FUZE SFX

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
03/11/20	1.0	1.06	31 Channel	Initial release.
05/22/20	1.1	NC	No Change	Updated Installation Guidelines.
07/14/20	1.2	NC	No Change	Updated Thermal
08/25/20	1.3	1.07	No Change	Updated primary / secondary
10/14/20	1.4	NC	No Change	Updated specifications
05/22/21	1.5	NC	No Change	Updated FCC statement

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.

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 that 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

Fixture (x1)
Omega Brackets (x2)
Locking Power Cable (X1)

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
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REPLACEMENT PARTS please visit parts.elationlighting.com

IMPORTANT NOTICE!

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

WARRANTY RETURNS (USA ONLY)

To obtain warranty service, a Return Materials Authorization (RMA) number must first be obtained from ELATION. It is the Customer's responsibility to provide product proof of purchase and serial number by acceptable evidence such as an invoice copy or an approved ELATION Extended Warranty Certificate ("EWC") and any relevant maintenance records at the time warranty service is sought. Failure to provide acceptable evidence of product proof of purchase or EWC and any relevant maintenance records may be cause for denial of warranty service.

Products returned for warranty service must be sent without any accessories (i.e., power, data, and safety cables, brackets, clamps, rigging hardware, frost filters, gel frames, barn doors, lens, hoses, nozzles, rack mounting hardware, etc.), must be boxed using the original and/or suitable packaging materials (double-box and foam) that provides ample product protection for ground and/or air freight transit, and must be shipped freight pre-paid and insured to ELATION in Los Angeles, CA or an ELATION Authorized Service Center. The RMA number must be clearly written on the outside of the return box, and a brief description of the problem and the RMA number must be documented and included in the box.

Products returned for warranty service without an RMA number clearly marked on the outside of the package will be refused and returned to the shipper at the Customer's expense. Products returned for warranty service, which are received damaged due to inadequate and/or improper packaging and/or due to damage caused by shipping carrier, may incur additional repair charges before warranty service begins and/or may void this warranty. If any product accessories (included and/or optional) are shipped with the product, ELATION and/or the ELATION Authorized Service Center shall have no liability whatsoever for the loss and/or damage to any such accessories, nor the safe return thereof. If the requested warranty repairs or service (including parts replacement) are within the terms of this warranty, ELATION will pay return ground transportation shipping charges to a single designated point within the United States.

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 manufacturer's 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.
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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!

INDOOR / DRY LOCATIONS USE ONLY!
DO NOT EXPOSE FIXTURE TO RAIN AND MOISTURE!

MINIMUM DISTANCE TO OBJECTS/SURFACES IS 1.6 FEET (0.5 METER)
MINIMUM DISTANCE OF INFLAMMABLE MATERIALS FROM THE SURFACE IS 1.6 FEET (0.5 METER)
MAXIMUM AMBIENT OPERATING TEMPERATURE 113°F (45°C)

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 servicing.

DO NOT shake fixture, and 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 must never be blocked.

Allow approx. 6” (15cm) between fixture and other devices or a wall for proper cooling.

Always disconnect fixture from main power source before performing any type of service and/or cleaning. Only handle the power cord by the plug end, and 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 for service.

MAINTENANCE GUIDELINES

DISCONNECT POWER BEFORE PERFORMING ANY MAINTENANCE!

CLEANING

Frequent cleaning is recommended to ensure 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 periodically with a soft cloth to avoid dirt/debris accumulation.
NEVER use alcohol, solvents, or ammonia-based cleaners.

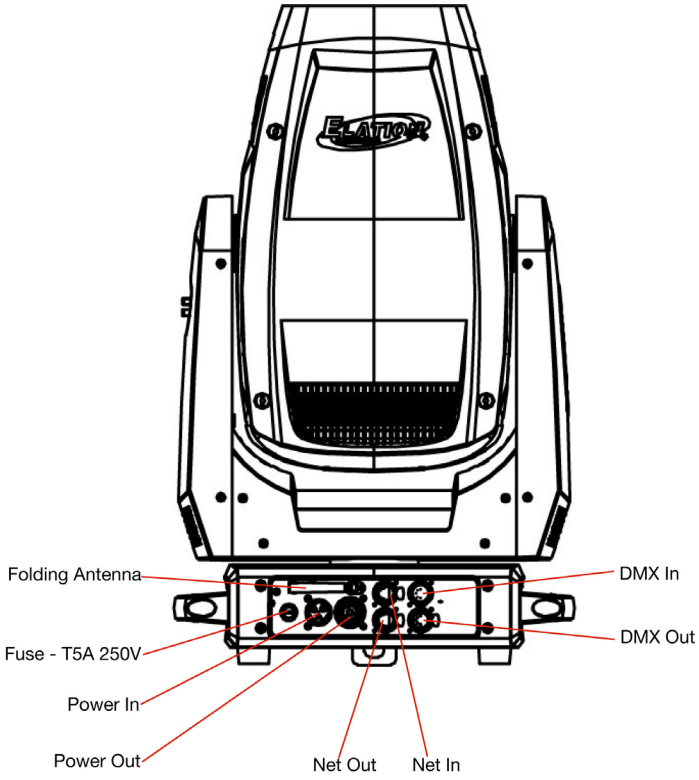
MAINTENANCE

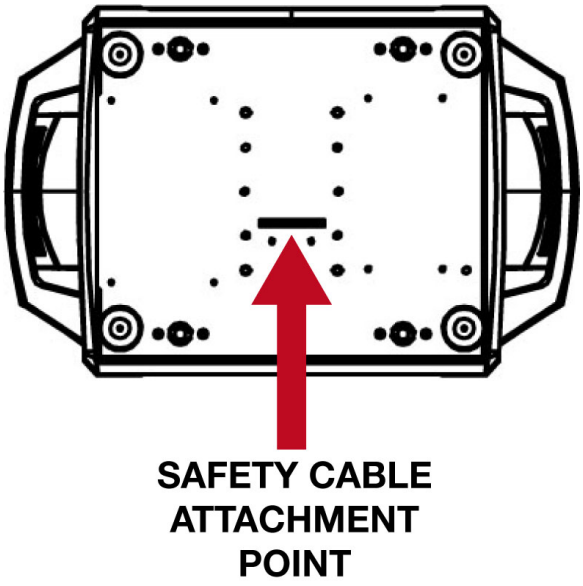
Regular inspections are recommended to ensure proper function and extended life.
There are no user serviceable parts inside this fixture. Please refer all other service issues to an authorized Elation service technician. Should you need any spare parts, please order genuine parts from an authorized Elation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

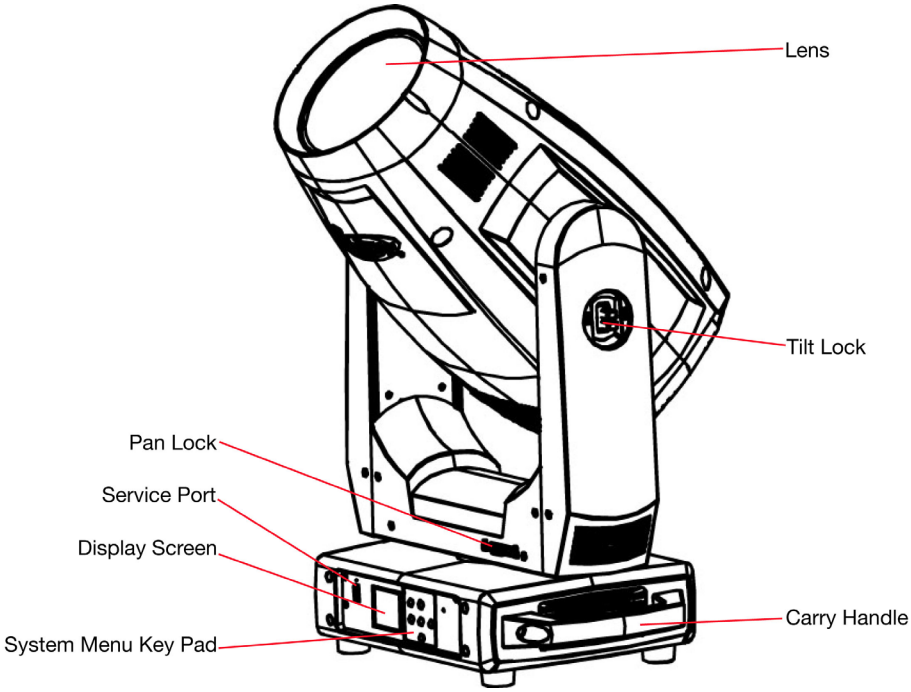
Please refer to the following points during routine inspections:

- A detailed electrical check by an approved electrical engineer every three months, to make sure the circuit contacts are in good condition and prevent overheating.
- Be sure all screws and fasteners are securely tightened at all times. Loose 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



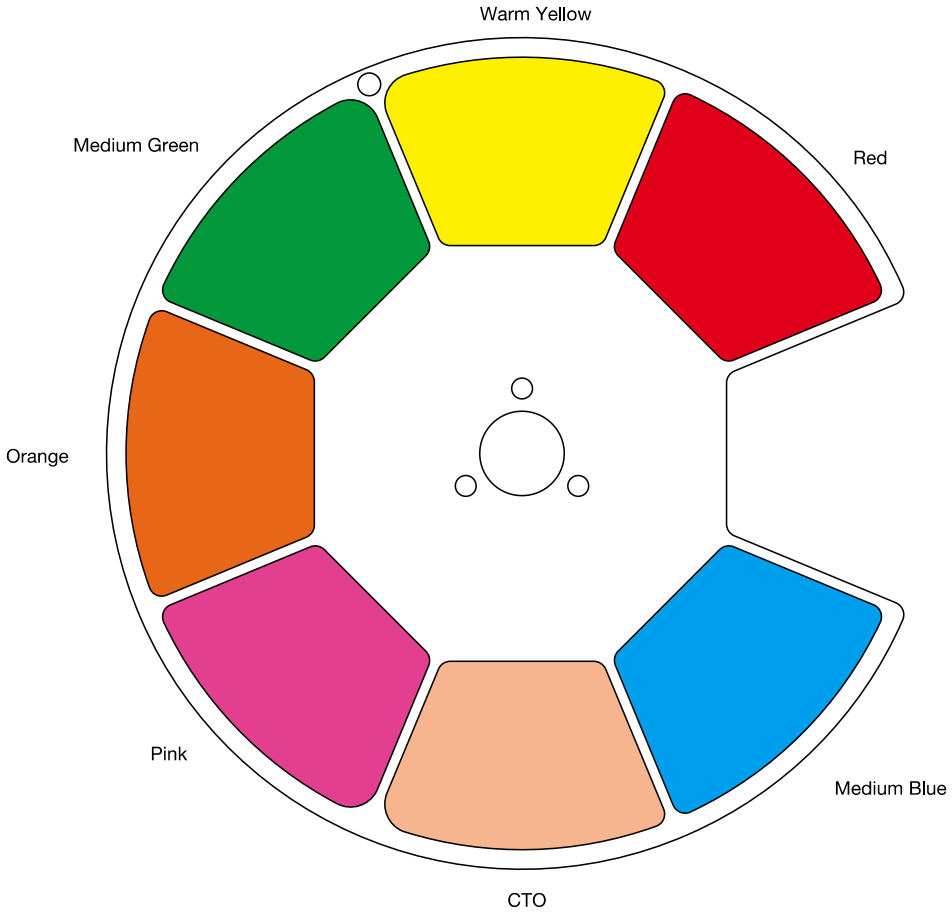




ALWAYS ATTACH A SAFETY CABLE WHENEVER INSTALLING THIS DEVICE IN A SUSPENDED ENVIRONMENT TO ENSURE THE FIXTURE WILL NOT DROP IF THE CLAMP FAILS.

COLOR WHEEL

Slot Number	Color
1	Red
2	Warm Yellow
3	Medium Green
4	Orange
5	Pink
6	CTO
7	Medium Blue



GOBO WHEELS

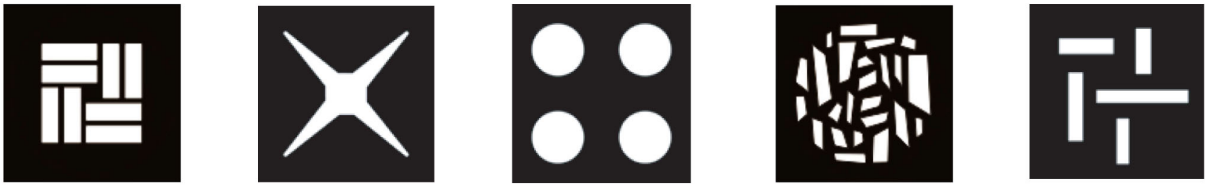
Gobo Wheel 1 (Rotating)

1 2 3 4 5

6 7 8

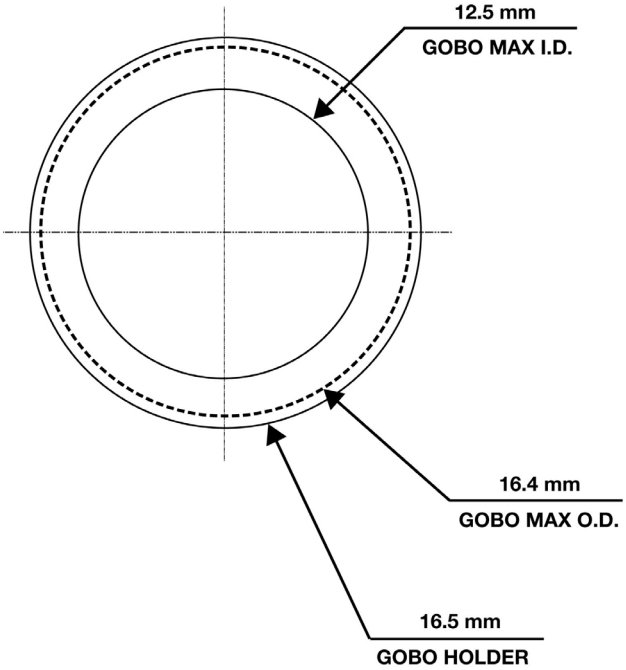
Gobo Wheel 2 (Static)

1 2 3 4 5



6 7 8 9 10

CUSTOM GOBOS



FUZE SFX ROTATING GLASS GOBOS - WHEEL 1 ONLY	
Gobo O.D. (Max. Outer Diameter)	Φ16.4mm
Gobo I.D. (Max. Image Diameter)	Φ12.5mm
Gobo Holder Diameter	Φ16.5mm
Gobo Material	Borofloat Glass

* * * IMPORTANT NOTICE REGARDING CUSTOM GOBOS * * *

Due to the high temperature optical system, special material as listed above is required for custom gobos. Due to varying manufacturing processes and tolerances, it is highly recommended to provide a gobo sample and holder from the fixture to the custom gobo vendor for accurate sizing. Extended testing of custom gobo designs is highly recommended prior to use. Contact ELATION SERVICE for further information.

