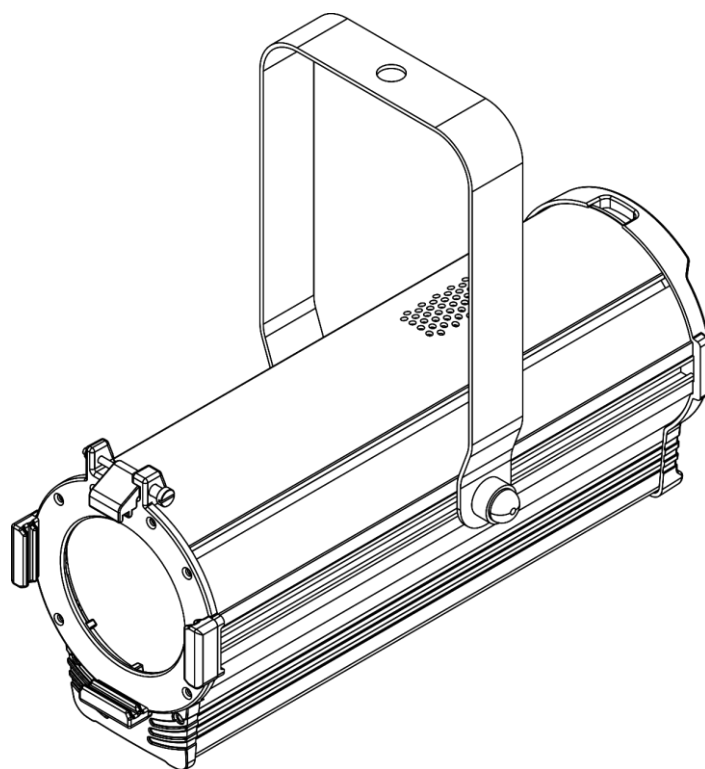




USER MANUAL



ENGLISH

ACT PC 60 RGBW

V1

Product code: 34020

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 ACT PC 60 RGBW
- Schuko to pro-power cable (1,5 m)
- User manual

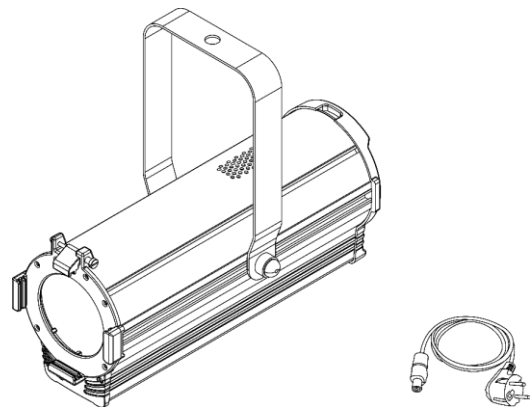


Fig. 01

1.2. Intended Use

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

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

1.3. Product Lifespan

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

1.4. LEDs Lifespan

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

1.5. Text Conventions

Throughout the user manual the following text conventions are used:

- Buttons: All buttons are in bold lettering, for example “Press the **UP/DOWN** buttons”
- References: References to chapters and parts of the device are in bold lettering, for example: “Refer to **2. Safety**”, “turn the **adjustment handle (05)**”
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.6. Symbols and Signal Words

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

Always follow the instructions provided in this user manual.



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.



Attention

Indicates important information for the correct operation and use of the product.



Important

Read and observe the instructions in this document.



Electrical hazard



Hot surface



Eye damage hazard



Provides important information about the disposal of this product.

1.7. Symbols on the Information Label

This product is provided with an information label. The information label is located on the mounting bracket.

The information label contains the following symbols:



This device is designed for indoor use.



This device shall not be treated as household waste.

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 Highlight 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 ACT PC 60 RGBW is a compact theater spot suitable for indoor venues. It delivers excellent color mixing, dimming, wash and beam effects.

3.1. Front View

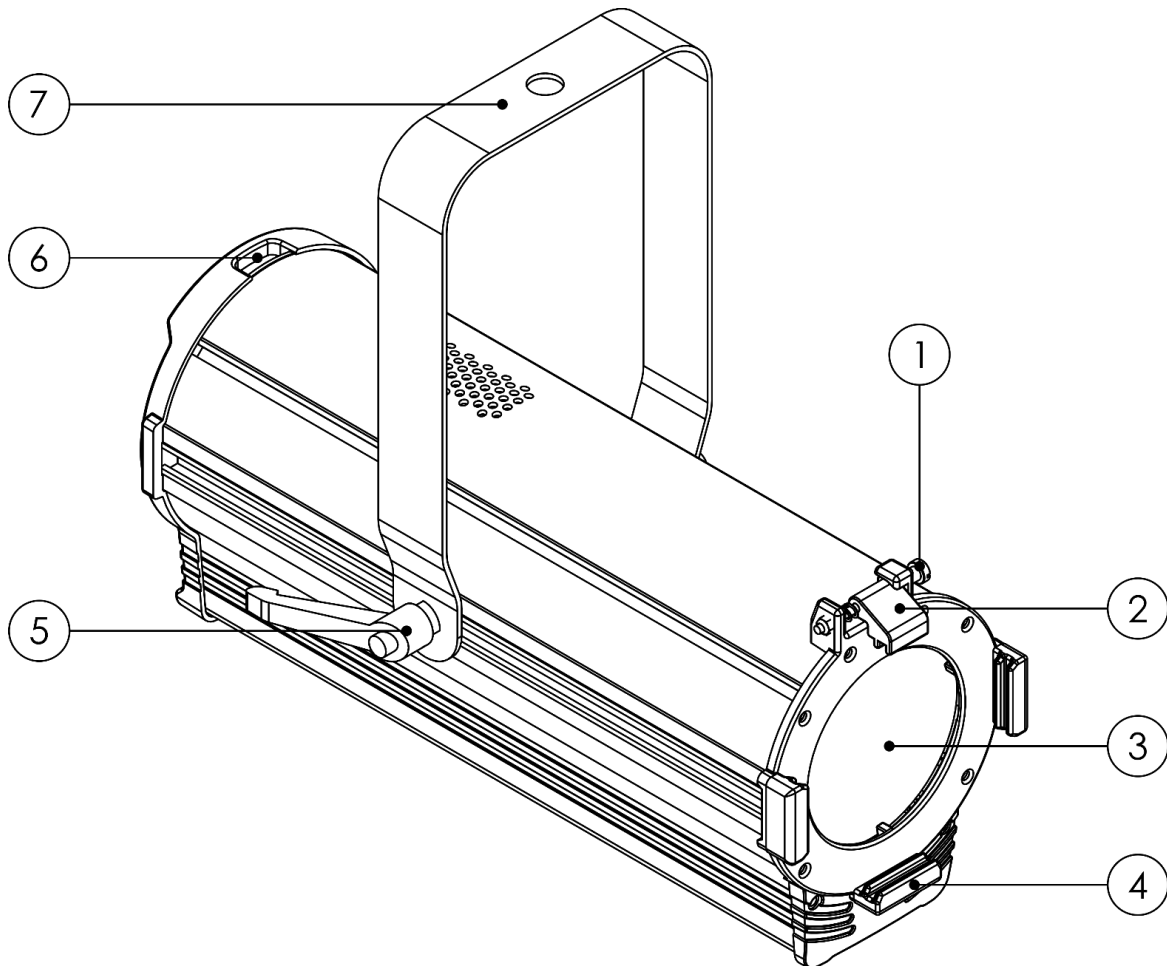


Fig. 02

- 01) Spring-loaded screw
- 02) Color frame clip
- 03) Lens
- 04) Color frame holder
- 05) Adjustment handle
- 06) Safety eye
- 07) Mounting bracket

