

User Manual



AF-250 DMX

Fog Machine

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1 General information





This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under www.thomann.de.

1.1 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this document.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – high-voltage.
	Warning – flammable substances.

Warning signs	Type of danger
	Warning – hot surface.
	Warning - slip hazard.
	Warning – harmful or irritating substances.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to be used to produce artificial fog by vaporising fog fluid. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety



DANGER!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.



DANGER!

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.

**DANGER!****Danger to life due to electric current!**

A short circuit could lead to a fire hazard and risk of death. Do not modify the mains cable or the plug! In case of isolation damage, disconnect immediately the power supply and arrange repair. If in doubt, seek advice from a qualified electrician.

**WARNING!****Risk of burns from flammable liquids!**

The use of flammable liquids in the device may cause severe burns and damage to property. Use only approved fog fluids. Never fill flammable liquids into the tank of the device.

**WARNING!****Risk of burns on the hot fog nozzle!**

The fog generated on the fog nozzle is hot. Occasionally hot fluid drops may escape from the nozzle. The fog nozzle may be hot for several hours after switching off the device. Skin contact with hot fog and drops of hot liquid can lead to burns. Ensure a minimum distance of 50 cm to persons and objects during operation. Do not touch the fog nozzle during and immediately after operation. Before touching the device, always ensure that all surfaces have cooled down sufficiently.

**WARNING!****Slip hazard due to condensate pools!**

The fog generated by the fog machine can condense on floors and surfaces. People can slip and injure themselves on pools of condensate. Do not direct the fog to floors or other surfaces that may be stepped on. Regularly check all floors and other surfaces that can be accessed for slipping hazards. If necessary, remove any pools of condensate.

**WARNING!****Health hazard when handling fog fluid!**

Fog fluid contains glycols. There is a health risk in case of eye contact and if fluid is swallowed. Keep fog fluid in a safe place and out of the reach of children. Never ingest fog fluid and avoid contact with eyes. In case of accidental ingestion or eye contact with fog fluid: Do not induce vomiting if swallowed. Thoroughly rinse the eyes with water upon contact. Get immediate medical attention.



CAUTION!

Possible respiratory problems due to fog fluid!

Fog fluid can lead to respiratory problems in case of prolonged exposure and in certain people. Using unsuitable fluids can generate toxic gases. Do not use any fog fluids other than the ones approved for the device. Any claims for compensation for damages caused by using non-approved fluids are excluded. Do not let the device produce fog in poorly ventilated areas. Do not expose people with health problems (e.g. allergy-related respiratory symptoms, asthma) to artificial fog.



NOTICE!

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can over-heat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.



NOTICE!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the "Technical specifications" chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.



NOTICE!

Damage to the device due to high voltages!

The device can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the device matches the local power grid before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the device from the power grid when storms are approaching or if the device will not be used for a longer period.

**NOTICE!****Risk of fire due to installation of a wrong fuse!**

Using fuses of a different type than compatible with the device may cause a fire and seriously damage the device. Only use fuses of the same type. Observe the labelling on the device casing and the information in the "Technical data" chapter.

**NOTICE!****Possible staining due to plasticiser in rubber feet!**

The plasticiser contained in the rubber feet of this product may react with the coating of the floor and cause permanent dark stains after some time. If necessary, use a suitable mat or felt slide to prevent direct contact between the device's rubber feet and the floor.

General information about how to safely operate fog machines and hazers

The device was designed for use in professional event technology and works reliably when used properly. Observe the following information:

- Follow all warnings in these operating instructions.
- Never leave the device running without supervision.
- The device is not suitable for use in private households or as a child's toy.
- Place the device on a stable, fire-proof basis that is at least twice as large as the device.
- Maintain a safety distance of 1 m to flammable materials.
- The device is not intended for suspended assembly (the so-called "flying operation").
- During operation, ensure that the visibility in the room does not fall below 2 m so that everyone in the room can still orient themselves safely.
- The fog or haze generated by the device may trigger smoke alarms.

