

# ULTIMATE 200

ATMOSPHERIC HAZE GENERATOR



- 20 200-120 Ultimate 200 std. 115V 60Hz
- 20 200-240 Ultimate 200 std. 240V 50Hz
- 20 201-120 Ultimate 200 DMX 120V 60Hz
- 20 201-240 Ultimate 200 DMX 240V 50Hz

## OWNER'S MANUAL

### STANDARD & DMX VERSIONS

**SWEFOG**  
OPEN MINDS



**IMPORTANT!**

**Read all cautions and warnings prior to assembly, mounting and operating this equipment.**

**IMPORTANT !**

**Prière de lire toutes les précautions et les avertissements avant l'assemblage, le montage et de faire fonctionner cet équipement.**

**WICHTIG !**

**Lesen Sie alle Warnungen sorgfältig bevor Sie das Gerät zusammenbauen, installieren und benutzen.**

**¡IMPORTANTE!**

**Por favor, lea todas las precauciones y las advertencias antes de ensamblar, montar y operar este equipo.**

**IMPORTANTI!**

**Leggere tutti gli avvertenti prima di montare e usare questo apparecchio.**

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## HOW TO USE THIS GUIDE:

For your safety, it is important that you read this manual thoroughly before you operate the Ultimate 200.

This manual describes how to unpack, plan for, set up and operate the Ultimate 200. It also lists important safety precautions and a separate service & maintenance manual for technical support.

In this manual you will find the following symbols:



**CAUTION!**

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



**WARNING**

**WARNING:** This symbol appears adjacent to warning messages. Not heeding these messages could result in serious personal injury !

## QUICK SETUP GUIDE:

1. Read chapter 3: “safety precautions”.
2. Place machine on a level surface.
3. Fill Swefog Ultimate haze fluid in the tank, fill slowly, and do NOT exceed the “max” level indicator !
4. Connect to a mains outlet with earth lead.
5. (DMX-able models only): connect a DMX cable to the male XLR connector.
6. Switch the machine ON.
7. (DMX-able models only): set a DMX address 1-512, press OK.

## 1. INTRODUCTION:

The Ultimate 200 is a high performance atmosphere haze generator. The machine can operate as a continuous duty haze machine, or it can operate intermittently for periods of time controlled by the user.

- The machine is instant on. Does not need warm-up time.
- Operates continuously as long as there is fluid and power supplied.
- Operates for approx. 40 hours on full tank.
- The machine will not be damaged if operated with an empty tank, even for a long time.
- All internal parts are easy to service or to replace.
- The machine is available in two versions, the **standard** version with manual on/off control, and the **DMX** version with manual or DMX control.

We hope that you will be fully satisfied with the performance and the low running costs. However, to keep your machine functioning like new for its entire life, it is important to follow the instructions in this manual and to have regular maintenance of the hazer.

For the best results, use only original Swefog Ultimate haze fluid in the machine. **Use of any other fluid will void the warranty.**

### **How to use this manual:**

This manual contains important safety precautions and information on how to use your machine. Always read the owner's manual before using the machine!

A [Service & Maintenance manual](#), which contains detailed information on regular maintenance, is able to download from [www.swefog.com](http://www.swefog.com). Refer all service and repair works to qualified personnel.

This manual and updates can also be downloaded as PDF-files from the internet: [www.swefog.com](http://www.swefog.com)

## 2. UNPACKING:

Ultimate 200 (standard & DMX versions) package contains:

- One machine.
- One manual.
- Please note, no mains cable is included, and no fluid.
- Save the carton and packing material for future use.
- If the machine needs to be transported, ensure the tank is empty. If not, the machine must be transported upright. Ship in the original box, and place it on a small pallet. Use stripes to fix it to the pallet. It is a cheap and simple way to avoid fluid leakage during transport.

