



# Relevé Spot User Operations Manual

Version 1.1

Part Number: 2510M1200-1.1.0 Rev: B

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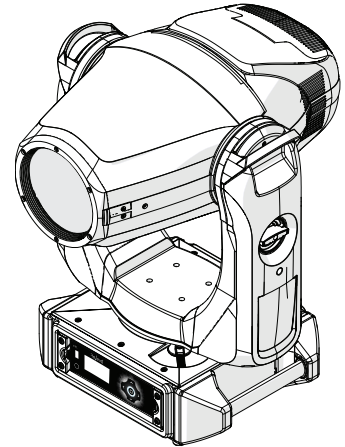
# Introduction

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Congratulations on your purchase of the Relevé Spot automated luminaire from ETC.

Relevé Spot is an LED-based automated spot luminaire that provides high-quality color control, predictable smooth pan and tilt control, and unparalleled zoom optics.

Relevé Spot builds on the legendary color control of ETC LED products and provides a reliable, full-featured automated luminaire of the highest quality.



## About This Manual

This manual provides information required for safe installation, operation, and scheduled maintenance of the Relevé Spot automated luminaire. For your safety, read this entire manual prior to installing, operating, or servicing the Relevé Spot luminaire.

## Other References

Relevé Spot videos are available for viewing from the ETC website [etconnect.com/ReleveSpot](http://etconnect.com/ReleveSpot).

## Document Conventions

This document uses the following conventions to draw your attention to important information.



**Note:** *Notes are helpful hints and information that is supplemental to the main text.*

---



**CAUTION:** *A Caution statement indicates situations where there may be undefined or unwanted consequences of an action, potential for data loss or an equipment problem.*

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**WARNING:** **A Warning statement indicates situations where damage may occur, people may be harmed, or there are serious or dangerous consequences of an action.**

---



**WARNING: RISK OF ELECTRIC SHOCK!** **This warning statement indicates situations where there is a risk of electric shock.**

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All ETC documents are available for free download from our website [etconnect.com](http://etconnect.com).

Please email comments about this manual to [TechComm@etconnect.com](mailto:TechComm@etconnect.com).

## Help from Technical Services

If you are having difficulties, your most convenient resources are the references given in this user manual. To search more widely, try the ETC website at [etconnect.com](http://etconnect.com) or the ETC support website at [support.etconnect.com](http://support.etconnect.com).

If none of these resources is sufficient, contact ETC Technical Services directly at one of the offices identified below. Emergency service is available from all ETC offices outside of normal business hours.

When calling for help, take these steps first:

- Prepare a detailed description of the problem
- Go near the equipment for troubleshooting
- Find your notification number if you have called in previously
- Locate the product model and serial number
- Know your power source
- Know your control source

### Americas

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## Warranty Service

ETC warranty terms and conditions are available on the ETC website [etconnect.com](http://etconnect.com).

## Compliance

Relevé Spot has been tested to, is listed under, or complies with the following regulatory compliance and standards:

cETLus

- Tested to UL 1573 and CSA C22.2 No. 166 - Stage and Studio Luminaires with additional compliance to UL 8750, LED luminaire

IEC 62471

- **LED Risk Group 1** - the luminaire LEDs do not pose a hazard due to normal behavioral limitations on exposure

FCC - Part 15 Class A

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.



**Note:** *This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.*

---

CE

- EN 55015:2013 + A1:2015
- EN 61547:2009
- EN 61000-3-2:2014
- EN 61000-3-3:2008
- EN 60598-2-17:1989
- EN 60598-1:2015
- EN 62471:2008

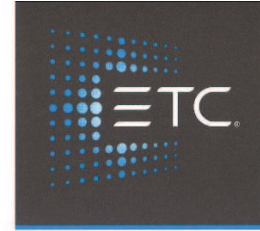
C-TICK

- N4241

# Declaration of Conformity



## EC DECLARATION OF CONFORMITY



We, Electronic Theatre Controls Limited  
declare under sole responsibility that the product(s):

**Product name:** Relevé Automated luminaire  
**Product type/model:** Relevé RELSPOT

to which this declaration relates is/are in conformity with the following Directives by the application of the quoted Standards.

Low Voltage Directive (LVD) 2014/35/EU:

EN 60598-1:2015	Luminaires. General requirements and tests
EN 60598-2-17:1989	Luminaires. Particular requirements. Specification for luminaires for stage lighting, television, film and photographic studios (outside and indoor)
EN 62471:2008	Photobiological safety of lamps and lamp systems

Electromagnetic Compatibility Directive (EMCD) 2014/30/EU:

EN 55015:2013+A1:2015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547:2009	Equipment for general lighting purposes. EMC immunity requirements
EN 61000-3-2:2014	Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current up to and including 16 A per phase) Class A
EN 61000-3-3:2008	Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current $\leq 16$ A per phase and not subject to conditional connection

Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive (RoHS2) 2011/65/EU:

These product(s) do not contain any of the following substances, or they contain trace amounts below allowable or measurable levels in each component or mechanically separable part:

**Lead (Pb), Mercury(Hg), Cadmium (Cd), Hexavalent Chromium (Cr6+), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ether (PBDE)**

Informational notes: The product(s) named herein have been found to comply with the testing and marking requirements of Australia and New Zealand and are suitable for importation into those countries.

To ensure Compliance of this product with the stated Directives it must be installed and operated for its intended use according to the manufacturer's instructions

London, United Kingdom  
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Mr Adam Bennette  
(Name of authorised person)

Adam Bennette  
(Signature of authorised person)

Page 1 of 1  
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Declaration:  
233 A

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Registered in England No. 3057796 | VAT No. GB 662 9487 90

## Safety Notices

Relevé Spot is a high-performance automated spot luminaire that is intended *for professional use only*. Read the entire user manual before installing and operating this equipment.

READ AND FOLLOW THESE SAFETY WARNINGS BEFORE USE:

- For indoor use only. The luminaire is IP20 rated for installation in dry locations only. When selecting the installation location, ensure the luminaire will not be exposed to extreme cold or heat outside of the operational range (see [Environment on page 12](#)), moisture, or dust.
- Do not project the light beam onto combustible surfaces or materials. The minimum distance you should maintain from the luminaire head to an illuminated surface is 2 m, and the minimum distance from the luminaire head to any flammable materials (decorations, etc.) is 0.1 m.
- The luminaire can be yoked in any mounting position, but it must be mounted and supported only by the suspension locations provided in the enclosure. See [Attach Clamp Mounting Rails on page 21](#).
- The installation location must safely hold ten times the weight of the Relevé Spot luminaire and support its intended operation. See [Weight on page 14](#).
- Suspend the luminaire from a suitable structure using a minimum of two hook clamps (not provided) and secured with tightened steel bolts (12 mm (1/2 in) diameter), washers, and locking nuts.
- Always use and install a suitable safety cable as a secondary safety measure to prevent accidental damage and/or injury in the event the installation clamps fail. The safety cable must, at a minimum, hold ten times the weight of the luminaire. ETC offers a suitable safety cable, which is available separately. Order part number 7060A1022.
- Disconnect the luminaire from power and DMX and allow it to cool before performing any cleaning and maintenance procedures.

## Storage and Transporting

Use care when transporting or storing the Relevé Spot luminaire. Use a fitted road case or reuse the original shipping materials to safely transport or store the luminaire.



**Note:** All pan and tilt locks on the Relevé Spot should be released before transporting. See [Pan and Tilt Locks on page 9](#).

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## Unpacking Instructions

The luminaire is fully calibrated and tested at ETC, then carefully packaged in a shipping carton that includes the luminaire and two clamp mounting rails.

Visually inspect the shipping carton for damage that may have occurred during transit. If the shipping carton shows signs of damage, document the damage fully before unpacking the luminaire. Documentation of any damage is helpful when reporting a claim with the carrier.

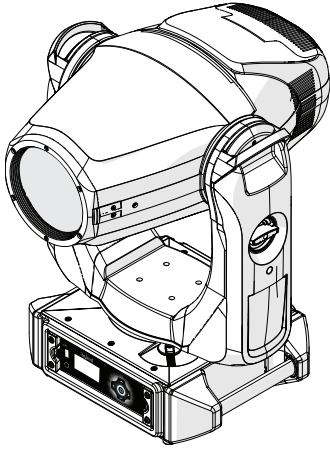
The luminaire weighs approximately 67 lbs. (30.4 kg). For your safety, ETC recommends that two people unpack the luminaire from the shipping carton. Use the provided handles on the yoke arms and the enclosure to lift the luminaire from the shipping carton.

The shipping carton and packaging materials can be valuable if you ever need to ship the fixture, including transporting the fixture for service. Do not discard. If you do not require this packaging for future use, please recycle the materials through your local recycling program.

# Overview

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The Relevé Spot automated luminaire features:



## LED Source

- Features ColorSource Deep Blue array utilizing 52 Lumileds LUXEON® C LEDs in Red, Green, Indigo, and Lime
- Maximum of 6,000 field lumens at full power at any zoom position when operated within acceptable ambient temperatures (see [Environment on page 12](#))
- 33 lumens per watt
- L70 rating (pending test results) for 35,000 hours when used at 70% output. This rating is estimated pending in progress test results when operated at full within the acceptable ambient temperatures (see [Environment on page 12](#))

## Color System

- Features ColorSource Deep Blue array utilizing 54 Lumileds LUXEON® C LEDs in Red, Green, Indigo, and Lime
  - Additive LED RGIL mixing system harnesses the calibrated ColorSource DeepBlue system
    - Brighter reds, more vibrant greens, and deeper blues
    - Even and calibrated color mixing for consistency throughout the beam
    - Mix infinite shades of warm and cool whites, every hue of your favorite reds and blues
- Color Temperature range from 2700K - 7000K

## Optical

- High-quality 3:1 automated and focusable zoom range from 18 to 54 degrees
- Gate size 44 mm
- Camera flicker control:
  - 1,200 Hz (default) and 25,000 Hz by selection
- Variable beam control creates softened gobo edges, crisp spot edges, and provides a morph-effect when focus is transitioned between the Ani-gobo and rotating gobo wheels



## Iris

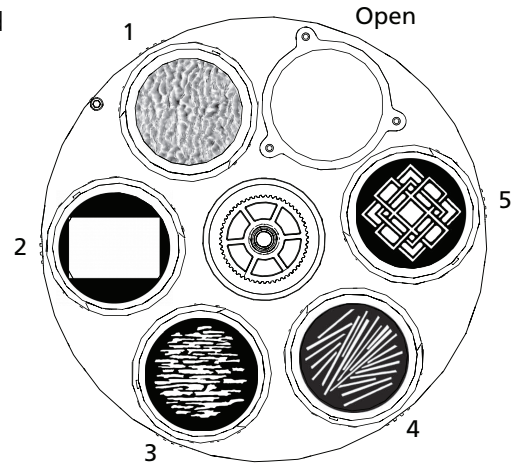
- Mechanical 20-blade iris provides continuous beam size control
- Provides smooth timed beam control

## Rotating Gobos

- Rotating and indexing wheel with five standard interchangeable gobo patterns and one open aperture:

- position 0 - Open
- position 1 - Ripple
- position 2 - Rectangle
- position 3 - Interlocking Breakup
- position 4 - Misdirection
- position 5- Décor Grid

- 44 mm image size
- Unlimited clockwise and counterclockwise rotation with variable speed
- A gobo carrier kit (RELGOBOKIT / ETC part number 2510K1000) is available for purchase from ETC for customer-installed gobos, and custom gobos are available at approved vendors. See [Replace a Gobo on page 39](#).
- Relevé Spot uses the shortest path to position each pattern upon recall.

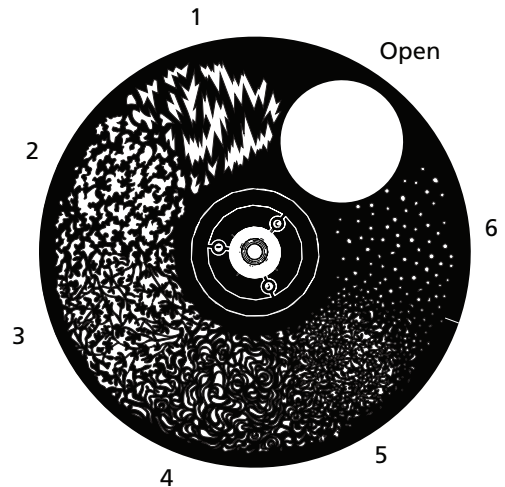


## Ani-gobo Wheel

- Custom-designed fixed-wheel with six distinct breakup patterns with interconnecting art between patterns.

- position 0 - Open
- position 1 - Jagged
- position 2 - Breakup
- position 3 - Vines
- position 4 - Swirly
- position 5 - Ivy
- position 6 - Dots

- Patterns are usable for indexed standard breakups, animation effects, graphical transitions, gobo morphing, and out-of-focus pattern effects.
- Indexes to any position on the wheel
- Unlimited clockwise and counterclockwise rotation with variable speed, or limited rotation with variable speed that changes direction to avoid the open position.
- Shake function with variable speed.



## Frost

- Variable frost softens the beam edges smoothly and evenly.
- Utilizes Rosco Quarter Hamburg (R132) as standard. Rosco R114 and R119 are available from ETC as field-installed accessory option kits.

Model	Part Number	Description
RELFROST114	2510K1001	Rosco R114 (Hamburg Frost)
RELFROST119	2510K1002	Rosco R119 (Light Hamburg Frost)
RELFROST132*	2510K1004	Rosco R132 (Quarter Hamburg Frost)

\*The luminaire ships with this frost installed.

## Pan and Tilt Movement

- 540 degree pan and 270 degree tilt.
- 180 degree pan and tilt within 2.0 seconds.
- 16-bit operation for smooth and accurate movement.
  - See [DMX Channel Mode on page 37](#).
- Absolute position feedback and correction.
- Menu options provide the ability to restrict pan and tilt range for use in tight spaces.
- Whisper Home pan and tilt homing system provides instant and nearly motionless pan and tilt homing.

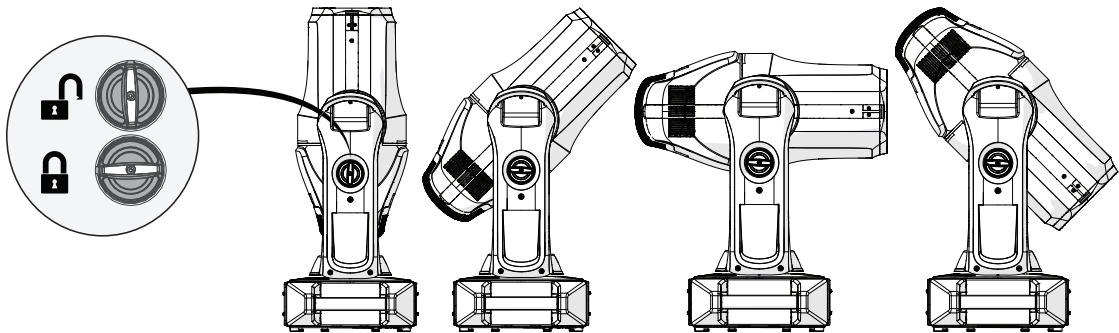
## Pan and Tilt Locks

- Relevé Spot features positionable pan and tilt locks for use during servicing.



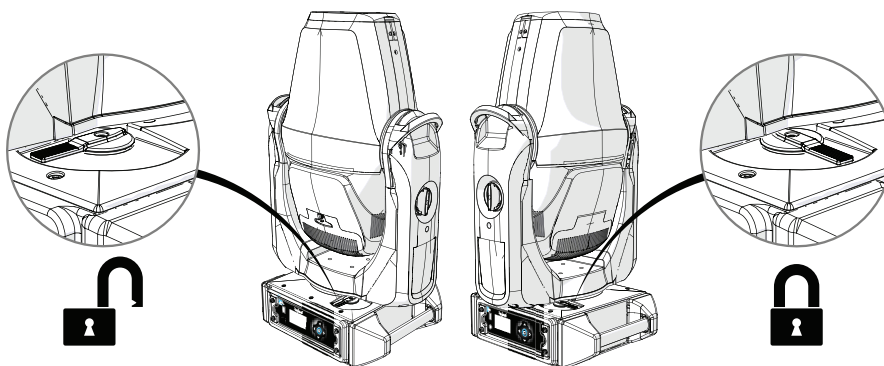
**CAUTION:** *The pan and tilt locks should remain unlocked for transport. Locks are intended only to assist while servicing the unit. Constraining movement during transport may cause damage the Relevé Spot luminaire.*

### Tilt Lock



- The tilt lock is available to lock the luminaire head at its center tilt range and plus or minus 45 and 90 degrees from the center tilt range in both directions.

### Pan Lock



- The pan lock is available to lock the luminaire yoke parallel to the enclosure handles and plus or minus 90 degrees throughout the range of rotation.

## Control

### DMX512-A

The Relevé Spot is supplied with a 5-pin XLR input connector and a 5-pin XLR pass through connector supporting DMX.

- Compliant with:
  - DMX512-A (ANSI E1.11-2008 (R2013))



**Note:** DMX on the Relevé Spot luminaire is not self-terminating. You must terminate the last fixture in the DMX line with a 120 Ohm resistor or use a 5-pin male XLR DMX terminator plug in the last luminaire's DMX Thru receptacle. A 5-pin XLR DMX terminator is an accessory option available from ETC (order part number SGE1507).

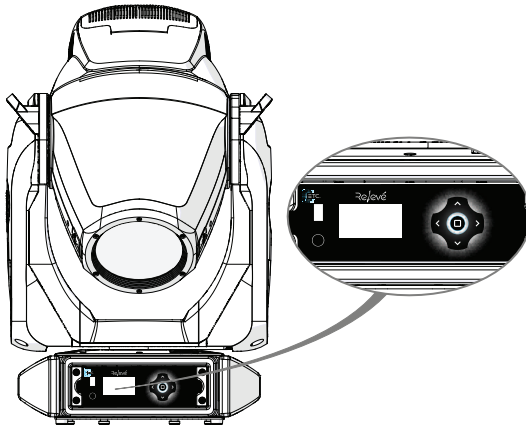
ETC recommends using Belden 9729 (or equivalent) cable for a reliable DMX control system.




