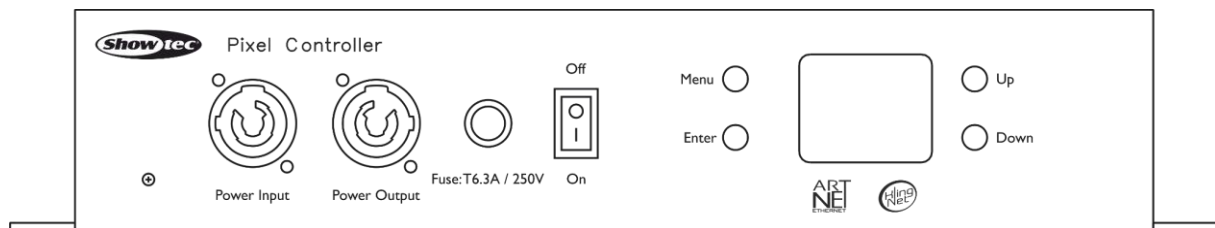




USER MANUAL



ENGLISH

Pixel Controller

V2

Product code: 44510

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 Pixel Controller
- Schuko to pro power cable (1,5 m)
- User manual

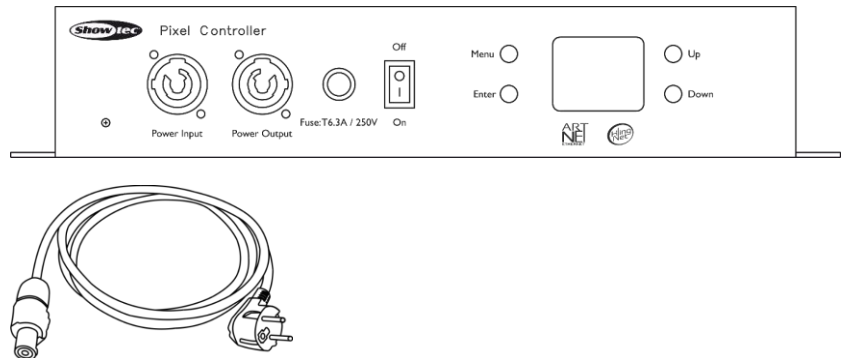


Fig. 01

1.2. Intended Use

This device is intended for use as a pixel controller. It is suitable only for indoor installation. It 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 device's lifespan.

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 chapters and parts of the device are in bold lettering, for example: "Refer to **2. Safety**", "turn the **adjustment handle (08)**"
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.5. 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 at the backside of the device.

The information label contains the following symbols:



This device is designed for indoor use.



This device shall not be treated as household waste.



This device falls under IEC protection class I.



Read and observe the instructions in the user manual.



Caution: Risk of electric shock. Disconnect input power before opening.
Warning: This appliance must be earthed.

2. Safety



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

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

2.1. Warnings and Safety Instructions



DANGER
Danger for children

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

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



DANGER
Electric shock caused by dangerous voltage inside

There are areas within the device where dangerous touch voltage may be present.

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



DANGER
Electric shock caused by short-circuit

This device falls under IEC protection class I.

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



WARNING
Risk of epileptic shock

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



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 block the ventilation openings. Without proper heat dissipation and air circulation, the internal components may overheat. This can result in product damage.
- 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 the use immediately.



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

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

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.
- There is no damage to the RJ45 connectors.
- The CAT cables used for connection of the device are not damaged and do not show any material fatigue.
- The power cables are not damaged and do not show any material fatigue.



Attention

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

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

2.2. Requirements for the User

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

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

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

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

3. Description of the Device

The Pixel Controller is suitable only for indoor installation (e.g. in hotels or theaters, in order to create a good ambience in a lobby) and it can be used only with the Pixelstrips 20 and 40, Pixeltubes 16 and 32 or PixelDots. Each controller can handle those devices divided over 4 outputs.

All Pixelstrips/Pixeltubes/PixelDots can be easily daisy-chained and connected to the Pixel Controller with a CAT cable. The Pixel Controller can be controlled with DMX, Art-Net and Kling-Net. It can also be used as a stand-alone controller with built-in programs. When using multiple devices, the built-in programs can be synchronized due to master/slave function.

3.1. Front View

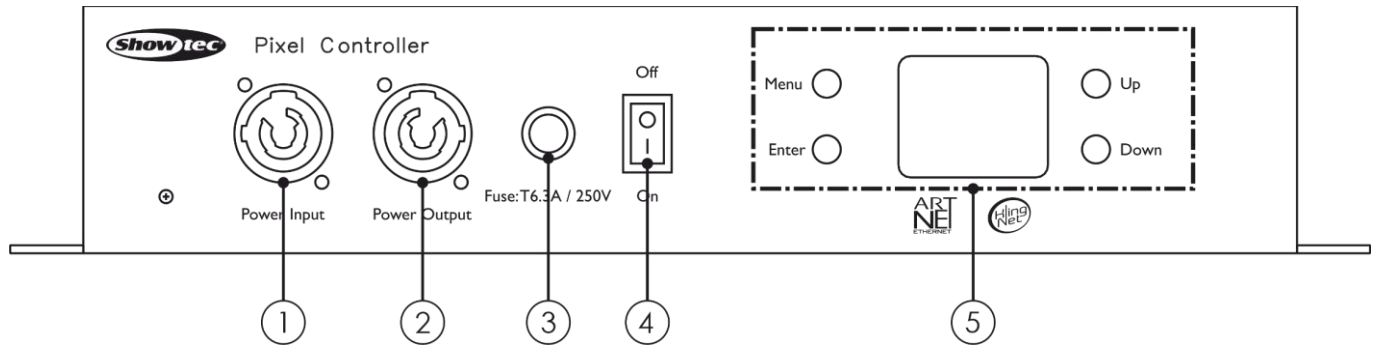


Fig. 02

- 01) Pro power connector (Blue) IN
- 02) Pro power connector (Gray) OUT
- 03) Fuse T6,3A/250 V
- 04) Power switch ON/OFF
- 05) OLED display + control buttons

3.2. Back View

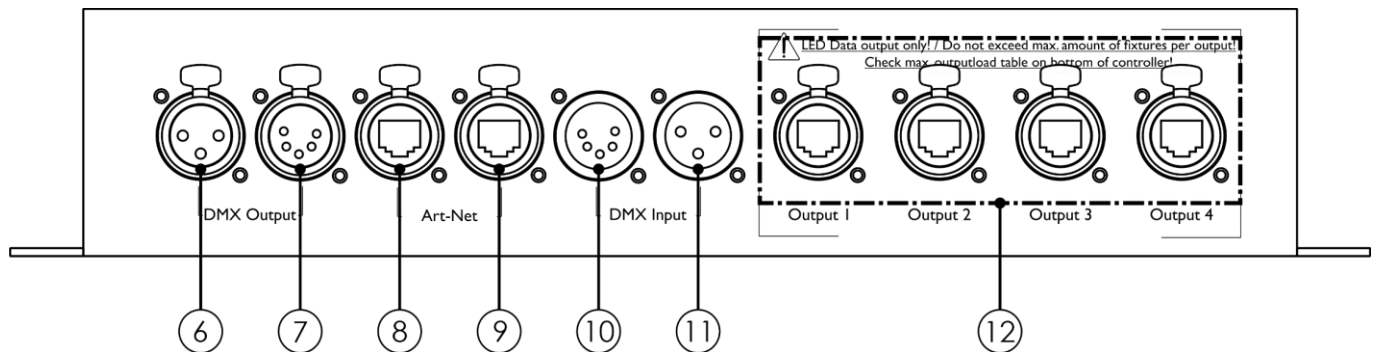


Fig. 03

- 06) 3-pin DMX connector OUT
- 07) 5-pin DMX connector OUT
- 08) RJ45 connector Art-Net IN/OUT
- 09) RJ45 connector Art-Net IN/OUT
- 10) 5-pin DMX connector IN
- 11) 3-pin DMX connector IN
- 12) Dedicated RJ45 Pixelstrip/Pixeltube/PixelDot connectors OUT 1-4

3.3. Side View

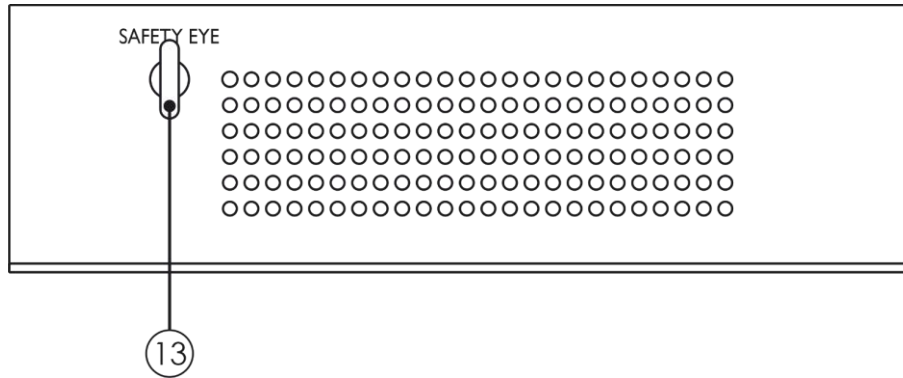


Fig. 04

13) Safety eye

3.4. Product Specifications

Model:	Pixel Controller	
Electrical:		
Input voltage:	100–240 V AC, 50/60 Hz	
Power consumption:	230 W	
Fuse:	T6,3A/250 V	
Physical:		
Dimensions:	342 x 210 x 68 mm (L x W x H)	
Weight:	2,03 kg	
Operation and control:		
Control:	Auto, Manual, Master/Slave, DMX-512, Art-Net, Kling-Net	
DMX channels:	See 6.7. DMX Channels on pages 33–51 for more information	
Control protocols:	DMX-512, Art-Net, Kling-Net	
Control panel:	OLED display and buttons	
Connections:		
Power connections:	Pro power connectors IN/OUT	
Input connections:	3-pin/5-pin DMX connectors IN, 2 x Art-Net RJ45 connectors IN/OUT	
Output connections:	3-pin/5-pin DMX connectors OUT, 4 x dedicated RJ45 connectors OUT	
Maximum cable length:	10 m (CAT-5/CAT-6) from the Pixel Controller to the Pixelstrip/Pixeltube/PixelDot	
Maximum output length:	Pixelstrip 20/40: 4 m per output; 16 m per controller Pixeltube 16/32: 5 m per output; 20 m per controller PixelDot: 40 x PixelDot per output; 160 x PixelDot per controller	
Construction:		
Housing:	Metal	
Color:	Black	
IP rating:	IP20	
Cooling:	Convection	
Thermal:		
Maximum ambient temperature t_a :	40 °C	
Maximum housing temperature t_c :	70 °C	

3.5. Compatibility



Attention

The Pixel Controller is designed to be operated **ONLY** with the Pixelstrip 20/40, Pixeltube 16/32 or PixelDot.

The Pixel Controller is delivered without the Pixelstrip/Pixeltube/PixelDot. You need to purchase these devices separately.

- Product code: [44501](#) (Pixelstrip 20, 50 cm)
- Product code: [44502](#) (Pixelstrip 40, 100 cm)
- Product code: [44520](#) (Pixeltube 32)
- Product code: [44521](#) (Pixeltube 16)
- Product code: [44530](#) (PixelDot)

3.6. Recommended Software

- Product code: [50180](#) (Arkaos LED Master)
- Product code: [102101](#) (Arkaos Media Master Express 5.0)
- Product code: [102201](#) (Arkaos Media Master Pro 5.0)

3.7. Dimensions

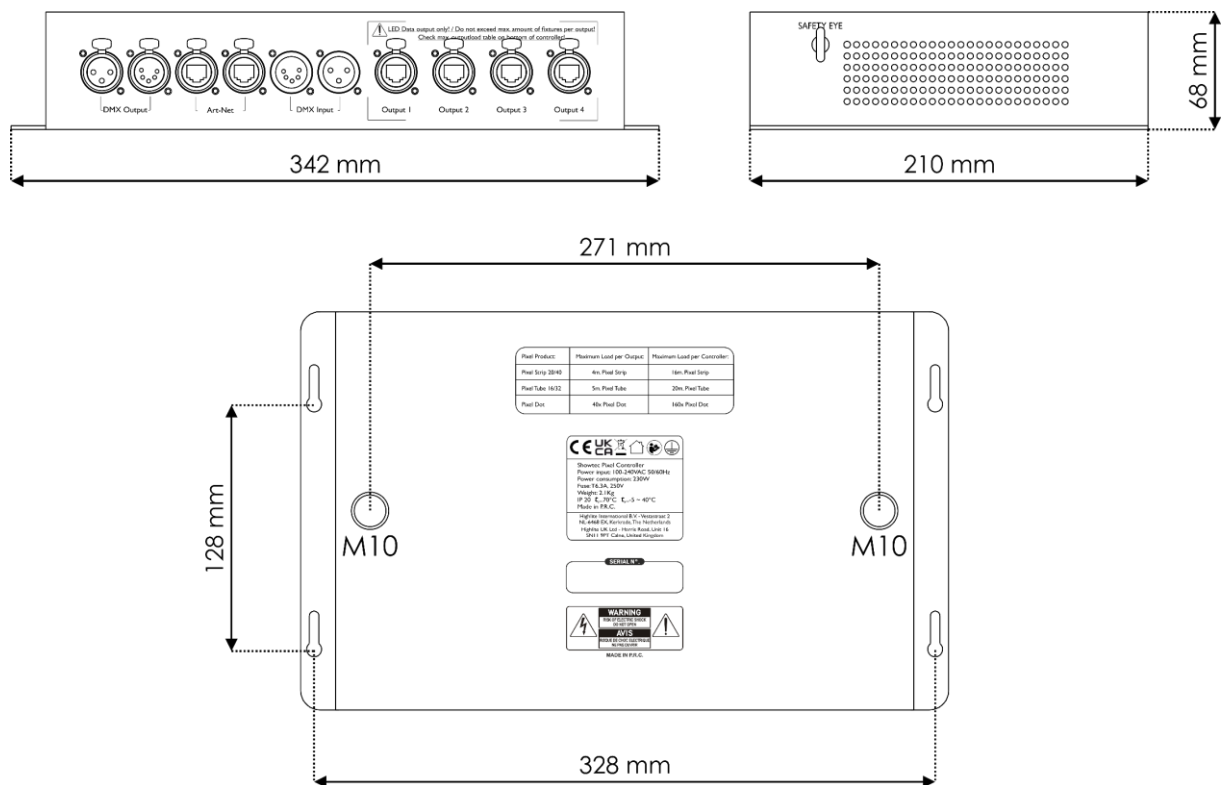


Fig. 05

4. Installation

4.1. Safety Instructions for Installation



Attention

Make sure there is enough space for ventilation around the device.

