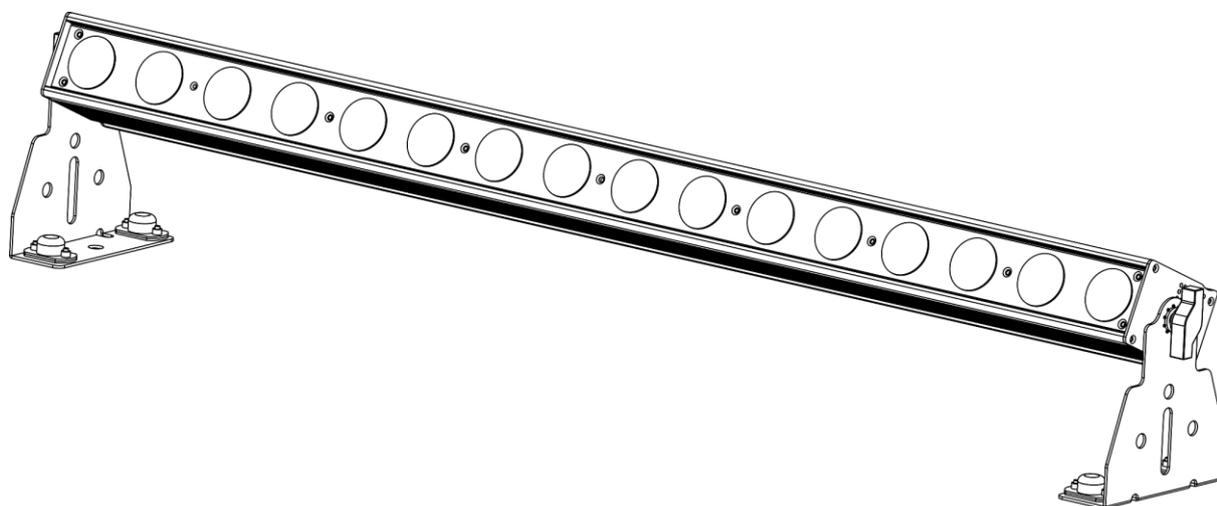




USER MANUAL



ENGLISH

Pixelbar 16 Q6

V1

Product code: 41308

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 Pixelbar 16 Q6
- 2 x mounting brackets
- 2 x adjustment screws
- Schuko to pro-power cable (1,5 m)
- User manual

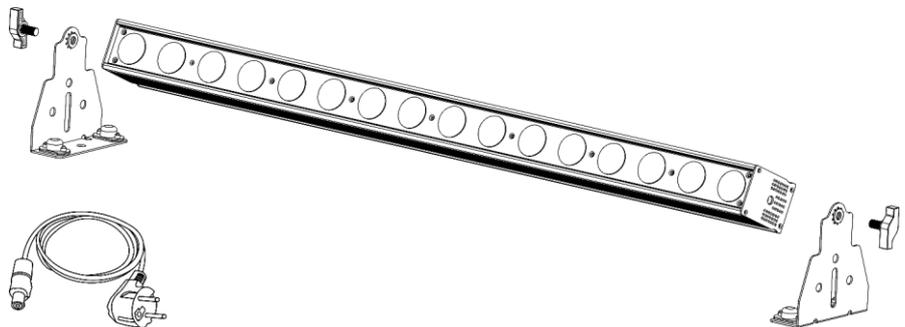


Fig. 01

1.2. Intended Use

This device is intended for professional use as a linear wash light. 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 screw (02)**"
- 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 backside of the device.

The information label contains the following symbols:



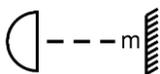
This device is designed for indoor use.



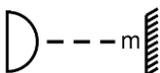
This device shall not be treated as household waste.



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 (> 120 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 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 Pixelbar 16 Q6 is a LED bar with 16 x 6-in-1 RGBWA-UV LEDs. It is suitable for indoor venues. The different mounting positions allow for various creative setups. With Pixelbar 16 Q6 it is possible to create both saturated and pastel colors.

3.1. Front View

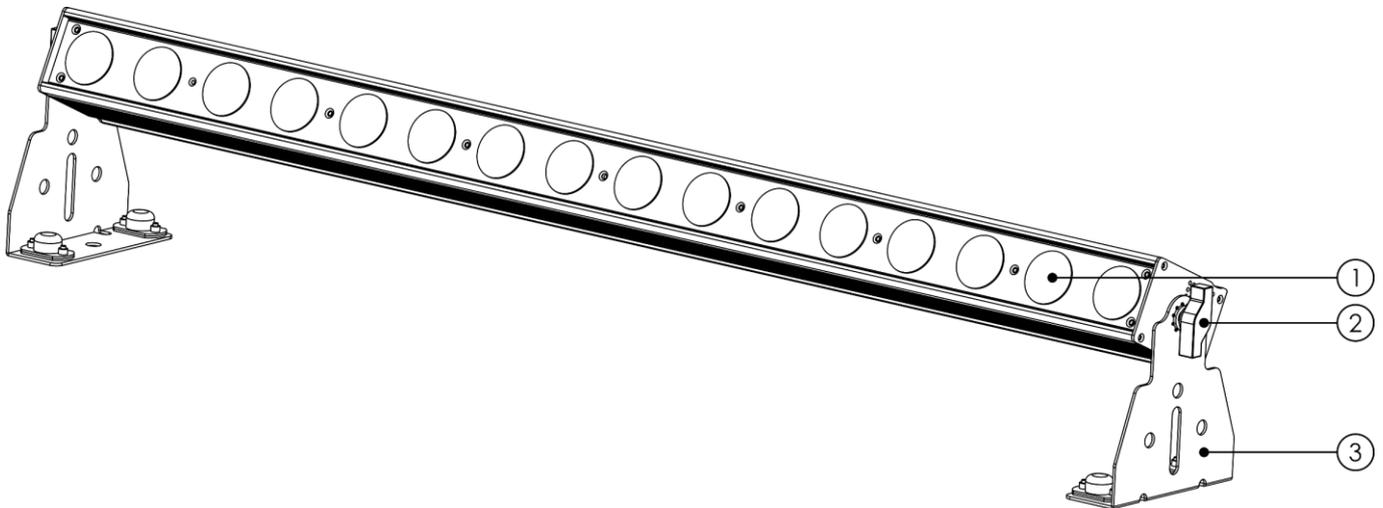


Fig. 02

- 01) 16 x 6-in-1 RGBWA-UV LEDs
- 02) Adjustment screw
- 03) Mounting bracket

3.2. Back View

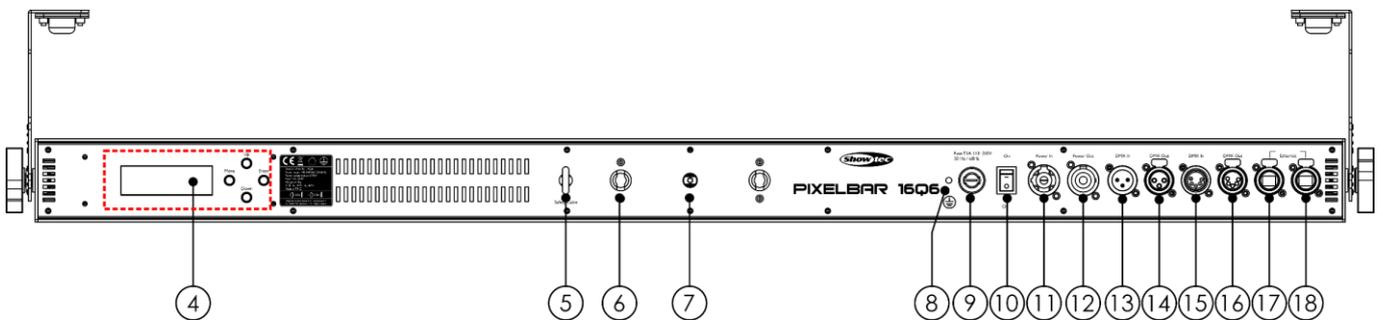


Fig. 03

- | | |
|--|---|
| <ul style="list-style-type: none"> 04) Control panel: LCD display and control buttons 05) Safety eye 06) 2 x openings for a quick-lock bracket 07) M10 opening for a clamp 08) Ground (earth) contact 09) Fuse T3A, 110-250 V, 50/60 Hz 10) Power switch ON/OFF | <ul style="list-style-type: none"> 11) Pro-power connector IN (Blue) 12) Pro-power connector OUT (Gray) 13) 3-pin DMX connector IN 14) 3-pin DMX connector OUT 15) 5-pin DMX connector IN 16) 5-pin DMX connector OUT 17) Ethernet RJ45 connector 18) Ethernet RJ45 connector |
|--|---|

