



BS-280 R10 BeamSpot moving head



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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.

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'*.

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 – dangerous optical radiation.
	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.

Completely disconnect the device from the power supply before you open or remove covers. Mount all covers and attach them firmly before connecting the device again.

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

The lamp used in this device produces an intense beam of visible and invisible light radiation.

Do not start the operation of the device without completely fixed covers. 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 at the surface and inside of the device

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

After switching off the device wait for at least 15 minutes before you start any maintenance activities.



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.

**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.

**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.

3 Features

The moving head is particularly suitable for professional lighting tasks, for example at events, on rock stages, in theatres and musicals or in discotheques.

Special features of the device:

- Control via DMX (15 or 21 channels) and via buttons and display on the unit
- Colour wheel with 13 indexable colours, split colours and white
- Two gobo wheels (one with 14 static gobos, one with 9 freely indexable and rotatable gobos), variable rotation speed and direction
- Four additional gobos included in the scope of delivery
- Two rotating and indexable effect prisms (8 round facets, 5 linear facets)
- Frost filter
- Motorised zoom, motorised focus
- Light source included in scope of delivery

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.

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.



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 and overheating

The distance between the light source and the combustible materials must be greater than 12 m. The distance to non-combustible materials must be greater than 2 m.

Provide sufficient ventilation.

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

**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).

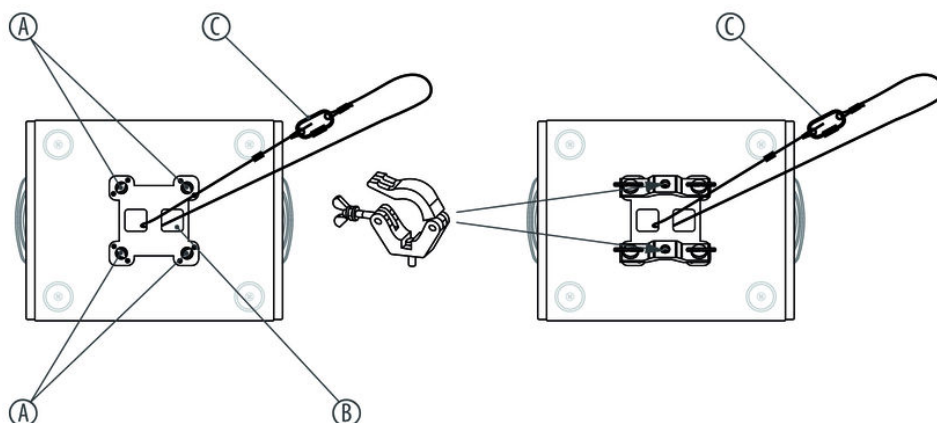
**NOTICE!****Possible data transmission errors**

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.

Options

The quick lock openings on the housing bottom are used for secure attachment of Omega brackets. To these, the flight adapters (Half Coupler, Trigger Clamps, C-hooks, etc.) are attached. The safety cable must be routed through the safety eyelet on the bottom of the housing.



