

FNIRSI™

ERD-10

V1.2

ELECTROMAGNETIC RADIATION DETECTOR USER MANUAL



※Please read this instruction manual carefully before using the product and keep it properly.

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1.SECURITY REQUIREMENT

1.1 Environmental Requirement

Precautions

- Avoid high temperatures, open flames, corrosive gases, and humid or dusty environments to prevent device failure.
- Ensure that the vents are not blocked to prevent the device from overheating.

Keep away from the following items

- Heaters: Avoid overheating or fire risks.
- Water sources, chemical solvents: Leakage may damage the device or cause a fire.
- Strong magnetic equipment: Prevent magnetic fields from interfering with the normal operation of the device.



Please do not dispose of used batteries or equipment with regular household waste. They should be handled according to national or local regulations.

2.PRODUCT OVERVIEW

2.1 Production Introduction

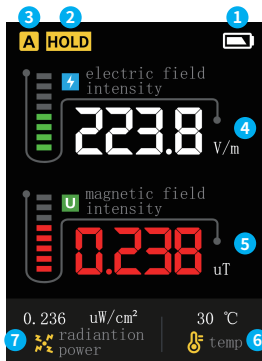
The ERD-10 is an electromagnetic radiation detector, a professional instrument used for measuring electromagnetic radiation. It is suitable for various application scenarios, such as homes, offices, vehicles, and outdoor environments. It features a 2.4-inch high-definition color screen and supports monitoring of electric field strength, magnetic field strength, radiation power, and environmental temperature.

2.2 Production Description



2.3 主页面示意图

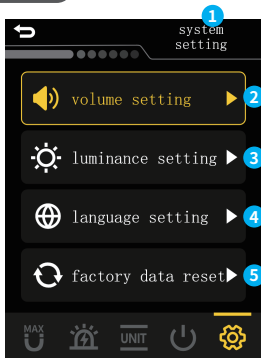
- ①**Power Indicator:**Indicates the system's battery level
- ②**Data Retention:**Short press **HOLD**, to activate Data Retention.
- ③**Auto Power Off Indicator:**Indicates the status of the automatic power-off function.
- ④**Electric Field Strength Measurement:**This area displays the measured value of the electric field strength.
- ⑤**Magnetic Field Strength Measurement:**This area displays the measured value of the magnetic field strength.
- ⑥**Temperature Value:**This area displays the real-time temperature measured by the device.
- ⑦**Radiation Power Measurement:**This area displays the power of radiofrequency radiation.



Key	Operation	Function
	Long press	Power off
	Short press	Power on(Off condition)/Back
HOLD 	Short press	Turn on/off Data Retention
 	Long press	Enter system menu,long press again out
MODE OK	Short press	Switch to curve interface,visualize data. Click again get out of curve interface

2.4 System Settings Page Illustration

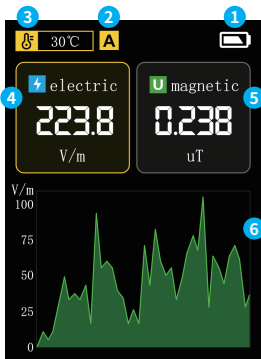
- ① **system setting:** This area displays the name of the selected function.
- ② **volume setting:** Allows adjustment of the volume from level 0 to 10.
- ③ **luminance setting:** Allows adjustment of the brightness from level 1 to 10.
- ④ **Language setting:** Use the left and right keys to select between Simplified Chinese and English.
- ⑤ **factory data reset:** Use the left and right keys to choose whether to restore to factory settings, then press the **OK** button to confirm.



Key	Operation	Function
	Long Press	Power Off
	Short Press	Back Operation
	Short Press	Select Button
	Long Press	Quit system menu, long press again enter system menu
	Short Press	Confirm selection

2.5 曲线界面页面示意图

- ① **Power Indicator:** Indicates the system's battery level.
- ② **Auto Power Off Indicator:** Indicates the status of the automatic power-off function.
- ③ **Temperature Value:** This area displays the real-time temperature measured by the device.
- ④ **Electric Field Strength Measurement:** This area displays the measured value of the electric field strength.
- ⑤ **Magnetic Field Strength Measurement:** This area displays the measured value of the magnetic field strength.
- ⑥ **Curve Display:** This area displays the real-time values of the curve measurement. The curve page updates every 0.5 seconds.



