

DMX Operation

Channel Mapping

These 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. (There is only one DMX mode for this luminaire, which is Enhanced 16-bit Mode.)



Table 3-1: VL3000 Spot Luminaire Enhanced 16-Bit Mode

DMX Channel	Parameter	Range
1	Intensity	0-255
2	Hi Byte Pan	0-65535
3	Lo Byte Pan	0-65535
4	Hi Byte Tilt	0-65535
5	Lo Byte Tilt	0-65535
6	Edge	0-255
7	Zoom	0 (small) - 255 (big)
8	CTO Mixer	0 (open) - 255 (diffused)
9	Blue Mixer	0 (open) - 255 (full saturation)
10	Amber Mixer	0 (open) - 255 (full saturation)
11	Magenta Mixer	0 (open) - 255 (full saturation)
12	Color Wheel	0-216 / 217-255 (spins)
13	Gobo Wheel 1	0-216 / 217-255 (spins)
14	Hi Byte Gobo 1 Index/Rot	0-65535
15	Lo Byte Gobo 1 Index/Rot	
16	Gobo Wheel 2	0-216 / 217-255 (spins)
17	Hi Byte Gobo 2 Index/Rot	0-65535
18	Lo Byte Gobo 2 Index/Rot	
19	Gobo Wheel 3	0-216 / 217-255 (spins)
20	Hi Byte Gobo 3 Index/Rot	0-65535
21	Lo Byte Gobo 3 Index/Rot	
22	Beam Iris	0 (small) - 255 (open)
23	Strobe	0 (open) - 255 (max)
24	Focus Time	0-255
25	Color Time	0-255
26	Beam Time	0-255
27	Gobo Time	0-255
28	Control	0-255



Table 3-2: VL3000 Wash Luminaire Enhanced 16-Bit Mode

DMX Channel	Parameter	Range
1	Intensity	0-255
2	Hi Byte Pan	0-65535
3	Lo Byte Pan	0-65535
4	Hi Byte Tilt	0-65535
5	Lo Byte Tilt	0-65535
6	Edge	0-255
7	CTO Mixer	0 (open) - 255 (diffused)
8	Blue Mixer	0 (open) - 255 (full saturation)
9	Amber Mixer	0 (open) - 255 (full saturation)
10	Magenta Mixer	0 (open) - 255 (full saturation)
11	Color Wheel	0-216 / 217-255 (spins)
12	Strobe	0 (open) - 255 (max)
13	Focus Time	0-255
14	Color Time	0-255
15	Beam Time	0-255
16	Control	0-255

Control Channel Functions

Control channel functions allow special actions such as reset, lamp on/off and partial recalibration. These must be executed with zero time transition or with timing disabled. Discrete values must be used; not manual controls such as faders or encoders (see chart below for values).

Reset - resets all luminaire mechanisms.

Lamp On or Lamp Off - switches lamp on or off.

Partial Recalibration - resets only the target mechanism (color, gobo, zoom, etc.) without affecting others.

Table 3-3: Control Channel Functions

Control Channel Function	Control Channel Value		
	% Value	DMX Value	
		For 3 Secs or Greater	After 3 Secs
Luminaire Reset	32-33	81-87	0
Lamp Off	65-67	165-171	0
Lamp On	98-100	249-255	0
Partial Recalibration of:			
- Color	40	100-104	0
- Gobos	45	112-116	0
- Edge/Zoom/Iris	50	126-130	0
- Dimmer/Strobe	55	138-142	0

To use control channel functions:

- Step 1. Select an action to be sent.
- Step 2. Set control channel value for desired action (for example, 84 for reset). Hold value for 3 seconds.
- Step 3. Set control channel value to zero. (This must occur without any scaling values. Action will be voided if other values are detected between action value and zero.)

Note: A numerical keypad is required for sending values. An encoder or fader does not allow for a quick value change, which is required to effect the control functions.

DMX Mapping

Color Control

The luminaire's color system is composed of a color mixing mechanism and a fixed color wheel. The follow sections describe these components.

Color Mixing

The color mixing mechanism is made up of four graduated color disks: blue, amber, magenta and CTO (color temperature orange). These disks provide full-spectrum color crossfades from pastel to saturated color.

Table 3-4: DMX Map for Blue, Amber, Magenta and CTO Colors

% Value	DMX Value	Action
0	0	Open
100	255	Full Saturation

Fixed Color Wheel

The fixed color wheel offers timed changes, half and full frame positions, and various spin rates in either direction. The wheel contains seven positions, one being open. The following illustration shows the standard positions and color configuration:

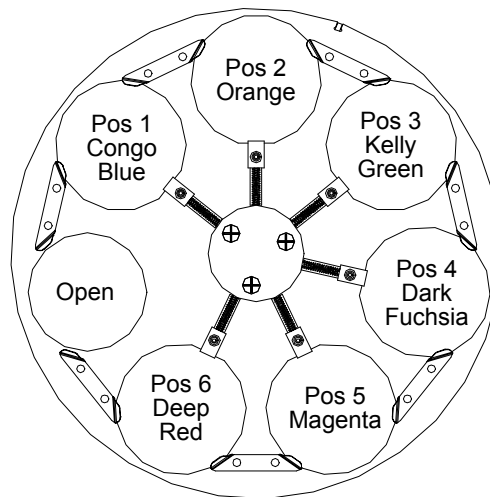


Figure 3-1: Fixed Color Wheel Positions

Table 3-5: Color Wheel Standard Configuration Chart

Position	Color Filter	Part Number
1	Congo Blue	41.9678.0305.03
2	Orange	41.9678.0305.05
3	Kelly Green	41.9678.0305.02
4	Dark Fuchsia	41.9678.0305.06
5	Magenta	41.9678.0305.04
6	Deep Red	41.9678.0305.01

