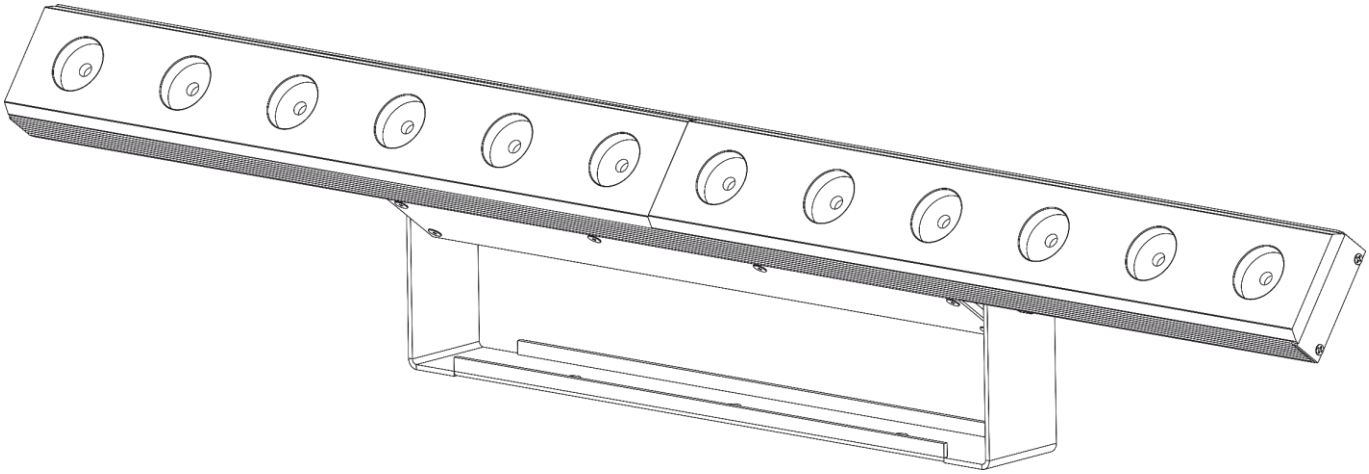
USER MANUAL



ENGLISH

Razor Blaze 12 V1

Product code: 44550

Highlite International B.V. – Vestastraat 2 – 6468 EX – Kerkrade – the Netherlands

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.

Design and product specifications are subject to change without prior notice.

For the latest version of this document, please visit our website www.highlite.com or contact us at service@highlite.com.

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Table of contents

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 Razor Blaze 12
- Schuko to Powercon power cable (1,5 m)
- Network cable (1,45 m)
- User manual

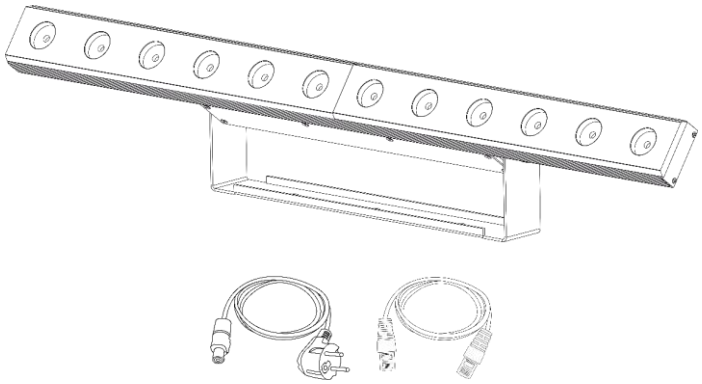


Fig. 01

1.2. Intended Use

This device is intended for professional use as a light effect. 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 (08)**"
- 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

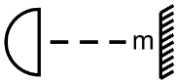
This product is provided with an information label. The information label is located at the backside of the device.

The information label contains the following symbols:

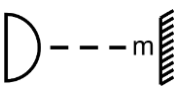
This device is designed for indoor use.

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 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 Razor Blaze 12, is a 2in1 LED matrix bar equipped with 12x 5W Warm White High Power LEDs(4° beam angle) and 96pcs RGB LEDs. Razor Blaze 12 has a 4, 9, 48, 300 channel personality to serve the basic users as well as the advanced users. The 4 & 9 channel mode allow users to control all basic functions and built-in programs, 48 & 300 channel mode allow users to gain full control of all pixels to create stunning effects. The Razor Blaze 12 can be controlled by DMX, Artnet and Klingnet, but can also be used as a stand-alone fixture with built-in programs. When using multiples units the built-in programs can be synchronized due to master/slave function. Razor Blaze 12 the perfect tool for any show!

3.1. Front View

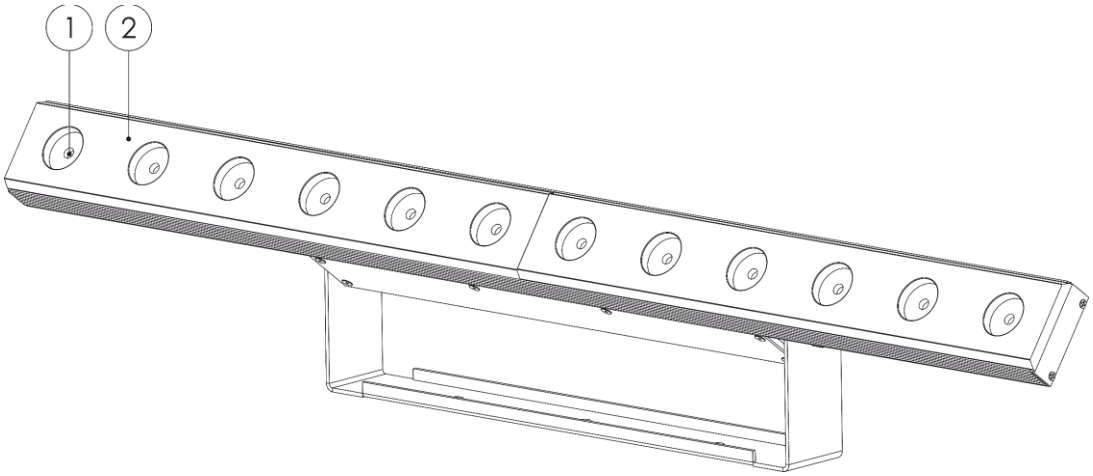


Fig. 02

01) 112 x 5 W High Power Warm White Cree® LEDs (WW LEDs)
02) 96 x 0,3 W RGB 5050SMD LEDs (RGB LEDs) – For the exact position of the 96 RGB LEDs, **see DMX Channels – 300 Channels** on pages 34–35

3.2. Back View

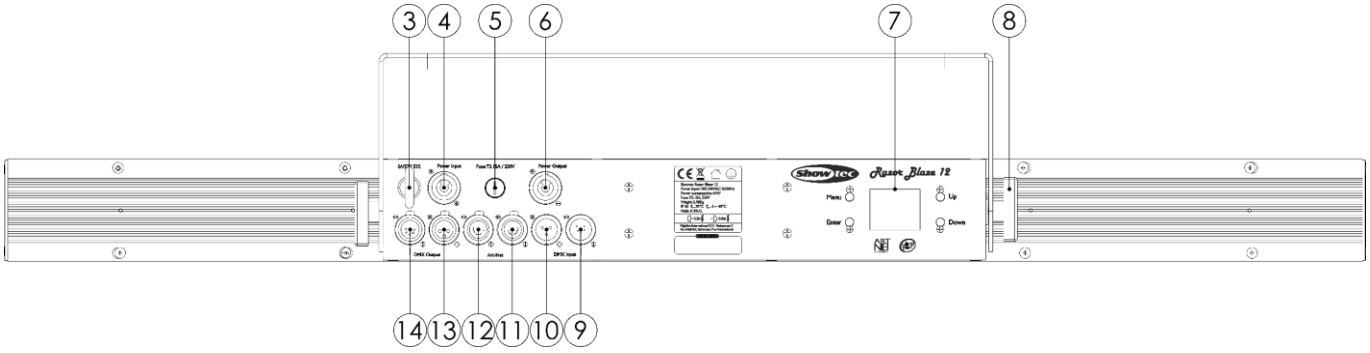


Fig. 03

03) Safety eye
04) Pro power connector 100–240 V IN (Blue)
05) Fuse T3,15 AL/250 V
06) Pro power connector 100–240 V OUT (Gray)
07) Control panel: LCD display and control buttons
08) Mounting bracket with 2 adjustment screws
09) 5-pin DMX connector IN
10) 3-pin DMX connector IN
11) RJ45 connector
12) RJ45 connector
13) 3-pin DMX connector OUT
14) 5-pin DMX connector OUT

3.3. Product Specifications

Model:	Razor Blaze 12

Electrical:	
Input voltage:	100–240 V AC, 50/60 Hz
Power consumption:	64 W

Physical:	
Dimensions:	1000 x 74 x 185 mm (L x W x H) (including bracket)
Weight:	3,06 kg
Fuse:	F3,15 AL/250 V

Optics:	
Light source:	12 x 5 W High Power Warm White (WW) Cree® LEDs 96 x 0,3 W RGB 5050SMD LEDs
Dimmer:	0–100 %
Strobe:	0–20 Hz
Beam angle:	4°

Operation and control:	
Control:	Auto, Sound-controlled, Master/Slave, DMX-512, Art-Net, Kling-Net
Control protocol	DMX-512, RDM, Art-Net, Kling-Net
DMX channels:	4, 9, 48 and 300 channels
Control panel:	OLED display and buttons

Connections:	
Power connections:	Pro power connector IN (Blue) Pro power connector OUT (Gray)
Data connections:	5-pin DMX connectors IN/OUT 3-pin DMX connectors IN/OUT 2 x RJ45 connectors IN/OUT
Signal pinouts:	pin 1 (ground), pin 2 (-), pin 3 (+), pin 4 (NC), pin 5 (NC).

