STAIRVILLE

MH-x200 Pro Spot

moving head

th•mann
MUSIC IS OUR PASSION

user manual

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Table of contents

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.

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.

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'*.

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.
	Warning – hot surface.
	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.

WARNING!

Risk of burns

The surface of the device can become very hot during operation.

Do not touch the device with bare hands during operation, and after switching off wait for at least 15 minutes.

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

The distance between the light output and the illuminated surface must be more than 2.0 m (78.7 in).

Always ensure sufficient ventilation.

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

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.

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.

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.

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 °)
- Automatic position correction
- Control via DMX (11 or 16 channels) and buttons plus display on the unit itself.
- Preprogrammed automatic show programmes
- Sound control
- Master/slave mode
- Colour wheel with white, 7 full-colours, 7 split-colours and rainbow effect
- Gobo wheel with 8 static gobos, gobo shake function and rainbow effect
- Gobo wheel with 7 rotatable Gobos and rainbow effect
- Effects wheel with triple prism
- Electronic dimmer
- Electronic iris

- Mechanical focus
- Shutter frequency: 0…20 Hz
- Two omega brackets included

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.

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!

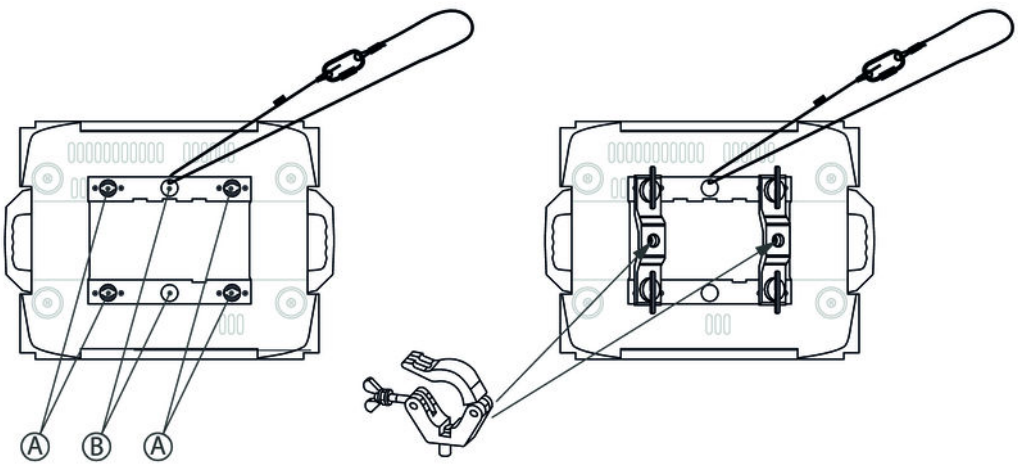
Possible data transmission errors

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.

Mounting options

The quick lock openings on the housing bottom are used for secure attachment of the supplied Omega brackets. To these, the flight adapters (half coupler, trigger clamps, C-hooks, etc.) are attached. The safety cable must be routed through the cut-outs on the bottom of the device.



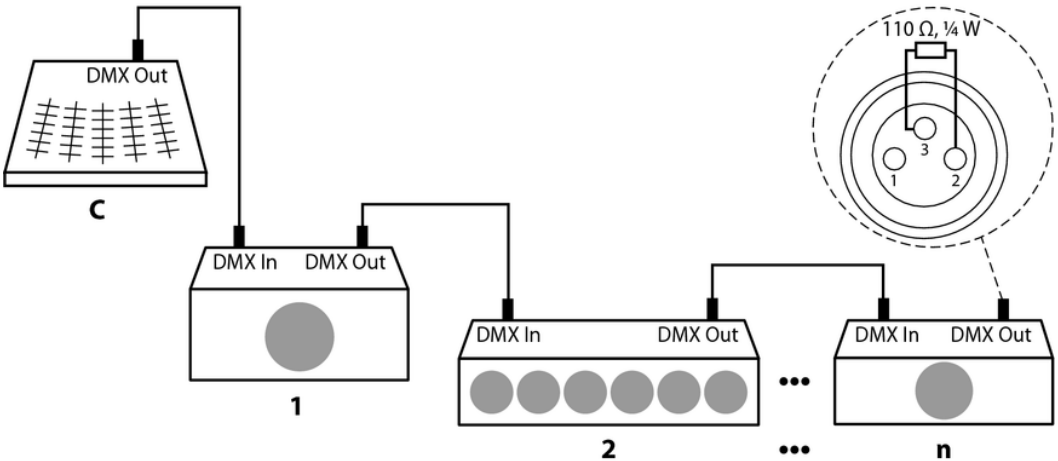
A	Quick-lock openings for omega bracket
B	Openings for safety eyelet