3.2. Back View

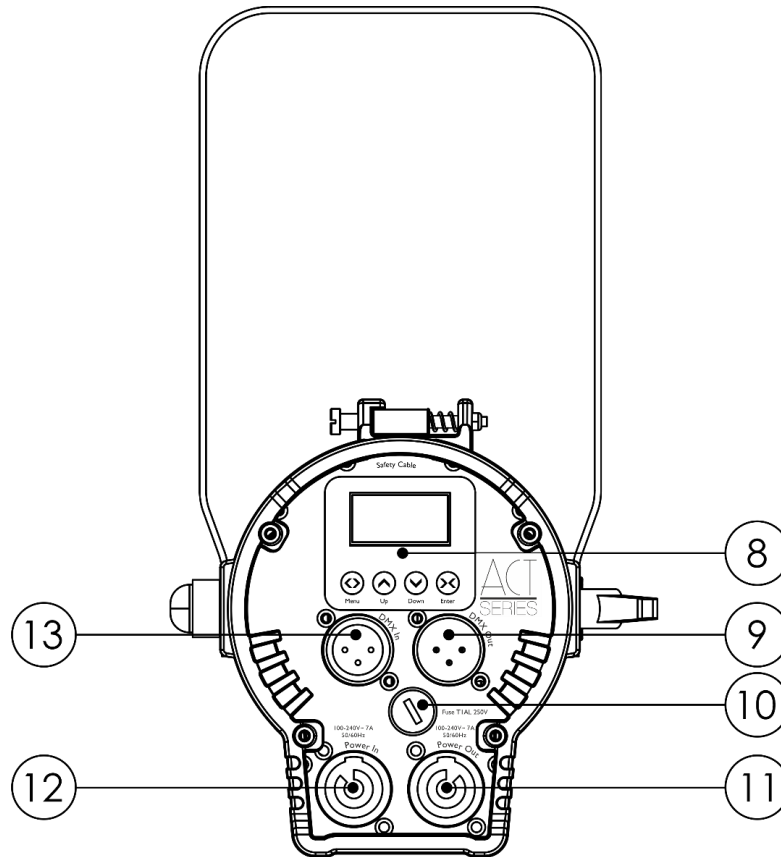


Fig. 03

- 08) Control panel: OLED display and control buttons
- 09) 3-pin DMX signal connector OUT
- 10) Fuse T1 AL/250 V AC
- 11) Pro-power connector OUT 100–240 V, 7A, 50/60 Hz (Gray)
- 12) Pro-power connector IN 100–240 V, 7A, 50/60 Hz (Blue)
- 13) 3-pin DMX signal connector IN

3.3. Product Specifications

Model:	ACT PC 60 RGBW
--------	----------------

Electrical:	
Input voltage:	100–240 V AC, 50/60 Hz
Power consumption:	70 W
Fuse:	T1 AL, 250 V AC

Physical:	
Dimensions:	313 x 165 x 265 mm (L x W x H)
Weight:	2,24 kg

Optics:	
Light source:	60 W Quad (RGBW) LED
Dimmer:	0–100 %
Strobe:	0–20 Hz
Zoom:	Motorized
Beam angle:	3,7°–31,5°
Output:	9410 lx @ 3 m (3,7°)
	132 lx @ 3 m (31,5°)

Operation and control:	
Control:	Stand-alone (auto, manual, sound-controlled) Master/Slave (auto, manual, sound-controlled) DMX-512
DMX channels:	5, 7, 11 channels
Control panel:	OLED display and buttons

Connections:	
Power connections:	Pro-power connectors IN/OUT
Data connections:	3-pin DMX connectors IN/OUT
Signal pin OUT:	Pin 1 (ground), pin 2 (-), pin 3 (+)

Construction:	
Housing:	Extruded aluminum
Color:	Black
Built-in microphone:	Yes
IP rating:	IP20
Cooling:	Internal fan

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

Minimum distance:	
Minimum distance from flammable surfaces:	0,5 m
Minimum distance to lighted object:	1 m

3.4. Optional Accessories

The ACT PC 60 RGBW is delivered without accessories. You can additionally install a barndoor and a color frame for a color gel.

Product code: 34051 (Barndoor for ACT series)

