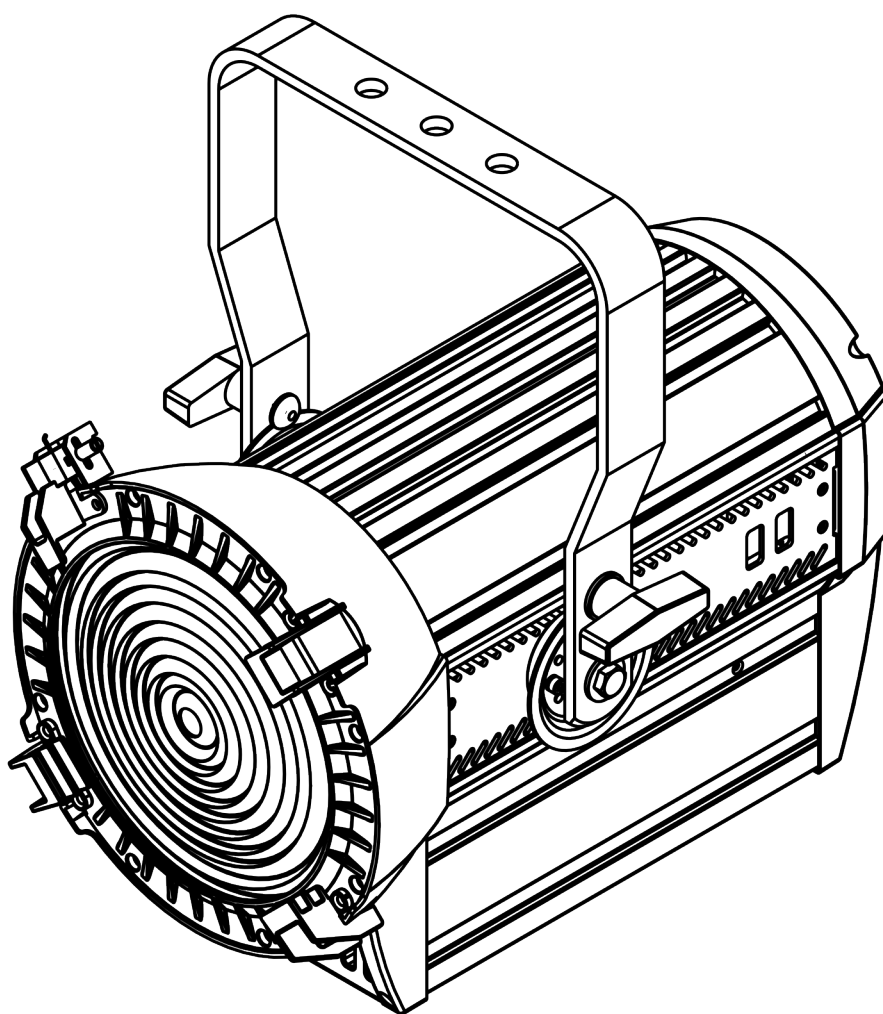




Performer Fresnel 2200 DDT

Product code: 33045

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 Performer Fresnel 2200 DDT
- Schuko to Power Pro cable (1,5 m)
- Filter frame
- User manual

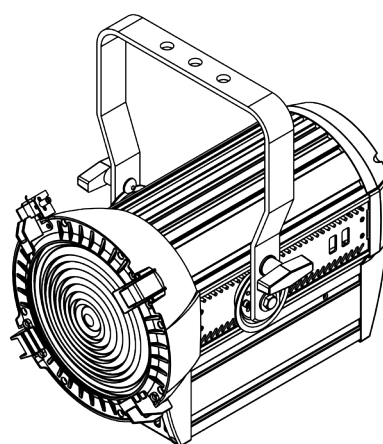
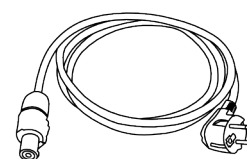


Figure 1



1.2. Intended Use

This device is intended for professional use as a stage light effect. 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:



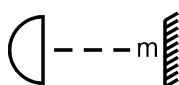
This device shall not be treated as household waste.



This device is designed for indoor use.



This device falls under IEC protection class I.



Minimum distance from lighted objects

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 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 stage light effect. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

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



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

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- The safety devices are not damaged.
- There are no deformations on housings, 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

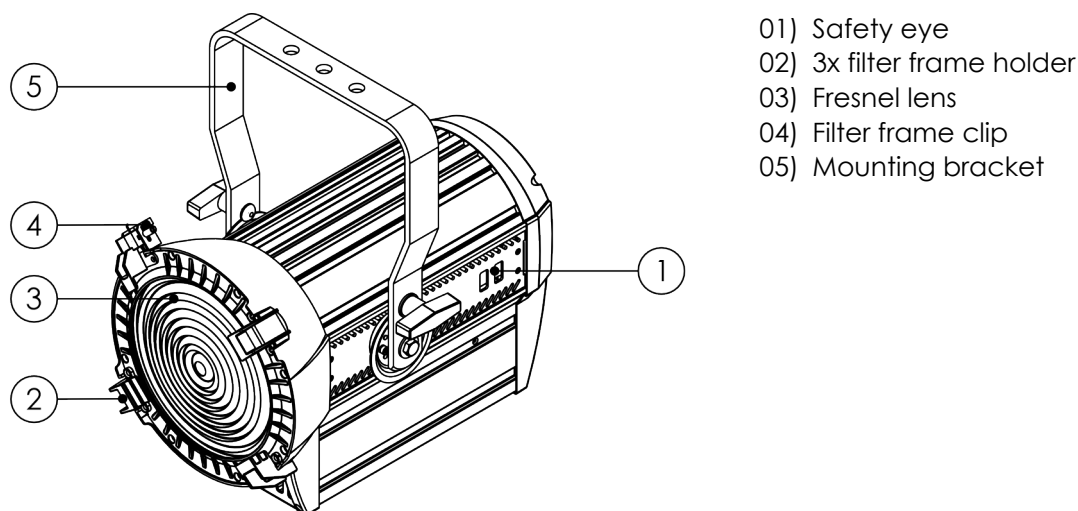
During installation, deinstallation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

3. Description of the Device

The Showtec Performer Fresnel 2200 DDT is a 300 W Warm White LED Spot with high CRI (98) and silent operations. The device projects light within a 15°–60° motorized zoom range. The Performer Fresnel 2200 DDT (Direct TRIAC Dimming Technology) is compatible with conventional dimmer packs. A barndoor is optional for shaping the output manually.

