VARYTEC

Rainbow Bar 9
Rainbow Bar 8

User manual

LED bar

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17.10.2019, ID: 463022_463021

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1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under *www.thomann.de*.

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'*.

Instructions

The individual steps of an instruction are numbered consecutively. The result of a step is indented and highlighted by an arrow.

Example:

1. Switch on the device.

2. Press *[Auto]*.

⇨ Automatic operation is started.

3. Switch off the device.

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 – dangerous optical radiation.

Warning signs	Type of danger
	Warning – suspended load.
	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 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 life of the device by regular breaks in operation and avoid switching it on and off frequently. This device is not suitable for continuous use.

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.

Only operate the device within the ambient conditions specified in the chapter 'Technical specifications' of this user manual. Avoid heavy temperature fluctuations and do not switch the device on immediately after it was exposed to temperature fluctuations (for example after transport at low outside temperatures).

Dust and dirt inside can damage the unit. When operated in harmful ambient conditions (dust, smoke, nicotine, fog, etc.), the unit should be maintained by qualified service personnel at regular intervals to prevent overheating and other malfunction.

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 damage due to installation of a wrong fuse

The use of different types of fuses can cause serious damage to the unit. Fire hazard!

Only fuses of the same type may be used.

3 Features

The Rainbow Bar is particularly suitable for professional lighting tasks, for example at events, in clubs and bars. The bar is characterized by low power consumption and long service life.

Special features of the device:

- Item no. 463021: 8 × RGB-3in1 LED for decorative rainbow effects
- Item no. 463022 : 9 × RGB single-colour LED for decorative rainbow effects
- Innovative lens system
- Control via DMX (2 different modes) and via buttons and display on the unit
- Built-in automatic show programmes
- Sound control
- Master / Slave mode
- Electronic shutter 0 … 25 Hz
- Noiseless due to passive cooling
- Robust metal housing

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 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

The distance between light output and the illuminated surface must be more than 1.5 m (19.7in).

Provide 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 of the brackets for fixing.

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 both brackets.

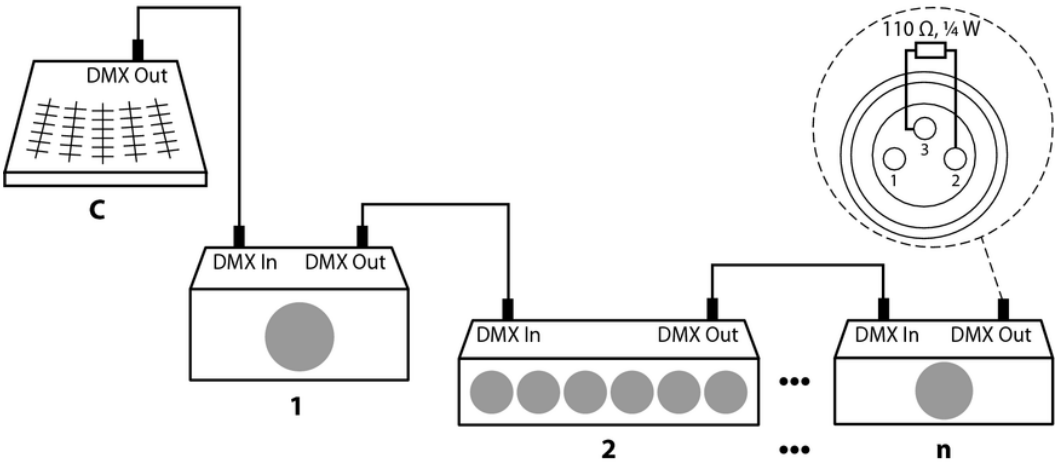
Please note that this device must not be connected to a dimmer.

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).



