

ETC Reference Guide

High End Systems Halcyon Gold DMX Channel Map

Halcyon Gold DMX Channel Map

Standard Protocol			
Channel	Function	Channel	Function
1	Pan Coarse	30	Animation
2	Pan Fine	31	Prism 1 Mode
3	Tilt Coarse	32	Prism 1 Coarse
4	Tilt Fine	33	Prism 1 Fine
5	Color Mode	34	Prism 2 Mode
6	Cyan	35	Prism 2 Coarse
7	Magenta	36	Prism 2 Fine
8	Yellow	37	Trifusion
9	CTO	38	Diffusion 1
10	Color Wheel Mode	39	Diffusion 2
11	Color Wheel	40	Diffusion 3
12	Rotating Gobo Wheel 1 Mode	41	Focus Coarse
13	Rotating Gobo Wheel 1	42	Focus Fine
14	Rotating Gobo 1 Mode	43	Zoom Coarse
15	Rotating Gobo 1 Coarse	44	Zoom Fine
16	Rotating Gobo 1 Fine	45	Auto Focus
17	Fixed Gobo Wheel 2 Mode	46	Auto Focus Fine
18	Fixed Gobo Wheel 2	47	Iris
19	Blade 1 Angle A	48	Strobe Mode
20	Blade 1 Angle B	49	Strobe
21	Blade 2 Angle A	50	Dimmer Coarse
22	Blade 2 Angle B	51	Dimmer Fine
23	Blade 3 Angle A	52	LED Animation
24	Blade 3 Angle B	53	LED Animation Speed
25	Blade 4 Angle A	54	LED Animation Crossfade
26	Blade 4 Angle B	55	mSpeed
27	Frame Rotate Coarse	56	Control
28	Frame Rotate Fine	57	Fan
29	Animation Insertion		



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Halcyon Gold Standard Protocol

Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Default	
1/2	Pan (Coarse/Fine)	See note 6 on page 10	0	65535	0%	100%	0000h	FFFFh	32512	
3/4	Tilt (Coarse/Fine)	See note 6 on page 10	0	65535	0%	100%	0000h	FFFFh	32512	
5	Color Mode	Pure Mix	0	31	0%	12%	00h	1Fh	0	
		Cycle	32	47	13%	18%	20h	2Fh		
		Random	48	63	19%	25%	30h	3Fh		
		Reserved (see note 4 on page 9)	64	255	25%	100%	40h	FFh		
6	Cyan	Pure Mix								255
		Full Saturation to Open	0	255	0%	100%	00h	FFh		
		Cycle & Random								0
Slow to Fast	0	255	0%	100%	00h	FFh				
7	Magenta	Full Saturation to Open	0	255	0%	100%	00h	FFh	255	
8	Yellow	Full Saturation to Open	0	255	0%	100%	00h	FFh	255	
9	CTO	Full Saturation to Open	0	255	0%	100%	00h	FFh	255	
10	Color Wheel Mode	Indexed (see note 1 on page 9)	0	15	0%	6%	00h	0Fh	0	
		Forward Spin	16	31	6%	12%	10h	1Fh		
		Reverse Spin	32	47	13%	18%	20h	2Fh		
		Continuous (see note 1 on page 9)	48	63	19%	25%	30h	3Fh		
		Scan	64	79	25%	31%	40h	4Fh		
		Random	80	95	31%	37%	50h	5Fh		
		Reserved (see note 4 on page 9)	96	255	38%	100%	60h	FFh		