A Fastening element with quick lock openings

B Openings for safety cable

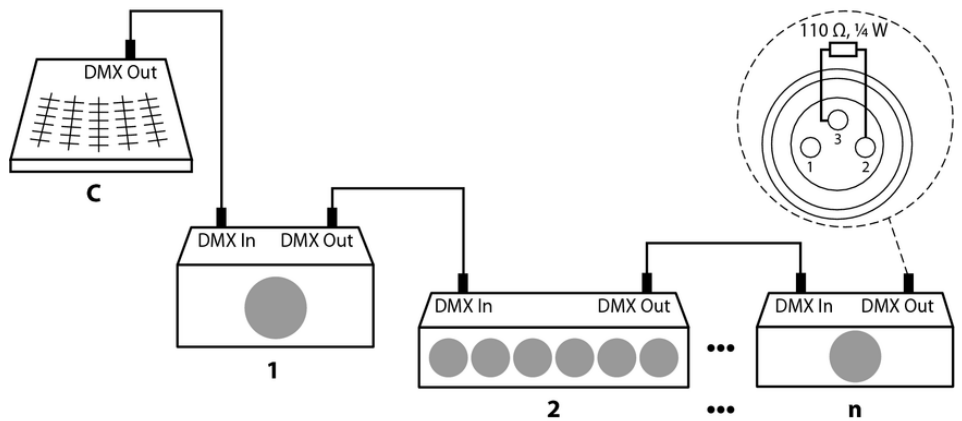
C Safety cable

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

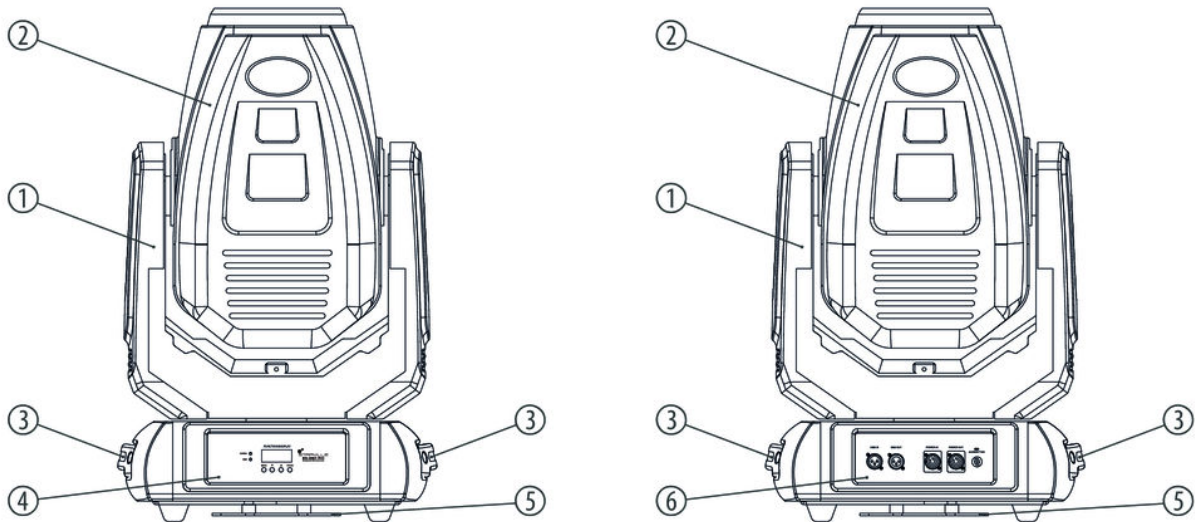
When the device and the DMX controller are operational, the “DMX” LED shows that a DMX signal is being received at the input.

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.

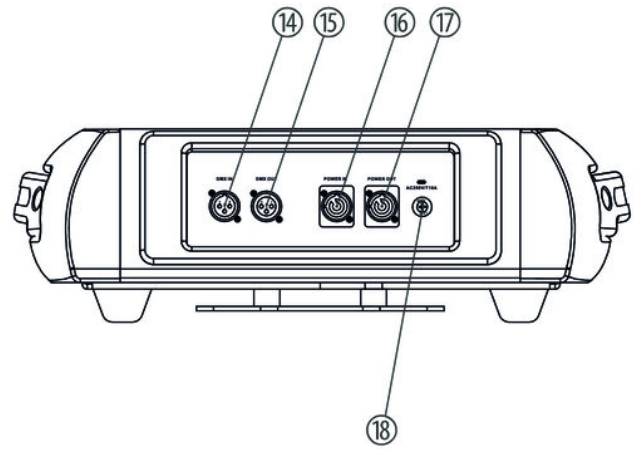
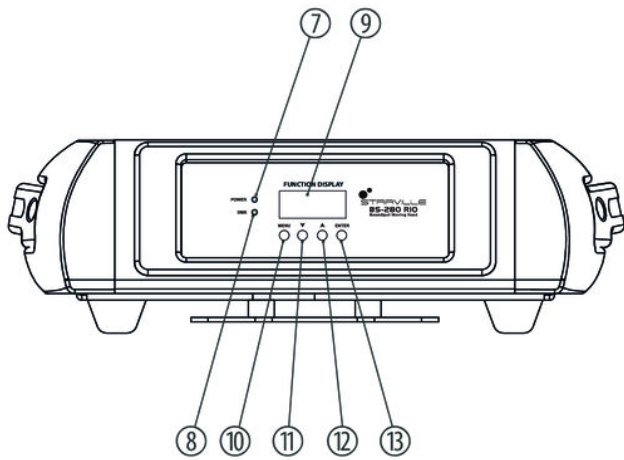
6 Connections and controls

Overview



- | | |
|---|--|
| 1 | Rotating end carriage |
| 2 | Moving head |
| 3 | Handles |
| 4 | Control panel with display |
| 5 | Fastening element |
| 6 | Connection panel with power supply, fuse holder and DMX ports. |

Control panel, connection panel



7	[POWER] The LED indicates that the device is connected to the power grid.
8	[DMX] The LED indicates that a DMX signal is being received.
9	Display
10	[MENU] Activates the main menu.
11	▲ Increases the displayed value by one.
12	▼ Reduces the displayed value by one.
13	[ENTER] Selects an option of the respective operating mode.
14	[DMX IN] DMX input
15	[DMX OUT] DMX output
16	[Power IN] Lockable PowerTwist input connector for the power supply.