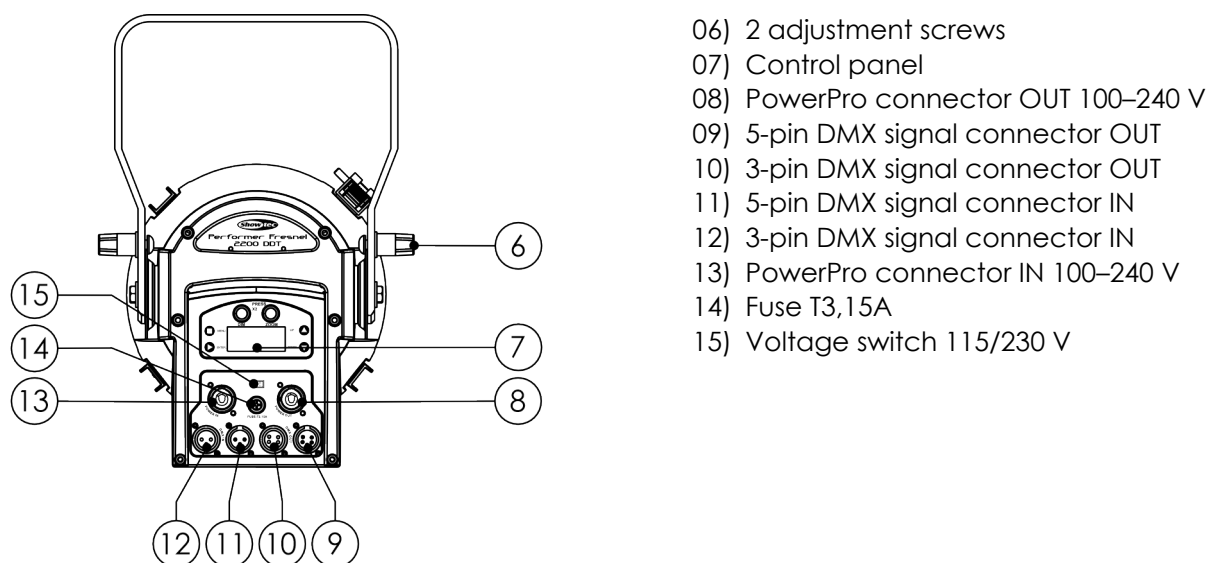
3.1. Front View

Figure 2



3.2. Back View

Figure 3



3.3. Product Specifications

Model:	Performer Fresnel 2200 DDT
--------	----------------------------

Source:

Light Source Type	LED
Light Source Quantity	1
Light Source Power	300 W
LED Color Type	WW
Light Source System	COB
Life Expectancy	50000 h
Refresh Rate (Max.)	25 kHz
Illuminance @ 5 m	3890 lx
Luminous Flux (Total)	11000 lm
CRI	98
Maximum CCT	3200 K

Optical:

Zoom Type	Manual
Zoom Minimum	15°
Zoom Maximum	60°

Control and Programming:

Control Mode	DMX / Manual / Master Slave / RDM / Stand Alone / Triac (Phase-cut dimming)
DMX Channels	1 / 2 / 5
Protocols	DMX / RDM
Display	OLED
Dim Curve	Linear
Dimmer Resolution	8 bit / 16 bit

Dynamic Effects:

Dimmer	0–100 %
Strobe	0–25 Hz

Electrical Specifications and Connections:

Power Supply	120–250 V AC 50/60 Hz
Power Consumption	220 W
Fuse	3,15 A
Power Connector IN	Power Pro True
Power Connector OUT	Power Pro True
DMX Connector	XLR 3P IN/OUT / XLR 5P IN/OUT
DMX Connector IN	XLR 3P / XLR 5P
DMX Connector OUT	XLR 3P / XLR 5P

Mechanical Specifications:

Length	417 mm
--------	--------

Width	286 mm
Height	260 mm
Weight	6,6 kg
IP Rating	IP20 (indoor use only)
Material	Aluminum
Housing	Aluminum
Color	Black

Product Properties:

Cooling	Forced Convection
---------	-------------------

Rigging:

Mounting Options	Bracket
Safety Attachment	Yes
Safety Eyes	1

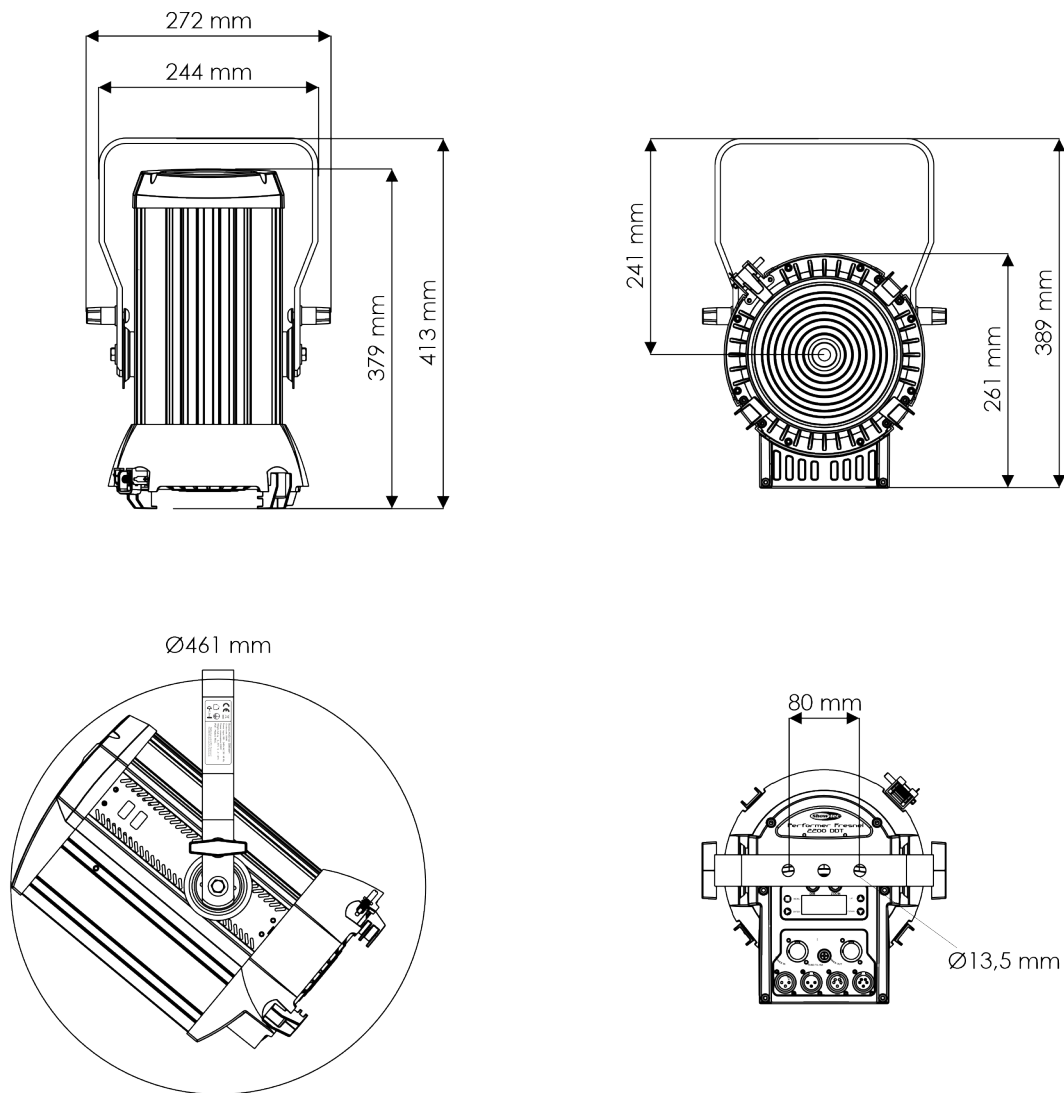
Thermal Specifications:

