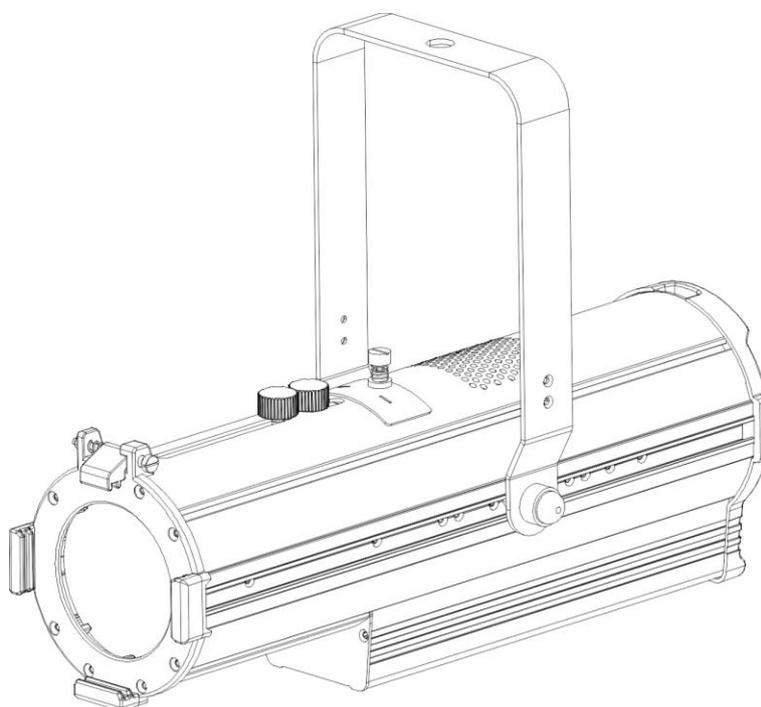




USER MANUAL



ENGLISH

ACT Image Spot 50 CW

V1

Product code: 34060

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
- Installation and operation of the device
- Intended and non-intended use 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 Image Spot 50 CW
- Gobo (already installed)
- Color frame
- Schuko to power pro cable (1,5 m)
- User manual

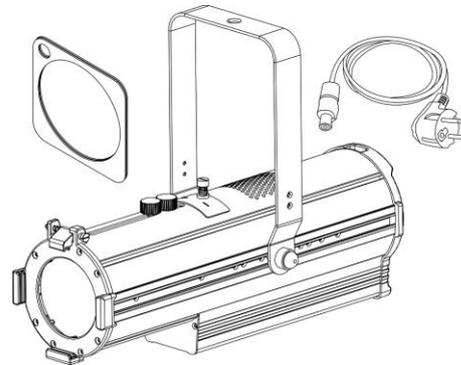


Fig. 01

1.2. Intended Use

This device is intended for use as a professional LED gobo projector and is suitable for indoor installation only. It is not suitable for households or 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 it is not in use. This will reduce wear and improve the device's lifespan.

1.4. LEDs Lifespan

The light output of LEDs gradually decrease over time (lumen depreciation). High operating temperatures contribute to this process. The lifespan of LEDs can be extended by ensuring 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 (11)**"
- 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 serious injury or death.



WARNING

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



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.



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 of the device.

The information label contains the following symbols:



This device is designed for indoor use.



This device falls under IEC protection class I.



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 epileptic shock

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



Attention
Power supply

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



Attention
General safety

- Do not connect this device to a dimmer pack.
- Do not switch the device on and off in short intervals. This reduces 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 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 LED gobo projector. 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. Installation, service and maintenance shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the service 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 Image Spot 50 CW is a compact, LED gobo projector suitable for commercial applications. It is equipped with a gobo holder and has a manually adjustable zoom and focus. A color frame is also included.

