VARYTEC

LED Studio Par Rookie COB 100W

User manual

LED PAR

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VARYTEC

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 – 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.

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!

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!

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.

3 Features

The LED PAR is suitable for almost all applications, for example in clubs, bars, small stages and theatres. It is characterized by compact dimensions and enormous performance.

Special features of the device:

- 1 ×100 W 4in1 RGBW
- Operable in stand-alone mode or DMX
- Control via DMX (two different modes) and via buttons and display on the unit
- Sound control
- Master / Slave mode
- 4 preprogrammed automatic shows
- Noiseless operation due to convection 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 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.

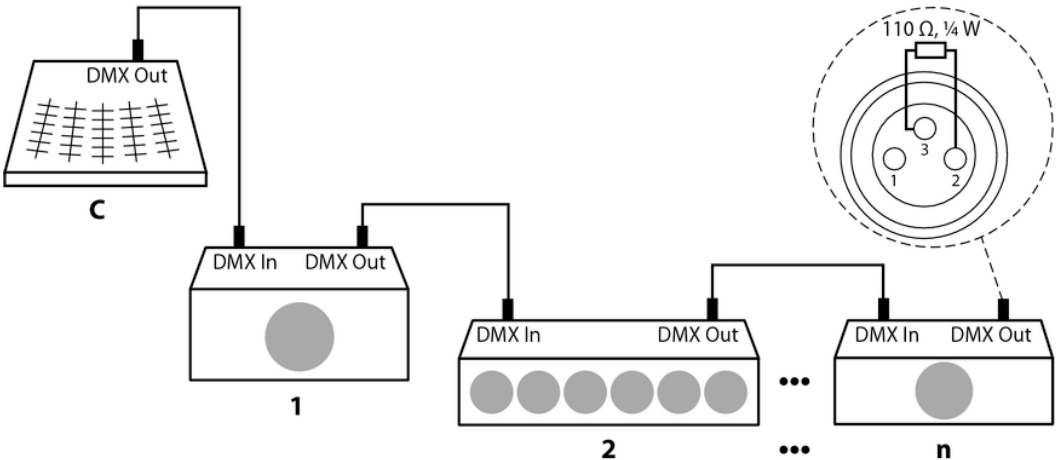
Please note that this device must not be connected to a dimmer.

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).

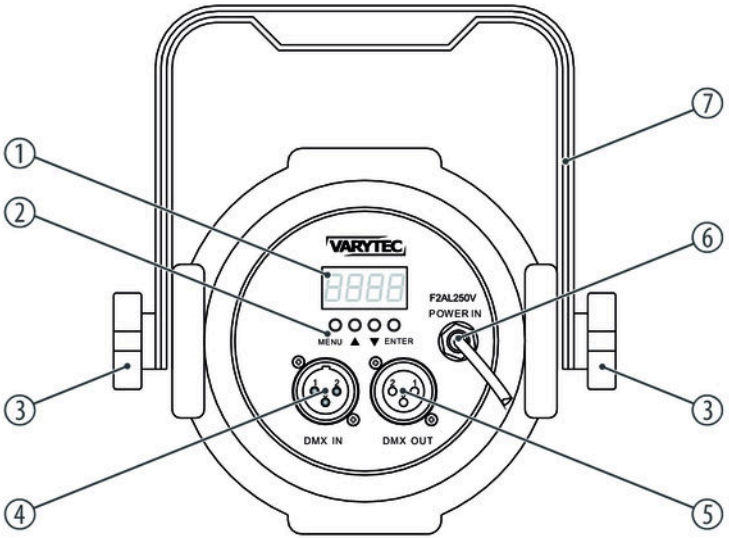


Connections in master/slave mode

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 controls

Front panel



1	Display
2	Buttons
	[MENU] Calls up the main menu or a submenu
	▲/▼ Increases / decreases the displayed value by one.
	[ENTER] Confirms a selected value
3	Locking screws for the bracket
4	*[DMX IN]* DMX input.
5	*[DMX OUT]* DMX output

6	Power cable for connection to the power supply
7	Bracket for floor placement or hanging

7 Operating

7.1 Starting the device

Connect the device to the power supply to start operation. After a few seconds, the display shows the last used settings. The device is now operational.

7.2 Main menu

Press *[MENU]* to call up various menu items. Use the arrow buttons to change the respectively displayed value. When the display shows the desired value press *[ENTER]*.

The last set values are retained even when the device is disconnected from the mains power supply.

DMX mode

Press *[MENU]* repeatedly until the display shows *'CH8'* or *'CH6'*. Now use the arrow buttons to select one of the following DMX modes:

- *'CH6'* (6 channel DMX mode)
- *'CH8'* (8 channel DMX mode)

When the display shows the desired value confirm the selection with *[ENTER]*.

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

DMX address

Press *[MENU]* repeatedly until the display shows *'A001'*. Use the arrow buttons to select a value between 1 and 512 (display shows *'A001'* … *'A512'*) to assign a DMX address. When the display shows the desired value confirm the selection with *[ENTER]*.

This setting is only relevant when the device is controlled via DMX. If no DMX controller is connected, *'A'* flashes in the display.

Colour change

Press *[MENU]* repeatedly until the display shows *'CC01'* to set the colour change speed. Use the arrow buttons to select a value between 01 and 99 (display shows *'CC01'* … *'CC99'*). When the display shows the desired value confirm the selection with *[ENTER]*.

