DMX Operation

Channel Mapping

The VLX3 Wash offers four modes:

Mode 1 - See "DMX Mode 1 Channel Mapping (Normal Operational Mode)" on page 22.

Mode 2 - See "DMX Mode 2 Channel Mapping (Enhanced Operational Mode)" on page 25.

Mode 3 - See "DMX Mode 3 Channel Mapping (Individual LED Engine Control)" on page 29.

Mode 4 - See "DMX Mode 4 Channel Mapping (Enhanced Individual LED Engine Control)" on page 33.

Refer to the appropriate DMX channel mapping chart for the mode you are using.

DMX Mode 1 Channel Mapping (Normal Operational Mode)

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.

Note: For Mode 2 Channel Mapping, refer to page 25. For Mode 3 Channel Mapping, refer to page 29. For Mode 4 Channel Mapping, refer to page 33

IMPORTANT! When changing the DMX Map (from one mode to another), the luminaire will auto re-calibrate.

Table 3-1: VLX3 Wash Luminaire Mapping Mode 1

DMX Channel	Parameter	Range DMX	Range%	**Default** - *These values are recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Pan - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Pan - 540° of movement.
4	Pan - Low Byte				
5	Tilt - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Tilt - 270° of movement.
6	Tilt - Low Byte				
7	Red - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LEDs from 0 to full.
8	Red - Low Byte				
9	Green - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LEDs from 0 to full.
10	Green - Low Byte				
11	Blue - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LEDs from 0 to full.
12	Blue - Low Byte				
13	White - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LEDs from 0 to full.
14	White - Low Byte				
15	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*
16	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*

Table 3-1: VLX3 Wash Luminaire Mapping Mode 1

17	Beam	0 - 255	0 - 100%	255	Controls beam angle from 15^{o} (DMX 0) to 55^{o} (DMX 255)
18	Strobe	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
19	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times.
20	Focus Time	0 - 255	0 - 100%	255	Allows for luminaire timing of pan and tilt. Profile should default to DMX 255 for smoothest console fade times.
21	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of color mixing. Profile should default to DMX 255 for smoothest console fade times.
22	Beam Time	0 - 255	0 - 100%	255	Allows for luminaire timing of zoom. Profile should default to DMX 255 for smoothest console fade times.

Table 3-1: VLX3 Wash Luminaire Mapping Mode 1

23	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the VLX Wash. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On / Off = DMX 3 - 4 Reset All to Defaults** = DMX 5 - 7 Quiet Mode† = DMX 11 - 13 Level Light Mode† = DMX 14 - 16 Constant Fans Mode† = DMX 17 - 19 Normal Mode† = DMX 20 - 22 Dimmer Curve LINEAR† = DMX 31 - 32 Dimmer Curve SQUARE LAW† = DMX 34 - 35 Full Luminaire Reset = DMX 81 - 87 Color Calibration OFF† = DMX 116 - 117 Color Calibration ON† = DMX 118 - 120 Manual Color Adjust ENABLE† = DMX 121 - 122 Manual Color Adjust STORE† = DMX 124 - 125 Notes: ** When resetting to defaults, the following will be enabled on the luminaire: - Normal Mode - Dimmer Curve SQUARE LAW - Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.

DMX Mode 2 Channel Mapping (Enhanced Operational Mode)

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.

Note: For Mode 1 Channel Mapping, refer to page 22. For Mode 3 Channel Mapping, refer to page 29. For Mode 4 Channel Mapping, refer to page 33.

DMX Map Mode 2 allows for independent control of each of the three individual LED segments in terms of Red, Green, Blue, White and Strobe. There is also a way to combine all three segments so you can control the unit as you would in Mode 1.

To select DMX Mode 2, access the Menu System as follows:

DMX -> DMX Map -> Mode 2

IMPORTANT! When changing the DMX Map (from one mode to another), the luminaire will auto re-calibrate.

Once Mode 2 has been selected, there are two additional settings of the control channel, Engines Combined and Engines Independent. When you first select Mode 2, the unit will default to Combined Control.

Combined Control

Combined Control allows luminaire's set to Mode 2 to behave as if set to Mode 1. Meaning that you have one set of console controls for all three of the individual segments.

Combined Control:

- Channels 7 & 8 controls all three Red
- Channels 9 & 10 controls all three Green
- Channels 11 & 12 controls all three Blue
- Channels 13 & 14 controls all three White
- Channel 15 controls all three Strobe
- Channels 16 through 33 have no affect on the luminaire

Independent Control

Independent control allows each of the 3 segments R, G, B, W and Intensity to be set to individual parameters.

