STAIRVILLE

MH-X60th LED Spot

moving head

user manual

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1   General notes

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

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1.1   Further information

On our website (*www.thomann.de)* you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

moving head

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: *[VOLUME]* control, *[Mono]* button.

Displays

Texts and values displayed on the device are marked by quotation marks and italics.

Examples: *'24ch'*, *'OFF'*.

Text input

Text inputs that are carried out on the device are indicated by typewriter font.

Example: 2323

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Cross-references
References to other locations in this manual are identified by an arrow and the specified page number. In the electronic version of the manual, you can click the cross-reference to jump to the specified location.

Example: See � *'Cross-references' on page 7*.

1.3 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 manual.

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.

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Warning signs	Type of danger
⚠	Warning – suspended load.
⚠	Warning – danger zone.

2   Safety instructions

Intended use

This device is intended to be used as moving-head spotlight. 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.

Safety

> **DANGER!**
> **Danger for children**
> Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!
>
> Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!
>
> Never let children unattended use electrical devices.

> **DANGER!**
> **Electric shock caused by high voltages inside**
> 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 if covers, protectors or optical components are missing or damaged.

DANGER!

Electric shock caused by short-circuit

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.

WARNING!

Eye damage caused by high light intensity

Never look directly into the light source.

WARNING!

Risk of epileptic shock

Strobe lighting can trigger seizures in photosensitive epilepsy. Sensitive persons should avoid looking at strobe lights.

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> **WARNING!**
> **Risk of injury caused by falling objects**
>
> Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.
>
> The load capacity of trusses or other fixtures must be sufficient for the intended number of devices. Not that the movement of the head places additional loads on the load-bearing parts.

CAUTION!

Risk of injury due to movements of the device

The head of the device can move quickly (pan, tilt) and can produce very bright light. This is also valid immediately after you turn on the device, when the device operates in automatic mode or under remote control and when you turn off a DMX controller that is connected to the device. Persons staying near the device could be injured or frightened.

Before you turn on the device and during the operation, always ensure that nobody stays close to the device. If work has to be performed in the area of movement or in the near vicinity of the device, it must remain turned off.

NOTICE!

Risk of fire

Do not block areas of ventilation. Do not install the device near any direct heat source. Keep the device away from naked flames.

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! **NOTICE!**

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.

The device must not be moved while it is in use.

! **NOTICE!**

Power supply

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user.

Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

!

NOTICE!

Possible staining

The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains.

In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.

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3 Features

The moving head is especially suited for professional lighting tasks, e.g. during events, on rock music stages, in theatre and musical productions or in discotheques.

Special features of this device:

- Two axes of movement with 8 or 16 bit resolution:
    – Tilt (270 °)
    – Pan (540 °)
- Control via DMX (8 or 14 channels) and buttons plus display on the unit itself.
- 8 preprogrammed automatic shows
- Sound control
- Master/slave mode
- Colour wheel with white, 8 full-colours, 8 split-colours and rainbow effect
- Gobo wheel with 7 rotatable gobos
- Gobo shake function
- Effects wheel with triple prism
- Electronic dimmer
- Mechanical focus
- Shutter frequency: 0…20 Hz

- Automatic position correction
- Mounting bracket included

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4 Installation

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

Lift the device only at the base. When lifted at the rotatable mounting, the device may be damaged.

You can install the device standing or hanging. When in use, the device must be mounted at a solid surface or clamped to an approved truss.

Work from a stable platform whenever you install or move the device or when you perform any kind of maintenance. Block access under the work area.

WARNING!

Risk of injury caused by falling objects

Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.

The load capacity of trusses or other fixtures must be sufficient for the intended number of devices. Not that the movement of the head places additional loads on the load-bearing parts.

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CAUTION!

Risk of injury due to movements of the device

The head of the device can move quickly (pan, tilt) and can produce very bright light. This is also valid immediately after you turn on the device, when the device operates in automatic mode or under remote control and when you turn off a DMX controller that is connected to the device. Persons staying near the device could be injured or frightened.

Before you turn on the device and during the operation, always ensure that nobody stays close to the device. If work has to be performed in the area of movement or in the near vicinity of the device, it must remain turned off.

NOTICE!