17	<i>[Power OUT]</i> Lockable PowerTwist output connector.
18	Fuse holder If the fuse blows, replace it with a new fuse of the same type. You must first disconnect the device from the power supply.

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), the screen displays a start message. After a few more seconds, the device operates in the last set mode.

7.2 Main menu

Press *[MENU]* to activate the main menu and select a menu item. If the desired menu item appears in the display, confirm the selection with *[ENTER]*.

Use ▲ and ▼ to change the respectively displayed value. If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

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 'RESET' function.

DMX address

Press *[MENU]* repeatedly until the display shows 'Address'. Press *[ENTER]*. Now you can set the number of the first DMX channel used by the device (DMX address). Use ▲ and ▼ to select a value between 1 and 512.

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

If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

Operating mode 'DMX'

Press *[MENU]* repeatedly until the display shows 'Channel Mode'. Use ▲ and ▼ to select between the following values: 15-channel or 21-channel. This setting is only relevant if the device is being controlled via DMX.

If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

Blackout function

Press *[MENU]* repeatedly until the display shows 'DMX State'. Use ▲ and ▼ to now select between 'Hold' (continues the last operating mode) and 'Blackout'.

If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

Pan reversal

Press *[MENU]* repeatedly until the display shows 'Pan Inverse'. Use ▲ and ▼ to now select between 'no' (normal direction of rotation) and 'Yes' (reverse direction of rotation).

If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

Tilt reversal

Press *[MENU]* repeatedly until the display shows 'Tilt Inverse'. Use ▲ and ▼ to now select between 'no' (normal direction of tilt) and 'Yes' (reverse direction of tilt).

If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

Background lighting

Press *[MENU]* repeatedly until the display shows 'LCD Display'. Use ▲ and ▼ to now choose between 'on' (LED for background illumination of the display is switched on) and 'oFF' (LED for background illumination of the display is switched off).

If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

Self-test

Press *[MENU]* repeatedly until the display shows 'Auto Test'. Press *[ENTER]*. The device now performs a self-test.

To abort the self-test and to return to the main menu, press 'MENU'.

Operating hours display

Press *[MENU]* repeatedly until the display shows 'Fixture Time'. Press *[ENTER]*. The display shows how long the device has been already in operation.

Press *[MENU]* to close the operating hours counter.

Switching the lamp on and off manually

Press *[MENU]* repeatedly until the display shows 'Lamp on/off'. Press *[ENTER]*. Use ▲ and ▼ to now select between 'on' (lamp switched on) and 'oFF' (lamp switched off).

If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

Quick start

This function allows you to define the device's behaviour immediately after switch-on.

Press *[MENU]* repeatedly until the display shows 'Lamp Power on'. Press *[ENTER]*. Use ▲ and ▼ to now select between 'PooF' (lamp initially remains dark after the device is switched on) and 'PooN' (lamp lights up immediately after the device is switched on).

If the display shows the required value, press *[ENTER]* and then *[MENU]*. To return to the main menu without making changes, wait around 30 seconds.

Firmware version

Press **[MENU]** repeatedly until the display shows 'Firmware Version'. Press **[ENTER]**. The display shows the device's firmware version.

Press **[MENU]** to close the display of the firmware version.

Loading default settings

Press **[MENU]** repeatedly until the display shows 'Default'. Use **▲** and **▼** to now select between 'no' (no action) and 'Yes' (reset all values to factory defaults).

If the display shows the required value, press **[ENTER]** and then **[MENU]**. To return to the main menu without making changes, wait around 30 seconds.

System reset

Press **[MENU]** repeatedly until the display shows 'Reset'. Press **[ENTER]**. The device is reset to its default settings.