To operate in Independent Mode, you have to send a value on the control channel (41) of 153-155. Please note there is **NO** 3-second rule. You should always **HOLD** the control channel at that DMX value while operating in Independent Mode. You can then set levels for each individual segment by adjusting the corresponding DMX channel.

To return to Combined Control, send a value on the control channel of 150-152. Again, the 3-second rule is not needed.

Table 3-2: VLX3 Wash Luminaire Mapping Mode 2

DMX Channel	Parameter	Range DMX	Range%	**Default** - *These values are recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Pan - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Pan - 540° of movement.
4	Pan - Low Byte				
5	Tilt - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Tilt - 270° of movement.
6	Tilt - Low Byte				
7	Red 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 1) from 0 to full.
8	Red 1 - Low Byte				
9	Green 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 1) from 0 to full.
10	Green 1 - Low Byte				
11	Blue 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 1) from 0 to full.
12	Blue 1 - Low Byte				
13	White 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 1) from 0 to full.
14	White 1 - Low Byte				
15	Strobe Engine 1	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
16	Red 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 2) from 0 to full.
17	Red 2 - Low Byte				
18	Green 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 2) from 0 to full.
19	Green 2 - Low Byte				
20	Blue 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 2) from 0 to full.
21	Blue 2 - Low Byte				
22	White 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 2) from 0 to full.
23	White 2 - Low Byte				
24	Strobe Engine 2	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
25	Red 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 3) from 0 to full.
26	Red 3 - Low Byte				
27	Green 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 3) from 0 to full.
28	Green 3 - Low Byte				

Table 3-2: VLX3 Wash Luminaire Mapping Mode 2

29	Blue 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 3) from 0 to full.
30	Blue 3 - Low Byte				
31	White 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 3) from 0 to full.
32	White 3 - Low Byte				
33	Strobe Engine 3	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
34	*Unused*	*N/A*	*N/A*	*N/A*	For Future Use
35	*Unused*	*N/A*	*N/A*	*N/A*	For Future Use
36	Beam	0 - 255	0 - 100%	255	Controls beam angle from 15^{o} (DMX 0) to 55^{o} (DMX 255)
37	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times.
38	Focus Time	0 - 255	0 - 100%	255	Allows for luminaire timing of pan and tilt. Profile should default to DMX 255 for smoothest console fade times.
39	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of color mixing. Profile should default to DMX 255 for smoothest console fade times.
40	Beam Time	0 - 255	0 - 100%	255	Allows for luminaire timing of zoom. Profile should default to DMX 255 for smoothest console fade times.

Table 3-2: VLX3 Wash Luminaire Mapping Mode 2

41	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the VLX Wash. Set control channel value for desired action. Hold value for at least 3 seconds (unless noted by #). Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On/Off = DMX 3-4 Reset All to Defaults** = DMX 5 - 7 Quiet Mode† = DMX 11 - 13 Level Light Mode† = DMX 14 -16 Constant Fans Mode† = DMX 17 - 19 Normal Mode† = DMX 20 - 22 Dimmer Curve LINEAR† = DMX 31 - 32 Dimmer Curve SQUARE LAW† = DMX 34 - 35 Full Luminaire Reset = DMX 81 - 87 Color Calibration OFF† = DMX 116 - 117 Color Calibration ON† = DMX 118 - 120 Manual Color Adjust ENABLE† = DMX 121 - 122 Manual Color Adjust STORE† = DMX 124 - 125 Engines Combined# = DMX 150 -152 Engines Independent# = DMX 153 - 155 Notes: ** When resetting to defaults, the following will be enabled on the luminaire: - Normal Mode - Dimmer Curve SQUARE LAW - Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF. # This parameter does not require that the value be held for 3-seconds to set. NOTE: In Combined Mode, all fixtures must be patched as Mode 2 units (41 channel) for proper operation.

DMX Mode 3 Channel Mapping (Individual LED Engine Control)

Vari-Lite has added a new control mode in VLX3 wash luminaires called Mode 3. Mode 3 allows users to program and control each LED engine individually but with significant differences from Mode 2.