3.3. Product Specifications

Model:	Pixelbar 16 Q6
Electrical:	
Input voltage:	100–240 V AC, 50/60 Hz
Power consumption:	170 W
Fuse:	T3A, 110-250 V, 50/60 Hz
Physical:	
Dimensions:	1047 x 136 x 146,5 mm (L x W x H) (with installed 2 mounting brackets)
Weight:	6,22 kg (with 2 mounting brackets)
Optics:	
Light source:	16 x 6-in-1 RGBWA-UV LEDs
Dimmer:	0–100 %
Strobe:	0–25 Hz
Beam angle:	25°
Operation and control:	
Control:	Stand-alone (auto, manual) Master/Slave (auto, manual) DMX-512, Art-Net, sACN, Kling-Net
DMX channels:	6, 8, 12, 96, 101, HSV, HSI
Control panel:	LCD display and buttons
Connections:	
Power connections:	Pro-power connectors IN/OUT
Data connections:	3-pin DMX connectors IN/OUT 5-pin DMX connectors IN/OUT 2 x RJ45 connectors
Signal pinouts:	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)
Construction:	
Housing:	Extruded aluminum
Color:	Black
IP rating:	IP20
Cooling:	Aluminum heatsink
Network:	
Ethernet speed:	100Base-T
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

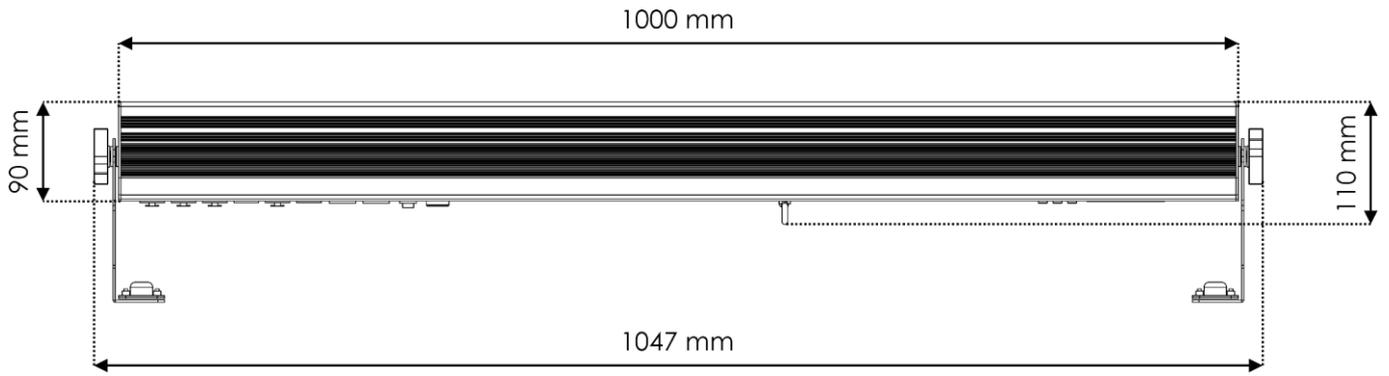


Fig. 04

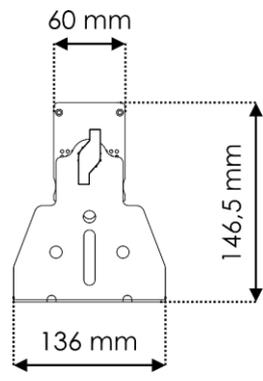


Fig. 05

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 another rigging structure in any orientation.
- The minimum distance to other objects 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 positioned on a flat surface or 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.

The device is delivered with 2 **mounting brackets (03)** and 2 **adjustment screws (02)**. The mounting brackets can be positioned in 2 ways or the device can be installed without mounting brackets:

- Option 1: 2 mounting brackets on both sides (see Fig. 06)
- Option 2: 1 mounting bracket on the back (see Fig. 06)
- Option 3: without mounting brackets (see Fig. 07)

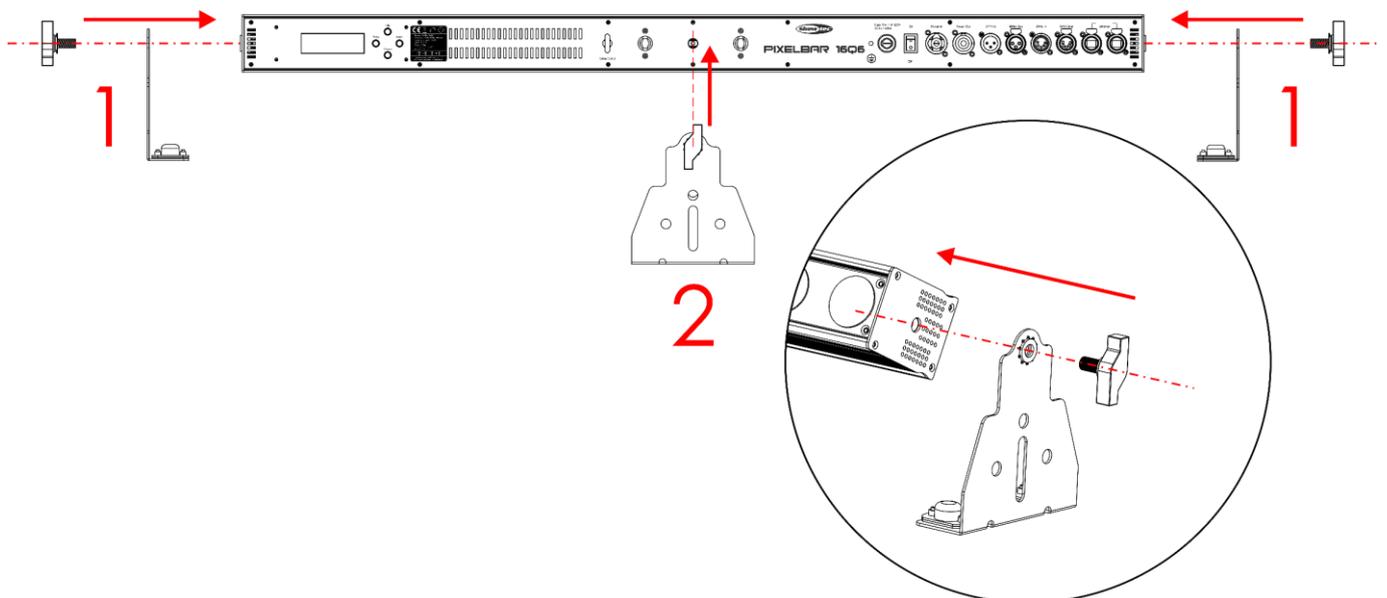


Fig. 06

**CAUTION**

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

To mount the device, follow the steps below:

- 01) Install the 2 **mounting brackets (03)** for option 1, or 1 **mounting bracket (03)** for option 2.
- 02) Fasten the quick-lock brackets on the **mounting brackets (03)** as shown in Fig. 07.

Note: It is possible to attach the quick-lock bracket directly to the back of the device without using a **mounting bracket (03)** (option 3).

- 03) Install the clamp(s), as shown in Fig. 07. Make sure that you use clamps suitable for attaching the device to a truss.

