GLP Twyn

DMX Channel Index

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GLP® Twyn DMX Channel Index

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1. Main module, Pattern module and Pixel module

Some control modes let you control the fixture in three layers: a Main Module, a Pattern Module and a Pixel Module. Professional controllers will handle this setup in a smart multi-fixture profile.

If Subfixture Mode is set to **Normal** (the default setting), the Subfixture channels are subordinate to the Main Fixture. This means that the intensity and shutter control channels of the Main Fixture act as global intensity and global shutter.

However, if the Subfixture Mode is set to **Independent**, all the control channels of the Subfixture are completely independent of the Main Fixture, and the Subfixture acts as an independent fixture.

2. Pixel layout

Pixel numbering is as shown with the fixture facing forward (display and connectors facing away from you), and **Pixel mirror** set to **Off**.

Plate pixels

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

Line

1	2	3	4	5	6

Wash

1	2	3
4	5	6
7	8	9

3. DMX control modes overview

Color	Meaning
	Base Module: Pan and tilt, Control/settings
	Wash Module
	Beam Module: Strobe pixels
	Plate Module: RGBW pixels
	Pattern Wash: FX engine 40 W RGBL Pixels
	Pattern Beam: FX engine Strobe pixels
	Pattern Plate: FX engine RGBW Pixels
	Pixel Engine (PE): Individual segment/pixel control

	DMX Mode 1 Basic (43 channels)	DMX Mode 2 FX (72 channels)	DMX Mode 3 Segment (49 + 36 + 6 + 96 = 187 channels)	DMX Mode 4 Full Segment (78 + 36 + 6 + 96 = 216 channels)
1	Pan coarse	Pan coarse	Pan coarse	Pan coarse
2	Pan fine	Pan fine	Pan fine	Pan fine
3	Tilt coarse	Tilt coarse	Tilt coarse	Tilt coarse
4	Tilt fine	Tilt fine	Tilt fine	Tilt fine
5	Pan motor speed	Pan motor speed	Pan motor speed	Pan motor speed
6	Tilt motor speed	Tilt motor speed	Tilt motor speed	Tilt motor speed
7	Pan motor mode	Pan motor mode	Pan motor mode	Pan motor mode
8	Tilt motor mode	Tilt motor mode	Tilt motor mode	Tilt motor mode
9	Tilt offset	Tilt offset	Tilt offset	Tilt offset
10	Control/settings	Control/settings	Control/settings	Control/settings
11	*Not used*	Mix priority Beam	Mix priority Beam	Mix priority Beam
12	*Not used*	Mix priority Plate	Mix priority Plate	Mix priority Plate
13	*Not used*	Mix priority Wash	Mix priority Wash	Mix priority Wash