To select DMX Mode 3, access the Menu System as follows:

DMX -> DMX Map -> Mode 3

- Mode 3 provides programmers access to individual control or combined control of the LEDs and allows control of easily built effects.
- VLX3 Wash Mode 3 adds an 8-bit channel called the **Engine Modifier** channel. This is channel **36** in the DMX map. This channel designates the way the programmer accesses the LED engines.
    a. To operate the fixture as a conventional moving wash fixture, set the **Engine Modifier** channel (channel 15) to a DMX value of **0** (default). This means that the RGBW and Strobe control of engine #1 (DMX Channels 7-15) will control all the LED engines as one.
    b. To control the engines separately, users can set the fixture to **Engine Modifier** channel to a DMX value of **15** (11-20 range). Enabling **Engine Modifier** separates the LED engines for individual control using their own individual control channels.
- Mode 3 extends the DMX channel count to 42 DMX channels. See Table 3-3, “VLX3 Wash Luminaire Mapping Mode 3,” on page 30 for more information.
- Now that you have each engine set to different colors, you may want to do some effects with them. If you move the **Engine Modifier** channel up in the range of **21** through **83**, you will notice that the colors you have selected are now rotating around each of the three engines. By adjusting within this range you are able to change speed and direction of the rotation.
- If the **Engine Modifier** channel is set in the range of **87** through **149**, the color selected for engine 1 will be applied to engine 2 and then engine 3 sequentially. It will then apply the selected color on engine 2 to engine 3 and then engine 1 sequentially. It will then apply the color selected for engine 3 to engine 1 and then to engine 2 sequentially. This is called **LED Pile-On**. By changing the values within this range you can manipulate the speed and direction the **LED Pile-On** takes.
- It is important to note that the individual colors can be altered while this channel is activated. Simply go back to any of the engines and change their values. The **Engine Modifier** channel will recognize the changes in real time. It is also important to note that the Color Timing Channel (DMX Channel 40 in Mode 3) is still recognized with the **Engine Modifier** channel. For example, if you set a slow rotation of the LED engines and then give it a 1 or 2 second color timing value, you will notice the rotation of the LED engines are now fading to each color rather than snapping to each color.
- Refer to Table 3-3, “VLX3 Wash Luminaire Mapping Mode 3,” on page 30 for all the values needed to write a console profile.

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.

Note: For Mode 1 Channel Mapping, refer to page 22. For Mode 2 Channel Mapping, refer to page 25. For Mode 4 Channel Mapping, refer to page 33.

IMPORTANT! When changing the DMX Map (from one mode to another), the luminaire will auto re-calibrate.

Table 3-3: VLX3 Wash Luminaire Mapping Mode 3

DMX Channel	Parameter	Range DMX	Range%	**Default** - *These values are recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Pan - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Pan - 540° of movement.
4	Pan - Low Byte				
5	Tilt - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Tilt - 270° of movement.
6	Tilt - Low Byte				
7	Red 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 1) from 0 to full.
8	Red 1 - Low Byte				
9	Green 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 1) from 0 to full.
10	Green 1 - Low Byte				
11	Blue 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 1) from 0 to full.
12	Blue 1 - Low Byte				
13	White 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 1) from 0 to full.
14	White 1 - Low Byte				
15	Strobe - LED Engine 1	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
16	Red 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 2) from 0 to full.
17	Red 2 - Low Byte				
18	Green 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 2) from 0 to full.
19	Green 2 - Low Byte				
20	Blue 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 2) from 0 to full.
21	Blue 2 - Low Byte				
22	White 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 2) from 0 to full.
23	White 2 - Low Byte				

Table 3-3: VLX3 Wash Luminaire Mapping Mode 3

24	Strobe - LED Engine 2	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
25	Red 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 3) from 0 to full.
26	Red 3 - Low Byte				
27	Green 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 3) from 0 to full.
28	Green 3 - Low Byte				
29	Blue 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 3) from 0 to full.
30	Blue 3 - Low Byte				
31	White 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 3) from 0 to full.
32	White 3 - Low Byte				
33	Strobe - LED Engine 3	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
34	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*
35	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*
36	Engine Modifier	0 - 255	0 - 100%	0	Used for setting fixture into expanded mode for control of individual LED engines. This channel also contains individual spin speeds and various other effects. DMX values as follows: Combined Engine Control = DMX 0 - 10 Independent LED Control = DMX 11 - 20 LED Virtual Spin CW = DMX 21 - 50 (Fast to Slow) LED Virtual Spin STOP = DMX 51 - 53 LED Virtual Spin Counter CW = DMX 54 - 83 (Slow to Fast) Stop - Independent Engine Data = DMX 84 - 86 LED Pile-On Spin CW = DMX 87 - 116 (Fast to Slow) LED Pile-On STOP = DMX 117 - 119 LED Pile-On Spin Counter CW = DMX 120 - 149 Stop - Independent Engine Data = DMX 150 - 152

