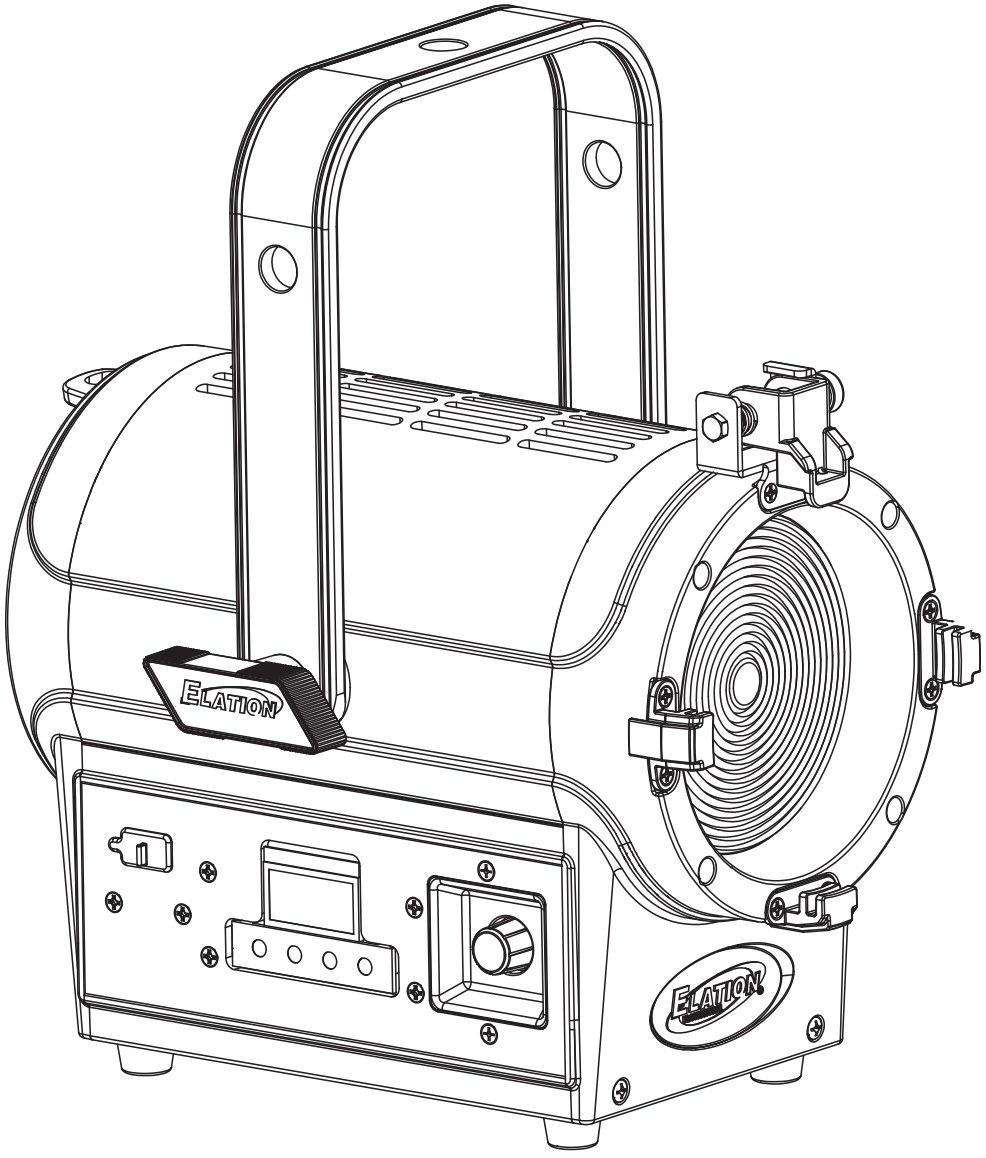
ELATION®



FRESNEL 4 FC
User Manual

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DOCUMENT VERSION

Due to additional product features and/or enhancements, an updated version of this document may be available online. Please scan the QR Code with your mobile device or visit www.elationlighting.com for the latest revision/update of this manual, before installation and/or programming.

Date	Document Version	Software Version ≥	DMX Channel Modes	Notes
06/14/24	1.0	1.01	1 / 2 / 6 / 11 / 18 / 19 / 9 / 14 / 15 Ch	Initial Release
01/10/25	1.1	N/C	No change	Updated Specifications, Dimensional Drawings

CONTENTS

GENERAL INFORMATION

INTRODUCTION

Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this device. These instructions contain important safety and use information. **This product is intended to be used by professionally trained personnel only, and is not suitable for private use.**

UNPACKING

Every device has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton is damaged, carefully inspect the device for damage, and be sure all accessories necessary to install and operate the device have arrived intact. In the event damage has been found or parts are missing, please contact our customer support team for further instructions. Please do not return this device to your dealer without first contacting customer support. Please do not discard the shipping carton in the trash. Please recycle whenever possible.

BOX CONTENTS

Barn Door
Gel Frame
Power Cable

CUSTOMER SUPPORT

Contact ELATION Service for any product related service and support needs.
Also visit forums.elationlighting.com with questions, comments or suggestions.

ELATION SERVICE USA - Monday - Friday 8:00am to 4:30pm PST
323-582-3322 | support@elationlighting.com

ELATION SERVICE EUROPE - Monday - Friday 08:30 to 17:00 CET
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REPLACEMENT PARTS please visit parts.elationlighting.com

LIMITED WARRANTY (USA ONLY)

A. Elation Professional hereby warrants, to the original purchaser, Elation Professional products to be free of manufacturing defects in material and workmanship for a period of two years (730 days), and Elation Professional product rechargeable batteries to be free of manufacturing defects in material and workmanship for a period of six months (180 days), from the original date of purchase. This warranty excludes discharge lamps and all product accessories. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.

B. For warranty service, send the product only to the Elation Professional factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Elation Professional will pay return shipping charges only to a designated point within the United States. If any product is sent, it must be shipped in its original package and packaging material. No accessories should be shipped with the product. If any accessories are shipped with the product, Elation Professional shall have no liability what so ever for loss and/or damage to any such accessories, nor for the safe return thereof.

C. This warranty is void if the product serial number and/or labels are altered or removed; if the product is modified in any manner which Elation Professional concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Elation Professional factory unless prior written authorization was issued to purchaser by Elation Professional; if the product is damaged because not properly maintained as set forth in the product instructions, guidelines and/or user manual.

D. This is not a service contract, and this warranty does not include any maintenance, cleaning or periodic check-up. During the periods as specified above, Elation Professional will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of Elation Professional under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Elation Professional. All products covered by this warranty were manufactured after January 1, 1990, and bare identifying marks to that effect.

E. Elation Professional reserves the right to make changes in design and/or performance improvements upon its products without any obligation to include these changes in any products theretofore manufactured.

F. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with the products described above. Except to the extent prohibited by applicable law, all implied warranties made by Elation Professional in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty periods set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said periods have expired. The consumer's and/or dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall Elation Professional be liable for any loss and/or damage, direct and/or consequential, arising out of the use of, and/or the inability to use, this product.

G. This warranty is the only written warranty applicable to Elation Professional products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

WARRANTY RETURNS

All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper and included in the shipping container. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Items returned without a R.A. number clearly marked on the outside of the package will be refused and returned at customer's expense. You may obtain a R.A. number by contacting customer support.

SAFETY GUIDELINES

This fixture is a sophisticated piece of electronic equipment. To guarantee a smooth operation, it is important to follow all instructions and guidelines in this manual. Elation Professional is not responsible for injury and/or damages resulting from the misuse of this fixture due to the disregard of the information printed in this manual. Only qualified and/or certified personnel should perform installation of this fixture and only the original rigging parts (omega brackets) included with this fixture should be used for installation. Any modifications to the fixture and/or the included mounting hardware will void the original manufactures warranty and increase the risk of damage and/or personal injury.

PROTECTION CLASS 1 - FIXTURE MUST BE PROPERLY GROUNDED

THERE ARE NO USER SERVICEABLE PARTS INSIDE THIS UNIT.
DO NOT ATTEMPT ANY REPAIRS YOURSELF; DOING SO WILL VOID YOUR MANUFACTURES WARRANTY. DAMAGES RESULTING FROM MODIFICATIONS TO THIS FIXTURE AND/OR THE DISREGARD OF SAFETY INSTRUCTIONS AND GUIDELINES IN THIS MANUAL VOID THE MANUFACTURES WARRANTY AND ARE NOT SUBJECT TO ANY WARRANTY CLAIMS AND/OR REPAIRS.

DO NOT PLUG FIXTURE INTO A DIMMER PACK!
NEVER OPEN THIS FIXTURE WHILE IN USE!
UNPLUG POWER BEFORE SERVICING FIXTURE!
NEVER TOUCH FIXTURE DURING OPERATION, AS IT MAY BE HOT!
KEEP FLAMMABLE MATERIALS AWAY FROM FIXTURE!

NEVER LOOK DIRECTLY INTO THE LIGHT SOURCE!
RETINA INJURY RISK - MAY INDUCE BLINDNESS!
SENSITIVE PERSONS MAY SUFFER AN EPILEPTIC SHOCK!

SAFETY GUIDELINES

DO NOT TOUCH the fixture housing during operation. Turn OFF the power and allow approximately 15 minutes for the fixture to cool down before serving.