Maximum Ambient Temperature	45 °C
Minimum Ambient Temperature	0 °C
Minimum Operating Temperature	0 °C

Included Items:

Included Cables	Power Pro Cable
Included Accessories	Filter frame

3.4. Dimensions



3.5. Optional Accessories

You can additionally purchase the following accessories:

- [33041](#) Barndoor for Performer 2000
- [33042](#) Filter Frame for Performer 2000

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 minimum distance to other objects must be bigger than 0,5 m.
- The maximum ambient temperature $t_a = 45^\circ\text{C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 45°C .

4.4. Rigging

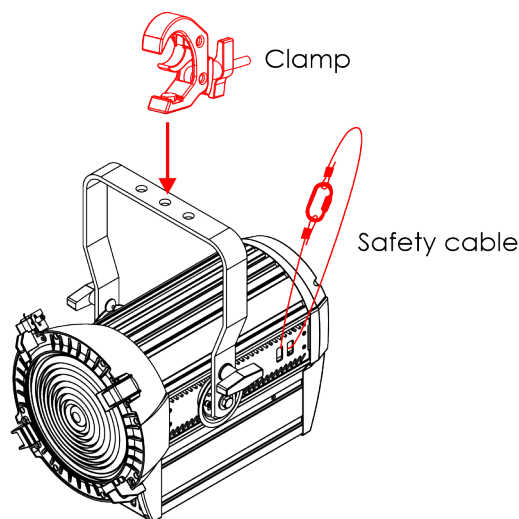
The device can be positioned on a flat surface or mounted to a truss or other rigging structure in any orientation. Make sure that all loads are within the pre-determined limits of the supporting structure.

**CAUTION**

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

To mount the device, follow the steps below:

- 01) Use a clamp to attach the device to the supporting structure. 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 (01)**.

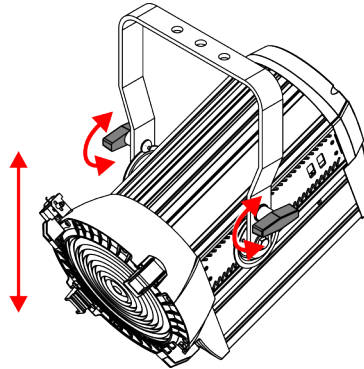


4.4.1. Angle Adjustment

You can adjust the angle of the device with the **adjustment screws (06)**.

- 01) Turn the **adjustment screws (06)** counterclockwise to loosen them.
- 02) Tilt the device to change the angle.
- 03) Turn the **adjustment screws (06)** clockwise to tighten them. Make sure that the device cannot move freely after the **adjustment screws (06)** are tightened.

Figure 4



4.4.2. Filter Frame/Barndoor Installation

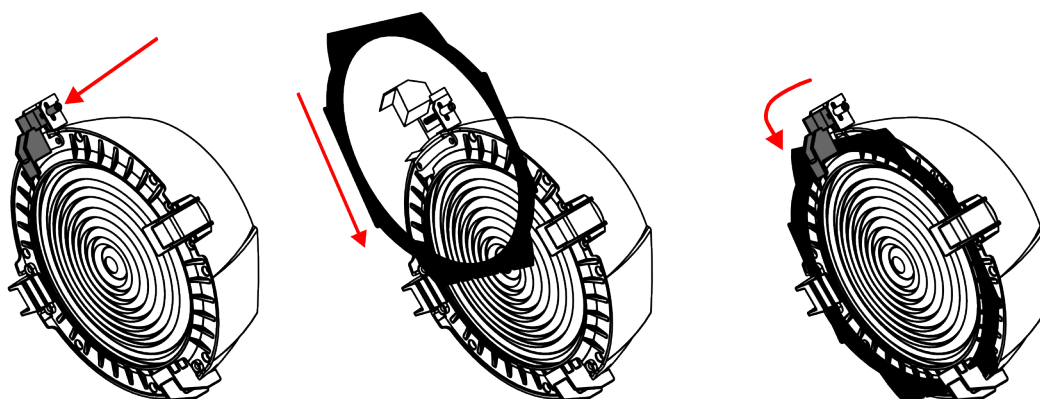
The Performer Fresnel 2200 DDT is delivered with a filter frame. A barndoor is an optional accessory (see [3.5. Optional Accessories](#) on page 12). You can insert a color gel or a diffusion filter into the filter frame. To install a filter frame or a barndoor, follow the steps below:

- 01) Press the spring-loaded screw on the **filter frame clip (04)**. The **filter frame clip (04)** turns upwards.
- 02) If you use a filter frame, insert a color gel or a diffusion filter into the filter frame.
- 03) Insert the filter frame or the barndoor into the **filter frame holders (02)**.
- 04) Pull the **filter frame clip (04)** downwards to release the spring-loaded screw. The filter frame or barndoor is locked in position.
- 05) If you install a barndoor, secure the barndoor to the overhead structure with an appropriate secondary attachment, for example a safety cable. Put the safety cable through the safety eye of the barndoor.

Note:

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

Figure 5



4.5. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

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

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

Before connecting the device to the socket-outlet:

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

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

4.6. Connecting to a Dimmer Pack

You can connect the device to a standard dimmer pack.