3 Features

This fog machine is suitable for use in clubs, bars, discotheques and on stages.

Special features of the device:

- Superior performance by highly efficient heating element
- Control via DMX (one channel) or via the supplied remote control
- Suitable for mobile use due to compact design
- Bracket included

4 Installation

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Place the device on a stable, fire-proof basis that is at least twice as large as the device. The device requires 20 cm clearance at the sides and above. The unit should be installed horizontally, a maximum deviation of 15° is allowed.

5 Starting up

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.



NOTICE!

Data transfer errors due to improper wiring!

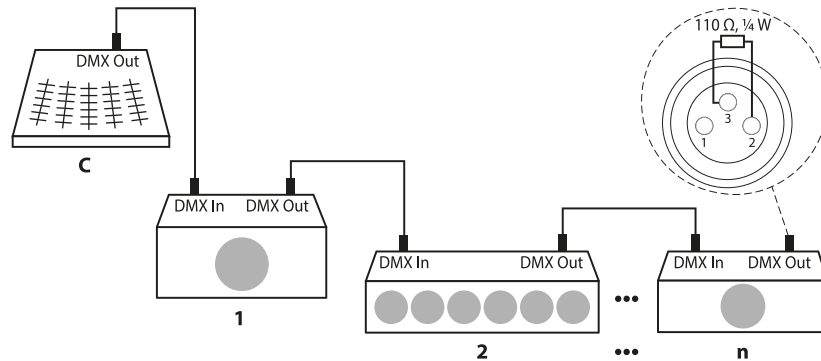
If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

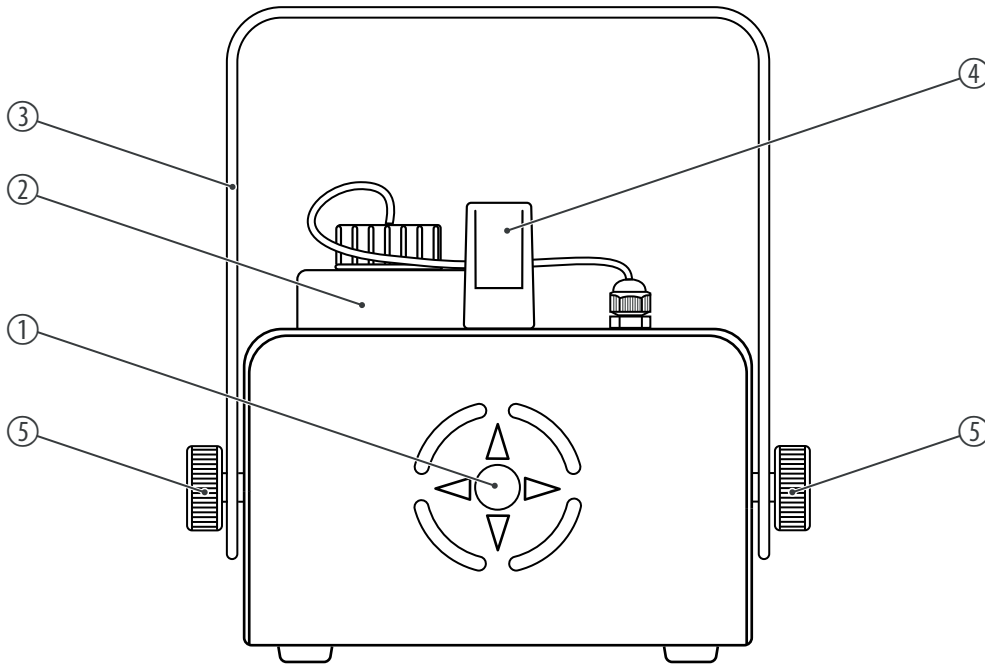
Connections in DMX mode

Connect the DMX input of the device to the DMX output of a DMX controller or another DMX device. Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a resistor ($110\ \Omega$, $\frac{1}{4}\text{ W}$).



