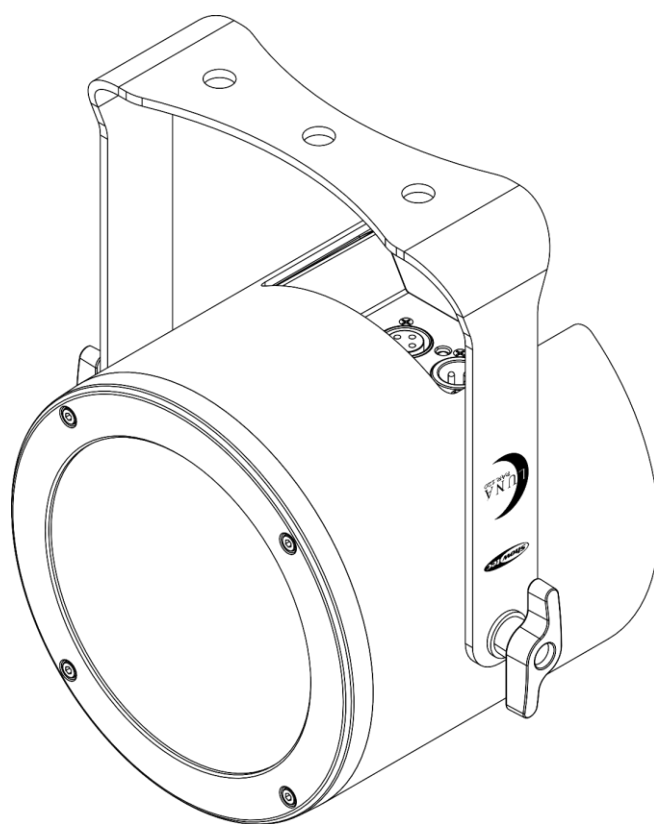




USER MANUAL



ENGLISH

Luna Par 120 Q4

V1

Product code: 43322

Preface

Thank you for purchasing this Showtec product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Intended and non-intended use of the device
- Installation and operation of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

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1. Introduction

1.1. Before Using the Product



Important

Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

After unpacking, check the contents of the box. If any parts are missing or damaged, contact your Highlite International dealer.

Your shipment includes:

- Showtec Luna Par 120 Q4
- Magnetic 25° diffuser
- Schuko to pro-power cable (1,5 m)
- User manual

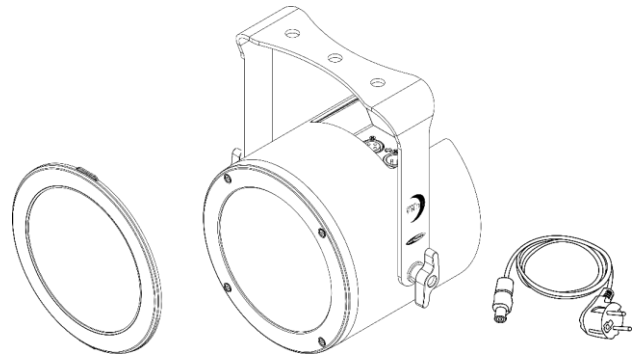


Fig. 01

1.2. Intended Use

This device is intended for professional use as a theater spot. It is suitable only for indoor installation. This device is not suitable for households and for general lighting.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

1.3. Product Lifespan

This device is not designed for permanent operation. Disconnect the device from the electrical power supply when the device is not in operation. This will reduce the wear and will improve the device's lifespan.

1.4. LEDs Lifespan

The light output of the LEDs gradually decreases over time (lumen depreciation). High operating temperatures contribute to this process. You can extend the lifespan of the LEDs by providing adequate ventilation and operating the LEDs at the lowest possible brightness.

1.5. Text Conventions

Throughout the user manual the following text conventions are used:

- Buttons: All buttons are in bold lettering, for example "Press the **UP/DOWN** buttons"
- References: References to chapters and parts of the device are in bold lettering, for example: "Refer to **2. Safety**", "turn the **adjustment handle (05)**"
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.6. Symbols and Signal Words

Safety notes and warnings are indicated throughout the user manual by safety signs.

Always follow the instructions provided in this user manual.



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.



Attention

Indicates important information for the correct operation and use of the product.



Important

Read and observe the instructions in this document.



Electrical hazard



Hot surface



Eye damage hazard



Provides important information about the disposal of this product.

1.7. Symbols on the Information Label

This product is provided with an information label. The information label is located on the mounting bracket.

The information label contains the following symbols:



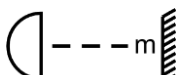
This device is designed for indoor use.



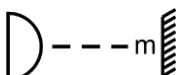
This device shall not be treated as household waste.



This device falls under IEC protection class I.



Minimum distance from lighted objects.



Minimum distance from other objects.

2. Safety



Important

Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

2.1. Warnings and Safety Instructions



DANGER

Danger for children

For adult use only. The device must be installed beyond the reach of children.

- Do not leave various parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within children's reach. Packaging material is a potential source of danger for children.



DANGER

Electric shock caused by dangerous voltage inside

There are areas within the device where dangerous touch voltage ($> 120 \text{ V DC}$) may be present.

- Do not open the device or remove any covers.
- Do not operate the device if the covers or the housing are open. Before operation, check if the housing is firmly closed and all screws are tightly fastened.
- Disconnect the device from electrical power supply before service and maintenance, and when the device is not in use.



DANGER

Electric shock caused by short-circuit

This device falls under IEC protection class I.

- Make sure that the device is electrically connected to ground (earth). Connect the device only to a socket-outlet with ground (earth) connection.
- Do not cover the ground (earth) connection.
- Do not bypass the thermostatic switch or fuses.
- For replacement use fuses of the same type and rating only.
- Do not let the power cable come into contact with other cables. Handle the power cable and all connections with the mains with caution.
- Do not modify, bend, mechanically strain, put pressure on, pull or heat up the power cable.
- Make sure that the power cable is not crimped or damaged. Examine the power cable periodically for any defects.
- Do not immerse the device in water or other liquids. Do not install the device in a location where flooding may occur.
- Do not use the device during thunderstorms. Disconnect the device from the electrical power supply immediately.

**WARNING**
Risk of burns due to hot surface

The surface and the inner parts of the device can become very hot during operation.

- Do not touch the device during operation.
- Allow the device to cool down for at least 15 minutes before handling.

**WARNING**
Risk of epileptic shock

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

**WARNING**
Possible eye damage caused by high light intensity

Possibly hazardous optical radiation emitted from this device.

- Do not look at the operating light source. May be harmful to the eye.
- Do not look at the light source with optical instruments that may concentrate the light output.
- Make sure that persons are not looking directly into the light source when the device lights up suddenly. This can happen when the device is powered or when it receives DMX signal, or when certain menu items are selected.
- Disconnect power supply before servicing.
- Wear protective goggles if looking into light source during service or maintenance.

**Attention**
Power supply

- Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.
- Make sure that the cross-sectional area of the extension cords and power cables is sufficient for the required power consumption of the device.

**Attention**
General safety

- Do not insert objects into the air vents.
- Do not connect the device to a dimmer pack.
- Do not switch the device on and off in short intervals. This decreases the device's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Change the lens or the LEDs if they are visibly damaged to such an extent that their effectiveness is impaired, for example by cracks or deep scratches. Contact your Highlite International dealer for more information, as servicing can be performed only by instructed or skilled persons.
- If the device is dropped or struck, disconnect the device from the electrical power supply immediately.

- If the device is exposed to extreme temperature variations (e.g. after transportation), do not switch it on immediately. Let the device reach room temperature before switching it on, otherwise it may be damaged by the formed condensation.
- If the device fails to work properly, discontinue the use immediately.



Attention
For professional use only
This device shall be used only for the purposes it is designed for.

This device is designed to be used as a professional stage light effect. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

- This device is not suitable for households and for general lighting.
- This device is not designed for permanent operation.
- This device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.



Attention
Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- The safety devices are not damaged.
- There are no deformations on housings, fixations and installation points.
- The lens is not cracked or damaged.
- The power cables are not damaged and do not show any material fatigue.



Attention
Do not expose the device to conditions that exceed the rated IP class conditions.

