



CLB2.4 Compact LED PAR System

LED lighting set

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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 – 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 cover the device nor any ventilation slots. Do not place 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

The LED lighting set is particularly suitable for professional lighting tasks, for example at events, on rock stages, in theatres and musicals. It's characterized by an extraordinary light output and a variety of control options.

- 432 × 10 mm LEDs on four flat PARs
- Control via DMX (6 modes), buttons and display on the unit, IR remote control and foot switch (optional accessory)
- 14 preprogrammed automatic shows
- Sound control
- Stand-alone mode
- Master / Slave mode
- Thermal protection
- Carrying case included

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.

**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!

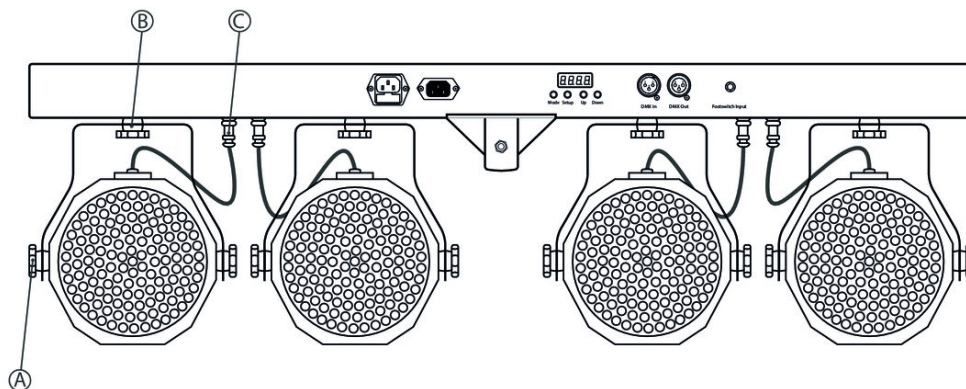
Possible data transmission errors

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.

Pre-assembled spots

The four spots are pre-assembled on the T bar. Attach the T Bar on a tripod and connect the footswitch unit (tripod and footswitch not included).



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A	Locking screws to fix the height and inclination angle.
B	Locking screw to fix the spots on the T bar and the horizontal alignment (beam direction).
C	Electrical connection of the spots on the T bar (pre-assembled).

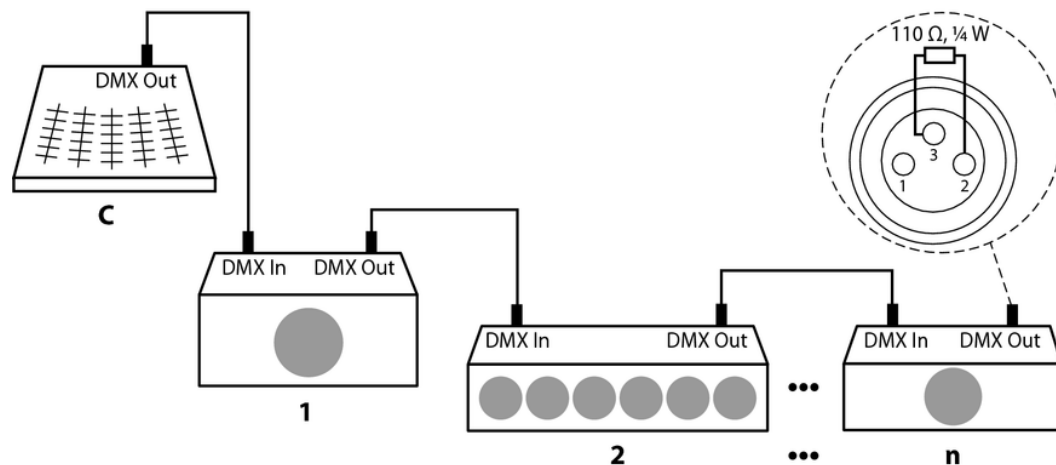
5 Starting up

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

Connections in 'DMX' mode

Connect the DMX input of the device to the DMX output of a DMX controller or other DMX device. Connect the output of the first DMX device to the input of the second and so on, to form a series connection.

