples of environments where nuclear, magnetic, and electric field detection are relevant, such as nuclear facilities, homes with appliances, and offices with electronics.

3.3. Display Modes

The GC-03 offers three distinct display modes for flexible monitoring:

- **Curve Mode:** Visualizes changes in radiation levels over time with a dynamic graph.
- **Professional Mode:** Provides detailed numerical data and statistics.

- **Quick View Mode:** Offers instant, simplified readings for rapid assessment.

Three Smart Modes for Flexible Monitoring

Switch freely between Curve, Professional, and Quick View Modes—Visualize changes, analyze deeply, or monitor instantly.



Image: The GC-03 screen displaying the three smart modes: Curve, Professional, and Quick View, illustrating how users can switch between them for different monitoring needs.

3.4. Real-time Monitoring & Alerts

The device provides real-time monitoring and alerts for nuclear radiation. When thresholds are exceeded, it triggers visual, audible, and vibration alerts. It can also track up to 50 alarm history sets.

3 Alarm Modes Customizable Values

Visual, Audible, and Vibration Alerts
for Complete Awareness



Image: The GC-03 device demonstrating its three alarm modes: visual alert (screen change), red LED flash, and audible alert (sound icon with 'Di Di Di').

3.5. Other Key Features

- **Day & Night Themes:** Adjustable display themes for optimal readability in various lighting conditions.
- **Visible Geiger Tube:** A unique hollow design allows visibility of the internal Geiger tube.
- **1500mAh Battery:** Integrated rechargeable battery for extended use.
- **Firmware Upgrade:** Supports firmware updates for improved functionality.



Day&Night Themes



Unique Hollow Design, Easy Carry



1500mAh Battery



Visible Geiger Tube



Firmware Upgrade

Image: A collage showcasing various features of the GC-03, including its day and night display themes, ergonomic design, 1500mAh battery, visible Geiger tube, and the option for firmware upgrades.

4. GETTING STARTED

4.1. Charging the Device

Before first use, fully charge the GC-03 using the provided USB Type-C cable and a standard 5V/1A USB power

adapter (not included). The charging indicator on the screen will show the battery status.

4.2. Powering On/Off

- **To Power On:** Press and hold the power button (usually located on the side or top) for a few seconds until the screen illuminates.
- **To Power Off:** Press and hold the power button again until the device shuts down.

5. OPERATING INSTRUCTIONS

5.1. Navigating the Interface


The GC-03 features an intuitive rotary knob for easy navigation through menus and settings. Rotate the knob to scroll and press it to select options.

Product Parameter

Parameters	Specifications	Parameters	Specifications
Screen material	2.4-inch color screen	Detection Radiation Type	Ionizing radiation (gamma rays, etc.)
Backlight	Brightness Adjustable	Detector	Energy compensation GM tube (Geiger counter tube)
Power supply	TYPE-C (5V/1A)	Dose Current Rate	0.00-10000 μ Sv/h (10mSv/h)
Battery	1500mAh	Cumulative Dose Equivalent	0.00 μ Sv-500.0mSv
Languages	中文, English	Energy Range	48keV-1.5MeV \leq ±30% (for 137Cs-)
Product size	\approx 138 \times 63 \times 32mm	Sensitivity	80CPM/ μ Sv
Net weight	\approx 141g	Dose Unit	μ Sv/h, μ Gy/h, mR/h, CPS, CPM
		Alarm Mode	Light, vibration, sound

Parameters	Nuclear Radiation	Electric Field	Magnetic Field
Units	μ Sv/h	V/m	μ T
Accuracy	0.01 μ Sv/h	1V/m	0.01 μ T
Range	0.01 μ Sv/h-999.99 μ Sv/h	1V/m - 1999V/m	0.01 μ T-99.99 μ T

Accessories List



Packing Box

Type-C Cable


GC-03

User Manual

Image: A detailed view of the GC-03's rotary knob, illustrating its function for easily switching between different modes and settings.

5.2. Understanding Display Modes

Switch between Curve, Professional, and Quick View modes using the navigation controls to suit your monitoring needs. Each mode provides a different level of detail and visualization.



Dynamic Curve Mode

50 Alarm Records

Monitor Radiation in Real-Time and Track Up to 50 Alarm History Sets for Ongoing Awareness

Image: A composite image showing the GC-03 in its three distinct display modes (Curve, Professional, Quick View), demonstrating the flexibility in monitoring data presentation.

5.3. Nuclear Radiation Detection

The GC-03 utilizes an energy compensation GM tube for precise detection of ionizing radiation (Gamma rays, X-rays, and Hard Beta rays).

- Hold the device in the area you wish to monitor.
- Observe the real-time radiation values on the screen.
- The device will alert you if radiation levels exceed preset thresholds.