DO NOT shake fixture, avoid brute force when installing and/or operating fixture.

DO NOT operate fixture if the power cord is frayed, crimped, damaged and/or if any of the power cord connectors are damaged and do not insert into the fixture securely with ease. NEVER force a power cord connector into the fixture. If the power cord or any of its connectors are damaged, replace it immediately with a new one of similar power rating.

DO NOT block any air ventilation slots.

All fan and air inlets must remain clean and never blocked.

Allow approx. 1.6 ft (0.5m) between fixture and other devices or a wall for proper cooling.

When installing fixture in a suspended environment, always use mounting hardware that is no less than M10 x 25 mm, and always install fixture with an appropriately rated safety cable.

Always disconnect fixture from main power source before performing any type of service and/or cleaning procedure. Only handle the power cord by the plug end, never pull out the plug by tugging the wire portion of the cord.

During the initial operation of this fixture, a light smoke or smell may emit from the interior of the fixture. This is a normal process and is caused by excess paint in the interior of the casing burning off from the heat associated with the lamp and will decrease gradually over time.

Consistent operational breaks will ensure fixture will function properly for many years.

ONLY use the original packaging and materials to transport the fixture in for service.

MAINTENANCE GUIDELINES

DISCONNECT POWER BEFORE PERFORMING ANY MAINTENANCE!

CLEANING

Frequent cleaning is recommended to insure proper function, optimized light output, and an extended life. The frequency of cleaning depends on the environment in which the fixture operates: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the fixture's optics. Clean the external lens surface at least every 20 days with a soft cloth to avoid dirt/debris accumulation. **NEVER use alcohol, solvents, or ammonia-based cleaners.**

MAINTENANCE

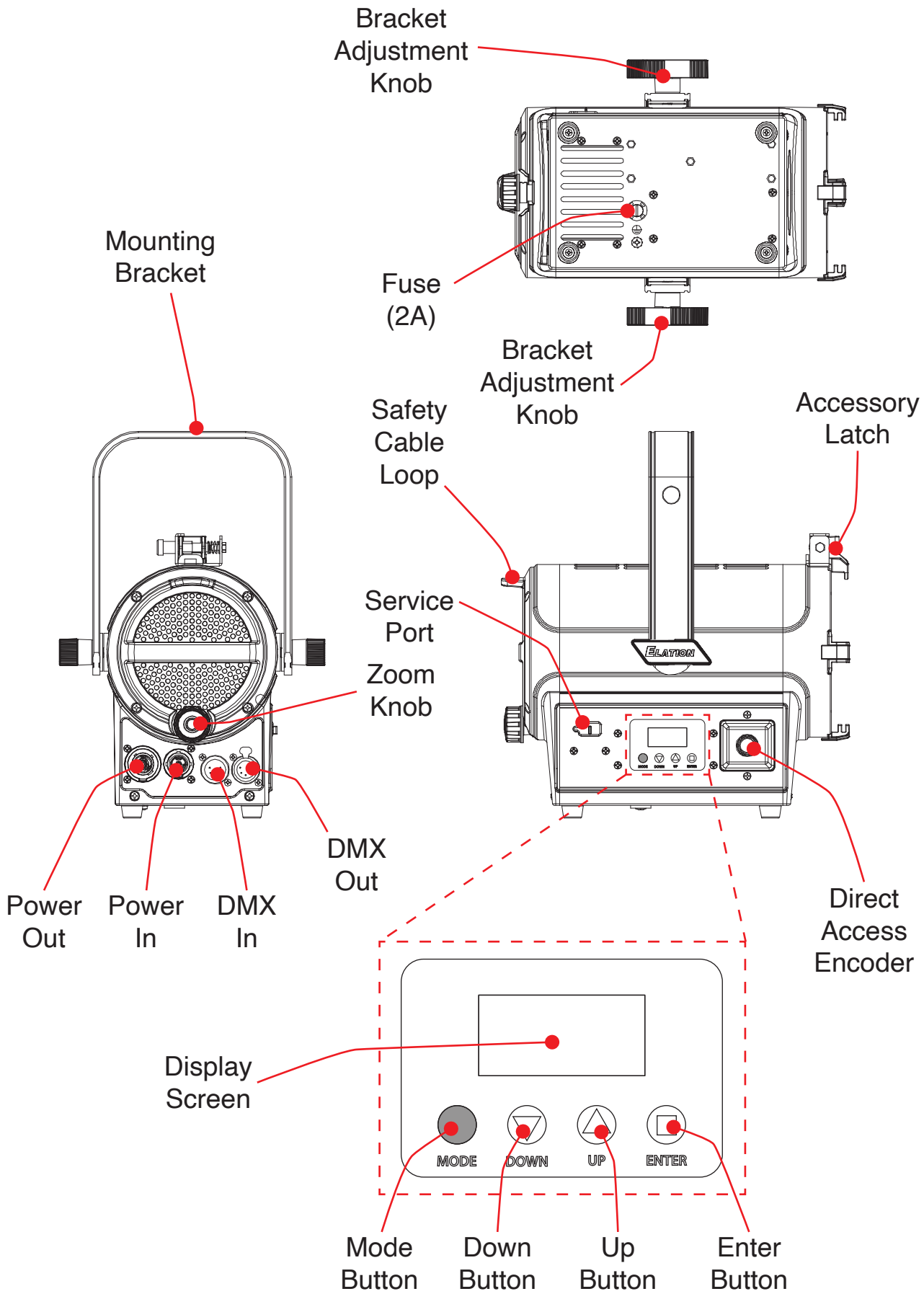
Regular inspections are recommended to insure proper function and extended life.
There are no user serviceable parts inside this fixture, please refer all other service issues to an authorized Elation service technician. Should you need any spare parts, please order genuine parts from your local Elation dealer.

Please refer to the following points during routine inspections:

- A detailed electrical check by an approved electrical engineer every three months, to make sure the circuit contacts are in good condition and prevent overheating.
- Be sure all screws and fasteners are securely tightened at all times. Lose screws may fall out during normal operation resulting in damage or injury as larger parts could fall.
- Check for any deformations on the housing, color lenses, rigging hardware and rigging points (ceiling, suspension, trussing). Deformations in the housing could allow for dust to enter into the fixture. Damaged rigging points or unsecured rigging could cause the fixture to fall and seriously injure a person(s).
- Electric power supply cables must not show any damage, material fatigue or sediments.

NEVER remove the ground prong from the power cable.

OVERVIEW


Bracket Adjustment Knob
Fuse (2A)
Bracket Adjustment Knob
Mounting Bracket
Safety Cable Loop
Accessory Latch
Service Port
Zoom Knob
DMX Out
Power Out
Power In
DMX In
Direct Access Encoder
Display Screen
MODE
DOWN
UP
ENTER
Mode Button
Down Button
Up Button
Enter Button

INSTALLATION GUIDELINES

FLAMMABLE MATERIAL WARNING
Keep fixture minimum 1.6 feet (0.5m) away from flammable materials and/or pyrotechnics.

ELECTRICAL CONNECTIONS
A qualified electrician should be used for all electrical connections and/or installations.

USE CAUTION WHEN POWER LINKING OTHER MODEL FIXTURES AS THE POWER CONSUMPTION OF OTHER MODEL FIXTURES MAY EXCEED THE MAX POWER OUTPUT ON THIS FIXTURE. CHECK SILK SCREEN FOR MAX AMPS.

DO NOT INSTALL THE FIXTURE IF YOU ARE NOT QUALIFIED TO DO SO!

Fixture MUST be installed following all local, national, and country commercial electrical and construction codes and regulations.

Before rigging/mounting a single fixture or multiple interconnected fixtures for custom matrix designs to any metal truss/structure or placing the fixture(s) on any surface, a professional equipment installer **MUST** be consulted to determine if the metal truss/structure or surface is properly certified to safely hold the combined weight of the fixture(s), clamps, cables, and accessories.

Fixture ambient operating temperature range is **-4° to 113°F. (-20° to 45°C).** Do not use the fixture when ambient temperature falls outside this range.

Fixture(s) should be installed in areas outside walking paths, seating areas, or away from areas were unauthorized personnel might reach the fixture by hand.

NEVER stand directly below the fixture(s) when rigging, removing or servicing.

Overhead fixture installation must always be secured with a secondary safety attachment, such as an appropriately rated safety cable that meets all local, national, and country codes and regulations. Allow approximately 15 minutes for the fixture to cool down before servicing.

