Limitations on Warranty and Liability

This product is intended for use with ATMOSPHERES® fog generating liquid. Manufacturer disclaims any and all liability for the misuse of this product and/or ATMOSPHERES.

The warranty is void if the product is opened, misused, damaged, or modified in any way. The warranty on this product gives you specific legal rights, and you may also have other rights which vary from state to state.

For complete warranty information and explanation, refer to Appendix A.

Atmospheres® fog generating liquid is a registered trademark of High End Systems, Inc.
F-100™ performance fog generator is a trademark of High End Systems, Inc.
Lightwave Research® and the Lightwave Research logo are registered trademarks of High End Systems, Inc.

Getting Help

High End Systems® Service provides a help line should you encounter problems during your installation or initial operations. Currently, service hours are 9 a.m. to 6 p.m. (CST), Monday through Friday. The numbers are:

1-800-890-8989
24 hour Voice Mail: (512) 837-3063
Fax line: (512) 834-9195

If you need emergency after-hour technical support, call 1-800-890-8989.

F-100 Performance Fog Generator User Guide
Version 3.0 Revised December 1995
P/N 60600021
Declaration of Conformity
according to ISO/IEC Guide 22 and EN45104

Manufacturer’s name: LightWave Research

Manufacture’s address: LightWave Research/High End Systems
2217 West Braker Lane
Austin, Texas 78758
U.S.A.

declares that the product

Product Name: F-100

Product Number: F-100

Product Options: All

conforms to the following EEC directives:

73/23/EEC, as amended by 93/68/EEC

89/336/EEC, as amended by 92/31/EEC and 93/68/EEC

Equipment referred to in this declaration of conformity first manufactured in 1995 in compliance with the following standards:

Safety: EN 60335-1 : 1988
A1-A9 : 1993

EMC: EN 50081-1 : 1992
EN 50082-1 : 1992

[Signature]

U.S.A., Thursday, December 21, 1995
Lanny Derryberry, Compliance Engineer
IMPORTANT SAFETY INFORMATION
INSTRUCTIONS PERTAINING TO CONTINUED PROTECTION
AGAINST FIRE, ELECTRIC SHOCK, AND INJURY TO PERSONS ARE
FOUND IN APPENDIX B.

READ ALL CAUTIONS AND WARNINGS PRIOR TO ASSEMBLY,
MOUNTING, AND OPERATING THIS EQUIPMENT.

IMPORTANT: INFORMATIONS DE SÉCURITÉ
INSTRUCTIONS RELATIVES À UNE PROTECTION CONTINUE CON-
TRE L’ INCENDIE, LE CHOC ÉLECTRIQUE, ET CONTRE DES
BLESURSES POSSIBLES SUR DES INDIVIDUS SE TROUVENT DANS
L’APPENDICE B.

PRIÈRE DE LIRE TOUTES LES PRÉCAUTIONS ET LES AVERTISSE-
MENTS AVANT D’ASSEMBLER, DE MONTER, ET DE FAIRE FONC-
TIONNER CET ÉQUIPEMENT.

WICHTIGE SICHERHEITSHINWEISE
DIE NACHSTEHENDEN HINWEISE BETREFFEN DEN SCHUTZ
GEGEN BRAND, ELEKTRISCHEN SCHLAG, SOWIE VERLETZUN-
GEN. SIE BEREINDEN SICH IN APPENDIX B.

LESEN SIE ALLE WARNUNGEN SORGFÄLTIG, BEVOR SIE DAS
GERÄT ZUSAMMENBAUEN, INSTALLIEREN UND BENUTZEN!

INFORMACIÓN IMPORTANTE DE SEGURIDAD
SE ENCUENTRAN EN EL APÉNDICE B LAS INSTRUCCIONES CON-
CERNIENTES A LA PROTECCIÓN CONTINUA CONTRA INCENDIO,
CHOQUE ELÉCTRICO, Y LESIONES A PERSONAS.

POR FAVOR LEA TODAS LAS PRECAUCIONES Y LAS ADVERTEN-
CIAS ANTES DE ENSAMBLAR, MONTAR Y OPERAR ESTE EQUIPO.

INFORMAZIONI IMPORTANTI DI SICUREZZA
ISTRUZIONI PERTINENTI LA PROTEZIONE CONTRO IL FUOCO, LE
SCOSSE ELETTRICHE, I DANNI ALLE persone SI TROVANO NEL
APPENDICE B.

