ECONOAIR PREMIUM PTR SERIES

L-5PTR

L-12PTR

L-15PTR

ECONOAIR PREMIUM L-5PTR

The F&J ECONOAIR Premium L-5PTR personal air sampler consists of a pump contained in a high impact steel fiber filled Lexan, antistatic and RFI/EMI-shielded case, exclusive electronic circuit board for constant flow control (patent pending), an LCD display with 2 lines of 16 characters, a single diaphragm pump mechanism and a rechargeable NiMH battery pack. The L-5PTR can be programmed for timing routine activated sampling.

The purpose of this pump is to draw air contaminants in through a sampling media such as 25 and 37 mm filter cassettes, bubble impingers, long-duration color detector tubes; to gauge personnel exposure to gases, vapors, particualtes, aerosols, etc. The operator can select to report flow rates and volumes to ambient conditions or to a Reference Temperature and Pressure.

No tools are required to operate this pump and a password protected keypad locking system provides uninterrupted operation. The main display allows quick selection To RUN (for sampling) or MENU (to reset pumps data).

Other features include elapsed time, flow rate and accumulated volume. The built in timer counts down the sampling time up to 40 hours and automatically turns the pump off. All data is saved and cleared for next sample under the MENU "Clear All Data" option

Features:

- Runs 20 hours @ 2.0 LPM (37 mm 0.8µ filter)
- Increased back pressure capability, up to 50" of w.c. @ 2 LPM
- Accuracy: ± 5% of compensation range
- High backpressure capable for 25 mm 0.45µ asbestos filters
- Flow compensation for filter plugging and battery voltage
- Dual flow range easily handles Impingers, cyclones and tubes
- "Auto-restart" within one minute of a flow fault
- Two-hour rechargeable single pack batteries and optional extended run with use of triple packs
- Battery pack rechargeable while attached or separately
- Compact, rugged and quiet
- Stainless steel belt clip with built-in tripod connector
- Key pad lock system
- Timing routine activated sampling
- Correction of flow rates and volumes to a Reference Temperature and Pressure
- Premium models are capable of Data Logging. PC Software and for download of data requires optional PC link cable
- The PC link with Windows 10 and Windows 11 operating system using the RS232 com port and the PC link cable
- Delayed start time with auto shut off feature is available upon request

Performance Profile: Model: L-5PTR
 Flow Range: 0.8 – 5 LPM (800-5000 cc/min)

5-800 cc/min with Universal Low Flow Holder
Compensation Range:
5000 cc/min up to 10" water back pressure
4000 cc/min up to 20" water back pressure
3000 cc/min up to 30" water back pressure
2000 cc/min up to 50" water back pressure
1000 cc/min up to 50" water back pressure
 800 cc/min up to 15" water back pressure
Accuracy: ± 5% of Compensation Range

Run time (hrs) at different back pressure and flow* rate
 (cc/min)   Backpressure (inches of water)

Flow Rate	5"	10"	15"	20"	30"	40"	50"	60"
1000	27hr	21hr	17hr	14hr	10hr			
2000	19hr	17hr	15hr	13hr	9hr	7hr	5hr	3hr
3000	17hr	14hr	11hr	9hr	7hr	5hr		
4000	15hr	11hr	9hr	8hr	5hr			
5000	11hr	8hr	6hr					

* Without Data Logging Feature Activated

Low Flow using Universal Low Flow Holder: 5 – 800 cc/min8 hours
Data Storage: Last flow rate, elapsed clock time and accumulated volume is saved into memory until
                cleared for next sampling.
Display: Backlit LCD with 2 lines of 16 Characters
Normal Operation: Battery Level, Flow Rate, Elapsed Time, Volume Collected, Timer
Flow Fault Displays: Flow Fault or Filter Off

Specifications
Power Supply: Single Pack, NiMH Batteries: 4.8V, 2.15 Ah
                Triple Pack, NiMH Batteries: 4.8B, 6.45 Ah
Recharge Time:

Battery	**Charger**		
	QuickOne	QuickFive	Standardization
Single Pack	2 Hr	2 Hr	16 Hr
Triple Pck	6 Hr	6 Hr	

Quick-Chargers: Input Voltage 100 to 240 VAC
Standard-Chargers: Input Voltage 120 VAC or 230 VAC
Approvals: CE EMC Directive (EMCD) 89/336/EEC UL and cUL (pending), ATEX (pending)
Temperature:
    Operating   32ºF to 122ºF (0ºC to 50ºC)
    Storage   32ºF to 122ºF (0ºC to 50ºC)
    Charging   41ºF to 104ºF (5ºC to 40ºC)
Case: Polycarbonate steel fiber filled, RFI/EMI-shielded
Size: 4.5"H × 4"W × 2"D
    (11.4 cm H × 10.2 cm W × 5 cm D)
Weight: 19 oz   (539 g)
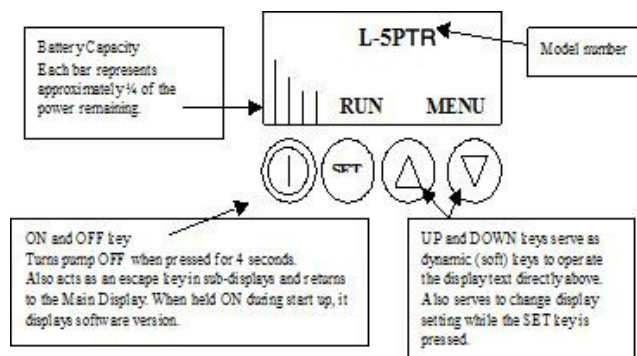
PRODUCT	DESCRIPTION
906200	L-5PTR Pump Kit
946200	L-5PTR, 5-pack Pump Kit
109030	Adjustable Universal Low Flow Holder

L-5PTR OPERATION DISPLAYS
 Main Display

*   Pump kit includes pump with a single pack NiMH battery, standard 120VAC battery charger, Luer hose adapter, shirt/hose clip, 3 feet of vinyl hose and operating manual. Kit does not include Universal Low Flow Holder for sorbent tubes.

**   Pump 5-pack kit includes 5 each: pumps with single pack NiMH batteries, Luer hose adapter, shirt/hose clip and 3 feet of vinyl hose. Also included is two oeprating manals, One QuickFive charger 100-240VAC and a durable hard plastic 1500 Pelican case with lifetime warranty that accommodates additional accessories. Kit does not inlcude Universal Low Flow Holder for sorbent tubes.

ECONOAIR PREMIUM L-12PTR

NOTABLE FEATURES:

- Compact, Rugged and Quiet
- No tools required to change flow rates
- Flow setting is saved in memory for next day quick start
- Battery pack rechargeable while attached or separately
- Stainless steel belt clip with built-in tripod connector
- One-hour rechargeable batteries and extended run triple packs
- High impact steel fiber filled Lexan case, antistatic and RFI shielded
- "Auto-restart" within one minute of a flow fault
- Flows up to 12 LPM
- High backpressure capable for 25mm 0.45µ asbestos filters
- Built in washable stainless steel 100 micron filter for economy of use
- NiMH batteries; 6.45 Ah
- Displays: Total Accumulated Volume, Elapsed Time, Battery Life, Countdown Clock and Current Flowrate
- Timing routine activated sampling
- Correction of flow rates and volumes to a Reference Temperature and Pressure
- One year warranty
- Premium models are capable of Data Logging. PC Software and for download of data requires optional PC link cable
- The PC link with Windows 10 and Windows 11 operating system using the RS232
- Delayed start time with auto shut off feature is available upon request

GENERAL DESCRIPTION:

The ECONOAIR Premium L-12PTR is a low-cost high-performance personal air sampling pump. It is a simple model designed for sampling of asbestos, lead and other airborne contaminates. The rugged compact design features a rechargeable NiMH battery with available one-hour recharger. The L-12PTR can be programmed for timing routine activated sampling.