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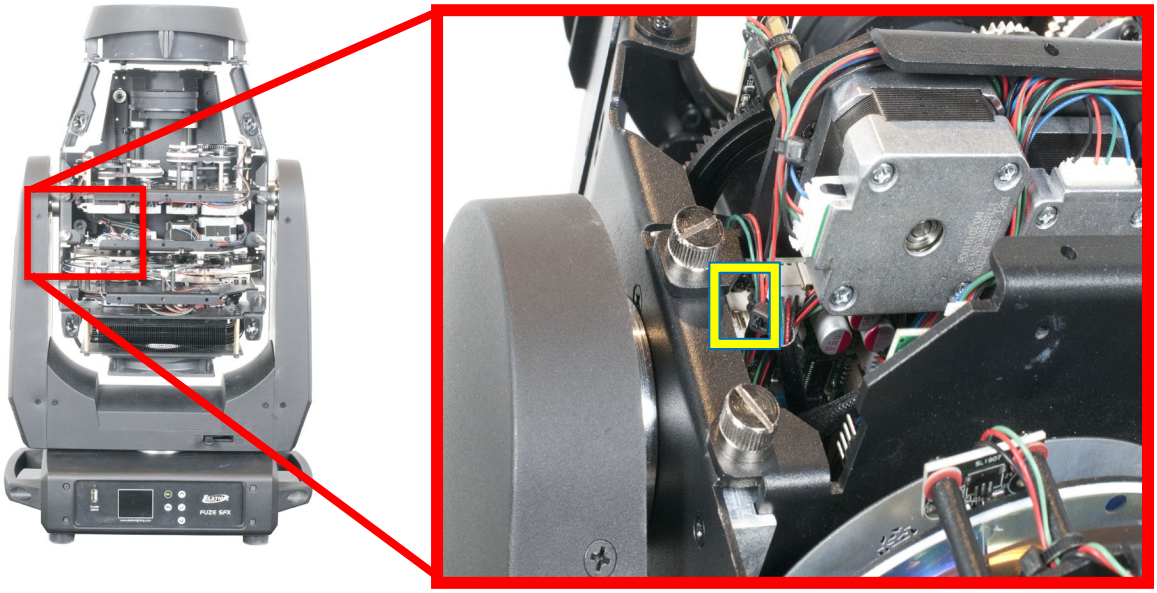
GOBO INSTALLATION

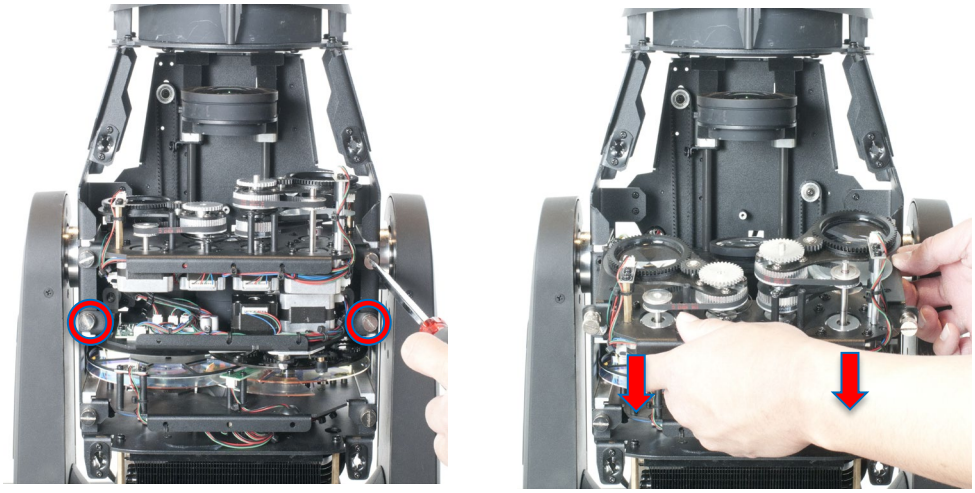
1. Place the fixture on a stable flat surface in a DUST-FREE, INDOOR location, and ensure that the unit has been disconnected from power and given at least 15 minutes to cool down after powering down. Engage both the Pan Lock (location shown at above left) and the Tilt Lock (location shown at above right). For the purposes of this procedure, we will assume that the head has been fixed in an upright position with the lens oriented upwards.

2. Use a Phillips head screwdriver to loosen the four (4) fasteners on each of the covers. Please note that these fasteners are of the twist-lock variety, and do not come free of the covers. Remove the safety cable clips securing each cover to the fixture.

GOBO INSTALLATION

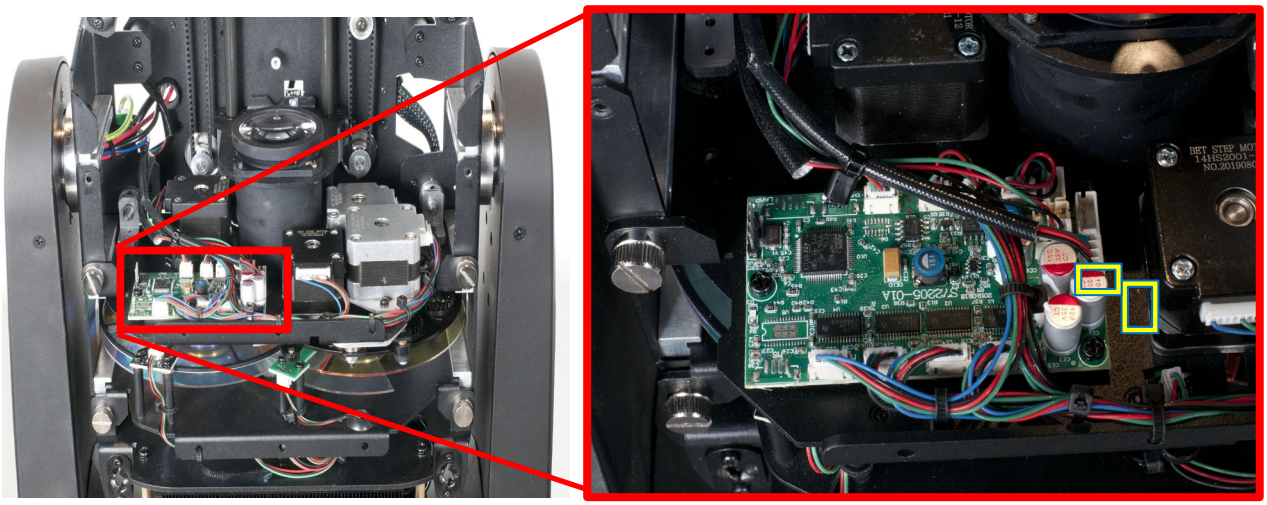


3. Optional. This step may be performed to help improve access to the gobo wheel module. On the prism module, find the 4-pin connector (denoted by the yellow box, above right) that is located behind the left-most electric motor, just beside the thumb screw on the left hand side of the prism module. Disconnect this connector.

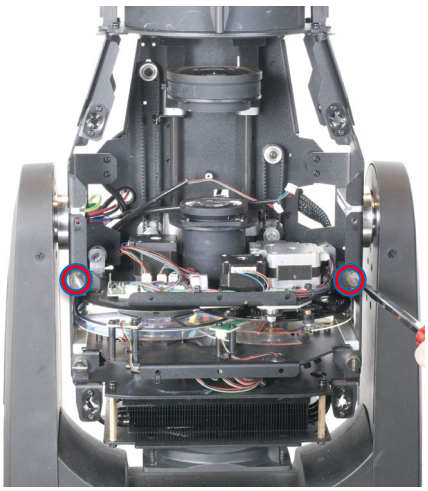


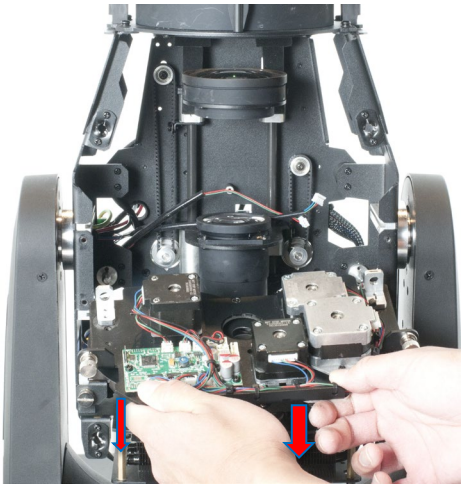
4. Optional. This step may be performed to help improve access to the gobo wheel module. Loosen the thumb screws for the prism module, and carefully slide the prism module out of its mounting slots. Set the prism module aside for later reinstallation.

