



AF-180 LED Fogger Co2 FX

Fog Machine

Thomann GmbH
Hans-Thomann-Straße 1
96138 Burgebrach
Germany
Telephone: +49 (0) 9546 9223-0
Internet: www.thomann.de

11.12.2023, ID: 334044 (V7)

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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 – dangerous optical radiation.
	Warning - slip hazard.
	Warning – harmful or irritating substances.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended for generating artificial fog by evaporating the fog fluid with which it is filled, with an additional electronic lighting effect by means of LED technology. The device is designed for professional use and is not suitable for use in households. 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.



Extend the life of the device by regular breaks in operation and avoid switching it on and off frequently. This device is not suitable for continuous use.

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 as 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. Always use proper ready-made insulated triple-core mains cable with a safety plug. 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.



WARNING!

Risk of eye damage caused by high light intensity!

The device generates highly intense light radiation. Looking directly into the light source can damage the eyes. Never look directly into the light source.



WARNING!

Risk of epileptic fit due to flashing lights!

The device emits flashing lights (strobe effects). Flashing lights can trigger epileptic fits in specific people. If you are at risk of epilepsy, avoid spending longer periods of time subjected to flashing lights and looking into strobing light.

**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 overheat 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 incorrect polarity!**

Incorrectly inserted batteries may cause fires and destroy the device and the batteries. Observe the markings on the batteries and on the device. Ensure that proper polarity is observed when inserting batteries.

**NOTICE!****Possible damage due to leaking batteries!**

Batteries can leak and cause permanent damage to the device. Take the batteries out of the device if it is not going to be used for an extended period of time.

**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:

- Coloured fog effects by integrated LEDs
- Control via DMX (7 channels)
- Manual control via wired and infrared remote control (included)
- Vertically and horizontally usable
- Suitable for mobile use due to compact design

For technological reasons, the light output of LEDs decreases over their lifetime. This effect increases with higher operating temperature. You can extend the service life of the illuminants by providing adequate ventilation and operating the LEDs with the lowest possible brightness.

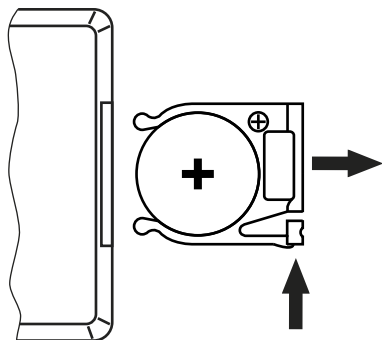
4 Installation

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.

The device requires a 20 cm clearance on the sides and above. Place the device on a flat, stable surface. The device should be installed horizontally, with a maximum deviation of 15°.

Insert the fog fluid container into the device and then mount the supplied safety bracket on the device. To do so, unscrew the two screws on the left and right of the recess for the fog fluid container from the housing. Put on the safety bracket and secure it to the housing with the two screws ( 'Side view, device is horizontal' on page 18).

Inserting the battery into the remote control



Push the lock of the battery holder towards the centre of the housing and pull out the battery holder like a drawer. Insert the batteries. The battery is correct if the positive pole points to the housing base of the remote control. Slide the battery holder back into the remote until it clicks into place.

When shipping, the battery is already installed in the remote and protected against discharge by a transparent plastic film. Remove the plastic film before initial use.



NOTICE!

Risk of fire due to incorrect polarity!

Incorrectly inserted batteries may cause fires and destroy the device and the batteries.

Observe the markings on the batteries and on the device.

Ensure that proper polarity is observed when inserting batteries.



NOTICE!

Possible damage due to leaking batteries!

Batteries can leak and cause permanent damage to the device.

Take the batteries out of the device if it is not going to be used for an extended period of time.

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!

