

MOVING FILTER ALPHA PLUS BETA-GAMMA AIR MONITOR SYSTEM

Model # SAAM-4HVM

FEATURES:

- AIRBORNE ALPHA and BETA-GAMMA PARTICULATES
- COUNTS SEPARATELY AND SIMULTANEOUSLY
- RUGGED, 100% DUTY CYCLE
- SETTABLE ALARM
- HIGH THROUGHPUT
- OPERATES 2-6 WEEKS UNATTENDED
- PRINTED RECORD
- BCD AND SERIAL PULSE OUTPUT
- 3" LEAD SHIELDING
- 4 CHANNEL AIR MONITOR:
 - CHANNEL 1:** SHORT LIFE ALPHA
 - CHANNEL 2:** LONG LIFE ALPHA
 - CHANNEL 3:** SHORT LIFE BETA
 - CHANNEL 4:** LONG LIFE BETA

DESCRIPTION: The **SAAM-4HVM** series are four channel air monitors for simultaneous measuring of gross Alpha, and Beta-Gamma particulates. Like all of the SAAM series, these are continuous duty, high capacity, rugged skid or caster-mounted systems. Electronics are microprocessor with color LCD display. Also preamps etc. are plug-in modules allowing change or addition of function as needed and allowing rapid repair by substitution of modules in the field. The modular system is covered by T/A's unique exchange warranty, in addition to the full one year warranty covering all T/A products.

Shields are void free lead with stainless steel parts for a long, useful life and easy decontamination. Filters are easily changed via quick disconnect, supply and take up spools. Shield can be opened for filter change or cleaning with minimum effort. All shield connections and openings are sealed against air leaks. The air moving system is based on a high capacity air pump capable of delivering 5 cfm with **Options** up to 30 cfm free air and including fine regulation in the 3 cfm to 5 cfm operating range. The entire system is mounted in a self-contained rugged cabinet and comes complete with all cabling and connectors in place ready to operate. The standard unit is operated from 115 V single phase, 60 Hz; **Optional** 220 V, 50 or 60 Hz.



Figure 1: SAAM-4HVM

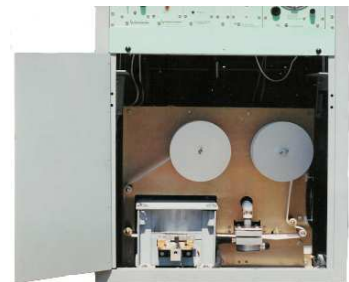


Figure 2: Filter Paper

T**A** **TECHNICAL ASSOCIATES**
7051 ETON AVENUE * CANOGA PARK, CA 91303 TELEPHONE (818) 883-7043 * FAX(818) 883-6103

\$Revision: 1.1 \$

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SPECIFICATIONS:

Channels:	1 & 2	3 & 4
Physical Form:	Particulates	Particulates
Activity Detected	Alpha	Beta-Gamma
Detector Type:	Solid State	Thin Window GM
Size:	1" diameter	2" diameter
Model:	SS-A1	T-1190
Filter Media:	Moving Filter	Moving Filter
Size:	75mm x 100meters	75mm x 100 meters
Construction:	Standard or Glass Fiber	Standard or Glass Fiber
Standard Shielding:	1/2"Steel	1" (Pb) Lead
Optional Shielding:		3" (Pb) Lead
Sensitivity:	$2 \times 10^{-13} \mu\text{Ci/ml}$	$2 \times 10^{-13} \mu\text{Ci/ml}$

Display Mode: Model **SAAM-4HVM** features micro-processor control and color LCD monitor.

Operation: When **SAAM-4HVM** continuous air monitor is in normal operation, the color LCD monitor displays:

CHANNEL NAME STATUS	REAL TIME AIRBORNE CONCENTRATION $\mu\text{Ci}/\text{m}^3$ (Note 1)	ACCUMULATED DOSE FOR THIS SHIFT $\mu\text{Ci-Hrs}/\text{m}^3$ (Note 1)	CONCENTRATION ALARM STATUS	ACCUMULATED DOSE ALARM
PARTICULATE ALPHA	—	—	—	—
PARTICULATE BETA-GAMMA	—	—	—	—
Other alarms:	status			
	Low Air Flow _____	Loss of Signal Particulate Alpha _____		
		Loss of Signal Particulate Beta-Gamma _____		

- MENU OPTIONS:
- | | |
|------------------------|-------------------|
| 1. Modify shift length | 2. Change filter |
| 3. Configure energies | 4. Set alarms |
| 5. Start shift | 6. Save to floppy |

NOTE 1 - User can easily change engineering units at will.

Clear audio and visual alarms are provided.

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```

Name Conc. Tot. Exposure Alarm1 Alarm2 Alarm3
Units Bq/l (cpm) (Exposure) (one sec gross)
I-125 0 99 13:45 13:45 13:45
not used 0 0 13:45 13:45 13:45
not used 0 0 13:45 13:45 13:45
In-111 0 129 13:45 13:45 13:45
Ga-67 0 101 13:45 13:45 13:45
Mo-99 0 64 13:45 13:45 13:45
Person 0 224 13:45 13:45 13:45

Health Physicist on Shift: not named
Space remaining on floppy 62.00%
Low Flow Alarm: 13:45
Current Gross Channel Level: 3 13:45 NOT OKAY
One Second Concentration Alarm: Okay
Inactive Alarm: Okay

1) Modify Next Shift Length 2) Change Filter 3) Configure Energies
4) Set Alarms 5) Start Shift 6) Save onto Floppy 7) Exit
    
```

MAIN DISPLAY SCREEN

```

DATA.TXT
=====
SAVING TO FLOPPY
Time of Start Shift: Thur Jan 01 5:00:00
Current Time is 11:02
Health Physicist on Duty: not named
Shift Length: 8.00
Engineering Units: Bq/l
Engineering multiplier conversion units:
Channel Total Exposure up to now
1 107
2 194
3 370
    
```

DATA.TXT DISPLAY SCREEN SHOWS DATA SAVED TO FLOPPY

Model shown in photo is 7-channel version
 DATA REVIEW MODE: (DATA.TXT)
 Model **SAAM-4HVM** continuous air monitor automatically saves all data and set-up parameters to 3.5" floppy diskette every hour. This data can be reviewed on the color LCD display.

```

1 I-125 0.035
2 not used 0.000
3 not used 0.000
4 In-111 0.245
5 Ga-67 0.300
6 Mo-99 0.739

Enter Channel to change name and energy
Enter 'c' to continue
    
```

TEST.EXE DISPLAY SCREEN FOR SETTING ENERGIES

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Outputs:	Alarm condition outputs: 1. logic level signal 2. contact closure-or opening. Ethernet and Optional modem or server.
Standard Installation:	Cabinet of heavy gauge steel. Skid or caster mounted with 4 five inch ball bearing casters, two of which are full swiveling.
Special Safety:	Loss of air flow alarm. Loss of signal alarm. All circuits fused.
Features:	Thermal protection on motor. (Optional: Positive displacement ROOTS pump).
Dimensions:	29" wide x 31" long x 41" high exclusive of casters.
Weight:	600 lbs (lighter systems are available).
Shipping Weight:	800 lbs (lighter systems are available).
OPTIONS:	Air monitor available without air mover or with alternate air movers. Broader range 12 decades. Different detector types. Three push-button check sources (License exempt quantities). Positive Displacement of Roots Blower. Higher Flow up to 30 cfm. Lighter system with less shielding. Modem and/or Server.

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