

## R500 Radiation Scanner



*High-sensitivity sensor*

*Detect  $\alpha$   $\beta$   $\gamma$  X radiation*

*Computer analysis software*

### **Description**

R500 radiation scanner has awarded the creative design by AMT due to its excellent design. The R500 has adopted the nuclear radiation sensor standards as recommended by the American Bureau of Standards and it has a 2 inch large flat high sensitivity sensor. R500 radiation scanner can detect  $\alpha$   $\beta$   $\gamma$  and x-rays intensity. Range of measurement is from  $0.01\mu\text{Sv/h}$  to  $2000\mu\text{Sv/h}$ .

R500 radiation scanner meet the ergonomics design, special designed grip, easy to grasp, the palm will not be polluted. With a correction factor function, customer can self calibration accuracy; Patent algorithm, it owns the background value stability as well as fast response, meantime improved sensitivity, Protection from electromagnetic interference using anti-saturation circuitry. Calibration of this unit can be done remotely so there is no need for direct contact at the time of calibration. The R500 has CE certification, EMC certification and is manufactured to ISO9001 quality standards.

## Application

Model R500 can be easily used in restaurants, hotels, home, public places, laboratories, power plants, quarries, emergency rescue stations, metal treatment plants, underground oil fields, and oil pipeline equipment, environmental protection, police stations and other departments. It can also be used to:

Inspect food pollution

Inspect environmental pollution

Inspect radioactivity of porcelain tableware and glass etc

Inspect radioactivity of materials architecture such as stone etc

Inspect radioactivity of underground drilling pipes and equipment

Inspect harmful radiation in personal precious property and jewelry

Inspect X-ray intensity of Medical and industrial X-ray instrumentation

Inspect radon radiation and cesium pollution in the surrounding environment

Inspect landfill and garbage dumps in danger of nuclear radiation contamination

## Product features

Large end-window GM detector

Large LCD with bar graph display

Types of measured Ray:  $\alpha$   $\beta$   $\gamma$  and x ray

Patent background tracking algorithm, the realization of high stability and fast response

Ray selector switch: combined selection of  $\alpha$   $\beta$   $\gamma$  and x ray

Display units complete: cps, cpm, Sv/h, rme/h

Stain-proof sets, as a special, avoid people and detector polluted

Telescopic distance measuring nuclear radiation to avoid bodily harms (matching)

Optional wired 1km transmission RS485 distance

History data can be uploaded to PC

Optional PC 1 with 4 or 1 with 8 system

## Features

### 1. Slide cover



By opening the slide you are able to detect  $\alpha$   $\beta$   $\gamma$  and x-rays



By closing the slide the sensor is dual protected and can detect gamma and x-rays

## 2. Stain-proof sets



With stain proof sets, even if contacting with materials polluted by radiation there is no need for concern just replace the stain-proof sleeve on the R500

## 3. Telescope link



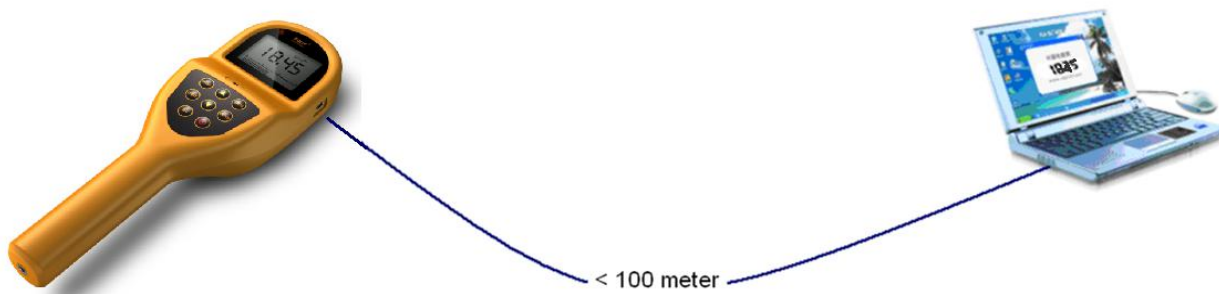
Telescope link can extend to 1.5 meter maximum to remotely detect radiation rays and protect humans from potential injuries



