<image>

# VARI¥LITE VL2600 SERIES

USER MANUAL

VL2600 PROFILE VL2600 SPOT VL2600 WASH

# INTRODUCTION

# OUR GOAL

We are committed to providing you the highest quality in customer service. Our comprehensive resources are available to help your business succeed and ensure you get the full benefit of being a Vari-Lite customer.

# **TECHNICAL SUPPORT**

Our Service and Support team is tasked with online and field support, repair, demo, commissioning, maintenance contracts, and technical training for fixtures and systems. In addition, this team plays a large role in a Systems sales, responsible for administering final commissioning, record-keeping, and organizing services. Refer to the back cover of this user manual for contacts in your region or visit **WWW.VARI-LITE.COM/SUPPORT**.

## CUSTOMER SERVICE

Customer Service is responsible for boxed goods and spare parts quotations, order entry and fulfilment, project delivery, lead times, and general account management. They also manage all after sales warranty fulfilment, RGA, and repairs invoicing in tandem with our After Sales Service & Support team. Visit our website to find a customer service agent in your region.

## ADDITIONAL DOCUMENTATION

Additional product documentation, including DMX maps, software, and photometric reports, are available for download on our website.

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), "Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition" (ISBN: 9780955703522).

**USITT Contact Information:** 

USITT 315 South Crouse Avenue, Suite 200 Syracuse, New York 13210-1844 USA Phone: 800-938-7488 or +1-315-463-6463 Fax: 866-398-7488 or +1-315-463-6525 Website: www.usitt.org

## ABOUT THIS DOCUMENT

Read all instructions before installing or using this product. Retain this user manual for future reference. Additional product information and descriptions may be found on the product data sheet(s) which can be downloaded from the Vari-Lite website at WWW.VARI-LITE.COM.

This user manual provides necessary information regarding safety, installation, operation and routine maintenance for Vari-Lite VL2600 Series. Familiarizing yourself with this information will help you to get the most out of your product.

**WARNING:** It is important to read ALL accompanying safety and installation instructions to avoid damage to the product and potential injury to yourself or others.

This user manual covers the following model(s):

- VL2600 Profile; order code(s) 88-105-7270-00, 88-105-7270-10
- VL2600 Spot; order code(s) 88-105-6950-00, 88-105-6950-10
- VL2600 Wash; order code(s) 88-105-7340-00, 88-105-7340-10

# SAFETY WARNINGS AND NOTICES

Read this user manual in full before attempting to install, operate or maintain the fixture to which it relates. This user manual is intended to provide general guidance to such suitably qualified personnel. Installation and operation of the fixture are to be performed by qualified personnel only.

When using electrical equipment, basic safety precautions should always be followed including the following:

#### READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

- For indoor, dry location use only. Do not use outdoors unless fixture is suitably IP rated.
- Use safety tether when mounting.
- Equipment should be mounted in locations and at heights where it will not be readily subjected to tampering by unauthorized personnel.
- Not for residential use. Do not use this equipment for other than intended use.
- Note distance requirement(s) from combustible materials or illuminated objects. Do not mount near gas or electric heaters.
- Install only in locations with adequate ventilation. Ensure sure that ventilation slots are not blocked.
- Ensure that the voltage and frequency of the power supply match the power requirements of the fixture.
- The fixture must be earthed/grounded to the appropriate conductor.
- Do not operate fixture outside the specified ambient temperature range.
- Do not connect the fixture to any dimmer pack.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition and void warranty.
- Refer service to qualified personnel. This fixture contains no user serviceable parts.
- Prior to first use, carefully inspect fixture to ensure no damage has occurred during shipping.
- Materials used in the manufacturing process can cause strong odors when the product is new. These odors dissipate over time.
- Prior to each use, carefully inspect power cables and replace any damaged cables.
- Exterior surfaces of the luminaire will be hot during operation. Take appropriate precautions.
- Continuous use of the fixture may shorten the lifespan. Power down the fixture when not in use.
- Do not cycle power on and off repeatedly. Disconnect mains power if the fixture is not used for an extended period.
- Clean fixtures regularly, particularly when working in a dusty environment.
- Never touch power cables or wires while the fixture is powered on.
- Avoid entangling power wires with other cables.
- In the event of a serious operating problem, immediately discontinue using the fixture.
- It is hazardous to operate luminaires without lens or shield. Shields, lenses, or ultraviolet screens shall be changed if they have become visibly damaged to such an extent that their effectiveness is impaired, for example, by cracks or deep scratches.
- Original packing materials can be reused for transporting the fixture.
- Do not look directly at the LED light beam while the fixture is on.
- This is a Class A product. In a domestic environment this product may cause radio interference, in which case, the user may be required to take adequate measures.
- The light source contained in this luminaire shall only be replaced by the manufacturer or service agent or similarly qualified person.

#### SAVE THESE INSTRUCTIONS.

WARNING: Refer to National Electrical Code<sup>®</sup> and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to personnel. Caution Against Direct Sunlight Through Front Lens Assembly

## CAUTION AGAINST DIRECT SUNLIGHT THROUGH FRONT LENS ASSEMBLY

The design and nature of the front lens assembly in Vari-Lite LLC luminaires is to efficiently focus the light energy from the luminaire's lamp for maximum light output.

- When the front lens assembly is exposed to direct sunlight or intense light from neighboring fixtures, the lens will collect and intensify this light and focus it back into the fixture. Intense sunlight or beams from other fixtures can cause damage to internal assemblies contained within the fixture.
- When fixture is not in use and direct sunlight or other intense light is present, position luminaires so their front lens assembly it not directly exposed to the light source.

## CAUTION AGAINST POWERING LUMINAIRES FROM DIMMER CIRCUITS

It is not recommended to power any Vari-Lite LLC luminaire from a dimmer - even in 'NONDIM' mode. Dimmer and non-dim modules are not suitable sources of power because their output modifies the AC wave form. This may work for a short time, but eventually results in power problems, luminaire mis-operation and/or failure.

- When using a power distribution rack, do not use dimmer or non-dim modules to power any Vari-Lite LLC luminaire. Damage to the luminaire can occur.
- Using a dimmer or non-dim module to power your Vari-Lite LLC luminaire will void your luminaire's warranty.

## CAUTION AGAINST THE USE OF THIRD PARTY PARTS OR ACCESSORIES

- Heat and heat distribution are important factors when operating Vari-Lite LLC luminaires. Vari-Lite LLC luminaires are designed to dissipate heat efficiently and safely. Any blockages or obstructions, such as aftermarket baffles, covers, enclosures, etc. can interrupt the luminaire's ability to dissipate heat properly and can damage the luminaire.
- Vari-Lite LLC cannot be responsible for issues arising from non-approved parts and accessories installed on or used with any Vari-Lite LLC product. Customers of such products should contact the manufacturer directly for assistance and support.

## TRANSPORTING LUMINAIRES

When shipping or transporting luminaires, Vari-Lite LLC recommends that the luminaire(s) be sufficiently protected against any (including, but not limited to) shock, vibration, drops, jarring, exposure to the environment, etc.

Failure to sufficiently protect any Vari-Lite LLC luminaire during shipping or transportation will result in damage and void the luminaire's warranty. Vari-Lite LLC will not be responsible for any shipping damage or breakage of any product under any circumstances. Vari-Lite LLC will not be responsible for any third party case manufacturer's cases.

**NOTE:** As with all automated luminaires, proper handling and suitable protective shipping cases should be used when transporting fixtures to reduce the risk of damage.

## TRANSPORTATION AND SHIPPING CASE REQUIREMENTS

Cases to transport Vari-Lite LLC luminaires should meet the following loading requirements:

- Luminaire head, yoke, and enclosure sub-assemblies shall be equally supported and constrained where no one sub-assembly (head, yoke, or enclosure) fully supports the entire mass of the luminaire.
- The interior of the case shall be of high quality and uniform density foam. The foam shall be of the same type and density throughout as to equally and uniformly support loading at every contact surface.
- The case shall, when laid on any of its six (6) surfaces, maintain the loading requirements outlined above.
- All cases not meeting the aforementioned loading requirements, with wheels, shall have markings on the exterior of the case that the unit is to be transported on it wheels only (e.g. "Case must be transported and remain [at all times] on its wheels").

# COMPLIANCE NOTICE



## FCC DECLARATION OF CONFORMITY

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with Vari-Lite Strand system, service, and safety guidelines, may cause harmful interference to radio communications.

As tested under this standard:

#### FCC 47CFR 15B cIA\*CEI

Issued:2009/10/01 Title 47 CFR Part 15 Subpart B Unintentional Radiators Class A

Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

**EU DECLARATION OF CONFORMITY** We, Vari-Lite LLC., 10911 Petal Street, Dallas, Texas 75238, declare under our responsibility for the products contained herein are in conformity with the essential requirements of the following European Directives and harmonized standards:

#### Low Voltage Director (LVD), 2006/95/EC

EN 60589-2-17:1984+A1:1987+A2:1990 used in conjunction with 60598-1:2008/A11:2009

### Electromagnetic Compatibility Directive (EMC), 2004//108/EC

EN 55022:2010, EN55024:2010

## HOW TO OBTAIN WARRANTY SERVICE

A copy of the Limited Warranty card was included in the shipping package for this product.

To obtain warranty service, please contact customer service at 1-214-647-7880, or **entertainment.service signify.com** and request a Return Material Authorization (RMA) for warranty service. You will need to provide the model and serial number of the item being returned, a description of the problem or failure and the name of the registered user or organization. If available, you should have your sales invoice to establish the date of sale as the beginning of the warranty period. Once you obtain the RMA, pack the unit in a secure shipping container or in its original packing box. Be sure to clearly indicate the RMA number on all packing lists, correspondence, and shipping labels. If available, please include a copy of your invoice (as proof of purchase) in the shipping container.

With the RMA number written legibly on or near the shipping address label, return the unit, freight prepaid, to:

Vari-Lite LLC Attention: Warranty Service (RMA# \_\_\_\_\_) 10911 Petal Street Dallas, Texas 75238 USA

As stated in the warranty, it is required that the shipment be insured and FOB our service center.

**IMPORTANT!** When returning products to Vari-Lite for repairs (warranty or out-of-warranty) from a country other than the USA, "Vari-Lite LLC", must appear in the address block as the Importer of Record (IOR) on all shipping documentation, Commercial Invoices, etc. This must be done in order to clear customs in a timely manner and prevent returns.

# **INSTALLATION & SETUP**

# POWER AND DATA CABLING REQUIREMENTS

## CONNECTING POWER

This fixture requires standard AC power distribution from 100VAC-240 VAC, 50/60 Hz. Current required depends on the AC supply voltage and product model.

**NOTE:** The mating Neutrik<sup>®</sup> powerCON<sup>®</sup> True1 connector is supplied: however, you will need to purchase or construct a cable appropriate for your application.

Depending on the application, the luminaire's AC input cable may require a different connector. If required, install a new connector meeting your requirements using the following wire color code reference:

WIRE*	CONNECTION
Green/yellow	AC ground
Blue	AC neutral
Brown	AC line

\* International (Harmonized) Standard

**WARNING:** DO NOT connect to three-phase service in countries with 240V power.

For single-phase power at 240 volts RMS:

	CONNECTION	PIN
)	AC neutral	Х
/	AC line	Y
	Ground (earth)	G

For three-phase power at 200 volts RMS:

CONNECTION	PIN
Phase 1	X
Phase 2	Y
Ground (earth)	G

## CURRENT VERSUS VOLTAGE

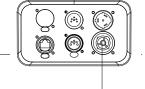
TABLE 1 provides the luminaire's current draw at specific voltages. Total luminaire current is calculated with the lamp on and all motors sequencing.

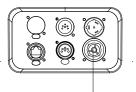
WARNING! It is the responsibility of the user to adequately protect supply source with a correct size and type circuit breaker and not overload circuits.

**WARNING!** It is not recommended to power any Vari-Lite luminaire from a dimmer - even in 'NONDIM' mode. Dimmer and non-dim modules are not suitable sources of power because their output modifies the AC wave form. This may work for a short time, but will eventually result in power problems, luminaire misoperation and/or failure and may void the luminaire's warranty.

#### TABLE 1. CURRENT VS. VOLTAGE (550W LAMP)

AC VOLTAGE AT 60HZ	TOTAL LUMINAIRE CURRENT (MOTOR + LAMP CURRENT)				
	PROFILE	SPOT	WASH		
100V	7.8A	7.5A	7.1A		
110V	7.0A	6.7A	6.3A		
120V	6.4A	6.1A	5.8A		
130V	5.9A	5.6A	5.3A		
200V	3.8A	3.6A	3.4A		
210V	3.6A	3.5A	3.3A		
220V	3.4A	3.3A	3.1A		
230V	3.3A	3.2A	3.0A		
240V	3.2A	3.1A	2.9A		





AC power input

## DATA CABLES

The luminaire is equipped with two, 5-pin XLR connectors for DATA IN and DATA THRU (out) applications. DATA IN requires a 5-pin, female XLR connector and DATA THRU requires a 5-pin, male XLR connector. When purchasing or constructing data cables, it is important that not only the correct cable type be used, but also quality cable to ensure a reliable DMX512 system. Your cabling should meet the following USITT DMX specification requirements:

- Suitable for use with EIA485 (RS485) operation at 250k baud
- Characteristic impedance 85-150 ohms, nominally 120 ohms
- Low capacitance
- Two twisted pairs
- Foil and braid shielded
- 24 AWG min. gauge for runs up to 1000 feet (300m)
- 22 AWG min. gauge for runs up to 1640 feet (500m)

**NOTE:** Microphone type cables and other general purpose, two-core audio or signal cables are not suitable for use with DMX512.

Refer to the USITT Recommended Practice for DMX512 guide for additional information regarding DMX512 systems.

