

# PORTABLE or FIXED PERSONNEL & VEHICLE MONITOR

便携式 或固定式人员&车辆监视器

Model Series ~ PPVM

PPVM系列

PPVM-TA ~ PPVM-TB ~ PPVM-HM

## FEATURES: 产品特点

- COMPLETELY PORTABLE 完全便携
- CAN BE SET TO ANY WIDTH 可设定任何宽度
- QUICK SET UP 快速安装
- **OPTIONAL: WIRELESS REMOTE NOTIFICATION – PHONE, ALARM, ETC.**
- **选项:** 无线遥控通知-电话、报警等
- HIGH SENSITIVITY DUE TO LARGE SURFACE AREA
- 大面积提供高灵敏度
- DETECTS BETA & GAMMA RADIATION
- 检测  $\beta$  &  $\gamma$  辐射
- OPERATES ON RECHARGEABLE BATTERIES or AC
- 充电电池或AC线供电
- CAN ALARM AT 7  $\mu\text{R/hr}$  CHANGE IN 1 SECOND (**PPVM-TA & PPVM-HM**)
- 每秒上升7 $\mu\text{R/hr}$ 可报警(**PPVM-TA & PPVM-HM**)
- SEES & CAN ALARM AT 1  $\mu\text{R/hr}$  ABOVE BACKGROUND(**PPVM-TB**)
- 可见本底以上 1  $\mu\text{R/hr}$  并报警(**PPVM-TB**)
- (2) PLASTIC SCINTILLATORS – ONE 528  $\text{in}^2$  IN EACH CASE (**PPVM-TA & PPVM-TB**)
- (2) 塑料闪烁体-每个箱子528  $\text{in}^2$  (**PPVM-TA & PPVM-TB**)
- (2) PLASTIC SCINTILLATORS – ONE 576  $\text{in}^2$  IN EACH CASE (**PPVM-HM**)
- (2) 塑料闪烁体-每个箱子576  $\text{in}^2$  (**PPVM-HM**)
- DYNAMIC BACKGROUND SUBTRACT
- 动态本底扣除
- CONTINUOUS OPERATION: “SET & FORGET”
- 连续操作 “一劳永逸”
- COMPLETELY WEATHER PROOF
- 完全耐候性
- DATA DOWNLOAD VIA USB & ETHERNET
- 通过USB或以太网下载数据
- IP66

**Designed to Meet  
FEMA & NRC Needs for  
Large Scale Evacuation  
of Contaminated Area or  
Screening.**  
为符合联邦应急管理局和  
美国核管局在污染地区大规模  
撤离或筛查设计



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## DESCRIPTION: 描述

Portable control / alarm module plus two portable weather proof detector housings.

便携式控制/报警模块，加两个便携式防潮外罩。

**PPVM-TA & PPVM-TB** each contain two Plastic Scintillators 528 in<sup>2</sup> /detectors.

**PPVM-TA & PPVM-TB**每个型号带两个528 in<sup>2</sup>塑料闪烁体探头

**PPVM-HM** contains two Plastic Scintillators 576 in<sup>2</sup> /detectors.

**PPVM-HM**每个型号带两个576 in<sup>2</sup>塑料闪烁体探头

Rate of change electronics with audio and visual alarms. Operates on built-in rechargeable batteries or 110/220 AC.

**PPVM-TA & PPVM-TB** are designed for rugged outdoor use as well as indoors.

**PPVM-HM** is designed primarily for indoor use.

带视听报警的率变电子学。内置可充电电池或110/220交流电供电，**PPVM-TA & PPVM-TB**供室内及室外恶劣环境使用，**PPVM-HM**主要供室内使用。

Model **PPVM-TA** is a high sensitivity Beta/Gamma Monitoring system for determining possible radiation contamination on people, in containers, or vehicles on a non-pause basis. Since the operation of this instrument is based on rate of change in radiation, it will reliably pick up contamination as it passes near the monitor.

型号**PPVM-TA**是一款高灵敏 $\beta/\gamma$ 监测系统用于监测人员，集装箱或其它车辆通过时可能存在的辐射污染物。由于此仪器操作基于辐射率变化，所以只要污染物靠近监测器，就能可靠地被检测到。

Model **PPVM-TB** achieves greater sensitivity for people or vehicles by stop & count approach. This system can be set-up at the **road side** or in a **parking lot**. It can be mounted to a fence post or stand alone in an indoor or outdoor area. Background is continually updated and subtracted thus giving net reading for person or vehicle.

