STAIRVILLE

AFH-600

User Manual

Hazer

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

2 Safety instructions

Intended use

This device is intended to be used to produce fine haze by vaporising hazer 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. 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 hazer fluids. Never fill flammable liquids into the tank of the device.

WARNING!

Slip hazard due to condensate pools!

The haze generated by the hazer can condense on floors and surfaces. People can slip and injure themselves on pools of condensate. Do not point the haze on 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 hazer fluid!

Hazer fluid contains glycols. There is a health risk in case of eye contact and if fluid is swallowed. Keep hazer fluid in a safe place and out of the reach of children. Never ingest hazer fluid and avoid contact with eyes. In case of accidental ingestion of or eye contact with hazer 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 hazer fluid!

Hazer 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 hazer 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 haze in poorly ventilated areas. Do not expose people with health problems (e.g. allergy-related respiratory symptoms, asthma) to artificial haze.

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). Ensure that the power cord plug is easily accessible at all times if it is the only device to safely disconnect the device from the mains supply. As a precaution, disconnect the device from the power grid when storms are approaching or it 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 product's rubber feet and the floor.

3 Features

The hazer is suitable to be used in medium-sized clubs, bars, discotheques and on stages.

Special features of the device:

- Compact design
- Suitable for mobile use
- High-performance hazer with short heating time and continuous haze output
- Integrated DMX512 interface allows control via any commercially available DMX control
- Large fluid container for PHF Pro Haze Fluid (item no. 260572, not 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!

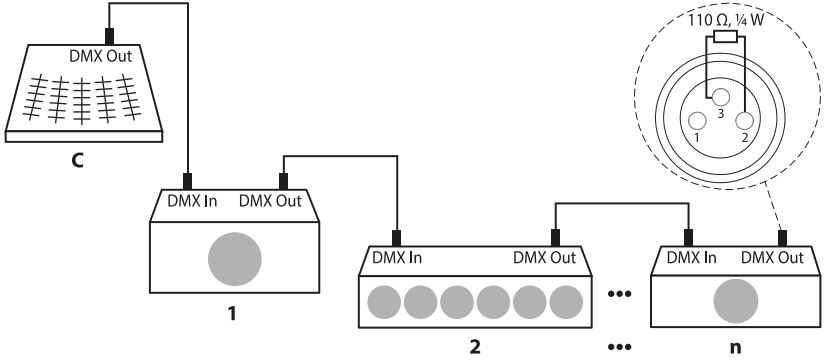
If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

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

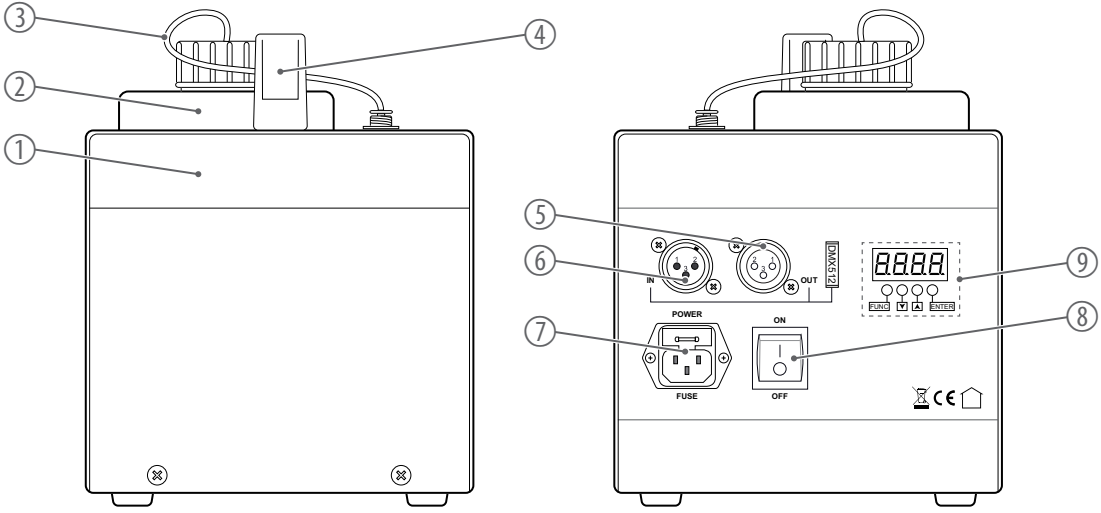
Connect the DMX input of the device to the DMX output of a DMX controller or another DMX device. Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a resistor (110 Ω, ¼ W).