LEGGERE TUTTI GLI AVVERMENTI PRIMA DI MONTARE E
USARE QUESTO APPARECCHIO.
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<td>High End Systems, Inc.</td>
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Chapter 1
Introduction and Installation

Introduction

The F-100 Performance Fog Generator is a high performance fog machine. The F-100 can operate as a continuous duty fog machine, or it can operate intermittently for periods of time set by the user. Pump output can also be controlled by a 0-10 volt analog control or the optional DMX-512 remote control unit.

For the best results, use only ATMOSPHERES Fog Generating Liquid in the F-100. **Use of any other fluid will void the warranty.**

How to Use This Guide

*For your safety, it is important that you read this user guide thoroughly before you operate the F-100.*

This guide describes how to unpack, plan for, set up and operate the F-100. It also lists important safety precautions, explains basic trouble shooting techniques, and lists the appropriate service personnel contacts available for technical support.

In this book you will find the following symbols:

- **Caution:** This symbol appears adjacent to Caution messages. Not heeding these messages could result in minor personal injury and/or damage to equipment.

- **Warning:** This symbol appears adjacent to Warning messages. Not heeding these messages could result in serious personal injury.

- **Explosion:** This symbol appears adjacent to Explosion warning messages. These messages warn you about possible high pressure, fire, or explosive situations.

F-100 Specifications

Power Requirements

- 100–120 VAC 50/60 Hz 14 Amp. (15010002)
- 200–240 VAC 50/60 Hz 7 Amp. (15010003)
Electronics
- Over-temperature protection
- Parallel-inverted SCR's
- Thermocouple temperature control

Weight
- 14 Kg (31 lbs) with empty tank

Assembled Unit Dimensions
(including handles & hardware)
- 27 cm (10.5 inch) Height
- 30 cm (12.0 inch) Width
- 69 cm (27.0 inch) Length

FIGURE 1: VIEWS AND DIMENSIONS OF THE F-100
F-100 Unpacking and Planning

Unpacking the F-100
The shipping carton contains the F-100, its fog fluid bottle, and this manual.

Note: If the shipping carton does not contain all of the items listed above, contact your High End Systems dealer or contractor immediately.

Installation Planning and Precautions
(also see additional Precautions listed on Page 17)

⚠️ Warnings:
- Make sure the area in which this product is to be used is well ventilated.
- Do not install the F-100 directly over an audience.
- Do not point the discharge directly into an audience.
- Do not operate near flammable materials.
- Do not place hands or face near heat exchanger or outlet during operation.
- Do not expose to rain or moisture.

⚠️ Cautions:
- Only use ATMOSPHERES fluid in the F-100.
- Use responsible concentrations of fog to create atmospheric effects.
- Not for residential use.

Remote Control Panel
All controls and indicators for the F-100 are located on the piggyback remote control panel on the rear of F-100 unit.
The remote control is connected to the machine by a 6-conductor cable that plugs into the 6-pin din plug, and is attached to the rear of the F-100 by 4 #8 screws. The 6-conductor cable that comes with the F-100 allows remote operation to approximately 25 feet from the F-100. Fifty and one-hundred foot extension cables are available for greater range if needed. Contact your High End Systems dealer for further details.
Installing the F-100 Fixture

Before you plug in the F-100, be sure to inspect it for damage that might have occurred in shipping. If there is any damage, do not plug in the F-100 and refer to the Warranty and Conditions portion of this manual.

Step 1: Stabilize the F-100

Place the F-100 on a stable surface.

Step 2: Fill the fluid bottle

Fill the tank with ATMOSPHERES.

⚠️ WARNING: RISK OF FIRE OR EXPLOSION. Never use any kind of flammable liquid in the F-100.

⚠️ Caution: Never dilute or mix ATMOSPHERES with any other liquids.

Step 3: Position the F-100

If the F-100 is to be used with a fog distribution system, it should now be placed so that the fog is discharged into the distribution system's inlet or as directed by the distribution systems instructions.

If the distribution system has 100 mm (4") tubing, slip 3.5cm (1.5") of the tubing over the end of the output collar.

Because airflow is essential to any distribution system, DO NOT COVER THE COLLAR VENTS.

If the F-100 is to be used with a 0–10 volt analog control, continue with steps 4 and 5 on the next page. Otherwise, skip to Chapter 2 for instructions on how to operate the F-100 with the timer remote control, or skip to Chapter 3 for instructions on how to operate the F-100 with the DMX-512 remote control.
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0-10VDC Analog Hookup

Step 4: Remove the remote control panel
Remove the four #8 screws holding the remote control panel to the rear of the F-100.
Remove the remote control panel from the rear of the unit to access the 6mm (1/4"") phone jack and remote cable connector. See Figure 2.