The sealed pump case protects the internal components from dust, fibers and moisture. Simplicity of its operation features establishment of flows at 4, 8 and 10 LPM's, maintained within 5% for full constant flow compensation using 37 and 25 mm cassettes interchangeable. This insures accurate sample volumes based on the run time. The ECONOAIR Premium L-12PTR is capable of delivering up to 12 LPM for periods exceeding 8 hours. Bright LCD's indicate pump ON, Flow Fault or a Low Battery.
The ECONOAIR Premium features a two line display that displays flowrate, accumulated volume, elapsed time, battery life and a countdown timer.

The operator can select to report flow rates and volumes to ambient conditions or to a Reference Temperature and Pressure.

Press SET button and hold while using the Arrow keys to adjust flow

ON/OFF Button: Press to turn ON, pump will begin running at previous set flow rate. Press and hold for 3 seconds to turn OFF.

Total Flow Range: 3-12 LPM

Power: Rechargeable NiMH Batteries; 4.8Vm 6.45 Ah

Operating Temperature Range: 32º to 122ºF   (0º to 50ºC)

Case: Polycarbonate steel fiber filled; RFI-shielded and antistatic

Size: 6.5"H × 4"W × 2"D   (16,5 × 10.2 × 5 cm)

Displayed Information: Current Flowrate   Elapsed Time   Battery Life
Accumulated Volume   Countdown Timer

PERFORMANCE PROFILE
Accuracy: ± 5% of the flow set point

Constant Flow Range:
12.0 LPM up to 4.5" water backpressure
10.0 LPM up to 10" water backpressure
8.00 LPM up to 15" water backpressure
6.00 LPM up to 30" water backpressure
4.00 LPM up to 36" water backpressure
3.00 LPM up to 40" water backpressure

Pump Run Times with Sampling Filters

	5"	10"	15"	20"	25"
12 LPM	12.6 hr				
10 LPM	16.1 hr	12.9 hr			
8 LPM	24.3 hr	18.3 hr	14.1 hr	12.1 hr	
6 LPM	34.0 hr	25.0 hr	19.0 hr	15.4 hr	13.7 hr
5 LPM	43.0 hr	30.8 hr	23.0 hr	18.9 hr	16.1 hr
3 LPM	69.0 hr	47.7 hr	36.6 hr		

ECONOAIR PREMIUM L-15PTR

NOTABLE FEATURES:

- Compact, Rugged and Quiet
- No tools required to change flow rates
- Flow setting is saved in memory for next day quick start
- Battery pack rechargeable while attached or separately
- Stainless steel belt clip with built-in tripod connector
- One-hour rechargeable batteries and extended run triple packs
- High impact steel fiber filled Lexan case, antistatic and RFI shielded
- "Auto-restart" within one minute of a flow fault
- Flows up to 15 LPM
- High backpressure capable for 25mm 0.45µ asbestos filters
- Built in washable stainless steel 100 micron filter for economy of use
- NiMH batteries; 6.45 Ah
- Displays: Total Accumulated Volume, Elapsed Time, Battery Life, Countdown Clock and Current Flowrate
- Timing routine activated sampling
- Correction of flow rates and volumes to a Reference Temperature and Pressure
- One year warranty
- Premium models are capable of Data Logging. PC Software and for download of data requires optional PC link cable
- The PC link with Windows 10 and Windows 11 operating system using the RS232
- Delayed start time with auto shut off feature is available upon request

GENERAL DESCRIPTION:

The ECONOAIR Premium L-15PTR is a low-cost high-performance personal air sampling pump. It is a simple model designed for sampling of asbestos, lead and other airborne contaminates. The rugged compact design features a rechargeable NiMH battery with available one-hour recharger.
The L-15PTR can be programmed for timing routine activated sampling.

