# ELATION
## PROFESSIONAL

# KL FRESNEL 8 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 |
|---|---|---|---|---|
| 2/8/21 | 1 | 1.02 | 1/7/12/18/10/14 | Initial release |
| 4/4/21 | 1.5 | 1.02 | 1/7/12/19/10/15 | Updated Specs. |
| 7/14/21 | 2.0 | N/C | No Change | Updated Specifications and System Menu. |
| 2/15/22 | 2.5 | N/C | No Change | Added Optional Accessories. |
| 6/21/22 | 3.0 | N/C | No Change | Removed E-Fly mentions |
| 4/27/23 | 3.5 | N/C | No Change | Added Software Updates; updated Overview and Installation Guidelines |

# 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 | Fax 323-832-9142 | 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. 6" (15cm) 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 electric 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.

# FIXTURE OVERVIEW

Manual
Dimming
Control

Display
Screen

USB
Software
Update
Port

Mode
Button

Up
Button

Down
Button

Enter
Button

Manual
Function
Control

3pin
DMX In

5pin
DMX In

5pin
DMX Out

3pin
DMX Out

Power
In

Power
Out

Fuse

9
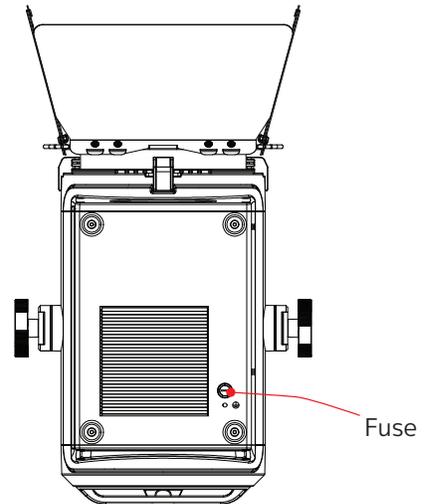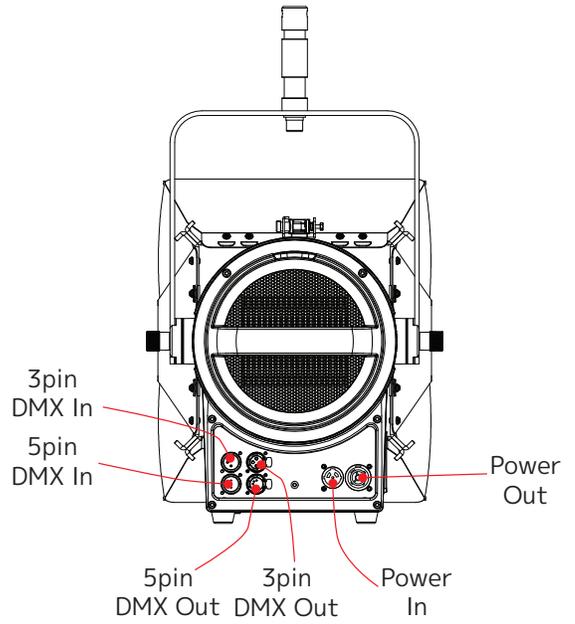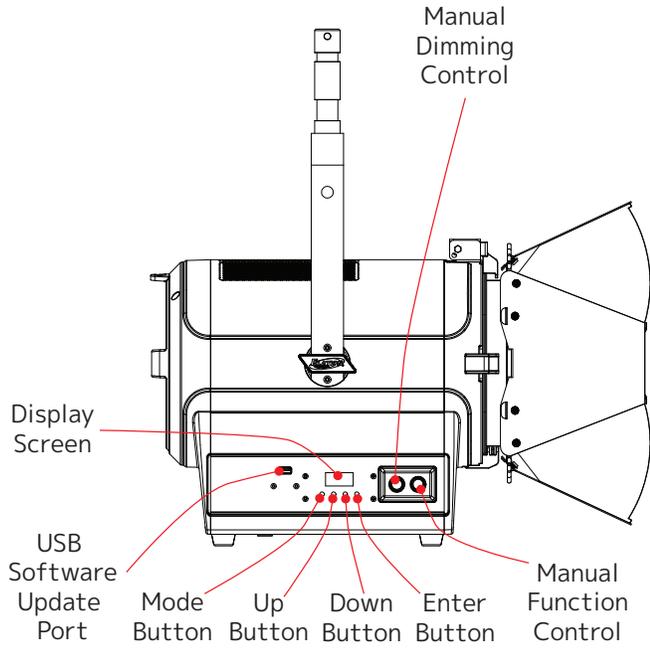
# INSTALLATION GUIDELINES

**FLAMMABLE MATERIAL WARNING**
Keep fixture minimum 5.0 feet (1.5m) 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 **14° to 113°F. (-10° to 45°C)**
Do not use the fixture under or above this temperature.

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 serving.

# 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.**
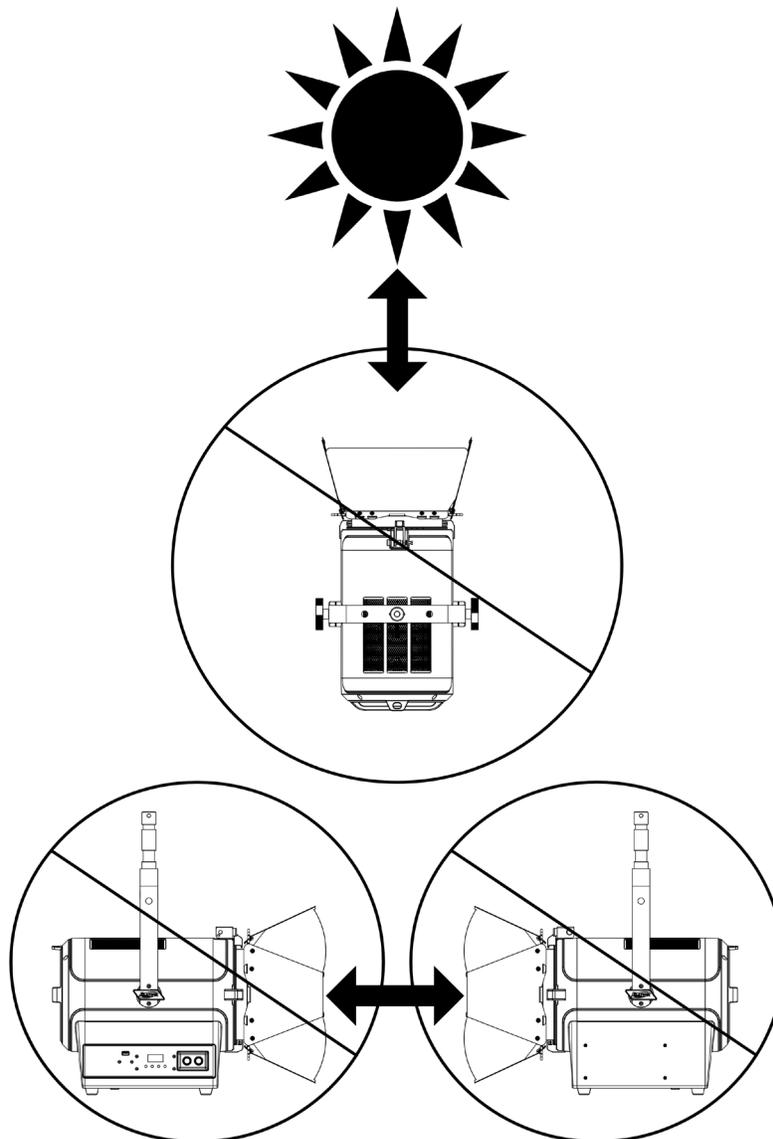
# INSTALLATION GUIDELINES

