

# Neutron XS Operations Manual



v.01.03.01

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*Please Read Carefully Before Operating*

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## Introduction

Capture beams of light with a translucent haze. The Neutron XS Hazer, rewrites the book on haze technology. Le Maitre's patented Sequentially Tracked Auto Reissue technology generates an environment of translucent haze without the use of a compressor or heating block, providing a virtually silent operation with instant effect.

The haze is generated without the use of oil, eliminating any residue associated with cracked oil effects.



Silent operation combined with continuous output, optional DMX and remote control places the Neutron XS in a class of its own.

## Features

- Whisper Quiet Operation
- Continuous Haze Output
- 1 Gallon of fluid lasts 160 Hours
- Micro-Processor Controlled
- DMX Interface (Optional)
- Integrated Fan
- Remote Control (Optional)
- Instant Effect
- Patented S.T.A.R. Technology



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Warning

**IMPORTANT SAFETY INSTRUCTIONS**  
**Do not touch or place hands, expose skin,**  
**within 10 cm. of discharge nozzle.**  
**SAVE THESE INSTRUCTIONS**  
**READ THESE IMPORTANT SAFETY INSTRUCTIONS**

**WARNING**  
**READ THESE IMPORTANT SAFETY INSTRUCTIONS**  
**Do not remove the outer case until power has been**  
**disconnected from the machine**

**READ THESE IMPORTANT SAFETY INSTRUCTIONS**  
**Persons suffering from asthma or allergenic**  
**sensitivity may experience irritation, discomfort, or**  
**allergic symptoms when exposed to heated**  
**fog effects**

**WARNING**  
**Ensure that this unit is grounded at all times.**  
**Failure to do so may result in serious injury.**

**WARNING**  
**Never use alternative fluids. Toxicity free output**  
**is your responsibility.**

M.S.D.S. Available by request or at [www.lemaitrefx.com](http://www.lemaitrefx.com)

## Technical Specifications

Model: Neutron XS Hazer with S.T.A.R. Technology

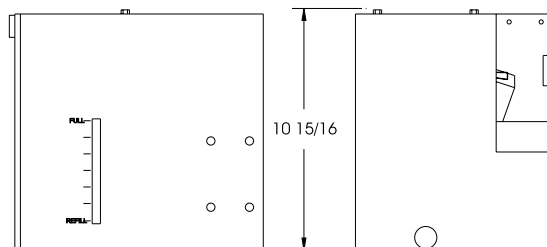
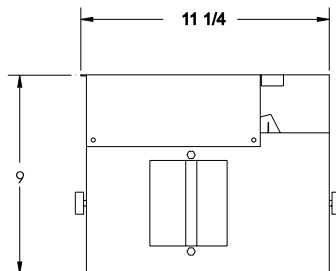
Type: Water Base Haze Generating System

Dimensions: Length: 67 cm. / 11.25 "  
Width: 28.5 cm. / 9 "  
Height: 33 cm. / 10.94 "

Weight with Fluid: 11 Kg. / 23.75 lbs.

Power Rating: 115VAC 60HZ 3.15A  
220VAC 50HZ 1.45A

## Neutron XS Illustration



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## Operating Procedure

The machine should be fitted with a 2 litre Le Maitre Neutron Hazer fluid container.

The use of any other fluid will lead to damage of the 'Hazing Element' .

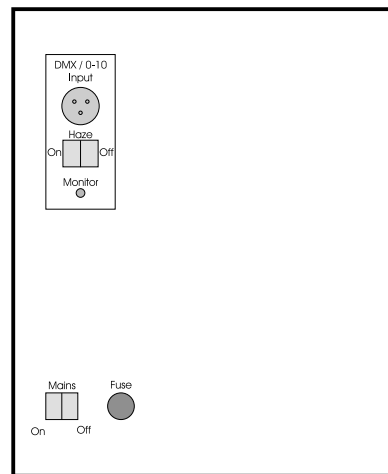
Remove the main cover by releasing the two thumb screws, situated rear top and front lower and sliding the cover forward, up and out.

- 1.) Place the bottle securely into the machine and remove its sealing cap. Insert the fluid feed pipe and secure the fluid cap, making sure that the air vent in the cap is clear from obstruction.
- 2.) Plug the machine into a suitable main power supply. Set the 'Mains' switch to the On position, located on the rear panel.  
The 'Mains' switch will illuminate to indicate the presence of 'Mains' power.

### Note

A clean power supply is essential to the operation of the Neutron. For this reason we do not recommend the supply of mains power from a lighting dimmer.

- 3.) Set the 'Haze' switch to the On position, located on the rear panel.  
The 'Monitor' led should now begin to flash continuously indicating that the initial auto cleanse phase has commenced.



Neutron Rear Panel

Please note , if the Neutron XS Hazer shut down cycle has not been allowed then it is possible that small amounts of fluid will be ejected during the auto cleanse phase.

