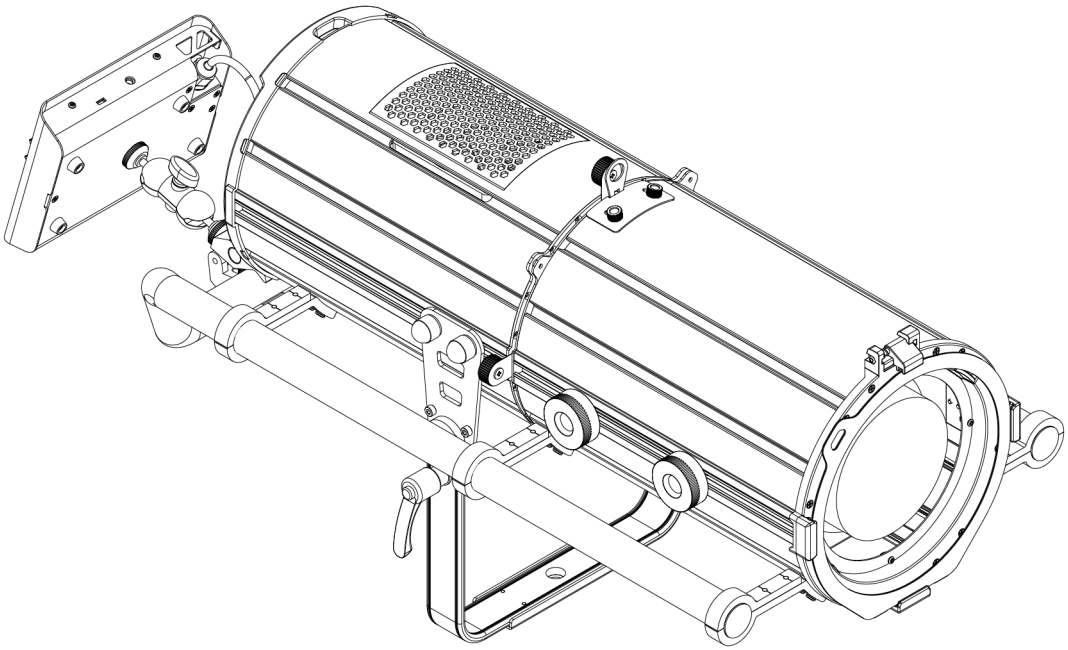
USER MANUAL

ENGLISH

V1.0



ACT Followspot 230 CW

Product code: 34080

Preface

Thank you for purchasing this Showtec product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Intended and non-intended use of the device
- Installation and operation of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

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

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1. Introduction

1.1. Before Using the Product

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

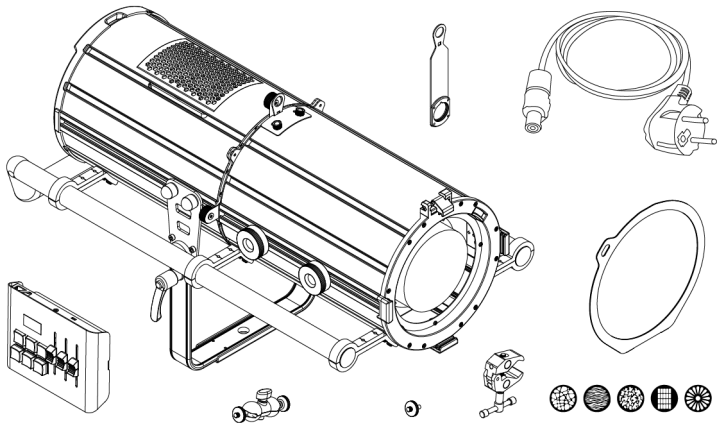
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

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

Your shipment includes:

- Showtec ACT Followspot 230 CW
- Dedicated controller with a fixed DMX cable (0,9 m) with a dedicated connector
- Articulated spacer for dedicated controller
- Short spacer for dedicated controller
- Clamp
- Filter frame
- Gobo holder
- 5 x metal gobo
- Schuko to Power Pro cable (3 m)
- User manual

Figure 1



1.2. Intended Use

This device is intended for professional use as a follow spot. It can be installed only indoors. 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. 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.

1.4. 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 wear and improve the lifespan of the device.

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

1.6. 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



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 shall not be treated as household waste.



This device is designed for indoor use.



This device falls under IEC protection class I.

2. Safety



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

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

2.1. Warnings and Safety Instructions



DANGER
Danger for children

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

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



DANGER
Electric shock caused by dangerous voltage inside

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

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



DANGER
Electric shock caused by short-circuit

This device falls under IEC protection Class I.

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



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



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

This device is intended for professional use as a follow spot. 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, fixings 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 out by ordinary persons. Installation and service shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

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

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

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

2.3. Personal Protective Equipment

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

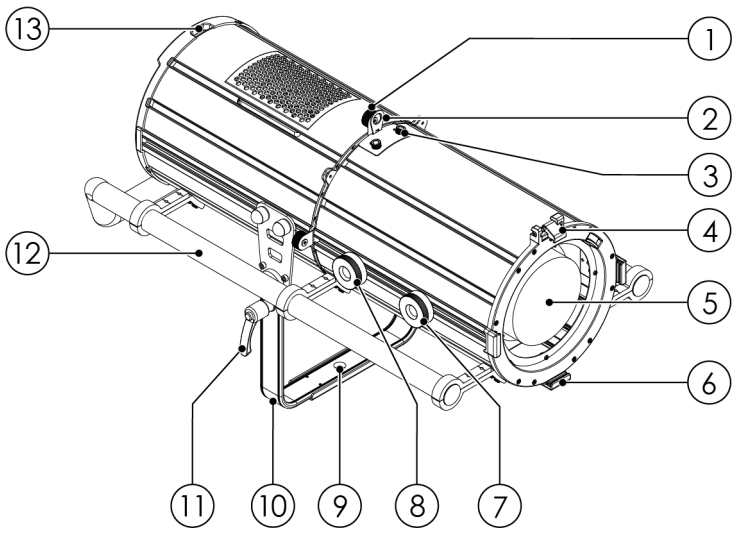
3. Description of the Device

The Showtec ACT Followspot 230 CW is a compact and powerful LED follow spot equipped with a 230 W cold-white LED engine (6000 K). It features an internal color wheel offering a choice of 4200 K, 3200 K, lavender, amber and pink, or open white for maximum output. The fixture includes a motorized iris, as well as dimmer and strobe functions, all controllable via DMX or a dedicated panel. The manual zoom (8°–32°), manual focus, and manual shutters provide full control over beam shape and size, while a gobo slot adds creative flexibility for marking, framing or pattern projection. A clear OLED display on the unit makes setup and configuration straightforward.

The dedicated control panel is included and offers 6 direct-access color buttons and 3 faders for dimmer, iris and strobe. The controller can be mounted on the side or the back of the unit using the supplied metal clamp. The fixture also provides DMX in/out with merge, allowing control from both a lighting desk and the included panel at the same time—ideal for situations where the lighting operator needs both local and desk-based control.

3.1. Front View

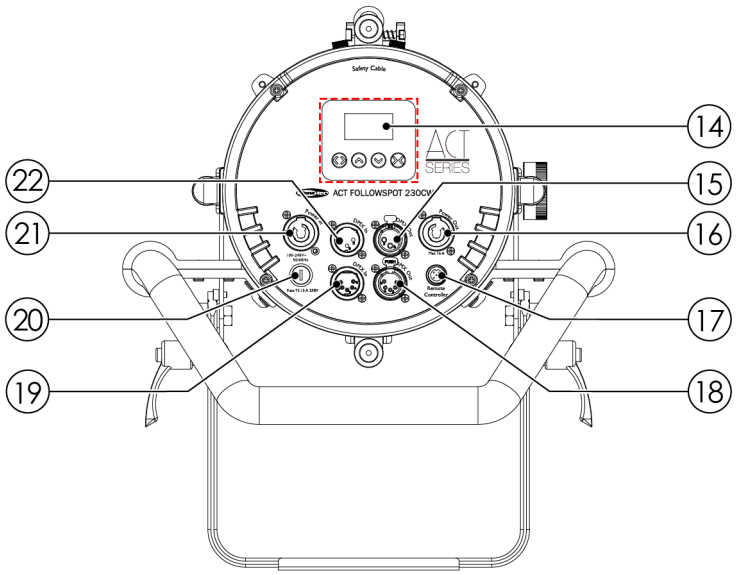
Figure 2



01) 4 x framing shutter
02) Gobo holder
03) 2 x cover plate thumbscrew
04) Filter frame clip
05) Lens
06) 3 x filter frame holder
07) Zoom control
08) Focus control
09) Mounting hole (Ø12,5 mm)
10) Mounting bracket
11) 2 x adjustment handle
12) Controller bar
13) Safety eye

