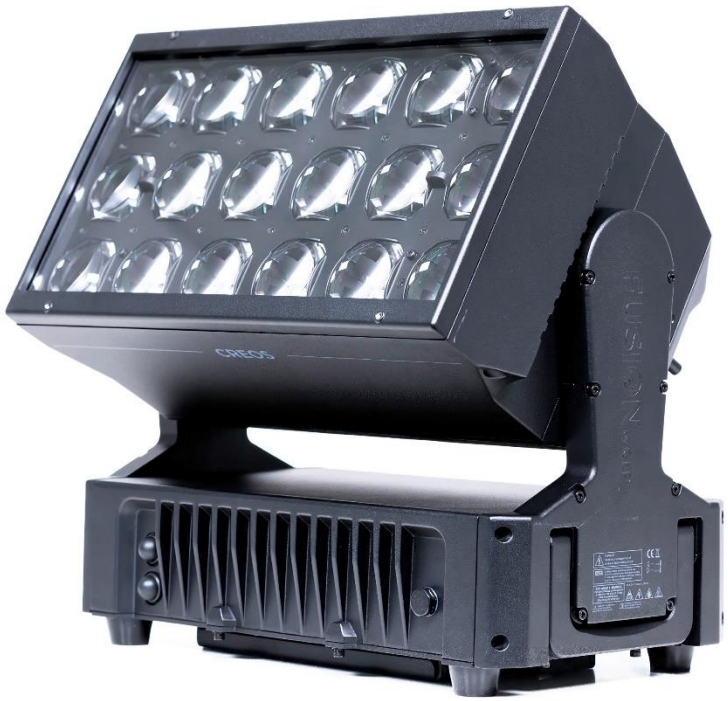
FUSION by GLP

Creos

DMX Channel Index



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Document revisions

Revision number	Notes	Date released
20241003-03	First release of the DMX Channel Index for the Fusion Creos. Covers firmware v. 0.2.2	October 2024

GLP® Fusion DMX Channel Index

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1. Main Fixture and Subfixture

Some control modes divide the fixture into two layers: a Main Fixture (or Main Module) and a Subfixture (or Sub Module). Professional controllers will handle this setup in a smart multi-fixture profile.

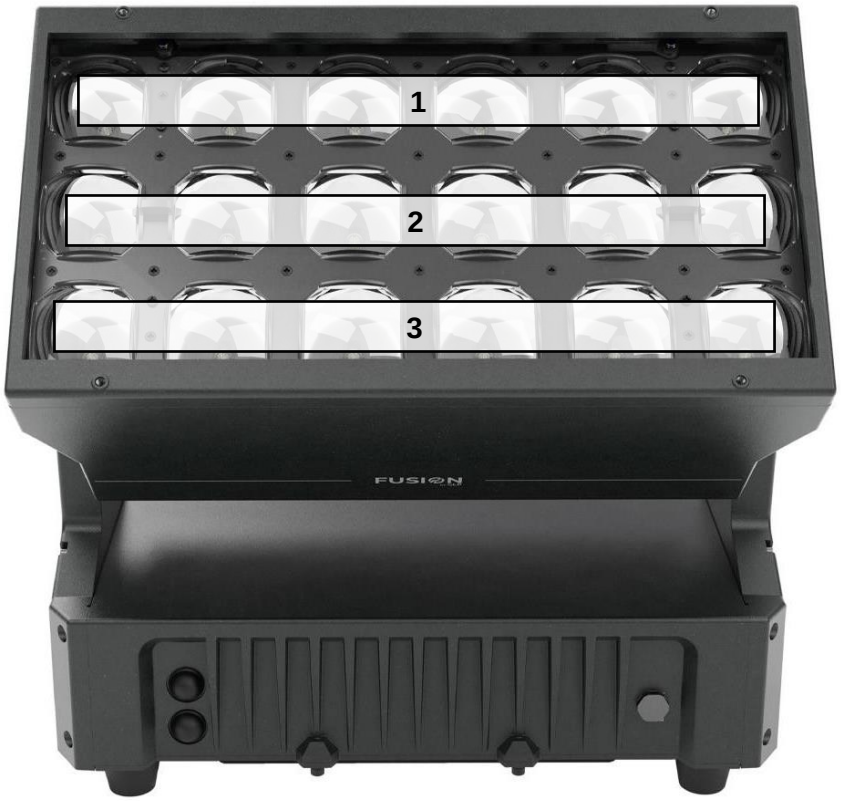
If Subfixture Mode is set to **Normal** (the default setting), the Subfixture channels are subordinate to the Main Fixture. This means that the intensity and shutter control channels of the Main Fixture act as global intensity and global shutter.