Such a chain may consist of up to 30 DMX devices. Make sure that the output of the last device in the chain is terminated by a resistor ($110\ \Omega$, $\frac{1}{4}\text{ W}$).



DMX indicator

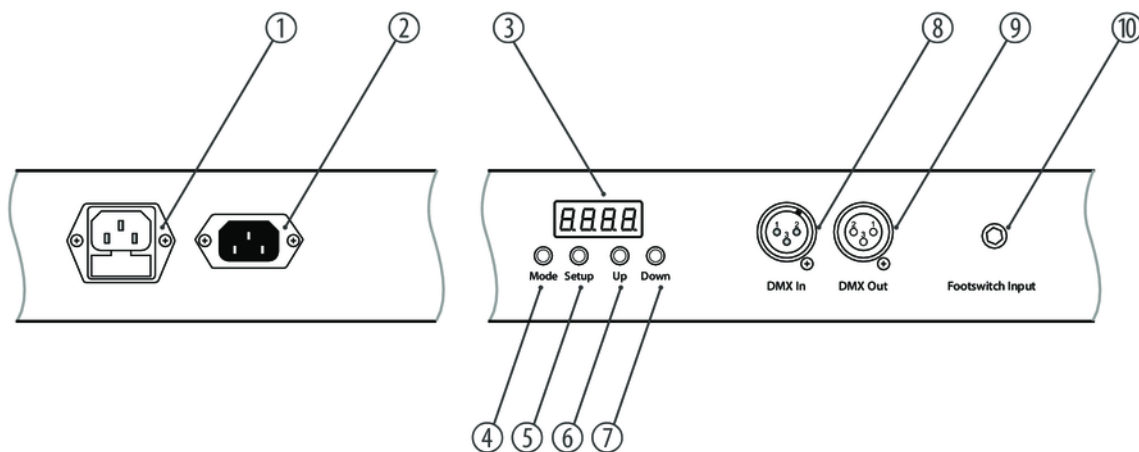
If the unit is in DMX mode and a DMX controller is connected and turned on, the 'd' is flashing in the first digit of the display.

Connections in 'Master / Slave' mode

When you configure a group of devices in 'Master / Slave' mode, the first device controls the others and allows an automatic, music-controlled and synchronized show. This feature is especially useful to start a show without much programming. Connect the DMX output of the master unit to the DMX input of the first slave unit. Then connect the DMX output of the first slave unit to the DMX input of the second slave unit and so on (maximum 30 slaves).

6 Connections and operating elements

Front panel



1	IEC chassis plug for power supply with fuse holder.
2	IEC chassis socket for the power supply cable to the next unit.
3	Display.
4	<i>[Mode]</i> Activates the main menu and toggles between menu items. Closes an opened submenu.
5	<i>[Setup]</i> Selects an option of the respective operating mode, confirms the set value.
6	<i>[Up]</i> Increases the displayed value by one.
7	<i>[Down]</i> Decreases the displayed value by one.
8	<i>[DMX In]</i> DMX input.

9	<i>[DMX Out]</i> DMX output.
10	<i>[Footswitch Input]</i> 1/4" phone socket to connect the footswitch unit.

7 Operating

Connect the device to the power supply to start operation. After a few seconds, the display indicates that a reset is in progress. The device is then ready for use.

7.1 Operating on the unit

Press *[Mode]* to activate the main menu and select an operating mode. Use *[Up]* and *[Down]* to change the respectively indicated value. When the display shows the desired value, press *[Mode]*.

If you don't press any button for about 20 seconds, the current setting will be automatically applied and the display turns off. The set values are retained as long as the device is connected to the mains power supply.

Operating mode 'Preprogrammed automatic show'

A preprogrammed automatic show 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.