3.2. Back View

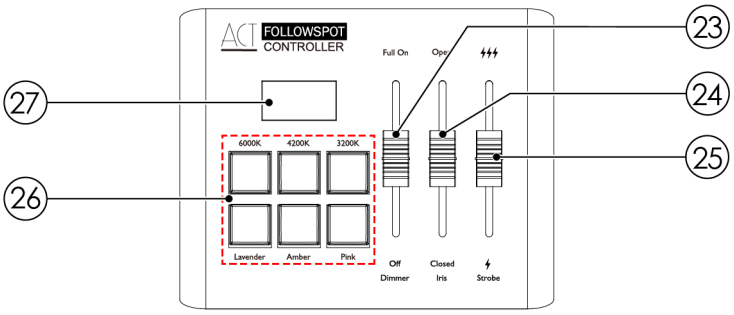
Figure 3



14) Control panel: OLED display and control buttons
15) 3-pin DMX signal connector OUT
16) Power Pro connector OUT (gray)
17) Dedicated DMX connector IN (for dedicated controller)
18) 5-pin DMX signal connector OUT
19) 5-pin DMX signal connector IN
20) Fuse (T3,15 A 250 V)
21) Power Pro connector IN (blue)
22) 3-pin DMX signal connector IN

3.3. Dedicated Controller Front View

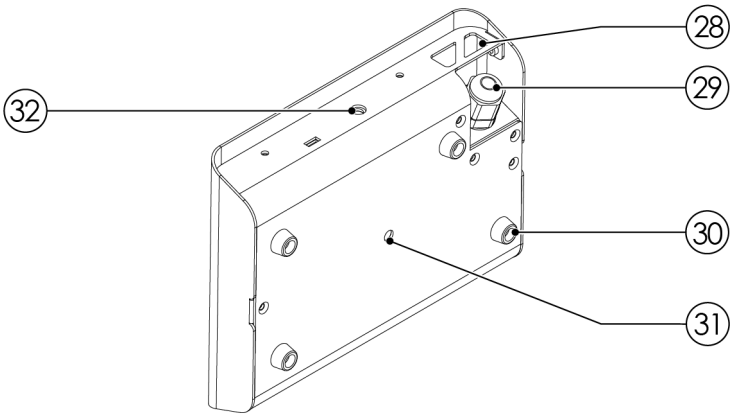
Figure 4



23) Dimmer fader
24) Iris fader
25) Strobe fader
26) 6 x color button (6000 K/4200 K/3200 K/ Lavender/Amber/Pink)
27) OLED display

3.4. Dedicated Controller Back View

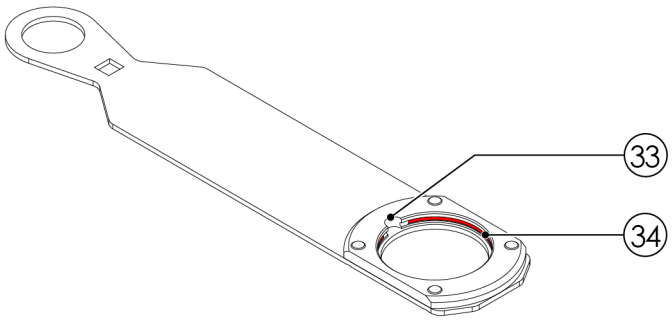
Figure 5



28) Opening for a safety cable
29) Fixed dedicated DMX cable
30) 4 x rubber feet
31) Rear mounting opening (Ø5 mm)
32) Top mounting opening (Ø5 mm)

3.5. Gobo Holder

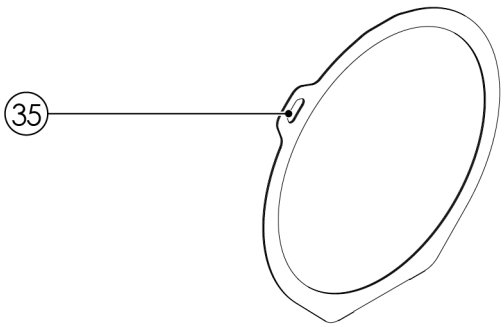
Figure 6



33) Spring removal slot
34) Retention spring

3.6. Filter Frame

Figure 7



35) Safety eye - filter frame

3.7. Product Specifications

Model:	ACT Followspot 230 CW

Source:	
Light source type	LED
Light source quantity	1
Light source power	230 W
LED color type	CW
Refresh rate	1000 Hz
Illuminance @ 2 m	6608 lx
Illuminance @ 3 m	2937 lx
Illuminance @ 5 m	1057 lx
Luminous flux (total)	6513 lm
CRI	90
CCT	6000 K

Optical:	
Beam angle minimum (circular)	8,3°
Beam angle maximum (circular)	32,4°
Zoom type	Manual
Zoom minimum	8°
Zoom maximum	32°
Iris	Motorized

Control and Programming:	
Control mode	DMX / manual
DMX channels	4 / 5
Protocols	DMX / RDM
Display	OLED
Display size	1,3 "
Dim curve	Square / I-Square / S-Curve
Dimmer resolution	16 bit

Dynamic Effects:	
Dimmer	0–100 %
Strobe	0–15 Hz
Color system	Color wheel

Electrical Specifications and Connections:	
Power supply	100–240 V AC 50/60 Hz
Power consumption	230 W
Fuse	3,15 A
Power connector IN	Power Pro blue
Power connector OUT	Power Pro gray
DMX connector	XLR 3P IN/OUT / XLR 5P IN/OUT

Mechanical Specifications:	
Length	609 mm
Width	297 mm
Height	364 mm
Weight	12,7 kg
IP rating	IP20 (indoor use only)
Housing	Aluminum
Color	Black

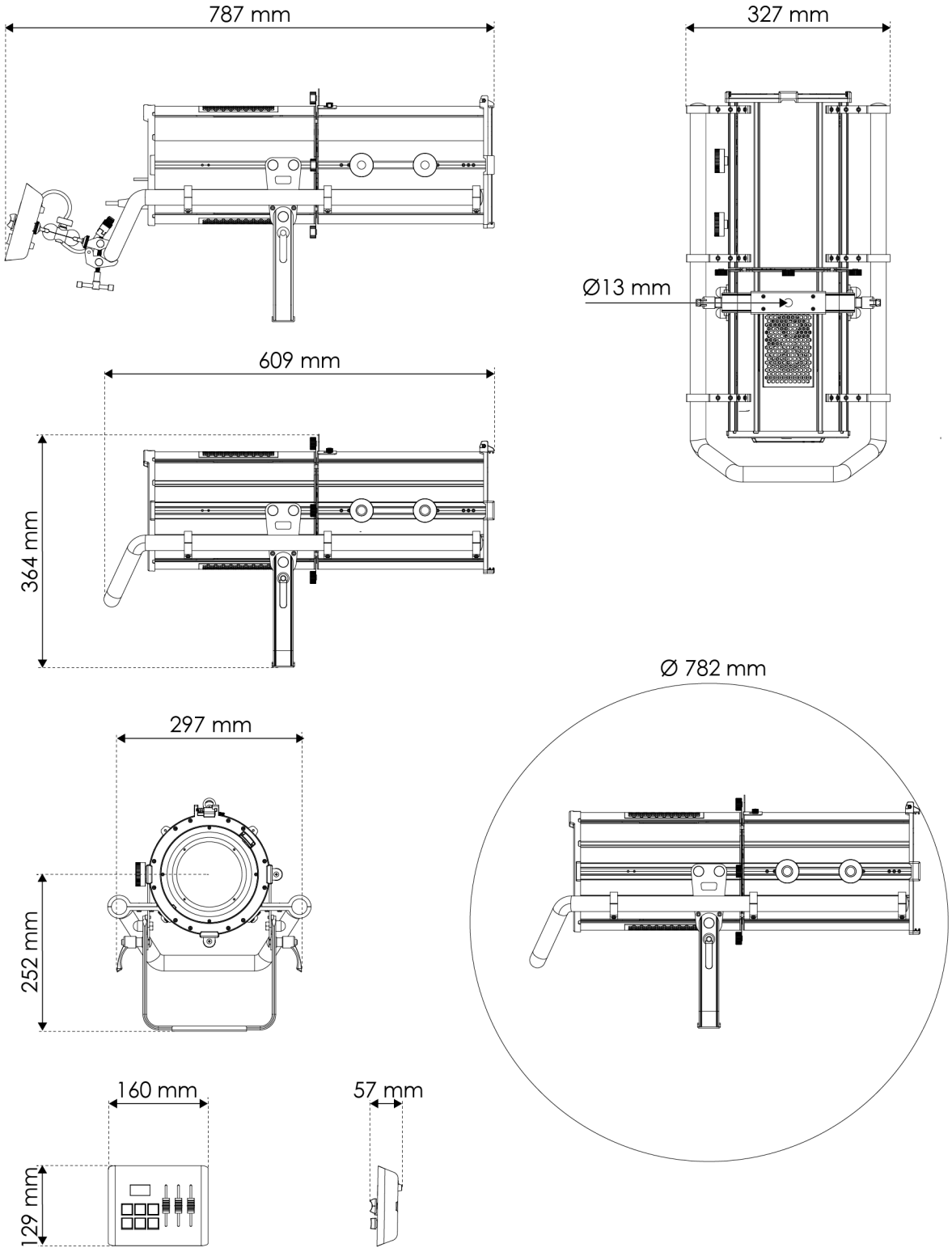
Product Properties:	
Cooling	Forced convection

