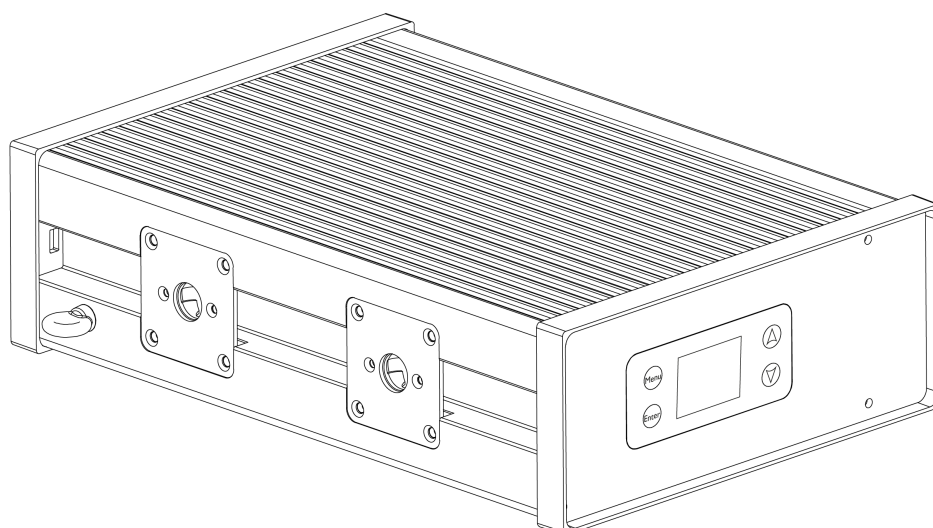




## IP Pixel Controller

Product code: 44511

For IP Pixelstrip 40/80

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

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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.**

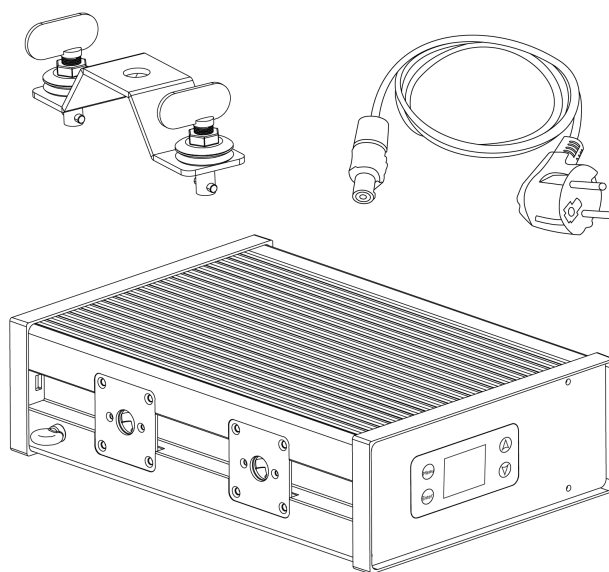
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

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

Your shipment includes:

- Showtec IP Pixel Controller
- Quick-lock bracket
- Schuko to Power Pro True cable (1,5 m)
- User manual

**Figure 1**



### 1.2. Intended Use

This device is intended for professional use as an IP Pixel controller. It can be installed indoors and outdoors. This device is not suitable for households.

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 lifespan of the device.

### 1.4. 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 parts of the device are in bold lettering, for example: "turn the **adjustment handle (05)**". References to chapters are hyperlinked
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

## 1.5. 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**

Provides important information about the disposal of this product.

## 1.6. Symbols on the Information Label

This product is provided with an information label. The information label is located on the side of the device.

The information label contains the following symbols:



This device shall not be treated as household waste.



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



This device falls under IEC protection class I.

# IP65

This devices is rated IP65.

## 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 any parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within the reach of children. Packaging material is a potential source of danger for children.

**DANGER**

**Electric shock caused by dangerous voltage inside**

There are areas inside 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 the 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 a ground (earth) connection.
- Do not cover the ground (earth) connection.
- Do not bypass the thermostatic switch or fuses.
- Replace fuses only with the same type and rating.
- 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.

**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 shake the device. Avoid brute force when installing or operating the device.
- 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 use immediately.



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

This device is designed to be used as an IP Pixel controller. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

- This device is not suitable for households.
- 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.
- There are no deformations on housings, fixings and installation points.
- 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 IP65 rated. IP (Ingress Protection) 65 class means that the device is dust-tight and protected against harmful effect of water jets.

Keep the connectors sealed with the rubber caps when the connectors are not in use.



## 2.2. Requirements for the User

This product may be used by ordinary persons. Maintenance may be carried out 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 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.

## 2.3. Personal Protective Equipment

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

### 3. Description of the Device

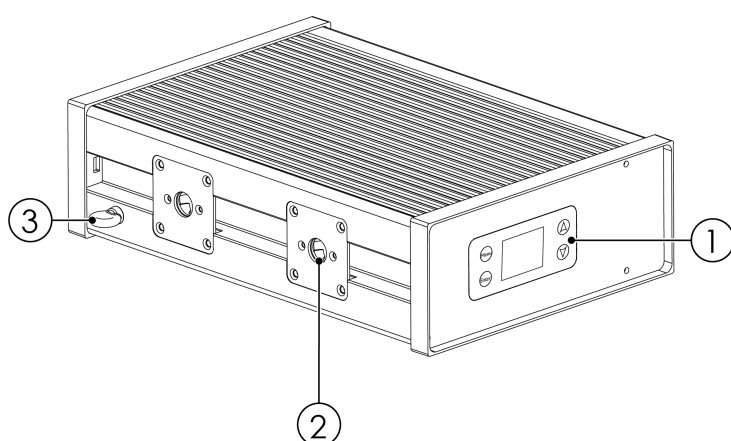
The Showtec IP Pixel Controller is an IP65-rated controller for the IP Pixelstrip 40 and IP Pixelstrip 80. Each of its four outputs can control up to 4 meters of IP Pixelstrips, for a maximum total of 16 meters. The device accepts DMX, Art-Net, sACN and Kling-Net protocols.

When using Art-Net or sACN, the controller can address every RGB LED in each 4 meter string, requiring up to 3840 channels / 8 DMX universes. Pixels can be grouped to reduce the required number of DMX channels. The device also has a 8- and 12-channel control mode for direct DMX control.

The controller also supports stand-alone operation with master/slave, manual modes and built-in programs.

#### 3.1. Front View

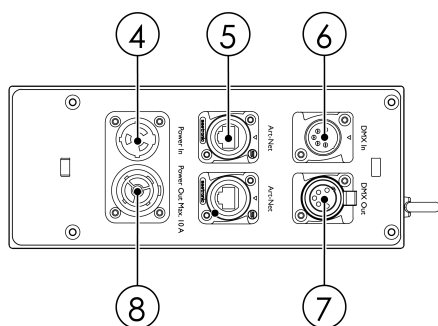
Figure 2



- 01) Control panel: OLED display and control buttons
- 02) 2 x mounting holes for quick-lock bracket
- 03) Safety eye

#### 3.2. Back View

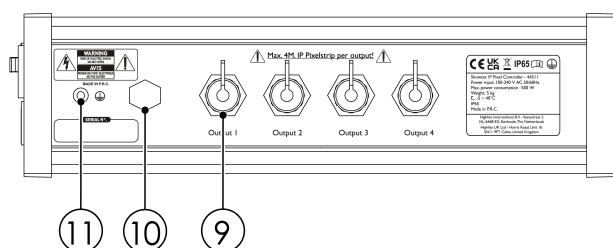
Figure 3



- 04) IP65-rated Power Pro True connector IN
- 05) 2 x IP65-rated RJ45 connector
- 06) IP65-rated 5-pin DMX signal connector IN
- 07) IP65-rated 5-pin DMX signal connector OUT
- 08) IP65-rated Power Pro True connector OUT

#### 3.3. Side View

Figure 4



- 09) 4 x IP65-rated dedicated connector OUT
- 10) Protective vent
- 11) Ground/earth connection

### 3.4. Product Specifications

|        |                     |
|--------|---------------------|
| Model: | IP Pixel Controller |
|--------|---------------------|

#### Control and programming:

|              |                                                                            |
|--------------|----------------------------------------------------------------------------|
| Control mode | Art-Net / Built-in program / DMX / Kling-Net / Manual / Master slave / RDM |
| DMX channels | 8 / 12 / 120 / 240 / 360 / 480 / 720 / 960 / 1440 / 1920 / 2880 / 3840     |
| Protocols    | Art-Net / DMX / Kling-Net / RDM / sACN                                     |
| Display      | OLED                                                                       |

#### Dynamic effects:

|        |         |
|--------|---------|
| Dimmer | 0–100 % |
| Strobe | 0–20 Hz |

#### Electrical specifications and connections:

|                     |                       |
|---------------------|-----------------------|
| Power supply        | 100–240 V AC 50/60 Hz |
| Output voltage      | 48 V DC               |
| Power consumption   | 500 W                 |
| Power connector in  | Power Pro True        |
| Power connector out | Power Pro True        |

#### Mechanical specifications:

|                   |          |
|-------------------|----------|
| Controller height | 89 mm    |
| Controller width  | 219 mm   |
| Controller length | 322 mm   |
| Weight            | 5 kg     |
| IP rating         | IP65     |
| Housing           | Aluminum |
| Color             | Black    |