3.5. Dimensions

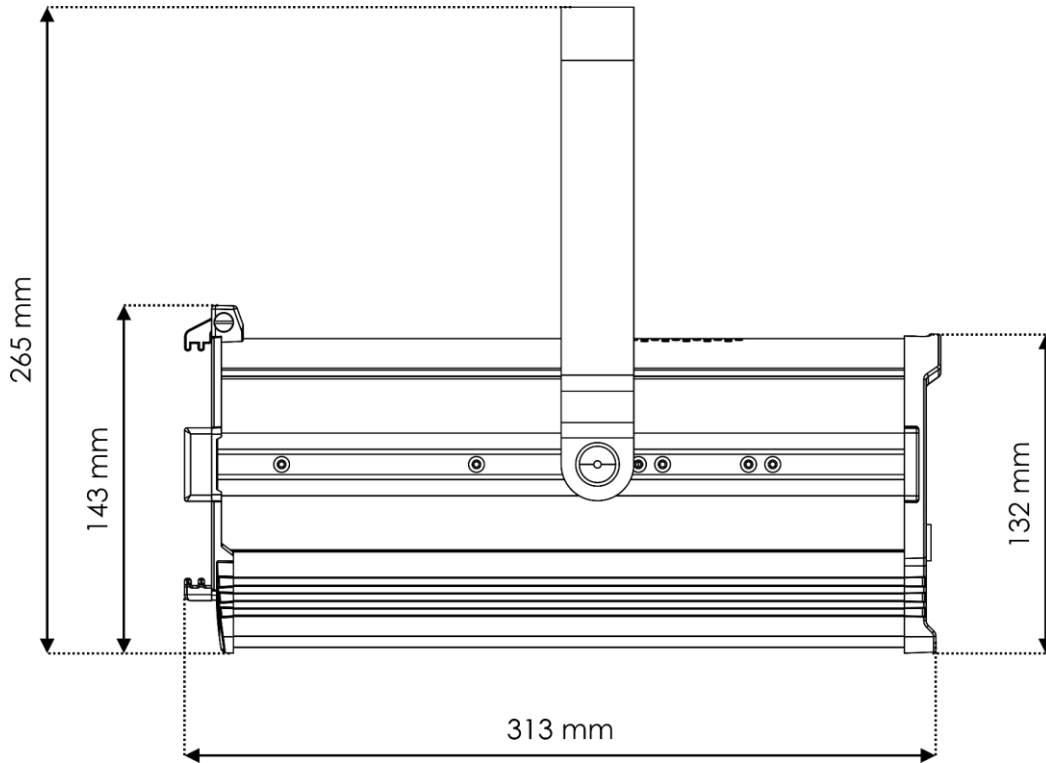


Fig. 04

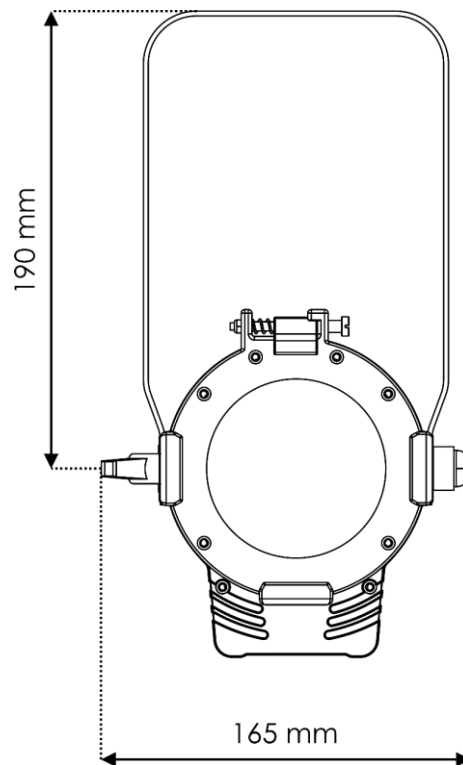


Fig. 05

4. Installation

4.1. Safety Instructions for Installation

**WARNING**

Incorrect installation can cause serious injuries and damage of property.

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

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

4.2. Personal Protective Equipment

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

4.3. Installation Site Requirements

- The device can be used only indoors.
- The device can be mounted to a truss or another rigging structure in any orientation.
- The minimum distance to other objects must be bigger than 0,5 m.
- The maximum ambient temperature $t_a = 40\text{ °C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40 °C.

4.4. Rigging

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

**CAUTION**

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

To mount the device, follow the steps below:

- 01) Use a clamp to attach the device to the supporting structure, as shown in Fig. 06. Make sure that the device cannot move freely.
- 02) Secure the device with a secondary suspension, for example a safety cable. Make sure that the secondary suspension can hold 10 times the weight of the device. If possible, the secondary suspension should be attached to a supporting structure independent of the primary suspension. Put the safety cable through the **safety eye (06)**, as shown in Fig. 06.

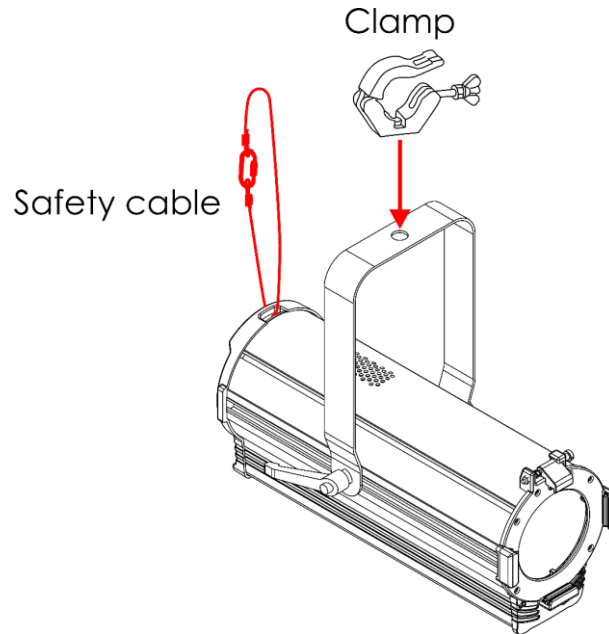


Fig. 06

4.4.1. Angle Adjustment

You can adjust the angle of the device with the **adjustment handle (05)**.

- 01) Turn the **adjustment handle (05)** counterclockwise to release it.
- 02) Tilt the device at the desired angle (see Fig. 07).
- 03) Turn the **adjustment handle (05)** clockwise to tighten it. Make sure that the device cannot move freely after the **adjustment handle (05)** is tightened.

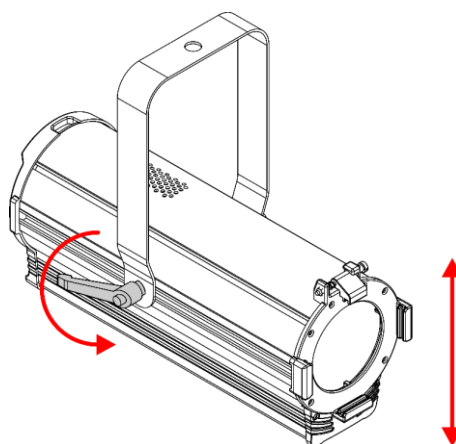


Fig. 07

4.5. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

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

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

Before connecting the device to the socket-outlet:

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

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

4.6. Power Linking of Multiple Devices

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

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



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

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

- Use cables with sufficient current-carrying capacity. The power cable supplied with the device is not suitable for power linking of multiple devices.
- Make sure that the total current draw of the device and all connected devices does not exceed the rated capacity of the power cables and the circuit breaker.
- Do not link more devices on one power link than the maximum recommended number.

Maximum recommended number of devices:

- at 100–120 V: 10 devices ACT PC 60 RGBW
- at 200–240 V: 15 devices ACT PC 60 RGBW

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 ACT PC 60 RGBW is not connected to a controller or to other devices, it functions as a stand-alone device. It can be operated manually, in auto mode or in sound-controlled mode.

For more information about the control modes, refer to **6.2. Control Modes** on page 19.

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 ACT PC 60 RGBW has 3-pin DMX signal IN and OUT connectors.

The pin assignment is as follows:



1. Ground
2. Signal (-)
3. Signal (+)

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 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. 08.

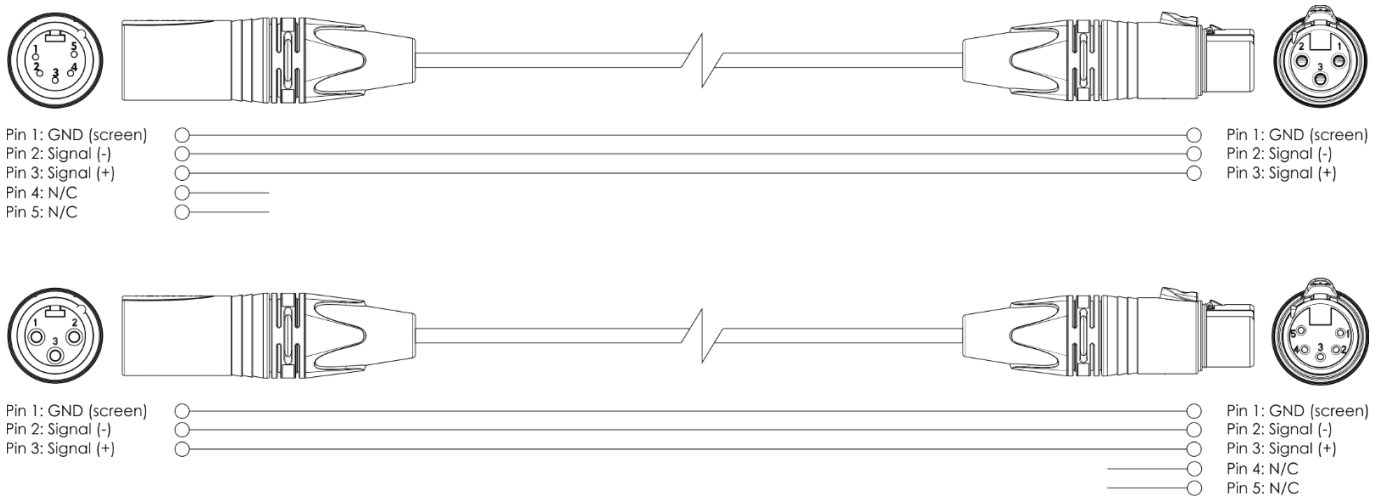


Fig. 08

5.3.3. Master/Slave Setup

The ACT PC 60 RGBW 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.
- 02) Repeat step 1 to connect all devices as shown in Fig. 09.
- 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 **6.6.2.3. Slave Mode** on page 26 for more information.
- 05) Set the remaining devices to slave mode. See **6.6.2.3. Slave Mode** on page 26 for more information.

