fungeneration

LED Diamond Dome MK II

User Manual

LED Effect

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Mode
Setup
Up
Down

1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under *www.thomann.de*.

1.1 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 document.

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 – suspended load.

Warning signs	Type of danger
	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 only 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 operating life of the device by regular breaks and by avoiding frequent switching on and off. The device is not suitable for continuous operation.

Safety

DANGER!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.

DANGER!

Danger to life due to electric current!

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 when covers, safety equipment or optical components are missing or damaged.

DANGER!

Danger to life due to electric current!

A short circuit could lead to a fire hazard and risk of death. Do not modify the mains cable or the plug! In case of isolation damage, disconnect immediately the power supply and arrange repair. If in doubt, seek advice from a qualified electrician.

WARNING!

Risk of eye damage caused by high light intensity!

The device generates highly intense light radiation. Looking directly into the light source can damage the eyes. Never look directly into the light source.

WARNING!

Risk of epileptic fit due to flashing lights!

The device emits flashing lights (strobe effects). Flashing lights can trigger epileptic fits in specific people. If you are at risk of epilepsy, avoid spending longer periods of time subjected to flashing lights and looking into strobing light.

NOTICE!

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can overheat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.

NOTICE!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the “Technical specifications” chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

NOTICE!

Damage to the device due to high voltages!

The device can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the device matches the local power grid before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the device from the power grid when storms are approaching or it the device will not be used for a longer period.

NOTICE!

Risk of fire due to installation of a wrong fuse!

Using fuses of a different type than compatible with the device may cause a fire and seriously damage the device. Only use fuses of the same type. Observe the labelling on the device casing and the information in the "Technical data” chapter.

NOTICE!

Risk of fire due to incorrect polarity!

Incorrectly inserted batteries may cause fires and destroy the device and the batteries. Observe the markings on the batteries and on the device. Ensure that proper polarity is observed when inserting batteries.

NOTICE!

Possible damage due to leaking batteries!

Batteries can leak and cause permanent damage to the device. Take the batteries out of the device if it is not going to be used for an extended period of time.

3 Features

The device is characterized by an extraordinary light output and effects.

- 6 × 6-in-1 LED, RGBWA and UV, each 1 W
- Dispersion characteristics: VNSP (Very Narrow Spot)
- transparent hemisphere with Narrow-Beam lenses
- Diamond circle effect
- Control via DMX (nine channels), buttons and display on the unit and also via the supplied infrared control
- Preprogrammed automatic shows
- Sound control
- Master / Slave mode
- Strobe effect
- Built-in fan

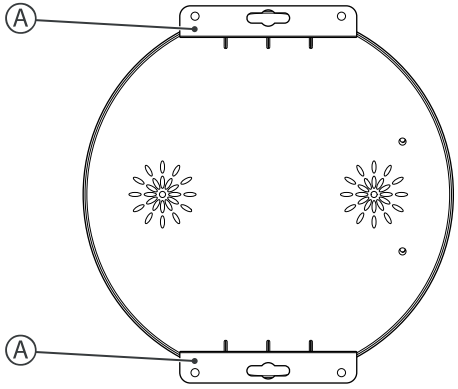
For technological reasons, the light output of LEDs decreases over their lifetime. This effect increases with higher operating temperature. You can extend the service life of the illuminants by providing adequate ventilation and operating the LEDs with the lowest possible brightness.

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.

Ceiling or wall mounting

The device is designed for ceiling or wall mounting and has two mounting tabs on the bottom for this purpose.



A	Mounting tabs for ceiling or wall mounting of the device.

WARNING!

Risk of injury from falling devices that were inadequately secured!

If devices are not properly secured during assembly, they can cause severe injury and considerable damage by falling.

» Continued on the next page

When installing and operating, make sure to follow the standards and regulations that apply in your country.

Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.

Use appropriate mounting hardware to attach the device to the ceiling or a wall. The designated fastening area must be sufficiently stable for the load, level and vibration-free.

NOTICE!

Data transfer errors due to improper wiring!

