

# Inspector/EXP

Survey/Contamination Instrument



The Inspector is a small, handheld microprocessor-based instrument that offers excellent sensitivity to low levels of alpha, beta, gamma, and x-rays. The digital readout is displayed with a red count light and a beeper sound with each count detected. Other features include an adjustable timer and external calibration controls.

The Inspector EXP was designed for the requirements of emergency response personnel. It has the same valuable features, small size, and quality of the Inspector, but instead of the built-in detector, it has the added versatility of an external probe with a convenient carrying case that attaches to a belt or grommet.

## Specifications

### Inspector (Internal tube only)

- Halogen-quenched, uncompensated GM tube with thin mica window, 1.4-2.0 mg/cm<sup>2</sup> areal density.
- Effective diameter of window is 45mm (1.75in.).
- Radiation symbol on front label marks the center of the detector.

### Inspector EXP (External probe only)

#### RAP-RS1 Probe:

- Same GM tube as Inspector. Anodized aluminum housing with coated, black foam grip.
- 500-volt power supply is in the probe head.
- Size - Approx. length: 22.2 cm (8.75in.) Diameter: 7cm (2.75in.)
- Connector – Amphenol 31226 twinax connectors

#### Display:

- 4 digit liquid crystal display with indicators.

#### Averaging periods:

- Display will update every 3 seconds. At low background levels, the update is the moving average for the past 30-second time period. The timed period for the moving average decreases as the radiation level increases.

#### Operating Range:

mR/hr - .001(1μR) to 100 mR/hr  
 μSv/hr - .01to1000  
 CPM – 0 to 300,000  
 CPS – 0 to 5000  
 Total/Timer – 1 to 9,999,000 counts

#### Accuracy:

mR/hr ± 15% from 0 to 30 mR/hr.  
 mR/hr ± 20% from 30 to 50 mR/hr.  
 CPM ± 15% from 0 to 100,000 CPM.  
 CPM ± 20% from 100,000 to 300,000 CPM.  
 (Referenced to Cs-137)

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Sensitivity to Common Isotopes: Typical GM tube efficiency for 4 pi geometry at contact.

Beta Isotopes	Energy	Efficiency
C-14	49 keV Avg. 156 keV	5.3%
Bi-210	390 keV Avg. 1.2 MeV Max.	32%
Sr(Y)-90	546 keV and 2.3 MeV	38%
P-32	693 keV Avg. 1.7 MeV max.	33%
Alpha		
Am-241	5.5 MeV	18%

Gamma Sensitivity: 3500 CPM/mR/hr referenced to Cs-137. Smallest detectable level for I-125 is .02 µCi at contact.

Timer: Can set 1 minute sampling periods from 1 to 10 minutes. 10 minute sampling periods 10- 60 minutes. 1 hour sampling periods from 1 to 24 hours.

Count Light: Red LED flashes with each radiation event.

Audio Indicator: Internally mounted beeper (can be switched off for silent operation).

Outputs: Dual miniature jack drives CMOS or TTL devices: count to computer or datalogger. Submini jack input allows for electronic calibration.

Anti-Saturation: Meter will hold at full scale in fields as high as 100 times the maximum reading.

Power Requirements: One 9-volt alkaline battery. Battery life is min. 200 hours at normal background radiation levels.

Temperature Range: -10°C to 50°C (14°F to 122°F).

Weight: Inspector: 301.4 grams (10.6 oz.) without battery. Inspector EXP: 420 grams (1 lb. 15.6 oz.) without battery.

Size: 150 x 80 x 30 mm (5.9 x 3.3 x 1.2 in.).

Utility Menu: The Utility Menu offers several options accessible by holding down the + button while turning the instrument on.

- 3 second (fast response)
- Switches from mR/hr and CPM to µSv/hr and CPS
- Reset the cal factor to 100.
- Probe adjustment settings.
- Adjust the CAL factor.
- Reset all setting to original factory setting (default).

Includes: Carrying Case, 1 year limited warranty and CE mark. Cable for Inspector EXP: 42-inch Beldon 9853 with Amphenol 31226 twinax.

Options: STAND and Wipe Test Plate.



**"Extreme Boot"  
Protective Case**



**Wipe Test  
Plate**