GOBO INSTALLATION



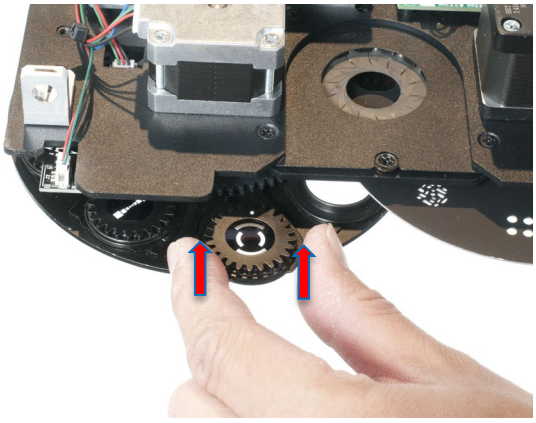
5. On the gobo wheel module, locate the circuit board on the left-hand side of the gobo wheel module, directly above the static gobo wheel. On this circuit board, find the 3-pin connector and the 4-pin connector (denoted by the yellow boxes, above right) located just behind a bank of three (3) capacitors, and disconnect both of these connectors.

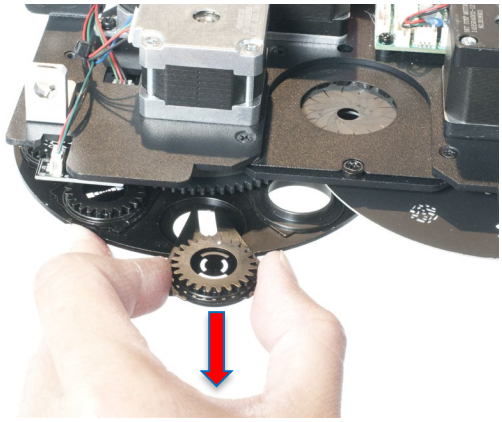




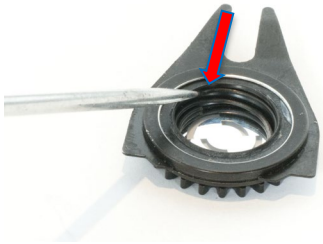
6. Loosen the thumb screws for the gobo wheel module, and carefully slide the gobo wheel module out of its mounting slots. Place the module on a flat, stable surface in a DUST-FREE, INDOOR location.

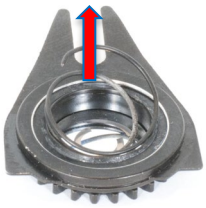
GOBO INSTALLATION

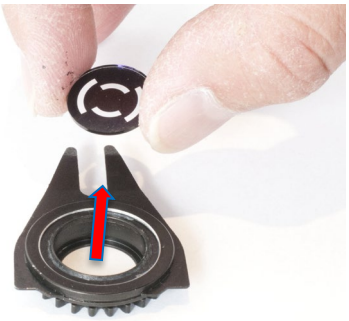




7. Locate the rotating gobo that will be replaced. Grip the edges of the geared gobo holder and gently lift (pictured at left) until the gobo holder clears the surface of the gobo wheel. Then pull the gobo holder out and away (pictured at right).







8. Place the gobo holder on a flat, level surface with the geared side down. Locate the tab of the spring, and use a precision pick (or similar tool) to push the spring tab inward. Remove the retaining spring and carefully separate the gobo from the gobo holder. Exercise caution to avoid scratching the gobo.

9. Install the new gobo and reassemble the fixture by following the steps above in reverse order.

GOBO INSTALLATION COMPLETE!

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.

MINIMUM DISTANCE TO OBJECTS/SURFACES MUST BE 1 FOOT (0.3 METERS)

MINIMUM DISTANCE OF INFLAMMABLE MATERIALS FROM THE SURFACE IS 1.6 FEET (0.5 METER)

MAXIMUM AMBIENT TEMPERATURE 113° F (45°C)

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 fixtures 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.

Overhead rigging requires extensive experience, including amongst others calculating working load limits, understanding of the installation material being used, and periodic safety inspection of all installation material and the fixture. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.

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.

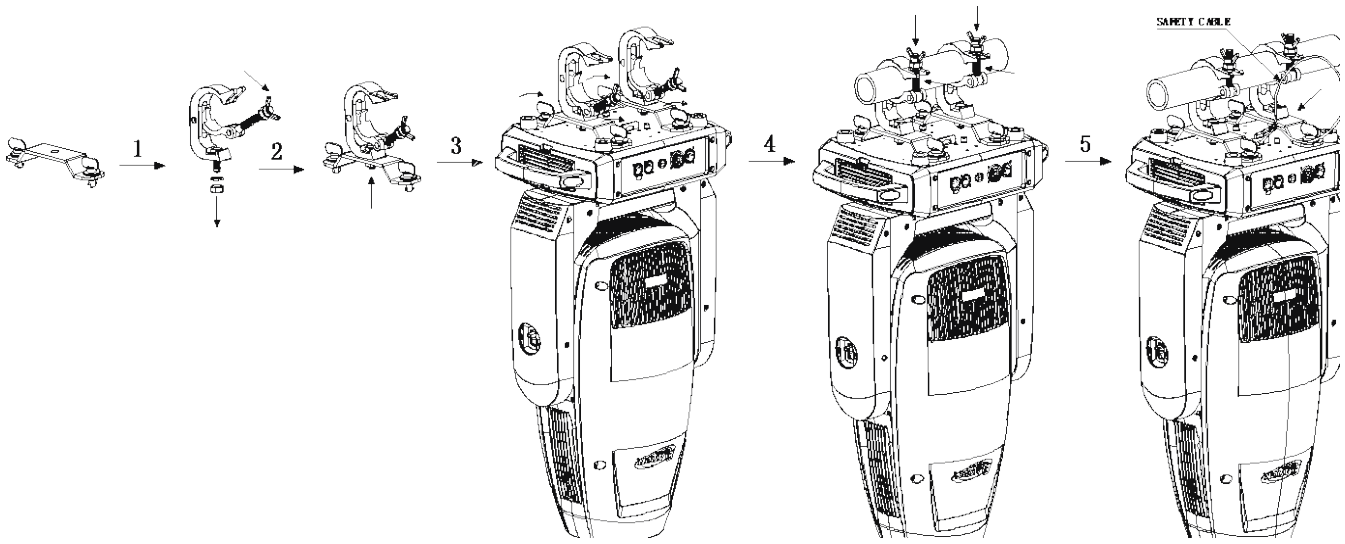
NEVER stand directly below the fixture(s) when rigging, removing or servicing.
Overhead fixture installation must always be secured with a secondary safety attachment, such as an appropriately rated safety cable.

Allow approximately 15 minutes for the fixture to cool down before servicing.

INSTALLATION GUIDELINES

OMEGA BRACKETS INSTALLATION

Insert the Omega Brackets into the matching holes on the bottom of the fixture. Secure the Omega Brackets to the fixture by turning each quick-lock fastener ¼ turn clockwise; making sure the fastener is completely locked. Omega Brackets can be installed into the fixture base as illustrated below.