Step 5: Plug in the 0–10 V line
Feed the 0–10 V control line through the bushing on the back of the F-100 and plug it into the 6mm (1/4") phone jack (either stereo or mono plugs will work.)
Reinstall the remote control panel on the rear of the machine, or use it as a monitor in conjunction with the 0–10 V controller.

Figure 2: Diagram of the F-100 showing the location of the remote cable connector, 6mm phone plug, and the required plug polarity.
Installing the F-100 Fixture
Controls and Indicators (Refer to Figure 3 above):

1. Ready LED—indicates F-100 has heated to operating temperature.
2. Run LED—indicates pump status.
3. Timer LED—displays status of timer system.
5. Enable LED—displays enable switch status.
6. Enable Switch—enables the electronics and the machine heating system.
7. Timer Switch—enables timer and Timer LED.
8. Run Switch—enables the pump and Run LED.
9. Duration Knob—adjusts the length of time (1–30 sec) that the pump is on when used with timer system.
10. Interval Knob—adjusts how long the pump is off (1–60 sec) when used with the timer system.
11. Output Knob—adjusts the volume of fog produced when the pump runs.
Operating the F-100

Step 1: Plug in the F-100
Plug the F-100 into a power socket with the appropriate voltage.

Step 2: Enable the system
Press the enable switch. This illuminates the enable and heater LEDs. The F-100 will require approximately 6 minutes to heat to a minimum operational temperature, at which time the ready LED will illuminate. Until the ready LED is illuminated, the pump is unable to run.

Step 3: Start the pump
Press the run switch. This starts the production of fog. Turn the output knob clockwise to its maximum setting to prime the pump.

Step 4: Adjust the volume of fog produced
For a lower volume of fog, turn the output knob counterclockwise. To produce a higher volume of fog, turn the output knob clockwise. **Note:** Using a 0–10 V analog control will override any setting of the output knob.

Step 5: Enable the timer for intermittent operation
To operate the timer system, press the timer switch. The timer LED will illuminate, indicating the timer system is enabled. Once enabled, the F-100 will produce fog based on the interval and duration knob positions.

Step 6: Adjust the duration the pump runs
To make the pump run for longer periods of time, turn the duration knob clockwise. To make the pump run for shorter periods of time, turn the duration knob counterclockwise.

Step 7: Adjust the interval between fog releases
To increase the time between fog releases, turn the interval knob clockwise. To decrease the
time between fog release, turn the interval knob counterclockwise.

**Optional Analog Control**
When the 0–10 V analog control is connected to the F-100, the amount of voltage it supplies controls to the volume of fog produced when the pump runs.

**Step 8: Shut down the F-100**
When you are through using the F-100, simply press the enable switch again to disable the pump and the heater. Unplug the unit when not in use.

⚠️ **Caution:** The unit remains very hot after the unit has been disabled. Stay clear of the discharge area.

**Solving Problems**

**Problem:** None of the LEDs on the remote light up.

**Solutions:**
- Make sure the unit is plugged in.
- Make sure to push the enable button.
- Make sure the remote cable is plugged into its socket, and that the plug is locked into the socket with the locking ring.

**Problem:** The unit is on, but no fog is produced.

**Solutions:**
- Has the unit had approximately 6 minutes to heat to its operating temperature, signalled by the ready LED illuminating?
- Make sure the tank has fluid in it.
- Press the run switch.
- Turn the output knob clockwise if it is at the minimum setting.

**Any Other Problems:**
If the remedies above fail to solve the problem, or if any other problem exists, contact a qualified service techni-
clian at your dealer or distributor.
Chapter 3
Operating the F-100 with the DMX-512 Remote Control

DMX-512 Remote Control

![Diagram of F-100 DMX-512 Remote Control Panel]

**Controls and Indicators** (Refer to the Figure 4 above):

1. Ready LED—indicates F-100 has heated to its operating temperature.
2. Run LED—indicates pump status.
3. DMX LED—indicates if DMX being received.
5. Enable LED—displays enable switch status.
6. Enable Switch—enables the electronics and the machine heating system.
7. Dip Switch—sets the fog generator’s address.
8. Run Switch—enables the pump and Run LED.
9. Output Knob—adjusts the volume of fog produced when the Run button is pressed.
10. #8 Screws—secure the remote to the F-100.
11. DATA IN plug—male XLR connection for receiving data.
12. DATA OUT jack—female XLR connection for transmitting data.