Key	Operation	Function
	Long Press	Power Off
	Short Press	Power On(Off condition)
	Short Press	Switch electric field strength/ magnetic field strength
	Long Press	Switch to system menu, long press again out

3. TECHNICAL SPECIFICATION

3.1 Device Parameters

Parameters	Specification
Item No.	ERD-10
Screen Material	2.4 inches
Backlight	Brightness adjustable
Charging Power	TYPE-C (5V/1A)
Battery	1000mAh
Languages	Chinese/English
Product Size	$\approx 143 \times 68 \times 29 \text{mm}$
Product Weight	$\approx 143 \text{g}$

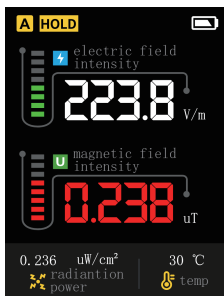
3.2 Measurement Parameters

Parameter	Electric Field	Magnetic Field
Unit	V/m	μT
Accuracy	1V/m	$0.01 \mu\text{T}$
Range	1V/m - 1999V/m	$0.01 \mu\text{T}$ - $99.99 \mu\text{T}$
Alarm Threshold	40V/m	$0.4 \mu\text{T}$
Power Range of Radiofrequency Radiation	$0.2\text{-}1000 \text{mW/cm}^2$	

4. OPERATION GUIDE

4.1 Boot

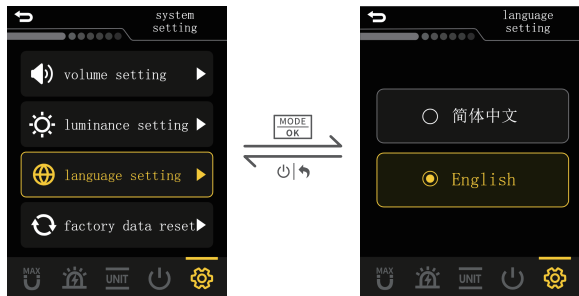
Short press  to turn on the device, then wait for the system to load, then enter the default system settings interface.



主界面

4.2 Language Settings

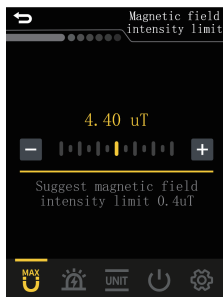
On the main interface, long press  to enter the system menu,   select system settings, short press **OK** to enter system settings,   select language settings, then short press **OK** to enter language settings,   select Chinese or English, short press **OK** to confirm.



4.3 Adjust the upper limit of magnetic and electric field strength

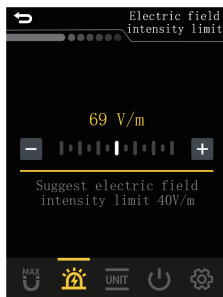
Magnetic field strength upper limit adjustment:

Long press  on the main interface to enter the system menu,   select the magnetic field strength upper limit setting parameter, short press **OK** to enter the magnetic field strength upper limit setting,   adjust the value, click   to save the setting and return to the previous page.



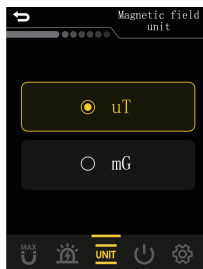
Electric field strength upper limit adjustment:

Long press  on the main interface to enter the system menu,   select the electric field strength upper limit setting parameter, short press **OK** to enter the electric field strength upper limit setting,   adjust the value, click   to save the setting and return to the previous page.

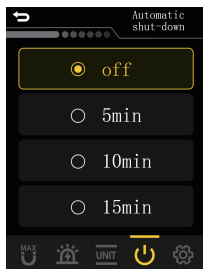


General settings and other function adjustments:

The corresponding function selections and opening are roughly the same as the above two points of operation navigation, and the step description is omitted.



磁场单位设置界面

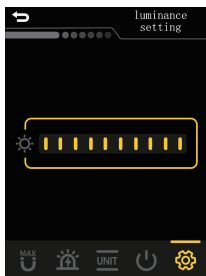
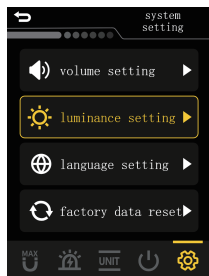


自动关机设置界面

4.4 Brightness adjustment

Brightness adjustment:

Long press  on the main interface to enter the system menu, ◀ ▶ select system settings, short press **OK** to enter the system settings, ◀ ▶ select brightness settings, and then short press **OK** to enter the brightness settings, ◀ ▶ adjust the brightness in real time, click  to save the settings and return to the previous page.



System settings and other function adjustments:

The corresponding function selection and opening are roughly the same as the above two points of operation navigation, and the step description is omitted.