#### Product properties:

|         |         |
|---------|---------|
| Cooling | Passive |
|---------|---------|

#### Rigging:

|                  |         |
|------------------|---------|
| Mounting options | Bracket |
|------------------|---------|

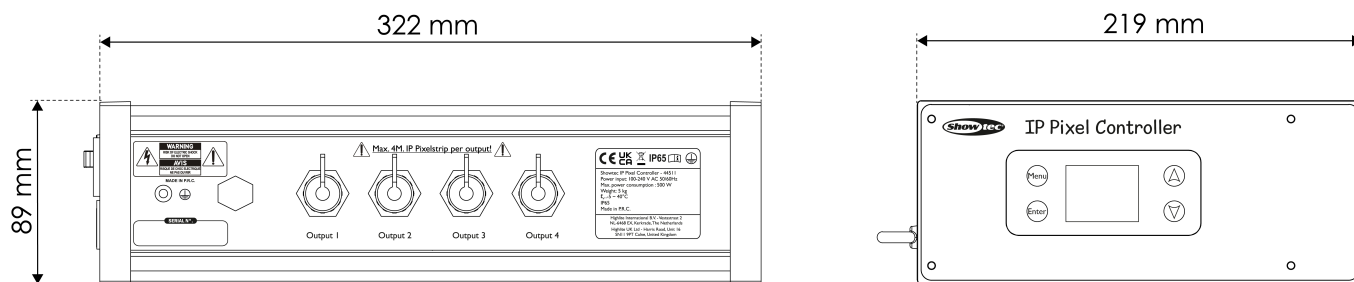
#### Thermal specifications:

|                             |       |
|-----------------------------|-------|
| Maximum ambient temperature | 40 °C |
|-----------------------------|-------|

#### Included items:

|                  |                       |
|------------------|-----------------------|
| Included rigging | 1x quick-lock bracket |
| Included cables  | Power Pro True cable  |

### 3.5. Dimensions



## 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, deinstallation 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 indoors and outdoors.
- The minimum distance to other objects must be bigger than 0,5 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.

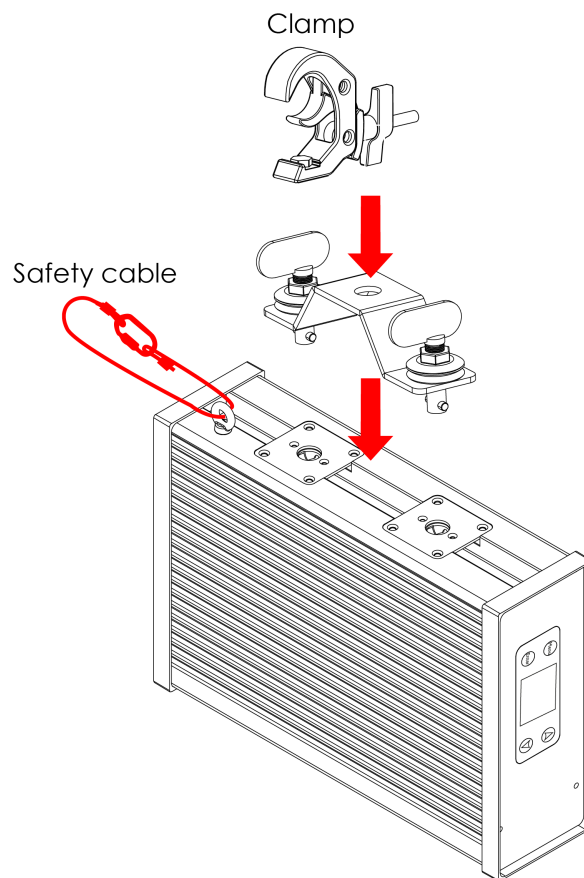
**CAUTION**

**Restrict the access under the work area during rigging/derigging.**

To mount the device, follow the steps below:

- 01) Fasten the quick-lock bracket, supplied with the device, on the **mounting holes for quick-lock bracket (02)**.
- 02) Install the clamp. Make sure that you use a clamp suitable for attaching the device to a truss.

**Figure 5**



- 03) Attach the device to the supporting structure. Make sure that the device cannot move freely.
- 04) 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 (03)**.

## 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 a 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: 2 devices IP Pixel Controller
- at 200–240 V: 4 devices IP Pixel Controller

## 5. Setup

### 5.1. Warnings and Precautions


**Attention**

Connect all data cables before supplying power.

Disconnect power supply before connecting or disconnecting data cables.

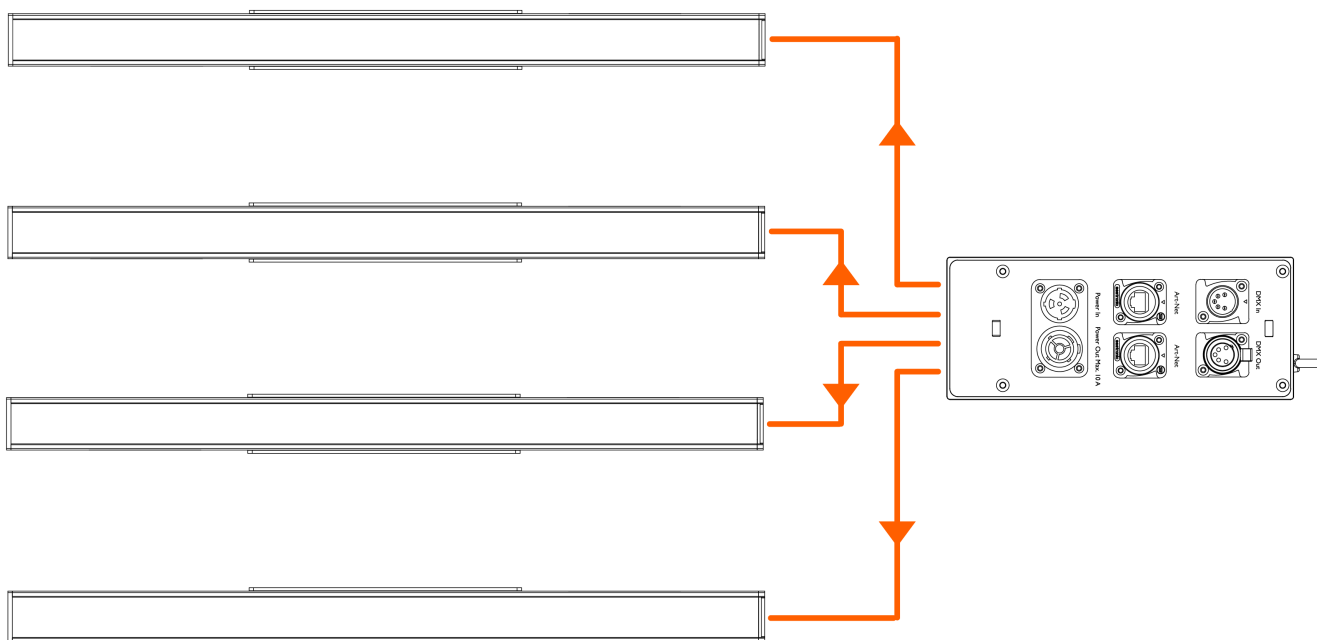
### 5.2. Setup Example

The IP Pixel Controller can control 4 meters of IP Pixelstrip devices per output, for a total of 16 meters per IP Pixel Controller. The maximum cable length from the IP Pixel Controller until the 1<sup>st</sup> IP Pixelstrip is 20 meters. The maximum cable length from the IP Pixel Controller until the last IP Pixelstrip in a chain is 30 meters.

To set up the IP Pixel Controller, follow the steps below:

01) Connect an **IP65-rated dedicated connector OUT (10)** of the device to an IP Pixelstrip.

02) Repeat step 1 to connect more devices.



## 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.

The IP Pixel Controller has 5-pin DMX signal IN and OUT connectors.

The pin assignment is as follows: 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

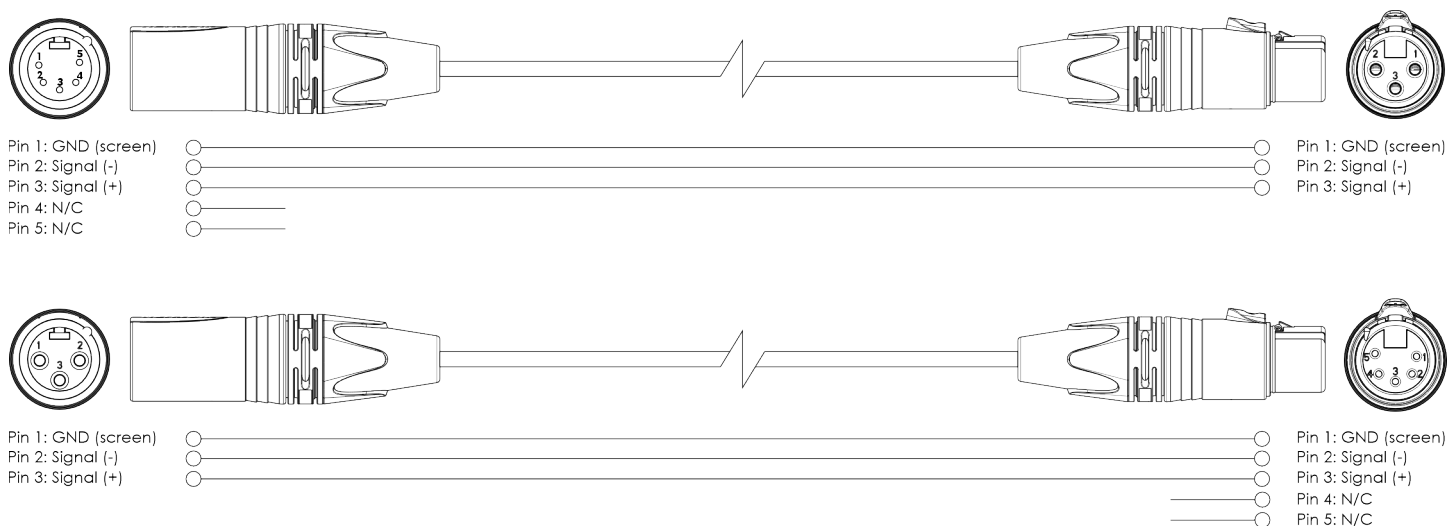
### 5.3.2. DMX Cables

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 the figure below.