Press *[Mode]* until the display shows 'Pr.xx'. Now you can select one of the preprogrammed automatic shows. Use *[Up]* and *[Down]* to select a value between 'Pr.01' and 'Pr.14'.

Settings for programme 01:

For programme Pr.01, you can set one of fourteen static colours across all LEDs. Press *[Mode]* and use *[Up]* and *[Down]* to select a desired colour (see following table). After selection, press again *[Mode]* to set the flash frequency. With *[Up]* and *[Down]* you can now select a value between 'FS.00' (slow) and 'FS.99' (fast).

Colour	Display
Cyan	'9b'
Purple	'rb'
Pink	'rb'
Orange	'r9'
White	'rb'

Colour	Display
Light red	'rb'
Light green	'rg'
Light blue	'rb'
Yellow	'rb'
Warm white	'1Y'
Red	'-r'
Green	'-g'
Blue	'-b'
Amber	'rg'

Settings for programmes 02 to 14:

To adjust the programme process speed, press again *[Setup]*. The display shows 'SP.xx'. With *[Up]* and *[Down]* you can now select a value between 'SP.01' (slow) and 'SP.FL' (fast).

To adjust the strobe frequency, press again *[Setup]*. The display shows 'FS.xx'. With *[Up]* and *[Down]* you can now select a value between 'FS.00' (slow) and 'FS.99' (fast).

Operating mode 'Automatic'

Automatic operation 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.

Press *[Mode]* repeatedly until the display shows 'Auto'. Playback of preprogrammed shows Pr. 02 ... Pr.14 starts automatically.

Operating mode 'Slave'

This setting is only relevant if the device is serving as Slave in a Master / Slave configuration and is not controlled via DMX.

DMX address

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

Press *[Mode]* repeatedly until the display shows 'dxxx'.

Now you can set the number of the first DMX channel to be used by the device (DMX address). Use *[Up]* and *[Down]* to select a value between 1 and 512 (the display shows 'd001' ... 'd512').

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

Mode	Highest possible DMX address
2-channel	511
3-channel	510
4-channel	509
7-channel	506
8-channel	505
14-channel	499

Operating mode 'DMX'

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

Press *[Mode]* repeatedly until the display shows '*dxxx*'. Press *[Setup]*. With *[Up]* and *[Down]* you can now select one of the following DMX modes:

- '2-ch' (two channels)
- '3-ch' (three channels)
- '4-ch' (four channels)
- '7-ch' (seven channels)
- '8-ch' (eight channels)
- '14-ch' (fourteen channels)

Operating mode 'Dimmer'

A constant colour 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.

Press *[Mode]* repeatedly until the display shows '*Colr*'. Press *[Setup]*. The display shows the setting for one of the primary colours (display shows '*r.xxx*', '*G.xxx*' or '*b.xxx*'). Press *[Setup]* to switch between the colours.

With *[Up]* and *[Down]* to set the colour intensity:

Display	Description
'r.000' ... 'r.255'	Red
'g.000' ... 'g.255'	Green
'b.000' ... 'b.255'	Blue

