

ignition

LED Mini Studio PAR One 40°

LED Mini Studio PAR One 20°

LED-PAR

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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 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

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.



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.

Secure the barn door with a safety cable on the spotlight after installation. The safety cable must run outside the barn door and must not interfere with the light emission.



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

Special features of the device:

- 7 × 10 W RGBW 4-in-1 LED chips
- Control via DMX (three different modes) and via buttons and display on the unit
- Built-in automatic show programmes
- Sound control
- Master / Slave mode
- Overheat protection
- Self-locking double bracket for floor placement or hanging
- Remote control, colour filter frame, 2 × DMX-in-/DMX-out 5-to-3-pin adapter included

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.

Secure the barn door with a safety cable on the spotlight after installation. The safety cable must run outside the barn door and must not interfere with the light emission.



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 bracket provided for mounting.

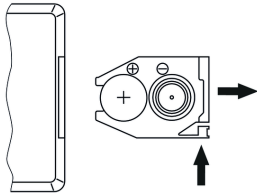
Always work from a stable platform whenever installing, moving or servicing the unit. In doing so, the area underneath the unit must be cordoned off.

The safety cable must be attached to the bracket.



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

Inserting batteries into the remote



Push the lock of the battery holder towards the centre of the housing and pull out the battery holder like a drawer. Insert the batteries in the correct polarity according to the marking on the remote. Slide the battery holder back into the remote until it clicks into place.

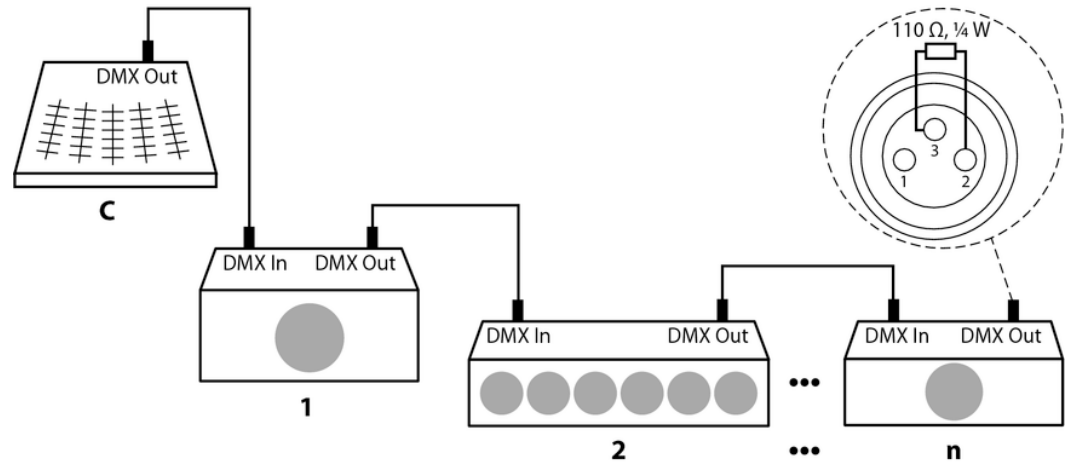
When shipping, the batteries are already installed in the remote and protected against discharge by a transparent plastic film. Remove the plastic film before initial use.

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

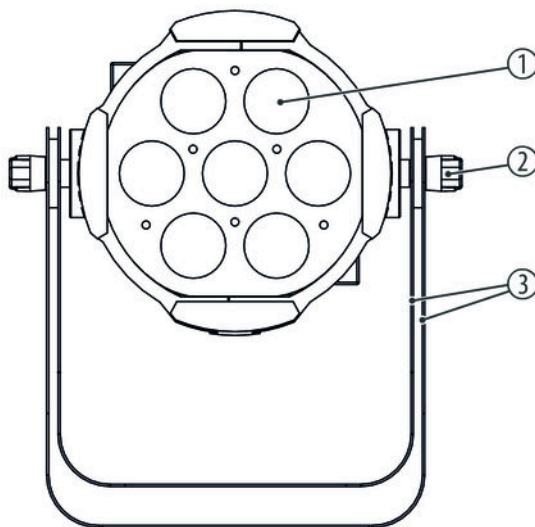


Connections in master/slave mode

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.