CLAMP INSTALLATION

When mounting fixture to truss, be sure to secure an appropriately rated professional grade rigging clamp to the included Omega Brackets using an M10 screw fitted through the center hole of the Omega Brackets. The fixture provides a built-in rigging points for a SAFETY CABLE. Be sure to only use one of the designated rigging points for the safety cable and never secure a safety cable to a carrying handle.

RIGGING

Overhead rigging requires extensive experience, including calculating working load limits, understanding of the installation material being used, and periodic safety inspection of all installation material and the fixture, among other things. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.

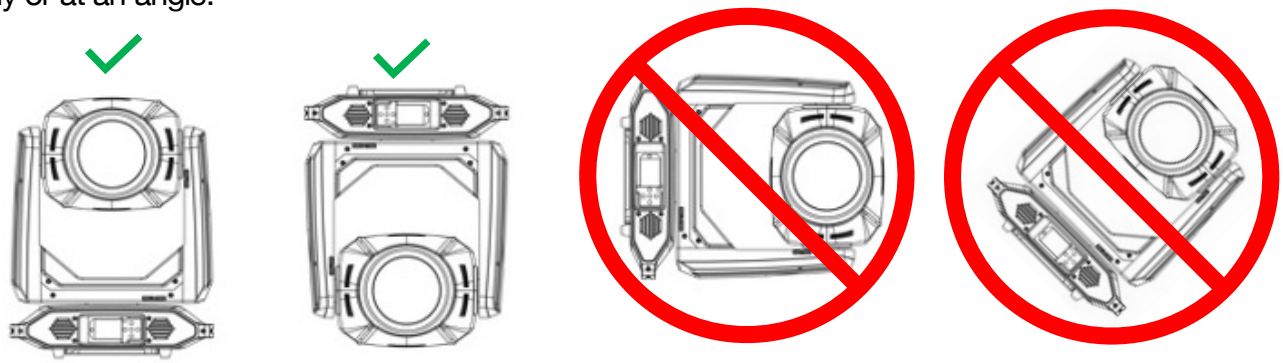
ALWAYS ATTACH AN APPROPRIATELY RATED SAFETY CABLE (NOT INCLUDED) THAT MEETS ALL LOCAL, NATIONAL, AND COUNTRY CODES AND REGULATIONS WHENEVER INSTALLING FIXTURE IN A SUSPENDED ENVIRONMENT!

INSTALLATION GUIDELINES

FIXTURE MOUNTING POSITION

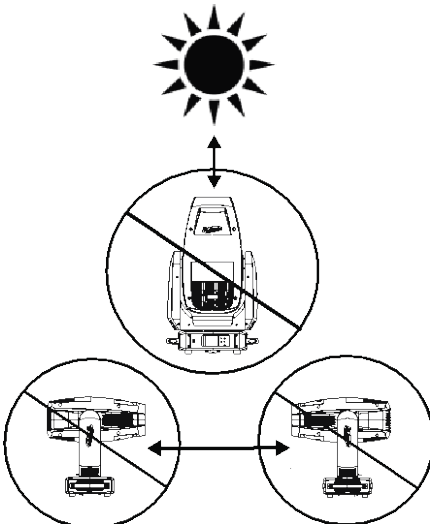
The fixture may be mounted in any position in which the base of the fixture is oriented horizontally. Acceptable positions include standing the fixture upright or hanging the fixture upside-down.

Do NOT install the fixture in a sideways position, or in any position in which the base of the fixture is oriented vertically or at an angle.



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.



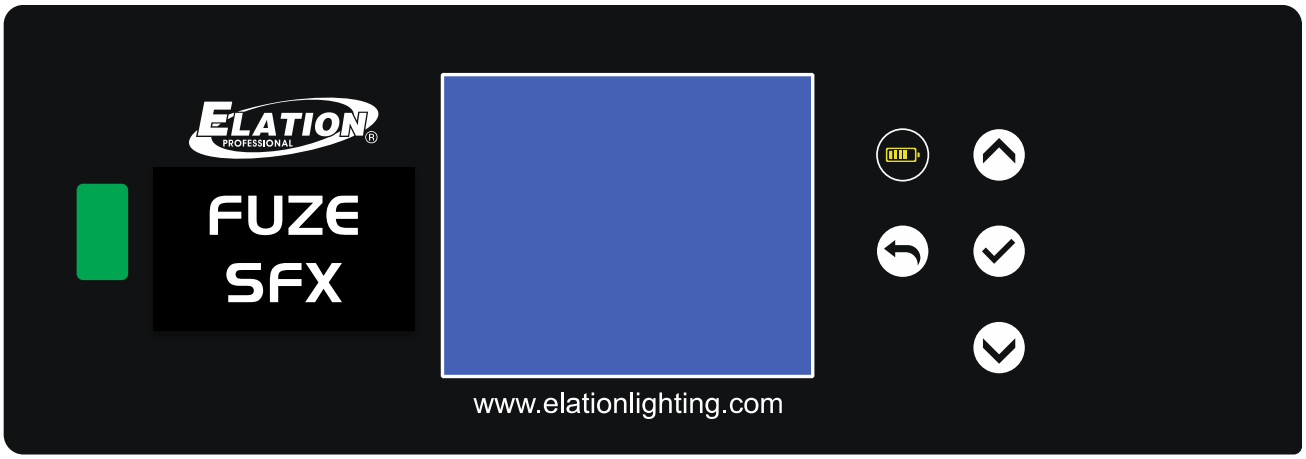
This issue is not specific to ELATION lighting fixtures; rather, it is a common issue with lighting fixtures from all manufacturers. Although there is no true way to fully prevent this issue from occurring, the guidelines below can help minimize the risk of potential damage if followed. Contact ELATION 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 DURING UNPACKING, INSTALLATION, USE, AND EXTENDED IDLE TIMES OUTDOORS. DO NOT FOCUS A LIGHT BEAM FROM ONE LIGHTING FIXTURE DIRECTLY TOWARDS ANOTHER.

SYSTEM MENU

The fixture includes an easy to navigate system menu. The LCD touch panel display located on the front of the fixture (see image below), provides access to the main system menu and is where all necessary system adjustments are made to the fixture. During normal operation, pressing the ENTER (Check Mark) 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 ESC (Back Arrow) button.

To access the LCD Menu Control Display via the internal battery, press and hold the BATTERY ICON button for 3 seconds. The LCD Menu Control Display will shut OFF automatically about 1 minute from the last button press.



SYSTEM MENU

Note: Default settings are shown in bold.

ELATION FUZE SFX SYSTEM MENU			
Supports Software Versions: ≥ 1.06			
DMX SETTINGS	DMX Address	A001 ~ A512	
	No DMX Status	Hold Last	
		Blackout	
		Internal Programs	
PERSONALITY	Primary	On / Off	
	Secondary	On / Off	
	Status Settings	Pan Invert	On / Off
		Tilt Invert	On / Off
		Pan / Tilt Feedback	On / Off
		Pan Degree	540
			630
		Pan / Tilt Speed	Speed 1
			Speed 2
		Hibernation	OFF
			01 min – 99 min
			15 min
	Fixture ID	Service Pin	Password = XXX (default password: 050)
		Universe	000 – 255
		UnitIPAddr	
		Mask Addr	
	Protocol Set	ArtNet	
		sACN	
	Net Switch	On / Off	
	Fan Settings	Auto	
		High	
		Low	
		Studio	
		Mute	