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Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Default		
11	Color Wheel	Indexed									
		Open (White)	0	14	0%	5%	00h	0Eh	0		
		Open/Red	15	29	6%	11%	0Fh	1Dh			
		Red	30	44	12%	17%	1Eh	2Ch			
		Red/Blue	45	59	18%	23%	2Dh	3Bh			
		Blue	60	74	24%	29%	3Ch	4Ah			
		Blue/TM-30	75	89	29%	35%	4Bh	59h			
		TM-30	90	104	35%	41%	5Ah	68h			
		TM-30/Purple	105	119	41%	47%	69h	77h			
		Purple	120	134	47%	53%	78h	86h			
		Purple/Orange	135	149	53%	58%	87h	95h			
		Orange	150	164	59%	64%	96h	A4h			
		Orange/Dark Blue	165	179	65%	70%	A5h	B3h			
		Dark Blue	180	194	71%	76%	B4h	C2h			
		Dark Blue/CTB	195	209	76%	82%	C3h	D1h			
		CTB	210	224	82%	88%	D2h	E0h			
		CTB/Open	225	239	88%	94%	E1h	EFh			
		Open (White)	240	255	94%	100%	F0h	FFh			
				Scan							
				Open/Red, Slow to Fast	0	29	0%	11%	00h	1Dh	0
				Red/Blue, Slow to Fast	30	59	12%	23%	1Eh	3Bh	
				Blue/TM-30, Slow to Fast	60	89	24%	35%	3Ch	59h	
				TM-30/Purple, Slow to Fast	90	119	35%	47%	5Ah	77h	
				Purple/Orange, Slow to Fast	120	149	47%	58%	78h	95h	
				Orange/Dark Blue, Slow to Fast	150	179	59%	70%	96h	B3h	
				Dark Blue/CTB	180	209	71%	82%	B4h	D1h	
				CTB/Open, Slow to Fast	210	255	82%	100%	D2h	FFh	
				Spin & Random							
				Stop	0	0	0%	0%	00h	00h	0
				Slow to Fast	1	255	0%	100%	01h	FFh	
		Continuous									
		Positioning from 0° to 359°	0	255	0%	100%	00h	FFh	0		
12	Rotating Gobo Wheel 1 Mode	Indexed	0	15	0%	6%	00h	0Fh	0		
		Forward Spin	16	31	6%	12%	10h	1Fh			
		Reverse Spin	32	47	13%	18%	20h	2Fh			
		Scan	48	63	19%	25%	30h	3Fh			
		Random	64	79	25%	31%	40h	4Fh			
		Reserved (see note 4 on page 9)	80	255	31%	100%	50h	FFh			

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Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Default	
13	Rotating Gobo Wheel 1 (see Halcyon Gold Gobos on page 12)	Indexed & Scan								0
		Open	0	15	0%	6%	00h	0Fh		
		Gobo 1 - Wiggle Lines	16	31	6%	12%	10h	1Fh		
		Gobo 2 - Mycelium	32	47	13%	18%	20h	2Fh		
		Gobo 3 - Bob's Brush	48	63	19%	25%	30h	3Fh		
		Gobo 4 - The Claw	64	79	25%	31%	40h	4Fh		
		Gobo 5 - Cut Cone	80	95	31%	37%	50h	5Fh		
		Gobo 6 - Split-S	96	111	38%	44%	60h	6Fh		
		Gobo 7 - Ice	112	127	44%	50%	70h	7Fh		
		Reserved (see note 4 on page 9)	128	255	50%	100%	80h	FFh		
		Spin & Random								
Stop	0	3	0%	1%	00h	03h				
Slow to Fast	4	255	2%	100%	04h	FFh				
14	Rotating Gobo 1 Mode	Indexed	0	15	0%	6%	00h	0Fh	0	
		Forward Spin	16	31	6%	12%	10h	1Fh		
		Reverse Spin	32	47	13%	18%	20h	2Fh		
		Forward Animate	48	63	19%	25%	30h	3Fh		
		Reverse Animate	64	79	25%	31%	40h	4Fh		
		Reserved (see note 4 on page 9)	80	255	31%	100%	50h	FFh		
15/16	Rotating Gobo 1 (Coarse/Fine)	Indexed								32767
		0° to 359°	0	65535	0%	100%	0000h	FFFFh		
		Spin & Animate								32767
		Stop	0	1023	0%	2%	0000h	03FFh		
	Slow to Fast	1024	65535	2%	100%	0400h	FFFFh			
17	Fixed Gobo Wheel 2 Mode	Indexed	0	15	0%	6%	00h	0Fh	0	
		Forward Spin	16	31	6%	12%	10h	1Fh		
		Reverse Spin	32	47	13%	18%	20h	2Fh		
		Scan	48	63	19%	25%	30h	3Fh		
		Random	64	79	25%	31%	40h	4Fh		
		Reserved (see note 4 on page 9)	80	255	31%	100%	50h	FFh		