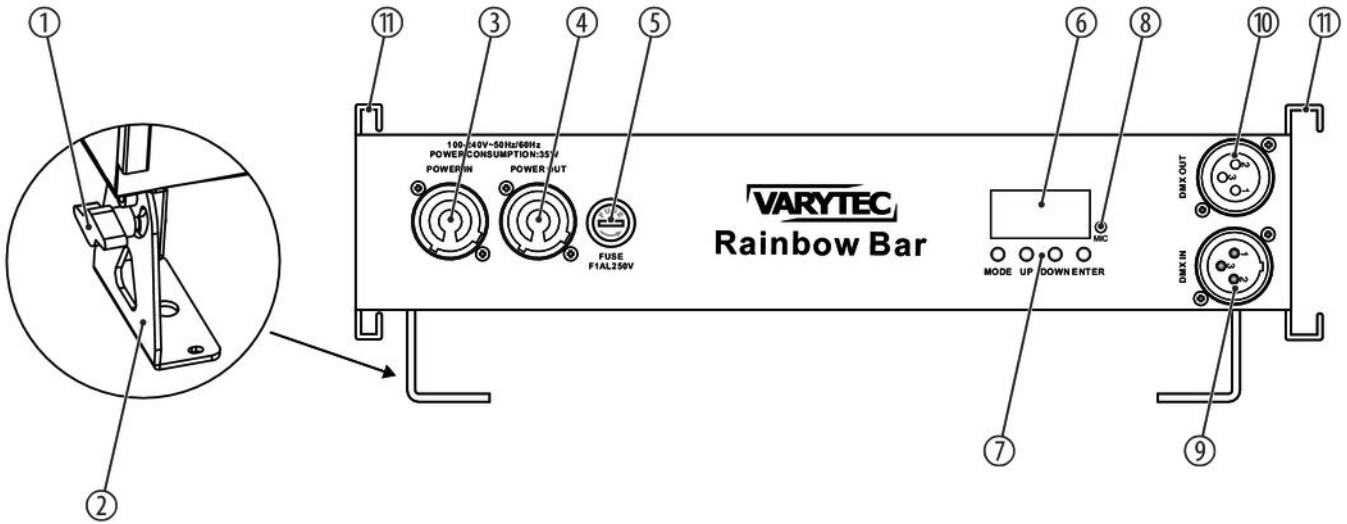
DMX indicator

If the indicator is flashing in the DMX mode, no DMX signal is received. Maybe the DMX controller is not switched on or there is a cabling error. If the indicator lights permanently, the device receives a valid DMX signal.

Connections in master/slave mode

When you configure a group of devices in master/slave mode, the first unit will control the other units for an automatic, sound-activated, synchronized show. This function is ideal when you want to start a show immediately. Connect the DMX output of the master device to the DMX input of the first slave device. Then connect the DMX output of the first slave device to the DMX input of the second slave device and so on.

6 Connections and operating elements



1	Locking screw for the mounting bracket
2	Mounting bracket
3	*[POWER IN]* Lockable Power Twist input socket
4	*[POWER OUT]* Lockable Power Twist output socket to supply further devices.
5	*[FUSE]* Fuse holder
6	Display
7	Buttons for menu control
	[MODE] Activates the main menu and toggles between menu items. Closes an open submenu without saving any changes.
	[UP] Navigates upwards in a menu list. Increases the displayed value by one.

	Button *[DOWN]* Navigates downwards in a menu list. Decreases the displayed value by one.
	[ENTER] Confirms a selected value.
8	*[MIC]* Built-in microphone for sound control
9	*[DMX IN]* DMX input
10	*[DMX OUT]* DMX output
11	Hanger bracket for mechanical, seamless connection of several devices with each other

7 Operating

7.1 Starting the device

Connect the device to the power supply to start operation. The device is immediately operational. The display shows the last used mode.

7.2 Operating on the unit

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to change the respectively indicated value.
3. With *[MODE]* you return to the previous menu level.

DMX address

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'Addr'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to select the desired DMX address between 001 and 512. Make sure that this number matches the configuration of your DMX controller.
4. Press *[ENTER]* to accept the selection.

   This setting is only relevant when the device is controlled via DMX.

   When the DMX mode is active, a dot flashes in the second digit of the display.
5. Press *[MODE]* to enable DMX mode. The display now shows the selected DMX address.

DMX mode

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'Chnd'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to select the desired DMX mode (3 or 8 channels). Depending on the selected mode, the display shows *'3Ch'* or *'8Ch'*.
4. Press *[ENTER]* to accept the selection.

   This setting is only relevant when the device is controlled via DMX.

   When the DMX mode is active, a dot flashes in the second digit of the display.

Master-Slave mode

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'SLnd'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to select either the Master mode (display shows *'Mast'*) or Slave mode (display shows *'SL 1'*).
4. Press *[ENTER]* to accept the selection.

   ⇨ In master mode, the device determines the settings of the connected slave devices if the cabling is correct. In Slave mode, the device behaves like the controlling master device.

This setting is only relevant if the device is not controlled via DMX.

Behaviour on DMX control failure

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'Lost'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to choose between *'blac'*, *'hold'* or *'Auto'* to make the setting to be used when the DMX controller fails.
4. Press *[ENTER]* to accept the selection.