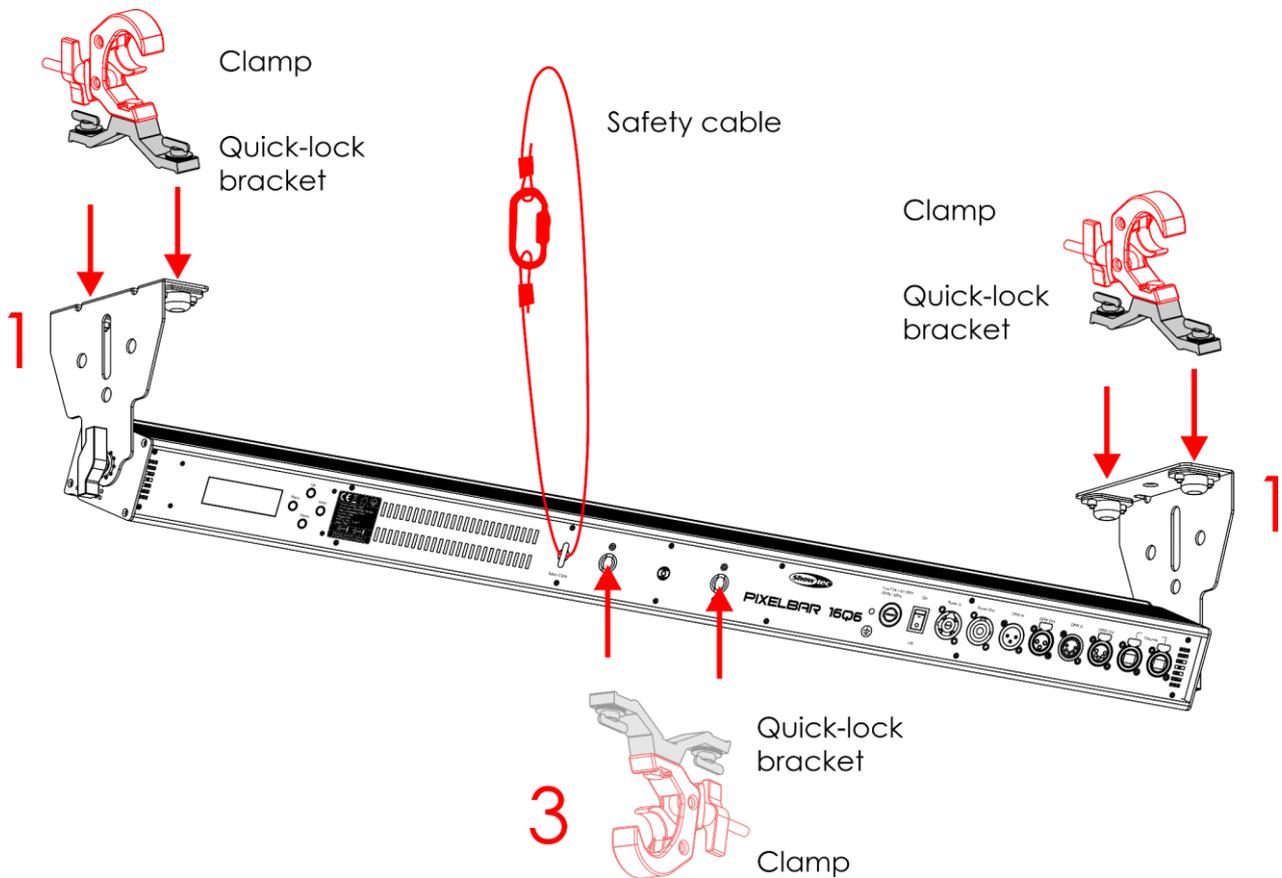


Fig. 07

- 04) Attach the device to the supporting structure. Make sure that the device cannot move freely.
- 05) 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 through the **safety eye (05)**, as shown in Fig. 07.

4.4.1. Angle Adjustment

You can adjust the angle of the device with the **adjustment screws (02)**.

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

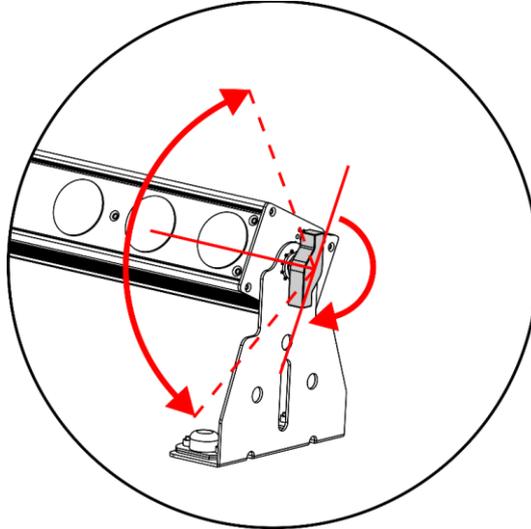


Fig. 08

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 device.
- 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: 8 devices Pixelbar 16 Q6
- at 200–240 V: 15 devices Pixelbar 16 Q6

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 Pixelbar 16 Q6 is not connected to a controller or to other devices, it functions as a stand-alone device. It can be operated manually or in auto mode.

For more information about the control modes, refer to **6.2. Control Modes** on page 22.

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 Pixelbar 16 Q6 has 3-pin 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 3-pin/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.

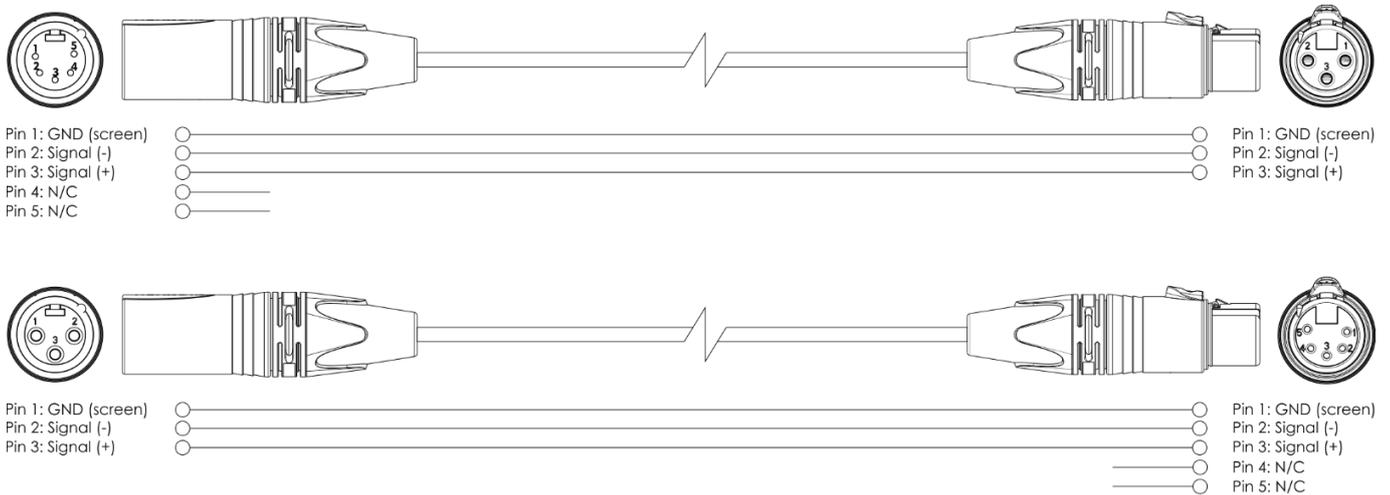


Fig. 09

5.3.3. Master/Slave Setup

The Pixelbar 16 Q6 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. 10.
- 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 **6.6.7. Slave Mode** on page 30 for more information.
- 05) Set the remaining devices as slave devices. See **6.6.7. Slave Mode** on page 30 for more information.

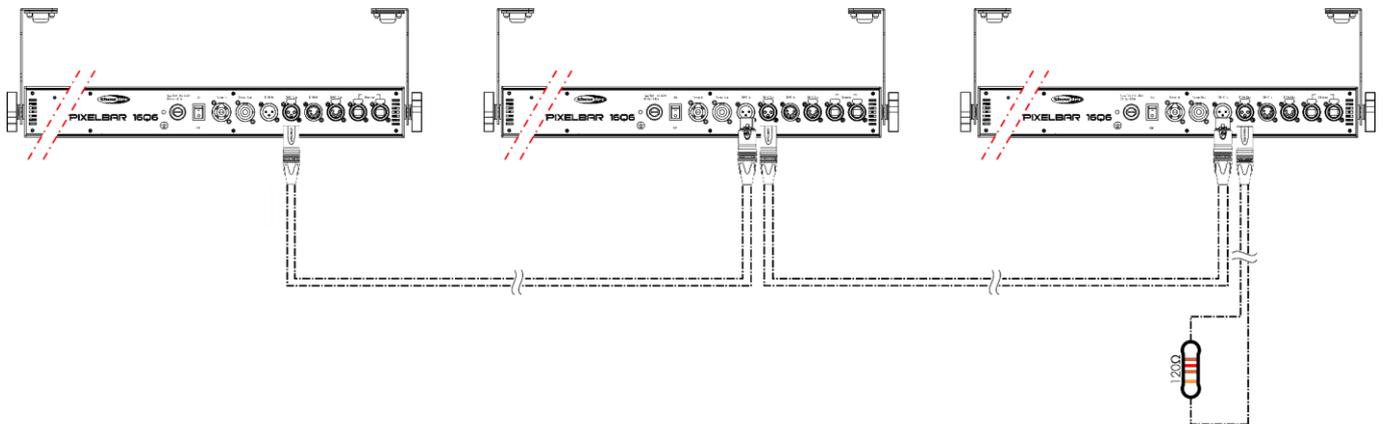


Fig. 10

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. 11.
- 04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.