## 3. SAFETY PRECAUTIONS:



### **WARNING**

- **Haze residues and fluid spillage may be dangerous. A slippery surface can cause serious personal injury! ALWAYS check surfaces before, during and after the use of the machine.**
- **Use Swefog Ultimate C- or C-XL fluid only. Other fluids may damage the machine, cause residues inside and outside the machine, or cause toxic or odorous haze.**
- **NOTE: The fluid is made with mineral-based oil and may cause allergic reactions. Make sure that those subjected to haze and fluid are not allergic to the substance.**

The original Swefog fluid is made with medical grade chemicals only, and is non-toxic. But always ensure the haze will not cause inconvenience.

- Connect to mains outlet with earth. Use a cable with earth. Check for correct voltage and/or mains frequency (see machine label). NEVER use the machine with wrong mains voltage or frequency.
- NOTE: The condensation of the haze makes floors, stairs and other surfaces slippery. Do NOT direct the machine's haze output beam towards cool or hard surfaces like wood, plastics, glass or metal. If the machine is frequently used, or used for a long time, often check that no surface is slippery.



### **CAUTION !**

- NEVER mix or dilute the fluid.
- NEVER heat the fluid. Use room-temperature fluid only.
- The machine is for indoor-use only. NEVER use in dusty environments. Keep away from moisture!
- Operate in room temperatures only. Min. operating temperature is +10 °C, max. temperature is +30 °C.
- NEVER cover vents or air inlets on the machine housing.
- NEVER use dimmers for control of power to the machine. The output of the machine or compressor capacity / speed is NOT able to regulate with mains voltage. If mains voltage is regulated ("dimmed"), the compressor and other electric components will be damaged.
- Service internal parts ONLY if you have the know-how and experience to perform the service correctly. If not, please contact a Swefog service centre or the manufacturer. NOTE: Incorrect service works and/or the use of non-original spare parts will void the warranty.
- NEVER change parts or details inside, use original spare parts only!
- Do not overfill the machine. NEVER switch power on if fluid level is above the "max" symbol.
- NOTE: If there is – for any reason – a fluid leakage or spillage, wipe off fluid spillage. DO NOT use the machine until it is mended.
- NOTE: The haze may cause residues on mirrors, lenses and similar components if there is too much haze in the air. Equipment using fan ventilation may draw haze through the lamp housing, which may cause residues. Always check carefully where to direct the output of the machine, and keep equipment that uses fans away from the haze.

#### 4. CE-CONFORMITY (230V models only):

We, Swefog, declare that the appliance described in this manual conforms to the EEC machine directive. Complete documents may be required from Swefog.



#### 5. INSTALLATION PLANNING AND PRECAUTIONS:



##### WARNING

- Make sure the area in which this product is to be used is well ventilated.
- Do NOT install the machine directly over an audience.
- Do NOT direct the haze outlet directly to an audience.
- Do NOT operate near flammable materials.
- Do NOT expose to rain or moisture. Use indoor only.



##### CAUTION !

- Use only Swefog Ultimate fluid in this machine.
- Use responsible concentrations of haze to create atmospheric effects.
- Not for residential use.
- Must be handled by qualified personnel during all times.

According to a report commissioned by Actors' Equity Association and the League of American Theatres and Producers, mineral oil should be used in such a manner that an Actors' exposure does not exceed a peak concentration of 25 mg/m<sup>3</sup>.

For chronic exposures to mineral oil, the existing standards established for oil mists (5 mg/m<sup>3</sup> as an eight-hour time-weighted average) should also be protective for Actors in theatrical productions.