The XLR 5-pin connectors should be wired as follows:

	Pin/Wire Code to XLR Connectors							
Data Thru Cable Pinout								
	Foil & Braided Shield	1st conductor of 1st twisted pair	2nd conductor of 1st twisted pair	1st conductor of 2nd twisted pair	2nd conductor of 2nd twisted pair			
Male Conn.		Data (-)	Data (+)	Data (-)	Data (+)	3 Female Conn.		

## RECOMMENDED CABLE TYPES/MANUFACTURERS

These are only a few of the suitable cable types. Any quality EIA485, twisted pair, 120 ohm, shielded cable will also work. Refer to **TABLE 2**.

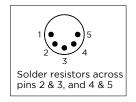
TYPE	PAIRS	ZΩ*	JACKET	AWG	USE	TEMP (°F)	TEMP (°C)
BELDEN CABLES							
1215A	2	150	PVC	26	IBM Type 6 Office cable	75	24
1269A	2	100	PTFE	22 (solid)	High Temp, Plenum cable	200	93
8102	2	100	PVC	24	UL2919	80	27
8132	2	120	PVC	28	UL2919	80	27
8162	2	100	PVC	24	UL2493	60	16
82729	2	100	PTFE	24	High Temp, Plenum cable	200	93
88102	2	100	PTFE	24	High Temp, Plenum cable	200	93
89696	2	100	PTFE	22	High Temp, Plenum cable	200	93
89729	2	100	PTFE	24	High Temp, Plenum cable	200	93
89855	2	100	PTFE	22	High Temp, Plenum cable	200	93
9729	2	100	PVC	24	UL2493	60	16
9804	2	100	PVC	28	UL2960	60	16
9829	2	100	PVC	24	UL2919	80	27
9842	2	120	PVC	24	UL2919	80	27
	PROPEX CABLES						
PC224P	2	110	Polyurethane	22	Heavy Duty and Portable	105	41
PC224T	2	110	PVC	22	UL2464	105	41
PC226T	3	110	PVC	22	UL2464		

#### TABLE 2. RECOMMENDED CABLES

\* Characteristic impedance

## TERMINATION CONNECTOR

A XLR termination connector is required at the last luminaire (or "far end of the line") to prevent signal reflections. Signal reflections may cancel out the signal at certain line lengths, resulting in errors. The terminator is also necessary for software downloads and running tests on multiple luminaires. To construct your own connector, you will need the following components:



- 5-pin, male XLR connector.
- Two 1/4W 5% 120 ohm resistors.

NOTE: A male termination connector is available as an accessory from Vari-Lite.

## HANGING THE FIXTURE

The VL2600 can be hung horizontally or vertically from any structure designed to work with the type of load created by this moving luminaire. Two mounting truss hooks or other mounting hardware are required. Many compatible truss hooks are available from different manufacturers for your particular needs.

A minimum of two hooks per luminaire is required. If mounting method does not use truss hooks, two attachment points, per luminaire, are required.

#### USER MANUAL

#### Install mounting hardware and brackets:

Step 1. Install truss hooks (also refer to "Truss Hook Hardware (by others)" on page 23) for additional information) on two provided truss hook brackets as required as shown in Figure 2-7.

**NOTE:** Various types of truss hooks can be used. The Mega Claw truss hook (as shown in the example above) as well as many other standard hooks, can be ordered separately.

## TRUSS HOOK HARDWARE (BY OTHERS)

When installing hanging hooks on mounting brackets, Vari-Lite strongly recommends the use of a Belleville washer when installing a truss hook or claw. The Belleville washer's size should be approximately 13-25mm (0.5-1.0 in) diameter. Belleville washers are available in various thicknesses and any of the following thicknesses are acceptable for the application described: 0.9.mm, 1.0mm, 1.3mm, 1.9mm (0.035-inch, 0.043-inch, 0.050-inch, 0.073-inch).

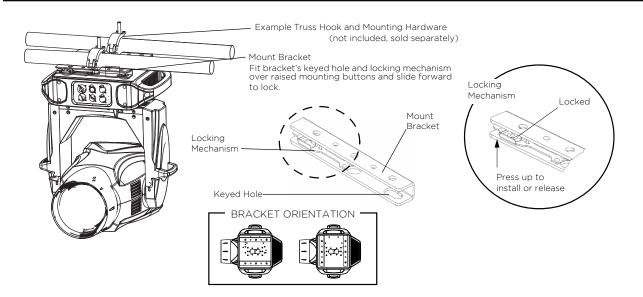
The washer serves two purposes:

- To spread out the load. When a washer IS NOT used, the bolt head (without a washer) concentrates the load in a smaller area, creating focused stress on the steel bracket, making premature failure possible. A steel washer is recommended to spread this load over a larger surface area.
- **To keep the bolt in place.** The recommended Belleville washer maintains tension in the bolted assembly and prevents it from vibrating loose.

If a Belleville washer is not available, a regular flat washer measuring in diameter of 25mm (1 inch) minimum can be used in conjunction with a suitable split lock washer situated between the bolt head and flat washer.

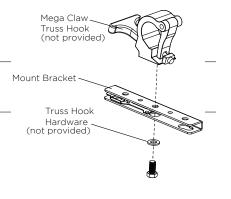
- Step 2. Determine required configuration of bracket installation. Brackets may be installed in many different orientations.
- Step 3. While pulling up on locking mechanism release, fit keyed holes onto raised mounting buttons at bottom of enclosure. Slide forward and release locking mechanism to lock in place. Ensure brackets are locked securely.

**WARNING:** Ensure that the bracket locking mechanism is fully seated after the bracket is installed on the luminaire.



#### **Installing in Truss:**

- Step 1. Using two people, lift luminaire into mounting position.
- Step 2. Secure in place with truss hook. Ensure truss hook hardware that locks hook in place (e.g. wing bolt) is properly tightened and that luminaire is fully supported.







Step 3. Attach safety cable (as required) as follows:

- a. Loop safety cable at least once around safety cable anchor point rod.
- b. Loop safety cable at least once around truss/pipe and secure around pipe.
- Step 4. Make sure tilt and pan locks are disengaged so luminaire moves freely.

Step 5. Connect power and data cables.

When the fixture is mounted in a side hanging orientation, you must enable side hang in the menu for proper operation. To enable side hang, press MENU. Select CONFIG > PAN/TILT > SIDE HANG > ENABLE.

## FLOOR MOUNTING

All luminaires included in this manual are designed to sit directly on its base in a floor installation application. When used in this type of application, be sure to leave enough space around the luminaire to allow proper, uninterrupted airflow for cooling and movement.

# CONNECTING DATA AND POWER

A maximum of 32 luminaires may be connected in any one DMX data link.

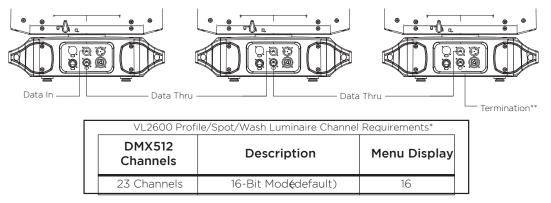
**NOTE:** This maximum limit applies to the luminaire "daisy chain" only. Your system or console may require fewer luminaires on a single data link path. Consult your console documentation for more information.

#### To connect power and data:

- Step 1. Connect data cable from console to first luminaire in chain at DATA IN connector.
- Step 2. If required, connect additional data cables from DATA THRU connectors to DATA IN connectors of remaining luminaires in link.
- Step 3. At last luminaire in link, install male termination connector at DATA THRU connector. (Luminaires and other devices on the same DMX chain may not function properly without termination.)
- Step 4. Connect AC Input Cable connector to power input source.
- Step 5. Dress AC input and data cables and secure them so that they will not interfere with luminaire head and yoke movement.

## **POWERING UP**





\*\*DMX terminator required for last fixture on DMX line.

When the luminaire is powered up for the first time, the default setting is enabled and the lamp will remain off. When AC power is applied, the luminaire will immediately begin a calibration sequence that steps it through full pan and tilt movements. The internal color and beam mechanisms will also move through a full range of motion. After calibration, the luminaire head will either stop at its "home" position (which positions the pan axis at mid-rotation and the head parallel to the yoke with the lens pointing away from the luminaire enclosure) or move to its current DMX-defined position if DMX data is present. All internal mechanisms also move to their "home" or DMX-defined positions.

**CAUTION:** Before applying power, be sure the luminaire is hung (or positioned), and the pan and tilt locks are disengaged, so that the head and yoke can move freely without restriction.

#### To power up:

- Step 1. At each luminaire, apply power connecting the power cable to the unit.
- Step 2. Luminaire will automatically step through calibration and stop at "home" position (only if DMX is not present).

## ADDRESSING

## **PROGRAM STARTING ADDRESS**

The address setting for DMX console controlled systems is entered using the Menu Display. The luminaire retains the DMX address even if power is removed.

### DMX ADDRESS

#### To set, edit, and save a DMX address:

- Step 1. Press [ESC].
- Step 2. Press [Up] / [Down] arrows until Address appears. Press [OK].
- Step 3. Use [Left] and [Right] arrow buttons to scroll through all digits.
- Step 4. Once at desired digit, use [Up] and [Down] arrows to change highlighted digit.
- Step 5. Once digit is set, use [Left] and [Right] arrow buttons to set other digits in DMX address.
- Step 6. Once all digits are set in DMX address, press [OK] to set.
- Step 7. DMX will display and is saved.

## PROGRAM STARTING ADDRESS WITHOUT CALIBRATION

It is possible to bypass the calibration sequence and go directly to the Menu Display programming in order to pre-program an address setting.

Program starting address without calibrating luminaire:

- While powering up luminaire, press and hold [ESC].
- When display changes from "Starting" to the DMX address, program address as in Program Starting Address above.

**NOTE:** The luminaire will require a reset to restore control.

Program starting address in Battery Mode:

 To activate menu in Battery Mode when the fixture is not connected to a power source, press [OK] and [ESC] together. The LCD screen will come on. Address the fixture as described above. The LCD screen will shut off after one minute of inactivity.

# 2 OPERATION

# COLOR CONTROL & GOBOS

## COLOR WHEEL

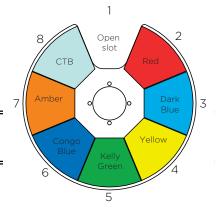
### VL2600 Profile, VL2600 Spot, VL2600 Wash

VL2600 Series fixed color wheel holds 7 color filters and has one open space. Note that the open space will not accommodate a filter.

**CAUTION:** VL2600 Series accept glass gobos only. Use of metal gobos in these luminaires may damage gobo assembly and will void the luminaire warranty.

## **GOBO WHEELS**

VL2600 Profile

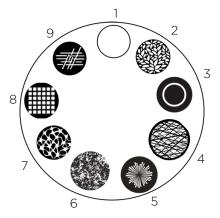


# 

WH	WHEEL 1			
1	Open slot			
2	Night sky			
3	Circle of ovals			
4	Bricked out			
5	Punch card			
6	Swirl			
7	Honeycomb reverse			
8	On the rocks*			

\*glass gag

This rotating gobo wheel offers seven rotatable, indexable gobo positions and one open position.



WН	WHEEL 2			
1	Open slot			
2	Leafy breakup			
3	Medium circle			
4	Lattice			
5	Radial breakup			
6	Dust breakup			
7	Neurons			
8	Grid			
9	Cross bars			

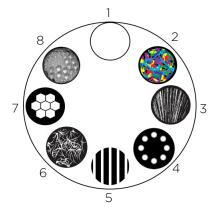
This fixed gobo wheel offers 8 gobo positions and one open position.

LUMINAIRE	GOBO DIAMETER	IMAGE AREA DIAMETER	GLASS THICKNESS	CARRIER REQUIRED?
VL2600 Profile	27mm	17.5mm	1.1mm	Yes

VARI**\***LITE

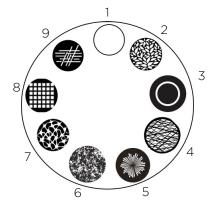
#### VL2600 Spot WHEEL 1 1 1 Open slot 2 8 2 Night sky 3 Circle of ovals 4 Bricked out 3 5 Punch card 7 6 Swirl 7 Honeycomb reverse 8 On the rocks\* \* Glass Gag 5

This rotating gobo wheel offers seven rotatable, indexable gobo positions and one open position.



abic	able gobo positions and one open pe				
WH	WHEEL 2				
1	Open slot				
2	DichroFusion				
3	Alpha rays				
4	Circle of holes				
5	Vertical bars V2				
6	Tribal				
7	Honeycomb				
8	Droplets*				

This rotating gobo wheel offers seven rotatable, indexable gobo positions and one open position.



WHE	WHEEL 3				
1	Open slot				
2	Leafy breakup				
3	Medium circle				
4	Lattice				
5	Radial breakup				
6	Dust				
7	Neurons				
8	Grid				
9	Crossbars				

This fixed gobo wheel offers 8 gobo positions and one open position.

