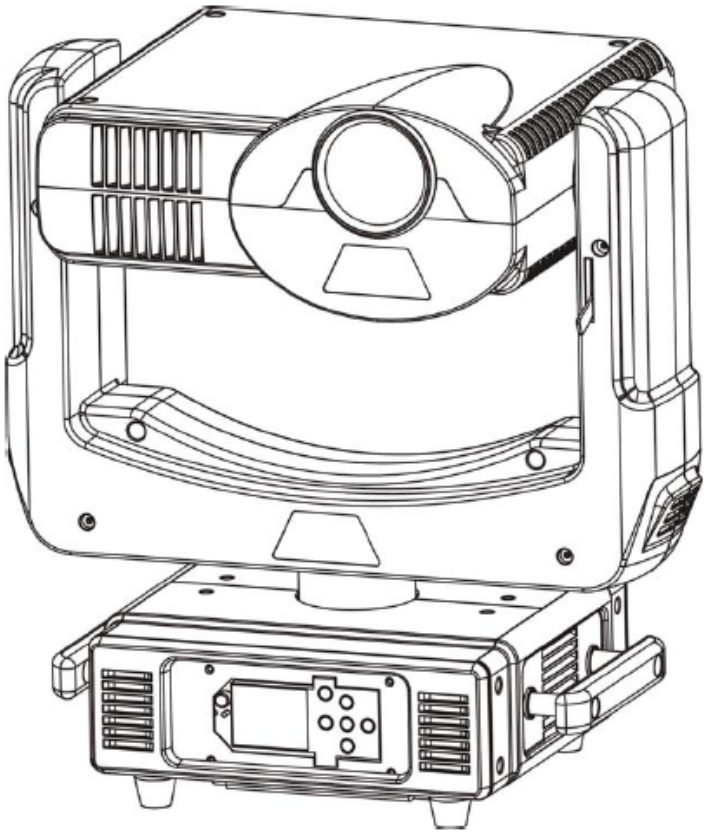
ELATION PROFESSIONAL



EMOTION

user manual

ELATION | EMOTION™ | user manual

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DOCUMENT VERSION

Please check www.elationlighting.com for the latest revision/update of this manual.

Date	Document Version	Fixture Software Version	DMX Channel Modes	Notes
11/24/15	1	≥2.0.0U	32 / 54	Initial release.

CONTENTS

GENERAL INFORMATION

INTRODUCTION

Congratulations, you have just purchased one of the most innovative digital projector moving head lighting fixtures on the market today! This fixture has been designed to perform reliably for years when the guidelines in this booklet are followed. Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this unit. These instructions contain important information regarding safety during use and maintenance.

UNPACKING

Every fixture 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 appears to be damaged, carefully inspect your unit for damage and be sure all accessories necessary to operate the unit 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 unit to your dealer without first contacting customer support at the number listed below. Please do not discard the shipping carton in the trash. Please recycle whenever possible.

BOX CONTENTS

- (2) Omega Brackets
- (1) 5pin DMX Cable
- (1) Power Cable
- Manual & Warranty Card

CUSTOMER SUPPORT

Elation Professional® provides a customer support line, to provide set up help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at www.elationlighting.com for any comments or suggestions. For service related issue please contact Elation Professional®.

ELATION SERVICE USA - Monday - Friday 8:00am to 5:00pm PST

Voice: 323-582-3322 **Fax: 323-832-9142**

E-mail: support@elationlighting.com

ELATION SERVICE EUROPE - Monday - Friday 08:30 to 17:00 CET

Voice: +31 45 546 85 30 **Fax: +31 45 546 85 96**

E-mail: support@elationlighting.eu

WARRANTY REGISTRATION

Please complete and mail in the enclosed warranty card or register online: http://www.elationlighting.com/Login.aspx to validate your purchase. 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.

IMPORTANT NOTICE!

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 and general user instructions found in this user manual void the manufactures warranty and are not subject to any warranty claims and/or repairs.

LIMITED WARRANTY

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 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.

SAFETY INSTRUCTIONS

This fixture is an extremely sophisticated piece of electronic equipment. To guarantee a smooth operation, it is important to follow the guidelines in this manual. The manufacturer of this device will not accept responsibility for damages resulting from the misuse of this fixture due to the disregard of the information printed in this manual.

This device falls under **PROTECTION CLASS 1**. It's essential this device be grounded properly. Only qualified personnel should perform all electrical connections.

I N D O O R S U S E O N L Y !

DO NOT EXPOSE FIXTURE RAIN AND MOISTURE!

UNPLUG POWER BEFORE SERVICING FIXTURE!

DO NOT PLUG FIXTURE INTO A DIMMER PACK!

NEVER TOUCH FIXTURE DURING OPERATION, AS IT MAY BE HOT!

NEVER LOOK DIRECTLY INTO THE LIGHT SOURCE!

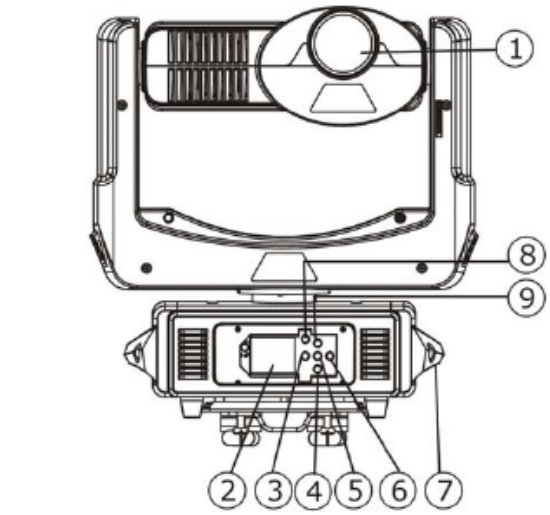
SENSITIVE PERSONS MAY SUFFER AN EPILEPTIC SHOCK!

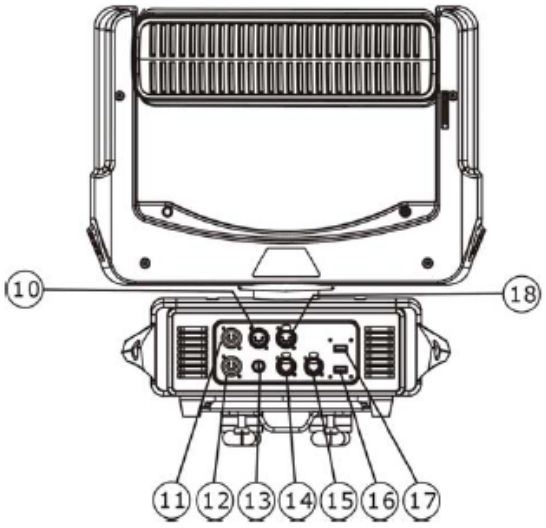
- For proper operation, follow the **Installation** guidelines described in this manual. Only qualified and certified personnel should perform installation of this fixture and only the original rigging parts (brackets) included with this fixture should be used for installation. Any modifications will void the original manufactures warranty and increase the risk of damage and/or personal injury.
- Never look directly into the light source of this fixture to prevent risk of injury to your retina, which may induce blindness. Those suffering from **EPILEPSY** should avoid looking directly into the light source of this unit at all times.
- The fan and air inlets must remain clean and never blocked. Allow approx. 6" (15cm) between this fixture and other devices or a wall for proper cooling.
- Always disconnect 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.
- Do not operate this fixture if the power cord has become frayed, crimped and/or damaged. If the power cord is damaged, replace it immediately with a new one of similar power rating.

GENERAL GUIDELINES

- **NEVER OPEN THIS FIXTURE WHILE IN USE!**
- 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.
- This fixture is a professional lighting effect designed for **INDOOR / DRY LOCATIONS ONLY** on stage, in nightclubs, theatres, etc.
- Please make sure there are **NO FLAMMABLE MATERIALS** close to the fixture while operating, to prevent any fire hazard.
- The fixture must be installed in a location with adequate ventilation, at least 1.5 feet (.5m) from adjacent surfaces. Be sure no air ventilation slots are blocked.
- **DO NOT** attempt installation and/or operation without knowledge how to do so.
- **DO NOT** permit operation by persons who are not qualified to operate this type of fixture. Most damages are the result of operations by nonprofessionals.
- Consistent operational breaks may ensure the fixture will function properly for many years to come.
- **DO NOT** shake fixture, avoid brute force when installing and/or operating fixture.
- Always install the fixture with an appropriate safety cable. When installing the fixture in a suspended environment, always use mounting hardware that is no less than M10 x 25 mm, also be sure the hardware is insert in the pre-arranged screw holes in the bracket of the fixture.
- Use the original packaging and materials to transport the fixture in for service.
- **DO NOT TOUCH** the housing bare-hand during its operation. Turn OFF the power and allow approximately 15 minutes for the fixture to cool down before replacing or serving.

FIXTURE OVERVIEW





1. **Lens**
2. **LCD Menu Function Display**
3. **LEFT Button**
4. **DOWN Button**
5. **ENTER Button**
6. **RIGHT Button**
7. **Carrying Handle(s)**
8. **MODE/ESC Button**
9. **UP Button**
10. **5pin DMX Input**
11. **Power Input**
12. **Power Output**
13. **Fuse**
14. **RJ45 to Graphics Server**
15. **RJ45 Art-NET Input**
16. **USB 3.0 to Graphics Server**
17. **USB 3.0 to Graphics Server**
18. **5pin DMX Output**

FIXTURE INSTALLATION

FLAMMABLE MATERIAL WARNING

Keep fixture at least 5.0 ft (1.5m) away from any flammable materials, decorations, pyrotechnics, etc.

ELECTRICAL CONNECTIONS

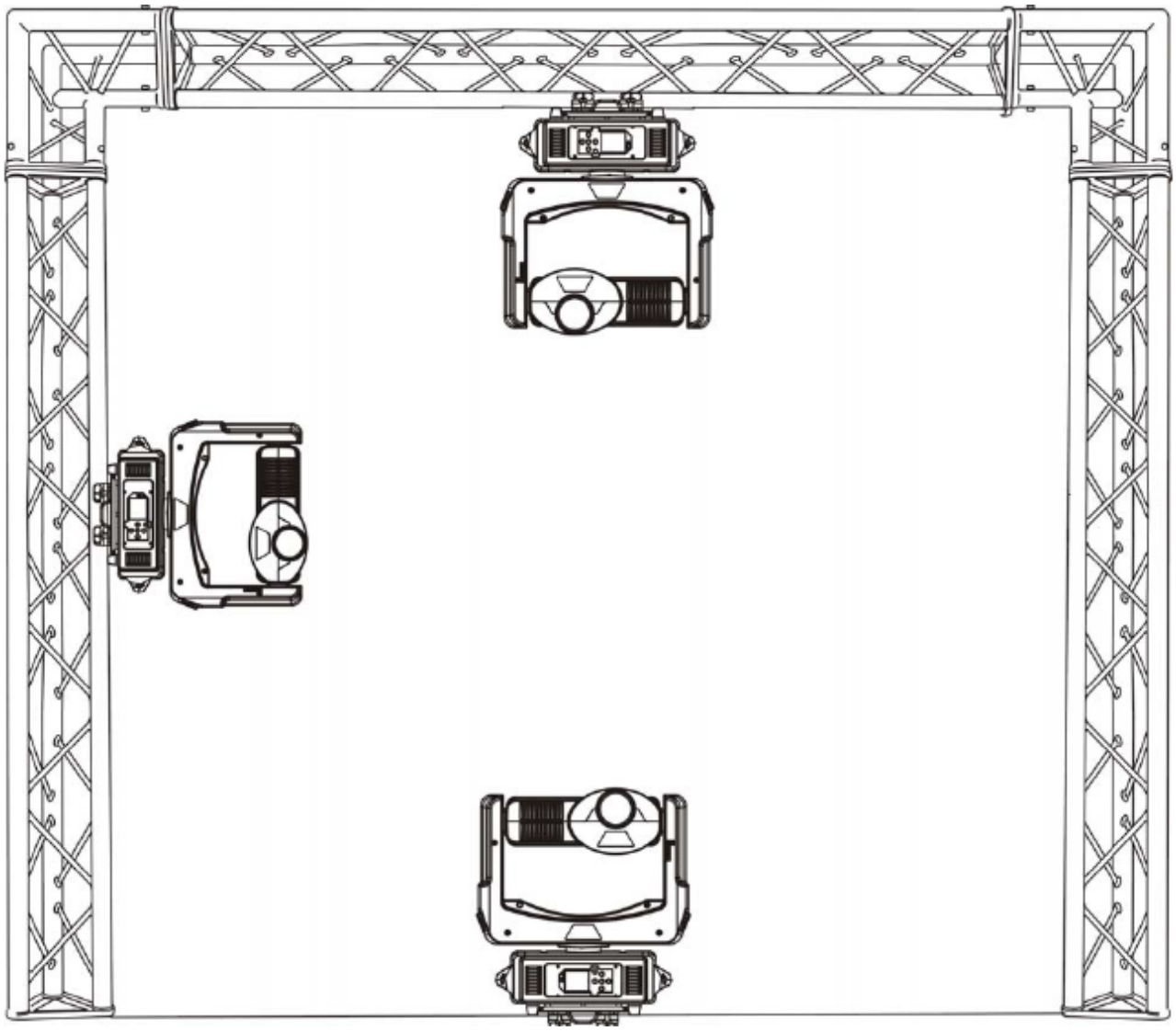
A qualified electrician should be used for all electrical connections and/or installations.

CAUTIONS

- For added protection, mount the fixture in areas outside walking paths, seating areas, or in areas were unauthorized personnel might reach the fixture.
- Ambient operating temperature range for this fixture is:
  Temperature 41° to 95°F. (5° to 35°C) | Humidity: 20%–80% (non-condensing)
  Do not use the fixture under or above this temperature.
- Before mounting the fixture to any surface, make sure the installation area can hold a minimum point load of 10 times the weight of the fixture.
- Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.
- Never stand directly below the device when mounting, removing or servicing.

MOUNTING POINTS

- Overhead mounting requires extensive experience, including amongst others calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the device. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.
- Fixture is fully operational in the specific mounting positions as illustrated below.