*DMX-512 Remote Control*
FIGURE 5: REMOTE MOUNTING SCREWS

Step 1: Loosen the four #8 screws that hold the timer remote to the F-100 chassis. (Refer to Figure 5)

Step 2: Lift the timer remote out of the chassis, and pull out the bundle of remote cable.

Step 3: Look through the remote opening towards the right of the chassis.
   You will see the remote cable connector and a 6mm phone plug just below it.

Step 4: Grasp the locking ring on the remote cable connector.
   Give it a half turn counterclockwise to unlock the remote cable connector from its socket.

Step 5: Pull the remote cable connector out of the socket.

Step 6: Plug the DMX-512 remote cable connector into the socket.

Step 7: Grasp the locking ring on the DMX-512 remote cable connector.
   Give it a half turn clockwise to lock the connector into the socket.

Step 8: Place the new cable bundle inside the chassis,
put the remote back into the remote opening, and secure the remote to the chassis with the four #8 screws.

Data Cable Specifications for DMX-512 Remote

DMX Connections

The Data In and Data Out 3-pin XLR connections used for DMX control of the F-100 are located on the front panel of the remote control. The F-100 remote uses standard 3-pin XLR connectors for data input and data output. You should construct data cables using shielded, two conductor cable with a male (pins) 3-pin XLR connector at one end and a female (sockets) 3-pin XLR connector on the other end. You can use microphone cables if the pin connections are correct; verify that the pin connections are the same as in the diagram below. Test each cable with a voltmeter for correct polarity and ensure that the negative and positive pins are not grounded or shorted to the shield. Ensure that pin 1 is shielded. Refer to Figure 6.

![FIGURE 6: XLR CABLE REQUIREMENTS](image)

Data Cable Hookup and DMX-512 Addressing

**Step 1:** Plug the incoming data link into the DATA IN plug.

**Step 2:** Assign the fixture’s address.

Use the dipswitch located on the front of the remote control. **The default address, when all switches are off, is 1.** To enter a new address,
refer to the Figure 7 and do the following:

a. Take the desired address and subtract 1 from it.

   address 3 - 1 = 2  
   address 243 - 1 = 242

b. Turn on the switches whose binary values add up to the number you got when you subtracted one from the address.

   address 3 = switch 2 (2)
   address 243 = switches 8 (128), 7 (64), 6 (32), 5 (16), and 2 (2)

   DMX Addressing

   switch #
   1  2  3  4  5  6  7  8  9

   switch
   1  2  4  8  16  32  64

   binary

   value

   256

   FIGURE 7: F-100 DMX REMOTE DIPSWITCH

Step 3: Daisy-chaining multiple fixtures.

Plug an XLR cable into the DATA OUT jack on the first unit in the chain. Plug the other end of this cable into the DATA IN plug on the next unit in the series. Repeat this step with each successive unit in the chain (connect unit 2 to 3, 3 to 4, etc.) until all units are connected.

Daisy chain rule: You need one cable for each
unit you want to connect in the daisy chain.

FIGURE 8: CABLING FOR DMX DAISY CHAIN
Operating the F-100 with the DMX-512 remote

Step 1: Plug the F-100 into a power socket that supplies the correct voltage for your F-100.

Step 2: Press the Enable button on each F-100 remote. This starts heating the block and enables the electronics. It takes approximately 6 minutes to heat the block to its minimum operational temperature, at which time the Ready LED illuminates. Until the Ready LED illuminates, the pump will not run.

Step 3: Prime the pump. Once the Ready LED illuminates, prime the pump on each unit by moving the dimmer slide to full on. This runs the pump at full speed and fills the fluid lines for smooth operation.

Step 4: Adjust the output during use. Adjust the dimmer to affect output. The first 5% of dimmer travel is a zero value. Any dimmer travel higher than this causes the pump to run in proportion to the dimmer’s value.

Step 5: Shut down the F-100. When you are through using the F-100, simply press the enable switch again to disable the pump and the heater. Unplug the unit when not in use.

Caution: The unit remains very hot after the unit has been disabled. Stay clear of the discharge area.
Troubleshooting the DMX-512 F-100

Problem: Data LED doesn’t illuminate when data is sent to unit.
What to do:
• Make sure the F-100 is plugged in.
• Check to see that all XLR cables are properly connected to the remote control, and that the remote control is plugged into the unit properly.

