

ScanSphere 300



LED Scanner

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Table of contents

1	Ger	eral information	. 4
	1.1	Symbols and signal words	. 4
2	Safe	ety instructions	. 5
3	Fea	tures	. 7
4	Inst	allation	. 8
5	Sta	rting up	10
6	Con	nections and controls	11
7	Оре	erating	13
	7.1	Starting the device	13
	7.2	Main menu	13
	7.3	Functions in 11-channel DMX mode	21
	7.4	Functions in 13-channel DMX mode	23
	7.5	Functions in 39-channel DMX mode	25
	7.6	Gobos	30
8	Tec	hnical specifications	31
9	Plu	g and connection assignments	33
10	Feh	lerbehebung	34
11	Clea	aning	35
12	Pro	tecting the environment	36

1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under <u>www.thomann.de</u>.

1.1 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this document.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in mate- rial 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 for use as a multifunctional lighting instrument with movable mirror. The device is designed for professional use only and is not suitable for use in households. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.



Extend the operating life of the device by regular breaks and by avoiding frequent switching on and off. The device is not suitable for continuous operation.

Safety



DANGER!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.



DANGER!

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.



DANGER!

Danger to life due to electric current!

A short circuit could lead to a fire hazard and risk of death. Always use proper ready-made insulated triple-core mains cable with a safety plug. Do not modify the mains cable or the plug. In case of isolation damage, disconnect immediately the power supply and arrange repair. If in doubt, seek advice from a qualified electrician.



WARNING!

Risk of eye damage caused by high light intensity!

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



WARNING!

Risk of epileptic fit due to flashing lights!

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



WARNING!

Risk of injury from falling devices that were inadequately secured!

If devices are not properly secured during assembly, they can cause severe injury and considerable damage by falling. When installing and operating, make sure to follow the standards and regulations that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.



WARNING! Danger of burns on the device surface!

The surface of the device becomes very hot during operation. Skin contact can result in burns. Never touch the device with your bare hands during operation. After switching off the device, wait for at least 15 minutes before touching it.



CAUTION!

Risk of injury due to unexpected movements of the device!

The device head may perform fast movements and generate very bright light. This is the case immediately after the device is switched on, in automatic or remote operation, and when a connected DMX controller is switched off. Persons who are in the immediate vicinity of the device may be injured or frightened by this. Make sure that there are no obstacles within the movement range of the mirror, and that no persons are in the immediate vicinity of the device before any work is performed in the movement range or immediate vicinity of the device, or if unauthorised persons are in that area.

NOTICE!

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can overheat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.

NOTICE!

Risk of overheating and fire due to inadequate distance and bad ventilation!

If the distance between the light source and the illuminated surface is too short or the device is badly ventilated, the device can overheat and cause fires. Make sure that illuminated surfaces are more than 2 m away. Do not operate the device in ambient temperatures above 40 °C. Always ensure sufficient ventilation at the operating location.

NOTICE!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the "Technical specifications" chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

NOTICE!

Damage to the device due to high voltages!

The device can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the device matches the local power grid before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the device from the power grid when storms are approaching or it the device will not be used for a longer period.

NOTICE!

Risk of fire by exceeding the maximum current

The device can supply power to other devices of identical design and connected in series. If too many devices are connected, the power consumption can exceed the maximum permitted power consumption, which can cause the device to overheat and burst into flames. Only connect devices of identical design to the device. When deciding how many devices you can connect in series, make sure that the maximum permitted power consumption as stated on the device is not exceeded. Also refer to the specifications in the technical specifications for the device. Only use power cords with a cable cross-section designed for the required current intensity when connecting the devices in series.

NOTICE!

Risk of fire due to installation of a wrong fuse!

Using fuses of a different type than compatible with the device may cause a fire and seriously damage the device. Only use fuses of the same type. Observe the labelling on the device casing and the information in the "Technical data" chapter.

NOTICE!

Potential property damage due to unsuitable stands!

If the device is mounted on an unsuitable stand, there is a risk that the stand will fall over and cause damage. Only use stands whose maximum bearing capacity is at least as high as the weight of the device. Always ensure that the stand is stable.