Thermal Specifications:	
Maximum ambient temperature	45 °C
Minimum operating temperature	0 °C

Included Items:	
Included cables	Power Pro cable
Included accessories	Clamp / controller / filter frame / metal gobos, 5 x / gobo holder

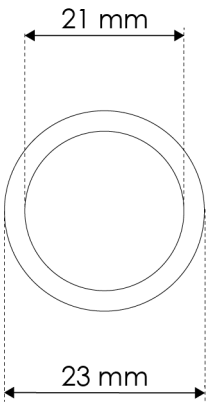
3.8. Dimensions

Figure 8



3.8.1. Gobo Dimensions

Figure 9



3.9. Optional Accessories

You can optionally purchase the following accessory:

- 74002 Showgear Follow Spot Stand

Contact your Highlite International dealer for more information.

4. Installation

4.1. Safety Instructions for Installation



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

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

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

4.2. Personal Protective Equipment

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

4.3. Installation Site Requirements

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

4.4. Installation on a Stand

WARNING
Stability hazard

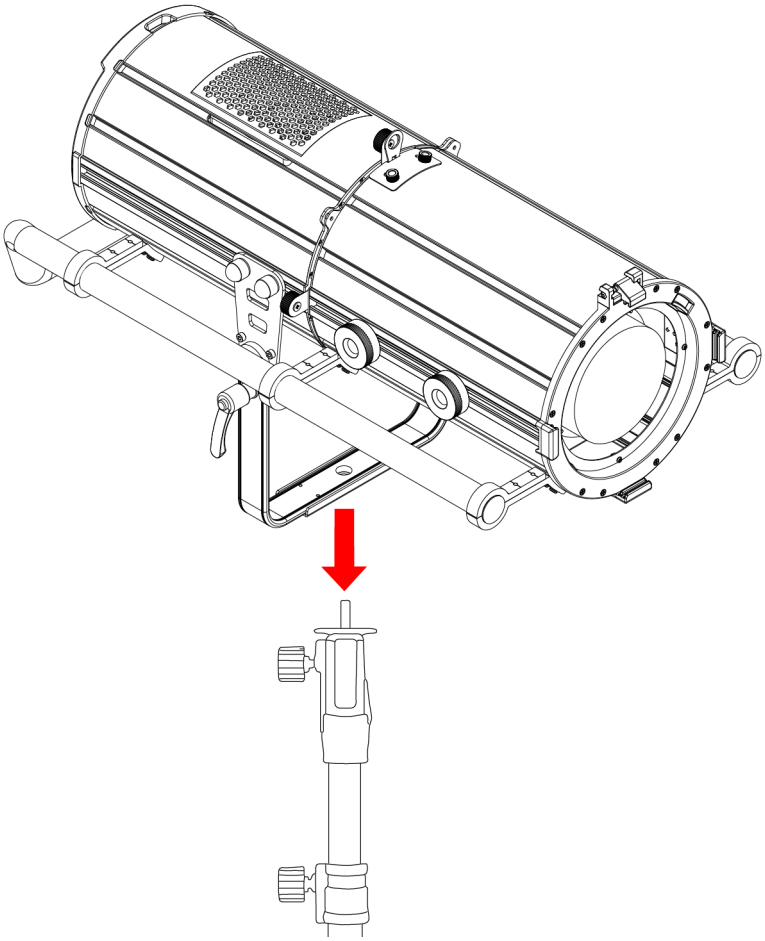
The device may fall if it is mounted on a stand, causing personal injury or death.

- Make sure that the device is safely mounted on the stand.
- Do not place objects on the top of the device when it is mounted on a stand. These objects may fall and cause injury.
- Make sure that the stand can support the weight of the device.

To mount the device on a stand (see 3.9. Optional Accessories on page 14), follow the steps below:

01) Place the stand on a level stable surface.
02) Fully extend the legs of the stand.
03) Lift the device above the stand.
04) Place the device on top of the stand so that the end of the stand fits in the **mounting hole (09)**.
05) Secure the device to the stand with a suitable nut.

Figure 10



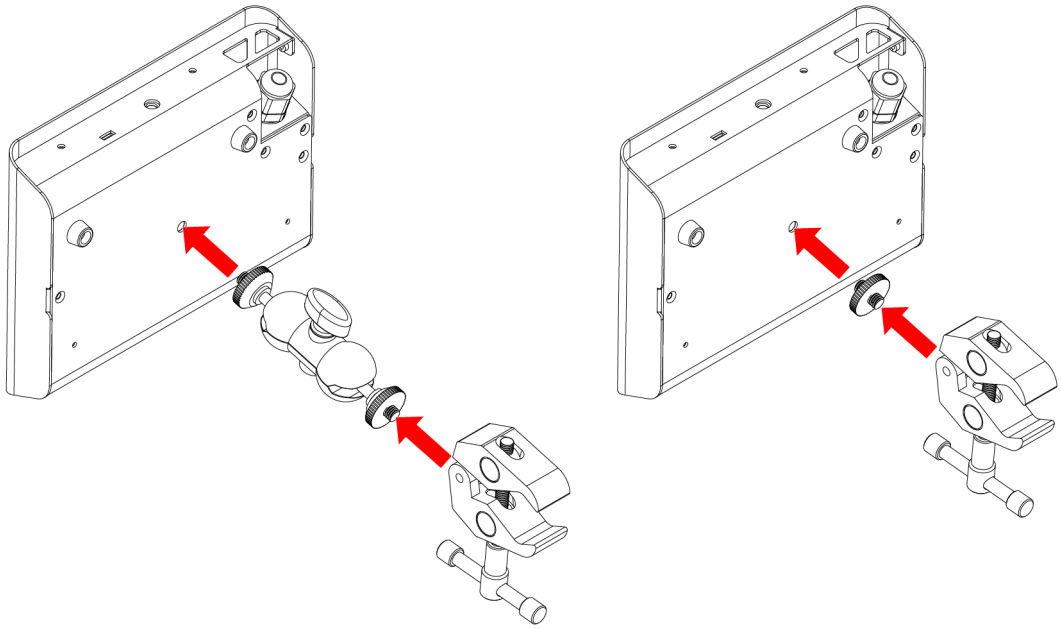
4.5. Mounting the Dedicated Controller

The ACT Followspot 230 CW is delivered with a dedicated controller. The dedicated controller can be placed on a flat surface or mounted on the **controller bar (12)**. The dedicated controller can be mounted to the device with the included clamp and the short spacer or the articulated spacer.

To mount the dedicated controller to the device, follow the steps below:

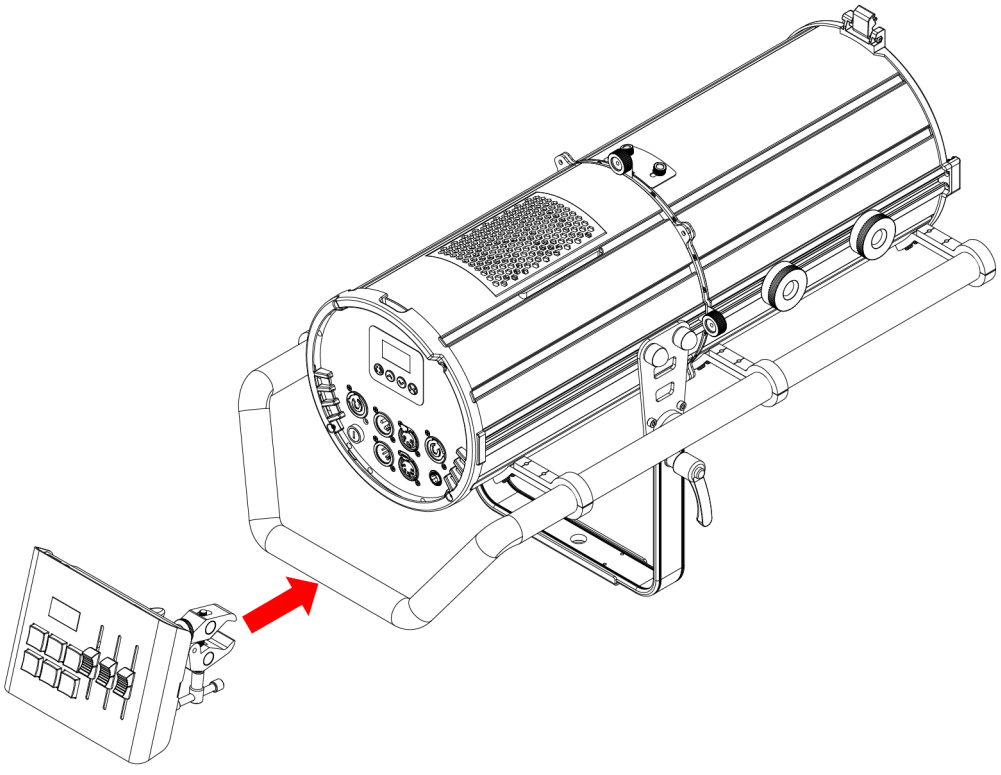
01) Screw one end of the articulated spacer or the short spacer into the **rear mounting opening (31)** or the **top mounting opening (32)** of the dedicated controller.
02) Screw the clamp onto the other end of the articulated spacer or short spacer.