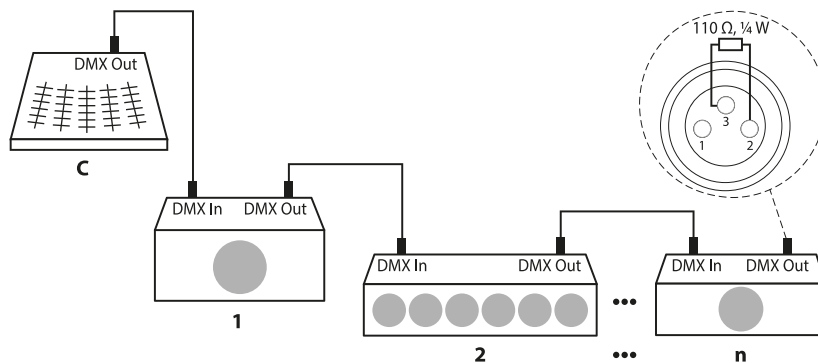
If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

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.

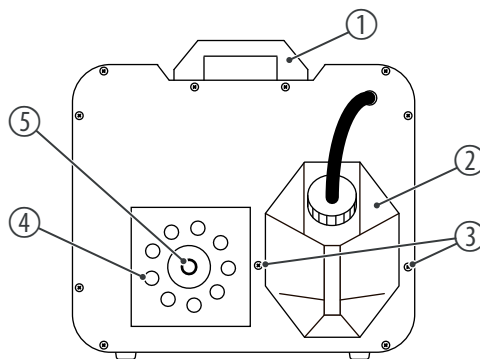
Connections in DMX mode

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 ($110\ \Omega$, $\frac{1}{4}\text{ W}$).

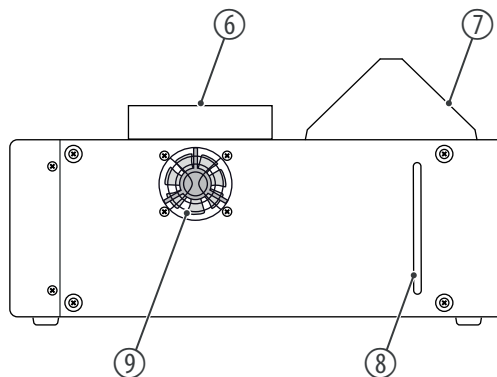


6 Connections and controls

Side view, device is horizontal

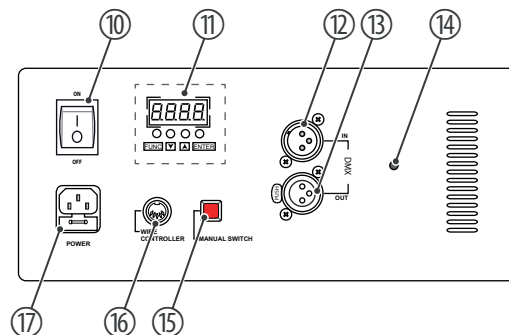


- | | |
|---|---|
| 1 | Carrying handle |
| 2 | Fog fluid container with screw-cap |
| 3 | Fastening screws for the safety bracket of the fog fluid container. |
| 4 | 9 × colour LEDs (3 × red, 3 × green, 3 × blue). |
| 5 | Fog nozzle |

Underside

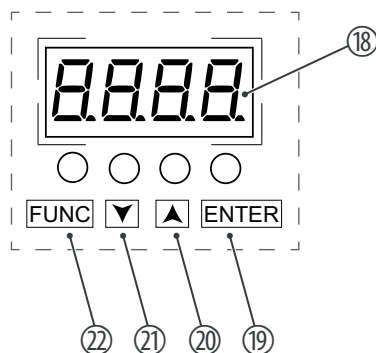
- | | |
|---|--|
| 6 | Fog / light aperture |
| 7 | Safety bracket for the fog fluid container |
| 8 | Fill level indicator |
| 9 | Fan |

Rear view, device is horizontal



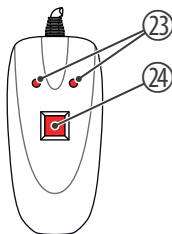
- | | |
|----|--|
| 10 | [ON OFF] Main switch. Turns the device on and off. |
| 11 | Control panel |
| 12 | [DMX IN] DMX input, 3-pin |
| 13 | [DMX OUT] DMX output, 3-pin |
| 14 | Infrared sensor for the remote control |
| 15 | [MANUAL SWITCH] Button for manually triggering a fog blast |
| 16 | [WIRE CONTROLLER] Connection for the supplied wired remote control |
| 17 | [POWER] Connection for the supply voltage |