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.

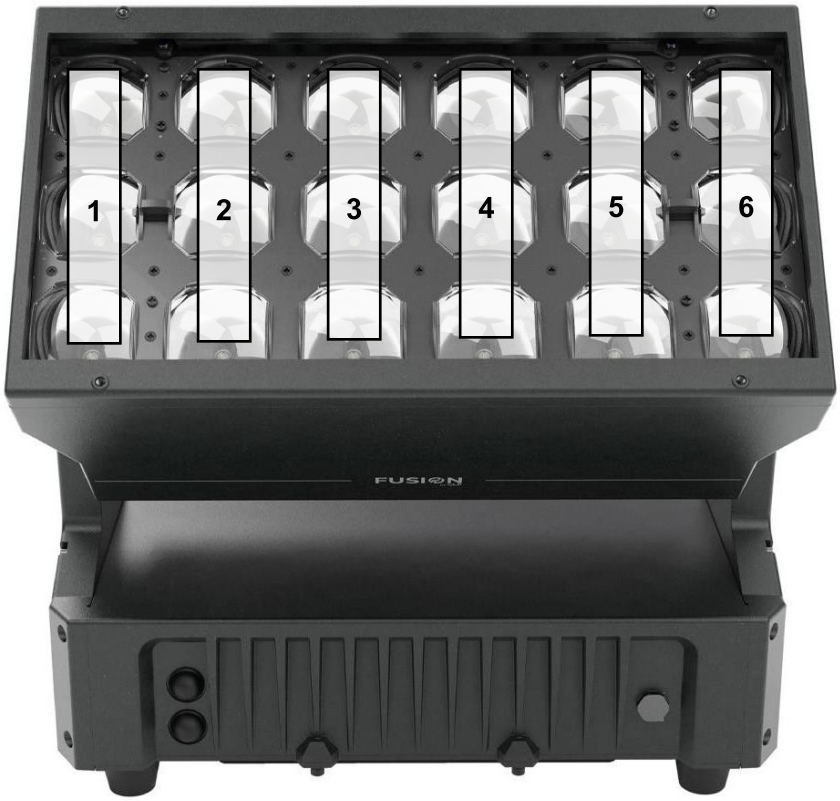
2. Pixel layout

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

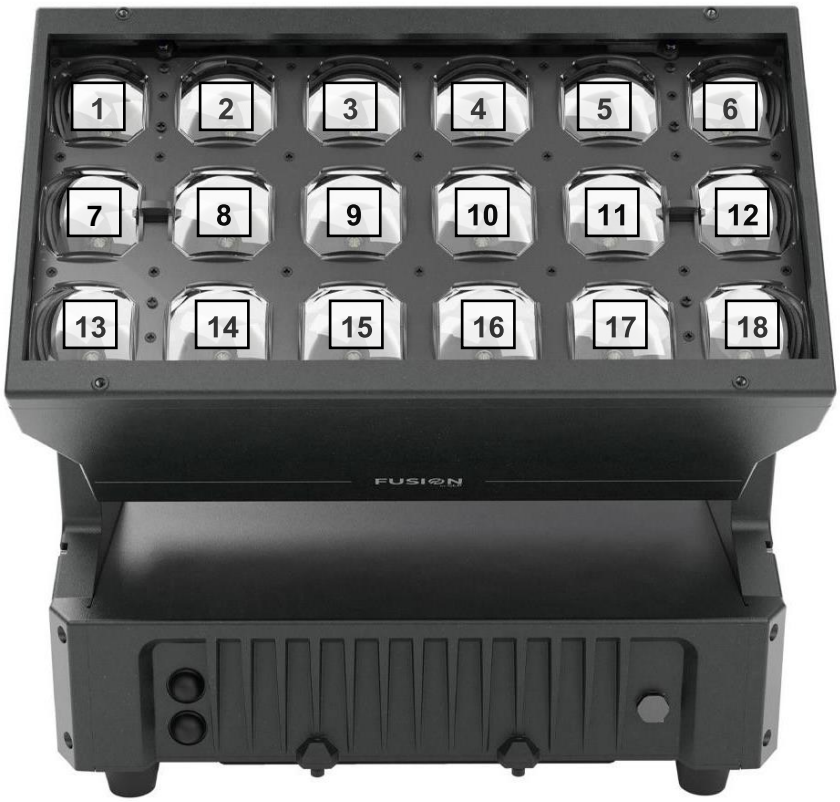
Segment 3 mode



Segment 6 mode



Multipix mode



3. DMX control modes overview

The following DMX control modes are available in the Fusion Creos.

For channels controlling individual color channels the following abbreviations may be used:
R=Red
G=Green
B=Blue
L=Lime

RGB / RGBL / x:y refer to the Color Mix Mode setting of the fixture

	M1 - Basic	M2 - Normal (Default)	M3 - Segment 3	M4 - Segment 6	M5 - Multipix Advanced	M6 - Multipix Compressed RGB	M7 - Multipix Compressed RGBL
1	Tilt coarse	Tilt coarse	Tilt coarse	Tilt coarse	Tilt coarse	Tilt coarse	Tilt coarse
2	Tilt Fine	Tilt Fine	Tilt Fine	Tilt Fine	Tilt Fine	Tilt Fine	Tilt Fine
3	Intensity coarse	Intensity coarse	Intensity coarse	Intensity coarse	Intensity coarse	Intensity coarse	Intensity coarse
4	Intensity fine	Intensity fine	Intensity fine	Intensity fine	Intensity fine	Intensity fine	Intensity fine
5	Shutter	Shutter	Shutter	Shutter	Shutter	Shutter	Shutter
6	Zoom	Zoom	Zoom	Zoom	Zoom	Zoom	Zoom
7	Control/Setting	Control/Setting	Control/Setting	Control/Setting	Control/Setting	Control/Setting	Control/Setting
8	RGB: R coarse RGBL:R coarse x;y: x coarse	RGB: R coarse RGBL:R coarse x;y: x coarse	RGB: R coarse RGBL:R coarse x;y: x coarse	RGB: R coarse RGBL:R coarse x;y: x coarse	RGB: R coarse RGBL:R coarse x;y: x coarse	CTC - Color Temperature Control	CTC - Color Temperature Control
9	RGB: R fine RGBL:R fine x;y: x fine	RGB: R fine RGBL:R fine x;y: x fine	RGB: R fine RGBL:R fine x;y: x fine	RGB: R fine RGBL:R fine x;y: x fine	RGB: R fine RGBL:R fine x;y: x fine	CQC - Color Quality Control	CQC - Color Quality Control
10	RGB: G coarse RGBL G coarse x;y: y coarse	RGB: G coarse RGBL G coarse x;y: y coarse	RGB: G coarse RGBL G coarse x;y: y coarse	RGB: G coarse RGBL G coarse x;y: y coarse	RGB: G coarse RGBL G coarse x;y: y coarse	Red (Px 01)	Red (Px 01)