**Note:** Do not use microphone cable or other cable with characteristics that are non-equivalent to the specified Belden 9729.

## User Interface

The Relevé Spot user interface (UI) consists of a display and button controls for local configuration, and a USB (type A) port for firmware update. Use the display and button controls to configure the luminaire for your specific application and installation needs.



### Display

The LCD is a graphic backlit display that automatically adjusts its orientation 180 degrees according to its installed orientation (floor- or truss-mounted). While viewing the status screen, pressing and holding the Enter  button for three seconds manually flips the display orientation 180 degrees from its current state. Button controls reorient to match the orientation of the display. Display orientation may also be adjusted from the Options menu (see [page 31](#)).

## Button Controls

Relevé Spot features a five-button user interface. Use the button controls to access and navigate the onboard menu. Button controls reorient their function to match the orientation of the display.

## Auxiliary Battery

- The auxiliary battery recharges over time (trickle charge) when power is applied to the luminaire, obtaining a full charge over four hours.
- The battery will remain charged for up to one year when the storage environment is within the ambient temperature range specified for the luminaire. See [Environment on the next page](#) for details.



**Note:** When power is applied to the luminaire while the user interface is operating from the auxiliary battery, the display and control will restart and the menu will return to the status display. Any settings that were applied using the auxiliary battery are saved.

## Power Requirements

### Input Power Voltage Range

- 100-240 VAC at 50/60 Hz
  - Relevé Spot features a universal auto-switching power supply

### Power Factor

- Maximum power consumption - 285 W
- Minimum power consumption - 29 W
  - After 15 minutes without active control, or when the Relevé Spot detects that the DMX control signal is lost, standby power save mode is enabled.

### Full Power Consumption

Measurements listed below are the Relevé Spot in regulated direct mode with LEDs at full and all motors functioning.

Voltage [V <sub>RMS</sub> ]	Freq [Hz]	Current [A <sub>RMS</sub> ]	Power [W]	Power [VA]	Power Factor [W/VA]	Crest Factor [V <sub>pk</sub> /V <sub>RMS</sub> ]	Crest Factor [A <sub>pk</sub> /A <sub>RMS</sub> ]
100	50	2.62	259.9	272.2	0.99	1.42	1.34
100	60	2.63	260.9	264.5	0.99	1.43	1.34
120	60	2.18	262.5	264.3	0.99	1.42	1.36
200	50	1.28	253.1	258.4	0.97	1.42	1.51
208	60	1.23	251.2	252.4	0.98	1.42	1.51
220	50	1.17	255.6	261.8	0.96	1.42	1.57
240	60	1.10	252.2	270.5	0.95	1.42	1.61

### Inrush

Voltage [V <sub>RMS</sub> ]	Freq [Hz]	Maximum Inrush [A <sub>pk</sub> ]
120	60	23.8
240	60	51.3

## Luminaires per Circuit (20 A)

- 4 luminaires at 100 VAC
- 5 luminaires at 120 VAC
- 10 luminaires at 240 VAC



**Note:** *Relevé Spot requires power from a non-dimmable source. Consult the upstream breaker trip curve specification for compatibility information with the required input power.*

## Power Receptacle/Connector Specification

Power input and power feed through connections are made to powerCON® type NAC3MPA-1 and NAC3MCB-1 receptacles on the Power Module.

The luminaire ships with a 1.5 m powerCON power-input cable with a connector of choice. See the Relevé Spot datasheet for ordering information. Use only compatible power cords with mating connectors for the specified receptacles.

Power In (blue) and Power Thru (gray) receptacles are keyed differently to prevent intermating.



**WARNING:** The powerCON is a connector without breaking capacity, i.e., the powerCON should not be connected or disconnected under load or while live!

**AVERTISSEMENT :** Le powerCON est un connecteur sans capacité de coupure, c'est-à-dire que le powerCON ne doit pas être connecté ou déconnecté lorsqu'il est sous tension!

See the following wire color code chart:

Wire Color Code (International Standard)	Wire Color Code (US Standard)	Connection Type	Terminal
Green/Yellow	Green	Earth/Ground	
Blue	White	Neutral	N
Brown	Black	Line (Live)	L

## Environment

- The Relevé Spot luminaire operates in ambient temperatures of 0-40°C (32-104°F), and relative humidity range 5-95%, non condensing
- The Relevé Spot is IP20, rated for indoor use only
  - IP2x indicates protected against intrusion by fingers or similar objects
  - IPx0 indicates no protection against liquid contact and ingress of liquid objects

## Acoustic Performance

Relevé Spot luminaire acoustic performance is dependent on the installation environment and operational use.

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**Note:** *Acoustic data has been measured in accordance with ISO 7779 (ANSI S12.10-1985).*

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The luminaire will not exceed 30.7 dBA at one meter distance in any direction when

- the operating temperature is 23°C (73°F);
  - the luminaire is in continuous operation in a fixed position with the emitters on at full; and
  - the fan is in Auto mode.
- 



**Note:** *Because Relevé Spot uses absolute encoders, the homing procedures are acoustically similar to results listed above for the fixed-position measurements.*

---

The luminaire will not exceed 50 dBA at one meter distance in any direction when

- the operating temperature is 23°C (73°F);
- the luminaire is in continuous operation with mechanical feature movement (pan/tilt, media, zoom, iris, etc.); and
- the fan is in Auto mode.

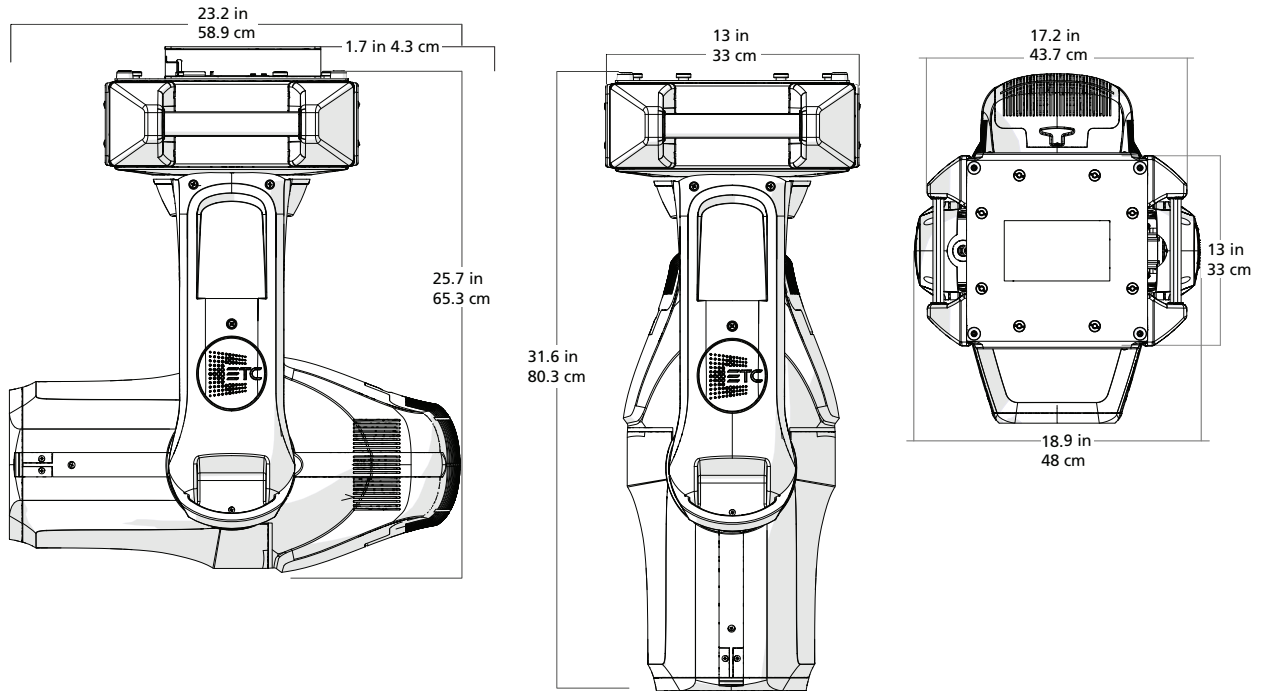
# Weights and Dimensions

## Weight

- The Relevé Spot weighs 67.5 lbs. (30.6 kg)

## Dimensions

- The Relevé Spot rotates within a 24.4 in (62 cm) circular diameter (base luminaire, excluding any accessories).

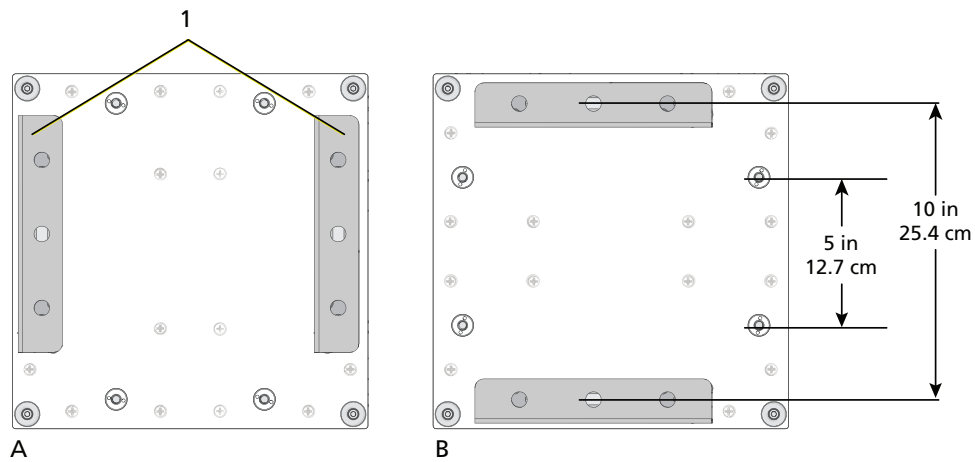


Item Description	Height		Width		Depth	
	inches	cm	inches	cm	inches	cm
Relevé Spot without clamp mounting rails	31.6	80.3	18.9	48	13.0	33
Relevé Spot with clamp mounting rails	33.3	84.5	18.9	48	13.0	33



## Mounting

For installation convenience, four hanging points are provided on the enclosure, two each in planes 90 degrees from each other. See [Attach Clamp Mounting Rails on page 21](#) for installation instructions.



Item#	Name	Part Number	Notes
1	Clamp Mounting Rails	2510A2017	Securely install on the provided attachment points on the base of the enclosure.

Relevé Spot can be yoked in any mounting position using the provided hanging points. Alternatively, the Relevé Spot luminaire can be floor-mounted (placed enclosure-side down on a stage floor).

Truss mounting clamps are available from ETC, sold separately.

Part Number	Description
PSF1131	Mega-Coupler™ Clamp 1.9" Pipe/2.0" Truss, Black
PSF1132	Mega-Coupler Clamp 1.9" Pipe/2.0" Truss, White
PSF1133	Mega-Claw™ Clamp 1.9" Pipe/2.0" Truss, Black
PSF1134	Mega-Claw Clamp 1.9" Pipe/2.0" Truss, White
PSF1135	Trigger Clamp™ 1.9" Pipe/2.0" Truss Tube, Black
PSF1136	Trigger Clamp 1.9" Pipe/2.0" Truss Tube, White

## Safety

---

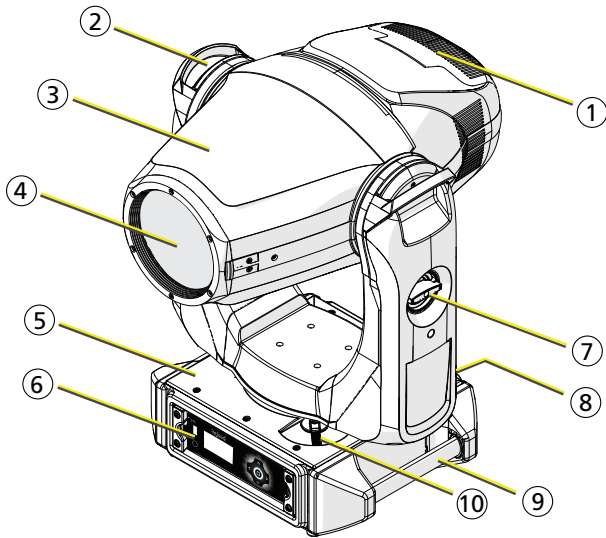


**Note:** *The installation location and structure must comply with local codes and be certified by the authority having jurisdiction (AHJ).*

- *The Relevé Spot luminaire is intended for professional use only on stages, in theaters, or other professional installations.*
  - *For indoor use only. When selecting the installation location, ensure the luminaire will not be exposed to extreme cold or heat outside of the operational range (see [Environment on page 12](#)), moisture, or dust.*
  - *Do not project the light beam onto combustible surfaces or materials. Minimum distance to illuminated surface 2 m, and a minimum distance from the luminaire head to combustible materials 0.1 m away from any flammable materials (decoration, etc.).*
  - *Suspend the luminaire from a suitable structure using a minimum of two hook clamps (not provided) and secured with tightened steel bolts (12 mm (1/2 in) diameter), washers, and locking nuts.*
  - *Always use and install a suitable safety cable as a secondary safety measure to prevent accidental damage and/or injury in the event the installation clamps fail. The safety cable must, at a minimum, hold ten times the weight of the luminaire. ETC offers a suitable safety cable which is available separately, order part number 7060A1022.*
  - *The installation location and safety cable must, at a minimum, safely hold ten times the weight of the Relevé Spot luminaire and support its intended operation. See [Weight on page 14](#).*
-

# Luminaire Overview

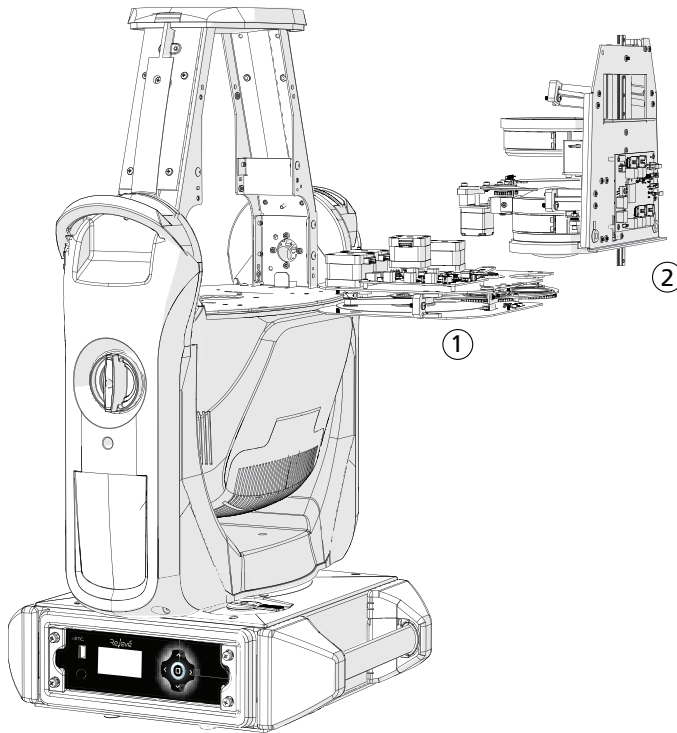
## Top Level



Item #	Description
1	LED Module - includes the LED array and driver board, reflector, and fan assembly
2	Yoke Assembly - includes yoke handles, supporting motor control boards, pan motor, and tilt motor
3	Head - includes the Optics Module, Effects Module, and supporting motor control boards
4	Front lens
5	Enclosure - includes pan tube and power distribution board
6	Main Control Module - includes a display, user interface, and USB port
7	Tilt lock
8	Power Module - includes receptacles for DMX In, DMX Thru, Power In, and Power Thru
9	Enclosure handle
10	Pan lock

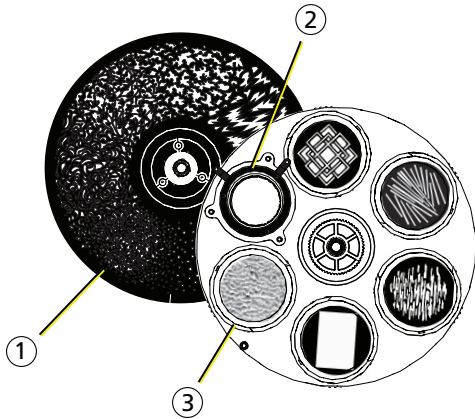
## Sub Assemblies

### Head



Item#	Name	Replacement Part Number	Notes
1	Effects Module	2510A2009-CFG	Rotating Gobo Wheel, Ani-gobo Wheel, Iris assembly
2	Optics Module	2510A2008-CFG	Focus and zoom lens assembly, and Frost assembly

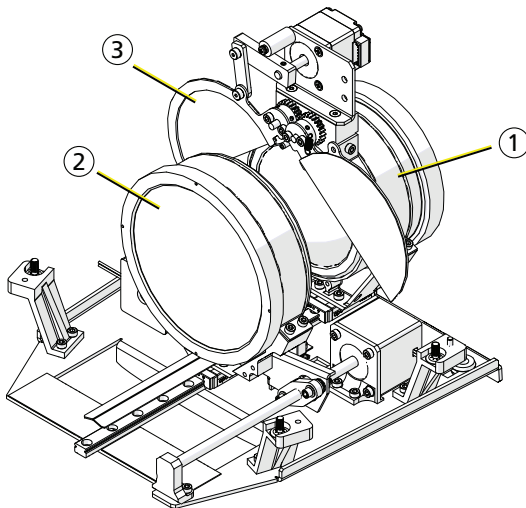
## Effects Module



The image above depicts the effects module with the enclosure, motors, and motor control board hidden for clarity of the internal features.