	DMX Mode 1 Basic (43 channels)	DMX Mode 2 FX (72 channels)	DMX Mode 3 Segment (49 + 36 + 6 + 96 = 187 channels)	DMX Mode 4 Full Segment (78 + 36 + 6 + 96 = 216 channels)
14	Intensity coarse	Intensity coarse	Intensity coarse	Intensity coarse
15	Intensity fine	Intensity fine	Intensity fine	Intensity fine
16	Shutter	Shutter	Shutter	Shutter
17	Zoom	Zoom	Zoom	Zoom
18	RGBL - Red coarse	RGBL - Red coarse	RGBL - Red coarse	RGBL - Red coarse
19	RGBL - Red fine	RGBL - Red fine	RGBL - Red fine	RGBL - Red fine
20	RGBL - Green coarse	RGBL - Green coarse	RGBL - Green coarse	RGBL - Green coarse
21	RGBL - Green fine	RGBL - Green fine	RGBL - Green fine	RGBL - Green fine
22	RGBL - Blue coarse	RGBL - Blue coarse	RGBL - Blue coarse	RGBL - Blue coarse
23	RGBL - Blue fine	RGBL - Blue fine	RGBL - Blue fine	RGBL - Blue fine
24	RGBL - Lime coarse	RGBL - Lime coarse	RGBL - Lime coarse	RGBL - Lime coarse
25	RGBL - Lime fine	RGBL - Lime fine	RGBL - Lime fine	RGBL - Lime fine
26	CTC	CTC	CTC	CTC
27	Tungsten effect	Tungsten effect	Tungsten effect	Tungsten effect
28	M/G-Shift	M/G-Shift	M/G-Shift	M/G-Shift
29	CQC - Color Quality Control	CQC - Color Quality Control	CQC - Color Quality Control	CQC - Color Quality Control
30	Intensity (Beam Module)	Intensity (Beam Module)	Intensity (Beam Module)	Intensity (Beam Module)
31	Intensity fine	Intensity fine	Intensity fine	Intensity fine
32	Duration (Beam Module)	Duration (Beam Module)	Duration (Beam Module)	Duration (Beam Module)
33	Rate (Beam Module)	Rate (Beam Module)	Rate (Beam Module)	Rate (Beam Module)
34	Shutter Mode (Beam Module)	Shutter Mode (Beam Module)	Shutter Mode (Beam Module)	Shutter Mode (Beam Module)
35	Intensity (Plate)	Intensity (Plate)	Intensity (Plate)	Intensity (Plate)
36	Intensity fine	Intensity fine	Intensity fine	Intensity fine
37	Duration (Plate)	Duration (Plate)	Duration (Plate)	Duration (Plate)
38	Rate (Plate)	Rate (Plate)	Rate (Plate)	Rate (Plate)
39	Shutter Mode (Plate)	Shutter Mode (Plate)	Shutter Mode (Plate)	Shutter Mode (Plate)
40	Red (Plate)	Red (Plate)	Red (Plate)	Red (Plate)
41	Green (Plate)	Green (Plate)	Green (Plate)	Green (Plate)
42	Blue (Plate)	Blue (Plate)	Blue (Plate)	Blue (Plate)
43	White (Plate)	White (Plate)	White (Plate)	White (Plate)

	DMX Mode 1 Basic (43 channels)	DMX Mode 2 FX (72 channels)	DMX Mode 3 Segment (49 + 36 + 6 + 96 = 187 channels)	DMX Mode 4 Full Segment (78 + 36 + 6 + 96 = 216 channels)
44		Pattern Wash Intensity coarse	PE: Intensity Wash coarse	Pattern Wash Intensity coarse
45		Pattern Wash Intensity fine	PE: Intensity Wash fine	Pattern Wash Intensity fine
46		Pattern Wash Shutter	PE: Intensity Beam coarse	Pattern Wash Shutter
47		Pattern Wash Red	PE: Intensity Beam fine	Pattern Wash Red
48		Pattern Wash Green	PE: Intensity Plate coarse	Pattern Wash Green
49		Pattern Wash Blue	PE: Intensity Plate fine	Pattern Wash Blue
50		Pattern Wash Lime	PATCHPOINT B	Pattern Wash Lime
51		Pattern Wash Select	<PE Wash Segments 9x4ch max = 36ch>	Pattern Wash Select
52		Pattern Wash Speed	<PE Beam Segments 6x1ch max = 6 ch>	Pattern Wash Speed
53		Pattern Wash X-Fade	<PE Plate Segments 24x4ch max = 96 ch>	Pattern Wash X-Fade
54		Pattern Wash Transition		Pattern Wash Transition
55		Pattern Beam Intensity coarse		Pattern Beam Intensity coarse
56		Pattern Beam Intensity fine		Pattern Beam Intensity fine
57		Pattern Beam Shutter		Pattern Beam Shutter
58		Pattern Beam Select		Pattern Beam Select
59		Pattern Beam Speed		Pattern Beam Speed
60		Pattern Beam X-Fade		Pattern Beam X-Fade
61		Pattern Beam Transition		Pattern Beam Transition
62		Pattern Plate Intensity coarse		Pattern Plate Intensity coarse
63		Pattern Plate Intensity fine		Pattern Plate Intensity fine
64		Pattern Plate Shutter		Pattern Plate Shutter
65		Pattern Plate Red		Pattern Plate Red
66		Pattern Plate Green		Pattern Plate Green
67		Pattern Plate Blue		Pattern Plate Blue
68		Pattern Plate White		Pattern Plate White

