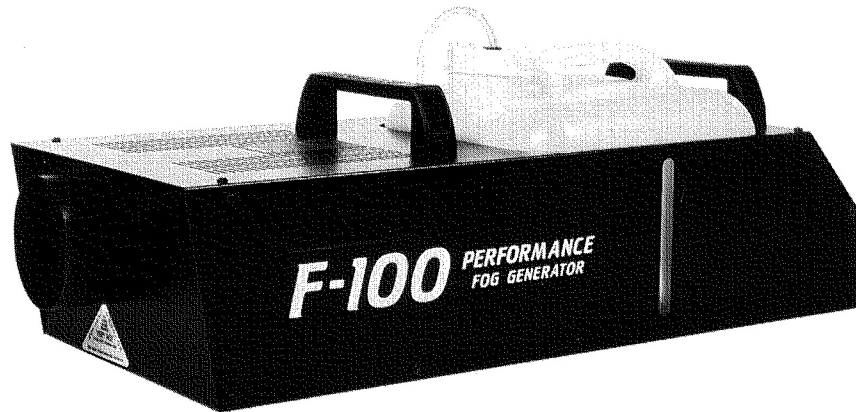


# *F-100*

*PERFORMANCE FOG GENERATOR*

## *User Guide*



**HIGH END SYSTEMS®**



High End Systems, Inc.  
2105 Gracy Farms Lane  
Austin, TX 78758 U.S.A.  
(512) 836-2242  
[www.highend.com](http://www.highend.com)

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p/n 60600021 Version 3.0

## Limitations on Warranty and Liability

This product is intended for use with ATMOSPHERES<sup>®</sup> 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<sup>®</sup> fog generating liquid is a registered trademark of High End Systems, Inc.

F-100<sup>™</sup> performance fog generator is a trademark of High End Systems, Inc.

Lightwave Research<sup>®</sup> and the Lightwave Research logo are registered trademarks of High End Systems, Inc.

## Getting Help

High End Systems<sup>SM</sup> 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  
**Manufacturer'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:

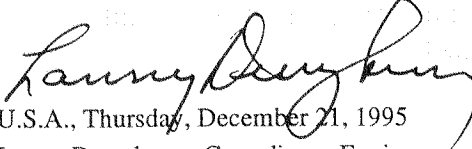
73/23/EEC, as amended by 93/68/EEC

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

  
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 CONTRE L' INCENDIE, LE CHOC ÉLECTRIQUE, ET CONTRE DES BLESSURES POSSIBLES SUR DES INDIVIDUS SE TROUVENT DANS L'APPENDICE B.

PRIÈRE DE LIRE TOUTES LES PRÉCAUTIONS ET LES AVERTISSEMENTS AVANT D'ASSEMBLER, DE MONTER, ET DE FAIRE FONCTIONNER CET ÉQUIPEMENT.

**WICHTIGE SICHERHEITSHINWEISE**

DIE NACHSTEHENDEN HINWEISE BETREFFEN DEN SCHUTZ GEGEN BRAND, ELEKTRISCHEN SCHLAG, SOWIE VERLETZUNGEN. SIE BEFINDEN 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 CONCERNIENTES A LA PROTECCIÓN CONTINUA CONTRA INCENDIO, CHOQUE ELÉCTRICO, Y LESIONES A PERSONAS.

POR FAVOR LEA TODAS LAS PRECAUCIONES Y LAS ADVERTENCIAS 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.

## Equipment Ratings and Specifications

Model: F-100  
Manufacturer: LightWave Research  
High End Systems, Inc.  
2217 West Braker Lane  
Austin, Texas 78758  
U.S.A.