- Do not block the ventilation openings. Without proper heat dissipation and air circulation, the internal components may overheat. This can result in product damage.
- Do not install near equipment that produces heat, for example amplifiers.

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 must be installed only indoors.
- The device can be placed on a flat surface or mounted to any kind of truss, with clamps and/or M5/M10 screws for fixed installations.
- 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. Make sure that all loads are within the pre-determined limits of the supporting structure.



CAUTION

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

To mount the device, follow the steps below:

- 01) Use clamps to attach the device to the supporting structure, as shown in Fig. 06 on page 13. Make sure that the device cannot move freely.
- 02) Secure the device with a secondary suspension, for example a safety cable. Make sure that the secondary suspension can hold 10 times the weight of the device. If possible, the secondary suspension should be attached to a supporting structure independent of the primary suspension. Put the safety cable through the **safety eye (13)**, as shown in Fig. 06 on page 13. You can use the safety cable supplied with the device.
- 03) It is also possible to mount the device with 4 x M5 screws. Drill holes in the wall, place the controller on the wall and tighten the screws.

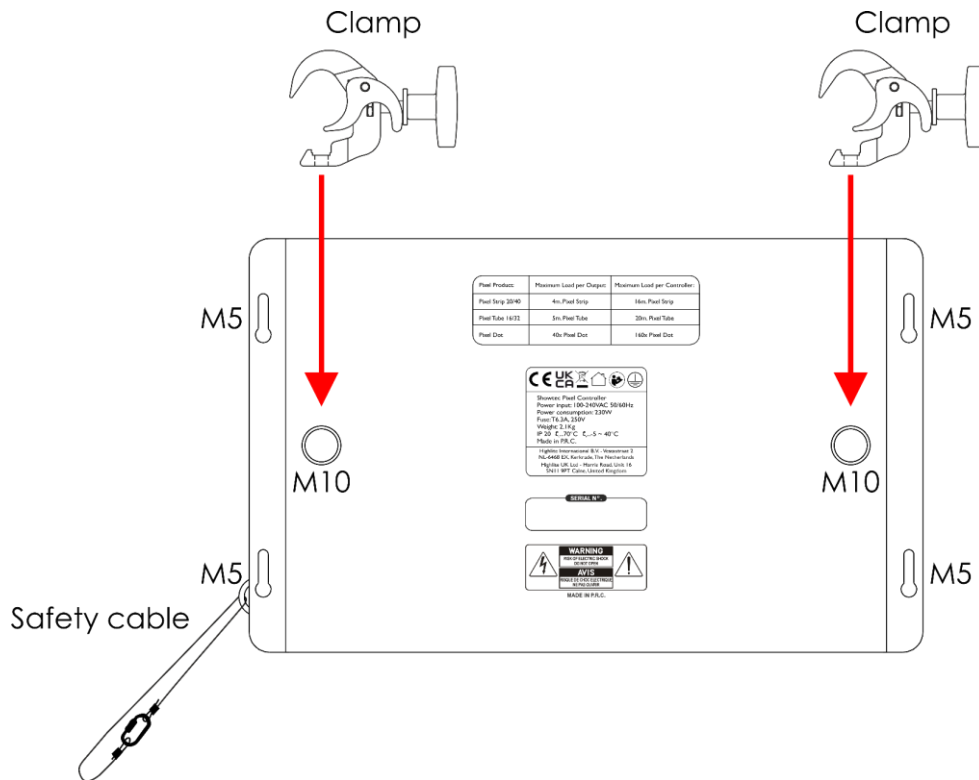


Fig. 06

4.5. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

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

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

Before connecting the device to the socket-outlet:

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

Connect the device to the socket-outlet with the power plug.

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: 5 devices
- at 200–240 V: 10 devices

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. DMX Connection

5.2.1. 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 Pixel Controller 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

5.2.2. 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. 07.

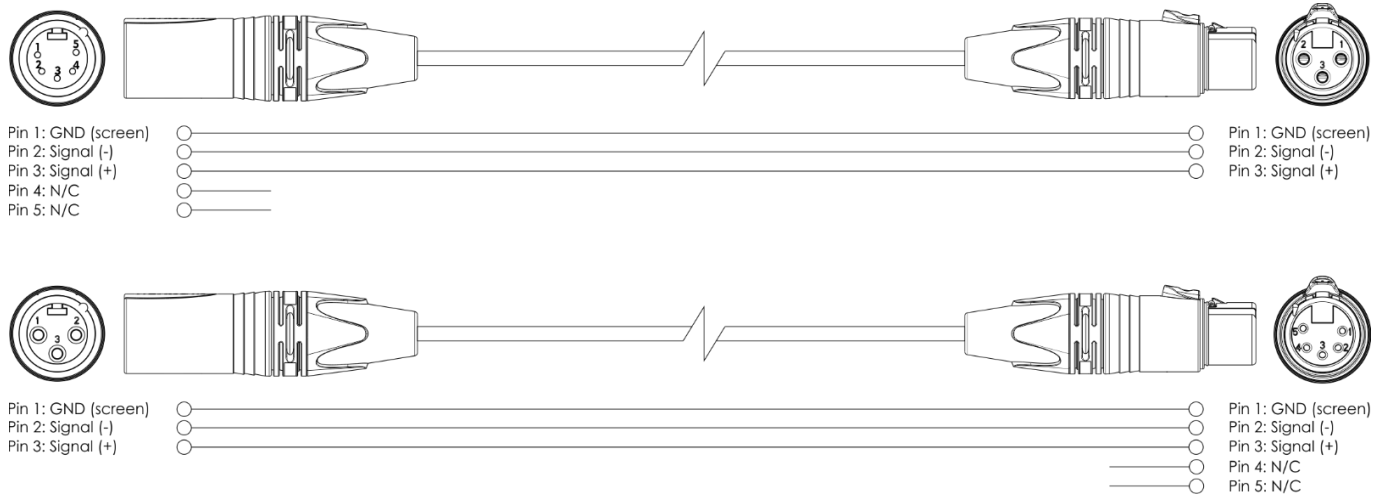


Fig. 07

5.2.3. Master/Slave Setup

The Pixel Controller supports master/slave control mode. You can connect the Pixelstrip 20/40 (max. 4 m per output), Pixeltube 16/32 (max. 5 m per output) or PixelDots (max. 40 devices per output) to the Pixel Controller. In the example below, the Pixelstrip 40 is connected to the Pixel Controller.

To connect multiple devices in master/slave setup, follow the steps below:

- 01) Connect the first device's DMX OUT connector to the second device's DMX IN connector with a 3-pin/5-pin DMX cable.
- 02) Repeat step 1 to connect all devices as shown in Fig. 08.
- 03) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device in the setup.
- 04) Set the first device on the data link as a master device. See **6.6.3.6. Slave** on page 30 for more information.
- 05) Set the remaining devices as slave devices. See **6.6.3.6. Slave** on page 30 for more information.

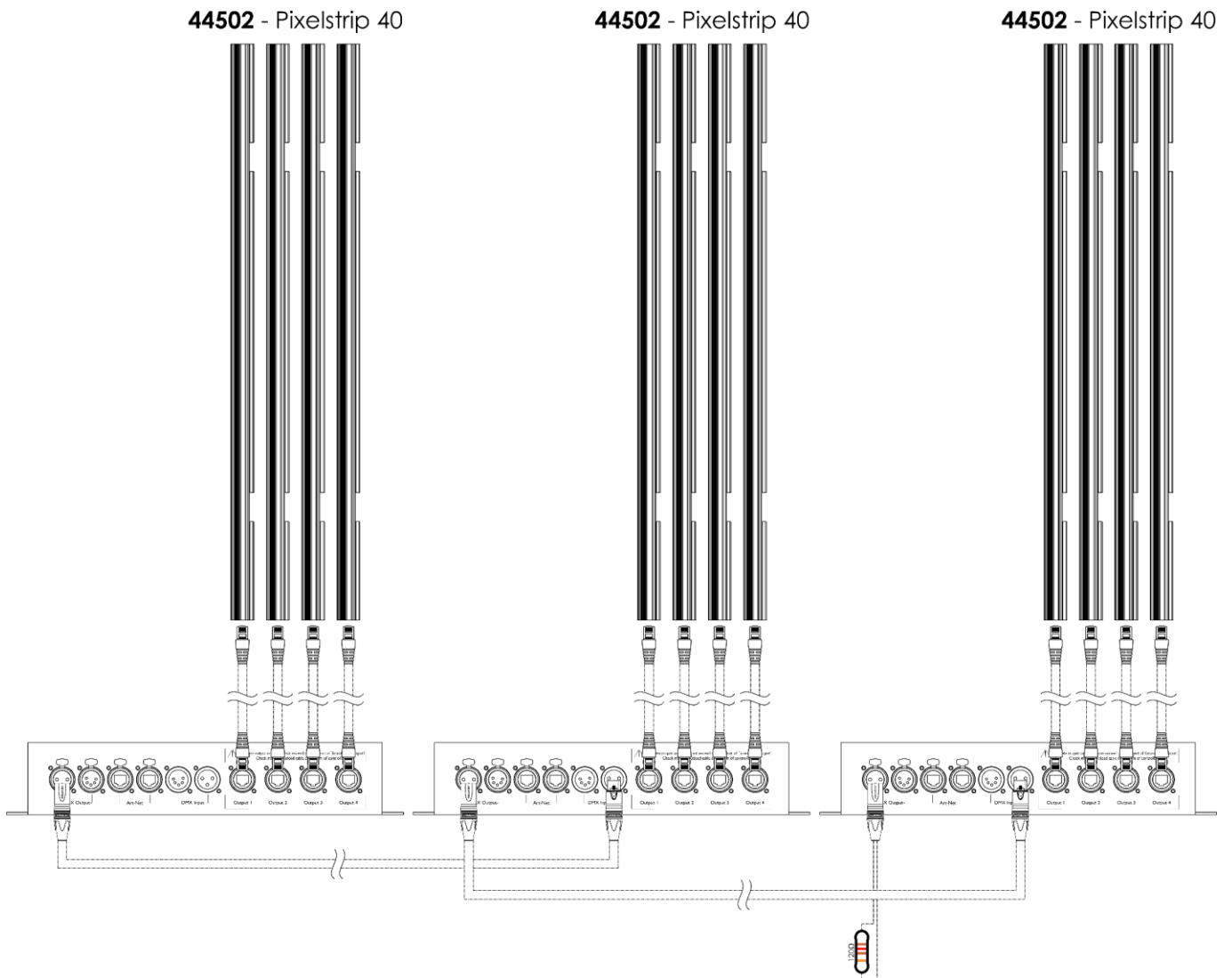


Fig. 08

5.2.4. DMX Linking

You can connect the Pixelstrip 20/40 (max. 4 m per output), Pixeltube 16/32 (max. 5 m per output) or PixelDots (max. 40 devices per output) to the Pixel Controller. In the example below, the Pixelstrip 40 is connected to the Pixel Controller.