3 Features

Special features of the device:

- Scanner set with 3 × CW LEDs, 60 W each
- Beam angle 13°
- Mirror rotation:
 - Pan (128°)
 - Tilt (22°)
- Control via DMX (11, 13 or 39 channels), via the buttons and display on the device, and via the foot switch (item no. 279058, optionally available)
- Separately controllable LED scanners
- Pre-programmed automatic shows
- Sound control
- Master/slave mode
- 3-facet prism with prism rotation
- Gobo wheel with 6 rotating gobos
- Colour wheel with 7 colours plus white
- Strobe effect
- Electronic dimmer
- Electronic focus
- Robust metal and plastic housing
- Omega brackets, 35-mm stand holder and power cable included

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

4 Installation

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

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 from falling devices that were inadequately secured!

If devices are not properly secured during assembly, they can cause severe injury and considerable damage by falling.

When installing and operating, make sure to follow the standards and regulations that apply in your country.

Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.

NOTICE!

Potential property damage due to unsuitable stands!

If the device is mounted on an unsuitable stand, there is a risk that the stand will fall over and cause damage.

Only use stands whose maximum bearing capacity is at least as high as the weight of the device. Always ensure that the stand is stable.

NOTICE!

Risk of overheating and fire due to inadequate distance and bad ventilation!

If the distance between the light source and the illuminated surface is too short or the device is badly ventilated, the device can overheat and cause fires.

Make sure that illuminated surfaces are more than 2 m away.

Do not operate the device in ambient temperatures above 40 °C.

Always ensure sufficient ventilation at the operating location.

Mounting options



The device can be attached to a stand via the 35-mm holder (1) on the underside of the device.

The threads on the underside of the device (2) are used to attach the supplied omega brackets. These can be used to attach flight adapters (half coupler, trigger clamps, C hooks etc.) that enable secure attachment to a truss beam. The device can also be attached to a truss beam via the mounting brackets on the back of the device (3).

The safety cable must be threaded through the safety eyelets on the back of the device.

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

(

5 Starting up

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

NOTICE!

Data transfer errors due to improper wiring!

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

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

Connections in DMX mode

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



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

Front



- C LED scanner 3 ('Lamp3')
- 1 Spotlight head with movable mirror
- 2 Lens
- 3 Safety cable eyelet
- 4 Threads for attaching the supplied omega brackets
- 5 35-mm stand holder

Connections and controls

Back



- 6 [Power Out] | Lockable output socket (Power Twist) for powering a connected device
- 7 [Power In] | Lockable input socket (Power Twist) for connection to mains power
- 8 Mounting bracket with locking screw
- 9 [T2A/250V] | Fuse holder
- 10 [DMX In] | DMX input, designed as XLR panel plug, 3-pin
- 11 [DMX Out] | DMX output, designed as XLR panel socket, 3-pin
- 12 [Footswitch Input] | 6.35-mm jack socket for connecting the foot switch unit
- 13 Built-in microphone for sound control
- 14 Display with function buttons

[Mode] | Activates the main menu. Closes an open submenu without saving the changes.

[Setup] | Selects an option of the respective operating mode, confirms the set value.

[Up] | Toggles between menu items, increases the displayed value by one.

[Down] | Toggles between menu items, decreases the displayed value by one.

7.1 Starting the device



CAUTION!

Risk of injury due to unexpected movements of the device!

The device head may perform fast movements and generate very bright light. This is the case immediately after the device is switched on, in automatic or remote operation, and when a connected DMX controller is switched off. Persons who are in the immediate vicinity of the device may be injured or frightened by this.

Make sure that there are no obstacles within the movement range of the mirror, and that no persons are in the immediate vicinity of the head before switching it on and during its operation.

Switch off the device before any work is performed in the movement range or immediate vicinity of the device, or if unauthorised persons are in that area.

Connect the device to the mains to start operation. After a few seconds, the fans start to work, the mirror at the device head moves to the pan and tilt home positions and the display indicates a system reset. The device is now operational.

7.2 Main menu

- 1. Press [Mode] to activate the main menu.
- **2.** Press [*Up*] or [*Down*] to switch between menu items or to modify the currently displayed value. When the display shows the required value, confirm with [*Setup*].
- **3.** To exit the menu item without making changes, press [Mode].
- **4.** If you do not press a button for 30 seconds the display turns off. Briefly press [*Mode*], [*Setup*], [*Up*] or [*Down*] to switch it on again.
- **5.** All previous settings are retained even when you switch the device off and disconnect it from the mains.

