VARYTEC

LED Theater Spot 100 3000K

LED Spotlight

Table of contents

1   General information

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

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

1.1 Symbols and signal words

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

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
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 – dangerous optical radiation.
	Warning – suspended load.

Warning signs	Type of danger
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended for use as an electronic lighting effect by means of LED technology. 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 spotlights and barn doors that were inadequately secured!

If spotlights and barn doors are not properly secured when mounted, 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 spotlights with a secondary safety attachment, such as a safety cable or a safety chain. Always secure the barn door with a safety cable on the spotlight. The safety cable must run outside the barn door to not interfere with the light emission.

!

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 risk of fire when operated with closed barn doors!

If the spotlight is operated with the barn doors closed, there is a risk of overheating and fire. In addition, even short-term operation with the barn doors closed can reduce the service life of the LEDs. Operate the device only with open barn doors.

!

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. 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 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.

3   Features

The LED theatre spotlight replaces conventional Fresnel lens spotlights with 500 W … 650 W power.

Special features of the device:

- 1 × COB LED, 100 W
- Fresnel lens
- Colour temperature: 3000 K
- Colour rendering index: 95
- Max. light output: 6350 lux (2 m)
- 15° to 45° manually adjustable beam angle
- Operation in stand-alone or DMX mode (one or two channels, depending on operating mode)
- Operating via buttons and display on the unit
- Very quiet temperature-controlled fan for quiet operation
- Ideally suitable for use in theatres

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.

WARNING!

Risk of injury from falling spotlights and barn doors that were inadequately secured!

If spotlights and barn doors are not properly secured when mounted, 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 spotlights with a secondary safety attachment, such as a safety cable or a safety chain.

Always secure the barn door with a safety cable on the spotlight. The safety cable must run outside the barn door to not interfere with the light emission.

! **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!**

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!
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.

Befestigungsmöglichkeiten

Sie können das Gerät hängend oder stehend installieren. Die Befestigung während des Gebrauchs muss immer auf einer festen Oberfläche oder an einem dafür zugelassenen Träger erfolgen. Benutzen Sie zur Befestigung die dafür vorgesehenen Öffnungen des Bügels.

Arbeiten Sie immer von einer stabilen Plattform aus, wenn Sie das Gerät installieren, bewegen oder Wartungsarbeiten daran durchführen. Dabei muss der Bereich unterhalb des Geräts abgesperrt sein.

Das Sicherheitsfangseil muss an der Fangseilöse befestigt werden.

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.

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).
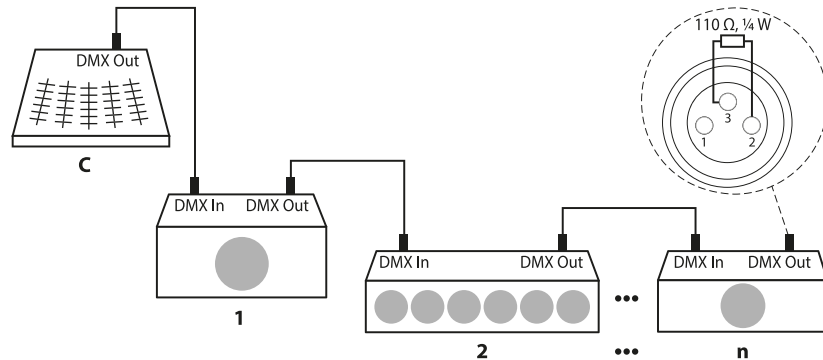
6   Connections and controls
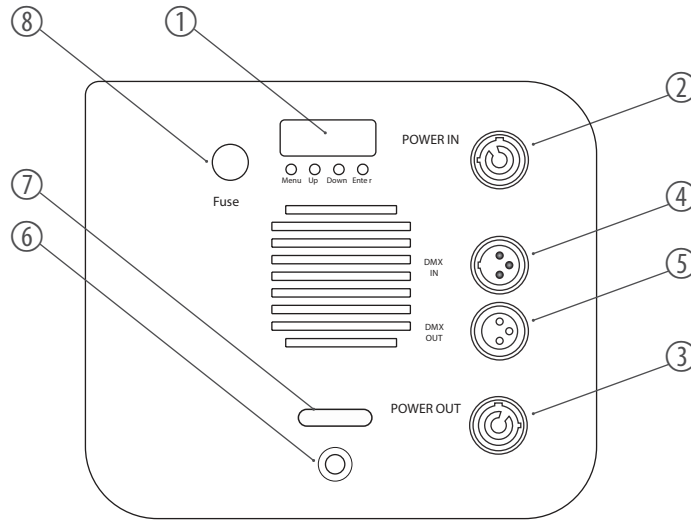
1	Display with function buttons. The display flashes when a valid DMX signal is present.
	[Enter]	Confirms a selected value.
	[Up], *[Down]*	Increases / decreases the displayed value by one.
	[Menu]	Calls up the main menu or a submenu.
2	Power-Twist connector for the power supply of the device.
3	Power-Twist connector for the voltage supply of a further device.
4	*[DMX IN]*	DMX input
5	*[DMX OUT]*	DMX output
6	Focus control. Adjusts the beam angle in a range from 15° to 45°.
7	Safety cable eyelet
8	Fuse holder
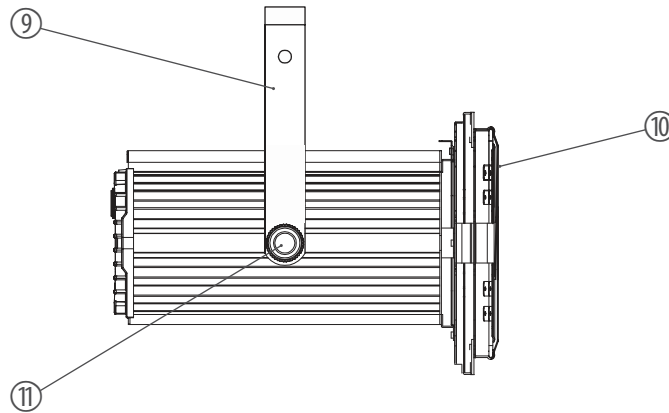
9	Mounting bracket
10	Front side with barn door attachment.
11	Locking screw for the mounting bracket.

