

Operations → DMX Modes

Standard Mode

Page 13; Uses 22 DMX channels

Advanced Mode

Page 14; Uses 31 DMX channels

Full Control Mode

Page 15; Uses 165 DMX channels

Pixel Mapping Mode

Page 17; Uses 137 DMX channels

Pattern Control Mode

Page 19; Uses 59 DMX channels

Compressed RGBW Mode

Page 21; Uses 15 DMX channels

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**Standard Mode**

CH	Value	Function
1	0 – 255	Pan
2	0 – 255	Pan fine
3	0 – 255	Tilt
4	0 – 255	Tilt fine
5	0 – 255	Colour Wheel (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	Red
7	0 – 255	Green
8	0 – 255	Blue
9	0 – 255	White
10	0 – 255	Shuttereffects (see Shuttereffects chart / Appendix Page VI)
11	0 – 255	Dimmer
12	0 – 255	CTO
13	0 – 255	Zoom
14	0 – 255	LED Ring Colour wheel (see Colour Wheel chart / App. Page IV)
15	0 – 255	LED Ring Shutter (see Shuttereffects chart / Appendix Page VI)
16	0 – 255	LED Ring Dimmer
17	0 – 255	Pattern (see Patterneffects table / Appendix Page VII)
18	0 – 255	Pattern Speed
19	0 – 255	LED Ring Pattern
20	0 – 255	LED Ring Pattern Speed
21	0 – 255	Control (see Control chanel table / Appendix Page V)
22	0 – 255	Remote DMX adress

Operations → DMX Modes

Advanced Mode

CH	Value	Function
1	0 - 255	Pan
2	0 - 255	Pan fine
3	0 - 255	Tilt
4	0 - 255	Tilt fine
5	0 - 255	Colour Wheel (see Colour Wheel chart / Appendix Page IV)
6	0 - 255	Red
7	0 - 255	Red fine
8	0 - 255	Green
9	0 - 255	Green fine
10	0 - 255	Blue
11	0 - 255	Blue fine
12	0 - 255	White
13	0 - 255	White fine
14	0 - 255	Shuttereffects (see Shuttereffects chart / Appendix Page VI)
15	0 - 255	Dimmer
16	0 - 255	Dimmer fine
17	0 - 255	CTO
18	0 - 255	Zoom
19	0 - 255	Zoom fine
20	0 - 255	LED Ring colour wheel (see Colour Wheel chart / App. Page IV)
21	0 - 255	LED Ring red
22	0 - 255	LED Ring green
23	0 - 255	LED Ring blue
24	0 - 255	LED Ring Shutter (see Shuttereffects chart / Appendix Page VI)
25	0 - 255	LED Ring Dimmer
26	0 - 255	Pattern (see Patterneffects table / Appendix Page VII)
27	0 - 255	Pattern Speed
28	0 - 255	LED Ring Pattern
29	0 - 255	LED Ring Pattern Speed
30	0 - 255	Control (see Control chanel table / Appendix Page V)
31	0 - 255	Remote DMX adress

**Full Control Mode**

CH	Value	Function
1	0 – 255	Pan
2	0 – 255	Pan fine
3	0 – 255	Tilt
4	0 – 255	Tilt fine
5	0 – 255	Colour Wheel (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	Red
7	0 – 255	Red fine
8	0 – 255	Green
9	0 – 255	Green fine
10	0 – 255	Blue
11	0 – 255	Blue fine
12	0 – 255	White
13	0 – 255	White fine
14	0 – 255	Shuttereffects (see Shuttereffects chart / Appendix Page VI)
15	0 – 255	Dimmer
16	0 – 255	Dimmer fine
17	0 – 255	CTO
18	0 – 255	Zoom
19	0 – 255	Zoom fine
20	0 – 255	LED Ring colour wheel (see Colour Wheel chart / App. Page IV)
21	0 – 255	LED Ring red
22	0 – 255	LED Ring green
23	0 – 255	LED Ring blue
24	0 – 255	LED Ring Shutter (see Shuttereffects chart / Appendix Page VI)
25	0 – 255	LED Ring Dimmer
26	0 – 255	LED 1 Red
27	0 – 255	LED 1 Green
28	0 – 255	LED 1 Blue
29	0 – 255	LED 1 White
30	0 – 255	LED 1 Shutter
31	0 – 255	LED 1 Dimmer
..	0 – 255	LED X Red
..	0 – 255	LED X Green
..	0 – 255	LED X Blue
..	0 – 255	LED X White
..	0 – 255	LED X Shutter
..	0 – 255	LED X Dimmer