LUM	INAIRE	GOBO DIAMETER	IMAGE AREA DIAMETER	GLASS THICKNESS	CARRIER REQUIRED?
VL260	00 Spot	27mm	17.5mm	1.1mm	No

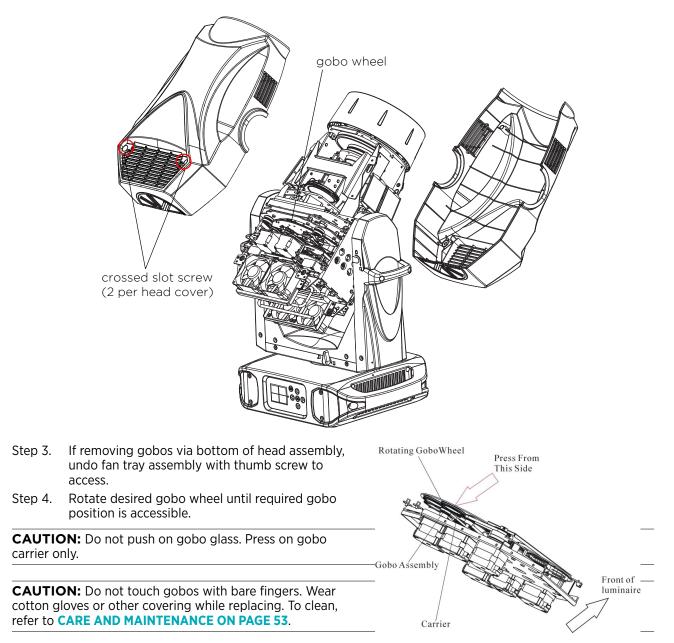
VAR	
v // wi w	

## INSTALL OR REPLACE GOBOS

**WARNING:** Remove power from luminaires before performing maintenance. Gobos may be HOT after opertion. Allow to cool before handling.

#### To replace a rotating gobo:

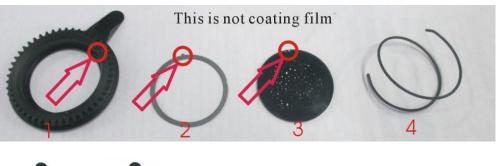
- Step 1. Remove power from luminaire.
- Step 2. Remove top and bottom head cover by loosening four crossed Slot screws to access the gobo wheel.



- Step 5. Remove current gobo by carefully pressing on edges of gobo carrier with fingers, pressing gobo toward front end of luminaire (toward lens), and out of wheel.
- Step 6. Install new gobo as follows:
  - a. Place the gobo holder on a clean, flat work surface with the teeth facing upwards. The gobo is held in place in the gobo holder by a spring. Taking care to avoid scratching or applying pressure to the gobo, lever the end of the spring out, remove the spring and then lift the gobo out of the gobo holder.



b. Hold the gobo with the dark side facing upwards towards the teeth in the gobo holder. Match up the alignment marks (arrowed) in the gobo and gobo holder. Lay the new gobo flat in the gobo holder.





c. Insert gobo carrier into wheel, ensuring that carrier snaps into place.

Step 7. Rotate desired gobo wheel until required gobo position is accessible.

# DMX OPERATION

## DMX MAPS

The tables assume a DMX start address of 1. When a different starting address is used, this address becomes channel 1 function and other functions follow in sequence.

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
1	Intensity High	0	0-65575	16 Bit control of Dimming
2	Intensity Low	0	0-65535	16 Bit control of Dimming
3	Pan High	32767	0-65535	540° Total Pan Rotation
4	Pan Low	52707	0-03333	
5	Tilt High	32767	0-65535	270° Total Tilt
6	Tilt Low	32707	0 00000	
7	Focus High	32767	0-65535	Focus control
8	Focus Low			Default value 50% Focus range
9	Zoom High	32767	0-65535	Zoom control
10	Zoom Low			Default value 50% zoom range
11	Cyan	0	0 - 255	Cyan Color Control 0-100% saturation
12	Yellow	0	0 - 255	Yellow Color Control 0-100% saturation
13	Magenta	0	0 - 255	Magenta Color Control 0-100% saturation
14	СТО	0	0 - 255	CTO Color correction Control 0-100% saturation
			0 - 255	8-bit control of Color Wheel. (spin speed slow to fast from control channel)
			O - 15	OPEN (centred at 0)
			16 - 47	Color 1 RED (centred at 32)
			48 - 79	Color 2 Dark Blue (centred at 64)
15	Color Wheel	0	80 - 111	Color 3 Yellow (centred at 96)
			112 - 143	Color 4 Kelly Green (centred at 128)
			144 - 175	Color 5 Congo Blue (centred at 160)
			176 - 207	Color 6 Amber (centred at 192)
			208 - 240	Color 7 CTB (centred at 224)
			241 -255	Open
			0 - 255	
			0 - 5	Linear Movement using shortest (quickest) path.
			6 - 10	Linear Movement using normal (longest) path.
			11 - 15	Wheel Spin CW (Forward)
16	Color Wheel	0	16 - 20	Wheel Spin STOP
	Control		21 - 25	Wheel Spin CCW (Reverse) Color Shake Quickest Path (Slow to Fast) For fastest shake
			26 - 56	set color timing to 0
			57 - 87	Color Shake Normal Path (Slow to Fast) For fastest shake set color timing to 0
			88 - 255	Reserved Values
			0 - 255	8-bit control of Gobo Wheel 1. See Channel 20 for control
			0 - 5	Open - No Gobo
			6 - 10	Gobo 1 (Night Sky) Index
			11 - 15	Gobo 2 (Circle of Ovals) Index
17	Gobo Wheel 1	0	16 - 20	Gobo 3 (Bricked Out) Index
			21 - 25	Gobo 4 (Punchcard) Index
			26 - 30	Gobo 5 (Swirl) Index
			31 - 35	Gobo 6 (Honeycomb Reverse) Index
			36 - 40	Gobo 7 (On the Rock) Index
		41 - 45	Open - No Gobo	

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			46 - 50	Gobo 1 (Night Sky) Rotate
			51 - 55	Gobo 2 (Circle of Ovals) Rotate
			56 - 60	Gobo 3 (Bricked Out) Rotate
			61 - 65	Gobo 4 (Punchcard) Rotate
			66 - 70	Gobo 5 (Swirl) Rotate
			71 - 75	Gobo 6 (Honeycomb Reverse) Rotate
			76 - 80	Gobo 7 (On the Rock) Rotate
17	Gobo Wheel 1	0	81 - 85	Open - No Gobo
17	continued	0	86 - 90	Gobo 1 (Night Sky) Rotate with Mega Stepping
			91 - 95	Gobo 2 (Circle of Ovals) Rotate with Mega Stepping
			96 - 100	Gobo 3 (Bricked Out) Rotate with Mega Stepping
			101 - 105	Gobo 4 (Punchcard) Rotate with Mega Stepping
			106 - 110	Gobo 5 (Swirl) Rotate with Mega Stepping
			111 - 115	Gobo 6 (Honeycomb Reverse) Rotate with Mega Stepping
			116 - 120	Gobo 7 (On the Rock) Rotate with Mega Stepping
			121 - 255	Reserved Values
18	Gobo 1 Rot/Index		0 - 65535	16-bit control of index and rotation of gobo wheel 1.
10	High Byte	32767	0 - 32756	Rotate Fast to Slow <<<
19	Gobo 1 Rot/Index	32/0/	32757 - 32780	Rotation STOP
13	Low Byte		32781 - 65535	Rotate Slow to Fast >>>
			0 - 255	Used as a control channel for different movement options for
				Gobo Wheel 1 (Channel 17)
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin CW Forward (Fast to Slow)
			51 - 60	Wheel Spin STOP
20	Gobo Wheel 1	0	61 - 90	Wheel Spin CCW Reverse (Slow to Fast)
	Control		91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Gobo Twist Quickest Path (Slow to Fast) For fastest twist set gobo timing to $\ensuremath{O}$
			181 - 210	Gobo Twist Normal Path (Slow to Fast) For fastest twist set gobo timing to 0
			211 - 255	Reserved Values

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0-255	8-bit control of Gobo Wheel for movement options see channel 22
			0 - 5	Open - No Gobo
			6 - 10	6-10 Gobo 1 (Leafy Breakup)
			11 - 15	11-15 Gobo 2 (Medium Circle)
21	Gobo Wheel 2	0	16 - 20	16-20 Gobo 3 Swirl (Lattice)
	(Fixed)	-	21 - 25	21-25 Gobo 4 (Radial Breakup)
			26 - 30	26-30 Gobo 5 (Dust)
			31 - 35	31-35 Gobo 6 (Neurons)
			36 - 40	36-40 Gobo 7 (Grid)
			41 - 45	41-45 Gobo 8 (Cross bars)
			46 - 255	Reserved
			0 - 255	Used as a control channel for different movement options for
				Gobo Wheel 2 (Channel 21)
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin CW Forward (Fast to Slow)
	Gobo Wheel 2	0	51 - 60	Wheel Spin STOP
22	Control		61 - 90	Wheel Spin CCW Reverse (Slow to Fast)
			91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Reserved Values
			181 - 210	Reserved Values
			211 - 255	Reserved Values
			0-255	Iris size control
23	Iris	0	0 - 200	Iris beam size open to closed
			201 - 255	Iris pulse slow to fast For future use
24	Frame 1A	0	0 - 255	Controls Framing Shutter 1A from Open (DMX 0) to Full (DMX 255).
25	Frame 1B	0	0 - 255	Controls Framing Shutter 1B from Open (DMX 0) to Full (DMX 255).
26	Frame 2A	0	0 - 255	Controls Framing Shutter 2A from Open (DMX 0) to Full (DMX 255).
27	Frame 2B	0	0 - 255	Controls Framing Shutter 2B from Open (DMX 0) to Full (DMX 255).
28	Frame 3A	0	0 - 255	Controls Framing Shutter 3A from Open (DMX 0) to Full (DMX 255).
29	Frame 3B	0	0 - 255	Controls Framing Shutter 3B from Open (DMX 0) to Full (DMX 255).
30	Frame 4A	0	0 - 255	Controls Framing Shutter 4A from Open (DMX 0) to Full (DMX 255).
31	Frame 4B	0	0 - 255	Controls Framing Shutter 4B from Open (DMX 0) to Full (DMX 255).
32	Frame Rotate	128	0 - 255	Controls Framing Shutter mechanism from +/- 90°

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0 - 255	Controls Prism mechanism with following values.
			0 - 5	Open
33	Triangular Prism	0 - 255	6 - 10	Index
55		0 - 235	11 - 15	Rotate Normal
			16 - 20	Rotate with Mega Stepping
			21 - 255	Reserved Values
34	Prism Index/Rot High Byte		0 - 65535	16-bit control of prism rotation and index.
	Driam Index/Det	32767	0 - 32756	Rotate Fast to Slow <<<
35	Prism Index/Rot Low Byte		32757 - 32780	Rotation STOP
	-		32781 - 65535	Rotate Slow to Fast >>>
36	Frost	0	0-255	Linear control of frost mechanism from out (DMX 0) to full in (DMX 255)
37	Strobe Speed	0	0 - 255	Controls strobe rate from slowest (DMX 0) to fastest (DMX 255) 0.5hz to 30hz
			0 - 255	Control Channel for strobing functions. Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle).
			0 - 5	Open
38	Strobe Control	0 - 255	6 - 10	Closed
			11 - 15	Normal Strobe
			16 - 20	Random Strobe
			21 - 25	Random Sync
			26 - 255	Reserved Values
			0-255	*do not require 3 second Dam rule mode will change once DMX level I reached **Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Macro action. For this a time greater then 3 second may be required (6s)
			0 - 40	Idle
			41 - 80	Linear**
			81 -120	S-Curve**
			121 -160	Square Curve (Default)**
39	Programmers	0	161 - 180	PL Curve **
	Channel		181 - 200	For Future Use
			201 - 210	Auto CTB ON (Default)**
			211 - 220	Auto CTB off **
			221 - 225	Edge Tracking OFF**
			226 - 230	Edge Tracking ON**
			231 - 235	Soft Zoom start ON** Soft Zoom start OFE** For future use
			236 - 240	
			241 - 245	Dimmer Snap On* (Default)
			246 - 250	Dimmer Snap Off*

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0 - 255	Dynamically control fan speed vs LED Output operation. Control values as follows
			0-4	Automatic fan/output adjustment (Default)
40	Fan Control		05 - 255	Linear control of fan speed and LED max output* DMX 5 =Highest Constant Fan Speed DMX 255 = Lowest Constant Fan Speed * Standard mode only
			0 - 255	Hybrid - full zoom range no restrictions (default)
			31 - 60	Spot Projection - 6%-100% Zoom Range No other restrictions besides zoom range
41	Optical Style	0 - 30	61 - 90	Open Beam Open Beam locked in at 2% zoom - Edge 0% (Hard Edged) - Ikis Office am/Iris/Edge functions not operational- Prism Fully functions 452
			91 - 120	Shaft - Open Beam locked in at 0% zoom-Edge 0%- I is limited Range of 26%-100% (iris never completely leaves beam to keep hard edge)- Gobo Functionality disabled. Prism Fully functional
			0 - 255	Control Channel used for full fixture settings, lamp controls, and miscellaneous modes. Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s)
			0 - 5	Idle (Default)
			6 - 10	Full Luminaire ReCal - Also Used to Wake fixture up from shutdown
			11 - 15	Reserved Values
			16 - 20	Reserved Values
			21 - 25	Fixture Shutdown
			26 - 30	Display - Menu ON
			31 - 35	Display - Menu OFF
			36 - 40	ReCal Position
			41 - 45	ReCal Color
42	Luminaira Control	0	46 - 50	ReCal Gobo
42	Luminaire Control	0	51 - 55	ReCal Beam
			56 - 60	ReCal Optics
			61 - 65	Reserved Values
			66 - 70	Reset Fixture to Defaults
		71 - 75	Full Luminaire Reboot. This command will douse lamp and reset all processors in fixture, then ReCal all parameters.	
			76 - 80	Fixture Status On/Off. This command will enable the display to show fixture status for 5 min. After this time, displays will return to default configuration. Repeating this command in less than 5 minutes will behave as a toggle.
			81 - 85	Standard Mode - Fixture operates at maximum output (Default)
			86 - 90	Studio Mode - Reduced output with lower fan settings
			91 - 100	Side Hang Disable (Default)
			101 - 110	Side Hang Enable
			111 - 225	Reserved Values

