Nuclear Radiation Detector Manual(TC-8500)

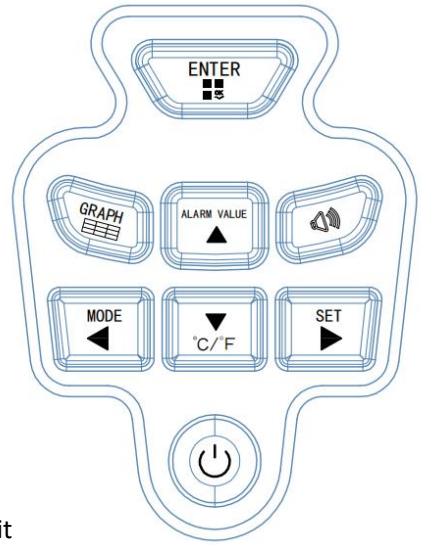
Overview

- ✧ This dosimeter uses a Geiger-Muller counter tube to measure radiation. When each ray passes go through the GM tube and causes ionization, the GM tube generates a detection current pulse, and each pulse is detected by the electronic tube circuit and recorded as a count. , the displayed value of this dosimeter is the count value in the mode you selected.
- ✧ Due to the random nature of radioactivity, the count value detected by the dosimeter varies from minute to minute. It is more accurate to take the readings within an average period of time, and the longer the interval is, it is more accurate the average counts.
- ✧ The detector is used to measure β,γ and X-ray radiation, it is optimal for measuring small changes in radiation levels, and has high sensitivity for most commonly used nuclides.

Applications

- ✓ Safety organizations, such as police and fire brigade, emergency response organizations environmental protection organizations, hazardous materials disposal, metal recycling companies, mines, etc, have a higher chance of being exposed to various radioactive substances.
- ✓ Ports, wharves, airports, etc, because of the large flow of people and various import and export goods, especially involving entry and exit personnel, the probability of radiation pollution is high.
- ✓ Hardware factories, ceramic factories, hospitals, research institutions, laboratories, drug administrations, universities, etc., they have a higher chance of being exposed to various low-intensity or leaking radiation.
- ✓ Private individuals who are concerned about the quality of the living environment and personal safety, such as someone who wants to find the surrounding environmental pollution at home, food, water, etc. (various accidents or terrorist attacks, etc.).

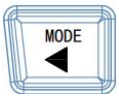
Button function



Switch button: short press to turn on or off

Enter button:

- Exit to the main interface
- The parameter setting interface can be pressed to exit
- Press to exit the historical trend interface
- The historical data interface can be pressed to exit

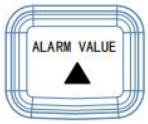


Mode button:

- Short press to switch between ionization mode or electromagnetic mode
- The parameter setting mode is adjustable
- Pages can be shifted in the historical trend interface
- Pages that can be shifted in the history interface

Settings button:

- Short press enter function parameters
- The parameter setting mode is adjustable
- Pages that can be shifted in the history interface
- Pages that can be shifted in the history interface



Alarm value setting button:

- Short press to enter the alarm value setting, press this button again to increase the alarm value
- Pages that can be turned up in the historical trend interface
- Pages that can be turned up in the history interface
- Select the parameter item up on the function parameter interface

Temp. unit conversion button:

- Short press to switch ℃ or ℉ units
- Pages that can be turned down in the historical trend interface
- Select the parameter item down on the function parameter interface

Historical trend button：

- Short press to enter the historical trend interface

Audible alarm button:

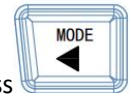
- Short press to turn on or off the alarm sound

Operation Description

Power on or off:

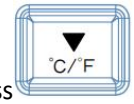
Short press  button to switch on/off

Lonization mode and electromagnetic mode conversion:

Short press 

to switch lonization mode and electromagnetic mode

Temp. unit conversion:

Short press 

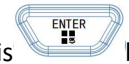
to switch℃/℉

REC data interval time setting:

During automatic measurement press the button 

once can enter the function parameter interface， press 

to select the time interval modification item, at this time,you can press 

this button to select the desired [recording interval],When finished, press this 

button to return to the main interface

History record query:

Press 

once， and press 

enter<History record>， press 

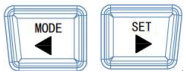
to shift pages,press 

to check the record pages.

Function parameter setting entry steps:

Press 

once, enter <function parameter>,press 

按 to move and select the corresponding parameter item， press 

to select the modified parameter press 

to save and exit to the main interface.

Record interval:

Press 

to select the recording interval setting press 

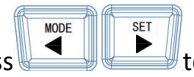
to select 10 s'/30 s'/60 s'/3 min/10 min/30 min/1 h recording interval, after selection,press 

to save and exit to the main interface

Alarm volume:

Press 

to select the alarm volume setting

Press 

to select 1/2/3/4/5 volume

Change time:

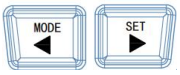
Press  to select change time setting

Press  to select the date and time digits, press  to increase or decrease the value. After completion,press  to save and exit to the main interface.

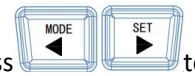
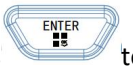
Language switch:

press  to select language switch settings, press  to switch between Chinese/English. After completion,press  to save and exit to the main interface

Delete data:

press  to select the delete data setting, press  to select yes or no.After completion,press  to save and exit to the main interface

Auto shutdown time:

press  to select the shutdown time setting, press  to select 10 min/30 min/1 h/2h.After completion,press  to save and exit to the main interface

Technical Specifications

Detector:	**Energy compensated GM tube**
Detection ray:	**β -rays , γ -rays , X-rays**
Energy Range:	**20kev～3.0mev≤±30%（137Cs-）**
Flexibility:	**80cpm/μSV/（Co-60）**
Testing accuracy:	**0.01μSV/h**
RT measurement range:	**0.00-10mSv/h**
Cum measurement range:	**0.00usV/h-999.9Sv**
RT accuracy:	**≤10%**
Avg accuracy:	**≤3%**
Record groups:	**1000 groups**
Supply battery:	**5V/USB 3.7V lithium batter/2200mAh**
Battery service life:	**2-3 hours**
Temp.measurement range:	**20-60℃**
Temp.measurement resolution:	**0.1%**
Temp.accuracy:	**±2℃**
Humidity measurement range:	**0～100%**
Humidity accuracy:	**±3%**
Humidity resolution:	**0.1%**
Screen:	**3.2 inch full-color screen (320*240)**
Net Weight:	**750g**
Size:	**222*80*46mm**

Common problem analysis

1. Inaccurate data

- The battery power is too low to start the core components to work here is a problem with the core components

2. Doesn't boot

- The battery is dead or damaged,use the USB port to supply power. If the machine can be turned on and the battery level in the upper right corner changes, then the battery is dead if there is no change, only the OK icon will be displayed, it means the battery is damaged.
- The +/- polarity of the battery is reversed. It should be noted that the one end of the battery without the protruding contact point is the "." pole, and the end with the protruding contact point is the "+" pole.