



DJ Lase Performance  
150 RGY / 250 RVP /  
200 GVC

showlaser

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# 1 General notes

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

## 1.1 Further information

On our website ([www.thomann.de](http://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'*.

### Instructions

The individual steps of an instruction are numbered consecutively. The result of a step is indented and highlighted by an arrow.



#### Example:



1. ▶ Switch on the device.
2. ▶ Press *[Auto]*.
  - ⇒ Automatic operation is started.
3. ▶ Switch off the device.

## 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
<b>DANGER!</b>	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.
<b>WARNING!</b>	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.
<b>NOTICE!</b>	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 – laser radiation.

Warning signs	Type of danger
 A yellow triangular warning sign with a black border. Inside the triangle, a black silhouette shows a crane hook lifting a rectangular load.	Warning – suspended load.
 A yellow triangular warning sign with a black border. Inside the triangle, a black exclamation mark is centered.	Warning – danger zone.

## 2 Safety instructions

### Intended use

This device is intended to be used for the projection of laser light effects. It has been designed exclusively for show applications. 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.

### **Laser safety basics**

Laser safety requirements are based on DIN EN 60825-1:2015. The corresponding accident prevention regulation of the Accident Prevention and Insurance Association in Germany is BGV-B2.

This device contains a class-3B laser. It comes equipped with a safety key and a jack for connecting an external safety switch. Always remove the key when the device is not attended by a trained operator.

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.

Prior to commissioning, the company/operator must appoint a qualified person as laser protection officer in writing and notify the operation of the laser equipment to the Accident Prevention and Insurance Association and to the authority responsible for occupational safety. In the event of public use, the complete laser equipment must be approved by an expert (e. g. the Technical Control Board TÜV) prior to commissioning.

**Safety****DANGER!****Danger for children**

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.

**DANGER!****Electric shock caused by high voltages inside**

Within the device there are areas where high voltages may be present. Never remove any covers.

There are no user-serviceable parts inside.

Do not use the device if covers, protectors or optical components are missing or damaged.



### **DANGER!**

#### **Electric shock caused by short-circuit**

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.



### **DANGER!**

#### **Laser radiation – avoid exposure to beam**

The device contains a class-3B laser, classified according to EN 60825-1:2015. Do not look into the laser beam. The laser beam can injure your eyes when you directly look into it. Do not expose yourself to the laser beam. The laser beam can cause skin burns.

In this context take extreme care when using converging optical instruments.



**WARNING!**

**Eye damage caused by high light intensity**

Never look directly into the light source.



**WARNING!**

**Risk of epileptic shock**

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



**NOTICE!**

**Laser radiation – risk of fire**

Keep the area exposed to laser radiation free from flammable substances.



### **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.





**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 staining**

The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains.

In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.

### 3 Features

The showlaser is specially suited for discos, clubs, bars, stages, etc. Its control via the DMX interface allows smooth integration into light shows.

Special features of this device:

- Control via DMX (9 channels) and buttons plus display on the unit itself.
- Built-in automatic show programmes
- Sound control
- Master/slave mode
- 32 different patterns
- Two laser diodes with the corresponding mixed colour (150 RGY: red, green, yellow; 250 RVP: red, violet, pink; 200 GVC: green, violet, cyan)

## 4 Installation

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

You can install the device standing or hanging. When in use, the device must be mounted at a solid surface or clamped to an approved truss.

Work from a stable platform whenever you install or move the device or when you perform any kind of maintenance. Block access under the work area.

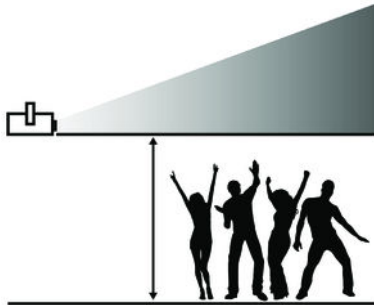
### Safety switch (emergency stop)



Connect the external safety switch (optional, not included in scope of delivery) to the connection socket provided on the unit. If you press the switch, the laser beam will be switched off immediately.

Follow the switch manufacturer's safety instructions and the guidelines for intended use.

## Minimum height



When installing the unit, observe the specified minimum height to prevent the risk of injury to persons, and observe the limits for maximum exposure of eyes or skin to a laser.

These limits are set depending on the specific ambient conditions in each case and must be determined on site by the laser safety authorised personnel in charge, based on the applicable standard, DIN EN 60825-1.



### **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.



### **DANGER!**

Follow the instructions in the chapter titled "Safety Instructions" in the user manual.