Figure 6



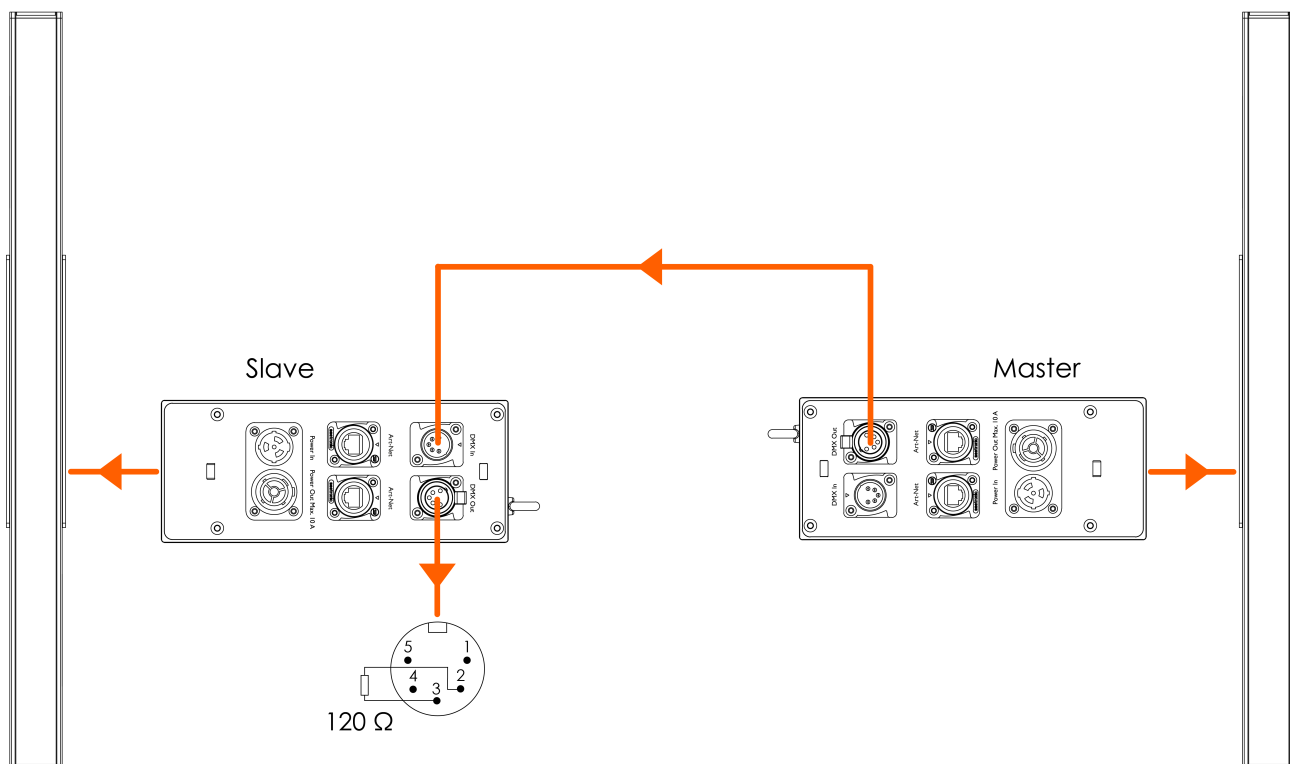


### 5.3.3. Master/Slave Setup

The IP Pixel Controller supports master/slave control mode. To connect multiple devices in a master/slave setup, follow the steps below:

- 01) Connect the DMX OUT connector of the 1<sup>st</sup> device to the DMX IN connector of the 2<sup>nd</sup> device with a 5-pin DMX cable.
- 02) Repeat step 1 to connect all devices in a daisy-chain.
- 03) Connect a DMX terminator (120  $\Omega$  resistor) to the DMX OUT connector of the last device on the data link.
- 04) Set the 1<sup>st</sup> device on the data link as a master device (see [6.6.3.7. Slave](#) on page 34).
- 05) Set the remaining devices as slave devices (see [6.6.3.7. Slave](#) on page 34).

Figure 7

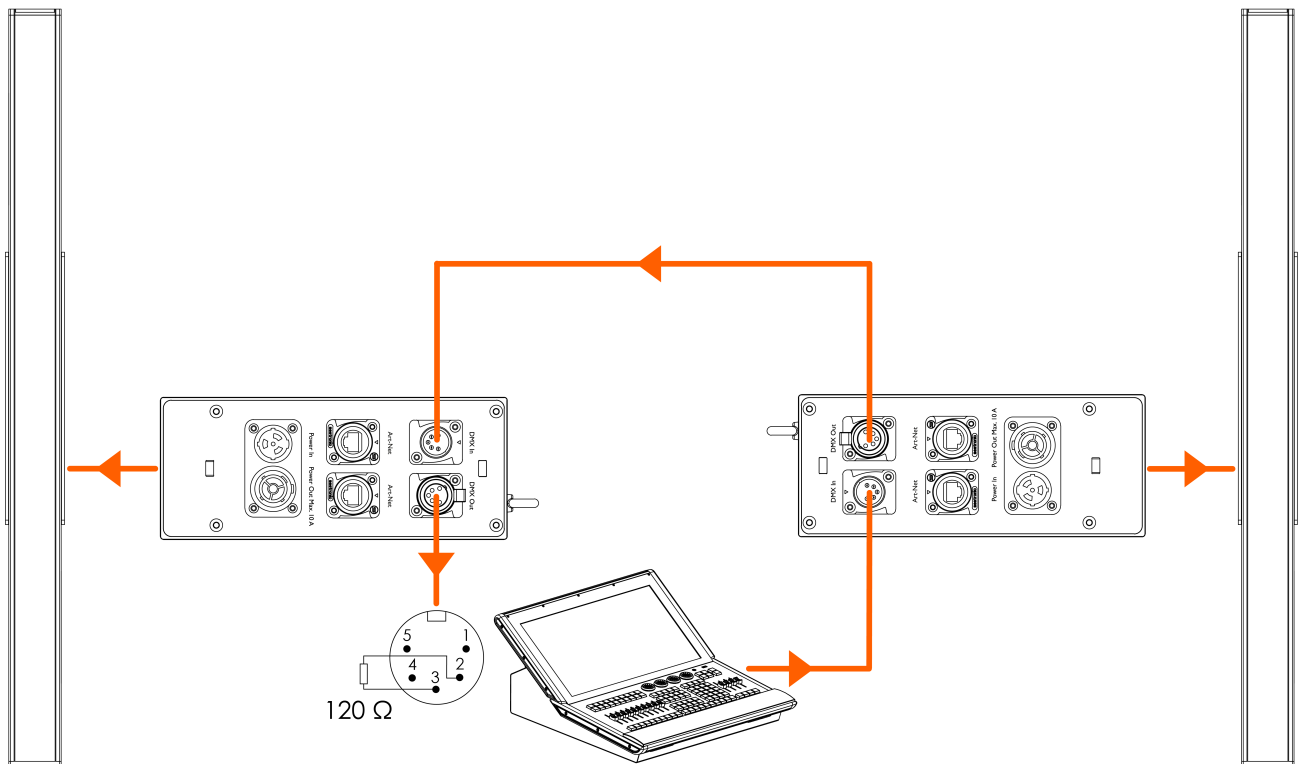


### 5.3.4. DMX Linking

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

- 01) Use a 5-pin DMX cable to connect the DMX OUT connector of the lighting controller to the DMX IN connector of the 1<sup>st</sup> device.
- 02) Connect the DMX OUT connector of the 1<sup>st</sup> device to the DMX IN connector of the 2<sup>nd</sup> device with a 5-pin DMX cable.
- 03) Repeat step 2 to connect all devices in a daisy-chain.
- 04) Connect a DMX terminator (120  $\Omega$  resistor) to the DMX OUT connector of the last device on the data link.

**Figure 8**



### 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 IP Pixel Controller has 2 personalities: 8Ch Mode (8 channels) and 12Ch Mode (12 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 1<sup>st</sup> device on the data link to 1 (001).
- 02) Set the starting address of the 2<sup>nd</sup> device on the data link to 13 (013), as  $1 + 12 = 13$ .
- 03) Set the starting address of the 3<sup>rd</sup> device on the data link to 25 (025), as  $13 + 12 = 25$ .
- 04) Continue assigning the starting addresses of the remaining devices by adding 12 each time to the previous number.