7.2.1 DMX address

- **1.** Press [*Mode*] to activate the main menu.
- **2.** Press [*Up*] or [*Down*] repeatedly until the display shows '*DMX*'. Confirm with [*Setup*].
- **3.** Press [*Up*] or [*Down*] repeatedly until the display shows '*Address*'. Confirm with [*Setup*].
- **4.** Use [*Up*] or [*Down*] to select a value between '001' and '512' to set the desired DMX address. Confirm with [*Setup*].
- 5. To exit the menu item without making changes, press [Mode].

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

Mode	Highest possible DMX address
11-channel mode	502
13-channel mode	500
39-channel mode	474

7.2.2 DMX mode

- **1.** Press [*Mode*] to activate the main menu.
- **2.** Press [*Up*] or [*Down*] repeatedly until the display shows '*DMX*'. Confirm with [*Setup*].
- **3.** Press [*Up*] or [*Down*] repeatedly until the display shows '*Channel*'. Confirm with [*Setup*].
- **4.** Use [*Up*] or [*Down*] to select the required DMX mode (11-channel mode, 13-channel mode or 39-channel mode, display '11-CH', '13-CH' or '39-CH'). Confirm with [*Setup*].
- **5.** To exit the menu item without making changes, press [Mode].

7.2.3 Manual control on the device

In the 'Manual Control' menu, you can make manual settings for the device parameters.

- **1.** Press [*Mode*] to activate the main menu.
- **2.** Press [*Up*] or [*Down*] repeatedly until the display shows '*Manual Control*'. Confirm with [*Setup*].
- 3. Use [Up] or [Down] to select the required parameter. Confirm with [Setup].

Menu level 2	Menu level 3	Description
'Lamp'	Selection of LED) scanners
	'All'	The manual settings are adopted for all LED scanners.
	'Lamp1'	The manual settings are adopted for LED scanner 1.
	'Lamp2'	The manual settings are adopted for LED scanner 2.
	'Lamp3'	The manual settings are adopted for LED scanner 3.
'Pan'	'000' '255'	Rotation angle (0 ° to 128 °)
'Pan Fine'	'000' '255'	Fine adjustment of rotation angle (0 $^{\circ}$ to 128 $^{\circ}$)
'Tilt'	'000' '255'	Tilt angle (0 ° to 22 °)
'Tilt Fine'	'000' '255'	Fine adjustment of tilt angle (0 $^{\circ}$ to 22 $^{\circ})$
'P/T Speed'	'000' '255'	Pan/tilt speed (fast to slow)
'Dimmer'	'000' '255'	Dimmer intensity (dark to bright)
'Strobe'	'000' '255'	Strobe (slow to fast)
'Color'	'000' '255'	Colour selection
'Gobo'	'000' '255'	Gobo selection
'Gobo-R'	'000' '255'	Gobo wheel rotation
'Prism'	'000' '255'	Prism
'Prism-R'	'000' '255'	Prism rotation

- **4.** When the display shows the required value, confirm the setting with [Setup].
- 5. To exit the menu item without making changes, press [Mode].

7.2.4 Auto programme

- **1.** Press [*Mode*] to activate the main menu.
- **2.** Press [*Up*] or [*Down*] repeatedly until the display shows '*Auto*'. Confirm with [*Setup*].
- **3.** Use [*Up*] or [*Down*] to choose between '*No*' (auto programme off) and '*Yes*' (auto programme on). Confirm with [*Setup*].
 - \Rightarrow The device plays the pre-programmed automatic show in an endless loop.
- **4.** To exit the menu item without making changes, press [Mode].