Operations → DMX Modes

CH	Value	Function
134	0 - 255	LED 19 Red
135	0 - 255	LED 19 Green
136	0 - 255	LED 19 Blue
137	0 - 255	LED 19 White
138	0 - 255	LED 19 Shutter
139	0 - 255	LED 19 Dimmer
140	0 - 255	LED Ring Segment 1 red
141	0 - 255	LED Ring Segment 1 green
142	0 - 255	LED Ring Segment 1 blue
..	0 - 255	LED Ring Segment X red
..	0 - 255	LED Ring Segment X green
..	0 - 255	LED Ring Segment X blue
161	0 - 255	LED Ring Segment 8 red
162	0 - 255	LED Ring Segment 8 green
163	0 - 255	LED Ring Segment 8 blue
164	0 - 255	Control (see Control channel table / Appendix Page V)
165	0 - 255	Remote DMX address

**Pixel Mapping Mode**

CH	Value	Function
1	0 – 255	Pan
2	0 – 255	Pan fine
3	0 – 255	Tilt
4	0 – 255	Tilt fine
5	0 – 255	Colour Wheel (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	Red
7	0 – 255	Green
8	0 – 255	Blue
9	0 – 255	White
10	0 – 255	Shuttereffects (see Shuttereffects chart / Appendix Page VI)
11	0 – 255	Dimmer
12	0 – 255	CTO
13	0 – 255	Zoom
14	0 – 255	LED Ring colour wheel (see Colour Wheel chart / App. Page IV)
15	0 – 255	LED Ring red
16	0 – 255	LED Ring green
17	0 – 255	LED Ring blue
18	0 – 255	LED Ring Shutter (see Shuttereffects chart / Appendix Page VI)
19	0 – 255	LED Ring Dimmer
20	0 – 255	LED 1 Red
21	0 – 255	LED 1 Green
22	0 – 255	LED 1 Blue
23	0 – 255	LED 1 White
24	0 – 255	LED 1 Shutter
25	0 – 255	LED 1 Dimmer
..	0 – 255	LED X Red
..	0 – 255	LED X Green
..	0 – 255	LED X Blue
..	0 – 255	LED X White
..	0 – 255	LED X Shutter
..	0 – 255	LED X Dimmer
128	0 – 255	LED 19 Red
129	0 – 255	LED 19 Green
130	0 – 255	LED 19 Blue
131	0 – 255	LED 19 White
132	0 – 255	LED 19 Shutter
133	0 – 255	LED 19 Dimmer

Operations → DMX Modes

CH	Value	Function
134	0 - 255	LED Ring Pattern
135	0 - 255	LED Ring Pattern Speed
136	0 - 255	Control (see Control channel table / Appendix Page V)
137	0 - 255	Remote DMX address

**Pattern Control Mode**

CH	Value	Function
1	0 – 255	Pan
2	0 – 255	Pan fine
3	0 – 255	Tilt
4	0 – 255	Tilt fine
5	0 – 255	Colour Wheel (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	Red
7	0 – 255	Green
8	0 – 255	Blue
9	0 – 255	White
10	0 – 255	Shuttereffects (see Shuttereffects chart / Appendix Page VI)
11	0 – 255	Dimmer
12	0 – 255	CTO
13	0 – 255	Zoom
14	0 – 255	LED Ring colour wheel (see Colour Wheel chart / App. Page IV)
15	0 – 255	LED Ring red
16	0 – 255	LED Ring green
17	0 – 255	LED Ring blue
18	0 – 255	LED Ring Shutter (see Shuttereffects chart / Appendix Page VI)
19	0 – 255	LED Ring Dimmer
20		Pattern 1 Red
21		Pattern 1 Green
22		Pattern 1 Blue
23		Pattern 1 White
24		Pattern 1 Shutter
25		Pattern 1 Dimmer
26		Pattern 1 Pattern
27		Pattern 1 Pattern Speed
28		Pattern 2 Red
29		Pattern 2 Green
30		Pattern 2 Blue
31		Pattern 2 White
32		Pattern 2 Shutter
33		Pattern 2 Dimmer
34		Pattern 2
35		Pattern 2 Pattern Speed
36		Pattern 3 Red
37		Pattern 3 Green
38		Pattern 3 Blue

Operations → DMX Modes

39		Pattern 3 White
40		Pattern 3 Shutter
41		Pattern 3 Dimmer
42		Pattern 3 Pattern
43		Pattern 3 Pattern Speed
44		LED Ring Pattern 1 Red
45		LED Ring Pattern 1 Green
46		LED Ring Pattern 1 Blue
47		LED Ring Pattern 1 Shutter
48		LED Ring Pattern 1 Dimmer
49		LED Ring Pattern 1 Pattern
50		LED Ring Pattern 1 Pattern Speed
51		LED Ring Pattern 2 Red
52		LED Ring Pattern 2 Green
53		LED Ring Pattern 2 Blue
54		LED Ring Pattern 2 Shutter
55		LED Ring Pattern 2 Dimmer
56		LED Ring Pattern 2 Pattern
57		LED Ring Pattern 2 Pattern Speed
58	0 - 255	Control (see Control channel table / Appendix Page V)
59	0 - 255	Remote DMX address