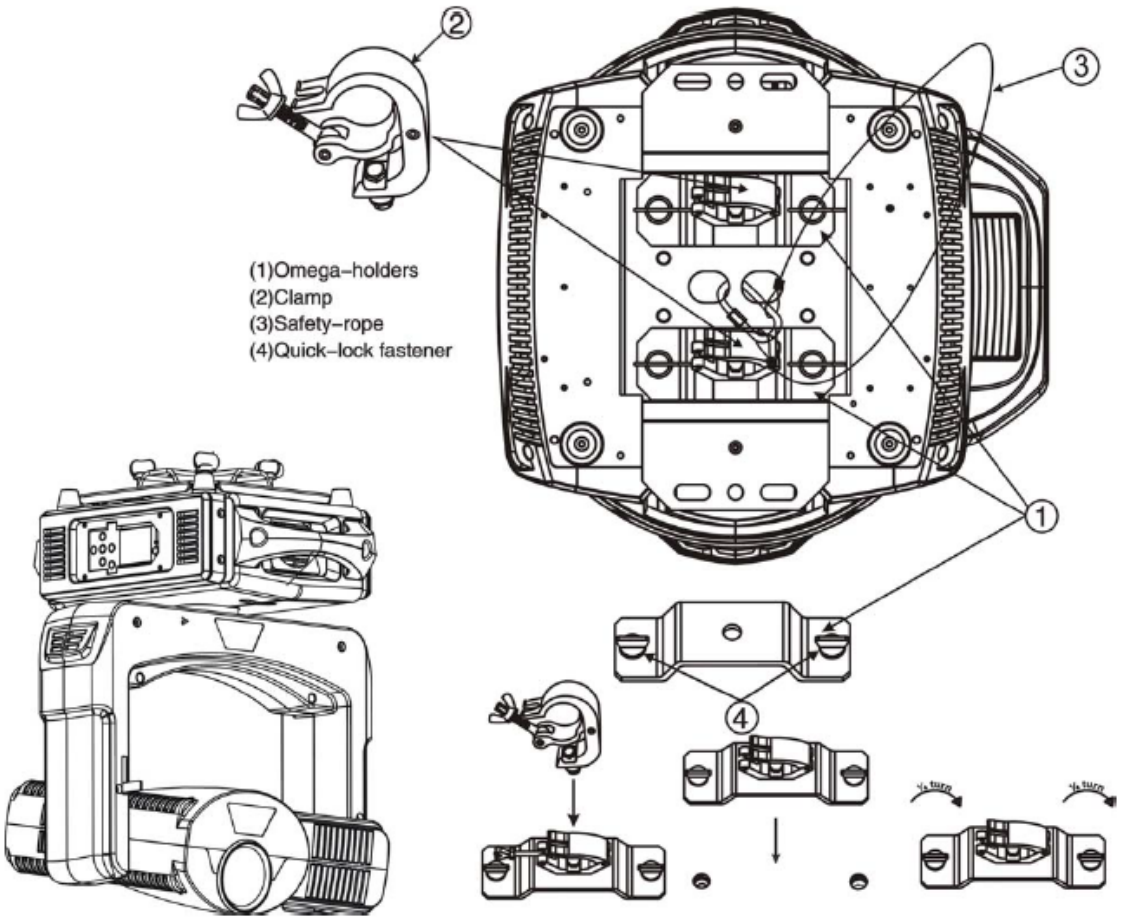


SAFETY CABLE

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

CLAMP MOUNTING

The fixture provides a unique mounting bracket assembly that integrates the bottom of the base, the included **Omega Brackets (x2)** and safety cable rigging point in one unit (see the illustration below). When mounting this fixture to truss be sure to secure an appropriately rated clamps to the included omega brackets using a M10 screw fitted through the center hole of the **Omega Bracket**. Be sure to attach an appropriate **Safety Cable** to the fixture using the safety cable rigging point integrated in the base assembly**.**



SECURING

Regardless of the rigging option you choose for your fixture always be sure to secure your fixture with a safety cable. The fixture provides a built-in rigging point for a safety cable on the hanging bracket as illustrated above. Be sure to only use the designated rigging point for the safety cable and never secure a safety cable to a carrying handle.

FIXTURE MENU

ON-BOARD SYSTEM MENU

The fixture comes with an easy to navigate system menu. The next section will detail the functions of each command in the system menu.

LCD MENU CONTROL PANEL

The control panel (see image below) located on back of the fixture allows you to access the main menu and make all necessary adjustments to the fixture. During normal operation, pressing **MODE/ESC** 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, DOWN, RIGHT,** and **LEFT** 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/ESC** button.

☞ **NOTE**: To access the LCD Menu Control Display via the internal battery, press and hold the **MODE/ESC** button for 3 seconds. The LCD Menu Control Display will shut **OFF** automatically about 1 minute from the last button press.

ELATION© EMOTION™ SYSTEM MENU				
Features are subject to change without any prior written notice.				
MAIN MENU	**SUB MENU**	**OPTIONS / VALUES** (Default Settings in **BOLD**)		**DESCRIPTION**
Address	001~XXX			DMX Address Setting
Info	Time Info.	Current Time	XXXX (Hours)	Fixture Run Time From Power ON
		Ttl Life Hrs	XXXX (Hours)	Fixture Total Run Time
		Last Run Time	XXXX (Hours)	Clear Fixture Last Run Time
		Timer PIN	Password=XXX	Password **038**
		Clr Last Run	ON / **OFF**	Reset Fixture Last Run Time
	Value Disp	NONE, ALL, PAN...		DMX Value Display
	Ethernet IP	XXX . XXX . XXX . XXX		Fixture Ethernet Address
	Software Version	**Ver 2.0.0 U**		Software Version
Set	Status	No DMX Mode	Close / Hold / Auto	Fixture State If No DMX Signal
		Pan Reverse	ON/**OFF**	Pan Reverse Movement
		Tilt Reverse	ON/**OFF**	Tilt Reverse Movement
		Pan Degree	630/**540**	Pan Degree Select
		Encoders	**ON**/OFF	Movement Feedback Switch
		Hibernation	OFF, 01M~99M, **15M**	Stand By Mode
	Lens Control	On projector		
		Always on		
		Off		
	Select Input	**DMX Only**		DMX Only
		Art-Net on IP2		Elect Art-Net IP02
		Art-Net on IP10		Elect Art-Net IP010
	Set Universe	000 - 255		Set Art-Net Universe
	Disp. Setting	Shutoff Time	02~60m **05m**	Display Shut Off Time
		Flip Reverse	ON/**OFF**	Display Reverse 180°
		Key Lock	ON/**OFF**	Key Lock
	Service Setting	Service PIN	Password=XXX	Service Password **050**
		RDM PID		Enter RDM PID
		Ethernet IP	XXX . XXX . XXX . XXX	Set Fixture IP Address
	ResetDefault	ON/**OFF**		Restore Factory Settings

ELATION© EMOTION™ SYSTEM MENU				
Specifications and features are subject to change without any prior written notice.				
MAIN MENU	**SUB MENU**	**OPTIONS / VALUES** (Default Settings in **BOLD**)		**DESCRIPTION**
Test	Home	All		Reset All Motors
		Pan&Tilt		Reset Pan/Tilt
		Others		Reset Others
	Test Channel	PAN ……		Test function
	Manual Control	PAN =XXX, ……		Fine Adjustments
	Calibration	Calibration Password		Password **050**
Mode Set	**Standard Mode**			DMX Channel Modes
	Extended Mode			
Preset	Play Back	DMX Control		DMX Control
		Set To Slave	Slave1, Slave2, Slave3	Salve Mode
		Auto Program	**Master** / Alone	Auto Program
	Select Prog.	Prog. Part1 = Program 1~10 **(Program 1)**		Select Programs To Be Run
		Prog. Part2 = Program 1~10 **(Program 2)**		
		Prog. Part3 = Program 1~10 **(Program 3)**		
	Edit Prog.	Program 1	Program Test	Testing Program
		:	Step 01=SCxxx	Program In Loop
		Program 10	Step 64=SCxxx	Save and Exit
	Edit Scenes	Scene 001 ~ Scene 250	Pan,Tilt,……	Save and Automatically Return
			--Fade Time-- --Scene Time--	Manual Scenes Edit
			Input By Outside	Stores Scenes via Ext DMX Console
	Scenes Input	XX~XX		Automatic Scenes Recorder

Test – Calibration

ONLY QUALIFIED TECHNICIANS SHOULD PERFORM THIS FUNCTION.

This function allows small adjustments to be made to the fixture to compensate for ware or in the event a sensor has been knocked slightly out of place. Because improper use of this function can result in undesired operation this function has been password protected. The password is **050** and must be entered each time the calibration menu function is entered. Because calibration is an extremely delicate procedure, instructions on performing this action are left out of this manual. For a first time calibrator, please contact our customer support team for step-by-step instructions.

EMOTION OVERVIEW

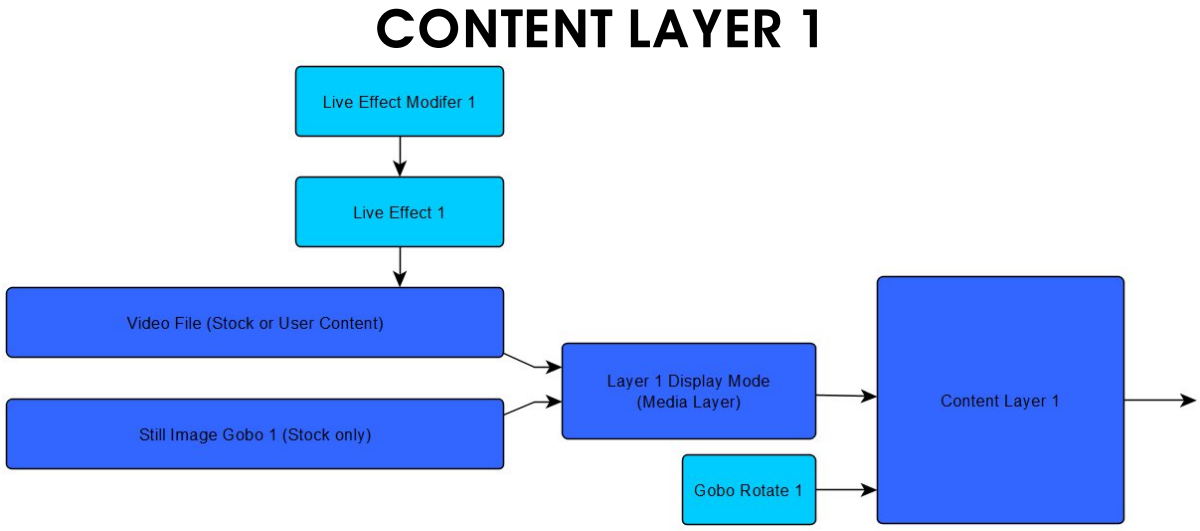
The **EMOTION™** is a next generation digital light, it contains an embedded projector; a powerful graphics engine and a custom designed Pan/Tilt system. The fixture can be completely controlled via DMX in one of two modes, a Standard Protocol mode to allow a minimum DMX footprint, or a full-featured Extended Protocol mode. The fixture also allows use of standard Ethernet cabling using the ArtNet connection at the base of the fixture.

Motion control functions are accessible through the on-board menu system, allowing various configuration options. The graphics server configuration options are accessible through a Content Management application (CMA) running on a network-connected computer.

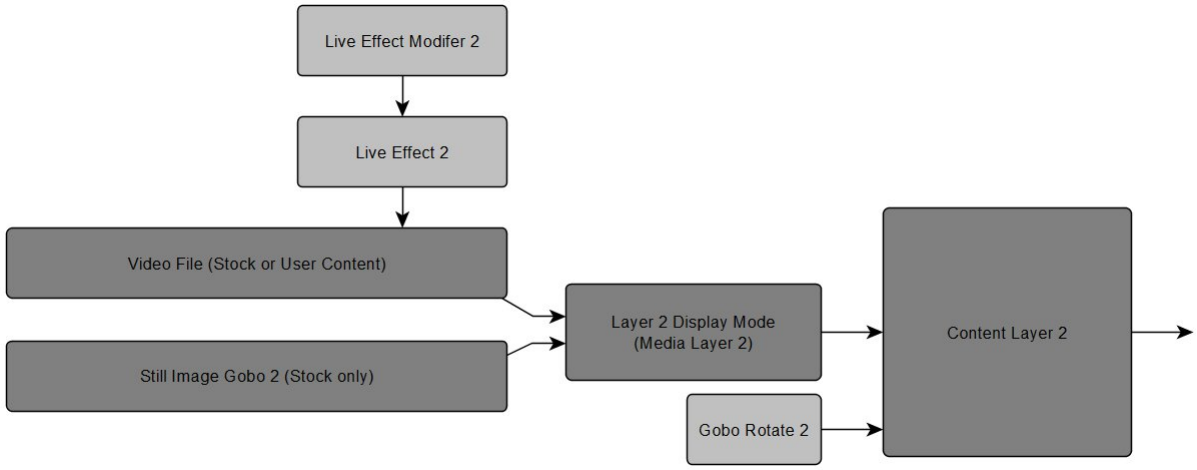
Detailed information about these various components are found in sections of this manual and online at through the Elation website.

GRAPHICS ENGINE FUNCTIONAL LAYOUT

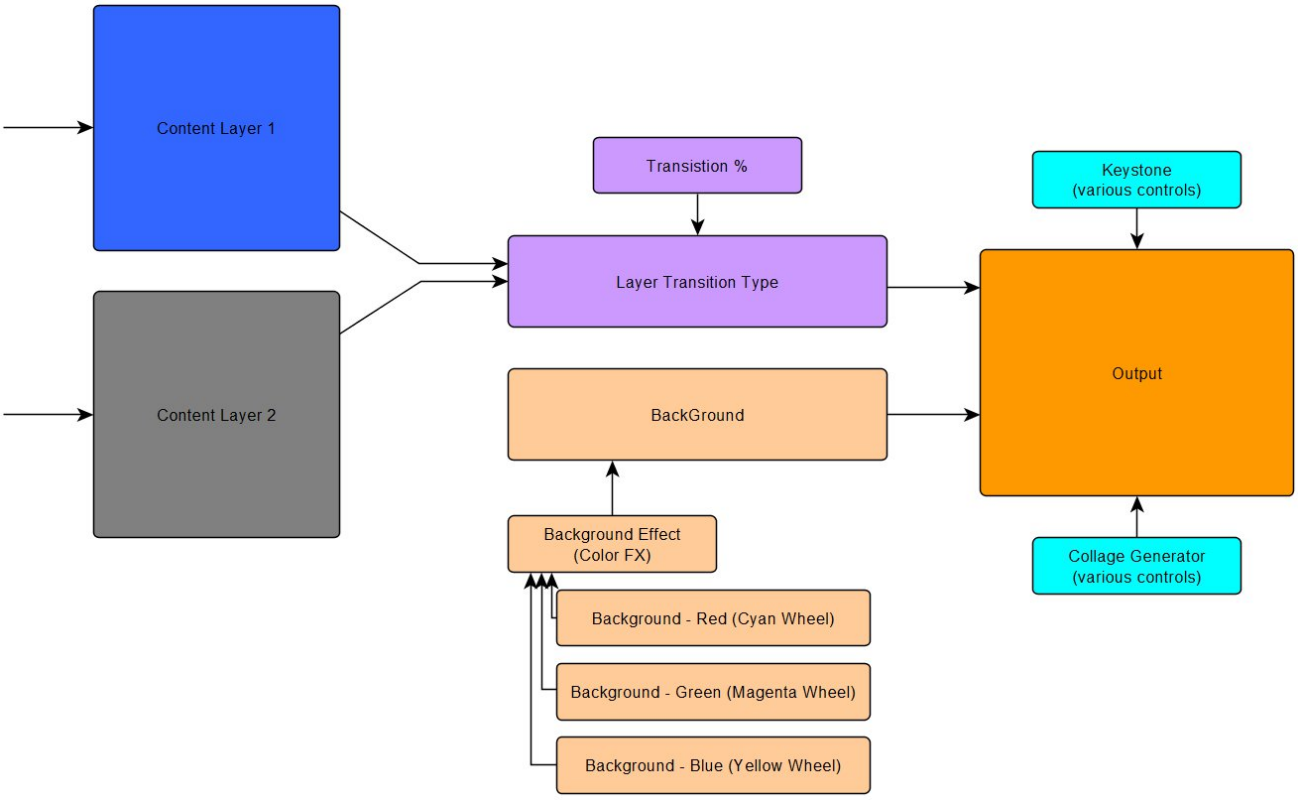
Below are conceptual block diagrams of the **EMOTION™** graphics engine. They are meant to give a graphical representation of how the graphics engine works. Detailed information about each block is found in this manual.