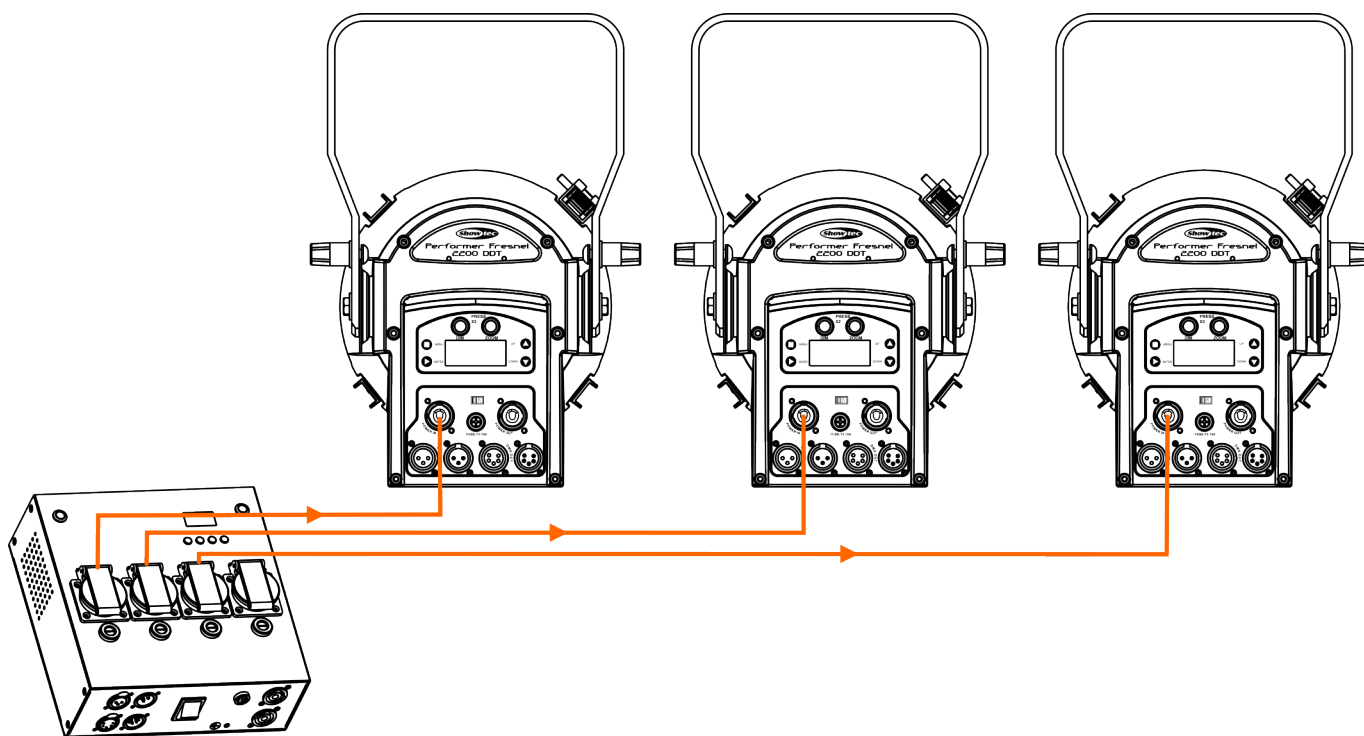
When connecting devices to a dimmer pack, make sure that:

- the total load per output does not exceed the maximum wattage and current of the dimmer pack.
- the total load of all connected fixtures and the dimmer pack does not exceed the maximum limit.

Note:

The values depend on the dimmer pack you use. Refer to the manual of the dimmer pack.

Figure 6



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.

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. Stand-alone Setup

When the Performer Fresnel 2200 DDT 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 in the Static menu.

For more information refer to Control and Operation Modes (see [6.2. Control and Operation Modes](#) on page 20).

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 Performer Fresnel 2200 DDT 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