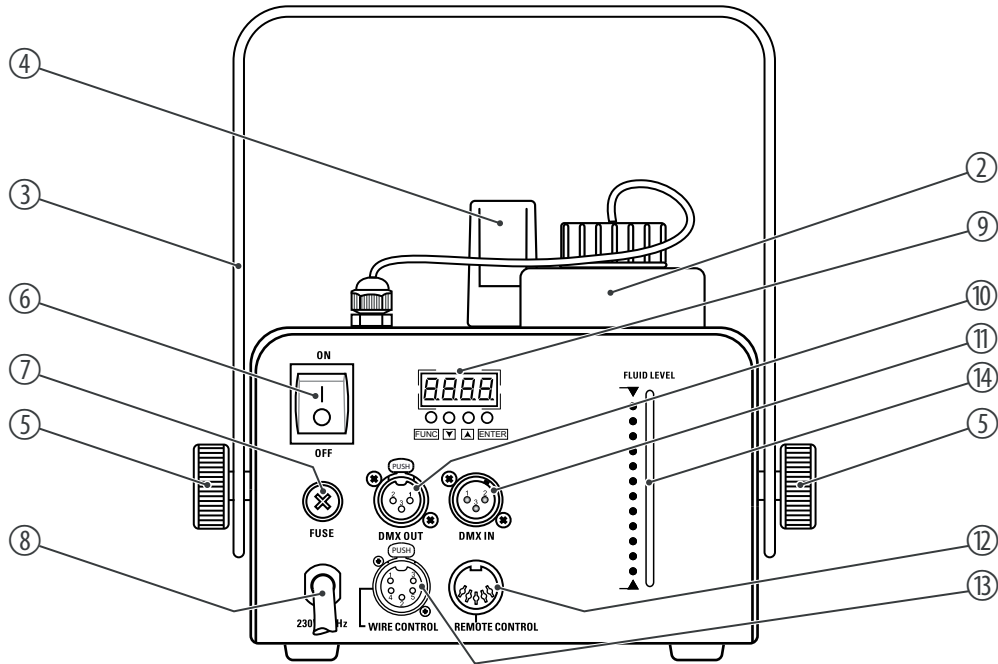
6 Connections and operating elements

Front panel



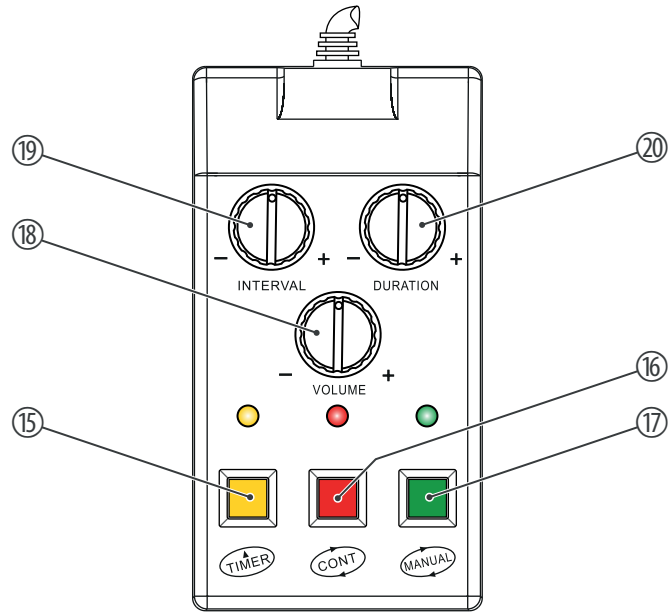
1	Fog nozzle
2	Fog fluid container with screw-cap
3	Bracket
4	Carrying handle
5	Locking screws for the bracket

Rear panel



2	Fog fluid container with screw-cap
3	Bracket
4	Carrying handle
5	Locking screws for the bracket
6	Main switch. Turns the device on and off.
7	[FUSE] fuse holder
8	Mains cable for power supply
9	Display with control buttons:
	[ENTER] button to select a menu option and to confirm the entered values
	▲ button to page down in the menu system, and to increase the displayed value
	▼ button to page up in the menu system, and to decrease the displayed value
	[FUNC] button to open the menu control
10	[DMX OUT] DMX output
11	[DMX IN] DMX input
12	[REMOTE CONTROL] connection for the receiver of the wireless remote control (optionally available, item no. 464052)
13	[WIRE CONTROL] connection for the wired remote control
14	Liquid level indicator.