Construction:	
Housing:	Metal, flame retardant plastic
Color:	Black
IP rating:	IP20
Cooling:	Fan, Temperature controlled

Thermal:	
Maximum ambient temperature t_a:	40 °C
Maximum housing temperature t_c:	70 °C

Minimum distance:	
Minimum distance from flammable surfaces:	0,5 m
Minimum distance to lighted object:	0,5 m

3.4. Dimensions

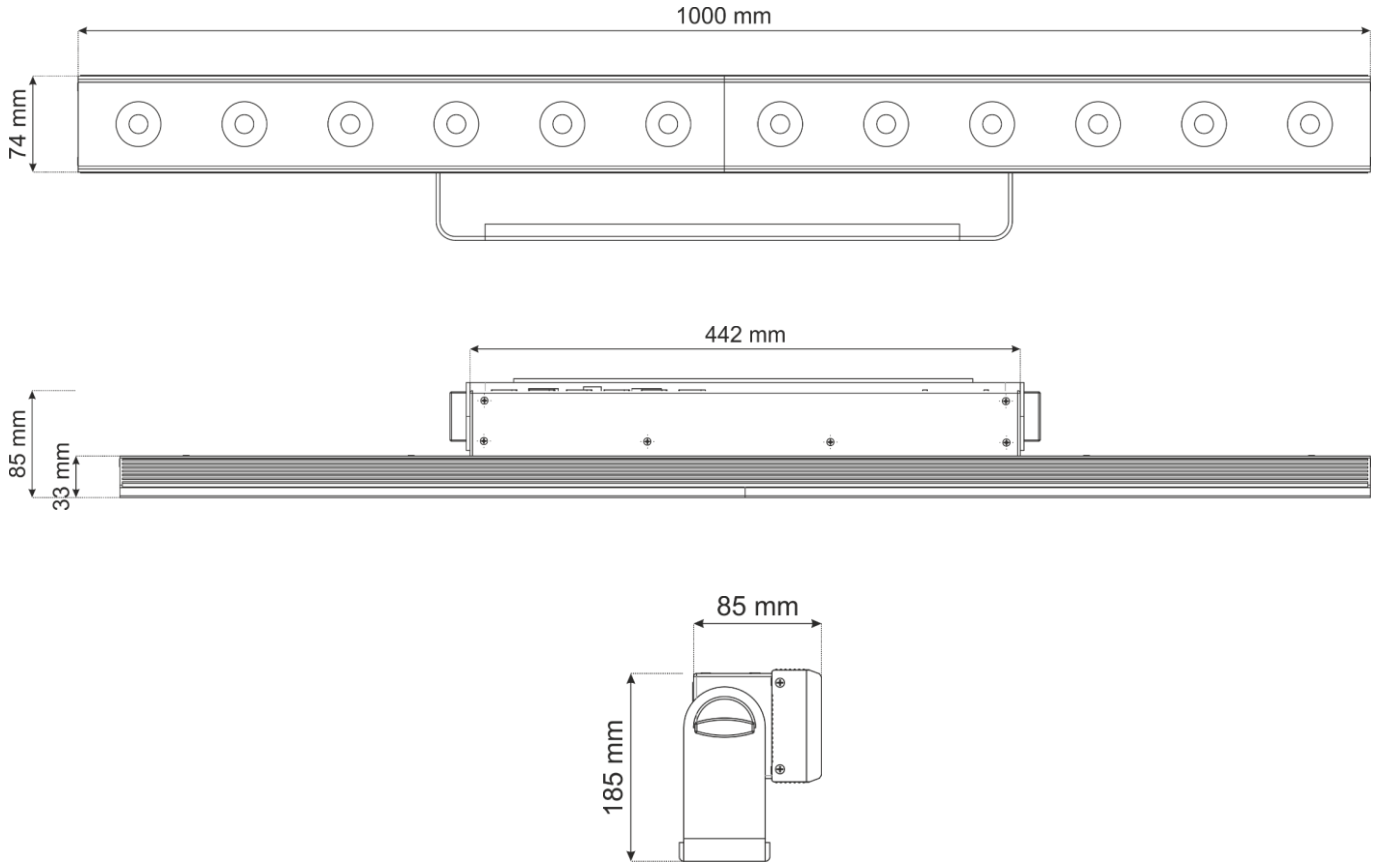


Fig. 04

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.
- The minimum distance to other objects must be bigger than 0,5 m.
- The minimum distance between the light output and the illuminated surface must be bigger than 0,5 m.
- The maximum ambient temperature t_a = 40 °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 positioned on a flat surface or mounted to a truss or other rigging structure. 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. 06. 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 (08)**, as shown in Fig. 06.

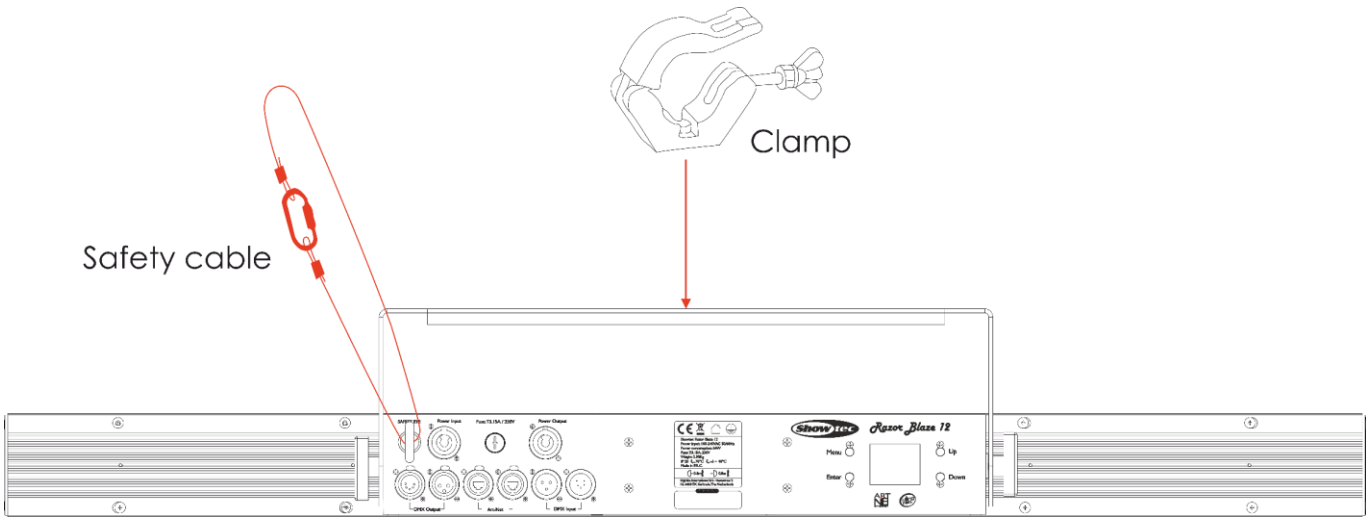


Fig. 05

4.4.1. Angle Adjustment

You can adjust the angle of the device with the 2 **adjustment screws (08)**.

01) Turn the **adjustment screws (08)** counterclockwise to release them.
02) Tilt the device at the desired angle (see Fig. 07).
03) Turn the **adjustment screws (08)** clockwise to tighten them. Make sure that the device cannot move freely after the **adjustment screws (08)** are tightened.

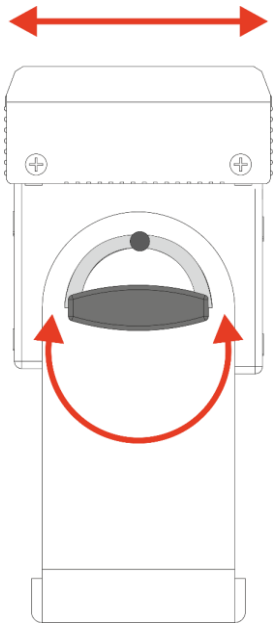


Fig. 06

4.5. 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.

4.6. 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: 10 devices Razor Blaze 12
- at 200–240 V: 20 devices Razor Blaze 12

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 Razor Blaze 12 is not connected to a controller or to other devices, it functions as a stand-alone device. It can be operated manually.

For more information about the control modes, refer to **6.2. Control Modes** on page 21.

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 Razor Blaze 12 has 3 and 5-pin DMX signal IN and OUT connectors.

The pin assignment is as follows:
- 3-pin: pin 1 (ground), pin 2 (-), pin 3 (+)
- 5-pin: pin 1 (ground), pin 2 (-), pin 3 (+), pin 4 (N/C), pin 5 (N/C)

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 5-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. 09.