When addressing multiple devices on one data link, make sure that there are no overlapping channels. You cannot control devices individually if they have overlapping channels.

## 5.4. Ethernet Connection

### 5.4.1. Art-Net/sACN Protocol

Art-Net is a protocol that uses TCP/IP to transfer a large amount of DMX-512 data over an Ethernet network. Art-Net 4 can support up to 32768 universes. Art-Net™ is designed by and copyright of Artistic Licence Holdings Ltd.

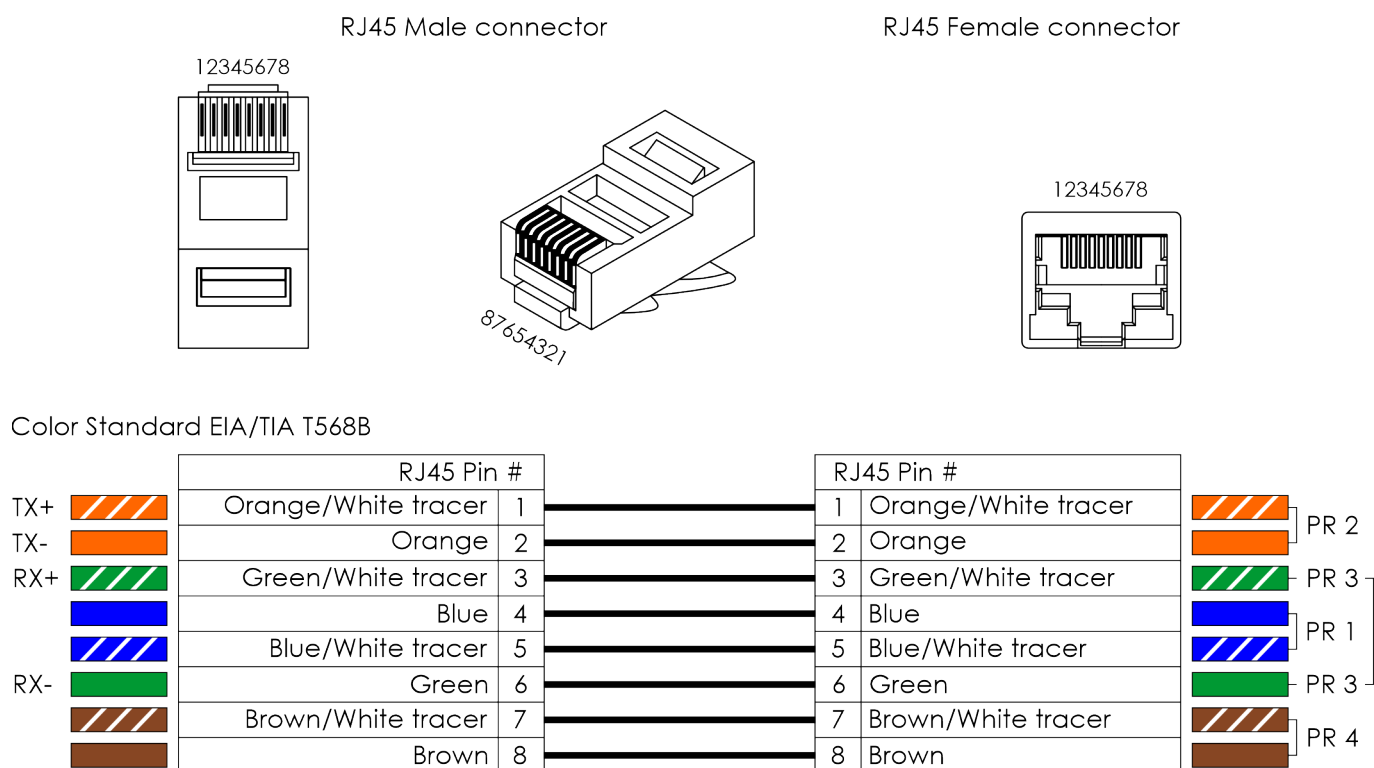
sACN (streaming Architecture for Control Networks), also known as ANSI E1.31, is a protocol developed by ESTA (Entertainment Services and Technology Association) for sending DMX-512 data over IP networks. It supports up to 65535 universes and uses multicasting.

### 5.4.2. Network Cables

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

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

**Figure 9**

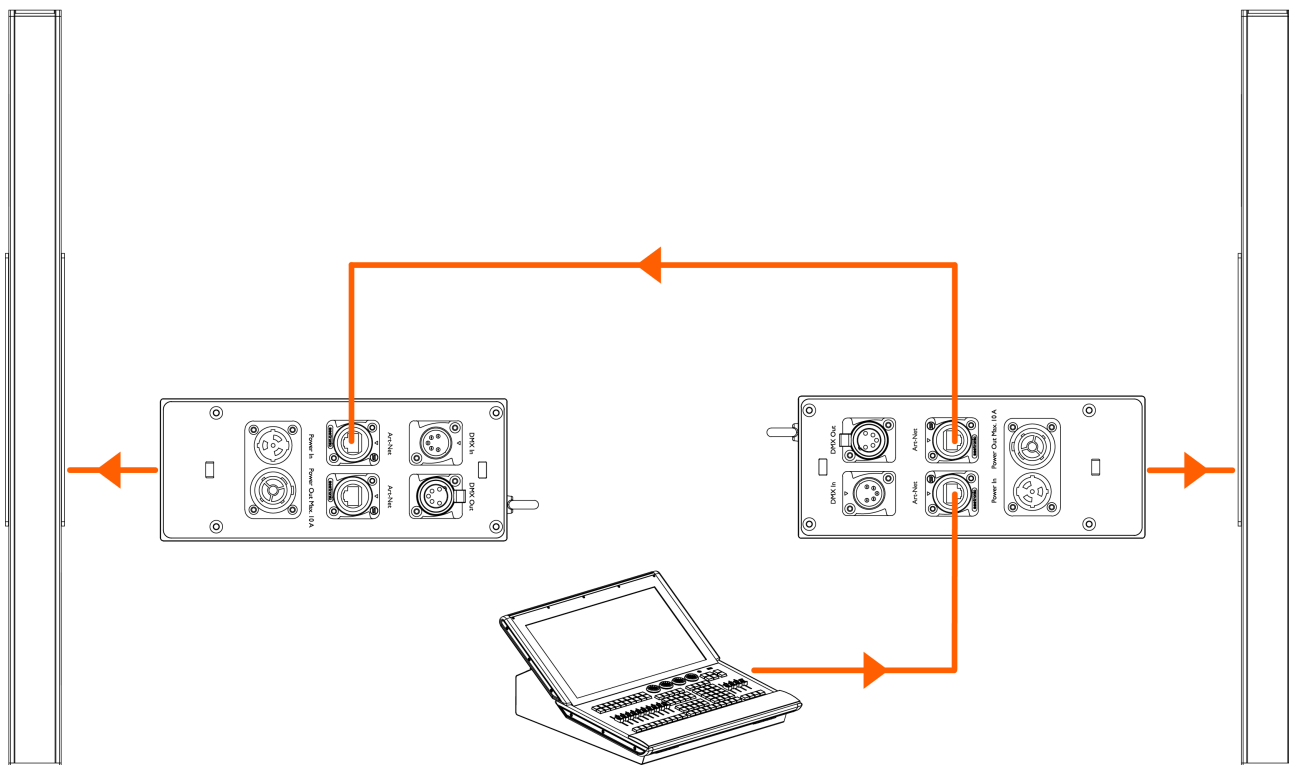


### 5.4.3. Art-Net/sACN/Kling-Net Linking

To connect multiple devices on one Art-Net/sACN data link, follow the steps below:

- 01) Use a CAT-5E/CAT-6 cable to connect the RJ45 connector of the computer/lighting controller to one of the RJ45 connectors of the 1<sup>st</sup> device.
- 02) Connect the 2<sup>nd</sup> RJ45 connector of the 1<sup>st</sup> device to the 1<sup>st</sup> RJ45 connector of the 2<sup>nd</sup> device with a CAT-5E/CAT-6 cable.
- 03) Repeat step 2 to connect all devices in a daisy-chain.

Figure 10



### 5.4.4. Art-Net Settings

You need an Art-Net data link to run light shows of one or more devices using a computer/light controller.

If you want to connect multiple devices on one Art-Net/RDM data link, follow the steps below:

- 01) Set the IP address of your computer/light controller to 2.x.x.x or 10.x.x.x, depending on the Art-Net settings. All devices in the network must have a unique IP address. To change the IP address, the IP Mode and the Subnet mask of the device, refer to the Network menu (see [6.6.2. Network](#) on page 30). To change the Universe of the device, refer to the Art-Net menu (see [6.6.3.4. Artnet](#) on page 32).
- 02) Set the Subnet mask to 255.0.0.0. on all devices.
- 03) Set the universe of the 1<sup>st</sup> device to 001.
- 04) Set the DMX address of the 1<sup>st</sup> device to 1.
- 05) Map all the connected devices in the Art-Net-based software. To change the Art-Net protocol of the device, refer to Art-Net/sACN Protocol.