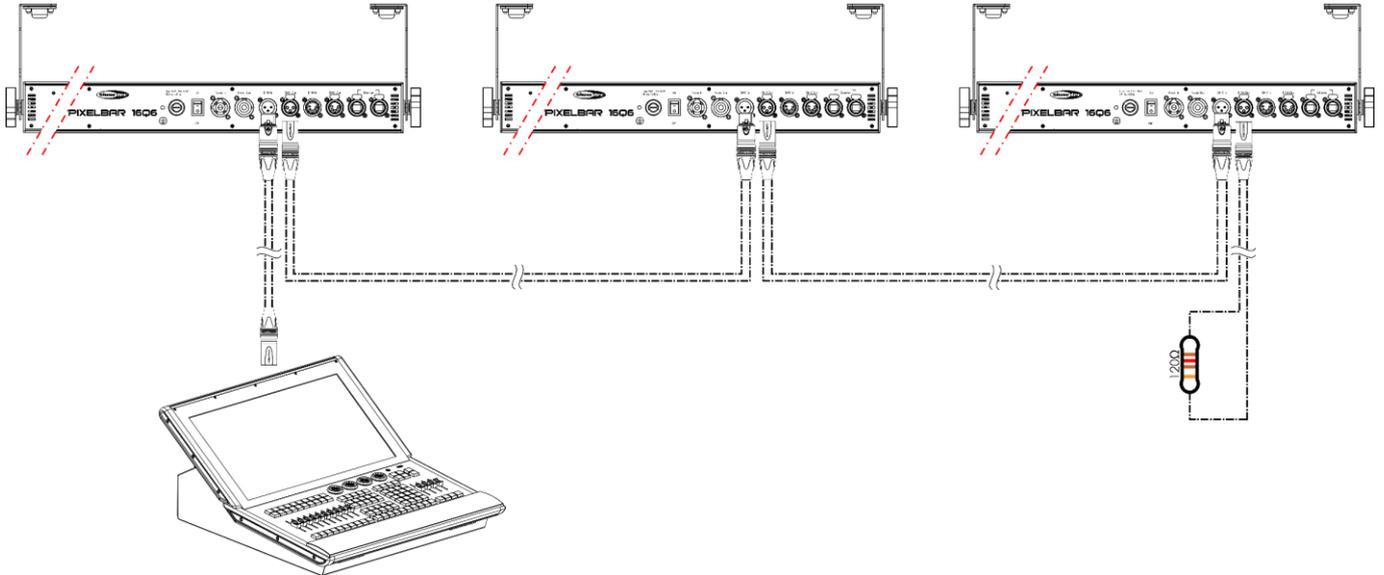


Fig. 11

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 Pixelbar 16 Q6 has 7 personalities: 6 channels, 8 channels, 12 channels, 96 channels, 101 channels, HSV (3 channels), and HSI (3 channels).

If you want to connect multiple devices on one data link and use them in 12-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 13 (013), as $1 + 12 = 13$.
- 03) Set the starting address of the 3rd device on the data link to 25 (025) as $13 + 12 = 25$.
- 04) Continue assigning the starting addresses of the remaining devices by adding each time 12 to the previous number.

Make sure that you do not have any overlapping channels in order to control each Pixelbar 16 Q6 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, sACN, 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.

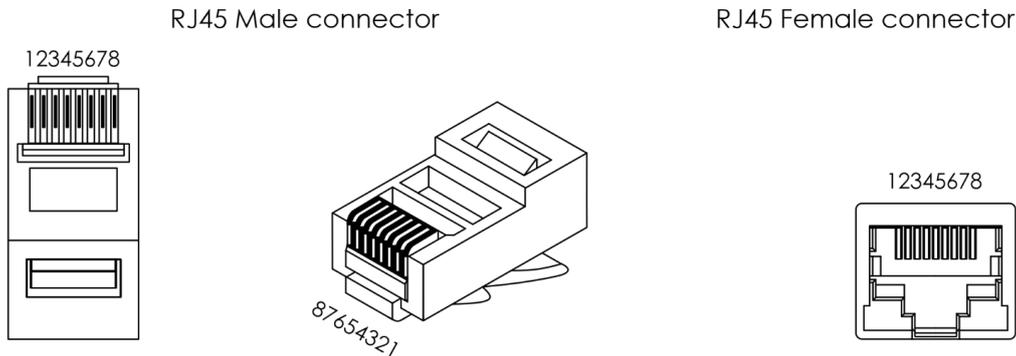
sACN (streaming Architecture for Control Networks), also known as ANSI E1.31, is a protocol for sending DMX-512 data over IP networks developed by ESTA (Entertainment Services and Technology Association). It supports up to 63999 universes and uses multicasting.

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, Art-Net or sACN 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, sACN 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
TX-		Orange	2	2	Orange
RX+		Green/White tracer	3	3	Green/White tracer
		Blue	4	4	Blue
		Blue/White tracer	5	5	Blue/White tracer
RX-		Green	6	6	Green
		Brown/White tracer	7	7	Brown/White tracer
		Brown	8	8	Brown

	PR 2
	PR 3
	PR 1
	PR 3
	PR 4
	PR 3
	PR 4
	PR 4

Fig. 12

5.4.3. Art-Net/sACN/Kling-Net Setup

The Pixelbar 16 Q6 has 2 RJ45 connectors. Either connector can be used as an input and as throughput. To connect multiple devices in an Art-Net/sACN/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. 13.

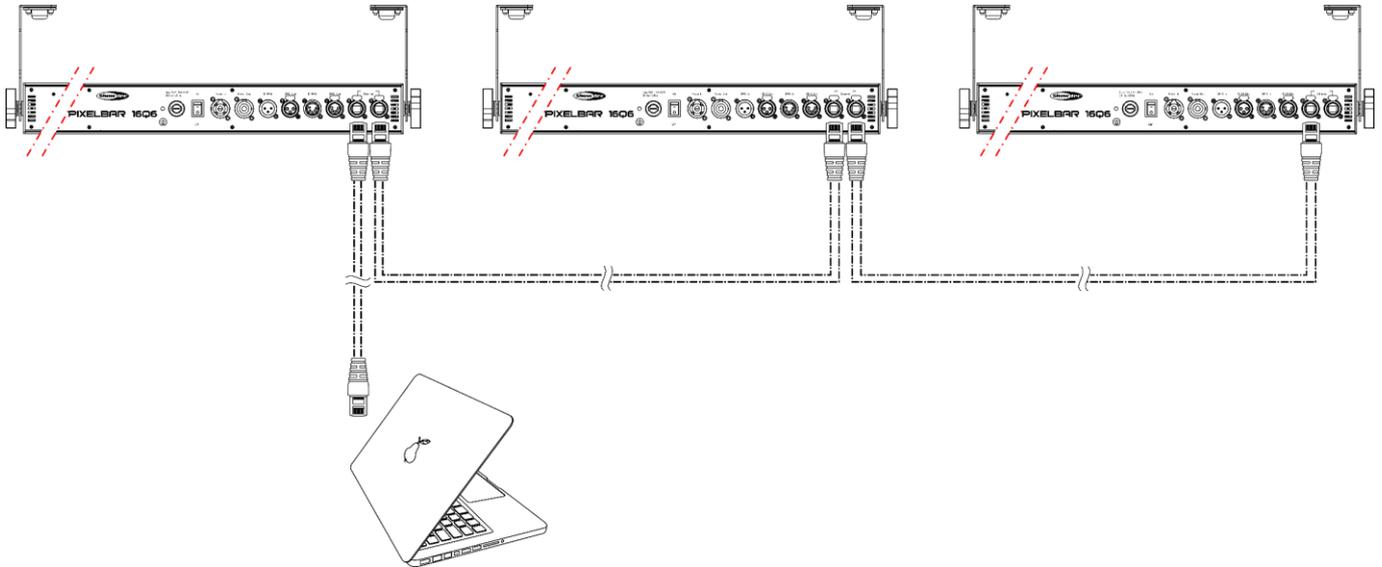


Fig. 13

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 **6.6.8. Set IP Mode** on page 30 and **6.6.9. Set IP Address** on page 30. To change the Subnet mask, refer to **6.6.10. Set Netmask** on page 31. 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 **6.6.11. Set Net Protocol** on page 31.
- 03) Set the universe. See **5.4.7. Universe Numbering** on page 21.