This device is IP20 rated. IP (Ingress Protection) 20 class provides protection against solid objects greater than 12 mm, such as fingers, and no protection against harmful ingress of water.

2.2. Requirements for the User

This product may be used by ordinary persons. Maintenance may be carried by ordinary persons. Installation and service shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the installation, service and maintenance of this product, so that they can identify risks and take precautions to avoid them.

Skilled persons have training or experience, which enables them to recognize risks and to avoid hazards associated with the installation, service and maintenance of this product.

Ordinary persons are all persons other than instructed persons and skilled persons. Ordinary persons include not only users of the product but also any other persons that may have access to the device or who may be in the vicinity of the device.

3. Description of the Device

The Showtec Luna Par 120 Q4 is a compact and stylish spot, equipped with a COB LED module. It delivers excellent RGBW color mixing. A 25-degree diffuser is included in the delivery.

3.1. Front View

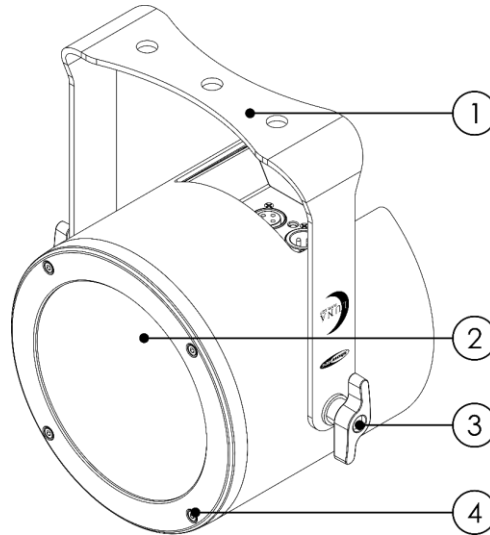


Fig. 02

- 01) Mounting bracket
- 02) Lens
- 03) 2 x Adjustment screws
- 04) 4 x Lens screws

3.2. Back View

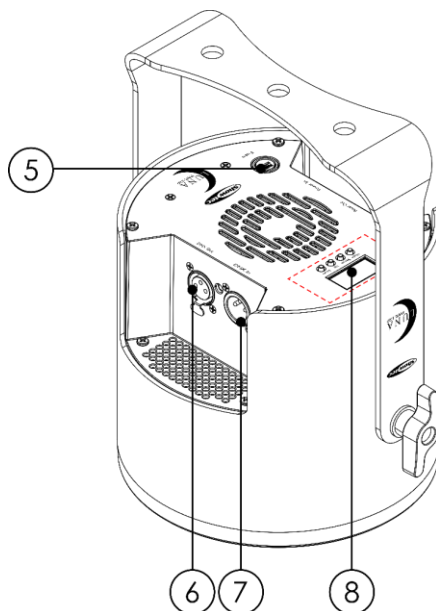


Fig. 03

- 05) Fuse T3 A, 250 V
- 06) 3-pin DMX signal connector OUT
- 07) 3-pin DMX signal connector IN
- 08) Control panel (OLED display and buttons)

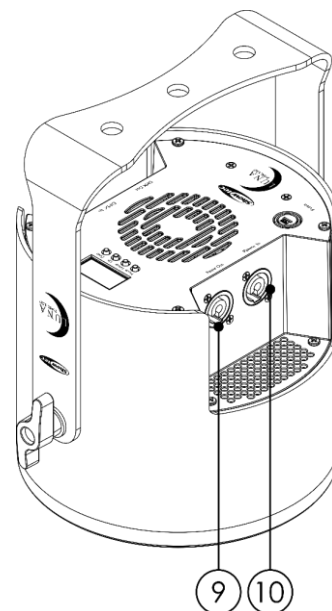


Fig. 04

- 09) Pro-power connector OUT (Gray)
- 10) Pro-power connector IN (Blue)

3.3. Product Specifications

Model:	Luna Par 120 Q4	
Electrical:		
Input voltage:	100–240 V AC, 50/60 Hz	
Power consumption:	125 W	
Fuse:	T3A, 250 V	
Physical:		
Dimensions:	265 x 250 x 190 mm (L x W x H)	
Weight:	2,74 kg (without accessories)	
Optics:		
Light source:	COB LED 120 W RGBW	
Dimmer:	0–100 %	
Strobe:	0–20 Hz	
Refresh rate:	> 1000 Hz	
Beam angle:	90°	
Luminous flux:	4950 lm	
Operation and control:		
Control:	Stand-alone (auto, manual, sound-controlled) Master/Slave (auto, manual, sound-controlled) DMX-512	
DMX channels:	4, 6, 11 channels	
Control panel:	OLED display and buttons	
Connections:		
Power connections:	Pro-power connectors IN/OUT	
Data connections:	3-pin DMX connectors IN/OUT	
Signal pinouts:	Pin 1 (ground), pin 2 (-), pin 3 (+)	
Construction:		
Housing:	Extruded aluminum	
Color:	Black	
Built-in microphone:	Yes	
IP rating:	IP20	
Cooling:	Internal fan	
Thermal:		
Maximum ambient temperature t_a :	40 °C	
Maximum housing temperature t_c :	70 °C	
Minimum distance:		
Minimum distance from flammable surfaces:	0,8 m	
Minimum distance to lighted object:	0,8 m	

3.4. Dimensions

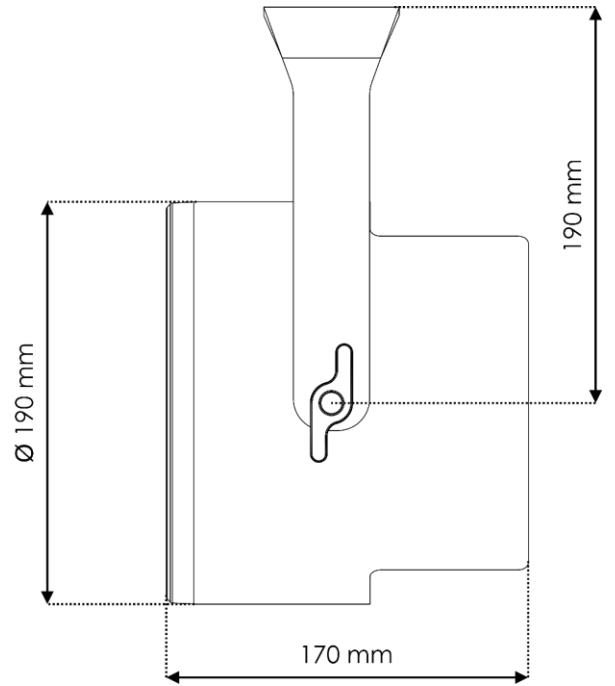
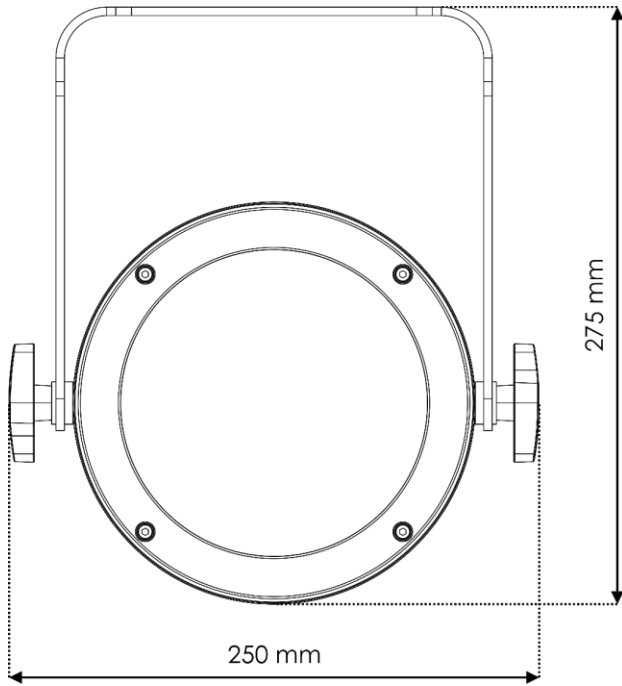


Fig. 05

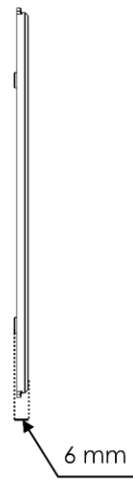
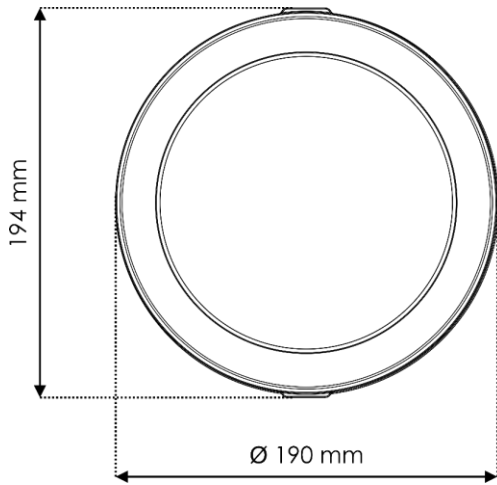


Fig. 06

4. Installation

4.1. Safety Instructions for Installation



WARNING

Incorrect installation can cause serious injuries and damage of property.