11	RGB: G fine RGBL: G fine x;y: y fine	RGB: G fine RGBL: G fine x;y: y fine	RGB: G fine RGBL: G fine x;y: y fine	RGB: G fine RGBL: G fine x;y: y fine	RGB: G fine RGBL: G fine x;y: y fine	Green (Px 01)	Green (Px 01)
12	RGB: B coarse RGBL:B coarse x;y: not used	RGB: B coarse RGBL:B coarse x;y: not used	RGB: B coarse RGBL:B coarse x;y: not used	RGB: B coarse RGBL:B coarse x;y: not used	RGB: B coarse RGBL:B coarse x;y: not used	Blue (Px 01)	Blue (Px 01)
13	RGB: B fine RGBL: B fine x;y: not used	RGB: B fine RGBL: B fine x;y: not used	RGB: B fine RGBL: B fine x;y: not used	RGB: B fine RGBL: B fine x;y: not used	RGB: B fine RGBL: B fine x;y: not used	Red (Px 02)	Lime (Px 01)
14	RGB: not used RGBL: L coarse x;y: not used	RGB: not used RGBL: L coarse x;y: not used	RGB: not used RGBL: L coarse x;y: not used	RGB: not used RGBL: L coarse x;y: not used	RGB: not used RGBL: L coarse x;y: not used	Green (Px 02)	Red (Px 02)
15	RGB: not used RGBL: L fine x;y: not used	RGB: not used RGBL: L fine x;y: not used	RGB: not used RGBL: L fine x;y: not used	RGB: not used RGBL: L fine x;y: not used	RGB: not used RGBL: L fine x;y: not used	Blue (Px 02)	Green (Px 02)
16	CW - Colorwheel	CW - Colorwheel	CW - Colorwheel	CW - Colorwheel	CW - Colorwheel	Red (Px 03)	Blue (Px 02)
17	CTC - Color Temperature Control	CTC - Color Temperature Control	CTC - Color Temperature Control	CTC - Color Temperature Control	CTC - Color Temperature Control	Green (Px 03)	Lime (Px 02)
18	CQC - Color Quality Control	CQC - Color Quality Control	CQC - Color Quality Control	CQC - Color Quality Control	CQC - Color Quality Control	Blue (Px 03)	Red (Px 03)
19	M/G-Shift	M/G-Shift	M/G-Shift	M/G-Shift	M/G-Shift	Red (Px 04)	Green (Px 03)
20	Tungsten Effect	Tungsten Effect	Tungsten Effect	Tungsten Effect	Tungsten Effect	Green (Px 04)	Blue (Px 03)
21		Mix Priority Channel	Mix Priority Channel	Mix Priority Channel	Mix Priority Channel	Blue (Px 04)	Lime (Px 03)
22		Intensity coarse (Px 01..18)	Intensity coarse (Px 01..18)	Intensity coarse (Px 01..18)	Intensity coarse (Px 01..18)	Red (Px 05)	Red (Px 04)