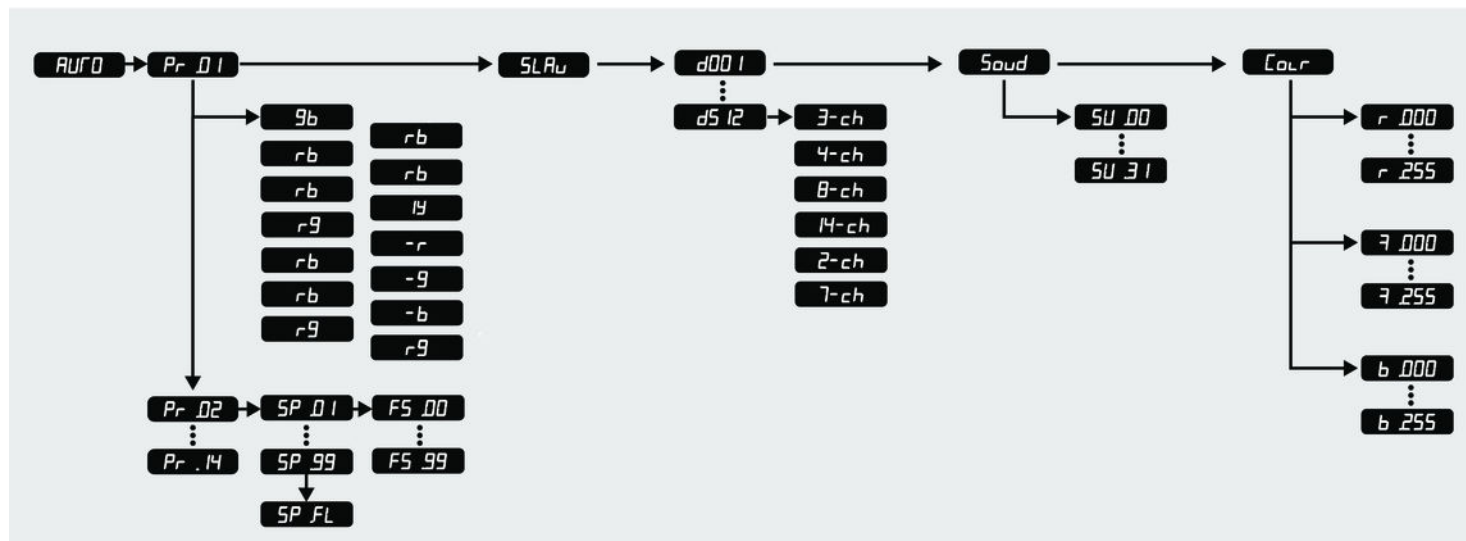
Operating mode 'Sound control'

The sound controlled automatic show 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.

Press *[Mode]* repeatedly until the display shows 'Soud'. This activates the sound controlled automatic show.

Press *[Setup]* and use *[Up]* and *[Down]* to adjust the sensitivity for the sound control in a range from 'SU.00' to 'SU.31'.

7.2 Menu overview



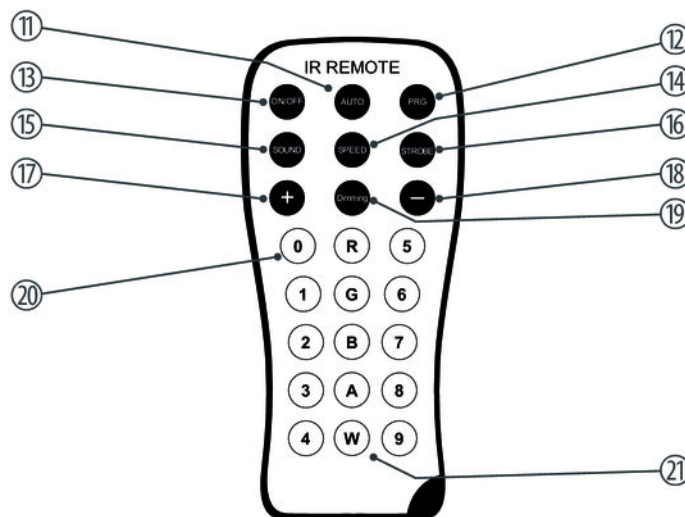
7.3 Foot switch functions

Optional accessory, not included. Follow the instruction manual of the foot switch.

7.4 Remote control functions

Optional accessory, not included.