Problem: Data LED is illuminated, but the unit is not responding to data.
What to do:
• Confirm that the address set with the dipswitch is the same as the address assigned on the control board. Refer to Step 2 of the Data Cable Hookup and DMX Addressing instructions.
• Make sure the F-100 is enabled. If the Enable LED isn’t illuminated, press the Enable button.
• If the F-100 is enabled, be sure the Ready LED is illuminated.

Problem: When changing from the timer remote control to the DMX-512 remote control, or vice versa, the pump runs for about a half a second if the F-100 is plugged into a power socket.
What to do:
• Nothing. This is a result of the electronics resetting and powering up and is a normal function.

Any Other Problems:
If the remedies above fail to solve the problem, or if any other problem exists, contact a qualified service technician at your dealer or distributor.
Chapter 4
Maintenance and Precautions

Maintaining the F-100

- Keep vented cover free of debris.
- Keep fluid container free of debris and rinse periodically with ATMOSPHERES fluid.
- Ensure fluid filter is intact and change if necessary by unscrewing the old filter and screwing in the new filter.
- For service, refer to qualified personnel only. Unauthorized service will void the warranty.

Warnings and Precautions

When handling and working with the F-100, please observe the warnings and precautions listed below:

⚠️ Cautions

- Please note and heed all of the WARNING labels on the F-100 unit, ATMOSPHERES tank, and distribution system.
- This product is intended for use with ATMOSPHERES fog generating liquid only. Manufacturer disclaims any and all liability for the misuse of this product and/or ATMOSPHERES fog generating liquid.
- Do not install this product directly above an audience or performers.
- Use the F-100 in adequately ventilated areas.
- Use responsible concentrations of fog.
- Nozzle and front of unit may be very hot.
- The F-100 is not designed for residential use.

⚠️ Warnings

- Do not expose to rain or moisture.
- There are no user serviceable parts inside the F-100. Do not attempt to open the F-100 case.
- Please refer servicing to qualified personnel.
Fire or Explosion

- Do not operate the F-100 near flammable materials or gases.
- Under no circumstances should tap, distilled or bottled water, vinegar, alcohol, or any other fluid be used to clean the heat exchanger. Use off such fluid can cause blockage of the heat exchanger, pose health and/or fire hazards, and will void the warranty.
- Combining additives to ATMOSPHERES may cause a health and/or fire hazard.

Specifications subject to change without notice.
Appendix A

Warranty and Conditions

Unpacking and Saving the Shipping Materials

Do not discard the F-100 shipping carton and packing materials. The shipping carton and packing materials are specifically designed to protect this product during transport.

If you ever need to return a product for repair or maintenance, you must return it in its original shipping carton and packing materials. You will be billed for a new shipping carton and new packing materials if you return your F-100 unit in a non-factory shipping carton with non-factory packing materials.

Note: Before sending anything to the factory, be sure to call your HES Dealer/Distributor for a Return Authorization Number (RA#). Any goods shipped without an RA# will be refused at the factory.

Inspecting the Contents

Carefully remove the contents of each shipping carton and inspect for signs of freight damage. If any such damage is found, you need to notify both the shipping agent and the sales agent immediately.

Any damage incurred in shipping is the responsibility of the carrier. In the case of hidden damage, a claim should be made as soon as discovered and all packing material retained for inspection.

Note: Freight Damage Claims are invalid for fixtures or controllers shipped in non-factory shipping cartons and packing materials.
Limited Warranty

Unless otherwise stated, your product is covered by a one year parts and labor limited warranty. If the warranty registration form provided with this equipment is filled out and faxed or mailed to High End Systems, Inc., and received within 60 days of invoice date, the one year parts and labor limited warranty will be extended one additional year, for a total of two years. Dichroic filters and Lithopatterns™ are not guaranteed against breakage or scratches to coating. It is the owner's responsibility to furnish receipts or invoices for verification of purchase, date, and dealer or distributor. If purchase date cannot be provided, date of manufacture will be used to determine warranty period.

Returning an Item for Repair Covered by Warranty

It is necessary to obtain a Return Authorization Number (RA#) from your dealer/point of purchase BEFORE any units are sent in for repair. The manufacturer will make the final determination as to whether or not the unit is covered by warranty. Lamps are covered by the lamp manufacturer’s warranty. Please note: Freight Damage Claims are invalid for fixtures shipped in non-factory boxes and packing materials.

Freight

All shipping will be paid by the purchaser. Items under warranty shall have return shipping paid by the manufacturer only in the Continental United States. Under no circumstances will freight collect shipments be accepted. Prepaid shipping does not include rush expediting such as airfreight. Airfreight can be sent customer collect in the Continental United States.