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).



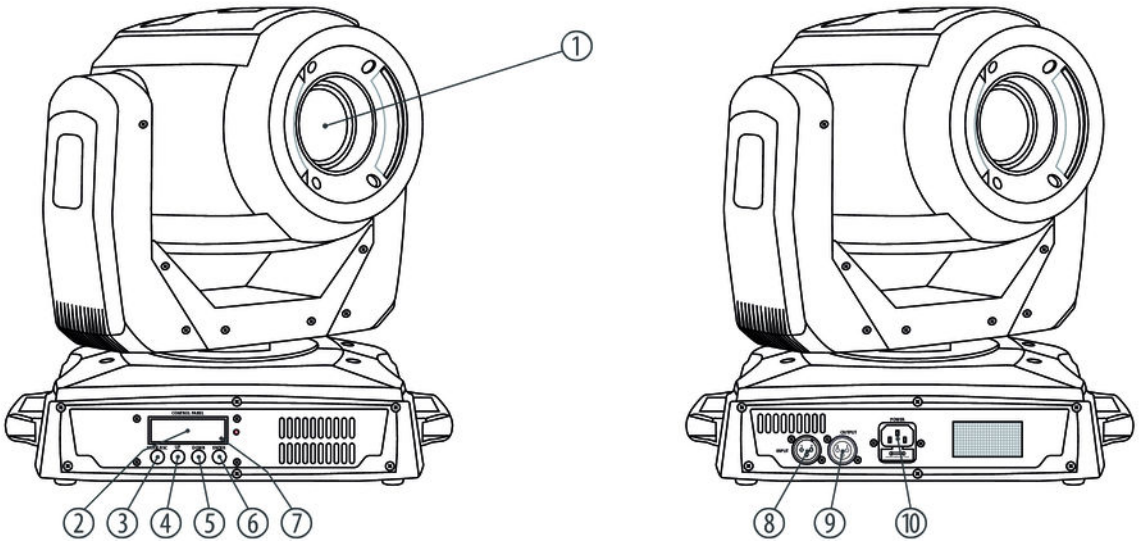
DMX indicator

When the device and the DMX controller are in operation, the DMX indicator (red LED) 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 (mechanical focus).
2	Display
3	*[MODE/ESC]* button Activates the main menu and the settings menu and switches between the menu items. Closes an open menu without saving the changes.
4	*[UP]* button Increases the displayed value by one.
5	*[DOWN]* button Decreases the displayed value by one.
6	*[ENTER]* button Selects an option of the respective operating mode, confirms the set value.
7	DMX indicator.

8	INPUT DMX input.
9	OUTPUT DMX output.
10	POWER IEC chassis connector with fuse holder.

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 *'DMX Address: 001'*. The device is now operational.

7.2 Main menu

Press *[MODE/ESC]* to activate the main menu. Press *[UP]* and *[DOWN]* to select an item from the main menu and *[ENTER]* to open the selected menu item.

Use *[UP]* and *[DOWN]* to change the respectively displayed value. When the display shows the desired value, press *[ENTER]*. To return to the main menu without making changes, press *[MODE/ESC]*.

If you don't press any button for about 30 seconds the display turns off. A short press on *[MODE/ESC]* will then turn it back on again.

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 set'* (↬ *'Loading default values' on page 36*).

DMX address

Press *[MODE/ESC]* repeatedly until the display shows *'DMX Address'*. Press *[ENTER]* to open this menu item. 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 any changes, press *[MODE/ESC]*.