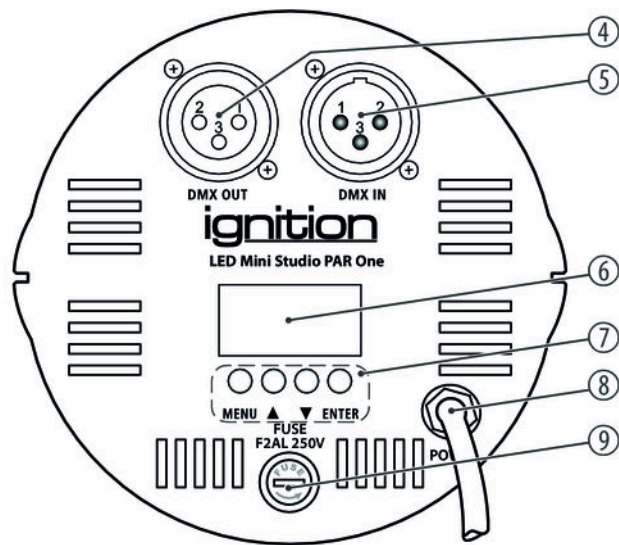
6 Connections and controls

Front panel



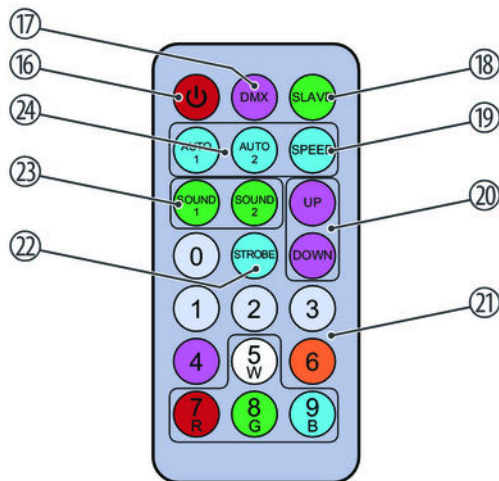
1	LED
2	Locking screws for the bracket
3	Bracket for floor placement or hanging

Rear panel



4	[DMX OUT] DMX output		
5	[DMX IN] DMX input		
6	Display		
7	Buttons for menu control	[ENTER]	Confirms a selected value.
		▼	Decreases the displayed value by one.
		▲	Increases the displayed value by one.
		[MENU]	Calls up the main menu or a submenu.
8	Mains cabling (power cord) with safety plug		
9	Fuse holder for the fuse		

Remote control



16	On / off switch
17	<i>[DMX]</i> Activates DMX mode. Then you can enter the DMX address with the number buttons
18	<i>[SLAVE]</i> Activates master / slave mode
19	<i>[SPEED]</i> Sets the running speed
20	<i>[UP], [DOWN]</i> Selects a programme or number. <i>[UP]</i> increases the displayed value or scrolls forward. <i>[DOWN]</i> decreases the displayed value or scrolls back.

21	<p><i>[0...9]</i></p> <p>Selects a programme number</p> <p><i>[R], [G], [B], [W]</i></p> <p>Selects a colour. <i>[R]</i>, <i>[G]</i>, or <i>[B]</i> for primary colours red, green and blue, <i>[W]</i> for white. Use the buttons to turn the respective colour on or off. When the color is indicated on the display of the device, you can adjust its intensity with <i>[UP]</i> or <i>[DOWN]</i> in a range from 0 to 255.</p>
22	<p><i>[STROBE]</i></p> <p>Activates the strobe effect</p> <p><i>[UP]</i> or <i>[DOWN]</i> changes the flash rate.</p>
23	<p><i>[SOUND 1], [SOUND 2]</i></p> <p>Selection of music control programs 1 or 2. <i>[UP]</i> bzw. <i>[DOWN]</i> changes the sensitivity of the built-in microphone.</p>
24	<p><i>[AUTO 1], [AUTO 2]</i></p> <p>Selection of auto programmes 1 or 2. <i>[UP]</i> or <i>[DOWN]</i> changes the running speed of the selected music programme.</p>

7 Operating

7.1 Starting the device

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.

