

PORTABLE or FIXED PERSONNEL & VEHICLE MONITOR

Model Series ~ PPVM
PPVM-TA ~ PPVM-TB ~ PPVM-HM

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

FEATURES:

- COMPLETELY PORTABLE OR WALL INSTALLATION
- CAN BE SET TO ANY WIDTH
- QUICK SET UP
- VIDEO – REAL-TIME DISPLAY & CAPTURE
- **OPTIONAL:** WIRELESS REMOTE NOTIFICATION – PHONE, EMAIL, TEXT, ETC.
- **OPTIONAL:** OVERHEAD / UNDERFOOT DETECTORS
- HIGH SENSITIVITY DUE TO LARGE SURFACE AREA
- DETECTS BETA & GAMMA RADIATION
- OPERATES ON RECHARGEABLE BATTERIES or AC
- CAN ALARM AT 7 uR/hr CHANGE IN 1 SECOND (**PPVM-TA & PPVM-HM**)
- SEES & CAN ALARM AT 1 uR/hr ABOVE BACKGROUND (**PPVM-TB**)
- (2) PLASTIC SCINTILLATORS – ONE 528 in² IN EACH CASE (**PPVM-TA & PPVM-TB**)
- (2) PLASTIC SCINTILLATORS – ONE 576 in² IN EACH CASE (**PPVM-HM**)
- DYNAMIC BACKGROUND SUBTRACT
- CONTINUOUS OPERATION: "SET & FORGET"
- COMPLETELY WEATHER PROOF
- DATA DOWNLOAD VIA USB & ETHERNET
- **IP66**



DESCRIPTION:

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

PPVM-TA & PPVM-TB each contain two Plastic Scintillators 528 in² /detectors.

PPVM-HM contains two Plastic Scintillators 576 in² /detectors.

DESCRIPTION:

Mount to a fence post, stand alone, at a **road side** or in a **parking lot**, or can be wall mounted in hallways or doorways. Background is continually updated and subtracted thus giving net reading for person or vehicle. Has audio and visual alarms and video recording.

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.

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.

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.

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.**



Real - Time
Air & Water
Specialists



TECHNICAL ASSOCIATES
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Divisions of  US NUCLEAR CORP

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SPECIFICATIONS:

- **Detectors (PPVM-TA & PPVM-TB):** 2 ea. 12" x 1.5" x 44" premium Plastic Scintillators with a wide temperature range.
- **Detectors (PPVM-HM):** 2 ea. 8" x 1.5" x 72" premium Plastic Scintillators with a wide temperature range.
- **Volume (PPVM-TA & PPVM-TB):** 792 in³ per detector.*
- **Volume (PPVM-HM):** 864 in³ per detector.*
- **Surface Area (PPVM-TA & PPVM-TB):** 528 in² per detector.*
- **Surface Area (PPVM-HM):** 576 in² per detector.*
- **Sensitivity:** Detects 1 uCi of Cs-137 anywhere within portal based on 15 second count. Background up to 1 mR/hr. 28" portal width.
- **Range:** 1 uR/hr to 1 mR/hr.
- **Rate of Change Design:** Fast Alarming

DETECTOR

- **Power Requirements:** Choice of AC or DC Operation
- **Cables:** User specified lengths

COMPUTER

- **Power Requirements:** Operates on built in rechargeable batteries
Smart Trickle Charge when Plugged into Wall (AC) or 110/220 AC
- **Power Recharge Cable:** 6 ft. cable furnished. Three Prong grounded connector.
- **High Level Alarm:** Flashing red light and intermittent 2900 Hz tone. (90 dB)
Volume adjustable / On/Off switch.
- **Alarm Set:**
 - **PPVM-TA:** Internal factory set at .007 mR/hr rise per second. May be reset by user.
 - **PPVM-TB:** Internal factory set at 10% above ambient background. May be reset by user.
 - **PPVM-HM:** Internal factory set at .007 mR/hr rise per second. May be reset by user.
- **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.
- **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.



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- **Self-Test:** For: Low Battery, Loss of Signal, and High Back Ground.
- **Status Indicators:** "Ready" - "Counting" - "Clean-OK" - "High Alarm" "Count Incomplete".
- **Count Time:** 1 to 20 seconds (**PPVM-TB & PPVM-HM** only).
- **Background Compensation:** Background is continually updated and subtracted. (User can set parameters.)
- **Energy Range:** Gamma: 40 KeV to 6 MeV. Beta: above 1 MeV, includes P32, Sr90Y90, & N16.
- **Communications:** Built-in serial port and Ethernet Node.
- **Count Start:** Counting starts automatically when person or vehicle enters portal and trips sensor.
- **Set-Up:** One person can set-up unit in about 2 min.

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DIMENSIONS & WEIGHT:

- **Dimensions (PPVM-TA & PPVM-TB):** Control Box: 16" x 20" x 10" plus Alarm Beacon
CASE WITH PPVM-TA & PPVM-TB DETECTORS: .
Detector Towers: 54" H x 15.5" W x 7" D.
- **Dimensions (PPVM-HM):** Control Box: 16" x 20" x 10" plus Alarm Beacon.
CASE WITH PPVM-TA: Detector Towers: 78" H x 15.5" W x 7" D.
- **Optional:** Alternate Packaging.
- **Shipping Weight - Portable:** 150 lbs. (Lighter Less Sensitive Models Also Available.)
- **Shipping Weight – Wall Mount:** 200 lbs. (Lighter Less Sensitive Models Also Available.)
- **Carrying Weight Portable:** Control Box: 18 lbs. Each Tower: 55 lbs.
(Wheels & Handles are Built-in - **PPVM-TA & PPVM-TB.**)
PPVM-HM has no wheels or handles.
Mountable and Repositionable.)

OPTIONAL:

- **Check Source:** RAU-BGX, uranium source; license exempt.
- **Additional Relay:** 5A SPDT to operate other circuits.
- **Additional Remote Alarm:** RAL-3W flasher, siren.
- **Overhead Detector**



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*ADDITIONAL OPTIONS:

220 V, 50-60 Hz.

Battery Back-up.

Additional detectors: Overhead, Underfoot

Alternate detector types: Other size plastic scintillators, NaI(Tl) Scintillators, or BGO crystal.

Specific detectors e.g. for Plutonium or Neutron or Beta emitters

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

Wire-less operation.

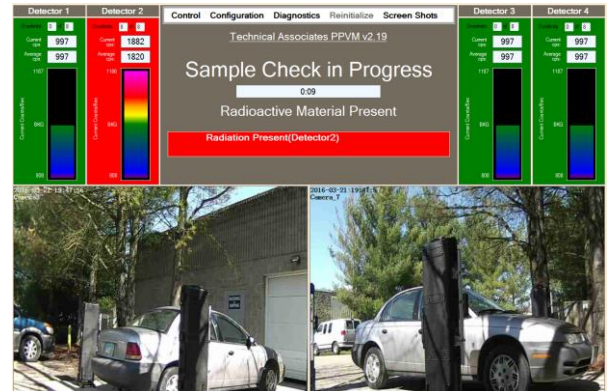
Video license plate capture



Steel Cases with Stands
OPTIONAL –Inset Wall Mount



Cases for Portable
Detector System



Sample Display Readout

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.
 - Available as a Fixed Vehicle Unit (Model - **VMF-TA**), in a Metal Housing.
See **Model ~ VMF-TA spec sheet**.



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