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
11 channels	502
16 channels	497

Operating mode 'Auto-Show'

Press *[MODE/ESC]* repeatedly until the display shows *'Run'*. Press *[ENTER]* to open this menu item. Now use *[UP]* and *[DOWN]* to select the operating mode. Press *[ENTER]* to start operation in the selected mode.

Menu display	Operating mode
'Fast'	Fast automatic show in Stand-alone mode
'Slow'	Slow automatic show in Stand-alone mode
'Sound'	Sound-controlled show in Stand-alone mode
'Slave'	Preprogrammed show in Slave mode

Pan inversion

Press *[MODE/ESC]* repeatedly until the display shows *'Pan'*. Press *[ENTER]* to open this menu item. Now use *[UP]* and *[DOWN]* to toggle between *'Reverse'* (reverse sense of rotation) and *'Normal'* (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 any changes, press *[MODE/ESC]*.

Tilt inversion

Press *[MODE/ESC]* repeatedly until the display shows *'Tilt'*. Press *[ENTER]* to open this menu item. Now use *[UP]* and *[DOWN]* to toggle between *'Reverse'* (reverse sense of inclination) and *'Normal'* (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 any changes, press *[MODE/ESC]*.

Display on time

Press *[MODE/ESC]* repeatedly until the display shows *'Display'*. Press *[ENTER]* to open this menu item. With *[UP]* and *[DOWN]* you can now select between *'Bright'* (display constantly on) and *'30 Close'* (displays turns off after 30 s without any keypress).

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 any changes, press *[MODE/ESC]*.

Pan range

Press *[MODE/ESC]* repeatedly until the display shows *'Pan Angle'*. Press *[ENTER]* to open this menu item. Now use *[UP]* and *[DOWN]* to determine the Pan area. Choose between *'540'* (Pan range = 540°), *'360'* (Pan range = 360°) and *'180'* (Pan range = 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 any changes, press *[MODE/ESC]*.

Tilt range

Press *[MODE/ESC]* repeatedly until the display shows *'Tilt Angle'*. Press *[ENTER]* to open this menu item. Now use *[UP]* and *[DOWN]* to determine the Tilt area. Choose between *'270'* (Tilt range = 270°), *'180'* (Tilt range = 180°) and *'90'* (Tilt range = 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 any changes, press *[MODE/ESC]*.

Operating mode 'DMX'

Press *[MODE/ESC]* repeatedly until the display shows *'Channel'*. Press *[ENTER]* to open this menu item. Now use *[UP]* and *[DOWN]* to select one of the following DMX operating modes: 11-channel (display shows *'Basic'*) or 16-channel (display shows *'Advanced'*). 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 any changes, press *[MODE/ESC]*.

Temperature display

Press *[MODE/ESC]* repeatedly until the display shows *'Temp. Display'*. Press *[ENTER]* to let the display show the current LED temperature.

Press *[MODE/ESC]* to quit the menu.

System reset

Press *[MODE/ESC]* repeatedly until the display shows *'Reset System'*. Press *[ENTER]* to open this menu item. Now use *[UP]* and *[DOWN]* to select one of the following options: *'NO'* or *'OK'*. Select *'OK'* and press *[ENTER]* to reset all movable axes, the gobo wheels and the colour wheel to their home positions.

Loading default values

Press *[MODE/ESC]* repeatedly until the display shows *'Load Set'*. Press *[ENTER]* to open this menu item. Now use *[UP]* and *[DOWN]* to select one of the following options: *'NO'* or *'OK'*. Select *'OK'* and press *[ENTER]* to reset all values to the factory settings.

7.3 Settings menu

Press and hold the *[MODE/ESC]* for at least 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]*.

Press *[MODE/ESC]* to quit the settings menu.

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

Rotation (alignment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Pan Init'*. Press *[ENTER]* to open this menu item. 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 any changes, press *[MODE/ESC]*.

Inclination (alignment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Tilt Init'*. Press *[ENTER]* to open this menu item. 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 any changes, press *[MODE/ESC]*.