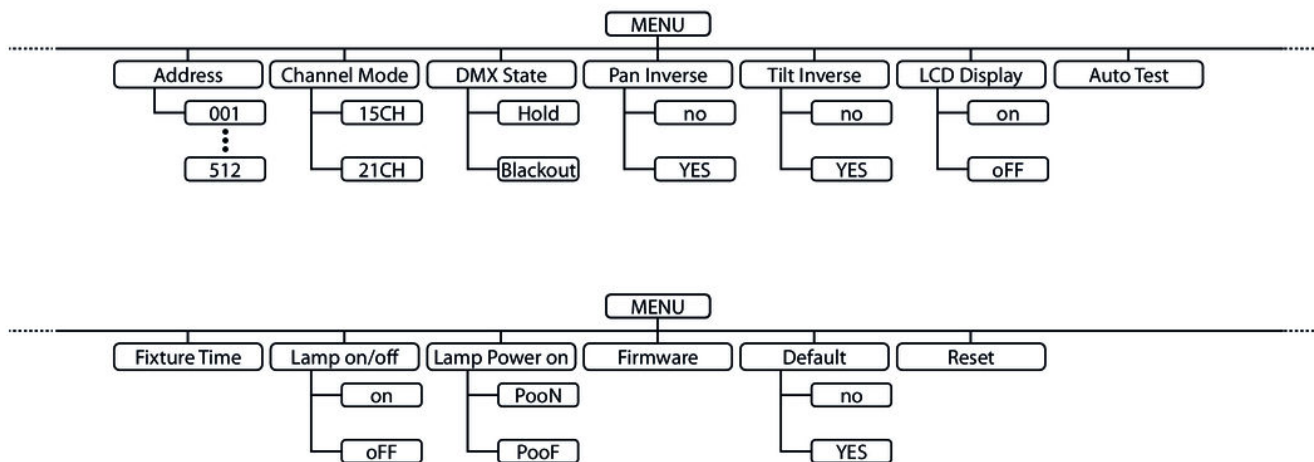
7.3 Calibration

The starting position of all mechanically powered elements can be adjusted in fine increments. To open the calibration menu, press **[MENU]** and then press **[ENTER]** for three seconds. Then using **▲** and **▼**, select the element you wish to calibrate. Press **[ENTER]**. Use **▲** and **▼** to adjust the selected element. Once the display shows the required value, press **[ENTER]**.

The following table shows the possible settings.

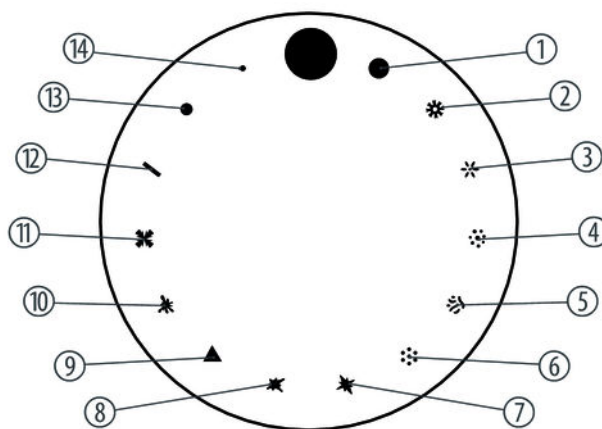
Display	Element	Value range	
		from	to
'Pan Offset'	Rotation (pan)	-127	127
'Tilt Offset'	Inclination (tilt)	-127	127
'Dimmer Offset'	Mechanical dimmer	0	255
'Color Offset'	Colour wheel	-127	127
'Gobo1 Offset'	Gobo wheel 1	-127	127
'Gobo2 Offset'	Gobo wheel 2	-127	127
'RGobo Offset'	Rotation of the gobos in gobo wheel 2	-127	127
'Prism1 Offset'	Prism wheel 1	0	255
'RPrism1 Offset'	Rotation of the prisms in prism wheel 1	-127	127
'Prism2 Offset'	Prism wheel 2	0	255
'RPrism2 Offset'	Rotation of the prisms in prism wheel 2	-127	127
'Frost Offset'	Frost filter	0	255
'Zoom Offset'	Mechanical zoom	0	255
'Focus Offset'	Mechanical focus	0	255

7.4 Menu overview



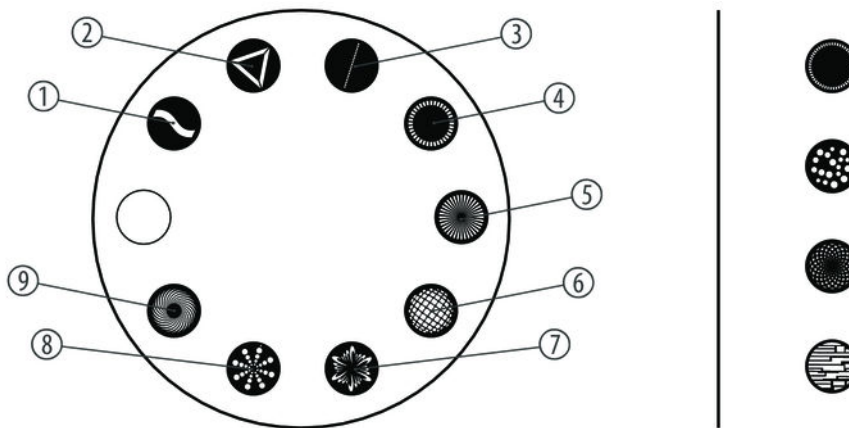
7.5 Gobos

Gobo wheel 1



Gobo wheel 2

The following figure shows the available gobos and their numbers.