### <u>USER MANUAL</u>

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
1	Intensity High	0	0.65575	16-bit control of Dimming
2	Intensity Low	0	0-65535	16-bit control of Dimming
3	Pan High	32767	0-65535	540° Total Pan Rotation
4	Pan Low	32707	0-03555	
5	Tilt High	32767	0-65535	270° Total Tilt
6	Tilt Low	52707	0 00000	
7	Focus High	32767	0-65535	Focus control
8	Focus Low			Default value 50% Focus range
9	Zoom High	32767	0-65535	Zoom control
10	Zoom Low			Default value 50% zoom range
11	Cyan	0	0 - 255	Cyan Color Control 0-100% saturation
12	Yellow	0	0 - 255	Yellow Color Control 0-100% saturation
13	Magenta	0	0 - 255	Magenta Color Control 0-100% saturation
14	СТО	0	0 - 255	CTO Color correction Control 0-100% saturation
			0 - 255	8-bit control of Color Wheel. (spin speed slow to fast from control channel)
			O - 15	OPEN (centred at 0)
			16 - 47	Color 1 RED (centred at 32)
			48 - 79	Color 2 Dark Blue (centred at 64)
15	Color Wheel	0	80 - 111	Color 3 Yellow (centred at 96)
			112 - 143	Color 4 Kelly Green (centred at 128)
			144 - 175	Color 5 Congo Blue (centred at 160)
			176 - 207	Color 6 Amber (centred at 192)
			208 - 240	Color 7 CTB (centred at 224)
			241 -255	Open
			0 - 255	
			0 - 5	Linear Movement using shortest (quickest) path.
			6 - 10	Linear Movement using normal (longest) path.
			11 - 15	Wheel Spin CW (Forward)
16	Color Wheel	О	16 - 20	Wheel Spin STOP
	Control		21 - 25	Wheel Spin CCW (Reverse) Color Shake Quickest Path (Slow to Fast) For fastest shake
			26 - 56	set color timing to 0
			57 - 87	Color Shake Normal Path (Slow to Fast) For fastest shake set color timing to 0
			88 - 255	Reserved Values
			0 - 255	8-bit control of Gobo Wheel 1. See Channel 20 for control
			0 - 5	Open - No Gobo
			6 - 10	Gobo 1 (Night Sky) Index
			11 - 15	Gobo 2 (Circle of Ovals) Index
17	Gobo Wheel 1	0	16 - 20	Gobo 3 (Bricked Out) Index
			21 - 25	Gobo 4 (Punchcard) Index
			26 - 30	Gobo 5 (Swirl) Index
			31 - 35	Gobo 6 (Honeycomb Reverse) Index
			36 - 40	Gobo 7 (On the Rock) Index
		41 - 45	Open - No Gobo	

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			46 - 50	Gobo 1 (Night Sky) Rotate
			51 - 55	Gobo 2 (Circle of Ovals) Rotate
			56 - 60	Gobo 3 (Bricked Out) Rotate
			61 - 65	Gobo 4 (Punchcard) Rotate
			66 - 70	Gobo 5 (Swirl) Rotate
			71 - 75	Gobo 6 (Honeycomb Reverse) Rotate
			76 - 80	Gobo 7 (On the Rock) Rotate
17	Gobo Wheel 1	0	81 - 85	Open - No Gobo
17	continued	0	86 - 90	Gobo 1 (Night Sky) Rotate with Mega Stepping
			91 - 95	Gobo 2 (Circle of Ovals) Rotate with Mega Stepping
			96 - 100	Gobo 3 (Bricked Out) Rotate with Mega Stepping
			101 - 105	Gobo 4 (Punchcard) Rotate with Mega Stepping
			106 - 110	Gobo 5 (Swirl) Rotate with Mega Stepping
			111 - 115	Gobo 6 (Honeycomb Reverse) Rotate with Mega Stepping
			116 - 120	Gobo 7 (On the Rock) Rotate with Mega Stepping
			121 - 255	Reserved Values
18	Gobo 1 Rot/Index	32767	0 - 65535	16-bit control of index and rotation of gobo wheel 1.
	High Byte		0 - 32756	Rotate Fast to Slow <<<
19	Gobo 1 Rot/Index		32757 - 32780	Rotation STOP
15	Low Byte		32781 - 65535	Rotate Slow to Fast >>>
			0 - 255	Used as a control channel for different movement options for
				Gobo Wheel 1 (Channel 17)
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin CW Forward (Fast to Slow)
			51 - 60	Wheel Spin STOP
20	Gobo Wheel 1	0	61 - 90	Wheel Spin CCW Reverse (Slow to Fast)
	Control		91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Gobo Twist Quickest Path (Slow to Fast) For fastest twist set gobo timing to $\ensuremath{O}$
			181 - 210	Gobo Twist Normal Path (Slow to Fast) For fastest twist set gobo timing to $\ensuremath{O}$
			211 - 255	Reserved Values

#### USER MANUAL

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0-255	8-bit control of Gobo Wheel for movement options see channel 22
			0 - 5	Open - No Gobo
			6 - 10	6-10 Gobo 1 (Leafy Breakup)
			11 - 15	11-15 Gobo 2 (Medium Circle)
	Gobo Wheel 2	_	16 - 20	16-20 Gobo 3 Swirl (Lattice)
21	(Fixed)	0	21 - 25	21-25 Gobo 4 (Radial Breakup)
			26 - 30	26-30 Gobo 5 (Dust)
			31 - 35	31-35 Gobo 6 (Neurons)
			36 - 40	36-40 Gobo 7 (Grid)
			41 - 45	41-45 Gobo 8 (Cross bars)
			46 - 255	Reserved
			0 - 255	Used as a control channel for different movement options for
				Gobo Wheel 2 (Channel 21)
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin CW Forward (Fast to Slow)
22	Gobo Wheel 2	0	51 - 60	Wheel Spin STOP
22	Control	0	61 - 90	Wheel Spin CCW Reverse (Slow to Fast)
			91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Reserved Values
			181 - 210	Reserved Values
			211 - 255	Reserved Values
		0	0-255	Iris size control
23	Iris		0 - 200	Iris beam size open to closed
			201 - 255	Iris pulse slow to fast For future use
24	Frame 1A	0	0 - 255	Controls Framing Shutter 1A from Open (0) to Full (255).
25	Frame 1B	0	0 - 255	Controls Framing Shutter 1B from Open (0) to Full (255).
26	Frame 2A	0	0 - 255	Controls Framing Shutter 2A from Open (0) to Full (255).
27	Frame 2B	0	0 - 255	Controls Framing Shutter 2B from Open (0) to Full (255).
28	Frame 3A	0	0 - 255	Controls Framing Shutter 3A from Open (0) to Full (255).
29	Frame 3B	0	0 - 255	Controls Framing Shutter 3B fromOpen (0) to Full (255).
30	Frame 4A	0	0 - 255	Controls Framing Shutter 4A from Open (0) to Full (255).
31	Frame 4B	0	0 - 255	Controls Framing Shutter 4B from Open (0) to Full (255).
32	Frame Rotate	128	0 - 255	Controls Framing Shutter mechanism from +/- 90°
			0 - 255	Controls Prism mechanism with following values.
			0 - 5	Open
33	Triangular Prism	0 - 255	6 - 10	Index
			11 - 15	Rotate Normal
			16 - 20	Rotate with Mega Stepping
			21 - 255	Reserved Values

#### USER MANUAL

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
34	Prism Index/Rot High Byte		0 - 65535	16-bit control of prism rotation and index.
		32767	0 - 32756	Rotate Fast to Slow <<<
35	35 Prism Index/Rot Low Byte	02/0/	32757 - 32780	Rotation STOP
	LOW Byte		32781 - 65535	Rotate Slow to Fast >>>
36	Frost	0	0-255	Linear control of frost mechanism from out (DMX 0) to full in (DMX 255)
37	Strobe Speed	0	0 - 255	Controls strobe rate from slowest (DMX 0) to fastest (DMX 255) 0.5hz to 30hz
			0 - 255	Control Channel for strobing functions. Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle).
			0 - 5	Open
38	Strobe Control	0 - 255	6 - 10	Closed
50		0 200	11 - 15	Normal Strobe
			16 - 20	Random Strobe
			21 - 25	Random Sync
			26 - 255	Reserved Values
			0-255	*do not require 3 second Dam rule mode will change once DMX level I reached **Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Macro action. For this a time greater then 3 second may be required (6s)
			0 - 40	Idle
			41 - 80	Linear**
			81 -120	S-Curve**
			121 -160	Square Curve (Default)**
39	Programmers Channel	0	161 - 180	PL Curve **
	Channel		181 - 200	For Future Use
			201 - 210	Auto CTB ON (Default)**
			211 - 220	Auto CTB off **
			221 - 225	Edge Tracking OFF**
			226 - 230	Edge Tracking ON**
			231 - 235	Soft Zoom start ON**
			236 - 240	Soft Zoom start OFF** For future use
			241 - 245	Dimmer Snap On* (Default)
			246 - 250	Dimmer Snap Off*
40	Focus Timing	255	0 - 255	Adjustment of fixture timing to control Pan/Tilt mechanisms. See Timing Channel Chart in User Manual
41	Optics Timing	255	0 - 255	Adjustment of fixture timing to control lensing mechanisms. See Timing Channel Chart in User Manual
42	Color Timing	255	0 - 255	Adjustment of fixture timing to control lensing mechanisms. See Timing Channel Chart in User Manual
43	Beam Timing	255	0 - 255	Adjustment of fixture timing to control beam shaping mechanisms. See Timing Channel Chart in User Manual
44	Gobo Timing	255	0 - 255	Adjustment of fixture timing to control gobo mechanisms. See Timing Channel Chart in User Manual

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0 - 255	Dynamically control fan speed vs LED Output operation. Control values as follows
			0 - 4	Automatic fan/output adjustment (Default)
45	Fan Control	0	05 - 255	Linear control of fan speed and LED max output* DMX 5 = Highest Constant Fan Speed DMX 255 = Lowest Constant Fan Speed * Standard mode only
			0 - 255	Hybrid - full zoom range no restrictions (default)
			31 - 60	Spot Projection 6%-100% Zoom Range No other restrictions besides zoom range
46	Optical Style	0 - 30	61 - 90	Open Beam - Open Open Clocked In at 2% zoom - Edge 0% (Hard Edged) - Iris 0% (Harm/Iris/edge functions not operational- Prism Fully functional - USe
			91 - 120	Shaft - Open Beam locked in at 0% zoom-Edge 0%- Iris limited Range of 26%-100% (iris never completely leaves beam to keep hard edge)- Gobo Functionality disabled. Prism Fully functional
			0 - 255	Control Channel used for full fixture settings, lamp controls, and miscellaneous modes. Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s)
			0 - 5	Idle (Default)
			6 - 10	Full Luminaire ReCal - Also Used to Wake fixture up from shutdown
			11 - 15	Reserved Values
			16 - 20	Reserved Values
			21 - 25	Fixture Shutdown
			26 - 30	Display - Menu ON
			31 - 35	Display - Menu OFF
			36 - 40	ReCal Position
			41 - 45	ReCal Color
47	Luminaire Control	0	46 - 50	ReCal Gobo
47	Luminaire Control	0	51 - 55	ReCal Beam
			56 - 60	ReCal Optics
			61 - 65	Reserved Values
			66 - 70	Reset Fixture to Defaults
			71 - 75	Full Luminaire Reboot. This command will douse lamp and reset all processors in fixture, then ReCal all parameters.
			76 - 80	Fixture Status On/Off. This command will enable the display to show fixture status for 5 min. After this time, displays will return to default configuration. Repeating this command in less than 5 minutes will behave as a toggle.
			81 - 85	Standard Mode - Fixture operates at maximum output (Default)
			86 - 90	Studio Mode - Reduced output with lower fan settings
			91 - 100	Side Hang Disable (Default)
			101 - 110	Side Hang Enable
			111 - 225	Reserved Values

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
1	Intensity High	0	0-65535	16 Bit control of Dimming
2	Intensity Low	0	0-05555	lo bit control of Dimining
3	Pan High	32767	0-65535	540° Total Pan Rotation
4	Pan Low	32707	0 00000	
5	Tilt High	32767	0-65535	270° Total Tilt
6	Tilt Low			
7	Focus High	32767	0-65535	Focus control
8	Focus Low			Default value 50% Focus range
9	Zoom High	32767	0-65535	Zoom control
10	Zoom Low			Default value 50% zoom range
11	Cyan	0	0 - 255	Cyan Color Control 0-100% saturation
12	Yellow	0	0 - 255	Yellow Color Control 0-100% saturation
13	Magenta	0	0 - 255	Magenta Color Control 0-100% saturation
14	СТО	0	0 - 255	CTO Color correction Control 0-100% saturation
			0 - 255	8-bit control of Color Wheel. (spin speed slow to fast from control channel)
			O - 15	OPEN (centred at 0)
			16 - 47	Color 1 RED (centred at 32)
			48 - 79	Color 2 Dark Blue (centred at 64)
15	Color Wheel	0	80 - 111	Color 3 Yellow (centred at 96)
			112 - 143	Color 4 Kelly Green (centred at 128)
			144 - 175	Color 5 Congo Blue (centred at 160)
			176 - 207	Color 6 Amber (centred at 192)
			208 - 240	Color 7 CTB (centred at 224)
			241 -255	Open
			0 - 255	
			0 - 5	Linear Movement using shortest (quickest) path.
			6 - 10	Linear Movement using normal (longest) path.
			11 - 15	Wheel Spin CW (Forward)
10	Color Wheel		16 - 20	Wheel Spin STOP
16	Control	0	21 - 25	Wheel Spin CCW (Reverse)
			26 - 56	Color Shake Quickest Path (Slow to Fast) For fastest shake set color timing to 0
			57 - 87	Color Shake Normal Path (Slow to Fast) For fastest shake set color timing to $\ensuremath{O}$
			88 - 255	Reserved Values
			0 - 255	8-bit control of Gobo Wheel 1. See Channel 20 for control
			0 - 5	Open - No Gobo
			6 - 10	Gobo 1 (Night Sky) Index
	17 Gobo Wheel 1		11 - 15	Gobo 2 (Circle of Ovals) Index
17		0	16 - 20	Gobo 3 (Bricked Out) Index
.,			21 - 25	Gobo 4 (Punchcard) Index
			26 - 30	Gobo 5 (Swirl) Index
			31 - 35	Gobo 6 (Honeycomb Reverse) Index
			36 - 40	Gobo 7 (On the Rock) Index
			41 - 45	Open - No Gobo