**GEL FRAME AND BARN DOOR INSTALLATION**
The fixture has 2 slots on the front to hold the GEL FRAME and BARN DOOR. The first smaller slot is for the GEL FRAME and the second larger slot is for the BARN DOOR. The fixture also has a top lock that secures these accessories to the fixture.
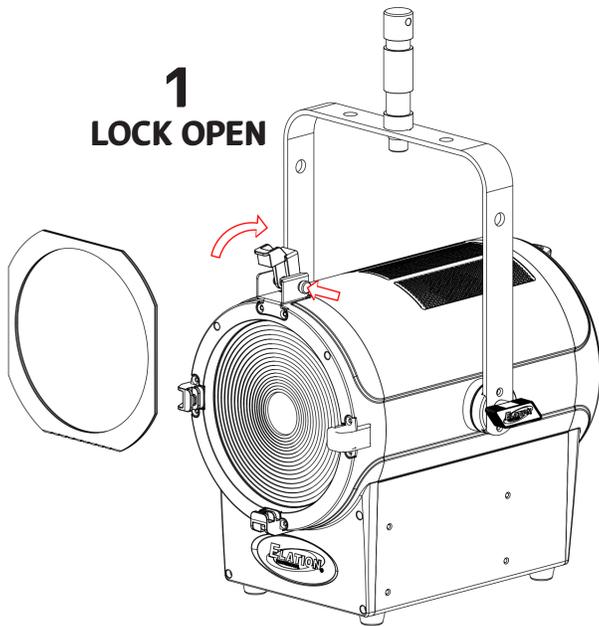
**1**
**LOCK OPEN**
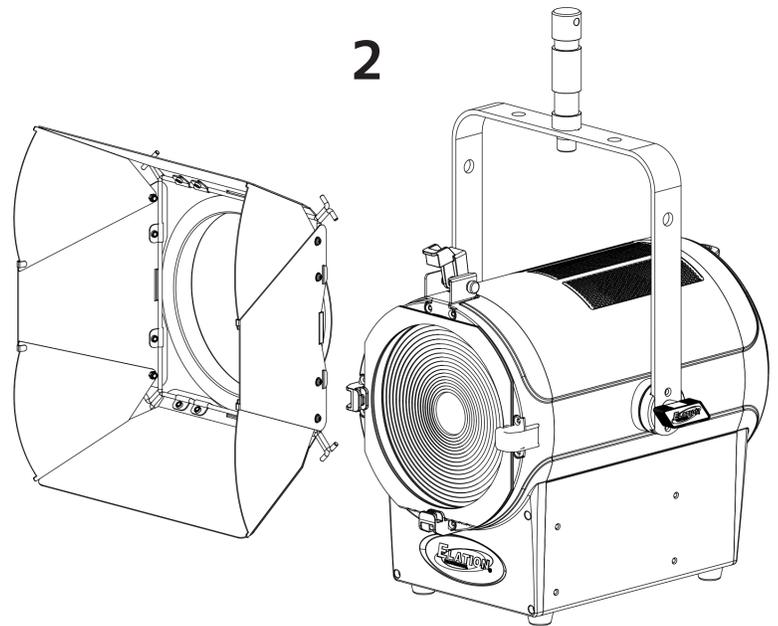
**2**
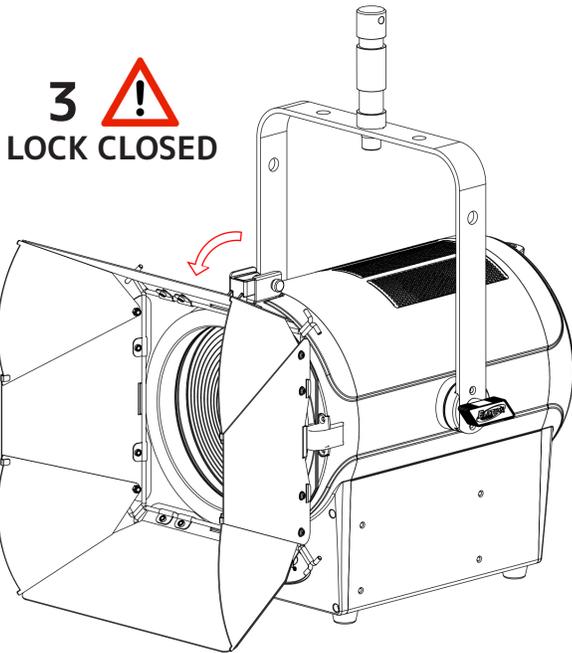
**3** ⚠️
**LOCK CLOSED**
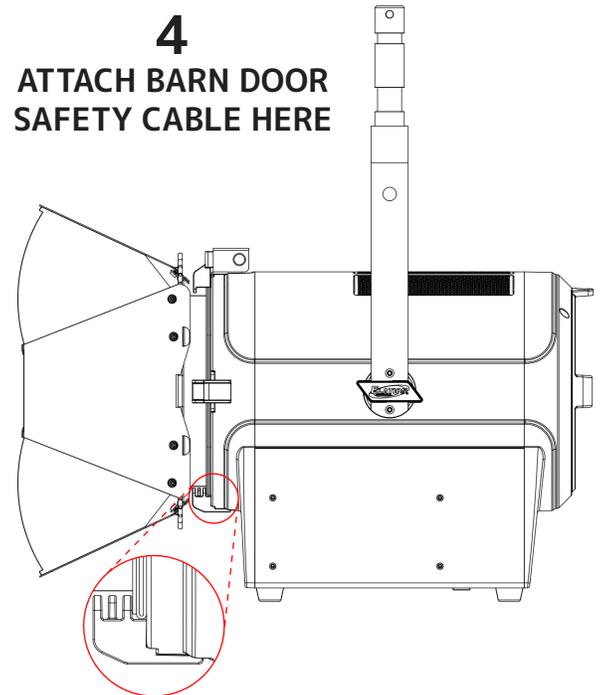
**4**
**ATTACH BARN DOOR SAFETY CABLE HERE**

**Insert Gel Frame into smaller slot**
**Insert Barn Doors into larger slot**

**Secure the included mini SAFETY CABLE to the BARN DOOR and the top lock.**

1. Lift up lock on top of fixture and insert **GEL FRAME** into the first slot closest to fixture.

2. Insert **BARN DOOR** into the second slot.

3. Lower the lock on top of the fixture to secure both the **GEL FRAME** and **BARN DOOR**.

4. Secure the included mini **SAFETY CABLE** to the **BARN DOOR** and top lock.

# INSTALLATION GUIDELINES

**JUNIOR PIN INSTALLATION (INCLUDED)**

This fixture includes an adjustable dual mounting yoke and safety cable rigging point attached to the fixture. When using the included 28mm Junior Pin, attach the pin with the included bolt using a 10mm Hex Key, and attach a SAFETY CABLE to the safety cable rigging point.

