The TSA PRM470 personal hand-held radiation monitor is ideal for searching at plant exits and material access areas, as well as contamination and background monitoring. The small size, light weight, and long battery life make it ideal for searching vehicles that require extended search times. The PRM470 hand-held is a popular choice for locating radioactive sources and measuring intensity in the field.

**Advanced Design Features**

The TSA PRM470 uses low power electronics to provide up to 17 hours of continuous operation from the rechargeable batteries. The PRM470 also features a self-test during power up, automatic background count and user determined alarm settings. Detection information and parameters are easy to read on the backlit display that can be used in dark or light conditions.

**Programmable Detection Parameters**

Settings may be configured from the front panel, or from a personal computer.

**Easy-to-Operate**

The TSA PRM470 is typically ready to use within 20 seconds of start-up. It features an audio and visual search/find mode to assist in pinpointing radioactive sources. It also uses a motion switch to automatically switch from background to search mode when the instrument is moved. After the instrument has been at rest for a preset duration, it will revert to background update. The unit may be programmed by the user to scale the display to CPS, μSv/hr or mR/hr. This conversion is not energy compensated. Therefore, the value displayed is only an approximation of actual dose rate.

As detected counts increase, so does the frequency of the audio signal helping to pinpoint the location of the radioactive source. LED indicators respond in similar fashion, flashing faster as counts increase. On gamma and neutron instruments, the LED indicators also assist to identify the type of radiation being detected (a red LED for gamma, and blue LED for neutron radiation).

A serial port is available for managing detection parameters and controlling security levels for the individual unit from a computer.

**Flexible Detection Options**

The TSA PRM470 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.

**FEATURES**

- Programmable Detection Parameters
- Programmable Security Levels
- Audio and Visual Indicators
- Universal Power Supply
- Serial Port Connectivity
- NmHi Battery Pack
# TSA PRM470

## Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Sensitivity</strong></td>
<td>Will detect 10g HEU or 1g 239Pu when tested in accordance with ASTM Standard C 1237*</td>
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</table>
| **Detectors**    | **Gamma**: One, 3.5 h x 2.88 w x 1.24 d in. (8.8 x 7.2 x 3.1 cm) organic plastic scintillator detector; provides approximately 12.6 in³ (206 cc) of detector volume.  
**Neutron**: Two, He³ tube, 4 in. (10.2 cm) active, 4 ATM.  
**Gamma and Neutron**: One, 3.5 h x 2.88 w x 1.24 d in. (8.8 x 7.2 x 3.1 cm) organic plastic scintillator detector; provides approximately 12.6 in³ (206 cc) of detector volume and one, He³ tube, 4 in. (10.2 cm) active, 4 ATM. |
| **Alarm Level**  | User configurable from 0.1 to 9.9 sigma                                                                                                                                 |
| **Alarm Indication** | Audible tone and LED                                                                                                                                  |
| **Count Time**  | Gamma search mode: 0.05 sec. count with 0.4 sec. moving average. Neutron: 1 sec. count time. Background time: Operator configurable |
| **Display**     | Alphanumeric LCD, 4 lines x 16 characters, with back-light                                                                                         |
| **Power Requirements** | Internal rechargeable battery pack                                                                                                                  |
| **Dimensions**  | Box = 7.75 h x 4.75 w x 3.5 d in. (19.7 x 12.06 x 8.9 cm)                                                                                      |
|                 | Handle = 4.75 h x 2.75 w x .75 d in. (12.06 cm x 7.00 cm x 1.90 cm)                                                                              |
| **Weight**      | 2.4 lb (1.1 kg) with batteries                                                                                                                      |
| **Environmental** | 32° to 100°F (0° to 38°C)                                                                                                                          |

*ASTM Standard C 1237 is available from your Rapiscan Systems sales representative or The American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428 (610) 832-9585

## 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

- Replaceable Alkaline Battery
- Serial Port