- 4.) It will now be necessary to 'Prime' fluid into the system to expel any air that might be present. This is done automatically and can take up to eight minutes if fluid feed pipe is empty.

Note: On the most recent version of the Neutron XS a prime function is available to speed up the fluid priming. The prime function is activated by:

- a.) Start with the mains switch and haze switch in the off position.
- b.) Machine must be completely switched off for 20 seconds to allow power supply to run down.
- c.) Switch mains on, within 5 seconds of doing this switch haze switch on/off 5 times quickly leaving it in the on position.

This then gives you 20 pulses which is the quick prime.  
To repeat this you start at step a.).

- 5.) Once the Neutron XS is primed, haze vapour will automatically be issued in a cycling fashion. When the unit is operating normally the LED will flash in pulses.
- 6.) To stop haze issue, set the 'Haze' switch to the Off position. The Neutron XS will not immediately stop issuing haze, but will enter into an additional auto cleanse phase. After this period the Neutron XS will shut down, and the 'Monitor' led will stop flashing.

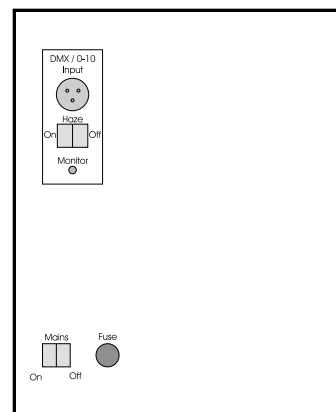
## Remote and External Control Features

### Neutron Remote

In addition to onboard controls, available for the Neutron XS, is a hand held Standard Remote Control with On/Off capabilities.

The Neutron Remote (Part # CLF 2415) is available for applications where the Neutron XS will be controlled from a remote location. To use the Neutron Remote simply follow the directions below:

- 1.) Select the Off position on the 'Haze' switch, located on the rear panel of the Neutron XS.
- 2.) Ensure the power to the Neutron is off, by selecting Off at the 'Mains' switch.



Neutron Rear Panel

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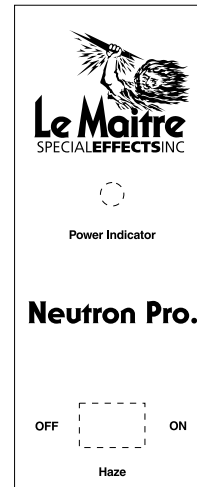
- 3.) Connect the remote cable connector to the 3 pin XLR located on the rear panel of the Neutron XS.
- 4.) Power up the Neutron by selecting On at the 'Mains' switch.
- 5.) The Power Indicator on the Neutron Remote should be illuminated at this time.

**Note**

The Power Indicator remains illuminated as long as the Neutron Remote is receiving power, it does not duplicate the flashing of the 'Monitor' Led.

- 6.) Start haze output by selecting On at the 'Haze' switch on the Neutron Remote.

**Service Note**



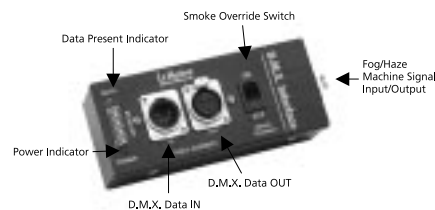
Neutron Remote Illustration

Pinout for 3 Pin XLR

- Pin 1 - Remote Signal
- Pin 2 - GND
- Pin 3 - +12V

**D.M.X. Interface**

The D.M.X. Interface (Part # CLF 3320) will allow D.M.X. 512 Protocol to activate the Haze output of the Neutron XS Haze machine.



See the publication included with the D.M.X. Interface for operating instructions.



## Maintenance

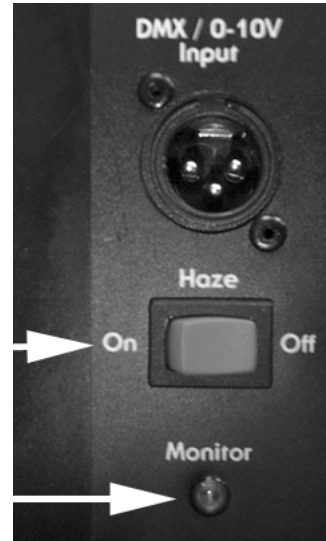
### Service Note

This following will outline the suggested schedule and procedure for maintaining your Neutron XS processing tube, including a proper "Power Down" procedure which must be followed to ensure the performance of your Neutron XS Hazer.

### Important Note

The following "Power Down" procedure **MUST** be followed each time the power to the Neutron XS is turned off:

- 1.) Turn the "Haze" switch to the OFF position to initiate the cleansing cycle.
- 2.) The cleansing cycle will begin clearing the processing coil of unprocessed fluids. The monitor light will continue to flash until the cleansing cycle has ended, at which time the monitor light will go out.
- 3.) The "Mains" power switch can now be turned to the OFF position.
- 4.) The "Power Down" procedure is complete.