5.4.5. sACN Settings

To run your device using sACN protocol:

- 01) Set the IP address of your computer/lighting controller. sACN does not have restrictions on the IP address.
- 02) Select sACN Protocol in the Set Net Protocol menu. See **6.6.11. Set Net Protocol** on page 31.
- 03) Set the universe. See **5.4.7. Universe Numbering** on page 21.

5.4.6. 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 **6.6.8. Set IP Mode** on page 30. 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 **6.6.11. Set Net Protocol** on page 31.
- 05) Map the device following the instructions of the Kling-Net-based software.

5.4.7. 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 18.
- 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.
- In sACN, universes number from 1 to 63999.

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 Pixelbar 16 Q6 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 linear wash light. 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 Pixelbar 16 Q6 supports the following control modes:

- Stand-alone: Auto operation mode (built-in chases), manual operation
- Master/Slave: Auto operation mode (built-in chases), manual operation
- DMX-512, Art-Net, sACN: 6, 8, 12, 96, 101 channels, HSV, HSI
- Kling-Net: Pixel mapping

For more information about how to connect the devices, refer to **5. Setup** on pages 16–21.

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 **6.6.5. Manual Control** on page 29 for more information.

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

- 01) Select one of the 13 built-in chases in the Auto Control menu. See **6.6.6. Auto Control** on page 29 for more information.
- 02) Set the speed of the built-in chase in the Auto Control menu. See **6.6.6. Auto Control** on page 29 for more information.

To operate the device with a DMX controller:

- 01) Set the DMX starting address of the device in the DMX Address menu. See **5.3.5. DMX Addressing** on page 18 and **6.6.1. DMX Address** on page 28.
- 02) Select the DMX channel mode. See **6.6.2. Set DMX Channel Mode** on page 28 for more information. See **6.7. DMX Channels** on pages 35–38 for complete overview of all DMX channels.

6.3. Control Panel

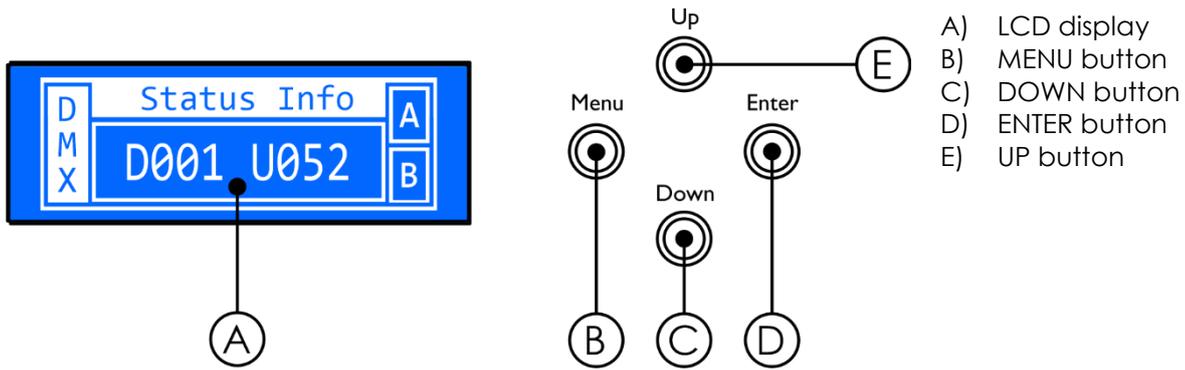


Fig. 14

- 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

The device has a power switch.

- Press the **power switch (10)** in ON position to turn the device on.
- Press the **power switch (10)** in OFF position to turn the device off.

Upon start-up the display will show a splash screen with the logo of Showtec followed by the name of the device:



Immediately afterwards the display will show the start screen. The start screen provides information about the DMX starting address of the device and the universe number:

	<p>DMX starting address 001 and universe 052 DMX signal is present</p>
	<p>DMX signal is lost</p>
	<p>Ethernet connection on port A.</p>

Note: If you choose hexadecimal (HEX) as input method in the Set Universe menu, the universe number will be shown in hexadecimal format on the start screen. See **6.6.12. Set Universe** on pages 31–32 for more information.

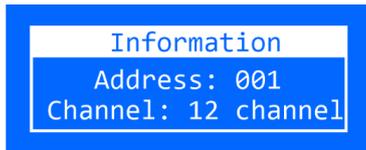
Press the **UP/DOWN** buttons to see the second part of the start screen:



This screen provides information about the current IP address of the device.

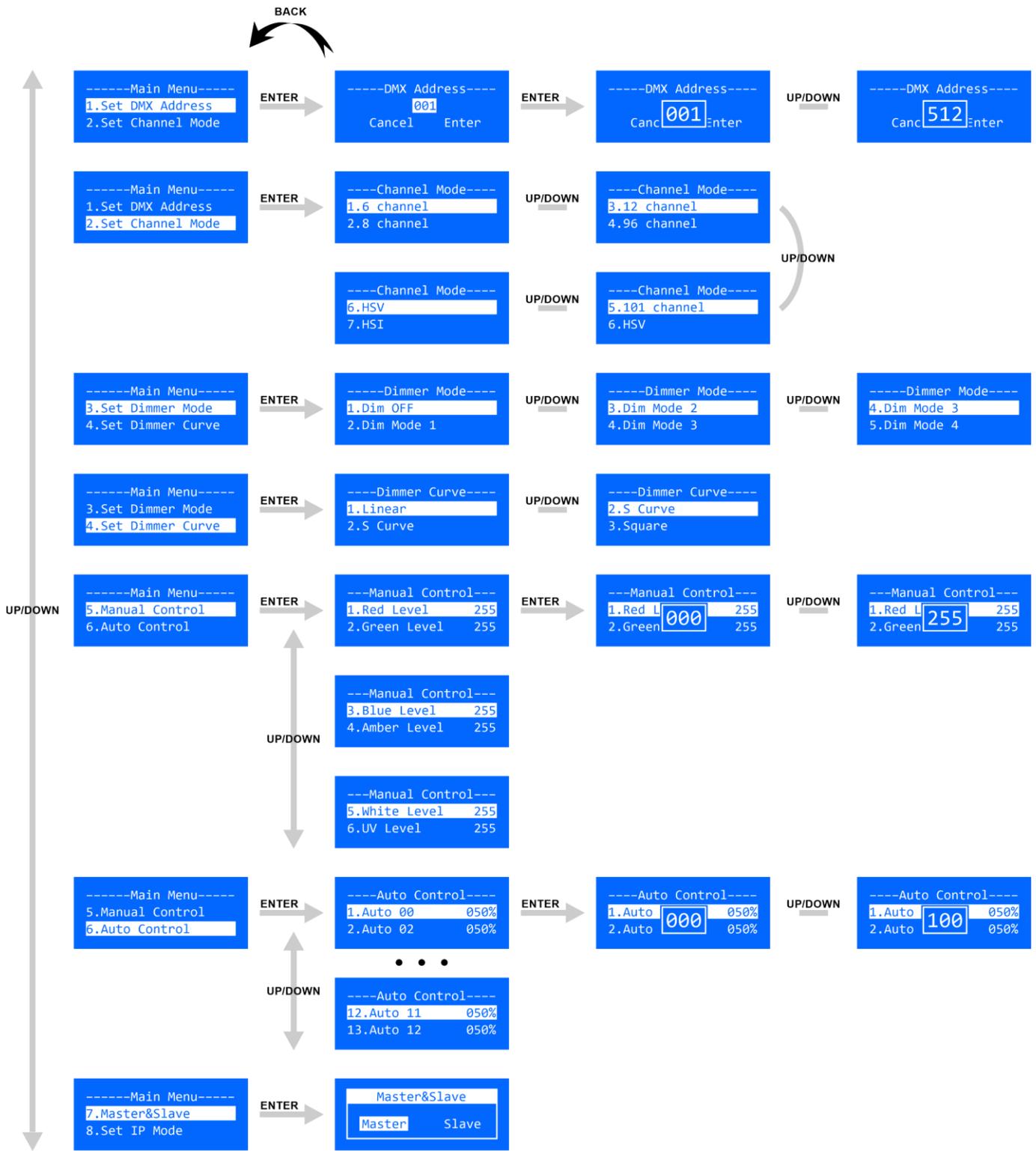
Note: If no button is pressed, after 20 seconds of inactivity the display will return to the start screen and after 10 more seconds it will turn off. Press any button to turn the display on. See **6.6.13. Set LCD Backlight** on page 33 for more information.