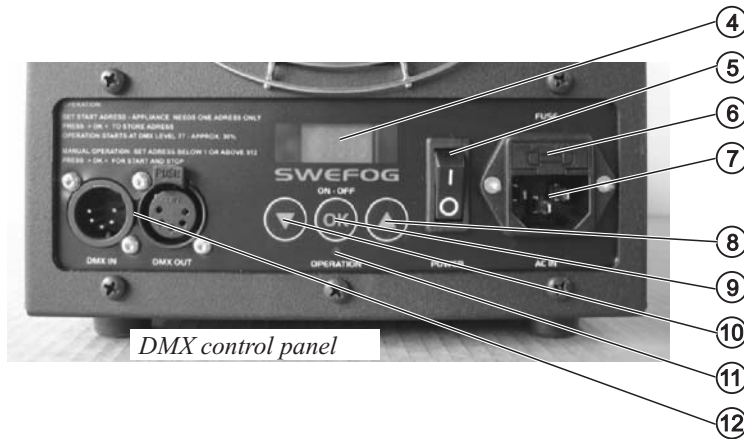
Source:  
[http://www.actorsequity.org/TheatreNews/smokefog\\_0501.html](http://www.actorsequity.org/TheatreNews/smokefog_0501.html)

## 6. OPERATION :

### 6.1 Control panels & display:



*Standard control panel*



*DMX control panel*

#### Standard control panel:

1. Mains fuse (slow blow) 115V: 8 Amp. 230V: 4 Amp.
2. IEC mains inlet
3. Mains switch

#### DMX control panel:

4. Display
5. Mains switch
6. Mains fuse (slow blow) 115V: 8 Amp. 230V: 4 Amp.
7. IEC mains inlet
8. "UP" button
9. "OK" button
10. "Down" button
11. Operation LED
12. DMX in / out XLR's

#### 6.1.1 Normal operation:

NOTE: When the machine is switched off, wait minimum 1 minute before it is switched on again. If not, the high starting current of the compressor motor may cause the mains fuse to blow.

- Place the machine on a level surface.
- Remove the fill cap on top of the machine. Fill with original "Swefog Ultimate" fluid. Fill slowly. DO NOT overfill. NEVER exceed the "max" fluid level. Close the fill cap before switching on the machine.
- NEVER fill fluid while machine is operating.
- The machine is continuously cooled by several fans and an intercooler and can operate without interruptions as long as there is mains power and fluid supply.
- Operating the machine with an empty fluid tank does not damage the machine.
- Connect a mains cable to a suitable mains outlet (120V min. 10 Amps capacity, 230V min. 5 Amps capacity). NOTE: Due to the high starting current, the machine consumes approx. 4 times its regular power consumption at the moment it is switched on. Always use mains fuses of the slow-blow type.



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## 6.2 OPERATION - Standard model without DMX control:

- The machine is switched on / off with the mains switch.
- The haze output is regulated by the running time of the machine. The longer it operates, the more haze is produced.

### **Remote control from external power sources - Ultimate 200 standard (w/o DMX) only:**

Ultimate 200 standard model (without DMX) can be controlled with the use of an external switch or relay pack. Never use dimmers for power control – it may cause permanent damage to the compressor, and is not covered by the warranty.

- Use a switch or relay pack control unit made for a continuous output current of min. 5 Amps (230V) or 8 Amps (115V). Use a control unit made for control of inductive loads (i.e. electric motors, transformers etc). Remember, the starting current of the compressor's electric motor is approx. 8 Amps (230V) or 15 Amps (115V).
- Do not connect other electrical equipment to the same outlet of the control unit.
- Set the mains switch to "1", and let the control unit switch the mains voltage on / off to the machine. NOTE: To avoid overload of the compressor, do not switch the machine on immediately after it is switched off.



### **CAUTION!**

NOTE: When external units are used for control of mains power, ensure that:

- No dimmer packs are used. The machine must be supplied with no (off) or full (on) mains voltage.
- Various voltage or frequency will damage the machine.

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## 6.3 OPERATION – DMX model:

If controlled with DMX, the machine consumes one channel only, and reads all channels between 001 and 512. The machine is ON at DMX level 77 (approx. 30%).

ON / OFF can be controlled with DMX or manually.

PLEASE NOTE: A DMX model cannot be remote controlled by an external device (e.g. a switchpack) like the standard model. There are only two ways to control a DMX model: Manual by pressing OK button, or via DMX 512.