Colour wheel (adjustment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Color Init'*. Press *[ENTER]* to open this menu item. 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 any changes, press *[MODE/ESC]*.

Gobo wheel 1 (adjustment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Gobo 1 Init'*. Press *[ENTER]* to open this menu item. 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 any changes, press *[MODE/ESC]*.

Gobo rotation (rotation)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Grota Init'*. Press *[ENTER]* to open this menu item. Use the buttons *[UP]* or *[DOWN]* to adjust the desired rotating 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 any changes, press *[MODE/ESC]*.

Gobo wheel 2 (adjustment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Gobo 2 Init'*. Press *[ENTER]* to open this menu item. 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 any changes, press *[MODE/ESC]*.

Focus (adjustment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Focus Init'*. Press *[ENTER]* to open this menu item. 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 any changes, press *[MODE/ESC]*.

Prism (alignment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Prism Init'*. 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 any changes, press *[MODE/ESC]*.

Aperture (adjustment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Iris Init'*. Press *[ENTER]* to open this menu item. 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 any changes, press *[MODE/ESC]*.

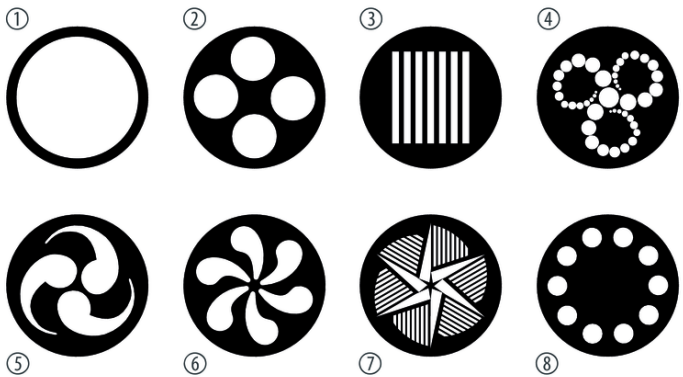
Brightness (adjustment)

Activate the settings menu. Press *[MODE/ESC]* repeatedly until the display shows *'Lamp Init'*. Press *[ENTER]* to open this menu item. Use the buttons *[UP]* or *[DOWN]* to adjust the desired default brightness.

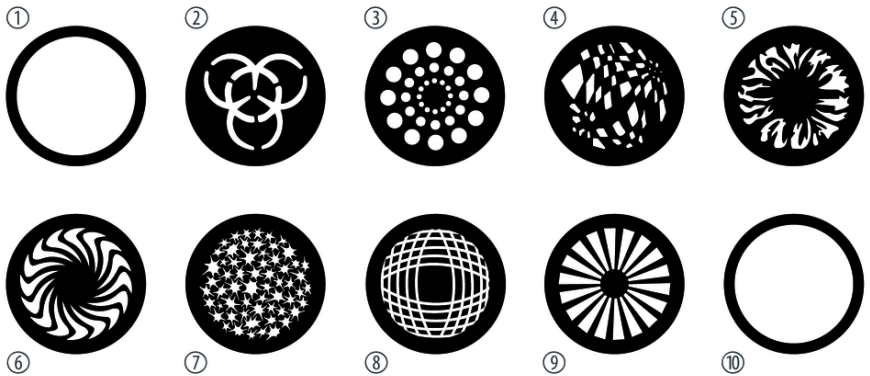
When the display shows the desired value, press *[ENTER]* to confirm the setting and then *[MODE/ESC]* to proceed to the next menu item. To change the menu item without making any changes, press *[MODE/ESC]*.

