## INSTALLED VEHICLE TRANSIT MONITOR

Model Series ~ VMF VMF-TA ~ VMF-TB ~ VMF-TA-4

### **FEATURES:**

- **BETA / GAMMA DETECTORS**
- OPERATES ON AC OR OPTIONAL BATTERY "BACK-UP"
- VMF-TA ALARMS AT 7 µR/hr RISE WITHIN 1 SECOND
- **VMF-TA & VMF-TB**

PLASTIC SCINTILLATION SHEETS: 792 in 3 VOLUME **EACH** 

SENSITIVE AREA: 528 in<sup>2</sup> EACH

- VMF-TB SEES AND CAN ALARM AT 1 µR/hr ABOVE **BACKGROUND**
- VMF-TA-4X DOUBLES THE DETECTOR AREA & HAS 2 PM TUBES IN EACH TOWER
- VMF-TA-4X & VMF-TA-4X-O

PLASTIC SCINTILLATION SHEETS: 3315 in 3 VOLUME EACH

SENSITIVE AREA: 2210 in 2 EACH

- VMF-TA-4X-O OPTIONAL: OVERHEAD DETECTOR
- **OPTIONAL:** WIRELESS REMOTE NOTIFICATION PHONE, EMAIL, TEXT, ETC.
- REAL TIME DATA DOWNLOAD & ARCHIVE
- VIDEO REAL TIME DISPLAY & CAPTURE
- AUDIO & VISUAL ALARM INCLUDES STROBE & HORN
- COMPLETELY WEATHER PROOF METAL HOUSING
- DYNAMIC BACKGROUND SUBTRACT
- **COMPUTER & SOFTWARE**
- FAST RATE OF CHANGE DESIGN
- CONTINUOUS OPERATION: "SET AND FORGET"
- **BI-LATERAL ENTRY DIRECTION**
- **OPTIONAL: VEHICLE SPEED SENSOR**
- **OPTIONAL: LICENSE PLATE CAPTURE**
- **OPTIONAL: NEUTRON DETECTOR**
- **OPTIONAL: PEDESTAL STAND**



VMF-TA-4X



VMF-TA-4X-O OVERHEAD DETECTOR OPTION

Model VMF-TA: Is a pass-through system.

**Model VMF-TB**: Achieves greater sensitivity by stop and count approach.





**TECHNICAL ASSOCIATES OVERHOFF TECHNOLOGY** 



# **INSTALLED VEHICLE TRANSIT MONITOR**

## Model Series ~ VMF VMF-TA ~ VMF-TB ~ VMF-TA-4

### **DESCRIPTION:**

Model SERIES VMF are high sensitivity Gamma Monitoring systems for determining possible radiation contamination in containers or vehicles on a non-pause basis. plastic scintillation sheets have higher sensitivity than cylindrical shaped scintillation crystals due to the larger surface area.

These systems can be installed at entrance and/or exit gates, at weight stations or check points, or anywhere that cars, trucks, rail cars or pedestrians will pass by; preferably at reduced speeds for more accurate readings.

Background is continually updated and subtracted thus giving net vehicle reading.

- VMF-TA, VMF-TB, & the VMF-TA-4 includes the electronic control/alarm console plus two rugged weather proof detectors each with plastic scintillation sheets with 792 in volume each & a sensitive area of 528 in 2 each.
- The VMF-TA-4X & the VMF-TA-4X-O includes the electronic control/alarm console plus two rugged weather proof detectors each with plastic scintillation sheets & dual PM tubes with 3315 in volume each & a sensitive area of 2210 in<sup>2</sup> each.
- Rate of change electronics with audio and visual alarms.
- Operates from 110/220 AC power main; optional battery back-up.
- Operation for rugged outdoor use as well as indoors with bi-lateral direction entry.
- 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.
- Indoor/Outdoor Camera Video capture of truck type, driver, and optional license plate capture.
- Free-standing strobe & horn alarm.

#### SPECIFICATIONS:

**Detectors - Plastic Scintillators:** VMM-TA-4: 4 ea. 12" W x 1.5" D x 44" H

> VMF-TA & VMF-TB: 2 ea. 12" W x 1.5" D x 44" H

Sensitive Volume: 792 in<sup>3</sup> per detector.

2 each 26" W x 1.5" D x 85" H premium

Sensitive Volume: 3315 in<sup>3</sup> per detector. Sensitive Area: 2210 in<sup>2</sup> per detector.

Dual PM Tubes in each detector.

(1) 26" W x 1.5" D x 85" H premium OPTIONAL: VMF-TA-4X-O: ADD Sensitive Volume: 3315 in<sup>3</sup> per detector. Sensitive Area: 2210 in<sup>2</sup> per detector.

Dual PM Tubes in overhead detector.

Range:  $1 \mu R/hr$  to 1 mR/hr.

**Power Requirements:** 110/220 Volts AC, 50/60 Hz.

**Power Connection:** Conduit or cable 6 ft. cable furnished. Three Prong grounded connector.

**High Level Alarm:** Flashing red light and intermittent 2900 Hz tone. (90 dB)

Alarm Set: VMF-Series internal factory set at .007 mR/hr rise per second.

May be reset by user.

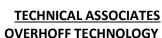
VMF-TB internal factory set at 10% above ambient background.

May be reset by user.

Housing: Weather-tight NEMA rated steel housing; water, moisture, & dust tight.

Cable: 100 ft Standard (User Specified Length)









## INSTALLED VEHICLE TRANSIT MONITOR

Model Series ~ VMF

VMF-TA ~ VMF-TB ~ VMF-TA-4

**DISPLAY** 

Alarm Indicators: Ready - OK- High Alarm –Fail – Battery Power in Use – Audio/Visual Alarm.

Count Time: 1 to 20 seconds (VMF-TB only).

Energy Range: 80 KeV to 6 MeV.

Beta: above 1 MeV, includes P<sup>32</sup>, Sr<sup>90</sup>, & N<sup>16</sup>.

**Communications:** Built-in serial port and Ethernet Node.

**WEIGHT & DIMENSIONS:** 

**Dimensions:** Control Box / Computer: 16" x 20" x 10" typical plus alarm Beacon.

**Detector Towers: VMF-TA, VMF-TB, VMF-TA-4**: 54" H x 15.5" W x 7" D.

Weight: 120 lbs

**Detectors Towers: VMF-TA-4X, VMF-TA-4X-O:** 90" H x 30" W x 5" D.

Weight: 1260 lbs

**OPTIONAL ACCESSORIES:** 

**Check Source:** RAU-BGX, uranium source; license exempt.

Additional Relay: 5A SPDT to operate other circuits.

Remote Alarm: RAL-3W flasher, siren.

**Power:** 220 V, 50-60 Hz.

Battery Back-up.

**Alternate Detector Types & Sizes:** 

NaI(TI) Scintillators or BGO crystal.

Additional Detectors: Plutonium or Neutron or Beta.

Photo cell vehicle sensors(s) to initiate count

Video: License plate capture

Vehicle Speed Record

**Shielding:** Provision made for adding shielding plates provided

**VMF-L/O** uses the same detectors as the other VMF Series models, but has simplified electronics with the **LAM-10L** ``Alarming Ratemeter", instead of ``Rate of Change" electronics.



Sample Display Readout