7.6 Functions in 15-channel DMX mode

Channel	Value	Function
1	0...255	Rotation (pan) (0° to 540°)
2	0...255	Inclination (tilt) (0° to 270°)
3	0...255	Speed of rotation (pan) and inclination (tilt), fast to slow
4	Special functions	
	0...69	Unused
	70...79	Blackout during Pan or Tilt movement
	80...89	Disabled blackout while pan/tilt moving
	90...99	Blackout during colour wheel movement
	100...109	Disabled blackout while colour wheel moving
	110...119	Blackout during gobo wheel movement
	120...129	Disabled blackout while gobo wheel moving
	130...139	Switch lamp on
	140...149	Pan and Tilt reset
	150...159	Colour wheel reset
	160...169	Gobo wheel reset
	170...179	Shutter reset
	180...189	Unused
190...199	Prism wheel, focus, zoom and frost filter reset	
200...209	Reset all settings	

Channel	Value	Function
	210...219	Blackout during pan or tilt movement or rotation of the gobo wheel or colour wheel
	220...229	No blackout during pan or tilt movement or rotation of the gobo wheel or colour wheel
	230...239	Switch lamp off
	240...255	Unused
5	Colour wheel	
	0...2	White
	3...4	Colour 1 (white/red)
	5...6	Colour 2 (red)
	7...9	Colour 3 (red/orange)
	10...11	Colour 4 (orange)
	12...13	Colour 5 (orange/cyan)
	14...15	Colour 6 (cyan)
	16...18	Colour 7 (cyan/green)
	19...20	Colour 8 (green)
	21...22	Colour 9 (green/mint green)
	23...24	Colour 10 (mint green)
	25...27	Colour 11 (mint green/lavender)
	28...29	Colour 12 (lavender)
	30...31	Colour 13 (lavender/rose)
	32...33	Colour 14 (rose)
	34...36	Colour 15 (rose/yellow)
	37...38	Colour 16 (yellow)
	39...40	Colour 17 (yellow/magenta)
	41...42	Colour 18 (magenta)
	43...45	Colour 19 (magenta/blue)
	46...47	Colour 20 (blue)
	48...49	Colour 21 (blue/CTO 2700K)
	50...51	Colour 22 (CTO 2700K)
	52...54	Colour 23 (CTO 2700K/CTO 3000K)
	55...56	Colour 24 (CTO 3000K)
	57...58	Colour 25 (CTO 3000K/UV)
	59...60	Colour 26 (UV)

Channel	Value	Function
	61...63	Colour 27 (UV/white)
	64...127	Index
	128...189	Rotation, decreasing speed
	190...193	Rotation stopped
	194...255	Rotation, increasing speed
6	Gobo wheel 1	
	0...4	Gobo 1
	5...8	Gobo 2
	9...12	Gobo 3
	13...16	Gobo 4
	17...20	Gobo 5
	21...24	Gobo 6
	25...28	Gobo 7
	29...32	Gobo 8
	33...36	Gobo 9
	37...40	Gobo 10
	41...44	Gobo 11
	45...48	Gobo 12
	49...52	Gobo 13
	53...57	Gobo 14
	58...62	Gobo 1 shake
	63...67	Gobo 2 shake
	68...72	Gobo 3 shake
	73...77	Gobo 4 shake
	78...82	Gobo 5 shake
	83...87	Gobo 6 shake
	88...92	Gobo 7 shake
	93...97	Gobo 8 shake
	98...102	Gobo 9 shake
103...107	Gobo 10 shake	
108...112	Gobo 11 shake	
113...117	Gobo 12 shake	

Channel	Value	Function
	118...122	Gobo 13 shake
	123...127	Gobo 14 shake
	128...189	Rotation, decreasing speed
	190...193	Rotation stopped
	194...255	Rotation, increasing speed
7	Gobo wheel 2	
	0...6	Open
	7...12	Gobo 1
	13...19	Gobo 2
	20...25	Gobo 3
	26...32	Gobo 4
	33...38	Gobo 5
	39...44	Gobo 6
	45...51	Gobo 7
	52...57	Gobo 8
	58...64	Gobo 9
	65...71	Gobo 1 shake
	72...78	Gobo 2 shake
	79...85	Gobo 3 shake
	86...92	Gobo 4 shake
	93...99	Gobo 5 shake
	100...106	Gobo 6 shake
	107...113	Gobo 7 shake
	114...120	Gobo 8 shake
	121...127	Gobo 9 shake
	128...189	Rotation, decreasing speed
	190...193	Rotation stopped
	194...255	Rotation, increasing speed
8	Rotation of the gobo in gobo wheel 2	
	0...127	Index position (0° to 360°)
	128...189	Rotation, decreasing speed
	190...193	Rotation stopped