CONTENT LAYER 2



COMPOSITION



STANDARD MODE / EXTENDED MODE OVERVIEW

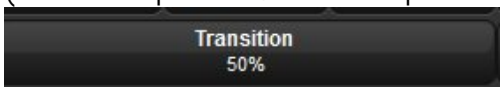
The Emotion Fixture has two distinct control modes that a control board can send commands to it with, a **Standard Protocol** mode and an **Extended Protocol** mode. The standard protocol mode allows the most number of fixtures per DMX universe using the fewest number of channels, 32. The extended protocol gives more features, using more channels per fixture, 54. The extended mode adds detailed keystone control, Collage Generator functionality, and fixture synchronization.

CONTENT LAYERS AND TRANSITIONS

The content layer can be thought of the 'surface' in virtual space that the video or gobo image is placed on. Layer 1 is in front of Layer 2; meaning Layer 2 is not visible if there is no transparency in Layer 1. Using the transition parameter will allow layer 1 to be displayed, or layer 2 to be displayed, or a combination of both.
(Please see the list below for all transition options.)
On a Hog4, they are named as Transition and Transition Mode.

Transition Mode (ex. Cross-Fade) is responsible for the 'type' of transition.

Transition is responsible for the progress.
(For Example: 50% means part of Layer 1 is visible and part of Layer 2 is visible)



Transition Effects List	DMX Value
Crossfade	0
Push Right	1
Push Left	2
Push Down	3
Push Up	4
Reveal Left	5
Reveal Right	6
Reveal Down	7
Reveal Up	8
Reveal Left Down	9
Reveal Right Down	10
Reveal Left Up	11
Reveal Right Up	12
Reveal Circle Out	13
Reveal Circle In	14
Reveal Rectangle Out	15
Reveal Rectangle In	16
Reveal Cross Out	17
Reveal Cross In	18
Pixelate Coarse	19
Pixelate Medium	20
Pixelate Fine	21
Vertical Slats Coarse	22
Vertical Slats Medium	23
Vertical Slats Fine	24
Horizontal Slats Coarse	25
Horizontal Slats Medium	26
Horizontal Slats Fine	27
Swirl	28

LAYER DISPLAY MODE

A layer can display multiple types of content; it can be a still image, or a movie file or a combination of both. The setting that is responsible this is called **Media Layer** or **Media Layer 2** on a Hog4. The list for all possible layer display modes is in the list below. Notice the mode can be as simple as a Gobo, a simple movie file or it can be much more complex combination. One such complex example is using the Gobo as a source for a movie file to be displayed upon.

Note in the list that there is mention of **"Content Fill"** this will scale the content to ensure there are not dark corners that would occur when rotating a rectangular object in a rectangular window.

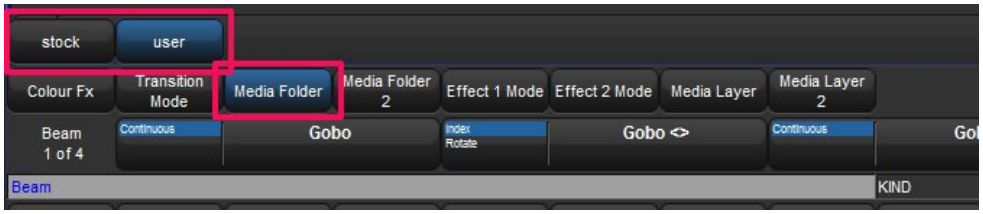
Gobo/Content Control Content is taken from Stock Content	**DMX Value**
Gobo	0
Gobo inverted Black to Alpha	1
Gobo Black to Alpha	2
Gobo Negative	3
Gobo Negative Inverted Black to Alpha	4
Gobo Negative Black to Alpha	5
Gobo Black to Alpha	6
Content	7
Content on Gobo	8
Content on Gobo Inverted Black to Alpha	9
Content on Gobo Black to Alpha	10
Content on Negative Gobo	11
Content on Negative Gobo Inverted Black to Alpha	12
Content on Negative Gobo Black to Alpha	13
Gobo Color Distance from Black to Alpha	14
Gobo Inverted Color Distance from Black to Alpha	15
Content Fill	16
Content Fill on Gobo	17
Content Fill on Gobo Inverted Black to Alpha	18
Content Fill on Gobo Black to Alpha	19
Content Fill on Negative Gobo	20
Content Fill on Negative Gobo Inverted Black to Alpha	21
Content Fill on Negative Gobo Black to Alpha	22
Gobo Set Black Transparent	23

LAYER DISPLAY MODE [continued]

Gobo/Content Control Content is taken from User Content	**DMX Value**
Gobo	128
Gobo inverted Black to Alpha	129
Gobo Black to Alpha	130
Gobo Negative	131
Gobo Negative Inverted Black to Alpha	132
Gobo Negative Black to Alpha	133
Gobo Black to Alpha	134
Content	135
Content on Gobo	136
Content on Gobo Inverted Black to Alpha	137
Content on Gobo Black to Alpha	138
Content on Negative Gobo	139
Content on Negative Gobo Inverted Black to Alpha	140
Content on Negative Gobo Black to Alpha	141
Gobo Color Distance from Black to Alpha	142
Gobo Inverted Color Distance from Black to Alpha	143
Content Fill	144
Content Fill on Gobo	145
Content Fill on Gobo Inverted Black to Alpha	146
Content Fill on Gobo Black to Alpha	147
Content Fill on Negative Gobo	148
Content Fill on Negative Gobo Inverted Black to Alpha	149
Content Fill on Negative Gobo Black to Alpha	150
Gobo Set Black Transparent	151

STOCK CONTENT OR USER CONTENT

Notice that the above list contains references user content; the Hog4 has a selection to make this choice in the background, without the user needing to keep track of DMX details. (Note: Using the **EMOTION™** with other consoles may require a different action)



VIDEO FILE – STOCK CONTENT

The Emotion fixture ships with 255 pieces of stock video content to be used with the fixture. These files cannot be removed from the fixture, but can be used anywhere when being used with the **EMOTION™** fixture. The name in the Hog4 Library for Layer 1 is **Media File**. The name for Layer 2 is **Media File 2.** The image below shows Layer 1, displaying file 38 from the stock media folder.

USER CONTENT – VIDEO FILE

User content can be added to the **EMOTION™** fixture. The content type that is required to be **.m2v**, encoded with all I-Frame for proper functionality of the synchronization system. There are encoding templates available to be used with Adobe Media Encoder. The use of the **Content Management Application (CMA)** is required to upload user content. (Please see the CMA section of this manual.)

Note For Use with Non-Hog4 Control Consoles:
The DMX value for this parameter refers to the stock content modes plus 128. For Example: to display **"User Video Content"**, with no effect- the Layer display mode would be set to 135. To display **"User Video Content on Negative Stock Gobo"** - the Layer display mode would be set to 139.

USER CONTENT – STILL IMAGE

User images can be added to the **EMOTION™** fixture. The tested content types are have been tested are PNG, JPG and BMP. The resolution is suggested to be **1024x768**, without Alpha Channel. The use of the Content Management Application (CMA) is required to upload user content. Please see the CMA section of this manual.

LIVE EFFECTS

The list on the next page provides the live effects that are available for use in the **EMOTION™** fixture. Live effects are applied to Video Content. The effect has one modifier to vary of effect on the original image. (The names in the Hog4 library referring to Layer 1 are **Effect1 Mod 1** and **Effect 1 Mode.** The names referring to Layer 2 are **Effect2 Mod 1** and **Effect 2 Mode.)**

LIVE EFFECTS [continued]

Content Effects	DMX Value
None	0
Swap RGB to GBR	1
Swap RGB to BRG	2
Swap RGB to BGR	3
Swap RGB to RBG	4
Swap RGB to GRB	5
Color Invert	6
Color Invert GBR	7
Color Invert BRG	8
Solarize	9
Solarize 2	10
Solarize 3	11
Solarize 4	12
Edge Detect	13
Edge Detect BW	14
Edge Detect 2	15
Edge Detect 2 Color	16
Scene Change Detect	17
Rain Drop	18
Faux LED	19
Faux Tile	20
Pixelate	21
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GOBO AND GOBO ROTATE

The Gobo parameter recalls the stock images to be used in the various layer modes. The Gobo Rotate parameter mimics the look of an actual rotating gobo wheel. The effect can be static, or a continuous. The rotate function is active for gobo images as well as Video Content.
(The names in the Hog Library are ***Gobo, Gobo <>, Gobo2,*** and ***Gobo 2<>.***)

BACKGROUND COLOR AND COLOR EFFECT

The **EMOTION™** fixture can have a background color applied or even a dynamic background color effect shown in the output. In addition, when calling up a fixture, for example 1 @ full, the background is set to full 'white' by default in the Hog4 library. Note: This behavior is to aide programming by mimicking a conventional fixture, but at times this background is seen when modifying layers. To 'mute' this effect – set the color channels to Red 0, Green 0, and Blue 0. (These parameter channels are oddly named CMY on a Hog4)

The chart below details all parameters of the background color and color effect feature. (The names in the Hog Library are ***Color FX*** to choose the background effect, the ***Cyan, Magenta***, and ***Yellow*** naming is used for Modifiers 1,2 and 3 respectfully)

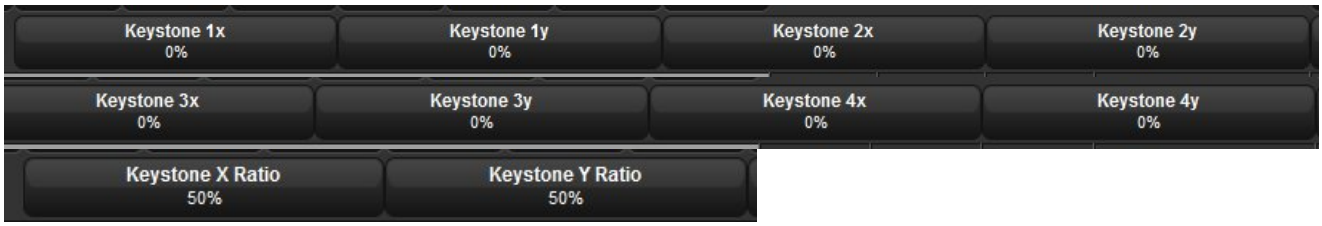
DMX	Background Color Effects	Description (M1, 2, 3 = Modifier 1, 2, 3)
0	Cyan Magenta Yellow	Cyan-Set Cyan; Magenta-Set Magenta; Yellow-Set Yellow
1	Red Cycle	M1-Red Speed. M2-Green Level. M3-Blue Level.
2	Green Cycle	M1-Red Level. M2-Green Speed. M3-Blue Level.
3	Blue Cycle	M1-Red Level. M2-Green Level. M3-Blue Speed.
4	Red Green Cycle	M1-Red Speed. M2-Green Speed. M3-Blue Level.
5	Red Blue Cycle	M1-Red speed. M2-Green Level. M3-Blue Speed.
6	Green Blue Cycle	M1-Red level. M2-Green Speed. M3-Blue Speed.
7	Red Green Blue Cycle	M1-Red speed. M2-Green Speed. M3-Blue Speed.
8	Gradient Red	M1-Red X Position. M2-Red Y Position. M3-Green Blue Multiplier.
9	Gradient Red 2	M1-Red X Position. M2-Red Y Position. M3-Green Blue Multiplier.
10	Gradient Green	M1-Green X Position. M2-Green Y Position. M3-Red Blue Multiplier.
11	Gradient Green 2	M1-Green X Position. M2-Green Y Position. M3-Red Blue Multiplier.
12	Gradient Blue	M1-Blue X Position. M2-Blue Y Position. M3-Red Green Multiplier.
13	Gradient Blue 2	M1-Blue X Position. M2-Blue Y Position. M3-Red Green Multiplier.
14	Gradient Red Green	M1-Red Multiplier. M2-Green Multiplier. M3-Rotation.
15	Gradient Red Delta	M1-Red Multiplier. M2-Green Multiplier. M3-Blue Multiplier.
16	Gradient Red Delta 2	M1-Red Multiplier. M2-Green Multiplier. M3-Blue Multiplier.
17	Gradient Green Delta	M1-Red Multiplier. M2-Green Multiplier. M3-Blue Multiplier.
18	Gradient Green Delta 2	M1-Red Multiplier. M2-Green Multiplier. M3-Blue Multiplier.
19	Gradient Blue Delta	M1-Red Multiplier. M2-Green Multiplier. M3-Blue Multiplier.
20	Gradient Blue Delta 2	M1-Red Multiplier. M2-Green Multiplier. M3-Blue Multiplier.

KEYSTONE FEATURE (STANDARD MODE)

The keystone feature available in the **Standard Mode** of the protocol gives a basic modification to account for minor projection angle variations. There are 2 parameters give for this control, **Keystone X Ratio** and **Keystone Y Ratio**. When modifying these parameters, the image is rotated around their X axis or Y axis respectively, this gives a basic modification.

KEYSTONE FEATURE (EXTENDED MODE)

The keystone feature available in the **Extended Mode** of the protocol uses 4 corner points, with an X/Y position control at each corner. The 8 control channels give detailed control over keystone modification. These parameters allow independent X, Y control of the 4 corners. In addition to the corner position modification, the linearity of the image can be adjusted as well. This adjustment allows for warping the image when projecting at shallow angles. These warping controls are labeled **Keystone X Ratio** and **Keystone Y Ratio.** The images below show the Hog4 slot toolbar layout.



COLLAGE GENERATOR (EXTENDED MODE)

The Collage Generator system is part of the graphics engine that allows multiple devices to work together to create a larger, virtually seamless image. The graphics engines of multiple servers can work together to create this much larger image. There are various modes that the Collage Generator can work, Standard Collage, Multi-Pane Collage, Standard Wrap, and Multi-Pane Wrap, all with various blending options. These various modes will use content differently to create the final full image.