A routine maintenance program is essential for the optimum performance of your Neutron XS Hazer. We recommend that the tube maintenance program be applied at least every 25 hours of use, or when a noticeable decrease in output is observed. More frequent maintenance will result in superior trouble free operation.

To make your maintenance regime more convenient and effective, a Neutron Cleaning Kit is available from your Le Maitre dealer. Included in this kit are extra abrasors, cleaning solution, and a spare Processing Tube. To order this kit use Part # CXP 2486.

**Warning !**  
**Make certain the power cord is unplugged when servicing this unit. Failure to disconnect may result in fatal electric shock, fire, or injury to persons.**  
**To avoid possible burns allow sufficient time for the unit to cool.**

- 1.) Disconnect power by unplugging unit from main power supply.



Knob Fastener



Knob Fastener

- 2.) Remove top cover by loosening knob fasteners counter clockwise.
- 3.) After removing top cover by sliding towards the front and upwards, the lid will locate into notch and lift away. Locate the Abrazor tool from behind label, and remove.

4.) Remove service port cover to allow easy access to the processing coil.

Service Port

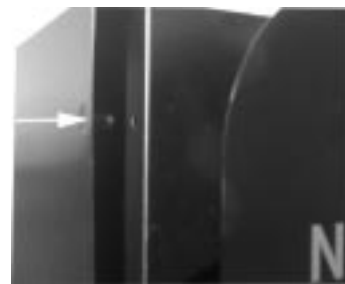


5.) Support the processing tube with one hand by simply grasping it firmly near the end of the tube where the haze exits. With abrazor tool in hand, guide it through the service port into the processing coil with an in and out motion. The burrs on the Abrazor will "de-scale" the walls, resulting in a rejuvenated processing tube.

Tech tip

For a better grip on the Abrazor tool, a few turns of electrical tape gives a better grip of the cleaning tool.

Alignment Studs



6.) The unit is now ready to reassemble. Take note of the alignment studs when assembling the lid. Tighten knob fasteners.

Alignment Studs

7.) The maintenance is complete.



## Recommended Fluids

### Neutron Water Based Haze Fluid

The Le Maitre water based Neutron Haze Fluid provides a translucent long lasting, dry haze effect that leaves no residue. For use only in the Neutron product range only.

**Warning!!**  
**Never use "Regular Haze" Fluid in your Neutron**

## Warranty Policy

Warranty:

The Neutron XS Hazer has a 1 Year Parts and Labour warranty against manufactured defect only. If the Hazing Element Coil becomes plugged it will NOT be considered warranty. Proof of purchase or proof of sale must always accompany any warranty returns. An RA (return authorization) number must be noted on the outside of any box returned to our facilities. Any packages without a clearly marked RA number will not be accepted by our receiving department. Proper maintenance and shut down procedure must be followed to ensure Hazing performance. Should your Hazing Element Tube become plugged a cleaning procedure can be administered.

Freight on warranty items are freight prepaid to our facility and we will prepay freight back to your facility after repair, by the most economical means available. Should you require the item express-returned, then you are responsible for any difference in freight cost.

### Return Policy:

Return of any product must be done within 30 days of purchase. The package must be returned freight prepaid and the RA number clearly marked on the outside of the box. A restocking charge of up to 25% may be levied. Only credits are issued to the dealers account. Any product not returned within 30 days is considered purchased.

### Warning:

Le Maitre Special Effects Inc. considers all it's product to be safe for use in the application it was intended. Le Maitre Special Effects takes no responsibility for misuse or incorrect use. Always refer to equipment owners manual for proper use.

## Safety Precautions

1. Ensure that operation of the machine is supervised by suitably trained and authorised personnel.
2. Do not modify the machine or use a machine which has been damaged in any way.
3. Allow sufficient air circulation around the machine at all times.
4. Protect the Neutron XS from direct weather effects.
5. Only use fluids recommended by the Manufacturer.
6. Do not continue to produce haze output in an enclosed area when visibility is reduced below 50cm.



7. Avoid direct haze output continuously at persons, structure or objects within close proximity of the discharge nozzle.
8. Ensure that adequate exhausting arrangements are available in the event of an emergency.
9. Do not place hands, or exposed skin within the first 10cm of the discharge nozzle at any time during haze production.

## Accessories

Listed below are accessories available for your Neutron XS through your Le Maitre dealer.

Model	Description
CLF 2415	Neutron Pro. Remote
CLF 3320	DMX Interface
CLF 2420	Neutron Road Case
CXP 2485	Replacement XS Hazer Coil
CLF 2421	Neutron Hanging Bracket
CXP 2486	Neutron XS Coil Cleaning Kit ( includes replacement tube)

Notes