Display	Meaning
'blac'	Spotlight turns off.
'hold'	Last effect is being held.
'Auto'	Automatic mode is activated.
'SOUn'	Sound control is activated.

Automatic shows

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'A1on'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to select the submenu *'Auto'*. Confirm with *[ENTER]*.

   Use *[UP]* or *[DOWN]* to select an automatic show *'Sh_1'* … *'Sh_8'*. Confirm with *[ENTER]*.

   Use *[UP]* or *[DOWN]* to select the desired programme speed from slow to fast (display shows *'A.000'* … *'A.249'*). Check that the microphone sensitivity is set to *'S000'*.
4. Press *[ENTER]* to accept the selection.

Sound control

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'A1on'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to select the submenu *'SOUn'*. Confirm with *[ENTER]*.

   Use *[UP]* or *[DOWN]* to select an automatic show *'Sh_1'* … *'Sh_8'*. Confirm with *[ENTER]*.

   Use *[UP]* or *[DOWN]* to select a value between *'S000'* and *'S099'* to set the microphone sensitivity for sound control. Check that the programme speed is set to *'A.000'*.
4. Press *[ENTER]* to accept the selection.

Manual test of colour macros

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'Manu'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to select the colour macro you want to test (display shows *'Co_1'* … *'Co_7'*).

Device temperature

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'Tenp'*. Confirm with *[ENTER]*.
   ⇨ The display indicates the device temperature (display shows *'00C'* … *'90C'*).
3. Press *[ENTER]*.
   ⇨ The menu is closed.

Display illumination

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'Led'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to choose between *'On'* (display permanently on) and *'off'* (display turns off after a few seconds in case of inactivity).
4. Press *[ENTER]* to accept the selection.

Rotating the Display

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'disp'*. Confirm with *[ENTER]*.
3. Use *[UP]* or *[DOWN]* to choose between *'On'* (display rotated by 180 °) and *'off'* (display not rotated).
4. Press *[ENTER]* to accept the selection.

Total runtime

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'Fhrs'*. Confirm with *[ENTER]*.
   ⇨ The display shows the total runtime of the device.
3. Press *[ENTER]*.
   ⇨ The menu is closed.

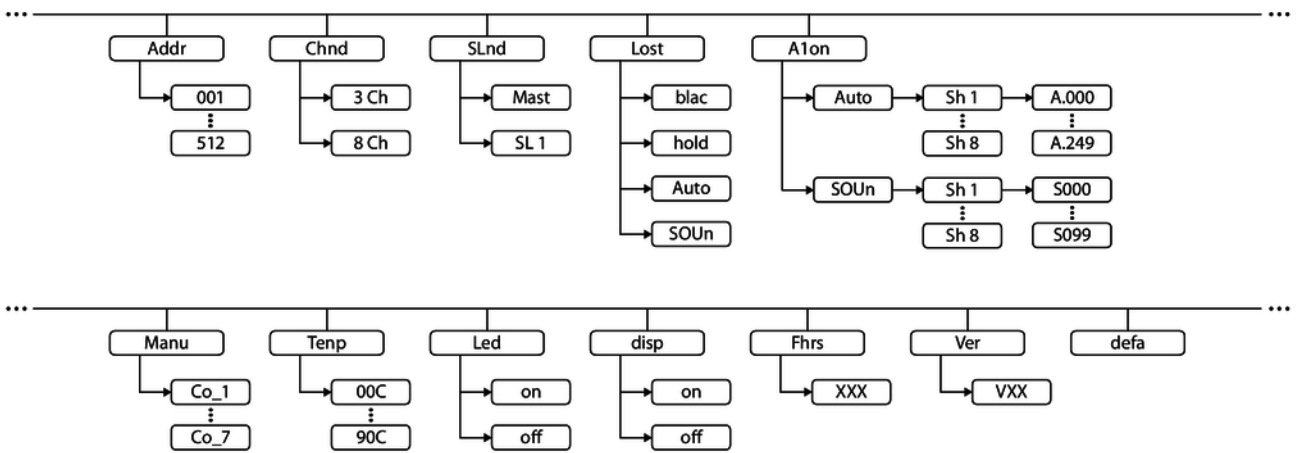
Software version

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'Ver'*. Confirm with *[ENTER]*.
   ⇨ The display shows the software version of the device.
3. Press *[ENTER]*.
   ⇨ The menu is closed.