Standard Collage

In the Standard Collage options, the content is automatically ***'sliced'*** into cell segments by the graphics engine when you define the array size. This yields good results in situations where moderate output resolution is suitable. Be aware, each graphic output is using a full resolution image file and only projecting the needed portion of the image, which can impact performance.

Multi-Pane Collage

In the Multi-Pane Collage options, the content is NOT sliced by the server and must be sliced before importing. This situation allows a much higher resolution output of the total collage. Using Multi-Pane Collage gives you the option to use video files that match the resolution of the display devices exactly.

Wrap

In the Wrap option, the blending area of the first and last image are repeated on the edge, so that they can be overlapped when build a cylindrical projection. This is required for a virtually seam-less output. Multi-Pane example, if you have four Emotion fixtures using a 4-part Multi-Pane Collage with individual 1024x768 video files, the resulting collage resolution will be much higher. In standard collage modes, a single file is divided by the number of parts in the collage. This method may not be visually acceptable on a large screen.

COLLAGE TYPE

The list below provides the possible **Collage Type** settings.

DMX Value	Action
1	Standard Collage divides content for projection onto a flat surface
2	Standard Collage with 360° wrap divides the content into an array and edge blending for projection onto a 360° surface
3	Multi-Pane Collage pre-configures the content into cells that are then arranged into an array for projection onto a flat surface
4	Multi-Pane Collage with 360° wrap pre-configures the content into cells that are then arranged into an array for projection onto a 360° surface.

COLLAGE CELL AND COLLAGE CELL SELECTION

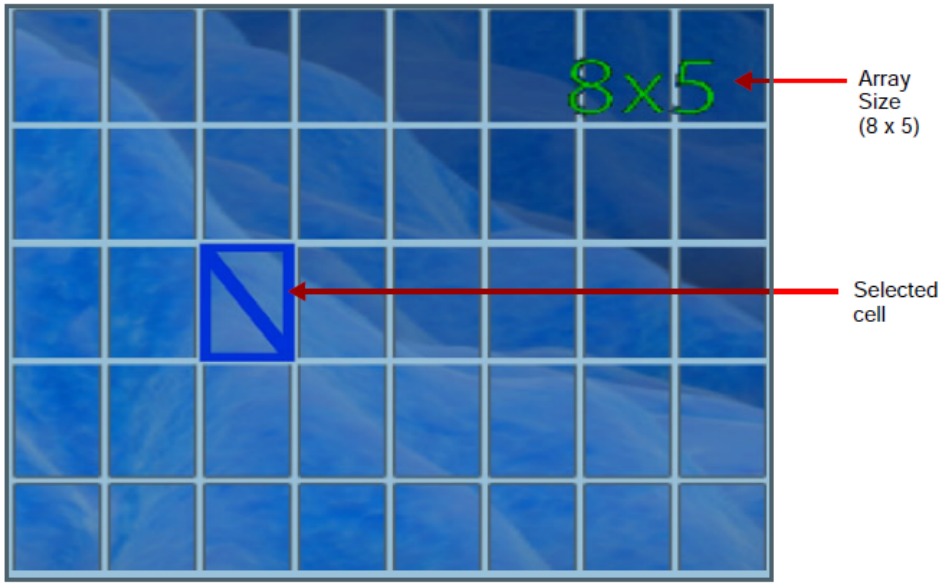
The **Collage Cell** parameter tells the **Collage Generator** how many total cells are in a collage. The layout of the grid is also selected at this time, for example a 2x1 grid is different from a 1x2 grid. DMX Values of 126-255 are reserved and default to no collage. (See the below Collage Cell Chart for more details)

The **Collage Cell Selection** parameter determines which cell a particular **EMOTION™** fixture will display. DMX values 0 up to 127 are used to step through the grid pattern determined by the **Collage Cell** parameter. DMX values outside the valid range default to the upper left corner of the grid.

COLLAGE CELL

DMX Value	Array (W x H)	DMX Value	Array (W x H)	DMX Value	Array (W x H)	DMX Value	Array (W x H)	DMX Value	Array (W x H)
1	2 x 1	**26**	1 x 6	**51**	8 x 2	**76**	10 x 5	**101**	13 x 6
2	1 x 2	**27**	6 x 2	**52**	2 x 8	**77**	10 x 6	**102**	13 x 7
3	2 x 2	**28**	2 x 6	**53**	8 x 3	**78**	10 x 7	**103**	13 x 8
4	3 x 1	**29**	6 x 3	**54**	3 x 8	**79**	10 x 8	**104**	14 x 1
5	1 x 3	**30**	3 x 6	**55**	8 x 4	**80**	11 x 1	**105**	14 x 2
6	3 x 2	**31**	6 x 4	**56**	4 x 8	**81**	11 x 2	**106**	14 x 3
7	2 x 3	**32**	4 x 6	**57**	8 x 5	**82**	11 x 3	**107**	14 x 4
8	3 x 3	**33**	6 x 5	**58**	5 x 8	**83**	11 x 4	**108**	14 x 5
9	4 x 1	**34**	5 x 6	**59**	8 x 6	**84**	11 x 5	**109**	14 x 6
10	1 x 4	**35**	6 x 6	**60**	6 x 8	**85**	11 x 6	**110**	14 x 7
11	4 x 2	**36**	7 x 1	**61**	8 x 7	**86**	11 x 7	**111**	14 x 8
12	2 x 4	**37**	1 x 7	**62**	7 x 8	**87**	11 x 8	**112**	15 x 1
13	4 x 3	**38**	7 x 2	**63**	8 x 8	**88**	12 x 1	**113**	15 x 2
14	3 x 4	**39**	2 x 7	**64**	9 x 1	**89**	12 x 2	**114**	15 x 3
15	4 x 4	**40**	7 x 3	**65**	9 x 2	**90**	12 x 3	**115**	15 x 4
16	5 x 1	**41**	3 x 7	**66**	9 x 3	**91**	12 x 4	**116**	15 x 5
17	1 x 5	**42**	7 x 4	**67**	9 x 4	**92**	12 x 5	**117**	15 x 6
18	5 x 2	**43**	4 x 7	**68**	9 x 5	**93**	12 x 6	**118**	15 x 7
19	2 x 5	**44**	7 x 5	**69**	9 x 6	**94**	12 x 7	**119**	15 x 8
20	5 x 3	**45**	5 x 7	**70**	9 x 7	**95**	12 x 8	**120**	16 x 1
21	3 x 5	**46**	7 x 6	**71**	9 x 8	**96**	13 x 1	**121**	16 x 2
22	5 x 4	**47**	6 x 7	**72**	10 x 1	**97**	13 x 2	**122**	16 x 3
23	4 x 5	**48**	7 x 7	**73**	10 x 2	**98**	13 x 3	**123**	16 x 4
24	5 x 5	**49**	8 x 1	**74**	10 x 3	**99**	13 x 4	**124**	16 x 5
25	6 x 1	**50**	1 x 8	**75**	10 x 4	**100**	13 x 5	**125**	16 x 6
126	16 x 7								
127	16 x 8								

COLLAGE CELL SELECTION



COLLAGE EDGE BLENDING

Variable Edge Blending controls are used with the **Collage Generator** controls to allow for on-the-fly adjustment of blend overlap between projectors. These controls allow more flexibility for sizing a collage to a given screen or projection surface, as well as smoother blending if wider blend regions are used. Horizontal and Vertical blend regions can be controlled independently of one another.
The **Variable Edge Blend** Horizontal and Vertical parameters allow 16-bit control of the horizontal blend region width from 0% (hard edge) up to 50% of the image size.

COLLAGE EDGE BLENDING CURVE ADJUSTMENT

The **Edge Curve Adjustment** lets you select from a variety of detailed methods to modify the blending curve to control the overlap of the adjacent projections. These modifications should only take place after all other modifications are complete. They give the final adjustment to the overlapped region to make the overlapped edge virtually seamless.

DMX Value	Curve Type and Range
0	Standard Color Blend Curve – No Adjustment
1-33	Standard Color Blend Curve w/Intensity Reduction (1 = Max Reduction)
34	Standard Color Blend Curve – No Adjustment
35-63	Standard Color Blend Curve w/Intensity Addition (63 = Max Addition)
64-95	Grey Scale Blend Curve w/Intensity Reduction (64 = Max Reduction)
96	Grey Scale Blend Curve – No Adjustment
97-127	Grey Scale Blend Curve w/Intensity Addition (127 = Max Addition)

COLLAGE EDGE CONTROL / ALIGNMENT PATTERN OUTPUT

During Collage setup, it is helpful to view a grid or other technical images to help the process of aligning each individual **EMOTION™** fixture to its portion of the total collage. There are six alignment patterns available. Each pattern has a different use and is helpful in different ways. Generally speaking, using the **"Alignment Pattern with Normal Blending" (value 3)** or **"Alignment Pattern with No Blending " (value 5)** are the most used. Below is the full list of technical images available to aid the alignment of the cell to the full collage.

DMX Value	Action
0	Graphics Out. Normal Blending Per Selected Blend Adjustment
1	Graphics Out. Blend Area Defaulted To Black
2	Graphics Out. Blend Area Shown With No Blending Applied
3	Alignment Pattern Out. Normal Blending Per Selected Blend Adjustment
4	Alignment Pattern Out. Blend Area Defaulted To Black
5	Alignment Pattern Out. Blend Area Shown With No Blending Applied
6	Grid Cell Selection Shown Over Graphics Output

SYNCHRONIZATION

Network Synchronization allows for certain functions of the fixture to be synchronized over an Ethernet network, accessible through the Graphics server port. This can be very useful when using the **Collage Generator** to ensure a seamless image across multiple fixtures.

Network Synchronization is accomplished using a reference fixture that sends information about its movie time. The sync information is transmitted via an Ethernet network to all listening server. The other listening servers, or slave servers use this information to set their movie times to match the reference server. This process is based on a global time clock using time offsets.

Network Synchronization is not **Control Mirroring**. With **Control Mirroring**, the fixtures are controlled with the same source, but do not communicate with each other. At times this method yields acceptable results, but to properly use **Network Synchronization**, all attached servers must have a unique control source.

NETWORK SYNCHRONIZATION REQUIREMENTS

In order for **Network Synchronization** to function properly, there are a few requirements that must be adhered to in the set-up of the fixtures:

All of the servers must be linked on an Ethernet network through the graphics server port. This network must be configured on a DHCP network and the router must have sufficient bandwidth to handle all connected fixtures. Low cost 10/100 wireless routers may not work properly; higher quality 100/1000 routers are generally preferred.

The **Fixture ID** for each fixture on the network must be unique. The **Fixture ID** is used to assign the master and slave servers. Having multiple media servers with the same **Fixture ID** will cause **Network Synchronization** to fail. **Fixture ID** is set via the **CMA**.

All video content to be used in a Synchronization scenario MUST adhere to the encoding requirements for encoding custom content. If the content is not encoded correctly **Network Synchronization** will not function. Specifically all image information must be present at all frame locations. Highly compressed video does not contain all image information in every frame, but only the changes from a key-frame previously encountered in playback.

NETWORK SYNCHRONIZATION CAPABILITIES

The system is designed to help keep the movie playback time relatively in sync, as perceived. The system is not designed to frame lock or gen-lock, these features will not be supported in the Emotion fixture. Synchronization is used between multiple servers for Collage applications, or other perceived playback applications.

NETWORK - ENABLE

To enable network sync, all fixtures must be on an Ethernet network, have an IP assigned by a DHCP, and have a unique ID number. Sync is activated by changing the Sync Control channel from zero to the fixture ID that is meant to be the sync target. For example, 4 fixtures connected have fixture ID's of 11, 12, 13, 14. The sync master is meant to be the 4th fixture, which in this example would be 14. Setting the sync value of all fixtures to 14 will tell the fixtures to listen to the 4th fixture. Note that there is no issue setting the master to sync to its self. By selecting all fixtures in the sync group, and setting them to the same value eases programming and minimizes mistakes.

FIXTURE CONTROL, PROJECTOR CONTROL

The fixture control channel is used to set various functions and features of the **EMOTION™** fixture. When there is not a specific command needed, the control channel must be set to Idle or Safe (Channel 7, Value of 0). Please note, leaving a control channel active can impact performance, as the projector can be constantly responding to command. For example, if the projector is commanded to flip, there will be the initial change, and every second after; the projector will attempt to change again. Please leave the control channel at Idle when not intending to make a change.

FIXTURE IDLE

This is the default value, and can be thought of as the 'no command' mode. Please use allow the control channel to remain at this value when not in use (Channel 7, Value of 0)

FIXTURE SHUTDOWN

This command is meant to turn-off the motion system. Note the lamp off must be sent in a separate command. It is good practice to shutdown the fixture and lamp before removing power – please allow 5 minutes for the projector lamp to cool before removing power. Sending the Home All command will 'wake up' a fixture in shutdown mode.

HOME ALL

This function is used to reset the Pan and Tilt position sensors and allow the system to start from a known position. Use this command when the Pan and Tilt is not responding correctly, or if the fixture has been impacted and no longer pointing in the correct direction.

LAMP STRIKE

This command is used to turn-on the projector lamp. The projector has in-built protection to allow the lamp to strike only when cool.

LAMP DOUSE

This command is used to turn-off the projector lamp. The projector will have a notification screen when this command is received. This is useful for ensuring the projector is responding as intended.

PROJECTOR ORIENTATION

This command is meant to change the orientation of the projected image. For example if the projector is hung inverted, the projector can 'flip' its output so that images remain upright. There is also the option to front-project or rear-project the image.

CONTENT MANAGEMENT APPLICATION (CMA)

The CMA is a standalone application that is installed and run from a networked PC. Typically the CMA is installed on a laptop and is available when the fixtures are in use. The CMA is also responsible for all graphics engine management functions as well as managing user content. Graphics engine software updates are handled through the CMA as well. The CMA communicates with the Emotion graphics engine through the Ethernet port labeled "Graphics Server."

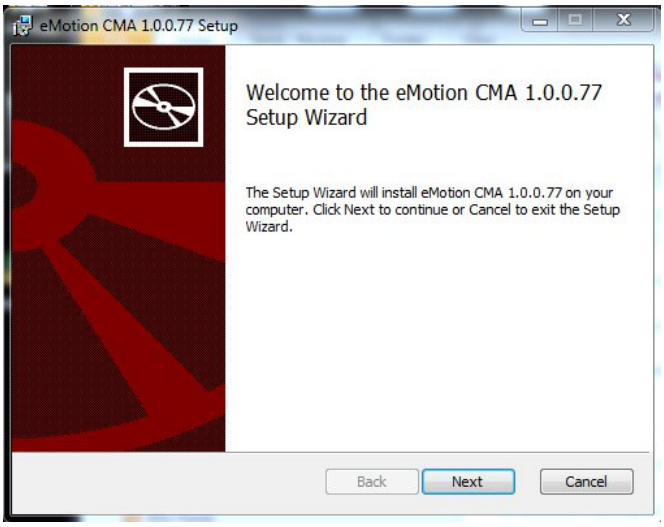
INSTALLATION OF THE CMA

Installing the CMA is a very similar to all other applications installed on a PC. The PC that is being used to run the CMA must meet minimum requirements for **Windows 7®** and above. The installation steps are listed below.