	DMX Mode 1 Basic (43 channels)	DMX Mode 2 FX (72 channels)	DMX Mode 3 Segment (49 + 36 + 6 + 96 = 187 channels)	DMX Mode 4 Full Segment (78 + 36 + 6 + 96 = 216 channels)
69		Pattern Plate Select		Pattern Plate Select
70		Pattern Plate Speed		Pattern Plate Speed
71		Pattern Plate X- Fade		Pattern Plate X- Fade
72		Pattern Plate Transition		Pattern Plate Transition
73				PE: Intensity Wash coarse
74				PE: Intensity Wash fine
75				PE: Intensity Beam coarse
76				PE: Intensity Beam fine
77				PE: Intensity Plate coarse
77				PE: Intensity Plate fine
78				PATCHPOINT B
…				<PE Wash Segments 9x4 channels max = 36 channels>
…				<PE Beam Segments 6x1 channels max = 6 channels>
…				<PE Plate Segments 24x4 channels max = 96 channels>

4. DMX control channel layout

In the following DMX channel layout tables:

- The default/home value to be sent by a control console is normally 0. If a different value should be sent this is shown at the end of the table

Pan

	DMX range		Fading	Note
Pan coarse	0	65535	Fade	16 Bit -360 to 360
Pan fine				

Tilt

	DMX range		Fading	Note
Tilt coarse	0	65535	Fade	16 Bit -360 to 360
Tilt fine				

Pan/Tilt motor speed

	DMX range		Fading	Note
Tracking/fastest speed	0	0	Snap	Default
Fast → Slow	1	253	Fade	
Slowest speed	254	254	Snap	
Stopped	255	255	Snap	Stops at current position, both in indexing & continuous rotation

Pan/Tilt Motor Mode

	DMX range		Fading	Note
Indexing -360 > +360 (conventional)	0	9	Snap	Default
Indexing -360 > +360 (shortest path)	10	19	Snap	
Continuous rotation CW to stop, spin down	20	29	Snap	Slow down from CW rotation to indexed position
Continuous rotation CW to stop, shortcut	30	39	Snap	Take shortest path from current position to indexed position (may cause a high jerk load)
Continuous rotation CCW to stop, spin down	40	49	Snap	Slow down from CCW rotation to indexed position
Continuous rotation CCW to stop, shortcut	50	59	snap	Take shortest path from current position to indexed position (may cause a high jerk load)
Not used	60	255		

Tilt Offset

This additional Tilt offset can be used to switch between having the Plate or the Wash side of the head facing to the front. It also lets you create positions with the Wash side and then re-use all those positions with the Plate side.

	DMX range		Fading	Note
-180 degrees	0	0	Fade	Flipped CW
	1	126	Fade	Crossfade CW
0 degree	127	127	Fade	Normal
	128	254	Fade	Crossfade CCW
+180 degrees	255	255	Fade	Flipped CCW

Control/Settings

- The note (3 s.) indicates that the value must be held for 3 seconds before the command is activated.
- The default setting is indicated with **bold type**.

	DMX range		Fading	Note
Idle	0	9	Snap	
No function	10	11		
iQ.Service Connect	12	13	Snap	Enables connectivity to the GLP iQ.Service App for 5 minutes
No function	14	19		
Dimmer Curve: Soft (Square)	20	21	Snap	Default setting (3 s.)
Dimmer curve: Linear	22	23	Snap	(3 s.)
Dimmer curve: S-Curve	24	25	Snap	(3 s.)
No function	26	29		
Display Mode: OFF	30	31	Snap	(3 s.)
Display Mode: Auto	32	33	Snap	Default setting (3 s.)
Display Mode : ON	34	35	Snap	(3 s.)
No function	36	37		
Display orientation: Auto	38	39	Snap	Default setting (3 s.)
Display orientation: Normal	40	41	Snap	(3 s.)
Display orientation: Inverted	42	43	Snap	(3 s.)
No function	44	45		
No Signal: Blackout	46	47	Snap	If DMX signal stops, fixture goes to blackout, default setting (3 s.)
No Signal: Hold	48	49	Snap	If DMX signal stops, fixture holds last DMX value, (3 s.)
No signal: Houselight	50	51	Snap	If DMX signal stops, fixture outputs low-intensity light
No Signal: Play captured scene	52	53	Snap	If DMX signal stops, fixture runs captured DMX scene (3 s.)
Capture current DMX scene	54	55	Snap	Capture current DMX scene for Stand-Alone (3 s.)

