

DMX Operation

VL4000 BeamWash 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. This section contains the DMX channel maps for the VL4000 BeamWash Luminaire. Users can select one of two maps as detailed in these sections:

- “Enhanced 16-Bit Channel Mapping (Default)” (starting below)
- “16-Bit Channel Mapping” on page 40.

Enhanced 16-Bit Channel Mapping (Default)

Table 3 provides DMX channel mapping of the DMX512 control values when the VL4000 BeamWash Luminaire is in Enhanced 16-Bit DMX mode (as set by the luminaire’s menu system).

Table 3: VL4000 BeamWash Enhanced 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|---------------------|-------------|-----------|----------------|---|
| 1 | Intensity | 0 - 255 | 0 - 100% | 0 | 8-bit control of Fixture Intensity from 0 - 100% |
| 2 | Pan High Byte | 0 - 65535 | 0 - 100% | 32767 | 16-bit linear control of pan from 0° to 520°. |
| 3 | Pan Low Byte | | | | |
| 4 | Tilt High Byte | 0 - 65535 | 0 - 100% | 32767 | 16-bit linear control of tilt from 0° to 270°. |
| 5 | Tilt Low Byte | | | | |
| 6 | Edge High Byte | 0 - 65535 | 0 - 100% | 0 | 16-bit linear control of edge functions. |
| 7 | Edge Low Byte | | | | |
| 8 | Zoom High Byte | 0 - 65535 | 0 - 100% | 0 | 16-bit linear control of fixture zoom range between 0 (4 degrees) to 65535 (60 Degrees). |
| 9 | Zoom Low Byte | | | | |
| 10 | Optic Style | 0 - 255 | 0 - 100% | 0 | Toggles optical ability between Wash, Beam, and Shaft. 0 - 127 = Wash Optics 128 - 191 = Beam Optics 192 - 255 = Shaft Optics |
| 11 | Cyan | 0 - 255 | 0 - 100% | 0 | Controls Cyan color mechanism. |
| 12 | Yellow | 0 - 255 | 0 - 100% | 0 | Controls Yellow color mechanism. |
| 13 | Magenta | 0 - 255 | 0 - 100% | 0 | Controls Magenta color mechanism. |
| 14 | CTO | 0 - 255 | 0 - 100% | 0 | Controls CTO mechanism. |
| 15 | Fixed Color Wheel 1 | 0 - 255 | 0 - 100% | 0 | 8-bit control of Color Wheel 1. See Channel 16 for options. 0 - 23 = OPEN 24 - 69 = RED (Center at DMX 46) 70 - 116 = DARK FUCHSIA (Center at DMX 93) 117 - 162 = ORANGE (Center at DMX 139) 163 - 209 = KELLY GREEN (Center at DMX 186) 210 - 255 = CONGO BLUE (Center at DMX 232) |