If trussing systems are used, installation must be carried out only by instructed or skilled persons.

Follow all applicable European, national and local safety regulations concerning rigging and trussing.

4.2. Personal Protective Equipment

During installation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

4.3. Installation Site Requirements

- The device can be used only indoors.
- The device can be mounted to a truss or other rigging structure in any orientation.
- The minimum distance to other objects must be bigger than 0,8 m.
- The minimum distance between the light output and the illuminated surface must be bigger than 0,8 m.
- The maximum ambient temperature $t_a = 40\text{ °C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40 °C.

4.4. Rigging

The device can be mounted to a truss or other rigging structure in any orientation. Make sure that all loads are within the pre-determined limits of the supporting structure.



CAUTION

Restrict the access under the work area during rigging and/or derigging.

To mount the device, follow the steps below:

- 01) Use a clamp to attach the device to the supporting structure, as shown in Fig. 07. Make sure that the device cannot move freely.
- 02) Secure the device with a secondary suspension, for example a safety cable. Make sure that the secondary suspension can hold 10 times the weight of the device. If possible, the secondary suspension should be attached to a supporting structure independent of the primary suspension. Put the safety cable around the **mounting bracket (01)**, as shown in Fig. 07.

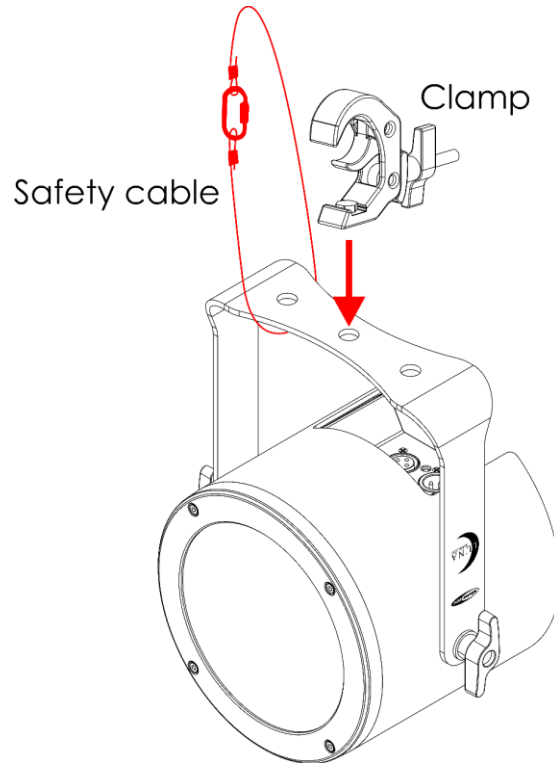


Fig. 07

4.4.1. Angle Adjustment

You can adjust the angle of the device with the 2 **adjustment screws (03)**.

- 01) Turn the **adjustment screws (03)** counterclockwise to release them.
- 02) Tilt the device at the desired angle (see Fig. 08).
- 03) Turn the **adjustment screws (03)** clockwise to tighten them. Make sure that the device cannot move freely after the **adjustment screws (03)** are tightened.

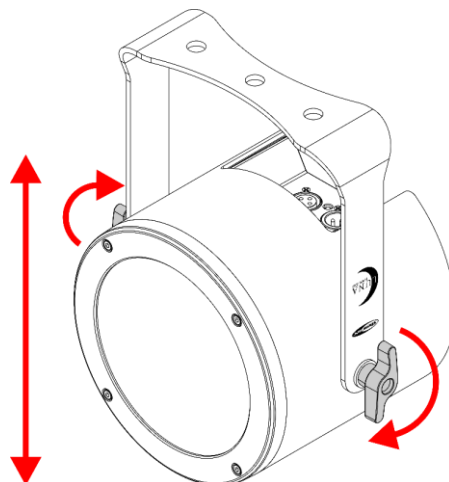


Fig. 08

4.5. Diffuser Installation

To install the diffuser:

Position the diffuser above the **lens (02)**, so that the 4 magnets fit into the 4 openings of the **lens screws (04)**. The diffuser will snap in its place and will remain attached to the device.

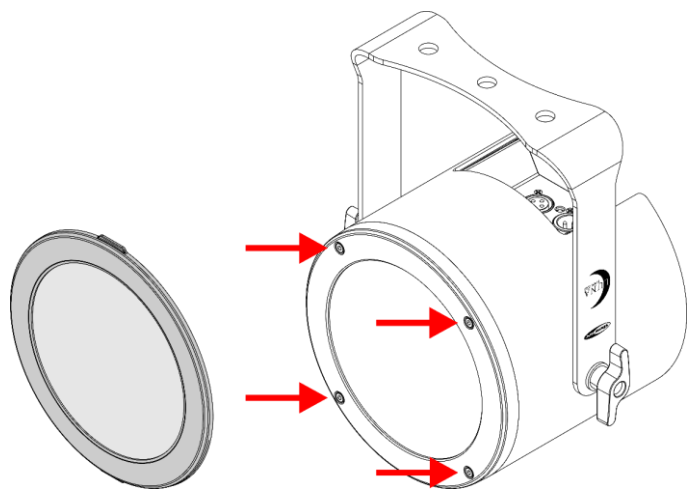


Fig. 09

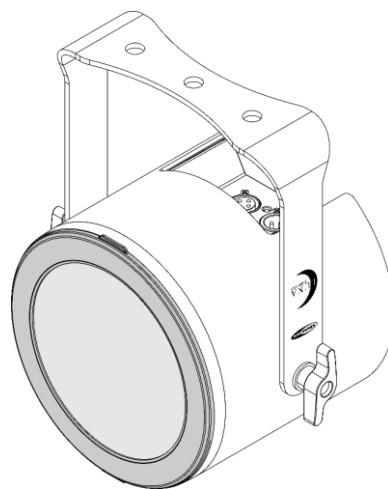


Fig. 10

4.6. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

The device accepts AC mains power at 100–240 V and 50/60 Hz. Do not supply power at any other voltage or frequency to the device.

This device falls under IEC protection class I. Make sure that the device is always electrically connected to the ground (earth).

Before connecting the device to the socket-outlet:

- Make sure that the power supply matches the input voltage specified on the information label on the device.
- Make sure that the socket-outlet has ground (earth) connection.

Connect the device to the socket-outlet with the power plug. Do not connect the device to a dimmer circuit, as this may damage the device.

4.7. Power Linking of Multiple Devices

This device supports power linking. Power can be relayed to another device via the power OUT connector. Note that the input and the output connectors have different designs: one type cannot be connected to the other.

Power linking of multiple devices must be carried out only by instructed or skilled persons.



WARNING
Incorrect power linking may lead to overload of the electrical circuit and result in serious injuries and damage of property.

To prevent overload of the electrical circuit, when power linking multiple devices:

- Use cables with sufficient current-carrying capacity. The power cable supplied with the device is not suitable for power linking of multiple devices.
- Make sure that the total current draw of the device and all connected devices does not exceed the rated capacity of the power cables and the circuit breaker.
- Do not link more devices on one power link than the maximum recommended number.