Channel	Value	Function
	192...255	Rotation, increasing speed
9	Prism	
	0...7	White, no prism
	8...63	Prism effect 1
	64...255	Prism effect 2
10	Prism rotation	
	0...127	Index position (0° to 360°)
	128...190	Rotation, decreasing speed
	191...192	Rotation stopped
	193...255	Rotation, increasing speed
11	0...255	Zoom from 0 to 100 %
12	0...255	Focus from 0 to 100 %
13	0...255	Frost effect from 0 to 100 %), if channel 6 = 0... 6
14	Strobe effect	
	0...7	Closed (blackout)
	8...15	Open
	16...131	Shutter, increasing speed
	132...167	Shutter closes quickly and opens slowly
	168...203	Shutter closes slowly and opens quickly
	204...239	Shutter, increasing speed
	240...247	Shutter, random speed
	248...255	Open
15	0...255	Dimmer from 0 to 100 %

7.7 Functions in 21-channel DMX mode

Channel	Value	Function
1	0...255	Rotation (pan) (0° to 540°)
2	0...255	Fine adjustment for rotation (pan)
3	0...255	Inclination (tilt) (0° to 270°)
4	0...255	Fine adjustment for inclination (tilt)
5	0...255	Speed of rotation (pan) and inclination (tilt), fast to slow

Channel	Value	Function
6	Special functions	
	0...69	Unused
	70...79	Blackout during Pan or Tilt movement
	80...89	Disabled blackout while pan/tilt moving
	90...99	Blackout during colour wheel movement
	100...109	Disabled blackout while colour wheel moving
	110...119	Blackout during gobo wheel movement
	120...129	Disabled blackout while gobo wheel moving
	130...139	Switch lamp on
	140...149	Pan and Tilt reset
	150...159	Colour wheel reset
	160...169	Gobo wheel reset
	170...179	Shutter reset
	180...189	Unused
	190...199	Prism wheel, focus, zoom and frost filter reset
	200...209	Reset all settings
	210...219	Blackout during pan or tilt movement or rotation of the gobo wheel or colour wheel
	220...229	No blackout during pan or tilt movement or rotation of the gobo wheel or colour wheel
	230...239	Switch lamp off
240...255	Unused	
7	Movement macros	
	0...7	Switched off
	8...15	Macro 1
	16...23	Macro 2
	24...31	Macro 3
	32...39	Macro 4
	40...47	Macro 5
	48...55	Macro 6
	56...63	Macro 7
	64...71	Macro 8
	72...79	Macro 9
	80...87	Macro 10

Channel	Value	Function
	88...95	Macro 11
	96...103	Macro 12
	104...111	Macro 13
	112...119	Macro 14
	120...127	Macro 15
	128...135	Macro 16
	136...143	Macro 17
	144...151	Macro 18
	152...159	Macro 19
	160...167	Macro 20
	168...175	Macro 21
	176...183	Macro 22
	184...191	Macro 23
	192...199	Macro 24
	200...207	Macro 25
	208...215	Macro 26
	216...223	Macro 27
	224...231	Macro 28
	232...239	Macro 29
	240...247	Macro 30
	248...255	Macro 31
8	0...255	Speed of the movement macro, from slow to fast
9	Colour wheel	
	0...2	White
	3...4	Colour 1 (white/red)
	5...6	Colour 2 (red)
	7...9	Colour 3 (red/orange)
	10...11	Colour 4 (orange)
	12...13	Colour 5 (orange/cyan)
	14...15	Colour 6 (cyan)
	16...18	Colour 7 (cyan/green)
	19...20	Colour 8 (green)

