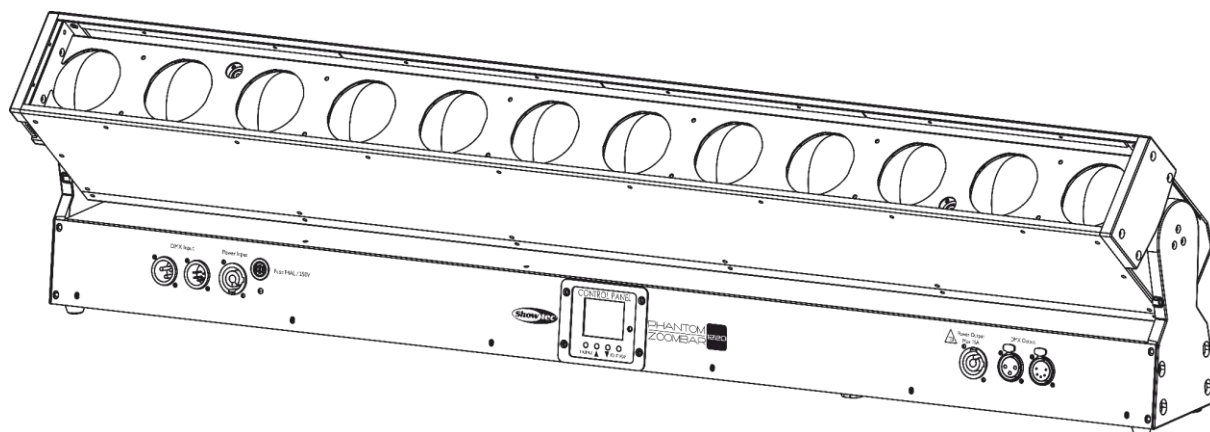




## USER MANUAL



ENGLISH

# Phantom 1220 Zoombar V1

Product code: 40090

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

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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 Phantom 1220 Zoombar
- 2 x quick-lock bracket
- Schuko to Neutrik powerCON cable (1,3 m)
- User manual

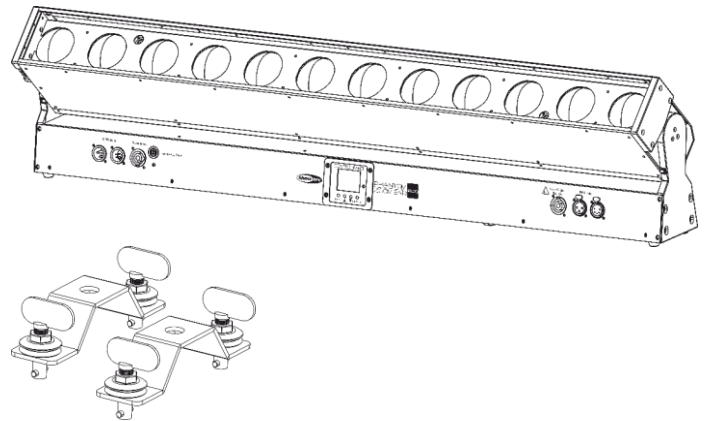


Fig. 01

### 1.2. Intended Use

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

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

### 1.3. Product Lifespan

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

### 1.4. LEDs Lifespan

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

### 1.5. Text Conventions

Throughout the user manual the following text conventions are used:










- Buttons: All buttons are in bold lettering, for example "Press the **UP/DOWN** buttons"
- References: References to chapters and parts of the device are in bold lettering, for example: "Refer to **2. Safety**", "turn the **adjustment screw (02)**"
- 0–255: Defines a range of values

- Notes: **Note:** (in bold lettering) is followed by useful information or tips

## 1.6. Symbols and Signal Words

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





Always follow the instructions provided in this user manual.

	<b>DANGER</b>	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
	<b>WARNING</b>	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	<b>CAUTION</b>	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	<b>Attention</b>	Indicates important information for the correct operation and use of the product.
	<b>Important</b>	Read and observe the instructions in this document.
	<b>Electrical hazard</b>	
	<b>Hot surface</b>	
	<b>Eye damage hazard</b>	
		Provides important information about the disposal of this product.

## 1.7. Symbols on the Information Label

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

The information label contains the following symbols:

	This device is designed for indoor use.
	This device shall not be treated as household waste.
	This device falls under IEC protection class I.
	Read and observe the instructions in the user manual.

## 2. Safety



### Important

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

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

### 2.1. Warnings and Safety Instructions



#### DANGER

**Danger for children**

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

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



#### DANGER

**Electric shock caused by dangerous voltage inside**

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

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



#### DANGER

**Electric shock caused by short-circuit**

This device falls under IEC protection class I.

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



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

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

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



**WARNING**  
**Risk of epileptic shock**

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



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

Possibly hazardous optical radiation emitted from this device.

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



**Attention**  
**Power supply**

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



**Attention**  
**General safety**

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



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



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

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

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



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

Make sure that:

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



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

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

## 2.2. Requirements for the User

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

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

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

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

### 3. Description of the Device

The Showtec Phantom 1220 Zoombar is a LED bar with 12 x 20 W RGBW LEDs, great optics and is fully pixel controllable. The zoom range between 5° and 50° makes it possible to create a narrow multi-colored light curtain or create a nice wash effect.

#### 3.1. Front View

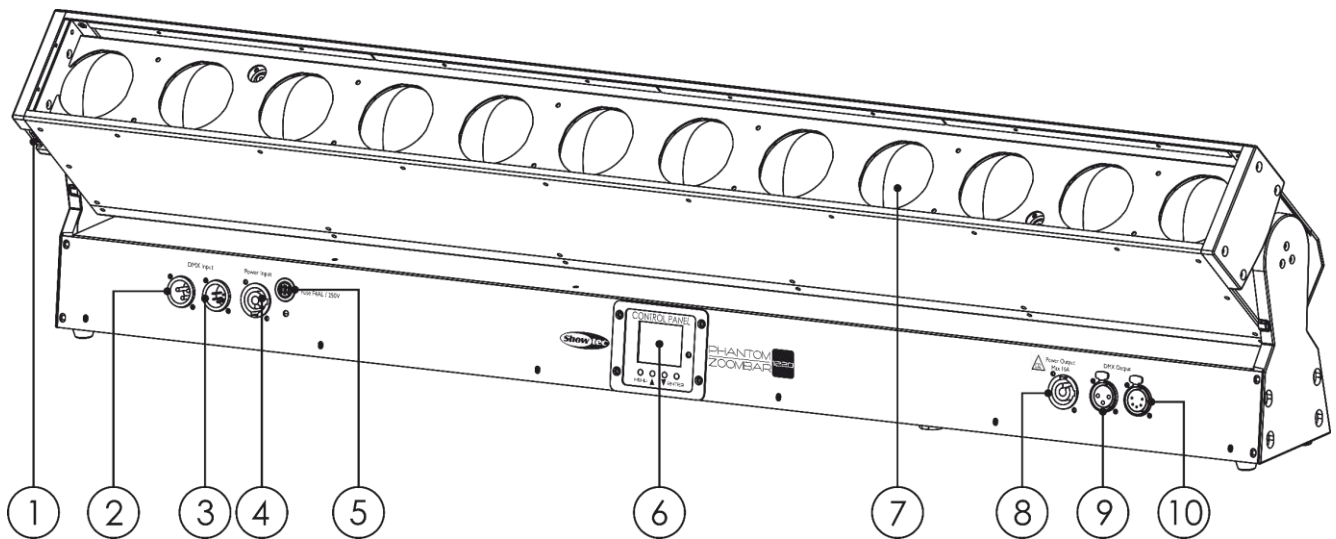


Fig. 02

- 01) Tilt lock
- 02) 3-pin DMX signal connector IN
- 03) 5-pin DMX signal connector IN
- 04) Neutrik powerCON connector (Blue) IN
- 05) Fuse F4AL/250V
- 06) LCD display + control buttons
- 07) 12 x 20 W RGBW LEDs
- 08) Neutrik powerCON connector (Gray) OUT
- 09) 3-pin DMX signal connector OUT
- 10) 5-pin DMX signal connector OUT