	DMX range		Fading	Note
Fan Mode: Regulated	56	57	Snap	Default setting (3 s.)
Fan Mode: High	58	59	Snap	(3 s.)
Fan Mode: Medium	60	61	Snap	Limited output (3 s.)
Fan Mode: Low	62	63	Snap	Limited output (3 s.)
Fan Mode: Off	64	65	Snap	All fans off – only necessary fans on low speed, limited output (3 s.)
Power Mode: Dynamic	66	67	Snap	Default setting (3 s.)
Power Mode: Balanced	68	69	Snap	Each module gets an even amount of power
Pixel mirror, Wash: Off	70	71	Snap	Default setting (3 s.)
Pixel mirror, Wash: x-mirror	72	73	Snap	(3 s.)
Pixel mirror, Wash: y-mirror	74	75	Snap	(3 s.)
Pixel mirror, Wash: x;y-mirror	76	77	Snap	(3 s.)
Segment mirror, Plate: Off	78	79	Snap	Default setting (3 s.)
Segment mirror, Plate: x-mirror	80	81	Snap	(3 s.)
Segment mirror, Plate: y-mirror	82	83	Snap	(3 s.)
Segment mirror, Plate: x;y-mirror	84	85	Snap	(3 s.)
Segment mirror, Beam: Off	86	87	Snap	Default setting (3 s.)
Segment mirror, Beam: On	88	89	Snap	(3 s.)
Duration control Normal	90	91	Snap	(3 s.)
Duration control Percentage	92	93	Snap	(3 s.)
No function	94	113		
Position Feedback: OFF	114	115	Snap	Position feedback disabled (3 s.)
Position Feedback: ON	116	117	Snap	Position feedback enabled, default setting (3 s.)
Tilt invert OFF	118	119	Snap	Default setting (3 s.)
Tilt invert ON	120	121	Snap	(3 s.)
Pan invert OFF	122	123	Snap	Default setting (3 s.)
Pan invert ON	124	125	Snap	(3 s.)
Tilt disable OFF	126	127	Snap	Normal tilt, default setting (3 s.)
Tilt disable: current disabled	128	129	Snap	No current to tilt motor (3 s.)
Pan disable OFF	130	131	Snap	Normal pan, default setting (3 s.)
Pan disable: current disabled	132	133	Snap	No current to pan motor (3 s.)
Wash Color Mode: RGB (iQ.Gamut), default setting	134	135		
Wash Color Mode: RGBL	136	137		
Wash Color Mode: x:y	138	139		
iQ.Gamut: FULL	140	141	Snap	Default setting (3 s.)
iQ.Gamut: Rec.2020	142	143	Snap	(3 s.)
iQ.Gamut: REC.709	144	145	Snap	(3 s.)
iQ.Gamut: DCI P3.65	146	147	Snap	(3 s.)
White Beam: Noral	148	149	Snap	White Plate LEDs follow RGB pixels according to Color Gamut, default setting (3 s.)

	DMX range		Fading	Note
White Beam: Expanded White	150	151	Snap	White Plate LEDs follow Beam pixels to have more White punch (3 s.)
No function	152	153		
Wash White Point: 8000K	154	155	Snap	(3 s.)
Wash White Point: 6500K	156	157	Snap	Default setting (3 s.)
Wash White Point: 5600K	158	159	Snap	(3 s.)
Wash White Point: 4200K	160	161	Snap	(3 s.)
Wash White Point: 3200K	162	163	Snap	(3 s.)
No function	164	165		
PWM Max	166	167	Snap	(3 s.)
PWM High 2	168	169	Snap	(3 s.)
PWM High 1	170	171	Snap	(3 s.)
PWM frequency Optimal (O)	172	173	Snap	Default setting (3 s.)
No function	174	189		
Hibernation: OFF	190	191	Snap	Default setting (3 s.), fixture performs a reset when leaving hibernation state
Hibernation: ON	192	193	Snap	(3 s.)
No function	194	225		
Strobe Cycle at Zero: Reset	226	227		Default setting (3 s.)
Strobe Cycle at Zero: Continue	228	229		(3 s.)
Rate/Duration Cycle: Smart	230	231		(3 s.)
Rate/Duration Cycle: Finish	232	233		Default setting (3 s.)
Rate/Duration Cycle: Restart	234	235		(3 s.)
Save as User Setting Preset 1	236	237	Snap	(3 s.)
Save as User Setting Preset 2	238	239	Snap	(3 s.)
Save as User Setting Preset 3	240	241	Snap	(3 s.)
Load User Setting Preset 1	242	243	Snap	(3 s.)
Load User Setting Preset 2	244	245	Snap	(3 s.)
Load User Setting Preset 3	246	247	Snap	(3 s.)
Load Settings Default	248	249	Snap	(3 s.)
Reset Pan + Tilt	250	251	Snap	Triggers a reset once (3 s.). To trigger an additional reset, you must exit this value for 3 s. and then return to the value.
Reset Head	252	253	Snap	
Reset All	254	255	Snap	