After discovery of a DMX signal, the display will show the following information screen:

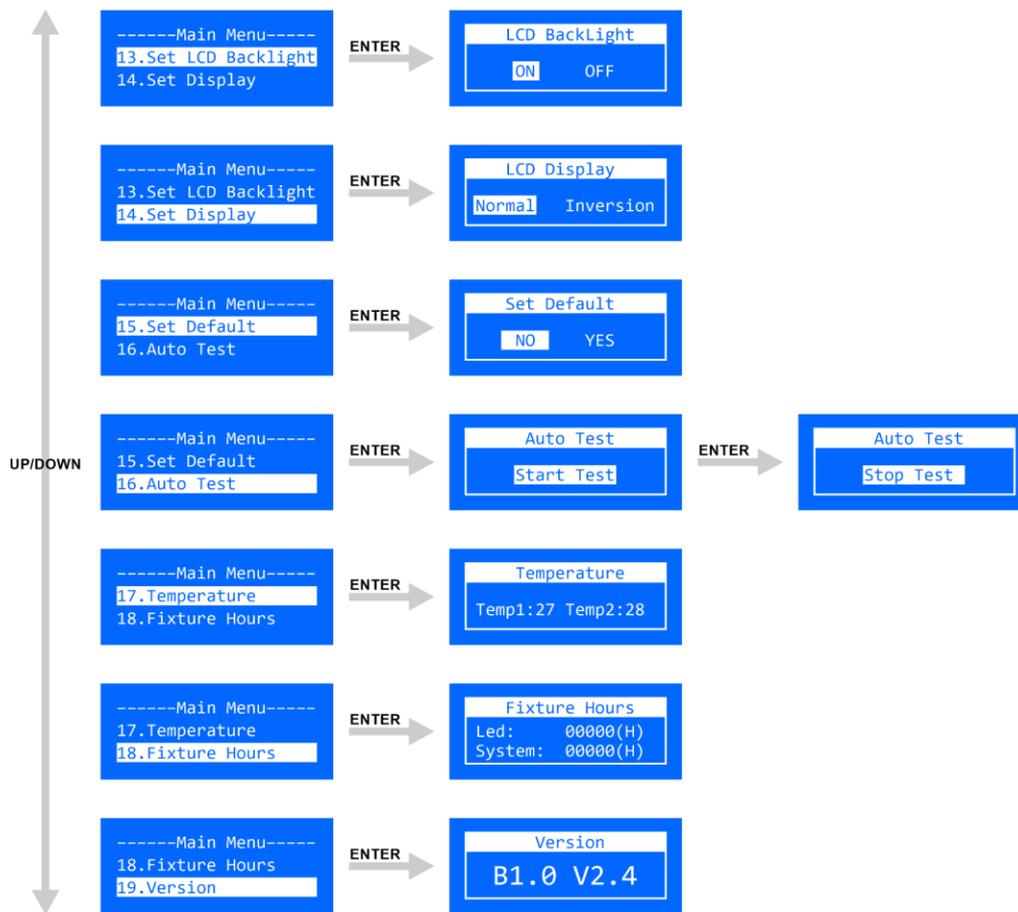


This screen provides information about the DMX starting address of the device and the current DMX channel mode.

6.5. Menu Overview







6.6. Main Menu Options

The main menu has the following options:

```

-----Main Menu-----
1.Set DMX Address
2.Set Channel Mode
3.Set Dimmer Mode
4.Set Dimmer Curve
5.Manual Control
6.Auto Control
7.Master&Slave
8.Set IP Mode
9.Set IP Address
10.Set Netmask
    
```

```

-----Main Menu-----
11.Set Net Protocol
12.Set Universe
13.Set LCD Backlight
14.Set Display
15.Set Default
16.Auto Test
17.Temperature
18.Fixture Hours
19.Version
    
```

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

6.6.1. DMX Address

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

01) Press the **UP/DOWN** buttons to move the cursor respectively to the right/left on the display.



02) Press the **ENTER** button to confirm the selection. The selection will be highlighted.

03) Press the **UP/DOWN** buttons to select the DMX starting address of the device. The selection range is between 1 and 512.

04) Press the **ENTER** button to confirm the number.

05) Press the **UP/DOWN** buttons to toggle between CANCEL (to discard the changes) and ENTER (to confirm the DMX starting address).

06) Press the **ENTER** button to confirm the selection.

6.6.2. Set Channel Mode

In this menu you can select the DMX channel mode.

01) Press the **UP/DOWN** buttons to select the desired DMX channel mode. There are 7 options available:

- 6 channel: 6 channels
- 8 channel: 8 channels
- 12 channel: 12 channels
- 96 channel: 96 channels
- 101 channel: 101 channels
- HSV: 3 channels
- HSI: 3 channels

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

6.6.3. Set Dimmer Mode

In this menu you can set the dimmer speed.

01) Press the **UP/DOWN** buttons to select one of the following 5 options:

- Dim OFF: Dimmer OFF (dimmer is off)
- Dim Mode 1: Dimmer mode 1 (fastest speed)
- Dim Mode 2: Dimmer mode 2
- Dim Mode 3: Dimmer mode 3
- Dim Mode 4: Dimmer mode 4 (slowest speed)

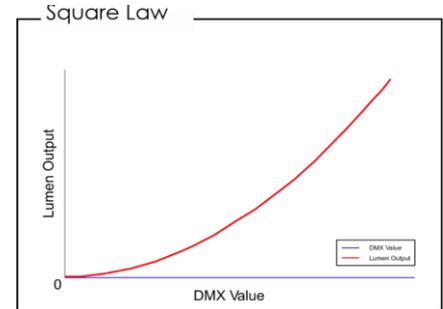
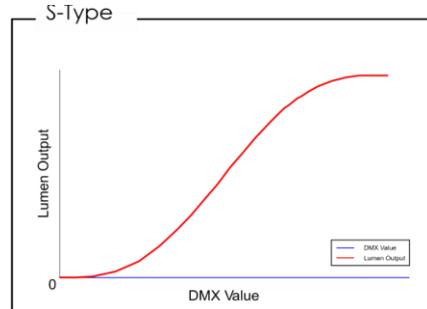
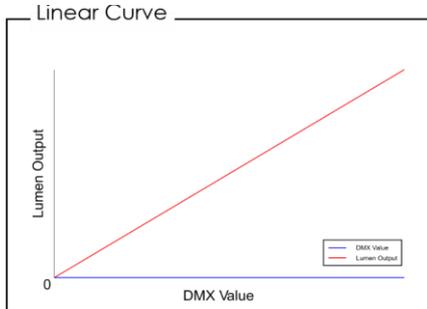
02) Press the **ENTER** button to confirm the selection.

6.6.4. Set Dimmer Curve

In this menu you can set the dimmer curve.

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

- Linear
- S Curve
- Square



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

6.6.5. Manual Control

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 Level
- Green Level
- Blue Level
- Amber Level
- White Level
- UV Level

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



03) Press the **UP/DOWN** buttons to adjust the values. The adjustment range is between 0 and 255.

04) Press the **ENTER** button to set the value.

6.6.6. Auto Control

In this menu you can select one of the 13 built-in chases.

01) Press the **UP/DOWN** buttons to select and activate one of the 13 built-in chases: Auto 00 – Auto 12.

02) Press the **ENTER** button to open the pop-up submenu where you can adjust the speed of the built-in chase.



03) Press the **UP/DOWN** buttons to adjust the speed. The adjustment range is between 0 and 100 %, from slow to fast.

04) Press the **ENTER** button to set the speed.

6.6.7. Slave Mode

In this menu you can activate master/slave control mode.

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



- Master: The device will operate as a master device in master/slave mode
- Slave: The device will operate as a slave device in master/slave mode

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

6.6.8. Set IP Mode

In this menu you can select the IP mode.