REPAIR OR REPLACEMENT AS PROVIDED FOR UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. HIGH END SYSTEMS, INC. MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, WITH RESPECT TO ANY PRODUCT, AND HIGH END SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HIGH END SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGE, INCLUDING LOST PROFITS, SUSTAINED OR INCURRED IN CONNECTION WITH ANY PRODUCT OR CAUSED BY PRODUCT DEFECTS OR THE PARTIAL OR TOTAL FAILURE OF ANY PRODUCT REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT, (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR OTHERWISE, AND WHETHER OR NOT SUCH DAMAGE WAS FORESEEN OR UNFORESEEN.

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Warranty and Conditions

Unpacking and Saving the Shipping Materials

Do not discard the F-100 shipping carton and packing materials. The shipping carton and packing materials are specifically designed to protect this product during transport.

If you ever need to return a product for repair or maintenance, you must return it in its original shipping carton and packing materials. You will be billed for a new shipping carton and new packing materials if you return your F-100 unit in a non-factory shipping carton with non-factory packing materials.

Note: Before sending anything to the factory, be sure to call your HES Dealer/Distributor for a Return Authorization Number (RA#). Any goods shipped without an RA# will be refused at the factory.

Inspecting the Contents

Carefully remove the contents of each shipping carton and inspect for signs of freight damage. If any such damage is found, you need to notify both the shipping agent and the sales agent immediately.

Any damage incurred in shipping is the responsibility of the carrier. In the case of hidden damage, a claim should be made as soon as discovered and all packing material retained for inspection.

Note: Freight Damage Claims are invalid for fixtures or controllers shipped in non-factory shipping cartons and packing materials.
Limited Warranty

Unless otherwise stated, your product is covered by a one year parts and labor limited warranty. If the warranty registration form provided with this equipment is filled out and faxed or mailed to High End Systems, Inc., and received within 60 days of invoice date, the one year parts and labor limited warranty will be extended one additional year, for a total of two years. Dichroic filters and Lithopatterns™ are not guaranteed against breakage or scratches to coating. It is the owner's responsibility to furnish receipts or invoices for verification of purchase, date, and dealer or distributor. If purchase date cannot be provided, date of manufacture will be used to determine warranty period.

Returning an Item for Repair Covered by Warranty

It is necessary to obtain a Return Authorization Number (RA#) from your dealer/point of purchase BEFORE any units are sent in for repair. The manufacturer will make the final determination as to whether or not the unit is covered by warranty. Lamps are covered by the lamp manufacturer's warranty.

Please note: Freight Damage Claims are invalid for fixtures shipped in non-factory boxes and packing materials.

Freight

All shipping will be paid by the purchaser. Items under warranty shall have return shipping paid by the manufacturer only in the Continental United States. Under no circumstances will freight collect shipments be accepted. Prepaid shipping does not include rush expediting such as airfreight. Airfreight can be sent customer collect in the Continental United States.

REPAIR OR REPLACEMENT AS PROVIDED FOR UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. HIGH END SYSTEMS, INC. MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, WITH RESPECT TO ANY PRODUCT, AND HIGH END SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HIGH END SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGE, INCLUDING LOST PROFITS, SUSTAINED OR INCURRED IN CONNECTION WITH ANY PRODUCT OR CAUSED BY PRODUCT DEFECTS OR THE PARTIAL OR TOTAL FAILURE OF ANY PRODUCT REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT, (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR OTHERWISE, AND WHETHER OR NOT SUCH DAMAGE WAS FORESEEN OR UNFORESEEN.

Warranty is void if the product is opened, misused, damaged, or modified in any way. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.
Appendix B

IMPORTANT SAFETY INFORMATION

1. Please note and heed all of the WARNING labels on the F-100 unit, ATMOSPHERES tank, and distribution system.

2. This product is intended for use with ATMOSPHERES fog generating liquid only. Manufacturer disclaims any and all liability for the misuse of this product and/or ATMOSPHERES fog generating liquid.

3. Use responsible concentrations of fog.

4. Nozzle and front of unit may be very hot.

5. The area in which this product is to be used should be well ventilated.

6. Do not install this unit directly over an audience or performers.

7. Do not point discharge directly into an audience.

8. Do not operate near flammable materials or gases.

9. Do not place hands, face, or other body parts near heat exchanger or outlet during operation.

10. No user serviceable parts inside the unit. Refer service to qualified personnel.

11. Do not expose to rain or moisture.

12. Not for residential use.

13. If this equipment was received without a line cord plug, attach the appropriate line cord plug according to the following code:
   - BROWN–LIVE
   - BLUE–NEUTRAL
   - GREEN/YELLOW–EARTH
   THIS EQUIPMENT MUST BE EARTHED.