	M1 - Basic	M2 - Normal (Default)	M3 - Segment 3	M4 - Segment 6	M5 - Multipix Advanced	M6 - Multipix Compressed RGB	M7 - Multipix Compressed RGBL
23		Intensity fine (Px 01..18)	Intensity fine (Px 01..18)	Intensity fine (Px 01..18)	Intensity fine (Px 01..18)	Green (Px 05)	Green (Px 04)
24		Shutter (Px 01..18)	Shutter (Px 01..18)	Shutter (Px 01..18)	Shutter (Px 01..18)	Blue (Px 05)	Blue (Px 04)
25		Pattern Select (Px 01..18)	Pattern Select (Px 01..18)	Pattern Select (Px 01..18)	Pattern Select (Px 01..18)	Red (Px 06)	Lime (Px 04)
26		Pattern Index/Speed (Px 01..18)	Pattern Index/Speed (Px 01..18)	Pattern Index/Speed (Px 01..18)	Pattern Index/Speed (Px 01..18)	Green (Px 06)	Red (Px 05)
27		Pattern Step Crossfade (Px 01..18)	Pattern Step Crossfade (Px 01..18)	Pattern Step Crossfade (Px 01..18)	Pattern Step Crossfade (Px 01..18)	Blue (Px 06)	Green (Px 05)
28		Pattern Transition (Px 01..18)	Pattern Transition (Px 01..18)	Pattern Transition (Px 01..18)	Pattern Transition (Px 01..18)	Red (Px 07)	Blue (Px 05)
29		Fixture Quantity (Px 01..18)	Fixture Quantity (Px 01..18)	Fixture Quantity (Px 01..18)	Fixture Quantity (Px 01..18)	Green (Px 07)	Lime (Px 05)
30		Fixture Number (Px 01..18)	Fixture Number (Px 01..18)	Fixture Number (Px 01..18)	Fixture Number (Px 01..18)	Blue (Px 07)	Red (Px 06)
31		Red (Px 01..18)	Red (Px 01..06)	Red (Px 01+07+13)	Red (Px 01)	Red (Px 08)	Green (Px 06)
32		Green - (Px 01..18)	Green (Px 01..06)	Green (Px 01+07+13)	Green (Px 01)	Green (Px 08)	Blue (Px 06)
33		Blue - (Px 01..18)	Blue (Px 01..06)	Blue (Px 01+07+13)	Blue (Px 01)	Blue (Px 08)	Lime (Px 06)
34			Red (Px 07..12)	Red (Px 02+08+14)	Red (Px 02)	Red (Px 09)	Red (Px 07)
35			Green (Px 07..12)	Green (Px 02+08+14)	Green (Px 02)	Green (Px 09)	Green (Px 07)
36			Blue (Px 07..12)	Blue (Px 02+08+14)	Blue (Px 02)	Blue (Px 09)	Blue (Px 07)
37			Red (Px 13..18)	Red (Px 03+09+15)	Red (Px 03)	Red (Px 10)	Lime (Px 07)
38			Green (Px 13..18)	Green (Px 03+09+15)	Green (Px 03)	Green (Px 10)	Red (Px 08)
39			Blue (Px 13..18)	Blue (Px 03+09+15)	Blue (Px 03)	Blue (Px 10)	Green (Px 08)
40				Red (Px 04+10+16)	Red (Px 04)	Red (Px 11)	Blue (Px 08)
41				Green (Px 04+10+16)	Green (Px 04)	Green (Px 11)	Lime (Px 08)
42				Blue (Px 04+10+16)	Blue (Px 04)	Blue (Px 11)	Red (Px 09)
43				Red (Px 05+11+17)	Red (Px 05)	Red (Px 12)	Green (Px 09)
44				Green (Px 05+11+17)	Green (Px 05)	Green (Px 12)	Blue (Px 09)
45				Blue (Px 05+11+17)	Blue (Px 05)	Blue (Px 12)	Lime (Px 09)
46				Red (Px 06+12+18)	Red (Px 06)	Red (Px 13)	Red (Px 10)
47				Green (Px 06+12+18)	Green (Px 06)	Green (Px 13)	Green (Px 10)
48				Blue (Px 06+12+18)	Blue (Px 06)	Blue (Px 13)	Blue (Px 10)
49					Red (Px 07)	Red (Px 14)	Lime (Px 10)
50					Green (Px 07)	Green (Px 14)	Red (Px 11)
51					Blue (Px 07)	Blue (Px 14)	Green (Px 11)
52					Red (Px 08)	Red (Px 15)	Blue (Px 11)
53					Green (Px 08)	Green (Px 15)	Lime (Px 11)
54					Blue (Px 08)	Blue (Px 15)	Red (Px 12)
55					Red (Px 09)	Red (Px 16)	Green (Px 12)
56					Green (Px 09)	Green (Px 16)	Blue (Px 12)