#### 3.2. Back View

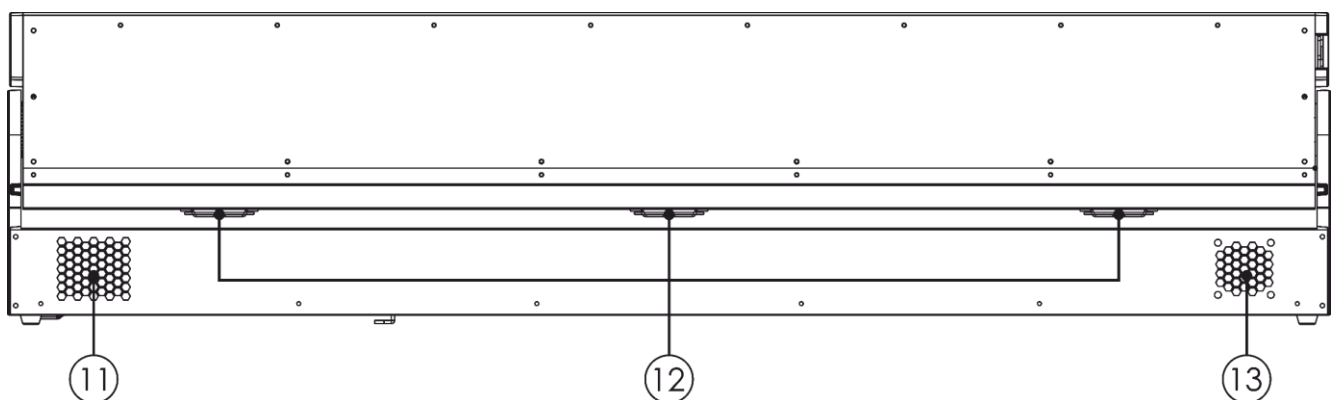


Fig. 03

- 11) Air intake grill
- 12) LED bar cooling fans
- 13) Cooling fan

### 3.3. Product Specifications

Model:	Phantom 1220 Zoombar
--------	----------------------

<b>Electrical:</b>	
Input voltage:	100–240 V AC, 50/60 Hz
Power consumption:	240 W
Fuse:	F4AL/250V

<b>Physical:</b>	
Dimensions:	997 x 95 x 233 mm (LxWxH)
Weight:	13,2 kg

<b>Optics:</b>	
Light source:	12 x 20 W RGBW LEDs
Lux @ 2 m:	57000 lx
Lumen:	4500 lm
Dimmer:	0–100 %
Strobe:	0–20 Hz
Beam angle:	5–50°

<b>Operation and control:</b>	
Control:	Stand-alone (auto, manual) Master/Slave (auto, manual) DMX-512
DMX channels:	19, 24, 72, 84, 129 channels
Control panel:	LCD display and buttons
Tilt:	210°

<b>Connections:</b>	
Power connections:	Neutrik powerCON connectors IN (Blue)/OUT (Gray)
Data connections:	3-pin DMX connectors IN/OUT 5-pin DMX connectors IN/OUT
Signal pinouts:	3-pin: pin 1 (ground), pin 2 (-), pin 3 (+) 5-pin: pin 1 (ground), pin 2 (-), pin 3 (+), pin 4 (N/C), pin 5 (N/C)

<b>Construction:</b>	
Housing:	Metal & flame-retardant plastic
Color:	Black
IP rating:	IP20
Cooling:	Cooling fans

<b>Thermal:</b>	
Maximum ambient temperature $t_a$ :	40 °C
Maximum housing temperature $t_c$ :	50 °C

<b>Minimum distance:</b>	
Minimum distance from flammable surfaces:	0,8 m
Minimum distance to lighted object:	0,8 m

### 3.4. Dimensions

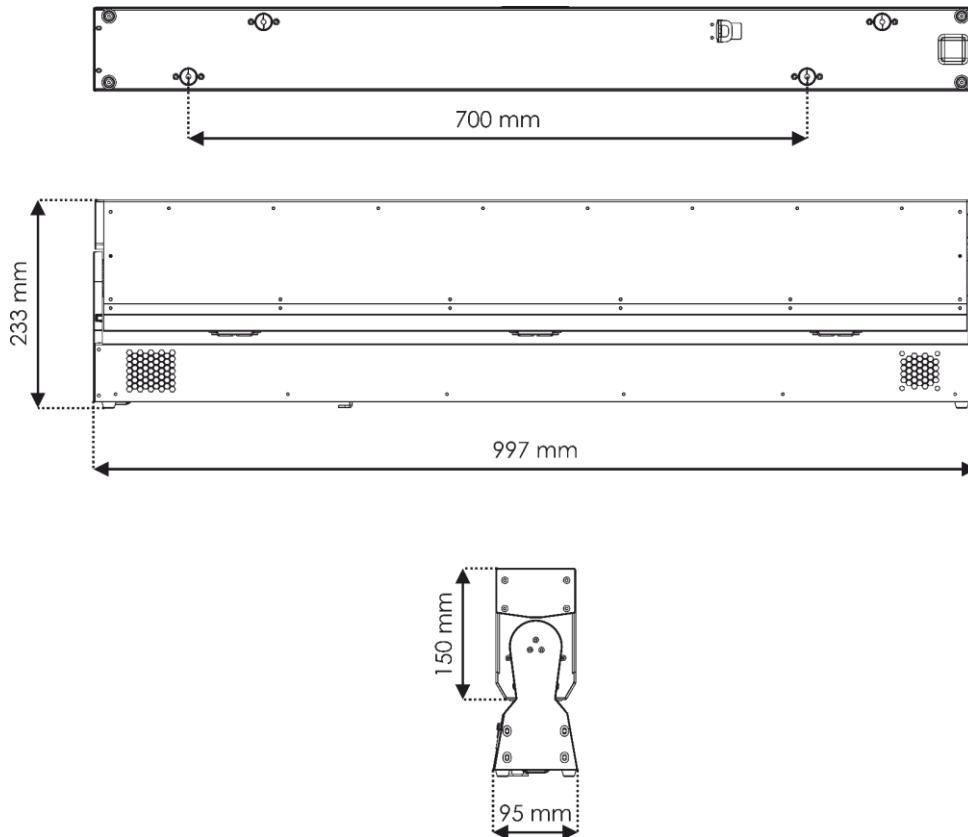


Fig. 04

## 4. Installation

### 4.1. Safety Instructions for Installation



**WARNING**

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

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

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

### 4.2. Personal Protective Equipment

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

### 4.3. Installation Site Requirements

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

#### 4.4. Rigging

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

The device is delivered with 2 quick-lock brackets.

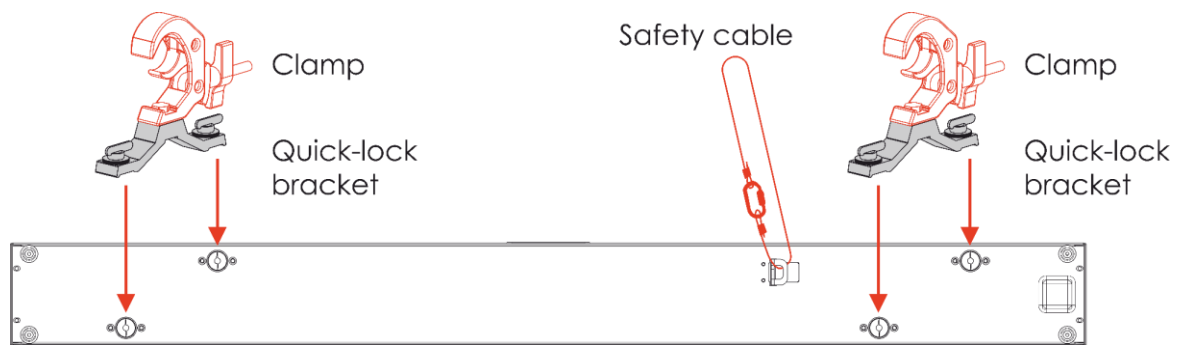


**CAUTION**

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

To mount the device, follow the steps below:

- 01) Install the 2 quick-lock brackets.
- 02) Fasten the quick-lock brackets.
- 03) Install the clamp(s), as shown in Fig. 05. Make sure that you use clamps suitable for attaching the device to a truss.



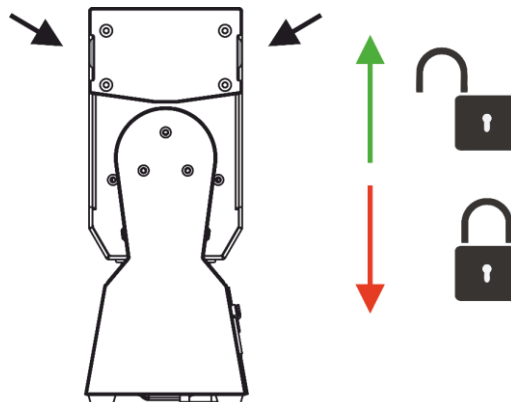
**Fig. 05**

- 04) Attach the device to the supporting structure. Make sure that the device cannot move freely.
- 05) Secure the device with a secondary suspension, for example a safety cable. Make sure that the secondary suspension can hold 10 times the weight of the device. If possible, the secondary suspension should be attached to a supporting structure independent of the primary suspension. Put the safety cable through the safety eye, as shown in Fig. 05.

##### 4.4.1. Tilt Lock

Before use, it is necessary to release the **tilt lock (01)**.

- 01) Press on the **tilt lock (01)** on both sides.
- 02) Move the **tilt lock (01)** up (to unlock) or down (to lock) the tilt mechanism.