Mix priority

The fixture has 3 engines for the Beam/Strobe and 3 engines for the RGB Plate:

- Main Beam/Plate
- Pattern or internal FX engine
- Pixel engine

Each of these has its own intensity control with crossfading available. The **Mix priority** channel sets how the values are combined to produce the final output value. The default behavior is HTP = highest takes precedence.

	DMX range		**Fading**	**Notes**
Main + Pattern + Pixel (HTP)	0	9	Snap	The highest value of the Main or Pattern or Pixel module determines the mix value used
Main only	10	19	Snap	The values of the Pattern and Pixel modules are ignored, the Main value determines the mix value used
Pattern only	20	29	Snap	The values of the Main and Pixel modules are ignored, the Pattern value determines the mix value used
Pixel only	30	39	Snap	The values of the Main and Pattern modules are ignored, the Pixel value determines the mix value used
[Main + Pattern HTP] + Pixel additive	40	49	Snap	The Main and Pattern values use HTP, the Pixel value is added to this. The resulting value is the sum of both values.
[Main + Pattern HTP] + Pixel module subtractive	50	59	Snap	The Main and Pattern values use HTP, the Pixel value is subtracted from this
Pixel, with [Main + Pattern HTP] subtractive	60	69	Snap	The Main and Pattern values use HTP, this value is subtracted from the Pixel value
Main over Pixel Snap	70	79	Snap	Output from the Pixel module stays in the background. Output from the Main module has higher priority and will not mix with the Pixel module color. As soon as the output value of the Main module is >0 the Pixel module blacks out and the Main module value appears. The Pattern module mixes with the result using HTP
Pixel over Main + Pattern Snap	80	89	Snap	Output from the Main + Pattern modules (HTP) stays in the background. Output from the Pixel module has higher priority and will not mix with the Main + Pattern module color. As soon as the output value of the Pixel module is >0 the Main + Pattern module value blacks out and the Pixel module value appears.
Main + Pattern over Pixel Crossfade	90	99	Fade	Output from the Pixel module stays in the background. Output from the Main module has higher priority and will not mix with the Pixel module color. If you fade in a Main + Pattern (HTP) value, the Pixel value crossfades to the Main value.

	DMX range		Fading	Notes
Pixel over Pixel Crossfade	100	109	Fade	Output from the Main + Pattern modules (HTP) stays in the background. Output from the Pixel module has higher priority and will not mix with the Main + Pattern module color. If you fade in a Main value, the Pixel value crossfades to the Main+ Pattern (HTP) value.
Not used	100	127		Not used = Main & Sub (HTP)
Main + Pattern (HTP) only	128	130	Snap	Main and Pattern modules (HTP) only
... Crossfade ...	...	...	Fade	Smooth fading
Main + Pattern + Pixel (HTP)	191	192	Snap	All modules, HTP, default setting
... Crossfade ...	...	...	Fade	Smooth fading
Pixel only	253	255	Snap	Pixel module only, Main and Pattern modules are ignored

Intensity

	DMX range		Fading	Note
Intensity coarse	0	65535	Fade	Global intensity 0 ... 100% or visibility of the Pattern layer.
Intensity fine				