PERSONALITY	Dim Modes	Standard	
		Stage	
		TV	
		Architecture	
		Theatre	
		Stage 2	
		Dim Speed	0 s – 10 s
	Dim Curves	Linear	
		Square	
		Inverse Square	
		S-Curve	
	LED Refresh Rate	900Hz – 1500Hz (default 1200Hz)	
		1500 Hz	
		2500 Hz	
		4000 Hz	
		5000 Hz	
		6000 Hz	
		10 KHz	
		15 KHz	
		20 KHz	
		25 KHz	
	E-FLY	On / Off	
	E-FLY CH	CH 00 – CH 14	
	Reset Motors	Pan / Tilt Reset	No / Yes
		Color Reset	No / Yes
		Gobo Reset	No / Yes
		Focus Reset	No / Yes
		Other Reset	No / Yes
	Display	Screen Saver Delay	Off
			1 min – 10 min (default 1 min)
		Screen Lock	On / Off
		Rotate Display 180°	On / Off
	Temp Unit	C / F	

PERSONALITY	Service (*Password: 050*)	Calibration	Pan
			Tilt
			Cyan Wheel
			Magenta Wheel
			Yellow Wheel
			Color Wheel
			Gobo Wheel
			Gobo Rot. Wheel 1
			Gobo Rot. Wheel 2
			Gobo Rot. Wheel 3
			Gobo Rot. Wheel 4
			Gobo Rot. Wheel 5
			Gobo Rot. Wheel 6
			Gobo Rot. Wheel 7
			Gobo Rot. Wheel 8
			Fixed Gobo Wheel
			Prism 1
PERSONALITY (continued from prev page)	Service (*Password: 050*) (continued from prev page)	Calibration (continued from prev page)	Prism 1 Rot.
			Prism 2
			Prism 2 Rot.
			Focus
			Zoom
			Iris
			Frost
		USB Update	On / Off
		Factory Reset	No / Yes
MANUAL CONTROL	Pan, Pan Fine, Tilt, Tilt Fine, Cyan, Cyan Fine, Magenta, Magenta Fine, Yellow, Yellow Fine, CMC Mix Mode, Color Wheel, Rotate Gobo, Gobo Index, Gobo Index Fine, Fixed Gobo Wheel, SFX, Prism 1 Rot., Prism 2 Rot., Focus, Focus Fine, Zoom, Zoom Fine, Strobe, Dimmer, Dimmer Fine, Dim Modes, Iris, Frost, Pan/Tilt Speed, Control		

INTERNAL PROGRAMS	Program 1	Speed	
		Fade	
	Program 2	Speed	
		Fade	
	Program 3	Speed	
		Fade	
	…		
	Program 16	Speed	
		Fade	
INFORMATION	Fixture Life Time	Power On Time	
	Fixture Last Time	Power On Time Since Last Reset	
		Time Reset	
	Fixture Temps	LEDs	Current
			Max Resettable
			Max Not Resettable
		Reset LED Temp	
		Base Temp	
	Fixture Temps	LEDs	Current
			Max Resettable
			Max Not Resettable
		Reset LED Temp	
		Base Temp	
	Fan Info (RPM)	LED Fan RPM	Fan 1
			Fan 2
		Base Fan RPM	Fan 1
			Fan 2
	DMX Values	Pan, Pan Fine, Tilt…	
	Product IDs	RDM UID	

INFORMATION	Error Logs	Fixture Errors	Error 1 – 10
			Pan
			Tilt
			Cyan Wheel
			Magenta Wheel
			Yellow Wheel
			Color Wheel
			Gobo Wheel
			Gobo Rot. Wheel
			Fixed Gobo Wheel
			Prism 1
			Prism 1 Rot.
			Prism 2
			Prism 2 Rot.
			Focus
			Zoom
			Iris
			Head Fan 1
			Head Fan 2
			Base Fan 1
			Base Fan 2
			Head Temp
			Base Temp
		Reset Error Log	No / Yes
	Software Version	X.XX	

MX CHANNEL FUNCTIONS AND VALUES

FUZE SFX DMX Channel Values / Functions (31 DMX Channels)					
Supports Software Versions: ≥ 1.06					
Features subject to change without any prior written notice.					
CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
1	000 – 255	Pan Movement	127		
2	000 – 255	Pan Movement Fine	127		
3	000 – 255	Tilt Movement	127		
4	000 – 255	Tilt Movement Fine	127		
5	Cyan		0		
	Full				
	000 – 255	Cyan (0 – 100%)			
	SFX				
	000 – 170	Cyan (0 – 100%)			
	171 – 189	Cyan (100% - Open)			
	190 – 221	Scroll Clockwise Fast to Slow			
	222 – 223	Stop			
	224 – 255	Scroll Counter-Clockwise Slow to Fast			
6	000 – 255	Cyan Fine Control	0		
7	Magenta		0		
	Full				
	000 – 255	Magenta (0 – 100%)			
	SFX				
	000 – 170	Magenta (0 – 100%)			
	171 – 189	Magenta (100% - Open)			
	190 – 221	Scroll Clockwise Fast to Slow			
	222 – 223	Stop			
	224 – 255	Scroll Counter-Clockwise Slow to Fast			
8	000 – 255	Magenta Fine Control	0		
9	Yellow		0		
	Full				
	000 – 255	Yellow (0 – 100%)			
	SFX				
	000 – 170	Yellow (0 – 100%)			
	171 – 189	Yellow (100% - Open)			
	190 – 221	Scroll Clockwise Fast to Slow			
	222 – 223	Stop			
	224 – 255	Scroll Counter-Clockwise Slow to Fast			
10	000 – 255	Yellow Fine Control	0		
11	CMY Mix Mode		0	X	
	000 – 127	Full			
	128 – 255	SFX			

CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
12	Color Wheel		0		
	000 – 005	Open			
	006 – 010	White/Red Split			
	011 – 015	Red			
	016 – 020	Red/Yellow Split			
	021 – 025	Yellow			
	026 – 030	Yellow/Green Split			
	031 – 035	Green			
	036 – 040	Green/Orange Split			
	041 – 045	Orange			
	046 – 050	Orange/Pink Split			
	051 – 055	Pink			
	056 – 060	Pink/CTO Split			
	061 – 065	CTO			
	066 – 070	High CRI			
	071 – 075	CTO/High CRI Split			
	076 – 080	CTO/Blue Split			
	081 – 085	Medium Blue			
	086 – 090	Blue/White Split			
	091 – 100	Open			
	Combinations (see Combination Sheet for reference)				
	101	Combo 1			
	102	Combo 2			
	103	Combo 3			
	104	Combo 4			
	105	Combo 5			
	106	Combo 6			
	107	Combo 7			
	108	Combo 8			
	109	Combo 9			
	110	Combo 10			
	111 – 127	Reserved			
	128 – 189	Scroll Clockwise Fast to Slow			
	190 – 193	Stop			
	194 – 255	Scroll Counter-Clockwise Slow to Fast			

CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
13	Rotating Gobo		0	X	
	000 – 005	Open			
	006 – 012	Rotating Gobo 1			
	013 – 019	Rotating Gobo 2			
	020 – 026	Rotating Gobo 3			
	027 – 033	Rotating Gobo 4			
	034 – 040	Rotating Gobo 5			
	041 – 047	Rotating Gobo 6			
	048 – 054	Rotating Gobo 7			
	055 – 061	Rotating Gobo 8			
	062 – 077	Rotating Gobo 1 Shake, Slow to Fast			
	078 – 093	Rotating Gobo 2 Shake, Slow to Fast			
	094 – 109	Rotating Gobo 3 Shake, Slow to Fast			
	110 – 125	Rotating Gobo 4 Shake, Slow to Fast			
	126 – 141	Rotating Gobo 5 Shake, Slow to Fast			
	142 – 157	Rotating Gobo 6 Shake, Slow to Fast			
	158 – 173	Rotating Gobo 7 Shake, Slow to Fast			
	174 – 189	Rotating Gobo 8 Shake, Slow to Fast			
	190 – 221	Scroll Clockwise, Fast to Slow			
	222 – 223	Stop			
	224 – 255	Scroll Counter-Clockwise, Slow to Fast			
14	Rotating Gobo Rotation Index		63		
	000 – 127	Gobo Indexing			
	128 – 189	Clockwise Gobo Scroll, Fast to Slow			
	190 – 193	No Rotation			
	194 – 255	Counter-Clockwise Gobo Scroll, Slow to Fast			
15	000 – 255	Rotating Gobo Fine Indexing	0		

CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
16	Fixed Gobo		0	X	
	000 - 005	Open			
	006 – 014	Fixed Gobo 1			
	015 – 023	Fixed Gobo 2			
	024 – 032	Fixed Gobo 3			
	033 – 041	Fixed Gobo 4			
	042 – 050	Fixed Gobo 5			
	051 – 059	Fixed Gobo 6			
	060 – 068	Fixed Gobo 7			
	069 – 077	Fixed Gobo 8			
	078 – 086	Fixed Gobo 9			
	087 – 095	Fixed Gobo 10			
	096 – 104	Fixed Gobo 1 Shake, Slow to Fast			
	105 – 113	Fixed Gobo 2 Shake, Slow to Fast			
	114 – 122	Fixed Gobo 3 Shake, Slow to Fast			
	123 – 131	Fixed Gobo 4 Shake, Slow to Fast			
	132 – 140	Fixed Gobo 5 Shake, Slow to Fast			
	141 – 149	Fixed Gobo 6 Shake, Slow to Fast			
	150 – 158	Fixed Gobo 7 Shake, Slow to Fast			
	159 – 167	Fixed Gobo 8 Shake, Slow to Fast			
	168 – 176	Fixed Gobo 9 Shake, Slow to Fast			
	177 – 185	Fixed Gobo 10 Shake, Slow to Fast			
	186 – 217	Scroll Clockwise, Fast to Slow			
	218 – 223	Stop			
	224 – 255	Scroll Counter-Clockwise, Slow to Fast			

CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
17	SFX		0	X	
	000 – 020	Open			
	021 – 040	Prism 1			
	041 – 060	Prism 2			
	061 – 080	Prism 1 + 2			
	081 – 100	Idle			
	101	SFX 1			
	102	SFX 2			
	…	…			
	200	SFX 100			
	201 – 255	Idle			
18	Prism 1 Index / Rotation / SFX Speed		0		
	000 – 127	Prism Indexing			
	128 – 189	Clockwise Prism Rotation, Fast to Slow			
	190 – 193	No Rotation			
	194 – 255	Counter-Clockwise Prism Rotation, Slow to Fast			
19	Prism 2 Index / Rotation		0		
	000 – 127	Prism Indexing			
	128 – 189	Clockwise Prism Rotation, Fast to Slow			
	190 – 193	No Rotation			
	194 – 255	Counter-Clockwise Prism Rotation, Slow to Fast			
20	000 – 255	Continuous Focus Adjustment, Near to Far	127		
21	000 – 255	Continuous Fine Focus Adjustment	0		
22	000 – 255	Zoom Adjustment, Out to In	127		
23	000 – 255	Fine Zoom Adjustment	0		
24	Strobe		50	X	
	000 – 031	Off (Shutter Closed)			
	032 – 063	No Function (Shutter Open)			
	064 – 095	Strobe Effect, Slow to Fast			
	096 – 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)			
25	000 – 255	Dimmer Intensity, 0 to 100%	0		
26	000 – 255	Dimmer Fine	0		

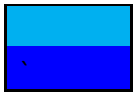
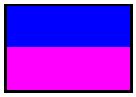
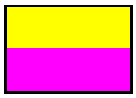
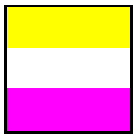
CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
27	Dimmer Configuration		0	X	
	Dim Modes				
	000 – 020	Standard			
	021 – 040	Stage			
	041 – 060	TV			
	061 – 080	Architectural			
	081 – 100	Theatre			
	101 – 120	Stage 2			
	Dimmer Delay Time				
	121	0.0s			
	122	0.1s			
	123	0.2s			
	124	0.3s			
	125	0.4s			
	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	10.0s			
	142 – 255	Idle			
28	Iris		0		
	000 – 191	Iris Diameter, Maximum to Minimum			
	192 – 223	Pulse Opening, Fast to Slow			
	224 – 255	Pulse Closing, Slow to Fast			
29	000 – 255	Frost, Open to Full	0		
30	Pan / Tilt and Color Speed		0	X	
	000 – 225	Speed, Maximum to Minimum			
	226 – 235	Blackout by Movement			
	236 – 245	Blackout by All Wheel Changing			
	246 – 255	No Function			

CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
31	Control		0	X	3s
	000 – 009	Color Change Snap			
	010 – 019	Color Change to Any Position			
	020 – 029	Color & Gobo Change to Any Position			
	030 – 034	Color Correct Gobo Disabled			
	035 – 039	Color Correct Gobo Enabled			
	040 – 044	Low Noise – Mute			
	045 – 049	Low Noise – Studio			
	050 – 059	Fan Control – Low			
	060 – 069	Fan Control – High			
	070 – 079	Fan Control – Auto (Default)			
	080 – 084	Reset All Motors			
	085 – 087	Pan / Tilt Reset			
	088 – 090	Color Reset			
	091 – 093	Gobo Reset			
	094 – 096	Focus and Zoom Reset			
	097 – 099	Reset Other Motors			
	Refresh Rate				1 s
	100	900 Hz			
	101	910 Hz			
	102	920 Hz			
	103	930 Hz			
	104	940 Hz			
	105	950 Hz			
	106	960 Hz			
	107	970 Hz			
	108	980 Hz			
	109	990 Hz			
	110	1000 Hz			
	111	1010 Hz			
	112	1020 Hz			
	113	1030 Hz			
	114	1040 Hz			
	115	1050 Hz			
	116	1060 Hz			
	117	1070 Hz			
	118	1080 Hz			
	119	1090 Hz			
	120	1100 Hz			

CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
31	121	1110 Hz	0	X	1s
	122	1120 Hz			
	123	1130 Hz			
	124	1140 Hz			
	125	1150 Hz			
	126	1160 Hz			
	127	1170 Hz			
	128	1180 Hz			
	129	1190 Hz			
	Refresh Rate (continued)				
	130	1200 Hz			
	131	1210 Hz			
	132	1220 Hz			
	133	1230 Hz			
	134	1240 Hz			
	135	1250 Hz			
	136	1260 Hz			
	137	1270 Hz			
	138	1280 Hz			
	139	1290 Hz			
	140	1300 Hz			
	141	1310 Hz			
	142	1320 Hz			
	143	1330 Hz			
	144	1340 Hz			
	145	1350 Hz			
	146	1360 Hz			
	147	1370 Hz			
	148	1380 Hz			
	149	1390 Hz			
	150	1400 Hz			
	151	1410 Hz			
	152	1420 Hz			
	153	1430 Hz			
	154	1440 Hz			
	155	1450 Hz			
	156	1460 Hz			
	157	1470 Hz			
	158	1480 Hz			
	159	1490 Hz			
	160	1500 Hz			

CHANNEL	VALUE	FUNCTION	DEFAULT	SNAP	HOLD
31	161	2500 Hz	0	X	1s
	162	4000 Hz			
	163	5000 Hz			
	164	6000 Hz			
	165	10000 Hz			
	166	15000 Hz			
	167	20000 Hz			
	168	25000 Hz			
	169 – 190	Idle			3s
	191 – 195	Hibernation OFF			
	196 – 200	Hibernation ON			
	Dimmer Curve				
	201 – 210	Linear (Default)			
	211 – 220	Square			
	221 – 230	Inverse Square			
	231 – 240	S-Curve			
	241 – 255	Idle			