Rated Voltage:	Model 115 V 100-120 VAC	Model 230 V 200-240 VAC
Rated Current:	14 A	7 A
Rated Power	1450 W	1450 W
Rated Frequency:	50-60 Hz	50-60 Hz





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# Chapter 1

## Introduction and Installation

### Introduction

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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

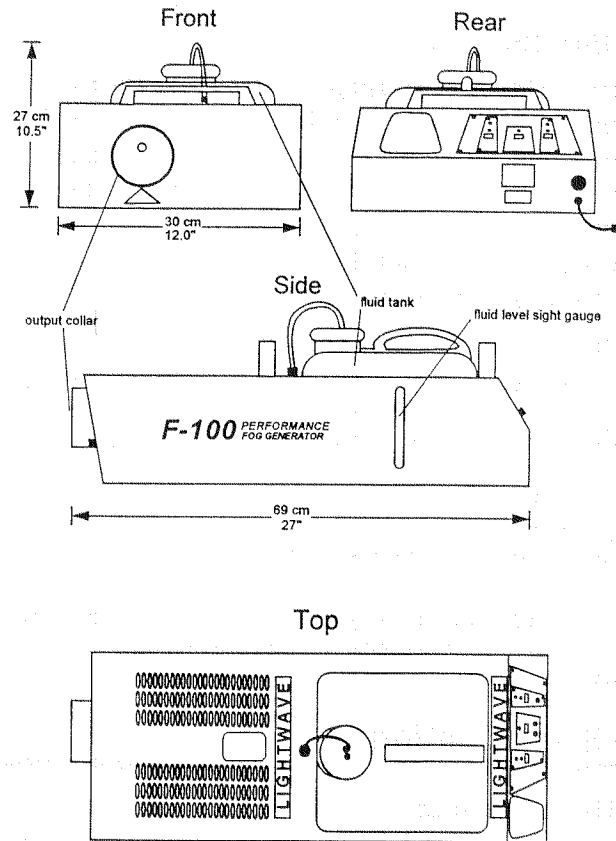


FIGURE 1: VIEWS AND DIMENSIONS OF THE F-100

## **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.

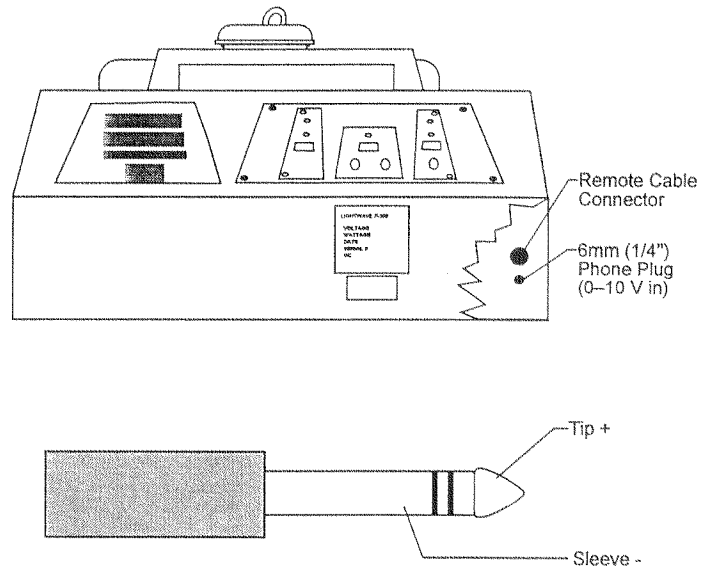


FIGURE 2: DIAGRAM OF THE *F-100* SHOWING THE LOCATION OF THE REMOTE CABLE CONNECTOR, 6MM PHONE PLUG, AND THE REQUIRED PLUG POLARITY.





# Chapter 2

## Operating the F-100 with the Timer Remote Control

### Timer Remote Control

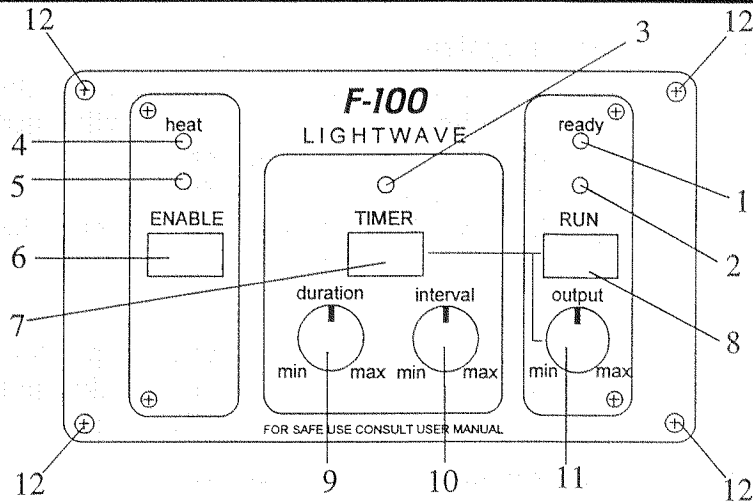


FIGURE 3: F-100 TIMER REMOTE CONTROL PANEL

#### 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.
4. Heat LED—displays heater status.
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.