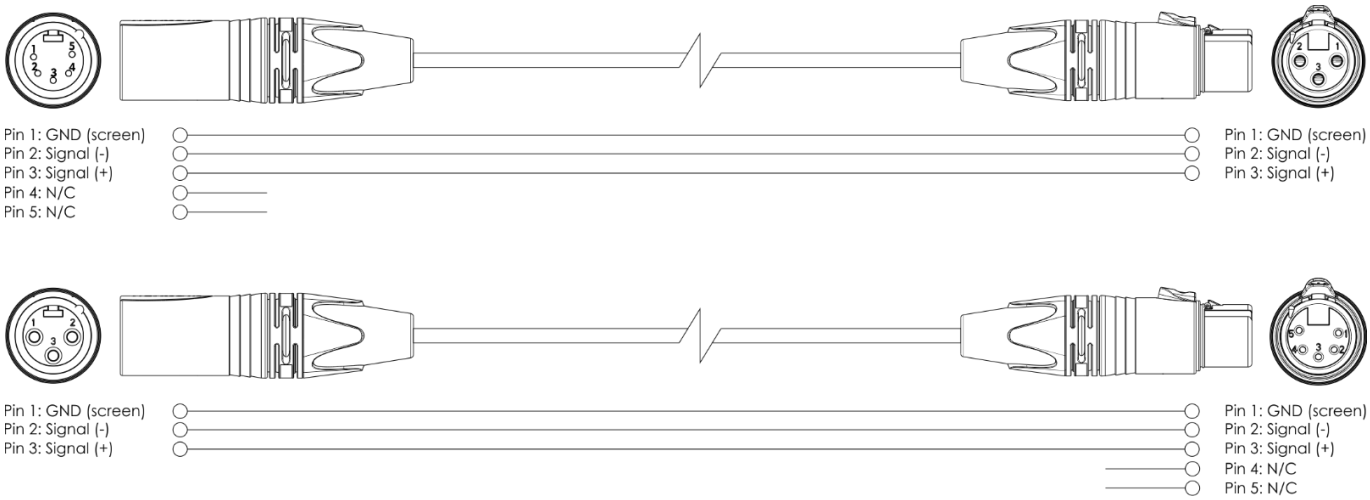


Fig. 07

5.3.3. Master/Slave Setup

The Razor Blaze 12 supports master/slave control mode. To connect multiple devices in master/slave setup, follow the steps below:

01) Connect the first device's DMX OUT connector to the second device's DMX IN connector with a 3-pin/5-pin DMX cable.
02) Repeat step 1 to connect all devices as shown in Fig. 08.
03) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device in the setup.
04) Set the first device on the data link as a master device. See **6.6.3.4. Slave Mode** on page 28 for more information.
05) Set the remaining devices as slave devices. See **6.6.3.4. Slave Mode** on page 28 for more information.

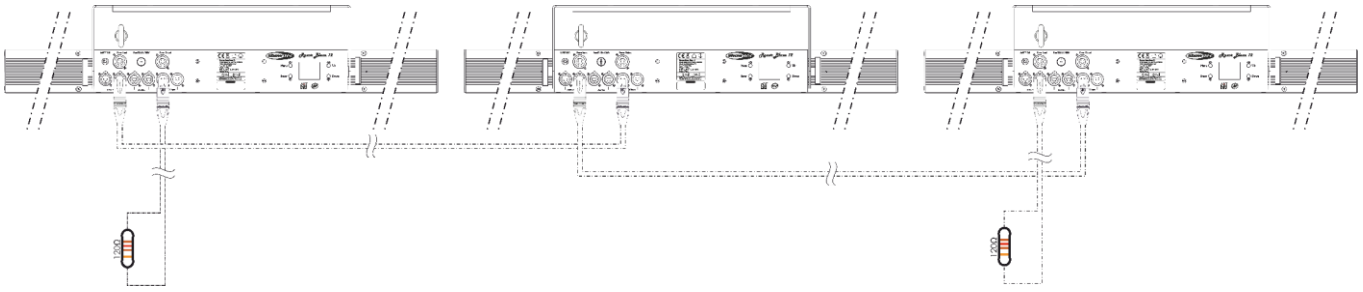


Fig. 08

5.3.4. DMX Linking

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

01) Use a 3-pin/5-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/5-pin DMX cable.
03) Repeat step 2 to connect all devices in a daisy-chain as shown in Fig. 09.
04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.

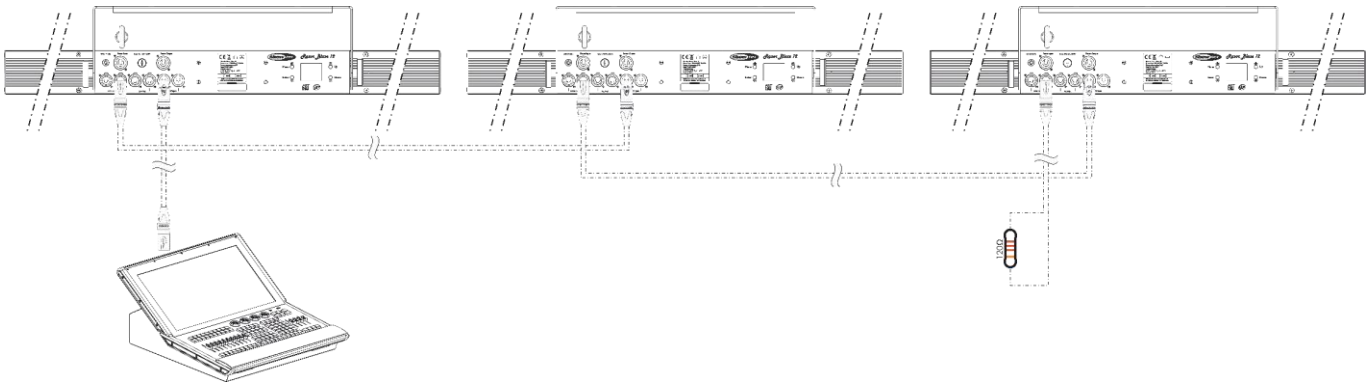


Fig. 09

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 Razor Blaze 12 has 4 personalities: 4 channels, 9 channels, 48 channels and (300 channels).

If you want to connect multiple devices on one data link and use them in 48-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 48 (013), as 1 + 48 = 49.
03) Set the starting address of the 3rd device on the data link to 49 (049) as 49 + 48 = 97.
04) Continue assigning the starting addresses of the remaining devices by adding each time 48 to the previous number.

Make sure that you do not have any overlapping channels in order to control each Razor Blaze 12 correctly. If two or more devices are addressed similarly, they will work similarly.

5.4. Ethernet Connection

Attention
Connect all data cables before supplying power.
Disconnect power supply before connecting or disconnecting data cables.

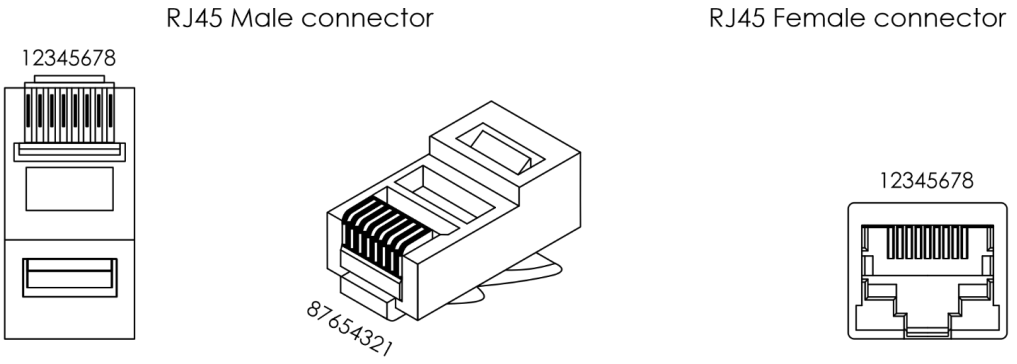
5.4.1. Art-Net and Kling-Net Protocols

Art-Net is a protocol that uses TCP/IP to transfer large amount of DMX-512 data over an Ethernet network. Art-Net 4 can support up to 32768 universes. Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd.
Kling-Net is a protocol that allows the creation of a network of LED display devices, which are automatically configured. Kling-Net is independent of DMX-512 or Art-Net protocols. It uses a standard Ethernet network.

5.4.2. Network Cables

Standard twisted-pair Ethernet cables (CAT-5/CAT-5E/CAT-6) can be used to connect the device to a computer or to a lighting controller that supports Art-Net or Kling-Net.

If you make your own network cables, make sure that you connect the pins and wires correctly as shown in Fig. 12. Use RJ45 (8P8C) connectors and patch the cables according to the T568B color standard.



Color Standard EIA/TIA T568B

		RJ45 Pin #		RJ45 Pin #		
TX+		Orange/White tracer	1	1 Orange/White tracer		PR 2
TX-		Orange	2	2 Orange		
RX+		Green/White tracer	3	3 Green/White tracer		PR 3
		Blue	4	4 Blue		PR 1
		Blue/White tracer	5	5 Blue/White tracer		
RX-		Green	6	6 Green		PR 3
		Brown/White tracer	7	7 Brown/White tracer		PR 4
		Brown	8	8 Brown		

Fig. 10

5.4.3. Art-Net/ Kling-Net Setup

The Razor Blaze 12 has 2 RJ45 connectors. Either connector can be used as an input and as throughput. To connect multiple devices in an Art-Net/Kling-Net setup, follow the steps below:

01) Use a CAT-5/CAT-5E/CAT-6 cable to connect the RJ45 connector of the computer/lighting controller to one of the RJ45 connectors of the first device.
02) Connect the other RJ45 connector of the first device to the RJ45 connector of the second device with a CAT-5/CAT-5E/CAT-6 cable.
03) Repeat step 2 to connect all devices as shown in Fig. 11.