3.1. Front View

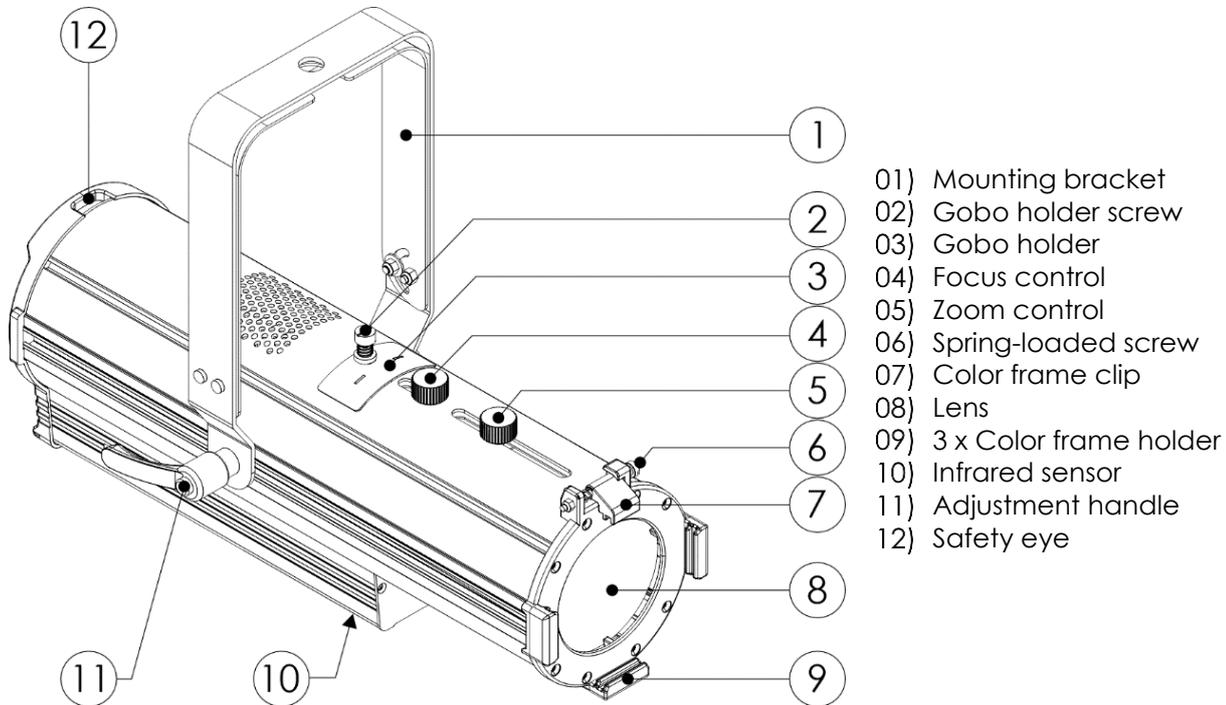


Fig. 02

3.2. Back View

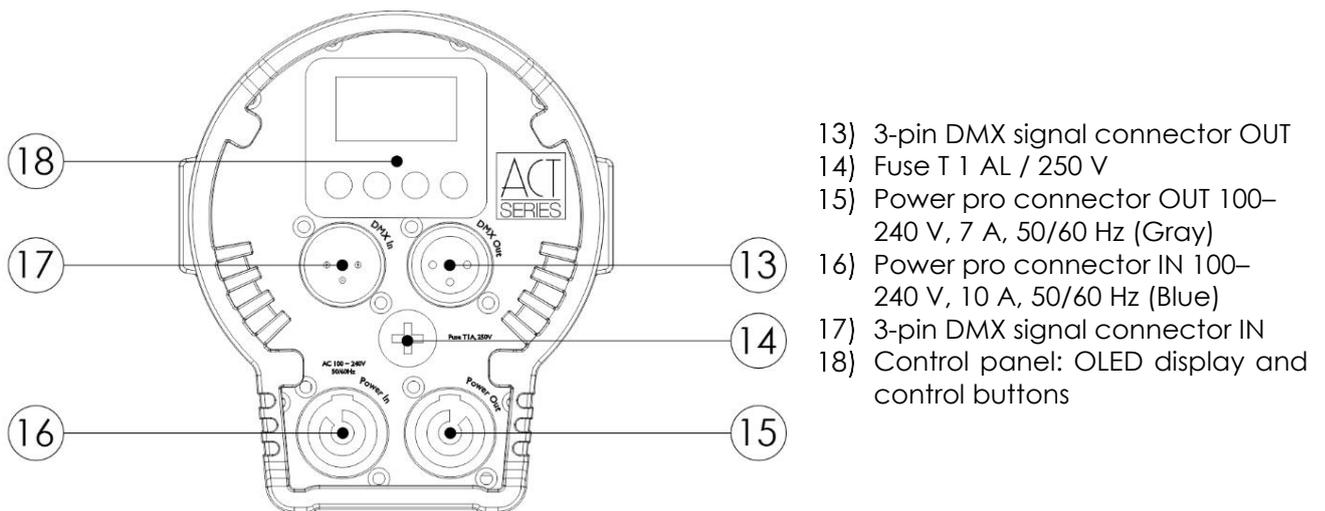
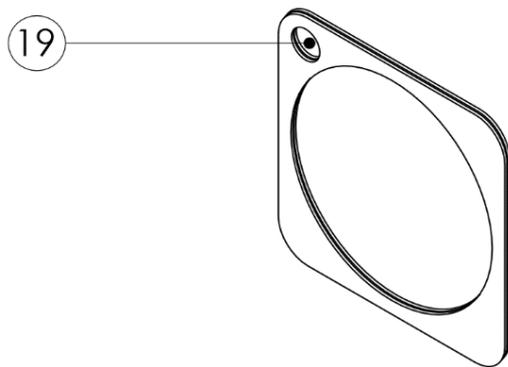


Fig. 03

3.3. Accessories



19) Safety eye

Fig. 04

3.4. Optional Accessories

- Product code: [42704](#) (Showtec IR Controller)
- Product code: [34050](#) (Showtec Season Gobo Set)

3.5. Product Specifications

Model:	ACT Image Spot 50 CW	
Electrical:		
Input voltage:	100–240 V AC, 50/60 Hz	
Power consumption:	57W	
Fuse:	T 1 AL/250 V	
Physical:		
Dimensions:	425 x 165 x 145 mm (L x W x H) (without accessories)	
Weight:	2,8 kg (without accessories)	
Optics:		
Light source:	1 x 50 W LED	
Dimmer:	0–100 %	
Strobe:	0–20 Hz	
Beam angle:	15,2°–27,5° (manual adjustment)	
Output:	6672 lx @ 2 m, 2965 lx @ 3 m, 1068 lx @ 5 m	
CRI:	96	
CCT:	6500 K (max.)	
Total luminous flux:	1743 lm	
Refresh rate:	1100 Hz	
Operation and control:		
Control:	Stand-alone (manual), DMX-512, IR	
DMX channels:	2 and 3-channel mode	
Control panel:	OLED display and buttons	
Manual operation:	Zoom & Focus	
Connections:		
Power connections:	Power pro connectors IN/OUT	
Data connections:	3-pin DMX connectors IN/OUT	
Signal pinouts:	Pin 1 (ground), pin 2 (-), pin 3 (+)	
Construction:		
Housing:	Aluminum	
Color:	Black	
IP rating:	IP20	
Cooling:	Convection/Axial fan	
Thermal:		
Maximum ambient temperature t_a :	45 °C	
Minimum ambient temperature t_a :	0 °C	
Minimum distance:		
Minimum distance from flammable surfaces:	0,5 m	