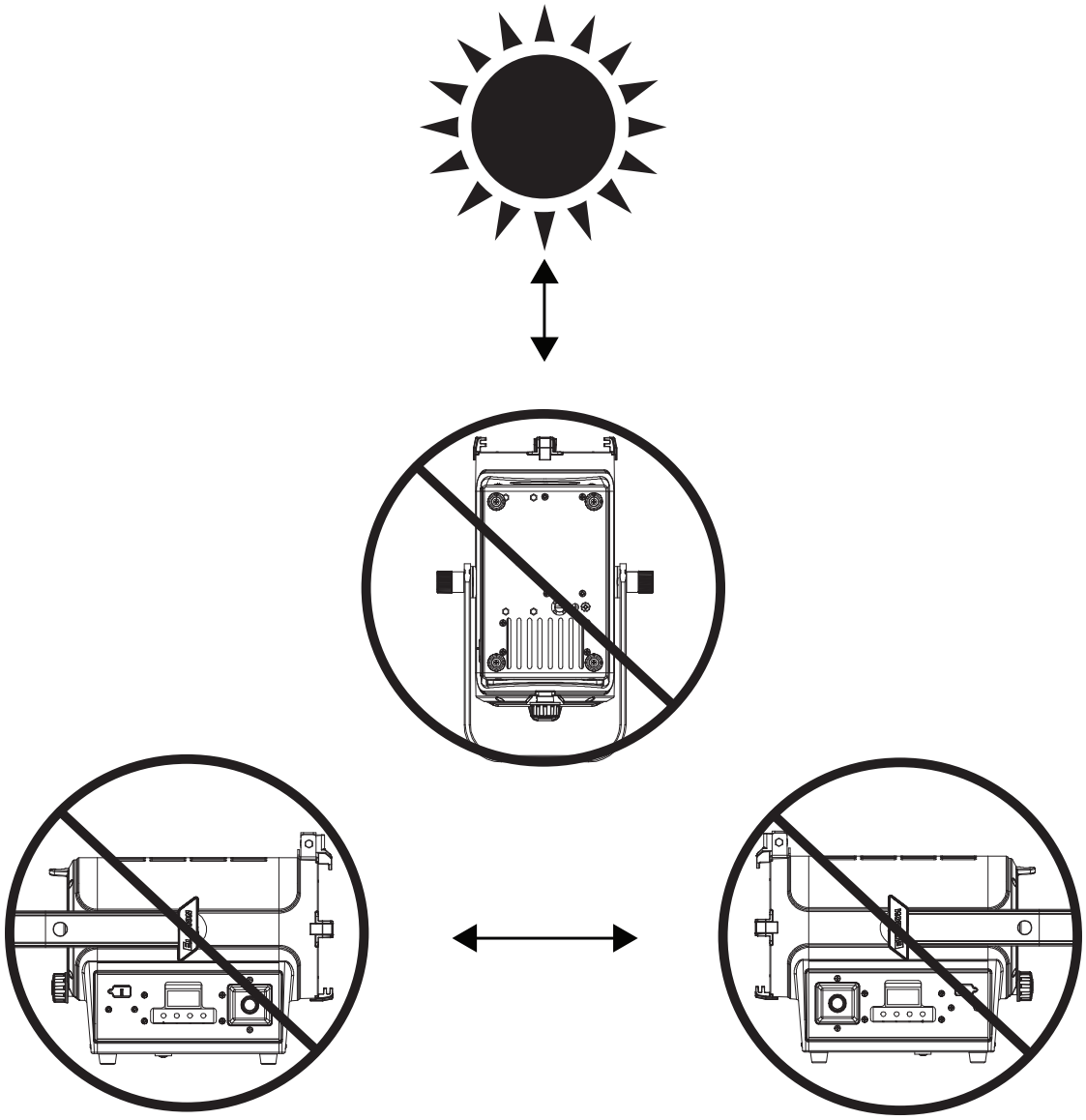
INSTALLATION GUIDELINES

POTENTIAL INTERNAL FIXTURE DAMAGE FROM EXTERNAL SOURCES OF LIGHT BEAMS

External sources of light beams from direct sunlight, lighting moving head fixtures, and lasers, which are focused directly towards the exterior housing and/or penetrate the front lens opening of ELATION lighting fixtures, can cause severe internal damage including burning to optics, dichroic color filters, glass and metal gobos, prisms, animation wheels, frost filters, iris, shutters, motors, belts, wiring, discharge lamps, and LEDs.

This issue is not specific only to ELATION lighting fixtures, it is a common issue with lighting fixtures from all manufacturers. Although there is no true way to fully prevent this issue from happening, the guidelines below can prevent any potential damage from occurring if followed. Contact ELATION Service for more details.

DO NOT EXPOSE THE FIXTURE AND/OR FRONT LENS OPENING TO LIGHT BEAMS FROM DIRECT SUNLIGHT, OTHER LIGHTING MOVING HEAD FIXTURES, AND LASERS WHILE UNPACKING, INSTALLATION, USE, AND EXTENDED IDLE TIMES OUTDOORS. DO NOT FOCUS A LIGHT BEAM FROM ONE LIGHTING FIXTURE DIRECTLY TOWARDS ANOTHER.

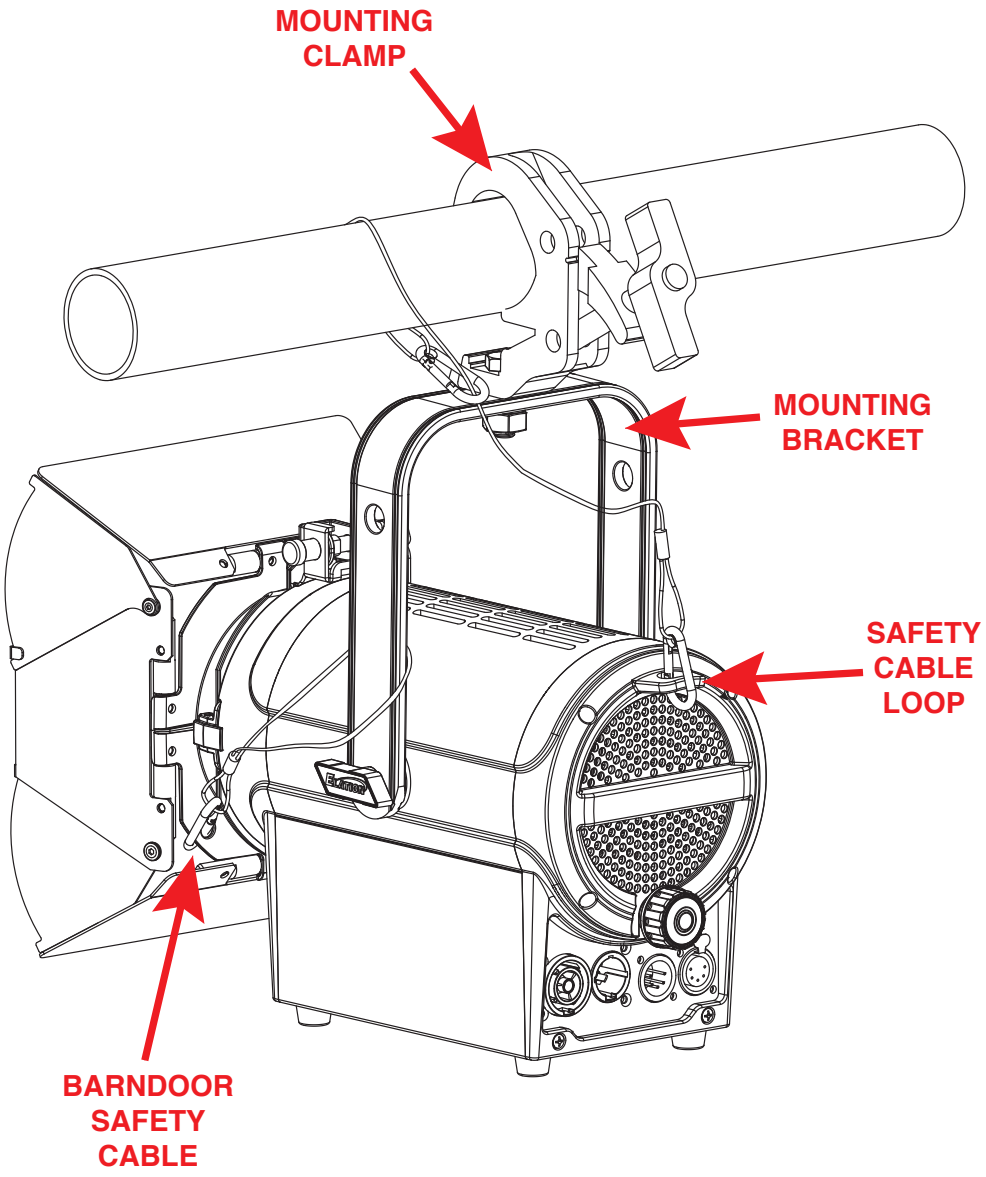


INSTALLATION GUIDELINES

CLAMP INSTALLATION (NOT INCLUDED)

This fixture includes an adjustable mounting bracket with an attachment point for a mounting clamp located at the top of the bracket, as well as a safety cable loop located on the rear of the fixture. When attaching a mounting clamp to the bracket, secure an appropriately rated clamp (not included) to the yoke using at minimum a M10 screw, and always attach a SAFETY CABLE of the appropriate rating to the safety cable loop.

Please note: when the fixture is fitted with the Barndoor accessory, the Barndoor requires its own separate safety cable.