The sealed pump case protects the internal components from dust, fibers and moisture. Simplicity of its operation features establishment of flows at 8, 10 and 14 LPM's, maintained within 5% for full constant flow compensation using 37 and 25 mm cassettes interchangeable. This insures accurate sample volumes based on the run time. The ECONOAIR Premium L-15PTR is capable of delivering up to 15 LPM for periods exceeding 8 hours.

The operator can select to report flow rates and volumes to ambient conditions or to a Reference Temperature and Pressure.

The ECONOAIR Premium features a two line display that displays flowrate, accumulated volume, elapsed time, battery life and a countdown timer.

Press SET button and hold while using the Arrow keys to adjust flow

ON/OFF Button: Press to turn ON, pump will begin running at previous set flow rate. Press and hold for 3 seconds to turn OFF.

Flow Fault Displays:
    Compensation Range:
        15 LPM up to 10" H_2O backpressure
        10 LPM up to 15" H_2O backpressure
        9.0 LPM up to 17" H_2O backpressure
        7.0 LPM up to 18" H_2O backpressure
        5.0 LPM up to 25" H_2O backpressure

Power: Rechargeable NiMH Batteries; 4.8V, 6.45 Ah (Triple Pack)

Operating Temperature Range: 32ºF to 122ºF (0ºC to 50ºC)

Storage Temperature: 32ºF to 122ºF (0ºC to 50ºC)

Charging Temperature Range: 41ºF to 104º (5ºC to 40ºC)

Case: Polycarbonate steel fiber filled; RFI-shielded and antistatic

Size: 6.75"H × 4"W × 2"D (14,6 × 10,2 × 5 cm)

Weight: 2.1 lbs. (0,93 kg)

Display: Backlit LCD with 2×16 Characters

Displayed Information: Current Flowrate   Elapsed Time   Battery Life
                                Accumulated Volume   Countdown Timer

PERFORMANCE PROFILE
Accuracy: ± 5% of the flow set point

Recommended Charger: Single Station; P/N: 601800
                             Five Station;   P/N: 605800

INSTRUCTIONS TO ENABLE DATA LOGGING AND DOWNLOAD LOGS

F&J L-XPTR Series is capable of storing seven days of sampling data in the internal memory if data is logged every minute. To enable data logging follow the instructions below.

1. Set flow and calibrate the pump as mentioned in section 1.
2. In the main display, press Menu key (Down arrow) and scroll down to Log Sample Rate screen
3. By default log rate is Disabled. Press and Hold Set Key and Press UP arrow to enable log rate in the format of minutes . 1-255 mins.
4. Press ON key once to escape back to Main display or Down arrow to scroll through the menus and then to main display where sampling could be started by pressing RUN (UP arrow) and accumulate logs.

Requirements for Downloading Logged Data:

1. PC with Windows 10 or Windows 11 operating system and RS 232 port.
2. F&J PC Link Elite software package part no. 109101 (includes the PC link cable part no. 109048).

F&J PC Link Elite software package can be purchased from F&J.

F&J PC link cable 109048 needs to be connected to the RS232 port on the PC and the other end to the pump port . Pump needs to be turned on to make the connection.

If RS232 port is not present in the PC then a USB to RS232 adapter is required to make the connection. Check your lo-cal electronic store for this adapter and download the latest driver file to make this adapter work properly.