	M1 - Basic	M2 - Normal (Default)	M3 - Segment 3	M4 - Segment 6	M5 - Multipix Advanced	M6 - Multipix Compressed RGB	M7 - Multipix Compressed RGBL
57					Blue (Px 09)	Blue (Px 16)	Lime (Px 12)
58					Red (Px 10)	Red (Px 17)	Red (Px 13)
59					Green (Px 10)	Green (Px 17)	Green (Px 13)
60					Blue (Px 10)	Blue (Px 17)	Blue (Px 13)
61					Red (Px 11)	Red (Px 18)	Lime (Px 13)
62					Green (Px 11)	Green (Px 18)	Red (Px 14)
63					Blue (Px 11)	Blue (Px 18)	Green (Px 14)
64					Red (Px 12)		Blue (Px 14)
65					Green (Px 12)		Lime (Px 14)
66					Blue (Px 12)		Red (Px 15)
67					Red (Px 13)		Green (Px 15)
68					Green (Px 13)		Blue (Px 15)
69					Blue (Px 13)		Lime (Px 15)
70					Red (Px 14)		Red (Px 16)
71					Green (Px 14)		Green (Px 16)
72					Blue (Px 14)		Blue (Px 16)
73					Red (Px 15)		Lime (Px 16)
74					Green (Px 15)		Red (Px 17)
75					Blue (Px 15)		Green (Px 17)
76					Red (Px 16)		Blue (Px 17)
77					Green (Px 16)		Lime (Px 17)
78					Blue (Px 16)		Red (Px 18)
79					Red (Px 17)		Green (Px 18)
80					Green (Px 17)		Blue (Px 18)
81					Blue (Px 17)		Lime (Px 18)
82					Red (Px 18)		
83					Green (Px 18)		
84					Blue (Px 18)		

