Owner's Manual

DJ Lase

DJ Lase 40-G MKII / 100-R MKII / 150-B

STARVILLE

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General notes on safety

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire or serious injury.
Save all warnings and instructions for future reference.

DANGER

Electric shock caused by high voltages inside!

Within the unit there are areas where high voltages may be present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. Covers should be removed by qualified service personnel only.
There are no user-serviceable parts inside.

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.

Power supply

Notice

Malfunction or damage to equipment!

Ensure that the input voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user.
Unplug the unit before electrical storms occur and when unused for long periods of time.

Operating conditions

Always install and use the device in accordance with these instructions.

Notice

Malfunction or damage to equipment!

This device has been designed for indoor use only. Do not expose the device to any liquid or moisture. Do not install the unit near any direct heat source. Keep the unit away from naked flames.
Do not block areas of ventilation. Failure to do so could result in fire.
This device has not been designed for continuous use. Regular breaks during operation are essential to maximize the lifetime.
Do not switch the device on and off in short time intervals.

Laser safety

This information is based on DIN EN 60825-1.
This device is a class 3B laser product. It is equipped with a safety key. Always remove the key when the device is not operated by trained personnel.
As an operator you are responsible for the safety of all persons present.
Familiarize yourself with the laser safety regulations that apply in your country. To ensure safe operation, it is important to pay attention to the following instructions.

DANGER

Laser radiation – avoid exposure to beam!

This device is a class-3B laser product, classified according to EN 60825-1. Do not look into the laser beam. The laser beam can injure your eyes when you directly look into it.
Do not expose to the laser beam. The laser beam can cause skin burns.
In this context take extreme care when using converging optical instruments.

WARNING

Risk of epileptic shock!

Strobe lighting can trigger seizures in photosensitive epilepsy. Sensitive persons must avoid looking at strobe lights.

Notice

Laser radiation – fire hazard!

Keep the laser area free of flammable objects.

Intended use

This device has been designed for show applications only. Any compensation claims caused by inappropriate or unintended use are always excluded.

Installation

DANGER

Laser radiation!

During installation follow the instructions specified in section “Laser safety” on page 4.

DANGER

When using additional components!

Additional components can cause dangerous laser beam diffusion when they are not properly connected.

Notice

Safety switch required!

We strongly recommend to install a remote manual safety switch to the device. The safety switch turns the laser off immediately.

General installation rules

You can install the device on the wall, the ceiling or on the ground. A mounting bracket is provided together with the device.

WARNING

Injuries caused by falling parts!

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.

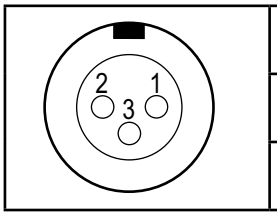
Notice

Malfunction or damage to equipment!

The distance between light output and the illuminated surface must be more than 0.5 m (19.7 in).
Ensure also that there is enough room for ventilation.
The ambient temperature must always be between 10 °C (50 °F) and 45 °C (113 °F).

DMX connectors

A female 3-pin XLR connector is used for the DMX output, a male 3-pin XLR connector for the DMX input. The figure below and the following table show the pin assignment.



1	Ground
2	DMX data (–)
3	DMX data (+)

Setup

DANGER

Laser radiation!

During setup follow the instructions specified in section “Laser safety” on page 4.

The required connections depend on the operation mode of the device.

Notice

Malfunction or damage to equipment!

For failure-free operation of the DMX chain, use dedicated DMX cables. Never use ordinary microphone cables.
Never connect the DMX output to audio devices such as mixers or amplifiers. The voltages used on the DMX lines may severely damage the audio input circuits.