Table 3: VL4000 BeamWash Enhanced 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|---|-------------|-----------|----------------|---|
| 16 | Fixed Color Wheel 1 Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different movement options of Color Wheel 1. 0 - 5 = Linear Movement using shortest (quickest) path. 6 - 10 = Linear Movement using normal (longest) path. 11 - 15 = Wheel Spin Forward (Fast to Slow) 16 - 20 = Wheel Spin STOP 21 - 25 = Wheel Spin Reverse (Slow to Fast) 26 - 56 = Color Shake Quickest Path (Slow to Fast) 57 - 87 = Color Shake Normal Path (Slow to Fast) 88 - 255 = Reserved Values |
| 17 | Fixed Color Wheel 2 | 0 - 255 | 0 - 100% | 0 | 8-bit control of Color Wheel 2. See Channel 18 for options. 0 - 23 = OPEN 24 - 69 = BLUE (Center at DMX 46) 70 - 116 = GREEN (Center at DMX 93) 117 - 162 = MINUS GREEN (Center at DMX 139) 163 - 209 = LAVENDER (Center at DMX 186) 210 - 255 = AMBER (Center at DMX 232) |
| 18 | Fixed Color Wheel 2 Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different movement options of Color Wheel 2. 0 - 5 = Linear Movement using shortest (quickest) path. 6 - 10 = Linear Movement using normal (longest) path. 11 - 15 = Wheel Spin Forward (Fast to Slow) 16 - 20 = Wheel Spin STOP 21 - 25 = Wheel Spin Reverse (Slow to Fast) 26 - 56 = Color Shake Quickest Path (Slow to Fast) 57 - 87 = Color Shake Normal Path (Slow to Fast) 88 - 255 = Reserved Values |
| 19 | Gobo Wheel 1 | 0 - 255 | 0 - 100% | 0 | 8-bit control of Gobo Wheel 1. See Channel 22 for control options. 0 - 5 = Open - No Gobo 6 - 10 = Gobo 1 (Stacked Ovals) Index 11 - 15 = Gobo 2 (Chopped) Index 16 - 20 = Gobo 3 (Triple Stack) Index 21 - 25 = Gobo 4 (Night Sky) Index 26 - 30 = Gobo 5 (Blades) Index 31 - 35 = Gobo 6 (Psychlone) Index 36 - 40 = Gobo 7 (Circle of Holes 1) Index 41 - 45 = Open - No Gobo 46 - 50 = Gobo 1 (Stacked Ovals) Rotate 51 - 55 = Gobo 2 (Chopped) Rotate 56 - 60 = Gobo 3 (Triple Stack) Rotate 61 - 65 = Gobo 4 (Night Sky) Rotate 66 - 70 = Gobo 5 (Blades) Rotate 71 - 75 = Gobo 6 (Psychlone) Rotate 76 - 80 = Gobo 7 (Circle of Holes 1) Rotate 81 - 85 = Open - No Gobo 86 - 90 = Gobo 1 Gobo 1 (Stacked Ovals) Rotate with Mega Stepping 91 - 95 = Gobo 2 (Chopped) Rotate with Mega Stepping 96 - 100 = Gobo 3 (Triple Stack) Rotate with Mega Stepping 101 - 105 = Gobo 4 (Night Sky) Rotate with Mega Stepping 106 - 110 = Gobo 5 (Blades) Rotate with Mega Stepping 111 - 115 = Gobo 6 (Psychlone) Rotate with Mega Stepping 116 - 120 = Gobo 7 (Circle of Holes 1) Rotate with Mega Stepping 121 - 255 = Reserved Values |
| 20 | Gobo Wheel 1 Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | 16 bit control of Gobo Wheel 1 index and rotation. |
| 21 | Gobo Wheel 1 Index / Rotate - Low Byte | | | | Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535 |