Maximum recommended number of devices:

- at 100–120 V: 7 devices Luna Par 120 Q4
- at 200–240 V: 15 devices Luna par 120 Q4

5. Setup

5.1. Warnings and Precautions



Attention

Connect all data cables before supplying power.

Disconnect power supply before connecting or disconnecting data cables.

5.2. Stand-alone Setup

When the Luna Par 120 Q4 is not connected to a controller or to other devices, it functions as a stand-alone device. It can be operated manually, in auto mode or in sound-controlled mode.

For more information about the control modes, refer to **6.2. Control Modes** on page 19.

5.3. DMX Connection

5.3.1. DMX-512 Protocol

You need a DMX serial data link to run light shows of one or more devices using a DMX-512 controller or to run synchronized shows of two or more devices set in a master/slave operating mode.

The Luna par 120 Q4 has 3-pin DMX signal IN and OUT connectors.

The pin assignment is as follows: pin 1 (ground), pin 2 (-), pin 3 (+).

Devices on a serial data link must be daisy-chained in a single line. The number of devices that you can control on one data link is limited by the combined number of the DMX channels of the connected devices and the 512 channels available in one DMX universe.

To comply with the TIA-485 standard, no more than 32 devices should be connected on one data link. In order to connect more than 32 devices on one data link, you must use a DMX optically isolated splitter/booster, otherwise this may result in deterioration of the DMX signal.

Note:

- Maximum recommended DMX data link distance: 300 m
- Maximum recommended number of devices on a DMX data link: 32 devices

5.3.2. DMX Cables

Shielded twisted-pair cables with 3-pin XLR connectors must be used for reliable DMX connection. You can purchase DMX cables directly from your Highlite International dealer or make your own cables.

If you use XLR audio cables for DMX data transmission, this may lead to signal degradation and unreliable operation of the DMX network.

When you make your own DMX cables, make sure that you connect the pins and wires correctly as shown in Fig. 11.

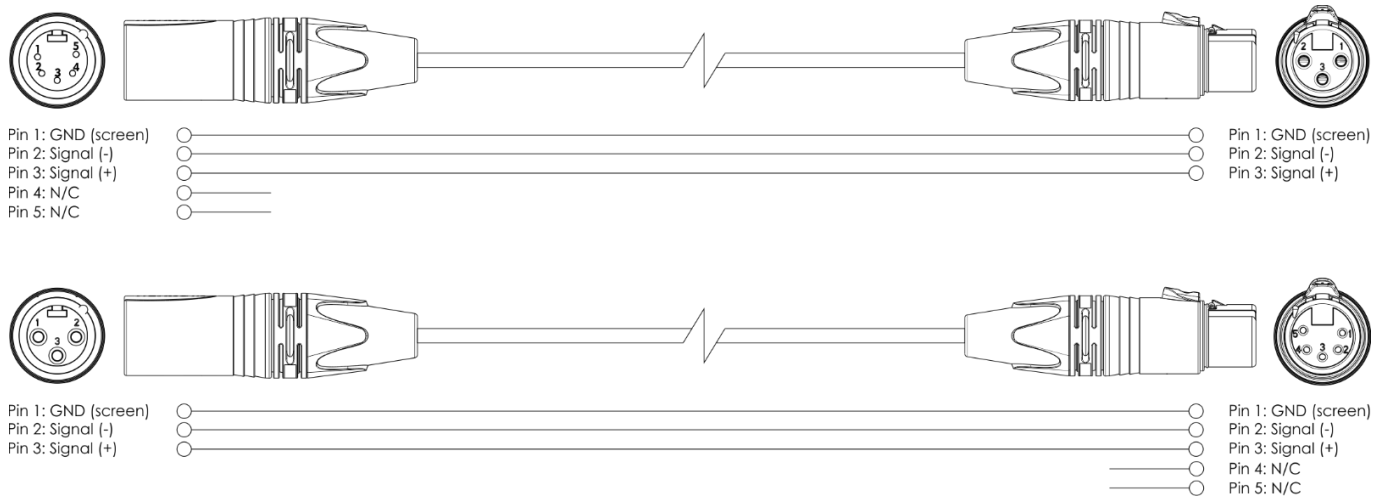


Fig. 11

5.3.3. Master/Slave Setup

The Luna Par 120 Q4 supports master/slave control mode. To connect multiple devices in a master/slave setup, follow the steps below:

- 01) Connect the first device's DMX OUT connector to the second device's DMX IN connector.
- 02) Repeat step 1 to connect all devices as shown in Fig. 12. The first connected device will be automatically recognized as the master device.
- 03) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device in the setup.
- 04) Set the remaining devices to slave mode. See **6.6.5. Slave Mode** on page 25 for more information.

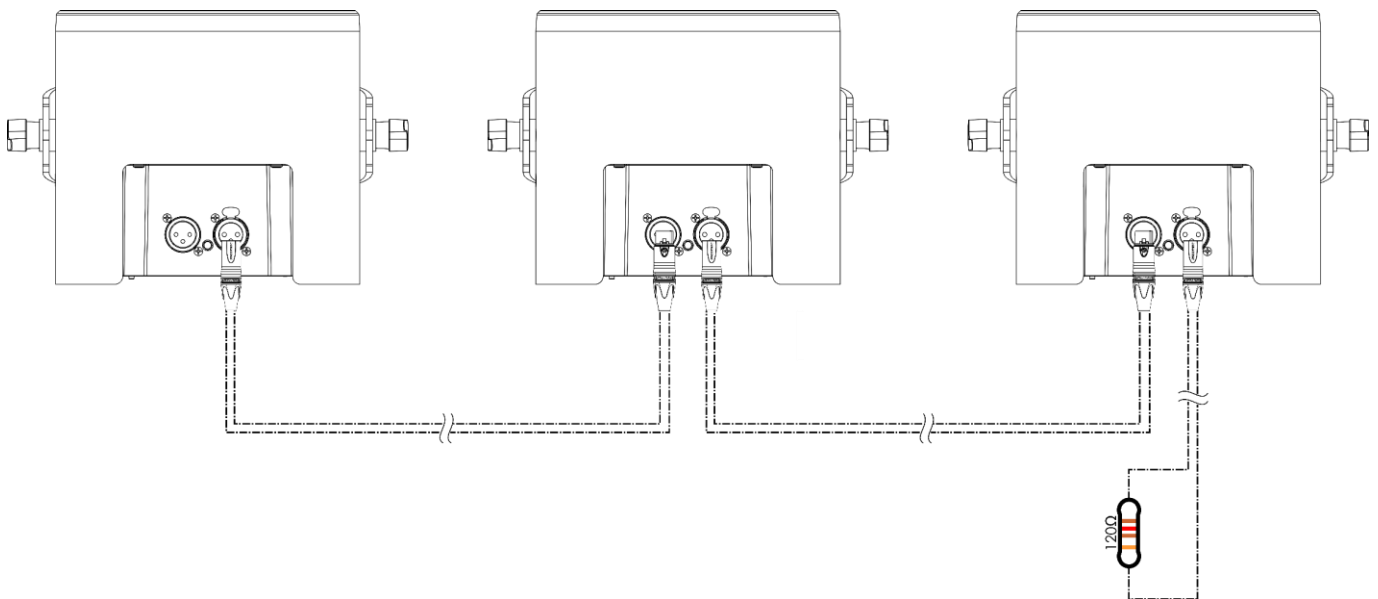


Fig. 12

5.3.4. DMX Linking

To connect multiple devices on one DMX data link, follow the steps below:

- 01) Use a 3-pin DMX cable to connect the DMX OUT connector of the lighting controller to the DMX IN connector of the first device.
- 02) Connect the first device's DMX OUT connector to the second device's DMX IN connector with a 3-pin DMX cable.
- 03) Repeat step 2 to connect all devices in a daisy-chain as shown in Fig. 13.
- 04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.