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			46 - 50	Gobo 1 (Night Sky) Rotate
			51 - 55	Gobo 2 (Circle of Ovals) Rotate
			56 - 60	Gobo 3 (Bricked Out) Rotate
			61 - 65	Gobo 4 (Punchcard) Rotate
			66 - 70	Gobo 5 (Swirl) Rotate
			71 - 75	Gobo 6 (Honeycomb Reverse) Rotate
			76 - 80	Gobo 7 (On the Rock) Rotate
17	Gobo Wheel 1	0	81 - 85	Open - No Gobo
17	continued	0	86 - 90	Gobo 1 (Night Sky) Rotate with Mega Stepping
			91 - 95	Gobo 2 (Circle of Ovals) Rotate with Mega Stepping
			96 - 100	Gobo 3 (Bricked Out) Rotate with Mega Stepping
			101 - 105	Gobo 4 (Punchcard) Rotate with Mega Stepping
			106 - 110	Gobo 5 (Swirl) Rotate with Mega Stepping
			111 - 115	Gobo 6 (Honeycomb Reverse) Rotate with Mega Stepping
			116 - 120	Gobo 7 (On the Rock) Rotate with Mega Stepping
			121 - 255	Reserved Values
18	Gobo 1 Rot/Index	32767	0 - 65535	16-bit control of index and rotation of gobo wheel 1.
10	High Byte		0 - 32756	Rotate Fast to Slow <<<
19	Gobo 1 Rot/Index		32757 - 32780	Rotation STOP
13	Low Byte		32781 - 65535	Rotate Slow to Fast >>>
			0 - 255	Used as a control channel for different movement options for
				Gobo Wheel 1 (Channel 17)
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin CW Forward (Fast to Slow)
			51 - 60	Wheel Spin STOP
20	Gobo Wheel 1	0	61 - 90	Wheel Spin CCW Reverse (Slow to Fast)
	Control	0	91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Gobo Twist Quickest Path (Slow to Fast) For fastest twist set gobo timing to $\ensuremath{0}$
			181 - 210	Gobo Twist Normal Path (Slow to Fast) For fastest twist set gobo timing to $\ensuremath{O}$
			211 - 255	Reserved Values

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0-255	8-bit control of Gobo Wheel for movement options see channel 24
			0 - 5	Open - No Gobo
			6 - 10	Gobo 1 (Dichrofusion) Index
			11 - 15	Gobo 2 (Alpha Rays) Index
			16 - 20	Gobo 3 (Circle of holes) Index
			21 - 25	Gobo 4 (Vertical Bars) Index
			26 - 30	Gobo 5 (Tribal) Index
			31 - 35	Gobo 6 (Honeycomb) Index
			36 - 40	Gobo 7 (Droplets) Index
			41 - 45	Open - No Gobo
			46 - 50	Gobo 1 (Dichrofusion) Rotate
	Gobo Wheel 2		51 - 55	Gobo 2 (Alpha Rays) Rotate
21		0	56 - 60	Gobo 3 (Circle of holes) Rotate
			61 - 65	Gobo 4 (Vertical Bars) Rotate
			66 - 70	Gobo 5 (Tribal) Rotate
			71 - 75	Gobo 6 (Honeycomb) Rotate
			76 - 80	Gobo 7 (Droplets) Rotate
			81 - 85	Open - No Gobo
			86 - 90	Gobo 1 (Dichrofusion) Rotate with Mega Stepping
			91 - 95	Gobo 2 (Alpha Rays) Rotate with Mega Stepping
			96 - 100	Gobo 3 (Circle of holes) Rotate with Mega Stepping
			101 - 105	Gobo 4 (Vertical Bars) Rotate with Mega Stepping
			106 - 110	Gobo 5 (Tribal) Rotate with Mega Stepping
			111 - 115	Gobo 6 (Honeycomb) Rotate with Mega Stepping
			116 - 120	Gobo 7 (Droplets) Rotate with Mega Stepping
			121 - 255	Reserved Values
22	Gobo 2 Rot / Index High Byte		0 - 65535	16-bit control of index and rotation of gobo wheel 1.
		32767	0 - 32756	Rotate Fast to Slow <<<
23	Gobo 2 Rot / Index Low Byte		32757 - 32780	Rotation STOP
	HIGEN LOW Dyte		32781 - 65535	Rotate Slow to Fast >>>

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0-255	Iris size control
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin Forward (Fast to Slow)
			51 - 60	Wheel Spin STOP
			61 - 90	Wheel Spin Reverse (Slow to Fast)
24	Gobo Wheel 2 Control	0	91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Gobo Twist Quickest Path (Slow to Fast) For fastest twist set gobo timing to 0
			181 - 210	Gobo Twist Normal Path (Slow to Fast) For fastest twist set gobo timing to 0
			211 - 255	Reserved Values
			0-255	8-bit control of Gobo Wheel 3. for movement options see channel 26
			0 - 5	Open - No Gobo
			6 - 10	6-10 Gobo 1 (Leafy Breakup)
			11 - 15	11-15 Gobo 2 (Medium Circle)
	Gobo Wheel 3		16 - 20	16-20 Gobo 3 Swirl (Lattice)
25	Fixed	0	21 - 25	21-25 Gobo 4 (Radial Breakup)
			26 - 30	26-30 Gobo 5 (Dust)
			31 - 35	31-35 Gobo 6 (Neurons)
			36 - 40	36-40 Gobo 7 (Grid)
			41 - 45	41-45 Gobo 8 (Cross bars)
			46 - 255	Reserved
			0 - 255	Used as a control channel for different movement options for Gobo Wheel 3 (Channel 25).
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin Forward (Fast to Slow)
	Caba Whaal Z		51 - 60	Wheel Spin STOP
26	Gobo Wheel 3 Control	0	61 - 90	Wheel Spin Reverse (Slow to Fast)
			91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Reserved Values
			181 - 210	Reserved Values
			211 - 255	Reserved Values
			0-255	Iris size control
27	Iris	0	0 - 200	Iris beam size open to closed
			201 - 255	Iris pulse slow to fast For future use

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0 - 255	Controls Prism mechanism with following values.
			0 - 5	Open
	Time	0	6 - 10	Index
28	Triangular Prism	0	11 - 15	Rotate Normal
			16 - 20	Rotate with Mega Stepping
			21 - 255	Reserved Values
20	Prism Index/Rot		0 - 65535	16-bit control of prism rotation and index.
29	High Byte	0 - 65535	0 - 32756	Rotate Fast to Slow <<<
70	Prism Index/Rot	0 - 65535	32757 - 32780	Rotation STOP
30	Low Byte		32781 - 65535	Rotate Slow to Fast >>>
31	Frost	0	0-255	Linear control of frost mechanism from out (DMX 0) to full in (DMX 255)
32	Strobe Speed	0 - 255	0 - 255	Controls strobe rate from slowest (DMX 0) to fastest (DMX 255) 0.5Hz to 30Hz
			0 - 255	Control Channel for strobing functions.
			0 - 5	Open
33	Strobe Control	0 - 255	6 - 10	Closed
	Strobe control	0-233	11 - 15	Normal Strobe
			16 - 20	Random Strobe
			21 - 25	Random Sync
			0-255	*do not require 3 second Dam rule mode will change once DMX level I reached **Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s)
			0 - 40	Idle
		0	41 - 80	Linear**
			81 -120	S-Curve**
			121 -160	Square Curve (Default)**
34	Programmers		161 - 180	PL Curve **
	Channel		181 - 200	For Future Use
			201 - 210	Auto CTB ON (Default)**
			211 - 220	Auto CTB off **
			221 - 225	Edge Tracking OFF**
			226 - 230	Edge Tracking ON**
			231 - 235	Soft Zoom start ON** <b>For future use</b>
			236 - 240	Soft Zoom start OFF**
			241 - 245	Dimmer Snap On* (Default)
			246 - 250	Dimmer Snap Off*
		0	0 - 255	Dynamically control fan speed vs LED Output operation. Control values as follows
75	Fan Cantural		0-4	Automatic fan/output adjustment (Default)
35	Fan Control			Linear control of fan speed and LED max output.
			5-255	DMX 4 = Highest Constant Fan Speed
				DMX 255 = Lowest Constant Fan Speed

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
	Optical Style	0	0 - 255	Hybrid - full zoom range no restrictions (default)
			31 - 60	Spot Projection - 6% 100% Zoom Range No other restrictions besides zoom range
36			61 - 90	Open Beam - Open Beam ocked in at 2% zoom - Edge 0% (Hard Edged) - Iris 0% - tigam/Iris/edge functions not operational- Prism Fully functional (
			91 - 120	Shaft - Open Beam locked in at 0% zoom-Edge 0%- Iris limited Range of 26%-100% (iris never completely leaves beam to keep hard edge)- Gobo Functionality disabled. Prism Fully functional
			0 - 255	Control Channel used for full fixture settings, lamp controls, and miscellaneous modes. Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s)
			0 - 5	Idle (Default)
			6 - 10	Full Luminaire ReCal - Also Used to Wake fixture up from shutdown
	Luminaire Control	Ο	11 - 15	Reserved Values
			16 - 20	Reserved Values
			21 - 25	Fixture Shutdown
			26 - 30	Display - Menu ON
			31 - 35	Display - Menu OFF
			36 - 40	ReCal Position
			41 - 45	ReCal Color
37			46 - 50	ReCal Gobo
			51 - 55	ReCal Beam
			56 - 60	ReCal Optics
			61 - 65	Reserved Values
			66 - 70	Reset Fixture to Defaults
			71 - 75	Full Luminaire Reboot. This command will douse lamp and reset all processors in fixture, then ReCal all parameters.
			76 - 80	Fixture Status On/Off. This command will enable the display to show fixture status for 5 min. After this time, displays will return to default configuration. Repeating this command in less than 5 minutes will behave as a toggle.
			81 - 85	Standard Mode - Fixture operates at maximum output (Default)
			86 - 90	Studio Mode - Reduced output with lower fan settings
			91 - 100	Side Hang Disable (Default)
			101 - 110	Side Hang Enable
			111 - 225	Reserved Values

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
1	Intensity High	0	0-65535	16 Bit control of Dimming
2	Intensity Low	0	0-03333	
3	Pan High	32767	0-65535	540° Total Pan Rotation
4	Pan Low	02707		
5	Tilt High	32767	0-65535	270° Total Tilt
6	Tilt Low			
7	Focus High	32767	0-65535	Focus control
8	Focus Low			Default value 50% Focus range
9	Zoom High	32767	0-65535	Zoom control
10	Zoom Low			Default value 50% zoom range
11	Cyan	0	0 - 255	Cyan Color Control 0-100% saturation
12	Yellow	0	0 - 255	Yellow Color Control 0-100% saturation
13	Magenta	0	0 - 255	Magenta Color Control 0-100% saturation
14	СТО	0	0 - 255	CTO Color correction Control 0-100% saturation
			0 - 255	8-bit control of Color Wheel.
			0 15	(spin speed slow to fast from control channel)
			0 - 15 16 - 47	OPEN (centred at 0)
			48 - 79	Color 1 RED (centred at 32)
15	Color Wheel	0	48 - 79 80 - 111	Color 2 Dark Blue (centred at 64) Color 3 Yellow (centred at 96)
15	Color Wheel	0	112 - 143	Color 4 Kelly Green (centred at 128)
			144 - 175	Color 5 Congo Blue (centred at 160)
			176 - 207	Color 6 Amber (centred at 192)
			208 - 240	Color 7 CTB (centred at 224)
			241 - 255	Open
			0 - 255	
			0 - 5	Linear Movement using shortest (quickest) path.
			6 - 10	Linear Movement using normal (longest) path.
	Color Wheel		11 - 15	Wheel Spin CW (Forward)
16	Control	0	16 - 20	Wheel Spin STOP
			21 - 25	Wheel Spin CCW (Reverse)
			26 - 56	Color Shake Quickest Path (Slow to Fast) For fastest shake
			57 - 87	Color Shake Normal Path (Slow to Fast) For fastest shake set
			88 - 255	Reserved Values
			0 - 255	8-bit control of Gobo Wheel 1. See Channel 21 for control
			0 - 5	Open - No Gobo
			6 - 10	Gobo 1 (Night Sky) Index
			11 - 15	Gobo 2 (Circle of Ovals) Index
17	Gobo Wheel 1	0	16 - 20	Gobo 3 (Bricked Out) Index
17	Gobo Wheel 1	U	21 - 25	Gobo 4 (Punchcard) Index
			26 - 30	Gobo 5 (Swirl) Index
			31 - 35	Gobo 6 (Honeycomb Reverse) Index
			36 - 40	Gobo 7 (On the Rock) Index
			41 - 45	Open - No Gobo