**Fig. 06**

## 4.5. Connecting to Power Supply



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

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

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

Before connecting the device to the socket-outlet:

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

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

## 4.6. Power Linking of Multiple Devices

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

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



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

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

- Use cables with sufficient current-carrying capacity. The power cable supplied with the device is not suitable for power linking of multiple 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: 7 devices
- at 200–240 V: 14 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. Stand-alone Setup

When the Phantom 1220 Zoombar is not connected to a controller or to other devices, it functions as a stand-alone device. It can be operated manually or in auto mode.

For more information about the control modes, refer to **6.2. Control Modes** on page 17.

### 5.3. DMX Connection

#### 5.3.1. DMX-512 Protocol

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

The Phantom 1220 Zoombar has 3-pin and 5-pin DMX signal IN and OUT connectors.

The pin assignment is as follows:

- 3-pin: pin 1 (ground), pin 2 (-), pin 3 (+)
- 5-pin: pin 1 (ground), pin 2 (-), pin 3 (+), pin 4 (N/C), pin 5 (N/C)

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

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

**Note:**

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

## 5.3.2. DMX Cables

Shielded twisted-pair cables with 3-pin/5-pin XLR connectors must be used for reliable DMX connection. You can purchase DMX cables directly from your Highlite International dealer or make your own cables.

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

When you make your own DMX cables, make sure that you connect the pins and wires correctly as shown in Fig. 07.

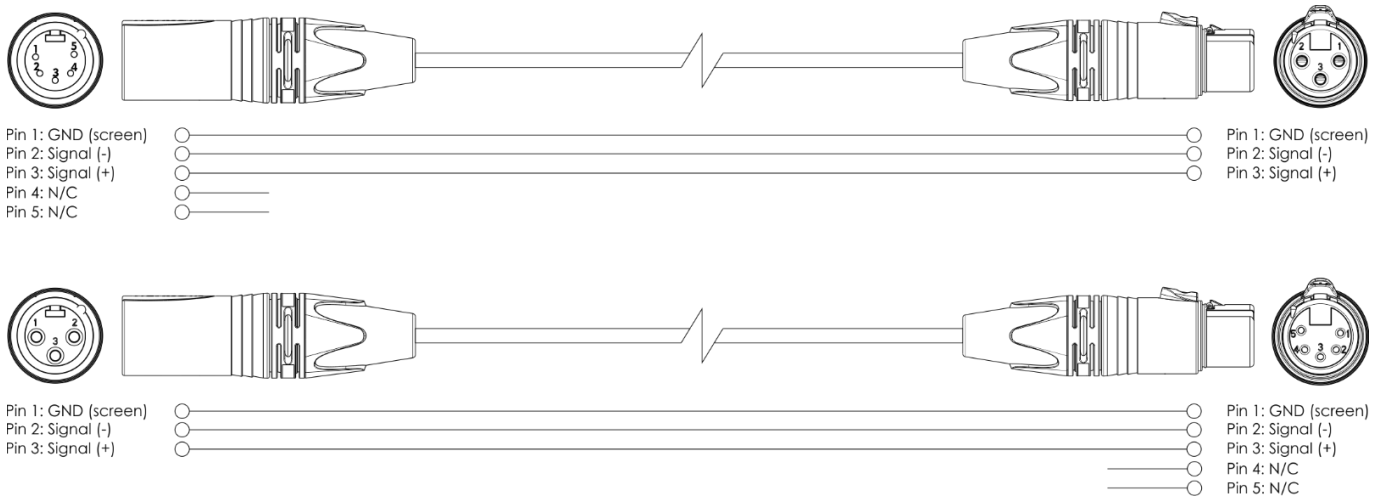


Fig. 07

## 5.3.3. Master/Slave Setup

The Phantom 1220 Zoombar supports master/slave control mode. To connect multiple devices in master/slave setup, follow the steps below:

- 01) Connect the first device's DMX OUT connector to the second device's DMX IN connector with a 3-pin/5-pin DMX cable.
- 02) Repeat step 1 to connect all devices as shown in Fig. 08.
- 03) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device in the setup.
- 04) Set the first device on the data link as a master device.
- 05) Set the remaining devices as slave devices. See **6.6.2.2. Slave** on page 21 for more information.

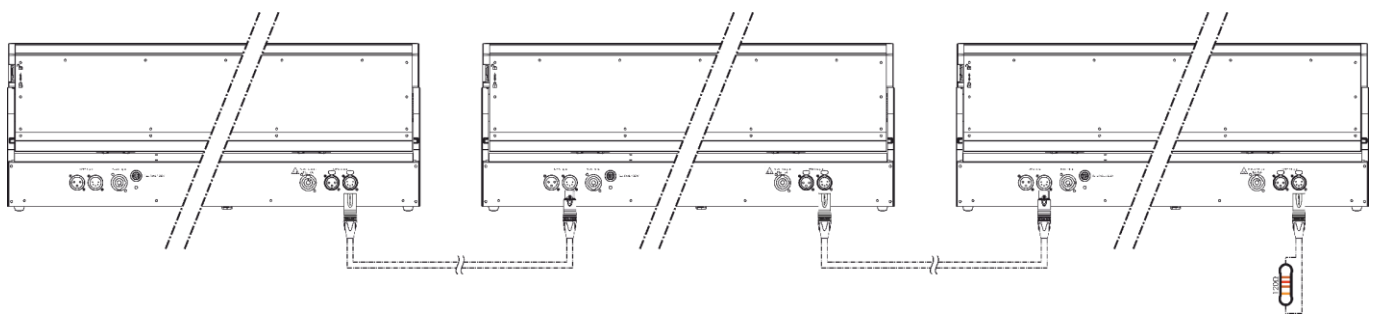


Fig. 08



## 5.3.4. DMX Linking

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

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

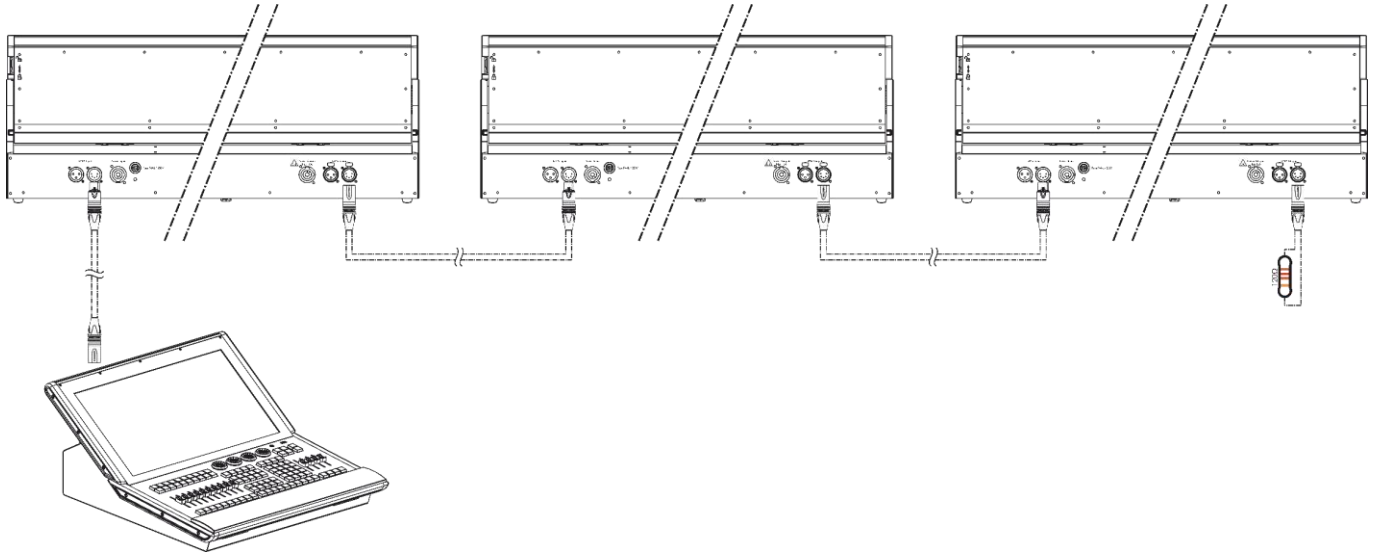


Fig. 09

## 5.3.5. DMX Addressing

In a setup with multiple devices, make sure that you set the DMX starting address of each device correctly. The Phantom 1220 Zoombar has 5 personalities: 19 channels, 24 channels, 72 channels, 84 channels and 129 channels.

If you want to connect multiple devices on one data link and use them in 129-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 130 (130), as  $1 + 129 = 130$ .
- 03) Set the starting address of the 3<sup>rd</sup> device on the data link to 259 (259) as  $130 + 129 = 259$ .
- 04) Continue assigning the starting addresses of the remaining devices by adding each time 129 to the previous number.

Make sure that you do not have any overlapping channels in order to control each Phantom 1220 Zoombar correctly. If two or more devices are addressed similarly, they will work similarly.