Remote control



- | | |
|----|--|
| 15 | <i>[TIMER]</i> with this button, you can turn the Timer function on or off. In this mode, the via <i>[VOLUME]</i> set fog volume is output in certain intervals; set the interval length via <i>[DURATION]</i> . The corresponding LED lights while the function is enabled. |
| 16 | <i>[CONT]</i> press this button to turn continuous operation on or off. In this mode, the via <i>[VOLUME]</i> set fog volume is output continuously. The corresponding LED lights while the function is enabled. |
| 17 | <i>[MANUAL]</i> press this button to output the maximum fog volume. The corresponding LED lights while the function is enabled. |
| 18 | <i>[VOLUME]</i> rotary control to set the fog volume to be output |
| 19 | <i>[INTERVAL]</i> rotary control to set the interval between two fog blasts |
| 20 | <i>[DURATION]</i> rotary control to set the interval length of a fog blast |

7 Operating

Filling the unit



NOTICE!

Possible damages caused by unsuitable fog fluid

Fog fluids not approved by the manufacturer may permanently damage the unit.

Exclusively use the fog fluids specified in chapter 'Technical specifications' of this manual and follow its instructions for use.

First, make sure the unit is disconnected from the mains.

Open the screw-cap of the liquid container and fill in the fog fluid. Make sure that no fog fluid is spilled or gets into the device. The easiest way is using a funnel. The container capacity is 1.8 litre.

Screw the cap firmly back on.

Turning the unit on



NOTICE!

Risk of undetected fires in the absence of supervision!

There is a general risk of fire when operating the device. If the appliance is left unattended, fires can go undetected and cause great damage.

Never operate the device unattended.

Make sure that the remote control is connected.

Connect the device to the mains power grid and turn it on with the main switch. During heating, the display shows the value 'UP'.

As soon as the required operating temperature is reached, the green LED on the remote lights up and the display shows the set DMX address. The device is now operational.

Operation

Operation with an empty fluid container can lead to overheating and permanent damage of the pump. When operating, always ensure that there is sufficient fog fluid in the liquid container to avoid no-load running.

Turning the unit off

Disconnect the device from the mains. Transport the device only when it is completely cooled down. To avoid leaking fog fluid during transport, you should transport the device only with empty fluid container.

7.1 Remote control functions

When the device is not controlled by DMX, it supports the following operating modes that can be selected with the remote control:

- **Manual operation with maximum fog volume**
To do so, just press *[MANUAL]*. This mode takes precedence over all others. This means that you don't have to stop the timer function and continuous operation before you press the button.
- **Continuous operation with adjustable fog volume**
In this mode, the fog volume you have set with *[VOLUME]* is output continuously. Press the *[CONT]* to turn the operating mode on or off.
- **Timer-controlled operation with adjustable fog volume**
In this mode, the fog volume you have set with *[VOLUME]* is output at regular intervals (adjustable with *[INTERVAL]*). Set the interval length of the fog blasts with *[DURATION]*. Press the *[TIMER]* to turn the operating mode on or off. The yellow LED indicates that the Timer function is enabled. Each fog blast lasts about three seconds.

7.2 DMX control

DMX address assignment

Turn the unit on as described above. Use the arrow buttons ▼ and ▲ to set the desired DMX address in the range of 1 ... 512. Confirm the selection with *[ENTER]*. You can then control the device with a connected controller.