12. #8 Screws—secure the remote to the *F-100*.

## **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-

cian at your dealer or distributor.

# Chapter 3

## Operating the *F-100* with the DMX-512 Remote Control

### DMX-512 Remote Control

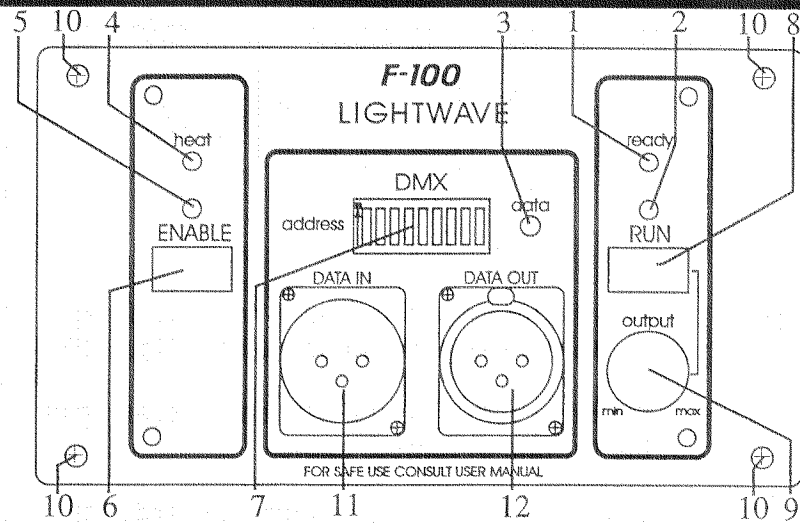


FIGURE 4: *F-100* DMX-512 REMOTE CONTROL PANEL

#### 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.
4. Heat LED—displays heater status.
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 Installation

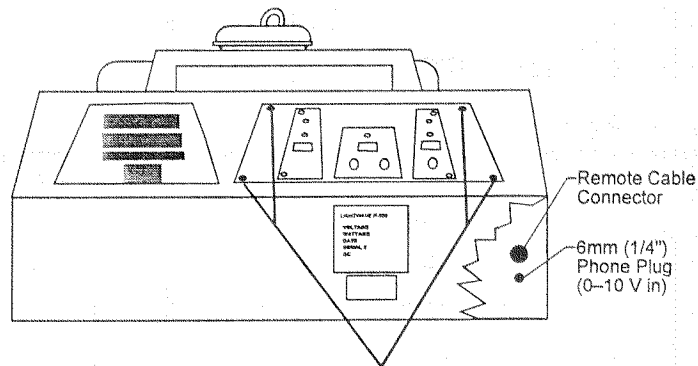


FIGURE 5: REMOTE MOUNTING SCREWS

- 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,

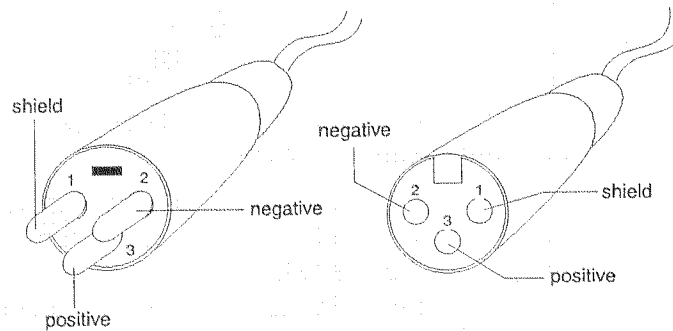
put the remote back into the remote opening, and secure the remote to the chassis with the four #8 screws.