## 6. Operation

### 6.1. Safety Instructions for Operation



**Attention**

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

This device is intended for professional use as a moving light bar. 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 Phantom 1220 Zoombar supports the following control modes:

- Stand-alone: Auto operation mode (built-in chases), manual operation
- Master/Slave: Auto operation mode (built-in chases), manual operation
- DMX-512: 19, 24, 72, 84, 129 channels

For more information about how to connect the devices, refer to **5. Setup** on pages 14–16.

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 white in Manual menu. See **6.6.2.4. Manual** on page 22 for more information.

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

- 01) Activate Auto menu. See **6.6.2.3. Auto** on page 21 for more information.

To operate the device with a DMX controller:

- 01) Set the DMX starting address of the device in the DMX Address menu. See **5.3.5. DMX Addressing** on page 16 and **6.6.1. DMX Address** on page 20.
- 02) Select the DMX channel mode. See **6.6.2.1. DMX** on page 21 for more information. See **6.7. DMX Channels** on pages 26–36 for complete overview of all DMX channels.

### 6.3. Control Panel

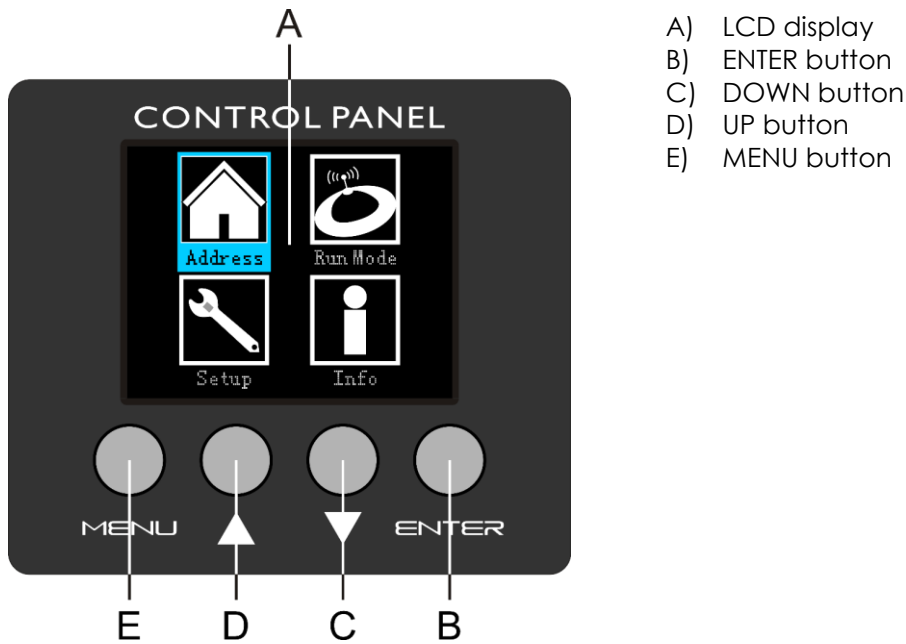
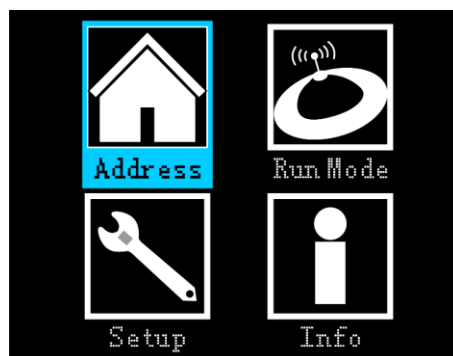


Fig. 10

- 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.

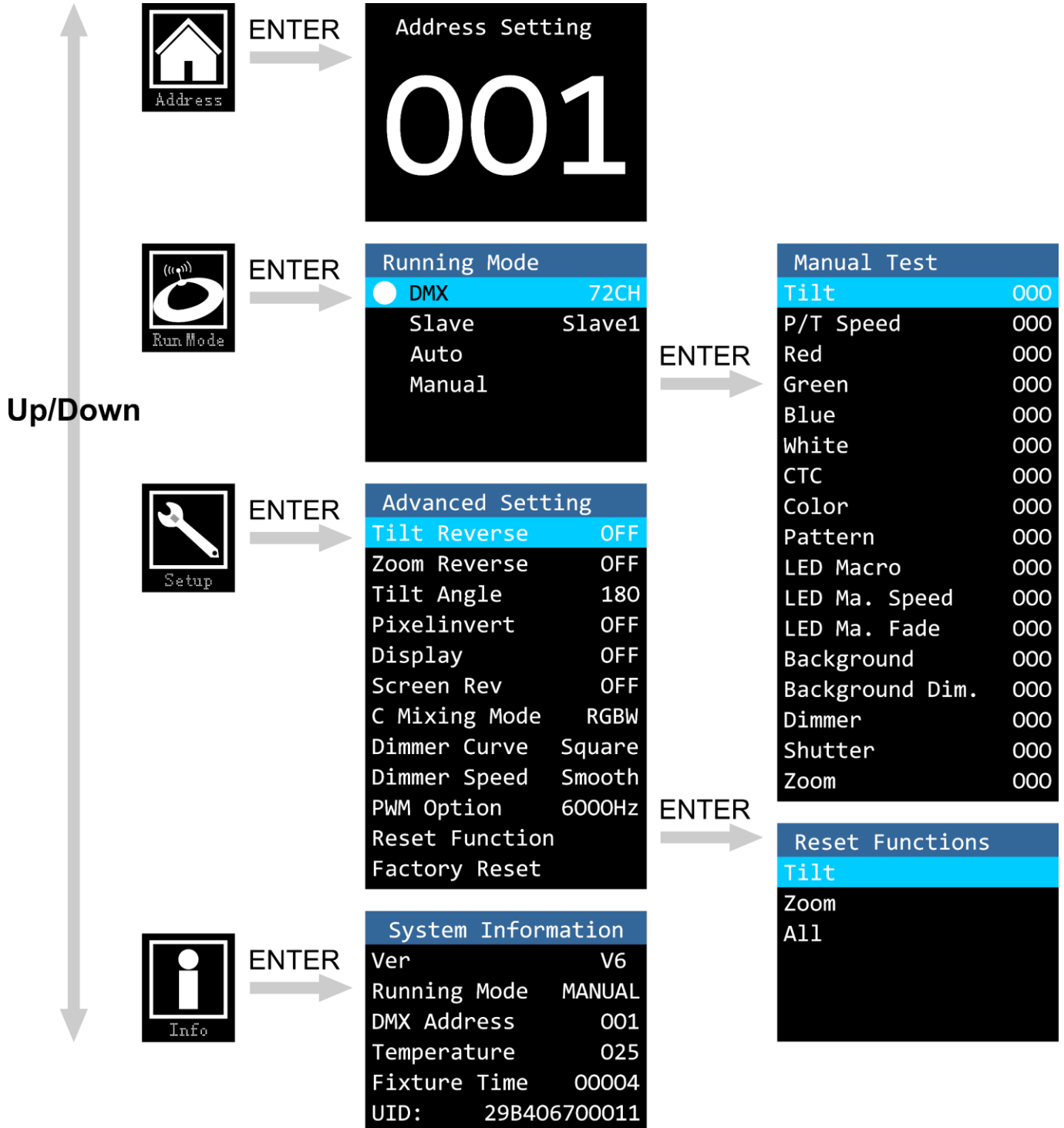
### 6.4. Start-up

Upon start-up the display will show a splash screen with the logo of Showtec. Immediately afterwards the display will show the start screen. The start screen provides information about the currently active operation mode and the current tilt angle setting. Press the **ENTER** button to enter the main menu. The display will show:



**Note:** If no button is pressed, after 30 seconds of inactivity the display will turn off. Press any button to turn the display on.

6.5. Menu Overview



## 6.6. Main Menu Options



DMX Address



DMX mode / Slave / Auto / Manual



Tilt Reverse / Zoom Reverse / Tilt Angle / Pixel Invert / Display / Screen Reverse / Color Mixing Mode / Dimmer Curve / Dimmer Speed / PWM Option / Reset Function / Factory Reset



System Information

### 6.6.1. DMX Address

In this menu you can set the DMX address.



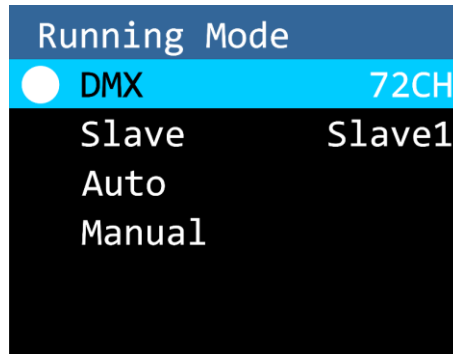
- 01) While in the main menu, press the **UP/DOWN** buttons, until the display shows
- 02) Press the **ENTER** button to confirm. The adjustment range is:
  - 001–494 (19-channel mode)
  - 001–489 (24-channel mode)
  - 001–441 (72-channel mode)
  - 001–429 (84-channel mode)
  - 001–384 (129-channel mode)
- 03) See **6.6.2.1 DMX** on page 21 for more information about how to activate the desired channel mode.
- 04) Press the **UP/DOWN** buttons to select the required address.
- 05) Press the **ENTER** button to confirm the address.