7.4 Gobos

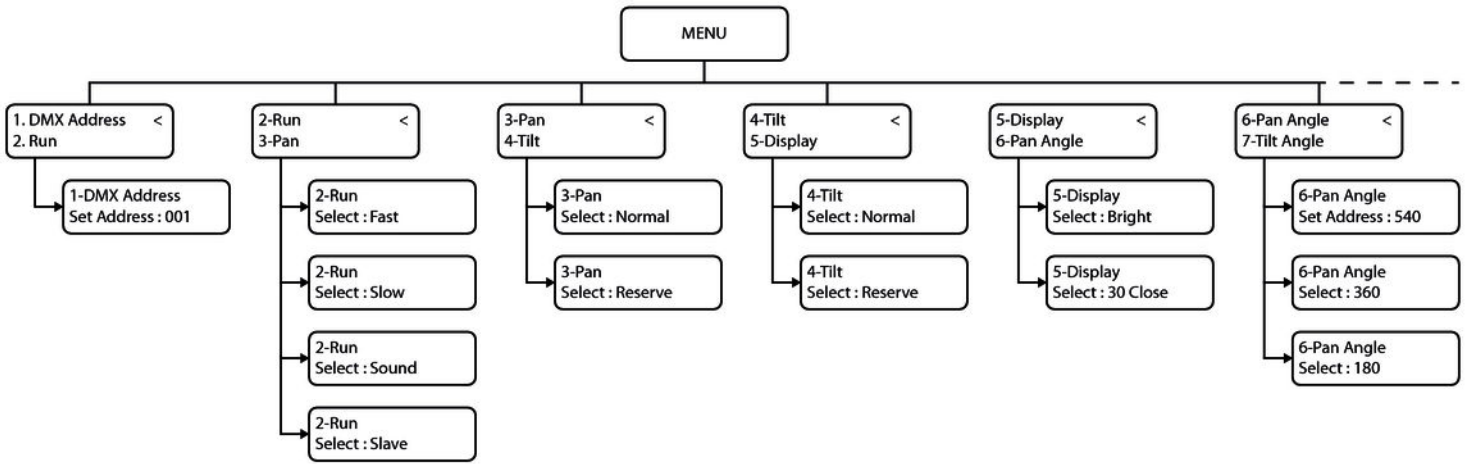
Gobo wheel 1, rotating gobos

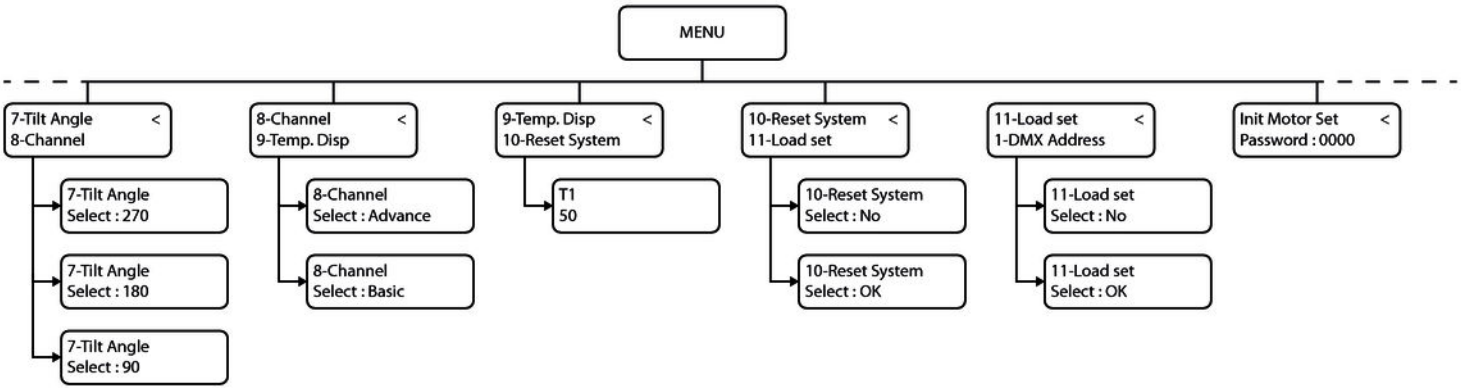


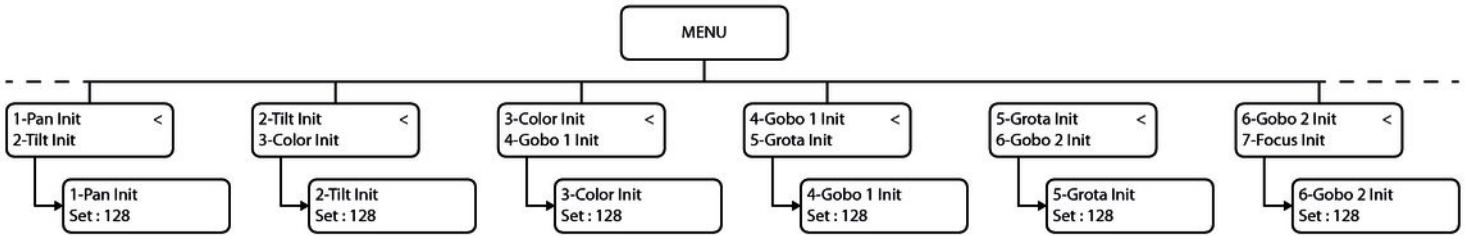
Gobo wheel 2, static gobos

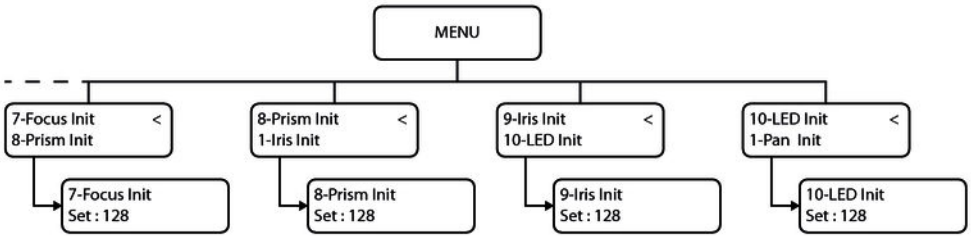


7.5 Menu overview




MENU
7-Tilt Angle <
8-Channel
7-Tilt Angle
Select : 270
7-Tilt Angle
Select : 180
7-Tilt Angle
Select : 90
8-Channel <
9-Temp. Disp
8-Channel
Select : Advance
8-Channel
Select : Basic
9-Temp. Disp <
10-Reset System
T1
50
10-Reset System <
11-Load set
10-Reset System
Select : No
10-Reset System
Select : OK
11-Load set <
1-DMX Address
11-Load set
Select : No
11-Load set
Select : OK
Init Motor Set <
Password : 0000


MENU
1-Pan Init
2-Tilt Init
1-Pan Init
Set : 128
2-Tilt Init
3-Color Init
2-Tilt Init
Set : 128
3-Color Init
4-Gobo 1 Init
3-Color Init
Set : 128
4-Gobo 1 Init
5-Grota Init
4-Gobo 1 Init
Set : 128
5-Grota Init
6-Gobo 2 Init
5-Grota Init
Set : 128
6-Gobo 2 Init
7-Focus Init
6-Gobo 2 Init
Set : 128


MENU
7-Focus Init
8-Prism Init
<
8-Prism Init
1-Iris Init
<
9-Iris Init
10-LED Init
<
10-LED Init
1-Pan Init
<
7-Focus Init
Set : 128
8-Prism Init
Set : 128
9-Iris Init
Set : 128
10-LED Init
Set : 128

7.6 Functions in 11-channel DMX mode

Channel	Value	Function
1	0…255	Rotation (0° up to the maximum value of the Pan area: 180°, 270° or 540°)
2	0…255	Inclination (0° up to the maximum value of the Tilt area: 90°, 180° or 270°)
3	Colour wheel	
	0…7	White
	8…15	Blue
	16…23	Yellow
	24…31	Pink
	32…39	Green
	40…47	Red
	48…55	Light blue
	56…63	Orange red

Channel	Value	Function
	64…66	White
	67…78	Gradual transition from white to blue
	79…92	Gradual transition from blue to yellow
	93…107	Gradual transition from yellow to pink
	108…120	Gradual transition from pink to green
	121…136	Gradual transition from green to red
	137…152	Gradual transition from red to bright blue
	153…170	Gradual transition from bright blue to orange red
	171…212	Clockwise rotation, speed increasing
	213…255	Counter-clockwise rotation, speed increasing
4	Shutter	
	0…7	Closed
	8…22	Open

