

# Rad-D

## Portable Radiation Monitor



### SNM DETECTOR FOR CONTAINER AND CONVEYOR BELT PACKAGE INSPECTION

The **Rad-D** is a fixed-position radiation detector that is used to monitor doorways, driveways, or loading docks. It can inspect packages or luggage on conveyor belts; and it can be integrated with an X-ray machine or a metal detector to increase the kinds of dangers detected. The rad-D can also be easily connected to an existing security system – to add radiation to the other types of alarms. The rad-D is small. It can be attached to walls, light poles, convey-or belts, or X-ray machines. And because it is small, it doesn't affect the how of vehicles or pedestrians under inspection. Other, similar devices need large, fixed areas and concrete footings to mount their systems and require traffic (vehicles or people) to be forced through a fixed inspection corridor. A rad-D system can include up to four detectors – operating simultaneously, each up to 150' away from the display electronics. The rad-D is designed to integrate into existing security networks, using either a serial communications link or a Bluetooth wireless link that can communicate with a PC up to 300 feet away. With four detectors, an operator can monitor four different doorways (or driveways, or conveyor belts, etc.) anywhere in your facility. When the rad-D alarms, it can trigger active responses such as blockades or halting conveyor belts. There are two different types of rad-D detectors available: Gamma, or Neutron. The standard radiation detector searches for gamma and X-ray radiation and can be configured as either omni-directional or

#### Flexibility, functionality, and affordability make the rad-D a practical solution for use in:

- Airport, rail and bus terminal security
- Shipping and receiving points / conveyer operations
- Security check-points in key government and commercial facilities
- Border check-points recreational events, convention centers

uni-directional to ensure that the unit is triggered only by what is directly in front of it, not by what is in the next traffic lane or on a parallel conveyor belt. The other type, a neutron detector, is an important tool to detect the transport of illicit nuclear weapons. Many users configure a standard radiation detector and a neutron detector to cover the full spectrum of radiation. Like the mini rad-D, the rad-D is designed to be extremely easy to use and understand. It provides the operator with an easy-to-interpret single digit read out of a "1" to a "9" to show the strength of the detected radiation. The rad-D also shows the actual count of photons or neutrons. It automatically calibrates itself to the natural background radiation environment to maximize its detection sensitivity.

# Rad-D

## FEATURES

- 24/7 Operation
- No maintenance required
- Easy to use – no special training
- High sensitivity
- Automatic background compensation to minimize false alarms
- Fast detection - < 1 second to complete package inspection on a conveyor belt system
- Transportable with LAURUS Systems universal mounting bracket
- Available with lead shielding for use with x-Ray machine conveyor belts

## SPECIFICATIONS

<b>Function</b>	Gamma Gamma/Neutron detection
<b>Detector</b>	Gamma: 2" X 3" (51 x 76 mm) NaI; doped with Thallium Neutron: 253 Cylindrical He3
<b>Energy Range</b>	40 keV to 3000 keV (gamma)
<b>Sensitivity</b>	Will detect 1.0 uCi of Cs137 at 1.5 meters from the face of the detector
<b>Power</b>	Regular 120VAC
<b>Response Time</b>	< 1 second
<b>Display</b>	"1" through "9" LED readout Counts Per Second (gamma)
<b>Notification</b>	Audio/LED – 3 µR/h (.03 uS/h) above background
<b>Audible Alarm</b>	92+ dBA at 24 inches (61 cm)
<b>Calibration</b>	Automatic
<b>Calibration Biasing</b>	16-position switch; allows manual setting for operation in high-radiation environments
<b>Versions</b>	Shielded version available for use with X-Ray scanning machines
<b>Size</b>	Detector: 5" Dia, 17.5" length (13 x 45 cm) Control Unit: 6.75" x 4.2" x 3" (17 x 11 x 8 cm)
<b>Weight</b>	Detector: 27.5 lb (12,5 kg) Control Unit: 1.5 lb (.7 kg)
<b>Environment</b>	-10°F - 122 °F (-23° - 50°C)

