



eurolite LED TSR-400 Beam Effect with LEDs User Manual

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Keep this device away from rain and moisture!
Never open the housing!

For your own safety, please read this user manual carefully before you initially start-up.

Every person involved with the installation, operation and maintenance of this device has to be qualified follow the instructions of this manual consider this manual to be part of the total product keep this manual for the entire

service life of the product pass this manual on to every further owner or user of the product download the latest version of the user manual from the Internet

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INTRODUCTION

Thank you for having chosen a EUROLITE LED TSR-400 RGBAW 3W DMX, LED D-400 RGBAW 3W DMX, or LED Z-400 RGBAW 3W DMX. If you follow the instructions given in this manual, we are sure that you will enjoy this device for a long period of time.

Delivery includes

- 1 Device
- 1 User manual

Unpack your device.

SAFETY INSTRUCTIONS



CAUTION!

Be careful with your operations. With a dangerous voltage you can suffer a dangerous electric shock when touching the wires!

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.

Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.

Please make sure that there are no obvious transport damages. Should you notice any damages on the A/C connection cable or on the casing, do not take the device into operation and immediately consult your local dealer.

This device falls under protection-class I. The power plug must only be plugged into a protection class I outlet. The voltage and frequency must exactly be the same as stated on the device. Wrong voltages or power outlets can lead to the destruction of the device and to mortal electrical shock. Always plug in the power plug last. The power plug must always be inserted without force. Make sure that the plug is tightly connected with the outlet. Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution! Never touch them with wet hands, as this could lead to mortal electrical shock.

Never modify, bend, strain mechanically, put pressure on, pull or heat up the power cord. Never operate next to sources of heat or cold. Disregard can lead to power cord damages, fire or mortal electrical shock.

The cable insert or the female part in the device must never be strained. There must always be sufficient cable to the device. Otherwise, the cable may be damaged which may lead to mortal damage.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

If extension cords are used, make sure that the core diameter is sufficient for the required power consumption of the device. All warnings concerning the power cords are also valid for possible extension cords.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord. Otherwise, the cable or plug can be damaged leading to mortal electrical shock. If the power plug or the power switch is not accessible, the device must be disconnected via the mains.

If the power plug or the device is dusty, the device must be taken out of operation, disconnected and then be cleaned with a dry cloth. Dust can reduce the insulation which may lead to mortal electrical shock. More severe dirt in and at the device should only be removed by a specialist.

There must never enter any liquid into power outlets, extension cords or any holes in the housing of the device. If you suppose that also a minimal amount of liquid may have entered the device, it must immediately be disconnected. This is also valid, if the device was exposed to high humidity. Also if the device is still running, the device must be checked by a specialist if the liquid has reduced any insulation. Reduced insulation can cause mortal electrical shock.

There must never be any objects entering into the device. This is especially valid for metal parts. If any metal parts like staples or coarse metal chips enter into the device, the device must be taken out of operation and disconnected immediately. Malfunction or short-circuits caused by metal parts may cause mortal injuries.



HEALTH HAZARD!

Never look directly into the light source, as sensitive persons may suffer an epileptic shock (especially meant for epileptics)!

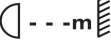
Keep away children and amateurs!

Never leave this device running unattended.

OPERATING DETERMINATIONS

- This device is a lighting effect for creating decorative effects. This product is only allowed to be operated with an alternating voltage of 230 V, 50 Hz and was designed for indoor use only.
- This device is designed for professional use, e.g. on stages, in discotheques, theatres etc.
- Lighting effects are not designed for permanent operation. Consistent operation breaks will ensure that the

device will serve you for a long time without defects.

