

AIR MONITOR MULTI-USE RADIATION MONITOR

Survey Meter • Wipe Counter • also Chem or Bio Aerosols

Model ~ AIR-TBM-SP

FEATURES:

- ALPHA, BETA-GAMMA
- IDEAL FOR FIRST RESPONDERS
- REAL TIME
- PORTABLE
- AC OPERATION
- INTEGRATED EXPOSURE
- ELECTRONICS – LAM-10D
- DETECTORS:
 - PGS-3 PROBE – SEARCH TOOL
 - STB-3 WIPE OR FILTER COUNTER
- DRAWS AIR FROM ROOM
- EASY CHANGE FILTER
- SLIDE-ON WIPE-HOLDER
- AC PUMP AP-5020E

OPTIONAL:

- BATTERY POWERED SYSTEM
- RELAY FOR OPERATING OTHER EQUIPMENT:
 - DOOR LOCKS, TURN ON FAN, ETC



LAM-10D



AC PUMP, HOSE & FILTER HOLDER



**STB-3
ALPHA/BETA**

**WH-15 FILTER
HOLDER**



**PGS-3
GAMMA**

APPLICATION:

• QUADRUPLE USE:

- AIR MONITOR- RADIATION
- WIPE COUNTER
- SURFACE MONITOR
- PERSONAL AIR SAMPLER

PRINCIPLE OF OPERATION:

Air is pulled thru a charcoal impregnated filter paper by air pump. This filter is constantly observed by a 2" diameter thin window GM tube and ratemeter.

DESCRIPTION:

The AIR-TBM-SP uses standard 57-70 mm filters in T/A's easy change, no leak filter, to trap any airborne radioactivity. The filter is measured for Alpha/Beta by a pancake GM tube in the STB-3. Air is drawn through the system by a continuous duty pump. The unit is completely self-contained and portable. Room air is drawn in through the charcoal impregnated filter paper. Then through the pump and its 3 ft. exhaust hose that can be extended. Wipe holder WH-15 accepts wipes from 1" diameter up to 2" diameter.



Real - Time
Air & Water
Specialists



TECHNICAL ASSOCIATES

Divisions of



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SPECIFICATIONS:

Measures: Airborne radioactivity including aerosol, particulate and gases, excluding the noble gases.

Sensitivity:

TIME	SENSITIVITY
1 Hour	$3 \times 10^{-9} \mu\text{Ci/cc}$
24 Hours	$1 \times 10^{-10} \mu\text{Ci/cc}$
5 Days	$2 \times 10^{-11} \mu\text{Ci/cc}$

- Limit of sensitivity (99% confidence level) 1 nanoCi collected on filter paper (as Beta over 0.1 MeV). This is the integrated content of entire amount of air drawn through the system.
- This corresponds to $2 \times 10^{-11} \mu\text{Ci/cc}$ after 5 days with pump running.
- $1 \times 10^{-10} \mu\text{Ci/cc}$ after 24 hours or $3 \times 10^{-9} \mu\text{Ci/cc}$ after pump runs for 1 hour.
- This level is below 2/10th of the NRC Title 10 limit for 40 Hr. exposure to most hazardous Beta and/or Gamma emitter in absence of AC 227.

Detector: **PGS-3:** 1" Dia x 1" L scintillation crystal optically coupled to photomultiplier tube. Gamma sensitivity is 100 times greater than GM tubes

Detector: **STB-3:** Alpha/Beta Counting System Termination is BNC

Sensitivity: Alphas/Betas 60KeV,

Range: 30% to 100% of 2 pi

Background: Typically 25 cpm

Flow Rate: Calibrated at factory. See chart. Positive displacement pump.

Filters: Includes package of 50 filters, charcoal impregnated.

Optional: Can use membrane, paper or glass fiber filters.

Electronics: LAM-10D Digital Ratemeter. **Ranges:** 0.01 to 100 mR/hr.

- ❖ 6 DIGIT RATE-8 DIGIT TOTAL DOSE
- ❖ WALL MOUNT OR PORTABLE
- ❖ AC OR BATTERY-RECHARABLE
- ❖ 5 DECADES
- ❖ RECORDER OUTPUT
- ❖ SETTABLE ALARM -BEEPER FLASHER
- ❖ DATA DOWNLOAD VIA RS-232
- ❖ **OPTIONAL** - USB

Case: Electronics housed in instrument-case, carrying handle included.

Meter Response Time: 2 seconds

Pump Power: AC standard. 115V, 50-60 Hz (230 V optional); **OPTIONAL:** 6 AA batteries-



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WEIGHT & DIMENSIONS:

Dimensions PGS-3: 9" L x 2" Dia

Weight PGS-3: 1 lb

Dimensions STB-3: 3 1/2" W x 4 1/2" L x 4" H

Dimensions STB-3 Drawer: 2 1/16" Dia x 3/8" Deep

Weight STB-3: 7 1/2 lbs with 1" Lead Shielding

Dimensions LAM-10D: 10" W x 7" H x 4" D

Weight LAM-10-D: 3 lbs including batteries and hardware, excluding probe.

Dimensions AC Pump: 5" W x 7" H x 10"L (Fold Down Handle)

Weight AC Pump: 6 lbs

PUMP SPECIFICATIONS:

PUMP	Model #	Flow Rate	Weight
Battery Operated	MINI-AIR-15	4ft ³ /hour (2 lpm)	1 lb
AC Operated	AP-5020E	0.5ft ³ /minute	6 lb

OPTIONS:

- Flow Regulator Serial Output
- High Alarm Flow Meter
- Extended Life Pump
- Unit Fitted With Inlet Hose to Allow Monitoring Of Hoods



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