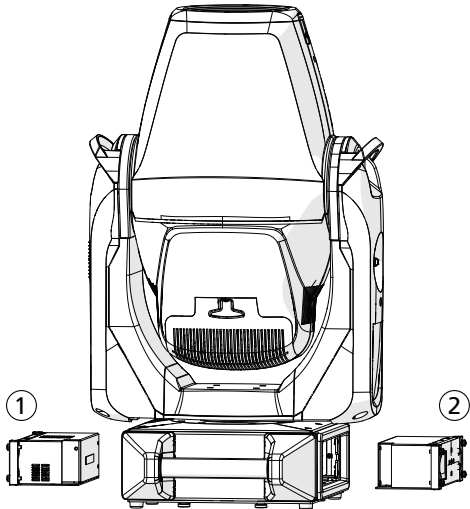
Item#	Description	Notes
1	Ani-gobo Wheel	Fixed gobo wheel with six breakup patterns plus an open aperture
2	Iris assembly	Smooth, stepless iris function
3	Rotating Gobo Wheel	Rotating and indexing wheel with five patterns plus an open aperture

## Optics Module



Item#	Name	Notes
1	Focus lens	
2	Zoom lens	18-54 degree zoom
3	Frost assembly	Rosco Quarter Hamburg Frost (R132) installed standard

## Enclosure

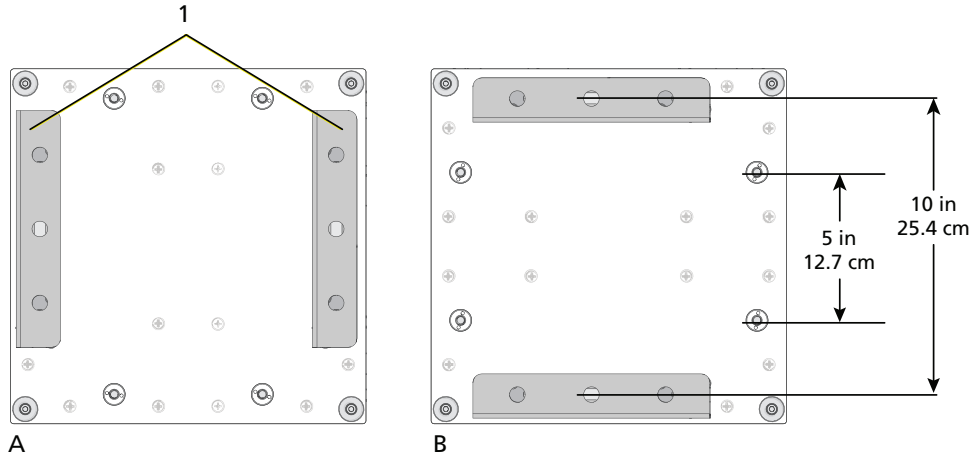


Item#	Description	Replacement Part Number	Notes
1	Power Module	2510A2027-CFG	Power Input and Thru receptacles and DMX In and Thru XLR receptacles. Installs opposite of the Main Control Module in the enclosure.
2	Main Control Module	2510A2034-CFG	User interface with display and menu navigation buttons, and USB port for firmware update. Installs opposite of the Power Module in the enclosure.

# Installation

## Attach Clamp Mounting Rails

For installation convenience, four hanging points are provided on the enclosure, two each in planes 90 degrees from each other.

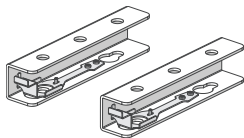


Item#	Name	Part Number	Notes
1	Clamp Mounting Rails	2510A2017	Securely install on the provided attachment points on the base of the enclosure.



**CAUTION: Risk of Personal Injury!** Overhead mounting requires extensive experience, including amongst others, calculating the working load limit (WLL) of the truss system, a specialized knowledge of the installation material being used, and a periodic safety inspection of all installation materials and the luminaire. Improper installation can result in bodily injury. This luminaire must be installed by qualified personnel only.

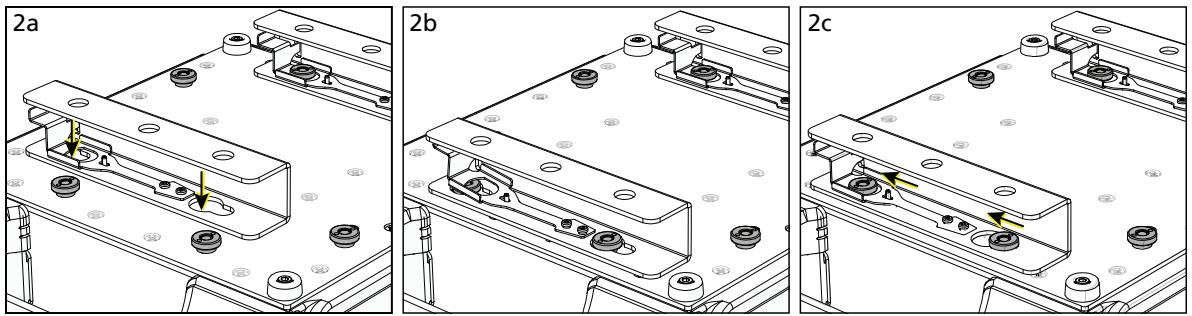
**ATTENTION : Risque de Blessures Corporelles !** L'installation en hauteur nécessite une vaste expérience, qui inclut notamment le calcul de la charge nominale du système de pont, une connaissance spécialisée du matériel utilisé pour l'installation et l'inspection régulière de tout l'équipement de l'installation et du luminaire. Une installation incorrecte peut entraîner des blessures corporelles. Ce luminaire doit uniquement être installé par du personnel qualifié.



Two clamp mounting rails are provided with the Relevé Spot luminaire for attachment to truss clamps (not provided) or other compatible hardware for installation.

The clamp mounting rails feature a safe-latching system for secure fit to the hanging points on the enclosure.

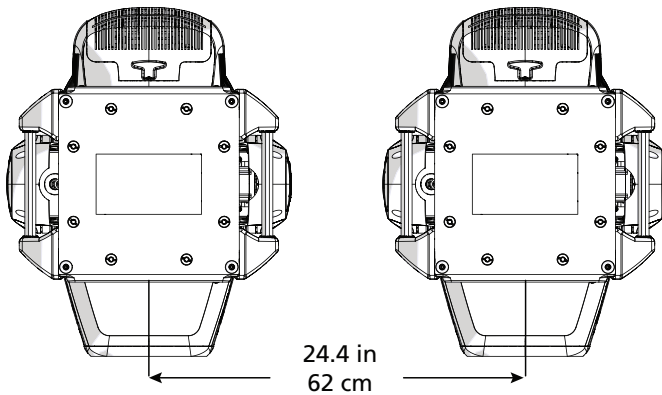
1. Install the truss clamps (not provided) to the clamp mounting rails.



2. Attach the clamp mounting rails to the enclosure.
  - a. Align the keyed holes of the clamp mounting rail to the attachment points on the enclosure.
  - b. Each clamp mounting rail should be installed on the same plane and facing the same direction.
  - c. Slide the clamp mounting rail in place until the locking mechanism is seated and captures the attachment point. The mounting rail will be locked in place and flush to the enclosure when installed properly.

## Spacing Requirements

For full pan and tilt operation, install the Relevé Spot with a minimum of 24.4 in (62 cm) between centers. The luminaire features Whisper Home technology, which provides instant pan and tilt homing at power on with minimal movement. You can install the luminaires closer together if you restrict the pan and/or tilt movement using the features provided for pan and tilt in the **Options** menu.



**Note:** Add additional spacing between luminaires when using accessories such as a top hat. Refer to the accessory datasheet for dimensions.

## Floor Mounting

Relevé Spot can be installed on the floor or a suitable level, horizontal, and flat surface. Rubber feet are provided on the base of the enclosure.



## Rigging



**WARNING: RISK OF INJURY!** Check each clamp mounting rail and truss clamp for proper and secure installation before hanging the luminaire.

**AVERTISSEMENT : DANGER DE BLESSURE !** Avant d'accrocher le luminaire, vérifiez chaque crochet et chaque porteuse pour une installation correcte et en sécurité.

1. Lift the luminaire to the installation location. We recommend that two people lift the luminaire.
2. Secure the luminaire in place using the previously installed truss clamps or other installation hardware. Secure the attachment hardware in place by tightening the hardware (wing bolt or other hardware), ensuring the luminaire is securely installed and supported to the truss.



**Note:** *The installation must follow local codes and standard practices for overhead rigging. When the luminaire is mounted in an overhead rigged position, you must also secure it in place using a safety cable that can hold at least ten times the weight of the luminaire. A suitable safety cable is available from ETC (part number 7060A 1022). Contact ETC for additional details.*

3. Attach a safety cable to the luminaire.
  - a. Loop one end of the safety cable around the enclosure handle and attach the clip onto the cable.
  - b. Loop the other end of the cable around the truss or pipe structure, then secure the clip onto the cable.

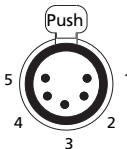
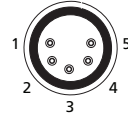
## Connect Data and Power

### Connect DMX-512

ETC recommends Belden 9729 or equivalent 2-pole twisted, shielded wire. The connectors must be XLR 5-pin female (DMX IN) and XLR 5-pin male (DMX THRU). Following best practices for DMX, a maximum of 32 DMX devices may be connected in any one DMX data run when installed in a daisy-chain fashion. See [DMX512-A on page 10](#) for details on DMX connector and cable specifications.

### XLR Pinout

ETC recommends using the following standard pinout when preparing DMX cable (Belden 9729 or equivalent) with an XLR connector. The second data pair in the recommended cable type is not used by the Relevé Spot luminaire and should be capped off and tied back for future service.

DMX-512 Pinout for 5-pin XLR (EIA-485)			
DMX Thru Receptacle	Pin #	Use	DMX Input Receptacle
 <p>*XLR pins viewed from the outside</p>	1	Common (shield)	 <p>*XLR pins viewed from the outside</p>
	2	Data - (typically black wire)	
	3	Data + (typically white wire)	
	4	unused	
	5	unused	

## Connect DMX

1. Connect the prepared DMX cable with the 5-pin XLR connector from the console or routed lighting network to the luminaire DMX Input receptacle.
2. If required, connect the prepared DMX cable with the 5-pin XLR connector from the DMX Thru connector on the luminaire to the next device in the control run.
3. Dress all cables so they will not interfere with the luminaire movements during normal operation.

## Terminate DMX-512

The last luminaire in the DMX control run must be terminated to prevent signal reflections. Signal reflections cause noise on the data line, resulting in corrupted data between the control source and the luminaire. Use a DMX termination plug 5-pin XLR male (available from ETC; order part number SGE1507).

## Connect Power In and Thru



**Note:** *Installation must follow all national and local codes for electrical equipment.*

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Relevé Spot requires standard AC power from 100-240 VAC at 50/60 Hz. See [Power Requirements on page 11](#) for details. Use only compatible power cords with mating connectors for the specified powerCON receptacles. See [Power Receptacle/Connector Specification on page 12](#) for details.

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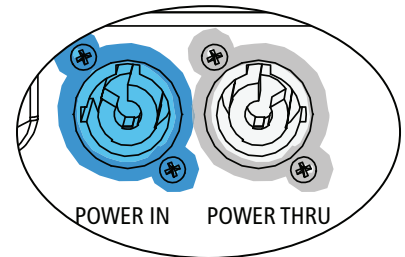


**WARNING:** The powerCON is a connector without breaking capacity, i.e., the powerCON should not be connected or disconnected under load or while live!

**AVERTISSEMENT :** Le powerCON est un connecteur sans capacité de coupure, c'est-à-dire que le powerCON ne doit pas être connecté ou déconnecté lorsqu'il est sous tension!

---

1. Connect the prepared compatible cable with connector to the Power In receptacle.
2. If you are continuing the power to the next luminaire, connect a prepared compatible cable with connector to the Power Thru receptacle.
3. Plug the power cord into the power source.
4. Dress all cables so they will not interfere with the luminaire movements during normal operation.



## Power Up

Prior to applying power to the luminaire, check the installation and ensure the following:

- The luminaire is mounted securely and the safety cable is properly secured to a suitable structure.
- The pan and tilt locking mechanisms are unlocked, allowing unrestricted movement of the luminaire head and yoke.
- All luminaire covers are fastened securely, and any luminaire accessory is tethered to the luminaire using the appropriate safety tether.
- There are no obstacles that prevent free movement of the luminaire head and yoke, including the dressing of all power and data cables.

Apply power to the circuit. The display will power on and the luminaire will begin its homing procedure. Reference [Homing below](#) for details. When the homing procedure is complete, the status screen displays the luminaire DMX address, DMX control mode, and firmware version number.



## Homing

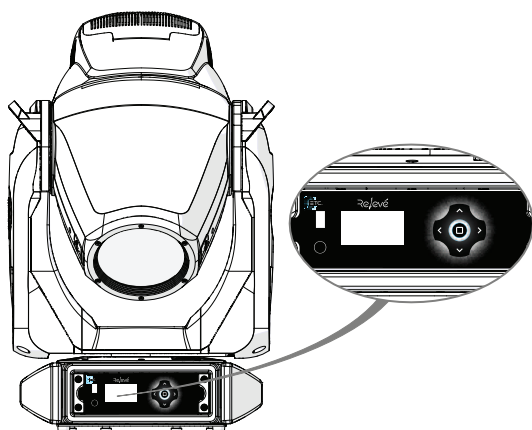
When you apply power to the luminaire, the display will power on and the luminaire will begin the process of testing its internal features, including achieving the calibrated pan and tilt position using Whisper Home technology. All internal features of the luminaire simultaneously locate their home position and await a control signal. All features except for the frost and iris home silently. Pan and tilt will respond to any received control value within 27 seconds after power up. The luminaire will not illuminate the LEDs until the entire homing process completes.

If the luminaire either loses its DMX control signal or never receives a signal after a period of 27 seconds, the luminaire will either hold at its current state until a signal is received (the default setting for DMX loss behavior) or Wait and Fade according to its configured fade time. The DMX address on the status screen will flash, indicating that no DMX control signal is present.

# User Interface

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The Relevé Spot user interface (UI) consists of a display and button controls for local configuration, and a USB (type A) port for firmware update. Use the display and button controls to configure the luminaire for your specific application and installation needs.



## Auxiliary Battery


- The auxiliary battery recharges over time (trickle charge) when power is applied to the luminaire, obtaining a full charge over four hours.
- The battery will remain charged for up to one year when the storage environment is within the ambient temperature range specified for the luminaire. See [Environment on page 12](#) for details.



**Note:** *When power is applied to the luminaire while the user interface is operating from the auxiliary battery, the display and control will restart and the menu will return to the status display. Any settings that were applied using the auxiliary battery are saved.*

---

## Display

The LCD is a graphic backlit display that automatically adjusts its orientation 180 degrees according to its installed orientation (floor- or truss-mounted). While viewing the status screen, pressing and holding the Enter  button for three seconds manually flips the display orientation 180 degrees from its current state. Button controls reorient to match the orientation of the display. Display orientation may also be adjusted from the Options menu (see [page 31](#)).

## Button Controls

Relevé Spot features a five-button user interface. Use the button controls to access and navigate the onboard menu. Button controls reorient their function to match the orientation of the display.

## Menu Navigation

Use the button controls to access and navigate the menu on the display.



**Navigate left** - Navigates within a value selection or cancels the current operation and returns to the previous screen. Multiple presses of the back button will eventually return you to the status display.







**Navigate right** - Navigates the selection to the right within a menu setting.

This button features an additional shortcut function:

- Pressing this button while the status screen is displayed is a shortcut to the **DMX Address** menu.



**Enter** - When the Relevé Spot luminaire is disconnected from power, pressing Enter  activates the menu for configuration and firmware update using the onboard auxiliary battery. See [Auxiliary Battery on the previous page](#) for more information regarding the battery features.

Pressing Enter  while navigating the menu activates the menu selection or stores a value. For many settings in the menu, press the button repeatedly to navigate through the available options while a setting is highlighted, then press the navigate up  or down  button to reach the desired value.

This button features a shortcut function:

- Pressing and holding this button for three seconds manually flips the display orientation 180 degrees. Button controls reorient to match the orientation of the display. This shortcut setting does not persist after a power cycle.

∧

**Navigate up** - Increases a value or menu selection by one. Press and hold the button to increase the rate of change.

∨

**Navigate down** - Decreases a value or menu selection by one. Press and hold the button to increase the rate of change.

## Status Screen

When the Relevé Spot is powered up initially, the luminaire runs self tests to check the status of the features of the luminaire and performs a homing routine. The user interface display shows the current DMX address, DMX mode, and installed version of firmware. The DMX address will flash when no DMX is present.



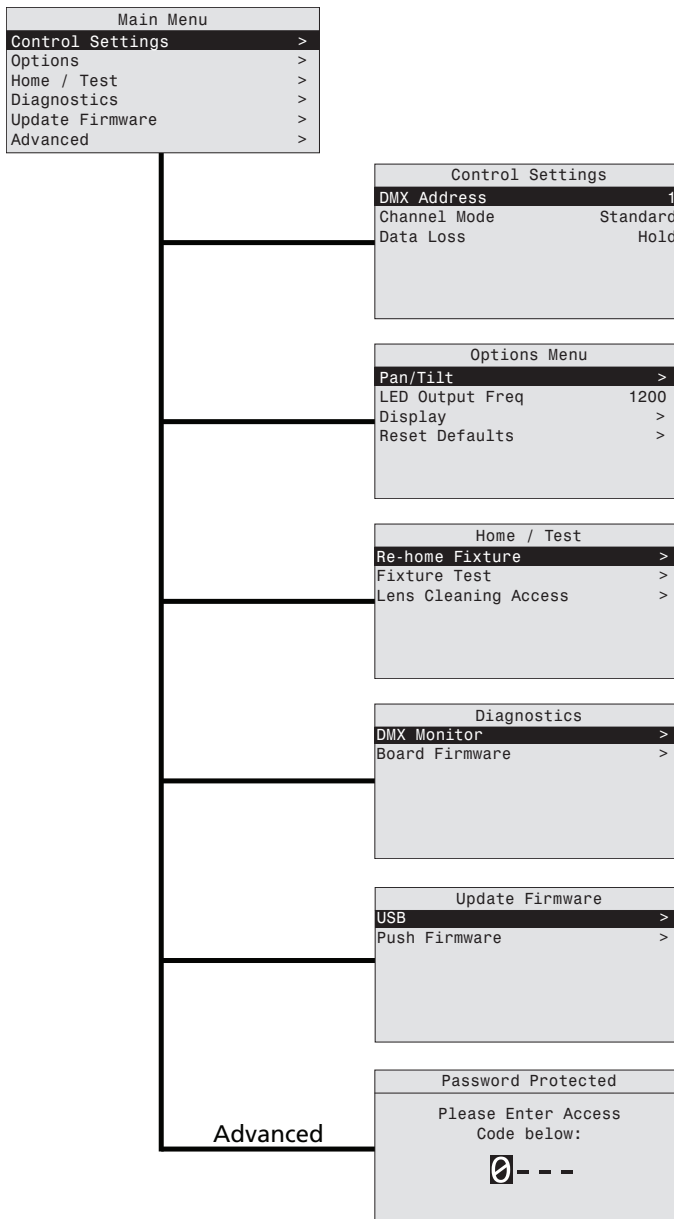
**Note:** ETC recommends running the most current version of firmware in your luminaire. Relevé Spot firmware is available for download from the ETC website [etconnect.com/ReleveSpot](http://etconnect.com/ReleveSpot). See [Update Firmware with USB Drive on page 35](#) for instructions about updating firmware.

