VARYTEC

Colors SonicStrobe

stroboscope

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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'* .

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 to be used as an illumination effect. 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.

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

- LED stroboscope with ambient effect
- 216 × CW LEDs for bright and dynamic strobe, blinder and wash effects
- 144 × RGB LEDs for colourful accents in the background
- Up to 48 individually controllable segments with the RGB LEDs
- Control via DMX and via buttons and display on the unit
- Operating modes:
  - Master/Slave
  - Sound control via built-in microphone
  - Auto operation
  - DMX
- 17 built-in chase programmes in automatic mode and sound control
- Flash rate: 20 Hz
- Swivelling mounting bracket

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!**
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 cable must be attached to the safety eyelet.

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).
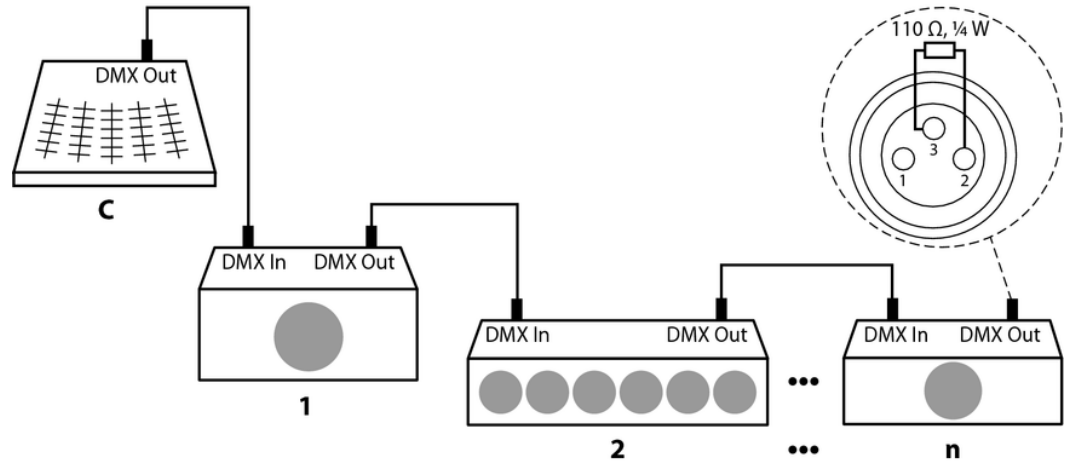
Connections in master/slave mode

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

Front panel
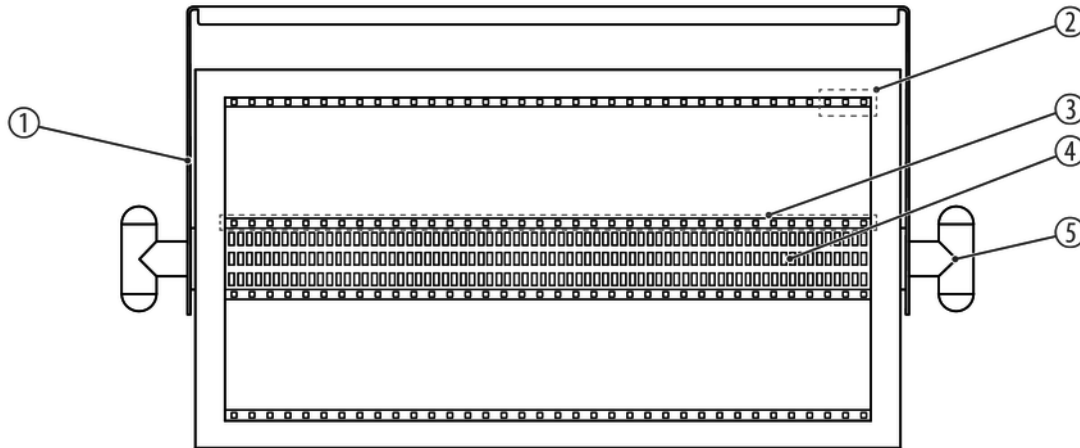
1	Hanging bracket/floor stand.
2	RGB LEDs (1 of 48 LED groups in 148-channel DMX mode)
3	RGB LEDs (1 of 4 LED segments in 22-channel DMX mode)
4	CW LEDs
5	Locking screws for the bracket for hanging or placement.

