

CINEMA FILTER SET LP-24

User's Manual



LAFONT AUDIO LABS

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Section 1. INTRODUCTION and PRECAUTIONS

1.1 Preface

Thank you for using this LAFONT product.

We have prepared this instruction manual to enable you to achieve optimum utility and performance from your new ADR/Foley processor LP-24.

We encourage you to read and make use of the material contained in this manual. Installation and operating of the LP-24 is not complicated but the flexibility provided by its operating features merits familiarization with its connections and controls. We welcome your suggestions and comments on our products and on this manual.

1.2 Unpacking and inspection

Your new LAFONT LP-24 was carefully packed at the factory. Save all the packing material - they will prove valuable should it become necessary to transport or ship this product.

We recommend careful examination of the shipping carton and its contents for any sign of physical damage which may have occurred during transportation.

If damage is evident, notify the transportation company without delay. Only you, the consignee, may institute a claim against the carrier for damage.

If necessary, contact your supplier or, as last a resort, your LAFONT importing agent who will fully co-operate under such circumstances.

Your shipping carton should contain :

The LP-24

The a/c. power cable.

This instruction manual.

1.3 Mounting

Do not install this unit in a location subjected to rain, moisture, dust or mechanical vibrations. If the unit is installed in an equipment rack, console or other area along with high heat producing equipment, adequate ventilation should be provided to assure longest component life. Also, while internal circuits susceptible to hum pickup is sufficiently shielded from moderate electromagnetic fields, avoid mounting the unit immediately above or below large power transformers or any radiating equipment.

1.4 Power connection

Connection is made by means of an IEC standard power socket. Before connecting the unit to the mains power, ensure that the operating voltage is correct for your local supply.

The rear panel voltage label indicates the voltage required for satisfactory operation of the unit. Mains voltage change should be carried out by a qualified service technician only. To change the mains voltage, please refer to Power supply section.

Should the fuse need replacement, it should be replaced only with the same type and value of fuse.

For 115Vac, use 500mA/250V - 5 x 20mm slow blow fuse.

For 230Vac, use 315mA/250V - 5 x 20mm slow blow fuse.

1.5 Safety warning

For safe operation the LP-24 must be connected to a good mechanical ground. This provides a current path for any voltage which might appear on the chassis due to an electrical fault in the network. Without this path the unit could be an electrical shock hazard. In addition a good quality ground on the chassis provides shielding from external fields and minimizes radiation of internal fields to the outside world.

This unit is fitted with 3-pin power socket. The earth lead should not be disconnected. Do not use a ground-lifting adapter and never cut the ground pin on a three-prong plug.

There are some instances where a hum or buzz will be introduced due to a phenomenon known as a ground loop. This results when there is a significant potential between the audio ground of the previous piece of equipment and the mechanical ground to which the LP-24 has been connected. If you encounter a problem with earth loops, remove the ground-lift link located inside the unit to isolate the signal earth from the chassis earth. Refer to Power supply section.

To prevent shock or fire hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not remove cover. Refer servicing to qualified personnel only.

Section 2

WARRANTY

Lafont Audio Labs warrants to the original purchaser all parts, except front panels, knobs, cases and cabinets of every Lafont product to be free from defects in materials or workmanship, as hereinafter provided, for one year from the original date of purchase.

Lafont Audio Labs will at his option, repair or replace any equipment covered by this warranty, which becomes defective, malfunctions or otherwise fails to conform with this warranty under normal use and service during the term of this warranty, at no charge for parts and labor.

This warranty does not cover defects, malfunctions or failures resulting from shipping or transit accidents, abuse, misuse, operation with faulty associated equipment, modification, alteration, tampering or normal wear and tear.

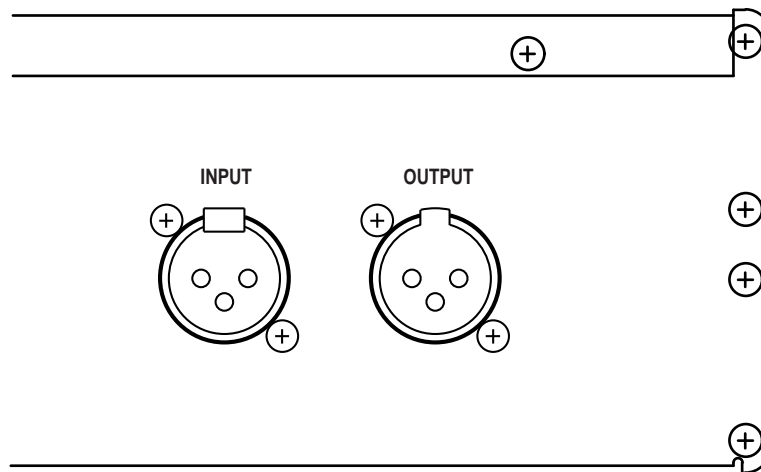
Lafont Audio Labs shall not be responsible for any incidental or consequential damages sustained by any customer as a result of or any cause associated with products including without the limitation the delivery or non-delivery thereof or the performance or non-performance thereof.