3.6. Dimensions

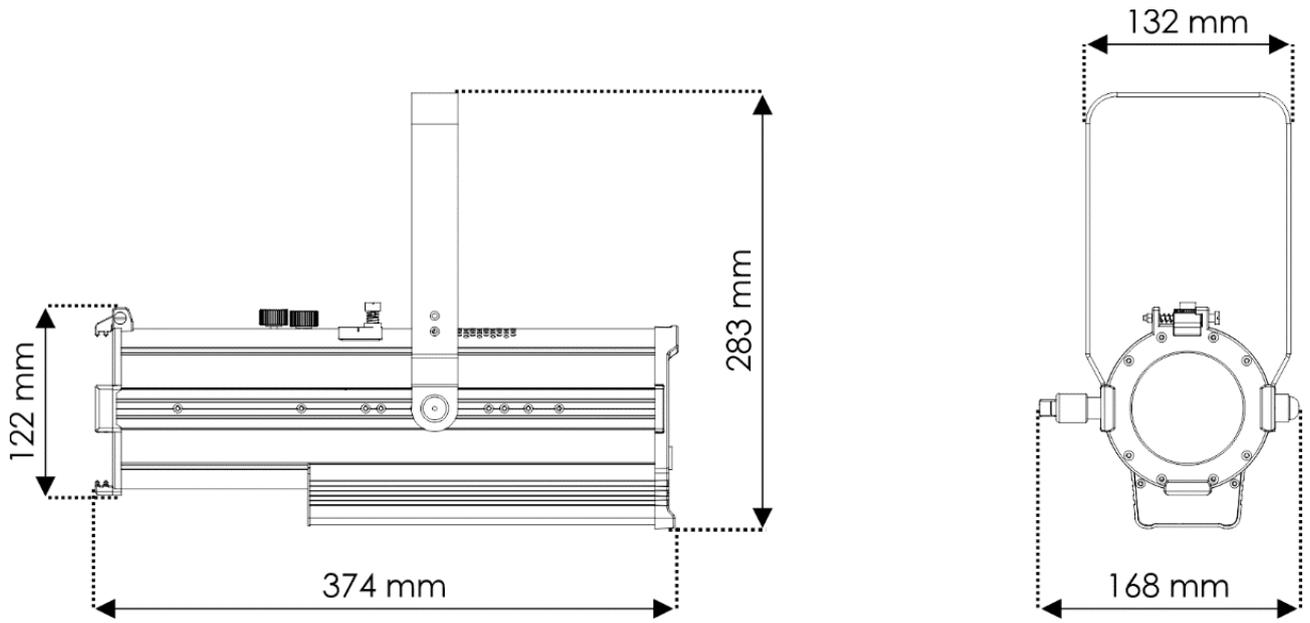


Fig. 05

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. Installation Site Requirements

- The device can be used indoors only.
- 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 $t_a = 45\text{ °C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 45 °C.

4.3. 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 (12)**, as shown in Fig. 06.

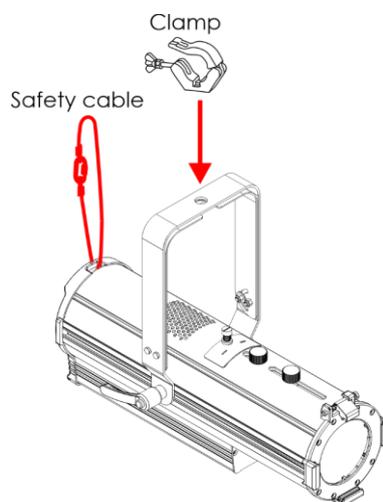


Fig. 06

4.4. Angle Adjustment

You can adjust the angle of the device with the **adjustment handle (11)**.

- 01) Turn the **adjustment handle (11)** counterclockwise to loosen it.
- 02) Tilt the device to the desired angle (see Fig. 07).
- 03) Turn the **adjustment handle (11)** clockwise to tighten it. Make sure that the device cannot move freely after the **adjustment handle (11)** is tightened.

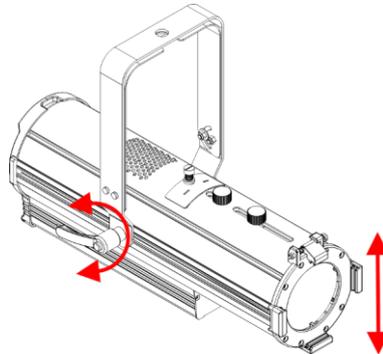


Fig. 07

4.5. Color Frame Installation

The ACT Image Spot 50 CW is delivered with a color frame. You can insert a color gel or a diffusion filter into the color frame. To install the color frame, follow the steps below:

- 01) Push the **spring-loaded screw (06)** and at the same time lift the **color frame clip (07)** and flip it backwards (see Fig. 08).
- 02) Insert a color gel or a diffusion filter into the color frame.
- 03) Insert the color frame into the **color frame holders (09)** (see Fig. 09).
- 04) Pull the **color frame clip (07)** downwards to release the **spring-loaded screw (06)** (see Fig. 10). The color frame will be locked in position.
- 05) Secure the color frame to the overhead structure with an appropriate secondary attachment, for example a safety cable. Put the safety cable through the **safety eye (19)** of the color frame. See **4.3. Rigging** on page 13 for more information.

Note:

Make sure that the color frame is locked in position with the color frame clip before using the device.

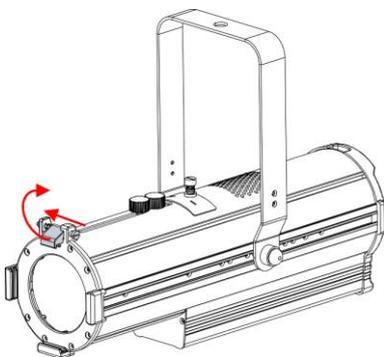


Fig. 08

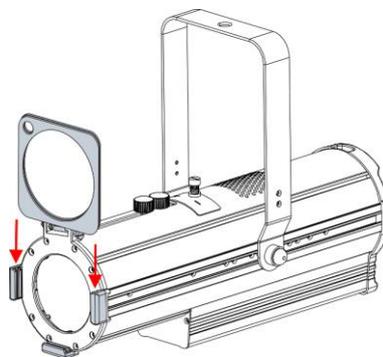


Fig. 09

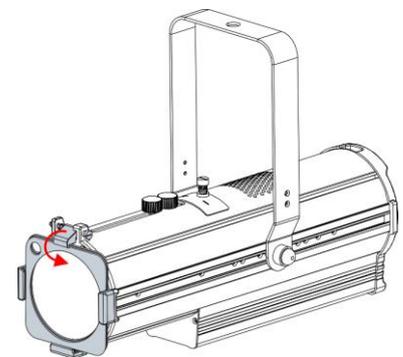


Fig. 10

4.6. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

The device can be powered by 100–240 V 50/60 Hz AC mains power. Do not supply mains 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.

4.7. 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: 16 devices ACT Image Spot 50 CW
- at 200–240 V: 32 devices ACT Image Spot 50 CW

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 Image Spot 50 CW is not connected to a controller or to other devices, it functions as a stand-alone device. It can be operated manually via the control panel and the manual controls or via an optional remote control.

For more information about the control modes, refer to **6.2. Control Modes** on page 21.

5.3. DMX Connection

5.3.1. DMX-512 Protocol

You need a DMX serial data link to run light shows of one or more devices using a DMX-512 controller.

The ACT Image Spot 50 CW has 3-pin DMX signal IN and OUT connectors.

The pin assignment is as follows: pin 1 (ground), pin 2 (-), pin 3 (+).

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.

Notes:

- 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 a 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. 11.