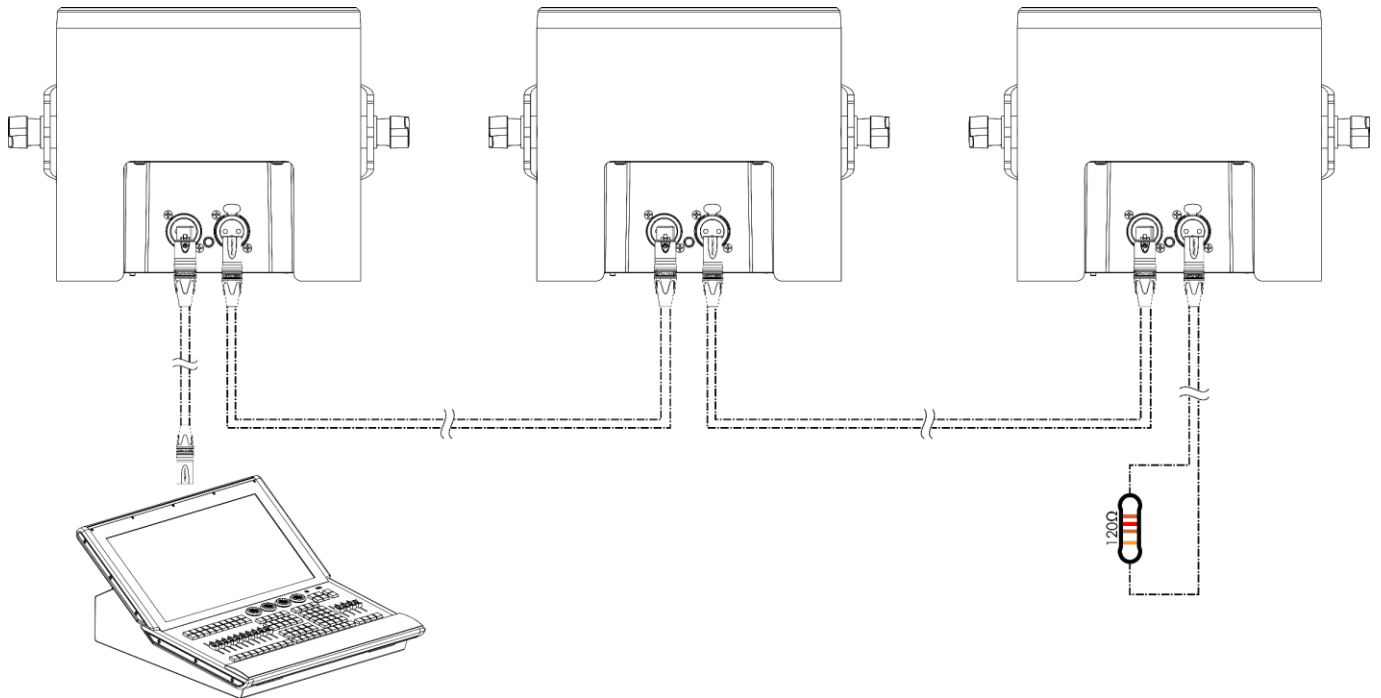


Fig. 13

5.3.5. DMX Addressing

In a setup with multiple devices, make sure that you set the DMX starting address of each device correctly. The Luna Par 120 Q4 has 3 personalities: 4 channels, 6 channels and 11 channels.

If you want to connect multiple devices on one data link and use them in 11-channel mode, for example, follow the steps below:

- 01) Set the starting address of the 1st device on the data link to 1 (001).
- 02) Set the starting address of the 2nd device on the data link to 12 (012), as $1 + 11 = 12$.
- 03) Set the starting address of the 3rd device on the data link to 23 (023) as $12 + 11 = 23$.
- 04) Continue assigning the starting addresses of the remaining devices by adding each time 11 to the previous number.

Make sure that you do not have any overlapping channels in order to control each Luna Par 120 Q4 correctly. If two or more devices are addressed similarly, they will work similarly.

6. Operation

6.1. Safety Instructions for Operation



Attention

This device must be used only for the purposes it is designed for.

This device is intended for professional use as a theater spot. It is suitable only for indoor installation. This device is not suitable for households and for general lighting.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.



Attention

Power supply

Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.

6.2. Control Modes

The Luna Par 120 Q4 can be operated with a DMX controller, and as a stand-alone device or in a master/slave setup without a DMX controller.

The Luna Par 120 Q4 supports the following control modes:

- Stand-alone: Auto operation mode (built-in chases, color presets), manual operation mode, sound-controlled operation mode (auto program)
- Master/Slave: Auto operation mode (built-in chases, color presets), manual operation mode, sound-controlled operation mode (auto program)
- DMX-512: 4 channels, 6 channels and 11 channels

For more information about how to connect the devices, refer to **5. Setup** on pages 16–18.

To operate the device manually as a stand-alone device or in a master/slave setup:

- 01) Select Manual Mode in the main menu.
- 02) Adjust the values for the colors in the respective submenus. See **6.6.2. Manual Mode** on page 24 for more information.

To run one of the built-in programs in auto operation mode:

- 01) Activate the auto operation mode in the Auto Mode menu.
- 02) Select one of the 33 color presets or 15 built-in chases. See **6.6.4. Program Settings** on page 25 for more information.

For more information about sound-controlled operation mode see **6.6.6. Sound Settings** on page 25.

To operate the device with a DMX controller:

- 01) Set the DMX starting address of the device in the DMX Mode menu. See **6.6.1. DMX Mode** on page 24 for more information.
- 02) Select the DMX channel mode in the DMX Mode menu. See **6.6.1. DMX Mode** on page 24 for more information. See **6.7. DMX Channels** on pages 28–29 for complete overview of all DMX channels.

6.3. Control Panel

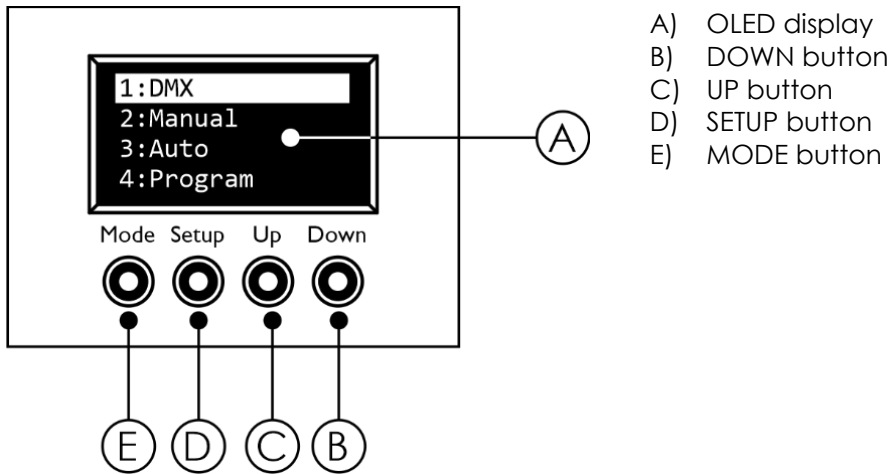



Fig. 14

- Use the **MODE** button to exit the current submenu, to return to the Main Menu and to return to the start screen.
- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **SETUP** button to open the desired menu, to confirm your choice or to set the currently selected value.

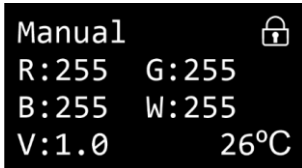
6.4. Start-up


Upon start-up the display will show a splash screen with the firmware version and the temperature of the LEDs:



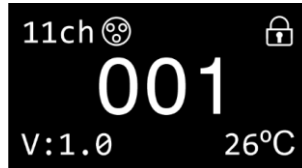
Version:1.0
Temperature:26°C



Immediately afterwards the display will show the start screen. The start screen provides information about the control mode of the device, the firmware version and the temperature of the LEDs, for example:



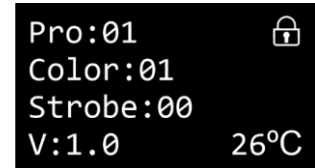
Manual 
R:255 G:255
B:255 W:255
V:1.0 26°C


Manual operation



11ch  
001
V:1.0 26°C

11-channel DMX mode with
starting address 001



Pro:01 
Color:01
Strobe:00
V:1.0 26°C

Auto operation mode

Description of the icons on the start screen:



The DMX icon indicates that DMX signal is present. If the DMX signal is lost, this icon will not appear on the screen.