Channel	Value	Function
	21...22	Colour 9 (green/mint green)
	23...24	Colour 10 (mint green)
	25...27	Colour 11 (mint green/lavender)
	28...29	Colour 12 (lavender)
	30...31	Colour 13 (lavender/rose)
	32...33	Colour 14 (rose)
	34...36	Colour 15 (rose/yellow)
	37...38	Colour 16 (yellow)
	39...40	Colour 17 (yellow/magenta)
	41...42	Colour 18 (magenta)
	43...45	Colour 19 (magenta/blue)
	46...47	Colour 20 (blue)
	48...49	Colour 21 (blue/CTO 2700K)
	50...51	Colour 22 (CTO 2700K)
	52...54	Colour 23 (CTO 2700K/CTO 3000K)
	55...56	Colour 24 (CTO 3000K)
	57...58	Colour 25 (CTO 3000K/UV)
	59...60	Colour 26 (UV)
	61...63	Colour 27 (UV/white)
	64...127	Index
	128...189	Rotation, decreasing speed
	190...193	Rotation stopped
	194...255	Rotation, increasing speed
10	Gobo wheel 1	
	0...4	Gobo 1
	5...8	Gobo 2
	9...12	Gobo 3
	13...16	Gobo 4
	17...20	Gobo 5
	21...24	Gobo 6
	25...28	Gobo 7
	29...32	Gobo 8

Channel	Value	Function
	33...36	Gobo 9
	37...40	Gobo 10
	41...44	Gobo 11
	45...48	Gobo 12
	49...52	Gobo 13
	53...57	Gobo 14
	58...62	Gobo 1 shake
	63...67	Gobo 2 shake
	68...72	Gobo 3 shake
	73...77	Gobo 4 shake
	78...82	Gobo 5 shake
	83...87	Gobo 6 shake
	88...92	Gobo 7 shake
	93...97	Gobo 8 shake
	98...102	Gobo 9 shake
	103...107	Gobo 10 shake
	108...112	Gobo 11 shake
	113...117	Gobo 12 shake
	118...122	Gobo 13 shake
	123...127	Gobo 14 shake
128...189	Rotation, decreasing speed	
190...193	Rotation stopped	
194...255	Rotation, increasing speed	
11	Gobo wheel 2	
	0...6	Open
	7...12	Gobo 1
	13...19	Gobo 2
	20...25	Gobo 3
	26...32	Gobo 4
	33...38	Gobo 5
	39...44	Gobo 6
	45...51	Gobo 7

Channel	Value	Function
	52...57	Gobo 8
	58...64	Gobo 9
	65...71	Gobo 1 shake
	72...78	Gobo 2 shake
	79...85	Gobo 3 shake
	86...92	Gobo 4 shake
	93...99	Gobo 5 shake
	100...106	Gobo 6 shake
	107...113	Gobo 7 shake
	114...120	Gobo 8 shake
	121...127	Gobo 9 shake
	128...189	Rotation, decreasing speed
	190...193	Rotation stopped
	194...255	Rotation, increasing speed
12	Rotation of the gobo in gobo wheel 2	
	0...127	Index position (0° to 360°)
	128...189	Rotation, decreasing speed
	190...193	Rotation stopped
	192...255	Rotation, increasing speed
13	Prism	
	0...7	White, no prism
	8...63	Prism effect 1
	64...255	Prism effect 2
14	Prism rotation	
	0...127	Index position (0° to 360°)
	128...190	Rotation, decreasing speed
	191...192	Rotation stopped
	193...255	Rotation, increasing speed
15	0...255	Zoom from 0 to 100 %
16	0...255	Fine adjustment of the zoom
17	0...255	Focus from 0 to 100 %
18	0...255	Fine adjustment of the focus

Channel	Value	Function
19	0...255	Frost effect from 0 to 100 %), if channel 11 = 0... 6
20	Strobe effect	
	0...7	Closed (blackout)
	8...15	Open
	16...131	Shutter, increasing speed
	132...167	Shutter closes quickly and opens slowly
	168...203	Shutter closes slowly and opens quickly
	204...239	Shutter, increasing speed
	240...247	Shutter, random speed
	248...255	Open
21	0...255	Dimmer from 0 to 100 %

8 Maintenance

8.1 Installing / replacing the light source

**DANGER!****Electric shock caused by high voltages inside**

Within the device there are areas where high voltages may be present.

Completely disconnect the device from the power supply before you open or remove covers. Mount all covers and attach them firmly before connecting the device again.

Do not use the device if covers, protectors or optical components are missing or damaged.

**WARNING!****Eye damage caused by high light intensity**

The lamp used in this device produces an intense beam of visible and invisible light radiation.

Do not start the operation of the device without completely fixed covers. Never look directly into the light source.

**WARNING!****Risk of burns at the surface and inside of the device**

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

After switching off the device wait for at least 15 minutes before you start any maintenance activities.

**NOTICE!****Possible damages due to dirt or finger prints**

Due to the high temperatures, even smallest pieces of dirt on the bulb can destroy the lamp when it is turned on.

Do not touch the lamp directly with your fingers. Use clean gloves or a clean lint-free tissue.