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

Tilt

Tilt	DMX range		fade	Note
Tilt coarse	0	65535	fade	Increasing values will turn head to front.
Tilt fine				

Intensity

Intensity	DMX range		fade	Note
Intensity coarse	0	65535	fade	Intensity 0..100%
Intensity fine				

Shutter

Shutter	DMX range		fade	Note
Closed	0	4	snap	blackout
Single Flash	5	9	fade	One Single Flash if Value Change within this range (005..009)
Open	10	11	snap	
Pulse (slow-fast)	12	39	fade	Synchronized Pulse (Ramp-Up/Down) Effect / Speed adjustable from slow to fast within this range (010..039)
Open	40	41	snap	
Pulse Open (slow-fast)	42	69	fade	Synchronized Pulse Open (Ramp-Up) Effect / Speed adjustable from slow to fast within this range (040..069)
Open	70	71	snap	
Pulse Close (slow-fast)	72	99	fade	Synchronized Pulse Close (Ramp-Up) Effect / Speed adjustable from slow to fast within this range (070..099)
Open	100	101	snap	
Double-Flash (slow > fast)	102	129	fade	Synchronized Double Flash slow to fast (same as KNV) / Speed adjustable from slow to fast within this range (100..129)
Open	130	131	snap	
Strobe Rnd Pixel (slow-fast)	132	159	fade	Random Strobe on Random Pixels slow to fast / Speed adjustable from slow to fast within this range (130..159)
Open	160	161	snap	
Strobe Rnd all (slow-fast)	162	199	fade	Random Strobe on all Pixels slow to fast / Speed adjustable from slow to fast within this range (160..199)
Open	200	201	snap	
Strobe Sync all Pixel (slow-fast)	200	250	fade	Synchronized Strobe slow 1Hz to fast / Speed adjustable from slow to fast within this range (200..250)
Open	251	255	snap	Continuously on

Default/Home value: 255

Zoom

Zoom	DMX range		fade	Note
Beam Angle	0	255	fade	narrow [000] ... wide [255]

Control/Setting

- (3s hold) indicates that the value must be held for 3 seconds before the command will be activated.
- The Default option setting for the fixture is indicated with **bold type**.