7.2.5 "Master/slave" mode

	To use a device as the master device, select the automatic programme, then activate sound control or manual control. Connect the slave devices to the DMX output of the master device and select the DMX mode.
	1. Press [<i>Mode</i>] to activate the main menu.
	2. Press [<i>Up</i>] or [<i>Down</i>] repeatedly until the display shows 'Slave'. Confirm with [Setup].
	3. Use [<i>Up</i>] or [<i>Down</i>] to choose between ' <i>No</i> ' (master/slave mode disabled) and 'Yes' (master/slave mode enabled). Confirm with [<i>Setup</i>].
	⇒ The device exactly follows the operation of the master device to which it is connected.
	4. To exit the menu item without making changes, press [<i>Mode</i>].
7.2.6 Sound control	
	In this mode, the device follows the rhythm of the background music or sounds detected by the built-in microphone.
	1. Press [<i>Mode</i>] to activate the main menu.
	2. Press [<i>Up</i>] or [<i>Down</i>] repeatedly until the display shows 'Sound'. Confirm with [Setup].
Adjusting the sensitivity	3. Use [Up] or [Down] to select the 'Sensitivity' menu item. Confirm with [Setup].
	4. Use [Up] or [Down] to select a value between '000' (low sensitivity) and '100' (low sensitivity). Confirm with [Setup].
Setting automatic shows	5. Juse [Up] or [Down] to select the 'Effects' menu item. Confirm with [Setup].
	6. Use [<i>Up</i>] or [<i>Down</i>] to select the required automatic show (display 'Effect1' 'Effect4'). Confirm with [<i>Setup</i>].
	7. To exit the menu item without making changes, press [<i>Mode</i>].



7.2.7 Settings

Use the 'Settings' menu to adjust the device parameters.

- **1.** Press [*Mode*] to activate the main menu.
- **2.** Press [*Up*] or [*Down*] repeatedly until the display shows 'Settings'. Confirm with [Setup].
- **3.** Use [Up] or [Down] to select the required parameter. Confirm with [Setup].

Menu level 2	Menu level 3	Description
'Pan Inv'	Pan inversion	
	'Normal'	Normal direction of rotation
	'Inverted'	Reversed direction of rotation
'Tilt Inv'	Tilt inversion	
	'Normal'	Normal direction of inclination
	'Inverted'	Reversed direction of inclination
'Dmx Fail'	Behaviour on D	MX control failure
	'Off'	Blackout on DMX failure
	'Hold'	Last DMX signal is held
'Curves Select'	Dimmer curves	
	'Linear'	Linear proportional course
	'Square Law'	Square curve with a flat course at the beginning and a steep course at the end
	ʻInv Square Lawʻ	Inverted square curve with a steep course at the beginning and a flat course at the end
	'S-Type'	Non-linear curve with a distinctive flat pro- file at the beginning and end
'Display Inv'	Display reversal	
	'Normal'	Text on the display appears normal
	'Inverted'	Text on the display is rotated by 180 $^\circ$
'BackLight'	Display illumina	tion
	'Always on'	Display illumination is always on
	'Off'	Display illumination is switched off after 60 seconds
'Key Lock'	Key lock	
	'On'	Automatic key lock activated
		When key lock is activated, all keys have no function after 30 seconds. To release the key lock, simultaneously press and hold <i>[Mode]</i> and <i>[Set]</i> for 3 seconds.
		To manually activate the key lock, simulta- neously press [Mode] and [Set].
	'Off'	Automatic key lock deactivated

Menu level 2	Menu level 3	Description
'Calibration'	Calibrating	
	Detailed inform under <i>∜ Chapte</i>	ation about this menu item can be found er 7.2.7.1 'Calibrating' on page 18
'Reset'	Motor reset	
	'No'	Do not reset motor
	'Yes'	Reset motor
'Default'	Resets the device to factory defaults	
	'No'	Do not reset device
	'Yes'	Reset device

- **4.** When the display shows the required value, confirm the setting with [Setup].
- **5.** To exit the menu item without making changes, press [Mode].

7.2.7.1 Calibrating

Use the 'Calibration' menu to adjust the start parameters of the device.

- **1.** Press [*Mode*] to activate the main menu.
- **2.** Press [*Up*] or [*Down*] repeatedly until the display shows 'Settings'. Confirm with [Setup].
- **3.** Press [*Up*] or [*Down*] repeatedly until the display shows '*Calibration*'. Confirm with [*Setup*].
- **4.** Use [*Up*] or [*Down*] to select the required parameter. Confirm with [*Setup*].