- Do not shake the device. Avoid brute force when installing or operating the device.
- When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!
- This device must never be operated or stockpiled in surroundings where splash water, rain, moisture or fog may harm the device. Moisture or very high humidity can reduce the insulation and lead to mortal electrical shocks. When using smoke machines, make sure that the device is never exposed to the direct smoke jet and is installed in a distance of 0.5 meters between smoke machine and device. The room must only be saturated with an amount of smoke that the visibility will always be more than 10 meters.
- The ambient temperature must always be between -5°C and $+45^{\circ}\text{C}$. Keep away from direct insulation (particularly in cars) and heaters. The relative humidity must not exceed 50 % with an ambient temperature of 45°C .
- This device must only be operated in an altitude between -20 and 2000 m over NN.
- Never use the device during thunderstorms. Over voltage could destroy the device. Always disconnect the device during thunderstorms.
- The symbol  determines the minimum distance from lighted objects.
- The minimum distance between light-output and the illuminated surface must be more than 0.1 meters.
- This device is only allowed for an installation via the mounting bracket. In order to safeguard sufficient ventilation, leave 50 cm of free space around the device.
- The housing must never touch surrounding surfaces or objects.
- Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.
- Always fix the fixture with an appropriate safety bond.
- The maximum ambient temperature $T_a = 45^{\circ}\text{C}$ must never be exceeded.
- Operate the device only after having become familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation!
- Never use solvents or aggressive detergents in order to clean the device! Rather use a soft and damp cloth.
- Please use the original packaging if the device is to be transported. Make sure that you pack the device in the original state.
- Please consider that unauthorized modifications on the device are forbidden due to safety reasons!
- If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like shortcircuit, burns, electric shock, crash etc.

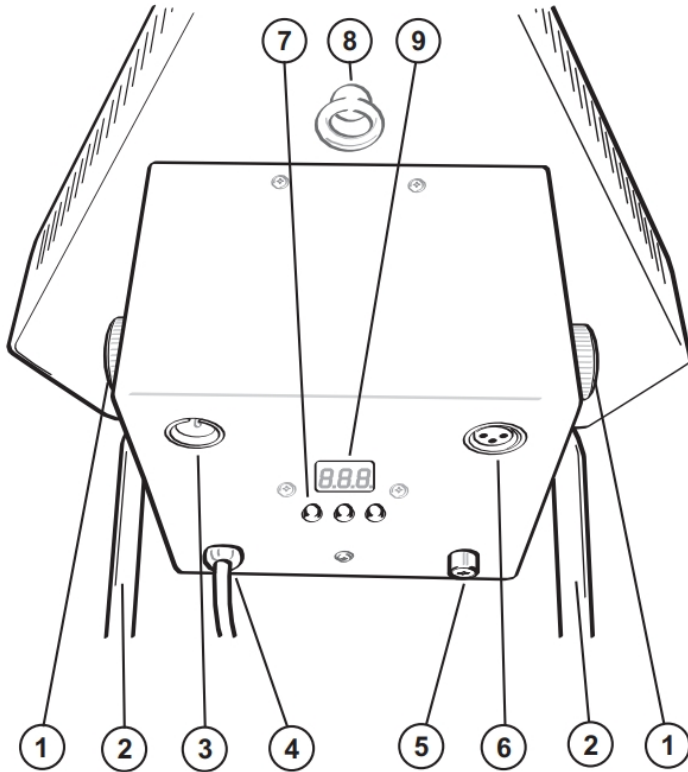
DESCRIPTION OF THE DEVICE

Features

- DMX-controlled operation or stand alone operation with Master/Slave function
- DMX512 control possible via any commercial DMX controller (occupies 3 channels)
- Comfortable addressing and setting via control panel with LED display and three operating buttons
- **Functions:** Static colors, RGBAW color blend, color change, color fade, strobe settings and motor-steps via DMX, Master/Slave

- Sound-control via built-in microphone
- Equipped with 5 x 3 W LEDs
- Easy installation
- Locking possibility at the mounting bracket
- Ready for connection via power cord with safety plug

Overview (example: LED TSR-400 RGBAW 3W DMX)



1. Fixation screws
2. Mounting brackets
3. DMX-In socket
4. Power supply
5. Fuseholder
6. DMX-Out socket
7. 3-button operation
8. Attachment eyelet
9. LED Display

INSTALLATION

Overhead rigging



DANGER TO LIFE!

Please consider the EN 60598-2-17 and the respective national standards during the installation! The installation must only be carried out by an authorized dealer!

The installation of the device has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.

The installation must always be secured with a secondary safety attachment, e.g. an appropriate catch net.

This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, derigging or servicing the device staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert after every four year in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are approved by a skilled person once a year.

Procedure:

The device should be installed outside areas where persons may walk by or be seated.

IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the device. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury and or damage to property. The device has to be installed out of the reach of people.

If the device shall be lowered from the ceiling or high joists, professional trussing systems have to be used.

The device must never be fixed swinging freely in the room.

Caution: Devices in hanging installations may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do NOT install the device!

Before rigging make sure that the installation area can hold a minimum point load of 10 times the device's weight.



DANGER OF FIRE!