**Compressed RGBW Mode**

CH	Value	Function
1	0 – 255	Pan
2	0 – 255	Pan fine
3	0 – 255	Tilt
4	0 – 255	Tilt fine
5	0 – 255	Colour Wheel (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	Red
7	0 – 255	Green
8	0 – 255	Blue
9	0 – 255	White
10	0 – 255	Shuttereffects (see Shuttereffects chart / Appendix Page VI)
11	0 – 255	Dimmer
12	0 – 255	Zoom
13	0 – 255	LED Ring Colour wheel (see Colour Wheel chart / App. Page IV)
14	0 – 255	LED Ring Shutter (see Shuttereffects chart / Appendix Page VI)
15	0 – 255	LED Ring Dimmer



Colourwheel table

Value	Function
0 - 5	No Function, RGBW Colour mixing
6 - 10	LEE 790-Moroccan Pink
11 - 15	LEE 157-Pink
16 - 20	LEE 332-Special Rose Pink
21 - 25	LEE 328-Follies Pink
26 - 30	LEE 345-Fuchsia Pink
31 - 35	LEE 194-Surprise Pink
36 - 40	LEE 181-Congo Blue
41 - 45	LEE 071-Tokyo Blue
46 - 50	LEE 120-Deep Blue
51 - 55	LEE 079-Just Blue
56 - 60	LEE 132-Medium Blue
61 - 65	LEE 200-Double CT Blue
66 - 70	LEE 161-Slate Blue
71 - 75	LEE 201-Full CT Blue
76 - 80	LEE 202-Half CT Blue
81 - 85	LEE 117-Steel Blue
86 - 90	LEE 353-Lighter Blue
91 - 95	LEE 118-Light Blue
96 - 100	LEE 116-Medium Blue Green
101 - 105	LEE 124-Dark Green
106 - 110	LEE 139-Primary Green
111 - 115	LEE 089-Moss Green
116 - 120	LEE 122-Fern Green
121 - 125	LEE 738-JAS Green
126 - 130	LEE 088-Lime Green
131 - 135	LEE 100-Spring Yellow
136 - 140	LEE 104-Deep Amber
141 - 145	LEE 179-Chrome Orange
146 - 150	LEE 105-Orange
151 - 155	LEE 021-Gold Amber
156 - 160	LEE 778-Mellennium Gold
161 - 165	LEE 135-Deep Golden Amber
166 - 170	LEE 164-Flame Red
Colourwheel rotation effects	
171 - 185	Colourwheel rotation forward (fast - slow)
186 - 190	Colourwheel rotation stop
191 - 205	Colourwheel rotation backward (fast - slow)
206 - 210	Colourwheel rotation stop
Random colours	
211 - 225	Fast - slow
White hue	
226 - 230	Warmwhite - 2700K
231 - 235	Warmwhite - 3200K
236 - 240	Neutralwhite - 4200K
241 - 245	Coldwhite - 5600K
246 - 250	Coldwhite - 7200K
251 - 255	Coldwhite - 8000K

Appendix → Special control channel

Special control channel

Value	Function
0 – 10	Reserved
11 – 15	fan Regulated
16 – 20	fan Silent
21 – 25	fan Standard
25 – 30	fan High power
31 – 35	Reserved
36 – 40	Remote DMX Address–Low (001–256)
41 – 45	Reserved
46 – 50	Remote DMX Address–High (257–512)
51 – 55	Reserved
56 – 60	Dimmer Speed: Smooth
61 – 65	Dimmer Speed: Fast
66 – 70	Reserved
71 – 75	Dimmer Curve: Linear
76 – 80	Dimmer Curve: Theatrical
81 – 85	Dimmer Curve: Sqaure Law
86 – 90	Dimmer Curve: Inverse Sqaure Law
91 – 95	Reserved
96 – 100	P/T speed slow
101 – 105	P/T speed Normal
106 – 110	P/T speed Fast
111 – 115	Reserved
116 – 120	Pan Invert: ON
121 – 125	Pan Invert: OFF
126 – 130	Tilt Invert: ON
131 – 135	Tilt Invert: OFF
136 – 140	Reserved
141 – 145	Position Feedback: ON
146 – 150	Position Feedback: OFF
151 – 155	Reserved
156 – 160	Pan Reset
161 – 165	Tilt Reset
166 – 170	Reserved
171 – 175	All Motors Reset
176 – 180	Fixture Reset
181 – 255	Reserved