7.2 Main menu

1. ➤ Press *[MENU]* to activate the main menu and select an operating mode.
2. ➤ Use the arrow buttons ▲ or ▼ to change the respectively displayed value. When the display shows the desired value, press *[ENTER]*.

If you don't press any button for about 1 minute, the unit returns to the previously selected mode. The set values are retained even when the device is disconnected from the mains power supply.

DMX address

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'Addr'.
3. ➤ Confirm the selection with *[ENTER]*.
 - ⇒ The display shows the current DMX address.
4. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows the desired DMX address (display shows 'A001' ... 'A512').
5. ➤ Confirm the selection with *[ENTER]*. To exit the menu, press *[MENU]*.

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

Sound control

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'SoUn'.
3. ➤ Confirm the selection with *[ENTER]*.
4. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows the desired value for the desired sound control mode (display shows 'SoU1' ... 'SoU5').
5. ➤ Confirm the selection with *[ENTER]*.
6. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows the desired value for the microphone sensitivity (display shows 'Se00' ... 'Se09').
7. ➤ Confirm the selection with *[ENTER]*. To exit the menu, press *[MENU]*.

Selection of constant colour

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'CoLo'.
3. ➤ Confirm the selection with *[ENTER]*.
4. ➤ Press the arrow buttons ▲ or ▼ to select a constant colour ('Co01' ... 'Co51').
5. ➤ Confirm the selection with *[ENTER]*.
6. ➤ Press the arrow buttons ▲ or ▼ to select the strobe speed ('SP00' ... 'SP20').
7. ➤ Confirm the selection with *[ENTER]*. To exit the menu, press *[MENU]*.

Selection of colour macro

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'CoLo'.
3. ➤ Confirm the selection with *[ENTER]*.
4. ➤ Press the arrow buttons ▲ or ▼ to select the desired colour macro. Display: 'Co01' ... 'Co05'.
5. ➤ When the display shows the desired value confirm the selection with *[ENTER]*. To exit the menu, press *[MENU]*.

Selection of mixed colour

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'CoLo'.
3. ➤ Confirm the selection with *[ENTER]*.
4. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'AtF'.
5. ➤ Confirm the selection with *[ENTER]*.
6. ➤ Press the arrow buttons ▲ or ▼ to select the colour you want to adjust. Display: 'rEd' (red), 'GrEE' (green), 'bLUE' (blue), 'UhIE' (white).
7. ➤ Confirm the selection with *[ENTER]*.
8. ➤ Press the arrow buttons ▲ or ▼ to assign a value between 1 and 255 to the selected colour. Display: 'r000' ... 'r255', 'G000' ... 'G255', 'b000' ... 'b255', 'U000' ... 'U255'.
9. ➤ Confirm the selection with *[ENTER]*.
10. ➤ Press the arrow buttons ▲ or ▼ to select the strobe speed ('SP00' ... 'SP20').
11. ➤ When the display shows the desired value confirm the selection with *[ENTER]*. To exit the menu, press *[MENU]*.

Automatic show

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'AUto'.
3. ➤ Confirm the selection with *[ENTER]*.
4. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows the desired value for the desired auto show programme ('AUt1' ... 'AUt5').
5. ➤ Confirm the selection with *[ENTER]*.
6. ➤ Press the arrow buttons ▲ or ▼ to select the programme speed ('SP 1' ... 'SP 9').
7. ➤ When the display shows the desired value confirm the selection with *[ENTER]*. To exit the menu, press *[MENU]*.

Reset

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'rEst'.
3. ➤ Confirm the selection with *[ENTER]*.
⇒ The device is reset to the factory default settings.

Software version

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'ver'.
⇒ The currently installed software version is displayed.

Temperature

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'tEnP'.
⇒ The device temperature is displayed.