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Halcyon Gold DMX Channel Map

Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Default
18	Fixed Gobo Wheel 2 (see Halcyon Gold Gobos on page 12)	Indexed & Scan							
		(Open)	0	15	0%	6%	00h	0Fh	0
		Gobo 1 - Texture Drops	16	31	6%	12%	10h	1Fh	
		Gobo 2 - Lovely Bubbly	32	47	13%	18%	20h	2Fh	
		Gobo 3 - Art Ducko	48	63	19%	25%	30h	3Fh	
		Gobo 4 - Window Matrix	64	79	25%	31%	40h	4Fh	
		Gobo 5 - Swirly Gig	80	95	31%	37%	50h	5Fh	
		Gobo 6 - Fenced In	96	111	38%	44%	60h	6Fh	
		Gobo 7 - The Only Way Is Up	112	127	44%	50%	70h	7Fh	
		Gobo 8 - Repeater	128	143	50%	56%	80h	8Fh	
		Reserved (see note 4 on page 9)	144	255	56%	100%	90h	FFh	
		Spin & Random							
		Stop	0	3	0%	1%	00h	03h	0
		Slow to Fast	4	255	2%	100%	04h	FFh	
19	Blade 1 Angle A (see note 5 on page 9)	Removed to Inserted	0	255	0%	100%	00h	FFh	0
20	Blade 1 Angle B (see note 5 on page 9)	Removed to Inserted	0	255	0%	100%	00h	FFh	0
21	Blade 2 Angle A (see note 5 on page 9)	Removed to Inserted	0	255	0%	100%	00h	FFh	0
22	Blade 2 Angle B (see note 5 on page 9)	Removed to Inserted	0	255	0%	100%	00h	FFh	0
23	Blade 3 Angle A (see note 5 on page 9)	Removed to Inserted	0	255	0%	100%	00h	FFh	0
24	Blade 3 Angle B (see note 5 on page 9)	Removed to Inserted	0	255	0%	100%	00h	FFh	0
25	Blade 4 Angle A (see note 5 on page 9)	Removed to Inserted	0	255	0%	100%	00h	FFh	0
26	Blade 4 Angle B (see note 5 on page 9)	Removed to Inserted	0	255	0%	100%	00h	FFh	0
27/28	Frame Rotate (Coarse/Fine)	-90° to 90°	0	65535	0%	100%	00h	FFFFh	32767
29	Animation Insertion	Full Insert	0	100	0%	39%	00h	64h	0
		Adjust Incline	101	255	40%	100%	65h	FFh	
30	Animation	Forward Spin, Stop to Fast	0	63	0%	25%	00h	3Fh	0
		Reverse Spin, Stop to Fast	64	127	25%	50%	40h	7Fh	
		Forward Animate, Stop to Fast	128	191	50%	75%	80h	BFh	
		Reverse Animate, Stop to Fast	192	255	75%	100%	C0h	FFh	
31	Prism 1 Mode	Removed	0	15	0%	6%	00h	0Fh	0
		Continuous	16	31	6%	12%	10h	1Fh	
		Forward Spin	32	47	13%	18%	20h	2Fh	
		Reverse Spin	48	63	19%	25%	30h	3Fh	
		Forward Animate	64	79	25%	31%	40h	4Fh	
		Reverse Animate	80	95	31%	37%	50h	5Fh	
		Reserved (see note 4 on page 9)	96	255	38%	100%	60h	FFh	