**CLAMP INSTALLATION (NOT INCLUDED)**

This fixture includes an adjustable dual mounting yoke and safety cable rigging point attached to the fixture. When mounting this fixture to truss, be sure to secure an appropriately rated clamp (not included) to the yoke using at minimum a M10 screw, and attach a SAFETY CABLE to the safety cable rigging point.
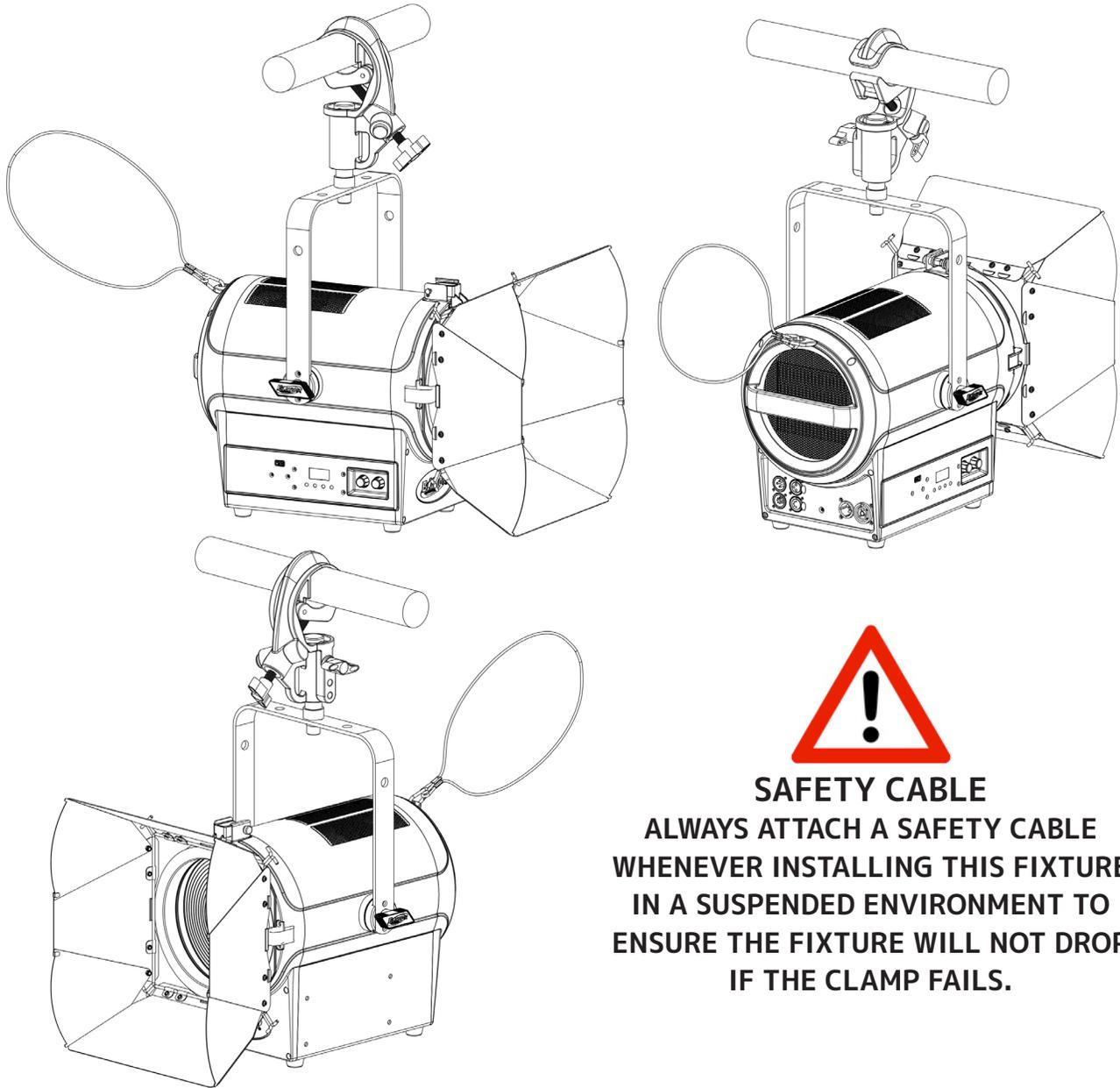
**SAFETY CABLE**
ALWAYS ATTACH A SAFETY CABLE
WHENEVER INSTALLING THIS FIXTURE
IN A SUSPENDED ENVIRONMENT TO
ENSURE THE FIXTURE WILL NOT DROP
IF THE CLAMP FAILS.