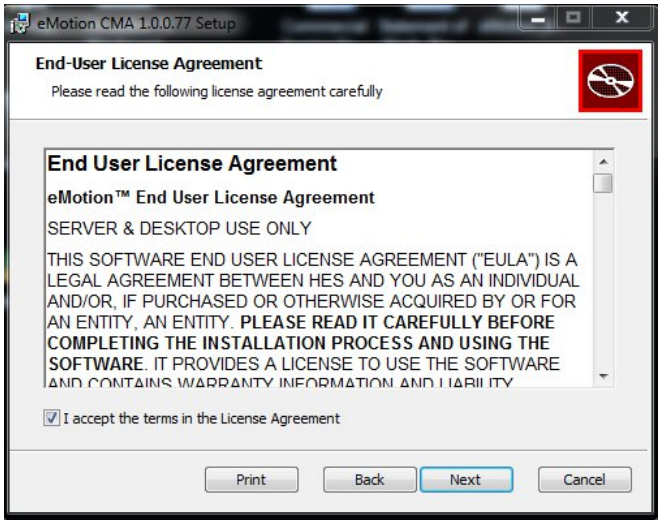
Before You Begin:

- Download the CMA installer from www.elationlighting.com.
- Double click on the downloaded file, it will likely be titled ***eMotion_CMA_x-x-x-x.msi*** (where the 'x' would be the version number)
- The Windows installer process begins after double-clicking.

Press '**Next'** after being greeted by the setup wizard

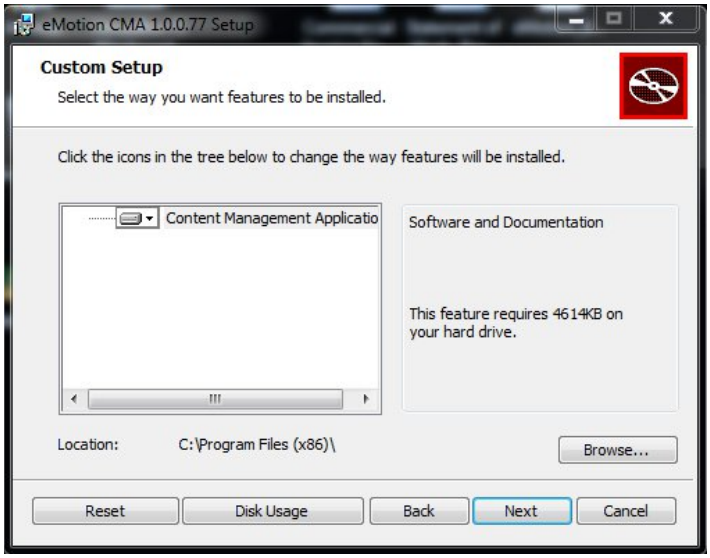


You must accept the License Agreement, and Press **'Next'** to continue.

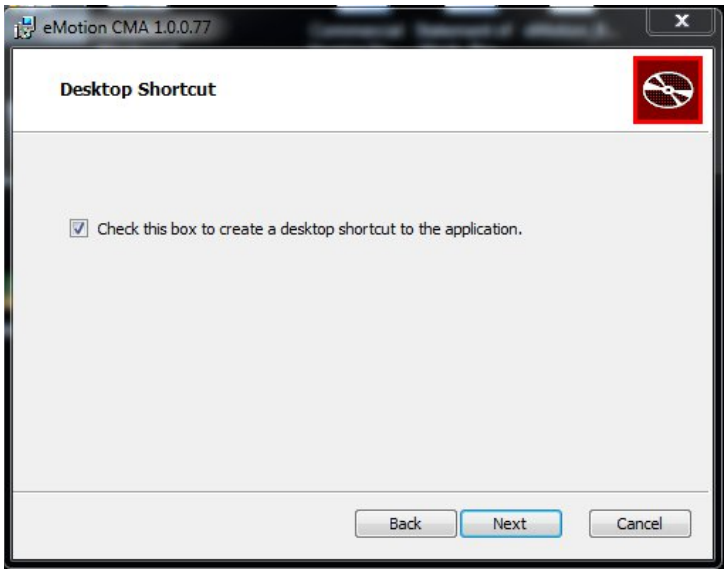


INSTALLATION OF THE CMA [continued]

If you would like to make a change to the installation directory, you can do that now. It is not recommended unless there is a specific need.

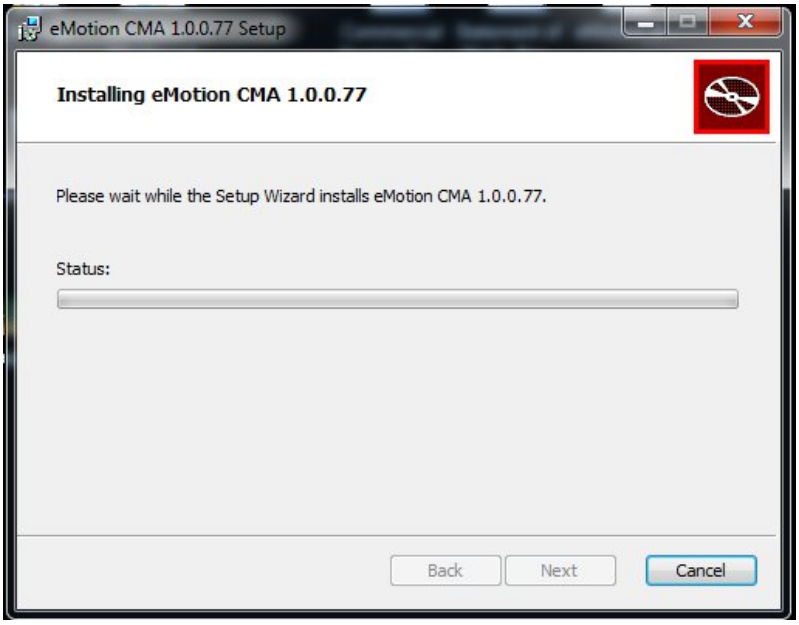


Check the box if you would like a **Desktop Shortcut** added after installation, this is recommended to ease use

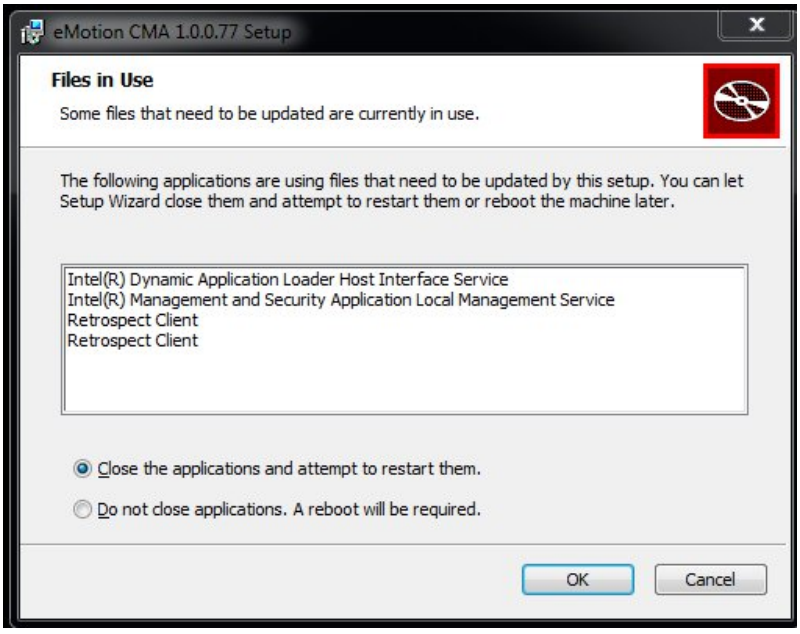


INSTALLATION OF THE CMA [continued]

Press **'Next'** to confirm no changes are needed, then the installation process will begin.

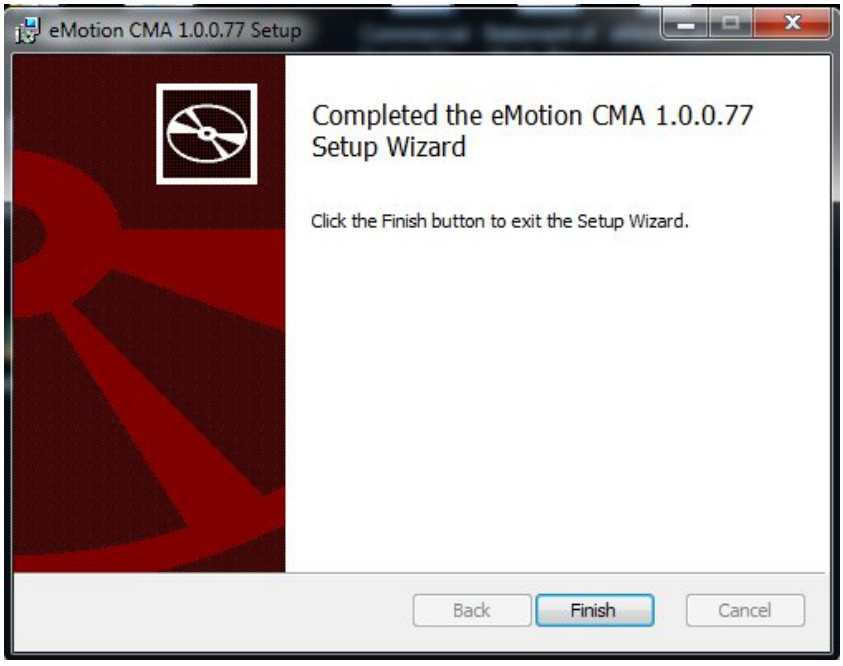


A dialog box may appear if there are other applications open when you are trying to install, choose option that best fits your need. It is recommended to reboot after installation anyways.



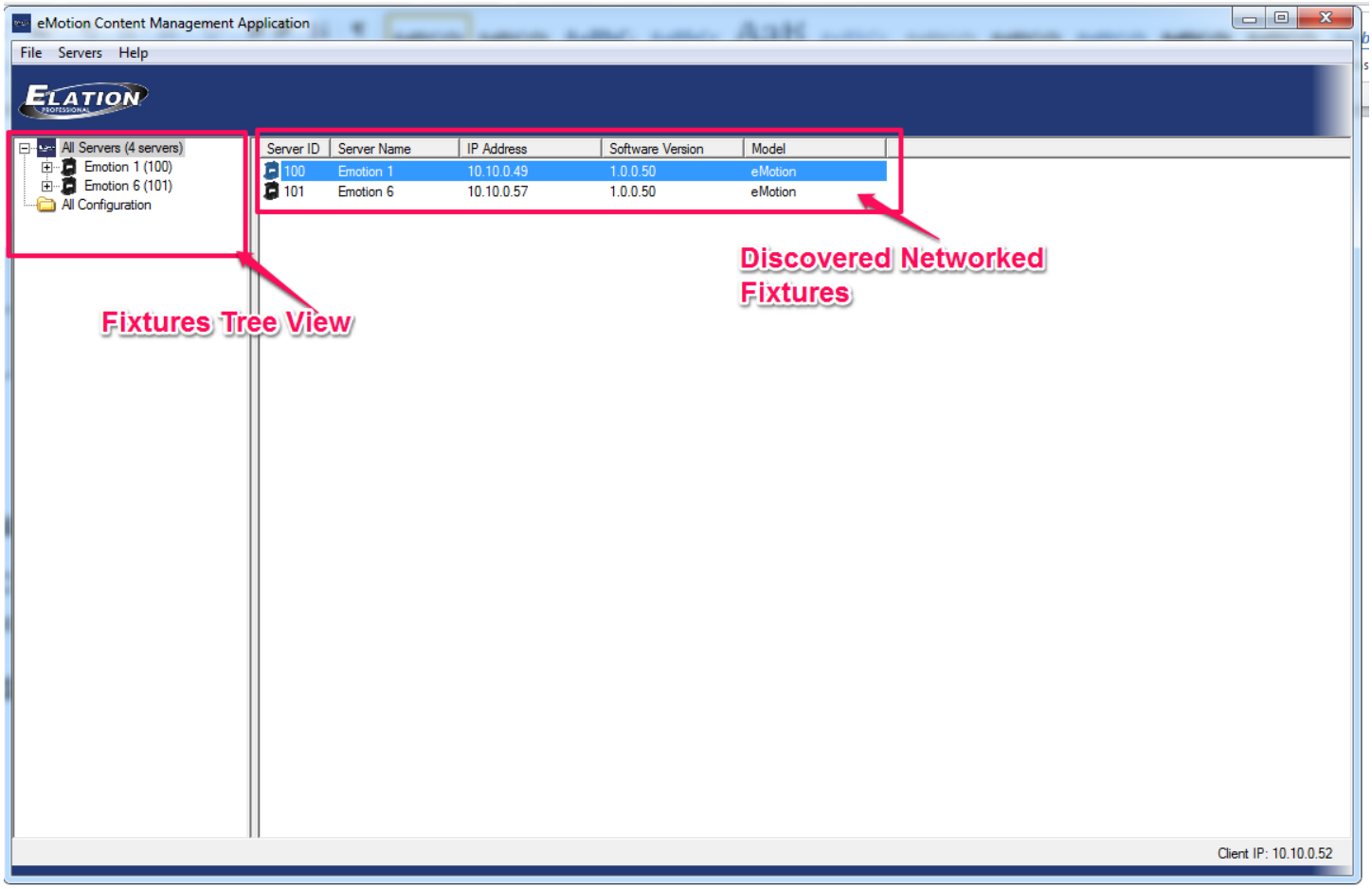
INSTALLATION OF THE CMA [continued]

Press **'Finish'** to end the installation process.