5. QUICK START GUIDE

5.1 Rapid Measurement

1. Turn on the electromagnetic radiation detector. After the device is turned on, it measures the environmental electric field, magnetic field, and radiation in real time.
2. View the measurement data on the main screen interface, switch the curve page, visualize the data, analyze the data, and record the data.
3. Short press  to activate the Data Retention.
4. Long press  to enter the system menu. You can set the upper limit of the electric field and magnetic field and adjust other parameter settings.

5.2 Firmware Upgrade

- Turn off the device, press **OK** and  together, device will boot firmware upgrade interface. Use data cable to connect device and computer, enter the firmware update interface to upgrade the firmware.
- After entering the firmware update, the computer recognizes the U disk. Copy the firmware file directly to the U disk then it's done.
- Long press the power button in the firmware update interface can shut down device.

6. TROUBLESHOOTING

6.1 Unable to boot

Possible causes:

- Battery exhausted
- Loose or damaged battery connection

Solution:

- ① Check battery charge and charge if low
- ② If battery fails to charge or device still does not power on, try reinstalling or replacing the battery.
- ③ If the device still does not power on, please contact technical support.

6.2 Screen does not display

Possible causes:

- The screen backlight is off
- Display hardware malfunction
- System software abnormality

Solution:

- ①Check and adjust the backlight brightness settings according to the manual.
- ②Try restarting the device to ensure the system returns to normal.
- ③If the screen still does not display properly, the display may need to be repaired or replaced.

7.MAINTENANCE

Clean the outside of the device

- Frequency:**Clean once a month, depending on the usage environment.
- Method:**Use a soft cloth to gently wipe the surface of the device. Avoid using chemical cleaners, especially those containing alcohol or strong acids or alkalis, to avoid damaging the casing or screen.
- Note:**
 - Keep the device clean and remove dust around the buttons regularly to keep it in good condition.
 - Ensure that no liquid, dust or debris enters the device interface.

Check the battery and power supply

- Battery maintenance:**For device built-in battery, check the health of the battery regularly. Avoid complete battery discharge. It is recommended to charge regularly and avoid not using the device for a long time.
- Charging specifications:**Use the official charger to charge, avoid overcharging or over-discharging, and ensure that the battery is in the appropriate operating voltage range.
- Battery replacement:**If the battery shows excessive attenuation (such as failure to charge normally or extremely fast discharge), it should be replaced in time.

Storage and Carrying

- Battery maintenance:**Storage environment: The device should be stored in a dry and ventilated environment, avoiding high temperature, high humidity or drastic temperature changes. Avoid placing it in direct sunlight.

- **Carrying:** Be careful to avoid falling when using, especially when carrying. It is recommended to use a protective case or a special bag for carrying.

Software Update

- Regularly check whether the device has new firmware to update. The latest firmware can fix known bugs and improve device performance.
- When updating, make sure the operation steps are correct, use the officially released firmware files, and avoid power outages or other interference.

Restore factory settings

- If the device is abnormal or does not work properly, try to restore the factory settings. After restoring the settings, the device will clear all custom configurations and return to the initial state.
- For methods to restore factory settings, please refer to the user manual or contact the manufacturer's customer service.

8.CONTACT US

Any FNIRSI users who contact us with questions will receive our promise of a satisfactory solution, plus an extra 6-month warranty as a token of our appreciation for your support! By the way, we have created an exciting community, and we welcome you to contact FNIRSI staff to join.

SHENZHEN FNIRSI TECHNOLOGY CO.,LTD

Product Name: Electronmagnetic Radiation Detector

Model: ERD-10

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Tel: 0755-28020752

Service Email: support@fnirsi.com

Business Email: business@fnirsi.com

Website: www.fnirsi.com



<http://www.fnirsi.com/>

9.WARRANTY INFORMATION

※**This page is the basic warranty card. Please keep it.**

Thank you for choosing our company's products. The warranty period of this product starts from the date of sale. During the product warranty period, if the product is installed and used in accordance with the product manual and used in normal environment and conditions, and the fault is caused by defects in the original materials and processing, you can enjoy free repair services according to the content of this warranty clause. Please keep this warranty card properly as a warranty certificate. No reissue will be issued if it is lost.

The following situations will incur paid repair services

- 1.Unable to present the original valid warranty card.
- 2.Damage caused by improper installation not meeting product requirements, standards, or relevant specifications.
- 3.Damage caused by accessories in the installation environment not meeting product requirements, standards, or relevant specifications.
- 4.Damage caused by improper use, improper storage, unauthorized disassembly, or unauthorized repairs by the user.
- 5.Expiration of the warranty period.



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