Table 3-3: VLX3 Wash Luminaire Mapping Mode 3

37	Beam	0 - 255	0 - 100%	255	Controls beam angle from 15^{o} (DMX 0) to 55^{o} (DMX 255)
38	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times.
39	Focus Time	0 - 255	0 - 100%	255	Allows for luminaire timing of pan and tilt. Profile should default to DMX 255 for smoothest console fade times.
40	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of color mixing. Profile should default to DMX 255 for smoothest console fade times.
41	Beam Time	0 - 255	0 - 100%	255	Allows for luminaire timing of zoom. Profile should default to DMX 255 for smoothest console fade times.
42	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the VLX Wash. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On / Off = DMX 3 - 4 Reset All to Defaults** = DMX 5 - 7 Quiet Mode† = DMX 11 - 13 Level Light Mode† = DMX 14 - 16 Constant Fans Mode† = DMX 17 - 19 Normal Mode† = DMX 20 - 22 Dimmer Curve LINEAR† = DMX 31 - 32 Dimmer Curve SQUARE LAW† = DMX 34 - 35 Full Luminaire Reset = DMX 81 - 87 Color Calibration OFF† = DMX 116 - 117 Color Calibration ON† = DMX 118 - 120 Manual Color Adjust ENABLE† = DMX 121 - 122 Manual Color Adjust STORE† = DMX 124 - 125 <u>Notes</u>: ** When resetting to defaults, the following will be enabled on the luminaire: - Normal Mode - Dimmer Curve SQUARE LAW - Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.

DMX Mode 4 Channel Mapping (Enhanced Individual LED Engine Control)

Vari-Lite has added a new control mode in VLX3 wash luminaires called Mode 4. Mode 4 allows users to program and control each LED engine individually but with significant differences from Mode 2 and Mode 3 (as described in Vari-Lite Technical Bulletin LSW-064).

To select DMX Mode 4, access the Menu System as follows:

DMX -> DMX Map -> Mode 4

IMPORTANT! Mode 4 utilizes the same control functionality as Mode 3, but with a different channel map. This channel map is useful when patching the fixture as 4 independent fixtures (one for intensity, pan, tilt, zoom and control) while the other 3 control the individual LED cells. Certain console profiles will prefer to use this mode. Please check with your console manufacturer for which mode their console profile supports.

Like Mode 3, Mode 4 provides:

- Programmers access to individual control or combined control of the LEDs and allows control of easily built effects.
- An 8-bit channel called the **Engine Modifier** channel. This is channel **15** in the DMX map in Mode 4. This channel designates the way the programmer accesses the LED engines.
    a. To operate the fixture as a conventional moving wash fixture, set the **Engine Modifier** channel to a DMX value of **0** (default). This means that the RGBW and Strobe control of engine #1 (DMX Channels 16 - 24) will control all the LED engines as one.
    b. To control the engines separately, users can set the fixture to **Engine Modifier** channel to a DMX value of **15** (11-20 range). Enabling **Engine Modifier** separates the LED engines for individual control using their own individual control channels.
- An extended DMX channel count - 42 DMX channels. See Table 3-4, “VLX3 Wash Luminaire Mapping Mode 4,” on page 34 for more information.
- The ability to set each engine to a different color and create effects with them. If you move the **Engine Modifier** channel up in the range of **21** through **83**, you will notice that the colors you have selected are now rotating around each of the three engines. By adjusting within this range you are able to change speed and direction of the rotation.
- If the **Engine Modifier** channel is set in the range of **87** through **149**, the color selected for engine 1 will be applied to engine 2 and then engine 3 sequentially. It will then apply the selected color on engine 2 to engine 3 and then engine 1 sequentially. It will then apply the color selected for engine 3 to engine 1 and then to engine 2 sequentially. This is called **LED Pile-On**. By changing the values within this range you can manipulate the speed and direction the **LED Pile-On** takes.
- It is important to note that the individual colors can be altered while this channel is activated. Simply go back to any of the engines and change their values. The **Engine Modifier** channel will recognize the changes in real time. It is also important to note that the Color Timing Channel (DMX Channel 10 in Mode 4) is still recognized with the **Engine Modifier** channel. For example, if you set a slow rotation of the LED engines and then give it a 1 or 2 second color timing

value, you will notice the rotation of the LED engines are now fading to each color rather than snapping to each color.

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.