This is the only warranty applicable to Lafont products. In the interest of continuous product improvement and development Lafont Audio Labs reserves the right to change and modify any specification or feature whenever in our opinion, such a change produces an advantage mutual to our customers and ourselves without incurring any obligation to change or improve products manufactured prior thereto.

Section 3

SIGNAL CONNECTIONS

The inputs and the outputs of the LP-24 are fully balanced on XLR connectors. Current IEC wiring convention calls for pin 2 to be high/hot and pin 3 low/cold. In a balanced system, the distinction is arbitrary provided there are no phase inversions through the unit ; the LP-24 maintains phase. When inputs and/or outputs should be unbalanced, it is unimportant which of the two signal pin is grounded, so long as the same convention is used on all inputs and outputs. Nevertheless, in the interests of maintaining international standardization, we suggest the IEC recommendation is followed.



We recommend that two conductor shielded cables be used even in an installation using unbalanced wiring. This takes advantage of the ability of the input to reject common-mode noise (hum) and reduces the possibility of radio interference (RFI). Do not depend on the shield wire itself to complete the signal connection.

Section 4 OPERATING PROCEDURE

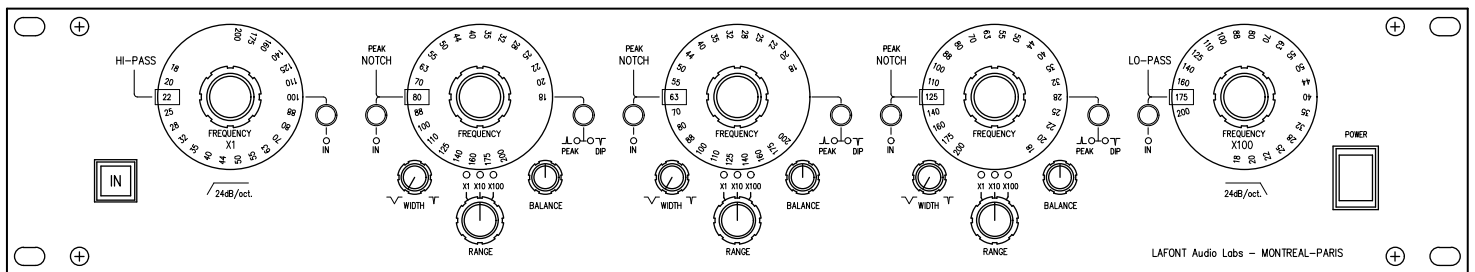
The model LP-24 Cinema Filter Set primary function is to remove undesirable noise components from audio range in live or recorded signal.

For example, AC hum, oscillations can be rendered completely inaudible with no apparent effect on the sound quality of the original signal because of the extreme sharpness of the band reject filters.

Complex noise such as camera noise, transformer vibrations or fluorescent light buzz can be greatly reduced.

Noise of random nature as air conditioning, jet aircraft, audience can be reduced using the high-pass and lo-pass filter together with the band reject filters.

The LP-24 may be used also to produce special effects such as phasing, frequency enhancement (ringing), heterodyne sweep, fading, etc...