Menu level 2	Menu level 3	Description
'Lamp'	'Lamp1'	The start parameters are adopted for LED scanner 1.
	'Lamp2'	The start parameters are adopted for LED scanner 2.
	'Lamp3'	The start parameters are adopted for LED scanner 3.
'Pan'	'000' '255'	Setting the home position of the rotary movement
'Tilt'	'000' '255'	Setting the home position of the inclination movement
'Color'	'000' '255'	Specifying the initial colour wheel setting
'Gobo'	'000' '255'	Specifying the initial gobo wheel setting
'Gobo-R'	'000' '255'	Specifying the initial gobo wheel rotation setting
'Prism'	'000' '255'	Specifying the initial prism setting
'Prism-R'	'000' '255'	Specifying the initial prism rotation setting
'Default'	Resets all param (default value: <i>'</i>	neters of the calibration to factory settings <i>127'</i>). Confirm with <i>[Set]</i> .

- 5. When the display shows the required value, confirm the setting with [Setup].
- **6.** To exit the menu item without making changes, press [Mode].

7.2.8 System information

Use the 'Information' menu to call up the system information.

- **1.** Press [*Mode*] to activate the main menu.
- **2.** Press [*Up*] or [*Down*] repeatedly until the display shows '*Information*'. Press and hold [*Setup*] for five seconds.
 - ⇒ The display shows the current version number, the total runtime and the serial number of the device.
- **3.** If you want to reset the total runtime of the device, use [Up] or [Down] to enter the password 0088.
 - \Rightarrow The total runtime of the device is reset.
- **4.** To exit the menu item without making changes, press [Mode].

7.2.9 RDM functions

Certain menus of the device and functions can be called up via the RDM protocol.

Parameter ID	Description
DISC_UNIQUE_BRANCH	Searching
DISC_MUTE	Locking
DISC_UN_MUTE	Unlocking
SUPPORTED_PARAMETERS	List of commands
DEVICE_INFO	Device information
DEVICE_MODEL_DESCRIPTION	Model description
MANUFACTURER_LABEL	Manufacturer label
DEVICE_LABEL	Device label
RESET_DEVICE	Reset device
FACTORY_DEFAULTS	Factory defaults
SOFTWARE_VERSION_LABEL	Software label
DMX_START_ADDRESS	DMS start address
SENSOR_DEFINITION	Sensor definition
SENSOR_VALUE	Sensor value
RECORD_SENSORS	Record sensor value
LAMP_HOURS	Operating time
DISPLAY_INVERT	Display reversal
IDENTIFY_DEVICE	Identifying the device

7.2.10 Menu overview







7.3 Functions in 11-channel DMX mode

Channel	Value	Function	
1	0255	Rotation (pan) (0° up to the maximum value of the Pan range)	
2	0255	Inclination (tilt) (0° up to the maximum value of the Tilt area)	
3	0255	Running speed of rotation (pan) and inclination (tilt), increasing speed	
4	0255	Dimmer intensity (0% to 100%)	
5	Strobe		
	010	Closed	
	11128	Random flashing (strobe), increasing speed	
	129255	Linear flashing (strobe), increasing speed	
6	Colour selection		
	07	White	
	815	White/red	
	1623	Red	
	2431	Red/green	
	3239	Green	
	4047	Green/blue	
	4855	Blue	
	5663	Blue/yellow	
	6471	Yellow	
	7279	Yellow/purple	
	8087	Purple	
	8895	Purple/orange	
	96103	Orange	
	104111	Orange/turquoise	
	112127	Turquoise	
	128191	Clockwise rotation, decreasing speed	
	192255	Anti-clockwise rotation, increasing speed	
7	Gobo selection		
	09	Open (white)	
	1019	Gobo 1	
	2029	Gobo 2	
	3039	Gobo 3	
	4049	Gobo 4	
	5059	Gobo 5	
	6069	Gobo 6	
	7079	Gobo 6 shake, increasing speed	

Channel	Value	Function
	8089	Gobo 5 shake, increasing speed
	9099	Gobo 4 shake, increasing speed
	100109	Gobo 3 shake, increasing speed
	110119	Gobo 2 shake, increasing speed
	120129	Gobo 1 shake, increasing speed
	130191	Clockwise rotation, decreasing speed
	192255	Anti-clockwise rotation, increasing speed
8	Gobo wheel	rotation
	0127	No function
	128191	Gobo wheel, clockwise rotation, decreasing speed
	192255	Gobo wheel, anti-clockwise rotation, increasing speed
9	031	Prism closed
	32255	Prism open
10	0127	Prism, static rotation at a specific angle
	128191	Prism, clockwise rotation, decreasing speed
	192255	Prism, anti-clockwise rotation, increasing speed
11	09	No function
	1020	Reset (after 5 seconds)
	21255	No function