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



**WARNING!**

**Stray laser radiation**

Inadequately secured additional components may cause stray laser radiation.  
Make sure that all additional components are adequately secured.



**NOTICE!**

**Risk of overheating**

The distance between the light output and the illuminated surface must be more than 2.0 m (78.7 in).

Always ensure sufficient ventilation.

The ambient temperature must always be below 40 °C (104 °F).

## 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.



**DANGER!**  
**Laser radiation**

Follow the instructions in the chapter titled "Safety Instructions" in this manual.



**NOTICE!**  
**Possible data transmission errors**

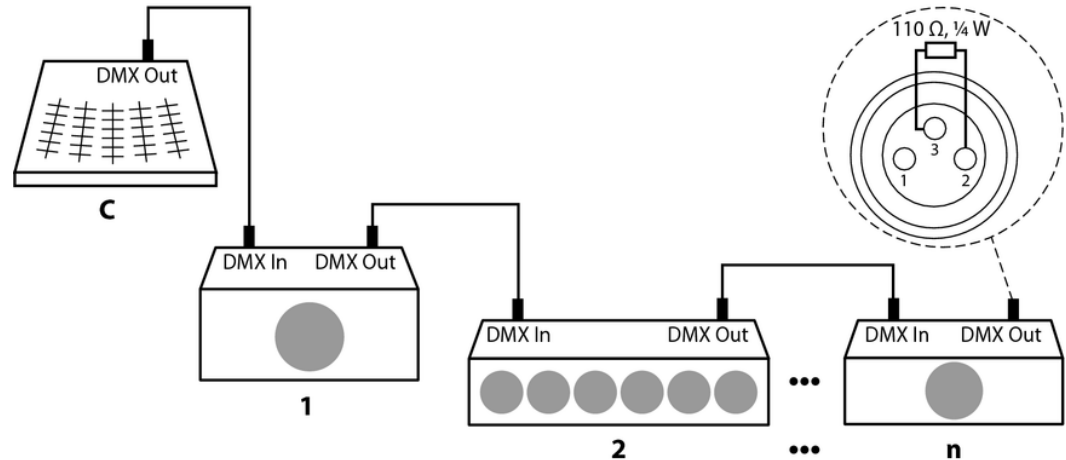
For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.

Never connect the DMX input or output to audio devices such as mixers or amplifiers.



