PLUTONIUM AIR MONITOR
QUICK RESPONSE
Model Series ~ FAST-CAM-5 & FAST-CAM-5T

FEATURES:

- DETECTS PLUTONIUM & OTHER ALPHAS
- DETECTS BETAS
- BETA CHANNEL HAS RADON REJECTION
- DUAL DETECTORS
  - ALPHA – ZnS(Ag)
  - BETA – PLASTIC SCINTILLATOR
- ALARM: AUDIO / VISUAL
- 35 CFM FLOW RATE- 4" DIA FILTER
- QUICK CHANGE FILTER
- REAL TIME OPERATION
- PROVIDES LOCAL OR REMOTE READOUT
- TWO MODELS AVAILABLE
  - PORTABLE WITH RS-232
  - BENCH TOP WITH USB or ETHERNET

FULLY COMPATIBLE TO OVERHOFF RADIATION OVERVIEW (ORO) NETWORK

DETECTOR & PUMP

DETECTOR SWINGS ASIDE FOR EASY FILTER REPLACEMENT

TWO ELECTRONICS OPTIONS

PRS-2F PORTABLE

BENCH TOP Fast-Cam 5T FM-9 Electronics
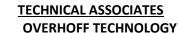
APPLICATION:

The **FAST-CAM-5** detects airborne Alpha radiation in high or varying background situations. Alarm points are pre-settable. Data output ports are provided with both the portable and the table top electronics models. Designed for stand-alone (or networked) operation such as the Overhoff Radiation Overview (ORO).

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DESCRIPTION:

- A ZnS (Ag) detector & Beta Scintillator which allows separate and simultaneous Alpha & Beta readouts.

- Provides integrated exposure information and has pulse output available

- Measures Pu-239 or other alpha emitters in the presence of significant or varying Radon-Thoron background.

- Count rate is read on the front panel digital display

- 6 digit display for both rate and integrated information.

- User selectable operating modes: gross count, area of interest counts - pulse height analyzing (PHA), or PHA with background subtract (PHA-SUB).

- Settable alarm point over the entire range with adjustable alarm delay to avoid short term transient alarms

- 35 CFM air pump

- Quick change 4" dia filter.

- A box of 20 pc 4" dia filters and user's manual are included

- A complete system.   Table top model **Fast-Cam-5T** may be expanded according to the needs of the user utilizing the FM-9 series modules.

SPECIFICATIONS:

Detection: ALARM in 10 sec at 2.7 DAC-HR prior to exposure of 74Bq/M^3.

PROBLEM: Most Pu monitors take too long to detect dangerous airborne levels and therefore do not provide personnel timely warning and opportunity to evacuate.

SOLUTION: In case of a spill or leak that produces air borne concentration of 74Bq/m^3 the Fast-CAM-5 & Fast-Cam-5T will alarm quickly, in 10 seconds limiting worker exposure to 2.7 DAC-HR.

Counting Efficiency: 20 percent of 2 pi with wide window setting and 4" dia Pu-239 source in the filter holder.

Detector: ZnS(Ag) – **OPTIONAL**: dual phosphor with a 5" dia photo-multiplier tube and a typical Alpha resolution of 60 KeV maximum.

Response time: 1 sec. to 24 hrs.

DETECTORS

Alpha	ZnS(Ag)	
Sensitive	5" dia	
Efficiency, typical:	Pu-239	4.0 Bq/cps, 25.0%
Beta	plastic scintillator .020"	
PM Tube	5" dia	
Efficiency, typical:	Tc-99	11.0 Bq/cps, 9.1%
Alpha cross talk into Beta channel	2.0%	
Beta cross talk into Alpha channel	0.08%	
Background (unshielded)		
Alpha	5 cpm	
Beta	200 cpm	

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ELECTRONICS

> **PORTABLE – PRS-2F**

Display:	Dual display, Alpha & Beta.
	2 separate scale factors for rate & total
	PRS-2F
	Energy discrimination
Alarm:	Audio / Visual
Data Output:	RS-232
Temperature:	-10 C^o to 40° C
Power:	Battery operation: 6 AA cells or optional in-place rechargeable batteries.
Battery Life:	100 hours with Alkaline cells (200 hours with - Lithium cells).
Construction:	Rugged, lightweight

WEIGHT & DIMENSIONS:

PRS-2F Dimensions: 3-1/4" H, 4-1/4 W, 7-1/4" (Long excluding probe holder and handle.)

PRS-2F Weight: 2 lbs.

Digital Display PRS-2F	RATEMETER	SCALER
Range	6 digit LCD	8 digit LCD
User Settable Scale Factor	0.1 - 20,000 count/sec	0-10,000,000 Total counts
Time Constant	0.01 to 99 seconds Display Refresh Rate	Free Running

ELECTRONICS

> **BENCH TOP MODEL - Fast-Cam-5T – FM-9W ELECTRONICS**

Power Supply and MV-5.12.24.

Power:	AC 115V, 60 Hz (230 Volts, 50 Hz optional.)
MAC-9:	Air Control Timer; Low Flow Alarm Flowmeter
MGA-5:	Single Channel Analyzer
FM-9:	On-Board computer with color monitor
Readout:	7" Color LCD monitor built-in user data display.
Data Output:	USB or Ethernet

TA **TECHNICAL ASSOCIATES** Divisions of US NUCLEAR CORP

OVERHOFF TECHNOLOGY **Ticker UCLE**

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Real - Time
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Specialists

7051 Eton Ave., Canoga Park, CA 91303
818-883-7043 (Phone) ~ 818-883-6103 (Fax)
SALES@USNUCLEARCORP.COM   WWW.TECH-ASSOCIATES.COM

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- **Concentration**
- **Total Activity on Filter**
  User Settable Units: (cps, Bq, µCi, Bq/m^3, µCi/l, DAC, DAC-hr etc.)
- **Raw Counts**
- **Flow Status**
- **Alarms – Audio & Visual On screen red light alert - User Settable.**
- **System Status; System Error**
- **Alert Change Filter Due to High Activity Build Up – Range Typically Set at 500 kBq or 13.5µCi User Settable.**

Modules and Functions Include:

MAR-6:   Alarm with Relays for operators use and for Acknowledge (audio disable)

SUB-5:   Three levels energy analyzer

FIL-7:   Digital Process Readout with RS-232 Output, Process Loop Transmitter (optional)

Filters: Includes a package of 20 Glass fiber free flowing 4" dia filter

WEIGHT & DIMENSIONS:

FM-9 Electronics: 21" 'W x 11"H x 15" D.

FM-9 Weight: 4**0** lbs.

OPTIONS:

Remote Alarm

Remote Readout

Beta detector for Radon Rejection

Multi detector Overview Network Software for Plant Wide Real-Time Data collection