# 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.
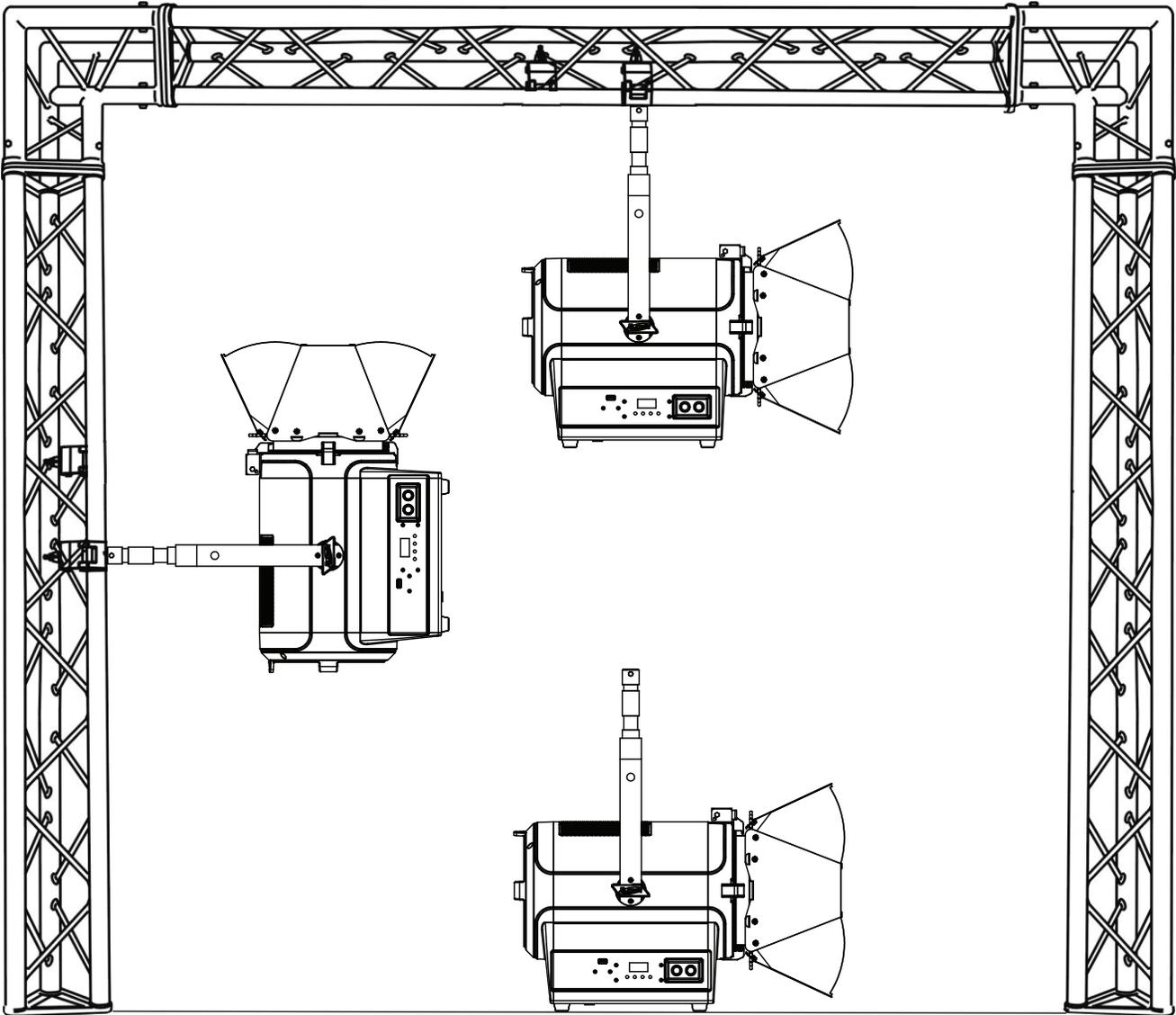


**CAUTION: Falling fixtures can cause severe injury or serious equipment damage! For this reason, fixtures should be installed and inspected only by qualified personnel. Do not install the unit if you lack the qualifications to do so, or if you have doubts about the safety and security of the installation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

# 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.
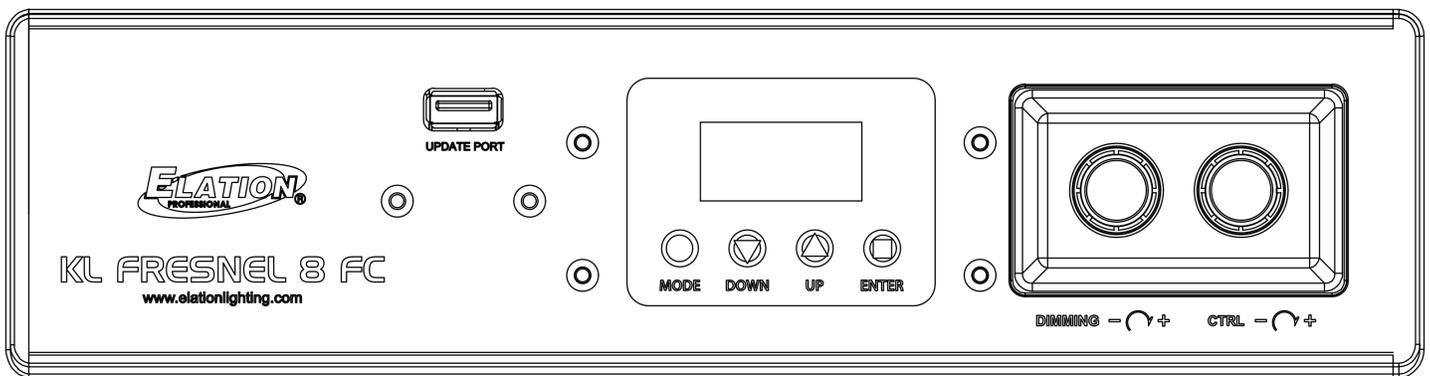


**STANDALONE**
Press the MODE button to access the fixture's main menu. Use the UP and DOWN buttons to navigate to DMX Settings and press the ENTER button. Navigate to No DMX Status and press the ENTER button. Navigate to Standalone and press the ENTER button.

**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

| MAIN MENU | SUB MENU | OPTIONS / VALUES<br>(Default Settings in BOLD) | | DESCRIPTION |
|---|---|---|---|---|
| Features subject to change without notice | | | |
| **MANUAL MODE** | Disabled, Dimmer, Int CCT Grn, Int Color Sat, Manual Control | See **Manual Mode** section for details | | |
| **DMX SETTINGS** | DMX Address | 001 – 512 | | Depends on DMX Mode |
| | DMX Mode | **1-CH Dimmer**, 7-CH Dimmer Color, 12-CH Standard, 19-CH Extended, 10-CH CMY, 15-CH CMY Extended | | |
| | No DMX Status | **Hold Last** | | |
| | | Fade to Black | | |
| | | Standalone | | |
| **STANDALONE** | Dimmer | **0** – 100% | | |
| | CCT | 2400 – 8500K (**6000K**) | | |
| | Green Shift | -100% ~ +100% | | |
| | Virtual Color | **Color01**, Color02, …, Color60 | | See Color Table / Uses Color Names |
| | ZOOM | 0-100% (**50%**) | | |
| **PERSONALITY** | Primary | ON / **OFF** | | |
| | Secondary | ON / **OFF** | | |
| | Dim Mode | Standard, Stage, TV, Architectural, Theatre, Stage, Stage 2, Dim Speed (0.0s~**0.1S**~10.0s) | | |
| | Dim Curves | **Linear**, Square, Square Inverse, S-Curve | | |
| | LED Refresh Rate | 900 – **1200Hz**- 1500 Hz, 2500 Hz, 4000 Hz, 5000 Hz, 6000 Hz, 10 KHz, 15 KHz, 20 KHz, 25 KHz | | |
| | LED Power Limit | 50%, 60%, 70%, 80%, 90%, **100%** | | |
| | Fan Mode | **Auto**, Silent, High | | |
| | Display | Screen Delay | 00:10S~05:00mins (**01:00mins**) | Display defaults to home page after 30-seconds. |
| | | Screen Lock | **OFF**/00:100-05:00 | **Note: To unlock screen, press and hold MODE button for 3 seconds.** |
| | | Rotate Display 180° | YES/**NO**/AUTO | |
| | Service (Passcode: **050**) | Calibration | Red: 50 – 255 | |
| | | | Green: 50 – 255 | |
| | | | Blue: 50 – 255 | |
| | | | Amber: 50 – 255 | |
| | | | Mint: 50 – 255 | |
| | | Update Software | YES / **NO** | |
| | | Factory Restore | YES / **NO** | |
| | | Edit RDM UID | XXXXXX | |

# SYSTEM MENU

| | | Features subject to change without notice | | |
|---|---|---|---|---|
| **MAIN MENU** | **SUB MENU** | **OPTIONS / VALUES**<br>(Default Settings in BOLD) | | **DESCRIPTION** |
| **INFORMATION** | Life Time | xxxxxx h | | |
| | Last Run Time | xxxxxx h | | |
| | Time Reset | Reset (Passcode: **038**) | | |
| | Temperatures | Current | | |
| | | Max Resettable | | |
| | | Max Unresettable | | |
| | | Reset (Passcode: **038**) | | |
| | DMX Values | R:000, G:000, G:000, … | | |
| | Product ID's | Mac Address | | |
| | RDM UID | RDM UID | | |
| | Error Logs | Fixture Errors | None | |
| | | Reset Error Log<br>(Passcode: **050**) | YES / **NO** | |
| | Software Version | V1.0.2 | | |

# ERROR CODES

| | Error Codes subject to change without notice |
|---|---|
| **ERROR CODES** | **DESCRIPTION** |
| Temperature Error | Temperature Error appears when fixture overheats. |