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			46 - 50	Gobo 1 (Night Sky) Rotate
			51 - 55	Gobo 2 (Circle of Ovals) Rotate
			56 - 60	Gobo 3 (Bricked Out) Rotate
			61 - 65	Gobo 4 (Punchcard) Rotate
			66 - 70	Gobo 5 (Swirl) Rotate
			71 - 75	Gobo 6 (Honeycomb Reverse) Rotate
			76 - 80	Gobo 7 (On the Rock) Rotate
17	Gobo Wheel 1	0	81 - 85	Open - No Gobo
17	continued	0	86 - 90	Gobo 1 (Night Sky) Rotate with Mega Stepping
			91 - 95	Gobo 2 (Circle of Ovals) Rotate with Mega Stepping
			96 - 100	Gobo 3 (Bricked Out) Rotate with Mega Stepping
			101 - 105	Gobo 4 (Punchcard) Rotate with Mega Stepping
			106 - 110	Gobo 5 (Swirl) Rotate with Mega Stepping
			111 - 115	Gobo 6 (Honeycomb Reverse) Rotate with Mega Stepping
			116 - 120	Gobo 7 (On the Rock) Rotate with Mega Stepping
			121 - 255	Reserved Values
18	Gobo 1 Rot/Index High Byte		0 - 65535	16-bit control of index and rotation of gobo wheel 1.
		32767	0 - 32756	Rotate Fast to Slow <<<
19	Gobo 1 Rot/Index Low Byte		32757 - 32780	Rotation STOP
	LOW Byte		32781 - 65535	Rotate Slow to Fast >>>
			0 - 255	Used as a control channel for different movement options for Gobo Wheel 1 (Channel 17).
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin CW Forward (Fast to Slow)
			51 - 60	Wheel Spin STOP
	Gobo Wheel 1	_	61 - 90	Wheel Spin CCW Reverse (Slow to Fast)
20	Control	0	91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Gobo Twist Quickest Path (Slow to Fast) For fastest twist set gobo timing to ${\rm O}$
			181 - 210	Gobo Twist Normal Path (Slow to Fast) For fastest twist set gobo timing to O
			211 - 255	Reserved Values
			0 - 255	8-bit control of Gobo Wheel 2. See Channel 24 for control options.
			0 - 5	Open - No Gobo
		O	6 - 10	Gobo 1 (Dichrofusion) Index
21	Gobo Wheel 2		11 - 15	Gobo 2 (Alpha Rays) Index
			16 - 20	Gobo 3 (Circle of holes) Index
			21 - 25	Gobo 4 (Vertical Bars) Index
			26 - 30	Gobo 5 (Tribal) Index
			31 - 35	Gobo 6 (Honeycomb) Index

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
21	Gobo Wheel 2 continued	O	36 - 40   41 - 45   46 - 50   51 - 55   56 - 60   61 - 65   66 - 70   71 - 75   76 - 80   81 - 85   86 - 90   91 - 95   96 - 100   101 - 105   106 - 110   111 - 115   116 - 120   121 - 255	Gobo 7 (Droplets) Index Open - No Gobo Gobo 1 (Dichrofusion) Rotate Gobo 2 (Alpha Rays) Rotate Gobo 3 (Circle of holes) Rotate Gobo 4 (Vertical Bars) Rotate Gobo 5 (Tribal) Rotate Gobo 5 (Tribal) Rotate Gobo 6 (Honeycomb) Rotate Gobo 7 (Droplets) Rotate Open - No Gobo Gobo 1 (Dichrofusion) Rotate with Mega Stepping Gobo 2 (Alpha Rays) Rotate with Mega Stepping Gobo 3 (Circle of holes) Rotate with Mega Stepping Gobo 4 (Vertical Bars) Rotate with Mega Stepping Gobo 5 (Tribal) Rotate with Mega Stepping Gobo 6 (Honeycomb) Rotate with Mega Stepping Gobo 7 (Droplets) Rotate with Mega Stepping
22	Gobo 2 Rot/Index High Byte	32767	0 - 65535	16-bit control of index and rotation of gobo wheel 1.
23	Gobo 2 Rot/Index Low Byte		0 - 32756 32757 - 32780 32781 - 65535	Rotate Fast to Slow <<< Rotation STOP Rotate Slow to Fast >>>
24	Gobo Wheel 2 Control	0	0 - 255 0 - 5 6 - 10 11 - 20 21 - 50 51 - 60 61 - 90 91 - 120 121 - 150 151 - 180 181 - 210 211 - 255	Used as a control channel for different movement options for Gobo Wheel 2 (Channel 21). Gobo Selection using shortest (quickest) path. Gobo Selection using normal (longest) path. Reserved Values Wheel Spin Forward (Fast to Slow) Wheel Spin STOP Wheel Spin Reverse (Slow to Fast) Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0 Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0 Gobo Twist Quickest Path (Slow to Fast) For fastest twist set gobo timing to 0 Gobo Twist Normal Path (Slow to Fast) For fastest twist set gobo timing to 0 Reserved Values
25	Gobo Wheel 3 (Fixed)	0	0-255 0 - 5 6 - 10 11 - 15 16 - 20	8-bit control of Gobo Wheel 3. for movement options see channel 26 Open - No Gobo 6-10 Gobo 1 (Leafy Breakup) 11-15 Gobo 2 (Medium Circle) 16-20 Gobo 3 Swirl (Lattice)

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			21 - 25	21-25 Gobo 4 (Radial Breakup)
			26 - 30	26-30 Gobo 5 (Dust)
05	Gobo Wheel 3	0	31 - 35	31-35 Gobo 6 (Neurons)
25	(Fixed) continued	0	36 - 40	36-40 Gobo 7 (Grid)
			41 - 45	41-45 Gobo 8 (Cross bars)
			46 - 255	Reserved
			0 055	Used as a control channel for different movement options for
			0 - 255	Gobo Wheel 3 (Channel 25).
			0 - 5	Gobo Selection using shortest (quickest) path.
			6 - 10	Gobo Selection using normal (longest) path.
			11 - 20	Reserved Values
			21 - 50	Wheel Spin Forward (Fast to Slow)
	Gobo Wheel 3		51 - 60	Wheel Spin STOP
26	Control	0	61 - 90	Wheel Spin Reverse (Slow to Fast)
			91 - 120	Gobo Shake Quickest Path (Slow to Fast) For fastest shake set gobo timing to 0
			121 - 150	Gobo Shake Normal Path (Slow to Fast) For fastest shake set gobo timing to 0
			151 - 180	Reserved Values
			181 - 210	Reserved Values
			211 - 255	Reserved Values
			0-255	Iris size control
27	Iris	0	0 - 200	Iris beam size open to <u>closed</u>
			201 - 255	Iris pulse slow to fast For future use
			0 - 255	Controls Prism mechanism with following values.
			0 - 5	Open
28	Triangular Prism	0	6 - 10	Index
20		0	11 - 15	Rotate Normal
			16 - 20	Rotate with Mega Stepping
			21 - 255	Reserved Values
29	Prism Index/Rot High Byte		0-65535	16-bit control of prism rotation and index.
	/	0 - 65535	0 - 32756	Rotate Fast to Slow <<<
30	Prism Index/Rot Low Byte		32757 - 32780	Rotation STOP
			32781 - 65535	Rotate Slow to Fast >>>
31	Frost	0	0-255	Linear control of frost mechanism from out (DMX 0) to full in (DMX 255)
32	Strobe Speed	0	0 - 255	Controls strobe rate from slowest (DMX 0) to fastest (DMX 255) 0.5Hz to 30Hz
			0 - 255	Control Channel for strobing functions.
			0 - 5	Open
			6 - 10	Closed
33	Strobe Control	0 - 255	11 - 15	Normal Strobe
			16 - 20	Random Strobe
			21 - 25	Random Sync
			26 - 255	Reserved Values

#### TABLE 4. VL2600 SPOT 16-BIT MODE ENHANCED

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0-255	*do not require 3 second Dam rule mode will change once DMX level I reached **Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s)
			0 - 40	Idle
			41 - 80	Linear**
			81 -120	S-Curve**
			121 -160	Square Curve (Default)**
34	Programmers	0	161 - 180	PL Curve **
54	Channel	Ŭ	181 - 200	For Future Use
			201 - 210	Auto CTB ON (Default)**
			211 - 220	Auto CTB off **
			221 - 225	Edge Tracking OFF**
			226 - 230	Edge Tracking ON**
			231 - 235	Soft Zoom start ON** <b>For future use</b>
			236 - 240	Soft Zoom start OFF**
			241 - 245	Dimmer Snap On* (Default)
			246 - 250	Dimmer Snap Off*
35	Focus Timing	255	0 - 255	Adjustment of fixture timing to control Pan/Tilt mechanisms. See Timing Channel Chart in User Manual
36	Optics Timing	255	0 - 255	Adjustment of fixture timing to control lensing mechanisms. See Timing Channel Chart in User Manual
37	Color Timing	255	0 - 255	Adjustment of fixture timing to control color mechanisms. See Timing Channel Chart in User Manual
38	Beam Timing	255	0 - 255	Adjustment of fixture timing to control beam shaping mechanisms. See Timing Channel Chart in User Manual
39	Gobo Timing	255	0 - 255	Adjustment of fixture timing to control gobo mechanisms. See Timing Channel Chart in User Manual
			0 - 255	Dynamically control fan speed vs LED Output operation. Control values as follows
			0-4	Automatic fan/output adjustment (Default)
40	Fan Control	0	5-255	Linear control of fan speed and LED max output.
				DMX 4 =Highest Constant Fan Speed
				DMX 255 = Lowest Constant Fan Speed
			0 - 255	Hybrid - full zoom range no restrictions (default)
			31 - 60	Spot Projection - 6%-100% Zoom Range No other restrictions besides zoom range
41	Optical Style	0	61 - 90	Open Beam OpenOcam locked in at 2% zoom - Edge 0% (Hard Edged) Uris Care, Beam/Iris/edge functions not operational- Prism Fully functional
			91 - 120	Shaft - Open Beam locked in at 0% zoom-Edge 0%- Iris limited Range of 26%-100% (iris never completely leaves beam to keep hard edge)- Gobo Functionality disabled. Prism Fully functional

#### TABLE 4. VL2600 SPOT 16-BIT MODE ENHANCED

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			0 - 255	Control Channel used for full fixture settings, lamp controls, and miscellaneous modes. Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s)
			0 - 5	Idle (Default)
			6 - 10	Full Luminaire ReCal - Also Used to Wake fixture up from shutdown
			11 - 15	Reserved Values
			16 - 20	Reserved Values
			21 - 25	Fixture Shutdown
			26 - 30	Display - Menu ON
			31 - 35	Display - Menu OFF
			36 - 40	ReCal Position
			41 - 45	ReCal Color
42	Luminaire Control	0	46 - 50	ReCal Gobo
12		C C	51 - 55	ReCal Beam
			56 - 60	ReCal Optics
			61 - 65	Reserved Values
			66 - 70	Reset Fixture to Defaults
			71 - 75	Full Luminaire Reboot. This command will douse lamp and reset all processors in fixture, then ReCal all parameters.
			76 - 80	Fixture Status On/Off. This command will enable the display to show fixture status for 5 min. After this time, displays will return to default configuration. Repeating this command in less than 5 minutes will behave as a toggle.
			81 - 85	Standard Mode - Fixture operates at maximum output (Default)
			86 - 90	Studio Mode - Reduced output with lower fan settings
			91 - 100	Side Hang Disable (Default)
			101 - 110	Side Hang Enable
			111 - 225	Reserved Values

#### TABLE 5. VL2600 WASH 16-BIT MODE

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
1	Intensity High	0	0.05575	
2	Intensity Low	0	0-65535	16 Bit control of Dimming
3	Pan High	70767	0.00070	E 40º Tatal Dan Datation
4	Pan Low	32767	0-65535	540° Total Pan Rotation
5	Tilt High	32767	0-65535	270° Total Tilt
6	Tilt Low	52707	0-03333	
7	Zoom High	32767	0-65535	Zoom control
8	Zoom Low	52707	0 00000	Default value 50% zoom range
9	Cyan	0	0 - 255	Cyan Color Control 0-100% saturation
10	Yellow	0	0 - 255	Yellow Color Control 0-100% saturation
11	Magenta	0	0 - 255	Magenta Color Control 0-100% saturation
12	СТО	0	0 - 255	CTO Color correction Control 0-100% saturation
			0 - 255	8-bit control of Color Wheel.
				(spin speed slow to fast from control channel)
			0 - 15	OPEN (centred at 0)
			16 - 47	Color 1 RED (centred at 32)
			48 - 79	Color 2 Dark Blue (centred at 64)
13	Color Wheel	0	80 - 111	Color 3 Yellow (centred at 96)
			112 - 143	Color 4 Kelly Green (centred at 128)
			144 - 175	Color 5 Congo Blue (centred at 160)
			176 - 207	Color 6 Amber (centred at 192)
			208 - 240	Color 7 CTB (centred at 224)
			241 -255	Open
			0 - 255	Linear Mayamant using about at (quiskast) noth
			0 - 5 6 - 10	Linear Movement using shortest (quickest) path.
			11 - 15	Linear Movement using normal (longest) path. Wheel Spin CW (Forward)
			16 - 20	Wheel Spin STOP
14	Color Wheel Control	0	21 - 25	Wheel Spin CCW (Reverse)
			26 - 56	Color Shake Quickest Path (Slow to Fast) For fastest shake set color timing to 0
			57 - 87	Color Shake Normal Path (Slow to Fast) For fastest shake set color timing to 0
			88 - 255	Reserved Values
15	Frame 1A	0	0-255	Controls Framing Shutter 1A from Open (0) to Full (255).
16	Frame 1B	0	0 - 255	Controls Framing Shutter 1B from Open (0) to Full (255).
17	Frame 2A	0	0 - 255	Controls Framing Shutter 2A from Open (0) to Full (255).
18	Frame 2B	0	0 - 255	Controls Framing Shutter 2B from Open (0) to Full (255).
19	Frame 3A	0	0 - 255	Controls Framing Shutter 3A from Open (0) to Full (255).
20	Frame 3B	0	0 - 255	Controls Framing Shutter 3B from Open (0) to Full (255).
21	Frame 4A	0	0 - 255	Controls Framing Shutter 4A from Open (0) to Full (255).
22	Frame 4B			Controls Framing Shutter 4B fromOpen (0) to Full (255).
23	Frame Rotate	128	0 - 255	Controls Framing Shutter mechanism from +/- 90°
24	Beam softening	0	0-255	Linear control of frost mechanism from out (0) to full in (255)
25	Strobe Speed	0	0 - 255	Controls strobe rate from slowest (0) to fastest (255) 0.5Hz to 30Hz