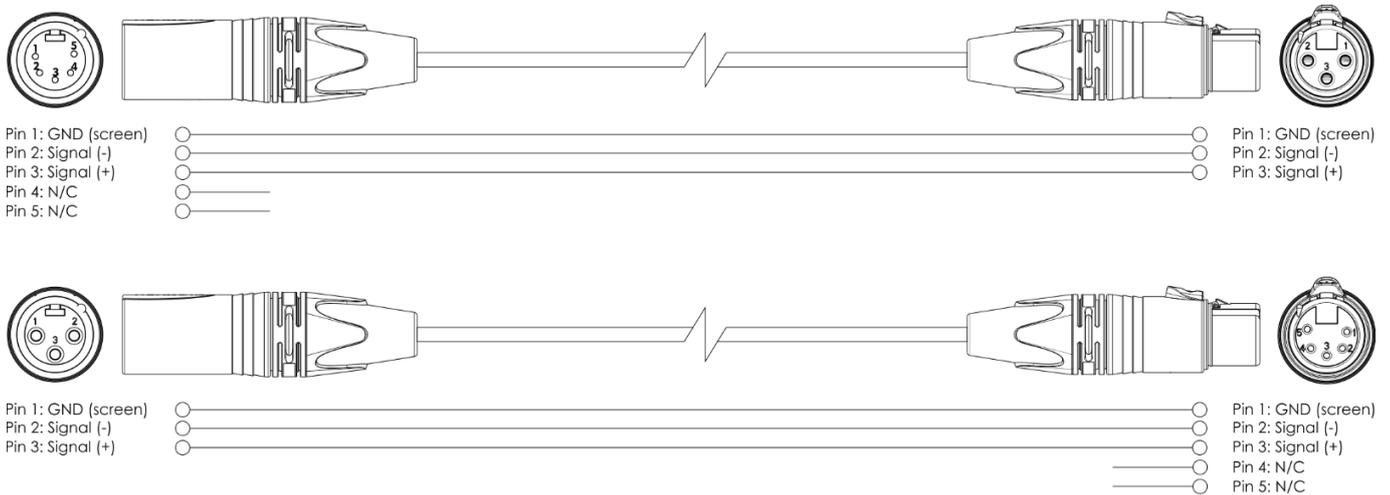


Fig. 11

5.3.3. DMX Linking

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

- 01) Connect the DMX OUT connector on the lighting controller to the DMX IN connector on the first device with a 3-pin DMX cable.
- 02) Connect the DMX OUT connector on the first device to the DMX IN connector on the second device with a 3-pin DMX cable.
- 03) Repeat step 2 to connect all devices in a daisy-chain as shown in Fig. 12.
- 04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.

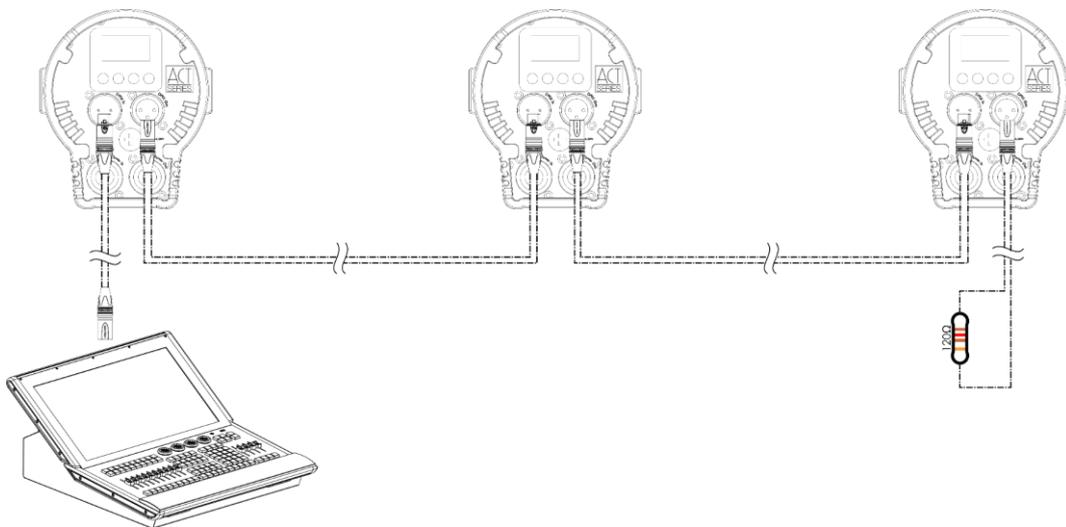


Fig. 12

5.3.4. DMX Addressing

In a setup with multiple devices, make sure that you set the DMX starting address of each device correctly. The ACT Image Spot 50 CW has 2 personalities: 2 channels and 3 channels.

If you want to connect multiple devices on one data link and use them in 3-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 4 (004), as $1 + 3 = 4$.
- 03) Set the starting address of the 3rd device on the data link to 7 (007) as $4 + 3 = 7$.
- 04) Continue assigning the starting addresses of the remaining devices by adding 3 to the previous number each time.

Make sure that you do not have any overlapping channels in order to control each ACT Image Spot 50 CW correctly. If two or more devices are addressed similarly, they will work similarly.

5.4. Beam Angle Adjustment

The beam angle of the ACT Image Spot 50 CW can be adjusted manually in the range 15,2°–27,5°. To adjust the beam angle, follow the steps below (see Fig. 13):

- 01) Turn the **zoom control (05)** counterclockwise to loosen it.
- 02) Slide the **zoom control (05)** forwards or backwards to achieve the desired beam angle.
- 03) After adjusting the beam angle, turn the **zoom control (05)** clockwise to tighten it. Do not overtighten it.

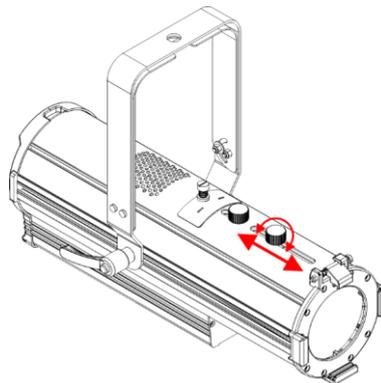


Fig. 13

5.5. Focus Adjustment

The focus of the ACT Image Spot 50 CW can be adjusted manually. To adjust the focus, follow the steps below (see Fig. 14):

- 01) Turn the **focus control (04)** counterclockwise to loosen it.
- 02) Slide the **focus control (04)** forwards or backwards to achieve the desired focus.
- 03) After adjusting the focus, turn the **focus control (04)** clockwise to tighten it. Do not overtighten it.

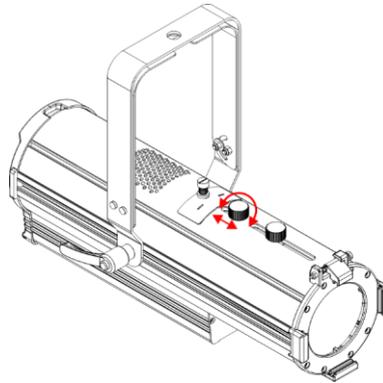


Fig. 14

5.6. Changing the Gobo

The ACT Image Spot 50 CW has a built-in gobo holder. To change the gobo, follow the steps below (see Fig. 15, 16 and 18):

- 01) Turn the **gobo holder screw (02)** on top of the **gobo holder (03)** counterclockwise to loosen it.
- 02) Pull the **gobo holder (03)** out of the device.