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

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

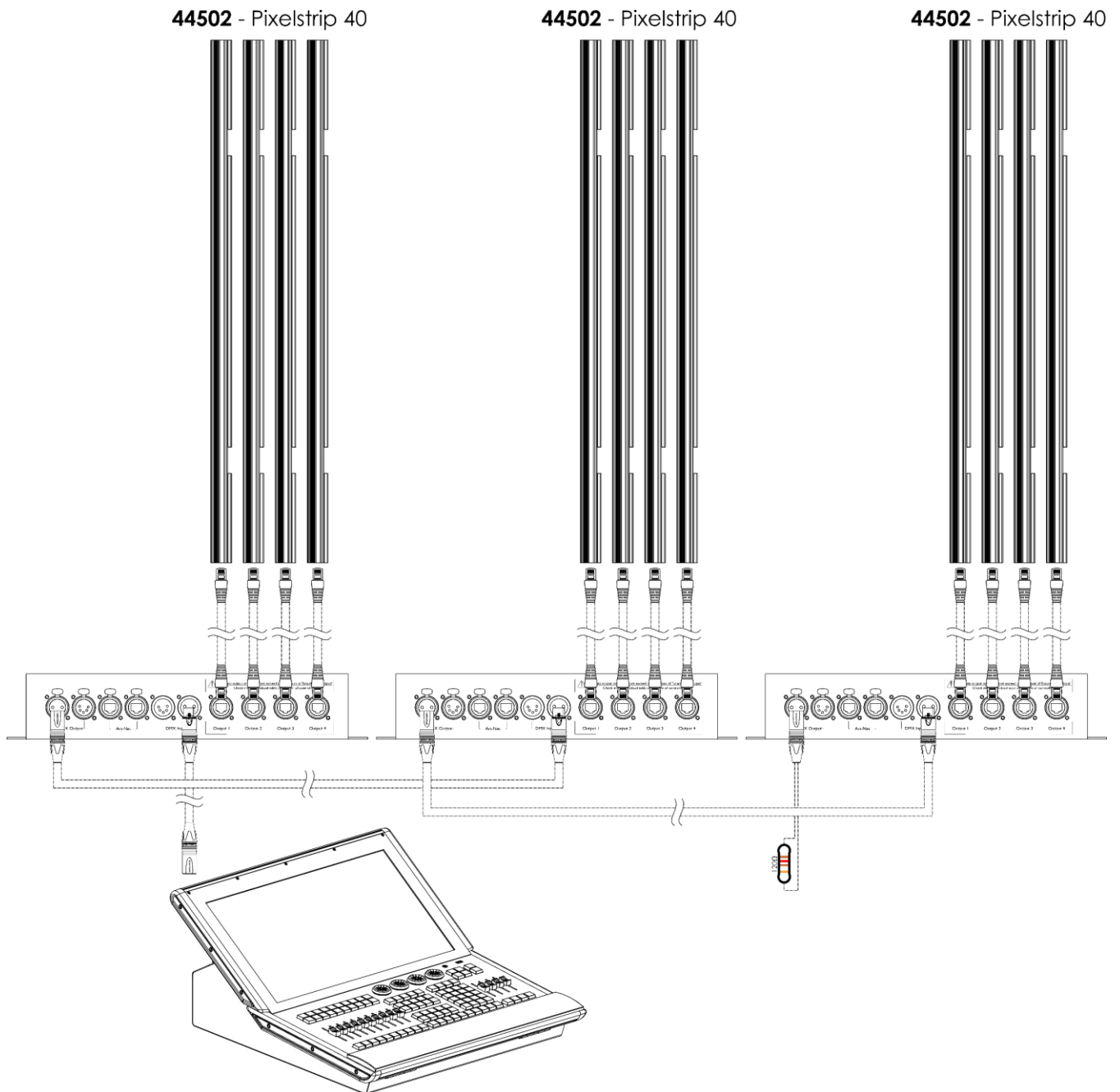


Fig. 09

5.2.5. DMX Addressing

In a setup with multiple devices, make sure that you set the DMX starting address of each device correctly. The Pixel Controller has many different personalities, depending on what device is connected to it: Pixelstrip, Pixeltube or PixelDot. For example, if you want to connect multiple Pixel Controllers on one data link and use them in 7-channel mode, 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 8 (008), as $1 + 7 = 8$.
- 03) Set the starting address of the 3rd device on the data link to 15 (015) as $8 + 7 = 15$.
- 04) Continue assigning the starting addresses of the remaining devices by adding each time 7 to the previous number.

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

5.3. Ethernet Connection



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

5.3.1. Art-Net and Kling-Net Protocols

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

Kling-Net is a protocol that allows the creation of a network of LED devices, which are automatically configured. Kling-Net is independent of DMX-512 or Art-Net protocols. It uses a standard Ethernet network.

5.3.2. Network Cables

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

If you make your own network cables, make sure that you connect the pins and wires correctly as shown in Fig. 10. Use RJ45 (8P8C) connectors and patch the cables according to the T568B color standard.

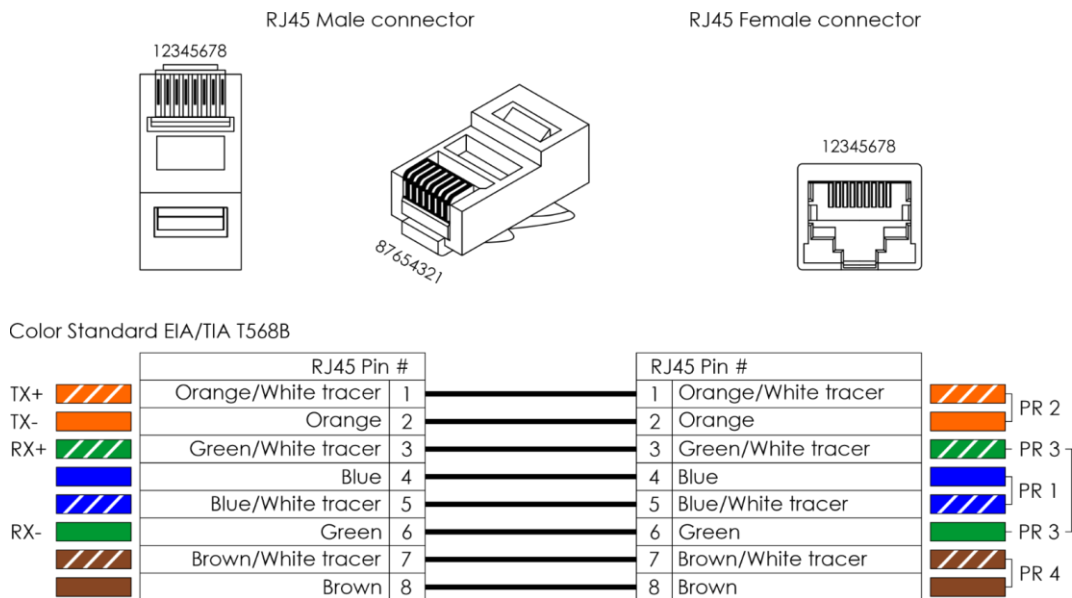


Fig. 10

5.3.3. Art-Net/Kling-Net Setup

The Pixel Controller has 2 RJ45 connectors. Either connector can be used as an input and as throughput.

You can connect the Pixelstrip 20/40 (max. 4 m per output), Pixeltube 16/32 (max. 5 m per output) or PixelDots (max. 40 devices per output) to the Pixel Controller. In the example below, the Pixelstrip 40 is connected to the Pixel Controller.

To connect multiple devices in an Art-Net/Kling-Net setup, follow the steps below:

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

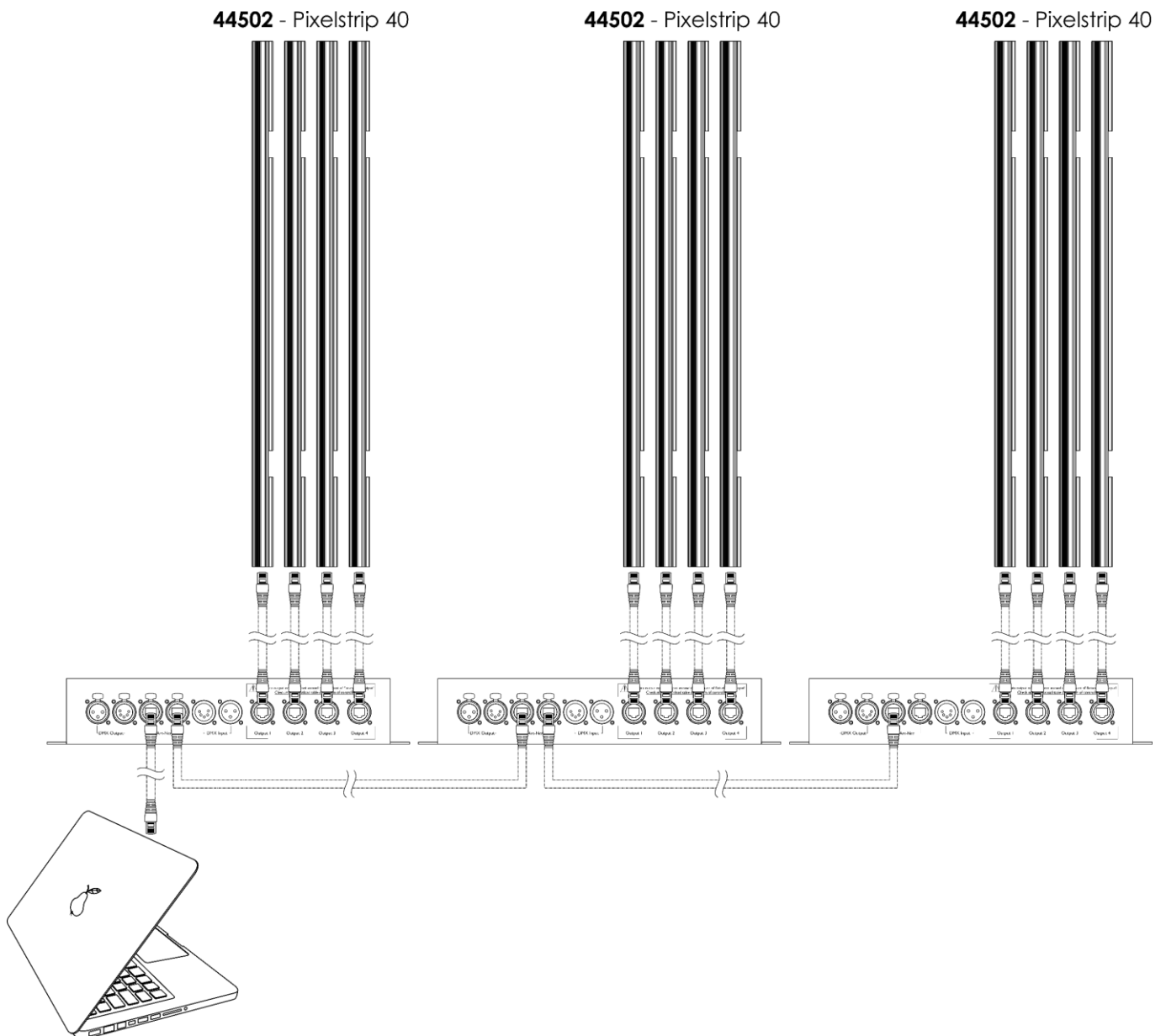


Fig. 11

5.3.4. Art-Net Settings

To run your device using Art-Net protocol:

- 01) Configure the network address of your computer/lighting controller in the correct range (IP 2.x.x.x, 10.x.x.x or 192.168.x.x and Subnet 255.0.0.0). To change the IP address of the device, refer to **6.6.2.1. Set Manual/DHCP** on page 26 and **6.6.2.2. Set IP Address** on page 26. To change the Subnet mask, refer to **6.6.2.3. Set Net Mask** on page 26. Make sure that all devices in the network have unique IP addresses.

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

- 02) Select Art-Net Protocol in the Set Net Protocol menu. See **6.6.3.4. Art-Net** or **6.6.3.5. Kling-Net** on page 29.
- 03) Set the universe. See **5.3.6. Universe Numbering** on page 21.

5.3.5. Kling-Net Settings

To run your device using Kling-Net protocol:

- 01) Install any Kling-Net-based software on your computer.
- 02) Make sure that your computer has a fixed IP address.
- 03) Select KlingNet IP in **6.6.2.1. Set Manual/DHCP** on page 26. The Kling-Net-based software will automatically configure the IP address of the device.
- 04) Select KlingNet Protocol in the Set Net Protocol menu. See **6.6.3.5. Kling-Net** on page 29.
- 05) Map the device following the instructions of the Kling-Net-based software.

5.3.6. Universe Numbering

If you want to connect more than 5 devices on one data link and use them in 96-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 **5.2.5. 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. This device supports 256 universes (0–255).

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 Pixel Controller 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 pixel controller. 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 Pixel Controller supports the following control modes:

- Stand-alone: Auto, Manual
- Master/Slave
- DMX-512 See **6.7. DMX Channels** on pages 33–51 for more information
- Art-Net, Kling-Net See **6.7. DMX Channels** on pages 33–51 for more information

For more information about how to connect the devices, refer to **5. Setup** on pages 14–21.

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

- 01) Adjust the levels for red, green, blue and strobe in Manual menu. See **6.6.3.8. Manual** on page 31 for more information.

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

- 01) Select one of the 30 built-in programs in Auto menu. See **6.6.3.7. Auto** on page 30 for more information.
- 02) Set the speed of the built-in chase in Auto menu. See **6.6.3.7. Auto** on page 30 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 **5.2.5. DMX Addressing** on page 18 and **6.6.1. DMX Address** on page 25.
- 02) Select the DMX channel mode. See **6.6.3.3. DMX** on page 28 for more information. See **6.7. DMX Channels** on pages 33–51 for complete overview of all DMX channels.

6.3. Control Panel

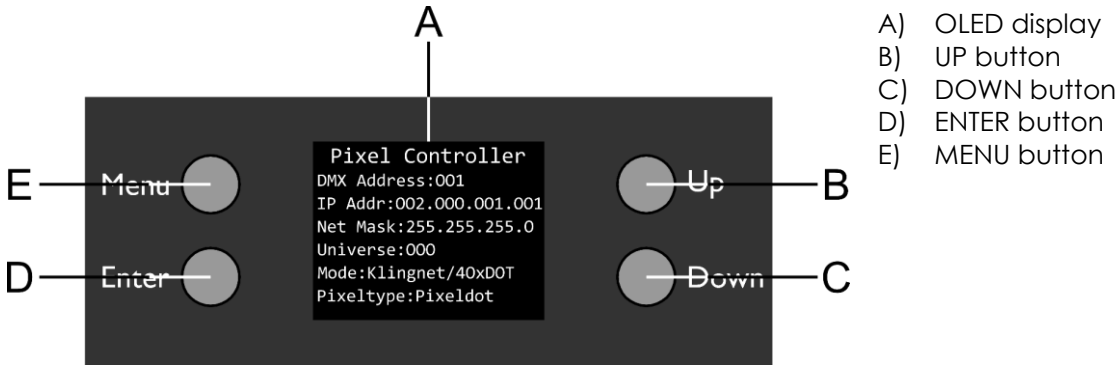
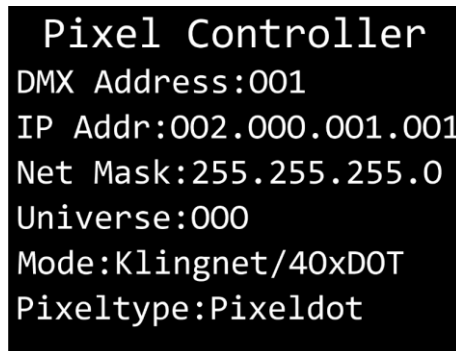