Risk of overheating

Always ensure sufficient ventilation.

The ambient temperature must always be below 40 °C (104 °F).

! **NOTICE!**
Possible damage caused by movements of the device
Always ensure that enough space is free around the device for the movements of the head (pan, tilt).

! **NOTICE!**
Possible data transmission errors
For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.

Never connect the DMX input or output to audio devices such as mixers or amplifiers.

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> ℹ️ *Please note that this device must not be connected to a dimmer.*

Mounting options

The threads on the bottom side of the housing allow the secure attachment of the included mounting bracket. There, you can fasten adapters such as half couplers, trigger clamps, c-hooks etc. The safety cable must be routed through the safety eyelet on the rear side (♲ *Chapter 6 'Connections and operating elements' on page 29*).
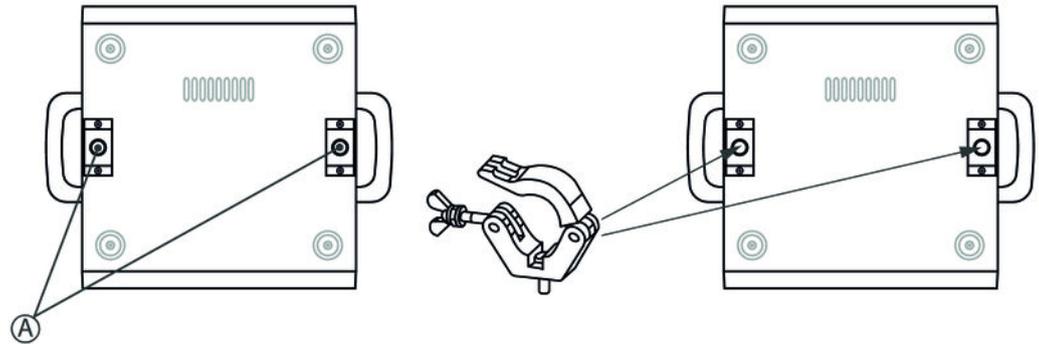
| A | Threads for the included mounting bracket |

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.

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).
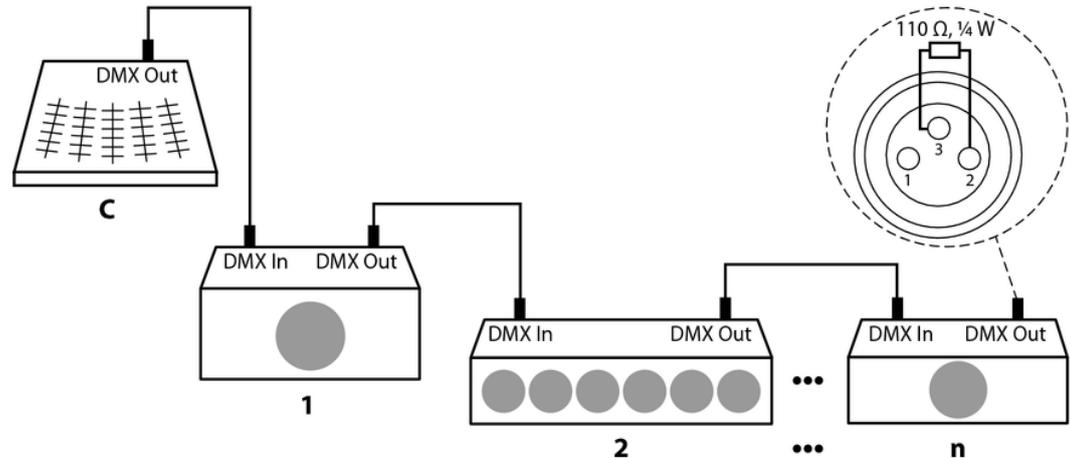
DMX indicator

When the device and the DMX controller are operational, the DMX indicator in the display shows that a DMX signal is being received on the input.

Connections in master/slave mode

When you configure a group of devices in master/slave mode, the first unit will control the other units for an automatic, sound-activated, synchronized show. This function is ideal when you want to start a show immediately. Connect the DMX output of the master device to the DMX input of the first slave device. Then connect the DMX output of the first slave device to the DMX input of the second slave device and so on.

