

# S.E. International Digital Radiation Detector **Monitor 200**



The Monitor 200 measures alpha, beta, gamma, and x-rays. Its digital display shows readings in your choice of CPM, CPS,  $\mu\text{Sv/hr}$ , mR/hr, or in accumulated counts. It has a digital, easy to read backlit display, a red count light, and a beeper that sounds with each count detected. This unit also includes an adjustable timer and a loud, customizable alert.

With the Free Radiation Alert Observer BLE app from the Google App Store, you can display the readings from your detector, label sample readings and descriptions, take timed counts, append GPS data and send your saved survey file. Alarms set on the instrument will also activate on your Android device. The Free Observer USB software (Windows® only) reads in Total Counts, CPM,  $\mu\text{R/hr}$ , mR/hr, CPS,  $\mu\text{Sv/hr}$ , and has the ability to collect and log data, set alarms, set timed counts, set the calibration date and settings, and generate reports.

## Applications & Uses

- Checking accelerator & x-ray shielding for leakage
- Industrial gauges containing Cesium-137
- Locating Sources
- Personal protection
- General surveying

## Detector

Halogen-quenched GM tube with thin mica end window. Mica window density 1.5-2.0 mg/cm<sup>2</sup>. Effective window diameter is .360 inch. Side wall is .012 inch thick.



## Energy Sensitivity

1070 CPM/mR/hr referenced to Cs137. Detects alpha down to 2.5 MeV; typical detection efficiency at 3.6 MeV is greater than 80%. Detects beta at 50 keV with typical 35% detection efficiency. Detects beta at 150 keV with typical 75% detection efficiency. Detects gamma and x-rays down to 10 keV typical through the window, 40 keV minimum through the case. (Ref to Cs137)

## Built-in Efficiencies

None

## Averaging Periods

None

## Operating Range

mR/hr – .001 (1 $\mu\text{R}$ ) to 200 mR/hr  
 $\mu\text{Sv/hr}$  – .01 to 2000  
 CPM – 0 to 235,400  
 CPS – 0 to 3923  
 Total Counts – 1 to 9,999,000 counts

## Accuracy

Referenced to Cs137  
 Typically  $\pm 15\%$  from factory,  $\pm 10\%$  with NIST Source Calibration NIST Calibration Additional

## Anti-Saturation

Readout will OVERRANGE in radiation fields as high as 100 times the maximum reading.

## Selectable Alert Set Range

mR/hr .001 – 100 and CPM 1 – 350,000. Pulsating beeper sounds the alert. Adjustable alert levels are used for mR/hr / CPM, and  $\mu\text{Sv/hr}$  / CPS. 70db @ 1m. Alarm will sound when in Timer Mode when set alarm threshold is reached.

## Display

Graphic LCD with Backlight.

## Outputs

USB for use with Free Observer USB Software for PCs  
 Bluetooth for use with the Free Observer BLE App for Android



## Audio Indicator

Sounds with each count (can be switched off for silent operation)

## Count Light

Red LED flashes with each count

## Power Requirements

USB Power or Two (2) AA alkaline batteries (included). Approx. 800 hrs @ background.

## Temperature Range

-10° to +50°C (14° to 122°F)

## Humidity

10% to 70% Non-Condensing.

## Size

140 X 68 X 33 mm (5.5 X 2.7 X 1.3 in.)

## Weight

181 g (0.4 lbs.)

## Includes

Carrying Case, Xtreme Boot, Lanyard, Stand, Batteries, Mini-USB Cable, Observer USB Software Download, Observer BLE App Certificate of Conformance

## Options

Water Resistant Case, NIST Calibration

## Limited Warranty

1 year limited warranty