

# SENTRY

*Alarming Dosimeter & Ratemeter*

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**RADIATION**<sup>®</sup>  
A•L•E•R•T  
QUALITY HANDHELD DETECTORS

The Sentry is a Personal Alarming Dosimeter and Rate Meter that measures gamma and x-ray radiation and provides dose rate monitoring in a small rugged package. The Sentry works with the Sentry Software, which can assist in tracking exposure to generate incident reconstruction and analysis.

The Sentry employs two bright pulsating LEDs, an Audio Alert, and/or a Vibration Alert for the selectable alert levels. Coupled with the software, The Sentry can provide dose measurement, dose rate measurement, and dose history and also enables you to easily set the alert to your desired levels for dose and rate.

## User Interface

### LEDs

Located on the left of the endpanel are two LEDs labeled Dose and Rate. The LED labeled Dose will light when the Dose warning or alert is going off. The LED labeled Rate will light when the Rate warning or alert is going off.

### Switches

The Sentry has two switches on the top of the unit. The first, located near the center of the end panel, controls the power (ON/OFF), the audio alarm (Audio only), or the vibration alarm (Vibrate only).

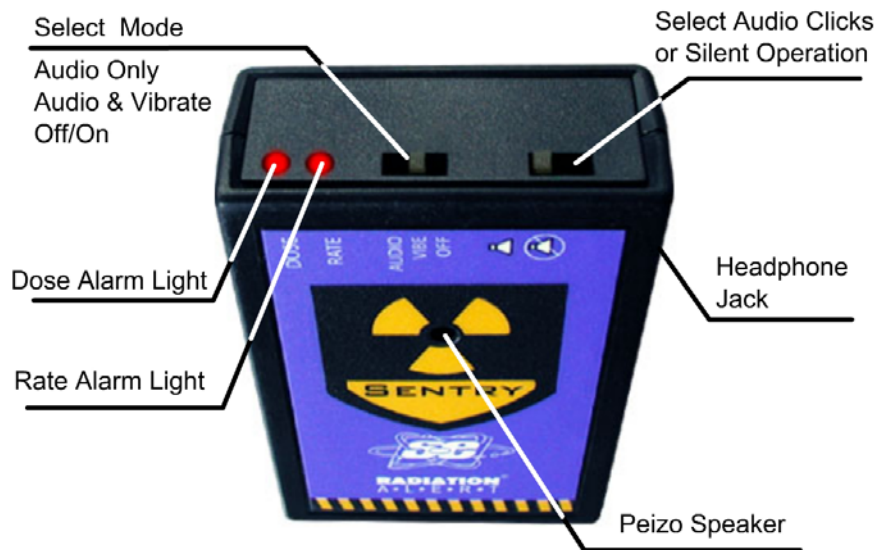


Fig. 1 Sentry Button and LED Functions

The second switch, located on the right of the unit, controls the audio clicks that sound with every count. It has two icons labeling the positions. Clicks on. Clicks off. This switch is also used to turn off active alerts and warnings.

### Alert Modes

#### Audio and Vibrate Mode

When The Sentry is initially switched on, the Sentry will conduct an alarm test where you will hear one high to low alert and feel a vibration.

The audio alert consists of two stages.

1. The first stage is a warning where the audio alert pulsates from high to low with a 1 second delay between them accompanied by a pulsating vibration while the LED flashes to indicate a Rate or Dose Warning. The warning is triggered when you are approaching the threshold that you have set for your alert.
2. The second stage of the alert sounds when you have reached the settable threshold. The full alert is a pulsating alert with no pause accompanied by a pulsating vibration while the LED remains solid. The LED indicates a Rate or Dose Alert.

To turn off the alert, change the position of the audio clicks switch. After leaving the field detected, the alert resets itself and will reset to alert the next time you enter a field corresponding to the preset alert and warning levels. If the unit is set to the Audio and Vibrate Alert mode, users can turn off the audio portion of the alert by switching the mode switch to “vibe”. The vibration alert and the LED will continue without the audio alert.

## Vibrate Mode

The vibrating alert consists of two stages.