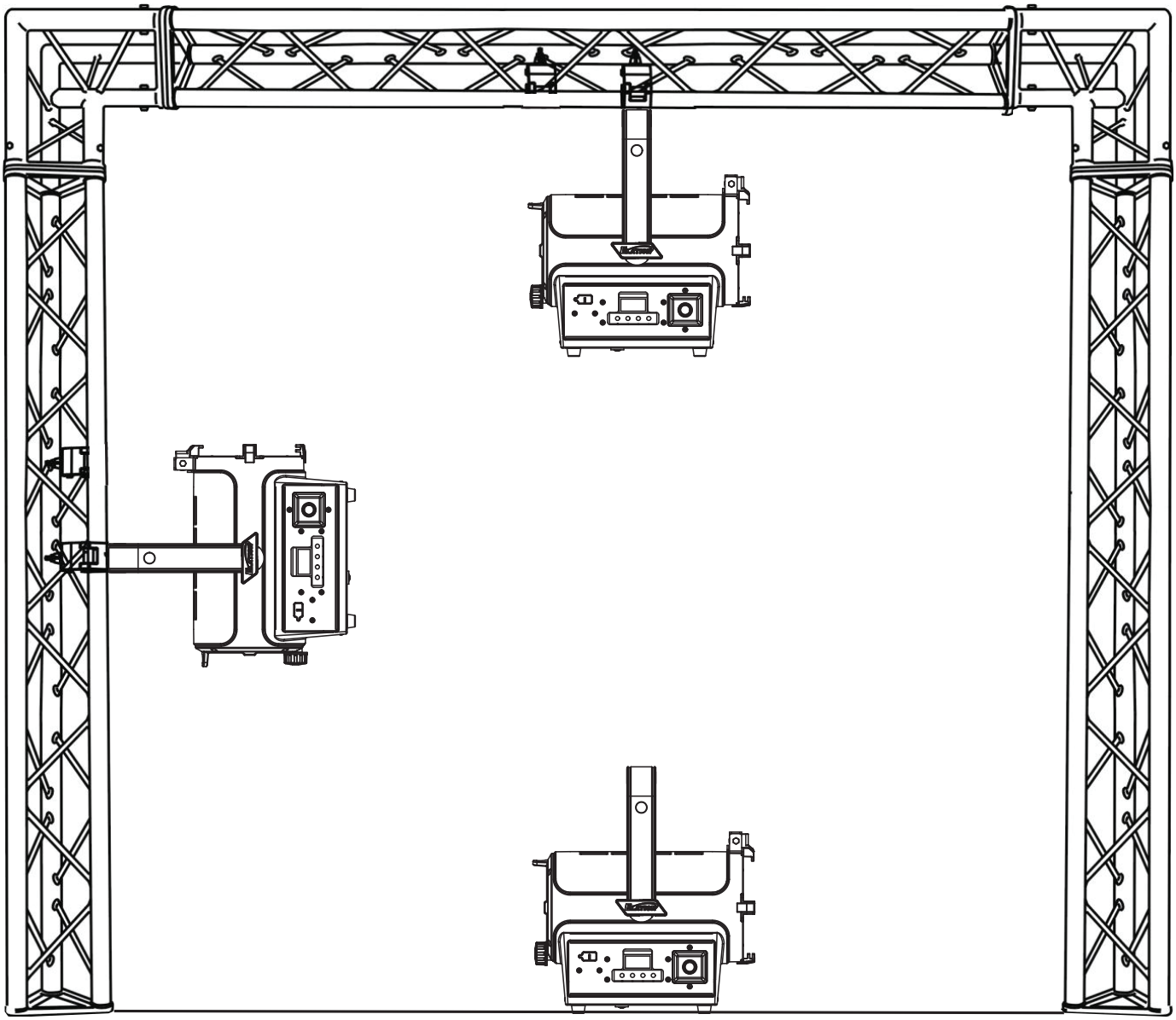
SAFETY CABLE

ALWAYS ATTACH A SAFETY CABLE WHENEVER INSTALLING THIS FIXTURE IN A SUSPENDED ENVIRONMENT TO ENSURE THE FIXTURE WILL NOT DROP IF THE CLAMP FAILS.

INSTALLATION GUIDELINES

RIGGING

This fixture can be mounted suspended upside down from a truss, mounted to a vertical truss, or standing upright on a stable, level surface. Refer to the illustration below. **Please note that if the fixture is fitted with the Barndoor accessory, then it must be installed with the accessory latch oriented upwards in order to ensure that the Barndoor does not fall even in the event of a latch failure.**



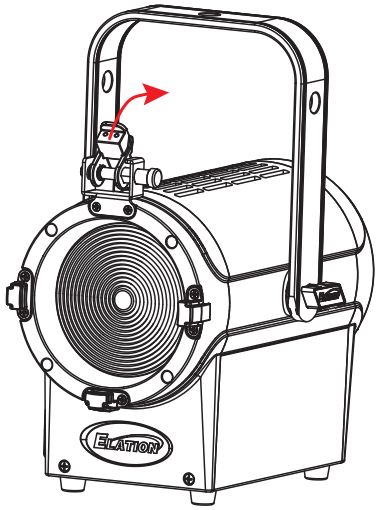
CAUTION: Falling fixtures can cause severe injury or serious equipment damage! For this reason, fixtures should be installed and inspected only by qualified personnel. Do not in-stall the unit if you lack the qualifications to do so, or if you have doubts about the safety and security of the installation setup or location!

ACCESSORY INSTALLATION

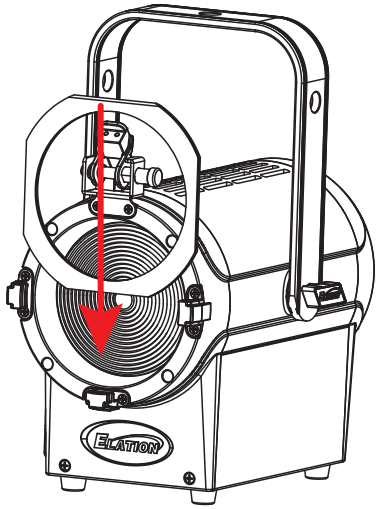
GEL FRAME AND BARN DOOR INSTALLATION

The fixture has 2 slots on the front to hold the Gel Frame and the Barndoors. Follow the directions below to install these accessories.

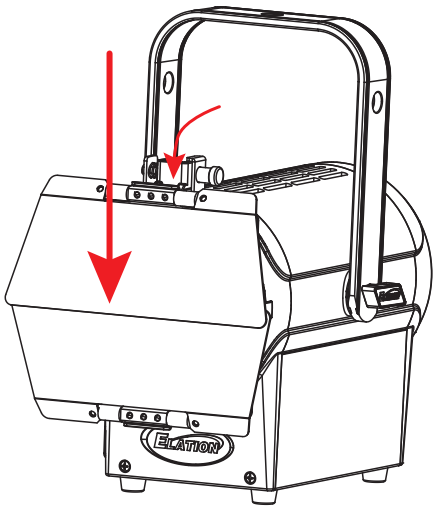
1. Open the accessory latch.



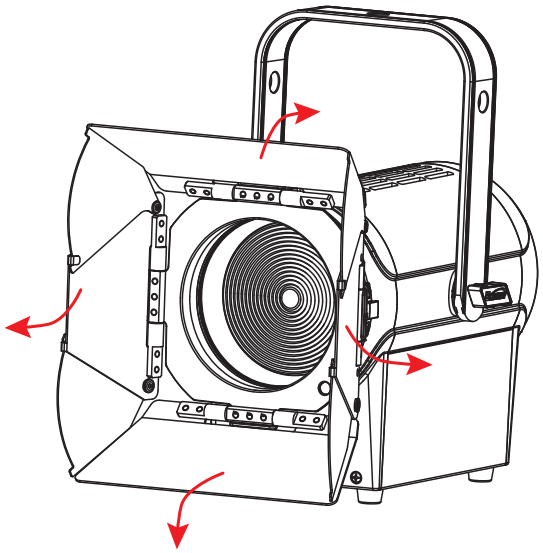
2. Slide the Gel Frame into the small slot closest to the fixture's lens.



3. Slide the Barndoors into the second slot in front of the Gel Frame. Close the accessory latch to secure in place.



4. Pull outward on the tabs to open up the Barndoor flaps.



REMOTE DEVICE MANAGEMENT (RDM)

NOTE: In order for RDM to work properly, RDM enabled equipment must be used throughout the entire system, including DMX data splitters and wireless systems.

Remote Device Management (RDM) is a protocol that sits on top of the DMX512 data standard for lighting, and allows the DMX systems of the fixtures to be modified and monitored remotely. This protocol is ideal for instances in which a unit is installed in a location that is not easily accessible.

With RDM, the DMX512 system becomes bi-directional, allowing a compatible RDM enabled controller to send out a signal to devices on the wire, as well as allowing the fixture to respond (known as a GET command). The controller can then use its SET command to modify settings that would typically have to be changed or viewed directly via the unit's display screen, including the DMX Address, DMX Channel Mode, and Temperature Sensors.

FIXTURE RDM INFORMATION:

Device ID	Device Model ID	RDM Code	Personality ID
0000-FFFF	001E	22A6	[001] 1Ch Dimmer, [002] 2Ch Dimmer & CCT, [003] 6Ch Dimmer/CCT/Color Picker, [004] 11Ch Standard, [005] 18Ch Legacy Extended, [006] 19Ch Extended, [007] 9Ch CMY, [008] 14Ch Legacy CMY Ext, [009] 15Ch CMY Ext

Please be aware that **not all RDM devices support all RDM features,** and therefore it is important to check beforehand to ensure that the equipment that you are considering includes all of the features that you require.