7.4 Functions in 13-channel DMX mode

Channel	Value	Function		
1	0255	Rotation (pan) (0° up to the maximum value of the Pan range)		
2	0255	Fine adjustment of rotation (pan)		
3	0255	Inclination (tilt) (0° up to the maximum value of the Tilt area)		
4	0255	Fine adjustment of the inclination (tilt)		
5	0255	Running speed of rotation (pan) and inclination (tilt), increasing speed		
6	0255	Dimmer intensity (0% to 100%)		
7	Strobe			
	010	Closed		
	11128	Random flashing (strobe), increasing speed		
	129255	Linear flashing (strobe), increasing speed		
8	Colour selec	tion		
	07	White		
	815	White/red		
	1623	Red		
	2431	Red/green		
	3239	Green		
	4047	Green/blue		
	4855	Blue		
	5663	Blue/yellow		
	6471	Yellow		
	7279	Yellow/purple		
	8087	Purple		
	8895	Purple/orange		
	96103	Orange		
	104111	Orange/turquoise		
	112127	Turquoise		
	128191	Clockwise rotation, decreasing speed		
	192255	Anti-clockwise rotation, increasing speed		
9	Gobo select	ion		
	09	Open (white)		
	1019	Gobo 1		
	2029	Gobo 2		
	3039	Gobo 3		
	4049	Gobo 4		
	5059	Gobo 5		

Channel	Value	Function	
	6069	Gobo 6	
	7079	Gobo 6 shake, increasing speed	
	8089	Gobo 5 shake, increasing speed	
	9099	Gobo 4 shake, increasing speed	
	100109	Gobo 3 shake, increasing speed	
	110119	Gobo 2 shake, increasing speed	
	120129	Gobo 1 shake, increasing speed	
	130191	Clockwise rotation, decreasing speed	
	192255	Anti-clockwise rotation, increasing speed	
10	Gobo wheel rotation		
	0127	No function	
	128191	Gobo wheel, clockwise rotation, decreasing speed	
	192255	Gobo wheel, anti-clockwise rotation, increasing speed	
11	031	Prism closed	
	32255	Prism open	
12	0127	Prism, static rotation at a specific angle	
	128191	Prism, clockwise rotation, decreasing speed	
	192255	Prism, anti-clockwise rotation, increasing speed	
13	09	No function	
	1020	Reset (after 5 seconds)	
	21255	No function	



7.5 Functions in 39-channel DMX mode

Settings for LED scanner 1 (*'Lamp1'*)

Channel	Value	le Function	
1	0255	Rotation (pan) (0° up to the maximum value of the Pan range)	
2	0255	e adjustment of rotation (pan)	
3	0255	Inclination (tilt) (0° up to the maximum value of the Tilt area)	
4	0255	Fine adjustment of the inclination (tilt)	
5	0255	Running speed of rotation (pan) and inclination (tilt), increasing speed	
6	0255	Dimmer intensity (0% to 100%)	
7	Strobe		
	010	Closed	
	11128	Random flashing (strobe), increasing speed	
	129255	Linear flashing (strobe), increasing speed	
8	Colour selec	tion	
	07	White	
	815	White/red	
	1623	Red	
	2431	Red/green	
	3239	Green	
	4047	Green/blue	
	4855	Blue	
	5663	Blue/yellow	
	6471	Yellow	
	7279	Yellow/purple	
	8087	Purple	
	8895	Purple/orange	
	96103	Orange	
	104111	Orange/turquoise	
	112127	Turquoise	
	128191	Clockwise rotation, decreasing speed	
	192255	Anti-clockwise rotation, increasing speed	
9	Gobo select	ion	
	09	Open (white)	
	1019	Gobo 1	
	2029	Gobo 2	
	3039	Gobo 3	
	4049	Gobo 4	