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

- DHCP IP: The IP address of the device will be generated automatically by the network server
- Static IP: The IP address of the device can be configured manually. For more information refer to **6.6.9. Set IP Address**
- KlingNet IP: The IP address of the device will be generated automatically by the media server

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

6.6.9. Set IP Address

If you have selected DHCP IP or KlingNet IP in **6.6.8. Set IP Mode** above, when you select Set IP Address in the menu, the display will show respectively the following:



The IP address of the device will be generated automatically by the network server.



The IP address of the device will be generated automatically by the Media Server.

If you have selected Static IP, you can configure the IP address of the device manually.

- 01) Press the **UP/DOWN** buttons to move the cursor respectively to the left or to the right on the display. When the cursor reaches the last available position on the line, it will move to the second line.
- 02) Press the **ENTER** button to confirm the selection. The selected number will be highlighted.



- 03) Press the **UP/DOWN** buttons to change the number. The selection range is between 0 and 255.
- 04) Press the **ENTER** button to confirm.
- 05) Repeat steps 1–4 for each of the remaining 3 sections.
- 06) Press the **UP/DOWN** buttons to toggle between CANCEL (to discard changes) and ENTER (to confirm the IP address).
- 07) Press the **ENTER** button to confirm the selection.

6.6.10. Set Netmask

If you have selected DHCP IP or KlingNet IP in **6.6.8. Set IP Mode** above, when you select Set Netmask in the menu, the display will show respectively the following:



The Netmask of the IP address of the device will be generated automatically by the network server.



The Netmask of the IP address of the device will be generated automatically by the Media Server.

If you have selected Static IP, you can set the Netmask of the IP address of the device.

01) Press the **UP/DOWN** buttons to scroll through the following 3 options:



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

6.6.11. Set Net Protocol

In this menu you can select the network protocol.

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

- Art-Net Protocol
- sACN Protocol
- Kling-Net Protocol

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

6.6.12. Set Universe

In this menu you can set the values for universe, sub-net and net.

01) Press the **UP/DOWN** buttons to select one of the following 4 options:



- Display type: Choose the input method of the values for net (Network), sub-net (Sub Network) and universe (Universe). The options are: decimal (DEC) and hexadecimal (HEX). See the **Decimal to Hexadecimal Conversion Table** on page 32 for more information
- Network: Set the net. The input range is between 0 and 217 (decimal) or 00H and 7FH (hexadecimal)
- Sub Network: Set the sub-net. The input range is between 0 and 15 (decimal) or 00H and 0FH (hexadecimal)
- Universe: Set the universe. The input range is between 0 and 15 (decimal) or 00H and 0FH (hexadecimal)

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

Decimal to Hexadecimal Conversion Table

DEC	HEX
0	00H
1	01H
2	02H
3	03H
4	04H
5	05H
6	06H
7	07H
8	08H
9	09H
10	0AH
11	0BH
12	0CH
13	0DH
14	0EH
15	0FH
16	10H
17	11H
18	12H
19	13H
20	14H
21	15H
22	16H
23	17H
24	18H
25	19H
26	1AH
27	1BH
28	1CH
29	1DH
30	1EH
31	1FH

DEC	HEX
32	20H
33	21H
34	22H
35	23H
36	24H
37	25H
38	26H
39	27H
40	28H
41	29H
42	2AH
43	2BH
44	2CH
45	2DH
46	2EH
47	2FH
48	30H
49	31H
50	32H
51	33H
52	34H
53	35H
54	36H
55	37H
56	38H
57	39H
58	3AH
59	3BH
60	3CH
61	3DH
62	3EH
63	3FH

DEC	HEX
64	40H
65	41H
66	42H
67	43H
68	44H
69	45H
70	46H
71	47H
72	48H
73	49H
74	4AH
75	4BH
76	4CH
77	4DH
78	4EH
79	4FH
80	50H
81	51H
82	52H
83	53H
84	54H
85	55H
86	56H
87	57H
88	58H
89	59H
90	5AH
91	5BH
92	5CH
93	5DH
94	5EH
95	5FH

DEC	HEX
96	60H
97	61H
98	62H
99	63H
100	64H
101	65H
102	66H
103	67H
104	68H
105	69H
106	6AH
107	6BH
108	6CH
109	6DH
110	6EH
111	6FH
112	70H
113	71H
114	72H
115	73H
116	74H
117	75H
118	76H
119	77H
120	78H
121	79H
122	7AH
123	7BH
124	7CH
125	7DH
126	7EH
127	7FH

6.6.13. Set LCD Backlight

In this menu you can select whether the backlight of the display will remain on or will turn off after 30 seconds of inactivity.

01) Press the **UP/DOWN** buttons to toggle between ON and OFF:



- ON: The backlight of the LCD display will remain on
- OFF: The backlight of the LCD display will turn off after 30 seconds of inactivity

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

6.6.14. Set Display

In this menu you can select the orientation of the display.

01) Press the **UP/DOWN** buttons to toggle between Normal and Inversion:



- Normal: Normal orientation of the LCD display
- Inversion: The LCD display will be rotated at 180°

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

6.6.15. Set Default

In this menu you can reset the device's settings to the default factory settings.

01) Press the **UP/DOWN** buttons to choose between NO and YES. If you choose YES, the device's settings will be reset to the default factory settings.



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

6.6.16. Auto Test

In this menu you can perform a test of the device's parameters.

01) Press the **ENTER** button to confirm and start the test. During the test the display will show:



02) Press the **ENTER** button to stop the test.

6.6.17. Temperature

In this menu you can view the temperature of the LEDs.



6.6.18. Fixture Hours

In this menu you can view the total hours of operation of the LEDs and of the device.



6.6.19. Version

In this menu you can view the firmware version of the device.



6.7. DMX Channels

6.7.1. 6 Channels, 8 Channels, 12 Channels

6 CH	8 CH	12 CH	Function	Value	Setting
	1	1	Master Dimmer	000–255	From low to high intensity (0–100 %)
1	2	2	Red	000–255	From low to high intensity (0–100 %)
2	3	3	Green	000–255	From low to high intensity (0–100 %)
3	4	4	Blue	000–255	From low to high intensity (0–100 %)
4	5	5	Amber	000–255	From low to high intensity (0–100 %)
5	6	6	White	000–255	From low to high intensity (0–100 %)
6	7	7	UV	000–255	From low to high intensity (0–100 %)
	8	8	Strobe	000–010	No function
				011–255	Strobe, from low to high frequency (0–20 Hz)
		9	Color Map	000–255	Color selection
		10	Auto Programs	000–010	No function
				011–029	Auto 0
				030–048	Auto 1
				049–067	Auto 2
				068–086	Auto 3
				087–105	Auto 4
				106–124	Auto 5
				125–143	Auto 6
				144–162	Auto 7
				163–181	Auto 8
				182–200	Auto 9
				201–219	Auto 10
				220–238	Auto 11
		239–255	Auto 12		
		11	Speed	000–255	Speed adjustment of the chases, from slow to fast
	12	Dimmer Mode	000–010	Preset dimmer speed from display menu	
			011–059	Dimmer Off	
			060–108	Dimmer Mode 1	
			109–157	Dimmer Mode 2	
			158–206	Dimmer Mode 3	
		207–255	Dimmer Mode 4		

Note: Make sure that the Master Dimmer channel is open in 8-CH and 12-CH mode in order to see the light output.