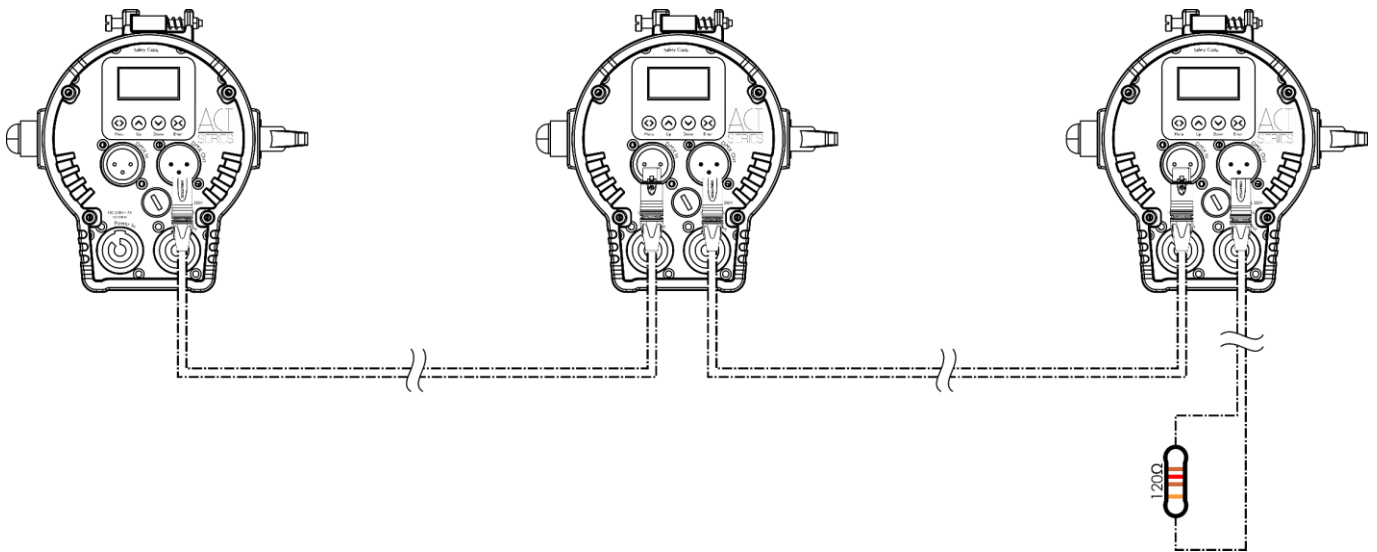


Fig. 09

5.3.4. DMX Linking

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

- 01) Use a 3-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 DMX cable.
- 03) Repeat step 2 to connect all devices in a daisy-chain as shown in Fig. 10.
- 04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.

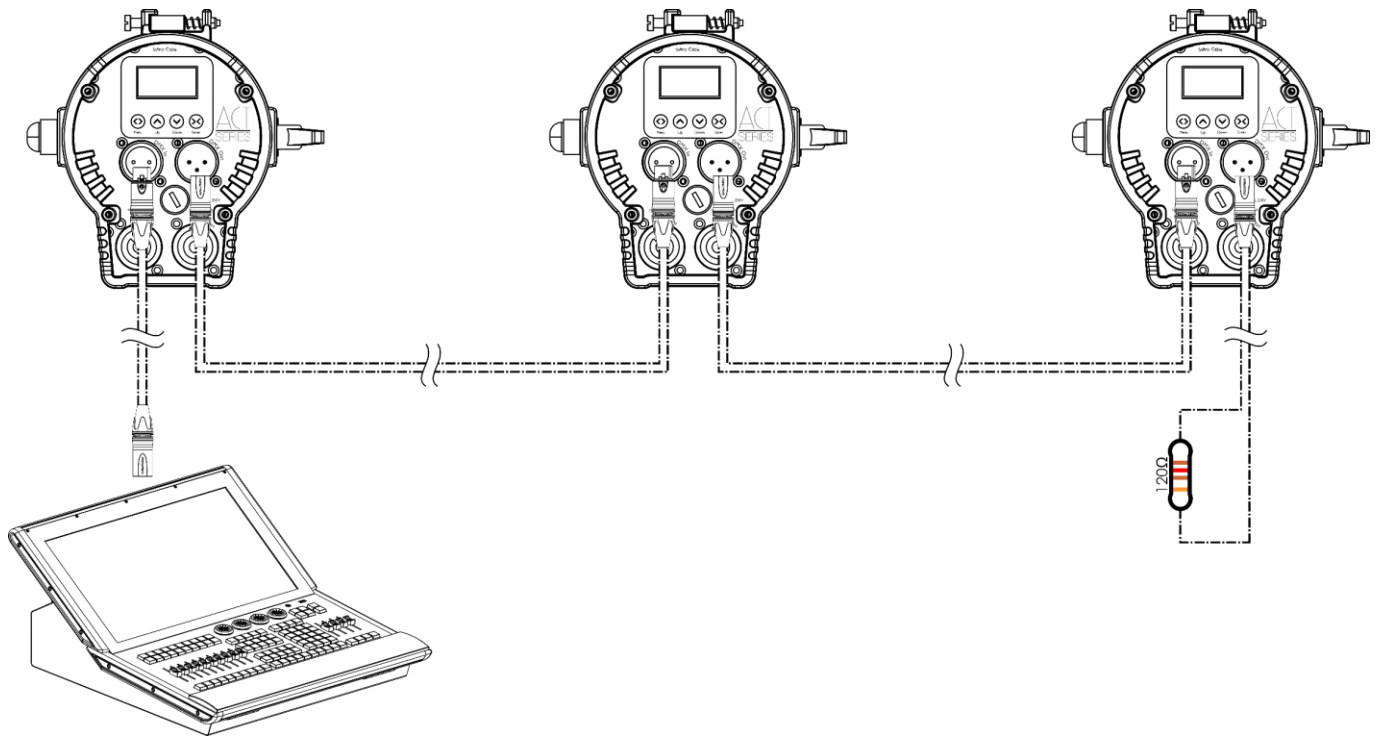


Fig. 10

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 ACT PC 60 RGBW has 3 personalities: 5 channels, 7 channels and 11 channels.

If you want to connect multiple devices on one data link and use them in 11-channel mode, for example, follow the steps below:

- 01) Set the starting address of the 1st device on the data link to 1 (001).
- 02) Set the starting address of the 2nd device on the data link to 12 (012), as $1 + 11 = 12$.
- 03) Set the starting address of the 3rd device on the data link to 23 (023) as $12 + 11 = 23$.
- 04) Continue assigning the starting addresses of the remaining devices by adding each time 11 to the previous number.

