

# PORTABLE IODINE MONITOR

Model ~ FR-PIB – Total Airborne Activity

Model ~ FR-PII & FR-PII-Pb

## FEATURES:

- DETECTS  $5 \times 10^{-11}$   $\mu\text{Ci/cc}$  IN 30 MINUTES
- BUILT-IN TIMER
- LINE OPERATED
- USER SETTABLE TIMER
- INTEGRATED EXPOSURE
- DRAW AIR FROM ROOM
- QUICK CHANGE FILTER
- LAM-10D ELECTRONICS (FR-PIB)
- PRS-7 ELECTRONICS (FR-PII & PII-Pb)
- **OPTIONAL:** DRAW AIR FROM HOOD, GLOVE BOXES, STACK, ETC. WITH INLET HOSE
- RS-232
- **OPTIONAL:** USB



FR-PIB



FR-PIB  
LAM-10D ELECTRONICS



FR-PII & PII-Pb

## APPLICATION:

The **FR-P** Series Air Monitor assures Safety against airborne radioactivity contamination by means of constant check and optional record capability. It provides integrated exposure information.

The **FR-P** Series is sensitive and versatile. Although designed as an industrial workplace and hospital breathing air measurement system. It may be used to monitor fume hoods and stack effluent down to EPA levels with optional inlet hose feature.

## DESCRIPTION:

- The **FR-PIB** Series uses standard charcoal filters in TA's unique quick change, no leak holders to trap any airborne radio-iodine.
- The filter is under constant surveillance via a GM 2" pancake detector (**FR-PIB**) or scintillation detector (**FR-PII**) or shielded scintillation probe (**FR-PII-Pb**).
- Air is drawn by a high-volume pump through a flow meter and exhausted through a short three-foot hose.
- Time is controlled by a timer wired into the pump circuit.
- This 2-piece unit is completely portable.
- Complete with 10 filters
- **OPTIONAL:** An Inlet hose may be attached to allow monitoring of hoods, glove boxes, stacks, etc.



FR-PII & PII-Pb  
PRS-7 ELECTRONICS



TECHNICAL ASSOCIATES

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# PORTABLE IODINE MONITOR

Model ~ FR-PIB – Total Airborne Activity

Model ~ FR-P11 & FR-P11-Pb

## SPECIFICATIONS:

Model:	FR-PIB Collection Unit	FR-P11 Collection Unit	FR-P11-PB Collection Unit
<b>Portability</b>	Portable	Portable	Portable
<b>DETECTOR</b>	T-1190 GM Tube	PGS-3L	PGS-3
<b>Size/Material</b>	2" dia. Pancake	1" x 0.8" NaI(Tl)	1" x 1" NaI(Tl)
<b>Detector Window</b>	Mica 1.5 - 2.0 mg/cm <sup>2</sup>	Aluminum 5mil	Aluminum 10-20mil
<b>Detects</b>	Beta, Gamma Removal of Alpha Shield allows detection of Radon Alphas.	Low + Middle Gamma.	Gamma
<b>Iodine</b>	I-131	I-125, I-129, I-131	I-131
<b>Detects Particulates</b>	Yes	Optional with alternate filter media.	Optional with alternate filter media.
<b>Detects Aerosol &amp; Reactive Gases</b>	Yes	Yes	Yes
<b>Filter</b>	Charcoal Filter Paper 2" dia. (Standard)	Charcoal Cartridge 2.5" dia.	Charcoal Cartridge 2.5" dia.
<b>Iodine Sensitivity: (30 min)</b>	$5 \times 10^{-11}$ $\mu$ Ci/cc	$1 \times 10^{-10}$ $\mu$ Ci/cc	$5 \times 10^{-12}$ $\mu$ Ci/cc
<b>Public Release: (<math>1 \times 10^{-10}</math> <math>\mu</math>Ci/cc)</b>	1/2 x Public Release	Public Release	1/20 x Public Release
<b>WEIGHTS:</b>			
Electronics	5 lbs with Batteries	5 lbs with Batteries	5 lbs with Batteries
Detector + Filter	2 lbs (0.9kg)	4 lbs (1.8 kg)	15 lbs(6.8 kg)
Pump	20 lbs (9 kg)	30 lbs (13.6 kg)	30 lbs (13.6 kg)
<b>Shielding</b>	None	None	1/8" lead – Pb (0.3 kg)
<b>Electronics</b>	LAM-10-D	PRS-7	PRS-7



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Model ~ FR-PII & FR-PII-Pb

## ELECTRONICS - FR-PIB

### LAM-10D

- **Digital Display:** Length = 6-digit rate, 8-digit Integrate  
Other meter scale markings are available.
- **Controls:** Front Panel: On-Off, Alarm-mute, Rate, Integrate, Reset.
- **User Settable Alarm:** 2000 Hz Audio tone with “mute” switch  
Visual: RED LIGHT, high current relay.
- **Recessed or Internal:** Discriminator level, high voltage, alarm set.
- **Electronics- LAM-10D:** Preamps: Linear pulse amplifier
- **Accuracy:** ±15% at Cs-137 Gamma
- **Calibration:** User Settable calibration factor gives high precision adjustment.
- **Computer Interface:** RS-232 standard, **OPTIONAL:** USB
- **Power:** 115-125 volts, 50-60 Hz (220-240 V optional)
- **Battery Back-Up:** Rechargeable Battery Pack with built-in charger.
- **Battery Life:** 100 Hours in Non-Alarm Status  
18 Hours in Alarm Status
- **Environmental:** 50 ° F - 140 ° F (10° C to 60° C), RH: 50% - 95%
- **Mounting:** Wall mount or bench top for electronics and detector
- **Construction:** Rugged, splash-proof case, with handle.

## WEIGHT AND DIMENSIONS: - LAM-10D

- **Weight:** 3 lbs. (1.4kg) including batteries and hardware, excluding probe.
- **Dimensions:** 10" W x 7" H x 4" D (25.4 cm x 17.8 cm x 10 cm)

## ELECTRONICS - FR-PII and FR-PII-Pb

### PRS-7

Sturdy portable instruments designed for rugged field use.

- Both Integrate and Ratemeter Functions.
- Single Channel Analyzer
- Variable High Voltage 0-2000v.
- All Closures Are Gasket Sealed creating in a splash proof instrument.
- **Digital Readout:** 6-digit LCD Rate, 8 digit integrate.  
LCD style scaler readout.
- **Power:** 105-125 volts, 50-60 Hz (220 V optional)
- **Power:** AC & Rechargeable Battery and Charger
- **Three Presettable Window Positions:** User settable
- **Switch Selectable:** Six Decades
- **Time Base:** Crystal controlled 1-10,000 seconds; user settable.
- **Display Modes:** Rate, Integrate.



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# PORTABLE IODINE MONITOR

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- **Range:** 1uR/hr to 1000 R/hr; 0 to 30,000 Cps; 0.1 mRem/hr to 10 Rem/hr.
- **Alarm:** 2000 Hz audio tone with audio “mute” switch  
Visual: RED LIGHT, high current relay.
- **Computer interface:** RS-232
- **IP65**

**OPTION:** USB

## **WEIGHT AND DIMENSIONS: - PRS-7**

- **Dimensions:** 10” L x 4.1” W x 7” H (25 cm L x 10.5 cm W x 18 cm H)  
Includes handle
- **Weight:** 5 lbs (2.5kg) including batteries.
- **Options:** Alarm Relay



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