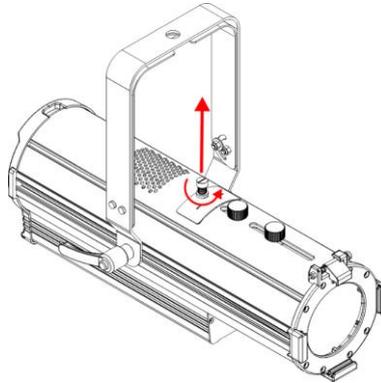


Fig. 15

- 03) Remove the retaining ring from the **gobo holder (03)** with needle-nose pliers or a similar sharp tool. Take care not to damage the gobo.
- 04) Remove the gobo from the **gobo holder (03)**.
- 05) Insert a new gobo into the **gobo holder (03)**. Make sure that the front of the gobo is facing the screw side of the **gobo holder (03)**.
- 06) Reinsert the retaining ring.

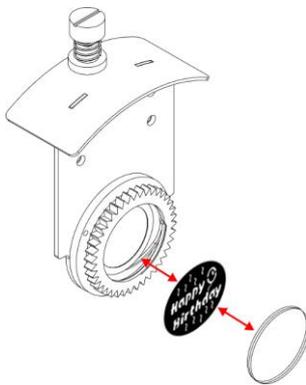


Fig. 16



Fig. 17

- 07) Insert the **gobo holder (03)** back into the device.
- 08) Turn the **gobo holder screw (02)** on top of the **gobo holder (03)** clockwise to tighten it. Do not overtighten it.

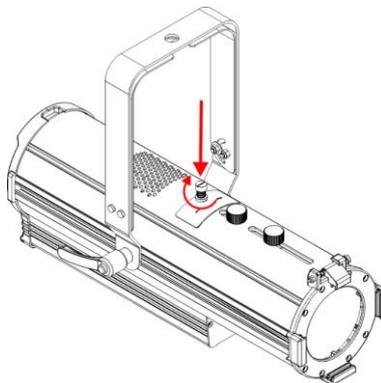


Fig. 18

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 use as a professional LED gobo projector and is suitable for indoor use only. This device is not suitable for households or 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 Image Spot 50 CW can be operated with a DMX controller, manually and with an IR remote control.

The ACT Image Spot 50 CW supports the following control modes:

- DMX-512: 2 channels and 3 channels
- Stand-alone: Manual and remote operation

For more information about how to connect the devices, refer to **5. Setup** on pages 16–20.

To operate the device with a DMX controller:

- 01) Set the DMX starting address of the device in the DMX Address menu. See **6.6.1.1. DMX Address** on page 27 for more information.
- 02) Select the DMX channel mode in the DMX channel mode menu. See **6.6.1.2. DMX Channel Mode** on page 27 for more information. See **6.7. DMX Channels** on page 31 for complete overview of all DMX channels.
- 03) Select the behavior of the device in case there is no DMX signal in the DMX Fail pop-up submenu. See **6.6.1.3. DMX Fail** on page 27 for more information.

You can operate the device manually as a stand-alone device in 2 ways:

- from the control panel and the menu (see **6.6.3. Manual Mode** on page 29 for more information),
- with the beam angle and focus adjustment controls (see **5.4. Beam Angle Adjustment** on page 18 and **5.5. Focus Adjustment** on page 19 for more information).

You can operate the device remotely as a stand-alone device with the optional IR remote control (see **6.8. Remote Control** on page 32 for more information).

6.3. Control panel

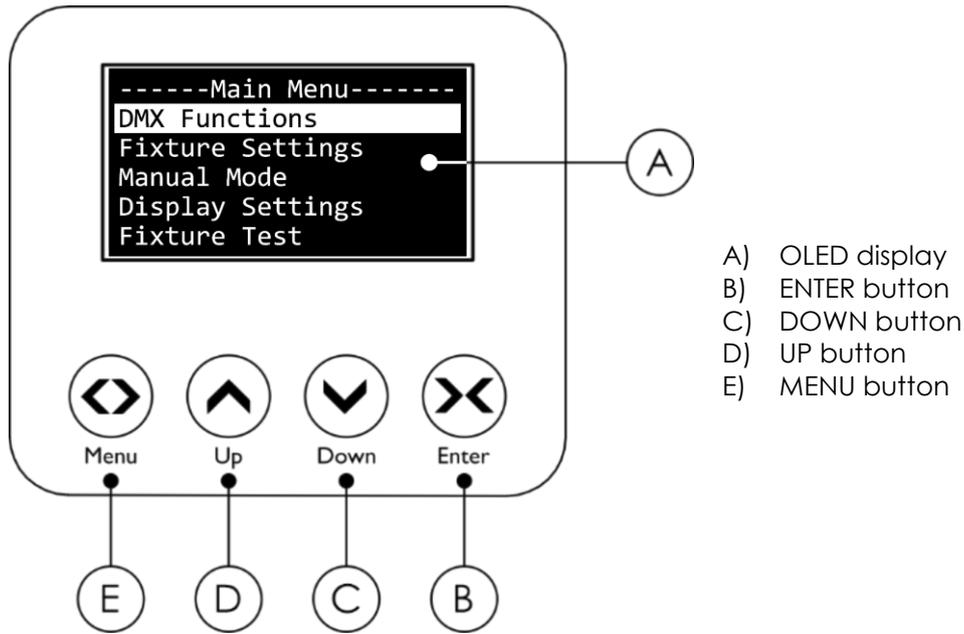


Fig. 19

- 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 shows a splash screen with the brand name followed by a start screen.



The start screen provides information about the control and operation modes of the device and the temperature of the LEDs, for example.