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

Fade programmes

Press *[MENU]* repeatedly until the display shows *'CF01'* to select a Fade programme. Use the arrow buttons to select a value between 01 and 99 (display shows *'CF01'* … *'CF99'*). When the display shows the desired value confirm the selection with *[ENTER]*.

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

Stroboscope speed

Press *[MENU]* repeatedly until the display shows *'St01'* to set the strobe speed. Use the arrow buttons to select a value between 01 and 99 (display shows *'St01'* … *'St99'*). When the display shows the desired value confirm the selection with *[ENTER]*.

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

Sound control

Press *[MENU]* repeatedly until the display shows *'SEn1'* to set the microphone sensitivity for sound control. Use the arrow buttons to select a value between 1 (low) and 9 (high) (display shows *'SEn1'* … *'SEn9'*). When the display shows the desired value confirm the selection with *[ENTER]*.

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

Colour macro

Press *[MENU]*. Press one of the arrow buttons repeatedly until the display shows *'SC01'* to select a colour macro. Use the arrow buttons to select a value between 01 and 16 (display shows *'SC01'* … *'SC16'*). When the display shows the desired value confirm the selection with *[ENTER]*.

Entry	Colour
SC01	Blackout
SC02	Red
SC03	Amber
SC04	Warm yellow
SC05	Yellow
SC06	Green
SC07	Turquoise
SC08	Cyan
SC09	Blue

Entry	Colour
SC10	Lavender
SC11	Mauve
SC12	Magenta
SC13	Pink
SC14	White, 3200 K
SC15	White, 5600 K
SC16	White, 7200 K

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

Intensity red

Press *[MENU]* repeatedly until the display shows *'r000'* to set the colour intensity for red. Use the arrow buttons to select a value between 000 and 255 (display shows *'r000'* … *'r255'*). When the display shows the desired value confirm the selection with *[ENTER]*.

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

Intensity green

Press *[MENU]* repeatedly until the display shows *'G000'* to set the colour intensity for green. Use the arrow buttons to select a value between 000 and 255 (display shows *'G000'* … *'G255'*). When the display shows the desired value confirm the selection with *[ENTER]*.

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

Intensity blue

Press *[MENU]* repeatedly until the display shows *'b000'* to set the colour intensity for blue. Use the arrow buttons to select a value between 000 and 255 (display shows *'b000'* … *'b255'*). When the display shows the desired value confirm the selection with *[ENTER]*.

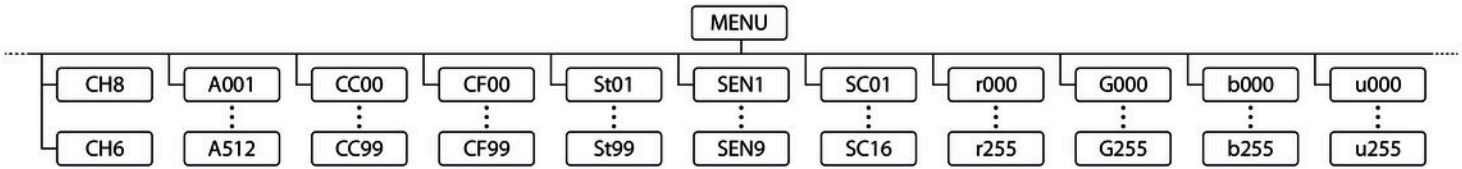
This setting is only relevant if the device is not controlled via DMX.

Intensity white

Press *[MENU]* repeatedly until the display shows *'u000'* to set the colour intensity for white. Use the arrow buttons to select a value between 000 and 255 (display shows *'u000'* … *'u255'*). When the display shows the desired value confirm the selection with *[ENTER]*.

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

7.3 Menu overview



7.4 Functions in 6-channel DMX mode

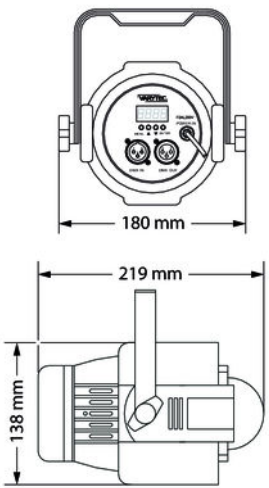
Channel	Value	Function
1	0…255	Dimmer (0 % to 100 %)
2	0…255	Intensity red (0 % to 100 %)
3	0…255	Intensity green (0 % to 100 %)
4	0…255	Intensity blue (0 % to 100 %)
5	0…255	Intensity white (0 % to 100 %)
6	0	Full brightness, no strobe effect
	1…255	Strobe effect, increasing speed (1 … 20 Hz)

7.5 Functions in 8-channel DMX mode

Channel	Value	Function
1	0…255	Dimmer (0 % to 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	Full brightness, no strobe effect
	1…255	Strobe effect, increasing speed (1 … 20 Hz)
7	Operating mode selection	
	0…50	DMX mode
	51…100	Step programme
	101…150	Fade programmes

Channel	Value	Function
	151…200	Strobe programmes
	201…255	Sound control
8	0…255	Increasing speed On activated sound control (channel 7 = 201 … 255): Microphone sensitivity

8 Technical specifications



Illuminant	1 × 100 W 4in1 RGBW
Beam angle	60°
Number of DMX channels	6 or 8 channels, depending on operating mode
Power consumption	max. 100 W
Operating supply voltage	100 – 240 V ~ 50/60 Hz
Fuse	5 mm × 20 mm, 2 A, 250 V, fast-acting
Protection class	IP20
Dimensions (W × H × D)	180 mm × 138 mm × 256 mm
Weight	1.8 kg

Environmental 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.	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.