### 5.4.5. sACN Settings

To run your device using sACN protocol:

- 01) Set the IP address of your computer/light controller. sACN does not have restrictions on the IP address. To change the IP address, the IP Mode and the Subnet mask of the device, refer to the Network menu (see [6.6.2. Network](#) on page 30). To change the Universe of the device, refer to the sACN menu (see [6.6.3.5. Sacn](#) on page 32).
- 02) Select sACN Protocol in the Mode menu (see [6.6.3. Mode](#) on page 30).
- 03) Set the universe in the sACN menu (see [6.6.3.5. Sacn](#) on page 32).

#### 5.4.6. Kling-Net Settings

- 01) Install the Arkaos software on your PC (Windows or Mac).
- 02) Set the IP address of your computer/light controller to 10.x.x.x. and the subnet to 255.0.0.0. The IP Pixel Controller does not require any further network setting adjustments.
- 03) Set the Kling-Net mode of the IP Pixel Controller in the Mode menu (see [6.6.3. Mode](#) on page 30).

## 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 an IP Pixel controller. It can be used indoors and outdoors. This device is not suitable for households.

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 IP Pixel Controller supports the following control modes:

- Stand-alone: Master/slave mode, manual control, built-in programs
- DMX-512: 8-channel mode, 12-channel mode
- Art-Net: 8-channel mode, 12-channel mode, section control mode (see [6.2.1. Section Control Mode](#)), pixel freak mode (see [6.2.2. Pixel Freak Mode](#))
- sACN: 8-channel mode, 12-channel mode, section control mode (see [6.2.1. Section Control Mode](#)), pixel freak mode (see [6.2.2. Pixel Freak Mode](#))
- Klingnet: 0,5 meter, 1 meter

For more information about how to connect the devices, refer to Setup (see [5. Setup](#) on page 14).

To operate the device manually as a stand-alone device:

- Set up the master/slave mode in the Mode menu (see [6.6.3.7. Slave](#) on page 34).
- Adjust the parameters for manual control in the Mode menu (see [6.6.3.9. Manual](#) on page 35).
- Select a built-in program in the Mode menu (see [6.6.3.8. Auto](#) on page 34).

To operate the device with a DMX controller:

- 01) Select a DMX mode in the Mode menu (see [6.6.3.3. DMX](#) on page 31). Refer to DMX Channels (see [6.7. DMX Channels](#) on page 36) for a complete overview of all DMX channels.
- 02) Set the DMX starting address of the device in the Address menu (see [6.6.1. Address](#) on page 29).

To operate the device via Art-Net with a computer/lighting controller:

- 01) Select an ArtNet mode in the Mode menu (see [6.6.3.4. Artnet](#) on page 32). Refer to DMX Channels (see [6.7. DMX Channels](#) on page 36) for a complete overview of all DMX channels.
- 02) Set the DMX starting address of the device in the Address menu (see [6.6.1. Address](#) on page 29).

To operate the device via sACN with a computer/lighting controller:

- 01) Select an sACN mode in the Mode menu (see [6.6.3.5. Sacn](#) on page 32). Refer to DMX Channels (see [6.7. DMX Channels](#) on page 36) for a complete overview of all DMX channels.
- 02) Set the DMX starting address of the device in the Address menu (see [6.6.1. Address](#) on page 29).

To operate the device via Kling-Net with a computer:

- Select a Kling-Net mode in the Mode menu (see [6.6.3.6. Klingnet](#) on page 33).



### 6.2.1.1. 10x RGB Mode

The following tables show the DMX universe and starting addresses when the IP Pixel Controller is in 10x RGB mode.

The IP Pixel Controller is connected to 4 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> | <b>Meter 3 (80 pixels)</b> | <b>Meter 4 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 031    | Universe 1, channel 061    | Universe 1, channel 091    |
| <b>Output 2</b> | Universe 1, channel 121    | Universe 1, channel 151    | Universe 1, channel 181    | Universe 1, channel 211    |
| <b>Output 3</b> | Universe 1, channel 241    | Universe 1, channel 271    | Universe 1, channel 301    | Universe 1, channel 331    |
| <b>Output 4</b> | Universe 1, channel 361    | Universe 1, channel 391    | Universe 1, channel 421    | Universe 1, channel 451    |

The IP Pixel Controller is connected to 3 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> | <b>Meter 3 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 031    | Universe 1, channel 061    |
| <b>Output 2</b> | Universe 1, channel 091    | Universe 1, channel 121    | Universe 1, channel 151    |
| <b>Output 3</b> | Universe 1, channel 181    | Universe 1, channel 211    | Universe 1, channel 241    |
| <b>Output 4</b> | Universe 1, channel 271    | Universe 1, channel 301    | Universe 1, channel 331    |

The IP Pixel Controller is connected to 2 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 031    |
| <b>Output 2</b> | Universe 1, channel 061    | Universe 1, channel 091    |
| <b>Output 3</b> | Universe 1, channel 121    | Universe 1, channel 151    |
| <b>Output 4</b> | Universe 1, channel 181    | Universe 1, channel 211    |

The IP Pixel Controller is connected to 1 meter of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> |
|-----------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    |
| <b>Output 2</b> | Universe 1, channel 031    |
| <b>Output 3</b> | Universe 1, channel 061    |
| <b>Output 4</b> | Universe 1, channel 091    |



### 6.2.1.2. 20x RGB Mode

The following tables show the DMX universes and starting addresses when the IP Pixel Controller is in 20x RGB mode.

The IP Pixel Controller is connected to 4 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> | <b>Meter 3 (80 pixels)</b> | <b>Meter 4 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 061    | Universe 1, channel 121    | Universe 1, channel 181    |
| <b>Output 2</b> | Universe 1, channel 241    | Universe 1, channel 301    | Universe 1, channel 361    | Universe 1, channel 421    |
| <b>Output 3</b> | Universe 2, channel 001    | Universe 2, channel 061    | Universe 2, channel 121    | Universe 2, channel 181    |
| <b>Output 4</b> | Universe 2, channel 241    | Universe 2, channel 301    | Universe 2, channel 361    | Universe 2, channel 421    |

The IP Pixel Controller is connected to 3 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> | <b>Meter 3 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 061    | Universe 1, channel 121    |
| <b>Output 2</b> | Universe 1, channel 181    | Universe 1, channel 241    | Universe 1, channel 301    |
| <b>Output 3</b> | Universe 1, channel 361    | Universe 1, channel 421    | Universe 2, channel 001    |
| <b>Output 4</b> | Universe 2, channel 061    | Universe 2, channel 121    | Universe 2, channel 181    |

The IP Pixel Controller is connected to 2 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 061    |
| <b>Output 2</b> | Universe 1, channel 121    | Universe 1, channel 181    |
| <b>Output 3</b> | Universe 1, channel 241    | Universe 1, channel 301    |
| <b>Output 4</b> | Universe 1, channel 361    | Universe 1, channel 421    |

The IP Pixel Controller is connected to 1 meter of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> |
|-----------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    |
| <b>Output 2</b> | Universe 1, channel 061    |
| <b>Output 3</b> | Universe 1, channel 121    |
| <b>Output 4</b> | Universe 1, channel 181    |

### 6.2.1.3. 40x RGB Mode

The following tables show the DMX universes and starting addresses when the IP Pixel Controller is in 40x RGB mode.

The IP Pixel Controller is connected to 4 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> | <b>Meter 3 (80 pixels)</b> | <b>Meter 4 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 121    | Universe 1, channel 241    | Universe 1, channel 361    |
| <b>Output 2</b> | Universe 2, channel 001    | Universe 2, channel 121    | Universe 2, channel 241    | Universe 2, channel 361    |
| <b>Output 3</b> | Universe 3, channel 001    | Universe 3, channel 121    | Universe 3, channel 241    | Universe 3, channel 361    |
| <b>Output 4</b> | Universe 4, channel 001    | Universe 4, channel 121    | Universe 4, channel 241    | Universe 4, channel 361    |

The IP Pixel Controller is connected to 3 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> | <b>Meter 3 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 121    | Universe 1, channel 241    |
| <b>Output 2</b> | Universe 1, channel 361    | Universe 2, channel 001    | Universe 2, channel 121    |
| <b>Output 3</b> | Universe 2, channel 241    | Universe 2, channel 361    | Universe 3, channel 001    |
| <b>Output 4</b> | Universe 2, channel 121    | Universe 3, channel 241    | Universe 3, channel 361    |

The IP Pixel Controller is connected to 2 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 121    |
| <b>Output 2</b> | Universe 1, channel 241    | Universe 1, channel 361    |
| <b>Output 3</b> | Universe 2, channel 001    | Universe 2, channel 121    |
| <b>Output 4</b> | Universe 2, channel 241    | Universe 2, channel 361    |

The IP Pixel Controller is connected to 1 meter of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> |
|-----------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    |
| <b>Output 2</b> | Universe 1, channel 121    |
| <b>Output 3</b> | Universe 1, channel 241    |
| <b>Output 4</b> | Universe 1, channel 361    |

### 6.2.2. Pixel Freak Mode

In Pixel Freak Mode, the IP Pixel Controller controls each LED of the connected IP Pixelstrip devices individually.

To use Pixel Freak Mode, follow the steps below:

- 01) Select the channel configuration for Pixel Freak Mode for Art-Net (see [6.6.3.4. Artnet](#) on page 32) or sACN (see [6.6.3.5. Sacn](#) on page 32).
- 02) Adjust the DMX settings on the lighting controller according to the required number of DMX universes and channels.