Connections in 'Master / Slave' mode

When you configure a group of devices in 'Master / Slave' mode, the first unit will control the others. This feature is especially useful to start a show without much programming. Connect the DMX output of the master unit to the DMX input of the first slave unit. Then connect the DMX output of the first slave unit to the DMX input of the second slave unit and so on.

6 Connections and controls



1	Haze nozzle
2	Hazer fluid container with screw-cap
3	Supply line for the hazer fluid from the fluid container to the evaporator
4	Carrying handle
5	*[OUT]* | DMX output
6	*[IN]* | DMX input
7	*[POWER]* | IEC chassis plug for power supply with fuse holder
8	*[ON/OFF]* | Mains switch. Turns the device on and off.
9	Display and control panel
	[FUNC] | Opens the main menu.
	▼ | Decreases the displayed value by one.
	▲ | Increases the displayed value by one.
	[ENTER] | Selects an option of the respective operating mode.

7 Operating

Filling the device

NOTICE!

Damage to the device due to the use of unsuitable hazer fluids!

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

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

1. Ensure that the device is switched off.
2. Open the screw cap on the fluid container.
3. Fill in the hazer fluid. Make sure that no hazer fluid is spilled or gets into the device. The easiest way to do so is to use a funnel. The container capacity is 2.3 litres.
4. Screw the cap on tightly.

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.

1. Connect the device to the mains power grid and turn it on with the main switch.
   ⇨ The display shows *'UP'*. The device heats up.
2. Wait until the device has reached the required operating temperature.
   ⇨ The display shows *'read'*. The device is now operational.

Operation

Operation with an empty fluid container can lead to overheating and permanently damage the pump. When operating the device, always ensure that there is sufficient hazer fluid in the fluid container to avoid running it without fluid.

During operation, ensure that visibility in the room does not drop below 2 m, to ensure that people can find their way safely around the space.

Operating modes

The device supports the following operating modes that you can select with the buttons on the device:

- Manual control
- Master / Slave mode
- DMX control

The haze volume that you have set either directly on the device, on the 'Master' or with your DMX controller is uniformly ejected In all modes.

Main menu

1. Press *[FUNC]* to activate the main menu and select an operating mode.
2. When the display flashes, use the arrow keys to change the respectively displayed value.
3. When the display shows the desired value, press *[ENTER]*. To return to the main menu without any changes, press *[FUNC]* or wait a minute.

   ⇨ All previous settings are retained even when you disconnect the device from the power grid.

“Manual control” mode

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

1. Press *[FUNC]* repeatedly until the display shows *‘out’*.
2. Press *[ENTER]*.
3. Use the arrow keys to set the desired amount of haze between *‘F001’* (no fog output) and *‘F100’* (maximum fog output).
4. Press *[ENTER]*.
5. To interrupt the haze output, press *[ENTER]*.
   ⇨ The display shows *‘read’*.
6. To restart the haze output, press *[ENTER]*.
   ⇨ The display shows the last set value.

“Master/slave” mode

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

1. Press *[FUNC]* repeatedly until the display shows *‘SLNd’*.
2. Press *[ENTER]*.
3. Use the arrow keys to select one of the following options:
   - *‘NASt’*: The device operates as the “Master” and controls other devices that follow as a “Slave”.
   - *‘SLAu’*: The device works as a “slave” and follows the exact operation of the “master” to which it is connected.
4. Press *[ENTER]*.
   ⇨ Operation starts in “master/slave" mode.

“DMX” mode

1. Press *[FUNC]* repeatedly until the display shows *‘Addr’*.
2. Press *[ENTER]*.
3. Set the number of the first DMX channel to be used by the device (DMX address). Use the arrow buttons to select a value between *‘1’* and *‘512’*.
4. Press *[ENTER]*.
   ⇨ Operation starts in “DMX” mode.
5. Make sure the number matches the configuration of your DMX controller.