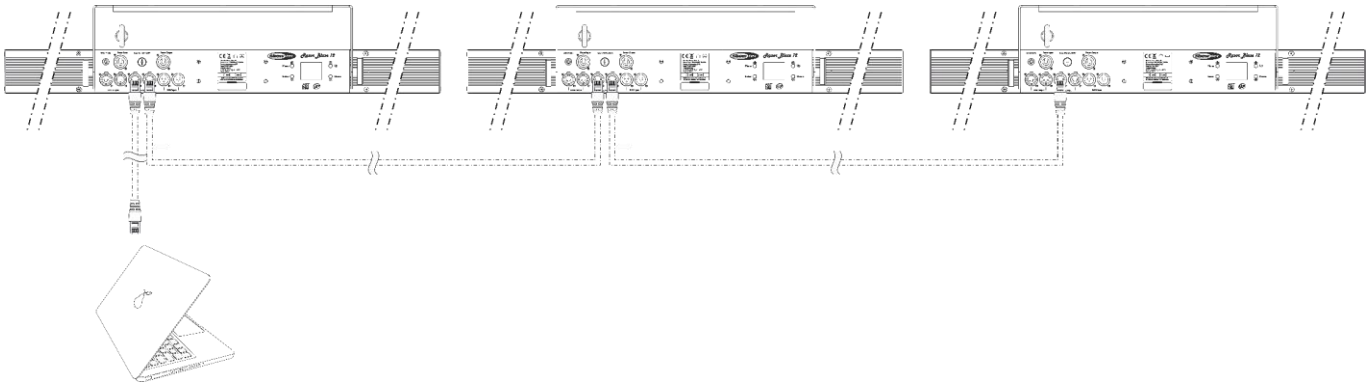


Fig. 11

5.4.4. Art-Net Settings

To run your device using Art-Net protocol:

01) Configure the network address of your computer/lighting controller in the correct range (IP 2.x.x.x, 10.x.x.x or 192.168.x.x and Subnet 255.0.0.0). To change the IP address of the device, refer to **6.6.2.1. Set Manual/DHCP** on page 25 and **6.6.2.2. Set IP Address** on page 25. To change the Subnet mask, refer to **6.6.2.3. Set Net Mask** on page 25. Make sure that all devices in the network have unique IP addresses.

Note: Art-Net 4 supports both DHCP and static addressing.

02) Select Art-Net Protocol in the Set Net Protocol menu. See **6.6.3.2. Art-Net** or **6.6.3.3. Kling-Net** on page 27.
03) Set the universe. See **5.4.6. Universe Numbering** on page 20.

5.4.5. Kling-Net Settings

To run your device using Kling-Net protocol:

01) Install any Kling-Net-based software on your computer.
02) Make sure that your computer has a fixed IP address.
03) Select KlingNet IP in the Set IP Mode menu. See **6.6.2.1. Set Manual/DHCP** on page 25. The Kling-Net-based software will automatically configure the IP address of the device.
04) Select KlingNet Protocol in the Set Net Protocol menu. See **6.6.3.3. Kling-Net** on page 27.
05) Map the device following the instructions of the Kling-Net-based software.

5.4.6. Universe Numbering

If you want to connect more than 5 devices on one data link and use them in 101-channel mode, you will need to address them on different universes.

01) Set the DMX starting address of the first 5 devices. Follow the instructions in **5.3.5. DMX Addressing** on page 17.
02) Set the universe number of the 6th device to 001 and the DMX starting address to 001.
03) Continue addressing the devices, each time increasing the universe number, after the limit of 512 channels for one universe has been reached.

There are 512 channels (1–512) in one universe. 16 consecutive universes (0–15) make up one sub-net. 16 sub-nets (0–15) make up one net. There are in total 128 nets (0–127).

Note:

- In Art-Net, universes are called Port Address and number from 0 to 32767. There are 32768 unique numbers.

15-bit Port Address	Net (0–127)	Sub-net (0–15)	Universe (0–15)
0	0	0	0
1	0	0	1
2	0	0	2
...	...	...	...
15	0	0	15
16	0	1	0
17	0	1	1
...	...	...	...
31	0	1	15
32	0	2	0
33	0	2	1
...	...	...	...
255	0	15	15
256	1	0	0
257	1	0	1
...	...	...	...
32766	127	15	14
32767	127	15	15

Make sure that you do not have any overlapping channels in order to control each Razor Blaze 12 correctly. If two or more devices are addressed similarly, they will work similarly.

Note: If you are using an Art-Net controller that supports Art-Net I or Art-Net II, the Art-Net net must be set to 0. The net number is available in Art-Net 3 and higher versions of the Art-Net protocol.

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 light effect. 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 Razor Blaze 12 supports the following control modes:

- Stand-alone: Built-in programs
- Master/Slave
- DMX-512: 4, 9, 48 and 300 channels
- Art-Net, Kling-Net: 4, 9, 48 and 300 channels

For more information about how to connect the devices, refer to **5. Setup** on pages 15–20.

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

01) Adjust the levels for red, green, blue, white, amber and UV in the Manual Control menu. See **6.6.3.6. Manual Control** on page 29 for more information.

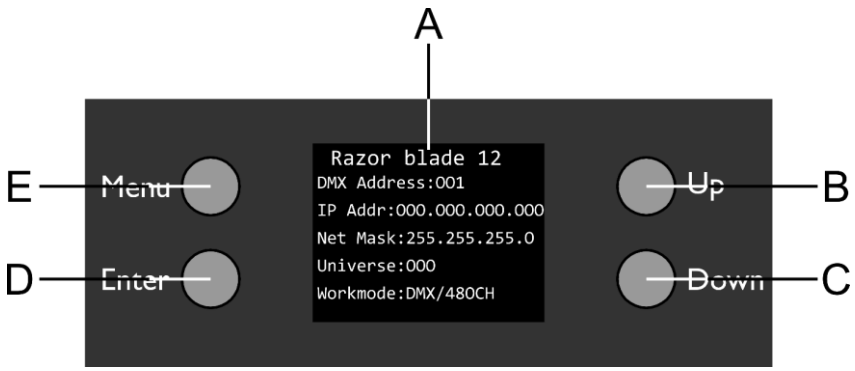
To run one of the built-in programs in auto operation mode without a DMX controller:

02) Select one of the 30 built-in chases in the Auto Control menu. See **6.6.3.5. Auto Control** on page 28 for more information.
03) Set the speed of the built-in chase in the Auto Control menu. See **6.6.3.5. Auto Control** on page 28 for more information.

To operate the device with a DMX controller:

04) Set the DMX starting address of the device in the DMX Address menu. See **5.3.5. DMX Addressing** on page 17 and **6.6.1. DMX Address** on page 24.
05) Select the DMX channel mode. See **6.6.3.1. Set DMX Channel Mode** on page 26 for more information. See **6.7. DMX Channels** on pages 31–35 for complete overview of all DMX channels.

6.3. Control Panel



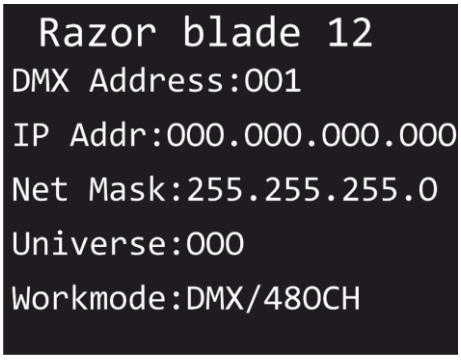
A) OLED display
B) UP button
C) DOWN button
D) ENTER button
E) MENU button

Fig. 12

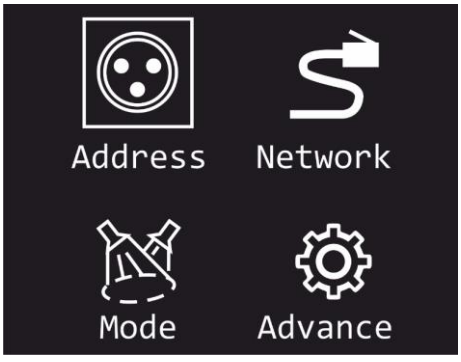
- Use the **MENU** button to exit the current submenu, to return to the main menu and to return to the start screen.
- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **ENTER** button to open the desired menu, to confirm your choice or to set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

6.4. Start-up

Upon start-up the display will show the following screen:

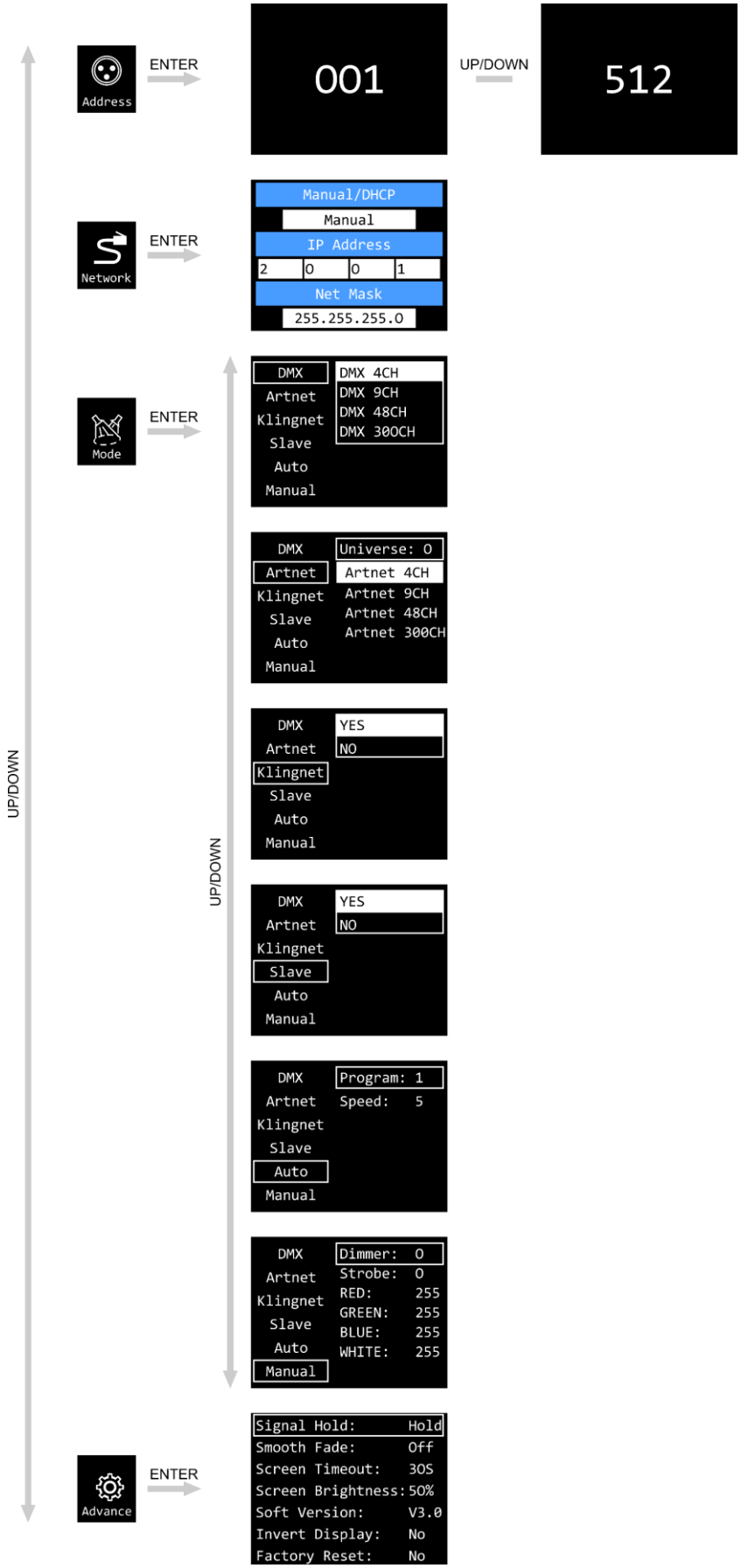


When you press the **MENU** button, the Razor Blade 12 will show its main menu :



Note: If no button is pressed, after 20 seconds of inactivity the display will return to the start screen and after 10 more seconds it will turn off. Press any button to turn the display on.

6.5. Menu Overview



6.6. Main Menu Options

The main menu has the following options:

DMX address

Network Settings

DMX / Art-Net / Kling-Net / Slave / Auto / Manual

Signal Hold / Smooth Fade / Screen Timeout / Screen Brightness / Software Version / Invert Display / Factory Reset

01) Press the **UP/DOWN** buttons to navigate through the main menu.
01) Press the **ENTER** button to open the submenus.
02) Press the **MENU** button to return to the previous screen.

6.6.1. DMX Address

In this menu you can set the DMX starting address of the device.

01) While in main menu, press the **UP/DOWN** buttons to select 

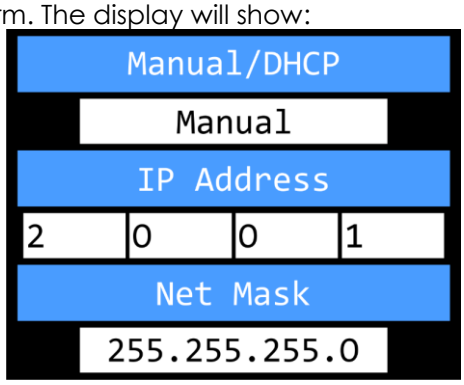
.
02) Press the **ENTER** button to confirm and open this menu.
03) Press the **UP/DOWN** buttons to select the DMX starting address. The selection range is 001–512.
04) Press the **ENTER** button to confirm the selection.

6.6.2. Network Settings

With this menu you can set the network settings.

01) While in main menu, press the **UP/DOWN** buttons to select 

.
02) Press the **ENTER** button to confirm. The display will show:



6.6.2.1. Set Manual/DHCP

01) Press the **UP/DOWN** buttons to select MANUAL/DHCP.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to select one of the 2 options:
    - MANUAL: You can enter a desired IP address and net mask.
    - DHCP: The device will receive its network settings from a DHCP server. **If you choose this option, you will not be able to adjust any settings in this menu**

04) Press the **ENTER** button to confirm your choice.

6.6.2.2. Set IP Address

01) Press the **UP/DOWN** buttons to select IP ADDRESS.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to adjust the 1st section of the IP address.
04) Press the **ENTER** button to save changes.
05) Press the **UP/DOWN** buttons to select the 2nd section of the IP address.
06) Press the **ENTER** button to open the menu.
07) Press the **UP/DOWN** buttons to adjust the 2nd section of the IP address.
08) Press the **ENTER** button to save changes.
09) Repeat the process to adjust the remaining 2 sections of the IP address.

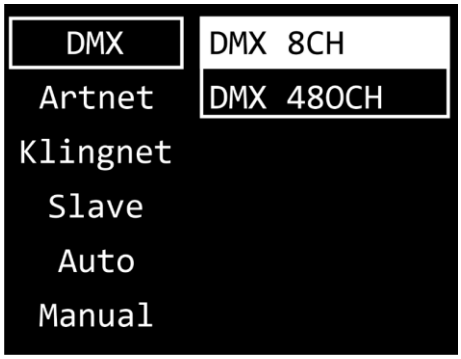
6.6.2.3. Set Net Mask

01) Press the **UP/DOWN** buttons to select NET MASK.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to select one of the 3 net mask options:
    255.0.0.0
    255.255.0.0
    255.255.255.0

04) Press the **ENTER** button to confirm your choice.

6.6.3. Control Modes

01) While in main menu, press the **UP/DOWN** buttons to select .
02) Press the **ENTER** button to open the menu. The display will show:



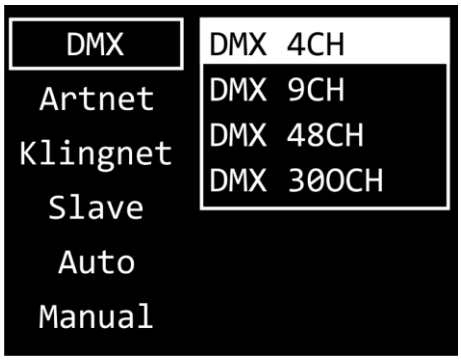
03) Press the **UP/DOWN** buttons to select one of the 6 modes:
- DMX
- ART-NET
- KLING-NET
- SLAVE
- AUTO
- MANUAL

04) Press the **ENTER** button to open the desired menu.

6.6.3.1. DMX

In this menu you can set the desired DMX channel mode.

01) When the display shows DMX, press the **ENTER** button to open the menu. The display will show:



02) Press the **UP/DOWN** buttons to select one of the 4 channel modes:
- 4 channels
- 9 channels
- 48 channels
- 300 channels

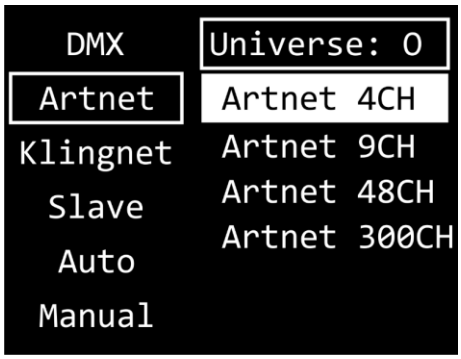
03) Press the **ENTER** button to confirm your choice.

Note: The Razor Blaze does not automatically detect whether DMX data signal is received or not. Activate DMX control.

6.6.3.2. Art-Net

In this menu you can set the Art-Net settings.

01) When the display shows ARTNET, press the **ENTER** button to open the menu. The display will show:



02) Press the **UP**/**DOWN** buttons to select UNIVERSE and press the **ENTER** button to confirm.
03) Press the **UP**/**DOWN** buttons to set the universe. The adjustment range is 0–255.
04) Press the **ENTER** button to save changes.
05) Press the **UP**/**DOWN** buttons to select the channel mode selection field and press the **ENTER** button to confirm.
06) Press the **UP**/**DOWN** buttons to select one of the 4 channel modes:
    - 4 channels
    - 9 channels
    - 48 channels
    - 300 channels

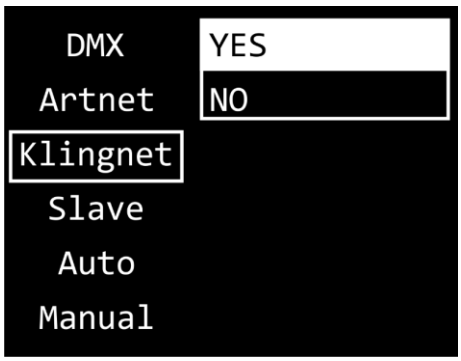
07) Press the **ENTER** button to confirm your choice.