Table 3: VL4000 BeamWash Enhanced 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|---|-------------|-----------|----------------|--|
| 22 | Gobo Wheel 1 Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different movement options for Gobo Wheel 1 (Channel 19). 0 - 5 = Gobo Selection using shortest (quickest) path. 6 - 10 = Gobo Selection using normal (longest) path. 11 - 20 = <i>Reserved Values</i> 21 - 50 = Wheel Spin Forward (Fast to Slow) 51 - 60 = Wheel Spin STOP 61 - 90 = Wheel Spin Reverse (Slow to Fast) 91 - 120 = Gobo Shake Quickest Path (Slow to Fast) 121 - 150 = Gobo Shake Normal Path (Slow to Fast) 151 - 180 = Gobo Twist Quickest Path (Slow to Fast) 181 - 210 = Gobo Twist Normal Path (Slow to Fast) 211 - 255 = <i>Reserved Values</i> |
| 23 | Gobo Wheel 2 | 0 - 255 | 0 - 100% | 0 | 8-bit control of Gobo Wheel 2. See Channel 26 for control options. 0 - 5 = Open - No Gobo 6 - 10 = Gobo 1 (Circle of Eights) Index 11 - 15 = Gobo 2 (Punch Card) Index 16 - 20 = Gobo 3 (Vertical Bars) Index 21 - 25 = Gobo 4 (Lattice) Index 26 - 30 = Gobo 5 (Wavy Triangle) Index 31 - 35 = Gobo 6 (Dot Buffet) Index 36 - 40 = Gobo 7 (Quadcone Red) Index 41 - 45 = Open - No Gobo 46 - 50 = Gobo 1 (Circle of Eights) Rotate 51 - 55 = Gobo 2 (Punch Card) Rotate 56 - 60 = Gobo 3 (Vertical Bars) Rotate 61 - 65 = Gobo 4 (Lattice) Rotate 66 - 70 = Gobo 5 (Wavy Triangle) Rotate 71 - 75 = Gobo 6 (Dot Buffet) Rotate 76 - 80 = Gobo 7 (Quadcone Red) Rotate 81 - 85 = Open - No Gobo 86 - 90 = Gobo 1 (Circle of Eights) Rotate with Mega Stepping 91 - 95 = Gobo 2 (Punch Card) Rotate with Mega Stepping 96 - 10 = Gobo 3 (Vertical Bars) Rotate with Mega Stepping 101 - 105 = Gobo 4 (Lattice) Rotate with Mega Stepping 106 - 110 = Gobo 5 (Wavy Triangle) Rotate with Mega Stepping 111 - 115 = Gobo 6 (Dot Buffet) Rotate with Mega Stepping 116 - 120 = Gobo 7 (Quadcone Red) Rotate with Mega Stepping 121 - 255 = <i>Reserved Values</i> |
| 24 | Gobo Wheel 2 Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | 16 bit control of Gobo Wheel 2 index and rotation. |
| 25 | Gobo Wheel 2 Index / Rotate - Low Byte | | | | Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535 |
| 26 | Gobo Wheel 2 Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different movement options for Gobo Wheel 2 (Channel 23). 0 - 5 = Gobo Selection using shortest (quickest) path. 6 - 10 = Gobo Selection using normal (longest) path. 11 - 20 = <i>Reserved Values</i> 21 - 50 = Wheel Spin Forward (Fast to Slow) 51 - 60 = Wheel Spin STOP 61 - 90 = Wheel Spin Reverse (Slow to Fast) 91 - 120 = Gobo Shake Quickest Path (Slow to Fast) 121 - 150 = Gobo Shake Normal Path (Slow to Fast) 151 - 180 = Gobo Twist Quickest Path (Slow to Fast) 181 - 210 = Gobo Twist Normal Path (Slow to Fast) 211 - 255 = <i>Reserved Values</i> |
| 27 | Animation Wheel (Concurrent) | 0 - 255 | 0 - 100% | 0 | Controls Animation Wheel linearly within the beam. |

Table 3: VL4000 BeamWash Enhanced 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|---|-------------|-----------|----------------|--|
| 28 | Animation Wheel (Concurrent) Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | 16 bit control of the Animation Wheel 1 index and rotation. Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535 |
| 29 | Animation Wheel (Concurrent) Index / Rotate - Low Byte | | | | |
| 30 | Animation Wheel (Concurrent) Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for Animation Wheel 1. 0 - 5 = Index using shortest (quickest) path. 6 - 10 = Index using normal (longest) path. 11 - 15 = Rotate Normal 16 - 20 = Rotate with Mega Stepping 21 - 25 = Reserved Values 26 - 56 = Image Shake using shortest (quickest) path slow to fast. 57 - 87 = Image Shake using normal (longest) path slow to fast. 88 - 255 = Reserved Values |
| 31 | Iris | 0 - 255 | 0 - 100% | 0 | Controls Iris mechanism from 0 (open) to 255 (full). |
| 32 | Beam Shaping | 0 - 255 | 0 - 100% | 0 | Controls Beam Shaping mechanism with following values. 0 - 5 = Open (Hybrid Zoom Range) 6 - 10 = Index (Hybrid Zoom Range) 11 - 15 = Rotate Normal (Hybrid Zoom Range) 16 - 20 = Rotate with Mega Stepping (Hybrid Zoom Range) 21 - 25 = Open (Narrow Zoom Range) 26 - 30 = Index (Narrow Zoom Range) 31 - 35 = Rotate Normal (Narrow Zoom Range) 36 - 40 = Rotate with Mega Stepping (Narrow Zoom Range) 41 - 45 = Open (Wide Zoom Range) 46 - 50 = Index (Wide Zoom Range) 51 - 55 = Rotate Normal (Wide Zoom Range) 56 - 60 = Rotate with Mega Stepping (Wide Zoom Range) 61 - 255 = Reserved Values |
| 33 | Beam Shaping Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | 16 bit control of Beam Shaping rotation and index. Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535 |
| 34 | Beam Shaping Index / Rotate - Low Byte | | | | |
| 35 | Prism | 0 - 255 | 0 - 100% | 0 | Controls Prism mechanism with following values. 0 - 5 = Open (Hybrid Zoom Range) 6 - 10 = Index (Hybrid Zoom Range) 11 - 15 = Rotate Normal (Hybrid Zoom Range) 16 - 20 = Rotate with Mega Stepping (Hybrid Zoom Range) 21 - 25 = Open (Narrow Zoom Range) 26 - 30 = Index (Narrow Zoom Range) 31 - 35 = Rotate Normal (Narrow Zoom Range) 36 - 40 = Rotate with Mega Stepping (Narrow Zoom Range) 41 - 45 = Open (Wide Zoom Range) 46 - 50 = Index (Wide Zoom Range) 51 - 55 = Rotate Normal (Wide Zoom Range) 56 - 60 = Rotate with Mega Stepping (Wide Zoom Range) 61 - 255 = Reserved Values |
| 36 | Prism Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | 16 bit control of Prism rotation and index. Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535 |
| 37 | Prism Index / Rotate - Low Byte | | | | |