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The menu and display are set by default to sleep after five seconds of inactivity. Press any button to wake the display. Any additional button press activates the menu.

# Menu System

Navigate the **Main Menu** to familiarize yourself with the onboard features available to you.



Reference:

- [Control Settings on the next page](#)
  - [Options Menu on page 31](#)
  - [Home/Test on page 33](#)
  - [Diagnostics on page 34](#)
  - [Update Firmware on page 35](#)
- [Advanced on page 36](#) - The **Advanced** Menu is password protected and reserved for trained and authorized technicians only.

## Control Settings

Control Settings	
DMX Address	1
Channel Mode	Direct
Data Loss	Hold

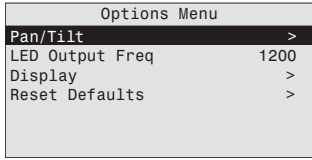
- **DMX Address** - Displays the current DMX512 address. Press Enter  to edit the address. Default Address is 001. Accepts values 1 - 488.
- **Channel Mode** - Displays the current DMX Channel Mode. Press Enter  to edit the mode. Default mode is Standard. Options include:
  - **Direct** - requires 25 channels of control
  - **Standard** - requires 20 channels of control.
- **Data Loss** - Displays the current data loss setting. Press Enter  to edit the setting. Default setting is Hold (Hold Last Look).
  - **Hold** - After data is lost, the luminaire maintains its last look until power is removed or control signal is restored. The last look will not be restored after power has been cycled.
  - **Wait and Fade** - After data is lost, the luminaire waits a specified period of time (settable from 0 to 240 seconds) then fades intensity only.

## Defaults

Menu Selection	Default Value
DMX Address	001
Channel Mode	Standard
Data Loss	Hold



# Options Menu



## Pan/Tilt

Displays current pan and tilt settings. Navigate to and press Enter  to edit a setting.

- **Tilt Invert** - Inverts tilt movement. Settable to Off (default) or On.
- **Pan Invert** - Inverts pan movement. Settable to Off (default) or On.
- **Restricted P/T** - Restricts pan and/or tilt movement to a user defined range. Settable to Off (default) or On. When On is selected, additional menu options display for selection.
  - Navigate to the limit you want to set and press Enter  to select. The selection will change to the "Off" value. Press the navigate up  button to increase the value one degree. The luminaire will display and react (live) with each increment or decrement of the limit value. Press Enter  to set the value. Press the navigate left  button to exit the menu.
    - **Pan Limits: Min** - Settings are Off (default) or any value between 0 and 540 degrees.
    - **Pan Limits: Max** - Settings are Off (default) or any value between 0 and 540 degrees.
    - **Tilt Limits: Min** - Settings are Off (default) or any value between 0 and 270 degrees.
    - **Tilt Limits: Max** - Settings are Off (default) or any value between 0 and 270 degrees.
- **P/T Feedback** - Settings are On (default) and Off. When On, provides pan/tilt correction based on the encoder position. Any manual movement will be automatically corrected to the current encoder value. When power is cycled to the luminaire, this setting resets to On.

## LED Output Freq

The LED Output Freq menu provides selection of the output frequency in Hz at which the LED array pulses, or blinks, as a function of the Pulse Width Modulation (PWM). This frequency is adjustable in order to avoid visible flicker on video and film. Available options are 1200 (default) or 25000. For high speed exposure or rolling shutter cameras, use the high 25000 setting. This will increase the PWM to 25,000 Hz and will result in flicker-free operation in most circumstances.

To access the high (25000) setting, navigate to LED Output Freq in the Options Menu and press Enter  to edit. Press the navigate up  button to change the selection from its default 1200 Hz to the 25000 Hz setting, and press Enter . Changing the frequency from the default value (1200) can have a slight impact on the smoothness, or color-mix consistency, or both when dimming.

## Display

Provides display orientation and backlight settings.

- **Orientation** - Settings are Auto (default) and Flip. Navigate to Orientation and press Enter  to edit the current setting. Press the navigate up  $\wedge$  or down  $\vee$  buttons to change the selection, then press Enter  to set the new selection.
  - **Auto** - Detects orientation of the luminaire and automatically orients the display for best readability.
  - **Flip** - Reorients the display 180 degrees from its current setting.
- **Backlight** - Settings are Off, 1 second, 5 seconds, and 30 seconds (default).

## Reset Defaults

The **Reset Defaults** menu resets only the options that are set in the **Options Menu** to factory defaults.



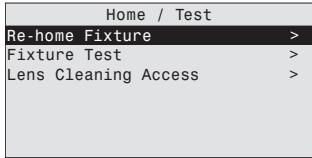
**Note:** *DMX settings are not affected when you reset the luminaire to its factory defaults.*

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The following options will reset to their factory defaults:

Setting	Default Value
Tilt Invert	Off
Pan Invert	Off
Pan Limits:Min	Off
Pan Limits: Max	Off
Tilt Limits: Min	Off
Tilt Limits: Max	Off
LED Output Freq	1200
Display Orientation	Auto
Backlight	30 seconds

## Home/Test



### Re-home Fixture

Selecting and confirming this menu option re-homes all features except for pan and tilt.

### Fixture Test

This menu provides options to test all features of the luminaire in one sequence, individual features of the luminaire as stand-alone tests, or individual features of the luminaire concurrently.

All menu options in **Fixture Test** are Off by default.



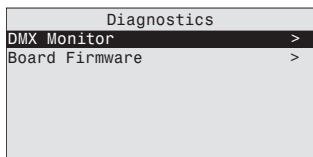
**Note:** Each test will repeat its sequence until you exit the **Fixture Test** menu or select the test option again. Multiple tests can run at the same time with the exception of **All Test**, which can only be run alone. "Running" is appended to the test name as a visual indication of the current running tests.

- **All Test** - All features of the luminaire are tested to their extents sequentially.
  - Tests run as follows: **Pan/Tilt** > **Color** > **Gobo** > **Frost/Iris** > **Zoom/Focus** > and then the sequence repeats.
- **Color** - All LEDs are tested to their extents.
  - Test run as follows: Red LED @ 100, Red LED @ 0, Green LED @ 100, Green LED @ 0, Indigo LED @ 100, Indigo LED @ 0, Lime LED @ 100, and Lime LED @ 0.
- **Gobo** - All gobos, both from the rotating gobo wheel and the ani-gobo wheel, are tested to their extents.
  - Test runs as follows: Rotating Gobo wheel snaps between gobo 1, gobo 2, gobo 3, gobo 4, and gobo 5 > gobo 3 rotates counter-clockwise fast > gobo 3 rotates clockwise fast > returns to open position > the ani-gobo wheel rotates clockwise at half speed > counter-clockwise at fast speed > returns to the open position.
- **Frost/Iris** - The frost and iris are tested to their extents.
  - Test runs as follows: Frost from full open to full closed in three seconds > full closed to full open in three seconds > full open to full closed in zero seconds > waits one second > closed to full open in zero seconds > waits one second > Iris pulses medium speed for three seconds.
- **Zoom/Focus** - The zoom and focus lenses are tested to their extents.
  - Test runs as follows: Zoom and focus lenses move from 0% to 100% > then from 100% to 0%.
- **Pan/Tilt** - Pan and tilt are tested to their extents.
  - Test runs as follows: Pan and tilt @ 0% > pan @ 100% > pan @ 0% > Pan @ 100% > pan @ 0% > tilt @ 100% > tilt @ 0% > tilt @ 100% > tilt @ 0% > pan @ 50% > tilt @ 25%.

## Lens Cleaning Access

The **Lens Cleaning Access** menu provides manual control access to move the lenses for optimal cleaning access. See [Clean the Lenses on page 48](#).

## Diagnostics



## DMX Monitor

The **DMX Monitor** menu displays the value of every channel in the current selected DMX Profile.

Direct Mode	Standard Mode																																																																																														
<table border="1"><thead><tr><th colspan="2">DMX Monitor</th></tr></thead><tbody><tr><td>Intensity</td><td>0</td></tr><tr><td>Red</td><td>0</td></tr><tr><td>Green</td><td>0</td></tr><tr><td>Blue</td><td>0</td></tr><tr><td>Lime</td><td>0</td></tr><tr><td>Strobe</td><td>0</td></tr><tr><td>Pan Course</td><td>0</td></tr><tr><td>Pan Fine</td><td>0</td></tr><tr><td>Tilt Course</td><td>0</td></tr><tr><td>Tilt Fine</td><td>0</td></tr><tr><td>Gobo Mode</td><td>0</td></tr><tr><td>Gobo Rot / Ind</td><td>0</td></tr><tr><td>Gobo R/I Fine</td><td>0</td></tr><tr><td>Fixed Gob Mod</td><td>0</td></tr><tr><td>Fixed Gob Ind</td><td>0</td></tr><tr><td>Focus Course</td><td>0</td></tr><tr><td>Focus Fine</td><td>0</td></tr><tr><td>Zoom</td><td>0</td></tr><tr><td>Iris</td><td>0</td></tr><tr><td>Frost</td><td>0</td></tr><tr><td>Configuration</td><td>0</td></tr><tr><td>PT Speed</td><td>0</td></tr><tr><td>Focus Speed</td><td>0</td></tr><tr><td>Color Speed</td><td>0</td></tr><tr><td>Beam Speed</td><td>0</td></tr></tbody></table>	DMX Monitor		Intensity	0	Red	0	Green	0	Blue	0	Lime	0	Strobe	0	Pan Course	0	Pan Fine	0	Tilt Course	0	Tilt Fine	0	Gobo Mode	0	Gobo Rot / Ind	0	Gobo R/I Fine	0	Fixed Gob Mod	0	Fixed Gob Ind	0	Focus Course	0	Focus Fine	0	Zoom	0	Iris	0	Frost	0	Configuration	0	PT Speed	0	Focus Speed	0	Color Speed	0	Beam Speed	0	<table border="1"><thead><tr><th colspan="2">DMX Monitor</th></tr></thead><tbody><tr><td>Intensity</td><td>0</td></tr><tr><td>Red</td><td>0</td></tr><tr><td>Green</td><td>0</td></tr><tr><td>Blue</td><td>0</td></tr><tr><td>Strobe</td><td>0</td></tr><tr><td>Pan Course</td><td>0</td></tr><tr><td>Pan Fine</td><td>0</td></tr><tr><td>Tilt Course</td><td>0</td></tr><tr><td>Tilt Fine</td><td>0</td></tr><tr><td>Gobo Mode</td><td>0</td></tr><tr><td>Gobo Rot / Ind</td><td>0</td></tr><tr><td>Gobo R/I Fine</td><td>0</td></tr><tr><td>Fixed Gob Mod</td><td>0</td></tr><tr><td>Fixed Gob Ind</td><td>0</td></tr><tr><td>Focus Course</td><td>0</td></tr><tr><td>Focus Fine</td><td>0</td></tr><tr><td>Zoom</td><td>0</td></tr><tr><td>Iris</td><td>0</td></tr><tr><td>Frost</td><td>0</td></tr><tr><td>Configuration</td><td>0</td></tr></tbody></table>	DMX Monitor		Intensity	0	Red	0	Green	0	Blue	0	Strobe	0	Pan Course	0	Pan Fine	0	Tilt Course	0	Tilt Fine	0	Gobo Mode	0	Gobo Rot / Ind	0	Gobo R/I Fine	0	Fixed Gob Mod	0	Fixed Gob Ind	0	Focus Course	0	Focus Fine	0	Zoom	0	Iris	0	Frost	0	Configuration	0
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This information is read only information and will update control values when the DMX input values change.



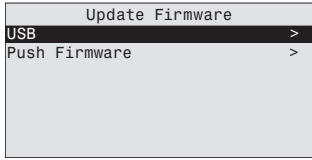
**Note:** When DMX control is not present to the luminaire, "No DMX Data" displays in the DMX Monitor.

## Board Firmware

The **Board Firmware** menu displays version information (read only) for all installed firmware on the Relevé Spot.

Board Firmware	
Bundle:	###.###
CPU:	###.###
LED:	###.###
GUI:	###.###
Pan/Tilt:	###.###
Effects:	###.###
Optics:	###.###

## Update Firmware



To update firmware on the Relevé Spot luminaire, you must first obtain the firmware by downloading it from the ETC website [etcconnect.com/relevespot](http://etcconnect.com/relevespot) or using the UpdaterAtor software from ETC. (For more information about UpdaterAtor, see the *UpdaterAtor Software Quick Guide*, which you can download for free from [etcconnect.com](http://etcconnect.com).)

There are several methods you can use to update firmware:

- Update luminaires individually using a USB drive. (See [Update Firmware with USB Drive below](#)).
- Push firmware from one luminaire to multiple luminaires simultaneously using the Push Firmware feature. (See [Update Firmware with Push Firmware Feature on the next page](#)).
- Update firmware on multiple luminaires simultaneously using UpdaterAtor. (See the *UpdaterAtor Software Quick Guide*).



**Note:** *The Push Firmware feature is supported in RelevéSpot luminaires that are running version 1.1.0 or later firmware.*

*To use UpdaterAtor software to update firmware, the Relevé Spot luminaires must be running version 1.1.0 or later firmware, and the UpdaterAtor software version must be version 6.0.0 or later.*

---

### Update Firmware with USB Drive

1. Download the current version of firmware into the root directory of a FAT32-formatted USB drive.
2. Insert the USB drive into the USB port of the luminaire's main control module.
3. Navigate the **Main Menu** and select **Update Firmware**.
4. Select **USB**. All versions of firmware identified in the root directory of the USB drive display for selection.
5. Navigate to the firmware version to be installed and select Enter .
6. Select **Yes** to install the version indicated in the UI. "DO NOT REMOVE USB DRIVE. Copying Bundle" is shown on the display.
7. When "Copying Bundle DONE. May remove USB Drive" is shown on the display, remove the USB drive from the USB port.



**Note:** *You may hear audible tones during the update process. This is normal encoder firmware feedback.*

---

## Update Firmware with Push Firmware Feature

When you update a Relevé Spot luminaire to a newer firmware version using a USB drive or add a Relevé Spot luminaire that is running a newer firmware version, you can use the Push Firmware feature to push the newer firmware version from that luminaire to all connected Relevé Spot luminaires.

The firmware update process can take up to 10 minutes to complete depending on the size of the firmware bundle and the number of boards that require updates.

You can only use the Push Firmware feature if all of the luminaires are using firmware version 1.1.0 or later. Use a USB drive to update individual luminaires that are running versions older than version 1.1.0.

1. If necessary, follow the instructions in [Update Firmware with USB Drive on the previous page](#) to install the new firmware version on the host luminaire (the luminaire from which you will initiate the firmware update to the remaining luminaires on the data run).
2. Disconnect the DMX control source from the host luminaire's DMX IN port.
3. In the UI on the host luminaire, navigate the **Main Menu** and select **Update Firmware**.
4. Select **Push Firmware**.
5. Select **Yes** to install the firmware version indicated in the UI. The firmware is sent to the Relevé Spot luminaires to which host luminaire is connected. The LCD backlights on the luminaires that are receiving the updates flash on and off slowly to indicate that they are receiving the bundle. In addition, progress bars on the LCDs of the luminaires show the progress of the update.

When the firmware bundle has been pushed to the receiving luminaires, the LCD on the host luminaire shows COMPLETE and the progress bar indicates 100%. The LCDs on the receiving luminaires indicate that the bundle is being saved, and then the firmware update begins on those luminaires.



**Note:** *If an error occurs during the update procedure, the LCDs on the receiving luminaires show "ERROR." Press < on the receiving luminaires to cancel the update, or wait three minutes for the UI to automatically time out and return to the **Main Menu**.*

*To voluntarily cancel the firmware update, press < on the host luminaire.*

---



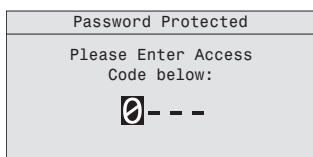
**Note:** *You may hear audible tones during the update process. This is normal encoder firmware feedback.*

---

6. When all of the Relevé Spot luminaires have been updated to the new firmware version, reconnect the DMX control source to the host luminaire's DMX IN port.

## Advanced

The Advanced menu is password protected, reserved for trained and qualified technicians.



Contact ETC Technical Support for assistance with advanced features.

# Operation

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## DMX Channel Mode

Relevé Spot has two modes of operation, which are accessible in the **Control Settings** menu from the user interface.

- Standard Mode utilizes 20 channels of control. This is the default setting.
  - Standard Mode enables efficient use of DMX channel bandwidth.
- Direct Mode utilizes 25 channels of control.
  - Direct Mode enables individual control of the luminaire features.