# DIMMER MODES - DIM CURVE
Select desired DIMMER MODE (Standard, Stage, TV, Architectural, Theatre, Stage2).
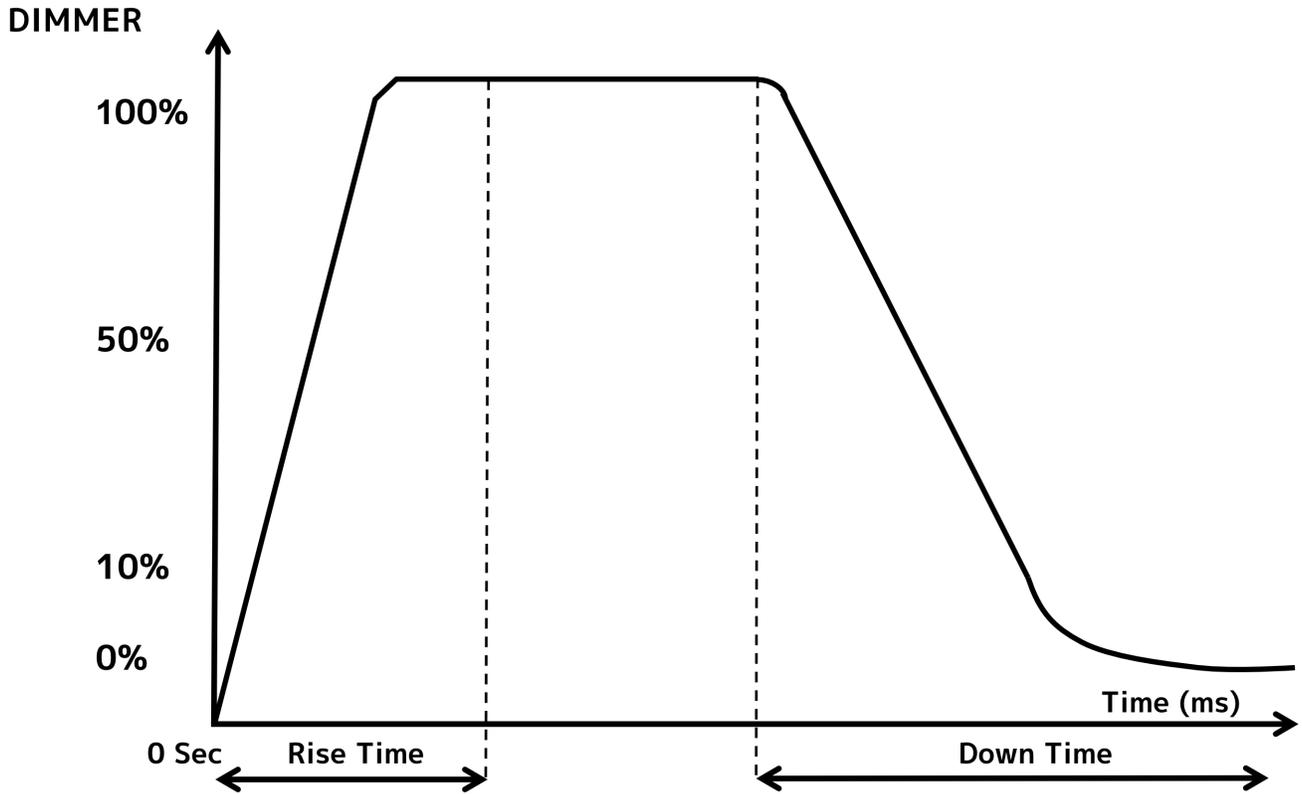


|  | 0 sec Fade Time | | 1 sec Fade Time | |
| --- | --- | --- | --- | --- |
| Dimming Curve Ramp Effect | | | | |
|  | Rise Time (ms) | Down Time (ms) | Rise Time (ms) | Down Time (ms) |
| Standard (default) | 0 | 0 | 0 | 0 |
| Stage | 780 | 1100 | 1540 | 1660 |
| TV | 1180 | 1520 | 1860 | 1940 |
|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



LINEAR



SQUARE



INVERSE SQUARE



S-CURVE
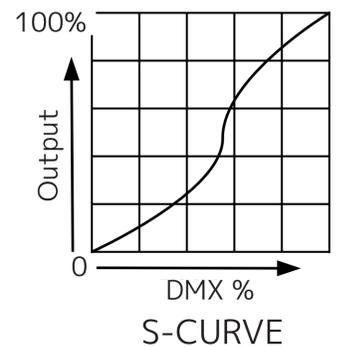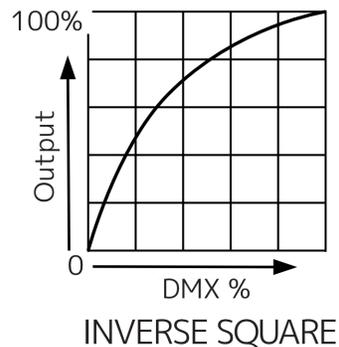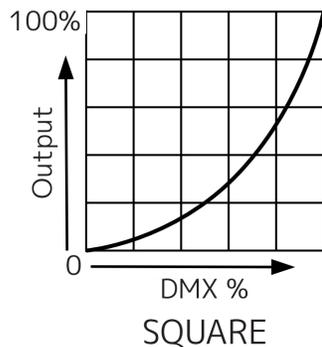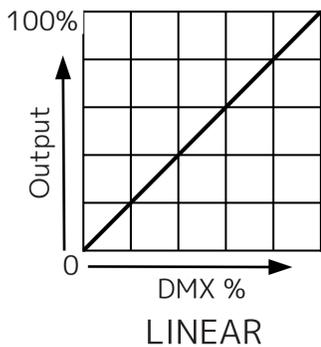
# MANUAL DIMMING AND FUNCTION CONTROL

Use the two encoder knobs for manual DIMMING and FUNCTION control. Press the CTRL knob to step/cycle through available sub-menu selections.
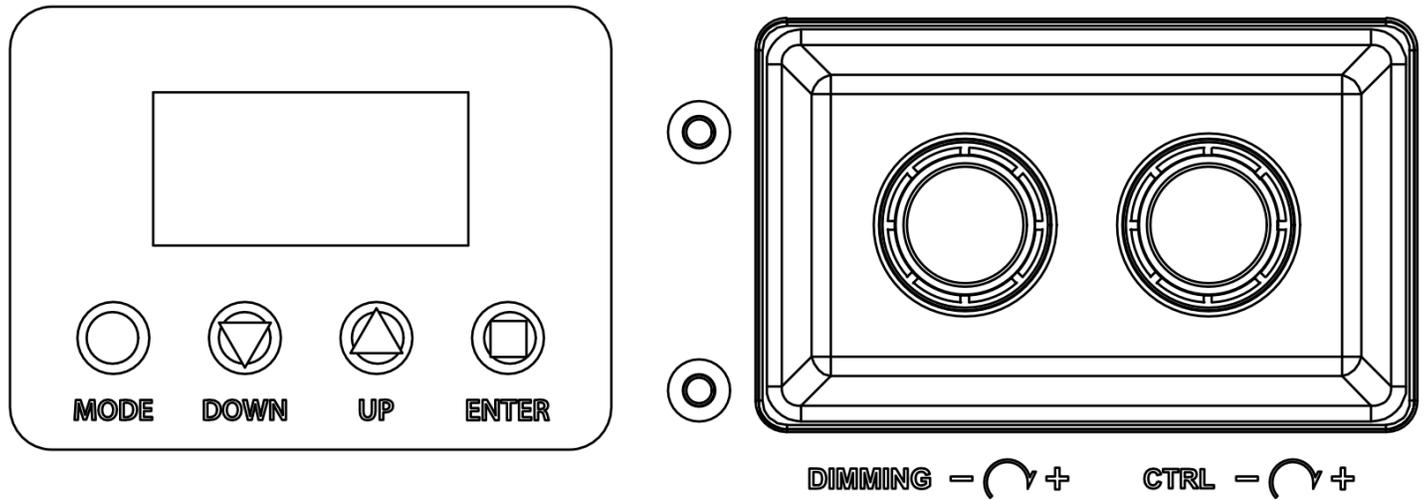
| DIMMER MODE | | | | |
|---|---|---|---|---|
| **ENCODER KNOB** | **SUB MENU** | **DISPLAY** | **RESOLUTION / STEPS** | **DEFAULT** |
| DIMMER | Intensity | Intensity 0-100% | 1% | 0% |
| CTRL | Zoom | Zoom 0-100% | 1% | 50% |