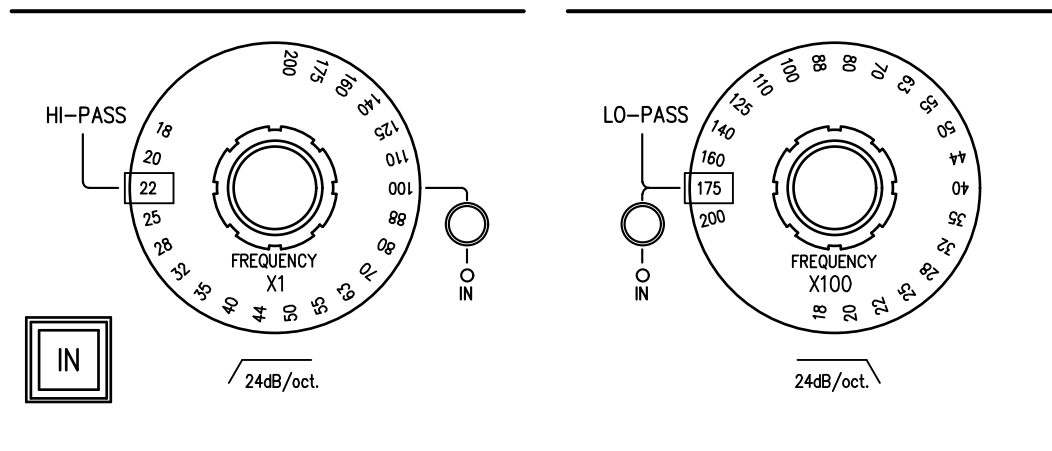
The LP-24 provides two continuously tunable band limiting filters and three band reject filters. This unit is designed for no-loss insertion in program circuits. A silent 'IN' switch is provided to add or remove all filter action instantly.

4.1 Band limiting filters

Using the high-pass and the low-pass filters is quite simple.

Each filter has an individual by-pass switch and a frequency sweep control that covers 3.4 octaves (1 to 11 ratio).

The slope is constant at 24dB per octave for maximum efficiency.



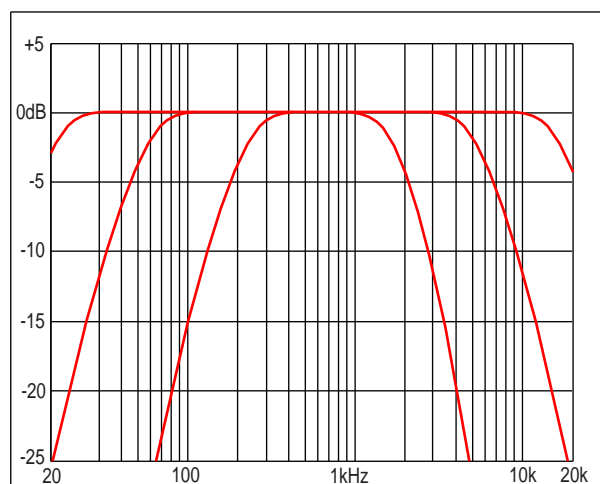
Ensure that the unit is powered and the green illuminated master IN switch is engaged.

The high-pass filter is located on the left side of the front panel.

Press the black 'IN' push button to insert the filter in the audio chain.

Then turn the big wheel clockwise to eliminate unwanted frequencies in the bottom of the audio spectrum. The selected cut-off frequency is displayed in the high-pass window.

Located on the right side of the front panel, the low-pass filter works in a similar manner. Turn the frequency control counter clockwise to limit the upper end of the audio frequency spectrum. The value displayed in the lo-pass window should be multiplied by 100 to obtain the cut-off frequency.