DMX assignment

Channel	Value	Function
1		Setting the fog volume
	0...255	No fog output (0 %) to maximum fog output (100 %)

8 Technical specifications

Approved fog fluids	Stairville FAST-FOG (item no. 209054)	
	Stairville E-M fluid (item no. 121307)	
	Stairville E fluid (item no. 105454)	
	Stairville E-C fluid (item no. 105455)	
	Stairville E-HD heavy fluid (item no. 105456)	
Heater power	1300 W	
Warm-up time	approx. 5 min	
Fluid container capacity	1.8 l	
Fluid consumption	approx. 108 ml / min	
Fog blast capacity	approx. 180 m ³ /min	
Fog blast reach	approx. 4 ... 5 m	
Input connections	DMX control	XLR chassis plug, 3-pin
	Receiver of the wireless remote control	DIN socket, 5-pin
	Wired remote control	XLR chassis socket, 5-pin
Output connections	DMX control	XLR chassis socket, 3-pin

Power consumption	1300 W	
Supply voltage	230 V ~ 50 Hz	
Fuse	5 mm × 20 mm, 8 A, 250 V, fast-acting	
Degree of protection	IP20	
Dimensions (W × H × D)	310 mm × 190 mm × 430 mm	
Weight	7.1 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non-condensing)

Further information

DMX control	yes
Blast direction	Horizontal
Timer remote control	yes
On/Off remote control	no
Radio remote control	no
Light effect	no
With suspension bracket	yes

9 Plug and connection assignments

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

DMX connections

The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.



Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX-, 'cold signal')
3	Signal (DMX+, 'hot signal')

10 Troubleshooting

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Symptom	Remedy
The unit does not work	Check the mains connection and the main fuse.
No haze output	<ol style="list-style-type: none"> 1. Check the fluid level in the fog container. 2. Switch the device off and check the hose that leads into the fluid container for flow.
No response to the DMX controller	<ol style="list-style-type: none"> 1. Check the address settings and the DMX polarity. 2. Try to use another DMX controller. 3. Check whether the DMX cables run near or parallel to high-voltage cables that may cause damage or interference to a DMX interface circuit.
The display shows 'hiGh'.	Please send the device to our Service Center for inspection.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at www.thomann.de.

11 Cleaning



NOTICE!

Possible damages caused by unsuitable cleaning agents

Cleaners not approved by the manufacturer may permanently damage the unit.

Only use the fog machine cleaners listed on www.thomann.de and follow their instructions for use.

Clean the appliance after every 30 operating hours, or if it was not in use for a longer period of time.

Procedure

1. ➤ Make sure that the device is turned off, disconnected from the mains and completely cooled down.
2. ➤ Position the unit in a well ventilated place.
3. ➤ Insert the suction hose of the fog machine into the bottle with the fog machine cleaner.
4. ➤ Connect the device to the mains power grid and turn it on with the main switch.
5. ➤ Wait until the unit has reached the required operating temperature.
6. ➤ Change to continuous operation and let the device produce fog for about 20 seconds.
7. ➤ Insert the suction hose of the fog machine back into the fog fluid container and let the device again produce fog for about 20 seconds. This will rinse the lines.
 - ⇒ The cleaning is completed.

Fan grids

The fan grids of the device must be cleaned of any contamination, such as dust, etc. on a regular basis. Before cleaning, switch off the device and disconnect mains-operated devices from the mains. Only use pH-neutral, solvent-free and non-abrasive cleaning agents. Clean the unit with a slightly damp lint-free cloth.

12 Protecting the environment

Disposal of the packing material



Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

Do not dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the instructions and markings on the packaging.



Observe the disposal note regarding documentation in France.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. When disposing of the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste management facility. Proper disposal protects the environment as well as the health of your fellow human beings.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

You can return your old device to Thomann GmbH at no charge. Check the current conditions on www.thomann.de.

If your old device contains personal data, delete those data before disposing of it.