Fig. 12

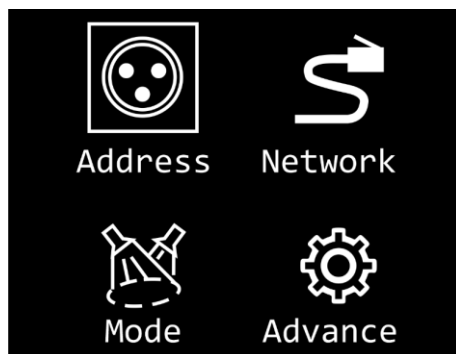
- Use the **MENU** button to exit the current submenu, to return to the main menu and to return to the start screen.
- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **ENTER** button to open the desired menu, to confirm your choice or to set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

6.4. Start-up

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

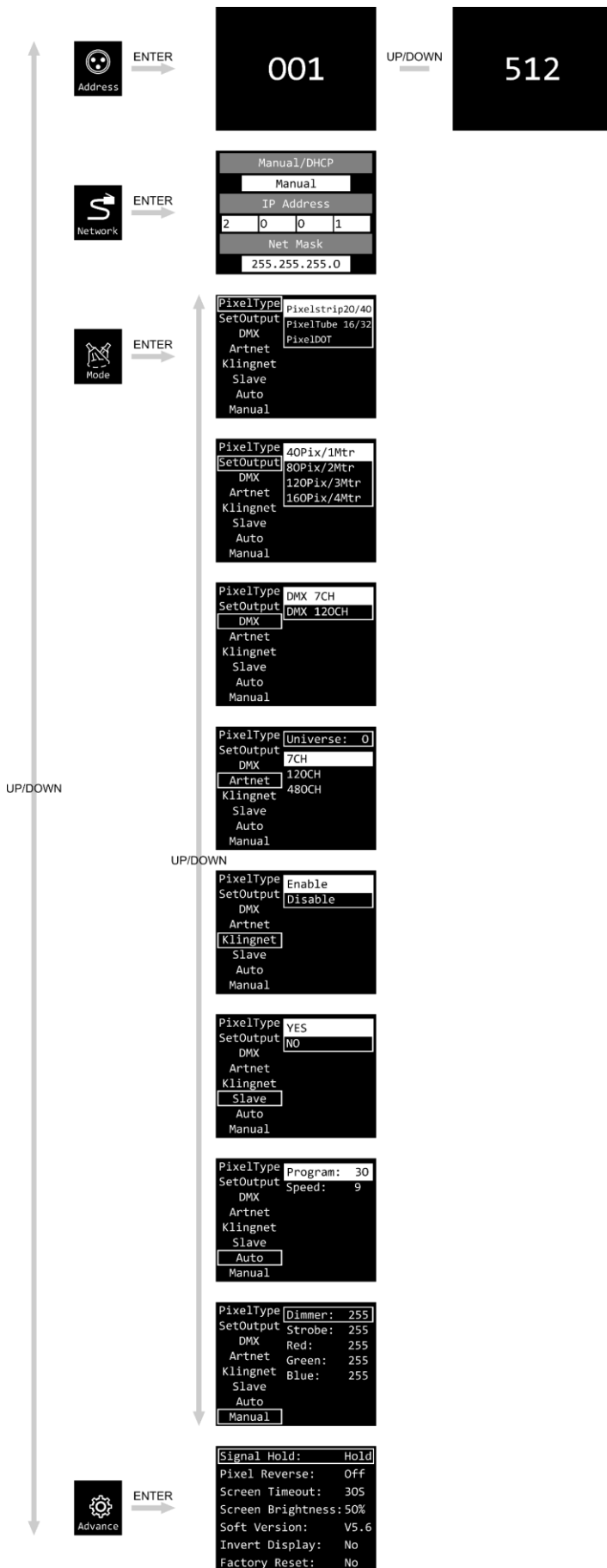


When you press the **MENU** button, the Pixel Controller will show its main menu :



Note: If no button is pressed, the display will turn off. Press any button to turn the display on. See **6.6.4.3. Screen Timeout** on page 32 for more information.

6.5. Menu Overview



6.6. Main Menu Options

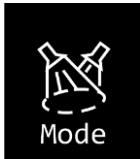
The main menu has the following options:



DMX Address



Network Settings



Pixel Type / Set Output / DMX / Art-Net / Kling-Net / Slave / Auto / Manual




Signal Hold / Pixel Reverse / Screen Timeout / Screen Brightness / Software Version / Invert Display / Factory Reset

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

6.6.1. DMX Address

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



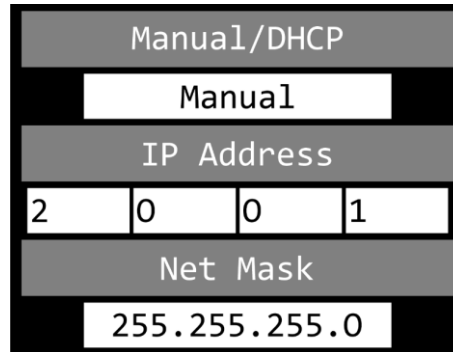
- 01) While in main menu, press the **UP/DOWN** buttons to select  .
- 02) Press the **ENTER** button to confirm and open this menu.
- 03) Press the **UP/DOWN** buttons to select the DMX starting address. The selection range is 001–512.
- 04) Press the **ENTER** button to confirm the selection.

6.6.2. Network Settings

In this menu you can set the network settings.



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



6.6.2.1. Set Manual/DHCP

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

6.6.2.2. Set IP Address

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

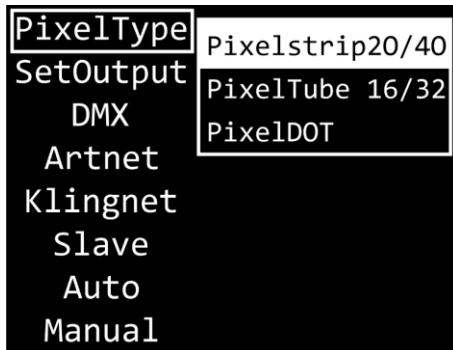
6.6.2.3. Set Net Mask

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

6.6.3. Control Modes



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

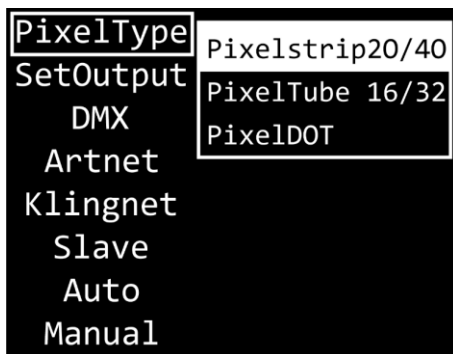


- 03) Press the **UP/DOWN** buttons to select one of the 8 modes:
 - PIXEL TYPE
 - SET OUTPUT
 - DMX
 - ART-NET
 - KLING-NET
 - SLAVE
 - AUTO
 - MANUAL
- 04) Press the **ENTER** button to open the desired menu.

6.6.3.1. Pixel Type

In this menu you can define what device is connected to the Pixel Controller.

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



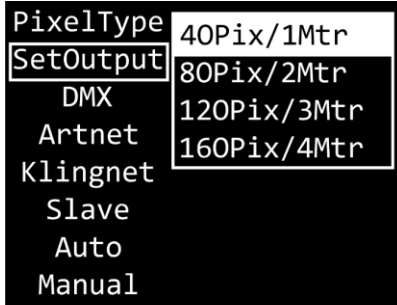
- 02) Press the **UP/DOWN** buttons to select one of the 3 devices:
 - Pixelstrip 20/40
 - Pixeltube 16/32
 - PixelDot
- 03) Press the **ENTER** button to confirm your choice. The Pixel Controller will reset and load the options necessary for the correct functioning of the selected device.

Note: Do not combine Pixelstrips, Pixeltubes and PixelDots on the same Pixel Controller at the same time. The devices will not work properly. Connect only one of these 3 devices at a time.

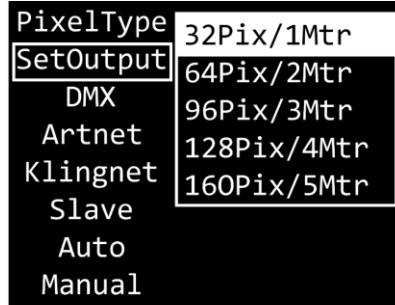
6.6.3.2. Set Output

In this menu you can set the output mode.

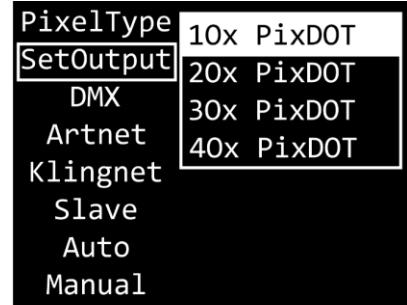
01) When the display shows SETOUTPUT, press the **ENTER** button to open the menu. The display will show the available output options, depending on what device was chosen in **6.6.3.1. Pixel Type** on page 27:



Pixelstrip 20/40



Pixeltube 16/32



PixelDot

02) Press the **UP/DOWN** buttons to select one of the available output modes.

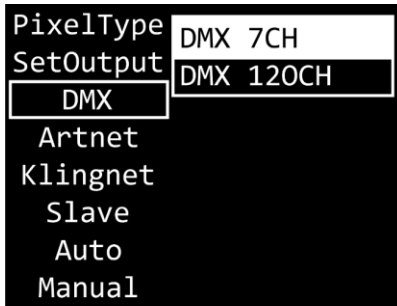
Note: You can connect the Pixelstrip 20/40 (max. 4 m per output), Pixeltube 16/32 (max. 5 m per output) or PixelDots (max. 40 devices per output) to the Pixel Controller. Your selected output mode should correspond with the number and/or total length of the connected devices.

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

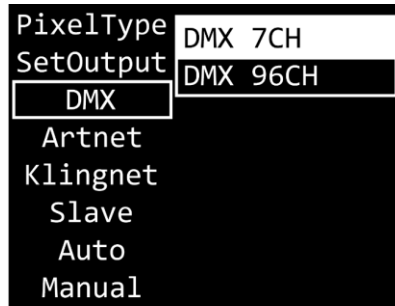
6.6.3.3. DMX

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

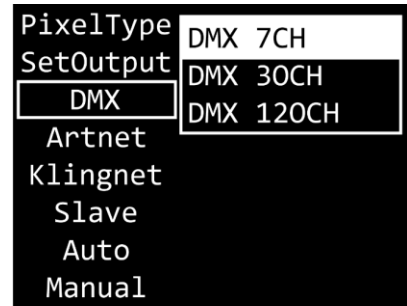
01) When the display shows DMX, press the **ENTER** button to open the menu. The display will show the available channel modes, depending on what options were chosen in **6.6.3.1. Pixel Type** on page 27 and in **6.6.3.2. Set Output** on page 28:



Pixelstrip 20/40



Pixeltube 16/32



PixelDot

02) Press the **UP/DOWN** buttons to select one of the available channel modes. See **6.7. DMX Channels** on pages 33–51 for more information.

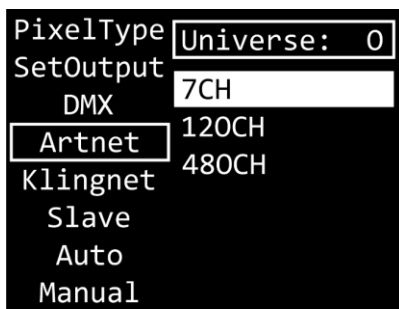
03) Press the **ENTER** button to confirm your choice.

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

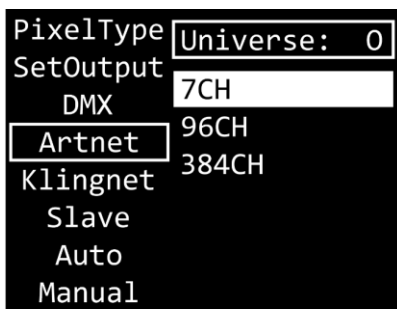
6.6.3.4. Art-Net

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

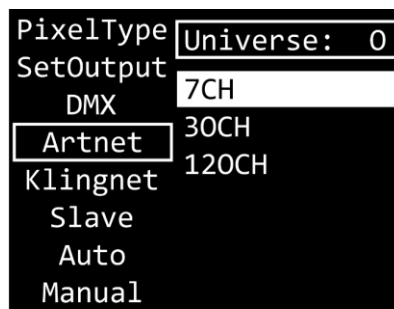
- 01) When the display shows ARTNET, press the **ENTER** button to open the menu. The display will show the available Art-Net options, depending on what options were chosen in **6.6.3.1. Pixel Type** on page 27 and in **6.6.3.2. Set Output** on page 28:



Pixelstrip 20/40



Pixeltube 16/32



PixelDot

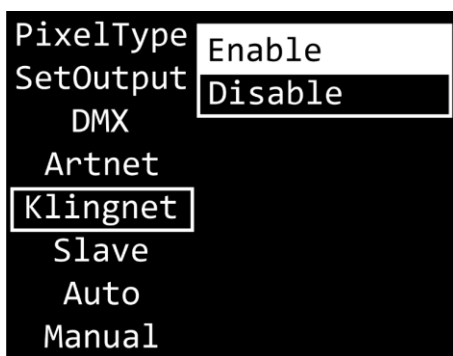
- 02) Press the **UP/DOWN** buttons to select UNIVERSE and press the **ENTER** button to confirm.
 03) Press the **UP/DOWN** buttons to set the universe. The adjustment range is 0–255.
 04) Press the **ENTER** button to save changes.
 05) Press the **UP/DOWN** buttons to select the channel mode selection field and press the **ENTER** button to confirm.
 06) Press the **UP/DOWN** buttons to select one of the available channel modes (depending on what device was chosen in **6.6.3.1. Pixel Type** on page 27).
 07) Press the **ENTER** button to confirm your choice.