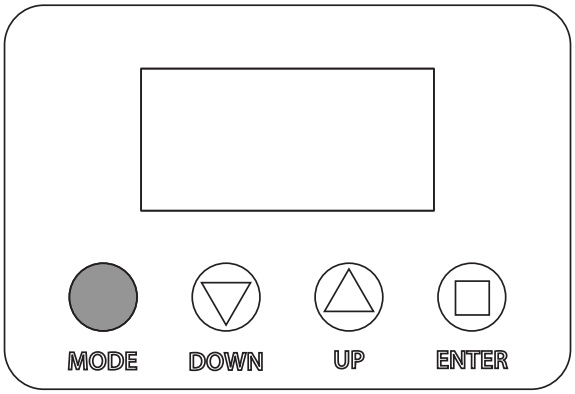
The following parameters are accessible in RDM on this device:

[0x0011] Proxied Device Count	[0x0015] Comms Status	[0x0122] Default Slot Value
[0x0200] Sensor Definition	[0x0031] Status ID Description	[0x00B0] Language
[0x0201] Sensor Value	[0x0032] Clear Status ID	[0x00A0] Language Capabilities
[0x0080] Device Model Description	[0x0405] Device Power Cycles	[0x00C2] Boot Software Version Label
[0x0081] Manufacturer Label	[0x0500] Display Invert	[0x00C1] Boot Software Version ID
[0x0082] Device Label	[0x0501] Display Level	[0x0070] Product Detail ID List
[0x00E0] DMX Personality	[0x0603] Realtime Clock	[0x0030] Status Messages
[0x00E1] DMX Personality Description	[0x1010] Power State	[0x1001] Reset Device
[0x0400] Device Hours	[0x1031] Preset Playback	[0x0000] Undefined PID

SYSTEM MENU

The fixture includes an easy to navigate system menu. The control panel (see image below) located on the side of the fixture provides access to the main system menu and is where all necessary system adjustments are made to the fixture. During normal operation, pressing **MODE** button once will access the fixture's main menu. Once in the main menu you can navigate through the different functions and access the sub-menus with the **UP** and **DOWN** buttons. Once you reach a field that requires adjusting, press the **ENTER** button to activate that field and use the **UP** and **DOWN** buttons to adjust the field. Pressing the **ENTER** button once more will confirm your setting. You may exit the main menu at any time without making any adjustments by pressing the **MODE** button.

NOTE: To access the LCD Menu Control Display when locked, press and hold the **MODE** button for 3 seconds. The LCD Menu Control Display will shut **OFF** automatically about 1 minute from the last button press.



SCREEN LOCK

The display screen will lock after a pre-selected period of inactivity. By default, this function is disabled, but it can be switched on and set by navigating to Settings > Display > Screen Lock in the system menu. To unlock, press and hold the MODE button for 3 seconds.

SERVICE PORT

This device features a service port on the control panel that can be used to perform software updates. Please refer to the **Software Updates** section of this manual for detailed information.

SYSTEM MENU

ENCODER MODE	Disabled			Run fixture in DMX mode
	Dimmer			Run fixture in dimmer mode
	Int CCT Grn			Run fixture in CCT mode with encoder control
	Int Color Sat			Run fixture in color mode with encoder control
	Manual Control			Run fixture in manual control mode with encoder control
DMX	DMX Address	**001** - 512		Set DMX address
	DMX Mode	**1Ch Dimmer**		Select DMX channel mode
		2Ch Dimmer & CCT		
		6Ch Dim/CCT/Clr		
		11Ch Standard		
		18Ch Legacy Extended		
		19Ch Extended		
		9Ch CMY		
		14Ch Legacy CMY Extended		
		15Ch CMY Extended		
	No DMX Status	**Hold Last**		Fixture holds last settings received if DMX connection is lost
		Fade to Black		Fixture fades display to black if DMX connection is lost
		Control		Fixture defaults to standalone mode if DMX connection is lost
CONTROL	Dimmer	000% - **100%**		Set master dimmer
	Manual Color	Red	000 - **255**	Manually configure color settings
		Green	000 - **255**	
		Blue	000 - **255**	
		Mint	000 - **255**	
		Amber	000 - **255**	
		CCT	2400K - 8500K Default = **6000K**	
		Green Shift	-100% ~ +100% Default = **0%**	
		Virtual Color	See **Color Macros** section of this manual	

SYSTEM MENU

CONTROL (continued)	Primary	On / **Off**		Enable or disable primary mode
	Secondary	On / **Off**		Enable or disable secondary mode
	Self Test	All		Run a diagnostic test
		Dimmer		
		Color		
SETTINGS	Dim Modes	**Standard**		Select dimming mode
		Stage		
		TV		
		Architectural		
		Theatre		
		Stage 2		
		Dim Speed	0s - 10s Default = **0.1s**	Set dimming speed
	Dim to Warm	On / **Off**		Enable or disable dim to warm feature
	Dim Curves	Linear		Select dim curve
		Square		
		Square Inverse		
		S-Curve		
	LED Refresh Rate	900Hz - 1500Hz, 2500Hz, 4000Hz, 5000Hz, 6000Hz, 10KHz, 15KHz, 20KHz, 25KHz Default = **1200Hz**		Set LED refresh rate
	Color Tuning	Highest Fidelity		
		Balanced Output and Fidelity		
		Highest Output		
	Output Balance	**Bright (Highest Output)**		Select output balance setting
		Uniform (Elation Full Spectrum Match)		
	LED Power Limit	50%		Set LED power output limit
		60%		
		70%		
		80%		
		90%		
		100%		
	Fan Mode	**Auto**		Set fan mode setting
		High		
		Silent		
		Mute		

SYSTEM MENU

SETTINGS (continued)	Display	Screen Delay	10s - 5min Default = **1min**	Screen goes into standby mode after selected period of inactivity
		Screen Lock	**Off,** 10s - 5min	Screen controls lock after selected period of inactivity
		Rotate Display	Yes	Inverted display orientation
			No	Standard display orientation
			Auto	Orientation changes to keep screen display upright
	Reset Defaults	Yes / **No**		Reset unit to factory default settings
INFORMATION	Time	Current Run Time		Displays current fixture run time
		Total Run Time		Displays lifetime total fixture run time
		Last Run Time		Displays fixture run time since last reset
	Temperature	Current		Displays current temperature
		Max Resettable		Displays maximum recorded temperature since last reset
	DMX Values	Red		Displays current DMX values for each parameter
		Green		
		...		
	Product IDs	RDM UID		Displays fixture RDM UID
	Error Logs	Fixture Errors		Displays recorded fixture errors
	Software Version	Vx.x		Displays current software version
SERVICE Passcode = 050	Calibration	Red	000 - 255	Calibrate color output
		Green	000 - 255	
		Blue	000 - 255	
		Mint	000 - 255	
		Amber	000 - 255	
	Update Software	Yes / **No**		Update software version
	Reset Last Run	Yes / No		Reset Last Run Time and Max Resettable Temperature readings
	Reset Error Logs	Yes / No		Clear error log

ENCODER MODE

DIMMER MODE			
FUNCTION	**DISPLAY**	**INCREMENTS**	**DEFAULT**
Intensity Dimmer	Intensity 0 - 100%	1%	0%

INT CCT GRN MODE			
FUNCTION	**DISPLAY**	**INCREMENTS**	**DEFAULT**
Intensity Dimmer	Intensity 0 - 100%	1%	0%
Color Temperature	CCT 2400 - 8500K	100K	6000K
Green Shift	GRN - 100% to +100%	1%	Neutral

INT COLOR SAT MODE			
FUNCTION	**DISPLAY**	**INCREMENTS**	**DEFAULT**
Intensity Dimmer	Intensity 0 - 100%	1%	0%
Color Mixing	Virtual Color 1, 2, 3, 4...	Single Color	-
Saturation	Sat 0 - 100%	1%	100%

MANUAL CONTROL MODE			
FUNCTION	**DISPLAY**	**INCREMENTS**	**DEFAULT**
Dimmer	Intensity 0 - 100%	1%	0%
Options	[Setting Name] 0 - 100	Strobe, Red, Green, Blue, Mint, Amber	Strobe
Adjuster	[Value] 0 - 100%	1%	0%

FAN MODES

The KL Fresnel 4 FC is a high-performance fixture suited for multiple applications. For noise critical environments such as Theater, Opera or Orchestra Halls, it offers various fan operation modes which remove any distraction for the audience and performers. Fan Modes can be changed remotely via the DMX control channel, allowing the fixture to offer high output or whisper silent operation at a moment's notice. All Fan Modes smoothly transition over a brief time, preventing unwanted attraction to the fixture.

Auto (Default)—Fans only run at the speeds needed to keep the LED engine within a safe temperature range and ensures optimal performance of the fixture. If possible, they will turn-off, for example, when the fixture is dimmed to a low intensity. Fans sense the ambient and fixture temperature, and will always try to keep noise levels to a minimum. The fixture output will only reduce when the LED engine cannot be cooled down to its safe operating range due to high ambient temperature. **NOTE: Recommended for daily operation.**

High—Fan speeds are increased throughout for the most efficient cooling of the fixture. This mode will increase wear on the fans and should only be utilized in exceptional circumstances. Fans will always run, even if the fixture is dimmed down. Fixture output is kept at 100% unless the LED engine temperature reaches an unsafe temperature at which point the fixture will reduce power carefully to ensure continued safe operation. This mode is only required in very high ambient temperatures when automatic fan speed adjustments are not desired.

