

## Description

### PRM-470C/G/N/GN

Gamma, Neutron, Gamma-Neutron hand held detectors



TSA's PRM-470C hand held series is a popular choice for locating radioactive sources and measuring intensity in the field. It uses low power CMOS electronics to provide extended operation from the rechargeable batteries. The versatile, easy to operate PRM-470CGN also features a self-test during power up, automatic background count and user determined alarm settings. Settings may be configured from the front panel, or from a personal computer using RS-232 communications. Count information and unit parameters are presented to the user on an alphanumeric 4 line, 16 character display.

The PRM-470C series utilizes 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,  $\mu\text{sv/hr}$  or  $\text{mR/hr}$ . This conversion is not energy compensated. Therefore, the value displayed is only an approximation of actual dose rate.

Due to popular demand, the PRM-470C series now features an audio and visual search/find mode to assist in locating radioactive sources. 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).

TSA Systems offers the following line of PRM-470C series hand held monitors:  
 PRM-470CG - Gamma only search/find instrument  
 PRM-470CN - Neutron only search/find instrument  
 PRM-470CGN - Gamma & Neutron (simultaneous) search/find instrument

## Specifications

### Models PRM-470CG, PRM-470CN, PRM-470CGN SPECIFICATIONS

- SENSITIVITY: Will detect 10g  $^{235}\text{U}$  (HEU) or 1g  $^{239}\text{Pu}$  when tested in accordance with ASTM Standard C 1237\*.
- DETECTORS:
  - PRM-470CG: One, 3.5" h x 2.88" w x 1.24" d (9 x 7 x 3cm) organic plastic scintillator detector; provides approximately 12.6 in<sup>3</sup> (206cc) of detector volume per instrument.
  - PRM-470CN: Two,  $^3\text{He}$  tubes, 4" (10cm) active, 4 ATM.
  - PRM-470-CGN: One, 3.5" h x 2.88" w x 1.24" d (9 x 7 x 3cm) organic plastic scintillator detector and one,  $^3\text{He}$  tube, 4" (10cm) active, 4 ATM; provides approximately 12.6 in<sup>3</sup> (206cc) of detector volume per instrument.
- 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: user configurable
- DISPLAY: Alphanumeric LCD, 4 lines x 16 characters, with backlight
- POWER REQUIREMENTS: Internal rechargeable battery pack
- DIMENSIONS: Box 7.75" h x 4.75" w x 3.5" d (20 x 12 x 9cm), Handle 4.75" h x .75" w x 2.75" d (12 x 2 x 7cm)
- WEIGHT: 2.4 lb (1.1kg) with batteries
- ENVIRONMENTAL: 32° to 100°F (0° to 38°C)

\*ASTM Standard C 1237 is available from The American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428, (610) 832-9585.

## Applications

Applications include special nuclear material (SNM) searches 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.