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

6.6.3.5. Kling-Net

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

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



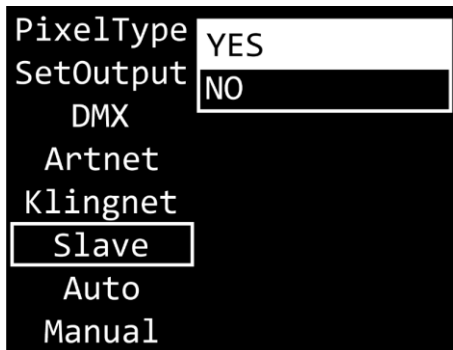
- 02) Press the **UP/DOWN** buttons to select ENABLE or DISABLE. If you choose ENABLE, Kling-Net protocol will be active.
 03) Press the **ENTER** button to confirm your choice.

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

6.6.3.6. Slave

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

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



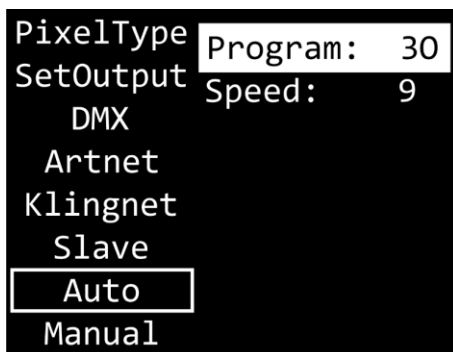
02) Press the **UP/DOWN** buttons to select YES or NO. If you choose YES, the device will react the same as the master device.

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

6.6.3.7. Auto

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

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



02) Press the **UP/DOWN** buttons to select PROGRAM and press the **ENTER** button to confirm.

03) Press the **UP/DOWN** buttons to select one of the 30 built-in programs.

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

05) Press the **UP/DOWN** buttons to select SPEED and press the **ENTER** button to confirm.

06) Press the **UP/DOWN** buttons to set the program speed. The adjustment range is 1–9, from slow to fast.

07) Press the **ENTER** button to save changes.

6.6.3.8. Manual

In this menu you can run Manual mode.

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

PixelType	Dimmer: 255
SetOutput	Strobe: 255
DMX	Red: 255
Artnet	Green: 255
Klingnet	Blue: 255
Slave	
Auto	
Manual	

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

- DIMMER: Dimmer brightness (0–255, from dark to brightest)
- STROBE: Strobe frequency (0–4, strobe OFF; 5–255, from low to high frequency)
- RED: Red color brightness (0–255, from dark to brightest)
- GREEN: Green color brightness (0–255, from dark to brightest)
- BLUE: Blue color brightness (0–255, from dark to brightest)

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

04) Press the **UP/DOWN** buttons to adjust the values.

05) Press the **ENTER** button to save changes.

Note: You can combine RED, GREEN and BLUE to create an infinite range of colors.

6.6.4. Advanced Settings



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

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

Signal Hold:	Hold
Pixel Reverse:	Off
Screen Timeout:	30S
Screen Brightness:	50%
Soft Version:	V5.6
Invert Display:	No
Factory Reset:	No

03) Press the **UP/DOWN** buttons to select one of the 7 options:

- SIGNAL HOLD
- PIXEL REVERSE
- SCREEN TIMEOUT
- SCREEN BRIGHTNESS
- SOFTWARE VERSION (V5.6)
- INVERT DISPLAY
- FACTORY RESET

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

05) Press the **UP/DOWN** buttons to change settings.

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

6.6.4.1. Signal Hold

In this menu you can determine the behaviour of the Pixel Controller in case of a DMX failure.

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

6.6.4.2. Pixel Reverse

In this menu you can set the pixel direction.

- 01) Press the **UP/DOWN** buttons to select one of the 2 options:
 - **ON**: Pixel direction reverse is enabled.
 - **OFF**: Pixel direction reverse is disabled.
- 02) Press the **ENTER** button to confirm your choice.

6.6.4.3. Screen Timeout

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

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

6.6.4.4. Screen Brightness

In this menu you can set the screen brightness.

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

6.6.4.5. Software Version

This menu shows the version of the currently installed software.

6.6.4.6. Invert Display

In this menu you can set the display inversion.

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

6.6.4.7. Factory Reset

In this menu you can restore the default factory settings.

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

6.7. DMX Channels

The available DMX channel modes depend on the device connected to the Pixel Controller (see **6.6.3.1. Pixel Type** on page 27) as well as on the selected output mode (see **6.6.3.2. Set Output** on page 28).

6.7.1. Pixelstrip 20/40

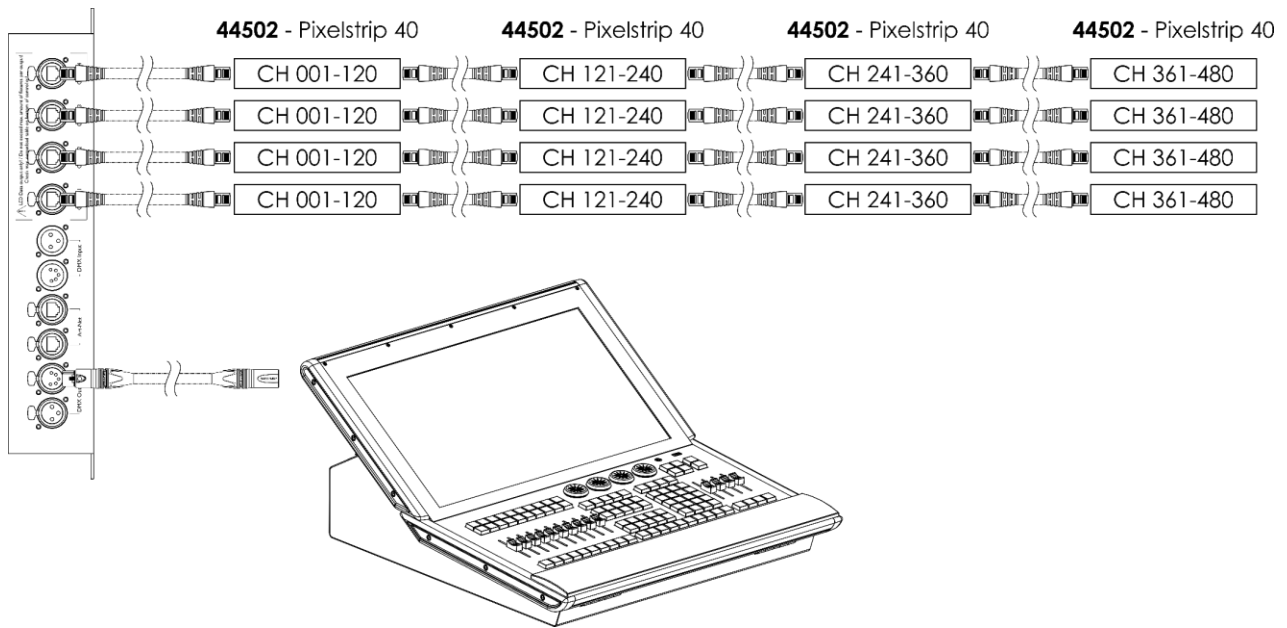
6.7.1.1. 7 Channels

7 CH	Function	Value	Setting
1	Master Dimmer	000–255	From low to high intensity (0–100 %)
2	Strobe	000–004	Strobe off
		005–255	From low to high frequency
3	Red	000–255	From low to high intensity (0–100 %)
4	Green	000–255	From low to high intensity (0–100 %)
5	Blue	000–255	From low to high intensity (0–100 %)
6	Built-in programs	000–015	Not functional
		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	Programs 1–29		
7	Program speed	000–255	From slow to fast

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

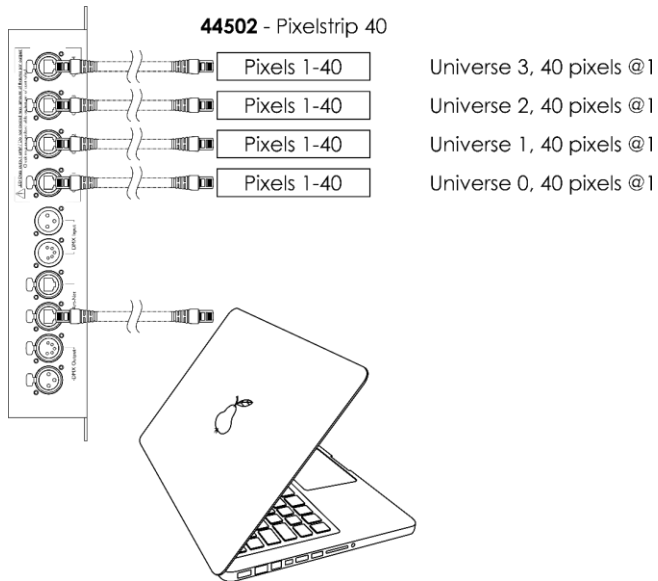
Note: Make sure that the Built-in Programs channel is closed in order to use the Red, Green and Blue channels.

6.7.1.2. 120, 240, 360, 480 Channels



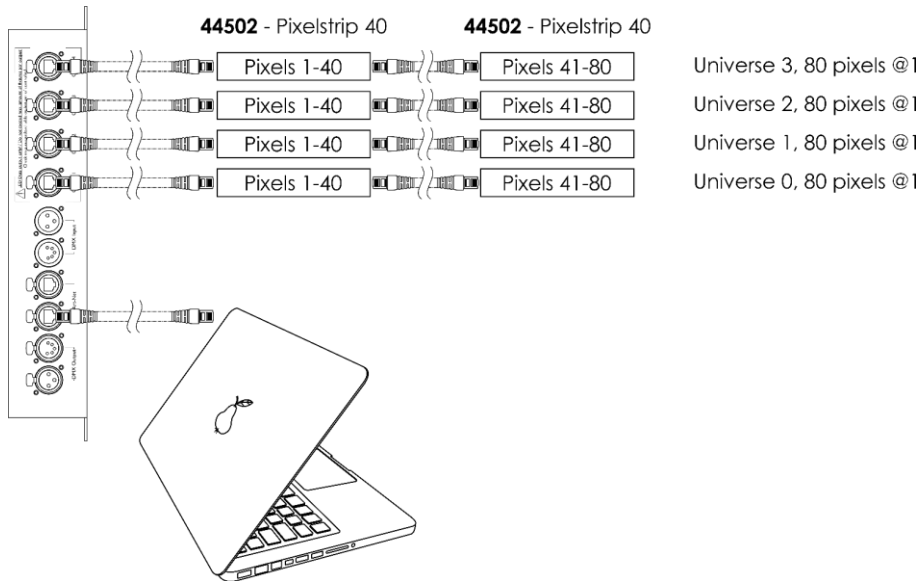
120 CH	240 CH	360 CH	480 CH	Function	Value	Setting
1	1	1	1	Red (pixel 1)	000-255	From low to high intensity (0-100 %)
2	2	2	2	Green (pixel 1)	000-255	From low to high intensity (0-100 %)
3	3	3	3	Blue (pixel 1)	000-255	From low to high intensity (0-100 %)
4	4	4	4	Red (pixel 2)	000-255	From low to high intensity (0-100 %)
5	5	5	5	Green (pixel 2)	000-255	From low to high intensity (0-100 %)
6	6	6	6	Blue (pixel 2)	000-255	From low to high intensity (0-100 %)
7	7	7	7	Red (pixel 3)	000-255	From low to high intensity (0-100 %)
8	8	8	8	Green (pixel 3)	000-255	From low to high intensity (0-100 %)
9	9	9	9	Blue (pixel 3)	000-255	From low to high intensity (0-100 %)
10	10	10	10	Red (pixel 4)	000-255	From low to high intensity (0-100 %)
11	11	11	11	Green (pixel 4)	000-255	From low to high intensity (0-100 %)
12	12	12	12	Blue (pixel 4)	000-255	From low to high intensity (0-100 %)
...			
	118	118	118	Red (pixel 40)	000-255	From low to high intensity (0-100 %)
	119	119	119	Green (pixel 40)	000-255	From low to high intensity (0-100 %)
	120	120	120	Blue (pixel 40)	000-255	From low to high intensity (0-100 %)
			
	238	238	238	Red (pixel 80)	000-255	From low to high intensity (0-100 %)
	239	239	239	Green (pixel 80)	000-255	From low to high intensity (0-100 %)
	240	240	240	Blue (pixel 80)	000-255	From low to high intensity (0-100 %)
			
	358	358	358	Red (pixel 120)	000-255	From low to high intensity (0-100 %)
	359	359	359	Green (pixel 120)	000-255	From low to high intensity (0-100 %)
	360	360	360	Blue (pixel 120)	000-255	From low to high intensity (0-100 %)
			
	478	478	478	Red (pixel 160)	000-255	From low to high intensity (0-100 %)
	479	479	479	Green (pixel 160)	000-255	From low to high intensity (0-100 %)
	480	480	480	Blue (pixel 160)	000-255	From low to high intensity (0-100 %)

6.7.1.3. 480 Channels (Art-Net)