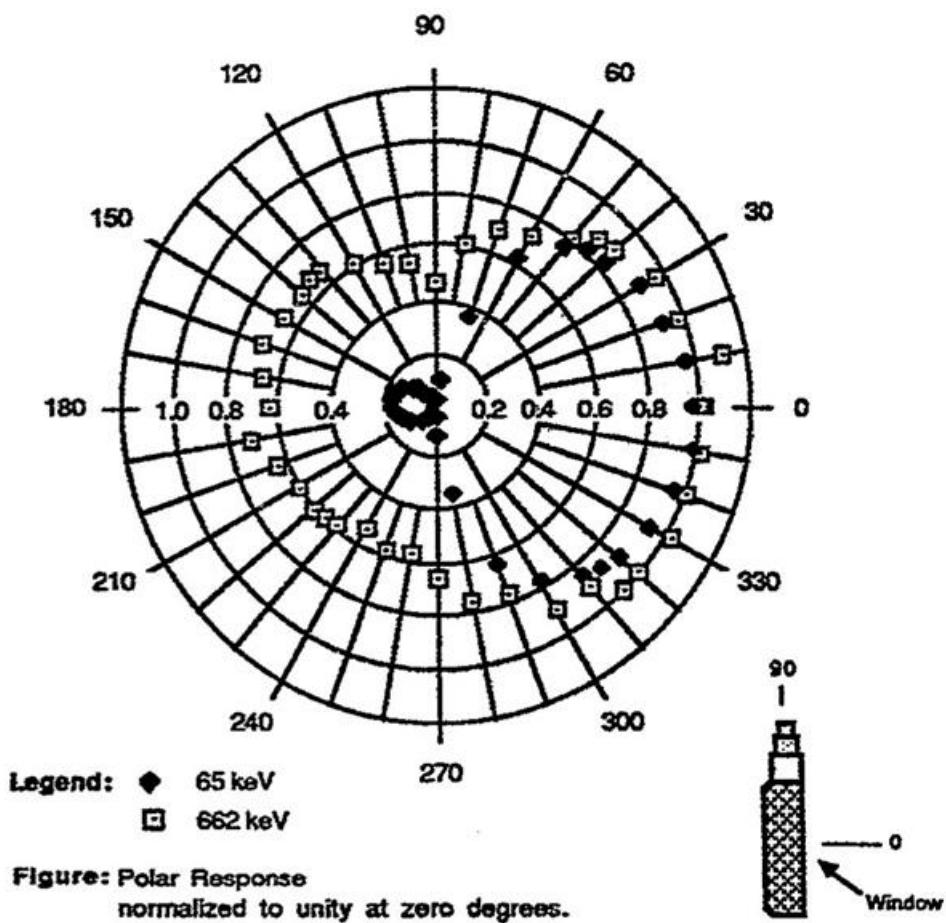
The point angle of the telescopic rod can be randomly adjusted

## Specifications

Types of measured ray	$\alpha$ $\beta$ $\gamma$ and x ray( Ray selection switch )
Range	Radiation dose rate:0.01 $\mu$ Sv/h-2000 $\mu$ Sv/h; 0.001mrem/hr-200mrem/hr Impulse dose rate:0-9999cps Radiation dose accumulation:0.001 $\mu$ Sv-999Sv
Gamma sensitivity	1 $\mu$ Sv/h $\geq$ 7cps (Cs137)
Energy response	20keV- 3MeV ( energy compensation selection switch)
Sensor	Large GM tube effective diameter 45mm MICA window density1.5-2.0mg/ cm <sup>2</sup>
Output port	USB Port (with special USB extend cable to opt which can extend to 100M)
Background value stability	$\pm$ 0.02 $\mu$ Sv/h (8 hours)
Display	Large LCD with bar graph display
Efficiency	Pu239( $\alpha$ )about40%;Am-241(5.5MeV $\alpha$ )about36%;Sr-90(546KeV,2.3MeV $\beta$ max)about65%;C-14(156KeV $\beta$ max)about8%;Bi-210(1.2 Me/V $\beta$ max) about64%
Anti saturation	Exceed the maximum reading of up to 100 times
Calibration	Calibration factor adjustable
Alarm function	Audible and visual alarm, alarm value setting fully adjustable default: 5 $\mu$ Sv/hr
Precision	$\pm$ 15%
Storage	Manually or automatically
Software	Transmit data in real-time to computer for displaying analyzing and recording
Influence of the electromagnetic wave	Negligible
10 times geomagnetic field influence	None
Working temperature	-20 $^{\circ}$ C to 60 $^{\circ}$ C
Storage temperature	-30 $^{\circ}$ C to 75 $^{\circ}$ C
Working humidity	<90%R.H (condensate)
Atmospheric pressure	75kPa-110kPa
Weight	450g
Dimension	L300mm, W90mm, H40mm
Power	3 AA battery Continuous operation for up to 30 days
Quality certifications	European CE, ISO9001
Optional	A multi PC software (optional: 2 units, 4 units, 8 units, 16 units.....)



Data is transmitted in real-time to computer for displaying and analyzing



Angle response data

Option: Telescopic link



Model:	MP-4
Section number	4
Max pipe diameter	Φ25.8mm
Max height	153cm
Reduced height	49cm
weight(kg)	0.32kg