1. The first stage is a warning where the vibration and the LED pulsates. The LED indicates a Rate or Dose Warning. The warning is triggered when you are approaching the threshold that you have set for your alert.
2. The second stage of the alert sounds when you have reached the settable threshold. The full alert is a pulsating vibration notably faster than the warning. The LED indicates a Rate or Dose Alert.

## Sentry Software

The Sentry Software enables the users to change the alert levels for both dose and rate, set the time and date, as well as download and set the parameters for your accumulated dose data.

### Connecting The Sentry to a PC

To connect the Sentry to a PC, open the battery door and locate the 4 pin header. Attach the provided cable as shown to the header connector and the other end to your computers serial port (A USB-Serial adapter can be used if your computer does not have a serial port). Launch The Sentry Software and click "Retrieve Current Settings". This will populate the fields with the current Sentry alert and time/date settings, as well as the calibration factor.

### Changing your Default Alert Levels

When you open The Sentry Software, the “Settings” tab opens by default. To change the alert levels on The Sentry, click into the field containing the setting you would like to change. After you have changed them to your desired setting, click "Update with New Settings" to update The Sentry.

By putting a 0 (zero) in the fields for warning or alarm, it will disable that warning or alarm. *Note: Do not set the warning value to a higher value than the alert.*

### Calibration Factor

If the factory defaults of The Sentry do not meet your needs, you can adjust the deadtime and the calibration factor by inputting your new settings in the Calibration tab.

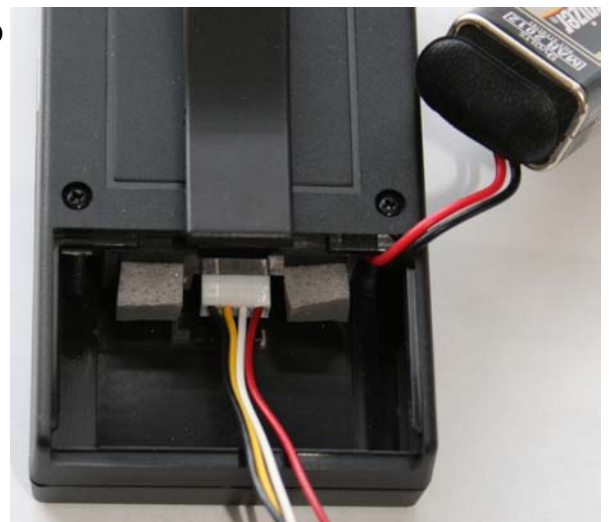
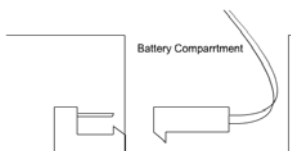


Fig. 2 Connect the cable to the header connector located inside the battery compartment.

## Data Logging Frequency

To download the accumulated dose data, click on the "Data Log" tab. The data will be shown based on the "Data Logging Frequency" setting.

## Changing the Time and Date on The Sentry

To display the current date and time setting for The Sentry, click "Retrieve Date and Time".

To set the date and time of The Sentry to the current date and time of your PC, click "Set Date and Time to PC" and then click "Update with New Settings".

You can also set the date and time to any desired setting by selecting the date and time you desire in the available date and time fields and then clicking "Update with New Settings".