6 Connections and operating elements
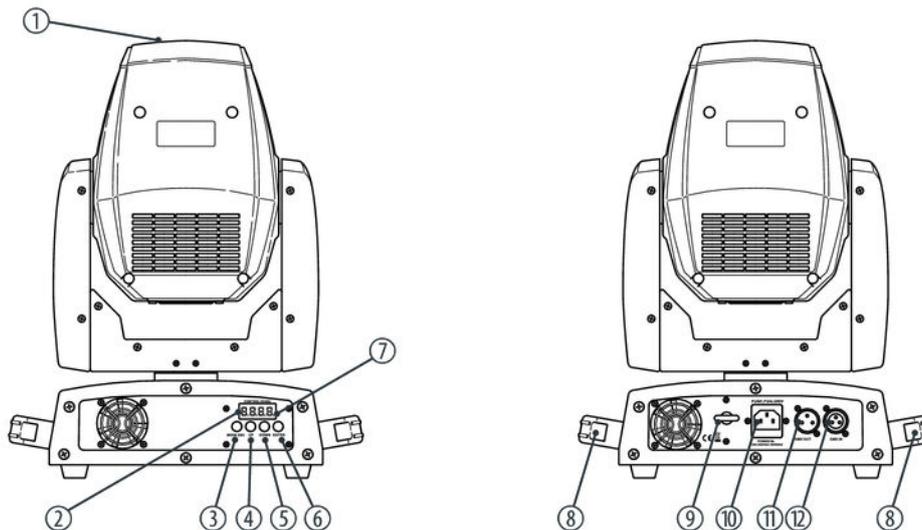
1	Light aperture with projection lens.
2	Display.
3	Button *[MODE ESC]* Activates the main and the settings menu and toggles between menu items. Closes an open submenu without saving any changes.
4	Button *[UP]* Increases the displayed value by one.
5	Button *[DOWN]* Decreases the displayed value by one.
6	Button *[ENTER]* Selects an option of the respective operating mode, confirms the set value.
7	DMX indicator.
8	Carrying handles.

9	Safety eye.
10	IEC chassis connector for the power cable with fuse holder. Below, the range of the allowable input voltage is specified.
11	*[DMX OUT]* DMX output.
12	*[DMX IN]* DMX input.

7 Operating

7.1 Starting the device

	CAUTION!
⚠️	**Risk of injury due to movements of the device**

The head of the device can move quickly (pan, tilt) and can produce very bright light. This is also valid immediately after you turn on the device, when the device operates in automatic mode or under remote control and when you turn off a DMX controller that is connected to the device. Persons staying near the device could be injured or frightened.

Before you turn on the device and during the operation, always ensure that nobody stays close to the device. If work has to be performed in the area of movement or in the near vicinity of the device, it must remain turned off.

Connect the device to the power supply to start operation. After a few seconds, the fans start to work, the head moves to the home positions for rotation (pan) and inclination (tilt). After a few more seconds, the display shows *'dxxx'*. The device is now operational.

7.2 Main menu

Press *[MODE ESC]* to activate the main menu. Press *[MODE ESC]* again to select a menu item.

Use *[UP]* and *[DOWN]* to change the respectively displayed value. Wenn das Display den gewünschten Wert anzeigt, drücken Sie *[ENTER]*. To return to the main menu without any changes, either press *[MODE ESC]* or wait 10 seconds.

If you don't press any button for about one minute the display turns off. A short press on *[MODE ESC]* will then turn it back on.

All previous settings are retained even when you switch the device off and disconnect it from the mains. To restart with default values, use the function *'Load default'* (✆ *'Loading default values' on page 39*).

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DMX address

Press *[MODE ESC]* repeatedly until the display shows *'dxxx'*. Now you can set the number of the first DMX channel to be used by the device (DMX address). Use *[UP]* and *[DOWN]* to select a value between 1 and 512.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Make sure that this number matches the configuration of your DMX controller. The following table shows the highest possible DMX address for the various DMX modes.

Mode	Highest possible DMX address
8 channels	505
14 channels	499

Auto show mode

Press *[MODE ESC]* repeatedly until the display shows *'NASL'*. Now use *[UP]* and *[DOWN]* to select one of the preprogrammed shows. Press *[ENTER]* to start operation in the selected mode.