#### TABLE 5. VL2600 WASH 16-BIT MODE

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
		0 - 255	0 - 255	Control Channel for strobing functions.
		0 - 5		Open
		6 - 10		Closed
26	Strobe Control	11 - 15		Normal Strobe
		16 - 20		Random Strobe
		21 - 25		Random Sync
		26 - 255		Reserved Values
27	Programmers Channel	0	0-255 0 - 40 41 - 80 81 -120 121 -160 161 - 180 181 - 200 201 - 210 211 - 220 221 - 225 226 - 230 231 - 235 235 - 240	*do not require 3 second Dam rule mode will change once DMX level I reached **Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s) Idle Linear** S-Curve** Square Curve (Default)** PL Curve ** For Future Use Auto CTB ON (Default)** Auto CTB off ** Edge Tracking OFF** Edge Tracking ON** Soft Zoom start OFF** <b>For future use</b>
			241 - 245	Dimmer Snap On* (Default)
			246 - 250	Dimmer Snap Off*
28	Fan Control	0	0 - 255	Dynamically control fan speed vs LED Output operation. Control values as follows Automatic fan/output adjustment (Default) Linear control of fan speed and LED max output.
				DMX 4 =Highest Constant Fan Speed
				DMX 255 = Lowest Constant Fan Speed
			0 - 255	Control Channel used for full fixture settings, lamp controls, and miscellaneous modes. Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s)
29	Luminaire Control	0	0 - 5	Idle (Default)
29		0	6 - 10	Full Luminaire ReCal - Also Used to Wake fixture up from shutdown
			11 - 15	Reserved Values
			16 - 20	Reserved Values
			21 - 25	Fixture Shutdown

#### TABLE 5. VL2600 WASH 16-BIT MODE

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			26 - 30	Display - Menu ON
			31 - 35	Display - Menu OFF
			36 - 40	ReCal Position
			41 - 45	ReCal Color
			46 - 50	Reserved Values
			51 - 55	ReCal Beam
			56 - 60	ReCal Optics
			61 - 65	Reserved Values
			66 - 70	Reset Fixture to Defaults
29	Luminaire Control continued	0	71 - 75	Full Luminaire Reboot. This command will douse lamp and reset all processors in fixture, then ReCal all parameters.
			76 - 80	Fixture Status On/Off. This command will enable the display to show fixture status for 5 min. After this time, displays will return to default configuration. Repeating this command in less than 5 minutes will behave as a toggle.
			81 - 85	Standard Mode - Fixture operates at maximum output (Default)
			86 - 90	Studio Mode - Reduced output with lower fan settings
			91 - 100	Side Hang Disable (Default)
			101 - 110	Side Hang Enable
			111 - 225	Reserved Values

#### USER MANUAL

#### TABLE 6. VL2600 WASH 16-BIT MODE ENHANCED

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
1	Intensity High	0	0.05575	10 Pit control of Direction
2	Intensity Low	0	0-65535	16 Bit control of Dimming
3	Pan High	32767	0-65535	540° Total Pan Rotation
4	Pan Low	32767	0-05555	
5	Tilt High	32767	0-65535	270° Total Tilt
6	Tilt Low	32707	0 00000	
7	Zoom High	32767	0-65535	Zoom control
8	Zoom Low			Default value 50% zoom range
9	Cyan	0	0 - 255	Cyan Color Control 0-100% saturation
10	Yellow	0	0 - 255	Yellow Color Control 0-100% saturation
11	Magenta	0	0 - 255	Magenta Color Control 0-100% saturation
12	СТО	0	0 - 255	CTO Color correction Control 0-100% saturation
			0 - 255	8-bit control of Color Wheel.
			0.15	(spin speed slow to fast from control channel)
			0 - 15	OPEN (centred at 0)
			16 - 47	Color 1 RED (centred at 32)
13	Color Wheel	0	48 - 79	Color 2 Dark Blue (centred at 64)
15	Color wheel	0	80 - 111 112 - 143	Color 3 Yellow (centred at 96) Color 4 Kelly Green (centred at 128)
			144 - 175	Color 5 Congo Blue (centred at 160)
			176 - 207	Color 6 Amber (centred at 192)
			208 - 240	Color 7 CTB (centred at 224)
			241 - 255	Open
			0 - 255	
			0 - 5	Linear Movement using shortest (quickest) path.
			6 - 10	Linear Movement using normal (longest) path.
			11 - 15	Wheel Spin CW (Forward)
	Color Wheel		16 - 20	Wheel Spin STOP
14	Color Wheel Control	0	21 - 25	Wheel Spin CCW (Reverse)
			26 - 56	Color Shake Quickest Path (Slow to Fast) For fastest shake set color timing to 0
			57 - 87	Color Shake Normal Path (Slow to Fast) For fastest shake set color timing to O
			88 - 255	Reserved Values
15	Frame 1A	0	0-255	Controls Framing Shutter 1A from Open (0) to Full (255).
16	Frame 1B	0	0 - 255	Controls Framing Shutter 1B from Open (0) to Full (255).
17	Frame 2A	0	0 - 255	Controls Framing Shutter 2A from Open (0) to Full (255).
18	Frame 2B	0	0 - 255	Controls Framing Shutter 2B from Open (0) to Full (255).
19	Frame 3A	0	0 - 255	Controls Framing Shutter 3A from Open (0) to Full (255).
20	Frame 3B	0	0 - 255	Controls Framing Shutter 3B from Open (0) to Full (255).
21	Frame 4A	0	0 - 255	Controls Framing Shutter 4A from Open (0) to Full (255).
22	Frame 4B			Controls Framing Shutter 4B fromOpen (0) to Full (255).
23	Frame Rotate	128	0 - 255	Controls Framing Shutter mechanism from +/- 90°
24	Beam softening	0	0-255	Linear control of frost mechanism from out (0) to full in (255)
25	Strobe Speed	0	0 - 255	Controls strobe rate from slowest (0) to fastest (255) 0.5Hz to 30Hz

#### USER MANUAL

TABLE 6.	VL2600 W	ASH 16-BIT I	MODE ENHANCED
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DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION	
		0 - 255	0 - 255	Control Channel for strobing functions.	
		O - 5		Open	
		6 - 10		Closed	
26	Strobe Control	11 - 15		Normal Strobe	
		16 - 20		Random Strobe	
		21 - 25		Random Sync	
		26 - 255		Reserved Values	
			0-255	*do not require 3 second Dam rule mode will change once DMX level I reached **Set discrete value of desired effect, wait >3 seconds, then set value to 0 (Idle). Note some consoles have a delay in their channel Marco action. For this a time greater then 3 second may be required (6s)	١
			0 - 40	Idle	
			41 - 80	Linear**	
			81 -120	S-Curve**	
			121 -160	Square Curve (Default)**	
27	Programmers	0	161 - 180	PL Curve **	
27	Channel	Ũ	181 - 200	For Future Use	
			201 - 210	Auto CTB ON (Default)**	
			211 - 220	Auto CTB off **	
			221 - 225	Edge Tracking OFF**	
			226 - 230	Edge Tracking ON**	
			231 - 235	Soft Zoom start ON** For future use	
			235 - 240	Soft Zoom start OFF**	
			241 - 245	Dimmer Snap On* (Default)	
			246 - 250	Dimmer Snap Off*	
28	Focus Timing	255	0 - 255	Adjustment of fixture timing to control Pan/Tilt mechanisms See Timing Channel Chart in User Manual	IS.
29	Optics Timing	255	0 - 255	Adjustment of fixture timing to control lensing mechanisms See Timing Channel Chart in User Manual	5.
30	Color Timing	255	0 - 255	Adjustment of fixture timing to control color mechanisms. See Timing Channel Chart in User Manual	
31	Fan Control	0	0 - 255	Dynamically control fan speed vs LED Output operation. Control values as follows Automatic fan/output adjustment (Default) Linear control of fan speed and LED max output. DMX 4 =Highest Constant Fan Speed	
				DMX 4 = Hignest Constant Fan Speed DMX 255 = Lowest Constant Fan Speed	
				Control Channel used for full fixture settings, lamp controls,	
			0 - 255	effect, wait >3 seconds, then set value to 0 (Idle). Note son consoles have a delay in their channel Marco action. For this time greater then 3 second may be required (6s)	me
32	Luminaire Control	0	0 - 5	Idle (Default)	
32	Control	0	6 - 10	Full Luminaire ReCal - Also Used to Wake fixture up from shutdown	
			11 - 15	Reserved Values	
			16 - 20	Reserved Values	
			21 - 25	Fixture Shutdown	

#### TABLE 6. VL2600 WASH 16-BIT MODE ENHANCED

DMX CHANNEL	PARAMETER	DEFAULTS	RANGE DMX	DESCRIPTION
			26 - 30	Display - Menu ON
			31 - 35	Display - Menu OFF
			36 - 40	ReCal Position
			41 - 45	ReCal Color
			46 - 50	Reserved Values
			51 - 55	ReCal Beam
			56 - 60	ReCal Optics
			61 - 65	Reserved Values
			66 - 70	Reset Fixture to Defaults
32	Luminaire Control continued	0	71 - 75	Full Luminaire Reboot. This command will douse lamp and reset all processors in fixture, then ReCal all parameters.
			76 - 80	Fixture Status On/Off. This command will enable the display to show fixture status for 5 min. After this time, displays will return to default configuration. Repeating this command in less than 5 minutes will behave as a toggle.
			81 - 85	Standard Mode - Fixture operates at maximum output (Default)
			86 - 90	Studio Mode - Reduced output with lower fan settings
			91 - 100	Side Hang Disable (Default)
			101 - 110	Side Hang Enable
			111 - 225	Reserved Values

# RDM PARAMETERS

GET ALLOWED	SET ALLOWED	RDM PARAMETER IDS	VALUE	COMMENT	ESTA STANDARD	REQUIRED / IMPLEMENTED	DMX / UI DESCIPTION
Category - N	Category - Network Management	gement					
		DISC_UNIQUE_BRANCH	0×0001				
		DISC_MUTE	0×0002				
		DISC_UN_MUTE	0×0003				
		PROXIED_DEVICES	0×0010				
		PROXIED_DEVICES_COUNT	0×0011				
		COMMS_STATUS	0×0015				
Category - S	Category - Status Collection	on					
		QUEUED_MESSAGE	0×0020			×	
×		STATUS_MESSAGES	0×0030			×	Status
×		STATUS_ID_DESCRIPTION	0×0031			×	
	×	CLEAR_STATUS_ID	0×0032			×	
		SUB_DEVICE_STATUS_REPORT_THRESHOLD	0×0033				
Category - R	Category - RDM Information	uo					
		SUPPORTED_PARAMETERS	0×0050	Support required only if supporting parameters beyond the minimum required set.		×	
×		PARAMETER_DESCRIPTION	0×0051	Support required for Manufacturer- specific PIDs exposed in SUPPORTED_ PARAMETERS message.		×	
Category - P	Category - Product Information	ation					
×		DEVICE_INFO	0×0060			×	
		PRODUCT_DETAIL_ID_LIST	0×0070				
×		DEVICE_MODEL_DESCRIPTION	0×0080			×	

GET ALLOWED	SET ALLOWED	RDM PARAMETER IDS	VALUE	COMMENT	ESTA STANDARD	REGUIRED / IMPLEMENTED	DMX / UI DESCIPTION
×		MANUFACTURER_LABEL	0×0081			×	
×	×	DEVICE_LABEL	0×0082			×	
		FACTORY_DEFAULTS	0600×0				Reset Defaults
		LANGUAGE_CAPABILITIES	0×00A0				
		LANGUAGE	0×00B0				
×		SOFTWARE_VERSION_LABEL	0×00C0			×	Version
×		BOOT_SOFTWARE_VERSION_ID	0×00C1				
×		BOOT_SOFTWARE_VERSION_LABEL	0x00C2				
Category - E	Category - DMX512 Setup						
×	×	DMX_PERSONALITY	0×00E0			×	DMX Mode
×		DMX_PERSONALITY_DESCRIPTION	0×00E1			×	
×	×	DMX_START_ADDRESS	0×00F0			×	Address
×		SLOT_INFO	0×0120			×	
×		SLOT_DESCRIPTION	0×0121			×	
×		DEFAULT_SLOT_VALUE	0×0122			×	
Category - S	Category - Sensors 0x02xx USE	× USE					
		SENSOR_DEFINITION	0×0200				
		SENSOR_VALUE	0×0201				
		RECORD_SENSORS	0×0202				
Category - E	<b>Dimmer Setting</b>	Category - Dimmer Settings 0x03xx - FUTURE USE					
		Dimmer Curve	0x0343				
		Dimmer Curve Description	0x0344				
		Modulation Frequency	0×0347				
		Modulation Frequency Description	0x0348				
Category - F	ower / Lamp :	Category - Power / Lamp Settings 0x04xx					
×		DEVICE_HOURS	0x0400			×	Fixture Hours
×		LAMP_HOURS	0x0401			×	
×		LAMP_STRIKES	0x0402			×	
×	×	LAMP_STATE	0x0403			×	
×	×	LAMP_ON_MODE	0x0404			×	
×		DEVICE DOWER CYCLES	020205			*	

