

RAPID RADON MONITOR

Model ~ FR-5-FS

FEATURES:

- RADON SYSTEM GIVES QUICK MEASUREMENT
- 1 PICOCURIE PER LITER IN 3 MINUTE SAMPLING
- INCREASED SENSITIVITY WITH LONGER SAMPLING
- PORTABLE (AC OPERATED)
- **OPTIONAL:** RECHARGEABLE BATTERIES AND CHARGER
- REPLACEMENT CARTRIDGES WIDELY AVAILABLE



Model – FR-P11: AC - Collection Unit with Quiet Pump & Filter Holder

DESCRIPTION:

Model – FR-P11 Collection Unit

- Regulated Air Sampler complete with Quiet Pump, flow meter and filter/cartridge holder.
- Quiet air pump capacity is 227 liters/minute under constant surveillance by flow meter.
- 10 cartridges included.
- **Model – PRS-7 Electronics**
- **SENSITIVITY:** 1 pico Ci/liter with 3 minute air collection and 3 min count after 1 hour wait
- **DAILY VARIATIONS:** Radon concentration varies dramatically during each day. To measure daily average value, leave pump operating in place for 24 hours, then wait at least one hour and make measurement. Quiet pump will not disturb most sleepers in adjacent rooms.

REUSE OF CARTRIDGE:

- Cartridges may be reused if the count of the cartridge shows zero counts above background.
- The cartridge will rid itself of Radon in approximately 2 weeks with no action, or can be rid completely of Radon in 1 hour by heating in oven for 1 hour at 250 degrees F.
- Additional charcoal cartridges are available



PRS-7 ELECTRONICS

[See RADON IN AIR COMPARISON CHART](#)



TECHNICAL ASSOCIATES

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APPLICATION:

- Take the pump and filter holder to the area to be tested
- Pull air through the filter for a period of at least 3 minutes.
- A 3-minute count based on a 3-minute sample achieves 1 pico Ci per liter.
- A ten-minute count based on a ten-minute sample achieves a 0.1 pico Ci/liter sensitivity.
- A waiting period of approximately one hour after taking the sample and before counting is required to maximize the sensitivity.
- Longer or shorter waiting times (from ten minutes to seven days) will still allow detection and accurate measurement of Radon in air but at lesser sensitivity than above.

SPECIFICATIONS:

Model:	FR-PII Collection Unit for FR-5-FS
Portability	Portable
DETECTOR	PGS-3L
Size/Material	1" x 0.8" NaI(Tl)
Window	Aluminum 5mil
Detects	Low + Middle ; Gamma.
Pump	227 liters/minute
Filter	Charcoal Cartridge 2.5" dia.
WEIGHTS:	
Electronics	5 lbs with Batteries
Detector + Filter	4 lbs (1.8 kg)
Pump	30 lbs (13.6 kg)
Shielding	None
Electronics	PRS-7



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ELECTRONICS PRS-7:

SPECIFICATIONS:

Digital-Display: 6-digit LCD Rate, 8 digit integrate.
Recessed or Internal: Discriminator level, high voltage, alarm set.
Time Base: Crystal controlled 1-10,000 seconds, user settable.
Display Modes: Rate, Integrate.
Range: 1×10^{-13} to 1×10^{-7} $\mu\text{Ci/cc}$ or Ci/m^3 – Depends on count time
Alarm: 2000 Hz audio tone with audio “mute” switch + RED LIGHT, high current relay.

Single Channel Analyzer:

3 Switch Selectable Windows:

2 preset (user settable) window positions plus one “variable”.
10-turn, 1000 division pot for each threshold.
10-turn, 1000 division pot for window width.

Analyzer/Discriminator:

Front Panel Controls:

On-Off Toggle; Alarm-Mute; Rate; Integrate; Reset;

Supply:

High Voltage is adjustable & repeatable with the 10-turn dial.

Engineering Units:

User Settable: input correct conversion factor, change units.

Controls:

Front Panel: On-Off, Alarm-mute, Rate, Integrate, Reset.

Calibration:

User settable calibration factor adjustment.

Computer interface:

Two-way, RS-232 standard, USB optional.

POWER:

AC & Rechargeable Battery and Charger

Batteries:

5 amp-Hour Battery Pack with built-in charger.

Battery Life:

100 Hours in Non-Alarm Status
18 Hours in Alarm Status

Power:

115-125 volts, 50-60 Hz (220 V optional)

Environmental:

10° C to 60° C, RH: 50% - 95%

Construction:

NEMA-4X polycarbonate gasket sealed case with handle:
Rugged / splash-proof with handle.

All plug-in circuit cards.

Weight and Dimensions

Electronics 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:

5lbs (2.5kg) including batteries.

OPTIONAL:

USB

Alarm Relay



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DETECTOR & PUMP SYSTEM:

Detector:	PGS-3L Scintillator
Air Pump:	High Flow Pump and Filter holder.
Air Flow Rate:	227 liters/min
Filters:	10 pack silver activated charcoal filter cartridges
System Power:	115 V 50-60 Hz 2A (Optional: 230 V 50-60 Hz).
OPTIONAL:	AC & Rechargeable Battery and Charger

WEIGHT & DIMENSIONS:

Pump Assembly:	12"W x 20"H x 14"D (30.4 cm W x 50.8 cm x H x 15.2 cm).
Detector Assembly:	5"W x 10"H x 6"D. (12.7 cm W x 28.4 cm x H x 15.2 cm).
Weight:	See Chart

OPTIONAL:

Computer Interface:	USB
Tripod for Breathing Zone Monitoring	
Detector Shielding	



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