Example of Logged Data

FILTER PAPER MEDIA

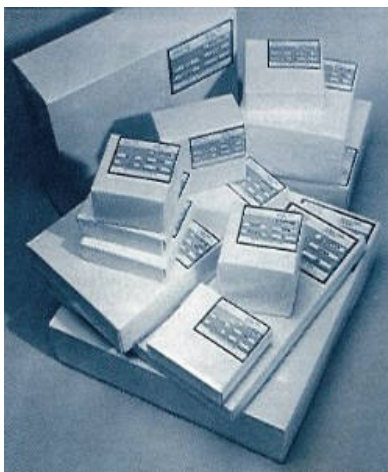F&J provides filter media of various characteristics in many different dimensions.
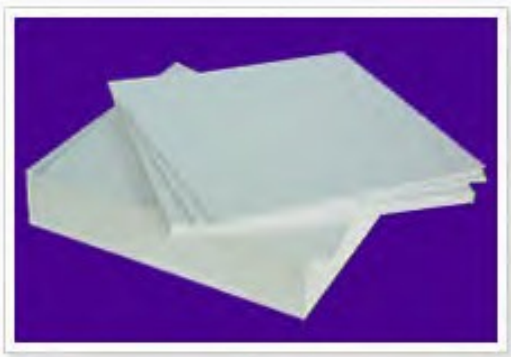
F&J provides its own proprietary filter grades, as well as those manufactured by Whatman, Ahlstrom and Millipore.

Filter Media Types:

Glass Fiber, Cellulose and Membrane

Typical Dimensions:

Diameter (mm)	Diameter (Inches)	Sheets
21, 25, 37, 47, 50	2, 2.25, 3.0 and 4.0	8"×10" (20,3 cm × 25,4 cm)
60, 70, 76 and 102		

LAPEL FILTER HOLDERS for PERSONAL AIR SAMPLERS

Open face lapel filter holders for utilization with personal air samplers. Snap cap, screw on cap or cassette styles are available.

MATERIALS

Plastic   Aluminum   Stainless Steel

STYLES

- Open Face
- Cassette
- Particulate
- In-Line
- Combination (charcoal/particulate)

P/N	Description
LP-947	Lapel, Open-Face Filter Holder, 47 mm cassette style. Connector fitting for 3/16" ID tubing
LP-948	Lapel, In-Line Filter Holder, particulate, plastic. Connector fitting for 3/16" ID tubing
FJ-832	Lapel, Open-Face Filter Holder, 5/16" hose barb, screw on cap
FJ-832A	Lapel, Open-Face Filter Holder, 3/16" hose barb, screw on cap Utilize with 47mm filter paper only
FJ-832AB	Lapel, Open-Face Filter Holder, 3/16" hose barb, screw on cap Utilize with 47mm filter paper in combination with FJ433 charcoal cartridge
FJ-832B	Lapel, Open-Face Filter Holder, 5/16" hose barb, screw on cap Utilize with 47mm filter paper in combination with FJ433 charcoal cartridge

F&J MINI-CALIBRATOR

NOTABLE FEAURES:

- Various Flow Ranges Available
- Lightweight; 8 oz. (227 gms)
- Small Footprint
- Adjustable Height
- Corrects Flowrate to STP
- Displays Airflow Temperature
- Displays Barometric Pressure
- Bright LED with large characters
- English or Metric Engineering Units
  (set at factory) Selection:

Flow	Temperature	Barometric Pressure
SCFM	ºF	Inches Hg
sccm	ºC	mmHg
SLPM		kPa
SCMH		

The F&J Mini-Calibrator is a small, lightweight microprocessor controlled instrument with sophisticated electronics.

The Mini-Calibrator, which is an exclusive F&J design, is a direct reading instrument utilizing a bright LED with large characters that are easily viewed by an operator. A NIST traceable calibration certificate is issued with each calibrator.

The Mini-Calibrator can be utilized as a handheld unit for field calibrations or temporarily mounted in a variety of methods without requiring a level position. The hose barb fittings permit easy connection to the air samplers utilizing flexible tubing.