**Note:** *The color output of all Relevé Spot luminaires is calibrated at the factory.*

*When operating in Standard Mode, each luminaire makes accommodations for the specific LEDs in its array and produces output that is consistent with other luminaires, whether or not they utilize LEDs from the same production batch.*

*Operating in Direct Mode bypasses this calibration, and multiple luminaires may produce slightly different outputs when controlled as a group.*

---

Standard Mode		Direct Mode	
Channel	Parameter	Channel	Parameter
1	Intensity	1	Intensity
2	Red	2	Red
3	Green	3	Green
4	Blue	4	Blue
5	Strobe	5	Lime
6	Pan Coarse	6	Strobe
7	Pan Fine	7	Pan Coarse
8	Tilt Coarse	8	Pan Fine
9	Tilt Fine	9	Tilt Coarse
10	Gobo Mode	10	Tilt Fine
11	16-bit Gobo Index Coarse	11	Gobo Mode
12	16-bit Gobo Index Fine	12	16-bit Gobo Index Coarse
13	Ani-gobo Mode	13	16-bit Gobo Index Fine
14	Ani-gobo Index	14	Ani-gobo Mode
15	Focus Coarse	15	Ani-gobo Index
16	Focus Fine	16	Focus Coarse
17	Zoom	17	Focus Fine
18	Iris	18	Zoom
19	Frost	19	Iris
20	Configuration	20	Frost

Standard Mode		Direct Mode	
Channel	Parameter	Channel	Parameter
		21	Configuration
		22	Pan/Tilt Speed
		23	Zoom/Focus Speed
		24	Reserved
		25	Beam Speed

See [DMX Channel Map on page 55](#) for detailed channel information about each protocol.

## DMX Start Address

The user interface allows configuration of the DMX Start Address to any value between 001 and 488. By default, the address is set to 001. The DMX Start Address information is stored in the luminaire even when power is removed.



**Note:** *The luminaire features an [auxiliary battery](#) in the Main Control Module which enables menu access to set the luminaire DMX Start Address as well as other luminaire configuration data, even when mains power is removed.*

---

1. With the status screen shown, press the navigate right button **>** on the user interface. DMX address "001" is shown by default.
2. Press Enter **□**. The ones value is selected for edit.
3. Change the value.
  - Press the navigate left button **<** to move the selection to the tens or hundreds value.
  - Press the navigate up button **▲** or the navigate down button **▼** to change a selected value.
4. Press Enter **□** to set the value and exit **DMX Start Address** menu.



## Replace a Gobo

Parts required:

- Standard or custom gobo installed in a Relevé Spot gobo carrier
  - A gobo carrier kit (RELGOBOKIT / part number 2510K1000) is available separately for purchase. Contact ETC Customer Service or your local authorized ETC dealer.

## Remove the Effects Module

Tool required:

- #2 Phillips screwdriver



**WARNING: RISK OF DEATH BY ELECTRIC SHOCK!** Failure to disconnect all power to the luminaire before working inside could result in serious injury or death.

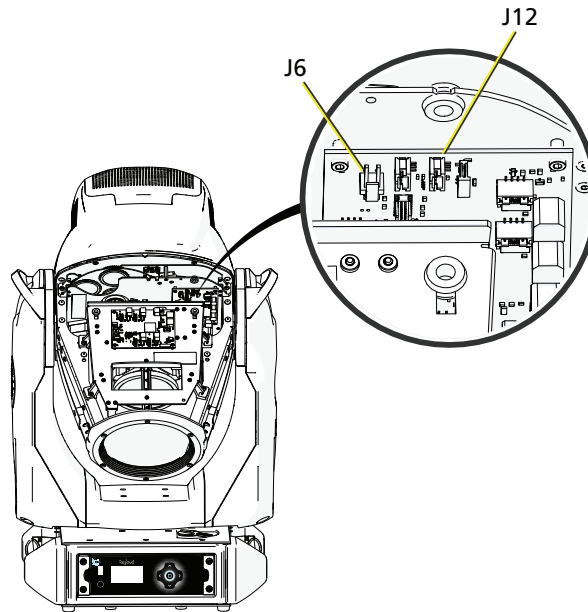
Disconnect power from the luminaire and follow appropriate Lockout/Tagout procedures as mandated by NFPA 70E. Any work must comply with OSHA Safe Working Practices and follow requirements by local code.

**AVERTISSEMENT : RISQUE DE MORT PAR ÉLECTROCUTION!** Travailler à l'intérieur du luminaire sans avoir déconnecté le courant peut entraîner des blessures graves, voire mortelles.

Déconnectez l'alimentation du luminaire et suivez les procédures de Consignation/Déconsignation appropriées prescrites par la norme NFPA 70E. Tout travail doit être conforme aux consignes de sécurité du travail de l'OSHA et respecter les codes locaux.

- 
1. Disconnect power to the luminaire and allow it to cool completely before opening the covers.
  2. Remove the head cover. You only need to remove the head cover that is on the top of the luminaire when the front lens is facing you and the tilt lock is on the right side of the luminaire. See [Remove the Head Covers on page 47](#).
  3. For easier removal of the effects module, rotate the head so that the lens is directed down and the optics module motor control board is on the top side. Use the tilt lock to secure the head in place. See [Pan and Tilt Locks on page 9](#).

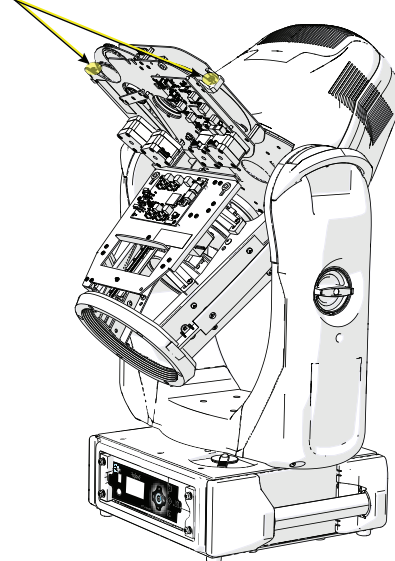
4. Disconnect power and CAN bus wires from the effects module motor control board before removing the module.
  - a. Disconnect the FX MOD PWR (red-and-black wire pair) from J6.
  - b. Disconnect the FX MOD CAN (blue-and-white wire pair) from J12.



**CAUTION:** Before removing the effects module, ensure that the lenses are positioned out of the way so there is no contact between the lenses and the effects module components. If necessary, push on the black focus lens ring to carefully and manually move the focus lens along the guide. Be careful not to touch the lens itself.

5. Loosen the two captured screws that secure the effects module, and then carefully remove the module from the enclosure.

Captured Screws



## Remove a Gobo

Tool required:

- 1/8 in flat blade



**CAUTION:** *To ensure proper indexing of your rotating gobo wheel, you must have a gobo installed in the first slot prior to powering up or re-homing the luminaire.*

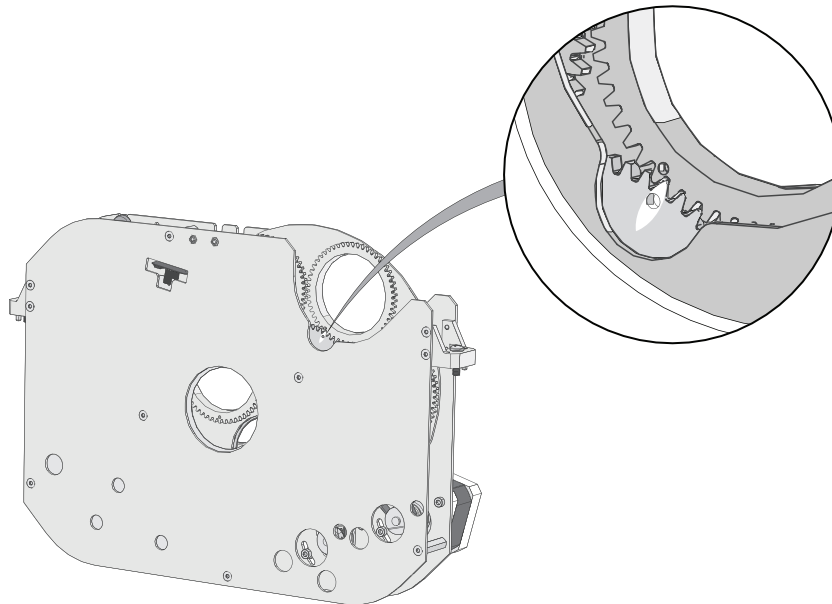
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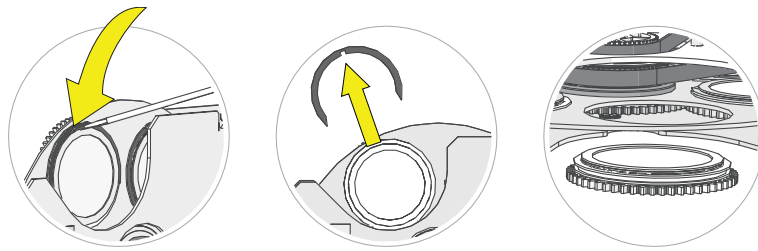
**CAUTION:** *For this procedure, it is important to lay the effects module on a clean and flat work surface with the motor-side facing up to ensure that the gobo rests on the work surface when you remove the retaining clip.*

---

1. Remove the effects module from the luminaire. See [Remove the Effects Module on page 39](#).
2. Place the effects module motor-side up on a clean, flat work surface.
3. Rotate the gobo wheel until the gobo you want to remove is accessible.
4. Each gobo carrier has a magnet that must be aligned with the white alignment mark on the rotating sun gear (center hub) before you remove the gobo.
  - a. Rotate the sun gear of the effects module until the white alignment mark is visible in the open slot.
  - b. Align the gobo magnet to the left of the mark and place the gobo into its slot as shown.

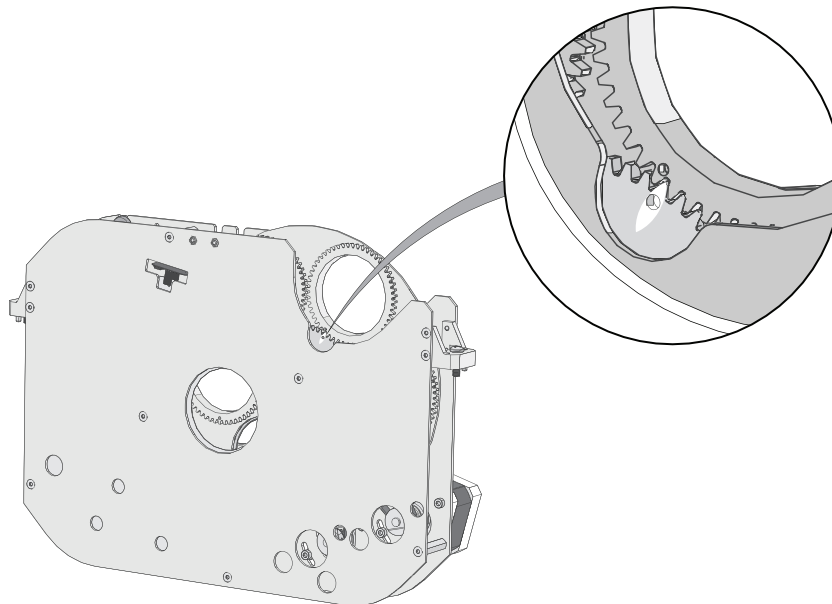


5. Locate the notch in the gobo retaining ring, insert the flat blade, and twist the blade 90 degrees to loosen the retaining ring. Continue using the flat blade around the outside of the retaining ring to loosen the clip from the gobo carrier, and then carefully slide the ring off of the gobo carrier. The gobo is no longer retained in the effects module and will fall to the work surface.



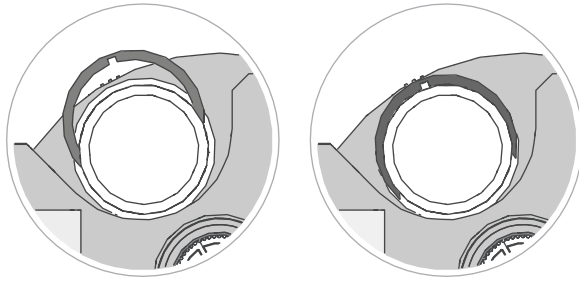
## Install a Gobo

1. Place the effects module motor-side down on a clean, flat work surface.
2. Each gobo carrier has a magnet that must be aligned with the white alignment mark on the rotating sun gear (center hub) to ensure proper rotation.
  - a. Rotate the sun gear of the effects module until the white alignment mark is visible in the open slot.
  - b. Align the gobo magnet to the left of the mark and place the gobo into its slot as shown.

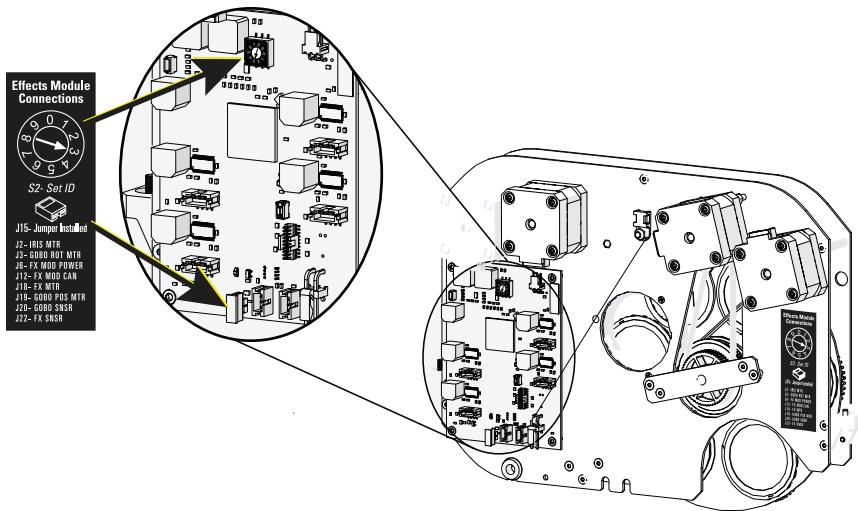


3. Holding the gobo in place, turn the effects module over.

- Align the retaining ring around the outside lip of the gobo carrier, and then fully seat the ring to secure the gobo in place.

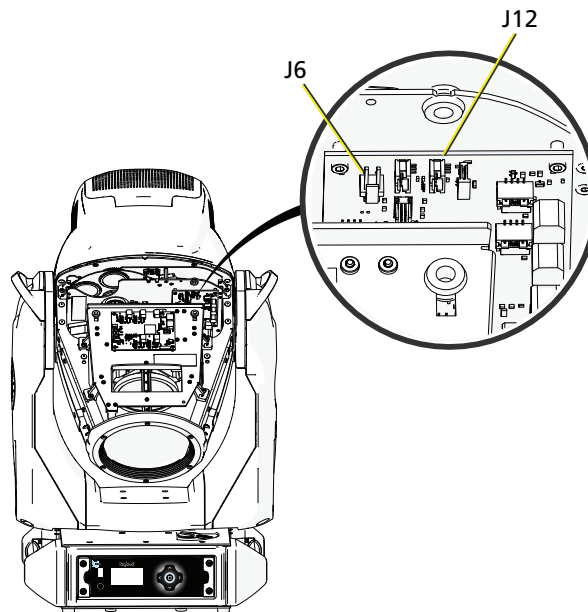


## Install the Effects Module



- Ensure the address on the effects module motor control board is set to address 3 and the jumper is installed to J15.
- Slide the effects module, with the flat side toward the LED module, into the luminaire and secure it in place using the two captured Phillips screws.

3. Reconnect the power and CAN bus wires to the effects module motor control board and check that all other factory connections are fully seated. Each wire set is labeled with its installation location and purpose, and the module is labeled to further guide you.
  - a. Connect the FX MOD PWR (red-and-black wire pair) to J6.
  - b. Connect the FX MOD CAN (blue-and-white wire pair) to J12.



4. Reinstall the head cover. See [Reinstall the Head Covers on page 48](#).

# Maintenance

---

Regular maintenance of the Relevé Spot luminaire is recommended to ensure optimal performance for the life of the luminaire.

---



**Note:** *Any service or maintenance that you perform on your Relevé Spot luminaire is at your own risk.*

---



**WARNING: RISK OF DEATH BY ELECTRIC SHOCK!** Failure to disconnect all power to the luminaire before working inside could result in serious injury or death.

Disconnect power from the luminaire and follow appropriate Lockout/Tagout procedures as mandated by NFPA 70E. Any work must comply with OSHA Safe Working Practices and follow requirements by local code.

**AVERTISSEMENT : RISQUE DE MORT PAR ÉLECTROCUTION!** Travailler à l'intérieur du luminaire sans avoir déconnecté le courant peut entraîner des blessures graves, voire mortelles.

Déconnectez l'alimentation du luminaire et suivez les procédures de Consignation/Déconsignation appropriées prescrites par la norme NFPA 70E. Tout travail doit être conforme aux consignes de sécurité du travail de l'OSHA et respecter les codes locaux.

---



**CAUTION:** *Allow the luminaire to cool completely before servicing or performing routine maintenance.*

---

## Clean the Fan Filter

To ensure proper air flow and cooling in the LED module, remove any buildup of dust on the fan filter and fan blades on a routine basis according to the installation environment.



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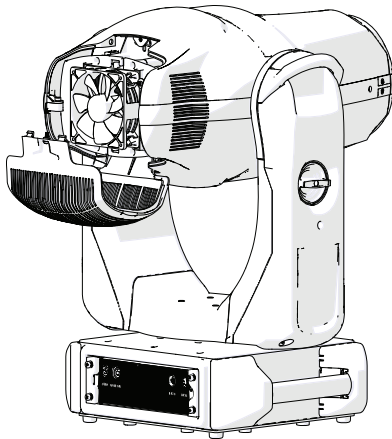
Disconnect power from the luminaire and follow appropriate Lockout/Tagout procedures as mandated by NFPA 70E. Any work must comply with OSHA Safe Working Practices and follow requirements by local code.