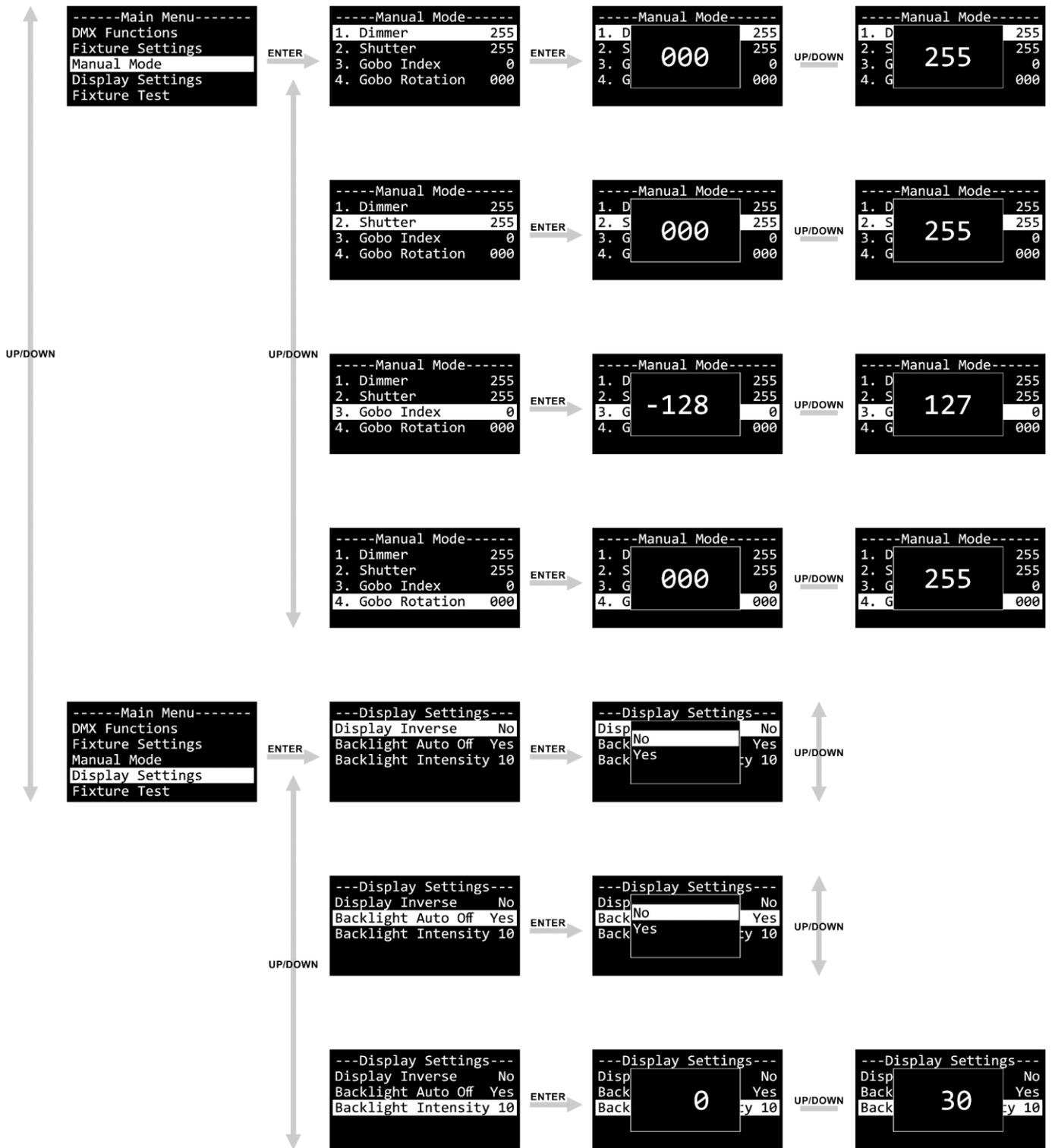
Manual operation (from the control panel and the menu)



3-channel DMX mode with starting address 001

Note:

If no button is pressed, after 60 seconds of inactivity the display will turn off. Press any button to turn the display on. See **6.6.4. Display Settings** on page 29 for more information.





6.6. Main Menu Options

The main menu has the following options:

```

-----Main Menu-----
DMX Functions
Fixture Settings
Manual Mode
Display Settings
Fixture Test
Fixture Information
Special Functions
    
```

- 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 select one of the following 4 options:

```

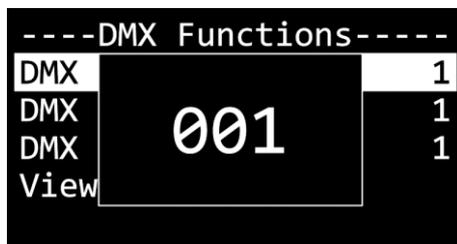
-----DMX Functions-----
DMX Address          1
DMX Channel Mode    1
DMX Fail             1
View DMX Value
    
```

- DMX Address: See **6.6.1.1. DMX Address** for more information.
 - DMX Channel Mode: See **6.6.1.2. DMX Channel Mode** for more information.
 - DMX Fail: See **6.6.1.3. DMX Fail** for more information.
 - View DMX Value: See **6.6.1.4. View DMX Value** for more information.
- 02) Press the **ENTER** button to confirm the selection.

6.6.1.1. DMX Address

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

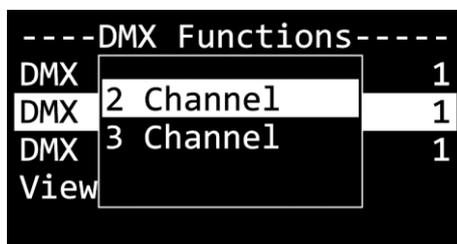


02) Press the **ENTER** button to confirm the selection.

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 DMX channel mode. There are 2 options available:



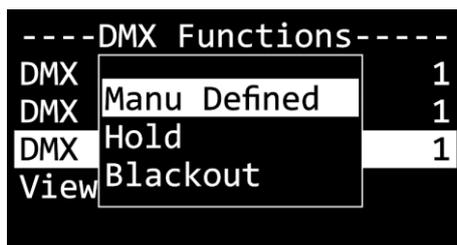
- Option 1: 2-channel mode
- Option 2: 3-channel mode

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 3 options:



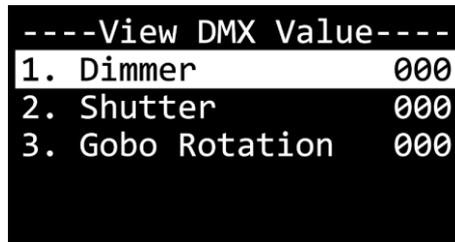
- Manually Defined: The device will use the manually selected dimmer value. See **6.6.3. Manual Mode** on page 29 for more information.
- Hold: The device will use the last DMX signal received correctly.
- Blackout: The device will black out the light output.

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 each DMX channel.

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



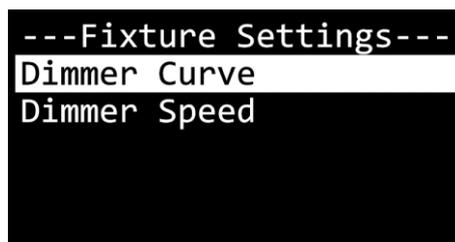
Depending on the selected DMX channel mode in the DMX Channel Mode submenu, you can see the following values:

- in 2- channel DMX mode: dimmer, shutter and gobo rotation;
- in 3-channel DMX mode: dimmer, shutter and gobo rotation.