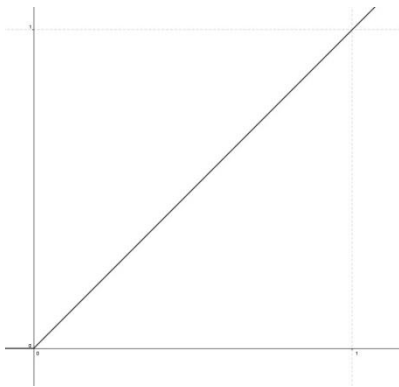


Table

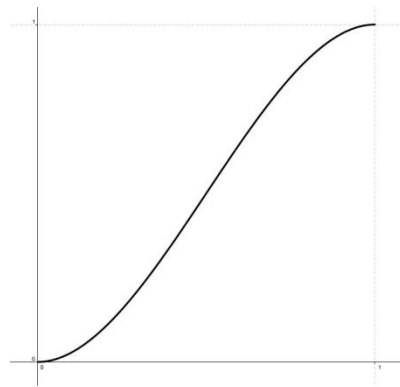
Shutter Channel Table

Value	Function
0 - 15	Shutter Closed
16-47	Random Strobe (slow - fast)
48-79	Random Ramp Up (slow - fast)
80-111	Random Ramp Down (slow - fast)
112-143	Random Ramp UP & down (slow - fast)
144-199	Strobe Pause 5s - 1s (slow - fast)
200-239	Strobe 1Hz - 20 Hz (slow - fast)
240-255	Shutter Open

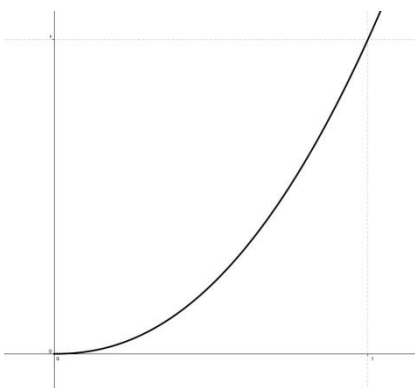
Dimmer Curves



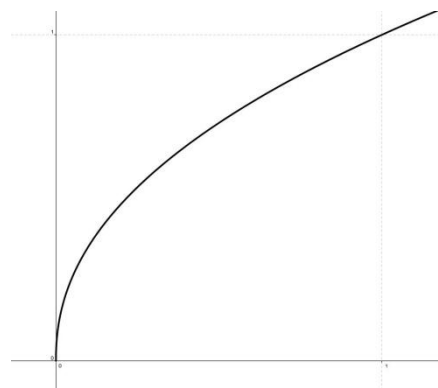
Linear



Theatrical



Square



Inverse square

Appendix → Patterns

Patterns

Helios+ 19z Animation Pattern

DMX 000 - 115 = Static

DMX 116 - 181 = Chase Animation -works with Pattern speed table

DMX 185 - 250 = Fade Animation -works with Pattern speed table

value after / = animation runs reversed

Static

Value	pattern	Value	pattern	Value	pattern	Value	pattern	Value	pattern	Value	pattern	Value	pattern
000-002		017		032		047		062		077		092	
003		018		033		048		063		078		093	
004		019		034		049		064		079		094	
005		020		035		050		065		080		095	
006		021		036		051		066		081		096	
007		022		037		052		067		082		097	
008		023		038		053		068		083		098	
009		024		039		054		069		084		099	
010		025		040		055		070		085		100	
011		026		041		056		071		086		101	
012		027		042		057		072		087		102	
013		028		043		058		073		088		103	
014		029		044		059		074		089		104	
015		030		045		060		075		090		105	
016		031		046		061		076		091		106-115	



Appendix → Patterns

Animated

chase	fade	1	2	3	4	5	6	7	8	9	10	11	12
116/185	117/186												
118/187	119/188												
120/189	121/190												
122/191	123/192												
124/193	125/194												
126/195	127/196												
128/197	129/198												
130/199	131/200												
132/201	133/202												
134/203	135/204												
136/205	137/206												
138/207	139/208												
140/209	141/210												
142/211	143/212												
144/213	145/214												

Appendix → Patterns

chase	fade	1	2	3	4	5	6	7	8	9	10	11	12
146/215	147/216												
148/217	149/218												
150/219	151/220												
152/221	153/222												
154/223	155/224												
156/225	157/226												
158/227	159/228												
160/229	161/230												
162/231	163/232												
164/233	165/234												
166/235	167/236												
168/237	169/238												
170/239	171/240												
172/241	173/242												
174/243	175/244												
176/245	177/246												
178/247	179/248												
180/249	181/250												
251-255													