Make sure that you do not have any overlapping channels in order to control each ACT PC 60 RGBW 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 theater spot. 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 ACT PC 60 RGBW can be operated with a DMX controller, and as a stand-alone device or in a master/slave setup without a DMX controller.

The ACT PC 60 RGBW supports the following control modes:

- Stand-alone: Auto operation mode (built-in chases, color macros), manual operation, sound-controlled operation mode (built-in chases)
- Master/Slave: Auto operation mode (built-in chases, color macros), manual operation, sound-controlled operation mode (built-in chases)
- DMX-512: 5 channels, 7 channels and 11 channels

For more information about how to connect the devices, refer to **5. Setup** on pages 16–18.

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

- 01) Select Manually Defined in the DMX Fail pop-up submenu. See **6.6.1.3. DMX Fail** on page 24 for more information.
- 02) Adjust the color, strobe, dimmer and zoom in the Manually Defined submenu. See **6.6.5.1. Manually Defined** on page 27 for more information.

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

- 01) Select Show in the DMX Fail pop-up submenu. See **6.6.1.3. DMX Fail** on page 24.
- 02) Select one of the 64 color macros or one of the 9 built-in chases in the Show Chase pop-up submenu. See **6.6.2.2. Show Chase** on pages 25–26 for more information.

You can additionally activate sound-controlled operation when running the built-in programs. See **6.6.2.1. Sound Settings** on page 25 for more information.

6.3. Control Panel

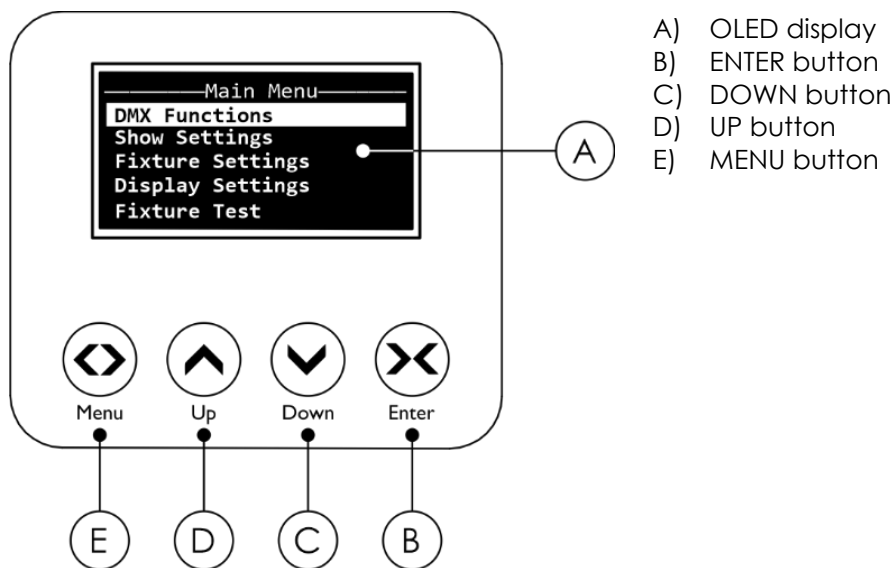


Fig. 11

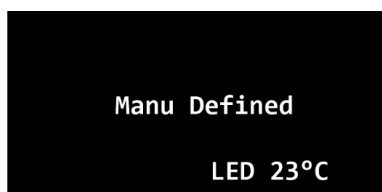
- Use the **MENU** button to exit the current submenu, to return to the Main Menu and to return to the start screen.
- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **ENTER** button to open the desired menu, to confirm your choice or to set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

6.4. Start-up

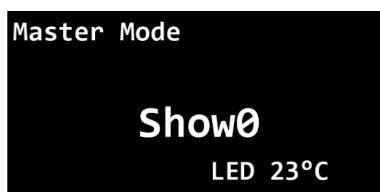
Upon start-up the display will show a splash screen with the name of the device:



Immediately afterwards the display will show the start screen. The start screen provides information about the control and operation modes of the device and the temperature of the LEDs, for example:



Manual operation

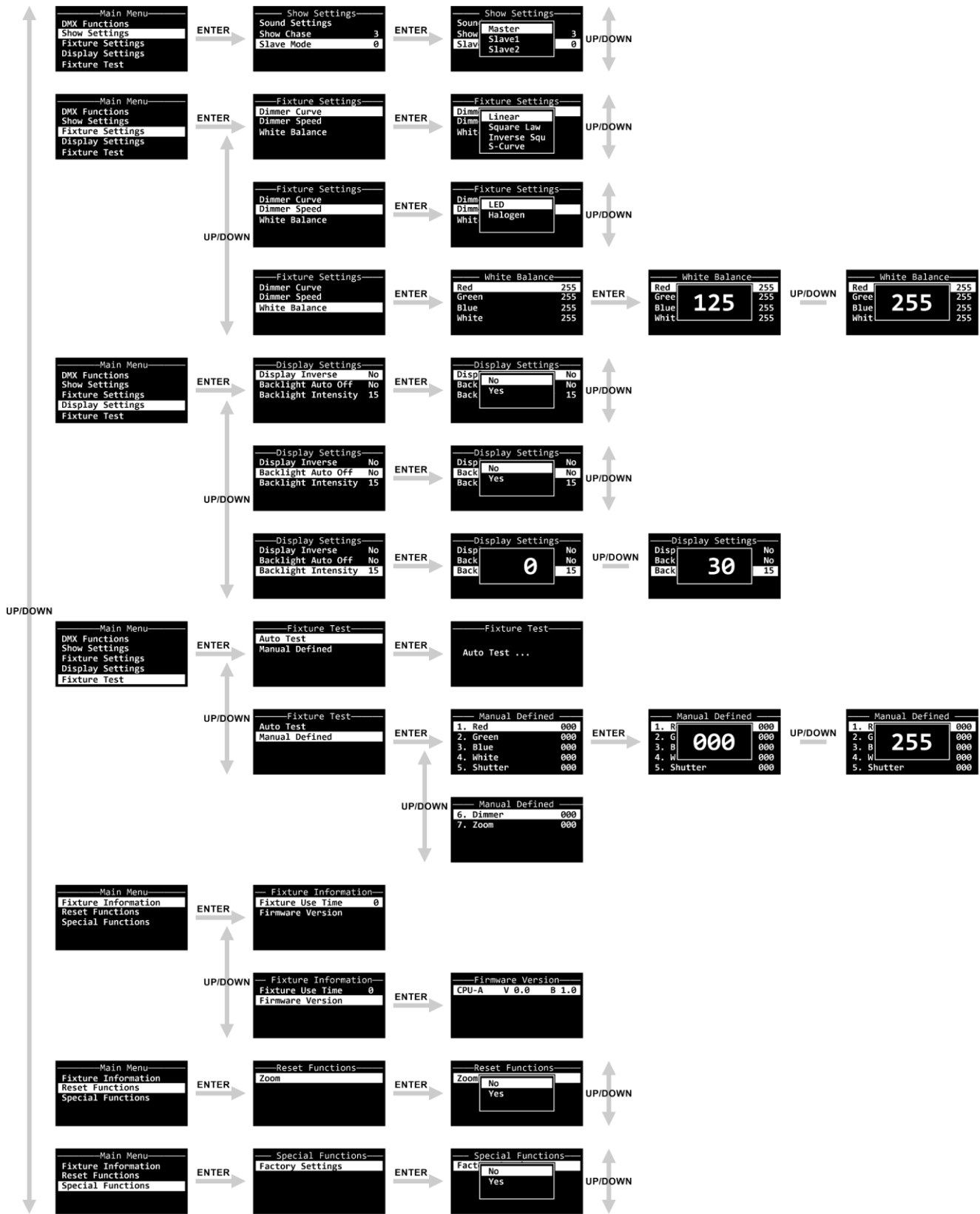


Color macros as a master device in master/slave control mode



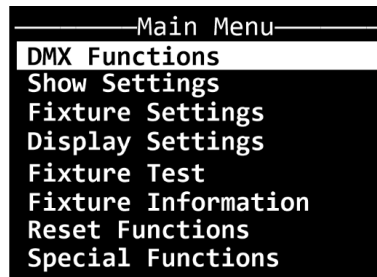
11-channel DMX mode with starting address 001

Note: If no button is pressed, after 50 seconds of inactivity the display will turn off. Press any button to turn the display on. See **6.6.4. Display Settings** on page 27 for more information.



6.6. Main Menu Options

The main menu has the following options:

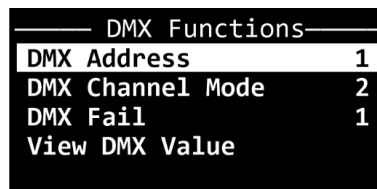


- 01) Press the **UP/DOWN** buttons to navigate through the main menu.
- 02) Press the **ENTER** button to open the submenus.

6.6.1. DMX Functions

In this menu you can configure the DMX settings of the device.

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

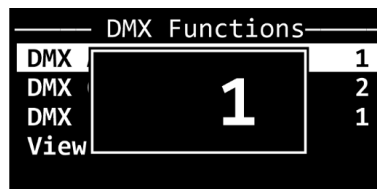


- 02) Press the **ENTER** button to confirm your choice.

6.6.1.1. DMX Address

In this pop-up submenu you can set the starting DMX address of the device.

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

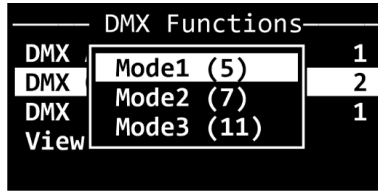


- 02) Press the **ENTER** button to confirm the selection.

6.6.1.2. DMX Channel Mode

In this pop-up submenu you can select the DMX channel mode.

01) Press the UP/DOWN buttons to select the desired DMX channel mode. There are 3 options available:



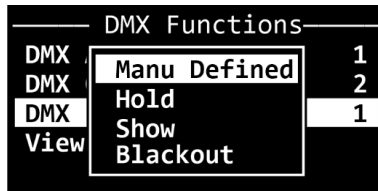
- Mode 1 (5): 5 channels
- Mode 2 (7): 7 channels
- Mode 3 (11): 11 channels

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

6.6.1.3. DMX Fail

In this pop-up submenu you can determine the behavior of the device in case there is no DMX signal.

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



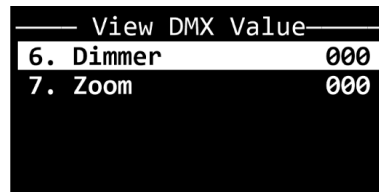
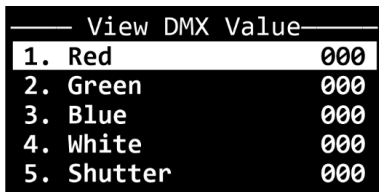
- Manually Defined (1): The device will use the manually selected values for color, shutter, dimmer and zoom. See **6.6.5.1. Manually Defined** in pages 27–28 for more information
- Hold (2): The device will use the last properly received DMX signal
- Show (3): The device will play one of the color macros or one of the built-in chases. See **6.6.2. Show Settings** on page 25–26 for more information
- Blackout (4): The device will black out the light output

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

6.6.1.4. View DMX Value

In this submenu you can view the currently selected DMX value for the following channels: red, green, blue, white, shutter, dimmer and zoom.

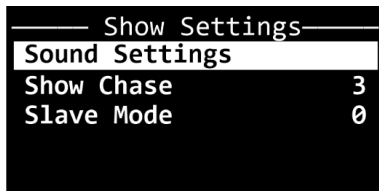
Press the **UP/DOWN** buttons to scroll through all options:



6.6.2. Show Settings

In this menu you can select the operation mode: sound-controlled, auto, master/slave.

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

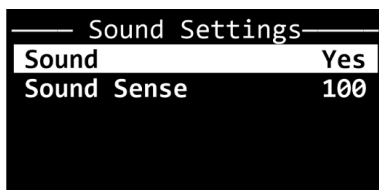


02) Press the **ENTER** button to confirm your choice.

6.6.2.1. Sound Settings

In this submenu menu you can select sound-controlled operation mode and adjust the sound sensitivity of the device.

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



- **Sound:** Activation of the sound-controlled operation mode (No/Yes). If you choose Yes, the device will run the selected built-in chase reacting to the beat of the music. See **6.6.2.2. Show Chase** on page 25–26 for more information about selecting built-in chases.
- **Sound Sense:** Adjustment of the sensitivity of the built-in microphone. The adjustment range is 000–100, from low to high sensitivity.

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

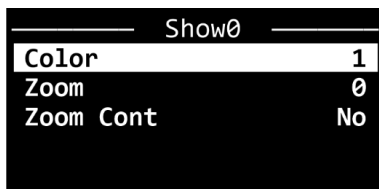
6.6.2.2. Show Chase

In this pop-up submenu menu you can select one of the 64 color macros or run one of the 9 built-in chases.

01) Press the **UP/DOWN** buttons to select one of the 10 available options.
 02) Press the **ENTER** button to confirm the selection.

The available options are:

- **Show0:** Select one of the 64 color macros and adjust the zoom settings

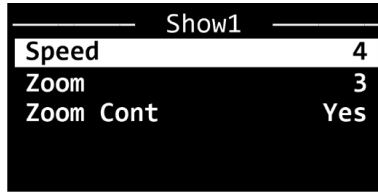


In the Show0 submenu you can further adjust the following parameters:

- Color:** Select one of the 64 color macros. The selection range is 001–064
- Zoom:** Set the zoom. The adjustment range is 000–255
- Zoom Cont:** Activate the automatic zoom-in and zoom-out function (No/Yes). If you select Yes, the device will continuously zoom in and zoom out

Note: You cannot select the color macros (Show0) in sound-controlled operation mode.

- **Show1 – Show9:** Select one of the 9 built-in chases



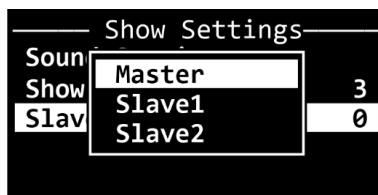
In each submenu under Show1 to Show9 you can further adjust the following parameters:

- Speed: Set the speed of the built-in chase. The adjustment range is 000–099
- Zoom: Set the zoom. The adjustment range is 000–255
- Zoom Cont: Activate the automatic zoom-in and zoom-out function (No/Yes). If you select Yes, the device will continuously zoom in and zoom out

6.6.2.3. Slave Mode

In this pop-up submenu menu you can activate master/slave control mode.

