The TSA MD134 is designed to automatically scan vehicles or containers without the need for frequent calibration. The system can be stationary to scan vehicles as they drive by or it can be mounted in a vehicle and driven past items to be scanned.

Advanced Operational Features
When the system is powered up, it acquires an initial background count typically within 120 seconds. The TSA MD134 can be put in occupancy mode two different ways, sensor activated or constant. When occupancy is activated the system starts comparing the current count to the most recent background data. Alarm comparisons are made every 200ms. If the count exceeds the alarm level, both audible and visual alarms will be triggered. The system monitors itself and indicates low and high background conditions.

Flexible Detection Options
The TSA MD134 is available in three configurations; Gamma, Neutron or a combination of Gamma and Neutron detection. Gamma provides detection of ionizing radiation and Neutron provides detection of Special Nuclear Materials (SNM) while the combined Gamma and Neutron provides the most powerful detection capabilities for radioactive isotopes even in shielded materials.

Interface Features
The TSA MD134 includes TSA RAVEN™ communications software designed to both capture and view data and video images relating to a radiological detection incident.

Cut-away view of the TSA MD134 mounted in a van for mobile screening. (Van is not included.)

Standard Features
Programmable Detection Parameters
Audio and Visual Indicators
Relay Outputs for User Interface
Universal Power Supply
Ethernet Connectivity
Wireless Output Capabilities
Battery Backup
Controller Mounting Options
External Alarm Box
TSA RAVEN™ Software

TSA RAVEN™ (Radiation Alarm and Video Event Notification) communications software is used remotely to assist response personnel in the field to pinpoint radioactive sources. RAVEN can monitor multiple detectors and aid in managing individual detector activity.

Markets
Aviation
Critical Infrastructure
Customs and Border Control
# TSA MD134

## Specifications

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| **Sensitivity**          | **Gamma**: Will detect 1,000g of $^{235}\text{U}$ (HEU) or 10g of $^{239}\text{Pu}$ in 20 uR/hr background at a passage speed of five mph (8km/h), at a distance of 39 in. (1 m).  
**Neutron**: Will detect less than 200g of plutonium in a shielded container that reduces the gamma flux to 1% of the unshielded gamma flux. |
| **Detectors**            | **Gamma**: Two, 48 h x 12 w x 1.5 d in. (121 x 30 x 3.8 cm) organic plastic scintillator detectors per skid; provide approximately 1,728 m$^3$ (28 liters) of detector volume.  
**Standard Neutron**: Four, 2 in. diameter x 36 in. (5 x 91 cm) He$^3$ tube.  
**High Sensitivity Neutron**: Eight, 2 in. diameter x 36 in. (5 x 91 cm) He$^3$ tube. |
| **Alarm Indication**     | Alarms are indicated on the External Alarm Box and the laptop or PC that is monitoring the system. |
| **Communications**       | Serial Port and Ethernet                                                   |
| **Display**              | Alphanumeric LCD, 4 lines x 16 characters.                                  |
| **Charging Requirements**| 90-250, 47-63Hz or 12VDC from host vehicle.                                |
| **Battery Life**         | 16 hours of continuous operation.                                           |
| **Dimensions**           | 65.5 h x 60 w x 35 d in. (166.5 x 152.5 x 89 cm) per skid.                 |
| **Weight**               | 500 lbs (227 kg) per skid.                                                 |
| **Environmental**        | -4° to 122° F (-20° to 50°C); designed for sheltered areas.               |

*For neutron detection please contact your sales representative to determine availability and quantity of He$^3$ tubes.

## Definitions

**Gamma Detection** - For the detection of ionizing radiation.

**Neutron Detection** - Typically used to detect Special Nuclear Materials (SNM).

**Gamma and Neutron Detection** - For full spectrum detection capabilities.

## Options

- Wireless Communications
- Survey and Mobile Mode
- External Alarm Box