## 6.6.2. Built-in Programs Mode

In this menu you can set the DMX channel mode, auto programs and manual operation.



- 01) While in the main menu, press the **UP/DOWN** buttons until the display shows
- 02) Press the **ENTER** button to open the menu.
- 03) Press the **UP/DOWN** buttons to select one of the 4 modes:



- 04) Press the **ENTER** button to open the desired submenu.

### 6.6.2.1. DMX

- 01) Press the **UP/DOWN** buttons to toggle through the 5 channel modes:
  - 19 channels
  - 24 channels
  - 72 channels
  - 84 channels
  - 129 channels
- 02) Press the **ENTER** button to confirm your choice.

### 6.6.2.2. Slave

- 01) Press the **UP/DOWN** buttons to set the device as the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> or 4<sup>th</sup> slave device (Slave1–4).
- 02) Press the **ENTER** button to save changes.
- 03) The device is now operating in the slave mode. It means that it will react the same as the master device.

### 6.6.2.3. Auto

The device will run the built-in auto show.

## 6.6.2.4. Manual

01) Once you have entered this submenu, the display will show:

Manual Test	
Tilt	000
P/T Speed	000
Red	000
Green	000
Blue	000
White	000
CTC	000
Color	000
Pattern	000
LED Macro	000
LED Ma. Speed	000
LED Ma. Fade	000
Background	000
Background Dim.	000
Dimmer	000
Shutter	000
Zoom	000

02) Press the **UP/DOWN** buttons to choose one of the following 17 options:

- TILT
- P/T SPEED (from fast to slow)
- RED (from dark to brightest)
- GREEN (from dark to brightest)
- BLUE (from dark to brightest)
- WHITE (from dark to brightest)
- CTC
- COLOR
- PATTERN
- LED MACRO
- LED MA. SPEED (LED macro speed)
- LED MA. FADE (LED macro fade)
- BACKGROUND
- BACKGROUND DIM.
- DIMMER (from dark to brightest)
- SHUTTER
- ZOOM

03) Press the **ENTER** button to edit the desired option. The adjustment range for each option is between 0–255.

04) Press the **UP/DOWN** buttons to set the value.

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

06) The values correspond with the functions described in the DMX charts. See **6.7. DMX Channels** on pages 26–36 for more information.

## 6.6.3. Advanced Settings

In this menu you can set the advanced settings.



01) While in the main menu, press the **UP/DOWN** buttons until the display shows

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

Advanced Setting	
Tilt Reverse	OFF
Zoom Reverse	OFF
Tilt Angle	180
Pixelinvert	OFF
Display	OFF
Screen Rev	OFF
C Mixing Mode	RGBW
Dimmer Curve	Square
Dimmer Speed	Smooth
PWM Option	6000Hz
Reset Function	
Factory Reset	

03) Press the **UP/DOWN** buttons to choose one of the following 12 options:

- TILT REVERSE (ON/OFF)
- ZOOM REVERSE (ON/OFF)
- TILT ANGLE (60°/120°/180°)
- PIXEL INVERT (ON/OFF)
- DISPLAY (ON/OFF; If set to ON, the display remains on. If set to OFF, the display turns off after 30 seconds.)
- SCREEN REV (ON/OFF; Screen reverse)
- C MIXING MODE (RGBW/CMY; Color mixing mode)
- DIMMER CURVE (Square/Linear/S-curve/Inv. Square; See **6.6.3.1. Dimmer Curves** on page 24 for more information.)
- DIMMER SPEED (Smooth/Fast)
- PWM OPTION (600 Hz/1200 Hz/ 2000 Hz/4000 Hz/6000 Hz/15000 Hz)
- RESET FUNCTION (See **6.6.3.2. Reset Function** on page 24 for more information.)
- FACTORY RESET (YES/NO; It restores default factory settings.)

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

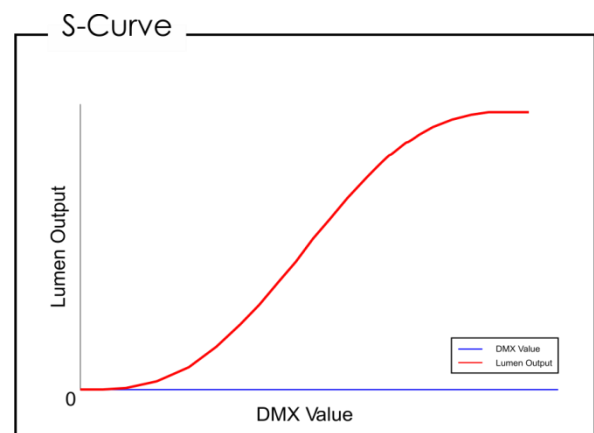
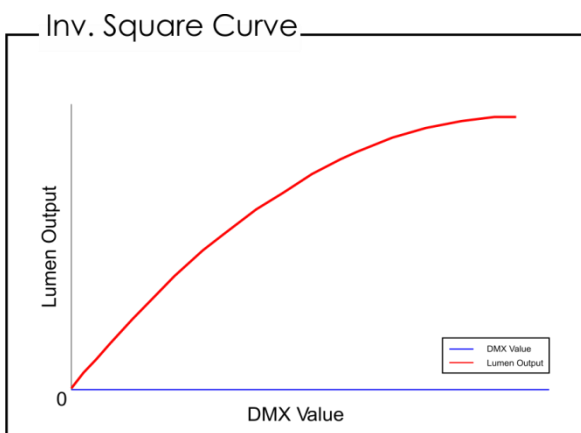
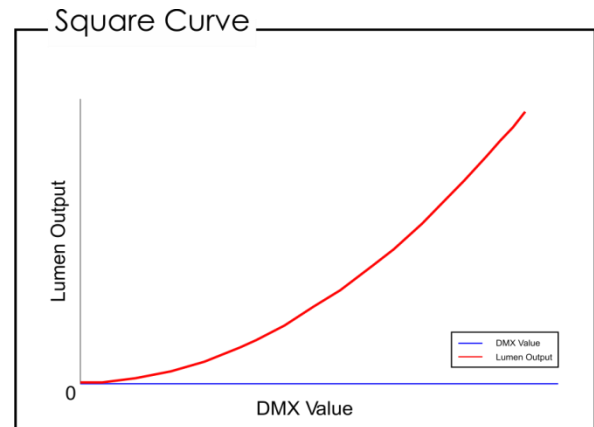
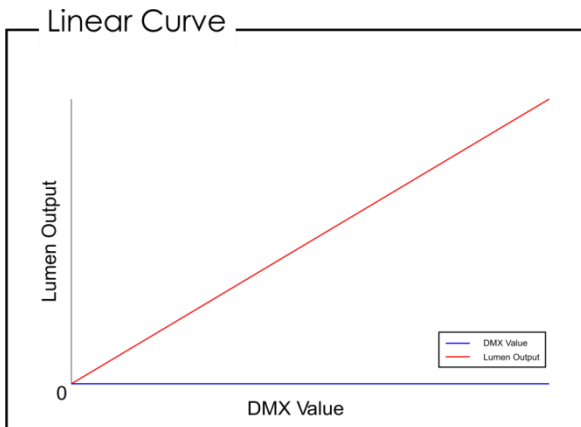
05) Press the **UP/DOWN** buttons to set the value/change settings.

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



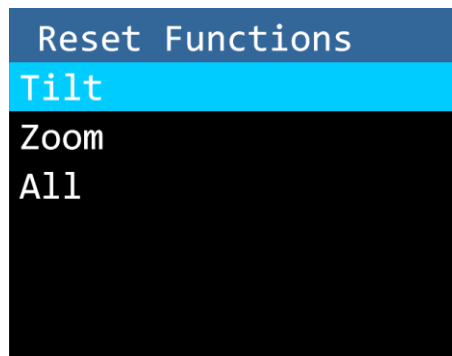
## 6.6.3.1. Dimmer Curves

The available dimming curves are:



## 6.6.3.2. Reset Function

01) If you have chosen RESET FUNCTION (in step 3, page 23), the display will show:



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

- TILT
- ZOOM
- ALL

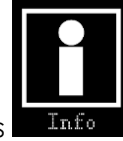
03) Press the **ENTER** button to edit the desired option.

04) Press the **UP/DOWN** buttons to choose YES or NO. If you choose YES, the currently selected function will be reset.

05) Press the **ENTER** button to save changes/confirm your choice.

## 6.6.4. System Information

In this menu you can see the currently active mode, the DMX starting address, the current software version, device's temperature, total operation time and the UID number.



- 01) While in the main menu, press the **UP/DOWN** buttons until the display shows
- 02) Press the **ENTER** button to open the menu and view the parameters.