Table 3-6: DMX Map for Fixed Color Wheel

Position	DMX Value	Action
1	0	Open
1.5	15	Half
2	31	Center
2.5	48	Half
3	62	Center
3.5	77	Half
4	93	Center
4.5	109	Half
5	124	Center
5.5	140	Half
6	155	Center
6.5	171	Half
7	186	Center
7.5	201	Half

Beam Control

Strobe

Table 3-7: DMX Map for Strobe

% Value	DMX Value	Action
0	0-2	Open
1	3-5	Closed
2	6-7	Slow Random
3	8-10	Med Random
4	11-12	Fast Random
5-100	13-255	Speed Range

Gobo/Effects Control

Gobo Wheels 1 and 2

These wheels have six positions, one being open. The following illustration shows the standard gobo configurations:

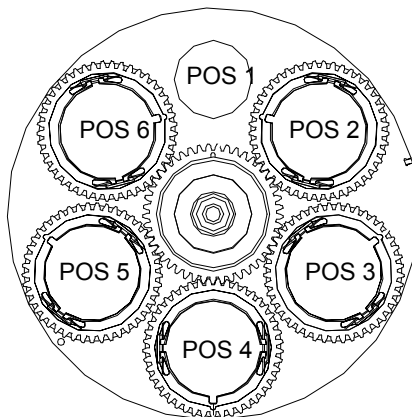


Figure 3-2: Gobo Wheels 1 and 2 Positions

Table 3-8: Gobo Wheel 1 Standard Configuration Chart

Position	Gobo Style	Part Number
1	open	n/a
2	Alpha Rays	41.6030.7029
3	Night Sky	41.6030.5011
4	Tribal Break-up	41.6030.5523
5	Pebbles	41.6030.7002
6	Glacier Gag	41.6030.8503

Table 3-9: Gobo Wheel 2 Standard Configuration Chart

Position	Gobo Style	Part Number
1	open	n/a
2	Palm Leaves	41.6030.5503
3	Shock Break-up	41.6030.7018
4	Uneven Bars	41.6030.4211
5	Ice Blocks Gag	41.6030.8509
6	Droplets Gag	41.6030.8506

Gobo Wheel 3

This wheel has five positions, one being open. The following illustration shows the standard gobo configurations:

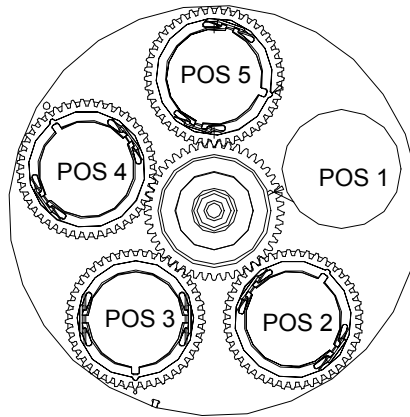


Figure 3-3: Gobo Wheel 3 Positions

Table 3-10: Gobo Wheel 3 Standard Configuration Chart

Position	Gobo Style	Part Number
1	open	n/a
2	3-Side Prism	41.6030.8003
3	Color Gobo	41.6030.8801
4	Triangle Break-up	41.6030.7024
5	Circle of Ovals	41.6030.6011

Index/Rotation

The gobo wheels operate in two modes: INDEX Mode and ROTATE Mode. The corresponding values are given in the DMX Map Tables below. Gobos will also behave as follows:

- Gobo wheels will only stop at whole images.
- It is not necessary for the wheel to complete a full revolution to change a gobo from indexing mode to rotating mode.
- Timed moves are only available using the Gobo Time channel (27).
- Spins are variable from DMX 217-236 for CCW fast to slow, and 237-255 for CW slow to fast.

Table 3-11: DMX Map for Gobo Wheels 1 and 2

Position	Indexing	Rotating	Function
1	0-7	100-116	Open
2	8-25	117-134	Gobo 1
3	26-44	135-153	Gobo 2
4	45-63	154-172	Gobo 3
5	64-82	173-191	Gobo 4
6	83-99	192-209	Gobo 5

Table 3-12: DMX Map for Gobo Wheel 3

Position	Indexing	Rotating	Function
1	0-10	98-119	Open
2	11-33	120-141	Gobo 1
3	34-54	142-163	Gobo 2
4	55-75	164-184	Gobo 3
5	76-97	185-206	Gobo 4

The Gobo Index function utilizes 16-bit control which offers enhanced resolution whether in INDEX or ROTATE mode.

Table 3-13: Index/Rotation Range

Function	Range
Index	0-65535
Rotate	0 (cw max) - 32599 (cw min) 32600-33047 (stop)