Displayed text when menu is open	Displayed text after confirming with *[ENTER]*	Operating mode
NASL	*'SLoU'*	Auto show type 1 (slow), in stand-alone mode or as master in master / slave operation
NAFA	*'FASt'*	Auto show type 2 (fast), in stand-alone mode or as master in master / slave operation

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Displayed text when menu is open	Displayed text after confirming with *[ENTER]*	Operating mode
NSt5	*'Srun'*	Sound-controlled show in stand-alone mode or as a master in master/slave mode
SLAv	*'Son'*	The device works as a slave, following the sequence of actions on the master unit

Pan inversion

Press *[MODE ESC]* repeatedly until the display shows *'PAN'*. Now use *[UP]* and *[DOWN]* to toggle between *'rPAN'* (reverse sense of rotation) and *'PAN'* (normal sense of rotation).

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Tilt inversion

Press *[MODE ESC]* repeatedly until the display shows *'tit'*. Now use *[UP]* and *[DOWN]* to toggle between *'rtit'* (reverse sense of inclination) and *'tit'* (normal sense of inclination).

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Display inversion

Press *[MODE ESC]* repeatedly until the display shows *'diS'*. Now use *[UP]* and *[DOWN]* to toggle between *'rdis'* (text appears in the display upside down) and *'dIS'* (text appears in the display normal).

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Operating mode 'DMX'

Press *[MODE ESC]* repeatedly until the display shows *'xxCH'*. Now use *[UP]* and *[DOWN]* to select one of the following DMX operating modes: 14-channel (display shows *'14CH)'* or 8-channel (display shows *'8CH'*). This setting is only relevant when the device is controlled via DMX.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

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Pan range

Press *[MODE ESC]* repeatedly until the display shows *'PAxx'*. Now use *[UP]* and *[DOWN]* to determine the Pan area. Select between *'PA54'* (Pan area = 540°), *'PA36'* (Pan area = 360°) and *'PA18'* (Pan area = 180°).

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Tilt range

Press *[MODE ESC]* repeatedly until the display shows *'tixx'*. Now use *[UP]* and *[DOWN]* to determine the Tilt area. Select between *'ti27'* (Tilt area = 270°), *'ti18'* (Tilt area = 180°) and *'ti 9'* (Tilt area = 90°).

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Temperature display

Press *[MODE ESC]* repeatedly until the display shows *'tCxx'*. The last two digits in the display show the temperature of the device in degrees Celsius.

To close the temperature display, press *[MODE ESC]*.

System reset   Press *[MODE ESC]* repeatedly until the display shows *'rESt'*. Press *[ENTER]* to reset the servo motors for the moving axles, the gobo and colour wheels to their home positions (mechanical reset).

Loading default values   Press *[MODE ESC]* repeatedly until the display shows *'LoAd'*. Press *[ENTER]* to reset all values to their factory default settings.