Table 3: VL4000 BeamWash Enhanced 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|---------------------|-------------|-----------|----------------|---|
| 38 | Programming Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different programmable settings. Set discreet value of desired effect, wait >3 seconds, then set value to 0 (Idle). 0 - 2 = Idle 3 - 5 = Reserved Values 6 - 10 = Reserved Values 11 - 15 = Dimmer Snap OFF 16 - 20 = Dimmer Snap ON (Fixture Default) 21 - 255 = Reserved Values |
| 39 | Strobe Speed | 0 - 255 | 0 - 100% | 0 | Controls strobe rate from slowest (DMX 0) to fastest (DMX 255) |
| 40 | Strobe Control | 0 - 255 | 0 - 100% | 0 | Control Channel for strobing functions. 0 - 5 = Open 6 - 10 = Closed 11 - 15 = Normal Strobe 16 - 20 = Random Strobe 21 - 25 = Random Sync 26 - 255 = Reserved Values |
| 41 | Focus Timing | 0 - 255 | 0 - 100% | 255 | Allows for luminaire timing of pan and tilt mechanisms. Profile should default to DMX 255 for smoothest console timing. |
| 42 | Optics Timing | 0 - 255 | 0 - 100% | 255 | Adjustment of fixture timing to control lensing mechanisms. Profile should default to DMX 255 for smoothest console timing. |
| 43 | Color Timing | 0 - 255 | 0 - 100% | 255 | Allows for luminaire timing to control color mechanisms. Profile should default to DMX 255 for smoothest console timing. |
| 44 | Beam Timing | 0 - 255 | 0 - 100% | 255 | Allows for luminaire timing to control beam shaping mechanisms. Profile should default to DMX 255 for smoothest console timing. |
| 45 | Gobo Timing | 0 - 255 | 0 - 100% | 255 | Allows for luminaire timing to control gobo mechanisms. Profile should default to DMX 255 for smoothest console timing. |
| 46 | Luminaire Control | 0 - 255 | 0 - 100% | 0 | To execute a command, the control channel must be set to idle (DMX 0) then changed to a particular value and held for 3 seconds then restored to DMX 0. Upon completion of this routine, the desired command will be executed by the luminaire. Used to strike/douse the lamp, set lamp levels, and other various functions, as well as resetting the luminaire via the console. DMX values are: 0 - 5 = Idle (Default) 6 - 10 = Full Luminaire ReCal (1) <i>(1) This command is also used to Wake fixture up from shutdown</i> 11 - 15 = Lamp ON 16 - 20 = Lamp OFF 21 - 25 = Fixture Shutdown (for more information, see "Fixture Shutdown" on page 44) 26 - 30 = Display - Menu ON 31 - 35 = Display - Menu OFF 36 - 40 = ReCal Position 41 - 45 = ReCal Color 46 - 50 = ReCal Gobo 51 - 55 = ReCal Beam 56 - 60 = ReCal Optics 61 - 65 = ReCal Dimmer/Strobe 66 - 70 = Reset Fixture to Defaults 71 - 75 = Full Luminaire Reboot (2) <i>(2) This command will douse lamp and reset all processors in fixture, then ReCal all parameters.</i> 76 - 80 = Fixture Status On/Off (3) <i>(3) 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.</i> 81 - 85 = Standard Mode - Fixture operates at maximum output (Default) 86 - 90 = Studio Mode - Reduced output with lower fan settings 91 - 255 = Reserved Values |

Notes:

Default Values: *Denotes recommended console default settings.