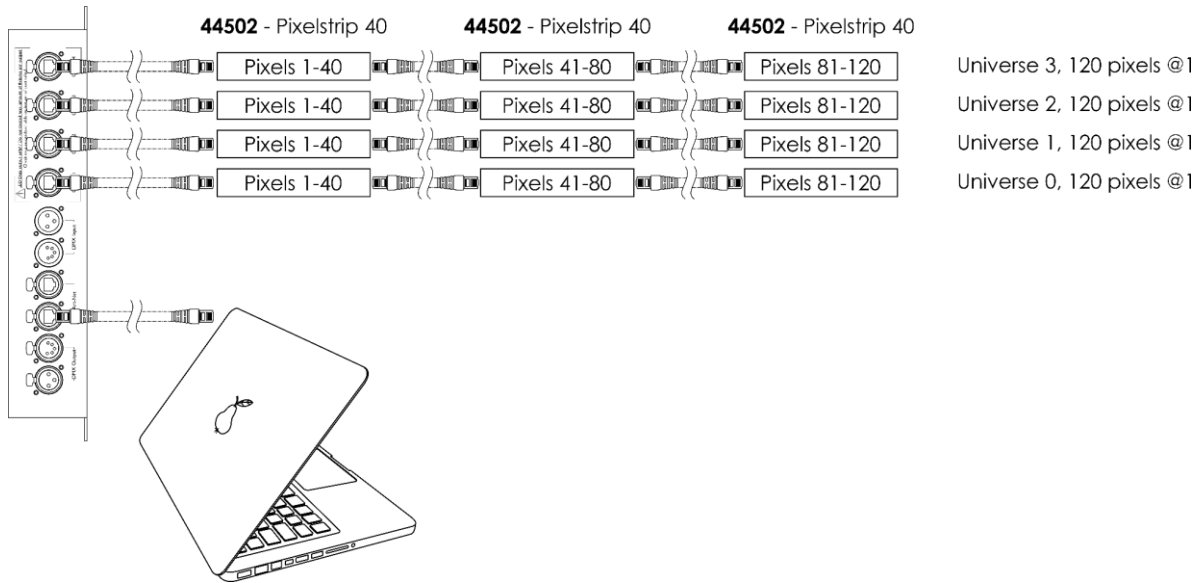
480 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
2	Green (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
3	Blue (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
4	Red (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
5	Green (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
6	Blue (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
7	Red (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
8	Green (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
9	Blue (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
10	Red (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
11	Green (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
12	Blue (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
...			
478	Red (pixel 40, universe 3)	000–255	From low to high intensity (0–100 %)
479	Green (pixel 40, universe 3)	000–255	From low to high intensity (0–100 %)
480	Blue (pixel 40, universe 3)	000–255	From low to high intensity (0–100 %)

6.7.1.4. 960 Channels (Art-Net)



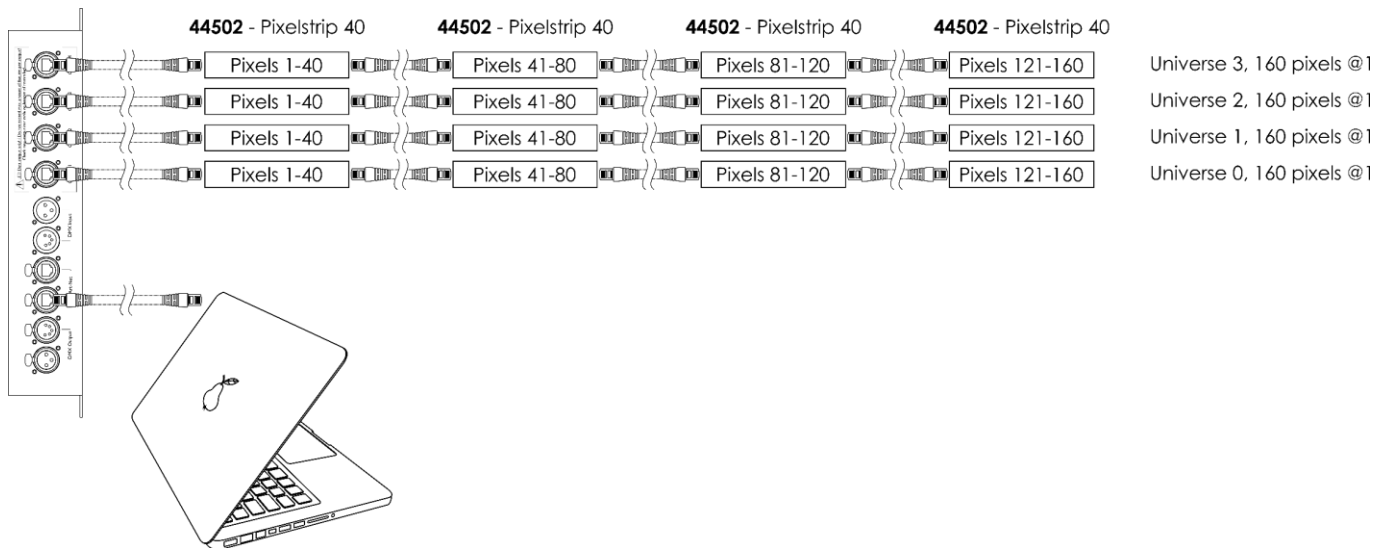
960 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
2	Green (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
3	Blue (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
4	Red (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
5	Green (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
6	Blue (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
7	Red (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
8	Green (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
9	Blue (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
10	Red (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
11	Green (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
12	Blue (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
...			
958	Red (pixel 80, universe 3)	000-255	From low to high intensity (0-100 %)
959	Green (pixel 80, universe 3)	000-255	From low to high intensity (0-100 %)
960	Blue (pixel 80, universe 3)	000-255	From low to high intensity (0-100 %)

6.7.1.5. 1440 Channels (Art-Net)



1440 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
2	Green (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
3	Blue (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
4	Red (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
5	Green (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
6	Blue (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
7	Red (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
8	Green (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
9	Blue (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
10	Red (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
11	Green (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
12	Blue (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
...			
1438	Red (pixel 120, universe 3)	000–255	From low to high intensity (0–100 %)
1439	Green (pixel 120, universe 3)	000–255	From low to high intensity (0–100 %)
1440	Blue (pixel 120, universe 3)	000–255	From low to high intensity (0–100 %)

6.7.1.6. 1920 Channels (Art-Net)



1920 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
2	Green (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
3	Blue (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
4	Red (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
5	Green (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
6	Blue (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
7	Red (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
8	Green (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
9	Blue (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
10	Red (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
11	Green (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
12	Blue (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
...			
1918	Red (pixel 160, universe 3)	000–255	From low to high intensity (0–100 %)
1919	Green (pixel 160, universe 3)	000–255	From low to high intensity (0–100 %)
1920	Blue (pixel 160, universe 3)	000–255	From low to high intensity (0–100 %)

6.7.2. Pixeltube 16/32

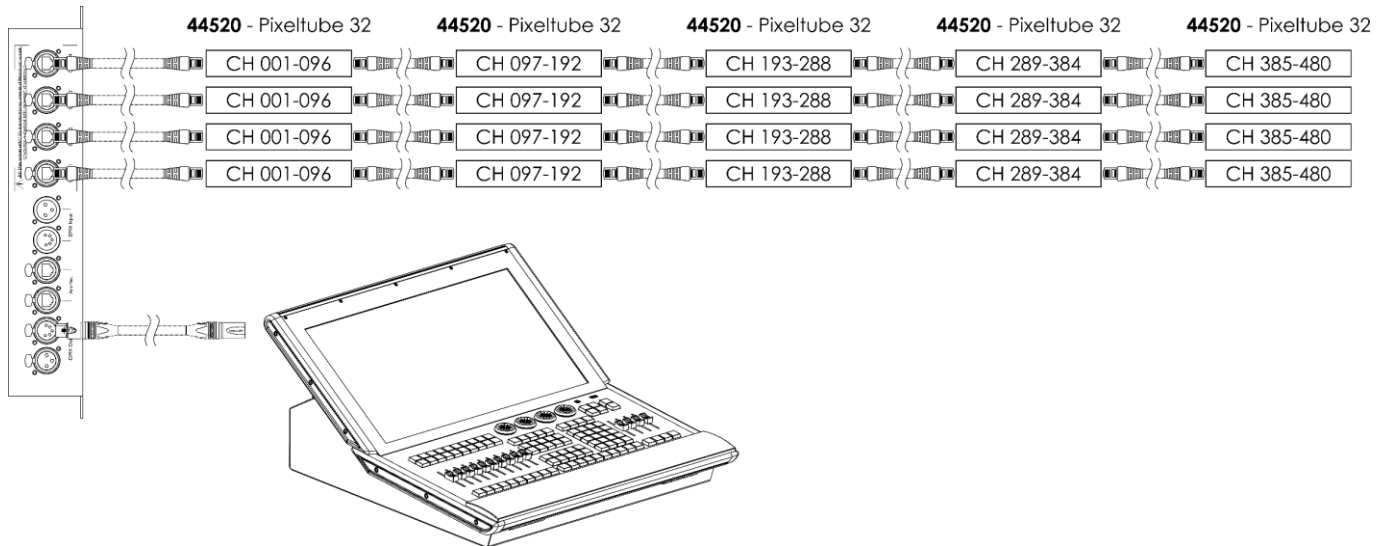
6.7.2.1. 7 Channels

7 CH	Function	Value	Setting
1	Master Dimmer	000–255	From low to high intensity (0–100 %)
2	Strobe	000–004	Strobe off
		005–255	From low to high frequency
3	Red	000–255	From low to high intensity (0–100 %)
4	Green	000–255	From low to high intensity (0–100 %)
5	Blue	000–255	From low to high intensity (0–100 %)
6	Built-in programs	000–015	Not functional
		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	Programs 1–29		
7	Program speed	000–255	From slow to fast

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

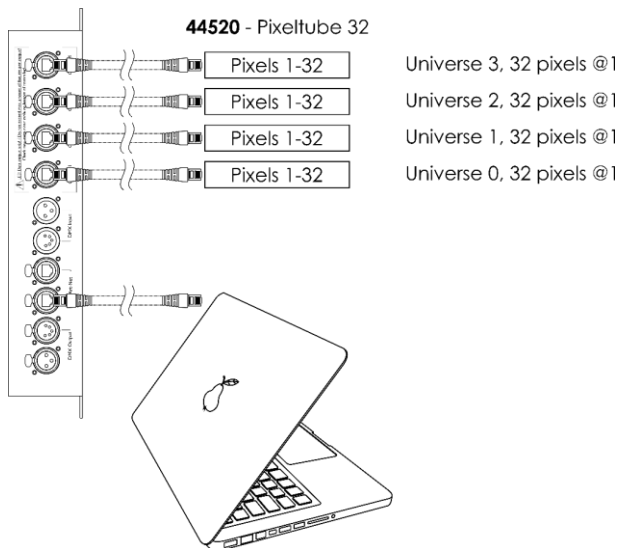
Note: Make sure that the Built-in Programs channel is closed in order to use the Red, Green and Blue channels.

6.7.2.2. 96, 192, 288, 384, 480 Channels



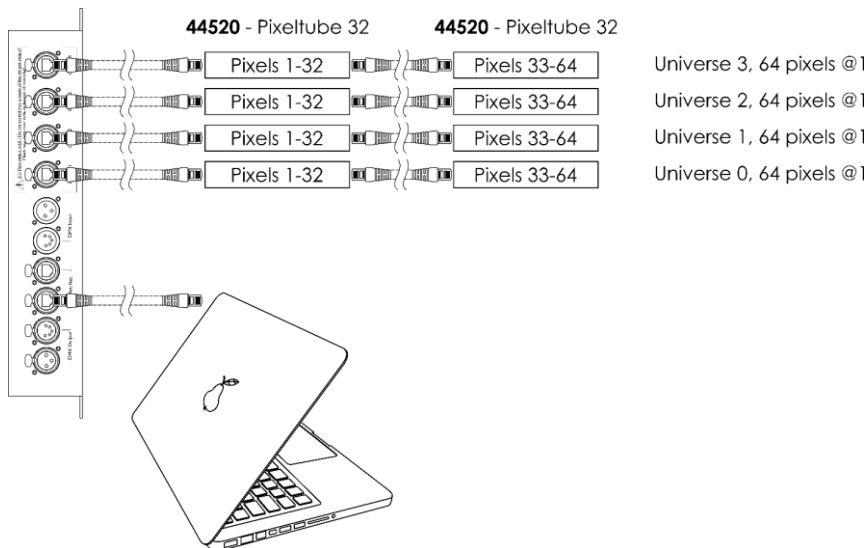
96 CH	192 CH	288 CH	384 CH	480 CH	Function	Value	Setting
1	1	1	1	1	Red (pixel 1)	000–255	From low to high intensity (0–100 %)
2	2	2	2	2	Green (pixel 1)	000–255	From low to high intensity (0–100 %)
3	3	3	3	3	Blue (pixel 1)	000–255	From low to high intensity (0–100 %)
4	4	4	4	4	Red (pixel 2)	000–255	From low to high intensity (0–100 %)
5	5	5	5	5	Green (pixel 2)	000–255	From low to high intensity (0–100 %)
6	6	6	6	6	Blue (pixel 2)	000–255	From low to high intensity (0–100 %)
7	7	7	7	7	Red (pixel 3)	000–255	From low to high intensity (0–100 %)
8	8	8	8	8	Green (pixel 3)	000–255	From low to high intensity (0–100 %)
9	9	9	9	9	Blue (pixel 3)	000–255	From low to high intensity (0–100 %)
10	10	10	10	10	Red (pixel 4)	000–255	From low to high intensity (0–100 %)
11	11	11	11	11	Green (pixel 4)	000–255	From low to high intensity (0–100 %)
12	12	12	12	12	Blue (pixel 4)	000–255	From low to high intensity (0–100 %)
...			
	94	94	94	94	Red (pixel 32)	000–255	From low to high intensity (0–100 %)
	95	95	95	95	Green (pixel 32)	000–255	From low to high intensity (0–100 %)
	96	96	96	96	Blue (pixel 32)	000–255	From low to high intensity (0–100 %)
	...	...	...	...		000–255	From low to high intensity (0–100 %)
	190	190	190	190	Red (pixel 64)	000–255	From low to high intensity (0–100 %)
	191	191	191	191	Green (pixel 64)	000–255	From low to high intensity (0–100 %)
	192	192	192	192	Blue (pixel 64)	000–255	From low to high intensity (0–100 %)
			
		286	286	286	Red (pixel 96)	000–255	From low to high intensity (0–100 %)
		287	287	287	Green (pixel 96)	000–255	From low to high intensity (0–100 %)
		288	288	288	Blue (pixel 96)	000–255	From low to high intensity (0–100 %)
				
			382	382	Red (pixel 128)	000–255	From low to high intensity (0–100 %)
			383	383	Green (pixel 128)	000–255	From low to high intensity (0–100 %)
			384	384	Blue (pixel 128)	000–255	From low to high intensity (0–100 %)
					