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Overview (main menu)
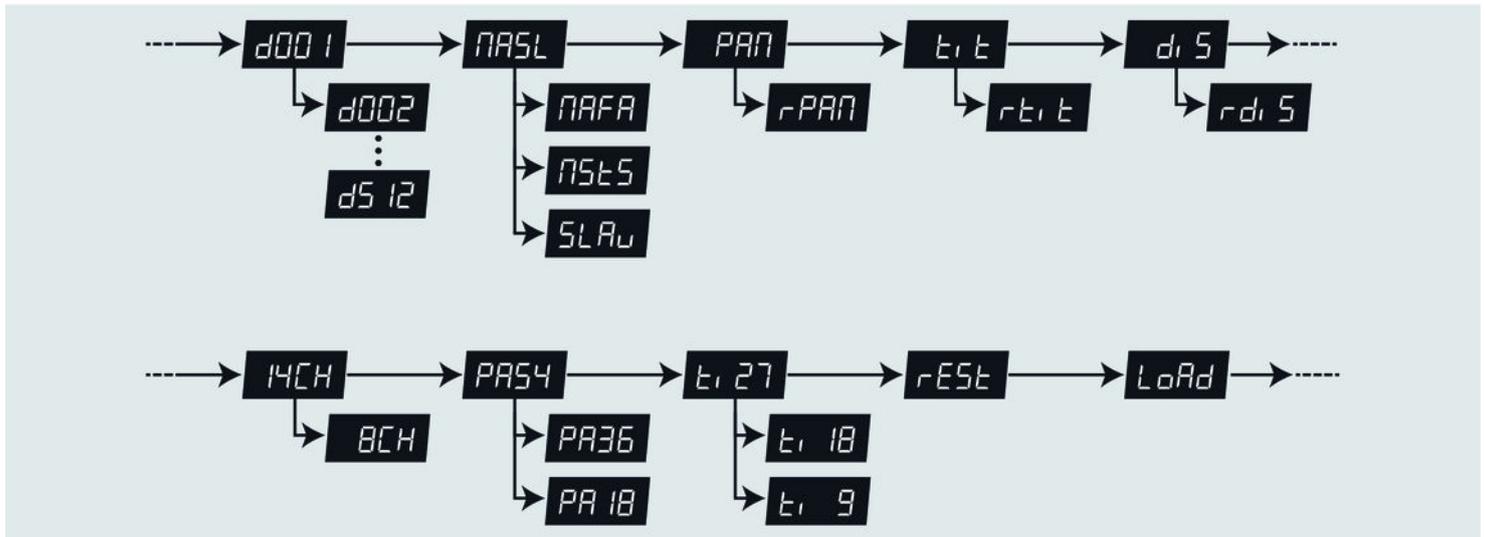
7.3 Settings menu

Keep *[MODE ESC]* pressed for about five seconds to activate the settings menu. Use *[UP]* and *[DOWN]* to enter the device password 2323. The *[UP]* button modifies the digit at the cursor position, while the *[DOWN]* button moves the cursor to the next digit. Once you have entered all digits, press *[ENTER]*.

To exit the settings menu and return to the main menu, keep *[MODE ESC]* pressed for about five seconds.

All previously made settings are retained even when you disconnect the device from the power grid.

There is no reset function for the parameters that can be changed in the settings menu.

Rotation preset (pan offset)

Activate the settings menu. Press *[MODE ESC]* repeatedly until the display shows *'Pxxx'*. Use the buttons *[UP]* or *[DOWN]* to adjust a value between 0 and 255, until the head is in the desired home position.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Inclination preset (tilt offset)

Activate the settings menu. Press *[MODE ESC]* repeatedly until the display shows *'txxx'*. Use the buttons *[UP]* or *[DOWN]* to adjust a value between 0 and 255, until the head is in the desired home position.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Gobo wheel preset

Activate the settings menu. Press *[MODE ESC]* repeatedly until the display shows *'Gxxx'*. Use the *[UP]* and *[DOWN]* buttons to select a value between 0 and 255 until the gobo wheel is in the desired starting position.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Gobo rotation preset

Activate the settings menu. Press *[MODE ESC]* repeatedly until the display shows *'rxxx'*. Use the buttons *[UP]* or *[DOWN]* to adjust a value between 0 and 255, until the Gobo wheel is in the desired rotation position.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Colour wheel preset

Activate the settings menu. Press *[MODE ESC]* repeatedly until the display shows *'Cxxx'*. Use the *[UP]* and *[DOWN]* buttons to select a value between 0 and 255 until the colour wheel is in the desired starting position.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Prism (alignment)

Activate the settings menu. Press *[MODE ESC]* repeatedly until the display shows *'Lxxx'*. Use the buttons *[UP]* or *[DOWN]* to adjust the desired home position.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Focus preset

Activate the settings menu. Press *[MODE ESC]* repeatedly until the display shows *'Fxxx'*. Use the buttons *[UP]* or *[DOWN]* to adjust the desired home position.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Brightness preset

Activate the settings menu. Press *[MODE ESC]* repeatedly until the display shows *'dxxx'*. Use the buttons *[UP]* or *[DOWN]* to adjust the desired initial brightness.

When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE ESC]* to proceed to the next menu item. To change the menu item without making changes, press *[MODE ESC]* or wait ten seconds.