Connections in DMX mode

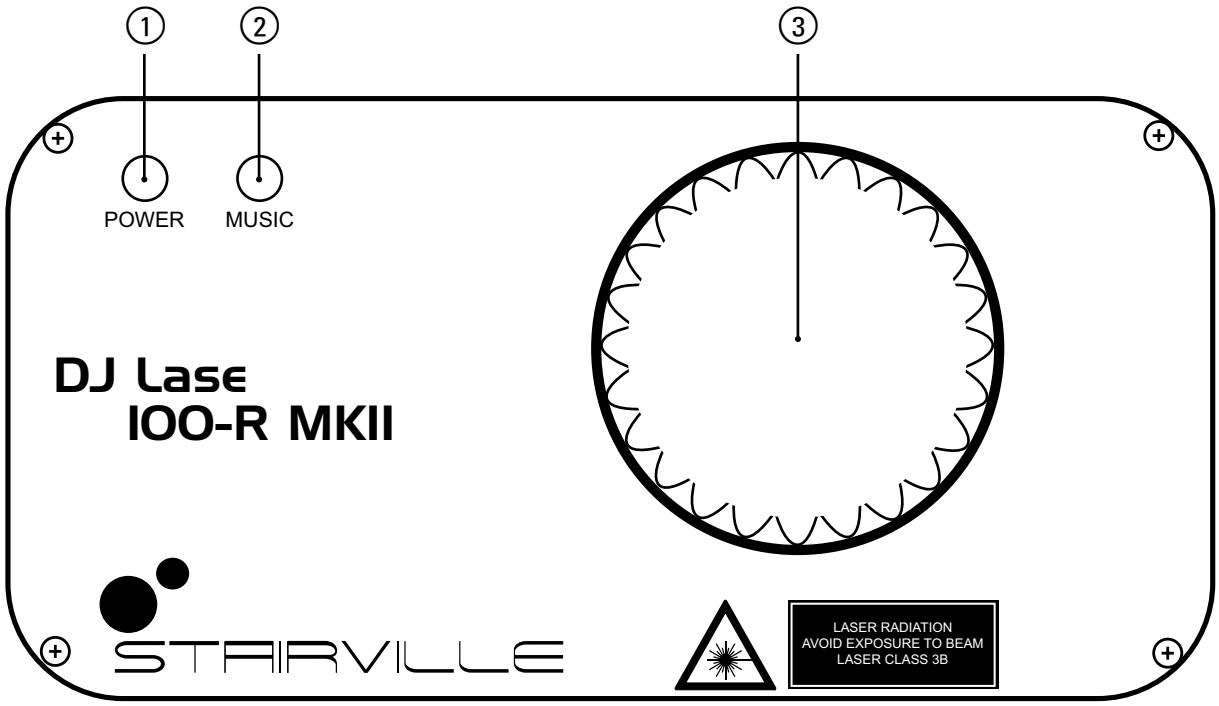
Connect the DMX input of the device to the DMX output socket of a DMX controller or another DMX device. Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a 120-Ω resistor. When the device is configured for DMX mode, but no DMX signal is being received, the display flashes.

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 light 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.

