

ignition

LED EXPO 310 6300 K,
LED EXPO 310 2700 K

LED spotlight

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Table of contents

1	General notes	6
	1.1 Further information.....	7
	1.2 Notational conventions.....	8
	1.3 Symbols and signal words.....	8
2	Safety instructions	11
3	Features	16
4	Installation	17
5	Starting up	21
6	Connections and controls	24
7	Operating	27
	7.1 Main menu.....	27
	7.2 Menu overview.....	32
	7.3 Functions in 2-channel DMX mode (Mod 1).....	33
	7.4 Functions in 1-channel DMX mode (Mod 2).....	34
8	Technical specifications	35

9	Plug and connection assignments.....	37
10	Troubleshooting.....	38
11	Cleaning.....	40
12	Protecting the environment.....	41



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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.
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 – suspended load.

Warning signs	Type of danger
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to be used as an electronic illumination effect using LED technics. The device is designed for professional use and is not suitable for use in households. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

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

Safety



DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.



DANGER!

Electric shock caused by high voltages inside

Within the device there are areas where high voltages may be present. Never remove any covers.

There are no user-serviceable parts inside.

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



DANGER!

Electric shock caused by short-circuit

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



WARNING!

Eye damage caused by high light intensity

Never look directly into the light source.



WARNING!

Risk of epileptic shock

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



NOTICE!

Risk of fire

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



NOTICE!

Operating conditions

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



NOTICE!

Power supply

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

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

3 Features

Powerful and flexible LED spotlight for showrooms, studios, exhibition booths, etc.

- LED configuration:
 - **LED EXPO 310 – 6300 K:** 31 cold white LEDs
 - **LED EXPO 310 – 2700 K:** 31 warm white LEDs
- Replacement for 575 W daylight lamps
- Control via DMX (2 channels) as well as via buttons and display on the unit
- Lockable connections (Power Twist) for self-supply and to supply additional devices
- sturdy bracket for secure attachment to trusses or firm footing on the ground

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.



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.



NOTICE!

Risk of overheating

Always ensure sufficient ventilation.

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



NOTICE!

Use of stands

When mounting the device onto a stand, ensure that the stand is in a safe and stable position and that the weight of the device does not exceed the maximum permissible load capacity of the stand.

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

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

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

Mounting options

You can install the unit in hanging or standing position. When in use, the device must always be attached to a solid surface or an approved truss. Use the openings provided on the two-piece bracket for attaching.

Always work from a stable platform whenever installing, moving or servicing the unit. In doing so, the area underneath the unit must be cordoned off.

The safety-rope must be attached to the bracket.



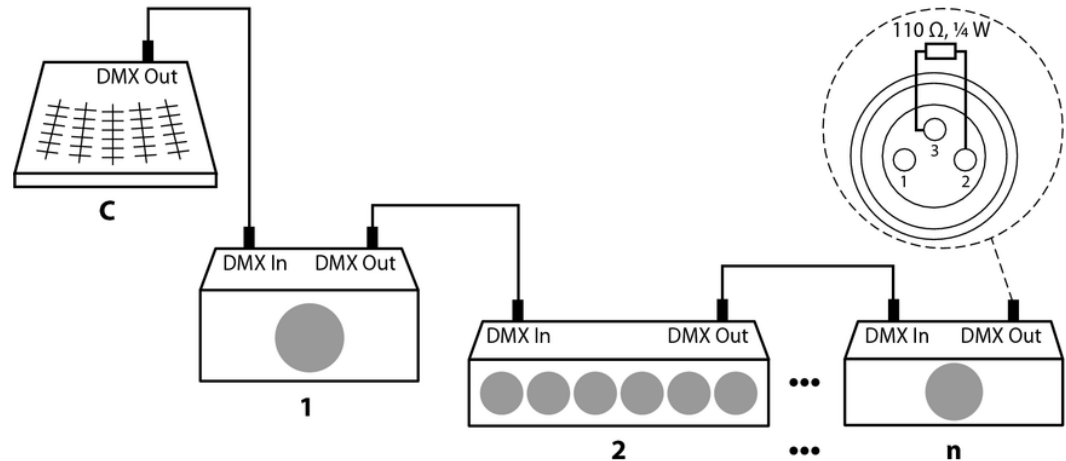
Please note that this device must not be connected to a dimmer.

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 ($110\ \Omega$, $\frac{1}{4}\text{ W}$).