System Information	
Ver	V6
Running Mode	MANUAL
DMX Address	001
Temperature	025
Fixture Time	00004
UID:	29B406700011

## 6.7. DMX Channels

## 6.7.1. 19 Channels

19 CH	Function	Value	Setting
1	Tilt	000–255	Tilt adjustment 0°–180°
2	Tilt, Fine	000–255	Tilt adjustment, 16-bit
3	Tilt speed	000–255	Speed adjustment of the tilt, from fast to slow
4	Dimmer	000–255	From low to high intensity (0–100 %)
5	Strobe/Shutter	000–004	No function
		005–006	Shutter open
		007–024	Pixel random strobe, from high to low frequency (20–0 Hz)
		025–026	Shutter open
		027–064	Strobe, from high to low frequency (20–0 Hz)
		065–066	Shutter open
		067–084	Fast on/slow off, from high to low frequency (20–0 Hz)
		085–086	Shutter open
		087–104	Slow on/fast off, from high to low frequency (20–0 Hz)
		105–106	Shutter open
		107–124	Random strobe, from high to low frequency (20–0 Hz)
		125–126	Shutter open
		127–144	Random fast on/slow off, from high to low frequency (20–0 Hz)
		145–146	Shutter open
		147–164	Random slow on/fast off, from high to low frequency (20–0 Hz)
		165–166	Shutter open
		167–184	Pulse strobe, from high to low frequency (20–0 Hz)
		185–186	Shutter open
		187–204	Random pulse strobe, from high to low frequency (20–0 Hz)
		205–206	Shutter open
207–224	Fade on/off, from high to low frequency (20–0 Hz)		
225–226	Shutter open		
227–244	Pulse strobe, from high to low frequency (20–0 Hz)		
245–255	Shutter open		
6	CTC	000	No function
		001–255	From 19000 K to 2700 K
7	Colors	000	No function
		001–002	White 2700 K (R=156, G=118, B=0, W=63)
		003–004	White 3200 K (R=156, G=141, B=5, W=89)
		005–006	White 4200 K (R=156, G=141, B=14, W=255)
		007–008	White 5600 K (R=156, G=207, B=54, W=255)
		009–010	White 8000 K (R=130, G=255, B=96, W=255)
		011	Blue (R=0, G=0, B=255, W=0)
		012–048	R=0, G+, B=255, W=0
		049	Cyan (R=0, G=255, B=255, W=0)
		050–086	R=0, G=255, B-, W=0
		087	Green (R=0, G=255, B=0, W=0)
		088–124	R+, G=255, B=0, W=0
		125	Yellow (R=255, G=255, B=0, W=0)
		126–162	R=255, G-, B=0, W=0
		163	Red (R=255, G=0, B=0, W=0)
		164–200	R=255, G=0, B+, W=0
		201	Magenta (R=255, G=0, B=255, W=0)
		202–238	R-, G=0, B=255, W=0
		239	Blue (R=0, G=0, B=255, W=0)
		240–247	Color flow, from fast to slow

19 CH	Function	Value	Setting
		248-255	Color switch, from fast to slow
8	Pattern	000-003	No function
		004-006	Pattern 1
		007-009	Pattern 2
		010-012	Pattern 3
		...	...
		247-249	Pattern 82
		250-252	Pattern 83
		253-255	Pattern 84
9	LED macros	000-015	No function
		016-019	LED macro 1
		020-023	LED macro 2
		024-027	LED macro 3
		...	...
		244-247	LED macro 58
		248-251	LED macro 59
		252-255	LED macro 60
10	LED macro speed+direction	000-127	Speed adjustment of the LED macros, from fast to slow
		128	Stop
		129-255	Direction reverse + speed adjustment of the LED macros, from slow to fast
11	LED macro fade speed	000-255	Speed adjustment of the LED macro fade, from fast to slow
12	Background color	000	No function
		001-002	White 2700 K (R=156, G=118, B=0, W=63)
		003-004	White 3200 K (R=156, G=141, B=5, W=89)
		005-006	White 4200 K (R=156, G=141, B=14, W=255)
		007-008	White 5600 K (R=156, G=207, B=54, W=255)
		009-010	White 8000 K (R=130, G=255, B=96, W=255)
		011	Blue (R=0, G=0, B=255, W=0)
		012-048	R=0, G+, B=255, W=0
		049	Cyan (R=0, G=255, B=255, W=0)
		050-086	R=0, G=255, B-, W=0
		087	Green (R=0, G=255, B=0, W=0)
		088-124	R+, G=255, B=0, W=0
		125	Yellow (R=255, G=255, B=0, W=0)
		126-162	R=255, G-, B=0, W=0
		163	Red (R=255, G=0, B=0, W=0)
		164-200	R=255, G=0, B+, W=0
		201	Magenta (R=255, G=0, B=255, W=0)
		202-238	R-, G=0, B=255, W=0
		239	Blue (R=0, G=0, B=255, W=0)
		240-247	Color flow, from fast to slow
248-255	Color switch, from fast to slow		
13	Background dimmer	000-255	From low to high intensity (0-100 %)
14	Zoom	000-255	From big to small (0-100 %)
15	Functions (after 5 seconds)	000-009	No function
		010-014	Tilt blackout
		015-019	No function
		020-024	RGBW color mixing
		025-029	CMY color mixing
		030-054	No function

19 CH	Function	Value	Setting
		055-059	Tilt reset
		060-064	Zoom reset
		065-069	No function
		070-074	All reset
		075-079	No function
		080-084	Tilt reverse
		085-089	Pixel reverse
		090-094	Tilt reverse
		095-099	No function
		100-109	Cancel tilt reverse
		110-114	Cancel pixel reverse
		115-134	No function
		135-139	Dimmer Fast
		140-144	Dimmer Smooth
		145-149	Linear curve
		150-154	Square curve
		155-159	I square curve
		160-164	S-curve
		165-174	No function
		175-179	PWM-600 Hz
		180-184	PWM-1200 Hz
		185-189	PWM-2000 Hz
		190-194	PWM-4000 Hz
		195-199	PWM-6000 Hz
		200-204	PWM-15000 Hz
		205-255	No function
<b>16</b>	<b>Red/Cyan</b>	000-255	From low to high intensity (0-100 %)
<b>17</b>	<b>Green/Magenta</b>	000-255	From low to high intensity (0-100 %)
<b>18</b>	<b>Blue/Yellow</b>	000-255	From low to high intensity (0-100 %)
<b>19</b>	<b>White</b>	000-255	From low to high intensity (0-100 %)

**Note:** Make sure that the dimmer channel(s) and shutter are open in order to see the light output.

**Note:**

- If you set CH 15 between 20-24, use CH 16, 17 and 18 to adjust the intensity of Red, Green and Blue.
- If you set CH 15 between 25-29, use CH 16, 17 and 18 to adjust the intensity of Cyan, Magenta and Yellow.

## 6.7.2. 24 Channels, 72 Channels, 84 Channels

24 CH	72 CH	84 CH	Function	Value	Setting
1	1	1	Tilt	000–255	Tilt adjustment 0°–180°
2	2	2	Tilt, Fine	000–255	Tilt adjustment, 16-bit
3	3	3	Tilt speed	000–255	Speed adjustment of the tilt, from fast to slow
4	4	4	Dimmer	000–255	From low to high intensity (0–100 %)
5	5	5	Dimmer, Fine	000–255	From low to high intensity (0–100 %)
6	6	6	Strobe/Shutter	000–004	No function
				005–006	Shutter open
				007–024	Pixel random strobe, from high to low frequency (20–0 Hz)
				025–026	Shutter open
				027–064	Strobe, from high to low frequency (20–0 Hz)
				065–066	Shutter open
				067–084	Fast on/slow off, from high to low frequency (20–0 Hz)
				085–086	Shutter open
				087–104	Slow on/fast off, from high to low frequency (20–0 Hz)
				105–106	Shutter open
				107–124	Random strobe, from high to low frequency (20–0 Hz)
				125–126	Shutter open
				127–144	Random fast on/slow off, from high to low frequency (20–0 Hz)
				145–146	Shutter open
				147–164	Random slow on/fast off, from high to low frequency (20–0 Hz)
				165–166	Shutter open
				167–184	Pulse strobe, from high to low frequency (20–0 Hz)
				185–186	Shutter open
187–204	Random pulse strobe, from high to low frequency (20–0 Hz)				
205–206	Shutter open				
207–224	Fade on/off, from high to low frequency (20–0 Hz)				
225–226	Shutter open				
227–244	Pulse strobe, from high to low frequency (20–0 Hz)				
245–255	Shutter open				
7	7	7	CTC	000	No function
				001–255	From 19000 K to 2700 K
8	8	8	Colors	000	No function
				001–002	White 2700 K (R=156, G=118, B=0, W=63)
				003–004	White 3200 K (R=156, G=141, B=5, W=89)
				005–006	White 4200 K (R=156, G=141, B=14, W=255)
				007–008	White 5600 K (R=156, G=207, B=54, W=255)
				009–010	White 8000 K (R=130, G=255, B=96, W=255)
				011	Blue (R=0, G=0, B=255, W=0)
				012–048	R=0, G+, B=255, W=0
				049	Cyan (R=0, G=255, B=255, W=0)
				050–086	R=0, G=255, B-, W=0
				087	Green (R=0, G=255, B=0, W=0)
				088–124	R+, G=255, B=0, W=0
				125	Yellow (R=255, G=255, B=0, W=0)
				126–162	R=255, G-, B=0, W=0

