

# PORTABLE PERSONNEL & VEHICLE MONITOR

Model # PPVM-TA  
Model # PPVM-TB  
Model # PPVM-L/O

## FEATURES:

- COMPLETELY PORTABLE
- DETECTS BETA AND GAMMA RADIATION
- OPERATES ON RECHARGEABLE BATTERIES or AC
- CAN ALARM AT 7  $\mu$ R/hr RISE WITHIN 1 SECOND (**PPVM-TA**)
- SEES AND CAN ALARM AT 1  $\mu$ R/hr ABOVE BACKGROUND (**PPVM-TB**)
- COMPLETELY WEATHER PROOF
- HIGH SENSITIVITY DETECTORS (2 PLASTIC SCINTILLATORS 392 in<sup>3</sup> IN EACH CASE)
- DYNAMIC BACKGROUND SUBTRACT
- FAST RATE OF CHANGE DESIGN
- CONTINUOUS OPERATION: "SET AND FORGET"



**DESCRIPTION:** Portable control / alarm module plus two portable weather proof detector housings. Each contains two Plastic Scintillators 392 in<sup>3</sup>/detector. Rate of change electronics with audio and visual alarms. Operates on built-in rechargeable batteries or 110/220 AC. Operation for rugged outdoor use as well as indoors. Model **PPVM-TA** is a high sensitivity 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. 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.



## TECHNICAL ASSOCIATES

7051 ETON AVENUE \* CANOGA PARK, CA 91303 TELEPHONE (818) 883-7043 \* FAX(818) 883-6103

[www.tech-associates.com](http://www.tech-associates.com)

\$Revision: 1.1 \$

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## SPECIFICATIONS:

<b>Detectors:</b>	4 ea. 12" x 1.5" x 22" premium Plastic Scintillators with a wide temperature range. Volume: 392 in <sup>3</sup> per detector.*
<b>Sensitivity:</b>	Detects 1 $\mu$ Ci of Cs-137 anywhere within portal based on 15 second count. Background up to 1 mR/hr. 28" portal width.
<b>Range:</b>	1 $\mu$ R/hr to 1 mR/hr.
<b>Power Requirements:</b>	Operates on a built in rechargeable batteries or 110/220 AC.
<b>Power Recharge Cable:</b>	6 ft. cable furnished. Three Prong grounded connector.
<b>High Level Alarm:</b>	Flashing red light and intermittent 2900 Hz tone. (90 dB) Volume adjustable plus an on/off switch.
<b>Alarm Set:</b>	<b>PPVM-TA</b> internal factory set at .007 mR/hr rise per second. May be reset by user. <b>PPVM-TB</b> internal factory set at 10% above ambient background. May be reset by user. <b>PPVM-L/O</b> internal factory set at 2 Times Background - user settable 0 to 150% full scale.
<b>Cases:</b>	Weather-tight NEMA rated tough, durable, lightweight. A "tongue-in-groove" continuous "O"-ring system makes the case water, moisture, and dust tight. Plus a low profile pressure release valve.
<b>Self-Test:</b>	For: Low Battery, Loss of Signal, and High Back Ground.
<b>Status Indicators:</b>	"Ready" - "Counting" - "Clean-OK" - "High Alarm" - "Count Incomplete".
<b>Count Time:</b>	1 to 20 seconds ( <b>PPVM-TB</b> only).
<b>Background Compensation:</b>	Background is continually updated and subtracted. (User can set parameters.)
<b>Energy Range:</b>	Gamma: 40 KeV to 6 MeV. Beta: above 1 MeV, includes P <sup>32</sup> , Sr <sup>90</sup> Y <sup>90</sup> , & N <sup>16</sup> .
<b>Communications:</b>	Built-in serial port and Ethernet Node.
<b>Count Start:</b>	Counting starts automatically when person or vehicle enters portal and trips sensor.
<b>Set-Up:</b>	One person can set-up unit in about 2 min. Designed to Meet FEMA and NRC needs for large scale evacuation of contaminated area or screening.
<b>Dimensions:</b>	Control Box: 16" x 20" x 10" plus alarm Beacon. Detector Towers: 54" H x 15.5" W x 7" D. <b>Optional</b> Alternate Packaging - All items fit in one case 55" x 19" x 9".
<b>Shipping Weight:</b>	150 lbs. (Lighter Less Sensitive Models Also Available.)
<b>Carrying Weight:</b>	Control Box: 18 lbs. Each Tower: 55 lbs. (Wheels & Handles are Built-in.)



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## OPTIONAL ACCESSORIES:

**Check Source:** RAU-BGX, uranium source; license exempt.  
**Additional Relay:** 5A SPDT to operate other circuits.  
**Additional Remote Alarm:** RAL-3W flasher, siren.  
**\*Options:** 220 V, 50-60 Hz.  
7-day Battery Back-up.  
Additional detectors.  
Alternate detectors other size plastic scintillators, NaI(Tl) Scintillators, or BGO crystal.  
Specific detectors eg. for plutonium or Neutron emitters or Beta emitters.  
Additional Photo Cell sensors(s) to measure speed of person or vehicle passing through portal.  
Wire-less operation.

## PORTABILITY:

- Battery or AC Operation.
- Each element is housed in weather proof high impact plastic case with sturdy carrying handles.
- Detectors are shipped with Deployment Stand (Model DS-4).
- Detectors have Built in wheels plus industrial grade, easy to use, reusable straps.



PPVM-L/O uses the same detectors as the other PPVM models, but has simplified LAM-10L "Alarming Ratemeter" electronics, Instead of "Rate of Charge" electronics.

Available as a Fixed Unit (Model # VMF-TA), in a Metal Housing.



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