Figure 11



03) Attach the clamp to the **controller bar (12)** of the ACT Followspot 230 CW.

Figure 12



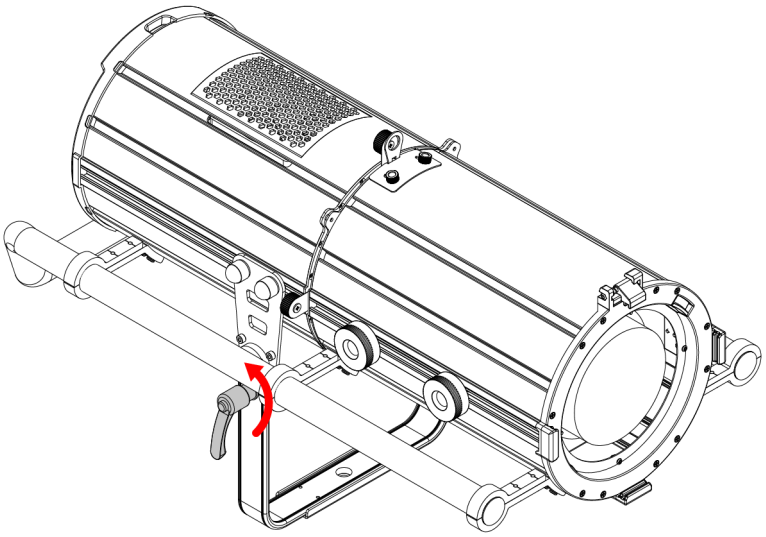
4.6. Angle Adjustment

You can adjust the angle of the device with the 2 **adjustment handles (11)**.

To adjust the angle, follow the steps below:

01) Turn the 2 **adjustment handles (11)** counterclockwise to loosen them.
02) Tilt the device to the desired angle.
03) Turn the 2 **adjustment handles (11)** clockwise to tighten them. Make sure that the device cannot move freely after the 2 **adjustment handles (11)** are tightened.

Figure 13

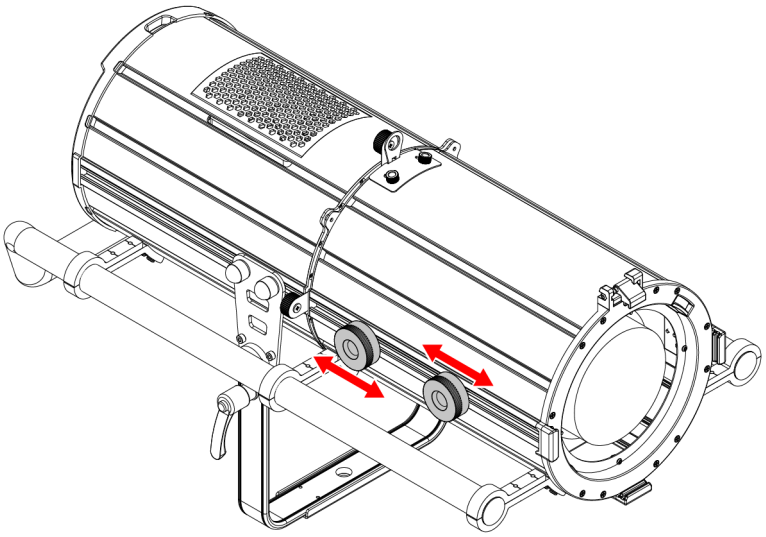


4.7. Beam Angle Adjustment

You can manually adjust the beam angle of the device between 8°–32° with the **zoom control (07)**. To adjust the beam angle, follow the steps below:

01) Turn the **focus control (08)** and the **zoom control (07)** counterclockwise to loosen them.
02) Slide the controls forwards or backwards to achieve the desired beam angle.
03) Once the fixture is focused, turn the **focus control (08)** and the **zoom control (07)** clockwise to tighten them. Do not overtighten them.

Figure 14



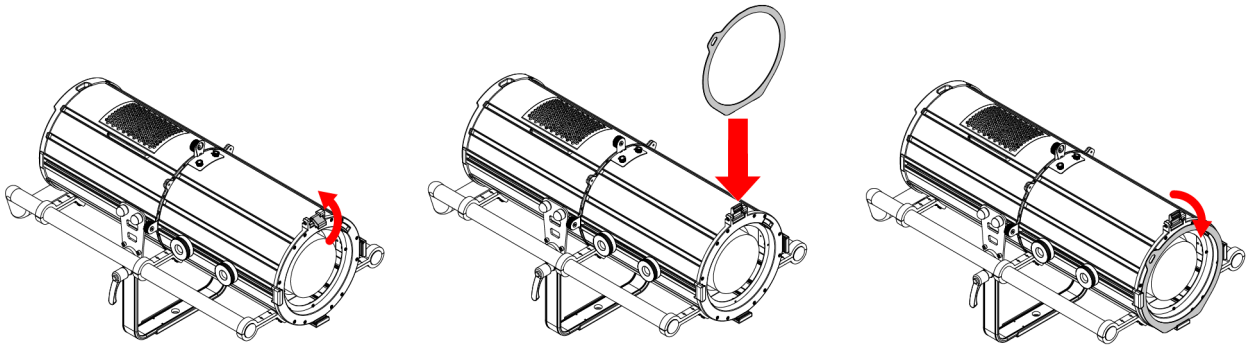
4.8. Filter Frame Installation

The ACT Followspot 230 CW is delivered with a filter frame. You can insert a color gel or a diffusion filter into the filter frame.

To install the filter frame, follow the steps below:

01) Slide the spring-loaded **filter frame clip (04)** to the side and flip it backwards.
02) Insert a color gel or a diffusion filter into the filter frame.
03) Insert the filter frame into the **filter frame holders (06)**.
04) Pull the **filter frame clip (04)** downwards to release the spring-loaded screw. The filter frame is locked in position.
05) Secure the filter frame to the overhead structure with an appropriate secondary attachment, for example a safety cable. Put the safety cable through the **safety eye (35)** of the filter frame.

Figure 15



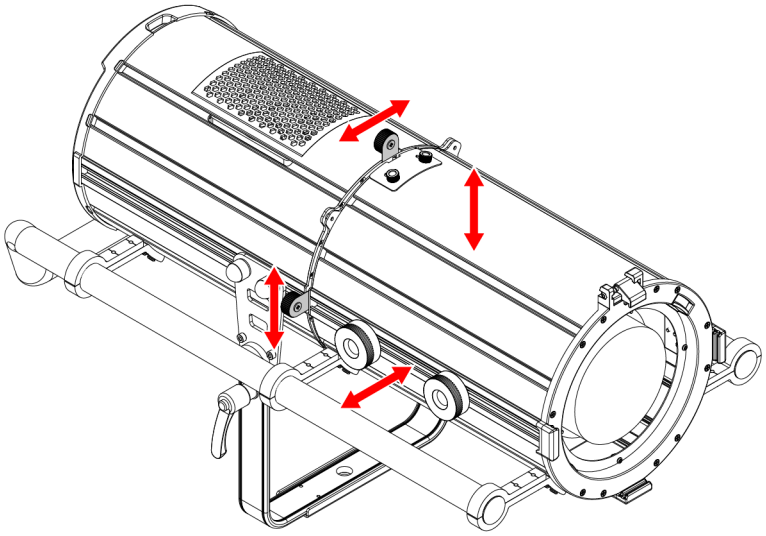
Note:

Make sure that the filter frame is locked in position with the **filter frame clip (04)** before you use the device.

4.9. Beam Shaping

You can shape the beam with the **4 framing shutters (01)**. Move the **framing shutters (01)** back and forth to modify the shape of the beam.