16-Bit Channel Mapping

Table 4 provides DMX channel mapping of the DMX512 control values when the VL4000 BeamWash Luminaire is in 16-Bit DMX mode (as set by the luminaire's menu system).

Table 4: VL4000 BeamWash 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|-----------------------------|-------------|-----------|----------------|---|
| 1 | Intensity | 0 - 255 | 0 - 100% | 0 | 8-bit control of Fixture Intensity from 0 - 100% |
| 2 | Pan High Byte | 0 - 65535 | 0 - 100% | 32767 | 16-bit linear control of pan from 0° to 520°. |
| 3 | Pan Low Byte | | | | |
| 4 | Tilt High Byte | 0 - 65535 | 0 - 100% | 32767 | 16-bit linear control of tilt from 0° to 270°. |
| 5 | Tilt Low Byte | | | | |
| 6 | Edge High Byte | 0 - 65535 | 0 - 100% | 0 | 16-bit linear control of edge functions. |
| 7 | Edge Low Byte | | | | |
| 8 | Zoom High Byte | 0 - 65535 | 0 - 100% | 0 | 16-bit linear control of fixture zoom range between 0 (4 degrees) to 65535 (60 Degrees). |
| 9 | Zoom Low Byte | | | | |
| 10 | Optic Style | 0 - 255 | 0 - 100% | 0 | Toggles optical ability between Wash, Beam, and Shaft. 0 - 127 = Wash Optics 128 - 191 = Beam Optics 192 - 255 = Shaft Optics |
| 11 | Cyan | 0 - 255 | 0 - 100% | 0 | Controls Cyan color mechanism. |
| 12 | Yellow | 0 - 255 | 0 - 100% | 0 | Controls Yellow color mechanism. |
| 13 | Magenta | 0 - 255 | 0 - 100% | 0 | Controls Magenta color mechanism. |
| 14 | CTO | 0 - 255 | 0 - 100% | 0 | Controls CTO mechanism. |
| 15 | Fixed Color Wheel 1 | 0 - 255 | 0 - 100% | 0 | 8-bit control of Color Wheel 1. See Channel 16 for options. 0 - 23 = OPEN 24 - 69 = RED (Center at DMX 46) 70 - 116 = DARK FUCHSIA (Center at DMX 93) 117 - 162 = ORANGE (Center at DMX 139) 163 - 209 = KELLY GREEN (Center at DMX 186) 210 - 255 = CONGO BLUE (Center at DMX 232) |
| 16 | Fixed Color Wheel 1 Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different movement options of Color Wheel 1. 0 - 5 = Linear Movement using shortest (quickest) path. 6 - 10 = Linear Movement using normal (longest) path. 11 - 15 = Wheel Spin Forward (Fast to Slow) 16 - 20 = Wheel Spin STOP 21 - 25 = Wheel Spin Reverse (Slow to Fast) 26 - 56 = Color Shake Quickest Path (Slow to Fast) 57 - 87 = Color Shake Normal Path (Slow to Fast) 88 - 255 = Reserved Values |
| 17 | Fixed Color Wheel 2 | 0 - 255 | 0 - 100% | 0 | 8-bit control of Color Wheel 2. See Channel 18 for options. 0 - 23 = OPEN 24 - 69 = BLUE (Center at DMX 46) 70 - 116 = GREEN (Center at DMX 93) 117 - 162 = MINUS GREEN (Center at DMX 139) 163 - 209 = LAVENDER (Center at DMX 186) 210 - 255 = AMBER (Center at DMX 232) |