The required number of DMX universes and channels depends on the numbers of output devices. The IP Pixel Controller supports up to 4 meters of output devices per output and 16 meters of output devices. Each 1 meter of output devices contains 80 pixels and each pixel requires 3 DMX channels, for a maximum total of 3840 DMX channels per IP Pixel Controller.

The following table shows the DMX universe and starting address when the IP Pixel Controller is connected to 4 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> | <b>Meter 3 (80 pixels)</b> | <b>Meter 4 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 241    | Universe 2, channel 001    | Universe 2, channel 241    |
| <b>Output 2</b> | Universe 3, channel 001    | Universe 3, channel 241    | Universe 4, channel 001    | Universe 4, channel 241    |
| <b>Output 3</b> | Universe 5, channel 001    | Universe 5, channel 241    | Universe 6, channel 001    | Universe 6, channel 241    |
| <b>Output 4</b> | Universe 7, channel 001    | Universe 7, channel 241    | Universe 8, channel 001    | Universe 8, channel 241    |

The following table shows the DMX universe and starting address when the IP Pixel Controller is connected to 3 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> | <b>Meter 3 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 241    | Universe 2, channel 001    |
| <b>Output 2</b> | Universe 2, channel 241    | Universe 3, channel 001    | Universe 3, channel 241    |
| <b>Output 3</b> | Universe 4, channel 001    | Universe 4, channel 241    | Universe 5 channel 001     |
| <b>Output 4</b> | Universe 5, channel 241    | Universe 6, channel 001    | Universe 6, channel 241    |

The following table shows the DMX universe and starting address when the IP Pixel Controller is connected to 2 meters of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> | <b>Meter 2 (80 pixels)</b> |
|-----------------|----------------------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    | Universe 1, channel 241    |
| <b>Output 2</b> | Universe 2, channel 001    | Universe 2, channel 241    |
| <b>Output 3</b> | Universe 3, channel 001    | Universe 3, channel 241    |
| <b>Output 4</b> | Universe 4, channel 001    | Universe 4, channel 241    |

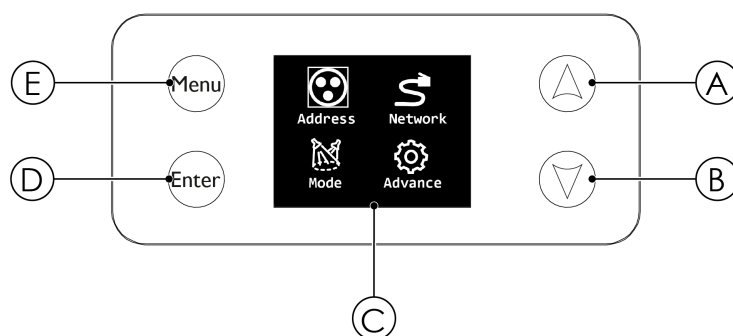
The following table shows the DMX universe and starting address when the IP Pixel Controller is connected to 1 meter of output devices per output.

|                 | <b>Meter 1 (80 pixels)</b> |
|-----------------|----------------------------|
| <b>Output 1</b> | Universe 1, channel 001    |
| <b>Output 2</b> | Universe 1, channel 241    |
| <b>Output 3</b> | Universe 2, channel 001    |
| <b>Output 4</b> | Universe 2, channel 241    |

### 6.3. Control Panel

Figure 12

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



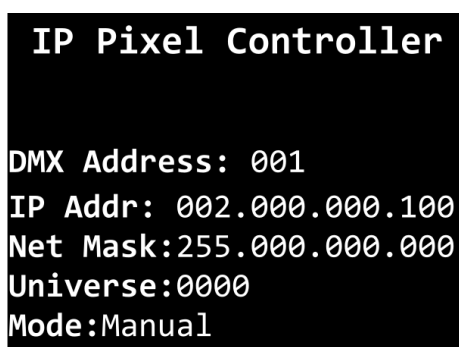
- Use the **MENU** button to exit the current submenu, to return to the Main Menu and to return to the start screen.
- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **ENTER** button to open the desired menu, to confirm your choice or to set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

### 6.4. Start-up

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



Immediately afterwards, the display shows the start screen. The start screen provides information about the assigned addresses and the control mode of the device, for example:



Press the **MENU** button to open the main menu (see [6.6. Main Menu Options](#) on page 29).

#### Note:

If no button is pressed, after 30 seconds of inactivity the display will turn off. Press any button to turn the display on. The screen timeout can be adjusted (see [6.6.4. Advance](#) on page 35).

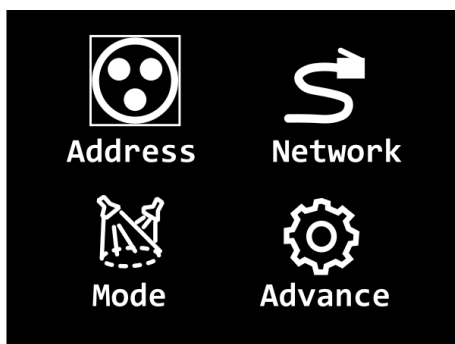
## 6.5. Menu Overview

| Level 1                                                        | Level 2        | Level 3        | Level 4     |
|----------------------------------------------------------------|----------------|----------------|-------------|
| <b>Address</b> (see <a href="#">6.6.1. Address</a> on page 29) | DMX Address    | 001–505        |             |
|                                                                | Manual/DHCP    | Manual<br>DHCP |             |
|                                                                | IP Address     |                |             |
|                                                                | Net Mask       |                |             |
| <b>Network</b> (see <a href="#">6.6.2. Network</a> on page 30) | SetOutput      | 80Pix/1Mtr     |             |
|                                                                |                | 160Pix/2Mtr    |             |
|                                                                |                | 240Pix/2Mtr    |             |
|                                                                |                | 320Pix/4Mtr    |             |
|                                                                | Section        | 10x RGB /Mtr   |             |
|                                                                |                | 20x RGB /Mtr   |             |
|                                                                |                | 40x RGB /Mtr   |             |
|                                                                | DMX            | DMX 8CH        |             |
|                                                                |                | DMX 12CH       |             |
|                                                                | Artnet         | Universe       | 0000–0255   |
|                                                                |                | 8CH            |             |
|                                                                |                | 12CH           |             |
|                                                                |                | xxxxCH Section |             |
|                                                                |                | xxxxCH         |             |
|                                                                | Sacn           | Universe       | 00001–65535 |
|                                                                |                | 8CH            |             |
|                                                                |                | 12CH           |             |
|                                                                |                | xxxxCH Section |             |
|                                                                |                | xxxxCH         |             |
|                                                                | Klingnet       | 0.5 Mtr        |             |
|                                                                |                | 1Mtr           |             |
|                                                                |                | Disable        |             |
|                                                                | Slave          | NO<br>YES      |             |
|                                                                | Auto           | Program        | 000–030     |
|                                                                |                | Speed          | 000–020     |
|                                                                | Manual         | Dimmer         | 000–255     |
|                                                                |                | Strobe         | 000–255     |
|                                                                |                | Red            | 000–255     |
|                                                                |                | Green          | 000–255     |
|                                                                |                | Blue           | 000–255     |
| <b>Mode</b> (see <a href="#">6.6.3. Mode</a> on page 30)       | Signal Hold    | Black          |             |
|                                                                |                | Hold           |             |
|                                                                | Pixel Reverse  | ON             |             |
|                                                                |                | OFF            |             |
|                                                                | Screen Timeout | Never          |             |
|                                                                |                | 30S            |             |
|                                                                |                | 60S            |             |
| <b>Advance</b> (see <a href="#">6.6.4. Advance</a> on page 35) |                |                |             |
|                                                                |                |                |             |
|                                                                |                |                |             |

|                   |      |  |
|-------------------|------|--|
| Screen Brightness | 25%  |  |
|                   | 50%  |  |
|                   | 75%  |  |
|                   | 100% |  |
| Soft Version      |      |  |
| Invert Display    | YES  |  |
|                   | NO   |  |
| Factory Reset     | YES  |  |
|                   | NO   |  |

## 6.6. Main Menu Options

The main menu has the following options:



Address

Network

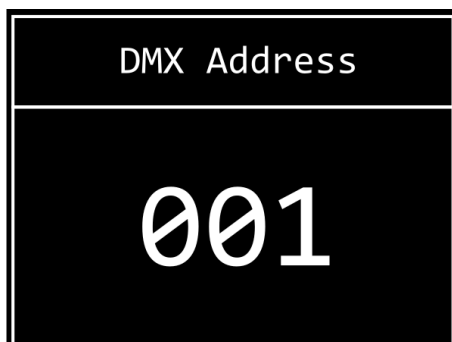
Mode

Advance

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

### 6.6.1. Address

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



- 01) Press the **UP/DOWN** buttons to select the starting DMX address of the device. The selection range is 001–505.
- 02) Press the **ENTER** button to confirm the selection.

### 6.6.2. Network

In this menu you can adjust the network settings.

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

|                 |             |
|-----------------|-------------|
| Manual/DHCP     |             |
| Manual          |             |
| IP Address      |             |
| 002             | 000.000.100 |
| Net Mask        |             |
| 255.000.000.000 |             |

- Manual/DHCP: Set the configuration of the IP address manually or automatically by a network server (DHCP)
- IP Address: Set the IP address
- Net Mask: Set the Net Mask

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

03) Press the **UP/DOWN** buttons to increase/decrease the value.