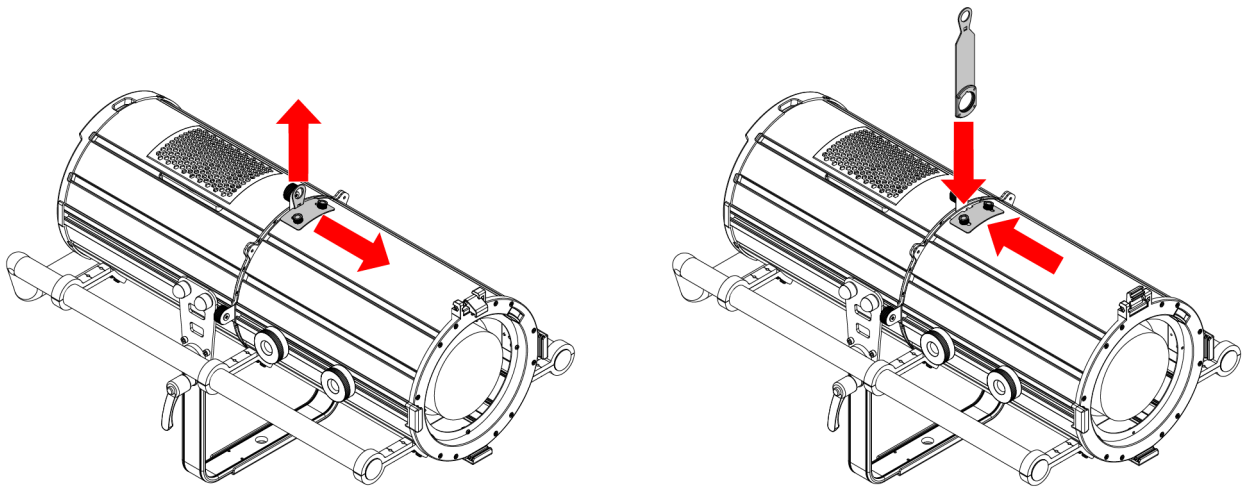
Figure 16



4.10. Gobo Replacement

01) Loosen the 2 **cover plate thumbscrews (03)**. Do not remove the thumbscrews.
02) Slide the gobo slot cover plate towards the **lens (05)**.
03) Slide out the **gobo holder (02)** from the gobo holder slot.
04) Change the gobo (see 4.11. Changing the Gobo on page 20) in the **gobo holder (02)**.
05) Slide the **gobo holder (02)** back into the gobo holder slot.
06) Slide the gobo slot cover plate towards the **gobo holder (02)**.
07) Tighten the **2 cover plate thumbscrews (03)** to secure the gobo slot cover plate in its place.

Figure 17

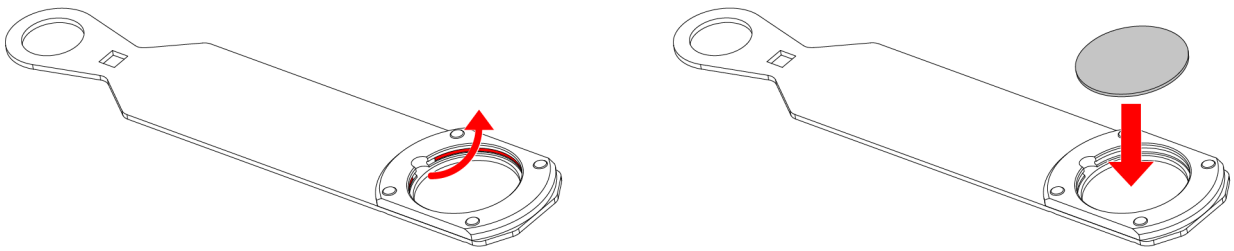


4.11. Changing the Gobo

To change the gobo, follow the steps below:

01) Insert a small flathead screwdriver into the **spring removal slot (33)** of the **gobo holder (02)** and carefully pry out the **retention spring (34)**.
02) Remove the gobo from the **gobo holder (02)**.
03) Place a new gobo inside the **gobo holder (02)**. Make sure that the painted (black) side of the gobo is facing upwards. When inserted back into the gobo slot, the painted (black) side should be facing the **lens (05)**.
04) Push the **retention spring (34)** back into the **gobo holder (02)**.

Figure 18



4.12. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

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

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

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

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

4.13. 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.

The maximum recommended number of devices depends on the total load of all connected devices.

The total load shall not exceed:

- at 120 V: 1800 W
- at 230 V: 3500 W

5. Setup

5.1. Warnings and Precautions

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

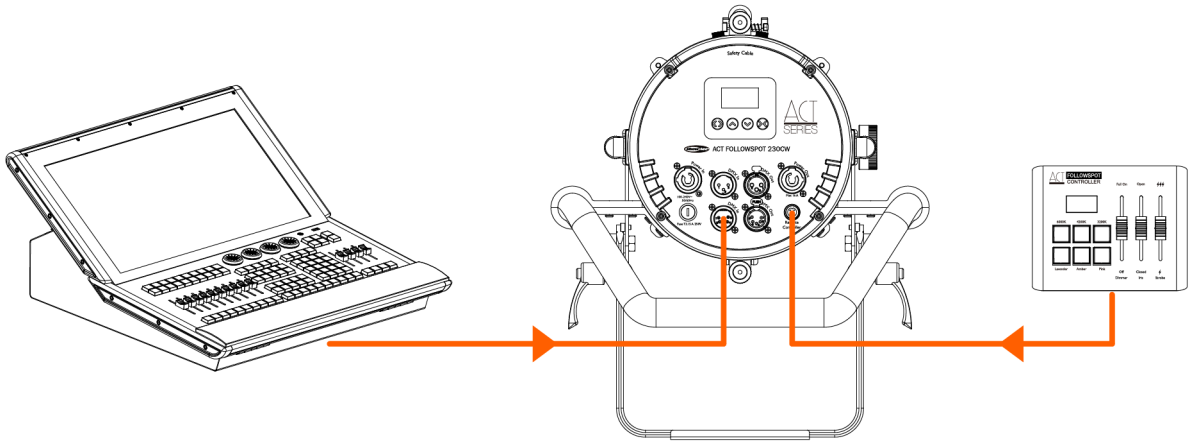
5.2. Setup Example

When the ACT Followspot 230 CW is not connected to a controller or to other devices, it functions as a stand-alone device. You can operate it manually via the control panel. You can also operate the device with a DMX controller or with the dedicated controller.

For more information refer to Control Modes (see 6.3. Control Modes on page 25).

The figure below shows a typical setup example with a DMX controller and the included dedicated controller.

Figure 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.

The ACT Followspot 230 CW has 3-pin and 5-pin DMX signal IN and OUT connectors.

The pin assignment is as follows:

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

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

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

Note:

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

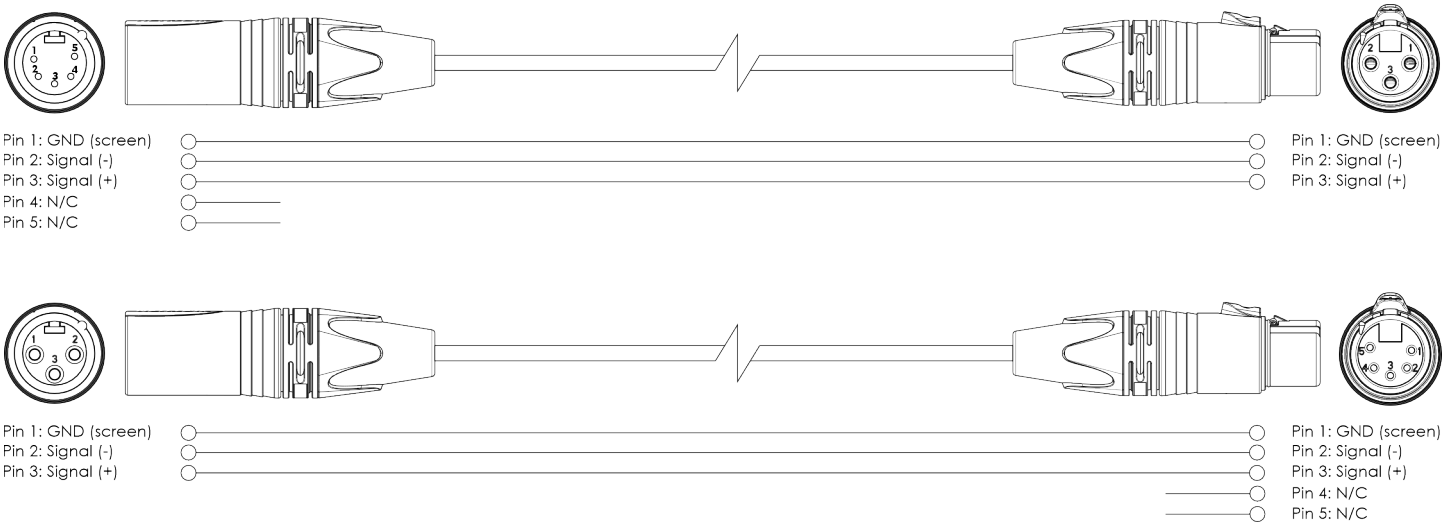
5.3.2. DMX Cables

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

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

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

Figure 20

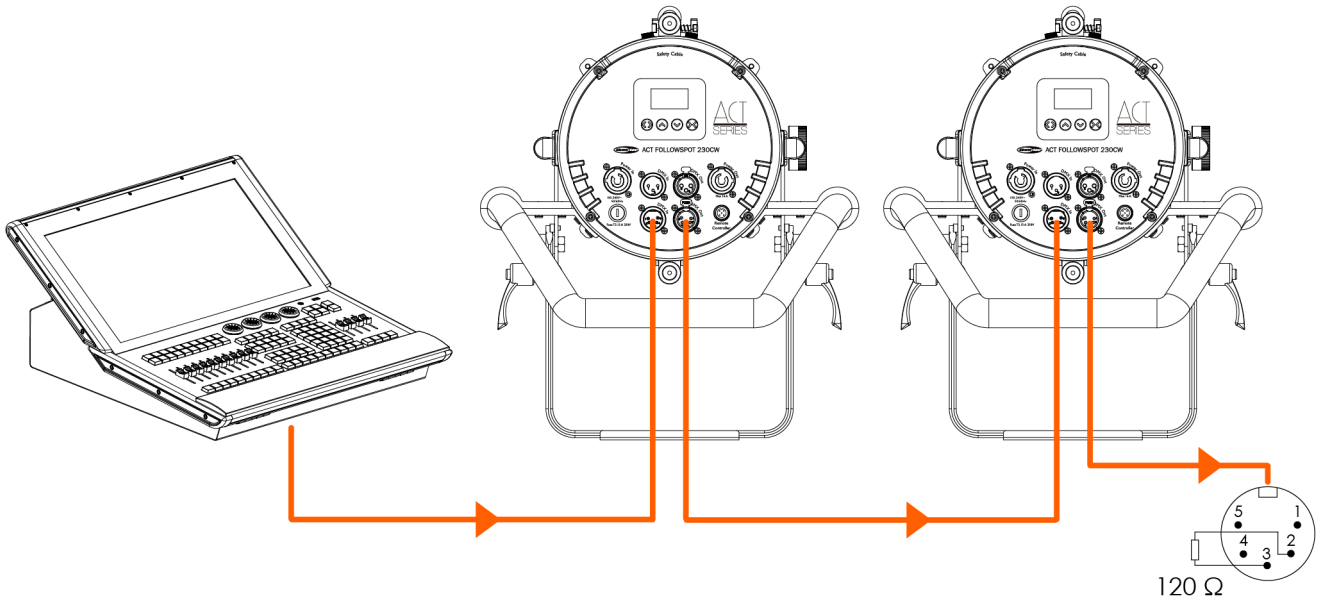


5.3.3. DMX Linking

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

01) Use a 3-pin/5-pin DMX cable to connect the DMX OUT connector of the lighting controller to the DMX IN connector of the 1st device.
02) Connect the DMX OUT connector of the 1st device to the DMX IN connector of the 2nd device with a 3-pin/5-pin DMX cable.
03) Repeat step 2 to connect all devices in a daisy-chain.
04) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.

Figure 21



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 Followspot 230 CW has 2 personalities: 4 Channel, 5 Channel.

If you want to connect multiple devices on one data link and use them in 5-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 6 (006), as 1 + 5 = 6.
03) Set the starting address of the 3rd device on the data link to 11 (011), as 6 + 5 = 11.
04) Continue assigning the starting addresses of the remaining devices by adding each time 5 to the previous number.

Make sure that you do not have any overlapping channels in order to control each ACT Followspot 230 CW 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 follow spot. It can be installed only indoors. 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. Turning ON/OFF

When the device is connected to the power supply, the device is turned on. To turn the device off, disconnect the power supply.

6.3. Control Modes

The ACT Followspot 230 CW supports the following control modes:
- Stand-alone: Manual operation
- DMX-512: 4CH (4 channels), 5CH (5 channels), with the dedicated controller

For more information about how to connect the devices, refer to Setup (see 5. Setup on page 22).

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

Adjust the parameters of the device in the Fixture test menu (see 6.8.4. Fixture Test on page 32).

To operate the device with a DMX controller:

01) Set the DMX starting address of the device in the DMX Address menu.
02) Select the DMX channel mode in the DMX channel mode menu. Refer to DMX Channels (see 6.9. DMX Channels on page 34) for a complete overview of all DMX channels.

To operate the device with the dedicated controller:

Set the DMX merge mode in the DMX Functions menu (see 6.8.1. DMX Functions on page 29).

6.4. Using the Dedicated Controller

When the dedicated controller is connected (see 5.2. Setup Example on page 22), it functions as a DMX controller for the ACT Followspot 230 CW. It has dedicated buttons and faders to control the DMX functions of the device.

The dedicated controller has the following buttons and faders:

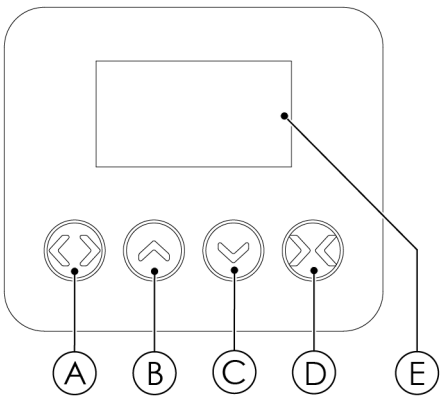
Dimmer fader (23)	Adjust the dimmer from Off to Full On (000–255)
Iris fader (24)	Adjust the iris from Closed to Open (000–255)
Strobe fader (25)	Adjust the strobe from low to high frequency (000–255)
Color buttons (26)	Set the output of the device to the corresponding color (6000 K/4200 K/3200 K/Lavender/ Amber/Pink)

Note:

The **OLED display (27)** (see 6.6.1. Dedicated Controller Start-up on page 27) shows the currently active DMX value for each fader and button.

6.5. Control Panel

Figure 22



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

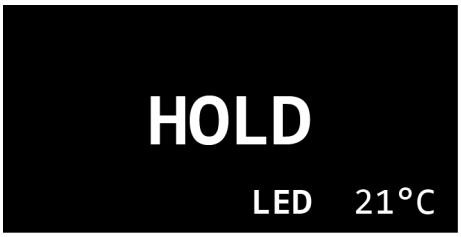
- Use the **MENU** button to exit the current submenu, to return to the main menu and to return to the start screen.
- Use the **UP/DOWN** buttons to navigate through the menus and submenus or to increase/decrease numeric values.
- Use the **ENTER** button to open the desired menu, to confirm your choice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

6.6. Start-up

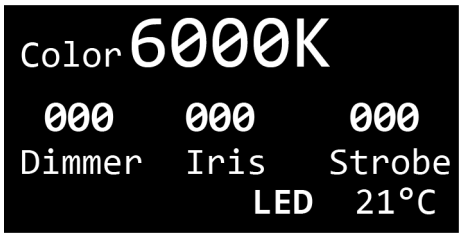
Upon start-up the display shows a splash screen with the name of the device:



Immediately afterwards, the display shows the start screen. The start screen provides information about the DMX fail setting and the temperature of the LEDs. If the dedicated controller is connected (see 5.2. Setup Example on page 22), the display shows the color setting and the DMX values for the dimmer, iris and strobe.



Manual operation (from the menu)



With dedicated controller

Note:

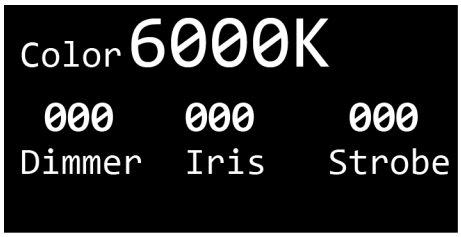
If no button is pressed, after 60 seconds of inactivity the display turns off. Press any button to turn the display on. You can adjust the screen timeout in the Display Settings menu (see 6.8.3. Display Settings on page 32).

6.6.1. Dedicated Controller Start-up

Upon start-up the **OLED display (27)** of the dedicated controller shows a splash screen with the name of the device and the software version:



Immediately afterwards, the display shows the color setting and the DMX values for the dimmer, iris and strobe.