Control panel



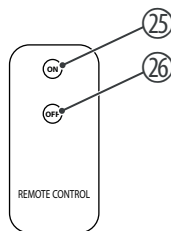
- | | |
|----|--|
| 18 | Display |
| 19 | [ENTER] Button for selecting a menu option and confirming the entered values |
| 20 | ▲ Button for scrolling forwards in the menu control and increasing the displayed value |
| 21 | ▼ Button for scrolling backwards in the menu control and reducing the displayed value |
| 22 | [FUNC] Button for opening the menu control |

Wired remote control



- | | |
|----|--|
| 23 | Standby indicators
When the remote control is connected to the device, these two LEDs indicate that the device has reached the operating temperature required for fog generation. |
| 24 | Button for manually triggering the fog blast |

Infrared remote control



25	[ON] Button for manually triggering the fog blast
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26	[OFF] Button for manually ending the fog blast
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7 Operation

Filling the device

**NOTICE!****Damage to the device due to the use of unsuitable fog fluids!**

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

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

First, make sure that the device is disconnected from the mains.

Open the screw cap of the fluid container and fill in the fog fluid. Make sure that no fog fluid is spilled or gets into the device. The easiest way to do so is to use a funnel. The container capacity is 2.5 litres.

Screw the cap firmly back on.

Switching on the device



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.

Connect the device to the mains power grid and turn it on with the main switch. During the warm-up time of about 3 minutes (± 30 s) the display shows 'UP'. Once the device is operational, the display will change to 'READ'.

When the device receives a DMX signal, the display shows the set DMX address, even during start-up and warm-up. During this time, the device does not respond to manual control commands, you only have the option to adjust the DMX address via the device menu.

In all modes, the maximum duration of a fog blast is approx. 6 seconds, and the charging time between two fog blasts is also approx. 6 seconds.

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.

“Manual control” mode

This mode can only be selected if no DMX controller is connected and turned on.

In this mode, the fog output can be triggered and deactivated using the *[MANUAL SWITCH]* or the remote control.

Use the *[MANUAL SWITCH]* on the device and the manual fog blast trigger button on the remote control (↵ ‘Manual control via wired remote control’ on page 26) to control the duration of the fog blast.

The colour effect can be adjusted via the menu of the device.

1. ➤ Press *[FUNC]* to open the menu control.
2. ➤ Press *[FUNC]* again or press the arrow buttons ▼ and ▲ until ‘CoLo’ appears on the display.
3. ➤ Confirm with *[ENTER]*.
⇒ The most recently set value ‘Co1’ ... ‘Auto’ flashes on the display.
4. ➤ Select the required colour setting with the arrow buttons ▼ and ▲, see the table below.
5. ➤ Confirm the input with *[ENTER]*.

Display	Colour setting
'oFF'	LEDs off
'Co1'	Continuous red light
'Co2'	Continuous green light
'Co3'	Continuous blue light
'Co4'	Continuous red-green light
'Co5'	Continuous red-blue light
'Co6'	Continuous blue-green light
'Co7'	Continuous red-green-blue light
'Auto'	Automatic colour change, all LEDs

Manual control via wired remote control

If the device is not controlled via DMX you can trigger and regulate the fog output with the red push button on the remote control. The device stops emitting fog when you release the button or after approx. 6 seconds. After the charging time of approx. 6 seconds you can trigger another fog blast.

Connect the remote control to the *[WIRE CONTROLLER]* connection socket at the control panel of the device. Make sure that the two indicator LEDs on the remote control light up.

Manual control via infrared remote control

If the device is not controlled via DMX, you can control the fog output using the *[ON]* and *[OFF]* buttons on the infrared remote control. Press *[ON]* to trigger a steady fog blast of no more than 6 seconds with maximum intensity. Press *[OFF]* to end the fog blast.

Activate the infrared port on the device.

1. ➤ Press *[FUNC]* to open the menu control.
2. ➤ Press *[FUNC]* again or press the arrow buttons ▼ and ▲ until 'InFr' appears on the display.
3. ➤ Confirm with *[ENTER]*.
4. ➤ Press the arrow buttons ▼ and ▲ to switch between 'on' (IR port on the device is turned on) and 'off' (IR port on the device is turned off).
5. ➤ Confirm the input with *[ENTER]*.