| INT CCT GRN (INTENSITY, COLOR TEMPERATURE, GREEN SHIFT) | | | | |
|---|---|---|---|---|
| **ENCODER KNOB** | **SUB MENU** | **DISPLAY** | **RESOLUTION / STEPS** | **DEFAULT** |
| DIMMER | Intensity | Intensity 0-100% | 1% | 0% |
| CTRL | Color Temperature | CCT 2400 - 8500K | 100K | 6000K |
| | Green Shift | GRN -100% to +100% | 1% | Neutral |
| | Zoom | Zoom 0-100% | 1% | 50% |

| INT COL SAT MODE (INTENSITY, COLOR, SATURATION) | | | | |
|---|---|---|---|---|
| **ENCODER KNOB** | **SUB MENU** | **DISPLAY** | **RESOLUTION / STEPS** | **DEFAULT** |
| DIMMER | Intensity | Intensity 0-100% | 1% | 0% |
| CTRL | Color | Virtual Color 1, 2, 3, 4··· | Single Color | |
| | Saturation | Sat 0-100% | 1% | 100% |
| | Zoom | Zoom 0-100% | 1% | 50% |

| MANUAL CONTROL MODE | | | | |
|---|---|---|---|---|
| **ENCODER KNOB** | **SUB MENU** | **DISPLAY** | **RESOLUTION / STEPS** | **DEFAULT** |
| DIMMER | Intensity | Intensity 0-100% | 1% | 0% |
| CTRL | Selection | [Setting Name] 0-100% | Zoom / Strobe / Red / Green / Blue / Amber / Mint | Strobe |
| | Adjustment | [Value] 0-100% | 1% | 0% |

# DMX TRAITS: CHANNEL FUNCTIONS AND VALUES

| Dimmer | Dimmer Color | Standard | Extended | CMY | CMY Extended | Value | Function | Default | Snap |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Supports Software Versions: ≥ V1.0.2 | | |
| 1 | 1 | 1 | 1 | 1 | 1 | | **Dimmer:** | 0 | |
| | | | | | | 0-255 | Intensity 0 to 100% | | |
| | 2 | 2 | 2 | 2 | 2 | | **Dimmer Fine:** | 0 | |
| | | | | | | 0-255 | Dimmer fine | | |
| | 3 | 3 | 3 | 3 | 3 | | **Shutter, strobe:** | 50 | X |
| | | | | | | 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 | | **Cyan:** | 0 | |
| | | | | | | 0-255 | Cyan (0-100% Cyan) | | |
| | | | | | 5 | | **Cyan Fine:** | 0 | |
| | | | | | | 0-255 | Cyan Fine | | |
| | | | | 5 | 6 | | **Magenta:** | 0 | |
| | | | | | | 0-255 | Magenta (0-100% Magenta) | | |
| | | | | | 7 | | **Magenta Fine:** | 0 | |
| | | | | | | 0-255 | Magenta Fine | | |
| | | | | 6 | 8 | | **Yellow:** | 0 | |
| | | | | | | 0-255 | Yellow (0-100% Yellow) | | |
| | | | | | 9 | | **Yellow Fine:** | 0 | |
| | | | | | | 0-255 | Yellow Fine | | |
| | | 4 | 4 | | | | **Red:** | 255 | |
| | | | | | | 0-255 | Red (0-100% Red) | | |
| | | | 5 | | | | **Red Fine:** | 255 | |
| | | | | | | 0-255 | Red Fine | | |
| | | 5 | 6 | | | | **Green:** | 255 | |
| | | | | | | 0-255 | Green (0-100% Green) | | |
| | | | 7 | | | | **Green Fine:** | 255 | |
| | | | | | | 0-255 | Green Fine | | |
| | | 6 | 8 | | | | **Blue:** | 255 | |
| | | | | | | 0-255 | Blue (0-100% Blue) | | |
| | | | 9 | | | | **Blue Fine:** | 255 | |
| | | | | | | 0-255 | Blue Fine | | |
| | | 7 | 10 | | | | **Mint:** | 255 | |
| | | | | | | 0-255 | Mint (0-100% Mint) | | |
| | | | 11 | | | | **Mint Fine:** | 255 | |
| | | | | | | 0-255 | Mint Fine | | |
| | | 8 | 12 | | | | **Amber:** | 255 | |
| | | | | | | 0-255 | Amber(0-100% Amber) | | |
| | | | 13 | | | | **Amber Fine:** | 255 | |
| | | | | | | 0-255 | Amber Fine | | |

| Dimmer | Dimmer Color | Standard | Extended | CMY | CMY Extended | Value | Function | Default | Snap |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | **Supports Software Versions: ≥ V1.0.2** | | |
| 4 | 9 | 14 | 7 | 10 | | | **CTO:** | 0 | |
| | | | | | | 0-23 | Open | | |
| | | | | | | 24 -85 | CTO 2400K - 8500K (see separate sheet) | | |
| | | | | | | 86-255 | 8500K | | |
| 5 | 10 | 15 | 8 | 11 | | | **Color Wheel:** | 0 | |
| | | | | | | 0 | Open | | |
| | | | | | | 1-179 | Virtual Swatch Book (see separate sheet) | | |
| | | | | | | | **Color Scroll** | | |
| | | | | | | 180-201 | Clockwise,fast→slow | | |
| | | | | | | 202-207 | Stop | | |
| | | | | | | 208-229 | Counter-clockwise,slow→ fast | | |
| | | | | | | 230-234 | Open | | |
| | | | | | | | **Random Slots** | | |
| | | | | | | 235-239 | Fast | | |
| | | | | | | 240-244 | Medium | | |
| | | | | | | 245-249 | Slow | | |
| | | | | | | 250 - 255 | Open | | |
| | | | 16 | | 12 | | **Green Shift:** | 0 | |
| | | | | | | 0 | Idle | | |
| | | | | | | 1-127 | Full Minus Green to Neutral | | |
| | | | | | | 128 | Neutral White | | |
| | | | | | | 129-255 | Neutral to Full Plus Green | | |
| 6 | 11 | 17 | 9 | 13 | | | **Zoom:** | 127 | |
| | | | | | | 0 - 255 | Zoom adjustment from small to big | | |
| | | | 18 | | 14 | | **Dim Modes** | 0 | X |
| | | | | | | 0-20 | Standard | | |
| | | | | | | 21-40 | Stage | | |
| | | | | | | 41-60 | TV | | |
| | | | | | | 61-80 | Architectural | | |
| | | | | | | 81-100 | Theatre | | |
| | | | | | | 101- 120 | Stage 2 | | |
| | | | | | | | **Dimmer Delay Time** | | |
| | | | | | | 121 | 0s | | |
| | | | | | | 122 | 0.1s | | |
| | | | | | | 123 | 0.2s | | |
| | | | | | | 124 | 0.3s | | |
| | | | | | | 125 | 0.4s | | |
| | | | | | | 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 | | |
| | | | | | | 136 | 5.0s | | |
| | | | | | | 137 | 6.0s | | |
| | | | | | | 138 | 7.0s | | |
| | | | | | | 139 | 8.0s | | |
| | | | | | | 140 | 9.0s | | |
| | | | | | | 141 | 10s | | |
| | | | | | | 142 - 255 | Idle | | |

