

The EVA-1 Radiation Alarm Users Guide

Thank you for using the EVA-1 Radiation Alarm to detect elevated radiation levels while operating your vehicle. This guide covers operation of the EVA-1.



EVA-1 External Sensor and Internal Indicator



External Sensor on Vehicle

The EVA-1 Radiation Alarm is designed for permanent installation on emergency vehicles. The external sensor and the internal indicator are hard wired into your vehicle and remain operational whenever the vehicle is running. A professional mechanic using the supplied Installation Guide should install these components on your vehicle in accordance with your vehicle manufacturer's warranty guidelines.

The EVA-1 Radiation Alarm provides an alarm when a sustained radiation level of 100 microR/hr or higher is detected.

Specification

Detector	4 mm x 4mm x 1mm Cadmium Telluride
Radiation Detected	Gamma, Beta
Alarm Radiation Level	100 μ R/H, calibrated to ^{137}Cs
Display	LEDs indicate device power and radiation alarm
Alarm Indicator	Flashing red LED and audible tone
Alarm Volume Level	115 db – can be silenced with mute button on indicator
Power	Internal vehicle power +12V DC, 40mA standby, 140mA during alarm
Temperature range	-26° to 50°C (-15° to 120°F)
Case	External sensor – stainless steel enclosure , shock and water resistant to IP67 Internal indicator – plastic case
Weight	External sensor – 1 pound (450 grams) Internal indicator – .1 pound (45 grams)

Features & Indicators

The internal indicator should be mounted on your dash or instrumentation panel so that you can easily see and hear any alarms.

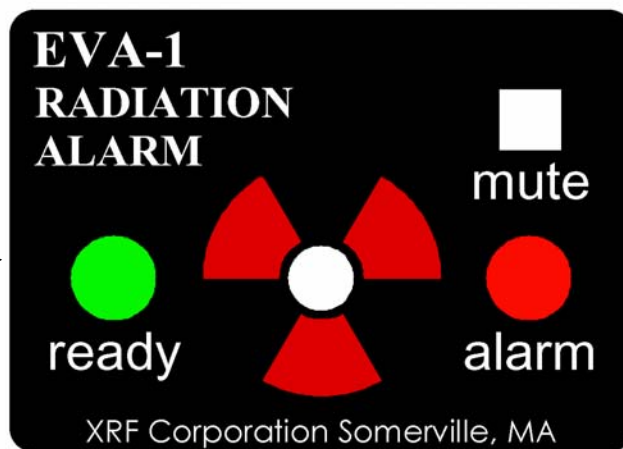
On power up, the indicator will emit a short audible beep. In addition, the green LED will illuminate. On power down, the indicator will emit a long beep.

The green light and initial tone indicate that the sensor is operational. If either of these indicators fail, the device is malfunctioning. Contact XRF Corporation for assistance.



Internal Indicator on Instrumentation Panel

Green LED indicates the sensor is operational and working properly. If the green LED does not illuminate, the system is not functioning properly.



Mute button will silence the alarm sound for 1 minute if alarming.

Red LED flashes to indicate an elevated radiation level. The alarm will sound in this condition.

If the sensor detects a radiation level of 100 microR/hr or higher for 8 seconds, the internal indicator will emit an audible alarm and the red LED will flash. The alarm will continue until the radiation level detected by the sensor drops below 100 microR/hr for 8 seconds.

The mute button will silence the audible alarm for 1 minute, or until a new alarm condition. This alarm will sound after 1 minute if the radiation level remains above the threshold.

The information provided by the indicator is meant to alert operators to an elevated radiation level. No information on the dose rate is provided. This is a yes/no system to provide early warning of an unusual elevation in radiation levels.

Operational Check

Perform a routine operational check using an uncalibrated 1 microcurie ¹³⁷Cs check source. This source can be purchased from LAURUS Systems Inc. (www.LaurusSystems.com). Place the source against the window of the external sensor. The alarm should sound within 10 seconds. If the alarm does not sound, contact XRF Corporation for assistance.