24 CH	72 CH	84 CH	Function	Value	Setting
				163	Red (R=255, G=0, B=0, W=0)
				164–200	R=255, G=0, B+, W=0
				201	Magenta (R=255, G=0, B=255, W=0)
				202–238	R-, G=0, B=255, W=0
				239	Blue (R=0, G=0, B=255, W=0)
				240–247	Color flow, from fast to slow
				248–255	Color switch, from fast to slow
9	9	9	Pattern	000–003	No function
				004–006	Pattern 1
				007–009	Pattern 2
				010–012	Pattern 3
				...	...
				247–249	Pattern 82
				250–252	Pattern 83
				253–255	Pattern 84
10	10	10	LED macros	000–015	No function
				016–019	LED macro 1
				020–023	LED macro 2
				024–027	LED macro 3
				...	...
				244–247	LED macro 58
				248–251	LED macro 59
				252–255	LED macro 60
11	11	11	LED macro speed+direction	000–127	Speed adjustment of the LED macros, from fast to slow
				128	Stop
				129–255	Direction reverse + speed adjustment of the LED macros, from slow to fast
12	12	12	LED macro fade speed	000–255	Speed adjustment of the LED macro fade, from fast to slow
13	13	13	Background color	000	No function
				001–002	White 2700 K (R=156, G=118, B=0, W=63)
				003–004	White 3200 K (R=156, G=141, B=5, W=89)
				005–006	White 4200 K (R=156, G=141, B=14, W=255)
				007–008	White 5600 K (R=156, G=207, B=54, W=255)
				009–010	White 8000 K (R=130, G=255, B=96, W=255)
				011	Blue (R=0, G=0, B=255, W=0)
				012–048	R=0, G+, B=255, W=0
				049	Cyan (R=0, G=255, B=255, W=0)
				050–086	R=0, G=255, B-, W=0
				087	Green (R=0, G=255, B=0, W=0)
				088–124	R+, G=255, B=0, W=0
				125	Yellow (R=255, G=255, B=0, W=0)
				126–162	R=255, G-, B=0, W=0
				163	Red (R=255, G=0, B=0, W=0)
				164–200	R=255, G=0, B+, W=0
				201	Magenta (R=255, G=0, B=255, W=0)
				202–238	R-, G=0, B=255, W=0
				239	Blue (R=0, G=0, B=255, W=0)
				240–247	Color flow, from fast to slow
248–255	Color switch, from fast to slow				
14	14	14	Background dimmer	000–255	From low to high intensity (0–100 %)

24 CH	72 CH	84 CH	Function	Value	Setting
15	15	15	Background Red	000–255	From low to high intensity (0–100 %)
16	16	16	Background Green	000–255	From low to high intensity (0–100 %)
17	17	17	Background Blue	000–255	From low to high intensity (0–100 %)
18	18	18	Background White	000–255	From low to high intensity (0–100 %)
19			Red/Cyan	000–255	From low to high intensity (0–100 %)
20			Green/Magenta	000–255	From low to high intensity (0–100 %)
21			Blue/Yellow	000–255	From low to high intensity (0–100 %)
22			White	000–255	From low to high intensity (0–100 %)
23	19	19	Zoom	000–255	From big to small (0–100 %)
24	20	20	Functions (after 5 seconds)	000–009	No function
				010–014	Tilt blackout
				015–019	No function
				020–024	RGBW color mixing
				025–029	CMY color mixing
				030–054	No function
				055–059	Tilt reset
				060–064	Zoom reset
				065–069	No function
				070–074	All reset
				075–079	No function
				080–084	Tilt reverse
				085–089	Pixel reverse
				090–094	Tilt reverse
				095–099	No function
				100–109	Cancel tilt reverse
				110–114	Cancel pixel reverse
				115–134	No function
				135–139	Dimmer Fast
				140–144	Dimmer Smooth
				145–149	Linear curve
				150–154	Square curve
				155–159	I square curve
				160–164	S-curve
				165–174	No function
				175–179	PWM-600 Hz
				180–184	PWM-1200 Hz
185–189	PWM-2000 Hz				
190–194	PWM-4000 Hz				
195–199	PWM-6000 Hz				
200–204	PWM-15000 Hz				
205–255	No function				
	21	21	Red/Cyan	000–255	From low to high intensity (0–100 %)
	22	22	Green/Magenta	000–255	From low to high intensity (0–100 %)
	23	23	Blue/Yellow	000–255	From low to high intensity (0–100 %)
	24	24	White	000–255	From low to high intensity (0–100 %)
	25	25	Dimmer 1	000–255	From low to high intensity (0–100 %)
	25	26	Red 1	000–255	From low to high intensity (0–100 %)
	26	27	Green 1	000–255	From low to high intensity (0–100 %)
	27	28	Blue 1	000–255	From low to high intensity (0–100 %)



24 CH	72 CH	84 CH	Function	Value	Setting
	28	29	White 1	000–255	From low to high intensity (0–100 %)
		30	Dimmer 2	000–255	From low to high intensity (0–100 %)
	29	31	Red 2	000–255	From low to high intensity (0–100 %)
	30	32	Green 2	000–255	From low to high intensity (0–100 %)
	31	33	Blue 2	000–255	From low to high intensity (0–100 %)
	32	34	White 2	000–255	From low to high intensity (0–100 %)
		35	Dimmer 3	000–255	From low to high intensity (0–100 %)
	33	36	Red 3	000–255	From low to high intensity (0–100 %)
	34	37	Green 3	000–255	From low to high intensity (0–100 %)
	35	38	Blue 3	000–255	From low to high intensity (0–100 %)
	36	39	White 3	000–255	From low to high intensity (0–100 %)
...	...	...	...	...	...
		75	Dimmer 11	000–255	From low to high intensity (0–100 %)
	65	76	Red 11	000–255	From low to high intensity (0–100 %)
	66	77	Green 11	000–255	From low to high intensity (0–100 %)
	67	78	Blue 11	000–255	From low to high intensity (0–100 %)
	68	79	White 11	000–255	From low to high intensity (0–100 %)
		80	Dimmer 12	000–255	From low to high intensity (0–100 %)
	69	81	Red 12	000–255	From low to high intensity (0–100 %)
	70	82	Green 12	000–255	From low to high intensity (0–100 %)
	71	83	Blue 12	000–255	From low to high intensity (0–100 %)
	72	84	White 12	000–255	From low to high intensity (0–100 %)

**Note:** Make sure that the dimmer channel(s) is open in order to see the light output.

**Note:**

In 24-channel mode:

- If you set CH 24 between 20–24, use CH 19, 20 and 21 to adjust the intensity of Red, Green and Blue.
- If you set CH 24 between 25–29, use CH 19, 20 and 21 to adjust the intensity of Cyan, Magenta and Yellow.

In 72-channel mode and 84-channel mode:

- If you set CH 20 between 20–24, use CH 21, 22 and 23 to adjust the intensity of Red, Green and Blue.
- If you set CH 20 between 25–29, use CH 21, 22 and 23 to adjust the intensity of Cyan, Magenta and Yellow.