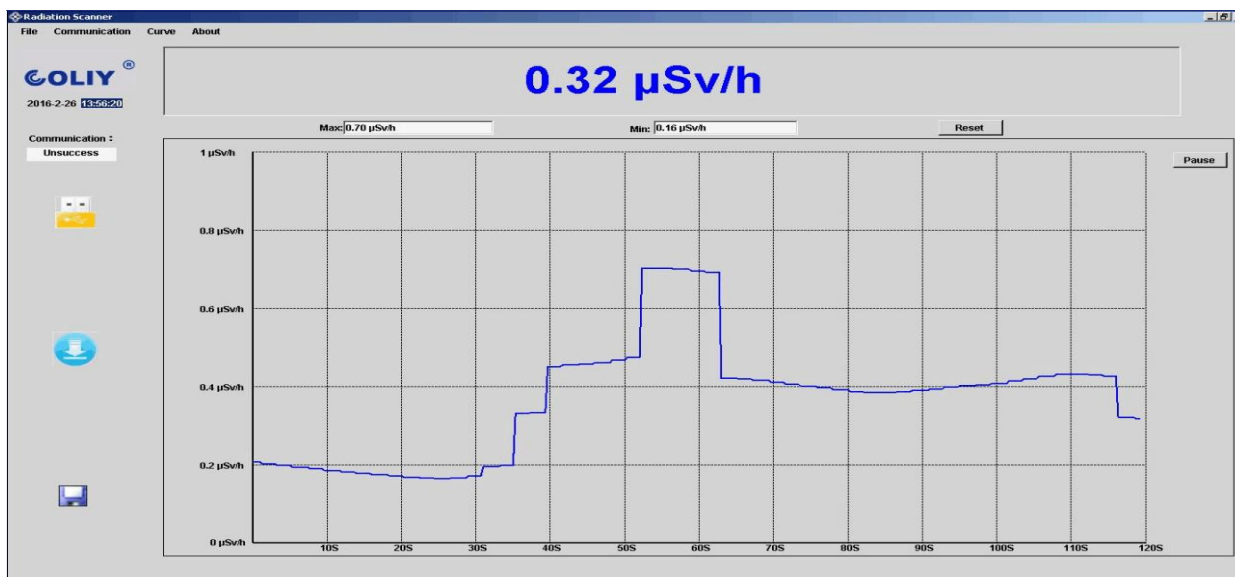
Use: distance-detecting nuclear radiation to avoid human radiation exposure. The point angle of the telescopic rod can be randomly adjusted.



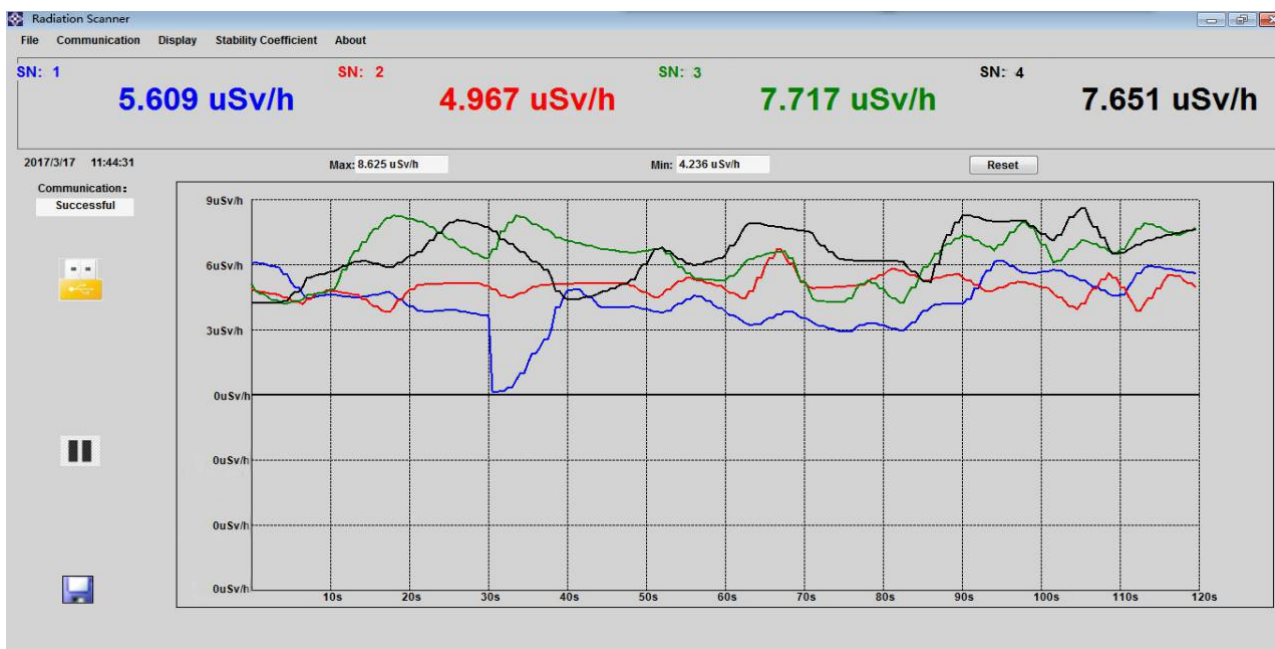
Consumables: Stain-proof sets

Data is transmitted in real-time to computer for displaying and analyzing

## Software analysis



## A multi PC software



## Selection description

The most popular package
NO.1:R500 +Stain-proof sets+PC software
NO.2:R500+Stain-proof sets+Telescopic link+PC software
NO.3:Multiple R500-RS485+PC software (optional: 2、4、6、8、16 hosts)

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