7 Operating

7.1 Starting the device

Connect the device to the mains to start operation. The device is immediately operational and operates in most recently active mode and with the most recently selected settings.

7.2 Main menu

Menu control

Press *[Menu]* to open the main menu. Use *[Up]* or *[Down]* to select the required parameter or to change the displayed value. When the display shows the desired parameter or value, press *[Enter]* to access the respective submenu or to confirm a new value. To return to the previous menu level without changes, press *[Menu]*.

If you do not press any button for 60 seconds, the display will automatically turn off. Any changes you made are not applied.

DMX address

Press *[Menu]*. Press *[Up]* or *[Down]* repeatedly until the display shows *'Addr'* and confirm with *[Enter]*. Now you can set the number of the first DMX channel to be used by the device (DMX address). Use *[Up]* or *[Down]* to select a value between 1 and 512 (for 1-channel mode) or 511 (for 2-channel mode).

Confirm the selection with *[Enter]*. Use *[Menu]* to return to the parent menu.

To return to the parent menu without changes, press *[Menu]* without prior confirmation.

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

Dimmer

Press *[Menu]*. Press *[Up]* or *[Down]* repeatedly until the display shows *'Stat'* and confirm with *[Enter]*. Use *[Up]* and *[Down]* to adjust the dimmer function in a range from *'U000'* … *'U255'* (off … maximum brightness).

Confirm the selection with *[Enter]*. Use *[Menu]* to return to the parent menu.

To return to the parent menu without changes, press *[Menu]* without prior confirmation.

Strobe

Press *[Menu]*. Press *[Up]* or *[Down]* repeatedly until the display shows *'Stat'* and confirm with *[Enter]*. Use *[Up]* and *[Down]* to adjust the strobe frequency in a range from *'F000'* … *'F255'* (off … maximum speed).

Confirm the selection with *[Enter]*. Use *[Menu]* to return to the parent menu.

To return to the parent menu without changes, press *[Menu]* without prior confirmation.

Temperature

Press *[Menu]*. Press *[Up]* or *[Down]* repeatedly until the display shows *'tEmP'* and confirm with *[Enter]*. The display shows the current internal temperature of the device in *'XX'* format (numeric value).

Use *[Menu]* to return to the parent menu.

DMX mode

Press *[Menu]*. Press *[Up]* or *[Down]* repeatedly until the display shows *'CH'* and confirm with *[Enter]*. Now you can set the number of the first DMX channel to be used by the device (DMX address). Use *[Up]* or *[Down]* to select one of two DMX modes *'CH01'* (1-channel mode) or *'CH02'* (2-channel mode).

Confirm the selection with *[Enter]*. Use *[Menu]* to return to the parent menu.

To return to the parent menu without changes, press *[Menu]* without prior confirmation.