Table 4: VL4000 BeamWash 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|---|-------------|-----------|----------------|--|
| 18 | Fixed Color Wheel 2 Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different movement options of Color Wheel 2. 0 - 5 = Linear Movement using shortest (quickest) path. 6 - 10 = Linear Movement using normal (longest) path. 11 - 15 = Wheel Spin Forward (Fast to Slow) 16 - 20 = Wheel Spin STOP 21 - 25 = Wheel Spin Reverse (Slow to Fast) 26 - 56 = Color Shake Quickest Path (Slow to Fast) 57 - 87 = Color Shake Normal Path (Slow to Fast) 88 - 255 = <i>Reserved Values</i> |
| 19 | Gobo Wheel 1 | 0 - 255 | 0 - 100% | 0 | 8-bit control of Gobo Wheel 1. See Channel 22 for control options. 0 - 5 = Open - No Gobo 6 - 10 = Gobo 1 (Stacked Ovals) Index 11 - 15 = Gobo 2 (Chopped) Index 16 - 20 = Gobo 3 (Triple Stack) Index 21 - 25 = Gobo 4 (Night Sky) Index 26 - 30 = Gobo 5 (Blades) Index 31 - 35 = Gobo 6 (Psychlone) Index 36 - 40 = Gobo 7 (Circle of Holes 1) Index 41 - 45 = Open - No Gobo 46 - 50 = Gobo 1 (Stacked Ovals) Rotate 51 - 55 = Gobo 2 (Chopped) Rotate 56 - 60 = Gobo 3 (Triple Stack) Rotate 61 - 65 = Gobo 4 (Night Sky) Rotate 66 - 70 = Gobo 5 (Blades) Rotate 71 - 75 = Gobo 6 (Psychlone) Rotate 76 - 80 = Gobo 7 (Circle of Holes 1) Rotate 81 - 85 = Open - No Gobo 86 - 90 = Gobo 1 Gobo 1 (Stacked Ovals) Rotate with Mega Stepping 91 - 95 = Gobo 2 (Chopped) Rotate with Mega Stepping 96 - 100 = Gobo 3 (Triple Stack) Rotate with Mega Stepping 101 - 105 = Gobo 4 (Night Sky) Rotate with Mega Stepping 106 - 110 = Gobo 5 (Blades) Rotate with Mega Stepping 111 - 115 = Gobo 6 (Psychlone) Rotate with Mega Stepping 116 - 120 = Gobo 7 (Circle of Holes 1) Rotate with Mega Stepping 121 - 255 = <i>Reserved Values</i> |
| 20 | Gobo Wheel 1 Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | 16 bit control of Gobo Wheel 1 index and rotation. |
| 21 | Gobo Wheel 1 Index / Rotate - Low Byte | | | | Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535 |
| 22 | Gobo Wheel 1 Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different movement options for Gobo Wheel 1 (Channel 19). 0 - 5 = Gobo Selection using shortest (quickest) path. 6 - 10 = Gobo Selection using normal (longest) path. 11 - 20 = <i>Reserved Values</i> 21 - 50 = Wheel Spin Forward (Fast to Slow) 51 - 60 = Wheel Spin STOP 61 - 90 = Wheel Spin Reverse (Slow to Fast) 91 - 120 = Gobo Shake Quickest Path (Slow to Fast) 121 - 150 = Gobo Shake Normal Path (Slow to Fast) 151 - 180 = Gobo Twist Quickest Path (Slow to Fast) 181 - 210 = Gobo Twist Normal Path (Slow to Fast) 211 - 255 = <i>Reserved Values</i> |