6.7.2. 96 Channels, 101 Channels

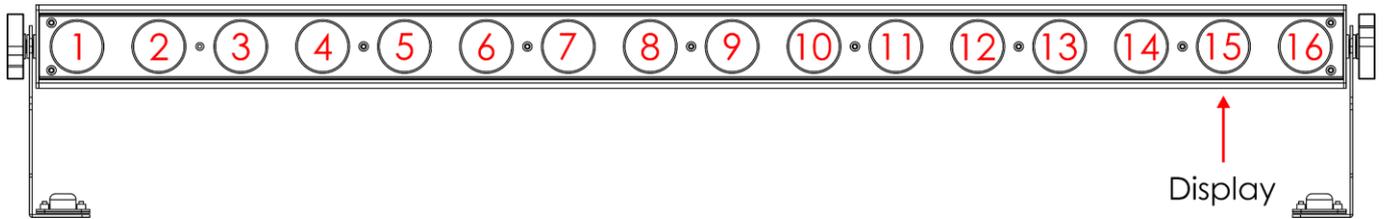


Fig. 15

96 CH	101 CH	Function	Value	Setting
1	1	Red 1	000–255	From low to high intensity (0–100 %)
2	2	Green 1	000–255	From low to high intensity (0–100 %)
3	3	Blue 1	000–255	From low to high intensity (0–100 %)
4	4	Amber 1	000–255	From low to high intensity (0–100 %)
5	5	White 1	000–255	From low to high intensity (0–100 %)
6	6	UV 1	000–255	From low to high intensity (0–100 %)
7	7	Red 2	000–255	From low to high intensity (0–100 %)
8	8	Green 2	000–255	From low to high intensity (0–100 %)
9	9	Blue 2	000–255	From low to high intensity (0–100 %)
10	10	Amber 2	000–255	From low to high intensity (0–100 %)
11	11	White 2	000–255	From low to high intensity (0–100 %)
12	12	UV 2	000–255	From low to high intensity (0–100 %)
13	13	Red 3	000–255	From low to high intensity (0–100 %)
14	14	Green 3	000–255	From low to high intensity (0–100 %)
15	15	Blue 3	000–255	From low to high intensity (0–100 %)
16	16	Amber 3	000–255	From low to high intensity (0–100 %)
17	17	White 3	000–255	From low to high intensity (0–100 %)
18	18	UV 3	000–255	From low to high intensity (0–100 %)
19	19	Red 4	000–255	From low to high intensity (0–100 %)
20	20	Green 4	000–255	From low to high intensity (0–100 %)
21	21	Blue 4	000–255	From low to high intensity (0–100 %)
22	22	Amber 4	000–255	From low to high intensity (0–100 %)
23	23	White 4	000–255	From low to high intensity (0–100 %)
24	24	UV 4	000–255	From low to high intensity (0–100 %)
25	25	Red 5	000–255	From low to high intensity (0–100 %)
26	26	Green 5	000–255	From low to high intensity (0–100 %)
27	27	Blue 5	000–255	From low to high intensity (0–100 %)
28	28	Amber 5	000–255	From low to high intensity (0–100 %)
29	29	White 5	000–255	From low to high intensity (0–100 %)
30	30	UV 5	000–255	From low to high intensity (0–100 %)
31	31	Red 6	000–255	From low to high intensity (0–100 %)
32	32	Green 6	000–255	From low to high intensity (0–100 %)
33	33	Blue 6	000–255	From low to high intensity (0–100 %)
34	34	Amber 6	000–255	From low to high intensity (0–100 %)
35	35	White 6	000–255	From low to high intensity (0–100 %)
36	36	UV 6	000–255	From low to high intensity (0–100 %)
37	37	Red 7	000–255	From low to high intensity (0–100 %)
38	38	Green 7	000–255	From low to high intensity (0–100 %)
39	39	Blue 7	000–255	From low to high intensity (0–100 %)
40	40	Amber 7	000–255	From low to high intensity (0–100 %)
41	41	White 7	000–255	From low to high intensity (0–100 %)
42	42	UV 7	000–255	From low to high intensity (0–100 %)
43	43	Red 8	000–255	From low to high intensity (0–100 %)

96 CH	101 CH	Function	Value	Setting
44	44	Green 8	000–255	From low to high intensity (0–100 %)
45	45	Blue 8	000–255	From low to high intensity (0–100 %)
46	46	Amber 8	000–255	From low to high intensity (0–100 %)
47	47	White 8	000–255	From low to high intensity (0–100 %)
48	48	UV 8	000–255	From low to high intensity (0–100 %)
49	49	Red 9	000–255	From low to high intensity (0–100 %)
50	50	Green 9	000–255	From low to high intensity (0–100 %)
51	51	Blue 9	000–255	From low to high intensity (0–100 %)
52	52	Amber 9	000–255	From low to high intensity (0–100 %)
53	53	White 9	000–255	From low to high intensity (0–100 %)
54	54	UV 9	000–255	From low to high intensity (0–100 %)
55	55	Red 10	000–255	From low to high intensity (0–100 %)
56	56	Green 10	000–255	From low to high intensity (0–100 %)
57	57	Blue 10	000–255	From low to high intensity (0–100 %)
58	58	Amber 10	000–255	From low to high intensity (0–100 %)
59	59	White 10	000–255	From low to high intensity (0–100 %)
60	60	UV 10	000–255	From low to high intensity (0–100 %)
61	61	Red 11	000–255	From low to high intensity (0–100 %)
62	62	Green 11	000–255	From low to high intensity (0–100 %)
63	63	Blue 11	000–255	From low to high intensity (0–100 %)
64	64	Amber 11	000–255	From low to high intensity (0–100 %)
65	65	White 11	000–255	From low to high intensity (0–100 %)
66	66	UV 11	000–255	From low to high intensity (0–100 %)
67	67	Red 12	000–255	From low to high intensity (0–100 %)
68	68	Green 12	000–255	From low to high intensity (0–100 %)
69	69	Blue 12	000–255	From low to high intensity (0–100 %)
70	70	Amber 12	000–255	From low to high intensity (0–100 %)
71	71	White 12	000–255	From low to high intensity (0–100 %)
72	72	UV 12	000–255	From low to high intensity (0–100 %)
73	73	Red 13	000–255	From low to high intensity (0–100 %)
74	74	Green 13	000–255	From low to high intensity (0–100 %)
75	75	Blue 13	000–255	From low to high intensity (0–100 %)
76	76	Amber 13	000–255	From low to high intensity (0–100 %)
77	77	White 13	000–255	From low to high intensity (0–100 %)
78	78	UV 13	000–255	From low to high intensity (0–100 %)
79	79	Red 14	000–255	From low to high intensity (0–100 %)
80	80	Green 14	000–255	From low to high intensity (0–100 %)
81	81	Blue 14	000–255	From low to high intensity (0–100 %)
82	82	Amber 14	000–255	From low to high intensity (0–100 %)
83	83	White 14	000–255	From low to high intensity (0–100 %)
84	84	UV 14	000–255	From low to high intensity (0–100 %)
85	85	Red 15	000–255	From low to high intensity (0–100 %)
86	86	Green 15	000–255	From low to high intensity (0–100 %)
87	87	Blue 15	000–255	From low to high intensity (0–100 %)
88	88	Amber 15	000–255	From low to high intensity (0–100 %)
89	89	White 15	000–255	From low to high intensity (0–100 %)
90	90	UV 15	000–255	From low to high intensity (0–100 %)
91	91	Red 16	000–255	From low to high intensity (0–100 %)
92	92	Green 16	000–255	From low to high intensity (0–100 %)
93	93	Blue 16	000–255	From low to high intensity (0–100 %)
94	94	Amber 16	000–255	From low to high intensity (0–100 %)
95	95	White 16	000–255	From low to high intensity (0–100 %)
96	96	UV 16	000–255	From low to high intensity (0–100 %)

96 CH	101 CH	Function	Value	Setting
	97	Auto Programs	000–010	No function
			011–029	Auto 0
			030–048	Auto 1
			049–067	Auto 2
			068–086	Auto 3
			087–105	Auto 4
			106–124	Auto 5
			125–143	Auto 6
			144–162	Auto 7
			163–181	Auto 8
			182–200	Auto 9
			201–219	Auto 10
			220–238	Auto 11
			239–255	Auto 12
	98	Speed	000–255	Speed adjustment of the chases, from slow to fast
	99	Master Dimmer	000–255	From low to high intensity (0–100 %)
	100	Strobe	000–010	No function
			011–255	Strobe, from low to high frequency (0–20 Hz)
	101	Dimmer Mode	000–010	Preset dimmer speed from display menu
			011–059	Dimmer Off
			060–108	Dimmer Mode 1
			109–157	Dimmer Mode 2
			158–206	Dimmer Mode 3
			207–255	Dimmer Mode 4

Note: Make sure that the Master Dimmer channel is open in 101-CH mode in order to see the light output.

6.7.3. HSI, HSV

HSI	HSV	Function	Value	Setting
1	1	Hue	000–255	Hue adjustment
2	2	Saturation	000–255	From low to high saturation
3		Intensity	000–255	From low to high intensity (0–100 %)
	3	Value	000–255	Value adjustment

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 41
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 6.6.15. Set Default on page 33
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/5-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 the defective device, 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

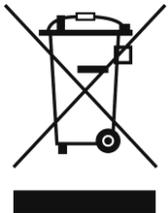
- Use the original packaging to transport the device, if possible.
- Always observe the handling instructions printed on the outer carton box, for example: "Handle with care", "This side up", "Fragile".

9.3. Storage

- Clean the device before storing. Follow the cleaning instructions in chapter **8.2.1. Basic Cleaning Instructions** on page 41.
- 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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