# DMX TRAITS: CHANNEL FUNCTIONS AND VALUES

| Dimmer | Dimmer Color | Standard | Extended | CMY | CMY Extended | Value | Function | Default | Snap |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | **Supports Software Versions: ≥ V1.0.2** | | |
| | | | | | | | **Control:** | | |
| | | | | | | 0-29 | Idle | | |
| | | | | | | 30-39 | Fan Mode Auto | | |
| | | | | | | 40-49 | Fan Mode Silent | | |
| | | | | | | 50-59 | Fan Mode High | | |
| | | | | | | 80-99 | Idle | | |
| | | | | | | 100-168 | **Refresh Rate (Hz)** | | |
| | | | | | | 100 | 900 | | |
| | | | | | | 101 | 910 | | |
| | | | | | | 102 | 920 | | |
| | | | | | | 103 | 930 | | |
| | | | | | | 104 | 940 | | |
| | | | | | | 105 | 950 | | |
| | | | | | | 106 | 960 | | |
| | | | | | | 107 | 970 | | |
| | | | | | | 108 | 980 | | |
| | | | | | | 109 | 990 | | |
| | | | | | | 110 | 1000 | | |
| | | | | | | 111 | 1010 | | |
| | | | | | | 112 | 1020 | | |
| | | | | | | 113 | 1030 | | |
| 7 | 12 | 19 | 10 | 15 | | 114 | 1040 | 0 | X |
| | | | | | | 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 | | |

# DMX TRAITS: CHANNEL FUNCTIONS AND VALUES

| Dimmer | Dimmer Color | Standard | Extended | CMY | CMY Extended | Value | Function | Default | Snap |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Supports Software Versions: ≥ V1.0.2 | | | |
| | | | | | | 134 | **1240** | | |
| | | | | | | 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 | | |
| 7 | 12 | 19 | | 10 | 15 | 154 | 1440 | 0 | X |
| | | | | | | 155 | 1450 | | |
| | | | | | | 156 | 1460 | | |
| | | | | | | 157 | 1470 | | |
| | | | | | | 158 | 1480 | | |
| | | | | | | 159 | 1490 | | |
| | | | | | | 160 | 1500 | | |
| | | | | | | 161 | 2500 | | |
| | | | | | | 162 | 4000 | | |
| | | | | | | 163 | 5000 | | |
| | | | | | | 164 | 6000 | | |
| | | | | | | 165 | 10000 | | |
| | | | | | | 166 | 15000 | | |
| | | | | | | 167 | 20000 | | |
| | | | | | | 168 | 25000 | | |
| | | | | | | 169-200 | Idle | | |
| | | | | | | 201-210 | Dimmer Curve Linear (default) | | |
| | | | | | | 211-220 | Dimmer Curve Square | | |
| | | | | | | 221-230 | Dimmer Curve Inverse Square | | |
| | | | | | | 231-240 | Dimmer Curve S-Curve | | |
| | | | | | | 241-255 | Idle | | |

# COLORS

| Colors | Color Temperature | Green Shift |
|---|---|---|
| Cyan | | Full Minus Green to Neutral |
| Magenta | | |
| Yellow | | |
| Red | 2700K – 8500K | Neutral White |
| Green | | |
| Blue | | Neutral to Full Plus Green |
| Mint | | |
| Amber | | |

# VIRTUAL GEL SWATCH BOOK COLOR

| | | | | | |
|---|---|---|---|---|---|
| 1 | 7 | pale yellow | 28 | 113 | magenta |
| 2 | 103 | straw | 29 | 46 | dark magenta |
| 3 | 151 | gold tint | 30 | 48 | rose purple |
| 4 | 100 | spring yellow | 31 | 126 | mauve |
| 5 | 10 | medium yellow | 32 | 49 | medium purple |
| 6 | 101 | yellow | 33 | 58 | lavender |
| 7 | 104 | deep amber | 34 | 199 | palace blue |
| 8 | 15 | deep straw | 35 | 119 | dark blue |
| 9 | 179 | loving amber | 36 | 132 | medium blue |
| 10 | 21 | gold amber | 37 | 120 | deep blue |
| 11 | 105 | orange | 38 | 165 | daylight blue |
| 12 | 158 | deep orange | 39 | 161 | slate blue |
| 13 | 22 | dark amber | 40 | 118 | light blue |
| 14 | 778 | millennium gold | 41 | 68 | sky blue |
| 15 | 135 | deep golden amber | 42 | 143 | pale navy blue |
| 16 | 24 | scarlet | 43 | 131 | marine blue |
| 17 | 106 | primary red | 44 | 115 | peacock blue |
| 18 | 26 | bright red | 45 | 172 | lagoon blue |
| 19 | 27 | medium red | 46 | 116 | medium blue green |
| 20 | 19 | fire | 47 | 90 | dark yellow green |
| 21 | 157 | pink | 48 | 139 | primary green |
| 22 | 36 | medium pink | 49 | 122 | fern green |
| 23 | 111 | dark pink | 50 | 89 | moss green |
| 24 | 128 | bright pink | 51 | 124 | dark green |
| 25 | 148 | bright rose | 52 | 88 | lime green |
| 26 | 332 | special rose pink | 53 | 138 | pale green |
| 27 | 793 | vanity fair | 54-179 | | No function |

# COLOR TEMPERATURE

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

# 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, allowing the DMX systems of the device to be managed, modified, and monitored remotely (hence, remote device management). This protocol is ideal for fixtures installed in locations that are 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 it's 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.

| Model | RDM Code | Device ID | Device Model ID | Personality ID |
|---|---|---|---|---|
| KL FRESNEL 8FC | 0x22A6 | 0012 | 18 | 001 1CH Dimmer<br>002 7CH Dimmer Color<br>003 12CH Standard<br>004 19CH Extended<br>005 10CH CMY<br>006 15CH CMY Extended |