Table 4: VL4000 BeamWash 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|---|-------------|-----------|----------------|---|
| 23 | Gobo Wheel 2 | 0 - 255 | 0 - 100% | 0 | <p>8-bit control of Gobo Wheel 2.</p> <p>See Channel 26 for control options.</p> <p>0 - 5 = Open - No Gobo 6 - 10 = Gobo 1 (Circle of Eights) Index 11 - 15 = Gobo 2 (Punch Card) Index 16 - 20 = Gobo 3 (Vertical Bars) Index 21 - 25 = Gobo 4 (Lattice) Index 26 - 30 = Gobo 5 (Wavy Triangle) Index 31 - 35 = Gobo 6 (Dot Buffet) Index 36 - 40 = Gobo 7 (Quadcone Red) Index 41 - 45 = Open - No Gobo 46 - 50 = Gobo 1 (Circle of Eights) Rotate 51 - 55 = Gobo 2 (Punch Card) Rotate 56 - 60 = Gobo 3 (Vertical Bars) Rotate 61 - 65 = Gobo 4 (Lattice) Rotate 66 - 70 = Gobo 5 (Wavy Triangle) Rotate 71 - 75 = Gobo 6 (Dot Buffet) Rotate 76 - 80 = Gobo 7 (Quadcone Red) Rotate 81 - 85 = Open - No Gobo 86 - 90 = Gobo 1 (Circle of Eights) Rotate with Mega Stepping 91 - 95 = Gobo 2 (Punch Card) Rotate with Mega Stepping 96 - 100 = Gobo 3 (Vertical Bars) Rotate with Mega Stepping 101 - 105 = Gobo 4 (Lattice) Rotate with Mega Stepping 106 - 110 = Gobo 5 (Wavy Triangle) Rotate with Mega Stepping 111 - 115 = Gobo 6 (Dot Buffet) Rotate with Mega Stepping 116 - 120 = Gobo 7 (Quadcone Red) Rotate with Mega Stepping 121 - 255 = Reserved Values</p> |
| 24 | Gobo Wheel 2 Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | <p>16 bit control of Gobo Wheel 2 index and rotation.</p> <p>Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535</p> |
| 25 | Gobo Wheel 2 Index / Rotate - Low Byte | | | | |
| 26 | Gobo Wheel 2 Control | 0 - 255 | 0 - 100% | 0 | <p>Used as a control channel for different movement options for Gobo Wheel 2 (Channel 23).</p> <p>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) 91 - 120 = Gobo Shake Quickest Path (Slow to Fast) 121 - 150 = Gobo Shake Normal Path (Slow to Fast) 151 - 180 = Gobo Twist Quickest Path (Slow to Fast) 181 - 210 = Gobo Twist Normal Path (Slow to Fast) 211 - 255 = Reserved Values</p> |
| 27 | Animation Wheel (Concurrent) | 0 - 255 | 0 - 100% | 0 | Controls Animation Wheel linearly within the beam. |
| 28 | Animation Wheel (Concurrent) Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | <p>16 bit control of the Animation Wheel 1 index and rotation.</p> <p>Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535</p> |
| 29 | Animation Wheel (Concurrent) Index / Rotate - Low Byte | | | | |

Table 4: VL4000 BeamWash 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|--|-------------|-----------|----------------|---|
| 30 | Animation Wheel (Concurrent) Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for Animation Wheel 1. 0 - 5 = Index using shortest (quickest) path. 6 - 10 = Index using normal (longest) path. 11 - 15 = Rotate Normal 16 - 20 = Rotate with Mega Stepping 21 - 25 = <i>Reserved Values</i> 26 - 56 = Image Shake using shortest (quickest) path slow to fast. 57 - 87 = Image Shake using normal (longest) path slow to fast. 88 - 255 = <i>Reserved Values</i> |
| 31 | Iris | 0 - 255 | 0 - 100% | 0 | Controls Iris mechanism from 0 (open) to 255 (full). |
| 32 | Beam Shaping | 0 - 255 | 0 - 100% | 0 | Controls Beam Shaping mechanism with following values. 0 - 5 = Open (Hybrid Zoom Range) 6 - 10 = Index (Hybrid Zoom Range) 11 - 15 = Rotate Normal (Hybrid Zoom Range) 16 - 20 = Rotate with Mega Stepping (Hybrid Zoom Range) 21 - 25 = Open (Narrow Zoom Range) 26 - 30 = Index (Narrow Zoom Range) 31 - 35 = Rotate Normal (Narrow Zoom Range) 36 - 40 = Rotate with Mega Stepping (Narrow Zoom Range) 41 - 45 = Open (Wide Zoom Range) 46 - 50 = Index (Wide Zoom Range) 51 - 55 = Rotate Normal (Wide Zoom Range) 56 - 60 = Rotate with Mega Stepping (Wide Zoom Range) 61 - 255 = <i>Reserved Values</i> |
| 33 | Beam Shaping Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | 16 bit control of Beam Shaping rotation and index. |
| 34 | Beam Shaping Index / Rotate - Low Byte | | | | Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535 |
| 35 | Prism | 0 - 255 | 0 - 100% | 0 | Controls Prism mechanism with following values. 0 - 5 = Open (Hybrid Zoom Range) 6 - 10 = Index (Hybrid Zoom Range) 11 - 15 = Rotate Normal (Hybrid Zoom Range) 16 - 20 = Rotate with Mega Stepping (Hybrid Zoom Range) 21 - 25 = Open (Narrow Zoom Range) 26 - 30 = Index (Narrow Zoom Range) 31 - 35 = Rotate Normal (Narrow Zoom Range) 36 - 40 = Rotate with Mega Stepping (Narrow Zoom Range) 41 - 45 = Open (Wide Zoom Range) 46 - 50 = Index (Wide Zoom Range) 51 - 55 = Rotate Normal (Wide Zoom Range) 56 - 60 = Rotate with Mega Stepping (Wide Zoom Range) 61 - 255 = <i>Reserved Values</i> |
| 36 | Prism Index / Rotate - High Byte | 0 - 65535 | 0 - 100% | 32767 | 16 bit control of Prism rotation and index. |
| 37 | Prism Index / Rotate - Low Byte | | | | Rotate Fast to Slow <<< = DMX 0 - 32756 Rotate STOP = DMX 32757 - 32780 Rotate Slow to Fast >>> = DMX 32781 - 65535 |
| 38 | Programming Control | 0 - 255 | 0 - 100% | 0 | Used as a control channel for different programmable settings. Set discreet value of desired effect, wait >3 seconds, then set value to 0 (Idle). 0 - 2 = Idle 3 - 5 = <i>Reserved Values</i> 6 - 10 = <i>Reserved Values</i> 11 - 15 = Dimmer Snap OFF 16 - 20 = Dimmer Snap ON (Fixture Default) 21 - 255 = <i>Reserved Values</i> |
| 39 | Strobe Speed | 0 - 255 | 0 - 100% | 0 | Controls strobe rate from slowest (DMX 0) to fastest (DMX 255) |