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

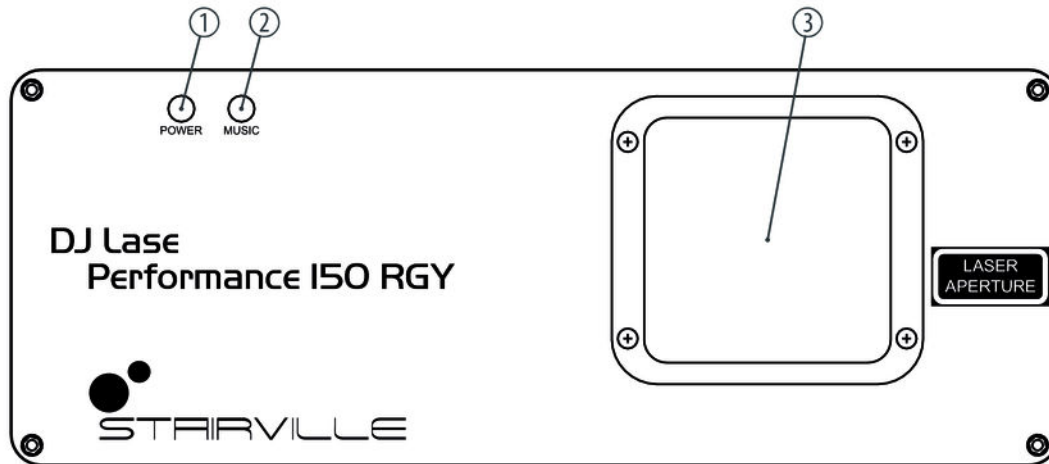


### **Connections in master/slave mode**

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

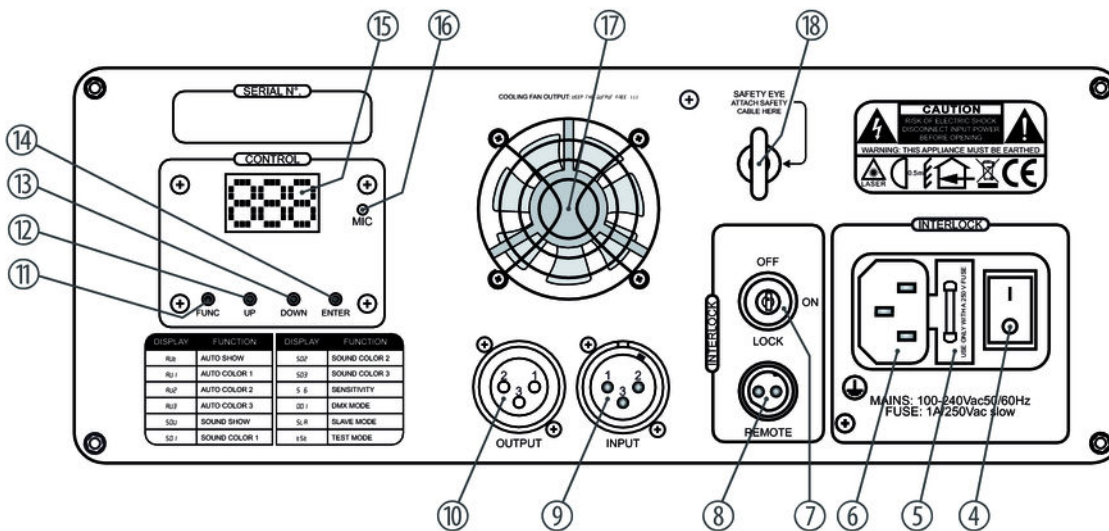
### Front panel



DJ Lase Performance 150 RGY / 250 RVP / 200 GVC

1	LED [ <i>POWER</i> ] Shows that the device is turned on.
2	LED [ <i>MUSIC</i> ] Shows that a sound or music signal is being detected.
3	Laser aperture.

Rear panel



DJ Lase Performance 150 RGY / 250 RVP / 200 GVC

4	Main switch.
5	Fuse holder.
6	Plug for mains cable.
7	<i>[LOCK]</i> Safety key switch: Turns the laser output on or off.
8	<i>[REMOTE]</i> Connection for optional remote safety switch (emergency stop). An adapter for safety switches equipped with phone jacks is included in the delivery.
9	<i>[INPUT]</i> DMX input.
10	<i>[OUTPUT]</i> DMX output.

11	<i>[FUNC]</i> Opens the main menu.
12	<i>[UP]</i> Increases the displayed value by one.
13	<i>[DOWN]</i> Decreases the displayed value by one.
14	<i>[ENTER]</i> Selects an option of the respective operating mode.
15	Display.
16	MIC Microphone used for the sound mode.
17	Fan.
18	Safety eyelet.

## 7 Operation

### 7.1 Starting up the device

Perform the following steps to start up the device:

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 into the lock (7).
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 (7) to the "ON" position to turn the laser beam on.



## 7.2 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 previously made settings are saved, 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 that can optionally be controlled by the built-in microphone. Using the *[UP]* and *[DOWN]* buttons, you can now choose between the show types shown in the table below. Press *[ENTER]* to store the value and to start the operation in Auto-Show mode.

Display	Show		
	DJ Lase Performance 150 RGY	DJ Lase Performance 250 RVP	DJ Lase Performance 200 GVC
	Item no. 255905	Item no. 255906	Item no. 255907
'Aut'	Auto show, green+red+yellow	Auto show, red+violet+pink	Auto show, green+violet+cyan
'Au1'	Auto show, red	Auto show, violet	Auto show, green
'Au2'	Auto show, green	Auto show, red	Auto show, violet
'Au3'	Auto show, yellow	Auto show, pink	Auto show, cyan
'Sou'	Sound-controlled show, green+red+yellow	Sound-controlled show, red+violet+pink	Sound-controlled show, green+violet+cyan
'So1'	Sound-controlled show, red	Sound-controlled show, violet	Sound-controlled show, green

Display	Show		
	DJ Lase Performance 150 RGY	DJ Lase Performance 250 RVP	DJ Lase Performance 200 GVC
	Item no. 255905	Item no. 255906	Item no. 255907
'So2'	Sound-controlled show, green	Sound-controlled show, red	Sound-controlled show, violet
'So3'	Sound-controlled show, yellow	Sound-controlled show, pink	Sound-controlled show, cyan

### 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 used by the device (DMX address). Use the *[UP]* and *[DOWN]* buttons to select a value between 1 and 512. 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 nine DMX channels, the highest usable DMX start address is 504.