Infrared remote control (optionally available)



11	<i>[AUTO]</i> Activates the automatic mode.
12	<i>[PRG]</i> Activates the preprogrammed automatic show mode. Use the <i>[+]</i> and <i>[-]</i> buttons to select the desired programme.
13	<i>[ON/OFF]</i> Activates/deactivates the device.
14	<i>[SPEED]</i> Activates the setup mode for the programme speed. Use the <i>[+]</i> and <i>[-]</i> buttons to set the speed.
15	<i>[SOUND]</i> Activates the sound controlled mode. Use the <i>[+]</i> and <i>[-]</i> buttons to set the sensitivity of the built-in microphone.
16	<i>[STROBE]</i> Activates the setup mode for the strobe speed. Use the <i>[+]</i> and <i>[-]</i> buttons to set the speed.

17	<i>[+]</i> Increases the set value.
18	<i>[-]</i> Decreases the set value.
19	<i>[Dimming]</i> Activates the dimming function for static colours. Use the <i>[+]</i> and <i>[-]</i> buttons to set the value for each static colour.
20	<i>[0 ... 9]</i> Numeric keys for the direct selection of static colours.
21	<i>[R], [G], [B], [A], [W]</i> Buttons for selecting the colour hue in dimming operation.

7.5 Functions in DMX mode 1, 3-channel mode

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

7.6 Functions in DMX mode 2, 4-channel mode

Channel	Value	Function
1	0 ... 255	Dimmer (0 % ... 100 %)
2	0 ... 255	Intensity red (0 % ... 100 %) all PARs
3	0 ... 255	Intensity green (0 % ... 100 %) all PARs
4	0 ... 255	Intensity blue (0 % ... 100 %) all PARs

7.7 Functions in DMX mode 3, 8-channel mode

Channel	Value	Function
1	0 ... 255	Dimmer (0 % ... 100 %)
2	0 ... 255	Intensity red (0 % ... 100 %), PAR 1 and 2
3	0 ... 255	Intensity green (0 % ... 100 %), PAR 1 and 2
4	0 ... 255	Intensity blue (0 % ... 100 %), PAR 1 and 2
5	0 ... 255	Intensity red (0 % ... 100 %), PAR 3 and 4
6	0 ... 255	Intensity green (0 % ... 100 %), PAR 3 and 4
7	0 ... 255	Intensity blue (0 % ... 100 %), PAR 3 and 4
8	0 ... 255	Strobe effect, increasing speed

7.8 Functions in DMX mode 4, 14-channel mode

Channel	Value	Function
1	0 ... 255	Dimmer (0 % ... 100 %)
2	0 ... 255	Intensity red (0 % ... 100 %), PAR 1
3	0 ... 255	Intensity green (0 % ... 100 %), PAR 1
4	0 ... 255	Intensity blue (0 % ... 100 %), PAR 1
5	0 ... 255	Intensity red (0 % ... 100 %), PAR 2
6	0 ... 255	Intensity green (0 % ... 100 %), PAR 2
7	0 ... 255	Intensity blue (0 % ... 100 %), PAR 2
8	0 ... 255	Intensity red (0 % ... 100 %), PAR 3
9	0 ... 255	Intensity green (0 % ... 100 %), PAR 3
10	0 ... 255	Intensity blue (0 % ... 100 %), PAR 3
11	0 ... 255	Intensity red (0 % ... 100 %), PAR 4

Channel	Value	Function
12	0 ... 255	Intensity green (0 % ... 100 %), PAR 4
13	0 ... 255	Intensity blue (0 % ... 100 %), PAR 4
14	0 ... 255	Strobe effect, increasing speed

7.9 Functions in DMX mode 5, 2-channel mode

Channel	Value	Function
1	0 ... 17	Preprogrammed automatic show no. 01
	18 ... 35	Preprogrammed automatic show no. 02
	36 ... 53	Preprogrammed automatic show no. 03
	54 ... 71	Preprogrammed automatic show no. 04
	72 ... 89	Preprogrammed automatic show no. 05