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### Tools and supplies required:

- #2 Phillips screwdriver
- compressed air
- vacuum



1. Disconnect power to the luminaire.
2. Use a Phillips screwdriver to loosen the captive screw securing the fan cover in place, and then rotate the fan cover down to expose the fan and fan filter.
3. Using compressed air, blow the dust from the filter and the fan assembly. Alternatively, use a vacuum to remove accessible dust and buildup from the filter and the fan assembly.
4. Reattach the fan cover and secure it in place using the captive screw.



## Remove and Reinstall Covers

Access to the internal components of the luminaire is provided behind removable covers. Disconnect power to the luminaire and allow it to cool completely before opening the covers.



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Disconnect power from the luminaire and follow appropriate Lockout/Tagout procedures as mandated by NFPA 70E. Any work must comply with OSHA Safe Working Practices and follow requirements by local code.

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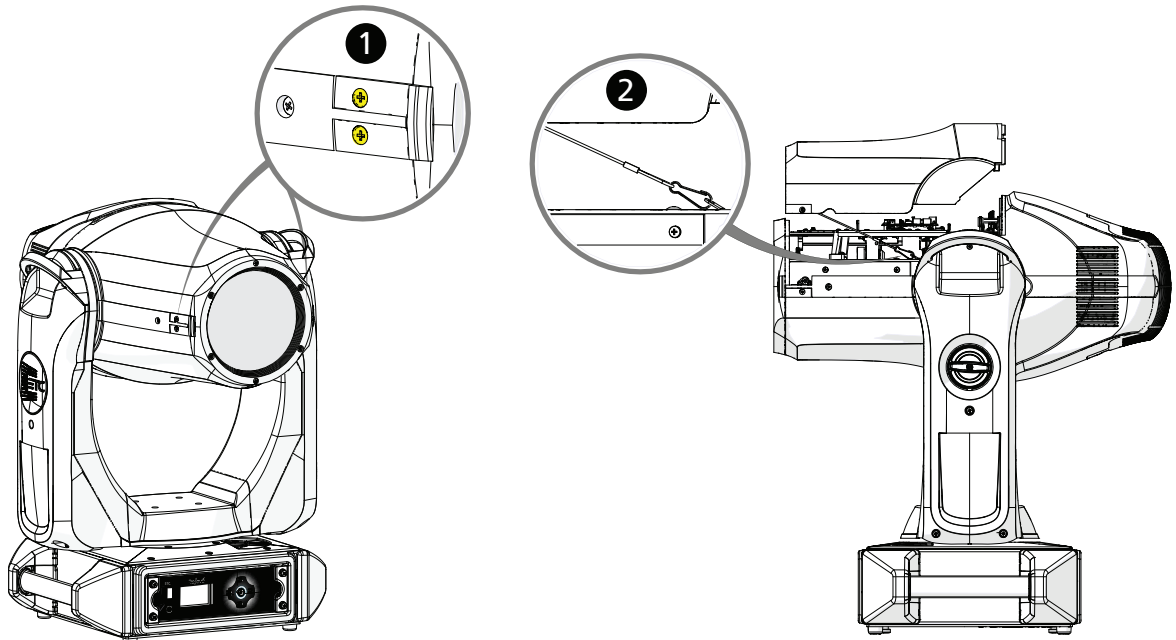
Déconnectez l'alimentation du luminaire et suivez les procédures de Consignation/Déconsignation appropriées prescrites par la norme NFPA 70E. Tout travail doit être conforme aux consignes de sécurité du travail de l'OSHA et respecter les codes locaux.

### Remove the Head Covers

Head covers are provided in two pieces and are secured in place using captured Phillips screws. In addition, each cover is secured to the luminaire with a safety lanyard.

Tool required:

- #2 Phillips screwdriver

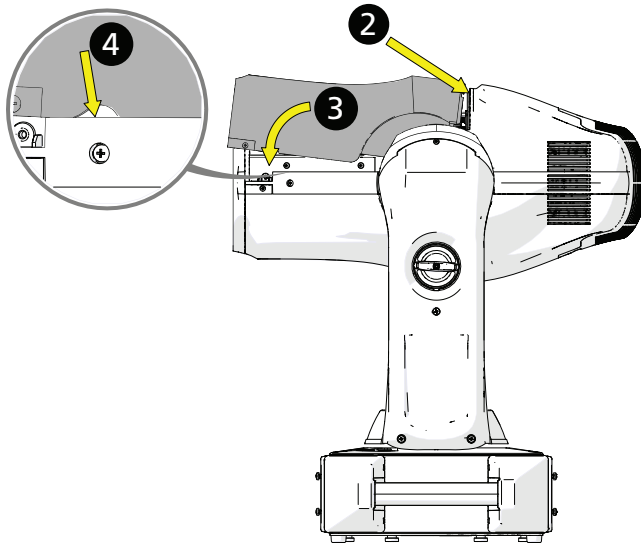


1. Loosen the Phillips screws that secure the head cover to the luminaire. There are two screws on each side of the front of the luminaire: The upper screws secure the top cover, and the lower screws secure the bottom cover.

2. Lift the cover, and then detach the lanyard from the luminaire enclosure to completely remove the cover.
3. If necessary, repeat these steps to remove the second cover.

## Reinstall the Head Covers

Head covers are universal, meaning that you can reinstall them on either side of the top of the luminaire head.



1. Align the cover to the luminaire and reattach the safety lanyard to the luminaire.
2. Angle the cover under the rear housing.
3. Slide the front of the cover down.
4. Tuck each long side of the cover behind the enclosure side rails until the cover is flush and the hardware is aligned.
5. Secure the cover in place by tightening the captured Phillips screws.
6. If necessary, repeat steps 1–5 to reinstall the second head cover.

## Clean the Lenses

Clean the Relevé Spot luminaire lenses on a routine basis according to the installation environment to ensure that optimal light output is maintained for the life of the luminaire.



**WARNING: RISK OF ELECTRIC SHOCK!** This procedure requires the luminaire to be powered and the covers removed for access to clean the lenses.

Relevé Spot luminaire firmware includes lens cleaning access features that move the lenses together and apart for easier access during cleaning.

**Tools and supplies required:**

- #2 Phillips screwdriver
- clean, soft, lint-free cloth



**CAUTION:** *Never use chemical based cleaners or solvents on the optic lenses.*

1. Maintain power to the luminaire.
2. Remove the head covers. See [Remove and Reinstall Covers on page 47](#).
3. Using your control source, tilt the head until the lenses are easily accessible.
4. Navigate the menu to **Home/Test > Lens Cleaning Access**, and press Enter . **Lenses Apart [1/2]** displays and the lenses inside the luminaire move apart.
5. Use a clean, soft, lint-free cloth to clean the accessible faces of the lenses.
6. Press Enter  again. **Lenses Together [2/2]** displays and the lenses move together.
7. Clean the accessible faces of the lenses.
8. Clean the inside and outside of the front lens.
9. Replace the head covers. See [Remove and Reinstall Covers on page 47](#).

## Replace the Effects Module

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**WARNING: RISK OF DEATH BY ELECTRIC SHOCK!** Failure to disconnect all power to the luminaire before working inside could result in serious injury or death.

Disconnect power from the luminaire and follow appropriate Lockout/Tagout procedures as mandated by NFPA 70E. Any work must comply with OSHA Safe Working Practices and follow requirements by local code.

**AVERTISSEMENT : RISQUE DE MORT PAR ÉLECTROCUTION!** Travailler à l'intérieur du luminaire sans avoir déconnecté le courant peut entraîner des blessures graves, voire mortelles.

Déconnectez l'alimentation du luminaire et suivez les procédures de Consignation/Déconsignation appropriées prescrites par la norme NFPA 70E. Tout travail doit être conforme aux consignes de sécurité du travail de l'OSHA et respecter les codes locaux.

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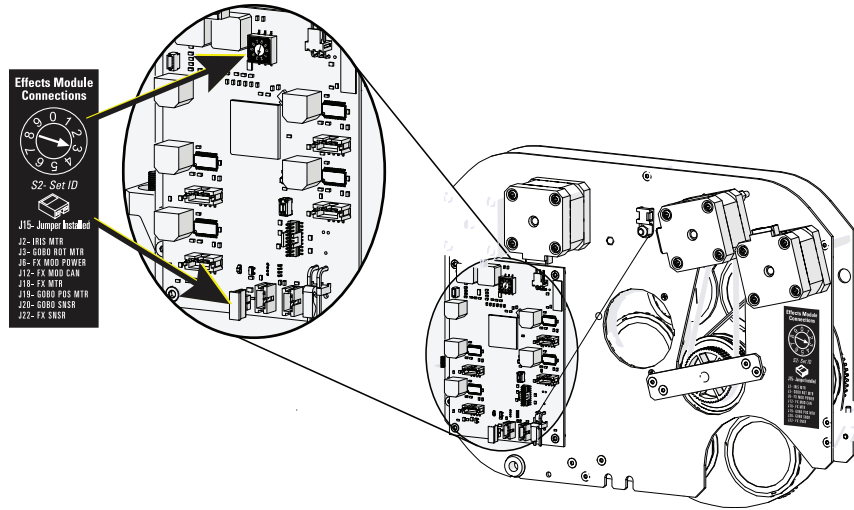


**CAUTION:** *Before removing the effects module, ensure that the lenses are positioned out of the way so there is no contact between the lenses and the effects module components. If necessary, push on the black focus lens ring to carefully and manually move the focus lens along the guide. Be careful not to touch the lens itself.*

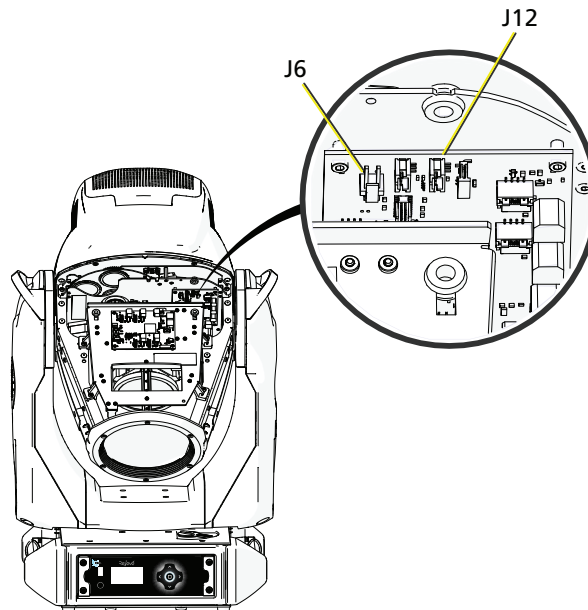
---

1. Remove the existing effects module from the luminaire. See [Remove the Effects Module on page 39](#) for instructions.
2. As needed, transfer any custom gobos to the replacement effects module. See [Remove a Gobo on page 41](#) for instructions.

3. Ensure that the address and jumper settings for the replacement effects module are correct according to the label on the module.
  - a. The address on the effects module motor control board must be set to address 3.
  - b. The jumper must be installed to J15 on the effects module motor control board.



4. Rotate the head of the luminaire so that the lens is directed down and the optics module motor control board on the top side, and use the tilt lock to secure the head in place. See [Pan and Tilt Locks on page 9](#).
5. Slide the effects module, with the flat side toward the LED module, into the luminaire and secure it in place using the two captured Phillips screws.
6. Reconnect the power and CAN bus wires to the effects module control board and check that all other factory connections are fully seated. Each wire set is labeled with its installation location and purpose, and the module is labeled to further guide you.
  - a. Connect the FX MOD PWR (red-and-black wire pair) to J6.
  - b. Connect the FX MOD CAN (blue-and-white wire pair) to J12.



7. Reinstall the head cover. See [Reinstall the Head Covers on page 48](#).

## Replace the Optics Module

Tool required:

- #2 Phillips screwdriver
- 



**WARNING: RISK OF DEATH BY ELECTRIC SHOCK!** Failure to disconnect all power to the luminaire before working inside could result in serious injury or death.

Disconnect power from the luminaire and follow appropriate Lockout/Tagout procedures as mandated by NFPA 70E. Any work must comply with OSHA Safe Working Practices and follow requirements by local code.

**AVERTISSEMENT : RISQUE DE MORT PAR ÉLECTROCUTION!** Travailler à l'intérieur du luminaire sans avoir déconnecté le courant peut entraîner des blessures graves, voire mortelles.

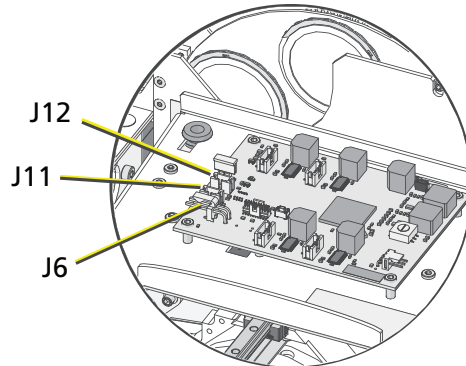
Déconnectez l'alimentation du luminaire et suivez les procédures de Consignation/Déconsignation appropriées prescrites par la norme NFPA 70E. Tout travail doit être conforme aux consignes de sécurité du travail de l'OSHA et respecter les codes locaux.

---

## Remove the Optics Module

1. Disconnect power to the luminaire and allow it to cool completely before opening the covers.
2. Remove the head cover. You only need to remove the head cover that is on the top of the luminaire when the front lens is facing you and the tilt lock is on the right side of the luminaire. See [Remove the Head Covers on page 47](#).
3. Tilt the luminaire head to expose the optics module and motor control board.

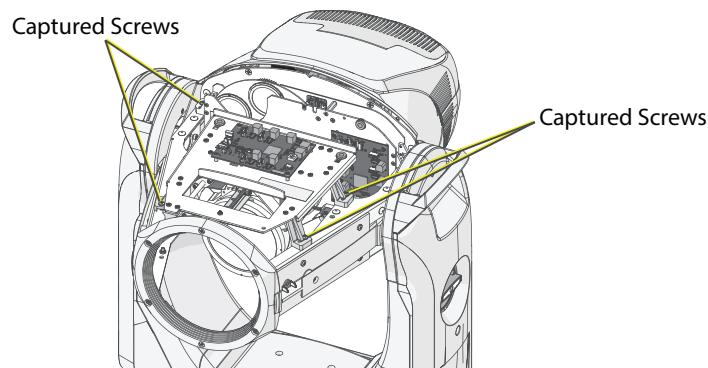
4. Disconnect the power and CAN bus wires from the optics module motor control board before removing the module.
  - a. Disconnect the OPTICS MOD PWR (red-and-black wire pair) from J6.
  - b. Disconnect the FX MOD CAN (blue-and-white wire pair) from J11.
  - c. Disconnect the OPTIC MOD CAN (blue-and-white wire pair) from J12.
  - d. Feed the FX MOD CAN bus wires through the opening in the optics module so that the wires are free of the module.



**CAUTION:** Before removing the optics module, ensure that the lenses are positioned so there is no contact between the lenses and the effects module components. If necessary, push on the black focus lens ring to carefully move the focus lens along the guide away from the effects module. Be careful not to touch the lens itself.

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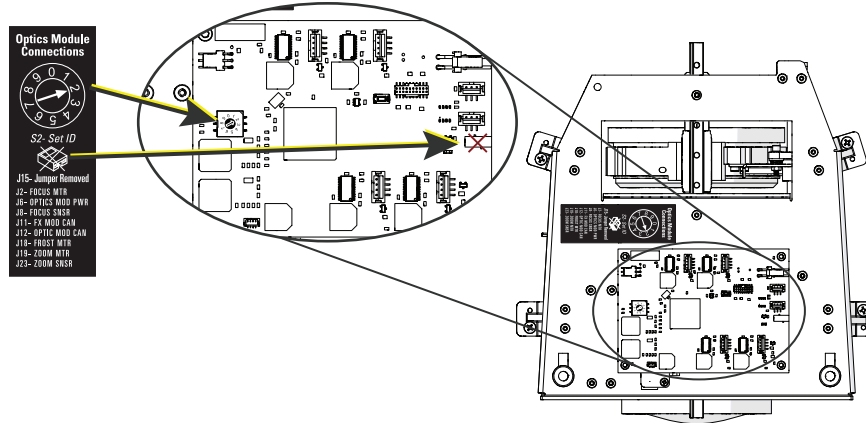
5. Using the Phillips screwdriver, loosen the four captured screws that secure the optics module to the luminaire housing.



6. Lift the optics module from the luminaire head.

## Install the Optics Module

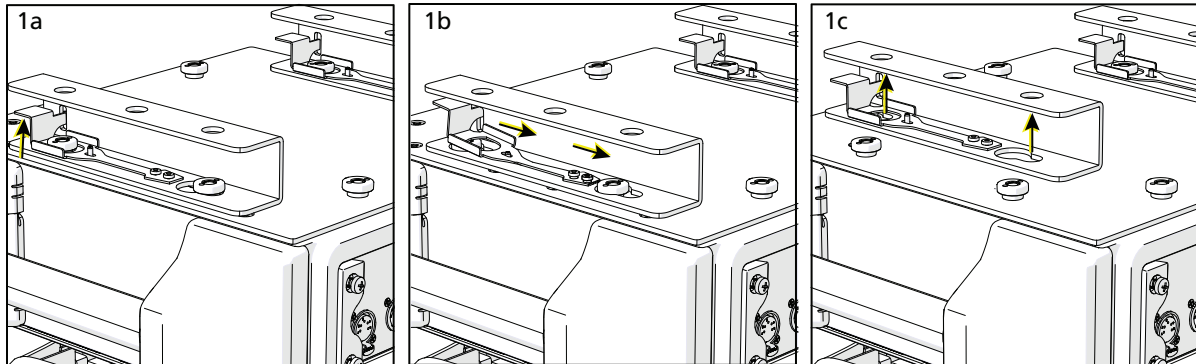
1. Ensure that the address setting for the replacement optics module is correct according to the label on the module, and ensure that the CAN bus jumper is not installed in J15.
  - a. The address on the optics module motor control board must be set to address 2.
  - b. This is not the last module in the CAN bus; therefore, ensure that no jumper is installed in J15.