Overview (settings menu)
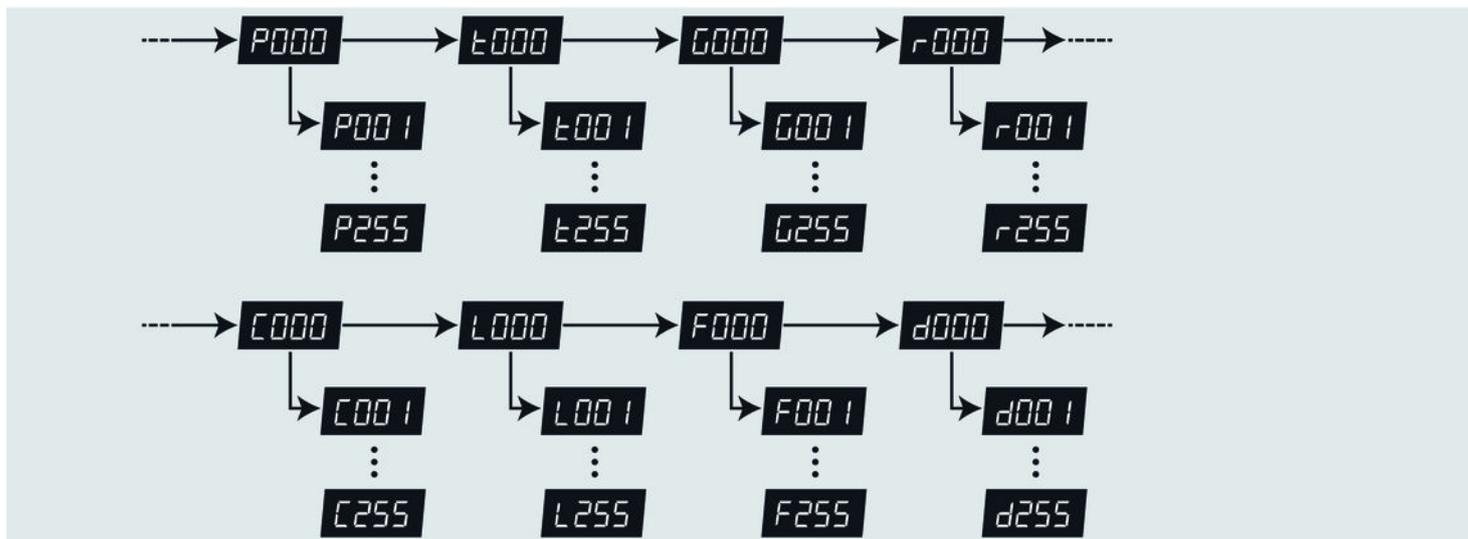
7.4 Gobos
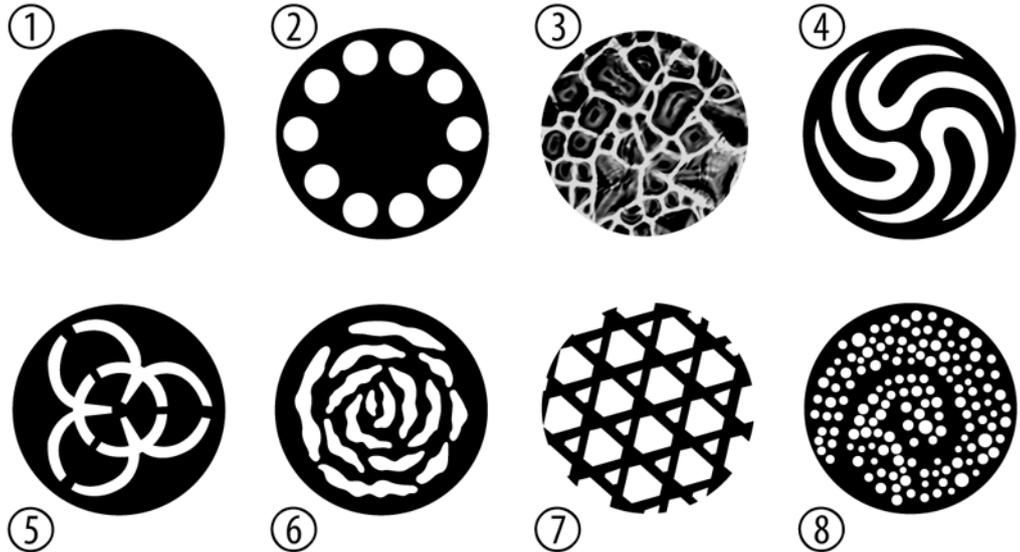
7.5 Functions in 8-channel DMX mode