Channel	Value	Function	
	5059	Gobo 5	
	6069	Gobo 6	
	7079	Gobo 6 shake, increasing speed	
	8089	Gobo 5 shake, increasing speed	
	9099	Gobo 4 shake, increasing speed	
	100109	Gobo 3 shake, increasing speed	
	110119	Gobo 2 shake, increasing speed	
	120129	Gobo 1 shake, increasing speed	
	130191	Clockwise rotation, decreasing speed	
	192255	Anti-clockwise rotation, increasing speed	
10	Gobo wheel rotation		
	0127	No function	
	128191	Gobo wheel, clockwise rotation, decreasing speed	
	192255	Gobo wheel, anti-clockwise rotation, increasing speed	
11	031	Prism closed	
	32255	Prism open	
12	0127	Prism, static rotation at a specific angle	
	128191	Prism, clockwise rotation, decreasing speed	
	192255	Prism, anti-clockwise rotation, increasing speed	
13	09	No function	
	1020	Reset (after 5 seconds)	
	21255	No function	

Settings for LED scanner 2 ('Lamp2')

Channel	Value	Function	
14	0255	Rotation (pan) (0° up to the maximum value of the Pan range)	
15	0255	Fine adjustment of rotation (pan)	
16	0255	255 Inclination (tilt) (0° up to the maximum value of the Tilt area)	
17	0255	Fine adjustment of the inclination (tilt)	
18	0255	Running speed of rotation (pan) and inclination (tilt), increasing speed	
19	0255	Dimmer intensity (0% to 100%)	
20	Strobe		
	010	Closed	
	11128	Random flashing (strobe), increasing speed	
	129255	Linear flashing (strobe), increasing speed	
21	Colour selection		

Channel	Value	Function	
	07	White	
	815	White/red	
	1623	Red	
	2431	Red/green	
	3239	Green	
	4047	Green/blue	
	4855	Blue	
	5663	Blue/yellow	
	6471	Yellow	
	7279	Yellow/purple	
	8087	Purple	
	8895	Purple/orange	
	96103	Orange	
	104111	Orange/turquoise	
	112127	Turquoise	
	128191	Clockwise rotation, decreasing speed	
	192255	Anti-clockwise rotation, increasing speed	
22	Gobo selection		
	09	Open (white)	
	1019	Gobo 1	
	2029	Gobo 2	
	3039	Gobo 3	
	4049	Gobo 4	
	5059	Gobo 5	
	6069	Gobo 6	
	7079	Gobo 6 shake, increasing speed	
	8089	Gobo 5 shake, increasing speed	
	9099	Gobo 4 shake, increasing speed	
	100109	Gobo 3 shake, increasing speed	
	110119	Gobo 2 shake, increasing speed	
	120129	Gobo 1 shake, increasing speed	
	130191	Clockwise rotation, decreasing speed	
	192255	Anti-clockwise rotation, increasing speed	
23	Gobo wheel	rotation	
	0127	No function	
	128191	Gobo wheel, clockwise rotation, decreasing speed	

Channel	Value	Function
	192255	Gobo wheel, anti-clockwise rotation, increasing speed
24	031	Prism closed
	32255	Prism open
25	0127	Prism, static rotation at a specific angle
	128191	Prism, clockwise rotation, decreasing speed
	192255	Prism, anti-clockwise rotation, increasing speed
26	09	No function
	1020	Reset (after 5 seconds)
	21255	No function

Settings for LED scanner 3 (*'Lamp3'*)

Channel	Value	Function	
27	0255	Rotation (pan) (0° up to the maximum value of the Pan range)	
28	0255	Fine adjustment of rotation (pan)	
29	0255	Inclination (tilt) (0° up to the maximum value of the Tilt area)	
30	0255	Fine adjustment of the inclination (tilt)	
31	0255	Running speed of rotation (pan) and inclination (tilt), increasing speed	
32	0255	Dimmer intensity (0% to 100%)	
33	Strobe		
	010	Closed	
	11128	Random flashing (strobe), increasing speed	
	129255	Linear flashing (strobe), increasing speed	
34	Colour selection		
	07	White	
	815	White/red	
	1623	Red	
	2431	Red/green	
	3239	Green	
	4047	Green/blue	
	4855	Blue	
	5663	Blue/yellow	
	6471	Yellow	
	7279	Yellow/purple	
	8087	Purple	
	8895	Purple/orange	
	96103	Orange	