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

### 6.6.3. Mode

In this menu you can configure the control mode of the device.

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

|           |             |
|-----------|-------------|
| SetOutput | 80Pix/1Mtr  |
| Section   | 160Pix/2Mtr |
| DMX       | 240Pix/3Mtr |
| Artnet    | 320Pix/4Mtr |
| Sacn      |             |
| Klingnet  |             |
| Slave     |             |
| Auto      |             |
| Manual    |             |

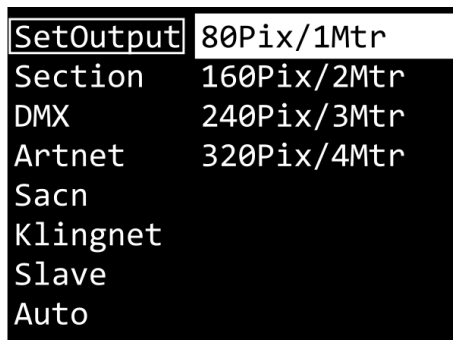
- SetOutput (see [6.6.3.1. Set Output](#))
- Section (see [6.6.3.2. Section](#))
- DMX (see [6.6.3.3. DMX](#))
- Artnet (see [6.6.3.4. Artnet](#))
- Sacn (see [6.6.3.5. Sacn](#))
- Klingnet (see [6.6.3.6. Klingnet](#))
- Slave (see [6.6.3.7. Slave](#))
- Auto (see [6.6.3.8. Auto](#))
- Manual (see [6.6.3.9. Manual](#))

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

### 6.6.3.1. Set Output

In this submenu you can set the output length for output devices.

01) Press the **UP/DOWN** buttons to scroll through the options.

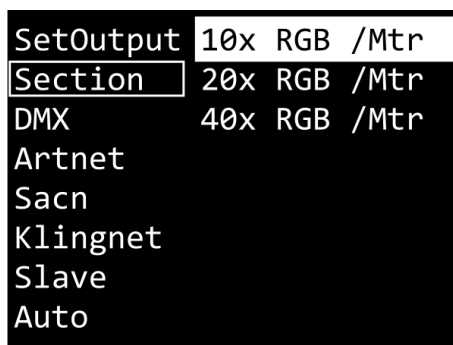


02) Press the **ENTER** button to confirm the selection.

### 6.6.3.2. Section

In this submenu you can set the section control for output devices. The section control sets the number of channels that are available when using Art-Net or sACN protocol.

01) Press the **UP/DOWN** buttons to scroll through the options.



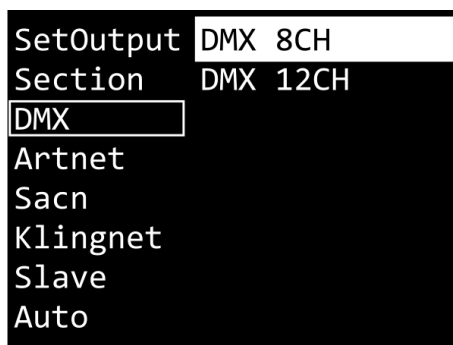
- 10x RGB /Mtr: 30 channels per meter of output devices (120/240/360/480 channels)
- 20x RGB /Mtr: 60 channels per meter of output devices (240/480/720/960 channels)
- 40x RGB /Mtr: 120 channels per meter of output devices (480/960/1440/1920 channels)

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

### 6.6.3.3. DMX

In this submenu you can select the DMX channel mode.

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



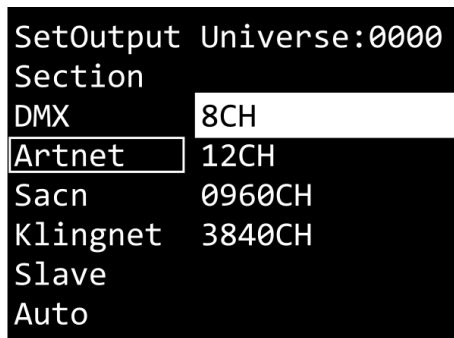
02) Press the **ENTER** button to confirm the selection.



#### 6.6.3.4. Artnet

In this submenu you can configure the Art-Net settings of the device.

01) Press the **UP/DOWN** buttons to scroll through the options.



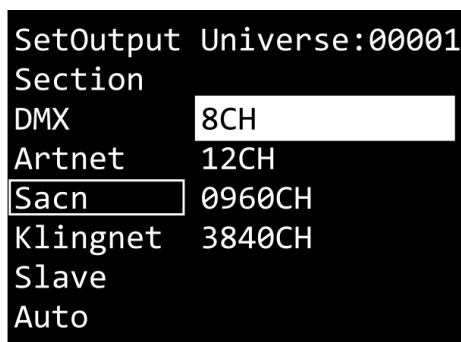
- Universe: Set the Art-Net universe
- 8CH: The device is controlled in 8-channel mode
- 12CH: The device is controlled in 12-channel mode
- xxxxCH: The device is controlled with the number of channels determined by section control (see [6.6.3.2. Section](#) on page 31)
- xxxxCH: The device is controlled in Pixel Freak Mode. In this mode each pixel is controlled individually. The numbers of channels is automatically determined according to the number of output devices per output

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

#### 6.6.3.5. Sacn

In this submenu you can configure the sACN settings of the device.

01) Press the **UP/DOWN** buttons to scroll through the options.



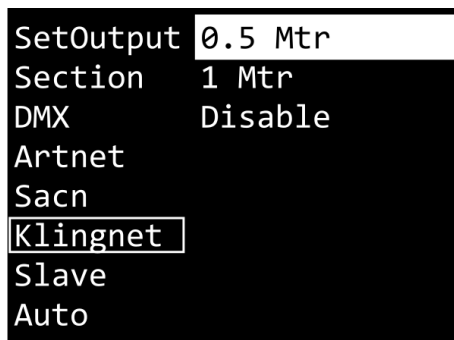
- Universe: Set the aSCN universe
- 8CH: The device is controlled in 8-channel mode
- 12CH: The device is controlled in 12-channel mode
- xxxxCH: The device is controlled with the number of channels determined by section control (see [6.6.3.2. Section](#) on page 31)
- xxxxCH: The device is controlled in Pixel Freak Mode. In this mode each pixel is controlled individually. The numbers of channels is automatically determined according to the number of output devices per output

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

#### 6.6.3.6. Klingnet

In this submenu you can configure the Kling-Net settings of the device. This configuration determines the number of ID's that is shown in the Arkaos control software.

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



- 0.5 Mtr: The Arkaos control software displays a maximum of 32 ID's for each IP Pixel Controller
- 1 Mtr: The Arkaos control software displays a maximum of 16 ID's for each IP Pixel Controller
- Disable: Disable Kling-Net operation of the device

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

The exact number of ID's displayed in the Arkaos control software depends on the number of IP Pixelstrip devices per output of the IP Pixel Controller.

|                                              | Klingnet setting | ID's per output |
|----------------------------------------------|------------------|-----------------|
| 4 meters of IP Pixelstrip devices per output | 0.5 Mtr          | 8 (32 in total) |
|                                              | 1 Mtr            | 4 (16 in total) |
| 3 meters of IP Pixelstrip devices per output | 0.5 Mtr          | 6 (24 in total) |
|                                              | 1 Mtr            | 3 (12 in total) |
| 2 meters of IP Pixelstrip devices per output | 0.5 Mtr          | 4 (16 in total) |
|                                              | 1 Mtr            | 2 (8 in total)  |
| 1 meter of IP Pixelstrip devices per output  | 0.5 Mtr          | 2 (8 in total)  |
|                                              | 1 Mtr            | 1 (4 in total)  |

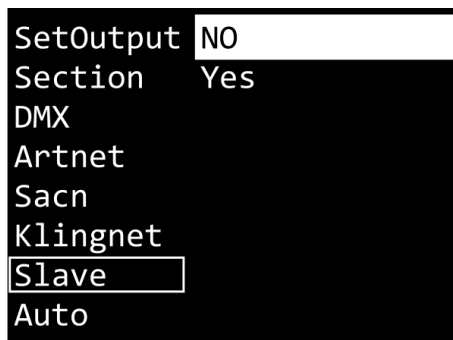
#### Note:

When combining IP Pixelstrip 40 devices and IP Pixelstrip 80 devices it is recommended to use the 0.5 Mtr setting. This gives each IP Pixelstrip 80 2 ID's, but prevents issues with multiple devices sharing 1 ID.

#### 6.6.3.7. Slave

In this submenu you can configure the device as a master or slave device (see [5.3.3. Master/Slave Setup](#) on page 16).

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



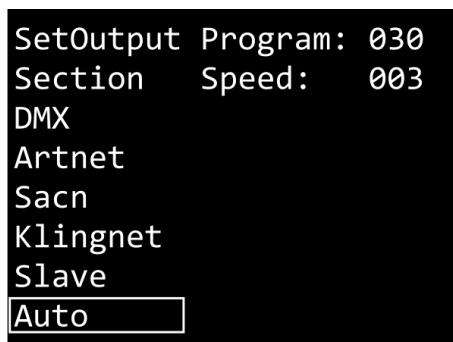
- NO: The device acts as a master device or stand-alone device
- YES: The device acts as a slave device

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

#### 6.6.3.8. Auto

In this submenu you can select a built-in program and adjust the speed of the program.