Rear side and connection panel

⑥ ⑦ ⑧   ⑨   ⑩   ⑪ ⑫

POWER IN   POWER OUT   F2AL250V
100-240V~50/60Hz - Power Consumption: 132W

VARYTEC   Colors SonicStrobe

MENU ▲ ▼ ENTER

DMX OUT   DMX IN
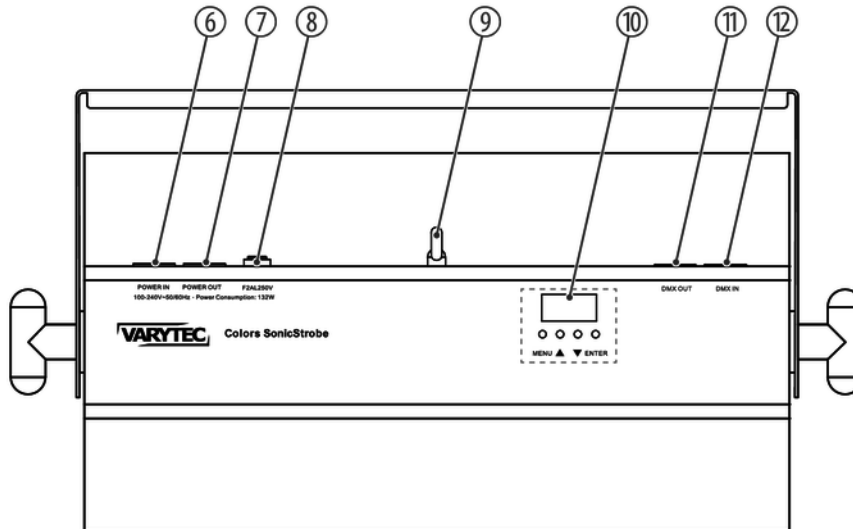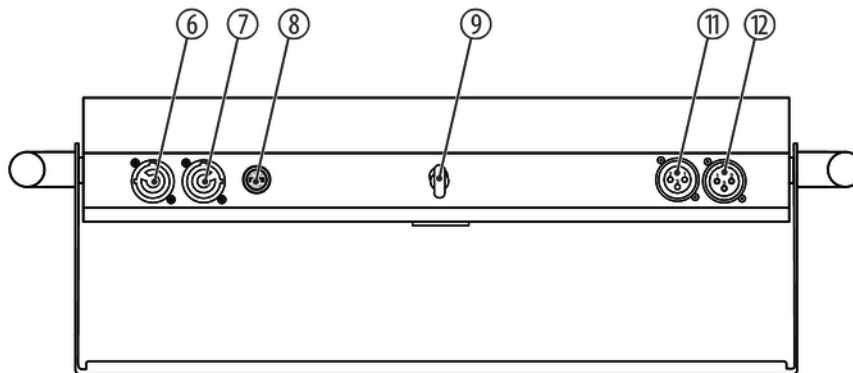
6	*[POWER IN]* Lockable input socket (Power Twist) for powering the device
7	*[POWER OUT]* Lockable output socket (Power Twist) for powering further devices
8	*[F2AL250V]* Fuse
9	Safety eye for attaching the safety cable
10	Display
	[MENU] Activates the main menu for selecting the operating mode
	▲ Increases the displayed value by one
	▼ Decreases the displayed value by one

	[ENTER] Selects an option of the respective operating mode
11	*[DMX IN]* DMX input
12	*[DMX OUT]* DMX output

7 Operating

Starting the device

To start operation, connect the device to the mains. The device is immediately operational.

The set values are retained during a power supply interruption.

Master/slave mode

This setting is only relevant if the device is working as Slave in a Master / Slave configuration and is not controlled via DMX. In this operating mode, the device responds to the control signals of the master device.

Press *[MENU]* repeatedly until the display shows *'SLAv'*. Confirm with *[ENTER]*.

Operating mode 'Sound control'

Sound control mode can only be activated when the unit is operating in stand alone mode or as master in a master / slave combination. This setting is only relevant if the device is not controlled via DMX. In this operating mode, the device responds to acoustic pulses which are recorded by the integrated microphone.

■ Briefly press *[MENU]* repeatedly until the display shows *'SoUn'*. Confirm with *[ENTER]*.
  Use ▲ and ▼ to select between *'SoXX'* and *'SeXX'*. Confirm with *[ENTER]*.
■ Use ▲ and ▼ to select the desired show programme (*'So00'* … *'So16'*) or specify the sensitivity for the built-in microphone for sound control in a range from *'SE00'* (low sensitivity) … *'SE99'* (high sensitivity). Confirm with *[ENTER]*.

'Automatic mode'

Auto mode can only be activated when the unit is operating in stand alone mode or as master in a master / slave combination. This setting is only relevant if the device is not controlled via DMX. In auto mode, 17 different show programmes are available, which run with adjustable speed.