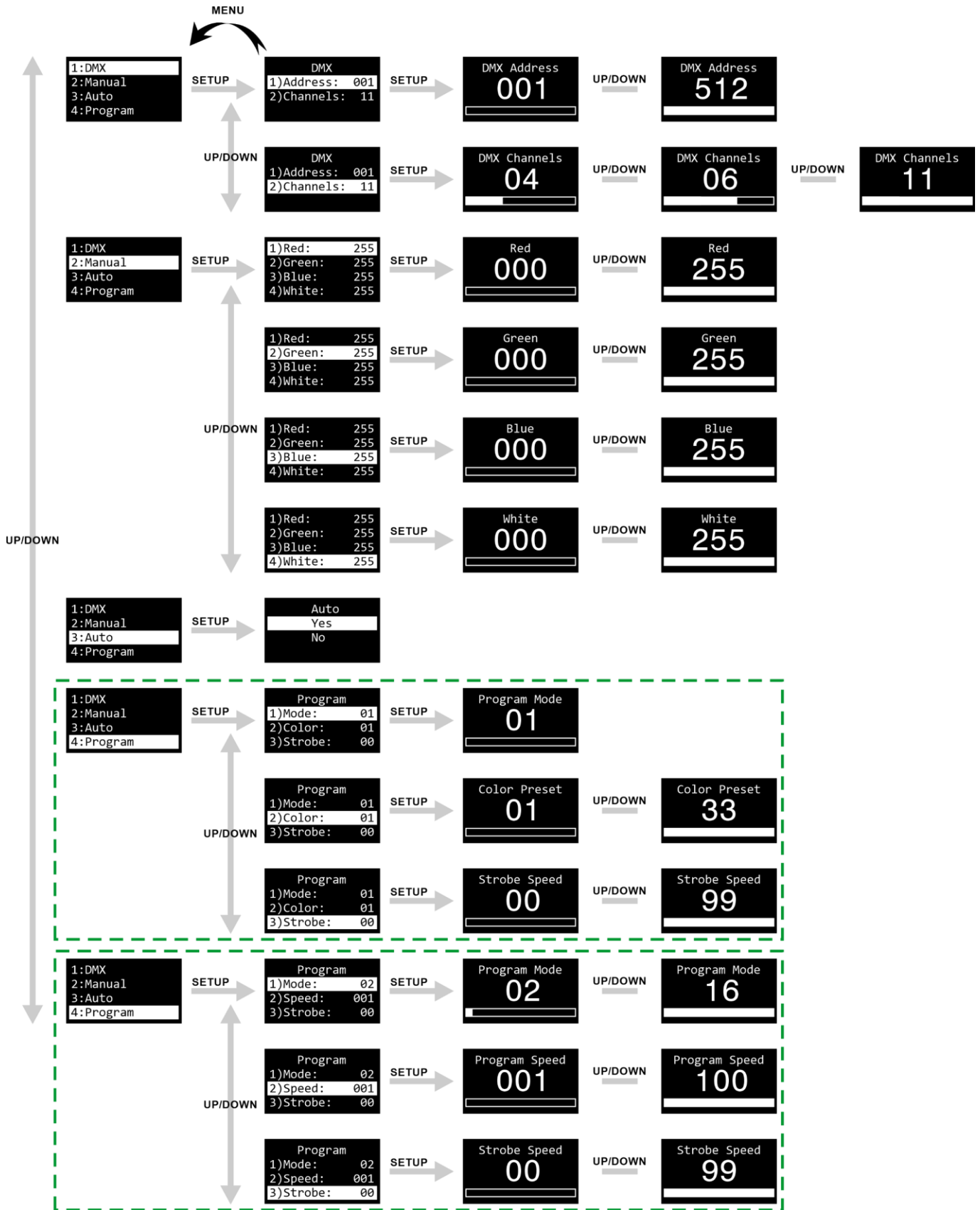


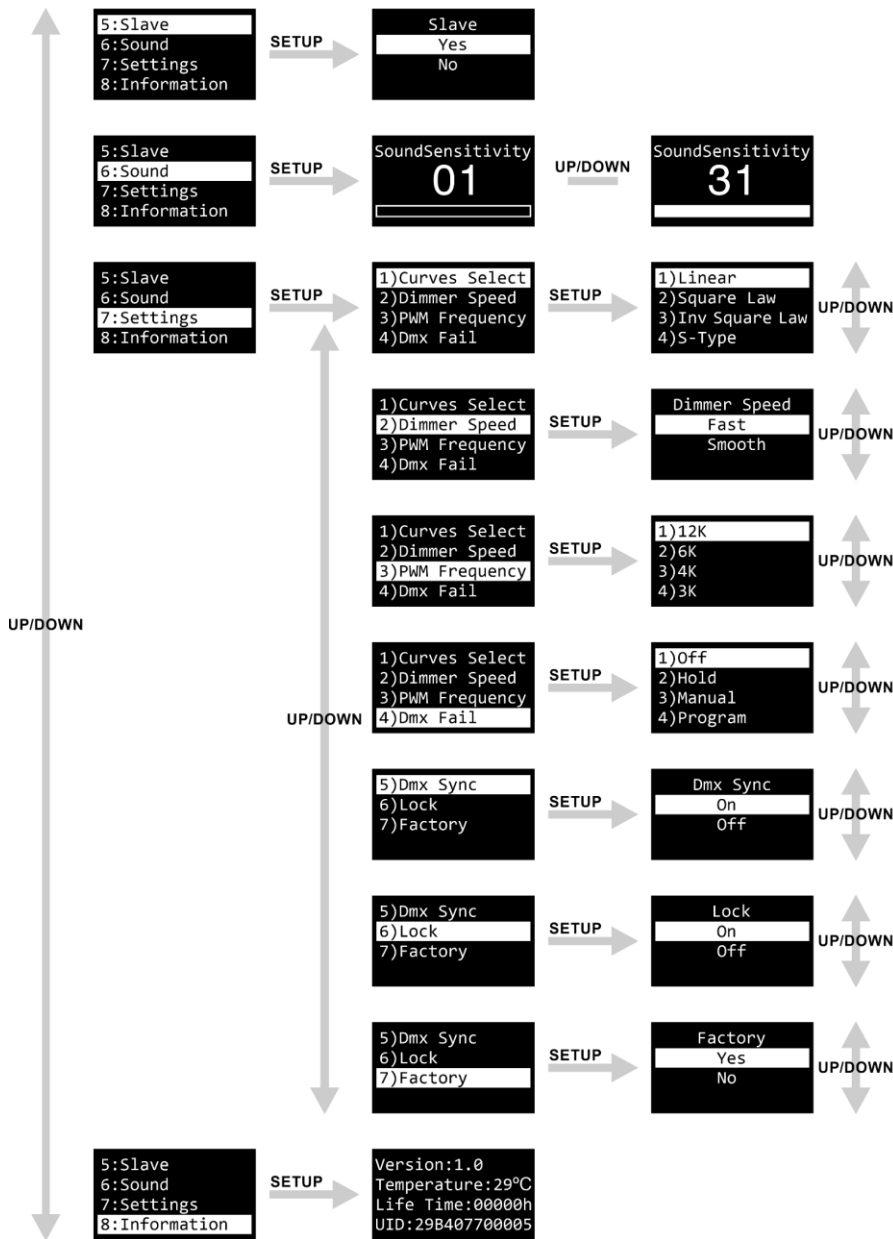
The padlock icon indicates that the display lock is enabled. If the display lock is disabled, this icon will not appear on the screen.

Note:

- If no button is pressed, after 50 seconds of inactivity the display will turn off. Press any button to turn the display on.
- By default the display is locked. To access the main menu, you need to enter the **password**. Press and hold down the **MODE** and **SETUP** buttons for 3 seconds. A timer counting from 0 to 3 will appear next to the padlock icon on the screen. See **6.6.7.2. Lock** on page 27 for more information.