01) Press the **UP/DOWN** buttons to scroll through the options.



- Program: Sets the built-in program that controls the output devices (000–030)
- Speed: Sets the speed of the built-in program (000–020)

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

03) Press the **UP/DOWN** buttons to increase/decrease the value.

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

#### 6.6.3.9. Manual

In this submenu you can manually configure the output settings of the device.

01) Press the **UP/DOWN** buttons to scroll through the options.

```

Section    Dimmer:  255
DMX        Strobe:  255
Artnet     Red:     000
Sacn       Green:   000
Klingnet   Blue:    000
Slave
Auto
Manual
  
```

- Dimmer: Sets the dimmer mode (000–255)
- Strobe: Sets the strobe mode (000–255)
- Red: Sets the red color value (000–255)
- Green: Sets the green color value (000–255)
- Blue: Sets the blue color value (000–255)

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

03) Press the **UP/DOWN** buttons to increase/decrease the value.

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

#### 6.6.4. Advance

In this menu you can adjust the general settings of the device.

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

```

Signal Hold:      Black
Pixel Reverse:    OFF
Screen Timeout:   30S
Screen Brightness: 75%
Soft Version:     V3.01
Invert Display:   YES
Factory Reset:    NO
  
```

- Signal Hold: The device will use the last working DMX value or switch to black in case of a DMX failure (Black/Hold)
- Pixel Reverse: Reverse the direction in which the pixels of the output devices are controlled (ON/OFF)
- Screen Timeout: You can adjust if the display turns off automatically after a period of inactivity (Never/30S/60S)
- Screen Brightness: You can adjust the brightness of the display (25%/50%/75%/100%)
- Soft Version: The software version that is installed on the device
- Invert Display: The display is rotated at 180° (YES/NO)
- Factory Reset: Reset the settings of the device to the default factory settings (YES/NO)

02) Press the **ENTER** button to select a setting.

03) Press the **UP/DOWN** buttons to change the value.

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

## 6.7. DMX Channels

| 8CH | 12CH | Description                    | Value   | Notes                                        |
|-----|------|--------------------------------|---------|----------------------------------------------|
| 1   | 1    | <b>Dimmer</b>                  | 000–255 | From low to high intensity (0–100%)          |
| 2   | 2    | <b>Strobe</b>                  | 000–255 | Strobe, from low to high frequency (0–20 Hz) |
| 3   | 3    | <b>Red</b>                     | 000–255 | 0–100%                                       |
| 4   | 4    | <b>Green</b>                   | 000–255 | 0–100%                                       |
| 5   | 5    | <b>Blue</b>                    | 000–255 | 0–100%                                       |
| 6   | 6    | <b>Internal Program</b>        | 000–015 | OFF                                          |
|     |      |                                | 016–023 | Program 1                                    |
|     |      |                                | 024–031 | Program 2                                    |
|     |      |                                | 032–039 | Program 3                                    |
|     |      |                                | 040–047 | Program 4                                    |
|     |      |                                | 048–055 | Program 5                                    |
|     |      |                                | 056–063 | Program 6                                    |
|     |      |                                | 064–071 | Program 7                                    |
|     |      |                                | 072–079 | Program 8                                    |
|     |      |                                | 080–087 | Program 9                                    |
|     |      |                                | 088–095 | Program 10                                   |
|     |      |                                | 096–103 | Program 11                                   |
|     |      |                                | 104–111 | Program 12                                   |
|     |      |                                | 112–119 | Program 13                                   |
|     |      |                                | 120–127 | Program 14                                   |
|     |      |                                | 128–135 | Program 15                                   |
|     |      |                                | 136–143 | Program 16                                   |
|     |      |                                | 144–151 | Program 17                                   |
|     |      |                                | 152–159 | Program 18                                   |
|     |      |                                | 160–167 | Program 19                                   |
|     |      |                                | 168–175 | Program 20                                   |
|     |      |                                | 176–183 | Program 21                                   |
|     |      |                                | 184–191 | Program 22                                   |
|     |      |                                | 192–199 | Program 23                                   |
|     |      |                                | 200–207 | Program 24                                   |
|     |      |                                | 208–215 | Program 25                                   |
|     |      |                                | 216–223 | Program 26                                   |
|     |      |                                | 224–231 | Program 27                                   |
|     |      |                                | 232–239 | Program 28                                   |
|     |      |                                | 240–247 | Program 29                                   |
|     |      |                                | 248–255 | Program 1–29 in random order                 |
| 7   | 7    | <b>Speed</b>                   | 000–255 | Slow to fast                                 |
| 8   | 8    | <b>Effect direction</b>        | 000–128 | Normal                                       |
|     |      |                                | 129–255 | Inverted                                     |
|     | 9    | <b>Effect zoom</b>             | 000–255 | Change effect size big to small              |
|     | 10   | <b>Red background dimmer</b>   | 000–255 | From low to high intensity (0–100%)          |
|     | 11   | <b>Green background dimmer</b> | 000–255 | From low to high intensity (0–100%)          |
|     | 12   | <b>Blue background dimmer</b>  | 000–255 | From low to high intensity (0–100%)          |

## 6.8. RDM Information

This device supports RDM (see [6.8.2. Supported RDM PIDs \(Parameter IDs\)](#)).

### 6.8.1. RDM Details

- Responder ID: 29B4:0E1xxxxx
- Manufacturer's ID: Showtec (Highlite International B.V.)
- Manufacturer Label: Showtec
- Model Description: IP Pixel Controller
- Model ID: 225 (0E1 hexadecimal)
- Device Label: IP Pixel Controller

#### Note:

An RDM responder ID consists of 3 parts:

- 1<sup>st</sup> part – 4 digits – Manufacturer's ID
- 2<sup>nd</sup> part – 3 digits – Model ID
- 3<sup>rd</sup> part – 5 digits – Unique ID

The RDM responder IDs of all products of Highlite International start with the same 4 digits. The first 7 digits of the RDM responder ID for each model are the same. The last 5 digits are different for each device.

### 6.8.2. Supported RDM PIDs (Parameter IDs)

| RDM Parameter ID            | Value  | Required | GET | SET |
|-----------------------------|--------|----------|-----|-----|
| DEVICE_LABEL                | 0x0082 |          | *   | *   |
| DEVICE_MODEL_DESCRIPTION    | 0x0080 |          | *   |     |
| DMX_PERSONALITY             | 0x00E0 | *        | *   | *   |
| DMX_PERSONALITY_DESCRIPTION | 0x00E1 |          | *   |     |
| DMX_START_ADDRESS           | 0x00F0 | *        | *   | *   |
| MANUFACTURER_LABEL          | 0x0081 |          | *   |     |
| STATUS_MESSAGES             | 0x0030 |          | *   |     |
| SUPPORTED_PARAMETERS        | 0x0150 | *        | *   |     |

## 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"> <li>Make sure that the device is connected to power supply and the cables are plugged in</li> </ul>                               |
| The device responds erratically                | The factory settings of the device are changed                                                                       | <ul style="list-style-type: none"> <li>Reset the parameters of the device to the default factory settings (see <a href="#">6.6.4. Advance</a> on page 35)</li> </ul> |
| The device does not respond to DMX control     | The controller is not connected                                                                                      | <ul style="list-style-type: none"> <li>Connect the controller</li> </ul>                                                                                             |
|                                                | The signal is reversed. The 5-pin DMX Out of the controller does not match the DMX In of the device                  | <ul style="list-style-type: none"> <li>Install a phase-reversing cable between the controller and the device</li> </ul>                                              |
|                                                | The controller is defective                                                                                          | <ul style="list-style-type: none"> <li>Try using another controller</li> </ul>                                                                                       |
| The device responds erratically to DMX control | Connections are defective                                                                                            | <ul style="list-style-type: none"> <li>Examine connections and cables. Correct defective connections. Repair or replace damaged cables</li> </ul>                    |
|                                                | The data link is not terminated with a 120 $\Omega$ termination plug                                                 | <ul style="list-style-type: none"> <li>Insert a termination plug in the DMX OUT connector of the last device on the link</li> </ul>                                  |
|                                                | Incorrect addressing                                                                                                 | <ul style="list-style-type: none"> <li>Make sure that the address settings are correct</li> </ul>                                                                    |
|                                                | 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"> <li>To find out the defective device, bypass one device at a time until normal operation is restored</li> </ul>                   |

## 8. Maintenance

### 8.1. Safety Instructions for Maintenance



**DANGER**  
Electric shock caused by dangerous voltage inside

Disconnect power supply 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.
- There are no deformations on housings, fixings and installation points.
- The power cables are not damaged and do not show any material fatigue.

#### 8.2.1. Basic Cleaning Instructions

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 5 minutes.
- 03) Clean the device with a soft, lint-free cloth.



**Attention**

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.

### 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

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### 9.1. Instructions for Deinstallation

**WARNING**

**Incorrect deinstallation can cause serious injuries and damage of property.**

- Let the device cool down before dismantling.
- 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 (see [8.2.1. Basic Cleaning Instructions](#) on page 39).
- Store the device in the original packaging, if possible.

## 10. Disposal

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### 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

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