2. Install the replacement optics module into the luminaire and secure it using the four captured screws.
3. Reconnect the power and CAN bus wires to the optics module control board and check that all other factory connections are fully seated. Each wire set is labeled with its installation location and purpose, and the module is labeled to further guide you.
  - a. Connect the OPTICS MOD PWR (red-and-black wire pair) to J6.
  - b. Feed the FX MOD CAN bus wires (blue-and-white wire pair) through the provided opening.
  - c. Connect the FX MOD CAN (blue-and-white wire pair) to J11.
  - d. Connect the OPTIC MOD CAN to J12.
4. If necessary, see [Clean the Lenses on page 48](#) for instructions about cleaning the lenses.
5. Replace the head cover. See [Reinstall the Head Covers on page 48](#).

## Remove Clamp Mounting Rails

The provided clamp mounting rails feature a safe-latching system for secure fit to the hanging points on the enclosure.



1. To remove the clamp mounting rails from the enclosure:
  - a. Press up on the locking mechanism handle until it is clear of the attachment point.
  - b. Slide the clamp mounting rail until the attachment points are aligned with the keyed holes.
  - c. Lift the clamp mounting rail free of the attachment points and the enclosure.



# DMX Channel Map

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Relevé Spot has two modes of operation, which are accessible in the **Control Settings** menu from the user interface.

- Standard Mode utilizes 20 channels of control. This is the default setting. See [Standard on the next page](#). Standard Mode enables efficient use of DMX channel bandwidth.
- Direct Mode utilizes 25 channels of control. See [Direct on page 63](#). Direct Mode enables individual control of the luminaire features.



**Note:** *The color output of all Relevé Spot luminaires is calibrated at the factory. When operating in Standard Mode, each luminaire makes accommodations for the specific LEDs in its array and produces output that is consistent with other luminaires, whether or not they utilize LEDs from the same production batch. Operating in Direct Mode bypasses this calibration, and multiple luminaires may produce slightly different outputs when controlled as a group.*

---

Standard Mode		Direct Mode	
Channel	Parameter	Channel	Parameter
1	Intensity	1	Intensity
2	Red	2	Red
3	Green	3	Green
4	Blue	4	Blue
5	Strobe	5	Lime
6	Pan Coarse	6	Strobe
7	Pan Fine	7	Pan Coarse
8	Tilt Coarse	8	Pan Fine
9	Tilt Fine	9	Tilt Coarse
10	Gobo Mode	10	Tilt Fine
11	16-bit Gobo Index Coarse	11	Gobo Mode
12	16-bit Gobo Index Fine	12	16-bit Gobo Index Coarse
13	Ani-gobo Mode	13	16-bit Gobo Index Fine
14	Ani-gobo Index	14	Ani-gobo Mode
15	Focus Coarse	15	Ani-gobo Index
16	Focus Fine	16	Focus Coarse
17	Zoom	17	Focus Fine
18	Iris	18	Zoom
19	Frost	19	Iris
20	Configuration	20	Frost
		21	Configuration
		22	Pan/Tilt Speed
		23	Zoom/Focus Speed
		24	Reserved
		25	Beam Speed

# Standard

DMX Channel	Function	Description	Range	Default	Notes	
1	Intensity	Color intensity	0-255	0	Linearly variable intensity control. Intensity changes shorter than 0.5 s are considered "bumps" and will be performed instantly.	
2	Red	Red saturation	0-255	0	Linearly variable color control with 0 being no saturation and 255 being full saturation. *	
3	Green	Green saturation	0-255	0		
4	Blue	Indigo saturation	0-255	0		
		No strobe (shutter open)	0			
5	Strobe	Dark strobe	1-40		See <a href="#">Strobe on page 69</a> .	
		Bright strobe	41-80			
		Pulse strobe	81-120			
		Random strobe	121-160	0		
		Flicker effect	161-200			
		Unassigned	201-240			
		LEDs Off (shutter closed)	241-254			
		No strobe (shutter open)	255			
6 / 7	Pan Coarse	16-bit pan of 540°	0-255	128		
	Pan Fine		0-255	128		
8 / 9	Tilt Coarse	16-bit tilt of 270°	0-255	128		
	Tilt Fine		0-255	128		

DMX Channel	Function	Description	Range	Default	Notes
10		Indexed, Open	0-9		
		Indexed, Gobo 1	10-19		
		Indexed, Gobo 2	20-29		
		Indexed, Gobo 3	30-39		Gobo index set by channel 11 / 12.
		Indexed, Gobo 4	40-49		
		Indexed, Gobo 5	50-59		
		Continuous Rotation, Open	60-69		
		Continuous Rotation, Gobo 1	70-79		
		Continuous Rotation, Gobo 2	80-89		
		Continuous Rotation, Gobo 3	90-99		
		Continuous Rotation, Gobo 4	100-109		
		Continuous Rotation, Gobo 5	110-119	0	
		Shake, Open	120-129		
		Shake, Gobo 1	130-139		
		Shake, Gobo 2	140-149		
		Shake, Gobo 3	150-159		
		Shake, Gobo 4	160-169		
		Shake, Gobo 5	170-179		
		Full Wheel Rotate	180-189		
		Unassigned	190-245		
	Open	246-255			

DMX Channel	Function	Description	Range	Default	Notes
11 / 12	16-bit Gobo Index Coarse 16-bit Gobo Index Fine	Indexes gobo selected on channel 10	0-65535		Clockwise from 0° to 360°.
			0-255		Stop (position not indexed).
			256-32767		Counter-clockwise fast to slow.
			32768-33023		Stop (position not indexed).
			33024-65279		Clockwise from slow to fast.
			65280-65535		Stop (position not indexed).
			0-255		Stop.
			256-65279	0	Shake fast to slow.
			65280-65535		Stop.
			0-255		Stop.
			256-32767		Counter-clockwise fast to slow.
			32768-33023		Stop.
			33024-65279		Clockwise slow to fast.
	65280-65535		Stop.		
		Unassigned	0-65535		Same as "Open" but reserved for future use.
		Open	0-65535		

DMX Channel	Function	Description	Range	Default	Notes
13	Ani-gobo Mode	Open	0-3		
		Position	4-13		Index to preselected position on the Ani-gobo wheel. Position set by channel 14.
		Position - shake	14-24		Shake up the next position on the Ani-gobo wheel. Position set by channel 14.
		Indexed	25-35		Index to any position on the Ani-gobo wheel. Position set by channel 14.
		Rotate	36-46		Continuous rotation of the entire Ani-gobo wheel. Speed set by channel 14.
		Rotate animation	47-57		Continuous rotation of the entire Ani-gobo wheel, skipping open. Speed set by channel 14.
		Light animation	58-68	0	Shakes between position 1 and position 3. Speed set by channel 14.
		Medium animation	69-79		Shakes between position 2 and position 4. Speed set by channel 14.
		Dark animation	80-90		Shakes between position 3 and position 6. Speed set by channel 14.
		Full animation	91-101		Shakes between position 1 and position 6. Speed set by channel 14.
		Unassigned	102-251		Same as "Open" but reserved for future use.
		Open	252-255		

DMX Channel	Function	Description	Range	Default	Notes
14	Ani-gobo Index	Open	0-255		
			0-9		Position 0 - Open
			10-50		Position 1 - Jagged
			51-91		Position 2 - Breakup
			92-132		Position 3 - Vines
			133-173		Position 4 - Swirly
			174-214		Position 5 - Ivy
			215-255		Position 6 - Dots
			0-9		Position 0 - Open
			10-50		Shakes position 1, slow to fast.
			51-91	0	Shakes position 2, slow to fast.
			92-132		Shakes position 3, slow to fast.
			133-173		Shakes position 4, slow to fast.
			174-214		Shakes position 5, slow to fast.
	215-255		Shakes position 6, - slow to fast.		
	0-255	Indexes the entire Ani-gobo wheel. Mode selected on channel 13.			
	0-3	Rotates the entire Ani-gobo wheel. Mode selected on channel 13.		Stop.	
	4-126			Rotates counter-clockwise fast to slow.	

DMX Channel	Function	Description	Range	Default	Notes
14 (continued)	Ani-gobo Index	Rotates the entire Ani-gobo wheel, Mode selected on channel 13 (continued).  Rotates the entire Ani-gobo wheel, skipping open. Mode selected on channel 13.  Animates selected position on channel 13.  Unassigned  Open  Coarse focus control  Fine focus control  Zoom 18° to 54° Open Indexed Closed  Pulse  Strobe  Open	127-129		Stop.
			130-251		Rotates clockwise slow to fast.
			252-255		Stop.
			0-3		Stop.
			4-126		Rotates clockwise, skipping open, fast to slow.
			127-129	0	Stop.
			130-251		Rotates counter-clockwise, skipping open, fast to slow.
			252-255		Stop.
			0-255		Slow to fast.
			0-255		Same as "Open" but reserved for future use.
15	Focus Coarse		0-255	128	
16	Focus Fine		0-255	128	
17	Zoom		0-255	128	
			0-10	0	
			11-127	11	Open to closed.
			128	128	
18	Iris		129-188	129	Slow to fast.
			189-245	189	Slow to fast.
			246-255	255	

DMX Channel	Function	Description	Range	Default	Notes
19	Frost	Insert frost	0-255		
		Idle	0-9		
		Reset entire fixture	10-19		
		Reset gobo and iris	20-29		Reset commands.
		Reset zoom and focus	30-39		
		Fan speed, off	40-49		
		Fan speed, Studio Mode	50-59		
		Fan speed, auto (default)	60-69		
		Data loss, hold last look (default)	70-79		
		Data loss, home	80-89		
		Data loss, wait and fade	90-99		
		Default pan/tilt settings	100-109	0	
		Sleep mode, auto (default)	110-119		
		Sleep mode, off	120-129		
		Sleep mode, DMX	130-139		
		Sleep, now	140-149		
		Display, auto (default)	150-159		
		Display, off	160-169		
		Default all features	170-179		
		Unassigned	180-255		Reserved for future use
20	Configuration**				Implemented in a future release.

\*The color output of all Revelé Spot luminaires is calibrated at the factory. When operating in Standard Mode, each luminaire makes accommodations for the specific LEDs in its array and produces output that is consistent with other luminaires, whether or not they utilize LEDs from the same production batch.

\*\*When creating a Revelé profile or to control configuration settings without a profile, activate the configuration settings by setting channel 18 to DMX 100, followed by setting channel 20 from 0 directly to the intended value, and then hold there for at least 2 seconds without moving, and then set channel 20 back to 0. If the channel is controlled using a fade, the channel will do nothing until it sees 0 again.



**Note:** Ensure that any changes made to channel 20 are not recorded into any cues, presets, or fades.



## Direct

DMX Channel	Function	Description	Range	Default	Notes
1	Intensity	Color intensity	0-255	0	Linearly variable intensity control. Intensity changes shorter than 0.5 s are considered "bumps" and will be performed instantly.
2	Red	Red saturation	0-255	255	Linearly variable color control with 0 being no saturation and 255 being full saturation. *
3	Green	Green saturation	0-255	255	
4	Blue	Indigo saturation	0-255	255	
5	Lime	Lime saturation	0-255	255	
6	Strobe	No strobe (shutter open)	0	0	See <a href="#">Strobe on page 69</a> .
		Dark strobe	1-40		
		Bright strobe	41-80		
		Pulse strobe	81-120		
		Random strobe	121-160		
		Flicker effect	161-200		
		Unassigned	201-240		
		LEDs off (shutter closed)	241-254		
		No strobe (shutter open)	255		
7	Pan Coarse	16-bit pan of 540°	0-255	128	
8	Pan Fine	16-bit pan of 540°	0-255	128	
9	Tilt Coarse	16-bit tilt of 270°	0-255	128	
10	Tilt Fine	16-bit tilt of 270°	0-255	128	

DMX Channel	Function	Description	Range	Default	Notes
		Indexed, Open	0-9		
		Indexed, Gobo 1	10-19		
		Indexed, Gobo 2	20-29		
		Indexed, Gobo 3	30-39		Gobo index set by channel 12 / 13.
		Indexed, Gobo 4	40-49		
		Indexed, Gobo 5	50-59		
		Continuous Rotation, Open	60-69		
		Continuous Rotation, Gobo 1	70-79		
		Continuous Rotation, Gobo 2	80-89		
		Continuous Rotation, Gobo 3	90-99		Gobo continuous rotation set by channel 12 / 13.
11	Gobo Mode	Continuous Rotation, Gobo 4	100-109	0	
		Continuous Rotation, Gobo 5	110-119		
		Shake, Open	120-129		
		Shake, Gobo 1	130-139		
		Shake, Gobo 2	140-149		
		Shake, Gobo 3	150-159		
		Shake, Gobo 4	160-169		Gobo shake speed set by channel 12 / 13.
		Shake, Gobo 5	170-179		
		Full Wheel Rotate	180-189		Full wheel rotate speed set by channel 12 / 13.
		Unassigned	190-245		Same as "Open" but reserved for future use.
		Open	246-255		

DMX Channel	Function	Description	Range	Default	Notes
12 / 13	16-bit Gobo Index Coarse 16-bit Gobo Index Fine	Indexes gobo selected on channel 11	0-65535		Clockwise from 0° to 360°.
			0-255		Stop (position not indexed).
			256-32767		Counter-clockwise fast to slow.
			32768-33023		Stop (position not indexed).
			33024-65279		Clockwise from slow to fast.
			65280-65535		Stop (position not indexed).
			0-255		Stop.
			256-65279		Shake fast to slow.
			65280-65535	0	Stop.
			0-255		Stop.
			256-32767		Counter-clockwise fast to slow.
			32768-33023		Stop.
			33024-65279		Clockwise slow to fast.
			65280-65535		Stop.
			0-65535		Same as "Open" but reserved for future use.
14	Ani-gobo Mode	Open	0-65535		
		Open	0-3		
		Position	4-13		Index to ere-selected position on the Ani-gobo wheel. Position set by channel 15.
		Position - shake	14-24		Shake up the next position on the Ani-gobo wheel. Position set by channel 15.
		Indexed	25-35		Index to any position on the Ani-gobo wheel. Position set by channel 15.
		Rotate	36-46		Continuous rotation of the entire Ani-gobo wheel. Speed set by channel 15.
		Rotate animation	47-57	0	Continuous rotation of the entire Ani-gobo wheel, skipping open. Speed set by channel 15.
		Light animation	58-68		Shakes between position 1 and position 3. Speed set by channel 15.
		Medium animation	69-79		Shakes between position 2 and position 4. Speed set by channel 15.
		Dark animation	80-90		Shakes between position 3 and position 6. Speed set by channel 15.
		Full animation	91-101		Shakes between position 1 and position 6. Speed set by channel 15.
		Unassigned	102-251		Same as "Open" but reserved for future use.
		Open	252-255		
		Open	0-255		
		15	Ani-gobo Index	Open	0-255

DMX Channel	Function	Description	Range	Default	Notes		
15 (continued)	Ani-gobo Index	Indexes Ani-gobo wheel to preselected position. Mode selected on channel 14.	0-9		Position 0 - Open		
			10-50		Position 1 - Jagged		
			51-91		Position 2 - Break-up		
			92-132		Position 3 - Vines		
			133-173		Position 4 - Swirly		
			174-214		Position 5 - Ivy		
		215-255		Position 6 - Dots			
					0-9		Position 0 - Open
					10-50		Shakes position 1, slow to fast.
					51-91		Shakes position 2, slow to fast.
					92-132		Shakes position 3, slow to fast.
					133-173		Shakes position 4, slow to fast.
					174-214		Shakes position 5, slow to fast.
					215-255		Shakes position 6, slow to fast.
			0-255	0			
			0-3		Stop.		
			4-126		Rotates counter-clockwise fast to slow.		
			127-129		Stop		
			130-251		Rotates clockwise slow to fast.		
			252-255		Stop.		
			0-3		Stop.		
			4-126		Rotates clockwise, skipping open fast to slow.		
			127-129		Stop.		
			130-251		Rotates counter-clockwise, skipping open fast to slow.		
			252-255		Stop.		
			0-255		Slow to fast.		
			0-255		Same as "Open" but reserved for future use.		
			0-255				
16	Focus Coarse	Coarse focus control	0-255	128			
17	Focus Fine	Fine focus control	0-255	128			
18	Zoom	Zoom 18° to 54°	0-255	128			

DMX Channel	Function	Description	Range	Default	Notes
19	Iris	Open	0-10	0	
		Indexed	11-127	11	Open to closed.
		Closed	128	128	
		Pulse	129-188	129	Slow to fast.
		Strobe	189-245	189	Slow to fast.
		Open	246-255	255	
		Insert frost	0-255	0	
		Idle	0-9		
		Reset entire fixture	10-19		
		Reset gobo and iris	20-29		
20	Frost	Reset zoom and focus	30-39		Reset commands.
		Fan speed, off	40-49		
		Fan speed, Studio Mode	50-59		
		Fan speed, auto (default)	60-69		
		Data loss, hold last look(default)	70-79		
		Data loss, home	80-89		
		Data loss, wait and fade	90-99	0	
		Default pan/tilt settings	100-109		
		Sleep mode, auto (default)	110-119		
		Sleep mode, off	120-129		
21	Configuration**	Sleep mode, DMX	130-139		
		Sleep now	140-149		
		Display, auto (default)	150-159		
		Display, off	160-169		
		Default all features	170-179		
		Unassigned	180-255		
		Adjust pan/tilt speed	0-3	0	Reserved for future use. Slow (quiet).
		Adjust zoom/focus speed	4-255	0	Slow to fast.
		Unassigned	0-3	0	Slow (quiet).
		Adjust beam functions speed	4-255	0	Slow to fast.
22	Pan/Tilt Speed	Unassigned	0-3	0	Reserved for future use.
		Adjust beam functions speed	4-255	0	Slow (quiet).
23	Zoom/Focus Speed	Unassigned	0-3	0	Slow (quiet).
		Adjust beam functions speed	4-255	0	Slow to fast.
24	Unassigned	Unassigned	0-3	0	Reserved for future use.
		Adjust beam functions speed	4-255	0	Slow (quiet).
25	Beam Speed	Unassigned	0-3	0	Slow (quiet).
		Adjust beam functions speed	4-255	0	Slow to fast.