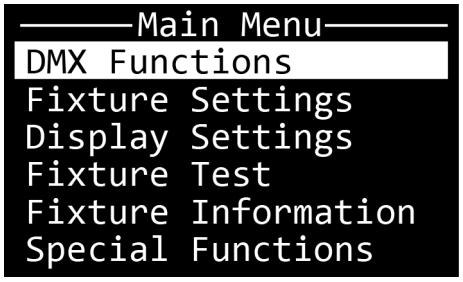


6.7. Menu Overview

Level 1	Level 2	Level 3	Level 4
DMX Functions (see 6.8.1. DMX Functions on page 29)	DMX Address	001–509/508 depending on Channel mode	
	Mode	4 Channel	
		5 Channel	
	DMX Fail	Hold	
		Blackout	
	Merge Mode	Dimmer	LTP
			HTP
		Strobe	LTP
			HTP
		Color	LTP
			HTP
		Iris	LTP
			HTP
	View DMX Value	1. Dimmer	000–255
		2. Dimmer Fine	000–255
		3. Strobe	000–255
		4. Color	000–255
		5. Iris	000–255
Fixture Settings (see 6.8.2. Fixture Settings on page 31)	Dimmer Curve	Linear	
		Square Law	
		Inverse Squ	
		S-Curve	
	Dimmer Speed	LED	
		Halogen	
	Iris Inverse	No	
		Yes	
Display Settings (see 6.8.3. Display Settings on page 32)	Display Inverse	No	
		Yes	
	Backlight Auto Off	No	
		Yes	
	Display Contrast	0–30	
Fixture Test (see 6.8.4. Fixture Test on page 32)	Auto Test	Auto Test …	
	Manual Defined	Dimmer	000–255
		Strobe	000–255
		Color	000–255
		Iris	000–255
Fixture Information (see 6.8.5. Fixture Information on page 33)	RDM UID	29B4:110XXXXX	
	Fixture Hour		
	Firmware Version		
Special Functions (see 6.8.6. Special Functions on page 33)	Factory Setting	No	
		Yes	

6.8. Main Menu Options

The main menu has the following options:



DMX Functions
Fixture Settings
Display Settings
Fixture Test
Fixture Information
Special Functions

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

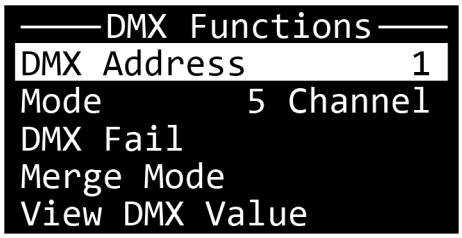
Note:

If no button is pressed, after 60 seconds of inactivity the device returns to the start screen.

6.8.1. 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:

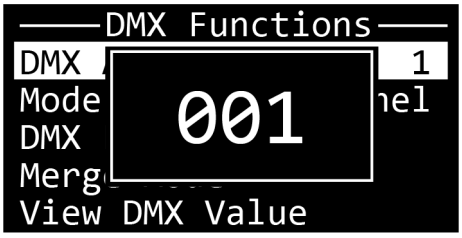


- DMX Address (see 6.8.1.1. DMX Address)
- Mode (see 6.8.1.2. Mode)
- DMX Fail (see 6.8.1.3. DMX Fail)
- Merge Mode (see 6.8.1.4. Merge Mode)
- View DMX Value (see 6.8.1.5. View DMX Value)

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

6.8.1.1. DMX Address

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

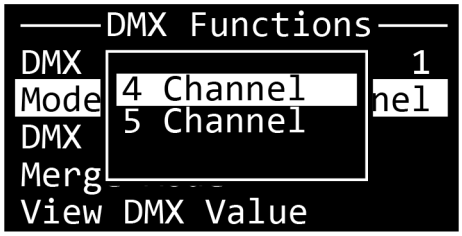


01) Press the **UP/DOWN** buttons to select the DMX starting address of the device. The selection range depends on the active DMX channel mode:
    - 4 Channels: 001–509 (4 channels)
    - 5 Channels: 001–508 (5 channels)
02) Press the **ENTER** button to confirm the selection.

6.8.1.2. Mode

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

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



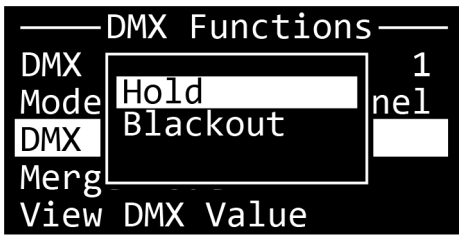
- 4 Channel
- 5 Channel

02) Press the **ENTER** button to confirm the selection. For more information refer to the DMX Channels (see 6.9. DMX Channels on page 34).

6.8.1.3. 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 2 options:



- Hold: The device uses the last DMX signal correctly received
- Blackout: The device blacks out the light output

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

6.8.1.4. Merge Mode

In this submenu you can select the merging mode for the signals received from the DMX input and the dedicated controller. The merging mode can be set for each of the 4 functions that are available in 4-channel DMX mode (see 6.9. DMX Channels on page 34) and that can be controlled with the dedicated controller (see 6.4. Using the Dedicated Controller on page 26).

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



- Dimmer: Set the merge mode for the dimmer function
- Strobe: Set the merge mode for the strobe function
- Color: Set the merge mode for the color function
- Iris: Set the merge mode for the iris function

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

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

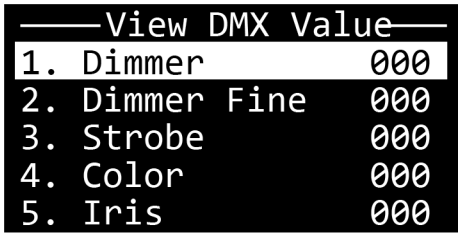
- LTP: Set the output to Latest Takes Precedence. The DMX packet with the latest value is sent to the output
- HTP: Set the output to Highest Takes Precedence. The DMX packet with the highest value is sent to the output

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

6.8.1.5. 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 5 options.



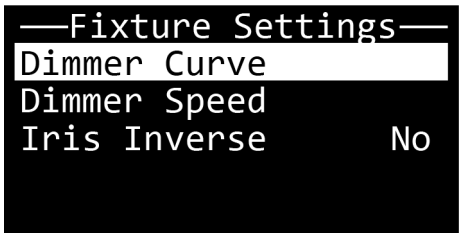
Note:

The submenu always shows all 5 possible DMX channels, even if 4-channel mode is selected in the Mode submenu (see 6.8.1.2. Mode on page 30).

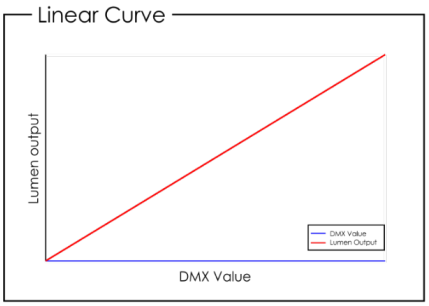
6.8.2. Fixture Settings

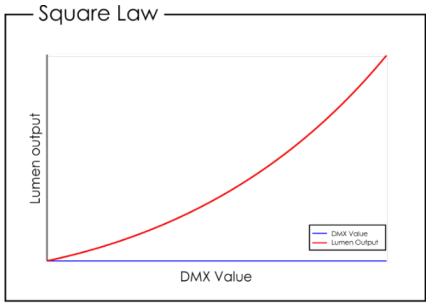
In this menu you can adjust the fixture settings.

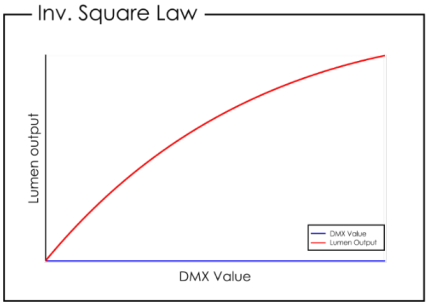
01) Press the **UP/DOWN** buttons to select one of the 3 options:

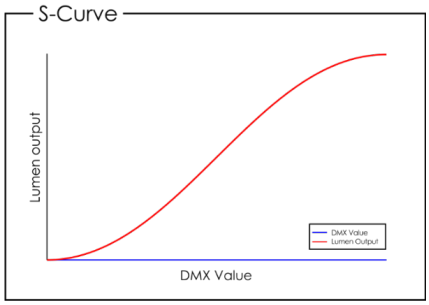


- Dimmer Curve: There are 4 options available: Linear, Square Law, Inverse Square Law and S-Curve









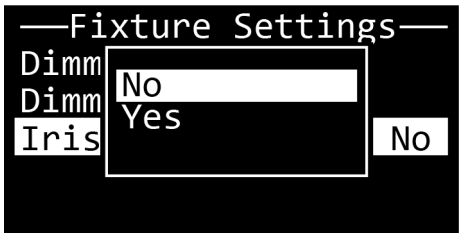
- Dimmer Speed: There are 2 options available: LED (instant dimming without delay) and Halogen (delayed dimming, imitating the behavior of a halogen lamp)
- Iris Inverse (see 6.8.2.1. Iris Inverse)

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

6.8.2.1. Iris Inverse

In this pop-up submenu you can set the behavior of the Iris DMX channel (see 6.9. DMX Channels on page 34).