Channel	Value	Function
	23…85	Strobe light, increasing speed
	86…100	Open
	101…165	Triple strobe, increasing speed
	166…180	Open
	181…245	Unregular strobe light, increasing speed
	246…255	Open
5	Dimmer	
	0…255	0…100 %
6	Gobo wheel 1, movable	
	0…9	Open
	10…19	Gobo 2
	20…29	Gobo 3
	30…39	Gobo 4

Channel	Value	Function
	40…49	Gobo 5
	50…59	Gobo 6
	60…69	Gobo 7
	70…79	Gobo 8
	80…99	Gobo 2 shake, increasing speed
	100…119	Gobo 3 shake, increasing speed
	120…139	Gobo 4 shake, increasing speed
	140…159	Gobo 5 shake, increasing speed
	160…179	Gobo 6 shake, increasing speed
	180…199	Gobo 7 shake, increasing speed
	200…219	Gobo 8 shake, increasing speed
	220…237	Clockwise rotation, speed increasing
	238…255	Counter-clockwise rotation, speed increasing

Channel	Value	Function
7	Gobo rotation	
	0…10	No rotation
	11…127	Fixed position from 0° to 360°
	128…191	Clockwise rotation, speed increasing
	192…255	Counter-clockwise rotation, speed increasing
8	Gobo wheel 2, static	
	0…9	Open
	10…19	Gobo 2
	20…29	Gobo 3
	39…39	Gobo 4
	40…49	Gobo 5
	50…59	Gobo 6
	60…69	Gobo 7

Channel	Value	Function
	70…79	Gobo 8
	80…89	Gobo 9
	90…91	Open
	92…107	Gobo 2 shake, increasing speed
	108…123	Gobo 3 shake, increasing speed
	124…139	Gobo 4 shake, increasing speed
	140…155	Gobo 5 shake, increasing speed
	156…171	Gobo 6 shake, increasing speed
	172…187	Gobo 7 shake, increasing speed
	188…203	Gobo 8 shake, increasing speed
	204…219	Gobo 9 shake, increasing speed
	220…237	Clockwise rotation, speed increasing
	238…255	Counter-clockwise rotation, speed increasing

Channel	Value	Function
9	Focus	
	0…255	Focusing
10	Aperture	
	0…63	Open / close iris diaphragm manually
	64…127	Automatic zoom, increasing speed
	128…191	Slow zoom-in, fast zoom-out, increasing speed
	192…255	Slow zoom-in, slow zoom-out, increasing speed
11	Prism	
	0…7	White
	8…15	Static prism
	16…127	Clockwise rotating prism
	128…239	Counterclockwise rotating prism
	240…255	Static prism

7.7 Functions in 16-channel DMX mode

Channel	Value	Function
1	0…255	Rotation (0° up to the maximum value of the Pan area: 180°, 270° or 540°)
2	0…255	Inclination (0° up to the maximum value of the Tilt area: 90°, 180° or 270°)
3	0…255	Rotation (pan), 16-bit operation
4	0…255	Inclination (tilt), 16-bit operation
5	0…255	Pan / tilt speed (fast to slow)
6	Colour wheel	
	0…7	White
	8…15	Blue
	16…23	Yellow
	24…31	Pink
	32…39	Green

Channel	Value	Function
	40…47	Red
	48…55	Light blue
	56…63	Orange red
	64…66	White
	67…78	Gradual transition from white to blue
	79…92	Gradual transition from blue to yellow
	93…107	Gradual transition from yellow to pink
	108…120	Gradual transition from pink to green
	121…136	Gradual transition from green to red
	137…152	Gradual transition from red to bright blue
	153…170	Gradual transition from bright blue to orange red
	171…212	Clockwise rotation, speed increasing
	213…255	Counter-clockwise rotation, speed increasing