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



- Master (0): The device will operate as a master device in master/slave mode
- Slave1 (1): The device will operate as a slave device in master/slave mode on line 1
- Slave2 (2): The device will operate as a slave device in master/slave mode on line 2

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

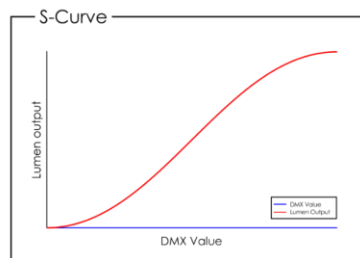
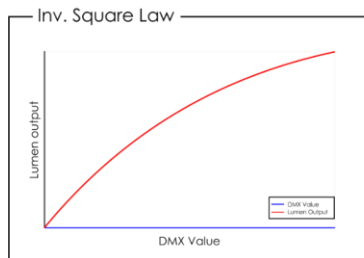
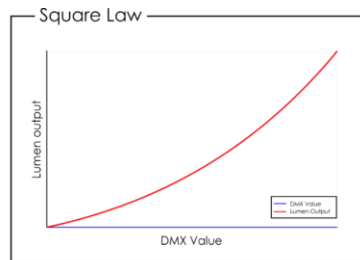
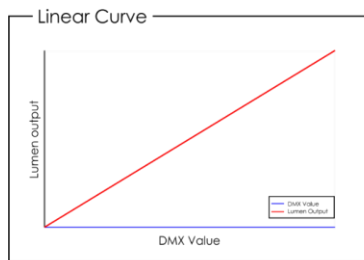
Note: Make sure that all slave devices in one master/slave setup are set to the same slave line, otherwise they will not operate as the master device. Select either Slave1 or Slave2 for all slave devices in the same master/slave setup.

6.6.3. Fixture Settings

In this menu you can adjust the fixture settings.

- 01) Press the **UP/DOWN** buttons to toggle between Dimmer Curve and Dimmer Speed.

- Dimmer Curve: There are 4 options available: Linear, Square Law, Inverse Square Law and S-Curve



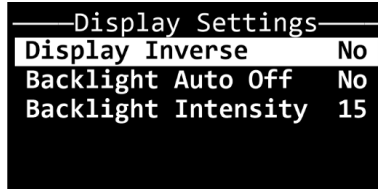
- Dimmer Speed: There are 2 options available: LED (instant dimming without delay) and Halogen (delayed dimming, imitating the behavior of a halogen lamp)
- White Balance: You can adjust the white balance of the LEDs through adjusting the values of the red, green, blue and white colors. The adjustment range is 125–255

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

6.6.4. Display Settings

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

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



02) Press the **ENTER** button to confirm the selection and open the pop-up submenu where you can adjust the settings.

03) Press the **UP/DOWN** buttons to select the desired setting.

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

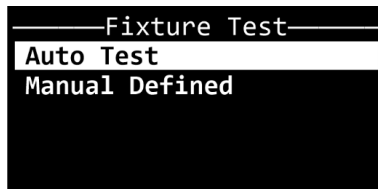
The available options are:

- Display Inverse: The OLED display will be rotated at 180° (No/Yes)
- Backlight Auto Off: The backlight of the OLED display will not turn off automatically after 50 seconds of inactivity (NO/YES)
- Backlight Intensity: The adjustment range is between 0 and 30 (from low to high contrast)

6.6.5. Fixture Test

In this menu you can perform a test of the device's parameters and adjust manually the dimmer and the strobe values.

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



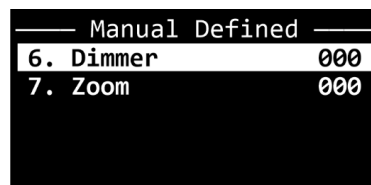
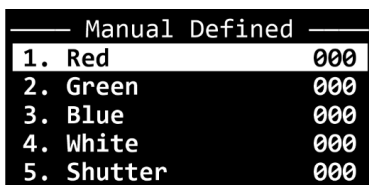
- Auto Test: The device performs an auto test of its parameters
- Manually Defined: See **6.6.3.1. Manually Defined** for more information

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

6.6.5.1. Manually Defined

In this submenu you can manually adjust color, strobe, dimmer and zoom.

01) Press the **UP/DOWN** buttons to scroll through following options: red, green, blue, white, shutter, dimmer and zoom.

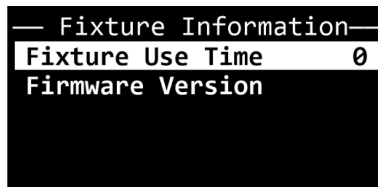


- 02) Press the **ENTER** button to confirm your selection and open the respective pop-up submenu where you can adjust the values.
- 03) Press the **UP/DOWN** buttons to adjust the values. The adjustment range is between 0 and 255.
- 04) Press the **ENTER** button to confirm your choice.

6.6.6. Fixture Information

In this menu you can view the LED operating hours and the firmware version of the device.

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

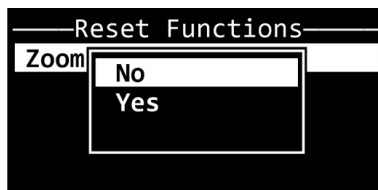


- Fixture Use Time: Provides information about the total hours of operation of the LEDs
 - Firmware Version: Shows the current firmware version
- 02) Press the **ENTER** button to confirm the selection and view the information.

6.6.7. Reset Functions

In this menu you can reset the zoom.

- 01) Press the **ENTER** button to open the pop-up submenu for the reset functions:

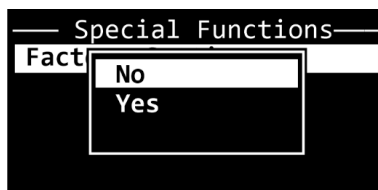


- 02) Press the **UP/DOWN** buttons to choose between NO and YES. If you choose YES, the zoom will be reset to the default factory settings.
- 03) Press the **ENTER** button to confirm your choice.

6.6.8. Special Functions

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

- 01) Press the **ENTER** button to open the pop-up submenu for the factory settings:



- 02) Press the **UP/DOWN** buttons to choose between NO and YES. If you choose YES, the device's settings will be reset to the default factory settings.
- 03) Press the **ENTER** button to confirm your choice.