### **Control with DMX signal only:**

- Connect a DMX cable to the male XLR connector. The DMX cable is linked to a standard DMX 512 source (e.g. a light desk).
- Set mains switch to "1". *The display indicates the last stored address, or "OFF" if the last operation mode was manual.*
- Select a DMX address between 001 and 512 (the machine uses one channel only): Use the up / down keys to select address (the display flashes while the new address is being selected). *Tip: Press and hold "up" or "down" key for faster count.*

- Press “OK” to store the selected address. *The display will now stop flashing, to confirm the address is stored.*
- When the level of the selected DMX address is 77 or more, the machine is on. When the level is 76 or less, the machine is off. The red “operation” LED indicates the machine is switched on by the DMX electronics.
- If the DMX source is manually controlled with potentiometers, make sure the potentiometer is not adjusted only around level 77. It can make the machine to go on and off repeatedly. The output cannot be controlled with the DMX level, only with the operate intervals. The best way to control the machine without the risk of an unwanted start or stop (and risk of damaged compressor motor), is to set the level to 0 (0%) for off, and 255 (100%) for on.

*Tips: The last selected address will be stored in the processor’s memory when the machine is switched off and / or mains voltage is disconnected. The address is set as default next time the machine is switched on. In an application where the machine is used with the same address every time (e.g. on tour or in permanent installations), a new address programming is not necessary at power on, as the last selected address is pre-set as default.*

*If, for any reason, a different address is to be used temporarily: Set the temporary address, but do NOT press “OK” (the temporary address will flash in the display). The machine will respond to the temporary address until mains power is switched off. Next time it is switched on, the common favourite address will be set as default.*

**Manual control without DMX:**

- Select an address below 1 or above 512 (the display indicates “OFF”).
- Press “OK” button for start and stop. The red “operation” LED indicates the machine is on.

**Remote control from external power sources:**

**Ultimate 200 DMX cannot be controlled from external switch- or relay units. Use the integrated DMX control, connected to a DMX light desk, or manual control only.**

<h2>7. SERVICE, MAINTENANCE &amp; REPAIR:</h2>
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The Ultimate series is made with industrial standard components. If regular care and maintenance is performed, the machine will last for many years of hard use.

If you have good know-how and technical experience of cracker hazers electronics and pneumatics, follow the service & maintenance manual able to download from [www.swefog.com](http://www.swefog.com).

If not, refer servicing to qualified technical personnel, or contact a preferred Swefog dealer. Preferred dealers have qualified service technicians, and will be able to perform most service works.

# **SWEFOG WORLD-WIDE WARRANTY:**

## **Unpacking and Saving the Shipping Materials**

Do not discard the Swefog 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.

## **Inspecting the Contents**

Carefully remove the contents of each shipping carton and inspect for signs of freight damage. In case of any such damage, notify both the shipping agent and the sender immediately (may it be the sales agent or the manufacturer).

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 damage is discovered. All packing material should be retained for inspection.

**NOTE:** Freight damage claims are invalid for fixtures or other spare parts shipped in non-factory shipping cartons and packing materials.

## **Limited Warranty**

Unless otherwise stated, the Swefog products are covered by a two year parts and labour limited warranty.

Guarantee will be invalid if the Swefog machines have been used with fluid other than the recommended Swefog haze fluid.

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**

**Before** any units are sent to Swefog for repair, a Return (RMA) Form has to be filled out. This RMA form can be obtained by contacting Swefog [info@swefog.com](mailto:info@swefog.com) or can be downloaded from our website [www.swefog.com](http://www.swefog.com). The manufacturer will then make the final determination as to whether or not the unit is covered by warranty. All shipping will be paid by the purchaser. Transport costs for the returned units are not covered by the warranty and will hence be at the cost of the sender.

**Under no circumstances will freight collect shipments be accepted.**

Repair or replacement as provided for under this warranty is the exclusive right of the client.

Swefog Technology Group AB 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 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 misused, damaged, or modified in any way.**