### 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 in Master/Slave mode.

### Self test mode

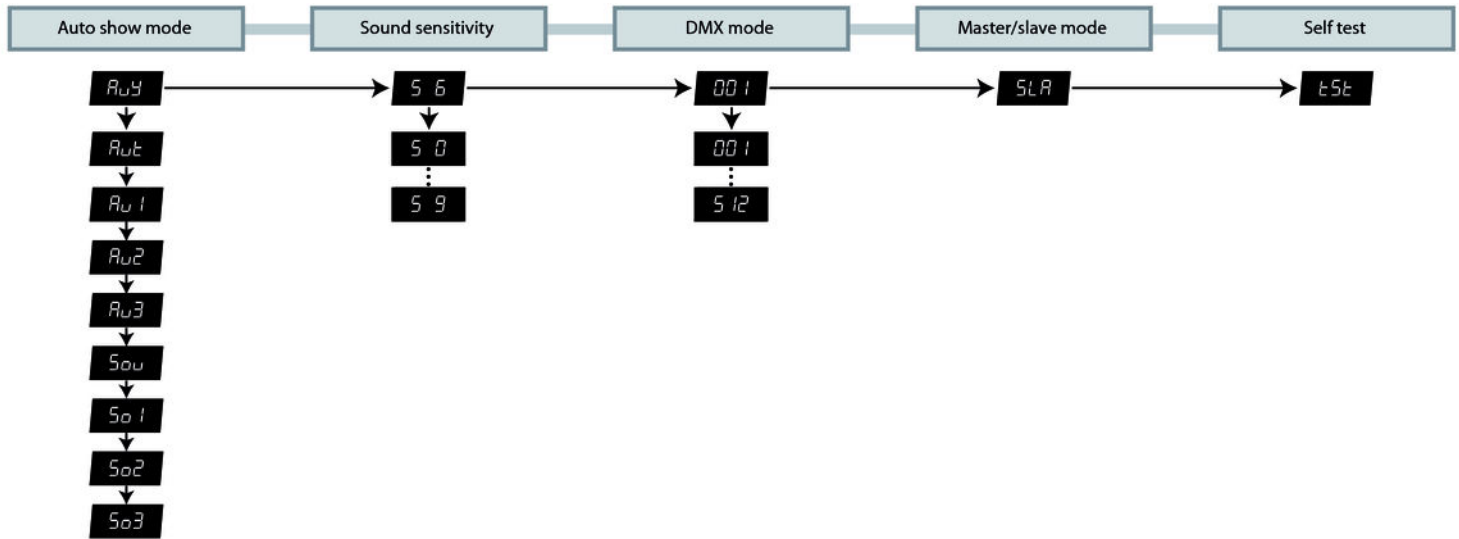
Press *[FUNC]* until the display shows 'tSt'. In this mode, the device performs a short self test. Press 'ENTER' to start a continuous self test. To finish the continuous self test press *[FUNC]*.

## 7.3 Stop the device

Perform the following steps to stop the device:

1. ➤ Turn the safety key (7) 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).

## 7.4 Menu diagram



## 7.5 Functions in DMX mode

### 150 RGY, item no. 255905

Channel	Value	Function
1	Mode selection	
	0...27	Laser off
	28...55	Auto show, green+red+yellow
	56...83	Auto show, red
	84...111	Auto show, green
	112...139	Auto show, yellow
	140...167	Sound-controlled show, green+red+yellow
	168...195	Sound-controlled show, red
	196...223	Sound-controlled show, green
	224...251	Sound-controlled show, yellow

Channel	Value	Function
	252...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	100 % to 5 % fixed zoom
	128...169	Zooming in effect, speed increasing from slow to fast
	170...209	Zooming out effect, speed increasing from slow to fast
	210...255	Zooming in and out effect, speed increasing from slow to fast
4	X axis moving	
	0...127	128 different fixed positions on X axis
	128...191	Clockwise moving effect, speed increasing from slow to fast
	192...225	Anti-clockwise moving effect, speed increasing from slow to fast
5	Y axis moving	
	0...127	128 different fixed positions on Y axis

Channel	Value	Function
	128...191	Clockwise moving effect, speed increasing from slow to fast
	192...255	Anti-clockwise moving effect, speed increasing from slow to fast
6	Y axis rotation	
	0...127	0° to 359° fixed Y axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast
7	X axis rotation	
	0...127	0° to 359° fixed X axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast
8	Z axis rotation	
	0...127	0° to 359° fixed Z axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast



Channel	Value	Function
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast
9	Colour selection	
	0...31	Original pre-programmed colour
	32...63	Red
	64...95	Green
	96...127	Yellow
	128...255	Colour rolling

### 250 RVP, item no. 255906

Channel	Value	Function
1	Mode selection	
	0...27	Laser off
	28...55	Auto show, red+violet+pink

Channel	Value	Function
	56...83	Auto show, violet
	84...111	Auto show, red
	112...139	Auto show, pink
	140...167	Sound-controlled show, red+violet+pink
	168...195	Sound-controlled show, violet
	196...223	Sound-controlled show, red
	224...251	Sound-controlled show, pink
	252...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	100 % to 5 % fixed zoom
	128...169	Zooming in effect, speed increasing from slow to fast
	170...209	Zooming out effect, speed increasing from slow to fast

Channel	Value	Function
	210...255	Zooming in and out effect, speed increasing from slow to fast
4	X axis moving	
	0...127	128 different fixed positions on X axis
	128...191	Clockwise moving effect, speed increasing from slow to fast
	192...225	Anti-clockwise moving effect, speed increasing from slow to fast
5	Y axis moving	
	0...127	128 different fixed positions on Y axis
	128...191	Clockwise moving effect, speed increasing from slow to fast
	192...255	Anti-clockwise moving effect, speed increasing from slow to fast
6	Y axis rotation	
	0...127	0° to 359° fixed Y axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast

Channel	Value	Function
7	X axis rotation	
	0...127	0° to 359° fixed X axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast
8	Z axis rotation	
	0...127	0° to 359° fixed Z axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast
9	Colour selection	
	0...31	Original pre-programmed colour
	32...63	Red
	64...95	Violet

Channel	Value	Function
	96...127	Pink
	128...255	Colour rolling

### 200 GVC, item no. 255907

Channel	Value	Function
1	Mode selection	
	0...27	Laser off
	28...55	Auto show, green+violet+cyan
	56...83	Auto show, green
	84...111	Auto show, violet
	112...139	Auto show, cyan
	140...167	Sound-controlled show, green+violet+cyan
	168...195	Sound-controlled show, green

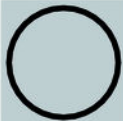
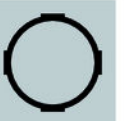



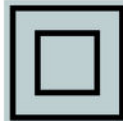












Channel	Value	Function
	196...223	Sound-controlled show, violet
	224...251	Sound-controlled show, cyan
	252...255	DMX mode This setting enables the function of the other DMX channels
2	0...255	Pattern selection (as shown in the pattern list)
3	Zoom	
	0...127	100 % to 5 % fixed zoom
	128...169	Zooming in effect, speed increasing from slow to fast
	170...209	Zooming out effect, speed increasing from slow to fast
	210...255	Zooming in and out effect, speed increasing from slow to fast
4	X axis moving	
	0...127	128 different fixed positions on X axis
	128...191	Clockwise moving effect, speed increasing from slow to fast
	192...225	Anti-clockwise moving effect, speed increasing from slow to fast

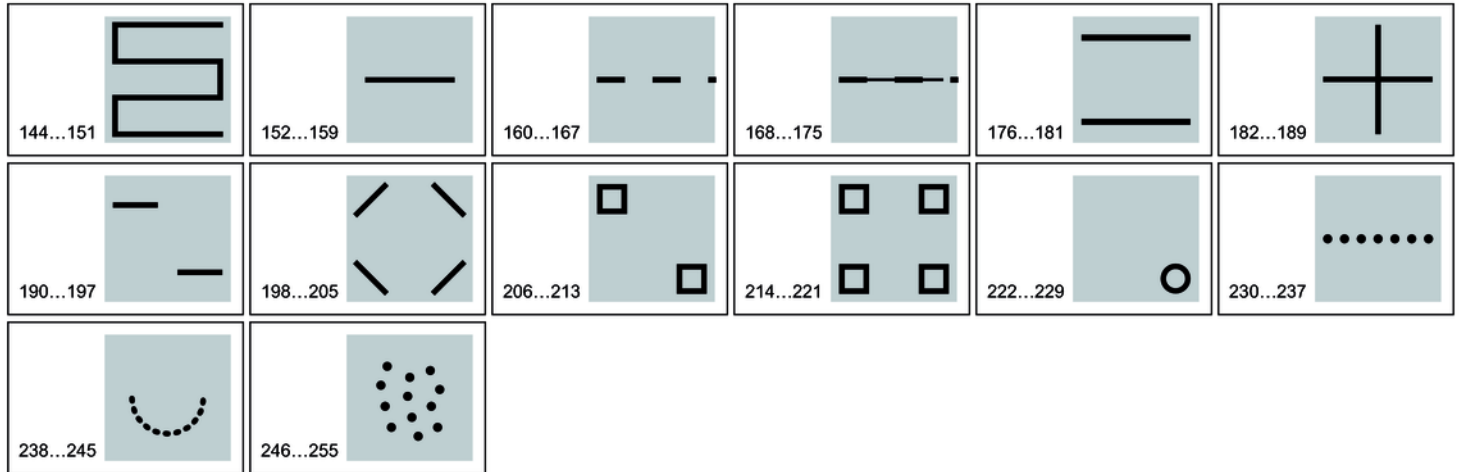
Channel	Value	Function
5	Y axis moving	
	0...127	128 different fixed positions on Y axis
	128...191	Clockwise moving effect, speed increasing from slow to fast
	192...255	Anti-clockwise moving effect, speed increasing from slow to fast
6	Y axis rotation	
	0...127	0° to 359° fixed Y axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast
7	X axis rotation	
	0...127	0° to 359° fixed X axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast
8	Z axis rotation	