Note: The Razor Blaze does not automatically detect whether Art-Net data signal is received or not. Activate Art-Net control.

6.6.3.3. Kling-Net

In this menu you can set the Kling-Net settings.

01) When the display shows KLINGNET, press the **ENTER** button to open the menu. The display will show:



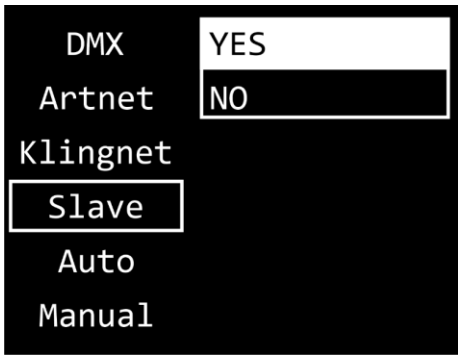
02) Press the **UP**/**DOWN** buttons to select the YES/NO field. Press the **ENTER** button to confirm.
03) Press the **UP**/**DOWN** buttons to select YES or NO. If you choose YES, Kling-Net protocol will be active.
04) Press the **ENTER** button to confirm your choice.

Note: The Razor Blaze does not automatically detect whether Kling-Net data signal is received or not. Activate Kling-Net control.

6.6.3.4. Slave

In this menu you can set the device as a slave.

01) When the display shows SLAVE, press the **ENTER** button to open the menu. The display will show:

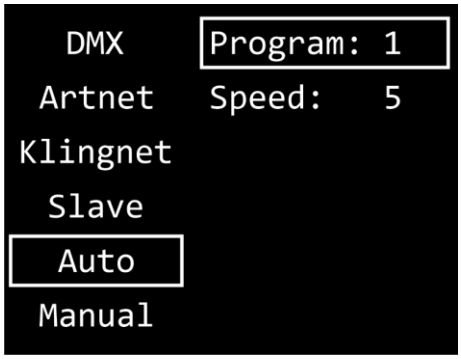


02) Press the **UP**/**DOWN** buttons to select YES or NO. If you choose YES, the device will react the same as the master device.
03) Press the **ENTER** button to confirm your choice.

6.6.3.5. Auto

In this menu you can run the desired built-in programs.

01) When the display shows AUTO, press the **ENTER** button to open the menu. The display will show:



02) Press the **UP**/**DOWN** buttons to select PROGRAM and press the **ENTER** button to confirm.
03) Press the **UP**/**DOWN** buttons to select one of the 30 built-in programs.
04) Press the **ENTER** button to confirm your choice.
05) Press the **UP**/**DOWN** buttons to select SPEED and press the **ENTER** button to confirm.
06) Press the **UP**/**DOWN** buttons to set the program speed. The adjustment range is 1–9, from slow to fast.
07) Press the **ENTER** button to save changes.

6.6.3.6. Manual

In this menu you can run the Manual mode.

01) When the display shows MANUAL, press the **ENTER** button to open the menu. The display will show:

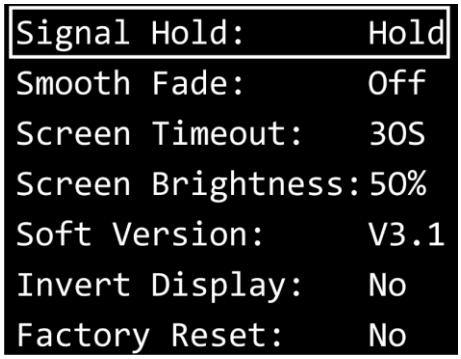
02) Press the **UP/DOWN** buttons to select one of the 6 options:
- DIMMER: Dimmer brightness (0–255, from dark to brightest)
- STROBE: Strobe frequency (0–4, strobe OFF; 5–255, from low to high frequency)
- RED: Red color brightness (0–255, from dark to brightest)
- GREEN: Green color brightness (0–255, from dark to brightest)
- BLUE: Blue color brightness (0–255, from dark to brightest)
- WHITE: White color brightness (0–255, from dark to brightest)

03) Press the **ENTER** button to open the desired menu.
04) Press the **UP/DOWN** buttons to adjust the values.
05) Press the **ENTER** button to save changes.
06) You can combine RED, GREEN, BLUE and WHITE to create an infinite range of colors.

6.6.4. Advanced Settings

01) While in main menu, press the **UP/DOWN** buttons to select 

.
02) Press the **ENTER** button to open the menu. The display will show:



03) Press the **UP/DOWN** buttons to select one of the 7 modes:
- SIGNAL HOLD
- SMOOTH FADE
- SCREEN TIMEOUT
- SCREEN BRIGHTNESS
- SOFTWARE VERSION (V3.1)
- INVERT DISPLAY
- FACTORY RESET

04) Press the **ENTER** button to open the desired option.
05) Press the **UP/DOWN** buttons to change settings.
06) Press the **ENTER** button to confirm your choice.

6.6.4.1. Signal Hold

In this menu you can determine the behaviour of the Razor Blaze in case of a DMX failure.

01) Press the **ENTER** button to open menu Fan Mode.
02) Press the **UP/DOWN** buttons to select one of the 2 options:
    - BLACK: If DMX signal is lost, the device will black its output out.
    - HOLD: If DMX signal is lost, the device will use the last successfully received DMX signal and will continue using it until DMX signal reception is restored, in order to ensure undisrupted performance.

03) Press the **ENTER** button to confirm your choice.

6.6.4.2. Smooth Fade

In this menu you can set the Smooth Fade.

01) Press the **UP/DOWN** buttons to select one of the 2 options:
    - ON: Smooth Fade is enabled.
    - OFF: Smooth Fade is disabled.

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

6.6.4.3. Screen Timeout

In this menu you can set the amount of time after which the display will turn off, when no button is pressed.

01) Press the **UP/DOWN** buttons to select one of the 3 options: 30 seconds/60 seconds/NEVER.
02) Press the **ENTER** button to confirm your choice.

6.6.4.4. Screen Brightness

In this menu you can set the screen brightness.

01) Press the **UP/DOWN** buttons to select one of the 4 options: 25/50/75/100 %, from dark to brightest.
02) Press the **ENTER** button to confirm your choice.

6.6.4.5. Software Version

This menu shows the version of the currently installed software.

6.6.4.6. Invert Display

In this menu you can set the display inversion.

01) Press the **UP/DOWN** buttons to select one of the 2 options:
    - YES: Display inversion is enabled.
    - NO: Display inversion is disabled.

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

6.6.4.7. Factory Reset

In this menu you can restore the default factory settings.

01) Press the **UP/DOWN** buttons to select one of the 2 options:
- YES: Restore the default factory settings.
- NO: Keep the current settings.

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

6.7. DMX Channels

6.7.1. 4 Channels

4 CH	Function	Value	Setting
1	**Red**	000–255	From low to high intensity (0–100 %)
2	**Green**	000–255	From low to high intensity (0–100 %)
3	**Blue**	000–255	From low to high intensity (0–100 %)
4	**Warm White**	000–255	From low to high intensity (0–100 %)

6.7.2. 9 Channels

9 CH	Function	Value	Setting
1	Master Dimmer	000–255	From low to high intensity (0–100 %)
2	Strobe	000–255	From low to high frequency
3	Red	000–255	From low to high intensity (0–100 %)
4	Green	000–255	From low to high intensity (0–100 %)
5	Blue	000–255	From low to high intensity (0–100 %)
6	Warm White	000–255	From low to high intensity (0–100 %)
7	Built-in programs 1–15	0–15	Not functional
		16–31	Program 1
		32–47	Program 2
		48–63	Program 3
		64–79	Program 4
		80–95	Program 5
		96–111	Program 6
		112–127	Program 7
		128–143	Program 8
		144–159	Program 9
		160–175	Program 10
		176–191	Program 11
		192–207	Program 12
		208–223	Program 13
		224–239	Program 14
		240–255	Program 15
8	Built-in programs 16–30	0–15	Not functional
		16–31	Program 16
		32–47	Program 17
		48–63	Program 18
		64–79	Program 19
		80–95	Program 20
		96–111	Program 21
		112–127	Program 22
		128–143	Program 23
		144–159	Program 24
		160–175	Program 25
		176–191	Program 26
		192–207	Program 27
		208–223	Program 28
		224–239	Program 29
		240–255	Program 30
9	Program speed	000–255	From slow to fast

Built-in Programs CH7

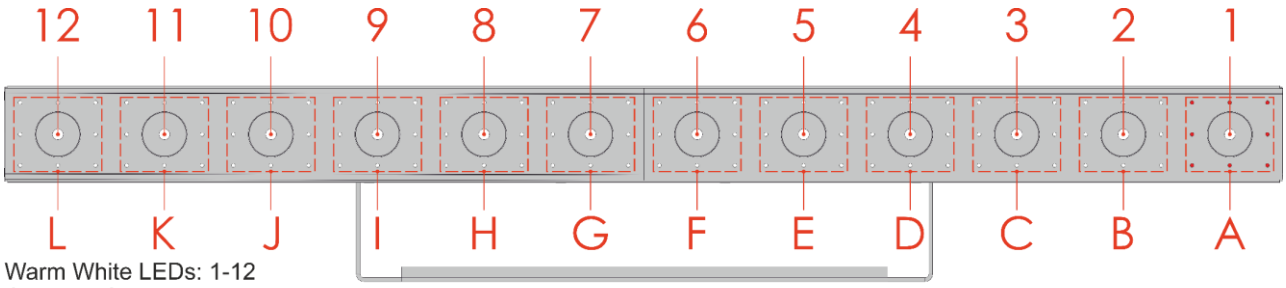
Note: Make sure that the Master Dimmer channel is open and that CH8 is closed, in order to see the light output.