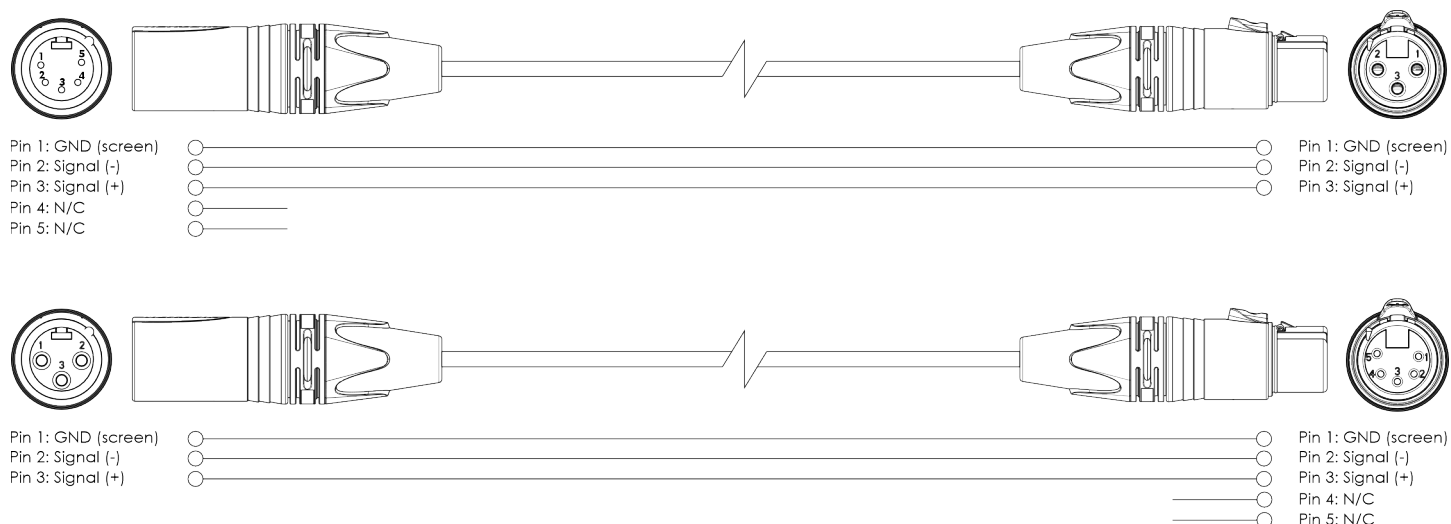
5.3.2. DMX Cables

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 7

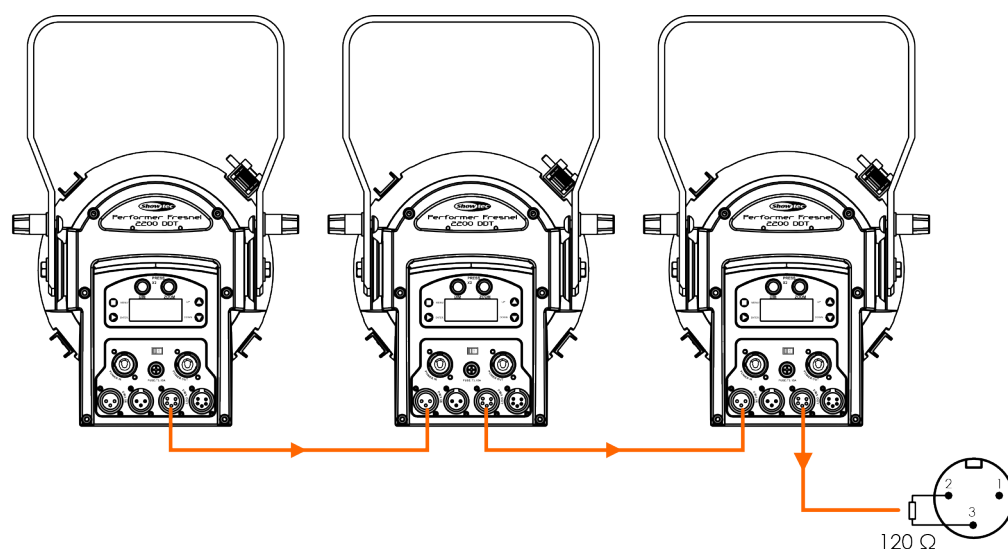


5.3.3. Master/Slave Setup

The Performer Fresnel 2200 DDT supports master/slave control mode. To connect multiple devices in a master/slave setup, follow the steps below:

- 01) 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.
- 02) Repeat step 1 to connect all devices in a daisy-chain.
- 03) Connect a DMX terminator (120 Ω resistor) to the DMX OUT connector of the last device on the data link.
- 04) Set every device on the daisy-chain to MAST in the Mode setting submenu (see [6.6.6.6. Mode Setting](#) on page 28).
- 05) Set all devices on the daisy-chain, except the 1st device, to SLAVE in the Run Mode menu (see [6.6.2. Run Mode](#) on page 26).

Figure 8

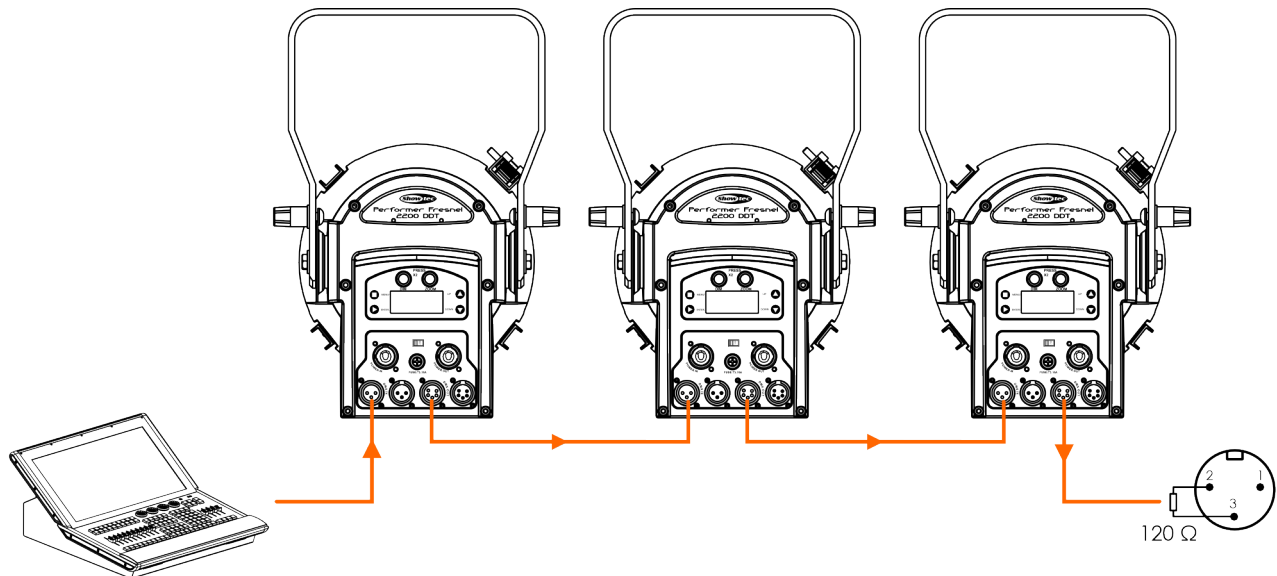


5.3.4. DMX Linking

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

- 01) Use a 3-pin/5-pin DMX cable to connect the DMX OUT connector of the lighting controller to the DMX IN connector of the 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 9



5.3.5. DMX Addressing

In a setup with multiple devices, make sure that you set the DMX starting address of each device correctly. The Performer Fresnel 2200 DDT has 3 personalities: UNO (1 channel), DOS (2 channels) and STD.P (5 channels).

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.

Note:

Make sure that you do not have any overlapping channels in order to control each Performer Fresnel 2200 DDT correctly. If two or more devices have the same DMX starting address, they operate in the same way.

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 stage light effect. 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. Control and Operation Modes

The Performer Fresnel 2200 DDT can be controlled as a stand-alone device, in master/slave mode, with a dimmer pack and with a DMX controller.

The Performer Fresnel 2200 DDT supports the following control modes:

- Stand-alone: Static mode. Select SELF in the Mode Setting submenu (see [6.6.6.6. Mode Setting](#) on page 28)
- Master/slave: Static mode, DMX controlled mode, dimmer controlled mode and sense mode. Select MAST in the Mode Setting submenu (see [6.6.6.6. Mode Setting](#) on page 28)
- DMX 512: DMX controlled mode with 1 channel, 2 channels or 5 channels

For more information about how to connect the devices, refer to Setup (see [5. Setup](#) on page 17).

6.2.1. Static Mode

To operate the device in static mode from the control panel and the menu:

- 01) Select Static in the main menu.
- 02) Adjust the settings (see [6.6.1. Static](#) on page 25).

Note:

When you use static mode, do not leave the Static menu. If you leave the Static menu, the device goes back to the selected run mode.