Low Noise Modes
For very critical noise environments, the fixture offers two additional Low Noise Modes for silent operation. The fixture output will be reduced, yet due to the extremely high luminous flux, the fixture still offers outstanding performance. In Low Noise Modes, all parameters of the fixture operate more quietly with reduced fan speeds.

Silent - 75-80% max output, fans run at low speed.

Mute – All but one fixture fan is turned off for whisper-quiet operation. The fixture LED power output is reduced to 25%.

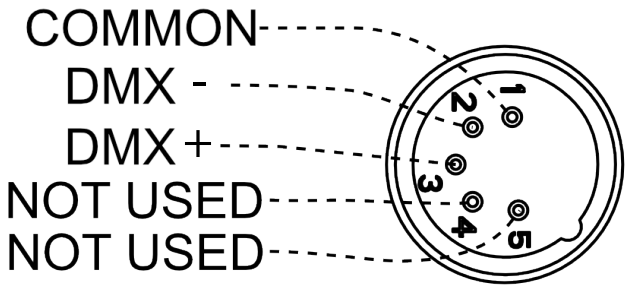
DMX SETUP

DMX-512: DMX is short for Digital Multiplex. This is a universal protocol used as a form of communication between intelligent fixtures and controllers. A DMX controller sends DMX data instructions from the controller to the fixture. DMX data is sent as serial data that travels from fixture to fixture via the DATA “IN” and DATA “OUT” XLR terminals located on all DMX fixtures (most controllers only have a DATA “OUT” terminal).

DMX Linking: DMX is a language allowing all makes and models of different manufacturers to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. To ensure proper DMX data transmission, try to use the shortest cable path possible when linking several DMX fixtures. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example, a fixture assigned a DMX address of 1 may be placed anywhere in a DMX line: at the beginning, at the end, or anywhere in the middle. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that unit, no matter where it is located in the DMX chain.

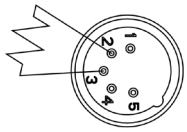
Data Cable (DMX Cable) Requirements (For DMX Operation): This unit can be controlled via DMX-512 protocol. The DMX address is set on the rear panel of the unit. Your unit and your DMX controller require a standard 5-pin XLR connector for data input and data output. We recommend Accu-Cable DMX cables. If you are making your own cables, be sure to use standard 110-120 Ohm shielded cable (This cable may be purchased at almost all pro lighting stores). Your cables should be made with a male XLR connector at one end and a female XLR connector at the other. Also remember that DMX cable must be daisy chained and cannot be split.

Notice: Be sure to follow the illustration below when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable’s shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR’s outer casing. Grounding the shield could cause a short circuit and erratic behavior.



DMX SET UP

Special Note: Line Termination. When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behavior. A terminator is a 110-120 ohm 1/4 watt resistor which is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This unit is inserted in the female XLR connector of the last unit in your daisy chain to terminate the line. Using a cable terminator (ADJ part number Z-DMX/T) will reduce the risk of erratic behavior.



A DMX512 terminator reduces signal errors, avoiding most signal reflection interference. Connect PIN 2 (DMX-) and PIN 3 (DMX+) of the last fixture in series with a 120 Ohm, 1/4 W Resistor to terminate the DMX512.

DMX ADDRESSING.
All fixtures should be given a DMX starting address when using a DMX controller, so the correct fixture responds to the correct control signal. This digital starting address is the channel number from which the fixture starts to “listen” to the digital control signal sent out from the DMX controller. The assignment of this starting DMX address is achieved by setting the correct DMX address on the digital control display on the fixture.

You can set the same starting address for all fixtures or a group of fixtures, or set different addresses for each individual fixture. Setting all fixtures to the same DMX address will cause all fixtures to react in the same way. In other words, changing the settings of one channel will affect all the fixtures simultaneously.

If you set each fixture to a different DMX address, each unit will start to “listen” to the channel number you have set, based on the quantity of DMX channels of each fixture. That means changing the settings of one channel will only affect the selected fixture.

For example, when this unit is operating in 2 channel mode, you should set the starting DMX address of the first unit to 1, the second unit to 3 (1 + 2), the third unit to 5 (1 + 2 + 2), and so on. See the chart below for more details.

CHANNEL MODE	UNIT 1 ADDRESS	UNIT 2 ADDRESS	UNIT 3 ADDRESS	UNIT 4 ADDRESS
1Ch	1	2	3	4
2Ch	1	3	5	7
6Ch	1	7	13	19
11Ch	1	12	23	34
18Ch	1	19	37	55
19Ch	1	20	39	58
9Ch	1	10	19	28
14Ch	1	15	29	43
15Ch	1	16	31	46

DMX TRAITS

1 Ch	2 Ch	6 Ch	11 Ch	18 Ch	19 Ch	9 Ch	14 Ch	15 Ch	DMX Values	Function	Snap	Def Value
1	1	1	1	1	1	1	1	1	0 - 255	**Dimmer**		0
										Intensity 0 → 100%		
		2	2	2	2	2	2	2	0 - 255	**Dimmer Fine**		0
										Fine Intensity Control		
		3	3	3	3	3	3	3		**Shutter / Strobe**		50
									0 - 31	Shutter Closed		
									32 - 63	No Function (shutter open)		
									64 - 95	Strobe Effect, slow to fast		
									96 - 127	No Function (shutter open)		
									128 - 159	Pulse Effect in Sequences		
									160 - 191	No Function (shutter open)		
									192 - 223	Random Strobe Effect, slow to fast		
									224 - 255	No Function (shutter open)		
			4	4	4				0 - 255	**Red**		0
										0 → 100%		
				5	5				0 - 255	**Red Fine**		0
										Fine Adjustment		
			5	6	6				0 - 255	**Green**		0
										0 → 100%		
				7	7				0 - 255	**Green Fine**		0
										Fine Adjustment		
			6	8	8				0 - 255	**Blue**		0
										0 → 100%		
				9	9				0 - 255	**Blue Fine**		0
										Fine Adjustment		
			7	10	10				0 - 255	**Mint**		0
										0 → 100%		
				11	11				0 - 255	**Mint Fine**		0
										Fine Adjustment		
			8	12	12				0 - 255	**Amber**		0
										0 → 100%		
				13	13				0 - 255	**Amber Fine**		0
										Fine Adjustment		
						4	4	4	0 - 255	**Cyan**		0
										0 → 100%		
							5	5	0 - 255	**Cyan Fine**		0
										Fine Adjustment		
						5	6	6	0 - 255	**Magenta**		0
										0 → 100%		
							7	7	0 - 255	**Magenta Fine**		0
										Fine Adjustment		
						6	8	8	0 - 255	**Yellow**		0
										0 → 100%		

DMX TRAITS

1 Ch	2 Ch	6 Ch	11 Ch	18 Ch	19 Ch	9 Ch	14 Ch	15 Ch	DMX Values	Function	Snap	Def Value
							9	9	0 - 255	**Yellow Fine**		0
										Fine Adjustment		
										CCT Presets		
									0 - 23	Open		
	2	4	9	14		7	10		24 - 85	2400K → 8500K (see **Color Temperature Table** section)	X	0
									86 - 255	8500K		
										Variable CCT		
					14			10	0 - 23	Open		0
									24 - 255	2400K → 8500K		
									0 - 255	**Variable CCT Fine**		
					15			11		Fine Adjustment		0
										Green Shift		
									0	Idle		
				15	16		11	12	1 - 127	Full Minus Green to Neutral		128
									128	Neutral White		
									129 - 255	Neutral to Full Plus Green		
										Color		
									0	Open		
									1 - 179	Virtual Swatch Book (see **Color Macros Table** section)		
										Color Scroll		
									180 - 201	Clockwise, fast → slow		
		5	10	16	17	8	12	13	202 - 207	Stop		0
									208 - 229	Counter-clockwise, slow → fast		
									230 - 234	Open		
										Random Slots		
									235 - 239	Fast		
									240 - 244	Medium		
									245 - 249	Slow		
									250 - 255	Open		
										Dim Modes		
									0 - 20	Standard		
									21 - 40	Stage		
									41 - 60	TV		
									61 - 80	Architectural		
									81 - 100	Theatre		
				17	18		13	14	101 - 120	Stage 2	X	0
										Dimmer Delay Time		
									121	0s		
									122	0.1s		
									123	0.2s		
									124	0.3s		
									125	0.4s		

DMX TRAITS

1 Ch	2 Ch	6 Ch	11 Ch	18 Ch	19 Ch	9 Ch	14 Ch	15 Ch	DMX Values	Function	Snap	Def Value
										Dimmer Delay Time (continued)		
									126	0.5s		
									127	0.6s		
									128	0.7s		
									129	0.8s		
									130	0.9s		
									131	1.0s		
									132	1.5s		
									133	2.0s		
									134	3.0s		
									135	4.0s		
				17	18		13	14	136	5.0s	X	0
									137	6.0s		
									138	7.0s		
									139	8.0s		
									140	9.0s		
									141	10.0s		
									142 - 149	Idle		
										Dim to Warm		
									150 - 154	DTW On		
									155 - 159	DTW Off		
									160 - 255	Idle		
										Control		
									0 - 29	Idle		
									30 - 39	Fan Mode Auto		
									40 - 49	Fan Mode High		
									50 - 59	Fan Mode Silent		
									60 - 69	Fan Mode Mute		
									70 - 99	Idle		
										Refresh Rate (Hz)		
									100	900		
									101	910		
									102	920		
		6	11	18	19	9	14	15	103	930	X	0
									104	940		
									105	950		
									106	960		
									107	970		
									108	980		
									109	990		
									110	1000		
									111	1010		
									112	1020		
									113	1030		