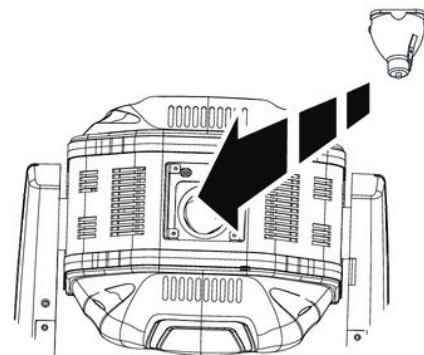
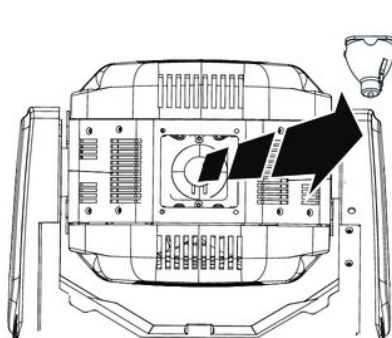
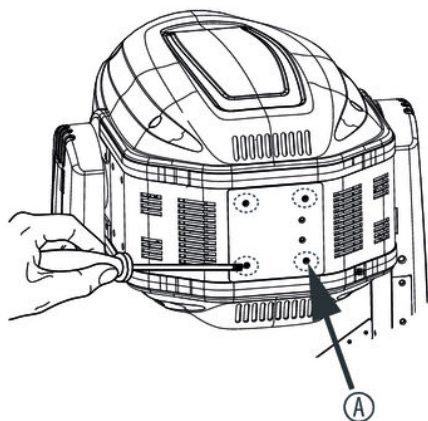
**NOTICE!****Possible damages due to wrong type of lamp**

Any attempt to use the device with a lamp other than those specified in this manual can result in severe damages to the device.

Only use a lamp of the specified type.

Notes on the light source

In this device, a bayonet, single-capped metal vapour discharge lamp is used as the light source. Suitable replacement lamps (type designation depending on the manufacturer, for example Sirius HRI 280W 7800K) can be found at www.thomann.de. Observe the safety instructions of the light source manufacturer.



Procedure

1. ➤ Make sure that the device is turned off, disconnected from the mains and completely cooled down.
2. ➤ Move the head of the unit in a horizontal position.
3. ➤ Open the housing by unscrewing the four Phillips top screws marked in the illustration above by 'A' and remove the upper part of the housing.
4. ➤ Remove the old lamp carefully.
5. ➤ Place the new lamp carefully in the mount and check that it is securely in position.
6. ➤ Reattach the upper part of the housing and secure it using the four cross-head screws provided.
7. ➤ Reconnect the device to the mains.

9 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.

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.

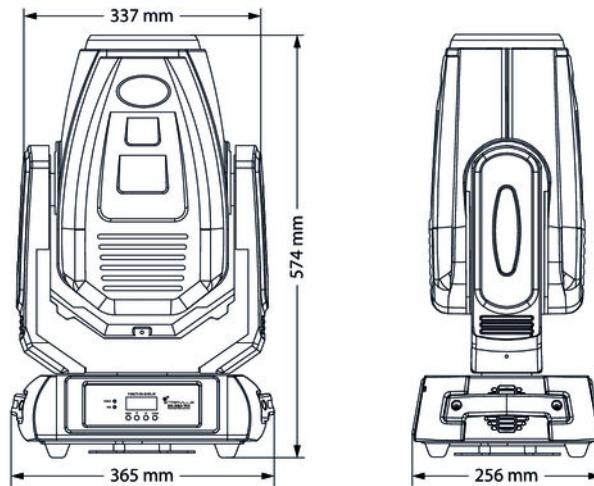
In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Problem	Corrective action
The device does not work, no light, the fans do not run	Check the power connection and main fuse.
No response to DMX controller	1. The 'DMX' LED should be on. If that is not the case, check whether the DMX connections are correct and cables are in a proper condition.
	2. If the 'DMX' LED is on but you can see no reaction, check the address settings and the DMX polarity.
	3. Try to use another DMX controller.
	4. 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 Technical specifications

Number of DMX channels	15 or 21, depending on operating mode
Light source	e.g. Osram Sirius HRI 280W 7800K
Maximum rotation angle (pan)	540°
Maximum inclination angle (tilt)	270°
Dimmer	mechanical, 0...100 %
Operating supply voltage	100 – 240 V ~ 50/60 Hz
Power consumption	347 W
Fuse	5 mm × 20 mm, 10 A, 250 V, slow-blow
Dimensions (W × H × D)	365 mm × 256 mm × 574 mm (15.35in. × 5.31in. × 15.55in.)
Weight	17 kg



12 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')

13 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.