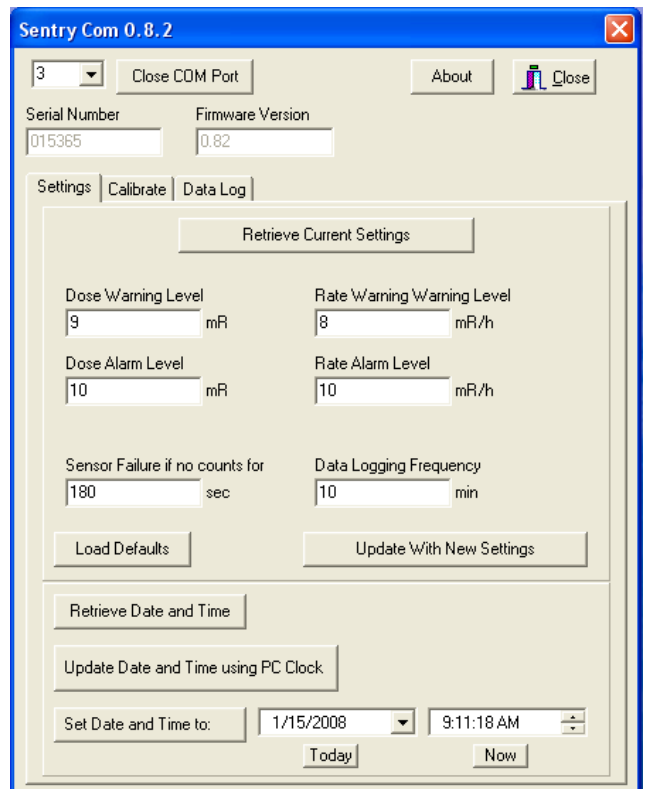


Fig. 2 Sentry Software Screen Capture

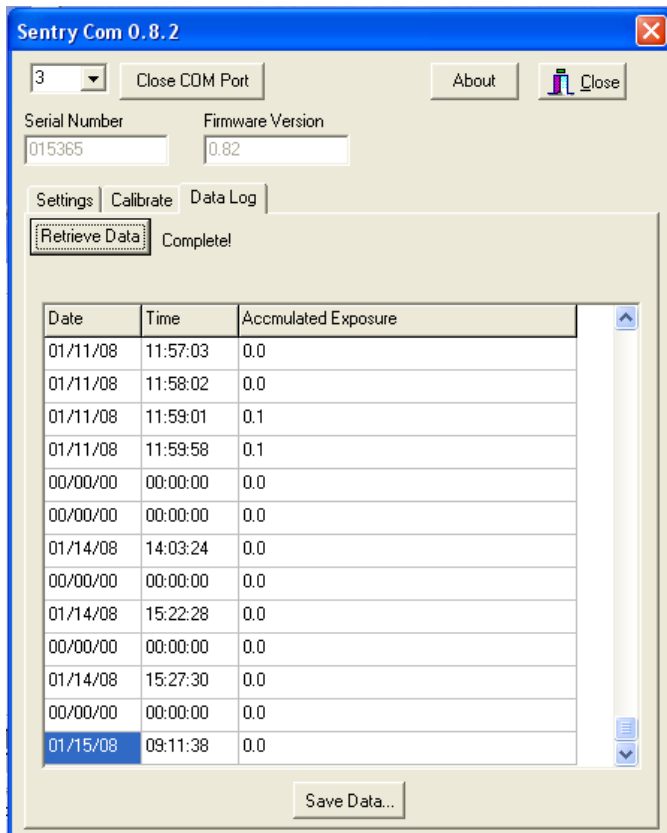


Fig. 3 Sentry Software Screen Capture

## Retrieving Accumulated Dose Data

The Sentry allows the user to download and log data that has been accumulated in The Sentry's memory. To download your data, connect to The Sentry as described in "connecting The Sentry to the PC" and click on the "Data Log" tab, then click "Retrieve Data". A progress bar will show you the time taken to download your data. After the table in the Data Log tab has been populated, you can click "Save Data" to save it to your computer. Date values of 00/00/00 indicate a power cycle of the unit (turned off then on).

## Specifications

### Detector:

Un-Compensated Peanut GM Detector

### Dose Alarm Default:

500 mR

### Rate Alarm Default:

.5 R

### Alarm Specifications:

< 90 db @ 1 ft. and Vibrating Alarm with corresponding LEDs.

### Power:

9 Volt Battery provides 1500 hrs @ background

### Size:

3.8 x 2.4 x 1 in (96.5 x 70 x 25.4 mm)

### Weight:

4.7 oz.

### Temperature Range

-10° C to +60° C

### Outputs

3.5MM Headphone Jack

### Warranty

1 year limited warranty

### Software Requirements

Windows based OS with Serial connector or USB-Serial Adapter

## Accessories

### Carrying Case (included)

The Sentry comes with a Vinyl carrying case with a clear end window for easy access to the switches. The carrying case comes equipped with a belt clip for easy, hands free use.

### Xtreme Boot for the Sentry

The Xtreme Boot for the Sentry offers a rugged rubber overlay that holds The Sentry snugly and safely and protects it from potential drops. The boot has a belt loop for easy, hands free use.