Channel	Value	Function
7	Shutter	
	0…7	Closed
	8…22	Open
	23…85	Strobe light, increasing speed
	86…100	Open
	101…165	Triple strobe, increasing speed
	166…180	Open
	181…245	Unregular strobe light, increasing speed
	246…255	Open
8	Dimmer	
	0…255	0…100 %
9	Gobo wheel 1, movable	
	0…9	Open

Channel	Value	Function
	10…19	Gobo 2
	20…29	Gobo 3
	30…39	Gobo 4
	40…49	Gobo 5
	50…59	Gobo 6
	60…69	Gobo 7
	70…79	Gobo 8
	80…99	Gobo 2 shake, increasing speed
	100…119	Gobo 3 shake, increasing speed
	120…139	Gobo 4 shake, increasing speed
	140…159	Gobo 5 shake, increasing speed
	160…179	Gobo 6 shake, increasing speed
	180…199	Gobo 7 shake, increasing speed

Channel	Value	Function
	200…219	Gobo 8 shake, increasing speed
	220…237	Clockwise rotation, speed increasing
	238…255	Counter-clockwise rotation, speed increasing
10	Gobo rotation	
	0…10	No rotation
	11…127	Fixed position from 0° to 360°
	128…191	Clockwise rotation, speed increasing
	192…255	Counter-clockwise rotation, speed increasing
11	Gobo wheel 2, static	
	0…9	Open
	10…19	Gobo 2
	20…29	Gobo 3
	30…39	Gobo 4

Channel	Value	Function
	40…49	Gobo 5
	50…59	Gobo 6
	60…69	Gobo 7
	70…79	Gobo 8
	80…89	Gobo 9
	90…91	Open
	92…107	Gobo 2 shake, increasing speed
	108…123	Gobo 3 shake, increasing speed
	124…139	Gobo 4 shake, increasing speed
	140…155	Gobo 5 shake, increasing speed
	156…171	Gobo 6 shake, increasing speed
	172…187	Gobo 7 shake, increasing speed
	188…203	Gobo 8 shake, increasing speed

Channel	Value	Function
	204…219	Gobo 9 shake, increasing speed
	220…237	Clockwise rotation, speed increasing
	238…255	Counter-clockwise rotation, speed increasing
12	Focus	
	0…255	Focusing
13	Aperture	
	0…63	Open / close iris diaphragm manually
	64…127	Automatic zoom, increasing speed
	128…191	Slow zoom-in, fast zoom-out, increasing speed
	192…255	Slow zoom-in, slow zoom-out, increasing speed
14	Prism	
	0…7	White
	8…15	Static prism

Channel	Value	Function
	16…127	Rotating prism, rotation clockwise
	128…239	Rotating prism, rotation counterclockwise
	240…255	Static prism
15	Channel-depending functions	
	0…9	Free
	10…14	Blackout during pan and tilt movement
	15…19	Blackout during colour wheel movement
	20…24	Blackout during colour wheel movement and during pan and tilt movement
	25…29	Blackout during gobo wheels movement
	30…34	Blackout during gobo wheels movement and during pan and tilt movement
	35…39	Blackout during colour wheel movement and during gobo wheels movement
	40…44	Blackout during colour wheel movement, during gobo wheels movement and during pan and tilt movement

Channel	Value	Function
	45…49	Reset rotation
	50…54	Reset inclination
	55…59	Colour wheel reset
	60…64	Reset aperture
	65…69	Reset gobo 1
	70…74	Reset gobo rotation
	75…79	Reset gobo 2
	80…84	Free
	85…89	Prism reset
	90…99	Reset all channels
	100…129	Free
	130…192	Random programme order
	193…255	Sound control

Channel	Value	Function
16	Effects	
	0…9	Free
	10…19	Effect 1
	…	
	240…249	Effect 24
	250…255	Effect 25

8 Technical specifications

Number of DMX channels	11 or 16, depending on operating mode
LED	120 W
Operating supply voltage	AC 230 V ~ 50 Hz
Power consumption	200 W
Dimensions (W × H × D), when light beam pointing upwards	495 mm × 482 mm × 422 mm
Weight	20.5 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')

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*.

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). 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.

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