7.3   Menu overview

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········┬──────────────┬──────────────┬──────────────┬········
     ┌──┴──┐        ┌──┴──┐        ┌──┴──┐        ┌──┴──┐
     │Addr │        │Stat │        │tEmP │        │ CH  │
     └──┬──┘        └──┬──┘        └─────┘        └──┬──┘
        │              │                             │
     ┌──┴──┐        ┌──┴──┐                       ┌──┴──┐
     │  1  │        │U000 │                       │CH01 │
     └─────┘        └─────┘                       └─────┘
        ·              ·                             ·
        ·              ·                             ·
        ·              ·                             ·
     ┌─────┐        ┌─────┐                       ┌─────┐
     │ 512 │        │U255 │                       │CH02 │
     └─────┘        └─────┘                       └─────┘
                       │
                    ┌──┴──┐
                    │F000 │
                    └─────┘
                       ·
                       ·
                       ·
                    ┌─────┐
                    │F255 │
                    └─────┘
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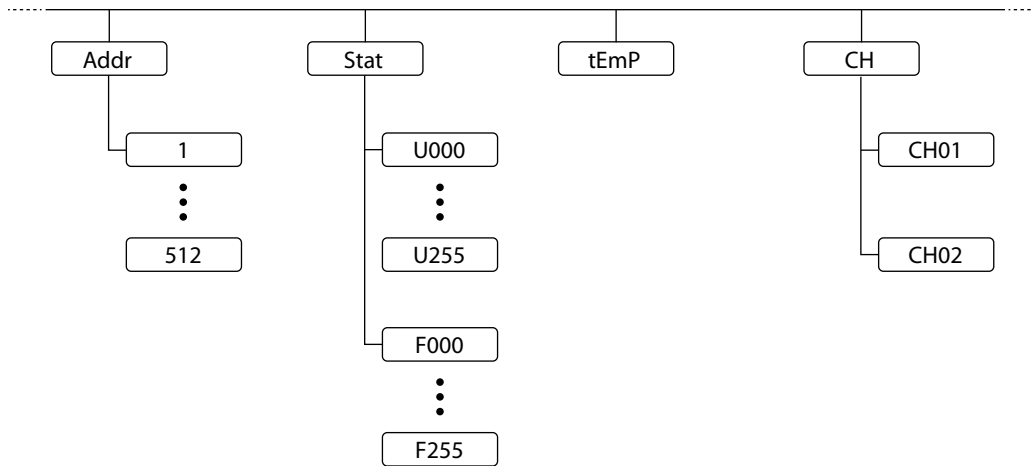
7.4 Functions in 1-channel DMX mode

Channel	Value	Function
1	0 … 255	Master dimmer (0% to 100%)

7.5 Functions in 2-channel DMX mode

Channel	Value	Function
1	0 … 255	White light dimmer (0% to 100%)
2	0 … 255	Strobe effect (0% to 100%)

8   Technical specifications
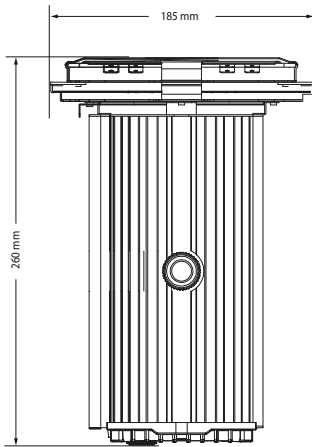
Light source	1 × COB LED, 100 W	
Light source properties	Colour temperature	3000 K
	Colour rendering index	95
Optical properties	Beam angle	15 ° … 45 °, manually adjustable on the device
Control	DMX, buttons and display on the unit	
Number of DMX channels	1 or 2	
Input connections	Power supply	lockable input socket (Power Twist)
	DMX control	XLR chassis socket, 3-pin
Output connections	Power supply of further devices	Lockable output socket (Power Twist)
	DMX control	XLR chassis socket, 3-pin
Power consumption	max. 115 W	
Supply voltage	100 - 240 V ∼ 50/60 Hz	
Fuse	5 mm × 20 mm, 3 A, 250 V, fast-acting	

Degree of protection	IP20	
Mounting options	Hanging, standing	
Dimensions (W × H × D)	160 mm × 185 mm × 260 mm	
Weight	5 kg	
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	20 %…80 % (non-con-densing)

Further information

Optic	Fresnel
Power of the individual LEDs	100 W
Fanless	No

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!**
>
> **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 device does not work, no light	Check the mains connection and the fuse.
No response to the DMX Controller	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 whether the DMX cables run near or parallel to high-voltage cables that may cause damage or interference to 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 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

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

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

Observe the disposal note regarding documentation in France.

Disposal of your old device

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

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. 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

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