6.7. DMX Channels

5 CH	7 CH	11 CH	Function	Value	Setting
1	1	1	Red	000–255	From low to high intensity (0–100 %)
2	2	2	Green	000–255	From low to high intensity (0–100 %)
3	3	3	Blue	000–255	From low to high intensity (0–100 %)
4	4	4	White	000–255	From low to high intensity (0–100 %)
				000	No function
				001–004	Color 1 R 255; G 016; B 000; W 000
				005–008	Color 2 R 255; G 032; B 000; W 000
				009–012	Color 3 R 255; G 048; B 000; W 000
				013–016	Color 4 R 255; G 064; B 000; W 000
				017–020	Color 5 R 255; G 080; B 000; W 000
				021–024	Color 6 R 255; G 096; B 000; W 000
				025–028	Color 7 R 255; G 112; B 000; W 000
				029–032	Color 8 R 255; G 128; B 000; W 000
				033–036	Color 9 R 255; G 144; B 000; W 000
				037–040	Color 10 R 255; G 160; B 000; W 000
				041–044	Color 11 R 255; G 176; B 000; W 000
				045–048	Color 12 R 255; G 192; B 000; W 000
				049–052	Color 13 R 255; G 208; B 000; W 000
				053–056	Color 14 R 255; G 224; B 000; W 000
				057–060	Color 15 R 255; G 240; B 000; W 000
				061–064	Color 16 R 255; G 255; B 000; W 000
				065–068	Color 17 R 255; G 255; B 016; W 000
				069–072	Color 18 R 255; G 255; B 032; W 000
				073–076	Color 19 R 240; G 255; B 048; W 000
				077–080	Color 20 R 224; G 255; B 064; W 000
				081–084	Color 21 R 208; G 255; B 080; W 000
				085–088	Color 22 R 192; G 255; B 096; W 000
		5	Color Macros	089–092	Color 23 R 176; G 255; B 112; W 000
				093–096	Color 24 R 160; G 255; B 128; W 000
				097–100	Color 25 R 144; G 255; B 144; W 000
				101–104	Color 26 R 128; G 255; B 160; W 000
				105–108	Color 27 R 112; G 255; B 176; W 000
				109–112	Color 28 R 096; G 255; B 192; W 000
				113–116	Color 29 R 080; G 255; B 208; W 000
				117–120	Color 30 R 064; G 255; B 224; W 000
				121–124	Color 31 R 048; G 255; B 240; W 000
				125–128	Color 32 R 032; G 255; B 255; W 000
				129–132	Color 33 R 016; G 255; B 255; W 000
				133–136	Color 34 R 000; G 240; B 255; W 000
				137–140	Color 35 R 000; G 224; B 255; W 000
				141–144	Color 36 R 000; G 208; B 255; W 000
				145–148	Color 37 R 000; G 192; B 255; W 000
				149–152	Color 38 R 000; G 176; B 255; W 000
				153–156	Color 39 R 000; G 160; B 255; W 000
				157–160	Color 40 R 000; G 144; B 255; W 000
				161–164	Color 41 R 000; G 128; B 255; W 000
				165–168	Color 42 R 000; G 112; B 255; W 000
				169–172	Color 43 R 000; G 096; B 255; W 000
				173–176	Color 44 R 000; G 080; B 255; W 000
				177–180	Color 45 R 000; G 064; B 255; W 000
				181–184	Color 46 R 000; G 048; B 255; W 000

5 CH	7 CH	11 CH	Function	Value	Setting
				185–188	Color 47 R 000; G 032; B 255; W 000
				189–192	Color 48 R 000; G 016; B 255; W 000
				193–196	Color 49 R 000; G 000; B 255; W 000
				197–200	Color 50 R 016; G 000; B 240; W 000
				201–204	Color 51 R 032; G 000; B 224; W 000
				205–208	Color 52 R 048; G 000; B 208; W 000
				209–212	Color 53 R 064; G 000; B 192; W 000
				213–216	Color 54 R 080; G 000; B 176; W 000
				217–220	Color 55 R 096; G 000; B 160; W 000
				221–224	Color 56 R 112; G 000; B 144; W 000
				225–228	Color 57 R 128; G 000; B 128; W 000
				229–232	Color 58 R 144; G 000; B 112; W 000
				233–236	Color 59 R 160; G 000; B 096; W 000
				237–240	Color 60 R 176; G 000; B 080; W 000
				241–244	Color 61 R 192; G 000; B 064; W 000
				245–248	Color 62 R 208; G 000; B 048; W 000
				249–252	Color 63 R 224; G 000; B 032; W 000
				253–255	Color 64 R 240; G 000; B 016; W 000
	5	6	Strobe	000–031	Closed (No light output)
032–063				Open	
064–095				Strobe, from low to high frequency	
096–127				Open	
128–159				Pulse strobe, from low to high rate	
160–191				Open	
192–223				Random strobe, from low to high rate	
224–255				Open	
	6	7	Master Dimmer	000–255	From low to high intensity (0–100 %)
		8	Color Temperature	000–007	No function
				008–255	Color temperature from 3000 K to 7200 K
5	7	9	Zoom	000–255	From 31,5° to 3,7°
		10	Chases	000	No function
				001–025	Chase 1
				026–050	Chase 2
				051–075	Chase 3
				076–100	Chase 4
				101–125	Chase 5
				126–150	Chase 6
				176–200	Chase 7
				201–225	Chase 8
		226–255	Chase 9		
		11	Speed	000–255	Speed adjustment of the chases, from slow to fast

Note:

- Make sure that the Strobe channel and the Master Dimmer channel are open in 7-CH and 11-CH mode in order to see the light output.
- If you play the built-in chases in 11-CH mode, the strobe (CH 6), the master dimmer (CH 7) and the zoom (CH 9) channels are not functional.

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 33
The device responds erratically	The factory settings of the device are changed	<ul style="list-style-type: none"> Reset the device's parameters to the default factory settings. See 6.6.7. Reset Functions and 6.6.8. Special Functions on page 28
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 DMX OUT of the controller does not match the DMX IN of the device	<ul style="list-style-type: none"> Install a phase-reversing cable between the controller and the device
	The controller is defective	<ul style="list-style-type: none"> Try using another controller
The device responds erratically to DMX control	Bad data link connection	<ul style="list-style-type: none"> Examine connections and cables. Correct poor connections. Repair or replace damaged cables
	The data link is not terminated with a 120 Ω termination plug	<ul style="list-style-type: none"> Insert a termination plug in the DMX OUT connector of the last device on the link
	Incorrect addressing	<ul style="list-style-type: none"> Check address settings and correct, if necessary
	In case of a setup with multiple devices, one of the devices is defective and disturbs data transmission on the link	<ul style="list-style-type: none"> To find out the defective device, bypass one device at a time until normal operation is restored
No light or LEDs cut out intermittently	LEDs are damaged	<ul style="list-style-type: none"> Disconnect the device and contact your Highlite International dealer
	The power supply settings do not match local AC voltage and frequency	<ul style="list-style-type: none"> Disconnect the device. Check the settings and correct, if necessary

8. Maintenance

8.1. Safety Instructions for Maintenance



DANGER
Electric shock caused by dangerous voltage inside

Disconnect power supply before servicing or cleaning.



WARNING
Risk of burns due to hot surface

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

8.2. Preventive Maintenance



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

Make sure that:

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

8.2.1. Basic Cleaning Instructions

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

To clean the device, follow the steps below:

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



Attention

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

8.3. Corrective Maintenance

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

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

8.3.1. Replacing the Fuse



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

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

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

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

9. Deinstallation, Transportation and Storage

9.1. Instructions for Deinstallation



WARNING

Incorrect deinstallation can cause serious injuries and damage of property.

- Let the device cool down before dismounting.
- Disconnect power supply before deinstallation.
- Always observe the national and site-specific regulations during deinstallation and derigging of the device.
- Wear personal protective equipment in compliance with the national and site-specific regulations.

9.2. Instructions for Transportation

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

9.3. Storage

- Clean the device before storing. Follow the cleaning instructions in chapter **8.2.1. Basic Cleaning Instructions** on page 33.
- 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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