6.2.2. DMX Mode

To operate the device with a DMX controller:

- 01) Connect the device to a DMX controller.
- 02) Select DMX 512 in the Run mode menu (see [6.6.2. Run Mode](#) on page 26).
- 03) Select a personality in the Personality submenu (see [6.6.6. Setting](#) on page 27):
 - UNO (1 channel)
 - DOS (2 channels)
 - STD.P (5 channels)
- 04) Set the DMX starting address of the device in the Address menu (see [6.6.4. Address](#) on page 26).
- 05) Select the behavior of the device in case there is no DMX signal in the DMX Error submenu (see [6.6.6.2. DMX Error](#) on page 28).
- 06) Select the DMX channel mode in the Personality submenu (see [6.6.6. Setting](#) on page 27). Refer to DMX Channels (see [6.7. DMX Channels](#) on page 30) for a complete overview of all DMX channels.

6.2.3. Dimmer Mode

To operate the device with a dimmer pack:

- 01) Connect the device to a dimmer pack.
- 02) Select DMMR mode in the Run mode menu (see [6.6.2. Run Mode](#) on page 26).

Note:

If you set the output of the dimmer to 0, the device receives no power and shuts down. When you set the output of the dimmer to a value higher than 0, the device restarts. Restarting the device does not change the prior settings of the device.

6.2.4. Sens Mode

To operate the device with a dimmer pack and with DMX 512:

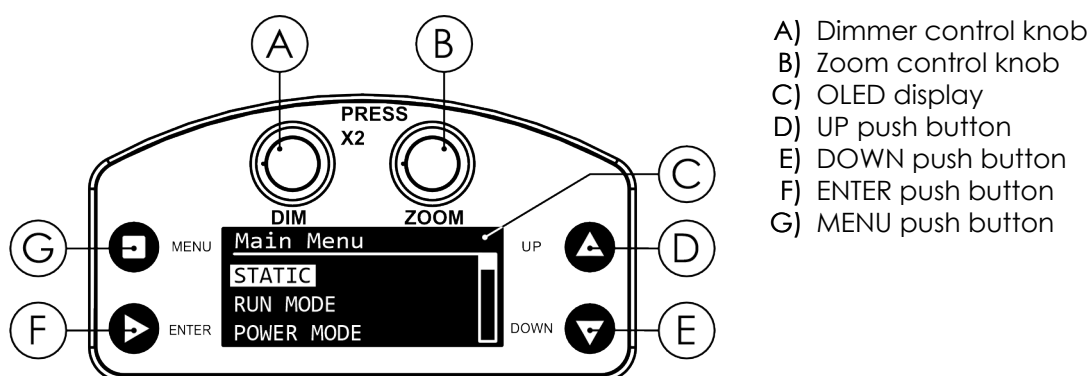
- 01) Connect the device to a dimmer pack.
- 02) Connect the device to a DMX controller.
- 03) Select SENS mode in the Run mode menu (see [6.6.2. Run Mode](#) on page 26).
- 04) Select a personality in the Personality submenu (see [6.6.6. Setting](#) on page 27):
 - UNO (1 channel)
 - DOS (2 channels)
 - STD.P (5 channels)
- 05) Set the DMX starting address of the device in the Address menu (see [6.6.4. Address](#) on page 26).
- 06) Select the behavior of the device in case there is no DMX signal in the DMX Error submenu (see [6.6.6.2. DMX Error](#) on page 28).
- 07) Select the DMX channel mode in the Personality submenu (see [6.6.6. Setting](#) on page 27). Refer to DMX Channels (see [6.7. DMX Channels](#) on page 30) for a complete overview of all DMX channels.

Note:

If you set the output of the dimmer to 0, the device receives no power and shuts down. When you set the output of the dimmer to a value higher than 0, the device restarts. Restarting the device does not change the prior settings of the device.

6.3. Control Panel

Figure 10



- Use the **Dimmer** control knob to operate the dimmer function in static mode.
- Use the **Zoom** control knob to operate the zoom function in static mode.
- Use the **UP/DOWN** buttons to navigate through the menus and submenus or to increase/decrease numeric values.
- Use the **ENTER** button to open a menu, to confirm your choice or to set the currently selected value.
- Use the **MENU** button to exit a menu or submenu.

6.4. Start-up

Upon start-up, the display shows a splash screen with the Showtec logo.

By default the display of the device is locked. Unlock the display to access the main menu (see [6.4.1. Password Input](#)).

6.4.1. Password Input

Enter the password to unlock the display.

01) Press the **UP/DOWN** buttons in the following order: **UP, DOWN, UP, DOWN**.

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

Note:

- If no button is pressed, after 25 s the display turns off. Enter the password to unlock the display. If the display lock is turned off, press any button to turn the display on.
- You can disable the display lock in the Key submenu (see [6.6.6. Setting](#) on page 27).
- You can disable the Setting menu lock in the Slock submenu (see [6.6.6. Setting](#) on page 27).
- You cannot disable the lock for the other locked menus: Reset and Calibration.

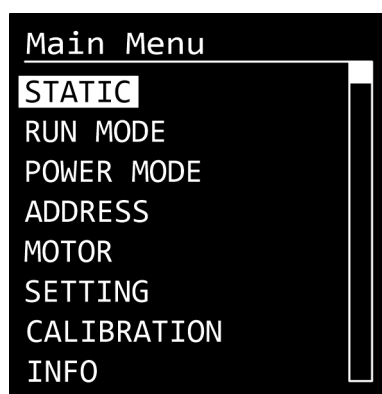
6.5. Menu Overview

Level 1	Level 2	Level 3	Level 4
STATIC (see 6.6.1. Static on page 25)	DIMMER	0–100	
	ZOOM	0–100	
RUN MODE (see 6.6.2. Run Mode on page 26)	DMX 512		
	SLAVE		
	DMMR		
	SENS		
POWER MODE (see 6.6.3. Power Mode on page 26)	575 W		
	750 W		
ADDRESS (see 6.6.4. Address on page 26)	001–512		
MOTOR (see 6.6.5. Motor on page 26)	YES		
	NO		
SETTING (see 6.6.6. Setting on page 27)	KEY	OFF ON	
	DIMMER	OFF	
		DIM1	
		DIM2	
		DIM3	
		DIM4	
	CURVE	OFF	
		CURVE 1	
		CURVE 2	
		CURVE 3	
	PERSONALITY	UNO	
		DOS	
		STD.P	
	SLOCK	OFF	
		ON	
	DMX ERROR	SAVE	
		BLACK	
	RESET	OK	
	ZOOM	BASE	
		POSE 1	
		POSE 2	
	PERFORM	LIVE	
		STUDIO	
		POWER	
	MODE SETTING	SELF	
		MAST	
	PWM	600 Hz	
		1200 Hz	
		2400 Hz	
		4000 Hz	
		6000 Hz	

Level 1	Level 2	Level 3	Level 4
		25000 Hz	
CALIBRATION (see 6.6.7. Calibration on page 29)	CALZ	POSE 1	0-255
		POSE 2	0-255
INFO (see 6.6.8. Info on page 29)	VERSION	V1.0.5	
	RDM	UID	0x29B40F900041
		LABEL	Performer Fresnel 2200 DDT

6.6. Main Menu Options

The main menu has the following options:



Static
Run Mode
Power Mode
Address
Motor
Setting
Calibration
Info

01) Press the **UP/DOWN** buttons to navigate through the menu.