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Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Default
32/33	Prism 1 (Coarse/Fine)	Continuous							32767
		0° to 359°	0	65535	0%	100%	0000h	FFFFh	
		Spin & Animate							0
		Stop	0	102	0%	0%	0000h	0066h	
		Slow to Fast	1024	65535	2%	100%	0400h	FFFFh	
34	Prism 2 Mode	Removed	0	15	0%	6%	00h	0Fh	0
		Continuous	16	31	6%	12%	10h	1Fh	
		Forward Spin	32	47	13%	18%	20h	2Fh	
		Reverse Spin	48	63	19%	25%	30h	3Fh	
		Forward Animate	64	79	25%	31%	40h	4Fh	
		Reverse Animate	80	95	31%	37%	50h	5Fh	
		Reserved (see note 4 on page 9)	96	255	38%	100%	60h	FFh	
35/36	Prism 2 (Coarse/Fine)	Continuous							32767
		0° to 359°	0	65535	0%	100%	0000h	FFFFh	
		Spin & Animate							0
		Stop	0	1023	0%	2%	0000h	03FFh	
		Slow to Fast	1024	65535	2%	100%	0400h	FFFFh	
37	Trifusion	Hard to Soft Edge	0	255	0%	100%	00h	FFh	0
38	Diffusion 1	Trifusion Channel = 0							0
		Removed	0	0	0%	0%	00h	00h	
		Hard to Soft Edge	1	255	0%	100%	01h	FFh	
		Trifusion Channel ≥ 1							-
		Disabled	-	-	-	-	-	-	
39	Diffusion 2	Trifusion Channel = 0							0
		Removed	0	0	0%	0%	00h	00h	
		Hard to Soft Edge	1	255	0%	100%	01h	FFh	
		Trifusion Channel ≥ 1							-
		Disabled	-	-	-	-	-	-	
40	Diffusion 3	Trifusion Channel = 0							0
		Removed	0	0	0%	0%	00h	00h	
		Hard to Soft Edge	1	255	0%	100%	01h	FFh	
		Trifusion Channel ≥ 1							-
		Disabled	-	-	-	-	-	-	
41/42	Focus (Coarse/Fine)	Focus	0	255	0%	100%	00h	FFh	0
43/44	Zoom (Coarse/Fine)	6° to 57°	0	255	0%	100%	00h	FFh	0
45	Auto Focus	Auto Focus Off	0	15	0%	6%	00h	0Fh	0
		5 m	16	31	6%	12%	10h	1Fh	
		7.5 m	32	47	13%	18%	20h	2Fh	
		10 m	48	255	19%	100%	30h	FFh	
46	Auto Focus Fine	Focus In to Out Fine	0	255	0%	100%	00h	FFh	0
47	Iris	Closed to Open	0	255	0%	100%	00h	FFh	255

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Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Default
48	Strobe Mode	Normal	0	15	0%	6%	00h	0Fh	0
		Random	16	31	6%	12%	10h	1Fh	
		Synchronous Random (see note 2 on page 9)	32	47	13%	18%	20h	2Fh	
		Reserved (see note 4 on page 9)	48	255	19%	100%	30h	FFh	
49	Strobe	Closed	0	0	0%	0%	00h	00h	0
		Slow to Fast	1	254	0%	100%	01h	FEh	
		Open	255	255	100%	100%	FFh	FFh	
50/51	Dimmer (Coarse/Fine)	Off to Full	0	65535	0%	100%	00h	FFFFh	0
52	LED Animation (see Halcyon Gold LED Macros on page 11)	Macro Off	0	3	0%	1%	00h	03h	0
		Macro 1: L to R	4	7	2%	3%	04h	07h	
		Macro 2: R to L	8	11	3%	4%	08h	0Bh	
		Macro 3: Alternate	12	15	5%	6%	0Ch	0Fh	
		Macro 4: In	16	19	6%	7%	10h	13h	
		Macro 5: Out	20	23	8%	9%	14h	17h	
		...							
Reserved (see note 4 on page 9)	24	255	9%	100%	18h	FFh			
53	LED Animation Speed	Stop to Fast	0	255	0%	100%	00h	FFh	128
54	LED Animation Crossfade	Stop to Fast	0	255	0%	100%	00h	FFh	128
55	mSpeed	Disabled	0	0	0%	0%	00h	00h	0
		Longest to Shortest	1	255	0%	100%	01h	FFh	
56	Control	Idle	0	15	0%	6%	00h	0Fh	0
		Reserved (see note 4 on page 9)	16	31	6%	12%	10h	1Fh	
		Display Off (3 s)	32	47	13%	18%	20h	2Fh	
		Display On (3 s)	48	63	19%	25%	30h	3Fh	
		Reserved (see note 4 on page 9)	64	79	25%	31%	40h	4Fh	
		Home All (3 s)	80	95	31%	37%	50h	5Fh	
		Shutdown (9 s)	96	111	38%	44%	60h	6Fh	
		Disable Pan/Tilt Motors (3 s)	112	127	44%	50%	70h	7Fh	
		Dimming Mode - 2.4 kHz (3 s)	128	143	50%	56%	80h	8Fh	
		Dimming Mode - 16 kHz (3 s)	144	159	56%	62%	90h	9Fh	
		Reserved (see note 4 on page 9)	160	167	63%	65%	A0	A7	
		Gobo Color Correction On	168	175	66%	69%	A8	AF	
		Gobo Color Correction Off	176	191	69%	75%	B0	BF	
Reserved (see note 4 on page 9)	192	255	75%	100%	C0	FF			