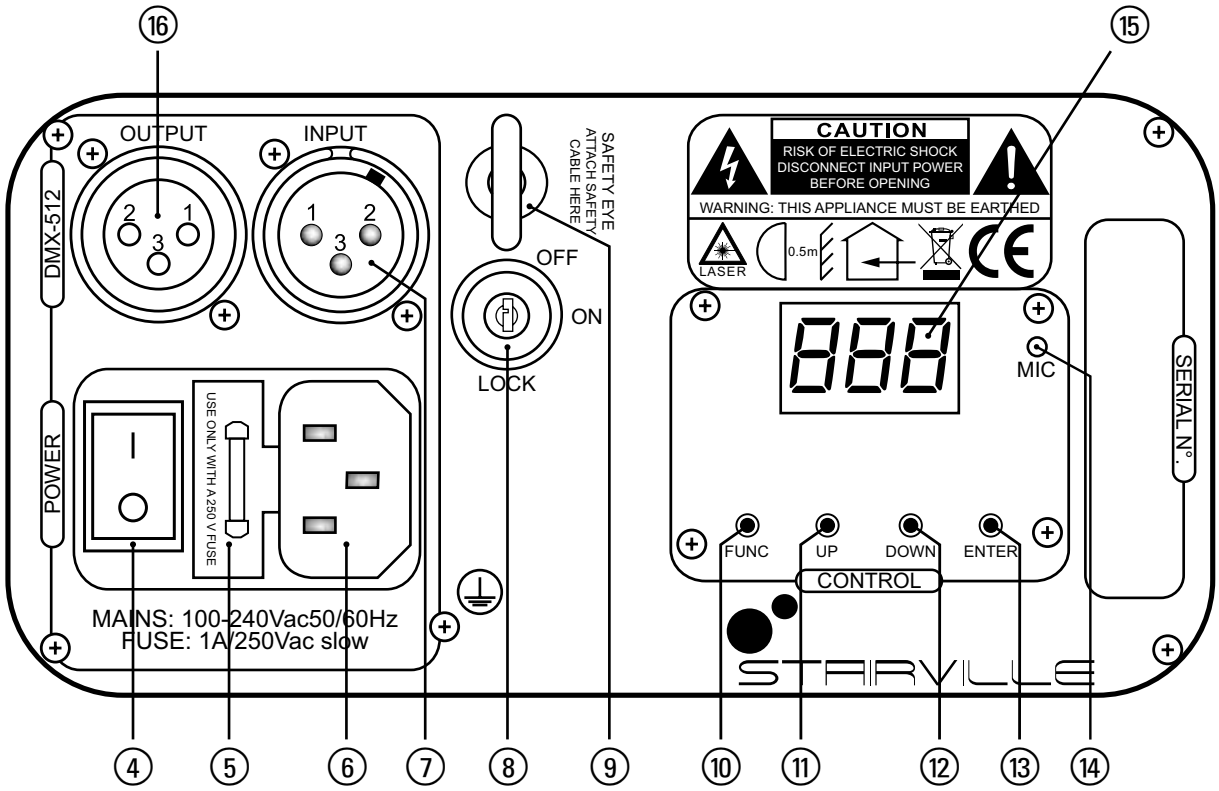
Components and functions

Front side



①	POWER: Shows that the device is turned on
②	MUSIC: Shows that a sound or music signal is being detected
③	Laser aperture

Rear side



④	Main switch
⑤	Fuse holder
⑥	Plug for mains cable; the input voltage is printed next to it
⑦	INPUT: DMX input
⑧	Safety key switch: Turns the laser output on or off
⑨	Safety eye
⑩	FUNC: Opens the main menu
⑪	UP: Increases the displayed value by one
⑫	DOWN: Decreases the displayed value by one
⑬	ENTER: Chooses between the options of the selected mode
⑭	MIC: Microphone used for the sound mode
⑮	Display
⑯	OUTPUT: DMX output

Operation

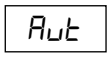
Start the device

Perform the following steps to start the operation:
1. Verify that all required laser safety precautions have been taken. Make sure that there is no one in the reach of the laser beam.
2. Insert the safety key (8) and turn it to the “OFF” position.
3. If not already connected, connect the device to the mains (6).
4. Using the main switch (4) turn the device on. After a few seconds, the fan and the motors start to work. The display shows the current operation mode. The device is now operational.
5. Turn the safety key (8) to the “ON” position to turn the laser beam on.

Main menu

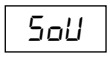
Press “FUNC” to activate the main menu and to select one of the operation modes.
When the display flashes, use the “UP” and “DOWN” buttons to change the displayed value. When the display shows the desired value, press “ENTER”. To go back to the main menu without any changes, press “FUNC” or wait for one minute.
All settings that were made previously are kept, even if you disconnect the device from the power supply.

Auto show mode



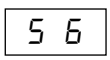
Press “FUNC” until the display shows “Aut”. The device operates in stand-alone mode and displays a pre-programmed show. Press “ENTER” to confirm and to start the operation.

Music mode



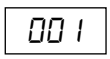
Press “FUNC” until the display shows “SoU”. The device operates in stand-alone mode, the built-in microphone controls a pre-programmed show. Press “ENTER” to confirm and to start the operation.

Sound sensitivity



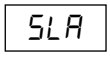
Press “FUNC” until the display shows “S 6” and starts flashing. This menu is used to set the sensitivity of the microphone. Using the “UP” and “DOWN” buttons, you can now choose between “S 0” (sensitivity = 0, music mode disabled) and “S 1” (low sensitivity) to “S 9” (high sensitivity). Press “ENTER” to store the setting.

DMX mode



Press “FUNC” until the display shows “001”. You can now set the number of the first DMX channel of the device (DMX address). Select a value between 1 and 512 using the “Up” and “Down” buttons. Press “ENTER” to store the value and to start the operation in DMX mode.
Ensure that this channel number fits to the configuration of your DMX controller. Since the device uses eight DMX channels, the highest usable DMX start address is 505.