DMX TRAITS

1 Ch	2 Ch	6 Ch	11 Ch	18 Ch	19 Ch	9 Ch	14 Ch	15 Ch	DMX Values	Function	Snap	Def Value
										Refresh Rate (Hz) (continued)		
									114	1040		
									115	1050		
									116	1060		
									117	1070		
									118	1080		
									119	1090		
									120	1100		
									121	1110		
									122	1120		
									123	1130		
									124	1140		
									125	1150		
									126	1160		
									127	1170		
									128	1180		
									129	1190		
									130	1200		
									131	1210		
									132	1220		
									133	1230		
		6	11	18	19	9	14	15	134	1240	X	0
									135	1250		
									136	1260		
									137	1270		
									138	1280		
									139	1290		
									140	1300		
									141	1310		
									142	1320		
									143	1330		
									144	1340		
									145	1350		
									146	1360		
									147	1370		
									148	1380		
									149	1390		
									150	1400		
									151	1410		
									152	1420		
									153	1430		
									154	1440		
									155	1450		
									156	1460		

DMX TRAITS

1 Ch	2 Ch	6 Ch	11 Ch	18 Ch	19 Ch	9 Ch	14 Ch	15 Ch	DMX Values	Function	Snap	Def Value
										Refresh Rate (Hz) (continued)		
									157	1470		
									158	1480		
									159	1490		
									160	1500		
									161	2500		
									162	4000		
									163	5000		
									164	6000		
									165	10000		
									166	15000		
									167	20000		
									168	25000		
		6	11	18	19	9	14	15	169 - 174	Idle	X	0
										Color Tuning		
									175 - 176	Highest Fidelity		
									177 - 178	Balanced Output and Fidelity		
									179 - 180	Highest Output (Default)		
										Output Balance		
									181 - 182	Bright (Highest Output)		
									183 - 184	Uniform (Elation Full Spectrum Match)		
									185 - 200	Idle		
										Dimmer Curves		
									201 - 210	Linear		
									211 - 220	Square		
									221 - 230	Inverse Square		
									231 - 240	S-Curve (Default)		
									241 - 255	Idle		

COLOR MACROS TABLE

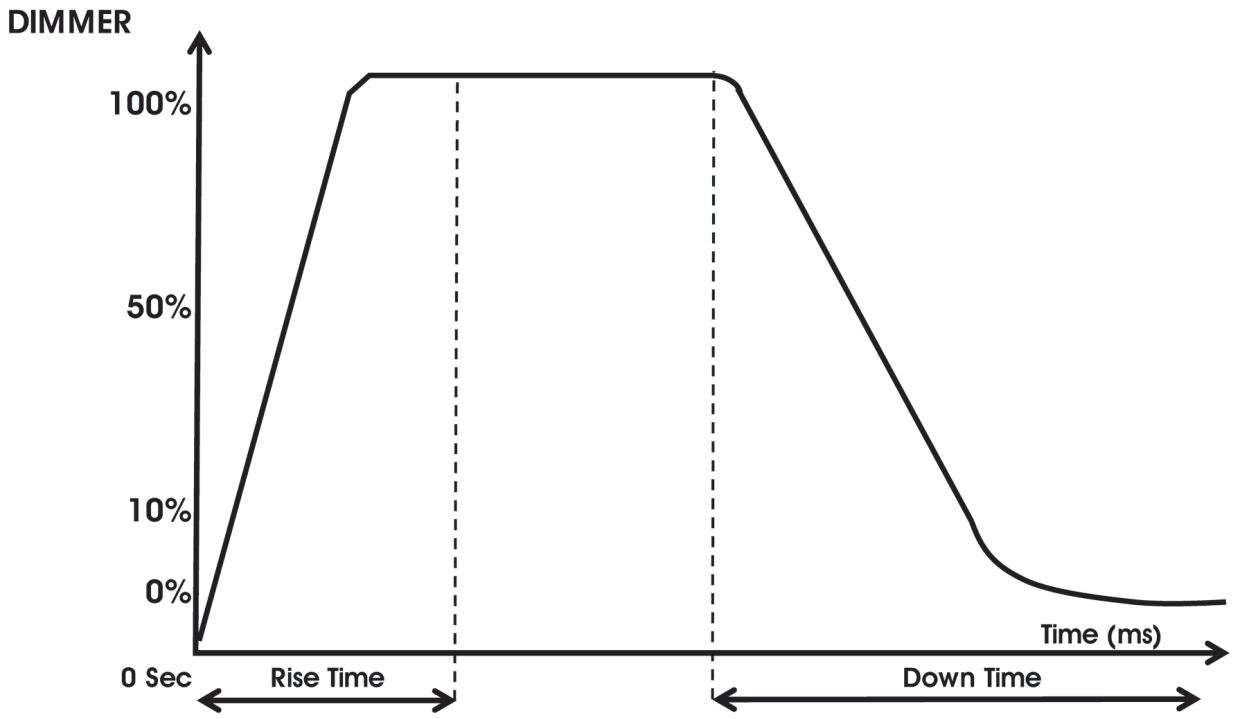
Value	Filter Number	Name	Value	Filter Number	Name
1	7	Pale Yellow	32	49	Medium Purple
2	103	Straw	33	58	Lavender
3	151	Gold Tint	34	199	Palace Blue
4	100	Spring Yellow	35	119	Dark Blue
5	10	Medium Yellow	36	132	Medium Blue
6	101	Yellow	37	120	Deep Blue
7	104	Deep Amber	38	165	Daylight Blue
8	15	Deep Straw	39	161	Slate Blue
9	179	Loving Amber	40	118	Light Blue
10	21	Gold Amber	41	68	Sky Blue
11	105	Orange	42	143	Pale Navy Blue
12	158	Deep Orange	43	131	Marine Blue
13	22	Dark Amber	44	115	Peacock Blue
14	778	Millenium Gold	45	172	Lagoon Blue
15	135	Deep Golden Amber	46	116	Medium Blue Green
16	24	Scarlet	47	90	Dark Yellow Green
17	106	Primary Red	48	139	Primary Green
18	26	Bright Red	49	122	Fern Green
19	27	Medium Red	50	89	Moss Green
20	19	Fire	51	124	Dark Green
21	157	Pink	52	88	Lime Green
22	36	Medium Pink	53	138	Pale Green
23	111	Dark Pink	54	203	Quarter CT Blue
24	128	Bright Pink	55	202	Half CT Blue
25	148	Bright Rose	56	201	Full CT Blue
26	332	Special Rose Pink	57	200	Double CT Blue
27	793	Vanity Fair	58	206	Quarter CT Orange
28	113	Magenta	59	205	Half CT Orange
29	46	Dark Magenta	60	204	Full CT Orange
30	48	Rose Purple	61-179		No Function
31	126	Mauve			

COLOR TEMPERATURE

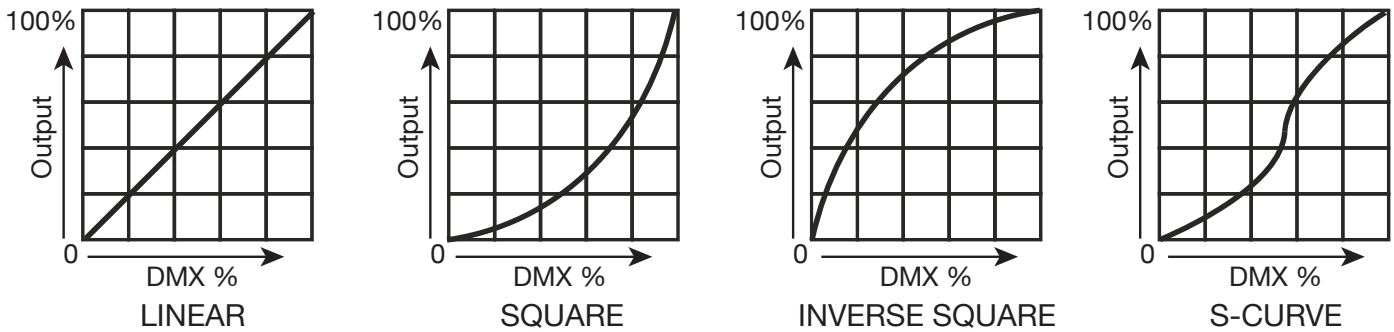
Colors shown are an approximate representation.