如果人员及车辆停靠并计数，型号**PPVM-TB**灵敏度更高。此系统可安装到**路边**或**停车场**，也可以安装到围栏柱或立在室内外。本底持续更新并扣除以便给出净读数。

Model Series **PPVM** are re-positional monitors. **Detectors are fixed on each side of hallway or doorway AT ANY WIDTH and may be remounted in alternate locations.**

型号**PPVM**为移动式走廊监测器，探测器可安装在任何宽度走廊或门口两侧或装到其它地点。



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## SPECIFICATIONS: 规格

- **Detectors (PPVM-TA & PPVM-TB):** 2 ea. 12" x 1.5" x 44" premium Plastic Scintillators with a wide temperature range.  
探测器 ((PPVM-TA & PPVM-TB): 两个优质塑料闪烁体, 宽温度范围, 体积12" x 1.5" x 44"
- **Detectors (PPVM-HM):** 2 ea. 8" x 1.5" x 72" premium Plastic Scintillators with a wide temperature range.  
探测器 ((PPVM-HM): 两个优质塑料闪烁体, 宽温度范围, 体积8" x 1.2" x 72"
- **Volume (PPVM-TA & PPVM-TB):** 792 in<sup>3</sup> per detector.\*  
体积 ((PPVM-TA & PPVM-TB): 每个探头792 in<sup>3</sup>
- **Volume (PPVM-HM):** 864 in<sup>3</sup> per detector.\*  
体积 ((PPVM-HM): 每个探头864 in<sup>3</sup>
- **Surface Area (PPVM-TA & PPVM-TB):** 528 in<sup>2</sup> per detector.\*  
探测面积(PPVM-TA & PPVM-TB): 每个探头528 in<sup>2</sup>
- **Surface Area (PPVM-HM):** 576 in<sup>2</sup> per detector.\*  
探测面积(PPVM-HM): 每个探头576 in<sup>2</sup>
- **Sensitivity:** Detects 1 uCi of Cs-137 anywhere within portal based on 15 second count. Background up to 1 mR/hr. 28" portal width.  
灵敏度: 基于 15 秒计数在入口内任何地方探测 Cs-137 为 1μCi, 28"入口宽度本底达 1 mR/hr.
- **Range:** 1 uR/hr to 1 mR/hr.
- **量程:** 1 uR/hr - 1 mR/hr.
- **Rate of Change Design:** Fast Alarming
- **变化率设计:** 快速报警

## DETECTOR

探头

- **Power Requirements:** Choice of AC or DC Operation  
电源要求: AC或DC
- **Cables:** User specified lengths  
线 用户指定

## COMPUTER

电脑

- **Power Requirements:** Operates on a built in rechargeable batteries or 110/220 AC. Smart Trickle Charge when Plugged into Wall (AC)  
电源要求: 内置可充电电池或110/220 AC, 插入AC电源后连续充电
- **Power Recharge Cable:** 6 ft. cable furnished. Three Prong grounded connector.



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- 电源线: 6英尺, 护套线, 三孔叉接地连接器
- **High Level Alarm:** Flashing red light and intermittent 2900 Hz tone. (90 dB)  
Volume adjustable / On/Off switch.  
上限报警: 闪烁红灯, 间断性的 2900HZ 报警音(90dB), 可调节音量, 加上可调节 on/off 开关
  - **Alarm Set:** 报警设定
    - **PPVM-TA:** Internal factory set at .007 mR/hr rise per second. May be reset by user.  
内部工厂设置每秒上升 .007 mR/hr报警, 用户可自设。
    - **PPVM-TB:** Internal factory set at 10% above ambient background. May be reset by user.  
工厂内部设置为本底环境的10%, 用户可自设
    - **PPVM-HM:** Internal factory set at .007 mR/hr rise per second. May be reset by user.  
内部工厂设置每秒上升 .007 mR/hr报警, 用户可自设。
  - **Portable Cases:** Weather-tight NEMA rated tough, durable, lightweight.  
A “tongue-in-groove” continuous O”-ring system makes the case water, moisture, and dust tight, & a low profile pressure release valve.  
便携式提箱: 防雨NEMA标准, 结实耐用, 轻量, 舌槽型连续环形设计使得外箱防水、防潮、防尘。外加一个薄压力释放阀。
  - **Wall Mount Cases:** HMC Tubular Locking System. Constructed of heavy 1.5 mm steel. Fits between 16 inch center wall studs, or on the floor. Full length piano hinge door for easy access, rugged construction prevents accidental damage.  
壁装外箱: HMC金属管带锁系统, 1.5mm粗重钢管, 适合16英寸宽壁骨间或地板上, 全长钢琴折页易于开关, 结构坚固防止意外损坏。
  - **Self-Test:** For: Low Battery, Loss of Signal, and High Back Ground.  
自测系统: 检测: 低电、信号丢失、高本底
  - **Status Indicators:** “Ready” - “Counting” - “Clean-OK” - “High Alarm”  
“Count Incomplete”.  
状态指示: “准备” “计数” “干净-OK” “高报警” “计数未完成”
  - **Count Time:** 1 to 20 seconds (PPVM-TB & PPVM-HM only).  
计数时间: 1-20秒 (仅PPVM-TB & PPVM-HM)
  - **Background Compensation:** Background is continually updated and subtracted. (User can set parameters.)  
本底补偿: 本底持续更新扣除 (用户可自设参数)
  - **Energy Range:** Gamma: 40 KeV to 6 MeV. Beta: above 1 MeV, includes P32, Sr90Y90, & N16.  
能量范围:  $\gamma$  40KEV-6MeV,  $\beta$  1MeV以上, 包括P32, Sr90Y90, & N16.
  - **Communications:** Built-in serial port and Ethernet Node.