Master/slave mode

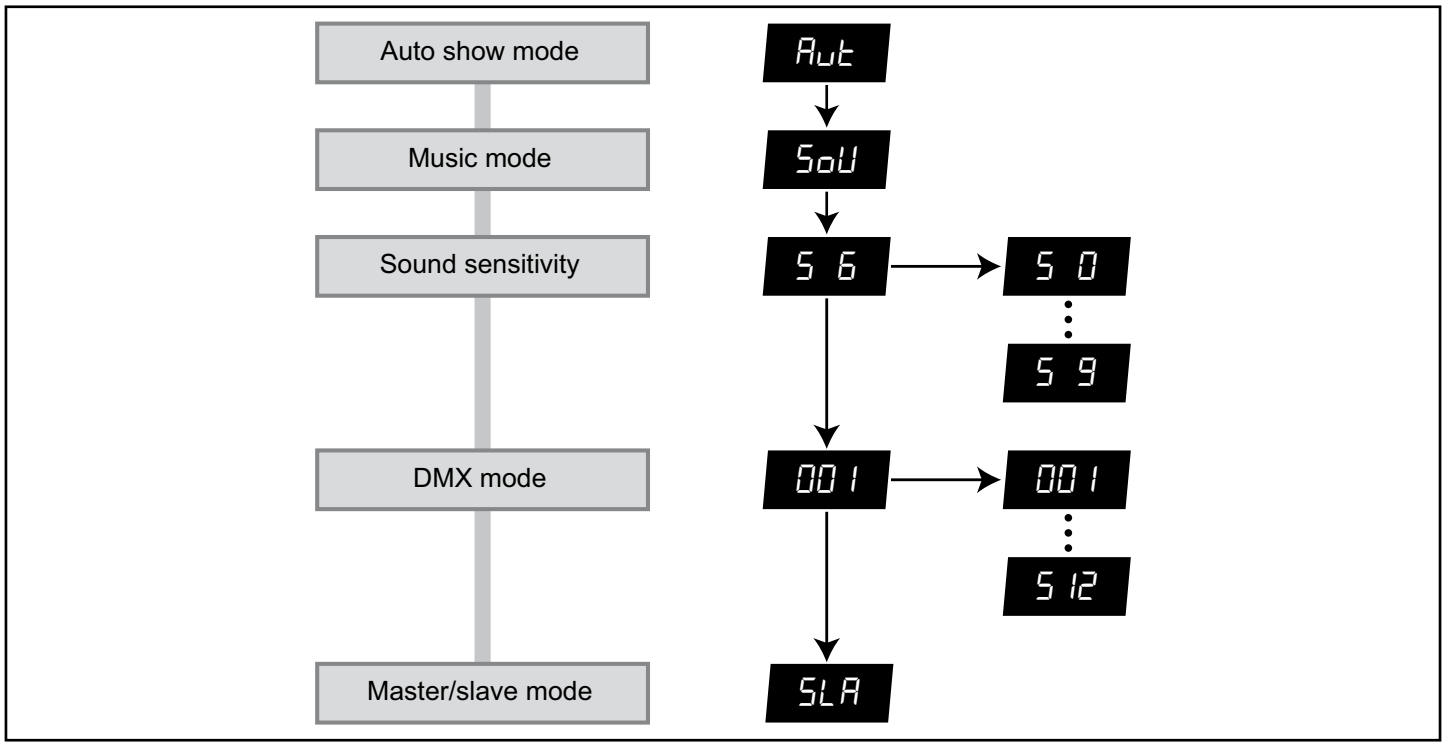


Press “FUNC” until the display shows “SLA”. In this mode, the device exactly follows the operation of the “master” it is connected to. Press “ENTER” to confirm and to start the operation.

Stop the device

Perform the following steps to stop the operation:
1. Turn the safety key (8) to the “OFF” position to turn the laser beam off and remove the key. Keep the safety key under control.
2. Using the main switch (4) turn the device off.
3. Optionally, disconnect the device from the mains (6).