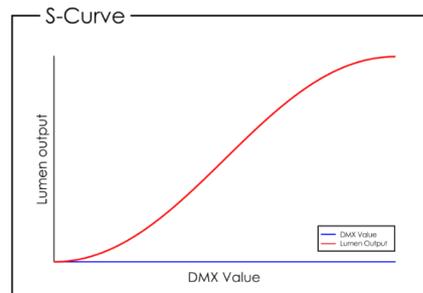
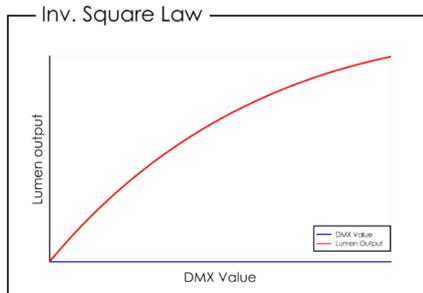
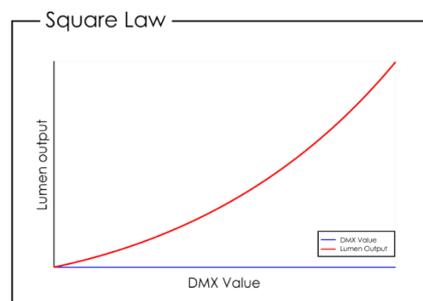
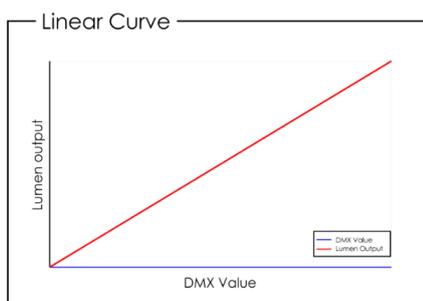
6.6.2. Fixture Settings

In this menu you can adjust the dimmer curve and speed.

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



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



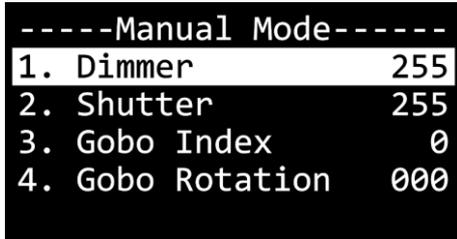
- Dimmer Speed: There are 2 options available: LED (instant dimming without delay) and Halogen (delayed dimming, imitating the behavior of a halogen lamp)

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

6.6.3. Manual Mode

In this submenu you can manually adjust the dimmer, shutter, gobo index and gobo rotation.

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



02) Press the **ENTER** button to confirm the 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 ranges are as follows:

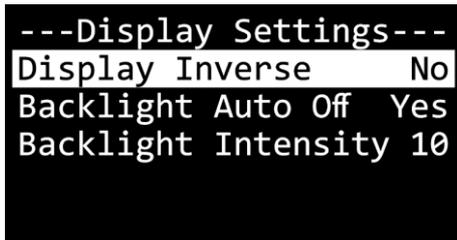
- Dimmer: 0–255
- Shutter: 0–255
- Gobo Index: -128–127
- Gobo Rotation: 0–255

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

6.6.4. Display Settings

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

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



- Display Inverse: The OLED display will be rotated by 180° (NO/YES)
- Backlight Auto Off: The backlight of the OLED display will not turn off automatically after 60 seconds of inactivity (NO/YES)
- Display Contrast: The adjustment range is between 0 and 30 (from low to high contrast)

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

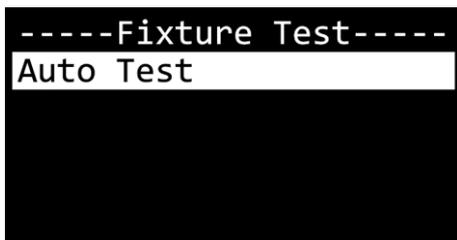
03) Press the **UP/DOWN** buttons to select the desired setting.

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

6.6.5. Fixture Test

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

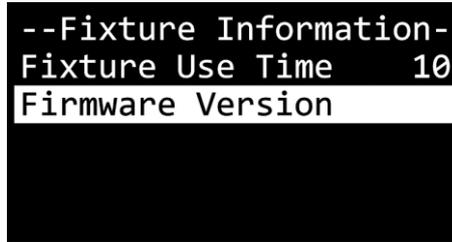
Press the **ENTER** button to begin the auto test.



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:



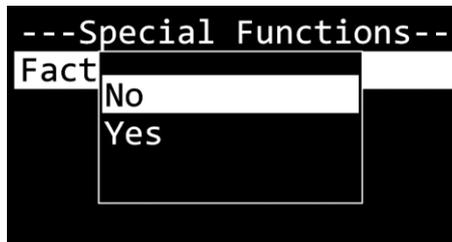
- Fixture Use Time: Provides information about the total hours of operation of the LEDs
- Firmware Version: Shows the current firmware version

02) Press the **ENTER** button to confirm the selection and view the information.

6.6.7. 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

2 CH	3 CH	Function	Value	Setting
1	1	Dimmer	000–255	From low to high intensity (0–100 %)
			000–019	Closed (No light output)
			020–024	Open
			025–064	Strobe, from low to high frequency
			065–069	Open
			070–084	Pulse strobe: fast close, slow open
			085–089	Open
			090–104	Pulse strobe: slow close, fast open
			105–109	Open
			110–124	Random strobe
			125–129	Open
	2	Strobe	130–144	Random strobe: fast close, slow open
			145–149	Open
			150–164	Random strobe: slow close, fast open
			165–169	Open
			170–184	Burst pulse strobe
			185–189	Open
			190–204	Random burst pulse strobe
			205–209	Open
			210–224	Pulse strobe: slow close, fast open
			225–229	Open
			230–244	Frequent bursts strobe
			245–255	Open
			2	3
128–191	Clockwise rotation (fast-slow)			
192–255	Counter-clockwise rotation (slow-fast)			

Note:

Make sure that the shutter (strobe) channel is open in 3-CH mode in order to use the dimmer.

6.8. Remote Control

The device can be controlled with an optionally available IR remote control (42704).



DANGER
Do not ingest battery, chemical burn hazard

The remote control contains a coin cell battery. If the coin cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.

The battery is already installed in the remote control. It is protected against discharge by a transparent plastic foil. Remove the plastic foil before using the remote control for the first time.