Channel	Value	Function
	104111	Orange/turquoise
	112127	Turquoise
	128191	Clockwise rotation, decreasing speed
	192255	Anti-clockwise rotation, increasing speed
35	Gobo select	ion
	09	Open (white)
	1019	Gobo 1
	2029	Gobo 2
	3039	Gobo 3
	4049	Gobo 4
	5059	Gobo 5
	6069	Gobo 6
	7079	Gobo 6 shake, increasing speed
	8089	Gobo 5 shake, increasing speed
	9099	Gobo 4 shake, increasing speed
	100109	Gobo 3 shake, increasing speed
	110119	Gobo 2 shake, increasing speed
	120129	Gobo 1 shake, increasing speed
	130191	Clockwise rotation, decreasing speed
	192255	Anti-clockwise rotation, increasing speed
36	Gobo whee	l rotation
	0127	No function
	128191	Gobo wheel, clockwise rotation, decreasing speed
	192255	Gobo wheel, anti-clockwise rotation, increasing speed
37	031	Prism closed
	32255	Prism open
38	0127	Prism, static rotation at a specific angle
	128191	Prism, clockwise rotation, decreasing speed
	192255	Prism, anti-clockwise rotation, increasing speed
39	09	No function
	1020	Reset (after 5 seconds)
	21255	No function

7.6 Gobos





8 Technical specifications



Light source	$3 \times CW$ -LED, 60 W		
Light source properties	Colour temperature	10233 K	
	Colour rendering index	CRI 79	
Optical properties	Beam angle	13°	
	Rotation angle (pan), max.	128°	
	Inclination angle (tilt), max.	22°	
Gobo wheel	$Gobo\varnothing$	22 mm	
	Image size of gobo \varnothing	17.5 mm	
Dimmer	electronic, 0%100%		
Shutter	electronic, 0 Hz20 Hz		
Control protocol	DMX-512		
Control	DMX		
	Buttons and display on the device		
	Foot switch (item no. 279058, available as	an option)	
Number of DMX channels	11, 13, 39		
Input connections	Power supply	$1 \times lockable input socket (Power Twist)$	
	DMX control	1 × XLR panel plug, 3-pin	
	Foot switch	1 × 6.35 mm jack socket	
Output connections	Power supply for further devices	$2 \times lockable output socket (Power Twist)$	
	DMX control	XLR panel socket, 3-pin	

Technical specifications

		XLR panel socket, 5-pin
Power consumption	236 W	
Supply voltage	100 - 240 V ~ 50/60 Hz	
Fuse	5 mm \times 20 mm, 2 A, 250 V, slow blow	
International Protection Rating	IP20	
Mounting options	Hanging, stand	
Dimensions (W \times H \times D)	1,200 mm × 338 mm × 183 mm	
Weight	17 kg	
Ambient conditions	Temperature range	0 °C40 °C
	Relative humidity	20%80% (non-condensing)

Further information

Construction type	Scanner
Light source type	LED
Light output	180 W
Number of gobo wheels	1
Rotating gobos	Yes
Static gobos	No
Electronic focus	Yes
Prism	Yes
Focus DMX-controlled	Yes
Dimmer	Yes
Number of colour wheels	1
Including Spotlight	Yes
Including Effects devices	Yes
Including Foot switch	No (item no. 279058, available as an option)
Including Stand	No
Including Case/bag	No



9 Plug and connection assignments

Introduction

DMX connections

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!

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')

Fehlerbehebung 10

NOTICE! Data transfer errors due to improper wiring!

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

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

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 connection and the main fuse.
No response to the DMX con- troller	1. Check the DMX connectors and cables for proper connection.
	2. Check the address settings and the DMX polarity.
	3. Try using 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 Cleaning

Optical lenses and mirrors

Clean the optical lenses and mirrors which are accessible from the outside periodically to optimise 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 of any contamination, such as dust, etc. on a regular basis. Before cleaning, switch off the device and disconnect mains-operated devices from the mains. Only use pH-neutral, solvent-free and non-abrasive cleaning agents. Clean the unit with a slightly damp lint-free cloth.

12 Protecting the environment

Disposal of the packing material





Disposal of your old device



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

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

Observe the disposal note regarding documentation in France.

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. When disposing of the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste management facility. Proper disposal protects the environment as well as the health of your fellow human beings.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

You can return your old device to Thomann GmbH at no charge. Check the current conditions on *www.thomann.de*.

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



Notes