■ Press *[MENU]* repeatedly until the display shows *'Auto'*. Confirm with *[ENTER]*.
  Use ▲ and ▼ to select the desired show programme (*'Au00'* … *'Au16'*) and confirm with *[ENTER]*. The display shows *'SP'*.
■ Use ▲ and ▼ to set the running speed of the programme in a range from *'SP00'* (slow) … *'SP99'* (fast) and confirm with *[ENTER]*.

Display shutdown

This function switches the display off after 30 s.

Press *[MENU]* repeatedly until the display shows *'LED'*. Confirm with *[ENTER]*.

Use ▲ and ▼ select between the options *'ON'* (display stays on) and *'OFF'* (display turns off after 30 s) and confirm with *[ENTER]*.

Display setting

This function rotates the display by 180 °.

Press *[MENU]* repeatedly until the display shows *'DISP'*. Confirm with *[ENTER]*. The display is now inverted.

Operating mode 'DMX'

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

■ Briefly press *[MENU]* repeatedly until the display shows *'Addr'*. Confirm with *[ENTER]*.
Use ▲ and ▼ to select a DMX address in the range from *'A001'* … *'A512'* and confirm with *[ENTER]*.
■ Briefly press *[MENU]* repeatedly until the display shows *'XXCH'*. Confirm with *[ENTER]*.
Use ▲ and ▼ to select DMX mode (*'7CH'*, *'13CH'*, *'22CH'* or *'148C'*) and confirm with *[ENTER]*.

DMX mode	Highest possible start address
7-channel mode	507
13-channel mode	500
22-channel mode	491
148-channel mode	365

The RGB LEDs are divided into 4 segments in 22-channel mode and 48 LED groups in 148-channel mode.

7.1 Functions in 7-channel mode

Channel	LED	Value	Function
1	Strobe LED	0…255	Intensity (0 % to 100 %)
2	Strobe LED	0…8	No function
		9…255	Strobe, increasing speed
3	Ambient LED	0…255	Intensity (0 % to 100 %)
4	Ambient LED	0…8	No function
		9…255	Strobe, increasing speed
5	Ambient LED	0…255	Intensity red (0 % to 100 %)
6	Ambient LED	0…255	Intensity green (0 % to 100 %)
7	Ambient LED	0…255	Intensity blue (0 % to 100 %)

7.2 Functions in 13-channel mode

Channel	LED	Value	Function
1	Strobe LED	0…255	Intensity (0 % to 100 %)
2	Strobe LED	0…8	No function
		9…255	Strobe, increasing speed
3	Strobe LED	0…255	Flash duration increasing
4	Effect LED	0…255	Intensity (0 % to 100 %)
5	Effect LED	0…8	No function
		9…255	Strobe, increasing speed
6	Effect LED	0…255	Intensity red (0 % to 100 %)
7	Effect LED	0…255	Intensity green (0 % to 100 %)
8	Effect LED	0…255	Intensity blue (0 % to 100 %)
9	Effect LED	Auto programmes	

Channel	LED	Value	Function
		0…7	No function
		8…22	Programme 1
		23…37	Programme 2
		38…52	Programme 3
		53…82	Programme 4
		83…97	Programme 5
		98…112	Programme 6
		113…127	Programme 7
		128…142	Programme 8
		143…157	Programme 9
		158…172	Programme 10
		173…187	Programme 11
		188…202	Programme 12

Channel	LED	Value	Function
		203…217	Programme 13
		218…232	Programme 14
		233…247	Programme 15
		248…255	Programme 16
10	Effect LED	0…255	Programme running speed increasing
11	Effect LED	0…7	No function
		8…255	Preset mixed colours for automatic programmes
12	Effect LED	Background colour	
		0…15	Automatic
		16…255	R / G / B / RG / RB / GB / RGB
13	Effect LED	0…127	Change of direction, from bottom to top
		128…255	Change of direction, from top to bottom

7.3   Functions in 22-channel mode

Channel	LED	Value	Function
1	Strobe LED	0…255	Intensity (0 % to 100 %)
2	Strobe LED	0…8	No function
		9…255	Strobe, increasing speed
3	Strobe LED	0…255	Flash duration increasing
4	Effect LED	0…255	Intensity (0 % to 100 %)
5	Effect LED	0…8	No function
		9…255	Strobe, increasing speed
6	Effect LED	0…255	Intensity red (0 % to 100 %), segment 1
7	Effect LED	0…255	Intensity green (0 % to 100 %), segment 1
8	Effect LED	0…255	Intensity blue (0 % to 100 %), segment 1
9	Effect LED	0…255	Intensity red (0 % to 100 %), segment 2