**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 | [0x0600] Pan Invert |
| [0x0200] Sensor Definition | [0x0601] Tilt Invert |
| [0x0201] Sensor Value | [0x0602] Pan Tilt Swap |
| [0x0080] Device Model Description | [0x0500] Display Invert |
| [0x0081] Manufacturer Label | [0x0501] Display Level |
| [0x0082] Device Label | [0x0603] Realtime Clock |
| [0x00E0] DMX Personality | [0x1010] Power State |
| [0x00E1] DMX Personality Description | [0x1031] Preset Playback |
| [0x0400] Device Hours | [0x0122] Default Slot Value |
| [0x0015] Comms Status | [0x00B0] Language |
| [0x0031] Status ID Description | [0x00A0] Language Capabilities |
| [0x0032] Clear Status ID | [0x00C2] Boot Software Version Label |
| [0x0401] Lamp Hours | [0x00C1] Boot Software Version ID |
| [0x0402] Lamp Strikes | [0x0070] Product Detail ID List |
| [0x0403] Lamp State | [0x0030] Status Messages |
| [0x0404] Lamp Mode | [0x0000] Undefined PID [0x0000, (0)] |
| [0x0405] Device Power Cycles | |

# 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.

# SPECIFICATIONS

**SOURCE**
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**
18,000 Total Lumen Output
CRI 94.5
TLCI 94
Zoom Range 10° - 50°
Beam Angle 10.4° - 50.8°
Field Angle 20.6° - 66.1°

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

**COLOR**
RGBMA Color Array
CMY Emulation
Variable CCT 2,400K - 8,500K
Green/Magenta Shift
Virtual Gel Swatch Book

**CONTROL / CONNECTIONS**
6 DMX Channel Modes (1 to 18 channels)
Manual and DMX Controlled Dimmer, Color and Zoom
Dual Rotary Dials
4 Button Control Panel, LED Display
RDM (Remote Device Management)
3/5pin DMX and IP65 Locking Power In/Out Connection

**SIZE / WEIGHT**
Length: 15.1" (382.5mm)
Width: 12.9" (326.5mm)
Vertical Height: 17.9" (455mm)
Weight: 23.15 lbs. (10.5kg)

**ELECTRICAL / THERMAL**
AC 100-240V - 50/60Hz
514W Max Power Consumption
5°F to 113°F (-15°C to 45°C)
BTU/hr (+/- 10%) 1752.74

**INCLUDED ITEMS**
Gel Frame and Rotating 8-leaf Barn Doors
Junior Pin (1 1/8" - 28mm)
IP65 Locking Power Cable

**APPROVALS / RATINGS**
CE | cETLus | IP20

Specifications and documentation subject to change without notice.

# DIMENSIONS

12.9in. [326.5mm]
10.8in. [274.5mm]
28.5in. [724.5mm]
24.0in. [609.8mm]
17.4in. [442.8mm]
11.9in. [301.4mm]

Ø0.5in. [Ø13.0mm]

21.7in. [550.5mm]
15.1in. [382.5mm]
1.4in. [35.5mm]
12.4in. [315.5mm]
9.0in. [228.7mm]
14.0in. [356.4mm]
10.7in. [272.5mm]

10.8in. [274.5mm]
22.4in. [570.0mm]
17.9in. [455.0mm]
Ø7.1in. [Ø180.0mm]
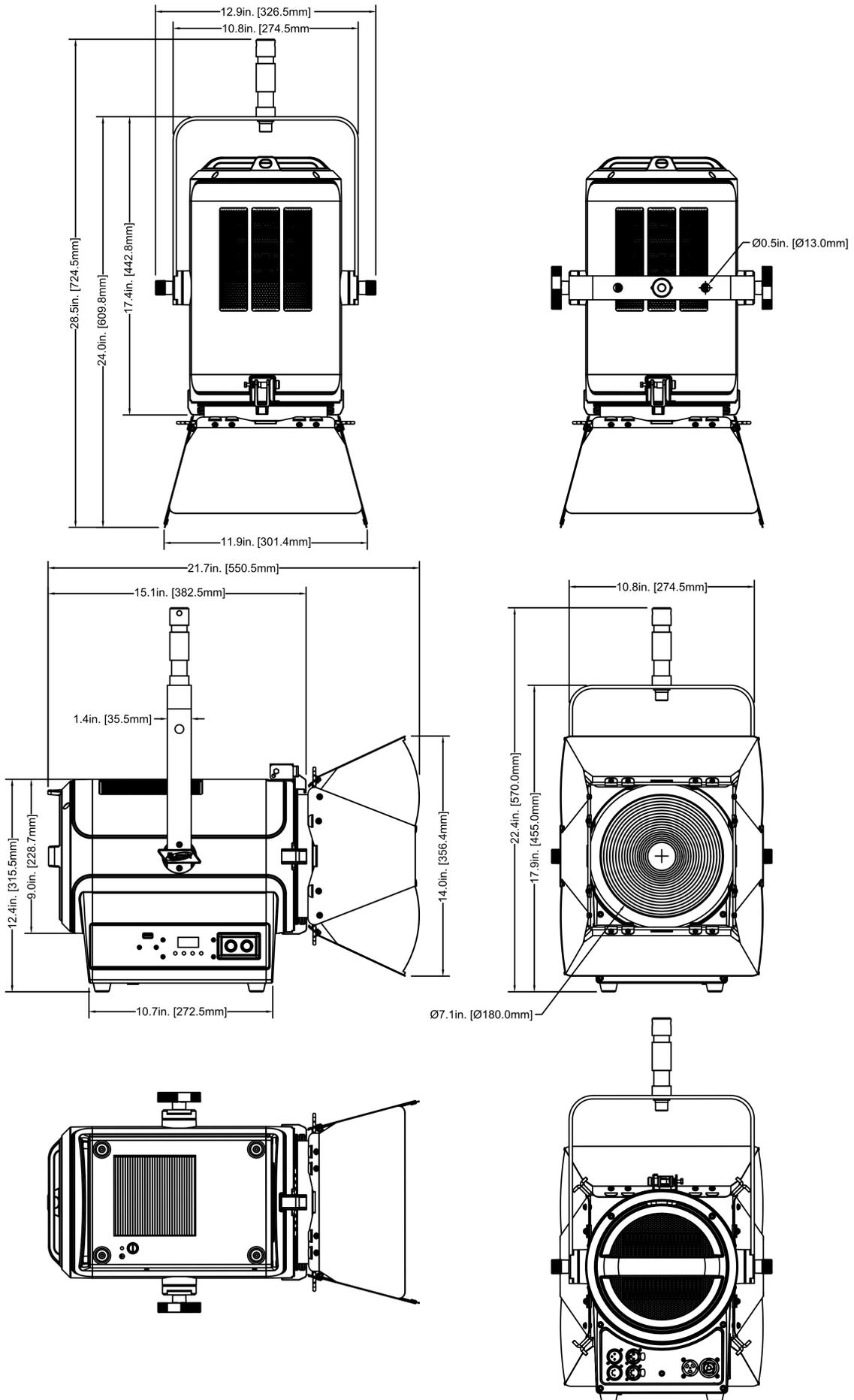
# OPTIONAL ACCESSORIES

| SKU NUMBER | DESCRIPTION |
| --- | --- |
| SIP139 | IP65 Rated Twist Lock Power Cable, 10ft (3m)* |
| AC5PDMX3PRO | 5-pin Pro DMX Cable, 3 ft (0.9m)* |
| 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.

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