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通信: 内置串口和以太网节点

- **Count Start:** Counting starts automatically when person or vehicle enters portal and trips sensor.

计数开始: 当人员和车辆进入传送口, 启动传感器, 计数自动开始。

- **Set-Up:** One person can set-up unit in about 2 min.  
安装: 一个人能在大约2分钟内安装好一台机器。

## Designed to Meet FEMA and NRC Needs for Large Scale Evacuation of Contaminated Area or Screening.

设计符合FEMA 和 NRC关于大型受污染地区疏散或筛查工作需求

### DIMENSIONS & WEIGHT: 尺寸与重量

- **Dimensions (PPVM-TA & PPVM-TB):** Control Box: 16" x 20" x 10" plus Alarm Beacon.  
Detector Towers: 54" H x 15.5" W x 7" D.
- **尺寸(PPVM-TA & PPVM-TB):** 控制柜: 16" x 20" x 10"加报警灯  
探测器组件: 54" 高x 15.5" 宽 x 7" 深.
- **Dimensions (PPVM-HM):** Control Box: 16" x 20" x 10" plus Alarm Beacon.  
Detector Towers: 78" H x 15.5" W x 7" D.
- **尺寸 (PPVM-HM):** 控制柜: 16" x 20" x 10"加报警灯  
探测器组件: 78" 高 x 15.5" 宽 x 7" 深.
- **Optional:** Alternate Packaging.  
选项: 更换组件
- **Shipping Weight - Portable:** 150 lbs. (Lighter Less Sensitive Models Also Available.)  
邮寄重量-便携式: 150磅 (可提供较轻灵敏度较低型号)
- **Shipping Weight - Wall Mount:** 200 lbs. (Lighter Less Sensitive Models Also Available.)  
邮寄重量-壁装式: 200磅 (可提供较轻灵敏度较低型号)
- **Carrying Weight Portable:** Control Box: 18 lbs. Each Tower: 55 lbs.  
(Wheels & Handles are Built-in - PPVM-TA & PPVM-TB.)  
手提重量: 控制柜: 18磅, 每个探头组件55磅 (PPVM-TA & PPVM-TB 型号, 轮子&把手内置)  
**PPVM-HM has no wheels or handles. Mountable and Repositionable.)**  
**PPVM-HM不带轮子和把手, 可安装和更换地点)**

OPTIONAL ACCESSORIES: 选购配件



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- **Check Source:** RAU-BGX, uranium source; license exempt.  
检测源: RAU-BGX, 铀源, 免执照
- **Additional Relay:** 5A SPDT to operate other circuits.  
附加继电器: 5A SPDT, 为其它电路供电
- **Additional Remote Alarm:** RAL-3W flasher, siren.  
附加遥控报警: RAL-3W闪光器、报警器

## \*ADDITIONAL OPTIONS: 附加选项

220 V, 50-60 Hz.

Battery Back-up.

备用电池

Additional detectors: Overhead, Underfoot

附加探头: 头顶, 脚下

Alternate detectors other size plastic scintillators, NaI(Tl) Scintillators, or BGO crystal.

其它尺寸塑料闪烁体探头, NaI(Tl)闪烁体或BGO

Specific detectors eg. for Plutonium or Neutron or Beta emitters

钚或中子发射物或β发射物专用探头

Additional Photo Cell sensors(s) to measure speed of person or vehicle passing through portal.

附加光电传感器测量人员或车辆通过入口速度

Wire-less operation.

无线操作

Video license plate capture

车牌号录像



Steel Cases with Stands  
OPTIONAL -Inset Wall Mount



Cases for Portable  
Detector System  
便携式探头系统外壳



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Sample Display Readout

## PORTABILITY: 便携性

- Battery or AC Operation.  
电池或AC线供电
- Each element is housed in weather proof high impact plastic case with sturdy carrying handles.  
每个元件放置在防潮塑料外箱内，带结实提手
- Detectors are shipped with Deployment Stand (Model DS-4).  
探头随箱带“Deployment Stand” (Model DS-4).
- Detectors have Built in wheels plus industrial grade, easy to use, reusable straps.  
探头带内置轮子，工业级易用可重复使用肩带
  - Available as a Fixed Unit (Model - **VMF-TA**), in a Metal Housing. See **Model ~ VMF-TA spec sheet**.  
可提供固定式Model - **VMF-TA**), 金属外箱，详见**Model ~ VMF-TA规格单**



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