14. Under no circumstances should tap, distilled, or bottled water, vinegar, alcohol, or any other fluid be used to clean the heat exchanger. Use of such fluid can cause blockage of the heat exchanger, pose health and/or fire hazards, and will void the warranty.

15. WARNING: RISK OF FIRE OR EXPLOSION. NEVER USE ANY KIND OF FLAMMABLE LIQUID IN THE F-100.
Appendice B

IMPORTANT: INFORMATIONS DE SÉCURITÉ

1. Veiller à ce que toutes les étiquettes de MISE EN GARDE soient correctement marquées et apposées sur l'appareil F-100, les réservoirs ATMOSPHERES et les systèmes de distribution.

2. Ce produit n'est à utiliser qu'avec du brouillard atmosphérique produisant exclusivement du liquide. Le fabricant dénie chacune et toutes les responsabilités concernant le mauvais usage de ce produit et/ou du brouillard ATMOSPHERES produisant exclusivement du liquide.

3. Utiliser des concentrations raisonnables de brouillard.

4. La tuyère et la façade de l'appareil peuvent être très chaud.

5. La zone au sein de laquelle le produit est utilisé devrait être bien aérée.

6. Ne pas directement disposer l'appareil au-dessus de la foule ou les interprètes.

7. Ne pas diriger l'évacuation directement sur la foule.

8. Ne pas utiliser à proximité de matières inflammables ou gazeuses.

9. Ne pas placer les mains, le visage ou tout autre partie du corps à côté de l'échangeur de chaleur ou de l'orifice de sortie de chaleur.

10. L'utilisateur ne peut pas accéder aux pièces à l'intérieur de cet appareil. Seul du personnel qualifié est habilité à réparer cet appareil.

11. Ne pas exposer l'appareil à la pluie ou l'humidité.

12. Cet appareil n'est pas destiné à un usage domestique.
13. Si l'appareil n'a pas été livré avec une prise de cordon électrique, attacher la prise de corde électrique conformément au code suivant:
   BRUN- BRANCHE
   BLEU- NEUTRE
   VERT/JAUNE - TERRE
   L'EQUIPEMENT DOIT ETRE MIS A LA TERRE.
15. MISE EN GARDE: RISQUE D'INCENDIE OU D'EXPLOSION. NE JAMAIS UTILISER QUELQUE TYPE DE LIQUIDE INFLAMMABLE QUE CE SOIT AVEC LE F-100.
Anhang B

WICHTIGE SICHERHEITSHINWEISE


2. Dieses Produkt ist ausschließlich für den Gebrauch mit der nebelerzeugenden Flüssigkeit ATMOSPHERES bestimmt. Der Hersteller lehnt ausdrücklich jegliche Haftung bei Mißbrauch dieses Produktes und/oder der nebelerzeugenden Flüssigkeit ATMOSPHERES ab.


4. Die Düse und das Vorderteil des Gerätes können sehr heiß werden.

5. Dieses Gerät sollte nur in gut belüfteten Räumen verwendet werden.


7. Richten Sie den Ausstoß nie direkt auf das Publikum.

8. Auf keinen Fall in der Nähe von brennbaren Substanzen oder Gasen betreiben.


11. Vor Feuchtigkeit und Nässe schützen.


13. Falls dieses Gerät ohne Netzstecker geliefert wurde, schließen Sie bitte ein Netzstecker nach folgendem Farbschlüssel an:

   BRAUN- STROMFÜHREND
   BLAU- NEUTRAL
   GRÜN/GELB- GEERDET

   DIESES GERÄT MUSS GEERDET WERDEN

werden. Verwendung von Flüssigkeiten kann den Wärmeaus-
tauscher blockieren und zu Gesundheitsschäden oder
Brandgefahr führen; außerdem erlöschen jegliche Garan-
tieansprüche.

15. WARNUNG: BRAND- ODER EXPLOSIONSGEFahr, NIE-
MALS EINE BRENNBARE FLÜSSIGKEIT IM F-100 GERÄT
VERWENDEN:

WICHTIGE SICHERHEITSHINWEISE
Apéndice B
INFORMACIÓN IMPORTANTE DE SEGURIDAD

1. Por favor, observe y tome en cuenta todos los rótulos de ADVERTENCIA de la unidad F-100, del tanque ATMOSPHERES, y del distribución.