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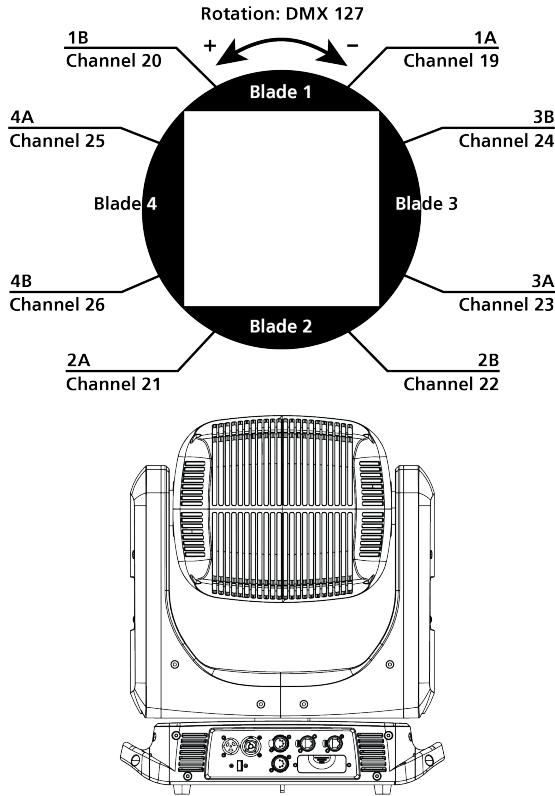
Halcyon Gold DMX Channel Map

Channel	Function	Description	Decimal Low	Decimal High	Percent Low	Percent High	Hex Low	Hex High	Controller Default
57	Fan (see note 3 on page 9)	Idle	0	15	0%	6%	00h	0Fh	0
		Slow to Fast	16	207	6%	81%	10h	CFh	
		Auto	208	223	82%	87%	D0h	DFh	
		Studio	224	239	88%	94%	E0h	EFh	
		Reserved (see note 4 on page 9)	240	255	94%	100%	F0h	FFh	

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Halcyon Gold DMX Channel Map

Notes

1	<p>Continuous and Indexed modes should take the quickest path from 255-0 and 0-255. Continuous mode color wheel aperture centers are as follows:</p> <table border="1" data-bbox="225 359 834 680"> <thead> <tr> <th>Color</th> <th>Center of Color DMX Value</th> </tr> </thead> <tbody> <tr> <td>Open</td> <td>0</td> </tr> <tr> <td>Red</td> <td>32</td> </tr> <tr> <td>Blue</td> <td>64</td> </tr> <tr> <td>TM-30</td> <td>93</td> </tr> <tr> <td>Purple</td> <td>127</td> </tr> <tr> <td>Orange</td> <td>159</td> </tr> <tr> <td>Dark Blue</td> <td>191</td> </tr> <tr> <td>CTB</td> <td>223</td> </tr> </tbody> </table>	Color	Center of Color DMX Value	Open	0	Red	32	Blue	64	TM-30	93	Purple	127	Orange	159	Dark Blue	191	CTB	223
Color	Center of Color DMX Value																		
Open	0																		
Red	32																		
Blue	64																		
TM-30	93																		
Purple	127																		
Orange	159																		
Dark Blue	191																		
CTB	223																		
2	Synchronous random strobes are synchronized across fixtures.																		
3	Upon loss of DMX, the fixture retains the fan mode setting but does not retain the linear fan speed setting. To retain the linear fan speed setting, park the DMX values to ensure the correct speed is always present when DMX is present.																		
4	Reserved ranges should function according to the controller default value.																		
5	<p>Framing blades are arranged according to the graphic below. For full-curtain framing, set blades 2A and 2B (channels 21 and 22) at or near 100%.</p>  <p>Pan: DMX 127 Tilt: DMX 37</p>																		

