

POLIMASTER

## PERSONAL RADIATION DETECTOR



# PM1703GN GAMMA-NEUTRON PAGER

**First Introduced in the United States in 2002 and currently most widely used by US law enforcement agencies.**

**This is still highly efficient existing first responders' "pager type" radiation detection instrument**

**For Law Enforcement, Homeland Security to prevent proliferation of nuclear materials and weapons.**



The PM1703GN is the first in the world unique gamma/neutron PRD of the new generation, which is capable to detect even very small amounts of radioactive and nuclear materials including nuclear weapons materials.

**The PM1703GN is designed as an extremely effective instrument for prevention of inland illicit trafficking of radioactive materials and nuclear weapons by terrorist groups**



**ALARM**

**LOCATION**

**INDICATION**

### Features

- Easy to use, two-button operation
- Doesn't require any special knowledge.
- Two independent scintillation detectors of CsI(Tl) and LiI(Eu)
- Audible, and vibration alarms
- Non-volatile memory
- Shockproof hermetic case
- Low EMI interference from portable radio and cell phones

### Applications

- First responders
- Customs and Border Patrol
- Police
- Emergency teams
- Law enforcement
- HazMat teams
- Security guards





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# PERSONAL RADIATION DETECTOR PM1703GN GAMMA-NEUTRON PAGER

<b>Detector</b> - gamma - neutron	CsI (TI) LiI (Eu)
<b>Sensitivity</b>  - <b>gamma</b> for Cs-137, no less - <b>neutron</b> for Pu- $\alpha$ -Be, no less for thermal neutrons, no less	<b>1 cps/(<math>\mu</math>R/h) (100 cps/(<math>\mu</math>Sv/h))</b>  <b>0.05 counts cm<sup>2</sup>/ n</b> <b>1.3 counts cm<sup>2</sup>/ n</b>
<b>Energy range</b> - for gamma - for neutron	<b>0.033 - 3 MeV</b> <b>0.025 eV - 14 MeV</b>
<b>Time of measurement</b>	<b>0.25 s</b>
<b>Range of n coefficient</b> (the number of mean square deviations of the current background) <b>Step</b>	<b>from 1 to 9.9</b> <b>0.1</b>
<b>Indication range of dose equivalent rate (DER)</b>	<b>1 - 7 000 <math>\mu</math>R/h (0.01 - 70 <math>\mu</math>Sv/h)</b>
<b>Accuracy of DER registration</b> to Cs-137 in collimated radiation in the range from 10 up to 4 000 $\mu$ R/h (from 0,1 up to 40 $\mu$ Sv/h)	<b><math>\pm</math> 30 %</b>
<b>Count time:</b> - in background mode - in the search mode	<b>36 s</b> <b>2 s</b>
<b>PM1703GN meets requirements of ITRAP Program:</b> detection with no less than 99% probability within 3 s at background level of 20 $\mu$ R/h (0,2 $\mu$ Sv/h) and false alarm rate no more than 1 per 12 hours for Cs-137, Am-241, Co-60, with the dose rate	<b>100 <math>\mu</math>R/h (1 <math>\mu</math>Sv/h)</b>
<b>Additional functions</b>	<b>PC communication mode</b>
<b>Drop test on concrete floor</b>	<b>2.3' (0.7 m)</b>
<b>Power supply</b>	<b>1.5 V</b> (one battery PANASONIC POWER LINE LR6 AA or compatible)
<b>Battery lifetime</b>	<b>1 000 h</b>
<b>Battery discharge warning</b>	<b>indication on LCD</b>
<b>Operating conditions:</b> - temperature range - relative humidity (at 95 °F (35 °C))	<b>- 22 ... +122 °F ( -30 ... +50 °C)</b> <b>up to 98%</b>
<b>Protection degree of case</b>	<b>IP65</b>
<b>Dimensions</b>	<b>3.43" x 2.83" x 1.38" (87 x 72 x 35 mm)</b>
<b>Weight</b> (with battery), no more than	<b>7.05 oz (200 g)</b>

Design and specifications of the device can be changed without further notice.