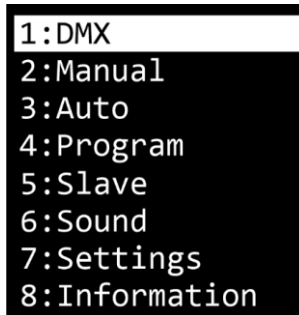
6.5. Menu Overview





6.6. Main Menu Options

The main menu has the following options:



- 01) Press the **UP/DOWN** buttons to navigate through the main menu.
- 02) Press the **SETUP** button to open the submenu.

6.6.1. DMX Mode

In this menu you can configure the DMX settings of the device.

- 01) Press the **UP/DOWN** buttons to select one of the following 2 options:



- Address: Set the DMX starting address of the device. The selection range is between 1 and 512
- Channels: Set the DMX channel mode. There are 3 options available: 4 channels, 6 channels and 11 channels

- 02) Press the **SETUP** button to confirm your choice.

6.6.2. Manual Mode

In this menu you can manually adjust the color intensity of the LEDs.

- 01) Press the **UP/DOWN** buttons to select one of the following options:

- Red
- Green
- Blue
- White

- 02) Press the **SETUP** button to open the submenu where you can adjust the values.



- 03) Press the **UP/DOWN** buttons to adjust the values. The adjustment range is 000–255.
- 04) Press the **SETUP** button to set the value.

6.6.3. Auto Mode

In this menu you can activate the auto operation mode.

- 01) Press the **UP/DOWN** buttons to toggle between Yes and No.
- 02) Press the **SETUP** button to confirm your choice.

6.6.4. Program Settings

In this menu you can select one of the 33 color presets or run one of the 15 built-in chases.

- 01) Press the **UP/DOWN** buttons to select one of the following 3 options:

- Mode: Select Mode 01 for the color presets or Mode 02–16 for the built-in chases

Program	
1)Mode:	01
2)Color:	01
3)Strobe:	00

Program	
1)Mode:	02
2)Speed:	001
3)Strobe:	00

- Color/Speed: If you have selected Mode 01, in the Color submenu you can select one of the 33 color presets. The selection range is 01–33
If you have selected Mode 02–16, in the Speed submenu you can set the speed of the built-in chase. The adjustment range is 001–100
- Strobe: Add strobe effect. The adjustment range is 00–99, from low to high frequency

- 02) Press the **SETUP** button to confirm the selection.

6.6.5. Slave Mode

In this menu you can set the device as a slave device in master/slave mode.

- 01) Press the **UP/DOWN** buttons to toggle between Yes and No.
- 02) Press the **SETUP** button to confirm the selection.

6.6.6. Sound Settings

In this menu you can activate the sound-controlled operation mode and adjust the sound sensitivity of the device. When you select this option, the device runs an auto program reacting to the beat of the music.

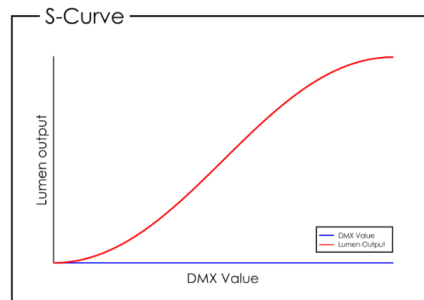
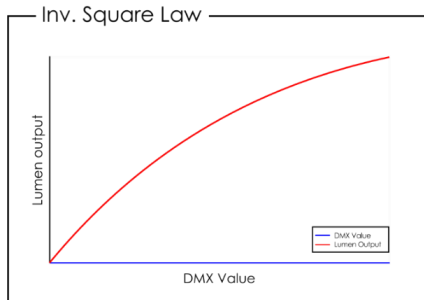
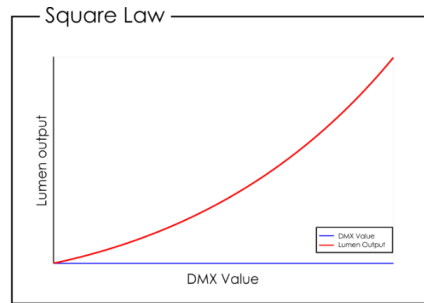
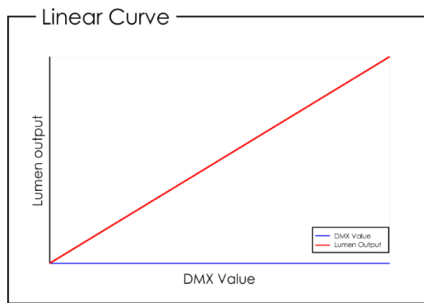
- 01) Press the **UP/DOWN** buttons to adjust the sensitivity of the built-in microphone. The adjustment range is 01–31, from low to high sensitivity.
- 02) Press the **SETUP** button to confirm the setting.

6.6.7. Settings

In this menu you can adjust different parameters of the device.

01) Press the **UP/DOWN** buttons to select one of the following options:

- Curves Select: There are 4 options available: Linear, Square Law, Inverse Square Law and S-Type



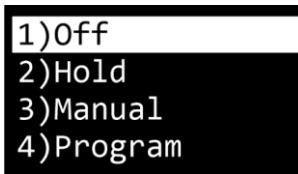
- Dimmer Speed: There are 2 options available: Fast and Smooth
- PWM Frequency: There are 4 options available: 12K (12000 Hz), 6K (6000 Hz), 4K (4000 Hz), and 3K (3000 Hz)
- DMX Fail: See **6.6.7.1. DMX Fail**
- DMX Sync: Synchronization over DMX (On/Off). The speed, with which the built-in chases are played, can change over time. Thus, if you run shows with multiple devices connected on one DMX link, the output may not be synchronous. Enable this option to activate the synchronization of the output across all devices connected on one DMX link.
- Lock: See **6.6.7.2. Lock**
- Factory: Reset the device's settings to the default factory settings (Yes/No)

02) Press the **SETUP** button to confirm the selection.

6.6.7.1. DMX Fail

In this submenu you can determine the behavior of the device if there is no DMX signal.

01) Press the **UP/DOWN** buttons to select one of the following 3 options:



- Off: The device will black out the light output
- Hold: The device will use the last properly received DMX signal
- Manual: The device will use the last working manual settings selected in manual mode. See **6.6.2. Manual Mode** on page 24 for more information
- Program: The device will run the last selected color preset or built-in chase. See **6.6.4. Program Settings** on page 25 for more information

02) Press the **SETUP** button to confirm the selection.

6.6.7.2. Lock

In this submenu you can enable the display lock.

01) Press the **UP/DOWN** buttons to toggle between On and Off.

- On: Display lock is on. The display turns off after 50 seconds of inactivity. To access the main menu, you need to enter the **password**. Press and hold down the **MODE** and **SETUP** buttons for 3 seconds. A timer counting from 0 to 3 will appear next to the padlock icon on the screen.
- Off: The access to the main menu remains unlocked after the display turns off

02) Press the **SETUP** button to confirm your choice.