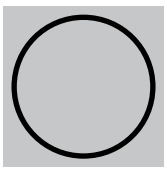
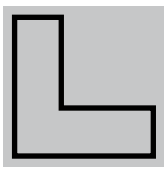
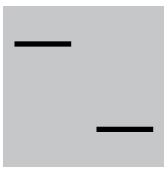
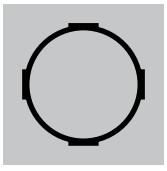
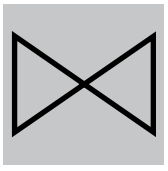
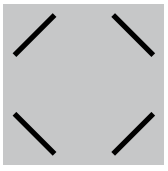
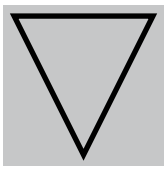
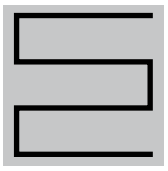
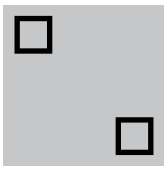
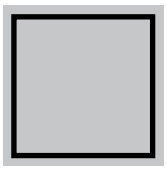
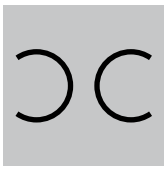
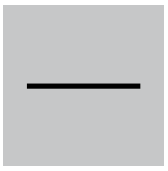
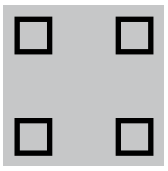
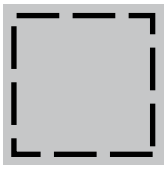
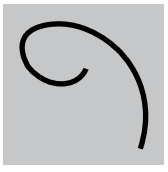
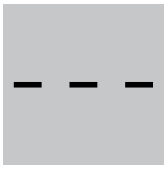
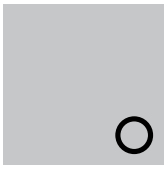
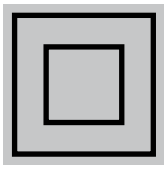
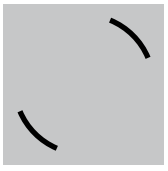
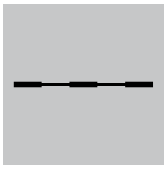
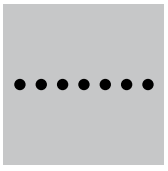
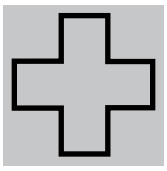
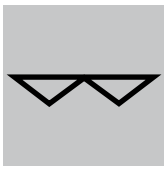
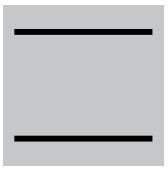
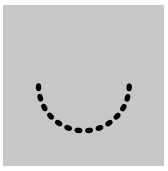
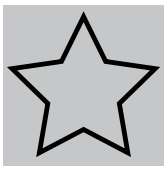
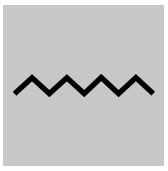
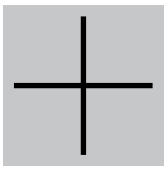
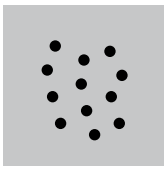
Menu diagram



Functions in DMX mode

Channel	Value	Function
1	Mode selection	
	0…63	Laser off
	64…127	Auto show; the device operates in stand-alone mode and display a pre-programmed show
	128…191	Music mode; the built-in microphone controls a pre-programmed show
	192…255	DMX mode; this setting enables the function of the other DMX channels
2	0…255	Pattern selection (as shown in the pattern list)
3	Zoom	
	0…127	Fixed zoom (100 % to 5 %)
	128…169	Zoom-in effect, speed increasing
	170…209	Zoom-out effect, speed increasing
	210…255	Zoom-in and zoom-out effect, speed increasing
4	Y axis rotation	
	0…127	0° to 359° fixed Y axis position
	128…191	Clockwise rolling effect, speed increasing
	192…255	Anti-clockwise rolling effect, speed increasing
5	X axis rotation	
	0…127	0° to 359° fixed X axis position
	128…191	Clockwise rolling effect, speed increasing
	192…255	Anti-clockwise rolling effect, speed increasing
6	Z axis rotation	
	0…127	0° to 359° fixed Z axis position
	128…191	Clockwise rolling effect, speed increasing
	192…255	Anti-clockwise rolling effect, speed increasing
7	X axis moving	
	0…127	128 different fixed positions on X axis
	128…191	Clockwise moving effect, speed increasing
	192…255	Anti-clockwise moving effect, speed increasing
8	Y axis moving	
	0…127	128 different fixed positions on Y axis
	128…191	Clockwise moving effect, speed increasing
	192…255	Anti-clockwise moving effect, speed increasing