Remote control

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'reno'.
3. ➤ Confirm the selection with *[ENTER]*.
4. ➤ Press the arrow buttons ▲ or ▼ to select 'on' if you want to activate remote control and 'off' if you want to deactivate remote control.
5. ➤ Confirm the selection with *[ENTER]*. To exit the menu, press *[MENU]*.

Master / slave mode

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'SLAv'.
3. ➤ Confirm the selection with *[ENTER]*.
4. ➤ Press the arrow buttons ▲ or ▼ to select 'SLA' if you want to activate slave mode.
5. ➤ Confirm the selection with *[ENTER]*.
 - ⇒ The slave device now copies exactly the settings of the master device.
6. ➤ To exit the menu, press *[MENU]*.

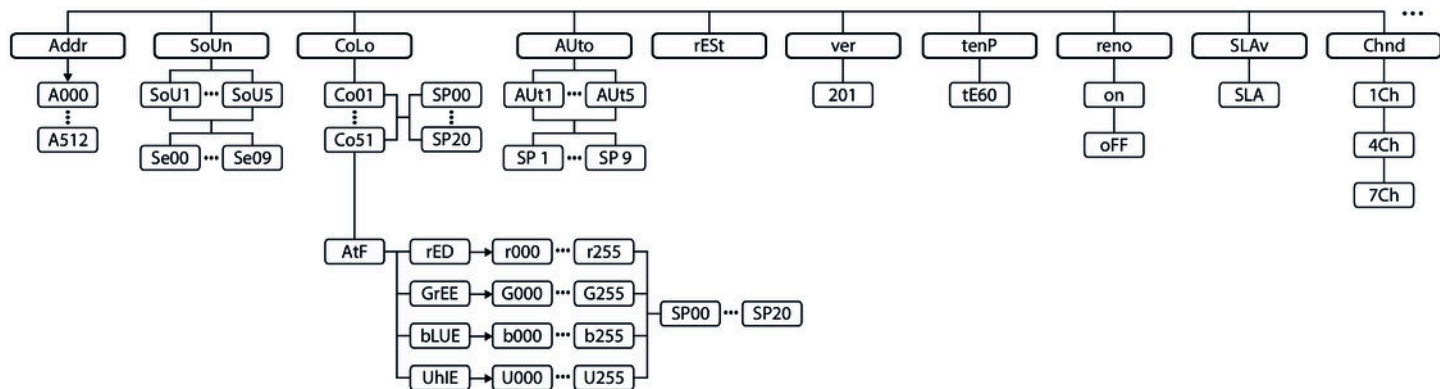
This setting is only relevant if the device is operating as Slave controlled by a Master, but not via DMX.

DMX mode

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows 'Chnd'.
3. ➤ Confirm the selection with *[ENTER]*.
4. ➤ Press the arrow buttons ▲ or ▼ repeatedly until the display shows the desired DMX channel mode ('1Ch' = 1 channel, '4Ch' = 4 channels, '7Ch' = 7 channels).
5. ➤ Confirm the selection with *[ENTER]*. To exit the menu, press *[MENU]*.

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

7.3 Menu overview



7.4 Functions in 1-channel DMX mode

Channel	Value	Function
1	1...4	Without function
	5...9	Red
	10...14	Green
	15...19	Blue
	20...24	White
	25...29	Colour macro 1
	30...34	Colour macro 2
	35...39	Colour macro 3
	40...44	Colour macro 4
	45...49	Colour macro 5
	50...54	Colour macro 6

Channel	Value	Function
	55...59	Colour macro 7
	60...64	Colour macro 8
	65...69	Colour macro 9
	70...74	Colour macro 10
	75...79	Colour macro 11
	80...84	Colour macro 12
	85...89	Colour macro 13
	90...94	Colour macro 14
	95...99	Colour macro 15
	100...104	Colour macro 16
	105...109	Colour macro 17
	110...114	Colour macro 18
	115...119	Colour macro 19

Channel	Value	Function
	120...124	Colour macro 20
	125...129	Colour macro 21
	130...134	Colour macro 22
	135...139	Colour macro 23
	140...144	Colour macro 24
	145...149	Colour macro 25
	150...154	Colour macro 26
	155...159	Colour macro 27
	160...164	Colour macro 28
	165...169	Colour macro 29
	170...174	Colour macro 30
	175...179	Colour macro 31
	180...184	Colour macro 32