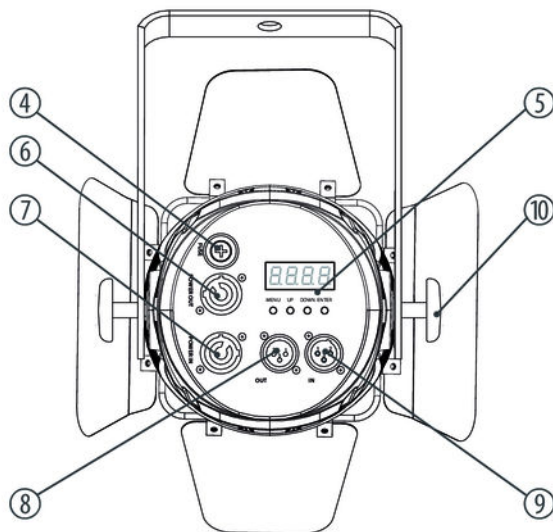
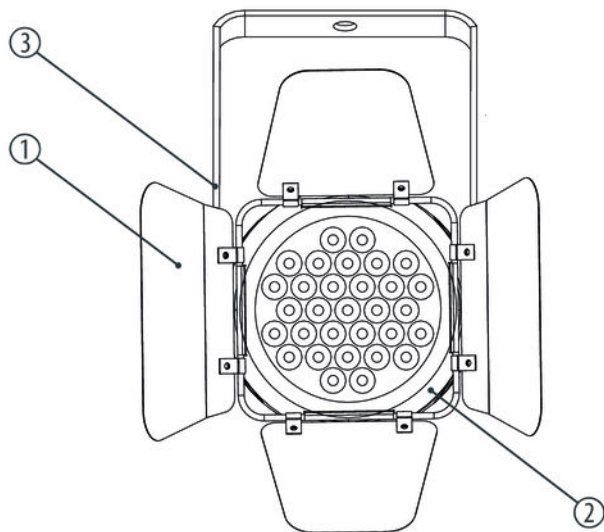


Connections in master/slave mode

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.

Connect the device to the power supply to start operation.

6 Connections and controls



1	Barn doors for directing the light beam.
2	LEDs
3	Bracket for hanging or installation and for securing the safety rope.
4	<i>[FUSE]</i> : Fuse holder
5	Display and control buttons: <i>[MENU]</i> : Activates the main menu and toggles between menu items. <i>[UP]</i> : Increases the displayed value by one. <i>[DOWN]</i> : Decreases the displayed value by one. <i>[ENTER]</i> : Selects an option of the respective operating mode.
6	<i>[POWER OUT]</i> : Lockable output socket (Power Twist) for powering a connected device.
7	<i>[POWER IN]</i> : Lockable input socket (Power Twist) for powering the device.
8	<i>[OUT]</i> : DMX output socket

9 *[IN]*: DMX input socket

10 Locking screw for fixing the spotlight.

7 Operating

7.1 Main menu

Press *[MODE]* to open the main menu. Use *[UP]* or *[DOWN]* to select the desired parameter or to change the respectively displayed value. When the display shows the desired parameter or value press *[ENTER]* to enter the respective submenu or to confirm a new value. To return to the previous menu level without changes, press *[MENU]*.

Enabling DMX operation

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Personal'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Status'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Addr DMX'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select between 'On' (DMX mode on) and 'OFF' (DMX mode off).

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

Selecting DMX mode

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Personal'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Status'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'DMX Mod'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select between 'Mod 1' (2 channels) and 'Mod 2' (1 channel).

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

Setting the DMX address

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Function'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Addr'. 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. Make sure that this number matches the configuration of your DMX controller. This setting is only relevant when the device is controlled via DMX.

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

DMX value display

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Function'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Value'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Free Ch'. The display shows the currently received DMX value.

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

Selecting the behaviour on missing DMX signal.

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Personal'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Status'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'No DMX'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select between 'Hold' (the last received DMX value will be retained if the DMX signal is missing), 'Open' (all values will be set to 255 if the DMX signal is missing) and 'Save' (all values will be set to zero – blackout if the DMX signal is missing).

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

Brightness setting

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Adjust'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Test'. Press *[ENTER]* twice. Use *[UP]* or *[DOWN]* to adjust the brightness in a range of 0 % (display shows '000') to 100 % (display shows '255'). This setting is only relevant if the device is not controlled via DMX.

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

Resetting to basic settings

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Personal'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Default'. Press *[ENTER]*. The device performs a reset.

Setting the display off time

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Personal'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Display'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'CloseT'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select switch-off time of the display in a range from '02m' to '59m'.

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

Selecting display inversion

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Personal'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Display'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Rev'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select between 'On' (display is rotated by 180 °) and 'OFF' (normal display).

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

Operating hours display

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Info'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Time'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select one of the following submenus and confirm with *[ENTER]*:

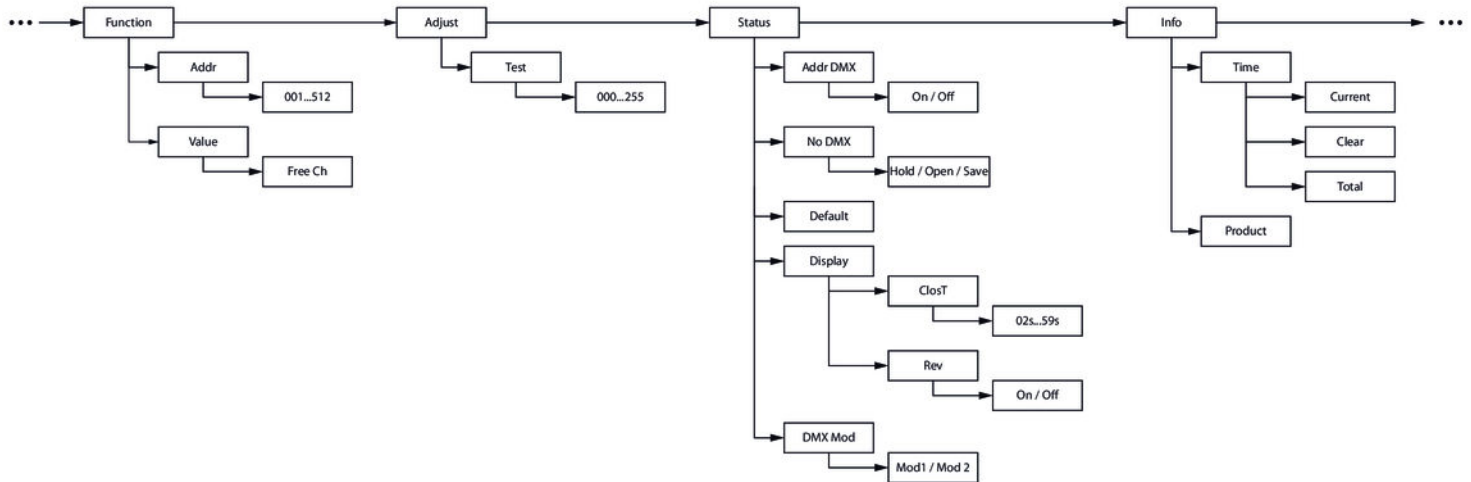
- 'Current': Indicates the current operating hours
- 'Total': Indicates the total operating hours
- 'Clear': Resets the current operating hours to zero

Confirm your selection with *[ENTER]*. Use *[MODE]* to return to the parent menu.

Showing software version

Press *[MODE]*. Press *[UP]* or *[DOWN]* repeatedly until the display shows 'Info'. Press *[ENTER]*. Use *[UP]* or *[DOWN]* to select the submenu 'Product'. Press *[ENTER]*. The software version of the device will now appear on the display.

7.2 Menu overview



7.3 Functions in 2-channel DMX mode (Mod 1)

Channel	Value	Function
1	0...255	Brightness (0 % to 100 %)
2	0	Open shutter
	1...95	Stroboscope effect, increasing speed
	96...127	Open shutter
	128...159	Pulse effect
	160...191	Open shutter
	192...223	Random stroboscope effect, increasing speed
	224...255	Open shutter

7.4 Functions in 1-channel DMX mode (Mod 2)

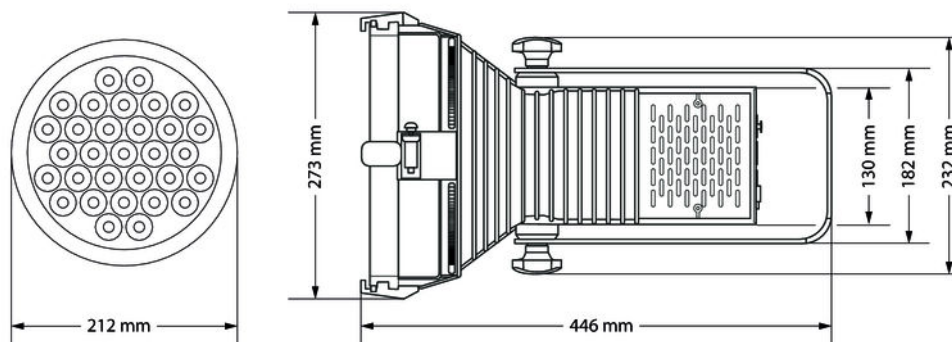
Channel	Value	Function
1	0...255	Brightness (0 % to 100 %)

8 Technical specifications

	LED EXPO 310 – 6900 K	LED EXPO 310 – 2700 K
Item no.	390807	420506
LED configuration:	31 × 10 W, cold white	31 × 10 W, warm white
Colour temperature	6900 K	2700 K
Number of DMX channels:	2	
Beam angle	20 °	
Modulation	1800 Hz	
DMX input, DMX output	XLR 3-pin	
Power consumption	350 W	
Operating supply voltage	100 – 240 V ~ 50/60 Hz	
Fuse	5 mm × 20 mm, 5 A, 250 V, slow-blow	

Technical specifications

	LED EXPO 310 – 6900 K	LED EXPO 310 – 2700 K
Dimensions (W × H × D)	270 mm × 270 mm × 490 mm	
Weight	6.6 kg	



9 Plug and connection assignments

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

DMX connections



The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.

Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX-, 'cold signal')
3	Signal (DMX+, 'hot signal')

10 Troubleshooting



NOTICE!

Possible data transmission errors

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

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

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

Symptom	Remedy
The unit does not work, no light.	Check the mains connection and the fuse.
No response to the DMX controller.	1. Check the DMX ports 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

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.

12 Protecting the environment

Disposal of the packaging material



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

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

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

Disposal of your old device



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

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