## 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



## 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)

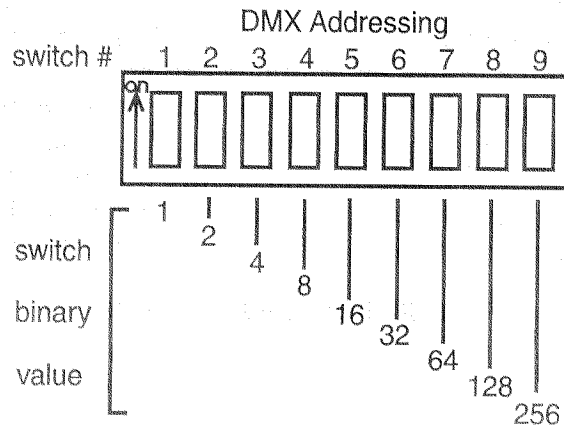


FIGURE 7: F-100 DMX REMOTE DIPSWITCH

### 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.

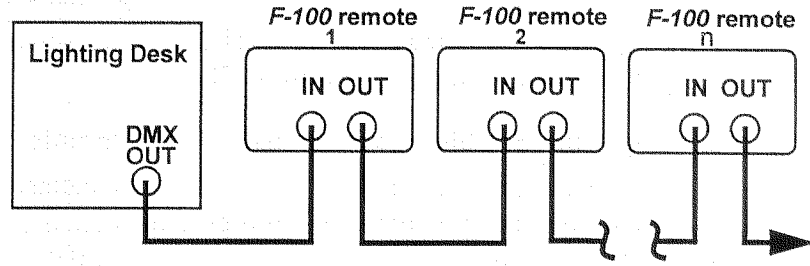


FIGURE 8: CABLING FOR DMX DAISY CHAIN

## **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 of 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

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### 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 A

## Warranty and Conditions

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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**

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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-EARTHTHIS 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.

14. Sous aucun prétexte on ne devrait utiliser de l'eau du robinet distillée ou en bouteille, du vinaigre, de l'alcool ou tout autre liquide pour nettoyer l'échangeur de chaleur. L'utilisation de ces liquides provoquerait un blocage de l'échangeur de chaleur, et présenterait un risque pour la santé et d'incendie, et annulerait la garantie.

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

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1. Bitte beachten und befolgen Sie alle WARNUNG-Schilder auf dem F-100 Gerät, auf dem ATMOSPHERES-Tank, sowie auf dem Verteilungssystem.

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.

3. Nebel stets nur in mäßiger Konzentration verwenden.

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

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

6. Montieren Sie dieses Gerät nie direkt über den Zuschauern oder den Schauspielern.

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

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

9. Legen Sie während des Betriebs niemals Hände, Gesicht oder andere Körperteile in die Nähe des Wärmeaustauschers oder Ventils.

10. Das Gerät enthält keine wartungsfähigen Teile. Service sollte stets nur von Fachpersonal durchgeführt werden.

11. Vor Feuchtigkeit und Nässe schützen.

12. Nicht für den Hausgebrauch bestimmt.

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

14. Auf keinen Fall darf der Wärmeaustauscher mit Leitungswasser, destilliertem Wasser oder in Flaschen abgefülltem Wasser, Essig, Alkohol oder sonstigen Flüssigkeiten gereinigt

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

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

# Apéndice B

## **INFORMACIÓN IMPORTANTE DE SEGURIDAD**

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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 neblinógeno ATMOSPHERES. El fabricante desconoce toda responsabilidad del uso errado o abuso de este producto y/o del líquido neblinógeno 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 u 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 - CON CORRIENTE  
AZUL - NEUTRO  
VERDE/AMMARRILLO - TIERRA  
ESTE EQUIPO DEBE CONECTARSE A TIERRA.



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 incendio, y anulará la garantía.

15. ADVERTENCIA: RIESGO DE INCEDIO O EXPLOSIÓN. JAMÁS USE NINGÚN TIPO DE LÍQUIDO INFLAMABLE EN EL F-100.

# Appendice B

## **INFORMACIÓN IMPORTANTE DE SEGURIDAD**

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1. Si prega di seguire tutte le AVVERTENZE della unita' 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.
3. Produrre nebbia in ragionevoli concentrazioni.
4. L'imboccatura e la parte anteriore della unita' 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 col 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'unita'. Per qualsiasi riparazione rivolgersi al personale specializzato.
11. Questa apparecchiatura non deve essere esposta ne alla pioggia ne all'umidita'.
12. Questa apparecchiatura non e' 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.