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DMX Fixture Orientation (Tilt Movement Range: 259°; Pan Movement Range: 540°) (Pan and tilt lock locations are highlighted in orange.)	
6	<p>Tilt = 255 DMX Pan = 127 DMX</p>
	<p>Tilt = 127 DMX Pan = 127 DMX</p>
	<p>Tilt = 0 DMX Pan = 127 DMX</p>
	<p>Pan = 0 DMX Tilt = 37 DMX</p>
	<p>Pan = 127 DMX Tilt = 37 DMX</p>
	<p>Pan = 255 DMX Tilt = 37 DMX</p>
7	RDM Manufacturer ID: 0x4c52
8	RDM Device IDs <ul style="list-style-type: none"> • Halcyon Gold Ultra-Bright: 0x2F03 • Halcyon Gold High CRI: 0x2F04

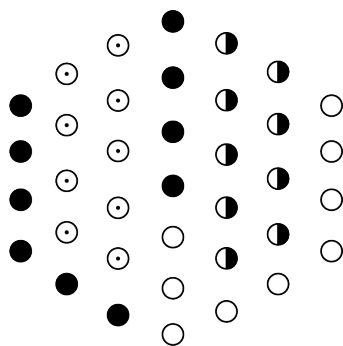
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Halcyon Gold DMX Channel Map

Halcyon Gold LED Macros

All macros are defined from left to right assuming the fixture is sitting on a table with the pan lock facing you.

LED	Symbol
LED1	
LED2	
LED3	
LED4	



Macro 1: L to R				
Step	LED1	LED2	LED3	LED4
1	0	0	255	0
2	0	0	0	255
3	255	0	0	0
4	0	255	0	0

Macro 2: R to L				
Step	LED1	LED2	LED3	LED4
1	0	255	0	0
2	255	0	0	0
3	0	0	0	255
4	0	0	255	0

Macro 3: Alternate				
Step	LED1	LED2	LED3	LED4
1	255	255	0	0
2	0	0	255	255

Macro 4: In				
Step	LED1	LED2	LED3	LED4
1	255	0	0	0
2	0	0	0	255

Macro 5: Out				
Step	LED1	LED2	LED3	LED4
1	0	255	0	0
2	0	0	255	0

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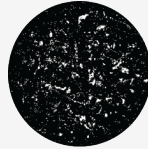
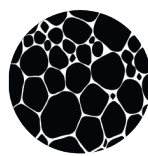




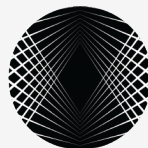

Halcyon Gold DMX Channel Map

Halcyon Gold Gobos

Rotating Gobo Wheel 1

Position	Name	Image
0	Open	N/A
1	Wiggle Lines	
2	Mycelium	
3	Bob's Brush	
4	The Claw	
5	Cut Cone	
6	Split-S	
7	Ice	

Fixed Gobo Wheel 2

Position	Name	Image
0	Open	N/A
1	Texture Drops	
2	Lovely Bubbly	
3	Art Ducko	
4	Window Matrix	
5	Swirly Gig	
6	Fenced In	
7	The Only Way Is Up	
8	Repeater	

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Revision History

Revision	Change	Release Date
A	Initial release.	November 2022