FUNCTIONAL LAYOUT OF THE CMA

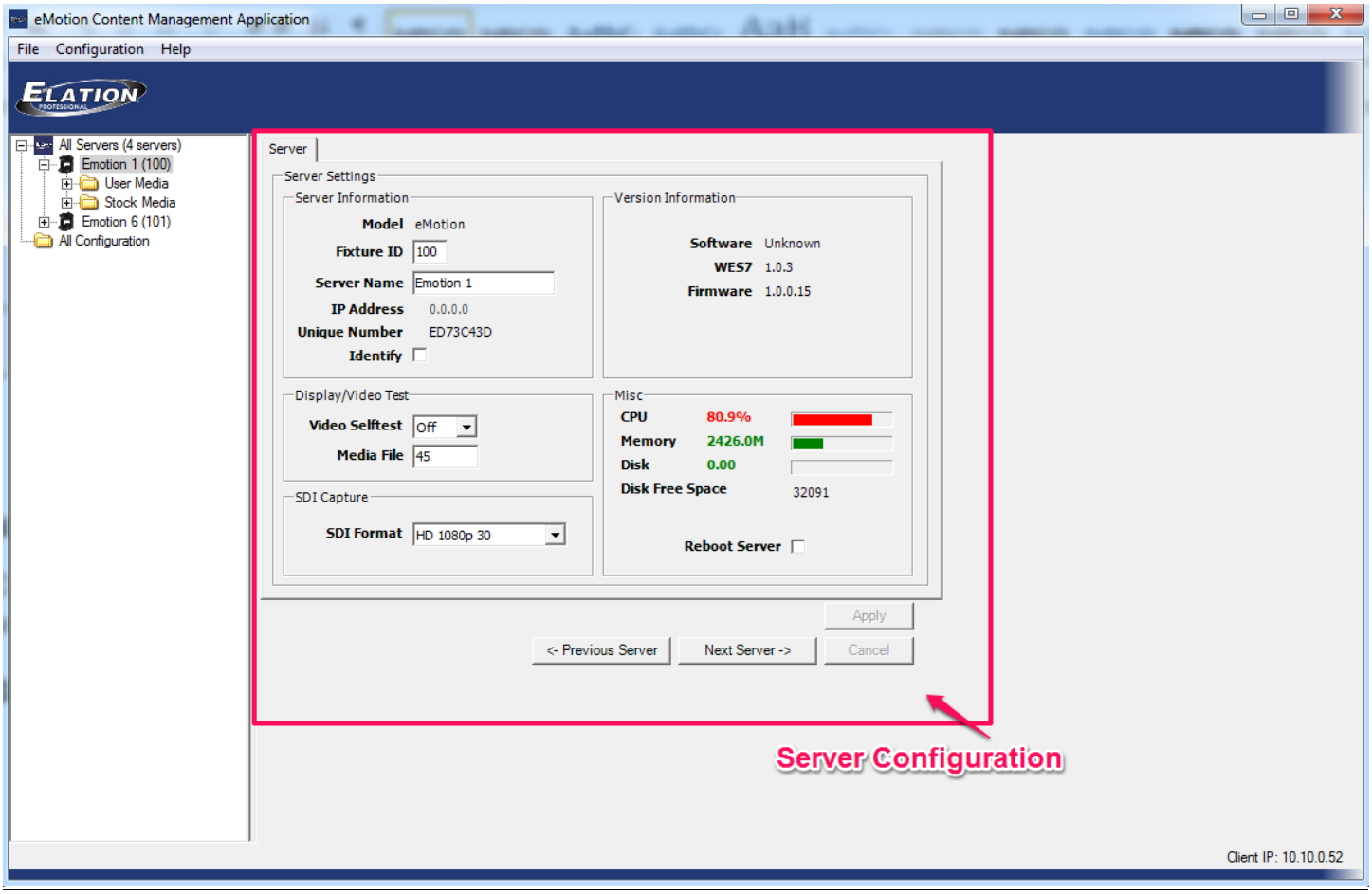
The below image shows the functional layout of the CMA, fixtures attached on the same network, using the graphics engine Ethernet port, which will be auto-discovered and displayed below. It is important to note that there is no direct control of the graphics engine IP address. If this functionality is needed, please use a router with a DHCP server set for your specific use.



GRAPHICS SERVER CONFIRGURATION

Select the **EMOTION™** to be viewed in the left-side tree view.

Information will be displayed in the right panel.



Fixture ID – User definable number, used for the synchronization system. If sync is to be used, all fixtures must have a unique Fixture ID when they are networked using their Graphics server Ethernet connector.

Identify – Check this box, and press **'Apply'**. The graphics engine will strobe white, this is used to locate fixtures

Server Name – User definable name, used for friendly organization in the CMA.

Video Selftest / **Media File** – A utility method to force output of the graphics engine, this function is useful for troubleshooting. Two preset methods are also included in the Self-Test feature.

SDI Format – (Accessory) a configuration option for the attached Ultra Studio SDI USB3 capture device. Recommended to use **'AUTO'**

Version Information – Multiple software versions installed in the fixture.

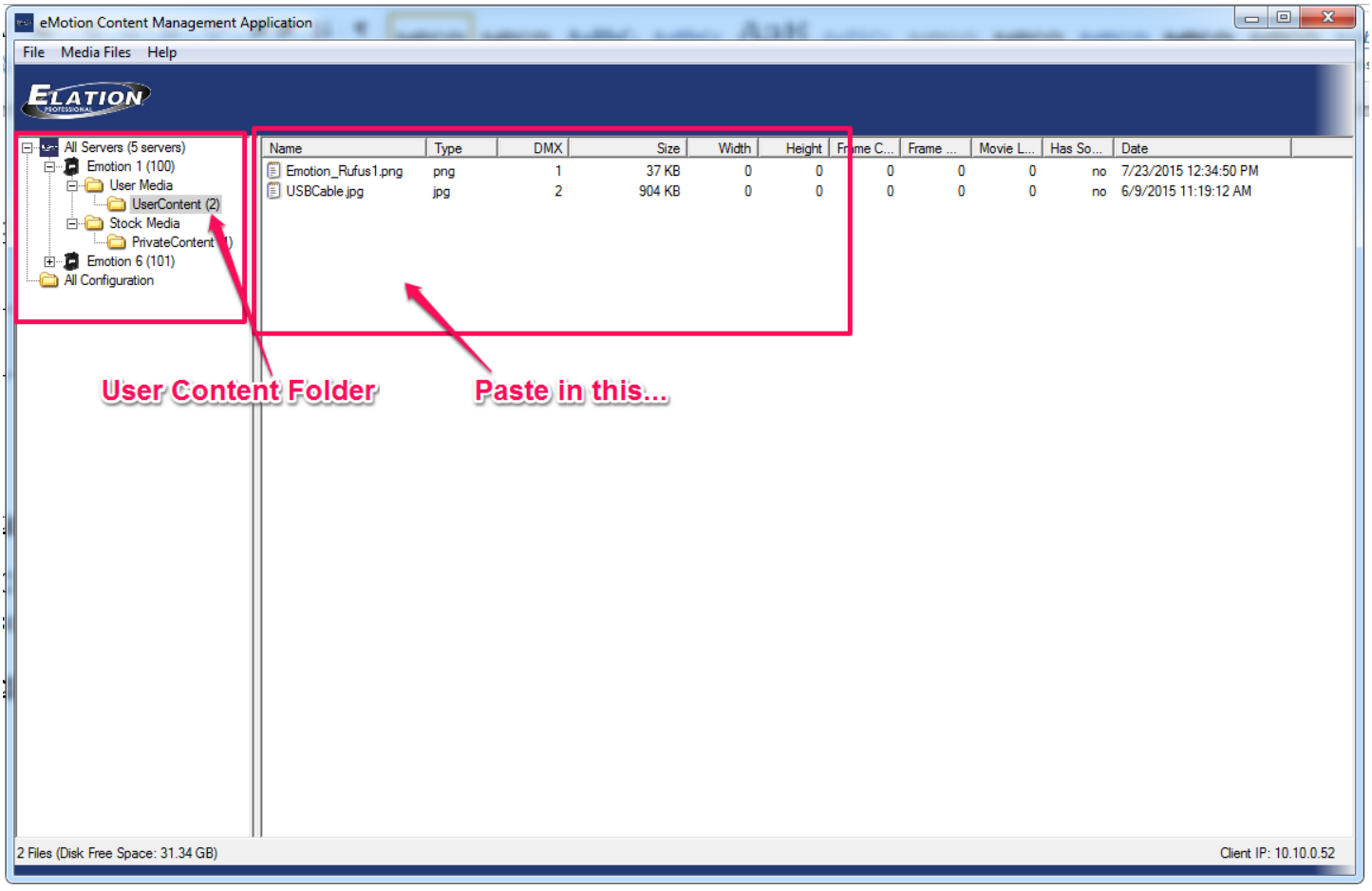
VIDEO FILE – USER CONTENT ADDITION

Please Note: Before adding content, video files must be properly encoded for proper playback. Still images must be properly formatted for proper playback as well. Please use the encoding template for proper video playback.

Content will be scanned before being imported, any content that is deemed unacceptable will not be added to the fixture – this is to maintain reliability of the fixture. Also, the use of 'spaces' in a file name is not allowed, this will be handled automatically upon import.

To add User Content navigate to the User Media / User Content folder in the tree view. Content files can be added from a **Windows 7®** computer via Drag-drop or Cut-Paste method.

Once the file is transferred to the graphics engine, a DMX address must be added. This can be accomplished by, right clicking on a file and pressing **"Auto-Set DMX"** will apply the next available DMX value.



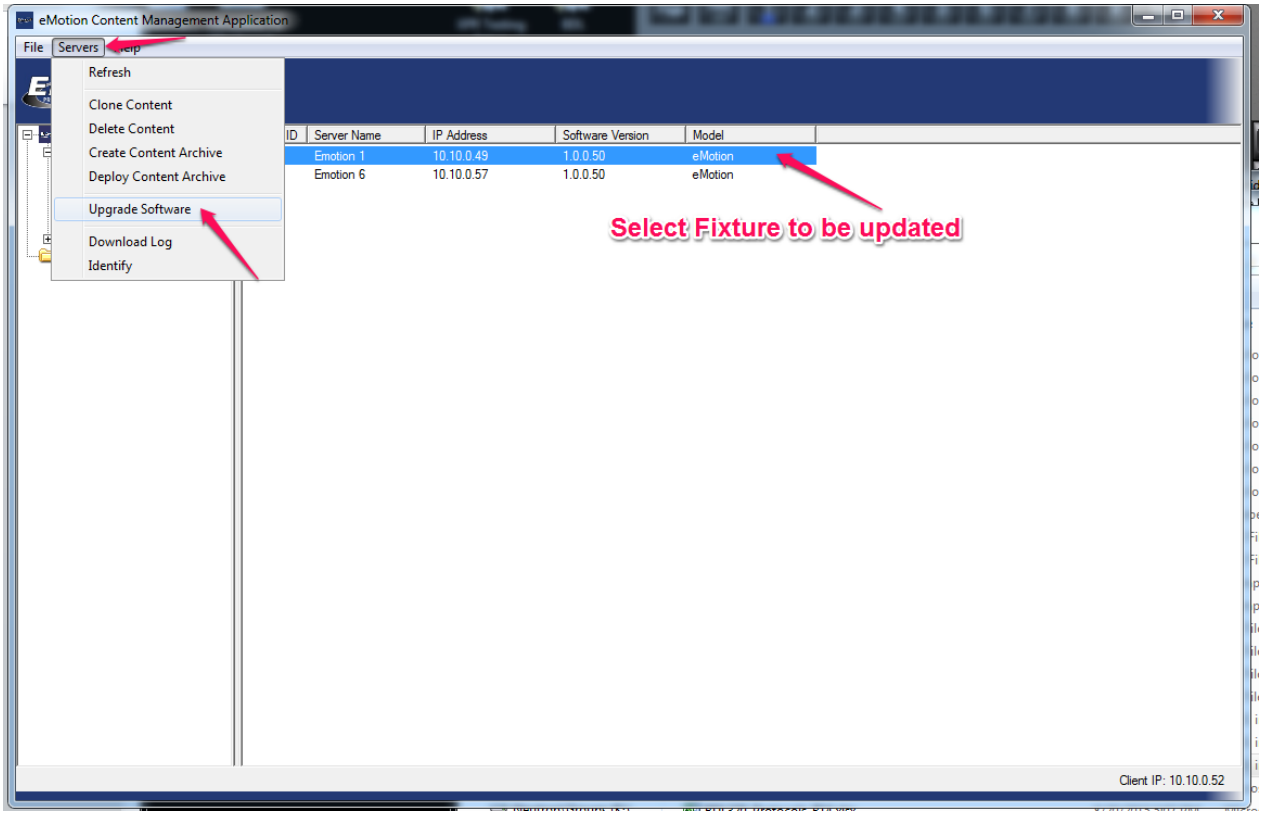
FIXTURE SOFTWARE, FIRMWARE AND UTILITIES

EMOTION™ GRAPHICS ENGINE SOFTWARE UPDATE

The software is used by the embedded graphics engine can be updated remotely, this method use the graphics server Ethernet connection. Before updating software, be sure to power on, allow the Emotion fixture to find all network devices, and finish startup requirements. This process generally takes up to a minute- please do not start a software update process within 1 minute of powering on an **EMOTION™** fixture.

To Update Software:

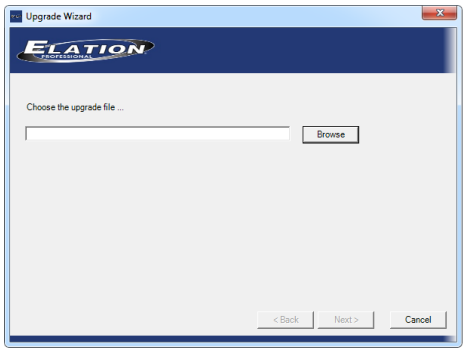
- Be sure the fixture is seen in the fixture tree
- Select the fixture in the right panel
- From the menu bar, choose **'Servers'**
- A pop up window will appear, prompting for the location of the **.BDL file** to send to the graphics engine.
- Detailed information will be contained with the **.BDL file**, highlighting software changes.



EMOTION™ GRAPHICS ENGINE SOFTWARE UPDATE [continued]

Follow on-screen prompts to update software.

(This dialog box is asking for the location of the .BDL file that was downloaded)



EMOTION™ MOTION SYSTEM FIRMWARE UPDATE

The **EMOTION™** fixture has a separate procedure to update the firmware of the motion system. This update process requires the use of a separate loading device. Please contact support for more information, and reference the procedures that are enclosed with the firmware device.

EMOTION™ GRAPHICS SYSTEM RESTORE – USB STICK

At times there are system changes that affect the foundation of the graphics engine. These changes cannot be accomplished through the update process mentioned above. By using a system image and a bootable USB stick, the System Restore method can reset the entire system to a factory default state.

Process Outline:

- Download a system restore image from the support website.
- Prepare the USB stick System restore.
- Place the USB stick in the fixture to restore and boot from it by pressing F10.
- Launch the System Restore process.
- Follow the onscreen prompts:
    - Partial restore: User content will be unaffected
    - Full restore: User content will be removed
    - Confirm, and process will complete.
- Remove USB when prompted by green text at next restart.
- Process will complete automatically.

DOWNLOAD SYSTEM IMAGE

The **EMOTION™** fixture graphics system image is available on the support website. Please download this file and place it on the desktop for easy access.