Channel	LED	Value	Function
10	Effect LED	0…255	Intensity green (0 % to 100 %), segment 2
11	Effect LED	0…255	Intensity blue (0 % to 100 %), segment 2
12	Effect LED	0…255	Intensity red (0 % to 100 %), segment 3
13	Effect LED	0…255	Intensity green (0 % to 100 %), segment 3
14	Effect LED	0…255	Intensity blue (0 % to 100 %), segment 3
15	Effect LED	0…255	Intensity red (0 % to 100 %), segment 4
16	Effect LED	0…255	Intensity green (0 % to 100 %), segment 4
17	Effect LED	0…255	Intensity blue (0 % to 100 %), segment 4
18	Effect LED	Auto programmes	
		0…7	No function
		8…22	Programme 1
		23…37	Programme 2
		38…52	Programme 3

Channel	LED	Value	Function
		53…82	Programme 4
		83…97	Programme 5
		98…112	Programme 6
		113…127	Programme 7
		128…142	Programme 8
		143…157	Programme 9
		158…172	Programme 10
		173…187	Programme 11
		188…202	Programme 12
		203…217	Programme 13
		218…232	Programme 14
		233…247	Programme 15
		248…255	Programme 16

Channel	LED	Value	Function
19	Effect LED	0…255	Programme running speed increasing
20	Effect LED	0…7	No function
		8…255	Preset mixed colours for automatic programmes
21	Effect LED	Background colour	
		0…15	Automatic
		16…255	R / G / B / RG / RB / GB / RGB
22	Effect LED	0…127	Change of direction, from bottom to top
		128…255	Change of direction, from top to bottom

7.4 Functions in 148-channel mode

Channel	LED	Value	Function
1	Strobe LED	0…255	Intensity (0 % to 100 %)
2	Strobe LED	0…8	No function
		9…255	Strobe, increasing speed
3	Effect LED	0…255	Intensity (0 % to 100 %)
4	Effect LED	0…8	No function
		9…255	Strobe, increasing speed
5	Effect LED	0…255	Intensity red (0 % to 100 %), LED group 1
6	Effect LED	0…255	Intensity green (0 % to 100 %), LED group 1
7	Effect LED	0…255	Intensity blue (0 % to 100 %), LED group 1
8	Effect LED	0…255	Intensity red (0 % to 100 %), LED group 2
9	Effect LED	0…255	Intensity green (0 % to 100 %), LED group 2

Channel	LED	Value	Function
10	Effect LED	0…255	Intensity blue (0 % to 100 %), LED group 2
…	…	…	…
146	Effect LED	0…255	Intensity red (0 % to 100 %), LED group 48
147	Effect LED	0…255	Intensity green (0 % to 100 %), LED group 48
148	Effect LED	0…255	Intensity blue (0 % to 100 %), LED group 48

8 Technical specifications
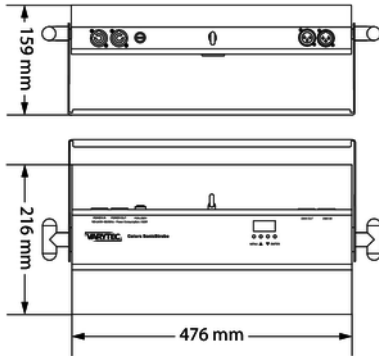
Light source	216 × CW LED SMD 5730, 0.5 W (Strobe)	
	144 × CW LED SMD 5050, 0.5 W (Ambient)	
Properties of the CW LEDs SMD 5730	Colour temperature	6200 K
	Colour rendering index	CRI RA of 70
Optical properties	Beam angle	140°
Control	DMX	
Number of DMX channels	7, 13, 22, 148	
Input connections	Voltage 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

Power consumption	130 W	
Operating supply voltage	AC 100 – 240 V ∼ 50/60 Hz	
Fuse	5 mm × 20 mm, 2 A, 250 V, slow-blow	
Flash rate	20 Hz	
Protection class	IP20	
Mounting options	hanging, standing	
Dimensions (W × H × D)	476 mm × 159 mm × 216 mm	
Weight	3.9 kg	
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	50 %, non-condensing

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	1. Check the mains connection and the main fuse.
	2. Check the settings in manual operation ('Static Color')
No response to the DMX controller	1. Check whether the DMX cables run near or parallel to high-voltage cables that may cause damage or interference to a DMX interface circuit.
	2. Try using another DMX controller.

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

Device components

Clean the device components that are accessible from the outside regularly. The cleaning frequency depends on the operating environment: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the device components.

- Clean with a dry soft cloth.
- Stubborn dirt can be removed with a slightly dampened cloth.
- Never use solvents or alcohol for cleaning.

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.

Notes