				478	Red (pixel 160)	000–255	From low to high intensity (0–100 %)
				479	Green (pixel 160)	000–255	From low to high intensity (0–100 %)
				480	Blue (pixel 160)	000–255	From low to high intensity (0–100 %)

6.7.2.3. 384 Channels (Art-Net)



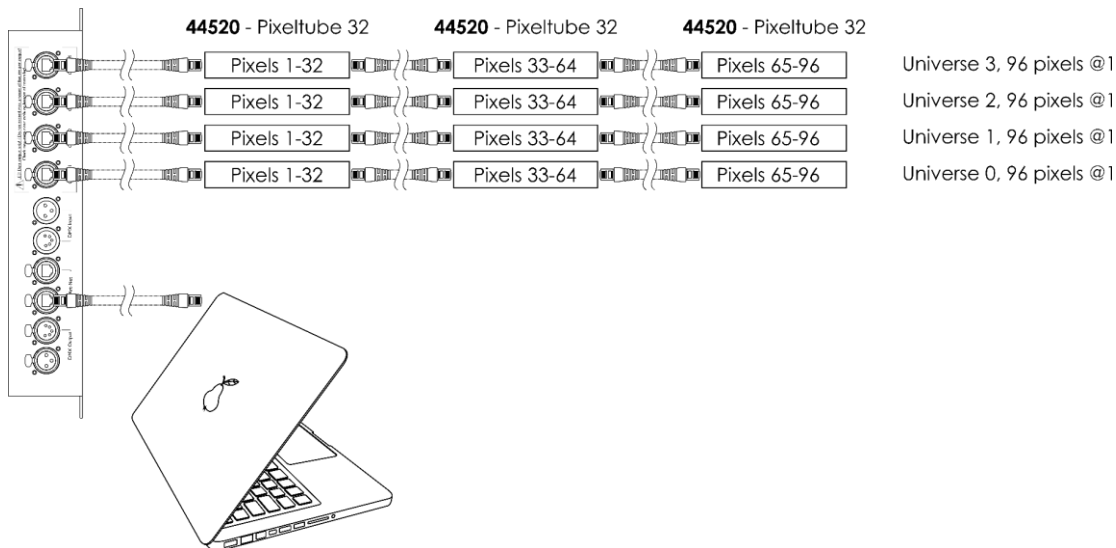
384 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
2	Green (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
3	Blue (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
4	Red (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
5	Green (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
6	Blue (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
7	Red (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
8	Green (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
9	Blue (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
10	Red (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
11	Green (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
12	Blue (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
...			
382	Red (pixel 32, universe 3)	000–255	From low to high intensity (0–100 %)
383	Green (pixel 32, universe 3)	000–255	From low to high intensity (0–100 %)
384	Blue (pixel 32, universe 3)	000–255	From low to high intensity (0–100 %)

6.7.2.4. 768 Channels (Art-Net)



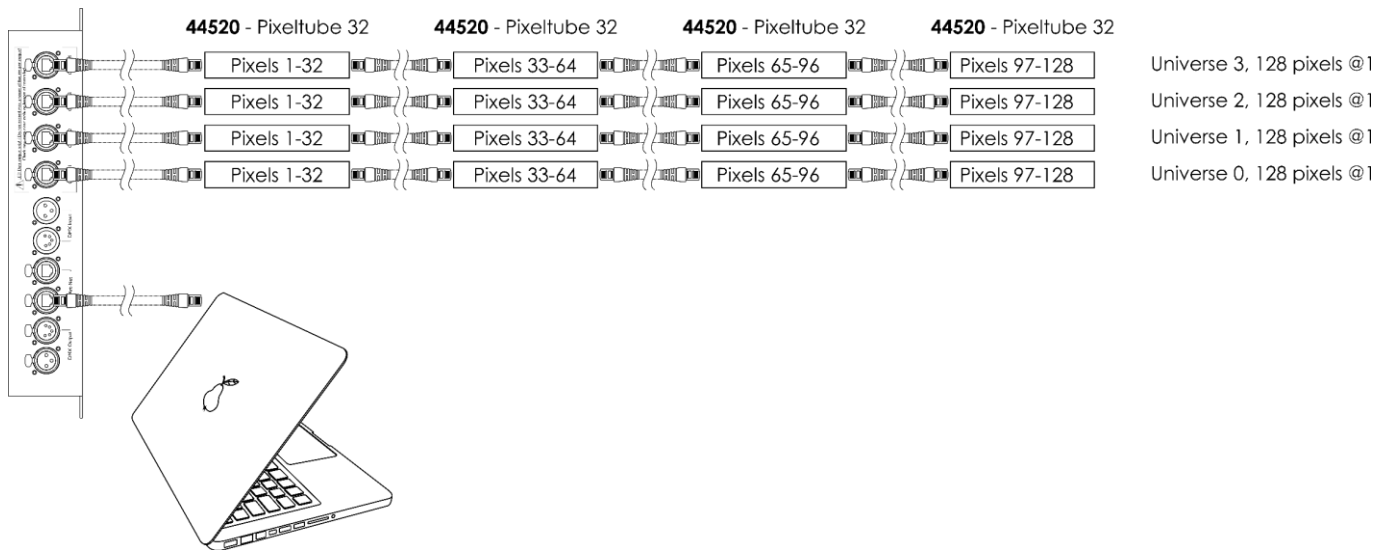
768 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
2	Green (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
3	Blue (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
4	Red (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
5	Green (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
6	Blue (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
7	Red (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
8	Green (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
9	Blue (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
10	Red (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
11	Green (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
12	Blue (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
...		000-255	From low to high intensity (0-100 %)
766	Red (pixel 64, universe 3)	000-255	From low to high intensity (0-100 %)
767	Green (pixel 64, universe 3)	000-255	From low to high intensity (0-100 %)
768	Blue (pixel 64, universe 3)	000-255	From low to high intensity (0-100 %)

6.7.2.5. 1152 Channels (Art-Net)



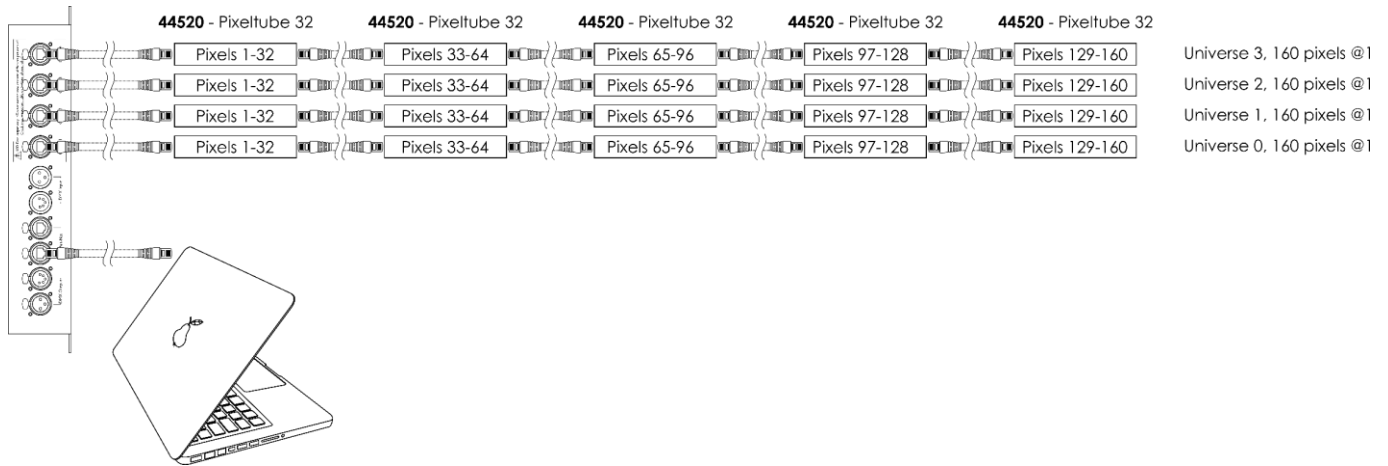
1152 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
2	Green (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
3	Blue (pixel 1, universe 0)	000-255	From low to high intensity (0-100 %)
4	Red (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
5	Green (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
6	Blue (pixel 2, universe 0)	000-255	From low to high intensity (0-100 %)
7	Red (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
8	Green (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
9	Blue (pixel 3, universe 0)	000-255	From low to high intensity (0-100 %)
10	Red (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
11	Green (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
12	Blue (pixel 4, universe 0)	000-255	From low to high intensity (0-100 %)
...		000-255	From low to high intensity (0-100 %)
1150	Red (pixel 96, universe 3)	000-255	From low to high intensity (0-100 %)
1151	Green (pixel 96, universe 3)	000-255	From low to high intensity (0-100 %)
1152	Blue (pixel 96, universe 3)	000-255	From low to high intensity (0-100 %)

6.7.2.6. 1536 Channels (Art-Net)



1536 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
2	Green (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
3	Blue (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
4	Red (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
5	Green (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
6	Blue (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
7	Red (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
8	Green (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
9	Blue (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
10	Red (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
11	Green (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
12	Blue (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
...		000–255	From low to high intensity (0–100 %)
1534	Red (pixel 128, universe 3)	000–255	From low to high intensity (0–100 %)
1535	Green (pixel 128, universe 3)	000–255	From low to high intensity (0–100 %)
1536	Blue (pixel 128, universe 3)	000–255	From low to high intensity (0–100 %)

6.7.2.7. 1920 Channels (Art-Net)



1920 CH	Function	Value	Setting
1	Red (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
2	Green (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
3	Blue (pixel 1, universe 0)	000–255	From low to high intensity (0–100 %)
4	Red (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
5	Green (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
6	Blue (pixel 2, universe 0)	000–255	From low to high intensity (0–100 %)
7	Red (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
8	Green (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
9	Blue (pixel 3, universe 0)	000–255	From low to high intensity (0–100 %)
10	Red (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
11	Green (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
12	Blue (pixel 4, universe 0)	000–255	From low to high intensity (0–100 %)
...		000–255	From low to high intensity (0–100 %)
1918	Red (pixel 160, universe 3)	000–255	From low to high intensity (0–100 %)
1919	Green (pixel 160, universe 3)	000–255	From low to high intensity (0–100 %)
1920	Blue (pixel 160, universe 3)	000–255	From low to high intensity (0–100 %)

6.7.3. PixelDot

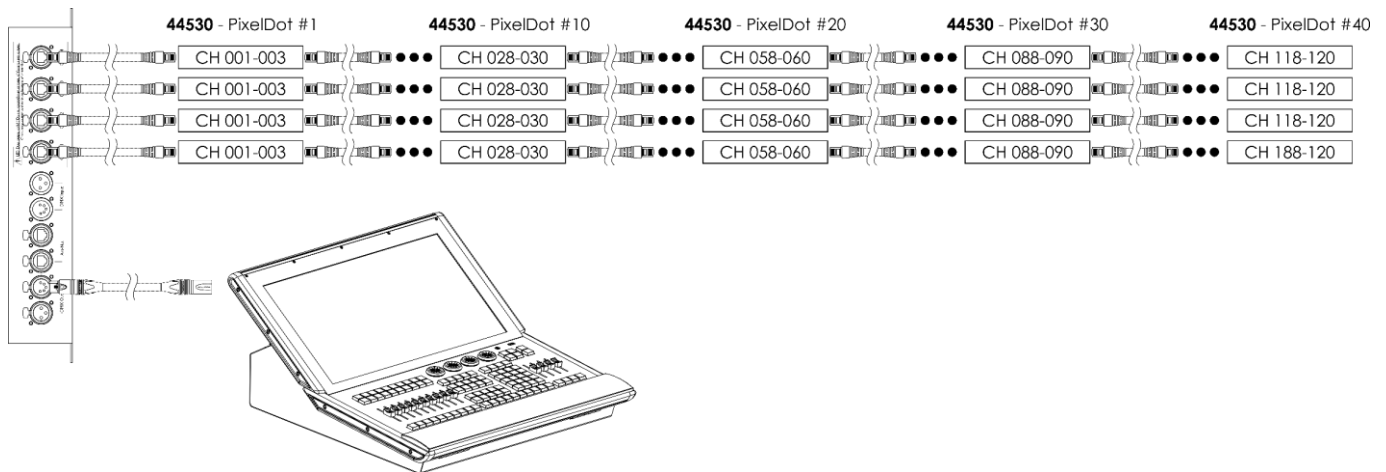
6.7.3.1.7 Channels

7 CH	Function	Value	Setting
1	Master Dimmer	000–255	From low to high intensity (0–100 %)
2	Strobe	000–004	Strobe off
		005–255	From low to high frequency
3	Red	000–255	From low to high intensity (0–100 %)
4	Green	000–255	From low to high intensity (0–100 %)
5	Blue	000–255	From low to high intensity (0–100 %)
6	Built-in programs	000–015	Not functional
		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	Programs 1–29		
7	Program speed	000–255	From slow to fast

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

Note: Make sure that the Built-in Programs channel is closed in order to use the Red, Green and Blue channels.