PREPARE USB STICK

A USB stick is required; it must be at least 8GB. It is suggested to be USB3.0 to speed the process. The USB stick is easily prepared by using a helper application called Rufus. (https://rufus.akeo.ie/) Please see the tech bulletin for detailed instruction on how to use Rufus.

BOOT TO USB STICK

The graphics server must be reset to access the system restore, it is advised to power on the Emotion fixture and allow it to start fully.

Once the system is fully up and running (approx. 1 min after power on) be sure to open the shutter of the fixture. This can be from a control board or by the internal menu system found under manual control of intensity.

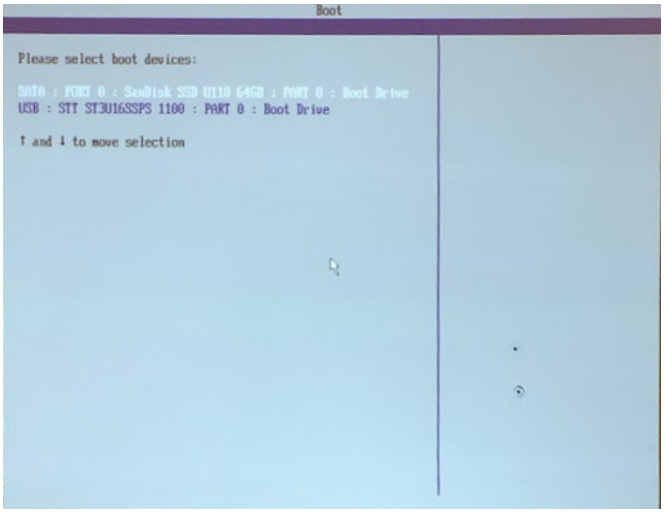
After the shutter is open, insert the USB stick into one of the USB ports, and place a keyboard into the other port.

Press and hold the graphics system reset button for approx. 5seconds.

Release the reset switch and begin tapping F10 on the keyboard (approx. 3 presses/second) you will see the Elation boot screen being shown from the projector.

You will see the projector flash a few times while booting; it is searching for the output source.

Once you see the boot device selection screen (shown below) you can stop pressing F10.



LAUNCH THE SYSTEM RESTORE PROCESS

Use the keyboard to navigate to the line that says **"USB"** (second line in SCREEN image on the previous page)

Press enter and continue pressing enter until you see the Windows Fish (shown below), at which point stop pressing enter. You have now successfully booted to the USB stick.

FOLLOW THE ON-SCREEN PROMPTS

Once the system restore process has begun, please follow the on-screen instructions to choose a partial restore or a full restore. A partial restore will remove and reinstall all graphics engine software. A full restore will remove graphics engine software and all user content. Both methods cannot be undone.

PROCESS CONTINUES AND ENDS AUTOMATICALLY

After choosing the on-screen confirmation to being the system restore, the process will copy needed files over to the graphics server, and make all necessary changes. The process will prompt the removal of the USB stick. This is highlighted by green text on screen saying the server will restart automatically. After the restart there are various setup items that will be completed. Windows will notify of settings being applied and may restart. Please wait for approx. 10 minutes to allow all the window processes to complete, and the server complete. At this time, it may be necessary to power cycle the entire fixture, to ensure that proper motion system and graphics system communications align.

EMOTION™ GRAPHICS SYSTEM RESTORE – UTILITY MENU / USER MENU / USER CONTENT DELETION

There is a helper utility on the USB stick to aid the recovery of a fixture in the event corrupted content is added by mistake. To access this utility, access the system restore USB stick via the method described above. (Reboot, F10, choose USB, Press enter for the Betafish) After booting to the USB stick, press the "Utilities" button, the hard drive will be scanned and there will be one option to delete all user content. Press **"Confirm"** and the process ends quickly and automatically. Exit and remove the USB stick, the fixture should start normally.

DMX PROTOCOL - STANDARD [32 CHANNELS]

Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default
1	**Pan**	Pan Coarse	0	255	0%	100%	00h	FFh	128
2	**Pan**	Pan Fine	0	255	0%	100%	00h	FFh	0
3	**Tilt**	Tilt Coarse	0	255	0%	100%	00h	FFh	128
4	**Tilt**	Tilt Fine	0	255	0%	100%	00h	FFh	0
5	**Zoom**	Digital Zoom Smallest	0		0%		00h		192
		Digital Zoom Largest	128		50%		80h		
		Optical Zoom Smallest	129		51%		81h		
		Optical Zoom Largest	255		100%		FFh		
6	**Focus**	Focus In	0		0%		00h		128
		Focus Out	255		100%		FFh		
7	**Control [Indexed]**	**The Control channel should not be crossfaded. No shutter channel requirement.**							0
		Safe (Normal Operation)	0	3	0%	1%	00h	03h	
		TBD	4	27	2%	11%	04h	1Bh	
		Shutter channel to 0 for access to the following commands.							
		Display Off (Send 20 Packets)	28	31	11%	12%	1Ch	1Fh	
		Display On (Send 20 Packets)	32	35	13%	14%	20h	23h	
		TBD	36	63	14%	25%	24h	3Fh	
		Home All (Send 20 Packets)	64	67	25%	26%	40h	43h	
		Reserved	68	71	27%	28%	44h	47h	
		Lamp On	72	75	28%	29%	48h	4Bh	
		Lamp Off	76	79	30%	31%	4Ch	4Fh	
		Shutdown (Send 80 Packets)	80	83	31%	33%	50h	53h	
		Graphic System Reset	84	87	33%	34%	54h	57h	
		Lamp Brightness	88	91	35%	36%	58h	5Bh	
		Lamp Eco	92	95	36%	37%	5Ch	5Fh	
		Reserved	96	107	38%	42%	60h	6Bh	
		Projector Floor Orientation	108	111	42%	44%	6Ch	6Fh	
		Projector Ceiling Orientation	112	115	44%	45%	70h	73h	
		Projector Front Orientation	116	119	45%	47%	74h	77h	
		Projector Rear Orientation	120	123	47%	48%	78h	7Bh	
		TBD	124	247	49%	97%	7Ch	F7h	
		DMX HUD in Blue	248		97%	0%	F8h	00h	
		DMX HUD in Green	249		98%	0%	F9h	00h	
		DMX HUD in Red	250		98%	0%	FAh	00h	
		DMX HUD in White	251		98%	0%	FBh	00h	
		General HUD in Blue	252		99%	0%	FCh	00h	
		General HUD in Green	253		99%	0%	FDh	00h	
		General HUD in Red	254		100%	0%	FEh	00h	
		General HUD in White	255		100%	0%	FFh	00h	

Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default
8	**Intensity**	Normal Dimming	0	255	0%	100%	00h	FFh	0
9	**Strobe [Note 5]**	Open	0	0	0%	0%	00h	00h	0
		Periodic	0	84	0%	33%	00h	54h	
		Synchronous Random	85	167	33%	65%	55h	A7h	
		Random Random	168	255	66%	100%	A8h	FFh	
		Open	255	255	100%	100%	FFh	FFh	
10	**Iris**	Closed	0		0%		00h		255
		Open	255		100%		FFh		
11	**Cyan (Mod 1)**	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
12	**Magenta (Mod 2)**	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
13	**Yellow (Mod 3)**	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
14	**Color Effect [Note 1]**	TBD	0	255	0%	100%	00h	FFh	0
15	**Gobo 1 Control**	TBD	0	255	0%	100%	00h	FFh	128
16	**Gobo 1 Control Fine**	TBD	0	255	0%	100%	00h	FFh	0
17	**Gobo 1**	TBD	0	255	0%	100%	00h	FFh	0
18	**Content 1 Control [Note 2]**	TBD	0	255	0%	100%	00h	FFh	0
19	**Content 1 [Note 7]**	No Selection	0		0%		00h		0
		Select Content	1	255	0%	100%	01h	FFh	
20	**Content 1 Effect [Note 3]**	TBD	0	255	0%	100%	00h	FFh	0
21	**Content 1 Effect Speed**	TBD	0	255	0%	100%	00h	FFh	0
22	**Gobo2 Control**	TBD	0	255	0%	100%	00h	FFh	128
23	**Gobo 2 Control Fine**	TBD	0	255	0%	100%	00h	FFh	0
24	**Gobo 2**	TBD	0	255	0%	100%	00h	FFh	0
25	**Content 2 Control [Note 2]**	TBD	0	255	0%	100%	00h	FFh	0
26	**Content 2 [Note 7]**	No Selection	0		0%		00h		0
		Select Content	1	255	0%	100%	01h	FFh	
27	**Content 2 Effect [Note 3]**	TBD	0	255	0%	100%	00h	FFh	0
28	**Content 2 Effect Speed**	TBD	0	255	0%	100%	00h	FFh	0
29	**Transition (T-Handle)**	Transition Between Layers	0	255	0%	100%	00h	FFh	128
30	**Transition Effect [Note 4]**	TBD	0	255	0%	100%	00h	FFh	0
31	**Keystone Horizontal**	TBD	0	255	0%	100%	00h	FFh	128
32	**Keystone Vertical**	TBD	0	255	0%	100%	00h	FFh	128

DMX PROTOCOL - EXTENDED [54 CHANNELS]

Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default
1	**Pan**	Pan Coarse	0	255	0%	100%	00h	FFh	128
2	**Pan**	Pan Fine	0	255	0%	100%	00h	FFh	0
3	**Tilt**	Tilt Coarse	0	255	0%	100%	00h	FFh	128
4	**Tilt**	Tilt Fine	0	255	0%	100%	00h	FFh	0
5	**Zoom**	Digital Zoom Smallest	0		0%		00h		192
		Digital Zoom Largest	128		50%		80h		
		Optical Zoom Smallest	129		51%		81h		
		Optical Zoom Largest	255		100%		FFh		
6	**Focus**	Focus In	0		0%		00h		128
		Focus Out	255		100%		FFh		
7	**Control** **[Indexed]**	**The Control channel should not be crossfaded. No shutter channel requirement.**							0
		Safe (Normal Operation)	0	3	0%	1%	00h	03h	
		TBD	4	27	2%	11%	04h	1Bh	
		Shutter channel to 0 for access to the following commands.							
		Display Off (Send 20 Packets)	28	31	11%	12%	1Ch	1Fh	
		Display On (Send 20 Packets)	32	35	13%	14%	20h	23h	
		TBD	36	63	14%	25%	24h	3Fh	
		Home All (Send 20 Packets)	64	67	25%	26%	40h	43h	
		Reserved	68	71	27%	28%	44h	47h	
		Lamp On	72	75	28%	29%	48h	4Bh	
		Lamp Off	76	79	30%	31%	4Ch	4Fh	
		Shutdown (Send 80 Packets)	80	83	31%	33%	50h	53h	
		Graphic System Reset	84	87	33%	34%	54h	57h	
		Lamp Brightness	88	91	35%	36%	58h	5Bh	
		Lamp Eco	92	95	36%	37%	5Ch	5Fh	
		Reserved	96	107	38%	42%	60h	6Bh	
		Projector Floor Orientation	108	111	42%	44%	6Ch	6Fh	
		Projector Ceiling Orientation	112	115	44%	45%	70h	73h	
		Projector Front Orientation	116	119	45%	47%	74h	77h	
		Projector Rear Orientation	120	123	47%	48%	78h	7Bh	
		TBD	124	247	49%	97%	7Ch	F7h	
		DMX HUD in Blue	248		97%	0%	F8h	00h	
		DMX HUD in Green	249		98%	0%	F9h	00h	
		DMX HUD in Red	250		98%	0%	FAh	00h	
		DMX HUD in White	251		98%	0%	FBh	00h	
		General HUD in Blue	252		99%	0%	FCh	00h	
		General HUD in Green	253		99%	0%	FDh	00h	
		General HUD in Red	254		100%	0%	FEh	00h	
		General HUD in White	255		100%	0%	FFh	00h	

Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default
8	**Intensity**	Normal Dimming	0	255	0%	100%	00h	FFh	0
9	**Strobe [Note 5]**	Open	0	0	0%	0%	00h	00h	0
		Periodic	0	84	0%	33%	00h	54h	
		Synchronous Random	85	167	33%	65%	55h	A7h	
		Random Random	168	255	66%	100%	A8h	FFh	
		Open	255	255	100%	100%	FFh	FFh	
10	**Iris**	Closed	0		0%		00h		255
		Open	255		100%		FFh		
11	**Cyan (Mod 1)**	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
12	**Magenta (Mod 2)**	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
13	**Yellow (Mod 3)**	Open	0		100%		00h		0
		Full Saturation	255		0%		FFh		
14	**Color Effect [Note 1]**	TBD	0	255	0%	100%	00h	FFh	0
15	**Gobo 1 Control**	TBD	0	255	0%	100%	00h	FFh	128
16	**Gobo 1 Control Fine**	TBD	0	255	0%	100%	00h	FFh	0
17	**Gobo 1**	TBD	0	255	0%	100%	00h	FFh	0
18	**Content 1 Control [Note 2]**	TBD	0	255	0%	100%	00h	FFh	0
19	**Content 1 [Note 7]**	No Selection	0		0%		00h		0
		Select Content	1	255	0%	100%	01h	FFh	
20	**Content 1 Brightness**		0	255	0%	100%	00h	FFh	128
21	**Content 1 Contrast**		0	255	0%	100%	00h	FFh	128
22	**Content 1 Effect [Note 3]**	TBD	0	255	0%	100%	00h	FFh	0
23	**Content 1 Effect Speed**	TBD	0	255	0%	100%	00h	FFh	0
24	**Gobo2 Control**	TBD	0	255	0%	100%	00h	FFh	128
25	**Gobo 2 Control Fine**	TBD	0	255	0%	100%	00h	FFh	0
26	**Gobo 2**	TBD	0	255	0%	100%	00h	FFh	0
27	**Content 2 Control [Note 2]**	TBD	0	255	0%	100%	00h	FFh	0
28	**Content 2 [Note 7]**	No Selection	0		0%		00h		0
		Select Content	1	255	0%	100%	01h	FFh	
29	**Content 2 Brightness**		0	255	0%	100%	00h	FFh	128
30	**Content 2 Contrast**		0	255	0%	100%	00h	FFh	128
31	**Content 2 Effect [Note 3]**	TBD	0	255	0%	100%	00h	FFh	0
32	**Content 2 Effect Speed**	TBD	0	255	0%	100%	00h	FFh	0
33	**Transition (T-Handle)**	Transition Between Layers	0	255	0%	100%	00h	FFh	128
34	**Transition Effect [Note 4]**	TBD	0	255	0%	100%	00h	FFh	0

Channel	Construct	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Default
35	**Collage Type [Indexed]**	College Type Selection	0	255	0%	100%	00h	FFh	0
36	**Collage Configuration [Indexed]**	College Grid Size Selection	0	255	0%	100%	00h	FFh	0
37	**Collage Cell [Indexed]**	College Cell Selection	0	255	0%	100%	00h	FFh	0
38	**Collage Blend Adjust [Indexed]**	College Blend Region Adjust	0	255	0%	100%	00h	FFh	0
39	**Collage Edge Control Alignment Pattern [Indexed]**	Blend ON/OFF, Alignment Pattern	0	255	0%	100%	00h	FFh	0
40	**Collage Variable Blend Horizontal Coarse**	Horizontal Variable Blend Region Size Control	0	255	0%	100%	00h	FFh	128
41	**Collage Variable Blend Horizontal Fine**		0	255	0%	100%	00h	FFh	0
42	**Collage Variable Blend Vertical Coarse**	Vertical Variable Blend Region Size Control	0	255	0%	100%	00h	FFh	128
43	**Collage Variable Blend Vertical Fine**		0	255	0%	100%	00h	FFh	0
44	**Keystone Top Left X**	Position Keystone Upper Left X	0	255	0%	100%	00h	FFh	0
45	**Keystone Top Left Y**	Position Keystone Upper Left Y	0	255	0%	100%	00h	FFh	0
46	**Keystone Top Right X**	Position Keystone Upper Right X	0	255	0%	100%	00h	FFh	0
47	**Keystone Top Right Y**	Position Keystone Upper Right Y	0	255	0%	100%	00h	FFh	0
48	**Keystone Bottom Right X**	Position Keystone Bottom Right X	0	255	0%	100%	00h	FFh	0
49	**Keystone Bottom Right Y**	Position Keystone Bottom Right Y	0	255	0%	100%	00h	FFh	0
50	**Keystone Bottom Left X**	Position Keystone Bottom Left X	0	255	0%	100%	00h	FFh	0
51	**Keystone Bottom Left Y**	Position Keystone Bottom Left Y	0	255	0%	100%	00h	FFh	0
52	**Keystone Ratio X**	Horizontal Keystone Distribution	0	255	0%	100%	00h	FFh	128
53	**Keystone Ratio Y**	Vertical Keystone Distribution	0	255	0%	100%	00h	FFh	128
54	**Sync To Fixture ID [Note 8]**		0	255	0%	100%	00h	FFh	0

DMX PROTOCOL - NOTES

Indexed	Indicates that channel should not be crossfaded.