Note: For Mode 1 Channel Mapping, refer to page 22. For Mode 2 Channel Mapping, refer to page 25. For Mode 3 Channel Mapping, refer to page 29.

IMPORTANT! When changing the DMX Map (from one mode to another), the luminaire will auto re-calibrate.

Table 3-4: VLX3 Wash Luminaire Mapping Mode 4

DMX Channel	Parameter	Range DMX	Range%	**Default** - *These values are recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Pan - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Pan - 540° of movement.
4	Pan - Low Byte				
5	Tilt - High Byte	0 - 65535	0 - 100%	32768	16-bit control of Tilt - 270° of movement.
6	Tilt - Low Byte				
7	Beam	0 - 255	0 - 100%	255	Controls beam angle from 15° (DMX 0) to 55° (DMX 255)
8	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times.
9	Focus Time	0 - 255	0 - 100%	255	Allows for luminaire timing of pan and tilt. Profile should default to DMX 255 for smoothest console fade times.
10	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of color mixing. Profile should default to DMX 255 for smoothest console fade times.
11	Beam Time	0 - 255	0 - 100%	255	Allows for luminaire timing of zoom. Profile should default to DMX 255 for smoothest console fade times.

Table 3-4: VLX3 Wash Luminaire Mapping Mode 4

12	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the VLX Wash. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On / Off = DMX 3 - 4 Reset All to Defaults** = DMX 5 - 7 Quiet Mode† = DMX 11 - 13 Level Light Mode† = DMX 14 - 16 Constant Fans Mode† = DMX 17 - 19 Normal Mode† = DMX 20 - 22 Dimmer Curve LINEAR† = DMX 31 - 32 Dimmer Curve SQUARE LAW† = DMX 34 - 35 Full Luminaire Reset = DMX 81 - 87 Color Calibration OFF† = DMX 116 - 117 Color Calibration ON† = DMX 118 - 120 Manual Color Adjust ENABLE† = DMX 121 - 122 Manual Color Adjust STORE† = DMX 124 - 125 Notes: ** When resetting to defaults, the following will be enabled on the luminaire: - Normal Mode - Dimmer Curve SQUARE LAW - Color Calibration ON † These settings require the Command Lock in Menu to be set to OFF in order to change on Control Channel. Resetting to defaults will turn Command Lock OFF.
13	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*
14	*Unused*	*N/A*	*N/A*	*N/A*	*For Future Use*

Table 3-4: VLX3 Wash Luminaire Mapping Mode 4

15	Engine Modifier	0 - 255	0 - 100%	0	Used for setting fixture into expanded mode for control of individual LED engines. This channel also contains individual spin speeds and various other effects. DMX values as follows: Combined Engine Control = DMX 0 - 10 Independent LED Control = DMX 11 - 20 LED Virtual Spin CW = DMX 21 - 50 (Fast to Slow) LED Virtual Spin STOP = DMX 51 - 53 LED Virtual Spin Counter CW = DMX 54 - 83 (Slow to Fast) Stop - Independent Engine Data = DMX 84 - 86 LED Pile-On Spin CW = DMX 87 - 116 (Fast to Slow) LED Pile-On STOP = DMX 117 - 119 LED Pile-On Spin Counter CW = DMX 120 - 149 Stop - Independent Engine Data = DMX 150 - 152
16	Red 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 1) from 0 to full.
17	Red 1 - Low Byte				
18	Green 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 1) from 0 to full.
19	Green 1 - Low Byte				
20	Blue 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 1) from 0 to full.
21	Blue 1 - Low Byte				
22	White 1 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 1) from 0 to full.
23	White 1 - Low Byte				
24	Strobe - LED Engine 1	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
25	Red 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 2) from 0 to full.
26	Red 2 - Low Byte				
27	Green 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 2) from 0 to full.
28	Green 2 - Low Byte				
29	Blue 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 2) from 0 to full.
30	Blue 2 - Low Byte				
31	White 2 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 2) from 0 to full.
32	White 2 - Low Byte				

Table 3-4: VLX3 Wash Luminaire Mapping Mode 4

33	Strobe - LED Engine 2	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
34	Red 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LED (Engine 3) from 0 to full.
35	Red 3 - Low Byte				
36	Green 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LED (Engine 3) from 0 to full.
37	Green 3 - Low Byte				
38	Blue 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LED (Engine 3) from 0 to full.
39	Blue 3 - Low Byte				
40	White 3 - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LED (Engine 3) from 0 to full.
41	White 3 - Low Byte				
42	Strobe - LED Engine 3	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 (slowest) - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255