Reset

1. Press *[MODE]* to activate the main menu.
2. Use *[UP]* or *[DOWN]* to select the submenu *'defa'*. Confirm with *[ENTER]*.
   ⇨ The device is reset to the default settings.

7.3 Menu overview



7.4 Functions in 3-channel DMX mode

Channel	Value	Function
1	0…255	Intensity red (0 % to 100 %)
2	0…255	Intensity green (0 % to 100 %)
3	0…255	Intensity blue (0 % to 100 %)

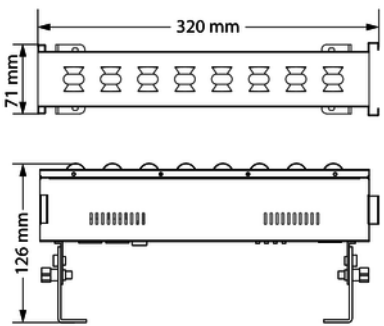
7.5 Functions in 8-channel DMX mode

Channel	Value	Function
1	0…15	No function
	16…45	Automatic show 1: Jump colour change 7 colours
	46…75	Automatic show 2: Jump colour change red – blue – green – blue
	76…105	Automatic show 3: Jump colour change red-blue – green-blue – red-green

Channel	Value	Function
	106…135	Automatic show 4: Colour gradient 7 colours
	136…165	Automatic show 5: Colour gradient red – blue – green – blue
	166…195	Automatic show 6: Colour gradient red-blue – green-blue – red-green
	196…225	Automatic show 7: Strobe effect
	226…255	Automatic show 8: Jump colour change 7 colours, colour gradient 7 colours, stroboscope effect
2	0…249	Sound control off, automatic show 1 … 8 with increasing speed
	250…255	Sound control, automatic show 1 … 8 in the rhythm of the music
3	0…31	No function
	32…63	Colour macro red
	64…95	Colour macro green
	96…127	Colour macro blue
	128…159	Colour macro red and green

Channel	Value	Function
	160…191	Colour macro red and blue
	192…223	Colour macro green and blue
	224…255	Colour macro red, green and blue
4	0…255	Dimmer (0 % to 100 %), for all LEDs
5	0…15	No function
	16…95	Stroboscope effect, 1 Hz … 25 Hz, increasing speed
	96…175	Stroboscope effect, 1 Hz, increasing speed
	176…255	Stroboscope effect, random speed
6	0…255	Intensity red (0 % to 100 %)
7	0…255	Intensity green (0 % to 100 %)
8	0…255	Intensity blue (0 % to 100 %)

8 Technical specifications



		Rainbow Bar 9 Item no. 463022	Rainbow Bar 8 Item no. 463021
Light source		9 × RGB single-colour LED, 3 W	8 × RGB 3in1 LED, 3 W
Optical properties	Beam angle	10 × 120°	
Control		DMX	
		Buttons and display on the unit	
Number of DMX channels		3, 8	
Input connections	Voltage supply	Lockable input socket (Power Twist)	
	DMX control	XLR chassis socket, 3-pin	
Output connections	Voltage supply	Lockable output socket (Power Twist)	
	DMX control	XLR chassis socket, 3-pin	

		Rainbow Bar 9 Item no. 463022	Rainbow Bar 8 Item no. 463021
Power consumption		35 W	
Operating supply voltage		100 – 240 V ~ 50/60 Hz	
Fuse		5 mm × 20 mm, 1 A, 250 V, fast-acting	
Protection class		IP20	
Mounting options		hanging, standing	
Dimensions (W × H × D)		320 mm × 126 mm × 71 mm	
Weight		1.0 kg	
Ambient conditions	Temperature range	0 °C…40 °C	
	Relative humidity	50 %, non-condensing	

Further information

	Rainbow Bar 9 **Item no. 463022**	**Rainbow Bar 8** **Item no. 463021**
Outdoor capable	No	No
Colour mixture	RGB	RGB
LED type	Uni-coloured	x-in-1
Fanless	Yes	Yes
Remote control	Not possible	Not possible
Wireless DMX	No	No
Housing colour	black	black
LEDs individually controllable	No	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!

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 main fuse.
No response to the DMX controller	1. When the display flashes, e.g. *'d001'*, no valid DMX signal is received. Check whether the DMX controller is switched on. Check the DMX connectors and cables for proper connection.
	2. If the display is not flashing but there is still no response, 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.

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) in its currently valid version. 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.