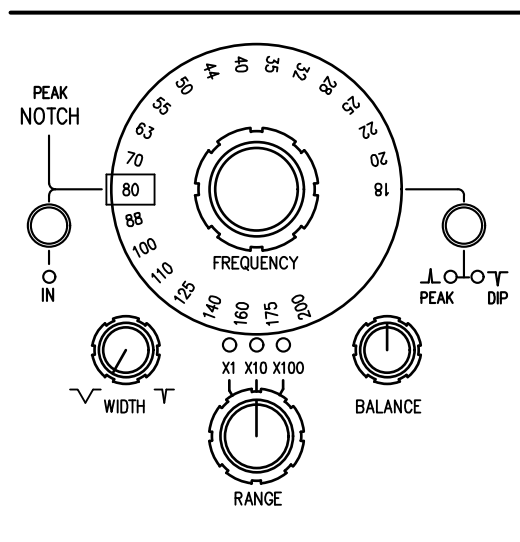
High pass and low pass filters

4.2 Band rejection filters

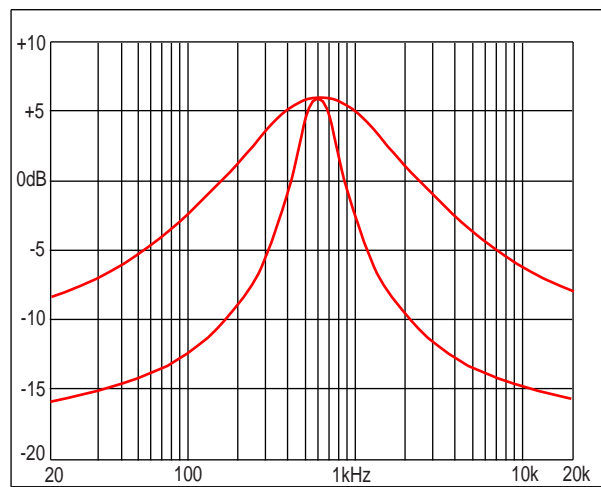
The LP-24 contains three identical band rejection filters. Each of the three rejection filters are capable of covering a center frequency range of ten octaves in three bands. We recommend that you start the procedure by using only one filter.

Procedure:

When using this unit for the first time, it is recommended to simulate a polluted track by mixing a sine wave (at about -6dB) with a music or film soundtrack and then follow the procedure described below. This will help to get familiar with it and be able to remove quickly complex noise in real situation.



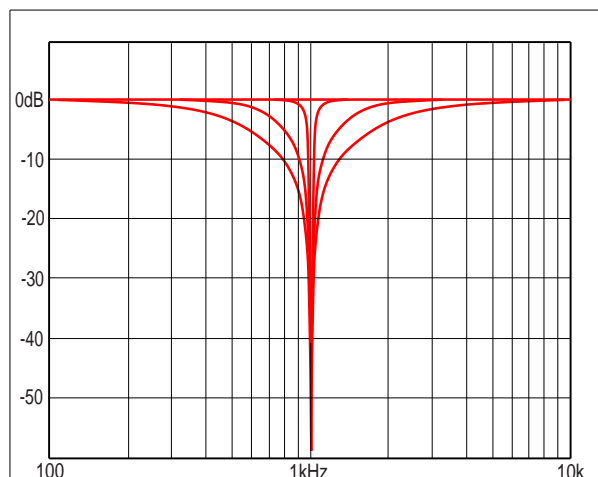
- 1) Choose a filter and press the peak/dip switch to put the filter in the peak mode, (red indicator).
- 2) Turn the WIDTH potentiometer fully counter clockwise.
- 3) Turn the BALANCE potentiometer to the mid position.
- 4) Select the estimated frequency band with the X1, X10, X100 rotary switch.
- 5) Turn the frequency potentiometer fully counter clockwise.
- 6) Press the black IN switch located at the left of the frequency potentiometer.
Most of the audible spectrum disappears except a narrow band amplified by 6dB.



Bandpass filter (peak mode)

- 7) Rotate slowly the frequency potentiometer to sweep the band until the noise becomes enhanced. It should not take too much fine tuning to settle the filter into the center of the noise spectrum. If you do not find the noise frequency, switch to another band.
Then turn the WIDTH control to its mid position and re-adjust the frequency for a closer tuning.
- 8) Release the peak/dip switch (green indicator). The program signal comes back and the unwanted signal is dimmed.
- 9) Adjust the BALANCE potentiometer to increase attenuation.
- 10) Then adjust the FREQUENCY and WIDTH in order to obtain maximum rejection.

Note: turning the width control clockwise will result in a narrower bandwidth. If the unwanted signal has a frequency slightly different from the selected one, the gap will be enhanced as filter bandwidth reduces. Narrow bands may result also in a loss of attenuation which will be compensated by turning the BALANCE potentiometer. A poor setting may give an attenuation of 20 dB while a well balanced setting will exceed 60 dB of signal rejection. The BALANCE potentiometer is not active in the bandpass mode (peak mode).



LP-24 rejection filter

Section 5 Specifications:

Maximum input level: +24dBu

Maximum output level: +24dBu

Unfiltered frequency response: 5Hz-100kHz @-1dB

Hi-pass filter: 18Hz to 200Hz @24dB/oct.

Lo-pass filter: 1.8kHz to 20kHz @24dB/oct.

Notch filters: 18Hz to 20kHz, 60dB rejection

Bandpass filters: 18Hz to 20kHz, 6dB gain

Power requirement: 115VAC/60Hz, 240VAC/50Hz

Physical size: 19"x2U rack cabinet (483x88x225mm).

In the interest of continuous product improvement and development LAFONT Audio Labs reserves the right to change and modify any of the above specification or feature whenever, in our opinion, such a change produces an advantage mutual to our customers and ourselves.

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