\*The color output of all ReleVé Spot luminaires is calibrated at the factory. Operating in Direct Mode bypasses this calibration, and multiple luminaires may produce slightly different outputs when controlled as a group.

\*\*When creating a Relevé profile or to control configuration settings without a profile, activate the configuration settings by setting channel 19 to DMX 100, followed by setting channel 21 from 0 directly to the intended value and hold there for at least 2 seconds without moving, and then set channel 21 back to 0. If the channel is controlled using a fade, the channel will do nothing until it sees 0 again.



**Note:** *Ensure that any changes made to channel 21 are not recorded into any cues, presets, or fades.*

# Strobe

DMX	Strobe Function	Freq. (Hz)	On Time (ms)	Off Time (ms)	Fade Up (ms)	Fade Down (ms)	Random Min (ms)	Random Max (ms)
0	No Strobe (Shutter Open)							
1	Dark Strobe	1.00	10	990	0	0		
2	Dark Strobe	1.03	10	965	0	0		
3	Dark Strobe	1.05	10	940	0	0		
4	Dark Strobe	1.08	10	915	0	0		
5	Dark Strobe	1.11	10	890	0	0		
6	Dark Strobe	1.14	10	865	0	0		
7	Dark Strobe	1.18	10	840	0	0		
8	Dark Strobe	1.21	10	815	0	0		
9	Dark Strobe	1.25	10	790	0	0		
10	Dark Strobe	1.29	10	765	0	0		
11	Dark Strobe	1.33	10	740	0	0		
12	Dark Strobe	1.38	10	715	0	0		
13	Dark Strobe	1.43	10	690	0	0		
14	Dark Strobe	1.48	10	665	0	0		
15	Dark Strobe	1.54	10	640	0	0		
16	Dark Strobe	1.60	10	615	0	0		
17	Dark Strobe	1.67	10	590	0	0		
18	Dark Strobe	1.74	10	565	0	0		
19	Dark Strobe	1.82	10	540	0	0		
20	Dark Strobe	1.90	10	515	0	0		
21	Dark Strobe	2.00	10	490	0	0		
22	Dark Strobe	2.11	10	465	0	0		
23	Dark Strobe	2.22	10	440	0	0		
24	Dark Strobe	2.35	10	415	0	0		
25	Dark Strobe	2.50	10	390	0	0		
26	Dark Strobe	2.67	10	365	0	0		
27	Dark Strobe	2.86	10	340	0	0		
28	Dark Strobe	3.08	10	315	0	0		
29	Dark Strobe	3.33	10	290	0	0		
30	Dark Strobe	3.64	10	265	0	0		
31	Dark Strobe	4.00	10	240	0	0		

DMX	Strobe Function	Freq. (Hz)	On Time (ms)	Off Time (ms)	Fade Up (ms)	Fade Down (ms)	Random Min (ms)	Random Max (ms)
32	Dark Strobe	4.44	10	215	0	0		
33	Dark Strobe	5.00	10	190	0	0		
34	Dark Strobe	5.71	10	165	0	0		
35	Dark Strobe	6.67	10	140	0	0		
36	Dark Strobe	8.00	10	115	0	0		
37	Dark Strobe	10.00	10	90	0	0		
38	Dark Strobe	13.33	10	65	0	0		
39	Dark Strobe	20.00	10	40	0	0		
40	Dark Strobe	40.00	10	15	0	0		
41	Bright Strobe	1.00	990	10	0	0		
42	Bright Strobe	1.03	965	10	0	0		
43	Bright Strobe	1.05	940	10	0	0		
44	Bright Strobe	1.08	915	10	0	0		
45	Bright Strobe	1.11	890	10	0	0		
46	Bright Strobe	1.14	865	10	0	0		
47	Bright Strobe	1.18	840	10	0	0		
48	Bright Strobe	1.21	815	10	0	0		
49	Bright Strobe	1.25	790	10	0	0		
50	Bright Strobe	1.29	765	10	0	0		
51	Bright Strobe	1.33	740	10	0	0		
52	Bright Strobe	1.38	715	10	0	0		
53	Bright Strobe	1.43	690	10	0	0		
54	Bright Strobe	1.48	665	10	0	0		
55	Bright Strobe	1.54	640	10	0	0		
56	Bright Strobe	1.60	615	10	0	0		
57	Bright Strobe	1.67	590	10	0	0		
58	Bright Strobe	1.74	565	10	0	0		
59	Bright Strobe	1.82	540	10	0	0		
60	Bright Strobe	1.90	515	10	0	0		
61	Bright Strobe	2.00	490	10	0	0		
62	Bright Strobe	2.11	465	10	0	0		
63	Bright Strobe	2.22	440	10	0	0		
64	Bright Strobe	2.35	415	10	0	0		
65	Bright Strobe	2.50	390	10	0	0		



DMX	Strobe Function	Freq. (Hz)	On Time (ms)	Off Time (ms)	Fade Up (ms)	Fade Down (ms)	Random Min (ms)	Random Max (ms)
66	Bright Strobe	2.67	365	10	0	0		
67	Bright Strobe	2.86	340	10	0	0		
68	Bright Strobe	3.08	315	10	0	0		
69	Bright Strobe	3.33	290	10	0	0		
70	Bright Strobe	3.64	265	10	0	0		
71	Bright Strobe	4.00	240	10	0	0		
72	Bright Strobe	4.44	215	10	0	0		
73	Bright Strobe	5.00	190	10	0	0		
74	Bright Strobe	5.71	165	10	0	0		
75	Bright Strobe	6.67	140	10	0	0		
76	Bright Strobe	8.00	115	10	0	0		
77	Bright Strobe	10.00	90	10	0	0		
78	Bright Strobe	13.33	65	10	0	0		
79	Bright Strobe	20.00	40	10	0	0		
80	Bright Strobe	40.00	15	10	0	0		
81	Pulse Strobe	0.51	10	1755	100	100		
82	Pulse Strobe	0.52	10	1710	100	100		
83	Pulse Strobe	0.53	10	1665	100	100		
84	Pulse Strobe	0.55	10	1620	100	100		
85	Pulse Strobe	0.56	10	1575	100	100		
86	Pulse Strobe	0.57	10	1530	100	100		
87	Pulse Strobe	0.59	10	1485	100	100		
88	Pulse Strobe	0.61	10	1440	100	100		
89	Pulse Strobe	0.62	10	1395	100	100		
90	Pulse Strobe	0.64	10	1350	100	100		
91	Pulse Strobe	0.66	10	1305	100	100		
92	Pulse Strobe	0.68	10	1260	100	100		
93	Pulse Strobe	0.70	10	1215	100	100		
94	Pulse Strobe	0.72	10	1170	100	100		
95	Pulse Strobe	0.75	10	1125	100	100		
96	Pulse Strobe	0.78	10	1080	100	100		
97	Pulse Strobe	0.80	10	1035	100	100		
98	Pulse Strobe	0.83	10	990	100	100		
99	Pulse Strobe	0.87	10	945	100	100		

DMX	Strobe Function	Freq. (Hz)	On Time (ms)	Off Time (ms)	Fade Up (ms)	Fade Down (ms)	Random Min (ms)	Random Max (ms)
100	Pulse Strobe	0.90	10	900	100	100		
101	Pulse Strobe	0.94	10	855	100	100		
102	Pulse Strobe	0.98	10	810	100	100		
103	Pulse Strobe	1.03	10	765	100	100		
104	Pulse Strobe	1.08	10	720	100	100		
105	Pulse Strobe	1.13	10	675	100	100		
106	Pulse Strobe	1.19	10	630	100	100		
107	Pulse Strobe	1.26	10	585	100	100		
108	Pulse Strobe	1.33	10	540	100	100		
109	Pulse Strobe	1.42	10	495	100	100		
110	Pulse Strobe	1.52	10	450	100	100		
111	Pulse Strobe	1.63	10	405	100	100		
112	Pulse Strobe	1.75	10	360	100	100		
113	Pulse Strobe	1.90	10	315	100	100		
114	Pulse Strobe	2.08	10	270	100	100		
115	Pulse Strobe	2.30	10	225	100	100		
116	Pulse Strobe	2.56	10	180	100	100		
117	Pulse Strobe	2.90	10	135	100	100		
118	Pulse Strobe	3.33	10	90	100	100		
119	Pulse Strobe	3.92	10	45	100	100		
120	Pulse Strobe	4.76	10	0	100	100		
121	Random Strobe	N/A	10	Random	0	0		
122	Random Strobe	N/A	10	Random	0	0	500	2000
123	Random Strobe	N/A	10	Random	0	0	488	1962
124	Random Strobe	N/A	10	Random	0	0	477	1923
125	Random Strobe	N/A	10	Random	0	0	465	1885
126	Random Strobe	N/A	10	Random	0	0	454	1846
127	Random Strobe	N/A	10	Random	0	0	442	1808
128	Random Strobe	N/A	10	Random	0	0	431	1769
129	Random Strobe	N/A	10	Random	0	0	419	1731
130	Random Strobe	N/A	10	Random	0	0	408	1692
131	Random Strobe	N/A	10	Random	0	0	396	1654
132	Random Strobe	N/A	10	Random	0	0	385	1615
133	Random Strobe	N/A	10	Random	0	0	373	1577

DMX	Strobe Function	Freq. (Hz)	On Time (ms)	Off Time (ms)	Fade Up (ms)	Fade Down (ms)	Random Min (ms)	Random Max (ms)
134	Random Strobe	N/A	10	Random	0	0	362	1538
135	Random Strobe	N/A	10	Random	0	0	350	1500
136	Random Strobe	N/A	10	Random	0	0	338	1462
137	Random Strobe	N/A	10	Random	0	0	327	1423
138	Random Strobe	N/A	10	Random	0	0	315	1385
139	Random Strobe	N/A	10	Random	0	0	304	1346
140	Random Strobe	N/A	10	Random	0	0	292	1308
141	Random Strobe	N/A	10	Random	0	0	281	1269
142	Random Strobe	N/A	10	Random	0	0	269	1231
143	Random Strobe	N/A	10	Random	0	0	258	1192
144	Random Strobe	N/A	10	Random	0	0	246	1154
145	Random Strobe	N/A	10	Random	0	0	235	1115
146	Random Strobe	N/A	10	Random	0	0	223	1077
147	Random Strobe	N/A	10	Random	0	0	212	1038
148	Random Strobe	N/A	10	Random	0	0	200	1000
149	Random Strobe	N/A	10	Random	0	0	188	962
150	Random Strobe	N/A	10	Random	0	0	177	923
151	Random Strobe	N/A	10	Random	0	0	165	885
152	Random Strobe	N/A	10	Random	0	0	154	846
153	Random Strobe	N/A	10	Random	0	0	142	808
154	Random Strobe	N/A	10	Random	0	0	131	769
155	Random Strobe	N/A	10	Random	0	0	119	731
156	Random Strobe	N/A	10	Random	0	0	108	692
157	Random Strobe	N/A	10	Random	0	0	96	654
158	Random Strobe	N/A	10	Random	0	0	85	615
159	Random Strobe	N/A	10	Random	0	0	73	577
160	Random Strobe	N/A	10	Random	0	0	62	538
161	Flicker Effect	N/A	Random	Random	Random 2	Random 3	50	500
162	Flicker Effect	N/A	Random	Random	Random 2	Random 3	500	2000
163	Flicker Effect	N/A	Random	Random	Random 2	Random 3	488	1962
164	Flicker Effect	N/A	Random	Random	Random 2	Random 3	477	1923
165	Flicker Effect	N/A	Random	Random	Random 2	Random 3	465	1885

DMX	Strobe Function	Freq. (Hz)	On Time (ms)	Off Time (ms)	Fade Up (ms)	Fade Down (ms)	Random Min (ms)	Random Max (ms)
166	Flicker Effect	N/A	Random	Random	Random 2	Random 3	454	1846
167	Flicker Effect	N/A	Random	Random	Random 2	Random 3	442	1808
168	Flicker Effect	N/A	Random	Random	Random 2	Random 3	431	1769
169	Flicker Effect	N/A	Random	Random	Random 2	Random 3	419	1731
170	Flicker Effect	N/A	Random	Random	Random 2	Random 3	408	1692
171	Flicker Effect	N/A	Random	Random	Random 2	Random 3	396	1654
172	Flicker Effect	N/A	Random	Random	Random 2	Random 3	385	1615
173	Flicker Effect	N/A	Random	Random	Random 2	Random 3	373	1577
174	Flicker Effect	N/A	Random	Random	Random 2	Random 3	362	1538
175	Flicker Effect	N/A	Random	Random	Random 2	Random 3	350	1500
176	Flicker Effect	N/A	Random	Random	Random 2	Random 3	338	1462
177	Flicker Effect	N/A	Random	Random	Random 2	Random 3	327	1423
178	Flicker Effect	N/A	Random	Random	Random 2	Random 3	315	1385
179	Flicker Effect	N/A	Random	Random	Random 2	Random 3	304	1346
180	Flicker Effect	N/A	Random	Random	Random 2	Random 3	292	1308
181	Flicker Effect	N/A	Random	Random	Random 2	Random 3	281	1269
182	Flicker Effect	N/A	Random	Random	Random 2	Random 3	269	1231
183	Flicker Effect	N/A	Random	Random	Random 2	Random 3	258	1192
184	Flicker Effect	N/A	Random	Random	Random 2	Random 3	246	1154
185	Flicker Effect	N/A	Random	Random	Random 2	Random 3	235	1115
186	Flicker Effect	N/A	Random	Random	Random 2	Random 3	223	1077
187	Flicker Effect	N/A	Random	Random	Random 2	Random 3	212	1038
188	Flicker Effect	N/A	Random	Random	Random 2	Random 3	200	1000
189	Flicker Effect	N/A	Random	Random	Random 2	Random 3	188	962
190	Flicker Effect	N/A	Random	Random	Random 2	Random 3	177	923
191	Flicker Effect	N/A	Random	Random	Random 2	Random 3	165	885
192	Flicker Effect	N/A	Random	Random	Random 2	Random 3	154	846
193	Flicker Effect	N/A	Random	Random	Random 2	Random 3	142	808
194	Flicker Effect	N/A	Random	Random	Random 2	Random 3	131	769
195	Flicker Effect	N/A	Random	Random	Random 2	Random 3	119	731
196	Flicker Effect	N/A	Random	Random	Random 2	Random 3	108	692
197	Flicker Effect	N/A	Random	Random	Random 2	Random 3	96	654
198	Flicker Effect	N/A	Random	Random	Random 2	Random 3	85	615
199	Flicker Effect	N/A	Random	Random	Random 2	Random 3	73	577

DMX	Strobe Function	Freq. (Hz)	On Time (ms)	Off Time (ms)	Fade Up (ms)	Fade Down (ms)	Random Min (ms)	Random Max (ms)
200	Flicker Effect	N/A	Random	Random	Random 2	Random 3	62	538
201-240	No Strobe (Shutter Open)						50	500
241-254	LEDs Off (Shutter Closed)							
255	No Strobe (Shutter Open)							

# Technical Specifications

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## Source

52 Lumileds LUXEON® C LEDs  
6,000 maximum lumens  
33 lumens per watt  
L70 rating (hours to 70% output) 50,000 hours  
(estimate pending testing data)

## Color

Red, Green, Indigo, and Lime  
Color temperature range - 2700 - 7000K  
Calibrated array - Yes  
Red Shift - No  
Notes: See the Relevé Spot datasheet for color rendering information

## Optical

18 - 54° beam angle range  
44 mm gate size  
160 mm aperture size  
Pattern projection: Rotating and Indexable wheel with five (5) patterns plus open Ani-gobo wheel with six (6) patterns plus open, includes interconnecting art between patterns  
Theatrical light frost installed (additional frost accessories available separately)  
20-blade Iris  
Camera flicker control - 1,200 Hz (default) and 25,000 Hz  
Notes: See the Relevé Spot datasheet for photometric information

## Control

Input - DMX-512 using 5-pin XLR  
Protocol - DMX over RS-485  
Operating Modes: Standard (20 channels) and Direct (25 channels)  
Black and white graphical user interface display with 5-button navigational controls  
Local manual control using the onboard user interface

Dimming performance: 8-bit controlled with 15-bit internal smoothing

## Electrical

100-240 VAC, 50/60 Hz  
powerCON input and thru connector  
Fixtures per circuit - 4 @ 100 VAC, 5 @ 120 VAC, 10 @ 240 VAC  
Wattage - 265 W (typical), 29 W (standby)  
Notes: See the Relevé Spot datasheet for full power information

## Thermal

Ambient operating temp - 0 - 40°C (32 - 104°F)  
Fan controllable with three modes of operation (Standard, Studio, and Off)  
Droop compensation - Yes  
Stationary dBA/full RGB - 30.7 dBA in Standard Mode  
Maximum BTUs/hour - 975

## Physical

540° Pan range/270° Tilt range  
Whisper Home, motionless absolute encoders  
Die-cast aluminum and plastic enclosure  
Available in black or white  
Installs (mounts) in any orientation  
IP20 rated  
67 lbs (30.4 kg)  
Includes two clamp mounting rails

## Safety and Compliance

Minimum distance to illuminated surface - 2.0 m  
Minimum distance from the luminaire head to combustible materials - 0.1 m  
See [Compliance on page 3](#) for regulatory details.

## Note about LED luminaires

All LED sources experience some lessening of light output and some color shift over time. Relevé Spot luminaires have complex thermal management systems to minimize these changes. With typical usage, a Relevé Spot luminaire will still achieve at least 70% of its initial output after 36,000 hours of use (L70).

In individual situations, LEDs will be used for different durations and different levels. This can eventually lead to minor alterations in color performance, necessitating slight adjustment to presets, cues, or programs.

All LEDs may exhibit a slight shift in output as they rise to full operating temperature. Relevé Spot luminaires allow the selection of different power settings in order to balance the competing requirements of thermal stability and brightness. Depending on the selected setting, changes in output as fixtures warm up may or may not be visible to the eye.



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