Shutter

	DMX range		Fading	Note
Off, normal sync flashes	0	4	Snap	Normal strobe
Single Flash	5	9	Fade	One single flash if value is changed within the range 005 ... 009
Spread (offset) FX	10	14	Snap	Timing offset to create flash chaser
Random (all)	15	19	Snap	Random flashes between multiple fixtures with all pixels synchronized. Set flash intensity, duration, and rate as normal.
Random (segments)	20	24	Snap	Random flashes of random pixels/segments within a fixture and between multiple fixtures. Low Rate = low number of pixels / High rate = higher number of pixels. Duration sets the flash duration.
Pulse (all)	25	29	Snap	Pulse (ramp up/down) synchronized across multiple fixtures. Duration sets the ON time, set intensity and rate as normal.
Pulse random (all)	30	34	Snap	Pulse (ramp up/down) random timing across multiple fixtures. Duration sets the ON time, set intensity and rate as normal.
Pulse random (segments)	35	39	Snap	Pulse (ramp up/down) random timing across segments. Duration sets the ON time, set intensity and rate as normal.
Pulse Open Sync (all)	40	44	Fade	Opening pulse (ramp up, snap down) synchronized across multiple fixtures. Duration sets the ON time, set intensity and rate as normal.

	DMX range		Fading	Note
Pulse Open Random (all)	45	49	Fade	Opening pulse (ramp up, snap down) random timing across multiple fixtures. Duration sets the ON time, set intensity and rate as normal.
Pulse Open Random (segments)	50	54	Snap	Opening pulse (ramp up, snap down) random timing across segments. Duration sets the ON time, set intensity and rate as normal.
Pulse Close Sync (all)	55	59	Fade	Closing pulse (snap up, ramp down) synchronized across multiple fixtures. Duration sets the ON time, set intensity and rate as normal.
Pulse Close Random (all)	60	64	Fade	Closing pulse (snap up, ramp down) random timing across multiple fixtures. Duration sets the ON time, set intensity and rate as normal.
Pulse Close Random (segments)	65	69	Snap	Closing pulse (snap up, ramp down) random timing across segments. Duration sets the ON time, set intensity and rate as normal.
Double Flash (all)	70	74	Snap	Fast Double Flash, synchronized across multiple fixtures. Duration sets length of flashes but there is always a blackout between flashes. Set intensity and rate as normal.
Double Flash Random (all)	75	79	Snap	Fast Double Flash, random timing across multiple fixtures. Duration sets length of flashes but there is always a blackout between flashes. Set intensity and rate as normal.
Triple Flash (all)	80	84	Snap	Fast Triple Flash, synchronized across multiple fixtures. Duration sets length of flashes but there is always a blackout between flashes. Set intensity and rate as normal.
Triple Flash Random (all)	85	89	Snap	Fast Triple Flash, random timing across multiple fixtures. Duration sets length of flashes but there is always a blackout between flashes. Set intensity and rate as normal.
Lightning	90	94	Snap	Simulated lightning. Flash duration not adjustable. Set intensity and rate as normal.
Paparazzi	95	99	Snap	Smile for the cameras... :o)
Spikes (all)	100	104	Snap	Flashes over low light. Rate sets flash period, duration sets flash length. All segments act as one group.
Spikes (segments)	105	109	Snap	Flashes over low light. Rate sets flash period, duration sets flash length. All segments act individually.
Chaser Flash LR	110	105	Snap	Synchronized chaser flash left to right
Chaser Flash LR Random	115	119	Snap	Random chaser flash left to right
Chaser Flash RL	120	124	Snap	Synchronized chaser flash right to left
Chaser Flash RL Random	125	129	Snap	Random chaser flash right to left
Bounce Flash LR	130	134	Snap	Synchronized bounce left to right
Bounce Flash LR Random	135	139	Snap	Random bounce left to right
Bounce Flash RL	140	144	Snap	Synchronized bounce right to left
Bounce Flash RL Random	145	149	Snap	Random bounce right to left

	DMX range		Fading	Note
Bounce Center to Out	150	154	Snap	Synchronized bounce center to out
Bounce Center to Out Random	150	154	Snap	Random bounce center to out
Center to Out Flash	160	164	Snap	Synchronized flash from center to out
Center to Out Flash Random	165	169	Snap	Random Flash from center to out
Out to Center Flash	170	174	Snap	Synchronized flash from out to center
Out to Center Flash Random	175	179	Snap	Random flash from out to center
Bounce Out to Center Flash	180	184	Snap	Synchronized bounce out to center
Bounce Out to Center Flash Random	185	189	Snap	Random bounce out to center
Not used	190	250	Snap	Off - normal sync flashes
Open	251	255	Snap	