Pattern list

0…7 	64…71 	128…135	190…197 
8…15 	72…79 	136…143	198…205 
16…23 	80…87	144…151 	206…213 
24…31 	88…95 	152…159 	214…221 
32…39 	96…103 	160…167 	222…229 
40…47 	104…111 	168…175 	230…237 
48…55 	132…119 	176…181 	238…245 
56…63 	140…127 	182…189 	246…255 

Troubleshooting

DANGER

Laser radiation!

During troubleshooting follow the instructions specified in section “Laser safety” on page 4.

DANGER

Laser radiation inside!

Only qualified personnel may carry out service activities when the covers of the device are open.

DANGER

Laser radiation!

Suitable laser protection glasses are required for any activities at the device.

A few common problems that may occur during operation are shown in the following. Here are some suggestions for easy troubleshooting:

The device does not work, no light and the fan does not work

1. Check the power connection and main fuse.

No response to the DMX controller

1. If the display shows a flashing number, for example “001“, no DMX signal is being received. Check the DMX connectors and cables to see if they are properly linked.
2. If the display does not flash and there is no response, check the address settings and DMX polarity.
3. Try to use another DMX controller.
4. Check if the DMX cables run near or alongside high-voltage cables that may cause damage or interference to the DMX interface circuit.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at www.thomann.de.

Cleaning

DANGER

Laser radiation!

During cleaning follow the instructions specified in section “Laser safety” on page 4.

DANGER

Laser radiation!

To avoid unintended laser emission, remove the safety key before you start to clean the device.

Clean the optical lenses which are accessible from the outside periodically to optimise light output. The cleaning frequency depends on the environment in which the device operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit’s optics.

- Clean with soft cloth using normal glass cleaning fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days.

Technical data

The laser emission values shown in the following table were measured according to the IEC measurement conditions for the classification.

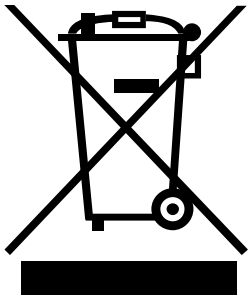
	DJ Lase 40-G MKII	**DJ Lase 100-R MKII**	**DJ Lase 150-B**
Item no.	255620	255623	255624
Laser medium	Green, 532 nm, Nd: YVO4 DPSS	Red, 650 nm, LD	Violet, 405 nm, GaAlAs
Laser power	> 40 mW	> 100 mW	> 150 mW
Laser classification acc. to EN 60825-1 2007	3B		
Beam diameter at aperture	< 5 mm		
Pulse data	All pulses < 4 Hz (> 0.25 s)		
Divergence (each beam)	< 2 mrad		
Divergence (total light)	< 160°		
Number of DMX channels	8		
Input voltage	110 VAC … 240 VAC, 50/60Hz		
Power consumption	12 W		
Fuse	5 mm × 20 mm, 1 A, 250 V, slow characteristic		
Dimensions (W × D × H)	160 mm × 160 mm × 80 mm (6.3 in. × 6.3 in. × 3.1 in.)		
Weight	1.8 kg (4.0 lbs)		

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 and are not in the reach of babies and young children. Choking hazard! Do not just dispose these materials with your normal household waste, but make sure that they are fed to a recovery. Please follow the notes and markings on the packaging.

Disposal of your old device



Electrical and electronic equipment often contain materials which can be unhealthy and environmentally harmful, if not properly treated and disposed of. However, they are essential for the proper operation of your device. At the end of its operating lifetime, do not dispose the device with your normal household waste.
This device is subject to the European directive 2002/96/EC.
Dispose this device through an approved waste disposal firm or through your local waste facility. When discarding the unit, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

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