Note 1

Background Color Effects	DMX	Description
Cyan Magenta Yellow	0	Cyan - set cyan; Magenta - set magenta; Yellow - set yellow
Red Cycle	1	Mod1 - red speed. Mod2 - green level. Mod3 - blue level.
Green Cycle	2	Mod1 - red level. Mod2 - green speed. Mod3 - blue level.
Blue Cycle	3	Mod1 - red level. Mod2 - green level. Mod3 - blue speed.
Red Green Cycle	4	Mod1 - red speed. Mod2 - green speed. Mod3 - blue level.
Red Blue Cycle	5	Mod1 - red speed. Mod2 - green level. Mod3 - blue speed.
Green Blue Cycle	6	Mod1 - red level. Mod2 - green speed. Mod3 - blue speed.
Red Green Blue Cycle	7	Mod1 - red speed. Mod2 - green speed. Mod3 - blue speed.
Gradient Red	8	Mod1 - red x position. Mod2 - red y position. Mod3 - green blue multiplier.
Gradient Red 2	9	Mod1 - red x position. Mod2 - red y position. Mod3 - green blue multiplier.
Gradient Green	10	Mod1 - green x position. Mod2 - green y position. Mod3 - red blue multiplier.
Gradient Green 2	11	Mod1 - green x position. Mod2 - green y position. Mod3 - red blue multiplier.
Gradient Blue	12	Mod1 - blue x position. Mod2 - blue y position. Mod3 - red green multiplier.
Gradient Blue 2	13	Mod1 - blue x position. Mod2 - blue y position. Mod3 - red green multiplier.
Gradient Red Green	14	Mod1 - red multiplier. Mod2 - green multiplier. Mod3 - rotation.
Gradient Red Delta	15	Mod1 - red multiplier. Mod2 - green multiplier. Mod3 - blue multiplier.
Gradient Red Delta 2	16	Mod1 - red multiplier. Mod2 - green multiplier. Mod3 - blue multiplier.
Gradient Green Delta	17	Mod1 - red multiplier. Mod2 - green multiplier. Mod3 - blue multiplier.
Gradient Green Delta 2	18	Mod1 - red multiplier. Mod2 - green multiplier. Mod3 - blue multiplier.
Gradient Blue Delta	19	Mod1 - red multiplier. Mod2 - green multiplier. Mod3 - blue multiplier.
Gradient Blue Delta 2	20	Mod1 - red multiplier. Mod2 - green multiplier. Mod3 - blue multiplier.

DMX PROTOCOL - NOTES [continued]

	Gobo/Content Control Content is taken from Stock Content.	DMX
Note 2	Gobo	0
	Gobo inverted Black to Alpha	1
	Gobo Black to Alpha	2
	Gobo Negative	3
	Gobo Negative Inverted Black to Alpha	4
	Gobo Negative Black to Alpha	5
	Gobo Black to Alpha	6
	Content	7
	Content on Gobo	8
	Content on Gobo Inverted Black to Alpha	9
	Content on Gobo Black to Alpha	10
	Content on Negative Gobo	11
	Content on Negative Gobo Inverted Black to Alpha	12
	Content on Negative Gobo Black to Alpha	13
	Gobo Color Distance from Black to Alpha	14
	Gobo Inverted Color Distance from Black to Alpha	15
	Gobo Set Black Transparent	16
	Content is taken from User Content.	
	Gobo	128
	Gobo inverted Black to Alpha	129
	Gobo Black to Alpha	130
	Gobo Negative	131
	Gobo Negative Inverted Black to Alpha	132
	Gobo Negative Black to Alpha	133
	Gobo Black to Alpha	134
	Content	135
	Content on Gobo	136
	Content on Gobo Inverted Black to Alpha	137
	Content on Gobo Black to Alpha	138
	Content on Negative Gobo	139
	Content on Negative Gobo Inverted Black to Alpha	140
	Content on Negative Gobo Black to Alpha	141
	Gobo Color Distance from Black to Alpha	142
	Gobo Inverted Color Distance from Black to Alpha	143
	Gobo Set Black Transparent	144

DMX PROTOCOL - NOTES [continued]

	Content Effects	DMX
	None	0
	Swap RGB to GBR	1
	Swap RGB to BRG	2
	Swap RGB to BGR	3
	Swap RGB to RBG	4
	Swap RGB to GRB	5
	Color Invert	6
	Color Invert GBR	7
	Color Invert BRG	8
	Solarize	9
	Solarize 2	10
	Solarize 3	11
	Solarize 4	12
	Edge Detect	13
	Edge Detect BW	14
	Edge Detect 2	15
	Edge Detect 2 Color	16
	Scene Change Detect	17
Note	Rain Drop	18
	Faux LED	19
3	Faux Tile	20
	Pixelate	21
	Gauss Blur	22
	Sharpen	23
	Cartoon	24
	Color Deconverge	25
	Fuzzifier	26
	Prism	27
	Gaussian Halo	28
	Sepia	29
	Red Tones	30
	Fire Gradient	31
	Gray Maker	32
	Gray Maker 2	33
	Posterize	34
	Black White	35
	Negative Art	36
	Dot P	37
	Horizontal Mirror	38
	Tiles	39
	RainbowCycle	40

DMX PROTOCOL - NOTES [continued]

	Transition Effects	DMX
Note 4	Crossfade	0
	Push Right	1
	Push Left	2
	Push Down	3
	Push Up	4
	Reveal Left	5
	Reveal Right	6
	Reveal Down	7
	Reveal Up	8
	Reveal Left Down	9
	Reveal Right Down	10
	Reveal Left Up	11
	Reveal Right Up	12
	Reveal Circle Out	13
	Reveal Circle In	14
	Reveal Rectangle Out	15
	Reveal Rectangle In	16
	Reveal Cross Out	17
	Reveal Cross In	18
	Pixelate Coarse	19
	Pixelate Medium	20
	Pixelate Fine	21
	Vertical Slats Coarse	22
	Vertical Slats Medium	23
	Vertical Slats Fine	24
	Horizontal Slats Coarse	25
	Horizontal Slats Medium	26
	Horizontal Slats Fine	27
	Swirl	28

DMX PROTOCOL - NOTES [continued]

	Strobe Modes
Note 5	Periodic - Equal ON and OFF times.
	Synchronous Random - Unequal ON and OFF times. All fixtures started at the same time with the same DMX value should strobe at the same time.
	Random Random - Unequal ON and OFF times. All fixtures will strobe differently.

	Video Capture
Note 7	Content value 255 selects video capture if a capture source is available. This selection is the same regardless of the Content Control value.

	Sync to Fixture ID
Note 8	Selects the fixture ID to which the content on both layers 1 & 2 will be synchronized during playback. Synchronization requires network connection of all the fixtures utilizing synchronization. Fixture ID's must be unique, i.e. cannot be duplicated. Fixture ID's are set by using the CMA application.

ERROR CODES

When power is applied, the unit will automatically enter a **"Reset/Test"** mode. This mode brings all the internal motors to a home position. If there is an internal problem with one or more of the motors an error code will flash in the display in the form of **"XXer"** were as XX will represent a function number. For example, when the display shows **"0Er"** it means there is some type of error with the Pan motor. If there are multiple errors during the start-up process they will all flash in the display. For example: if the fixtures has errors on **Channel 1**, **2**, and **5** all at the same time, you will see the error message **"01Er", "02Er"**, and **"05Er"** flash repeated 5 times.

If an error does occur during the initial start-up procedure the fixture will self-generate a second reset signal and try to realign all the motors and correct the errors. If the error persists after a second attempt a third attempt will be made. If after a third attempt all the errors have not been corrected the fixture will make the following determinations:

- **3 or More Errors -** The fixture cannot function properly with three or more errors therefore the fixture will place itself in a stand-by mode until subsequent repairs can be made.
- **Less Than 3 Errors -** The fixture has less than 3 errors; therefore most other functions will work properly. The fixture will attempt to operate normally until the errors can be correct by a technician. The errors in question will remain flashing in the display as a reminder of internal errors.

Pan Er
Tilt Er

CLEANING AND MAINTENANCE

CAUTION

Disconnect power before cleaning or 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.

TECHNICAL SPECIFICATIONS

PROJECTOR SPECIFICATIONS

OSRAM UHP 240W Lamp
4,000 ANSI Lumens, >80CRI 6,700K
3,000 Hour Average Lamp Life* (6,000 Hours ECO Mode)
*May vary depending on several factors including but not limited to:
Environmental Conditions, Power/Voltage, Usage Patterns (On-Off Cycling), Control, and Dimming.

Aspect Ratio: 4:3 Native (16:9 Compatible)
Resolution: XGA 1074 x 768
Image Size 30" to 307"
Projection Distance: 3.9' (1.2m) - 32.8' (10m)
Contrast Ratio: 15,000 : 1
Display Technology: DLP DMD Chip
1 Billion Colors (10bit)

EFFECTS

Digital and Optical Zoom
Motorized Focus
CMY / RGB Color Mixing
Mechanical Shutter / Dimmer
Elation Gobo Catalog (Royalty Free)
255 Video Images (Royalty Free)
40 Live / Background Effects and Color Control
28 Transition Effects Between Layers

CONTROL / CONNECTIONS

(2) DMX Channel Modes (32 / 54)
Dual Layer Media Content Control
6 Button Touch Control Panel
Full Color 180° Reversible LCD Menu Display
(2) USB 3.0 Ports
5pin DMX In/Out
RJ45 Ethernet In/Out (Art-NET)
Power In/Out

SIZE / WEIGHT

Length: 18.9" (480mm)
Width: 15.0" (382mm)
Vertical Height: 22.4" (569mm)
Weight: 44.0 lbs. (20 kg)

ELECTRICAL / THERMAL

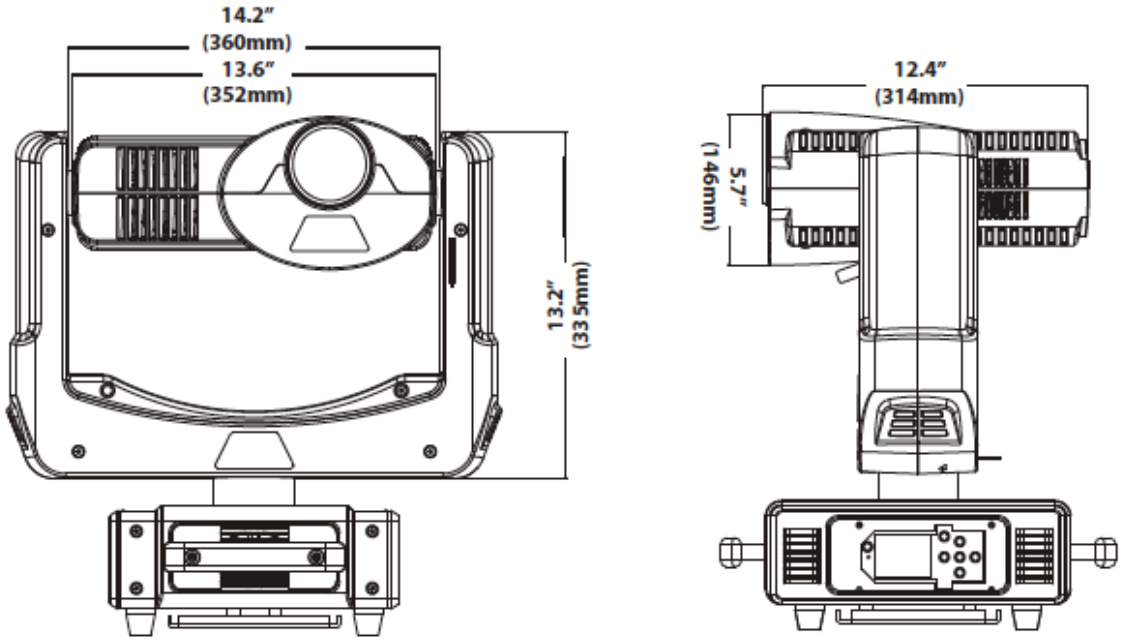
AC 100-240V - 50/60Hz
350W Max Power Consumption
40° - 95°F (5° - 35°C)

APPROVALS / RATINGS

CE | cETLus| IP20

Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

DIMENSIONAL DRAWINGS



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OPTIONAL ACCESSORIES

ORDER CODE	ITEM
TRIGGER CLAMP	Heavy Duty Wrap Around Hook Style Clamp
DRCEMO	Dual Touring Road Case For EMotion™
AC5PDMX5PRO	5 ft. (1.5m) 5pin PRO DMX Cable
CAT6PRO5	5 ft. (1.5m) CAT6 EtherCON Cable
PLC6	6 ft. (1.8m) powerCON Link Cable
	Additional Cable Lengths Available