Channel	Value	Function
	0...127	0° to 359° fixed Z axis position
	128...191	Clockwise rolling effect, speed increasing from slow to fast
	192...255	Anti-clockwise rolling effect, speed increasing from slow to fast
9	Colour selection	
	0...31	Original pre-programmed colour
	32...63	Violet
	64...95	Green
	96...127	Cyan
	128...255	Colour rolling



### 7.6 Pattern list

0...7 	8...15 	16...23 	24...31 	32...39 	40...47 
48...55 	56...63 	64...71 	72...79 	80...87 	88...95 
96...103 	104...111 	132...119 	140...127 	128...135 	136...143 



## 8 Technical specifications

	<b>DJ Lase Performance 150 RGY</b>	<b>DJ Lase Performance 250 RVP</b>	<b>DJ Lase Performance 200 GVC</b>
Item no.	255905	255906	255907
Laser medium	Green: 532 nm, Nd:YVO4 DPSS	Violet: 405 nm, GaAlAs	Violet: 405 nm, GaAlAs
	Red: 650 nm, LD GaAlAs	Red: 650 nm, LD GaAlAs	Green: 532 nm, Nd:YVO4 DPSS
Laser power	Green: > 50 mW	Violet: > 150 mW	Violet: > 150 mW
	Red: > 100 mW	Red: > 100 mW	Green: > 50 mW
Laser classification acc. to EN 60825-1 2015	3B		
Beam diameter at aperture	5 mm		
Pulse data	All pulses < 4 Hz (> 0,25 s)		
Divergence (each beam)	< 2 mrad		

	<b>DJ Lase Performance 150 RGY</b>	<b>DJ Lase Performance 250 RVP</b>	<b>DJ Lase Performance 200 GVC</b>
Divergence (total light)	< 160°		
Number of DMX channels	9		
Power consumption	15 W		
Operating supply voltage	100 – 240 V ~ 50/60 Hz		
Fuse	5 mm × 20 mm, 1 A, 250 V, slow-blow		
Dimensions (W × H × D)	266 mm × 99,5 mm × 185 mm		
Weight	2.6 kg		

# 9 Plug and connection assignments

## Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

## DMX connections



The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.

Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX-, 'cold signal')
3	Signal (DMX+, 'hot signal')

## 10 Troubleshooting



**DANGER!**

**Laser radiation inside**

Follow the instructions in the chapter titled "Safety Instructions" in this manual.

Only qualified personnel may carry out service work on the (open) device.

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

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, the fan does not run	<ol style="list-style-type: none"> <li>1. Check the power connection and main fuse.</li> <li>2. Check the safety key switch.</li> </ol>
No response to the DMX controller	<ol style="list-style-type: none"> <li>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.</li> <li>2. If the display does not flash and there is no response, check the address settings and DMX polarity.</li> <li>3. Try using another DMX controller.</li> <li>4. Check whether the DMX cables run near or parallel to high-voltage cables that may cause damage or interference to the DMX interface circuit.</li> </ol>

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at [www.thomann.de](http://www.thomann.de).

## 11 Cleaning



### **DANGER!**

#### **Laser radiation**

Follow the instructions in the chapter titled "Safety Instructions" in this manual.

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

### **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.



## 12 Protecting the environment

### Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

### Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE). Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.





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