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



- No: The setting is not inverted. The iris is fully closed at a DMX value of 0 and fully opened at a DMX value of 255
- Yes: The setting is inverted. The iris is fully opened at a DMX value of 0 and fully closed at a DMX value of 255

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

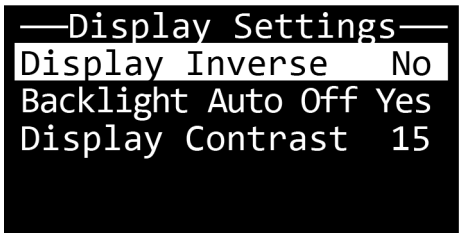
Note:

This setting also affects the behavior of the **iris fader (24)** on the dedicated controller (see 6.4. Using the Dedicated Controller on page 26).

6.8.3. 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 3 options:



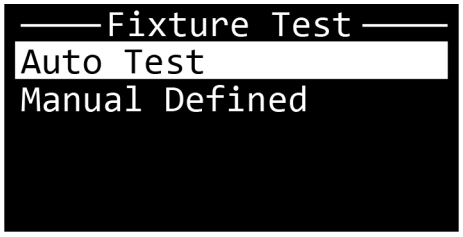
- Display Inverse: The OLED display is rotated at 180° (No/Yes)
- Backlight Auto Off: The backlight of the OLED display does not turn off automatically after 60 seconds of inactivity (No/Yes)
- Display Contrast: The adjustment range is 0-30 (from low to high contrast)

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.

6.8.4. Fixture Test

In this menu you can perform a test of the parameters of the device and manually adjust the dimmer, strobe, color and iris values.

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



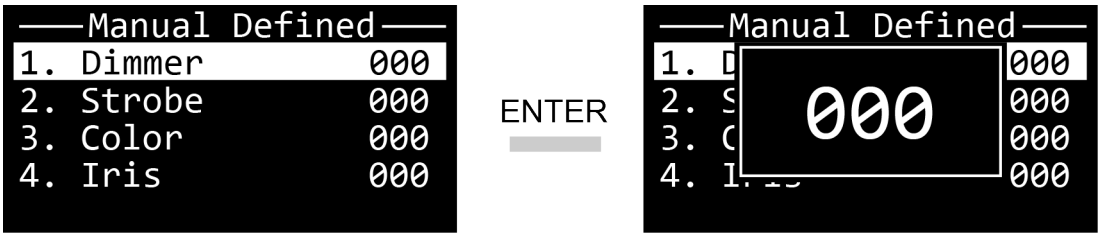
- Auto Test: The device performs an auto test of its parameters
- Manual Defined (see 6.8.4.1. Manual Defined)

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

6.8.4.1. Manual Defined

In this submenu you can manually adjust the dimmer, the strobe, the color and the iris. Refer to the DMX channels (see 6.9. DMX Channels on page 34) for more information.

01) Press the **UP/DOWN** buttons to scroll through the 4 options:



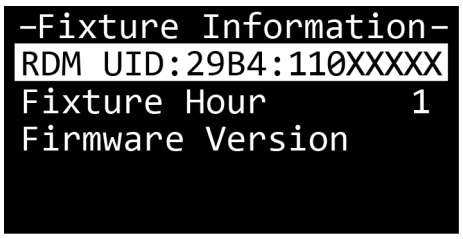
- Dimmer
- Strobe
- Color
- Iris

02) Press the **ENTER** button to confirm 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 000–255.
04) Press the **ENTER** button to confirm.

6.8.5. Fixture Information

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

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



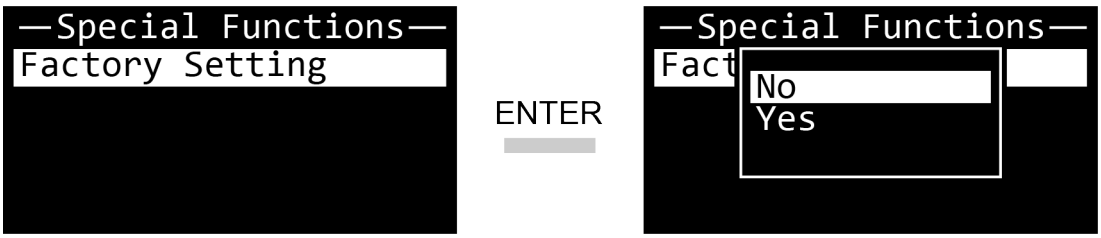
- RDM UID: View the unique identification (UID) number of the device
- Fixture Hour: View the operating hours of the LEDs
- Firmware Version: View the current firmware version

02) (When selecting Firmware Version) Press the **ENTER** button to select and view the firmware version.

6.8.6. Special Functions

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

01) Press the **ENTER** button to open the pop-up submenu.
02) Press the **UP/DOWN** buttons to select one of the 2 options:



- No: Cancel the reset and return to the previous screen
- Yes: Reset the settings of the device to the default factory settings

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

6.9. DMX Channels

4 Channel	5 Channel	Function	Value	Setting
1	**1**	**Dimmer**	000–255	From low to high intensity (0–100%)
	2	**Dimmer Fine**	000–255	From low to high intensity (0–100%)
2	**3**	**Strobe**	000–010	LED on
			011–255	Strobe, from low to high frequency
3	**4**	**Color**	000–021	Color 1 (6000 K)
			022–043	Color 2 (4200 K)
			044–065	Color 3 (3200 K)
			066–087	Color 4 (Lavender)
			088–109	Color 5 (Amber)
			110–127	Color 6 (Pink)
			128–191	Clockwise color scroll, fast to slow
			192–255	Counterclockwise color scroll, slow to fast
4	**5**	**Iris**	000–255	Small to big (0–100%)

6.10. RDM Information

This device supports RDM. Refer to Supported RDM PIDs (see 6.10.2. Supported RDM PIDs (Parameter IDs)) for more information.

6.10.1. RDM Details

- Responder ID: 29B4:110XXXXX
- Manufacturer's ID: Showtec (Highlite International B.V.)
- Manufacturer Label: Showtec
- Model Description: ACT Followspot 230 CW
- Model ID: 272 (110 hexadecimal)
- Device Label: ACT Followspot 230 CW

Note:

An RDM responder ID consists of 3 parts:

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

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

6.10.2. Supported RDM PIDs (Parameter IDs)

RDM Parameter ID's (Slot 21-22)	Value	Required	GET Allowed	SET Allowed
COMMS_STATUS	0x0015		*	*
STATUS_MESSAGES	0x0030		*	
STATUS_ID_DESCRIPTION	0x0031		*	
CLEAR_STATUS_ID	0x0032			*
SUPPORTED_PARAMETERS	0x0050	*	*	
DEVICE_MODEL_DESCRIPTION	0x0080		*	
MANUFACTURER_LABEL	0x0081		*	
DEVICE_LABEL	0x0082		*	*
FACTORY_DEFAULTS	0x0090		*	*
LANGUAGE_CAPABILITIES	0x00A0		*	
LANGUAGE	0x00B0		*	*
DMX_PERSONALITY	0x00E0		*	*
DMX_PERSONALITY_DESCRIPTION	0x00E1		*	
DMX_START_ADDRESS	0x00F0	*	*	*
SLOT_INFO	0x0120		*	
SLOT_DESCRIPTION	0x0121		*	
SENSOR_DEFINITION	0x0200		*	
SENSOR_VALUE	0x0201		*	*
RECORD_SENSORS	0x0202			*
CURVE	0x0343		*	*
CURVE_DESCRIPTION	0x0344	*	*	
MODULATION_FREQUENCY	0x0347		*	*
MODULATION_FREQUENCY_ DESCRIPTION	0x0348	*	*	

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	• Make sure that the device is connected to power supply and the cables are plugged in
	Main fuse is blown	• 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	• Reset the parameters of the device to the default factory settings
The device does not respond to DMX control	The controller is not connected	• Connect the controller
	The signal is reversed. The 3-pin/5-pin DMX OUT of the controller does not match the DMX IN of the device	• Install a phase-reversing cable between the controller and the device
	The controller is defective	• Try using another controller
The device responds erratically to DMX control	Connections are defective	• Examine connections and cables. Correct defective connections. Repair or replace damaged cables
	The data link is not terminated with a 120 Ω termination plug	• Insert a termination plug in the DMX OUT connector of the last device on the link

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, fixings 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.
- Replace fuses only with the same type and rating.

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 manually 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

- Use the original packaging to transport the device, if possible.
- Clean the device before storing (see 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

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

CE

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