“DMX” operating mode

Set the DMX address of the device using the menu control.

- 1.** ➤ Press *[FUNC]* to open the menu control.
- 2.** ➤ Press *[FUNC]* again or press the arrow buttons ▼ and ▲ until ‘Addr’ appears on the display.
- 3.** ➤ Confirm with *[ENTER]*.
⇒ The most recently set value ‘1’ ... ‘506’ flashes on the display.
- 4.** ➤ Select the required address with the arrow buttons ▼ and ▲.
- 5.** ➤ Confirm the input with *[ENTER]*.

Make sure that this number matches the configuration of your DMX controller.

DMX assignment

Channel	Value	Function
1	Amount of fog	
	0...9	No fog output (0%)
	10...255	Fog output (100%)
2	Brightness of all LEDs	
	0...255	LEDs off to maximum brightness
3	Colour effect	
	0...20	All LEDs off
	21...35	Continuous red light
	36...50	Continuous green light
	51...65	Continuous blue light
	66...80	Continuous red-green light
	81...95	Continuous red-blue light
	96...110	Continuous blue-green light
	111...127	Continuous red-green-blue light

Channel	Value	Function
	128...255	Automatic colour change, all LEDs, increasing speed
4	Strobe effect	
	0...9	Strobe effect off
	10...255	Strobe effect from slow to fast
5	Intensity of red colour effect	
	0...255	Red LEDs off to maximum brightness when channel 3 $\leq$ 20
6	Intensity of green colour effect	
	0...255	Green LEDs off to maximum brightness when channel 3 $\leq$ 20
7	Intensity of blue colour effect	
	0...255	Blue LEDs off to maximum brightness when channel 3 $\leq$ 20

Decommissioning the device

Switch off the device using the main switch. Do not transport the device before it has cooled down completely. To avoid leaking fog fluid during transport, you should transport the device only with an empty fluid container.

8 Technical specifications

Heater power	820 W	
Warm-up time	3 min ($\pm$ 30 s)	
Fluid container capacity	2.5 l	
Fluid consumption	approx. 50 ml/min	
Fog blast duration, max.	approx. 7 s	
Charging time between fog blasts	approx. 24 s	
Fog blast reach	3 m ($\pm$ 30 cm)	
Input connections	Power supply	C14 rubber panel plug
	DMX control	XLR panel plug, 3-pin
	Wired remote control	DIN socket, 5-pin
Output connections	DMX control	XLR panel socket, 3-pin
Light source	3 $\times$ LED red, 3 W each	
	3 $\times$ LED green, 3 W each	
	3 $\times$ LED blue, 3 W each	
Electronic shutter	0.5 Hz...30 Hz	

Technical specifications

Remote control battery	Lithium-ion button cell CR2025, 3 V	
Power consumption	850 W	
Supply voltage	230 V ~ 50 Hz	
Fuse	5 mm × 20 mm, 5 A, 250 V, fast blow	
International Protection Rating	IP20	
Dimensions (W × H × D)	190 mm × 300 mm × 340 mm	
Weight	4.6 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

Further information

DMX control	yes
Timer remote control included	no
Infrared remote control included	yes
On/Off remote control included	no
Battery operation	no
With suspension bracket	no
Blast direction	Horizontal, vertical
Light effect included	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	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	1. Check the address settings and the DMX polarity. 2. Try using another DMX controller. 3. Check to see if the DMX cables run near or alongside to high voltage cables that may cause damage or interference to DMX interface circuits.

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 batteries



Batteries do contain some hazardous chemicals so they should not be thrown away with the normal household waste. They should be returned to the manufacturer for disposal or recycled elsewhere in accordance with your local regulations.

Only dispose of lithium batteries when they are empty. Remove lithium batteries from the device before disposal if this is possible without destroying it. Protect used lithium batteries against short circuit, for example by taping the poles. Dispose the built-in lithium batteries together with the device. Check for an appropriate collection facility.

Dispose of the batteries and rechargeable batteries at relevant collection points or through your local waste facility.

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.