COLOR COMBINATION TABLE

COLOR COMBINATIONS					
COMBINATION	IMAGE	CYAN	MAGENTA	YELLOW	COLOR WHEEL
1		50% split	50% split	0%	Open
2		100%	50% split	0%	Open
3		50% split	100%	0%	Open
4		33% split	33% split	0%	Open
5		0%	50% split	50% split	Open
6		0%	50% split	100%	Open
7		0%	100%	50% split	Open
8		0%	33% split	33% split	Open
9		50% split	50% split	50% split	Open
10		33% split	33% split	0%	Yellow

ERROR CODES

Error Codes subject to change without notice.	
ERROR CODES	**DESCRIPTION**
PAN Er	Movement is not located in the default position after the reset. These messages will appear after a fixture reset if the magnetic-indexing circuit malfunctions (sensor failed, or magnet is missing) or there is a motor failure (defective motor or a defective motor IC drive on the main PCB). This error may also be displayed if the head/yoke was blocked during a reset function.
TILT Er	
RotGobo	Movement is not located in the default position after the reset. These messages will appear after a fixture reset if the magnetic-indexing circuit malfunctions (sensor failed, or magnet is missing) or there is a motor failure (defective motor or a defective motor IC drive on the main PCB).
RotGobo2	
Iris	
RotGoboIndex	
RotGobo2Index	
Animation	
Anima.Index	
Zoom	
Focus	
Frost	
Prism	
PrismIndex	
HeadTemp	These messages will appear if there is a temperature and/or fan malfunction.
CoolFan1	
CoolFan2	
CoolFan3	
CoolFan4	
BaseTemp	
BaseFan	

S P E C I F I C A T I O N S

SOURCE
300W 6,600K Bright White LED Engine
20,000 Hour Average LED Life*

*Test lab conditions. 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
12,135 Total Lumen Output
CRI 68+
Zoom Range 4.5° - 38°
Beam Angle 4.6° - 38.2°
Field Angle 5.6° - 42.2°

EFFECTS
Motorized Zoom
Remote Focus
Variable Frost Filter
Dual Independent Prisms (6 Facet linear & 6 Facet round)
Motorized Iris
Variable 16-bit Dimming Curve Modes
High Speed Electronic Shutter and Strobe

COLOR
CMY Variable Color Mix
7 Position Color Wheel
High CRI Filter, CRI 84
CTO Filter, 3200K, CRI 77

GOBOS
2 Gobo Wheels
Wheel #1 with 8 Rotating / Interchangeable Glass Gobos
Wheel #2 with 10 Static Gobos

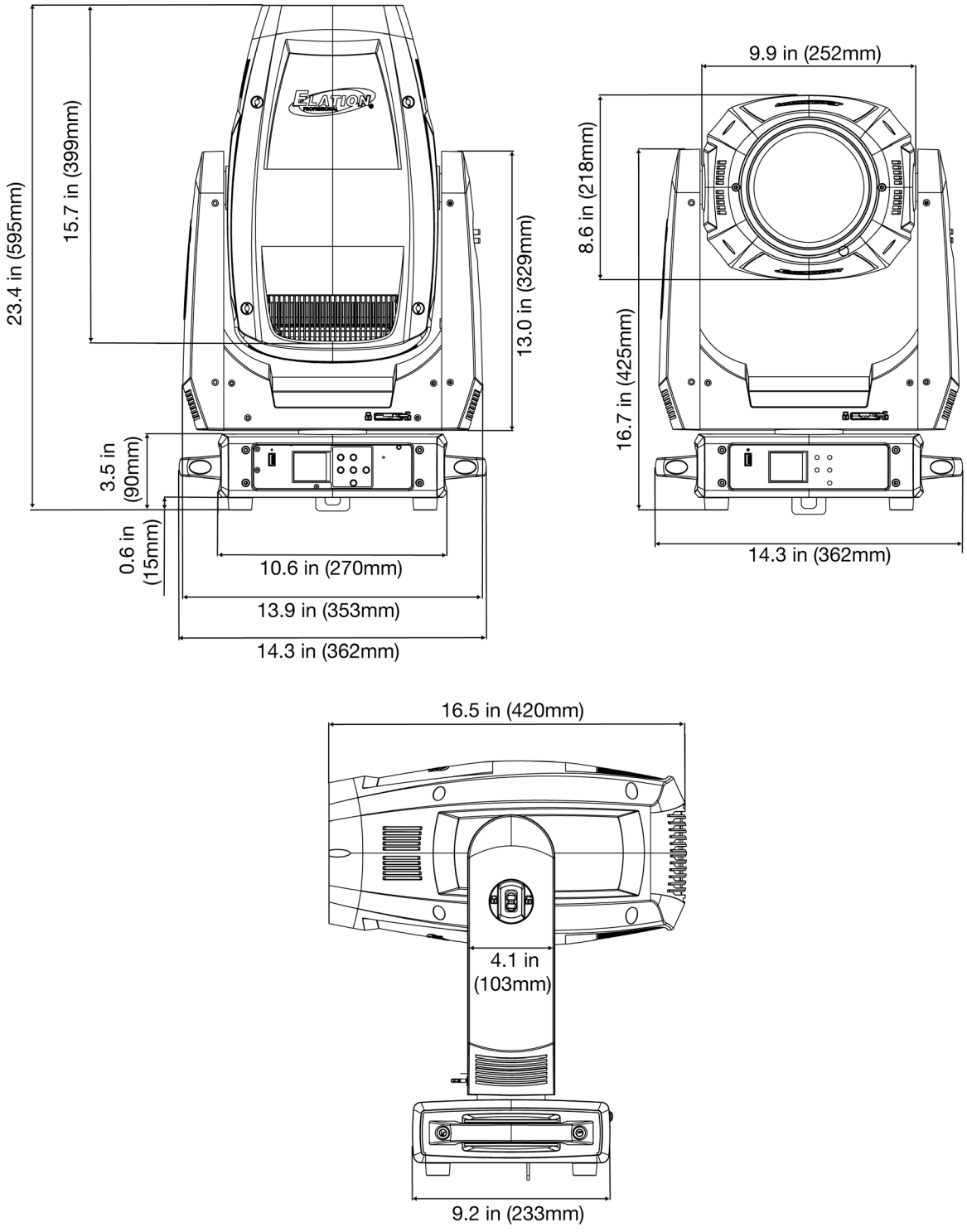
CONTROL / CONNECTIONS
31 DMX Channels
16-bit Pan, Tilt, and Dimming Control
DMX Adjustable LED Frequency
DMX, RDM, E-FLY Wireless, Art-Net, sACN Protocol Support
4 Button Touch Control Panel
Full Color 180° Reversible LCD Menu Display
Locking 5pin XLR Connector In/Out
Locking RJ45 Ethernet Connector In/Out
IP65 Locking Power Connector In/Out
USB Connection (Firmware Updates)
With Wired Digital Communication Network

SIZE / WEIGHT
Length: 14.3” (362mm)
Width: 9.2" (233mm)
Vertical Height: 23.4" (595mm)
Weight: 46.3 lbs. (19.3kg)

ELECTRICAL / THERMAL
AC 100-240V - 50/60Hz
432W Max Power Consumption
14°F to 113°F (-10°C to 45°C)
BTU/hr (+/- 10%) 1473.12

APPROVALS / RATINGS
CE | cETLus | IP20

DIMENSIONAL DRAWINGS



Dimensional Drawings not to scale.
Specifications and improvements in the design of this unit and this manual are subject to change without notice.

F C C S T A T E M E N T

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.

Europe Energy Saving Notice

Energy Saving Matters (EuP 2009/125/EC)

Saving electric energy is a key to help protecting the environment. Please turn off all electrical products when they are not in use. To avoid power consumption in idle mode, disconnect all electrical equipment from power when not in use. Thank you

SKU: FUZ406
EU: 1237000223
UPC: 810008260852