When replacing the battery, make sure that the polarity is correct. Incorrect polarity may damage the remote control.

You can control several devices at the same time with the remote control. Make sure that you point the remote control towards the **infrared sensor (10)** of the device or group of devices that you want to control, as shown in Fig. 20. If you point the remote control outside of the range of the sensor(s), the device(s) will not respond to the remote control.

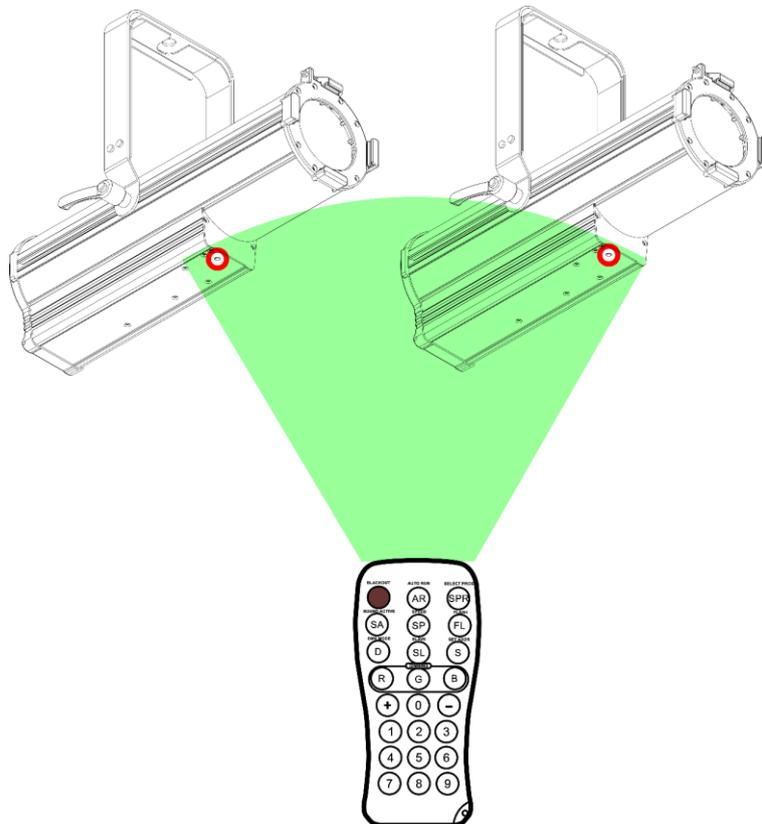


Fig. 20

Note:

When you turn off the device, the next time you turn it on, it will continue to operate in the previously selected operation mode.

The remote control has the following functions:

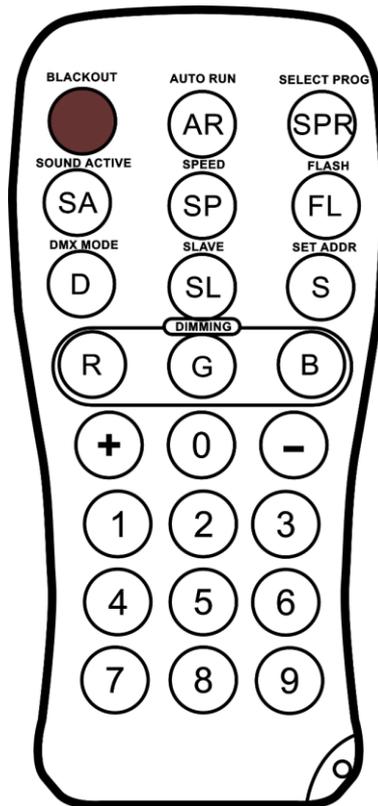
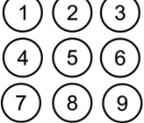


Fig. 21

Button	Function	Description
	Blackout	Activates and deactivates the blackout function
	Gobo rotation	Activates the gobo rotation function
	Gobo Index	Activates the gobo index function
	NO function	No function on this device
	Speed	Activates the speed control function
	Strobe	Activates the strobe speed control function
	DMX Mode	Activates DMX mode
	NO function	No function on this device
	DMX Address	Activates DMX address mode
	NO function	No function on this device

	Dimmer	Activates the dimmer function
	Blue	No function on this device
	Plus	Increase button
	Minus	Decrease button
	Number buttons	Number buttons
		

6.8.1. Blackout

- 01) Press the  button to activate the blackout.
- 02) Press the  or  button to deactivate the blackout.

6.8.2. Gobo Rotation

- 01) Press the  button to activate the clockwise gobo rotation.
- 02) Press the  button again to activate the counterclockwise gobo rotation.

6.8.3. Gobo Index

- 01) Press the  button.
- 02) Press the  button to activate the clockwise gobo index.
- 03) Press the  button to activate the counterclockwise gobo index.

6.8.4. Speed

- 01) Press the  button.
- 02) Press and hold the  button to increase the speed.
- 03) Press and hold the  button to decrease the speed.

6.8.5. Strobe

- 01) Press the  button.
- 02) Press and hold the  button to increase the strobe speed.
- 03) Press and hold the  button to decrease the strobe speed.

6.8.6. DMX Mode

- 01) Press the  button.
- 02) Press the  button for 2-channel mode or press the  button for 3-channel mode.
- 03) Press and hold the  button until the output flashes to confirm the selection.

6.8.7. DMX Address

- 01) Press the  button.
- 02) Press the number buttons (0–9) to set the DMX address.
- 03) Press and hold the  button until the output flashes to confirm the selection.

6.8.8. Dimmer

- 01) Press the  button.
- 02) Press and hold the  button to increase the brightness.
- 03) Press and hold the  button to decrease the brightness.

NOTE:

Make sure that the strobe speed is set to zero in order to use the dimmer.

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 38
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. Special Functions on page 30
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
The device does not respond to the remote control	The remote control is outside of the range of the sensor of the infrared port	<ul style="list-style-type: none"> Walk closer to the device or change the angle at which you point the remote control to the device. See 6.8. Remote Control on page 32
	The battery of the remote control is depleted	<ul style="list-style-type: none"> Change the battery of the remote control
No light or LEDs cut out intermittently	LEDs are damaged	<ul style="list-style-type: none"> Disconnect the device and contact your Highlight 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.

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 Transportation



WARNING

Incorrect deinstallation can cause serious injuries and damage of property.

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

9.2. Instructions for Deinstallation

- 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 37.
- Store the device in the original packaging, if possible.

10. Disposal

Correct disposal of this product



Disposal of Old Electrical and Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

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 applicable collection point for the 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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