DMX VALUE	COLOR TEMPERATURE (K)	DMX VALUE	COLOR TEMPERATURE (K)
24	2400	63	6300
25	2500	64	6400
26	2600	65	6500
27	2700	66	6600
28	2800	67	6700
29	2900	68	6800
30	3000	69	6900
31	3100	70	7000
32	3200	71	7100
33	3300	72	7200
34	3400	73	7300
35	3500	74	7400
36	3600	75	7500
37	3700	76	7600
38	3800	77	7700
39	3900	78	7800
40	4000	79	7900
41	4100	80	8000
42	4200	81	8100
43	4300	82	8200
44	4400	83	8300
45	4500	84	8400
46	4600	85	8500
47	4700		
48	4800		
49	4900		
50	5000		
51	5100		
52	5200		
53	5300		
54	5400		
55	5500		
56	5600		
57	5700		
58	5800		
59	5900		
60	6000		
61	6100		
62	6200		

DIMMER MODES AND DIM CURVES



Dimming Curve Ramp Effect	0 sec Fade Time (255 / 0)		1 sec Fade Time (255 / 0)	
	Rise Time (ms)	Down Time (ms)	Rise Time (ms)	Down Time (ms)
Standard (default)	0	0	0	0
Stage	780	1100	1540	1660
TV	1180	1520	1860	1940
Architectural	1380	1730	2040	2120
Theatre	1580	1940	2230	2280
Stage 2	0	1100	0	1660



SOFTWARE UPDATES

ONLY QUALIFIED TECHNICIANS SHOULD PERFORM THIS FUNCTION!
NOTE ALL MENU SETTINGS BEFORE UPDATING SOFTWARE!
FIXTURE SOFTWARE CAN NOT BE DOWNGRADED!
DOWNLOAD FIXTURE SOFTWARE TO PC ONLY! (NO MAC SUPPORT)
PLEASE CONTACT ELATION SERVICE FOR FURTHER INFORMATION.

PERSONALITY – Service Setting – USB Update
To update the fixture software via the UPDATE/SERVICE PORT, follow steps below.

1. Copy fixture software update file from a PC computer to a compatible USB flash drive. Make sure only the fixture software update file is stored on the USB flash drive.
2. Disconnect DMX, Art-Net, and E-FLY connections and power the fixture ON.
3. Insert USB flash drive into the UPDATE/SERVICE PORT on the rear connection panel.
4. Navigate to the Personality > Service, then input the service passcode. Select the Update Software option.
5. Select the software file name on the menu display and press ENTER.
6. Select YES to begin update process. Updating…% will show on the menu display.
7. After file is uploaded, the fixture will check the software, which may take some time.
8. The fixture will perform a reset process when the software update process is complete.
9. Remove the USB flash drive and make necessary system menu setting adjustments.

C-LOADER II
Alternately, an Elation C-Loader II can be used to update the fixture to the latest software. Please visit the C-Loader II product page at the Elation web site and download the product manual for step by step instructions.

https://www.elationlighting.com/c-loader-software-uploader

To order the C-Loader II uploader and the updated software for your fixture, please contact Elation support for details.

SPECIFICATIONS

SOURCE
- 80W 6500K RGBMA LED Engine
- 50,000 Hour Average LED Life*
- *May vary depending on several factors including but not limited to: Environmental Conditions, Power/Voltage, Usage Patterns (On-Off Cycling), Control and Dimming.

PHOTOMETRIC DATA
- Total Lumen Output:
- 2226 (Integrating Sphere)
- 2174 (Goniometer)
- CRI 94.2
- TLCI: 87
- Zoom Range 10° - 45°
- Beam Angle 11° - 47.6°
- Field Angle 21.5° - 72.8°

EFFECTS
- Manual Zoom
- Electronic Dimmer and Strobe
- Variable 16-bit Dimming Modes and Curves

COLOR
- High Brightness and High Fidelity Output Options
- RGBMA Color Array
- CMY Emulation
- 16bit Fully Variable CCT 2400K - 8500K
- Green/Magenta Shift
- Dim-to-Warm Fade
- Virtual Gel Swatch Book

CONTROL / CONNECTIONS
- 9 DMX Channel Modes (1, 2, 6, 11, 18, 19, 9, 14, 15)
- Manual and DMX Controlled Dimmer, Color
- Direct Access Encoder
- 4 Button Control Panel, LED Display
- RDM (Remote Device Management)
- 3/5pin DMX and IP65 Locking Power In/Out Connection

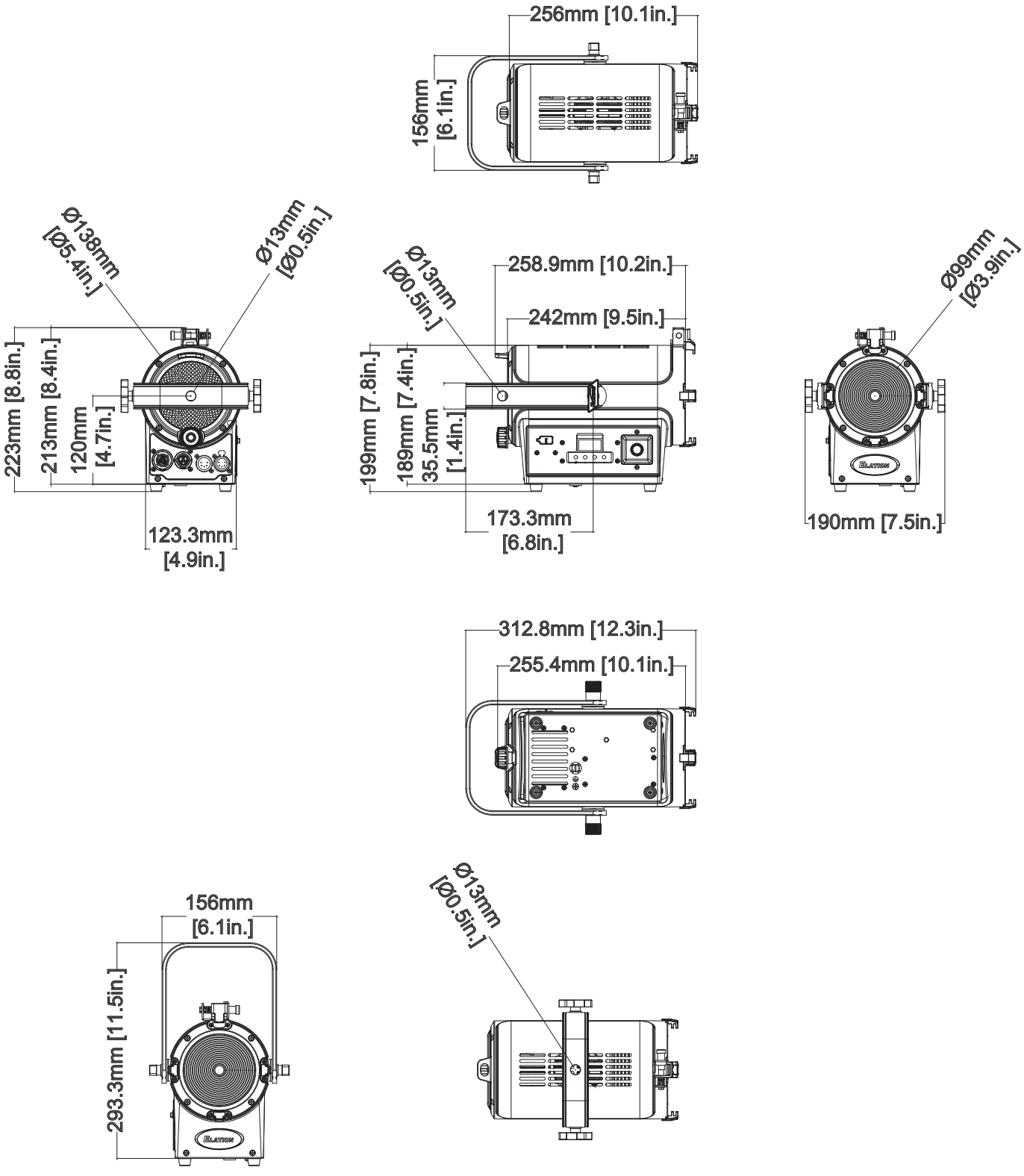
SIZE / WEIGHT
- Length: 7.5” (190mm)
- Width: 12.3” (312.8mm)
- Vertical Height: 8.8” (223mm)
- Weight: 8.2 lbs / 3.71 kg

ELECTRICAL / THERMAL
- AC 100-240V - 50/60Hz
- 85W Max Power Consumption
- Power Thru Capacity: 11A (14 units @ 110V; 31 units @ 240V)
- 5°F to 113°F (-15°C to 45°C)
- BTU/hr (+/- 10%) 289.85

INCLUDED ITEMS
- Gel Frame
- 8-Leaf Barn Doors
- IP65 Locking Power Cable
- Safety Cable

APPROVALS / RATINGS
- CE | cETLus | IP20 | FCC | UKCA

DIMENSIONAL DRAWINGS



OPTIONAL ACCESSORIES

SKU NUMBER	DESCRIPTION
SIP139	IP65 Rated Twist Lock Power Cable, 10ft (3m)*
TOU027	Tour Link 5pin 10ft Tour Grade DMX Data Cable
TRIGGER CLAMP	Heavy Duty Hook Style Clamp
KLF135	Universal Snap Bag

FCC STATEMENT

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.

FCC RADIO FREQUENCY INTERFERENCE WARNINGS & INSTRUCTIONS

This product has been tested and found to comply with the limits as per Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device uses and can radiate radio frequency energy and, if not installed and used in accordance with the included instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Reorient or relocate the device.
- Increase the separation between the device and the receiver.
- Connect the device to an electrical outlet on a circuit different from which the radio receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.