When installing the device, make sure there is no highly-inflammable material (decoration articles, etc.) within a distance of min. 0.5 m.

Mount the device to your trussing system using an appropriate clamp.

For overhead use, always install an appropriate safety bond.

You must only use safety bonds complying with DIN 56927, quick links complying with DIN 56927, shackles complying with DIN EN 1677-1 and BGV C1 carabines. The safety bonds, quick links, shackles and the carabines must be sufficiently dimensioned and used correctly in accordance with the latest industrial safety regulations (e. g. BGV C1, BGI 810-3).

Please note: for overhead rigging in public or industrial areas, a series of safety instructions have to be followed that this manual can only give in part. The operator must therefore inform himself on the current safety instructions and consider them.

The manufacturer cannot be made liable for damages caused by incorrect installations or insufficient safety precautions!

Pull the safety bond through the attachment eyelet and over the trussing system or a safe fixation spot. Insert the end in the quick link and tighten the safety screw.

The maximum drop distance must never exceed 20 cm.

A safety bond which already held the strain of a crash or which is defective must not be used again. Adjust the desired inclination-angle via the mounting-bracket and tighten the fixation screws.



DANGER TO LIFE!

Before taking into operation for the first time, the installation has to be approved by an expert!

DMX512 control



The wires must not come into contact with each other, otherwise the devices will not work at all, or will not work properly.



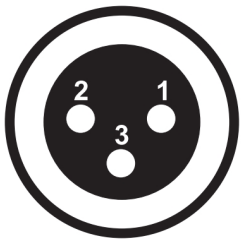
Please note, the starting address depends upon which controller is being used.

Only use a DMX cable and 3-pin XLR plugs and connectors in order to connect the controller with the fixture or one fixture with another.

Occupation of the XLR connection:

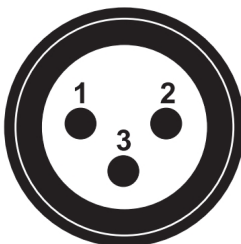
DMX-Output

XLR mounting-socket:



DMX-input

XLR mounting-plug:



If you are using controllers with this occupation, you can connect the DMX output of the controller directly with the DMX input of the first device in the DMX chain. If you wish to connect DMX controllers with other XLR outputs, you need to use adapter cables.

Building a serial DMX chain:

Connect the DMX output of the first device in the DMX chain with the DMX input of the next device. Always connect one output with the input of the next device until all devices are connected.

Caution: At the last fixture, the DMX cable has to be terminated. Plug the terminator with a 120 Ω resistor between Signal (–) and Signal (+) in the DMX output of the last fixture.

Master/Slave operation

The master/slave operation enables that several devices can be synchronized and controlled by one master device.


On the rear panel of the device you can find an XLR jack and an XLR plug, which can be used for connecting several devices.

Choose the device which is to control the effects. This device then works as master device and controls all other slave devices, which are to be connected to the master device via a DMX cable. Connect the OUT jack with the IN plug of the next device.

Connection with the mains

Connect the device to the mains with the power-plug.

The occupation of the connection-cables is as follows:

Cable	Pin	International
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	

The earth has to be connected!

If the device will be directly connected with the local power supply network, a disconnection switch with a minimum opening of 3 mm at every pole has to be included in the permanent electrical installation.

The device must only be connected with an electric installation carried out in compliance with the IEC standards. The electric installation must be equipped with a Residual Current Device (RCD) with a maximum fault current of 30 mA.

Lighting effects must not be connected to dimming-packs.

OPERATION

After you connected the device to the mains, it starts running.

The LED display lights up and you can choose the desired mode via the buttons MODE, UP and DOWN.

The device has two operating modes. It can be operated in Stand Alone or in DMX-controlled mode.

- STAND ALONE-MODE

- Slave Setting
- Sound Control Setting
- DMX-MODE

Stand-alone Mode

In the Stand Alone mode, the device can be used without a controller.

Slave Setting

Press the MODE button until the display shows **SLA**. The devices programmed thusly now function as Slaves to the Master device.

Sound Control Setting

Press the MODE button until the display shows SoU.

The desired sensitivity (00 – 99) can be selected via the UP or DOWN buttons.

DMX Mode

The Control Board allows you to assign the DMX fixture address, which is defined as the first channel from which the device will respond to the controller.

Addressing

Press the MODE button until the display shows Add. You can now set the desired address (001 – 512) via the UP or DOWN buttons.