2. Este producto ha de usarse solamente con el líquido neblínógeno ATMOSPHERES. El fabricante desconoce toda responsabilidad del uso errado o abuso de este producto y/o del líquido neblínógeno ATMOSPHERES.

3. Ejerza un criterio responsable al usar concentraciones de niebla.

4. Es posible que la boquilla y la parte frontal de la unidad esté muy calientes.

5. La zona donde haya de aplicarse este producto deberá estar bien ventilada.

6. No instale esta unidad directamente por encima del público de actores, artistas o intérpretes.

7. No descargue puntualmente de forma direcTa sobre el público.

8. No opere la unidad cerca de materiales o gases inflamables.

9. Durante el funcionamiento de la unidad, no coloque las manos, rostro y otra parte del termopermutador o de la salida.

10. El interior de la unidad no contiene repuestos que puedan ser reparados por el usuario. Solicite el servicio de reparación de personal calificado.

11. No exponga la unidad a la lluvia o a la humedad.

12. Prohibido su uso en ambientes residenciales.

13. Si se ha recibido este equipo sin un enchufe macho de cable de alimentación, conecte el enchufe macho de cable alimentación adecuado según los códigos siguientes:
    MARRÓN - CORRIENTE
    AZUL - NEUTRO
    VERDE/AMARILLO - TIERRA
    ESTE EQUIPO DEBE CONECTARSE A TIERRA.

INFORMACIÓN IMPORTANT DE SEGURIDAD
14. En ninguna circunstancia deberá usarse agua corriente, destilada o embotellada, vinagre, alcohol, o ningún otro líquido para el termopermutador. El uso de tales líquidos puede producir el bloqueo del termopermutador, presentar riesgos contra y/o de encendio, y anulará la garantía.

15. **ADVERTENCIA: RIESGO DE INCENDIO O EXPLOSIÓN. JAMÁS USE NINGÚN TIPO DE LÍQUIDO INFLAMABLE EN EL F-100.**
Appendice B

INFORMACIÓN IMPORTANTE DE SEGURIDAD

1. Si prega di seguire tutte le AVVERTENZE della unità F-100, del serbatoio ATMOSPHERES, e del sistema di distribuzione.

2. Questa apparecchiatura e da usarsi soltanto con il liquido ATMOSPHERES per la generazione di nebbia. Il fabbricante non si fa responsabile per i danni causati dal uso inadeguato tanto di questo prodotto quanto del liquido ATMOSPHERES per la generazione di nebbia.


4. L’imboccatura e la parte anteriore della unità possono arrivare ad alte temperature.

5. Questa apparecchiatura e da usarsi in un ambiente ben ventilato.

6. Questa apparecchiatura non deve essere installata al di sopra di dove si trovano gli spettatori o gli artisti.

7. Questa apparecchiatura non si deve rivolgere ne scaricare direttamente verso gli spettatori.

8. Questa apparecchiatura non si deve usare ne vicino a materiali ne a gas infiammabili.

9. Durante l’uso non avvicinarsi ne con le mani, ne ool viso, ne con nessuna altra parte del corpo allo scambiatore di calore o alla presa di corrente.

10. L’utente non deve riparare nessuna parte dentro l’unità. Per qualsiasi riparazione rivolgersi al personale specializzato.

11. Questa apparecchiatura non deve essere esposta ne alla pioggia ne all’umidità.

12. Questa apparecchiatura non è per uso domestico.
13. Nel caso in cui questa apparecchiatura fosse ricevuta senza il debito cavo completo di spina, collegarne uno appropriato seguendo i successivi codici:
   MARRONE-SOTTO TENSIONE
   BLU-NEUTRALE
   VERDE/GIALLO-A TERRA
   QUESTA APPARECCHIATURA DEVE METTERSI A TERRA

14. Per pulire lo scambiatore di calore, non si devono mai usare ne acqua corrente, ne acqua distillata, ne acqua imbottigliata, ne aceto, ne alcol, ne qualsiasi altro fluido. L’uso di tali fluidi potrebbe causare l’ ostruzione dello scambiatore di calore e potrebbe causare incidenti e/o incendi. Inoltre, l’ uso di tali fluidi causa l’ annullamento della garanzia.

15. AVVISO: RISCHIO D’ INCENDIO O DI ESPLOSIONE. NON USARE MAI NESSUN TIPO DI LIQUIDO INFIAMMABILE NEL F-100.