Channel	Value	Function
1	0…255	Pan (0° to maximum value of the panning range: 180°, 270° or 540°)
2	0…255	Tilt (0° to maximum value of the tilting range: 90°, 180° or 270°)
3	Colour wheel	
	0…6	White
	7…13	Yellow
	14…20	Pink
	21…27	Green
	28…34	Red
	35…41	Blue
	42…48	Kelly green
	49…55	Dark orange

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Channel	Value	Function
	56…63	Dark blue
	64…70	White + yellow
	71…77	Yellow + pink
	78…84	Pink + green
	85…91	Green + peachblow
	92…98	Peachblow + blue
	99…105	Blue + Kelly green
	106…112	Kelly + red
	113…119	Red + dark blue
	120…127	Dark blue + white
	128…191	Rainbow effect in positive rotation direction, with increasing speed
	192…255	Rainbow effect in negative rotation direction, with increasing speed
4	Shutter	

Channel	Value	Function
	0…3	Closed (blackout)
	4…7	Open
	8…76	Strobe light, increasing speed
	77…145	Triple strobe, increasing speed
	146…215	Random strobe light, increasing speed
	246…255	Open
5	Gobo wheel	
	0…7	Open
	8…15	Gobo 2
	16…23	Gobo 3
	24…31	Gobo 4
	32…39	Gobo 5
	40…47	Gobo 6

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Channel	Value	Function
	48…55	Gobo 7
	56…63	Gobo 8
	64…71	Gobo 8 shake with increasing speed
	72…79	Gobo 7 shake with increasing speed
	80…87	Gobo 6 shake with increasing speed
	88…95	Gobo 5 shake with increasing speed
	96…103	Gobo 4 shake with increasing speed
	104…111	Gobo 3 shake with increasing speed
	112…119	Gobo 2 shake with increasing speed
	120…127	Open
	128…191	Rotation of the gobo wheel counterclockwise, increasing speed
	192…255	Rotation of the gobo wheel clockwise, increasing speed
6	Gobo rotation	

Channel	Value	Function
	0…63	Gobo rotation fixing
	64…147	Gobo rotation clockwise, increasing speed
	148…231	Gobo rotation counterclockwise, increasing speed
	232…255	Gobo bouncing
7	Prism	
	0…7	White
	8…12	Static prism
	13…130	Clockwise rotating prism, increasing speed
	131…247	Counterclockwise rotating prism, increasing speed
	248…255	Static prism
8	0…255	Focus (far to near)

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7.6 Functions in 14-channel DMX mode

Channel	Value	Function
1	0…255	Pan (0° to maximum value of the panning range: 180°, 270° or 540°)
2	0…255	Tilt (0° to maximum value of the tilting range: 90°, 180° or 270°)
3	0…255	Fine pan
4	0…255	Fine tilt
5	0…255	Response speed (normal to slow)
6	Colour wheel	
	0…6	White
	7…13	Yellow
	14…20	Pink
	21…27	Green
	28…34	Peachblow

Channel	Value	Function
	35…41	Blue
	42…48	Kelly green
	49…55	Red
	56…63	Dark blue
	64…70	White + yellow
	71…77	Yellow + pink
	78…84	Pink + green
	85…91	Green + peachblow
	92…98	Peachblow + blue
	99…105	Blue + Kelly green
	106…112	Kelly + red
	113…119	Red + dark blue
	120…127	Dark blue + white

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Channel	Value	Function
	128…191	Rainbow effect in positive rotation direction, with increasing speed
	192…255	Rainbow effect in negative rotation direction, with increasing speed
7	Shutter	
	0…3	Closed (blackout)
	4…7	Open
	8…76	Strobe light, increasing speed
	77…145	Triple strobe, increasing speed
	146…215	Random strobe light, increasing speed
	246…255	Open
8	0…255	Electronic dimmer (0 % to 100 %)
9	Gobo wheel	
	0…7	Open
	8…15	Gobo 2