Built-in Programs CH8

Note: Make sure that the Master Dimmer channel is open and that CH7 is closed, in order to see the light output.

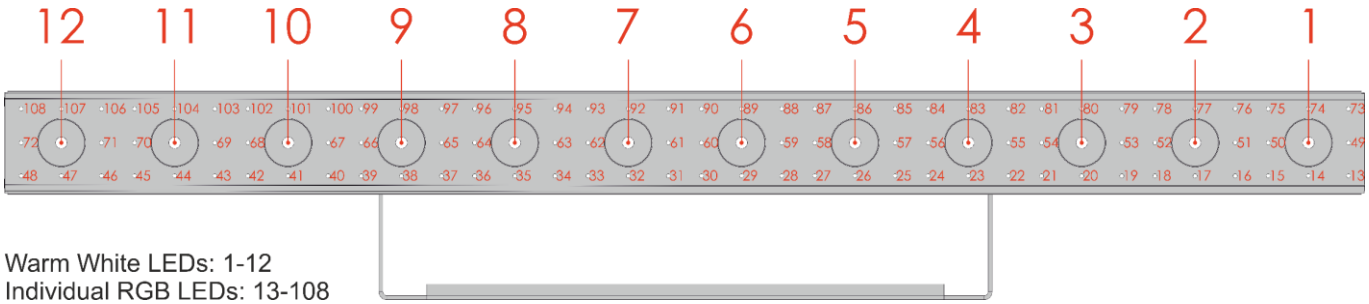
6.7.3. 48 Channels

48 CH	Function	Value	Setting
1	Red (Background Cluster A)	000–255	From low to high intensity (0–100 %)
2	Green (Background Cluster A)	000–255	From low to high intensity (0–100 %)
3	Blue (Background Cluster A)	000–255	From low to high intensity (0–100 %)
4	Warm White (Front LED 1)	000–255	From low to high intensity (0–100 %)
5	Red (Background Cluster B)	000–255	From low to high intensity (0–100 %)
6	Green (Background Cluster B)	000–255	From low to high intensity (0–100 %)
7	Blue (Background Cluster B)	000–255	From low to high intensity (0–100 %)
8	Warm White (Front LED 2)	000–255	From low to high intensity (0–100 %)
9	Red (Background Cluster C)	000–255	From low to high intensity (0–100 %)
10	Green (Background Cluster C)	000–255	From low to high intensity (0–100 %)
11	Blue (Background Cluster C)	000–255	From low to high intensity (0–100 %)
12	Warm White (Front LED 3)	000–255	From low to high intensity (0–100 %)
13	Red (Background Cluster D)	000–255	From low to high intensity (0–100 %)
14	Green (Background Cluster D)	000–255	From low to high intensity (0–100 %)
15	Blue (Background Cluster D)	000–255	From low to high intensity (0–100 %)
16	Warm White (Front LED 4)	000–255	From low to high intensity (0–100 %)
17	Red (Background Cluster E)	000–255	From low to high intensity (0–100 %)
18	Green (Background Cluster E)	000–255	From low to high intensity (0–100 %)
19	Blue (Background Cluster E)	000–255	From low to high intensity (0–100 %)
20	Warm White (Front LED 5)	000–255	From low to high intensity (0–100 %)
21	Red (Background Cluster F)	000–255	From low to high intensity (0–100 %)
22	Green (Background Cluster F)	000–255	From low to high intensity (0–100 %)
23	Blue (Background Cluster F)	000–255	From low to high intensity (0–100 %)
24	Warm White (Front LED 6)	000–255	From low to high intensity (0–100 %)
25	Red (Background Cluster G)	000–255	From low to high intensity (0–100 %)
26	Green (Background Cluster G)	000–255	From low to high intensity (0–100 %)
27	Blue (Background Cluster G)	000–255	From low to high intensity (0–100 %)
28	Warm White (Front LED 7)	000–255	From low to high intensity (0–100 %)
29	Red (Background Cluster H)	000–255	From low to high intensity (0–100 %)
30	Green (Background Cluster H)	000–255	From low to high intensity (0–100 %)
31	Blue (Background Cluster H)	000–255	From low to high intensity (0–100 %)
32	Warm White (Front LED 8)	000–255	From low to high intensity (0–100 %)
33	Red (Background Cluster I)	000–255	From low to high intensity (0–100 %)
34	Green (Background Cluster I)	000–255	From low to high intensity (0–100 %)
35	Blue (Background Cluster I)	000–255	From low to high intensity (0–100 %)
36	Warm White (Front LED 9)	000–255	From low to high intensity (0–100 %)
37	Red (Background Cluster J)	000–255	From low to high intensity (0–100 %)
38	Green (Background Cluster J)	000–255	From low to high intensity (0–100 %)
39	Blue (Background Cluster J)	000–255	From low to high intensity (0–100 %)
40	Warm White (Front LED 10)	000–255	From low to high intensity (0–100 %)
41	Red (Background Cluster K)	000–255	From low to high intensity (0–100 %)
42	Green (Background Cluster K)	000–255	From low to high intensity (0–100 %)
43	Blue (Background Cluster K)	000–255	From low to high intensity (0–100 %)
44	Warm White (Front LED 11)	000–255	From low to high intensity (0–100 %)
45	Red (Background Cluster L)	000–255	From low to high intensity (0–100 %)
46	Green (Background Cluster L)	000–255	From low to high intensity (0–100 %)
47	Blue (Background Cluster L)	000–255	From low to high intensity (0–100 %)
48	Warm White (Front LED 12)	000–255	From low to high intensity (0–100 %)