## 6.7.3. 129 Channels

129 CH	Function	Value	Setting
1	Tilt	000–255	Tilt adjustment 0°–180°
2	Tilt, Fine	000–255	Tilt adjustment, 16-bit
3	Tilt speed	000–255	Speed adjustment of the tilt, from fast to slow
4	Dimmer	000–255	From low to high intensity (0–100 %)
5	Dimmer, Fine	000–255	From low to high intensity (0–100 %)
6	Strobe/Shutter	000–004	No function
		005–006	Shutter open
		007–024	Pixel random strobe, from high to low frequency (20–0 Hz)
		025–026	Shutter open
		027–064	Strobe, from high to low frequency (20–0 Hz)
		065–066	Shutter open
		067–084	Fast on/slow off, from high to low frequency (20–0 Hz)
		085–086	Shutter open
		087–104	Slow on/fast off, from high to low frequency (20–0 Hz)
		105–106	Shutter open
		107–124	Random strobe, from high to low frequency (20–0 Hz)
		125–126	Shutter open
		127–144	Random fast on/slow off, from high to low frequency (20–0 Hz)
		145–146	Shutter open
		147–164	Random slow on/fast off, from high to low frequency (20–0 Hz)
		165–166	Shutter open
		167–184	Pulse strobe, from high to low frequency (20–0 Hz)
		185–186	Shutter open
		187–204	Random pulse strobe, from high to low frequency (20–0 Hz)
		205–206	Shutter open
207–224	Fade on/off, from high to low frequency (20–0 Hz)		
225–226	Shutter open		
227–244	Pulse strobe, from high to low frequency (20–0 Hz)		
245–255	Shutter open		
7	CTC	000	No function
		001–255	From 19000 K to 2700 K
8	Colors	000	No function
		001–002	White 2700 K (R=156, G=118, B=0, W=63)
		003–004	White 3200 K (R=156, G=141, B=5, W=89)
		005–006	White 4200 K (R=156, G=141, B=14, W=255)
		007–008	White 5600 K (R=156, G=207, B=54, W=255)
		009–010	White 8000 K (R=130, G=255, B=96, W=255)
		011	Blue (R=0, G=0, B=255, W=0)
		012–048	R=0, G+, B=255, W=0
		049	Cyan (R=0, G=255, B=255, W=0)
		050–086	R=0, G=255, B-, W=0
		087	Green (R=0, G=255, B=0, W=0)
		088–124	R+, G=255, B=0, W=0
		125	Yellow (R=255, G=255, B=0, W=0)
		126–162	R=255, G-, B=0, W=0
		163	Red (R=255, G=0, B=0, W=0)
		164–200	R=255, G=0, B+, W=0
		201	Magenta (R=255, G=0, B=255, W=0)
		202–238	R-, G=0, B=255, W=0
		239	Blue (R=0, G=0, B=255, W=0)
		240–247	Color flow, from fast to slow

129 CH	Function	Value	Setting
		248-255	Color switch, from fast to slow
9	Pattern	000-003	No function
		004-006	Pattern 1
		007-009	Pattern 2
		010-012	Pattern 3
		...	...
		247-249	Pattern 82
		250-252	Pattern 83
10	LED macros	253-255	Pattern 84
		000-015	No function
		016-019	LED macro 1
		020-023	LED macro 2
		024-027	LED macro 3
		...	...
		244-247	LED macro 58
11	LED macro speed+direction	248-251	LED macro 59
		252-255	LED macro 60
		000-127	Speed adjustment of the LED macros, from fast to slow
12	LED macro fade speed	128	Stop
		129-255	Direction reverse + speed adjustment of the LED macros, from slow to fast
13	Background color	000	No function
		001-002	White 2700 K (R=156, G=118, B=0, W=63)
		003-004	White 3200 K (R=156, G=141, B=5, W=89)
		005-006	White 4200 K (R=156, G=141, B=14, W=255)
		007-008	White 5600 K (R=156, G=207, B=54, W=255)
		009-010	White 8000 K (R=130, G=255, B=96, W=255)
		011	Blue (R=0, G=0, B=255, W=0)
		012-048	R=0, G+, B=255, W=0
		049	Cyan (R=0, G=255, B=255, W=0)
		050-086	R=0, G=255, B-, W=0
		087	Green (R=0, G=255, B=0, W=0)
		088-124	R+, G=255, B=0, W=0
		125	Yellow (R=255, G=255, B=0, W=0)
		126-162	R=255, G-, B=0, W=0
		163	Red (R=255, G=0, B=0, W=0)
		164-200	R=255, G=0, B+, W=0
		201	Magenta (R=255, G=0, B=255, W=0)
		202-238	R-, G=0, B=255, W=0
		239	Blue (R=0, G=0, B=255, W=0)
		240-247	Color flow, from fast to slow
248-255	Color switch, from fast to slow		
14	Background dimmer	000-255	From low to high intensity (0-100 %)
15	Background dimmer, Fine	000-255	From low to high intensity (0-100 %)
16	Background Red	000-255	From low to high intensity (0-100 %)
17	Background Red, Fine	000-255	From low to high intensity (0-100 %)
18	Background Green	000-255	From low to high intensity (0-100 %)

129 CH	Function	Value	Setting
19	Background Green, Fine	000-255	From low to high intensity (0-100 %)
20	Background Blue	000-255	From low to high intensity (0-100 %)
21	Background Blue, Fine	000-255	From low to high intensity (0-100 %)
22	Background White	000-255	From low to high intensity (0-100 %)
23	Background White, Fine	000-255	From low to high intensity (0-100 %)
24	Zoom	000-255	From big to small (0-100 %)
25	Functions (after 5 seconds)	000-009	No function
		010-014	Tilt blackout
		015-019	No function
		020-024	RGBW color mixing
		025-029	CMY color mixing
		030-054	No function
		055-059	Tilt reset
		060-064	Zoom reset
		065-069	No function
		070-074	All reset
		075-079	No function
		080-084	Tilt reverse
		085-089	Pixel reverse
		090-094	Tilt reverse
		095-099	No function
		100-109	Cancel tilt reverse
		110-114	Cancel pixel reverse
		115-134	No function
		135-139	Dimmer Fast
		140-144	Dimmer Smooth
		145-149	Linear curve
		150-154	Square curve
		155-159	I square curve
160-164	S-curve		
165-174	No function		
175-179	PWM-600 Hz		
180-184	PWM-1200 Hz		
185-189	PWM-2000 Hz		
190-194	PWM-4000 Hz		
195-199	PWM-6000 Hz		
200-204	PWM-15000 Hz		
205-255	No function		
26	Red/Cyan	000-255	From low to high intensity (0-100 %)
27	Red/Cyan, Fine	000-255	From low to high intensity (0-100 %)
28	Green/Magenta	000-255	From low to high intensity (0-100 %)
29	Green/Magenta, Fine	000-255	From low to high intensity (0-100 %)
30	Blue/Yellow	000-255	From low to high intensity (0-100 %)
31	Blue/Yellow, Fine	000-255	From low to high intensity (0-100 %)
32	White	000-255	From low to high intensity (0-100 %)
33	White, Fine	000-255	From low to high intensity (0-100 %)
34	Red 1	000-255	From low to high intensity (0-100 %)
35	Red 1, Fine	000-255	From low to high intensity (0-100 %)

129 CH	Function	Value	Setting
36	Green 1	000-255	From low to high intensity (0-100 %)
37	Green 1, Fine	000-255	From low to high intensity (0-100 %)
38	Blue 1	000-255	From low to high intensity (0-100 %)
39	Blue 1, Fine	000-255	From low to high intensity (0-100 %)
40	White 1	000-255	From low to high intensity (0-100 %)
41	White 1, Fine	000-255	From low to high intensity (0-100 %)
...	...	...	...
122	Red 12	000-255	From low to high intensity (0-100 %)
123	Red 12, Fine	000-255	From low to high intensity (0-100 %)
124	Green 12	000-255	From low to high intensity (0-100 %)
125	Green 12, Fine	000-255	From low to high intensity (0-100 %)
126	Blue 12	000-255	From low to high intensity (0-100 %)
127	Blue 12, Fine	000-255	From low to high intensity (0-100 %)
128	White 12	000-255	From low to high intensity (0-100 %)
129	White 12, Fine	000-255	From low to high intensity (0-100 %)

**Note:** Make sure that the dimmer channel(s) and shutter are open in order to see the light output.

**Note:**

- If you set CH 25 between 20-24, use CH 26-31 to adjust the intensity of Red, Green and Blue.
- If you set CH 25 between 25-29, use CH 26-31 to adjust the intensity of Cyan, Magenta and Yellow.

## 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>Check if power is switched on and cables are plugged in</li> </ul>
	Main fuse is blown	<ul style="list-style-type: none"> <li>Replace the fuse. See <b>8.3.1. Replacing the Fuse</b> on page 39</li> </ul>
The device responds erratically	The factory settings of the device are changed	<ul style="list-style-type: none"> <li>Reset the device's parameters to the default factory settings. See <b>FACTORY RESET</b> on page 23</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 3-pin/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	Bad data link connection	<ul style="list-style-type: none"> <li>Examine connections and cables. Correct poor 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>Check address settings and correct, if necessary</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>
No light or LEDs cut out intermittently	LEDs are damaged	<ul style="list-style-type: none"> <li>Disconnect the device and contact your Highlite International dealer</li> </ul>
	The power supply settings do not match local AC voltage and frequency	<ul style="list-style-type: none"> <li>Disconnect the device. Check the settings and correct, if necessary</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.



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

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

### 8.2. Preventive Maintenance



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

Make sure that:

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

## 8.2.1. Basic Cleaning Instructions

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

To clean the device, follow the steps below:

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



### Attention

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

## 8.3. Corrective Maintenance

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

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

### 8.3.1. Replacing the Fuse



### DANGER Electric shock caused by short-circuit

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

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

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



## 9. Deinstallation, Transportation and Storage

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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 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".

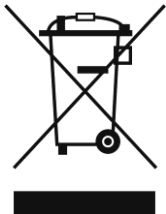
### 9.3. Storage

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







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