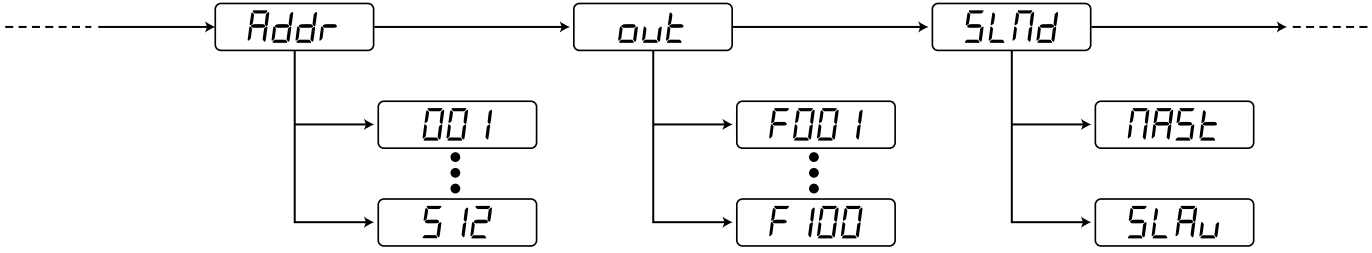
DMX assignment

Channel	Value	Function
1	Setting the amount of haze	
	0…255	No haze output (0%) to maximum haze output (100%)

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 hazer fluid during transport, you should transport the device only with an empty fluid container.

Menu overview



8 Technical specifications

Heater power	600 W	
Warm-up time	approx. 2 min	
Fluid container capacity	2.3 l	
Fluid consumption	7 ml/min	
Haze output duration, max.	Continuous, after heating phase	
Charging time between haze bursts		
Range of fog blast	approx. 850 m^3/min	
Input connections	Power supply	Rubber panel plug C14
	DMX control	XLR panel plug, 3-pin
Output connections	DMX control	XLR panel socket, 3-pin
Power consumption	650 W	
Supply voltage	230 V ~ 50 Hz	
Fuse	5 mm × 20 mm, 4 A, 250 V, fast blow	
International Protection Rating	IP20	
Dimensions (W × H × D)	290 mm × 265 mm × 450 mm	

Weight	5.5 kg	
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	20%…80% (non-condensing)

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 of the hazer fluid.
	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!

Potential damage caused by unsuitable cleaning agents

Cleaning agents not approved by the manufacturer may permanently damage the device.

Only use the cleaning agents 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

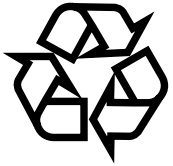
1. Make sure that the device is turned off, disconnected from the mains and completely cooled down.
2. Position the device in a well-ventilated place.
3. Insert the suction hose of the hazer into the bottle with the cleaning agent.
4. Connect the device to the mains power grid and turn it on with the main switch.
   ⇨ The display shows *'UP'*. The device heats up.
5. Wait until the device has reached the required operating temperature.
   ⇨ The display shows *'read'*. The device is now operational.
6. Use the arrow keys to set the value *'F100'* for maximum haze output and let the device produce haze for about 20 seconds.

7. Insert the suction hose of the hazer back into the fog fluid container and let the device produce haze again for about 20 seconds. This will rinse the lines.

   ⇨ Cleaning is complete.

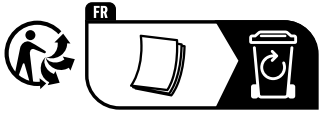
12 Protecting the environment

Disposal of the packing material



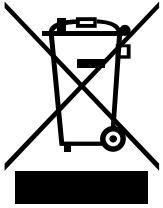
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

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. If in doubt, consult your local waste management facility. You can also return the device to a retailer if they offer to take the device back for free or if they are legally obliged to do so. When disposing of the device, comply with the rules and regulations that apply in your country. You can also return your old device to Thomann GmbH at no charge. Check the current conditions on *www.thomann.de*.

Proper disposal protects the environment as well as the health of your fellow human beings. This is because the proper handling of old devices negates the potential negative effects of hazardous substances, and because it conserves resources by recycling them.

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.

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