Image: A diagram highlighting the superior precision detection, high sensitivity, and low power consumption of the GC-03's Geiger Counter Tube compared to conventional tubes.

5.4. Electromagnetic Field (EMF) Detection

The device measures both electric and magnetic fields. Note that magnetic field values are displayed only when the magnetic field is changing or being cut; static magnetic fields (e.g., from permanent magnets) may not show a reading.

- Select the appropriate EMF detection mode.
- Move the device around the area or object to be measured.
- Readings for electric field (V/m) and magnetic field (μT or mG) will be displayed.



Image: Scenarios for electric field detection, including a microwave oven, electrical wiring, and a laptop, demonstrating common sources of electric fields.

Geiger Counter Tube

Precision Detection with High Sensitivity and Low Power Consumption

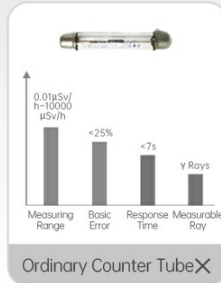
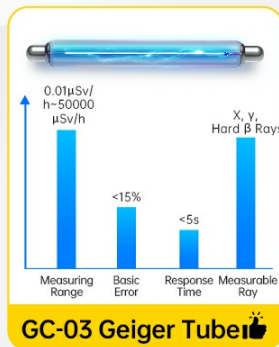


Image: Scenarios for magnetic field detection, including a refrigerator, an air conditioner, and a washing machine, illustrating common sources of magnetic fields.

5.5. Alarm Settings

You can customize alarm thresholds for nuclear radiation. When these thresholds are exceeded, the device will provide visual, audible, and vibration alerts. For electric and magnetic field alarms, the over-limit status will be displayed on the interface, but there will be no vibration, sound, or light prompts.

5.6. Day & Night Themes

Adjust the display theme in the settings menu to switch between light and dark modes for optimal visibility in different lighting conditions.

6. MAINTENANCE

6.1. Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents, as they may damage the casing or screen.

6.2. Battery Care

The GC-03 uses a 1500mAh Lithium Polymer battery. To prolong battery life, avoid extreme temperatures and store the device with a partial charge if not used for extended periods.

6.3. Firmware Upgrade

Periodically check the official FNIRSI website for available firmware updates. Follow the instructions provided with the update package to ensure proper installation.

7. TROUBLESHOOTING

- **Device does not power on:** Ensure the battery is charged. Connect the device to a power source using the Type-C cable and try again.
- **Inaccurate readings:** Ensure the device is used in an environment free from strong electromagnetic interference. Calibrate if necessary (refer to advanced settings in the device menu).
- **No magnetic field reading:** Magnetic field values are typically displayed only when the magnetic field is changing or being cut. Static magnetic fields will not register a reading. This is normal operation.
- **Screen is dim or unreadable:** Adjust the screen brightness in the settings menu or switch between Day/Night themes.

8. SPECIFICATIONS

Parameter	Specification
Screen Material	2.4-inch color screen
Backlight	Brightness Adjustable
Power Supply	Type-C (5V/1A)
Battery	1500mAh Lithium Polymer (included)
Languages	Chinese, English
Product Size	138 × 65 × 52 mm
Net Weight	≈141g
Detection Radiation Type	Ionizing radiation (Gamma rays, X-rays, Hard Beta rays)
Detector	Energy compensation GM tube (Geiger counter tube)
Dose Current Rate	0.00-10000μSv/h (10mSv/h)
Cumulative Dose Equivalent	0.00μSv-500.0mSv
Energy Range	48KeV-1.5MeV ≤ ±30% (for 137Cs-)
Sensitivity	80CPM/μSv
Dose Unit	μSv/h, μGy/h, mR/h, cps, cpm
Alarm Mode	Light, vibration, sound (for nuclear radiation)
Electric Field Range	1V/m - 1999V/m
Electric Field Accuracy	1V/m
Magnetic Field Range	0.01μT - 99.99μT / 0.1mG - 999.9mG
Magnetic Field Accuracy	0.01μT

9. SAFETY INFORMATION

- Do not attempt to disassemble or modify the device.
- Keep the device away from water and high humidity.
- Avoid exposing the device to extreme temperatures or direct sunlight for prolonged periods.
- This device is for informational and personal safety use. It should not be used as a substitute for professional radiation safety equipment or services.
- Dispose of the device and its battery according to local regulations.

10. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact details provided on the FNIRSI official website or contact your retailer. Please have your product model (GC-03) and purchase date available when contacting support.

11. PRODUCT VIDEOS

No official product videos could be embedded as specific video URLs and metadata (including creator type) were not provided in the input data.