02) Press the **ENTER** button to open submenus.

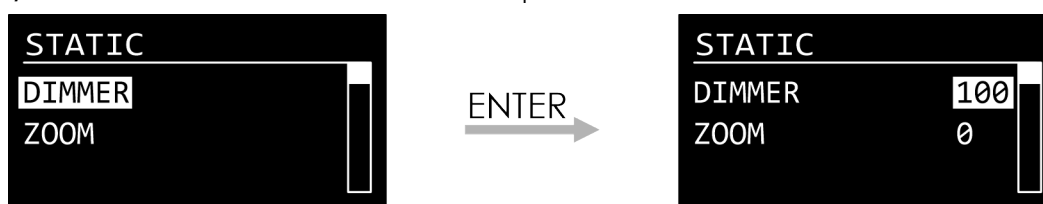
Note:

Some of the submenus require a password. The password is **UP, DOWN, UP, DOWN**.

6.6.1. Static

In this menu you can manually adjust the intensity and beam angle of the light output. When this menu is selected, the dimmer and zoom functions can also be controlled with the **dimmer control knob (A)** and the **zoom control knob (B)**.

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



- DIMMER: Adjust the intensity of the light, from OFF to high (0–100)
- ZOOM: Adjust the zoom, from 15° to 60° (0–100)

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

03) Press the **UP/DOWN** buttons. As an alternative, press the correct control knob 2 times and turn the control knob.

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

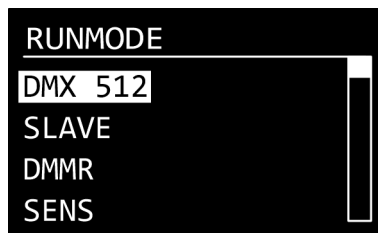
Note:

When you use static mode, do not leave the Static menu. If you leave the Static menu, the device goes back to the selected run mode.

6.6.2. Run Mode

In this menu you can select the control mode of the device.

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



- DMX 512: Operate the device with a light controller. The device becomes a master device
- SLAVE: Operate the device as a slave device in a master/slave setup
- DMMR: Operate the device with a dimmer pack
- SENS: Operate the device with a dimmer pack and with a light controller. The device automatically switches to the control mode you use

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

6.6.3. Power Mode

In this menu you can select the power mode. The options imitates HPL lamp properties.

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

- 575 W: This setting imitates the 575 W HPL lamp
- 750 W: This setting imitates the 750 W HPL lamp

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

6.6.4. Address

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

01) Press the **UP/DOWN** buttons to select the DMX starting address of the device (001–512).



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

6.6.5. Motor

In this menu you can reset the zoom motor.

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

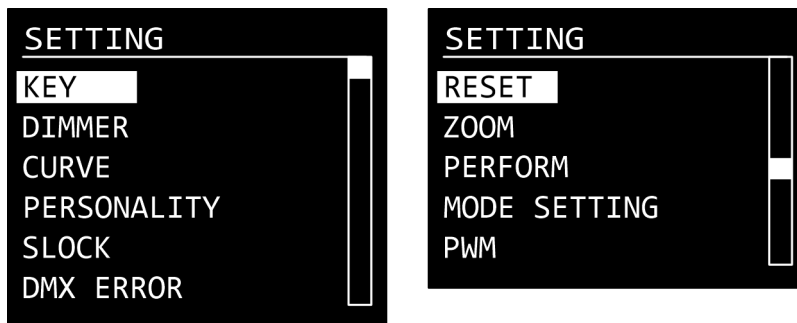
- Yes: Reset the zoom motor. The zoom motor resets to the starting point (15°)
- No: Do not reset the zoom motor

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

6.6.6. Setting

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

01) Press the **UP/DOWN** buttons to select one of the 11 options:



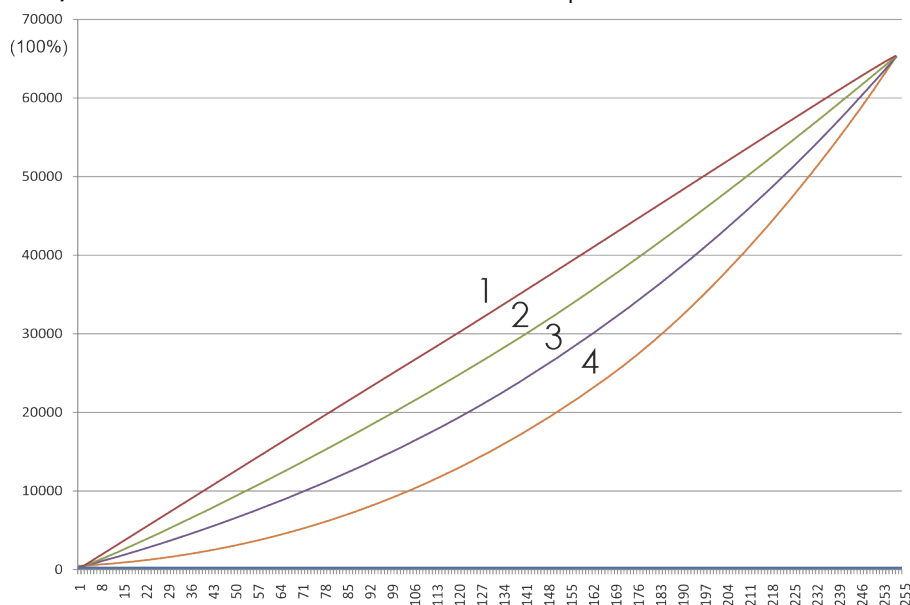
- KEY: Disable or enable the password input for the Main Menu (OFF/ON)
- DIMMER: Select the dimmer speed, from no delay to greatest delay (OFF, DIM 1–DIM4)
- CURVE: (see [6.6.6.1. Curve](#))
- PERSONALITY: Select a DMX channel mode. There are 3 options: UNO (1 channel), DOS (2 channels) and STD.P (5 channels)
- SLOCK: Disable or enable the password input for the Setting Menu (OFF/ON)
- DMX ERROR: (see [6.6.6.2. DMX Error](#))
- RESET: (see [6.6.6.3. Reset](#))
- ZOOM: (see [6.6.6.4. Zoom](#))
- PERFORM: (see [6.6.6.5. Perform](#))
- MODE SETTING: (see [6.6.6.6. Mode Setting](#))
- PWM: (see [6.6.6.7. PWM](#))

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

6.6.6.1. Curve

In this submenu you can select the dimming curve.