6.7.3.2. 30, 60, 90, 120 Channels



30 CH	60 CH	90 CH	120 CH	Function	Value	Setting
1	1	1	1	Red (PixelDot 1)	000–255	From low to high intensity (0–100 %)
2	2	2	2	Green (PixelDot 1)	000–255	From low to high intensity (0–100 %)
3	3	3	3	Blue (PixelDot 1)	000–255	From low to high intensity (0–100 %)
4	4	4	4	Red (PixelDot 2)	000–255	From low to high intensity (0–100 %)
5	5	5	5	Green (PixelDot 2)	000–255	From low to high intensity (0–100 %)
6	6	6	6	Blue (PixelDot 2)	000–255	From low to high intensity (0–100 %)
7	7	7	7	Red (PixelDot 3)	000–255	From low to high intensity (0–100 %)
8	8	8	8	Green (PixelDot 3)	000–255	From low to high intensity (0–100 %)
9	9	9	9	Blue (PixelDot 3)	000–255	From low to high intensity (0–100 %)
...			
	28	28	28	Red (PixelDot 10)	000–255	From low to high intensity (0–100 %)
	29	29	29	Green (PixelDot 10)	000–255	From low to high intensity (0–100 %)
	30	30	30	Blue (PixelDot 10)	000–255	From low to high intensity (0–100 %)
	...	...	...		000–255	From low to high intensity (0–100 %)
	58	58	58	Red (PixelDot 20)	000–255	From low to high intensity (0–100 %)
	59	59	59	Green (PixelDot 20)	000–255	From low to high intensity (0–100 %)
	60	60	60	Blue (PixelDot 20)	000–255	From low to high intensity (0–100 %)
			
	88	88	88	Red (PixelDot 30)	000–255	From low to high intensity (0–100 %)
	89	89	89	Green (PixelDot 30)	000–255	From low to high intensity (0–100 %)
	90	90	90	Blue (PixelDot 30)	000–255	From low to high intensity (0–100 %)
			
			118	Red (PixelDot 40)	000–255	From low to high intensity (0–100 %)
			119	Green (PixelDot 40)	000–255	From low to high intensity (0–100 %)
			120	Blue (PixelDot 40)	000–255	From low to high intensity (0–100 %)

Note: The 30-channel is available when *10xPixDOT* option was selected in the menu.

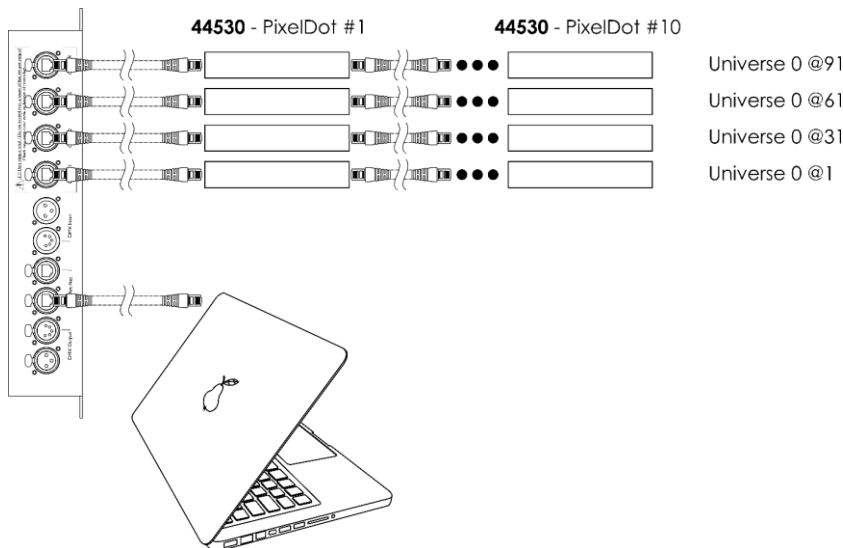
Note: The 60-channel is available when *20xPixDOT* option was selected in the menu.

Note: The 90-channel is available when *30xPixDOT* option was selected in the menu.

Note: The 120-channel is available when *40xPixDOT* option was selected in the menu.

See **6.6.3.2. Set Output** and **6.6.3.3. DMX** on page 28 for more information.

6.7.3.3. 120 Channels (DMX and Art-Net)

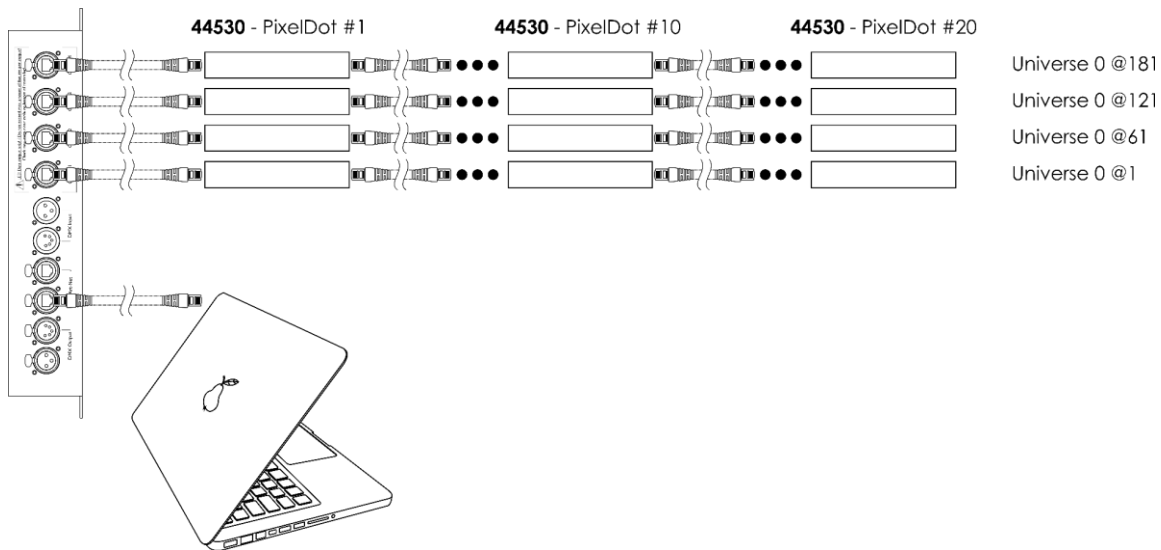


120 CH	Function	Value	Setting
1	Red (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
2	Green (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
3	Blue (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
4	Red (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
5	Green (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
6	Blue (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
7	Red (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
8	Green (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
9	Blue (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
...			
118	Red (PixelDot 10, output 4)	000–255	From low to high intensity (0–100 %)
119	Green (PixelDot 10, output 4)	000–255	From low to high intensity (0–100 %)
120	Blue (PixelDot 10, output 4)	000–255	From low to high intensity (0–100 %)

Note: The 120-channel is available when *10xPixDOT* option was selected in the menu.

See **6.6.3.2. Set Output** and **6.6.3.3. DMX** on page 28 for more information.

6.7.3.4. 240 Channels (DMX and Art-Net)

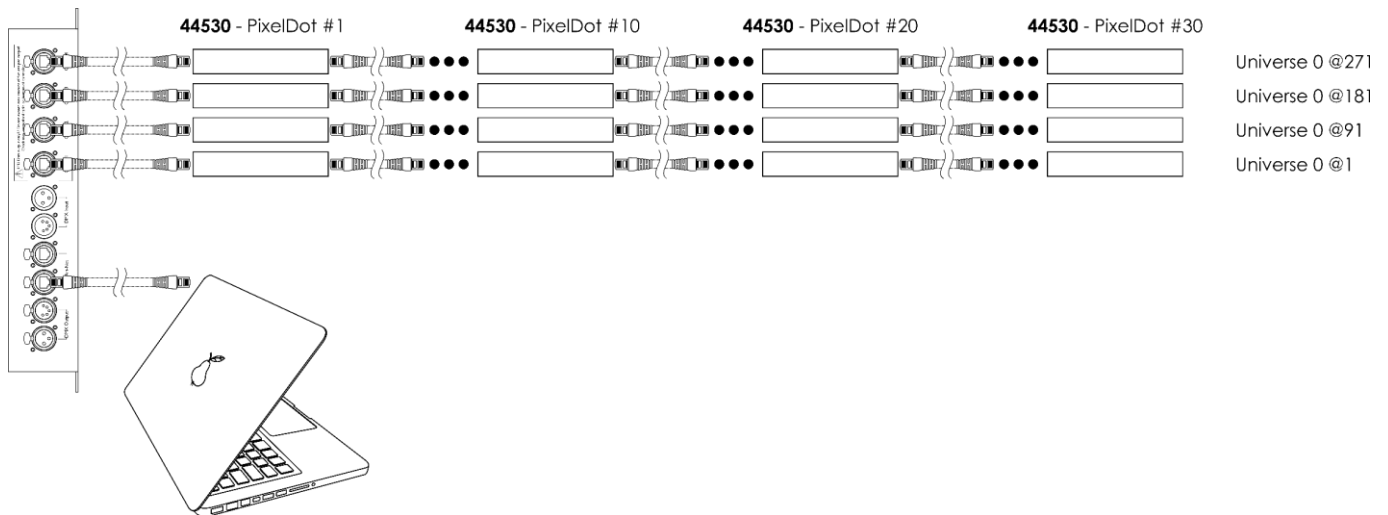


240 CH	Function	Value	Setting
1	Red (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
2	Green (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
3	Blue (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
4	Red (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
5	Green (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
6	Blue (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
7	Red (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
8	Green (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
9	Blue (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
...			
238	Red (PixelDot 20, output 4)	000–255	From low to high intensity (0–100 %)
239	Green (PixelDot 20, output 4)	000–255	From low to high intensity (0–100 %)
240	Blue (PixelDot 20, output 4)	000–255	From low to high intensity (0–100 %)

Note: The 240-channel is available when 20xPixDOT option was selected in the menu.

See **6.6.3.2. Set Output** and **6.6.3.3. DMX** on page 28 for more information.

6.7.3.5. 360 Channels (DMX and Art-Net)

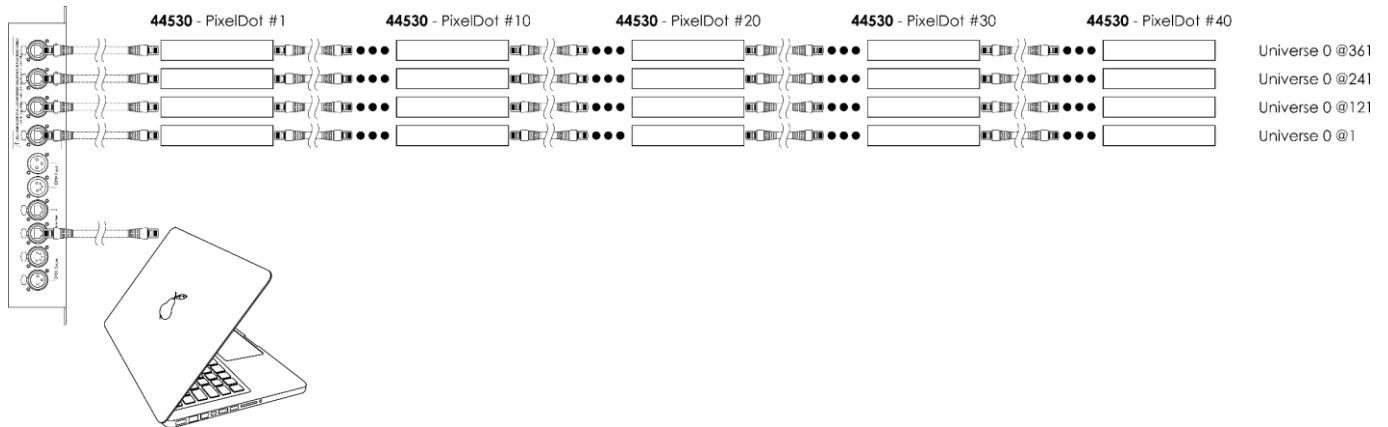


360 CH	Function	Value	Setting
1	Red (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
2	Green (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
3	Blue (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
4	Red (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
5	Green (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
6	Blue (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
7	Red (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
8	Green (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
9	Blue (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
...			
358	Red (PixelDot 30, output 4)	000–255	From low to high intensity (0–100 %)
359	Green (PixelDot 30, output 4)	000–255	From low to high intensity (0–100 %)
360	Blue (PixelDot 30, output 4)	000–255	From low to high intensity (0–100 %)

Note: The 360-channel is available when 30xPixDOT option was selected in the menu.

See **6.6.3.2. Set Output** and **6.6.3.3. DMX** on page 28 for more information.

6.7.3.6. 480 Channels (DMX and Art-Net)



480 CH	Function	Value	Setting
1	Red (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
2	Green (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
3	Blue (PixelDot 1, output 1)	000–255	From low to high intensity (0–100 %)
4	Red (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
5	Green (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
6	Blue (PixelDot 2, output 1)	000–255	From low to high intensity (0–100 %)
7	Red (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
8	Green (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
9	Blue (PixelDot 3, output 1)	000–255	From low to high intensity (0–100 %)
...			
478	Red (PixelDot 40, output 4)	000–255	From low to high intensity (0–100 %)
479	Green (PixelDot 40, output 4)	000–255	From low to high intensity (0–100 %)
480	Blue (PixelDot 40, output 4)	000–255	From low to high intensity (0–100 %)

Note: The 480-channel is available when 40xPixDOT option was selected in the menu.

See **6.6.3.2. Set Output** and **6.6.3.3. DMX** on page 28 for more information.

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 54
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 device responds erratically	The controller is defective	<ul style="list-style-type: none"> Try using another controller
	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 6.6.4.7. Factory Reset on page 32
The device responds erratically to DMX control	Bad data link connection	<ul style="list-style-type: none"> Examine connections and cables. Correct poor connections. Repair or replace damaged cables
	The data link is not terminated with a 120 Ω termination plug	<ul style="list-style-type: none"> Insert a termination plug in the DMX OUT connector of the last device on the link
	Incorrect addressing	<ul style="list-style-type: none"> Check address settings and correct, if necessary
	In case of a setup with multiple devices, one of the devices is defective and disturbs data transmission on the link	<ul style="list-style-type: none"> To find out which device is defective, bypass one device at a time until normal operation is restored
No light or LEDs cut out intermittently	LEDs are damaged	<ul style="list-style-type: none"> Disconnect the Pixelstrips, Pixeltubes or PixelDots 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

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, fixations 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 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.
- 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.
- 01) Allow the device to cool down for 5 minutes.
- 02) Loosen the fuse cover with a screwdriver and remove the fuse holder.
- 03) If the fuse is brown or unclear, it is burned out. Remove the old fuse.
- 04) 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.
- 05) 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 53.
- 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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