

RC1000

Vehicle Radiation Detection Systems



The **RC1000** Radiation Detection System is RadComm's entry level radiation monitoring system. It is specifically designed to detect radioactive material contained in a moving vehicle loaded with waste, scrap, or recycled material. Its aim is to provide radiation detection for the waste handler who wants a system that is very easy to use and can be manually adjusted to select the best sensitivity level depending on the application. It outperforms the competition in terms of durability and detector sensitivity.

The **RC1000** is shown here in single and dual detector configurations which are mounted at vehicle weigh scales. The **RC1000** is extremely flexible when it comes to detector configurations. The line of detector sizes can be made to fit virtually any application; from large feeders to small vehicle scales, to conveyor infeed/outfeed systems, transfer stations, and small or large sorting areas.

The **RC1000** system provides all the necessary information and warning indicators to allow any waste handling, scrap or recycling operation the opportunity to maximize their level of radiation detection capability with minimal operator training.



Prohibit radioactive materials from entering your site.

Prevent radioactive contamination of your waste, recycling, scrap, product and personnel with the RC1000 family of vehicle radiation detection systems

RC1000 Specifications

Key System Components:

- Detectors – 1 or 2 per system (depending on configuration) and interconnection cabling
- Display Console
(Note: Stands, footings, conduit and civil work not included in the system quotation)

RC1000 DISPLAY CONSOLE includes:

1 unit per system

- Small wall-mounted display console:
3.75" wide x 6.25" long x 2.25" deep / 9.5cm x 15.9cm x 5.7cm
- LCD Touch screen display:
2.25" x 2.25" / 5.7cm x 5.7cm
- Console includes **RED** flashing light and **AUDIO** alarm signals
- Easy to follow menu outlines and descriptions
- Main display screen contains 13 items of information including: System status, counts per second, background setting, alarm setting, sensitivity setting, etc.
- Built-in automatic non-radioactive self-test – touch key activated
- Learn background – automatically computes background radiation level on system start-up
- Three sensitivity settings – **Low, Med, High** (manually selected)
- Audio signal will beep at different rates to indicate the radiation level above the sensitivity setting i.e. the faster the beep the higher the radiation level
- Alarm radiation levels displayed in Counts Per Second (cps)
- System Fault: If the system loses communication for 5 seconds the display will show "**System Fault**". Red light will be on and the audio will "beep" for 5 seconds every 30 minutes
- Zero Counts: If the total counts of a specific detector are "0", a Red light will be on and the audio will beep for 5 seconds, indicating the problem
- Detailed, easy to follow detector and system configuration menu and operators manual are provided



Each RC1000 detector assembly consists of:

- Nema 4 (IP64) weatherproof detector case
- Premium grade PVT scintillator detection medium
- Low density Shield on face of detector panel
- Dual layer of thermal protection
-20° F to 150° F (-30°C to 65°C)
- 95% Humidity rating (non-condensing)
- High signal to noise ratio: **2" (5cm)** diameter PMT
- High-speed microcontroller
- Dual-input high speed pulse processor
- Low noise designed hardware – laboratory quality components
- Rugged component design for extra reliability and long life
- Each detector weighs approximately 100-200 Lbs (45-90 kg) depending on size

Performance Specifications:

Response: Will detect a 135 KBq (5 µCi) Cs-137 point source at 1 meter from the face of the detector (the radiation exposure level is comparable to a 75mm x 150 mm 3.7GBq (100 µCi) Cs-137 Lead sealed source buried in 0.7 g/cm³ of scrap metal.

Detection: The RC1000-2 Radiation Detection System has been designed to detect low-level radiation in vehicles carrying all grades of recycled or waste material. The RC1000-2 detection system in controlled testing will reliably detect any sealed or unsealed radioactive source, such as **Cs-137, Co-60, Ir-192, Ra-226**, buried or unburied, producing an exposure rate of **1.5mR/hr (1.5µSv)** on a surface area of **12" x 12" (30cm x 30cm)** on the outside wall of a vehicle up to **39" (100cm)** away. The vehicle can travel at speeds of up to **3mph (5km/h)**.

RadComm reserves the right to make, within reason, any adjustments to the system to achieve the performance specification. The overall detection capability of RadComm's radiation detection systems will be significantly increased as vehicle speed decreases.

- **ISO-9000/2000**
- **CE Certified**