Controlling:

After having addressed the LED TSR-400 RGBAW 3W DMX, LED D-400 RGBAW 3W DMX, or LED Z-400 RGBAW 3W DMX, you may now start operating it via your lighting controller.

Note:

It's necessary to insert the XLR termination plug with 120 Ω in the last lighting in the link in order to ensure proper transmission on the DMX data link.

DMX Protocol

Channel	Value	Function
	000 – 004	BLACKOUT
	005 – 009	Red
	010 – 014	Green
	015 – 019	Blue

CH1

020 – 024	White
025 – 029	Amber
030 – 034	R+G
035 – 039	G+B
040 – 044	B+W
045 – 049	W+A
050 – 054	R+A
055 – 059	G+A
060 – 064	B+A
065 – 069	R+B
070 – 074	R+W
075 – 079	G+W
080 – 084	R+G+B
085 – 089	G+B+W
090 – 094	B+W+A

095 – 099	R+W+A
100 – 104	G+W+A
105 – 109	R+G+A
110 – 114	R+G+W
115 – 119	R+B+A
120 – 124	R+B+W
125 – 129	G+B+A
130 – 134	R+G+B+W
135 – 139	G+B+W+A
140 – 144	R+G+B+A
145 – 149	R+G+W+A
150 – 154	R+G+B+W+A
155 – 200	Color change (increasing speed)
201 – 250	Color fade (increasing speed)

	251 – 255	Sound control (CH2: sensitivity control)
CH2	000 – 255	Strobe (increasing speed)
CH3	000 – 255	Step motor (increasing speed)

CLEANING AND MAINTENANCE



DANGER TO LIFE!

Disconnect from mains before starting maintenance operation!

We recommend a frequent cleaning of the device. Please use a soft lint-free and moistened cloth. Never use alcohol or solvents!

There are no serviceable parts inside the device except for the fuse. Maintenance and service operations are only to be carried out by authorized dealers.

Replacing the fuse

If the fine-wire fuse of the device fuses, only replace the fuse by a fuse of same type and rating.

Before replacing the fuse, unplug mains lead.

Procedure:

1. **Step 1:** Unscrew the fuseholder with a fitting screwdriver from the housing (anti-clockwise).
2. **Step 2:** Remove the old fuse from the fuseholder.
3. **Step 3:** Install the new fuse in the fuseholder.
4. **Step 4:** Replace the fuseholder in the housing and fix it.

Should you need any spare parts, please use genuine parts.

If the power supply cable of this device becomes damaged, it has to be replaced by authorized dealers only in order to avoid hazards.

Should you have further questions, please contact your dealer.

TECHNICAL SPECIFICATIONS

Power supply:	230 V AC, 50 Hz ~	
Power consumption:	45 W	
Number of DMX channels:	3	
DMX512 connection:	3-pin XLR	
Sound-control:	via built-in microphone	
Maximum ambient temperature T_a :	45° C	
Maximum housing temperature T_u :	55° C	
Min. distance from flammable surfaces:	0.5 m	
Min. distance to lighted object:	0.1 m	
Fuse:	F1A, 250 V	

Article:	51918200 / TSR-400	51918210 / D-400	51918220 / Z-400
LED type:	3 W	3 W	3 W
Number of LEDs:	5	5	5
Beam angle:	180°	130°	130°
Dimensions (LxWxH):	360 x 400 x 365 mm	385 x 245 x 155 mm	390 x 275 x 275 mm
Weight:	6.5 kg	3.5 kg	3 kg

Accessories:	51918200	51918210	51918220
EUROLITE TH-52 Theatre hook, silver	58000642		
EUROLITE TH-52S Theatre hook, black	58000643		
Safety bond 4x1000mm up to 15kg, silver	58010320		
EUROLITE TH-50 Theatre hook, silver		58000650	58000650
EUROLITE TH-50S Theatre hook, black		58000651	58000651
Safety bond 3x600mm up to 5kg, silver		58010310	58010310

Please note: Every information is subject to change without prior notice. 25.03.2014 ©


Keep this manual for future needs!

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Documents / Resources

	<p>eurolite LED TSR-400 Beam Effect with LEDs [pdf] User Manual LED TSR-400, LED D-400, Beam Effect with LEDs, Beam Effect, Effect with LEDs, Effect</p>
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References

- [Eurolite: Ihre Experten für Licht - Hersteller von Lichteffekten](#)