Warm White LEDs: 1-12
Cluster RGB LEDs: A-L

6.7.4. 300 Channels



Warm White LEDs: 1-12
Individual RGB LEDs: 13-108

CH	LED	Color	CH	LED	Color	CH	LED	Color	CH	LED	Color
1	WW LED 1	WW	**45**	RGB LED 23	Blue	**89**	RGB LED 38	Green	**133**	RGB LED 53	Red
2	WW LED 2	WW	**46**	RGB LED 24	Red	**90**	RGB LED 38	Blue	**134**	RGB LED 53	Green
3	WW LED 3	WW	**47**	RGB LED 24	Green	**91**	RGB LED 39	Red	**135**	RGB LED 53	Blue
4	WW LED 4	WW	**48**	RGB LED 24	Blue	**92**	RGB LED 39	Green	**136**	RGB LED 54	Red
5	WW LED 4	WW	**49**	RGB LED 25	Red	**93**	RGB LED 39	Blue	**137**	RGB LED 54	Green
6	WW LED 4	WW	**50**	RGB LED 25	Green	**94**	RGB LED 40	Red	**138**	RGB LED 54	Blue
7	WW LED 4	WW	**51**	RGB LED 25	Blue	**95**	RGB LED 40	Green	**139**	RGB LED 55	Red
8	WW LED 4	WW	**52**	RGB LED 26	Red	**96**	RGB LED 40	Blue	**140**	RGB LED 55	Green
9	WW LED 4	WW	**53**	RGB LED 26	Green	**97**	RGB LED 41	Red	**141**	RGB LED 55	Blue
10	WW LED 4	WW	**54**	RGB LED 26	Blue	**98**	RGB LED 41	Green	**142**	RGB LED 56	Red
11	WW LED 4	WW	**55**	RGB LED 27	Red	**99**	RGB LED 41	Blue	**143**	RGB LED 56	Green
12	WW LED 4	WW	**56**	RGB LED 27	Green	**100**	RGB LED 42	Red	**144**	RGB LED 56	Blue
13	RGB LED 13	Red	**57**	RGB LED 27	Blue	**101**	RGB LED 42	Green	**145**	RGB LED 57	Red
14	RGB LED 13	Green	**58**	RGB LED 28	Red	**102**	RGB LED 42	Blue	**146**	RGB LED 57	Green
15	RGB LED 13	Blue	**59**	RGB LED 28	Green	**103**	RGB LED 43	Red	**147**	RGB LED 57	Blue
16	RGB LED 14	Red	**60**	RGB LED 28	Blue	**104**	RGB LED 43	Green	**148**	RGB LED 58	Red
17	RGB LED 14	Green	**61**	RGB LED 29	Red	**105**	RGB LED 43	Blue	**149**	RGB LED 58	Green
18	RGB LED 14	Blue	**62**	RGB LED 29	Green	**106**	RGB LED 44	Red	**150**	RGB LED 58	Blue
19	RGB LED 15	Red	**63**	RGB LED 29	Blue	**107**	RGB LED 44	Green	**151**	RGB LED 59	Red
20	RGB LED 15	Green	**64**	RGB LED 30	Red	**108**	RGB LED 44	Blue	**152**	RGB LED 59	Green
21	RGB LED 15	Blue	**65**	RGB LED 30	Green	**109**	RGB LED 45	Red	**153**	RGB LED 59	Blue
22	RGB LED 16	Red	**66**	RGB LED 30	Blue	**110**	RGB LED 45	Green	**154**	RGB LED 60	Red
23	RGB LED 16	Green	**67**	RGB LED 31	Red	**111**	RGB LED 45	Blue	**155**	RGB LED 60	Green
24	RGB LED 16	Blue	**68**	RGB LED 31	Green	**112**	RGB LED 46	Red	**156**	RGB LED 60	Blue
25	RGB LED 17	Red	**69**	RGB LED 31	Blue	**113**	RGB LED 46	Green	**157**	RGB LED 61	Red
26	RGB LED 17	Green	**70**	RGB LED 32	Red	**114**	RGB LED 46	Blue	**158**	RGB LED 61	Green
27	RGB LED 17	Blue	**71**	RGB LED 32	Green	**115**	RGB LED 47	Red	**159**	RGB LED 61	Blue
28	RGB LED 18	Red	**72**	RGB LED 32	Blue	**116**	RGB LED 47	Green	**160**	RGB LED 62	Red
29	RGB LED 18	Green	**73**	RGB LED 33	Red	**117**	RGB LED 47	Blue	**161**	RGB LED 62	Green
30	RGB LED 18	Blue	**74**	RGB LED 33	Green	**118**	RGB LED 48	Red	**162**	RGB LED 62	Blue
31	RGB LED 19	Red	**75**	RGB LED 33	Blue	**119**	RGB LED 48	Green	**163**	RGB LED 63	Red
32	RGB LED 19	Green	**76**	RGB LED 34	Red	**120**	RGB LED 48	Blue	**164**	RGB LED 63	Green
33	RGB LED 19	Blue	**77**	RGB LED 34	Green	**121**	RGB LED 49	Red	**165**	RGB LED 63	Blue
34	RGB LED 20	Red	**78**	RGB LED 34	Blue	**122**	RGB LED 49	Green	**166**	RGB LED 64	Red
35	RGB LED 20	Green	**79**	RGB LED 35	Red	**123**	RGB LED 49	Blue	**167**	RGB LED 64	Green
36	RGB LED 20	Blue	**80**	RGB LED 35	Green	**124**	RGB LED 50	Red	**168**	RGB LED 64	Blue
37	RGB LED 21	Red	**81**	RGB LED 35	Blue	**125**	RGB LED 50	Green	**169**	RGB LED 65	Red
38	RGB LED 21	Green	**82**	RGB LED 36	Red	**126**	RGB LED 50	Blue	**170**	RGB LED 65	Green
39	RGB LED 21	Blue	**83**	RGB LED 36	Green	**127**	RGB LED 51	Red	**171**	RGB LED 65	Blue
40	RGB LED 22	Red	**84**	RGB LED 36	Blue	**128**	RGB LED 51	Green	**172**	RGB LED 66	Red
41	RGB LED 22	Green	**85**	RGB LED 37	Red	**129**	RGB LED 51	Blue	**173**	RGB LED 66	Green
42	RGB LED 22	Blue	**86**	RGB LED 37	Green	**130**	RGB LED 52	Red	**174**	RGB LED 66	Blue
43	RGB LED 23	Red	**87**	RGB LED 37	Blue	**131**	RGB LED 52	Green	**175**	RGB LED 67	Red
44	RGB LED 23	Green	**88**	RGB LED 38	Red	**132**	RGB LED 52	Blue	**176**	RGB LED 67	Green

CH	LED	Color	CH	LED	Color	CH	LED	Color	CH	LED	Color
177	RGB LED 67	Blue	**208**	RGB LED 78	Red	**239**	RGB LED 88	Green	**270**	RGB LED 98	Blue
178	RGB LED 68	Red	**209**	RGB LED 78	Green	**240**	RGB LED 88	Blue	**271**	RGB LED 99	Red
179	RGB LED 68	Green	**210**	RGB LED 78	Blue	**241**	RGB LED 89	Red	**272**	RGB LED 99	Green
180	RGB LED 68	Blue	**211**	RGB LED 79	Red	**242**	RGB LED 89	Green	**273**	RGB LED 99	Blue
181	RGB LED 69	Red	**212**	RGB LED 79	Green	**243**	RGB LED 89	Blue	**274**	RGB LED 100	Red
182	RGB LED 69	Green	**213**	RGB LED 79	Blue	**244**	RGB LED 90	Red	**275**	RGB LED 100	Green
183	RGB LED 69	Blue	**214**	RGB LED 80	Red	**245**	RGB LED 90	Green	**276**	RGB LED 100	Blue
184	RGB LED 70	Red	**215**	RGB LED 80	Green	**246**	RGB LED 90	Blue	**277**	RGB LED 101	Red
185	RGB LED 70	Green	**216**	RGB LED 80	Blue	**247**	RGB LED 91	Red	**278**	RGB LED 101	Green
186	RGB LED 70	Blue	**217**	RGB LED 81	Red	**248**	RGB LED 91	Green	**279**	RGB LED 101	Blue
187	RGB LED 71	Red	**218**	RGB LED 81	Green	**249**	RGB LED 91	Blue	**280**	RGB LED 102	Red
188	RGB LED 71	Green	**219**	RGB LED 81	Blue	**250**	RGB LED 92	Red	**281**	RGB LED 102	Green
189	RGB LED 71	Blue	**220**	RGB LED 82	Red	**251**	RGB LED 92	Green	**282**	RGB LED 102	Blue
190	RGB LED 72	Red	**221**	RGB LED 82	Green	**252**	RGB LED 92	Blue	**283**	RGB LED 103	Red
191	RGB LED 72	Green	**222**	RGB LED 82	Blue	**253**	RGB LED 93	Red	**284**	RGB LED 103	Green
192	RGB LED 72	Blue	**223**	RGB LED 83	Red	**254**	RGB LED 93	Green	**285**	RGB LED 103	Blue
193	RGB LED 73	Red	**224**	RGB LED 83	Green	**255**	RGB LED 93	Blue	**286**	RGB LED 104	Red
194	RGB LED 73	Green	**225**	RGB LED 83	Blue	**256**	RGB LED 94	Red	**287**	RGB LED 104	Green
195	RGB LED 73	Blue	**226**	RGB LED 84	Red	**257**	RGB LED 94	Green	**288**	RGB LED 104	Blue
196	RGB LED 74	Red	**227**	RGB LED 84	Green	**258**	RGB LED 94	Blue	**289**	RGB LED 105	Red
197	RGB LED 74	Green	**228**	RGB LED 84	Blue	**259**	RGB LED 95	Red	**290**	RGB LED 105	Green
198	RGB LED 74	Blue	**229**	RGB LED 85	Red	**260**	RGB LED 95	Green	**291**	RGB LED 105	Blue
199	RGB LED 75	Red	**230**	RGB LED 85	Green	**261**	RGB LED 95	Blue	**292**	RGB LED 106	Red
200	RGB LED 75	Green	**231**	RGB LED 85	Blue	**262**	RGB LED 96	Red	**293**	RGB LED 106	Green
201	RGB LED 75	Blue	**232**	RGB LED 86	Red	**263**	RGB LED 96	Green	**294**	RGB LED 106	Blue
202	RGB LED 76	Red	**233**	RGB LED 86	Green	**264**	RGB LED 96	Blue	**295**	RGB LED 107	Red
203	RGB LED 76	Green	**234**	RGB LED 86	Blue	**265**	RGB LED 97	Red	**296**	RGB LED 107	Green
204	RGB LED 76	Blue	**235**	RGB LED 87	Red	**266**	RGB LED 97	Green	**297**	RGB LED 107	Blue
205	RGB LED 77	Red	**236**	RGB LED 87	Green	**267**	RGB LED 97	Blue	**298**	RGB LED 108	Red
206	RGB LED 77	Green	**237**	RGB LED 87	Blue	**268**	RGB LED 98	Red	**299**	RGB LED 108	Green
207	RGB LED 77	Blue	**238**	RGB LED 88	Red	**269**	RGB LED 98	Green	**300**	RGB LED 108	Blue

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	• Check if power is switched on and cables are plugged in
	Internal fuse is blown	• Disconnect the device and contact your Highlite International dealer
The device does not respond to DMX control	The controller is not connected	• Connect the controller
	The signal is reversed. The 3-pin DMX OUT of the controller does not match the DMX IN of the device	• Install a phase-reversing cable between the controller and the device
	The controller is defective	• Try using another controller
The device responds erratically to DMX control	Bad data link connection	• Examine connections and cables. Correct poor connections. Repair or replace damaged cables
	The data link is not terminated with a 120 Ω termination plug	• Insert a termination plug in the DMX OUT connector of the last device on the link
	Incorrect addressing	• 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	• 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	• Disconnect the device and contact your Highlite International dealer
	The power supply settings do not match local AC voltage and frequency	• 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:

05) Disconnect the device from the electrical power supply.
06) Allow the device to cool down for at least 15 minutes.
07) Remove the dust collected on the external surface with dry compressed air and a soft brush.
08) Clean the lens with a damp cloth. Use a mild detergent solution.
09) Dry the lens carefully with a lint-free cloth.
10) 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.

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.

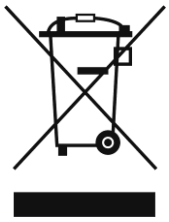
9.2. Instructions for Transportation

- 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 38.
- 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

CE

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