Channel	Value	Function
	90 ... 107	Preprogrammed automatic show no. 06
	108 ... 125	Preprogrammed automatic show no. 07
	126 ... 143	Preprogrammed automatic show no. 08
	144 ... 161	Preprogrammed automatic show no. 09
	162 ... 179	Preprogrammed automatic show no. 10
	180 ... 197	Preprogrammed automatic show no. 11
	198 ... 215	Preprogrammed automatic show no. 12
	216 ... 233	Preprogrammed automatic show no. 13
	234 ... 251	Preprogrammed automatic show no. 14
	252 ... 255	Sound control
2	Fixed colour, if channel 1 = 0 ... 17 (preprogrammed automatic show No. 01)	
	0 ... 17	LEDs off
	18 ... 35	Cyan

Channel	Value	Function
	36 ... 53	Purple
	54 ... 71	Pink
	72 ... 89	Orange
	90 ... 107	White
	108 ... 125	Light red
	126 ... 143	Light green
	144 ... 161	Light blue
	162 ... 179	Yellow
	180 ... 197	Warm white
	198 ... 215	Red
	216 ... 233	Green
	234 ... 251	Blue

Channel	Value	Function
	252 ... 255	Amber
	Programme speed, if channel 1 = 18 ... 251 (preprogrammed automatic show No. 02 ... 14)	

7.10 Functions in DMX mode 6, 7-channel mode

Channel	Value	Function
1	0 ... 255	Dimmer (0 % ... 100 %)
2	0 ... 255	Intensity red (0 % ... 100 %)
3	0 ... 255	Intensity green (0 % ... 100 %)
4	0 ... 255	Intensity blue (0 % ... 100 %)
5	Preprogrammed automatic shows, if channel 2 ... 4 = 0	
	0 ... 17	Preprogrammed automatic show no. 01

Channel	Value	Function
	18 ... 35	Preprogrammed automatic show no. 02
	36 ... 53	Preprogrammed automatic show no. 03
	54 ... 71	Preprogrammed automatic show no. 04
	72 ... 89	Preprogrammed automatic show no. 05
	90 ... 107	Preprogrammed automatic show no. 06
	108 ... 125	Preprogrammed automatic show no. 07
	126 ... 143	Preprogrammed automatic show no. 08
	144 ... 161	Preprogrammed automatic show no. 09
	162 ... 179	Preprogrammed automatic show no. 10
	180 ... 197	Preprogrammed automatic show no. 11
	198 ... 215	Preprogrammed automatic show no. 12
	216 ... 233	Preprogrammed automatic show no. 13
	234 ... 251	Preprogrammed automatic show no. 14

Channel	Value	Function
	252 ... 255	Sound control
6	Programme speed	
7	0 ... 255	Strobe effect, increasing speed

8 Technical specifications

Number of DMX channels		2, 3, 4, 7, 8, or 14 channels, depending on operating mode
Illuminant		4 × 108 RGB LEDs (10 mm)
Dispersion angle		30°
Light power	Red:	234 Lux / 2 m
	Green:	951 Lux / 2 m
	Blue:	224 Lux / 2 m
	In total:	1364 Lux / 2 m
Operating supply voltage		AC 230 V ~ , 50 Hz
Power consumption		50 W
Fuse		5 mm × 20 mm, 2,0 A, 250 V, slow-blow
Diameter of tripod holder		36 mm

Dimensions T bar with assembled flat PARs (W × H × D)	1007 mm × 305 mm × 63 mm
Dimensions T bar without assembled flat PARs (W × H × D)	982 mm × 55 mm × 55 mm
Weight	5.6 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	1. Check the mains connection and the main fuse.
	2. Check the settings in manual operation ('Static Color')
	3. Check whether the device has switched off due to excessive heat: Overtemperature protection, the value 'rt' is flashing on the display. In this case, switch the device off and let it cool down for some time.
No response to the DMX controller	1. 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.
	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

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 on a regular basis to remove dust and dirt. Before cleaning, switch off the device and disconnect AC-powered devices from the mains. Use a lint-free damp cloth for cleaning. 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). 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.