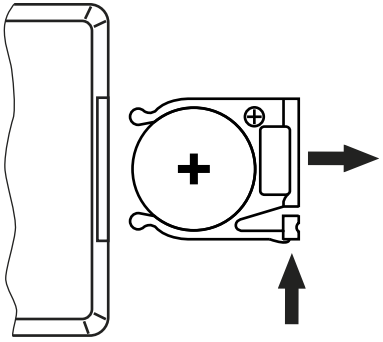
If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

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

Inserting the battery into the remote control



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. The battery is correct if the positive pole points to the housing base of the remote control. Slide the battery holder back into the remote until it clicks into place.

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

NOTICE!

Risk of fire due to incorrect polarity!

Incorrectly inserted batteries may cause fires and destroy the device and the batteries.

Observe the markings on the batteries and on the device.

Ensure that proper polarity is observed when inserting batteries.

NOTICE!

Possible damage due to leaking batteries!

Batteries can leak and cause permanent damage to the device.

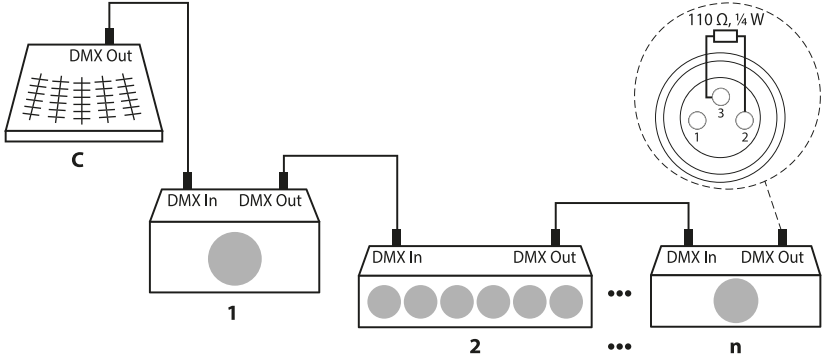
Take the batteries out of the device if it is not going to be used for an extended period of time.

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

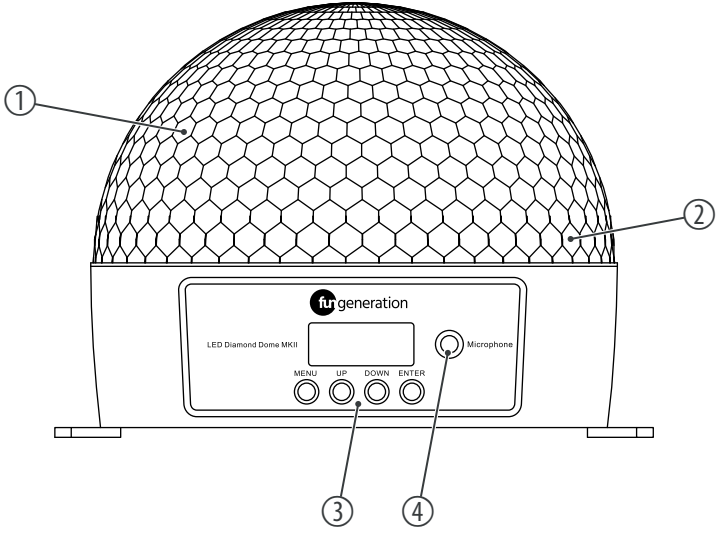
Connect the DMX input of the device to the DMX output of a DMX controller or another DMX device. Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a resistor (110 Ω, ¼ W).

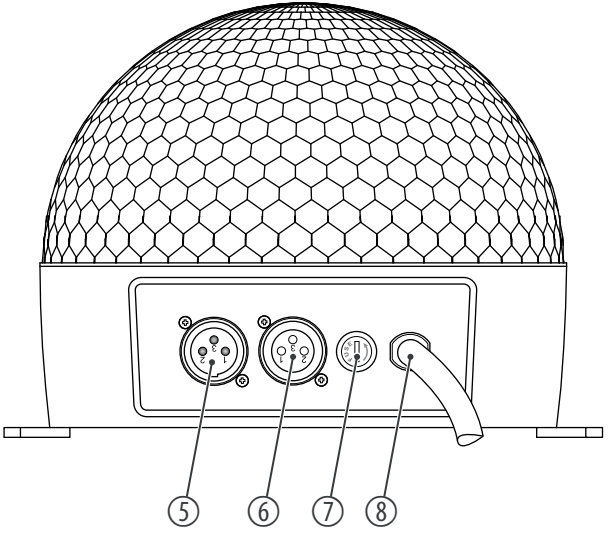


Connections in master/slave mode

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.