Channel	Value	Function
	185...189	Colour macro 33
	190...194	Colour macro 34
	195...199	Colour macro 35
	200...204	Colour macro 36
	205...209	Colour macro 37
	210...214	Colour macro 38
	215...219	Colour macro 39
	220...224	Colour macro 40
	225...229	Colour macro 41
	230...234	Colour macro 42
	235...239	Colour macro 43
	240...244	Colour macro 44

Channel	Value	Function
	245...249	Colour macro 45
	250...255	Colour macro 46

7.5 Functions in 4-channel DMX mode

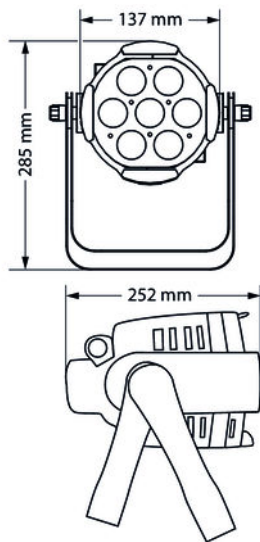
Channel	Value	Function
1	0...255	Intensity red (0 % to 100 %)
2	0...255	Intensity green (0 % to 100 %)
3	0...255	Intensity blue (0 % to 100 %)
4	0...255	Intensity white (0 % to 100 %)

7.6 Functions in 7-channel DMX mode

Channel	Value	Function
1	0...255	Master dimmer (0 % bis 100 %)
2	0...255	Intensity red (0 % to 100 %)
3	0...255	Intensity green (0 % to 100 %)
4	0...255	Intensity blue (0 % to 100 %)
5	0...255	Intensity white (0 % to 100 %)
6	0...7	Preset
	8...255	Strobe (0 Hz...20 Hz)
	0...255	Process speed for programmes in channel 7
7	0...15	Dimmer
	16...31	Colour change 1
	32...47	Colour change 2

Channel	Value	Function
	48...63	Colour change 3
	64...79	Colour change 4
	80...95	Colour change 5
	96...111	Multicolour strobe effect
	112...127	Fade effect
	128...143	Colour synchronization
	144...159	Colour change, shutter closing
	160...175	Fade out and colour change
	176...191	Fade in and colour change
	192...207	Fade-in-out effect
	208...223	Colour change mixed colours
	224...239	Sound-control 1
	240...255	Sound-control 2

8 Technical specifications



		LED Mini Studio PAR One 20°	LED Mini Studio PAR One 40°
Light source	7 × RGBW 4in1 LED, 10 W		
Optical properties	Beam angle	20°	40°
Control	DMX		
	Infrared remote control		
Control protocol	DMX 512		
Number of DMX channels	1, 4 or 7		
Input connections	DMX control	XLR chassis socket, 3-pin	
Output connections	DMX control	XLR chassis socket, 3-pin	
Power consumption	70 W		
Supply voltage	100 – 240 V ~ 50/60 Hz		

		LED Mini Studio PAR One 20°	LED Mini Studio PAR One 40°
Fuse	5 mm × 20 mm, 2 A, 250 V, fast-acting		
Degree of protection	IP20		
Battery remote control	Battery type	Lithium button cell, 3 V, CR 2025	
Mounting options	Standing, hanging		
Dimensions (W × H × D)	137 mm × 252 mm × 285 mm		
Weight	1.4 kg		
Ambient conditions	Temperature range	0 °C...40 °C	
	Relative humidity	50 %, non-condensing	

Further information

	LED Mini Studio PAR One 20°	LED Mini Studio PAR One 40°
Number of LEDs	7	7
Power of the individual LEDs	10	10
Colour mixture	RGBW	RGBW
LED type	x-in-1	x-in-1
Base housing	Yes	Yes
Fanless	No	No
Remote control	Included	Included
Wireless DMX	No	No
Housing colour	Black	Black

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.

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 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.