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



- 1: OFF
- 2: Curve 1
- 3: Curve 2
- 4: Curve 3

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

6.6.6.2. DMX Error

In this 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:

- **SAVE:** The device uses the last DMX signal received correctly
- **BLACK:** The device blacks out the light output

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

6.6.6.3. Reset

In this submenu you can reset the device to the factory settings.

01) Enter the password (see [6.4.1. Password Input](#) on page 22).

02) Press the **ENTER** button to confirm the password. When the screen shows 'OK!', the device is reset.

6.6.6.4. Zoom

In this submenu you can select a zoom limit.

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

- **BASE:** The zoom limit is set to the standard zoom settings (15°–60°)
- **POS1:** The zoom limit is set to the Pos1 setting (see [6.6.7. Calibration](#) on page 29)
- **POS2:** The zoom limit is set to the Pos2 setting (see [6.6.7. Calibration](#) on page 29)

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

6.6.6.5. Perform

In this submenu you can select the performance mode with regard to noise and light output.

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

- **LIVE:** Balanced mode (default). The device operates with a compromise between noise and light output
- **STUDIO:** Low-noise mode. The fans do not turn on. Instead, the device reduces the light output to cool down
- **POWER:** Light output mode. The device gives the highest quality light output. The fans turn on to high speed when it is necessary to cool the device

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

6.6.6.6. Mode Setting

In this submenu you can select the control mode for the device.

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

- **SELF:** DMX data transfer is off
- **MAST:** DMX data transfer is on.

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

6.6.6.7. PWM

In this submenu you can select the PWM (pulse-width modulation) rate of the device.

01) Press the **UP/DOWN** buttons to select one of the 6 options:

- 600 Hz
- 1200 Hz
- 2400 Hz
- 4000 Hz
- 6000 Hz
- 25000 Hz

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

Note:

- When you select 25000 Hz, make sure that you select OFF in the Curve submenu (see [6.6.6.1. Curve](#)). 25000 Hz cannot dim according to CURVE1, CURVE2 or CURVE3 and does not give a smooth dimming output.

6.6.7. Calibration

In this menu you can use 2 slots to manually set up a zoom limit (0–255).

01) Press the **ENTER** button to open the submenu. Use the password (see [6.4.1. Password Input](#) on page 22).

02) Press the **ENTER** button again to open the submenu.

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



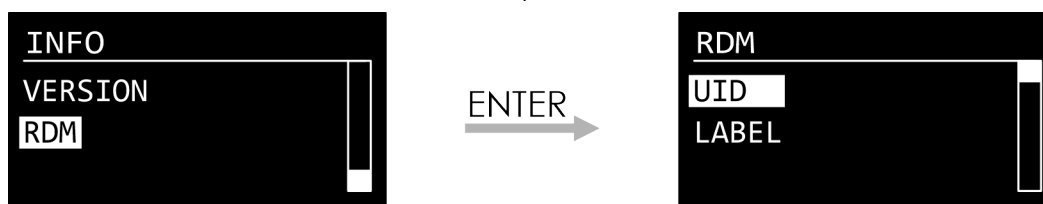
04) Press the **UP/DOWN** buttons to select a value.

05) Press the **ENTER** button to confirm the setting.

6.6.8. Info

In this menu you can view information about the device.

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



- VERSION: Shows the current firmware version
- RDM

02) Press the **ENTER** button to view the information.

03) If you select RDM, press the **UP/DOWN** buttons to select one of the 2 options:

- UID: Shows the unique identification number of the device that the RDM controller receives. Access UID through the RDM submenu
- LABEL: Shows the name of the device that the RDM controller receives. Access LABEL through the RDM submenu

04) Press the **ENTER** button to view the information.

6.7. DMX Channels

6.7.1. UNO

CH	Function	Value	Setting
1	Dimmer	000–255	From OFF to high intensity

6.7.2. DOS

CH	Function	Value	Setting
1	Dimmer	000–255	From OFF to high intensity
2	Fine dimmer	000–255	From low to high intensity

6.7.3. STD.P

CH	Function	Value	Setting
1	Dimmer	000–255	From OFF to high intensity
2	Fine dimmer	000–255	From low to high intensity
3	Strobe	000–009	No function
		010–099	Strobe, from low to high rate
		100–109	No function
		110–179	Lightning strobe, from low to high rate
		180–189	No function
		190–255	Random strobe, from low to high rate
4	Zoom	000–255	From narrow to wide
5	Motor restart	000–200	No function
		201–220	Motor restart
		221–255	No function

6.8. RDM Information

This device supports RDM. Refer to Supported RDM PIDs (see [6.8.2. Supported RDM PIDs \(Parameter IDs\)](#)) for more information.

6.8.1. RDM Details

• Responder ID:	29B4:00B4XXXXXX
• Manufacturer's ID:	Showtec (Highlite International B.V.)
• Manufacturer Label:	Showtec
• Model Description:	Performer Fresnel 2200 DDT
• Model ID:	180 (00B4 hexadecimal)
• Device Label:	Performer Fresnel 2200 DDT

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.

6.8.2. 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 34)
	Dimmer pack is defective	Change the dimmer pack
	Incompatible dimmer pack	Use a different dimmer pack
	Dimmer pack output is set to 0	Change the dimmer output on the dimmer pack
The device responds erratically	The factory settings of the device are changed	Reset the parameters of the device to the default factory settings (see 6.6.6.3. Reset on page 28)
	Incompatible dimmer pack	Use a different dimmer pack
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

9.1. Instructions for Deinstallation



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

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

9.2. Instructions for Transportation

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

9.3. Storage

- Clean the device before storing. (see [8.2.1. Basic Cleaning Instructions](#) on page 33)
- Store the device in the original packaging, if possible.

10. Disposal

Correct disposal of this product



Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

11. Approval



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