Channel	Value	Function
	16…23	Gobo 3
	24…31	Gobo 4
	32…39	Gobo 5
	40…47	Gobo 6
	48…55	Gobo 7
	56…63	Gobo 8
	64…71	Gobo 8 shake with increasing speed
	72…79	Gobo 7 shake with increasing speed
	80…87	Gobo 6 shake with increasing speed
	88…95	Gobo 5 shake with increasing speed
	96…103	Gobo 4 shake with increasing speed
	104…111	Gobo 3 shake with increasing speed
	112…119	Gobo 2 shake with increasing speed

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Channel	Value	Function
	120…127	Open
	128…191	Rotation of the gobo wheel counterclockwise, increasing speed
	192…255	Rotation of the gobo wheel clockwise, increasing speed
10	Gobo rotation	
	0…63	Gobo rotation fixing
	64…147	Gobo rotation clockwise, increasing speed
	148…231	Gobo rotation counterclockwise, increasing speed
	232…255	Gobo bouncing
11	Special functions	
	0…7	Reserved
	8…15	Blackout while pan/tilt moving
	16…23	Blackout while colour wheel moving
	24…31	Blackout while gobo wheel moving

Channel	Value	Function
	32…39	No blackout during Pan or Tilt movement and colour wheel movement
	40…47	No blackout during Pan or Tilt movement and Gobo wheel movement
	48…55	No blackout during Pan or Tilt movement, colour wheel movement and Gobo wheel movement
	56…95	Reserved
	96…103	Reset pan
	104…111	Reset tilt
	112…119	Reset colour wheel
	120…127	Reset gobo wheel
	128…135	Reset gobo rotation
	136…143	Reset prism
	144…151	Reset focus
	152…159	Reset all channels

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Channel	Value	Function
	160…255	Reserved
12	Built-in programmes	
	0…7	Reserved
	8…23	Programme 1
	24…39	Programme 2
	40…55	Programme 3
	56…71	Programme 4
	72…87	Programme 5
	88…103	Programme 6
	104…119	Programme 7
	120…135	Programme 8
	136…151	Sound control 1
	152…167	Sound control 2

Channel	Value	Function
	168…183	Sound control 3
	184…199	Sound control 4
	200…215	Sound control 5
	216…231	Sound control 6
	232…247	Sound control 7
	248…255	Sound control 8
13	Prism	
	0…7	White
	8…12	Static prism
	13…130	Clockwise rotating prism, increasing speed
	131…247	Counterclockwise rotating prism, increasing speed
	248…255	Static prism
14	0…255	Focus (far to near)

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8 Technical specifications

Number of DMX channels	8, 14
LED	55 W
Operating supply voltage	AC 230 V ∼ , 50 Hz
Power consumption	170 W
Fuse	5 mm × 20 mm, 7 A, 250 V, fast-acting
Dimensions (W × D × H), when light beam pointing upwards	325 mm × 290 mm × 435 mm
Weight	10.4 kg

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')

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10   Troubleshooting

! **NOTICE!**
   Possible data transmission errors

   For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.

   Never connect the DMX input or output to audio devices such as mixers or amplifiers.

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, no light, the fan does not run	Check the mains power connection and the main fuse.
No response to the DMX controller	1. The DMX indicator should light up. If it doesn't, check DMX connectors and cables for proper connection.
	2. If the DMX indicator lights up but with no response, check the address settings and DMX polarity.
	3. Try using another DMX controller.
	4. Check whether the DMX cables lie near or adjacent to high voltage cables, which could cause damage or interference with a DMX interface circuit.

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

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11   Cleaning

Optical lenses

Clean the optical lenses, that are accessible from the outside, regularly in order to optimize the light output. The frequency of cleaning depends on the operating environment: wet, smoky or particularly dirty surroundings can cause more accumulation of dirt on the optics of the device.

- Clean with a soft cloth using our lamp and lens cleaner (item no. 280122).
- Always dry the parts carefully.

Fan grids

The fan grids of the device must be cleaned on a regular basis to remove dust and dirt. Before cleaning, switch off the device and disconnect AC-powered devices from the mains. Use a lint-free damp cloth for cleaning. Never use solvents or alcohol for cleaning.

12 Protecting the environment

Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

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

Disposal of your old device

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

Notes