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GET ALLOWED	GET SET ALLOWED ALLOWED	RDM PARAMETER IDS	VALUE	COMMENT	ESTA STANDARD	REQUIRED / IMPLEMENTED	DMX / UI DESCIPTION
Category - D	Category - Display Settings 0x05xx	gs 0x05xx					
×	×	DISPLAY_INVERT	0×0500			×	
×	×	DISPLAY_LEVEL	0×0501			×	
Category - C	Category - Configuration 0x06xx	0x06xx					
×	×	PAN_INVERT	0×0600			×	
×	×	TILT_INVERT	0×0601			×	
×	×	PAN_TILT_SWAP	0x0602			×	
		REAL_TIME_CLOCK	0×0603				
Category - C	Category - Control 0x10xx	×					
	×	IDENTIFY_DEVICE	0×1000			×	
	×	RESET_DEVICE	0×1001			×	
		POWER_STATE	0×1010				
		PERFORM_SELFTEST	0×1020				
		SELF_TEST_DESCRIPTION	0×1021				

# **3** OPERATION

# MENU FUNCTIONS

Press the MENU button to select any functions, until the required function is shown in the display. Select the LCD Display and Menu System

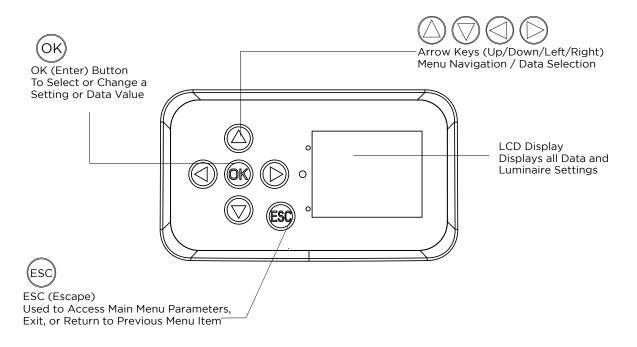
The VL2600 Luminaire's LCD Display and Menu System provides local control for accessing the following fixture's settings:

- Address to set the DMX address
- Configure various parameter settings, set luminaire ID
- DMX change the map, view incoming DMX, invert pan/tilt
- Fixture fixture status, recalibrate, reboot, software version, view fixtures hours, service, etc.
- Manual manual control of parameters
- Test test functions of parameters

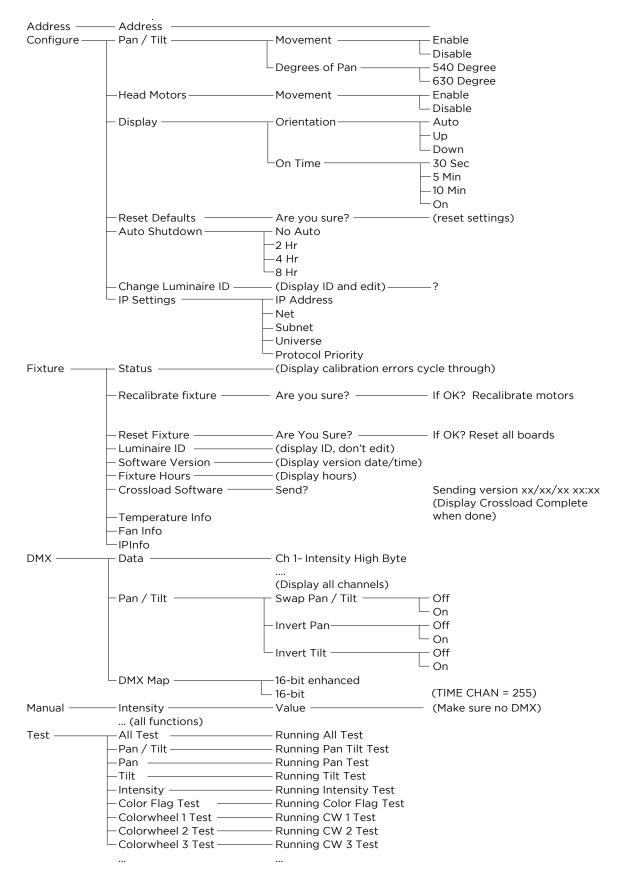
The menu system is controlled at the Menu Display available at the enclosure input panel. If there are multiple luminaires in a system, any settings or changes would need to be made at each LCD Menu as desired

# MENU CONTROLS

The menu system is controlled by an OK (Enter), ESC (Escape), and four Arrow (◀▲▼►) buttons.



### MENU SYSTEM



# LCD DISPLAY AND MENU SYSTEM OPERATION

The LCD Display Menu system consists of several categories. Use the Menu Buttons to access and make changes to the menu items. When the desired menu item is reached, press the desired Menu Button to display the menu options and to navigate and configure the menu options as required.

#### To navigate and access menu settings/selections:

- Step 1. Make sure unit is powered and turned on.
- Step 2. Press [ESC] to access menu categories.
- Step 3. Use four Arrow ( $\blacktriangleleft \blacktriangle \lor$ ) buttons to navigate through the various options and settings.
- Step 4. Once menu item is reached, press [OK] to access the menu item parameters.
- Step 5. Make changes to parameters as desired.
- Step 6. Press OK [Enter] button to accept changes.

#### DMX ADDRESS

#### To set, edit, and save a DMX address:

- Step 1. Press [ESC].
- Step 2. Press [Up] / [Down] arrows until Address appears. Press [OK].
- Step 3. Use [Left] and [Right] arrow buttons to scroll through all digits.
- Step 4. Once at desired digit, use [Up] and [Down] arrows to change highlighted digit.
- Step 5. Once digit is set, use [Left] and [Right] arrow buttons to set other digits in DMX address.
- Step 6. Once all digits are set in DMX address, press [OK] to set.
- Step 7. DMX address will display and is saved.

# OTHER LCD DISPLAY FEATURES

#### LCD MENU BATTERY OPERATION

The LCD menu system utilizes a battery powered system for operation when the luminaire is not connected to power. The primary purpose of this mode is to allow basic setup and configuration of the luminaire.

#### To enable the battery operation of the menu system:

- Step 1. Press and hold [ESC] and [OK] for two seconds.
- Step 2. Once enabled, the menu will function as normal.

**NOTE:** Any commands that require full power will be ignored while the menu system is in battery operation mode.

Step 3. To exit battery mode, press and hold [ESC] and [OK] for two seconds. Note, luminaire will automatically exit this mode after one minute of inactivity.

#### STATUS BAR

The Status Bar is present at all times and displays luminaire operational information of the luminaire. The Status Bar contains the following information:

- LAMP indicates current lamp state ON or OFF.
- SHDN indicates shutdown time in hours NO indicates NO shutdown time.
- ERRORS Displays a number indicating the total amount of current errors. When errors are present, messages will appear in Red text. When no errors are present, NO will display.



• ADDR – Displays the current DMX address for the fixture.

**NOTE:** When the fixture does not detect a DMX input signal, the DMX address text will display in Red text.

#### LCD MENU PROXIMITY SENSOR

The LCD menu system uses a proximity sensor to automatically enable the menu display (turn on the backlight) as you reach for the front panel. If the display is off, it will turn on when your hand is within a few inches of the display.

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**NOTE:** When the luminaire is not connected to power and the LCD menu is operating on battery, this proximity sensor is disabled.

# SELF TESTS

## **RUNNING PARAMETER TESTS**

The luminaire is capable of running self tests by using the TEST menu functions.

When running tests on multiple luminaires, a DMX termination connector is required at the last luminaire in the link.

#### To run tests:

- Step 1. Press [ESC].
- Step 2. Press [Up] / [Down] arrows until Test appears. Press [OK].
- Step 3. Use [Up] / [Down] arrows to select a parameter to test.
- Step 4. Press [OK] to run test.
- Step 5. Press [ESC] to stop test at any time.

NOTE: Connected luminaires may not respond on the first action (may delay) of the master luminaire.

# MOVEMENT DISABLE

The Movement option allows pan and tilt to be disabled so that the luminaire can be placed in any position for testing without movement occurring. In order to regain full control of the luminaire, Movement will need to be enabled after testing.

**NOTE:** When using the Movement option, pan and tilt will be disabled for all the luminaires that are linked.

#### To set movement option:

Step 1. Press [ESC].

- Step 2. Press [Up] /[Down] arrows until Config appears. Press [OK].
- Step 3. Press [Up] / [Down] arrows until Pan/Tilt appears. Press [OK].
- Step 4. Movement will be displayed. Press [OK].
- Step 5. Use [Up] / [Down] arrows to select Enable or Disable. Press OK] to select.

# **DIAGNOSTIC TESTS**

The following diagnostic tests are available in the test menu. Press [Menu] at anytime to stop test.

TEST NAME	DISPLAY
ALL Test	Running 'ALL TEST'
Pan/Tilt	Running 'PAN TILT TEST'
Pan	Running 'PAN TEST'
Tilt	Running 'TILT TEST'
Intensity	Running 'INTENSITY TEST'
Color Flag Test	Running 'COLOR FLAG TEST'
Color Wheel 1	Running 'CW 1 TEST'
Color Wheel 2	Running 'CW 2 TEST'
Color Wheel 3	Running 'CW 3 TEST'

# USB LOGGING

The VL2600 Luminaire stores error messages in a log file within the luminaire. This information along with specific luminaire settings can be saved as a .csv (comma-separated values) file to a USB flash drive connected to the USB port.



#### To save the current log file to a USB Flash Drive:

Step 1. Insert a USB flash drive (not supplied, by others) into luminaire's USB port.

- Step 2. Step 2. Press [ESC].
- Step 3. Press [UP] / [DOWN] arrows until Fixture appears. Press [OK].
- Step 4. Press [UP] / [DOWN] arrows until USB appears. Press [OK].
- Step 5. Press [UP] / [DOWN] arrows until USB Log appears. Press [OK].
- Step 6. Press [UP] / [DOWN] arrows until DOWNLOAD appears. Press [OK].
- Step 7. Once the download is complete, the display will read "Reset Current Lum error lognfile?" Press [OK] to reset or [ESC] to exit.
- Step 8. Press [OK] to clear the current log file in the luminaire or [ESC] to keep it.

The .csv log file on the USB Flash Drive can be read via any computer system. The file name will be as follows: 26KSxxxx.csv (the xxxxx will be the unique luminaire ID of the fixture). Each log file contains labels and values as shown below.

PARAMETER	EXAMPLE	MEANING	
Model	VL2600 luminaire	The fixture model	
Fixture Hours	142	The total of number of hours the fixture has been operating	
DMX Address	1	Current DMX address of the fixture as set by the user	
RDM UID	56:4c:2f:0:7:2a	Refer to RDM PARAMETERS ON PAGE 45	
Luminaire ID	1834	Current luminaire identification number	
Software Version	1/6/2015	Current software version loaded in the fixture	
DMX Map	16-bit	Current DMX mode setting (16 bit )	
Swap Pan/Tilt	No	Current pan and tilt setting	
Invert Pan	No	Current pan operation setting	
Invert Tilt	No	Current tilt operation setting	
Lamp Power Up	Lamp off	Current Lamp Power Up option setting (Lamp Off, Lamp ON, or Cal On)	
Lamp Level	Standard	Current operating mode of the fixture (Standard)	
Lamp Strikes	518	Total number of lamp strikes initiated by the fixture	
Lamp Hours	140	Total number of lamp hours since the last lamp hour reset	
Fixture Hour	Error Type(s)	Lists any errors and their associated fixtures hour (in example shown, a pan error occurred at fixture hour 138)	
138	Pan no sensor		

# APPENDIX A CARE AND MAINTENANCE

# TROUBLESHOOTING

The following are a few common problems that may occur during operation.

#### The unit does not work; light and fan do not turn on

- Check the connection of power and main fuse.
- Measure the mains voltage on the main connector.

#### Not responding to DMX controller

- Check DMX connectors, cables to see if they link properly.
- Check the address settings and DMX polarity.
- If you have intermittent DMX signal problems, check the pins on connectors or on DMX PCB of the unit or the previous one.
- Try to use another DMX controller.
- Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

# CLEANING

The cleaning of internal lenses must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the fixture's optics.

General cleaning guidelines:

- Clean with soft cloth using normal glass cleaning fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 30 days.

# **CLEANING OPTICS, FILTERS AND GOBOS**

WARNING: Remove power from luminaires before performing maintenance.

**WARNING:** Acetone is a harsh cleaning agent and solvent. Acetone is very flammable.

Handle acetone according to manufacturer's safety instructions and precautions.

The front lens, optics/color filters, and reflector may require cleaning after extended use.

- FRONT LENS: Use a isopropyl alcohol with a soft, lint-free cloth to clean the front lens.
- OPTICS/COLOR FILTERS/ GOBOS: Use Acetone or Isopropyl Alcohol along with a soft, lint-free cloth to clean the optics/color filters.
- REFLECTOR: Use Acetone or Isopropyl Alcohol along with a soft, lint-free cloth to clean the reflector.

CAUTION: Do not continuously rub color filters or reflector - it may damage or remove the optical coating.

# TECHNICAL SUPPORT

# GLOBAL 24HR TECHNICAL SUPPORT:

Call: +1 214 647 7880 entertainment.service@signify.com

NORTH AMERICA SUPPORT: Call: 877-VARI-LITE (877-827-4583) entertainment.service@signify.com

# EUROPEAN CUSTOMER SERVICE CENTER:

Call: +31 (0) 543 542 531 entertainment.europe@signify.com

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VL2600 PROFILE PROFILE, SPOT, WASH USER MANUAL

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