Default/Home value: 255

Zoom

	DMX range		Fading	Note
Beam angle	0	255	Fade	Narrow ... wide

Red

	DMX range		Fading	Note
Intensity 0 ... 100%	0	255	Fade	

Green

	DMX range		Fading	Note
Intensity 0 ... 100%	0	255	Fade	

Blue

	DMX range		Fading	Note
Intensity 0 ... 100%	0	255	Fade	

Lime

	DMX range		Fading	Note
Intensity 0 ... 100%	0	255	Fade	

CTC

	DMX range		Fading	Note
Open	0	9	Snap	Selected White Point
10 000 K	11	11	Snap	Stepless fade through color temperatures of 10 000 K to 2500 K (interpolation)
9999 K ... 2501 K	12	254	Fade	
2500 K	255	255	Snap	

Tungsten simulation

	DMX range		fade	Note
Off	0	9	Snap	Selected White Point / No red shift or delay while dimming
Tungsten ACL 250W/28V	10	19	Snap	Uses the color temperature of the selected reference light source and dims it with the time delay and red shift behavior of that light source. Tungsten simulation has higher priority than color mixing, CTC and color wheel.
Tungsten Blinder 650W/120V	20	29	Snap	
Tungsten 750W/80V	30	39	Snap	
Tungsten 1000W/240V	40	49	Snap	
Tungsten 1200W/240V	50	59	Snap	
Tungsten 2000W/230V	60	69	Snap	
Tungsten 2500W/230V	70	79	Snap	
Tungsten 5000W/230V	80	89	Snap	
Not used (= Off)	90	120	--	
Off	120	139	Snap	Selected White Point / No Red Shift or Delay while dimming
FX Tungsten ACL 250W/28V	140	149	Snap	Uses currently set color temperature and dims it with the time delay and red shift behavior of the selected reference light source. If color wheel or CTO is enabled, the effect will combine it.
FX Tungsten Blinder 650W/120V	150	159	Snap	
FX Tungsten 750W/80V	160	169	Snap	
FX Tungsten 1000W/240V	170	179	Snap	
FX Tungsten 1200W/240V	180	189	Snap	
FX Tungsten 2000W/230V	190	199	Snap	
FX Tungsten 2500W/230V	200	209	Snap	
FX Tungsten 5000W/230V	210	219	Snap	
Not used (= Off)	220	255		

Magenta/Green shift (Tint)

Magenta-Green-Shift	DMX range		Fade	Note
Off - (no correction)	0	9	Snap	Neutral / no effect
Full plus Magenta +100% (-0,1 Duv)	10	10	Fade	
Plus Magenta +99% .. + 1%	11	124		
Neutral / no effect	125	140	Snap	Neutral / no effect
Plus green +1% .. +99%	141	254	Fade	
Full plus green +100% (+ 0,1 Duv)	255	255		

Default/Home setting: 128

CQC (Color Quality Control) / Saturation)

CQC - Color Quality Control	DMX range		Fade	Note
High Quality (HQ) (saturated color)	0	9	Snap	White point is mixed with RGBL with focus on best color rendering quality
Crossfade	10	117	Fade	If color is mixed, the crossfade will unsaturate the color
High Quality (HQ) (unsaturated color)	118	127	Snap	Fully unsaturated color with high quality white spectrum
High Output (HO) (unsaturated color)	128	137	Snap	Fully unsaturated color with high output white spectrum
Cross fade	138	245	Fade	Increasing color saturation
High Output (HO) (saturated color)	246	255	Snap	White point is mixed with RGBL with focus on highest output

Intensity Beam, Intensity Plate

	DMX range		Fading	Note
Intensity coarse	0	65535	Fade	
Intensity fine				

Pattern Select

	DMX range		Fading	Notes
Idle	0	9	Snap	All pixels
Select patterns	10	229	Snap	
Not used	230	249	Snap	
Random pixel	250	255	Snap	Random pixel pattern