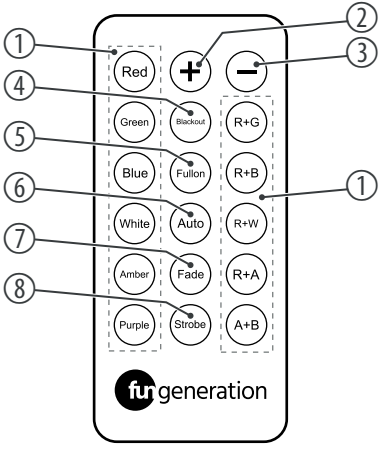
6 Connections and controls





1	Transparent hemisphere with Narrow-Beam lenses
2	Infrared sensor for the supplied remote control.
3	Display and control buttons
	[MENU] | activates the main menu and toggles between menu items, closes an opened submenu
	[UP] | increases the displayed value by one
	[DOWN] | decreases the displayed value by one
	[ENTER] | selects an option of the respective operating mode, confirms the set value
4	*[Microphone]* | microphone for sound control
5	DMX input, designed as XLR panel plug, 3-pin
6	DMX output, designed as XLR panel socket, 3-pin
7	Fuse holder
8	Power supply cable

Infrared remote control



1	*[Red]*, *[Green]*, *[Blue]*, *[White]*, *[Amber]*, *[Purple]*, *[R+G]*, *[R+B]*, *[R+W]*, *[R+A]*, *[R+B]* Buttons for direct selection of a fixed colour. Adjust the speed using *[+]* and *[–]*.
2	*[+]* | increases the set value
3	*[–]* | decreases the set value
4	*[Blackout]* | turns the device off
5	*[Fullon]* | enables all colors. Adjust the speed using *[+]* and *[–]*.
6	*[Auto]* | enables the 'Automatic' mode. Adjust the automatic programme using *[+]* and *[–]*.
7	*[Fade]* | enables the colour change. Adjust the fade programme using *[+]* and *[–]*.
8	*[Strobe]* | enables / disables the Strobe effect. Adjust the strobe programme using *[+]* and *[–]*.

7 Operating

Connect the device to the power supply to start operation.

Press *[MENU]* to activate the main menu and select an operating mode. Use *[UP]* and *[DOWN]* to change the respectively indicated value. Confirm the value with *[ENTER]*.

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.

The following table shows the setting options.

Menu level 1	Menu level 2	Meaning
'DMX'	*'A001'* … *'A255'*	DMX mode setting
Auto programmes		
'Au11' … *'Au19'*		Colour effect Red, increasing speed
'Au21' … *'Au29'*		Colour effect Green, increasing speed
'Au31' … *'Au39'*		Colour effect Blue, increasing speed
'Au41' … *'Au49'*		Colour effect White, increasing speed
'Au51' … *'Au59'*		Colour effect Amber, increasing speed

Menu level 1	Menu level 2	Meaning
'Au61' … *'Au69'*		Colour effect Purple/UV, increasing speed
'Au71' … *'Au79'*	double colour change, increasing motor speed	
	'SP-1' … *'SP-9'*	Colour change, increasing speed
'Au81' … *'Au89'*	Change of all colours, increasing motor speed	
	'SP-1' … *'SP-9'*	Colour change, increasing speed
'Au91' … *'Au99'*	Transition of all colours, increasing motor speed	
	'SP-1' … *'SP-9'*	Colour change, increasing speed
'AuA1' … *'AuA9'*	Strobe effect, increasing motor speed	
	'SP-1' … *'SP-9'*	Stroboscope effect, increasing speed