F&J's Mini Calibrator
MODEL SELECTION

100V	230V	SCFM	SLPM	sccm
MC-300CC	MC-300ECC		0.075 – 0.3	75 – 300 cc/m
MC-500CC	MC-500ECC		0.2 – 0.5	200 – 500 cc/m
MC-1L	MC-1LE		0.2 – 1	
MC-3L	MC-3LE		0.5 – 3	
MC-5L	MC-5LE	0.02 – 0.18	1 – 5	
MC-15L	MC-15LE	0.07 – 0.53	3 – 15	
MC-25L	MC-25LE	0.14 – 0.88	4 – 25	
MC-30L	MC-30LE	0.11 – 1.06	6 – 30	
MC-50L	MC-50LE	0.18 – 1.8	10 – 50	
MC-60L	MC-60LE	0.2 – 2	12 – 60	
MC-75L	MC-75LE	0.26 – 2.6	15 – 75	
MC-115L	MC-115LE	0.5 – 4	15 – 115	
MC-175L	MC-175LE	0.63 – 6.2	30 – 175	
MC-250L	MC-250LE	1 – 9	50 – 250	

GENERAL SPECIFICATIONS

Power Requirements	100 or 230 VAC; 47-63 Hz; 0.3 amps maximum
Operating Temperature	40 - 104º F (4 - 40º C)
Storage Temperature	22 - 158º F (-5 – 70º C)
Dimension (L×W×H)	3.25" × 2.50" × 2.00" (82,6 mm × 140 mm × 50,8 mm)
Weight	8 ounces (227 gs)

MEASUREMENT ACCURACY

Air Flow   ± 2% of full scale
Temperature (Typical)   ± 2ºF (1.1ºC)
Barometric Pressure   ± 2% over measurement range
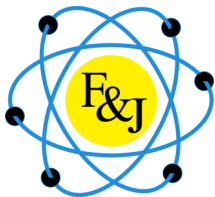
CALIBRATION
Factory calibration is recommended once per year.

OPTIONS
- RS-232 interface, including cable.
    All measured and calculated parameters are accessible through RS-232 port to a computer.

DISPLAY PARAMETERS and RESOLUTIONS

Parameter	Engineering Unit	Resolution
CFM	Cubic feet per minute	0.01 CFM
LPM	Liter per minute	0.1 LPM
M^3/hr	Cubic meter per hour	0.01 M^3/hr.
F	Degree Fahrenheit	0.1º F
C	Degree Celsius	0.1º C
In-Hg	Inches of Mercury	0.01 In-Hg
mm-Hg	Millimeters of Mercury	1 mm-Hg

PRODUCT PROFILE

Air Sampling Systems

- High Volume Air Samplers
  — Portable Grab Samplers
  — Environmental Systems
  — Enzyme Dust Samplers
  — PM10 Systems
- Continuous Air Samplers
  — Environmental Systems
  — Portable
  — Fixed Station
- Personal Air Samplers
- Emergency Response DC Powered Air Sampling Systems

Tritium Detection Systems

- Portable and Fixed Station Collection Systems utilizing Silica Gel or Molecular Sieve Absorbents
- Continuous Tritium Monitors

Air Flow Calibrators

- World Calibrator Series
- Compact Digital V.2 Series
- Mini-Calibrator

New Products

- Global Air Sampler Systems
- Digital Flow Meter Air Samplers
- C-14 Collection Systems
- Isokinetic Air Sampling Systems
- ELITE DIGITAL LIGHT (EDL) Air Samplers
- MEGA High Volume Air Samplers
- ULTRA High Volume (CTBTO) Air Samplers
- JUNIOR CTBTO Air Samplers

Radon Detection Devices

- 2-Day Passive Charcoal Canisters
- 7-Day Passive Charcoal Canisters
- Continuous Radon Monitors

Radioiodine Collection Cartridges

- TEDA Impregnated Charcoal
- Silver Zeolite
- Custom Cartridges
- Bulk Silver Zeolite

Filter Paper

- Glass Fiber
- Cellulose
- Membrane
- Quartz

Filter Holders

- Open Face
- In-Line
- PAS Filter Holders
- Materials
  — Plastic
  — Aluminum
  — Stainless Steel