Pattern Step/Speed

	DMX Value		Fading
Continuous Movement (Loop)			
Stop (First Pattern Step)	0	2	Snap
CW fast - slow (run Pattern Step 1..n)	3	63	Fade
Stop at current position	64	66	Snap
CCW slow - fast (run Pattern Step n..1)	67	127	Fade
Select specific Movement Steps			
Pattern Step 01	128	129	Snap
Pattern Step 02	130	131	Snap
Pattern Step 03	132	133	Snap
Pattern Step 04	134	135	Snap

Pattern Step 05	136	137	Snap
Pattern Step 06	138	139	Snap
Pattern Step 07	140	141	Snap
Pattern Step 08	142	143	Snap
Pattern Step 09	144	145	Snap
Pattern Step 10	146	147	Snap
Pattern Step 11	148	149	Snap
Pattern Step 12	150	151	Snap
Pattern Step 13	152	153	Snap
Pattern Step 14	154	155	Snap
Pattern Step 15	156	157	Snap
Pattern Step 16	158	159	Snap
Pattern Step 17	160	161	Snap
Pattern Step 18	162	163	Snap
Pattern Step 19	164	165	Snap
Pattern Step 20	166	167	Snap
Pattern Step 21	168	169	Snap
Pattern Step 22	170	171	Snap
Pattern Step 23	172	173	Snap
Pattern Step 24	174	175	Snap
Pattern Step 25	176	177	Snap
Pattern Step 26	178	179	Snap
Pattern Step 27	180	181	Snap
Pattern Step 28	182	183	Snap
Pattern Step 29	184	185	Snap
Pattern Step 30	186	187	Snap
Pattern Step 31	188	189	Snap
Pattern Step 32	190	191	Snap
Pattern Step 33	192	193	Snap
Pattern Step 34	194	195	Snap
Pattern Step 35	196	197	Snap
Pattern Step 36	198	199	Snap
Pattern Step 37	200	201	Snap
Pattern Step 38	202	203	Snap
Pattern Step 39	204	205	Snap
Pattern Step 40	206	207	Snap

Pattern Step 41	208	209	Snap
Pattern Step 42	210	211	Snap
Pattern Step 43	212	213	Snap
Pattern Step 44	214	215	Snap
Pattern Step 45	216	217	Snap
Pattern Step 46	218	219	Snap
Pattern Step 47	220	221	Snap
Pattern Step 48	222	223	Snap
Pattern Step 49	224	225	Snap
Pattern Step 50	226	227	Snap
Pattern Step 51	228	229	Snap
Pattern Step 52	230	231	Snap
Pattern Step 53	232	233	Snap
Pattern Step 54	234	235	Snap
Pattern Step 55	236	237	Snap
Pattern Step 56	238	239	Snap
Pattern Step 57	240	241	Snap
Pattern Step 58	242	243	Snap
Pattern Step 59	244	245	Snap
Pattern Step 60	246	247	Snap
Step direction control			
Next Step A	248	249	Snap
Next Step B	250	251	Snap
Previous Step A	252	253	Snap
Previous Step B	254	255	Snap

Next Step A/B: jumping to this value will step forward exactly 1 step in the dynamic pattern.

Previous Step A/B: jumping to this value will step backward exactly 1 step in the dynamic pattern.

Pattern Step Crossfade

	DMX Value		Fading
Off (snap, no crossfade between steps in pattern)	0	9	Snap
Snap → fastest Xfade → slowest Xfade (identical fade in and fade out times)	10	127	Fade
Off (snap, no crossfade between steps in pattern)	128	137	Snap
Xfade with tail: Snap → fastest Xfade with tail → slowest Xfade with tail (fade out time is longer than fade in time)	138	255	Fade

5. Key to conversion of x and y coordinates

8-bit

$$\text{DMX}\,x = \frac{x \text{ co-ordinate x } 255}{0.8}$$

$$\text{DMX}\,y = \frac{y \text{ co-ordinate x } 255}{0.8}$$

16-bit

$$\text{DMX}\,x = \frac{x \text{ co-ordinate x } 65535}{0.8}$$

$$\text{DMX}\,y = \frac{y \text{ co-ordinate x } 65535}{0.8}$$


GLP