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

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.

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SPECIFICATIONS:

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

Sensitivity:

<table>
<thead>
<tr>
<th>TIME</th>
<th>SENSITIVITY</th>
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<tr>
<td>1 Hour</td>
<td>$3 \times 10^{-3} \muCi/cc$</td>
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<tr>
<td>24 Hours</td>
<td>$1 \times 10^{-6} \muCi/cc$</td>
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<tr>
<td>5 Days</td>
<td>$2 \times 10^{-11} \muCi/cc$</td>
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- 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 $2 \times 10^{-11} \muCi/cc$ after 5 days with pump running.
- $1 \times 10^{-10} \muCi/cc$ after 24 hours or $3 \times 10^{-9} \muCi/cc$ 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-RECHARARGEABLE
  - 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-
WEIGHT & DIMENSIONS:

Dimensions PGS-3: 9" L x 2" Dia
Weight PGS-3: 1 lb

Dimensions STB-3: 3 ½” W x 4 ½” L x 4” H
Dimensions STB-3 Drawer: 2 1/16” Dia x 3/8” Deep
Weight STB-3: 7 ½ 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:

<table>
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<tr>
<th>PUMP</th>
<th>Model #</th>
<th>Flow Rate</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Battery Operated</td>
<td>MINI-AIR-15</td>
<td>4ft³/hour (2 lpm)</td>
<td>1 lb</td>
</tr>
<tr>
<td>AC Operated</td>
<td>AP-5020E</td>
<td>0.5ft³/minute</td>
<td>6 lb</td>
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OPTIONS:

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