Menu level 1	Menu level 2	Meaning
Manual operation		
'S1-1' … *'S1-9'*	Sound mode 1, programme 1…9	
	'uoL1' … *'uoL9'*	Microphone sensitivity from low to high
'S2-1' … *'S2-9'*	Sound mode 2, programme 1…9	
	'uoL1' … *'uoL9'*	Microphone sensitivity from low to high

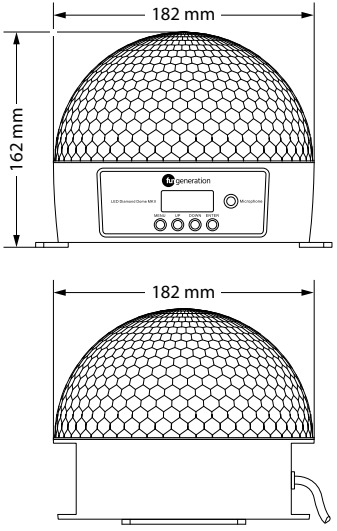
Menu level 1	Menu level 2	Meaning
'r000' … *'r255'*		Intensity Red (0 % to 100 %)
'g000' … *'g255'*		Intensity Green (0 % to 100 %)
'b000' … *'b255'*		Intensity Blue (0 % to 100 %)
'u000' … *'u255'*		Intensity White (0 % to 100 %)
'Y000' … *'Y255'*		Intensity Amber (0 % to 100 %)
'p000' … *'p255'*		Intensity Purple/UV (0 % to 100 %)
'F000' … *'F255'*		Stroboscope effect on, increasing speed
'S--1' … *'S--9'*		Increasing motor speed

7.1 Functions in 9-channel DMX operation

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 %)
5	0…255	Intensity Amber (0 % to 100 %)
6	0…255	Intensity Purple/UV (0 % to 100 %)
7	0…9	No function
	10…255	Stroboscope effect on, increasing speed
8	0…5	Motor on, static position
	6…127	Motor position
	128…255	Motor speed
9	0…50	random effects
	51…100	double colour change, increasing motor speed
	101…150	Change of all colours, increasing motor speed

Channel	Value	Function
	151…200	Transition of all colours, increasing motor speed
	201…250	Sound mode 1
	251…255	Sound mode 2

8 Technical specifications



Light source	6 × 6-in-1 LED, RGBWAUV, each 1 W	
Optical properties	Dispersion characteristics (single beams)	VNSP (very narrow spot)
Control	Buttons and display on the unit, DMX, infrared remote control	
Number of DMX channels	9	
Input connections	DMX control	XLR chassis plug, 3-pin
Output connections	DMX control	XLR chassis socket, 3-pin
Power consumption	25 W	
Operating supply voltage	100 - 240 V ~ 50/60 Hz	
Fuse	5 mm × 20 mm, 1 A, 250 V, slow-blow	
Protection class	IP20	
Mounting options	Ceiling mounting, wall mounting	
Dimensions (W × H × D)	182 mm × 162 mm × 182 mm	
Weight	0.8 kg	

Ambient conditions	Temperature range	0 °C…40 °C
	relative humidity	20 %…80 % (non-condensing)

Further information

Similar construction	Mirror ball
DMX control	yes
Master/Slave	yes
Remote control	included
Sound control	yes
Display	yes

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!

Data transfer errors due to improper wiring!

If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

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 fuse.
	2. Check the settings in manual mode.
No response to the DMX controller	1. Check the DMX connections and cables for proper connection.
	2. Check the address settings and the DMX polarity.
	3. Check whether the DMX cables run near or parallel to high-voltage cables that may cause damage or interference to a DMX interface circuit.
	4. Try using another DMX controller.
No response to the remote control	1. Try using the remote control at a different angle to the sensor.
	2. Move the remote control closer to the unit.
	Check the remote control battery.

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 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 batteries

Batteries must not be thrown away or incinerated; they must be disposed of in accordance with local regulations for the disposal of hazardous waste. Use the existing collection points for this.

Only dispose of lithium batteries when they are discharged. Remove replaceable lithium batteries from the device before disposal. Protect used lithium batteries against short circuits, for example by covering the poles with adhesive tape. Permanently built-in lithium batteries must be disposed of together with the device. Please inquire about an appropriate collection point.

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.