Table 4: VL4000 BeamWash 16-Bit DMX Channel Mapping

| DMX Channel | Parameters | Range (DMX) | Range (%) | Default Value* | Description / Operation |
|-------------|-------------------|-------------|-----------|----------------|--|
| 40 | Strobe Control | 0 - 255 | 0 - 100% | 0 | Control Channel for strobing functions. 0 - 5 = Open 6 - 10 = Closed 11 - 15 = Normal Strobe 16 - 20 = Random Strobe 21 - 25 = Random Sync 26 - 255 = <i>Reserved Values</i> |
| 41 | Luminaire Control | 0 - 255 | 0 - 100% | 0 | To execute a command, the control channel must be set to idle (DMX 0) then changed to a particular value and held for 3 seconds then restored to DMX 0. Upon completion of this routine, the desired command will be executed by the luminaire. Used to strike/douse the lamp, set lamp levels, and other various functions, as well as resetting the luminaire via the console. DMX values are: 0 - 5 = Idle (Default) 6 - 10 = Full Luminaire ReCal (1) <i>(1) This command is also used to Wake fixture up from shutdown</i> 11 - 15 = Lamp ON 16 - 20 = Lamp OFF 21 - 25 = Fixture Shutdown (for more information, see " Fixture Shutdown " on page 44) 26 - 30 = Display - Menu ON 31 - 35 = Display - Menu OFF 36 - 40 = ReCal Position 41 - 45 = ReCal Color 46 - 50 = ReCal Gobo 51 - 55 = ReCal Beam 56 - 60 = ReCal Optics 61 - 65 = ReCal Dimmer/Strobe 66 - 70 = Reset Fixture to Defaults 71 - 75 = Full Luminaire Reboot (2) <i>(2) This command will douse lamp and reset all processors in fixture, then ReCal all parameters.</i> 76 - 80 = Fixture Status On/Off (3) <i>(3) 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.</i> 81 - 85 = Standard Mode - Fixture operates at maximum output (Default) 86 - 90 = Studio Mode - Reduced output with lower fan settings 91 - 255 = <i>Reserved Values</i> |

Notes:

Default Values: *Denotes recommended console default settings.

Fixture Shutdown

This command will turn the lamp OFF, disable all motors, and stop the luminaire from functioning until either a Full Luminaire ReCal command or Lamp ON command is sent. When in the shutdown state, the luminaires menu will display **SHUTDOWN**.

Note: The luminaire's cooling fans will continue to run for 5 minutes after the shutdown command is sent. After 5 minutes the luminaire fans will shutdown. A power cycle will also clear the shutdown state.