6.6.8. Information

In this menu you can see the firmware version, the temperature of the LEDs, the total operating hours, and the unique identifier (UID) of the device.

```
Version:1.0  
Temperature:29°C  
Life Time:00000h  
UID:29B407700005
```

6.7. DMX Channels

4 CH	6 CH	11 CH	Function	Value	Setting
	1	1	Master Dimmer	000–255	From low to high intensity (0–100 %)
	2	2	Linear Strobe	000–010 011–255	No function From low to high frequency
		3	Random Strobe	000–010 011–255	No function From low to high frequency
		4	Color Presets	000–007 008–013 014–020 021–027 028–034 035–041 042–048 049–055 056–062 063–069 070–076 077–083 084–090 091–097 098–104 105–111 112–118 119–125 126–132 133–139 140–146 147–153 154–160 161–167 168–174 175–181 182–188 189–195 196–202 203–209 210–216 217–223 224–230 231–255	No function Color 1 R 255; G 000; B 000; W 000 Color 2 R 255; G 000; B 000; W 100 Color 3 R 255; G 000; B 000; W 200 Color 4 R 255; G 050; B 000; W 000 Color 5 R 255; G 150; B 000; W 000 Color 6 R 255; G 255; B 000; W 000 Color 7 R 255; G 255; B 000; W 075 Color 8 R 000; G 255; B 000; W 255 Color 9 R 000; G 255; B 000; W 150 Color 10 R 000; G 255; B 000; W 050 Color 11 R 000; G 255; B 000; W 000 Color 12 R 000; G 255; B 050; W 000 Color 13 R 000; G 255; B 150; W 000 Color 14 R 000; G 255; B 255; W 000 Color 15 R 000; G 255; B 255; W 075 Color 16 R 000; G 255; B 255; W 150 Color 17 R 000; G 100; B 255; W 255 Color 18 R 000; G 000; B 255; W 100 Color 19 R 000; G 000; B 255; W 050 Color 20 R 000; G 000; B 255; W 000 Color 21 R 075; G 000; B 255; W 000 Color 22 R 160; G 000; B 255; W 000 Color 23 R 255; G 000; B 255; W 000 Color 24 R 255; G 000; B 175; W 000 Color 25 R 255; G 000; B 100; W 000 Color 26 R 255; G 000; B 100; W 050 Color 27 R 255; G 000; B 025; W 050 Color 28 R 255; G 000; B 025; W 025 Color 29 R 255; G 000; B 025; W 000 Color 30 R 000; G 000; B 000; W 255 Color 31 R 075; G 075; B 000; W 255 Color 32 R 000; G 000; B 100; W 255 Color 33 R 255; G 255; B 255; W 255
		5	Built-in Chases	000–015 016–031 032–047 048–063 064–079 080–095 096–111 112–127 128–143 144–159 160–175 176–191	No function Jump 1 Jump 2 Jump 3 Jump 4 Jump 5 Jump 6 Jump 7 Jump 8 Fade 1 Fade 2 Fade 3

4 CH	6 CH	11 CH	Function	Value	Setting
				192–207	Fade 4
				208–223	Fade 5
				224–239	Fade 6
				240–255	Fade 7
		6	Speed	000–255	Speed adjustment of the built-in chases, from slow to fast
		7	Sound Mode	000–050	No function
				051–255	Sensitivity adjustment, from low to high (0–100 %)
1	3	8	Red	000–255	From low to high intensity (0–100 %)
2	4	9	Green	000–255	From low to high intensity (0–100 %)
3	5	10	Blue	000–255	From low to high intensity (0–100 %)
4	6	11	White	000–255	From low to high intensity (0–100 %)

Note:

- Make sure that the Master Dimmer channel is open in 6-CH and 11-CH mode in order to see the light output.
- If you play the built-in chases in 11-CH mode, the strobe (CH 2 and CH 3) and the master dimmer (CH 1) channels are not functional.
- The Speed channel in 11-CH mode works only in combination with the built-in chases in CH 5.

7. Troubleshooting

This troubleshooting guide contains solutions to problems which can be carried out by an ordinary person. The device does not contain user-serviceable parts.

Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

Refer servicing to instructed or skilled persons. Contact your Highlite International dealer in case the solution is not described in the table.

Problem	Probable cause(s)	Solution
The device does not function at all	No power to the device	<ul style="list-style-type: none"> Check if power is switched on and cables are plugged in
	Main fuse is blown	<ul style="list-style-type: none"> Replace the fuse. See 8.3.1. Replacing the Fuse on page 32
The device responds erratically	The factory settings of the device are changed	<ul style="list-style-type: none"> Reset the device's parameters to the default factory settings. See 6.6.7. Settings on page 26
The device does not respond to DMX control	The controller is not connected	<ul style="list-style-type: none"> Connect the controller
	The signal is reversed. The 3-pin DMX OUT of the controller does not match the DMX IN of the device	<ul style="list-style-type: none"> Install a phase-reversing cable between the controller and the device
	The controller is defective	<ul style="list-style-type: none"> Try using another controller
The device responds erratically to DMX control	Bad data link connection	<ul style="list-style-type: none"> Examine connections and cables. Correct poor connections. Repair or replace damaged cables
	The data link is not terminated with a 120 Ω termination plug	<ul style="list-style-type: none"> Insert a termination plug in the DMX OUT connector of the last device on the link
	Incorrect addressing	<ul style="list-style-type: none"> Check address settings and correct, if necessary
	In case of a setup with multiple devices, one of the devices is defective and disturbs data transmission on the link	<ul style="list-style-type: none"> To find out which device is defective, bypass one device at a time until normal operation is restored
No light or LEDs cut out intermittently	LEDs are damaged	<ul style="list-style-type: none"> Disconnect the device and contact your Highlite International dealer
	The power supply settings do not match local AC voltage and frequency	<ul style="list-style-type: none"> Disconnect the device. Check the settings and correct, if necessary

8. Maintenance

8.1. Safety Instructions for Maintenance



DANGER
Electric shock caused by dangerous voltage inside

Disconnect power supply before servicing or cleaning.



WARNING
Risk of burns due to hot surface

Allow the device to cool down for at least 15 minutes before servicing or cleaning.

8.2. Preventive Maintenance



Attention
Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- The safety devices are not damaged.
- There are no deformations on housings, fixations and installation points.
- The lens is not cracked or damaged.
- The power cables are not damaged and do not show any material fatigue.

8.2.1. Basic Cleaning Instructions

The external lens of the device must be cleaned periodically in order to optimize the light output. The cleaning schedule depends on the conditions at the site where the device is installed. When smoke or fog machines are used at the site, the device will need more frequent cleaning. On the other hand, if the device is installed in well-ventilated area, it will need less frequent cleaning. To establish a cleaning schedule, examine the device at regular intervals during the first 100 hours of operation.

To clean the device, follow the steps below:

- 01) Disconnect the device from the electrical power supply.
- 02) Allow the device to cool down for at least 15 minutes.
- 03) Remove the dust collected on the external surface with dry compressed air and a soft brush.
- 04) Clean the lens with a damp cloth. Use a mild detergent solution.
- 05) Dry the lens carefully with a lint-free cloth.
- 06) Clean the DMX and other connections with a damp cloth.



Attention

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.
- Make sure that the connections are fully dry before connecting the device to the power supply and to other devices.

8.3. Corrective Maintenance

The device does not contain user-serviceable parts. Do not open the device and do not modify the device.

Refer repairs and servicing to instructed or skilled persons. Contact your Highlite International dealer for more information.

8.3.1. Replacing the Fuse



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

- Do not bypass the thermostatic switch or fuses.
- For replacement use fuses of the same type and rating only.

Power surges, short-circuit or incorrect electrical power supply may cause a fuse to burn out. If the fuse burns out, the device will not function anymore. If this happens, follow the steps below:

- 01) Disconnect the device from the electrical power supply.
- 02) Allow the device to cool down for at least 15 minutes.
- 03) Loosen the fuse cover with a screwdriver and remove the fuse holder.
- 04) If the fuse is brown or unclear, it is burned out. Remove the old fuse.
- 05) Insert a new fuse in the fuse holder. Make sure that the type and the rating of the replacement fuse are the same as the ones specified on the information label of the product.
- 06) Replace the fuse holder in the opening and tighten the fuse cover.

9. Deinstallation, Transportation and Storage

9.1. Instructions for Deinstallation



WARNING

Incorrect deinstallation can cause serious injuries and damage of property.

- Let the device cool down before dismounting.
- Disconnect power supply before deinstallation.
- Always observe the national and site-specific regulations during deinstallation and derigging of the device.
- Wear personal protective equipment in compliance with the national and site-specific regulations.

9.2. Instructions for Transportation

- Use the original packaging to transport the device, if possible.
- Always observe the handling instructions printed on the outer carton box, for example: "Handle with care", "This side up", "Fragile".

9.3. Storage

- Clean the device before storing. Follow the cleaning instructions in chapter **8.2.1. Basic Cleaning Instructions** on page 32.
- Store the device in the original packaging, if possible.

10. Disposal

Correct disposal of this product



Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

11. Approval



Check the respective product page on the website of Highlite International (www.highlite.com) for an available declaration of conformity.



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