Control/Setting	DMX range		fade	Note
Idle	0	9	snap	
No function	10	11		
iQ.Service Connect	12	13	snap	Will enable the connectivity to the GLP iQ.Service App for 5 minutes.
No function	14	19		
Dimmer Curve: Soft (Square)	20	21	snap	(3s hold) (DEFAULT)
Dimmer Curve: Linear	22	23	snap	(3s hold)
Dimmer Curve: S-Curve	24	25	snap	(3s hold)
No function	26	29		
Display Mode: OFF	30	31	snap	(3s hold)
Display Mode: Auto	32	33	snap	(3s hold) (DEFAULT)
Display Mode : ON	34	35	snap	(3s hold)
No function	36	39		
Display Orientation: Normal	40	41	snap	(3s hold) (DEFAULT)
Display Orientation: Upside-Down	42	43	snap	(3s hold)
No function	44	45		
No Signal: Blackout	46	47	snap	(3s hold) If DMX Fails, fixture will blackout
No Signal: Hold	48	49	snap	(3s hold) (DEFAULT) If DMX Fails, fixture will hold last DMX Value
No Signal: Replay Captured Scene	50	51	snap	(3s hold) If DMX Fails, fixture will run captured DMX Scene
Capture Scene	52	53	snap	(3s hold) Capture current DMX Scene for Stand-Alone
No function	54	55		
Fan Mode : Off	56	57	snap	(Limited Output) (3s hold) All Fans off - only necessary fans on low speed.
Fan Mode: Regulated	58	59	snap	(3s hold) (DEFAULT)
Fan Mode: High	60	61	snap	(3s hold)
Fan Mode : Medium	62	63	snap	(Limited Output) (3s hold)
Fan Mode: Low	64	65	snap	(Limited Output) (3s hold)
No function	66	69		
Pixel Mirror: Off	70	71	snap	(3s hold) (DEFAULT)
Pixel Mirror: x-mirror	72	73	snap	(3s hold)
Pixel Mirror: y-mirror	74	75	snap	(3s hold)
Pixel Mirror: x;y-mirror	76	77	snap	(3s hold)

Control/Setting	DMX range		fade	Note
No function	78	91		
Position Feedback: OFF	92	93	snap	(3s hold) Will enable position Feedback
Position Feedback: ON	94	95	snap	(3s hold) (DEFAULT) Will disable Position Feedback
No function	96	97		
Tilt invert OFF	98	99	snap	(3s hold) (DEFAULT)
Tilt invert ON	100	101	snap	(3s hold)
No function	102	129		
Performance: Fast	130	131	snap	(3s Hold)
Performance: Normal	132	133	snap	(3s Hold) (DEFAULT)
Performance: Smooth	134	135	snap	(3s Hold)
No function	136	137		
White Point 8000K	138	139	snap	RGB-Mode Only (3s hold)
White Point 6500K	140	141	snap	RGB-Mode Only (3s hold) (Default)
White Point 5600K	142	143	snap	RGB-Mode Only (3s hold)
White Point 4200K	144	145	snap	RGB-Mode Only (3s hold)
White Point 3200K	146	147	snap	RGB-Mode Only (3s hold)
No function	148	149		
Sub Fixture Mode: Normal	150	151	snap	(3s hold) (DEFAULT)
Sub Fixture Mode: Independent	152	153	snap	(3s hold)
No function	154	165		
Color Mode: RGB [1]	166	167	snap	(3s hold) (DEFAULT)
Color Mode: RGBL [2]	168	169	snap	(3s hold)
Color Mode: x;y [3]	170	171	snap	(3s hold)
No function	172	181		
iQ.Gamut: FULL	182	183		(3s hold) (DEFAULT)
iQ.Gamut: Rec.2020	184	185		(3s hold)
iQ.Gamut: REC.709	186	187		(3s hold)
No function	188	189		
Hibernation: OFF	190	191	snap	(3s hold) (DEFAULT) Fixture will perform a Reset
Hibernation: ON	192	193	snap	(3s hold)
No function	194	215		
PWM Optimal (O)	216	217	snap	(Default) (3s hold)
PWM High1 (H1)	218	219	snap	(3s hold)
PWM High2 (H2)	220	221	snap	(3s hold)
PWM Max (M)	222	223	snap	(3s hold)
No function	224	229		
Save as User Setting Preset 1	230	231	snap	(3s hold)
Save as User Setting Preset 2	232	233	snap	(3s hold)
Save as User Setting Preset 3	234	235	snap	(3s hold)
No function	236	237		
Load User Setting Preset 1	238	239	snap	(3s hold)
Load User Setting Preset 2	240	241	snap	(3s hold)

Control/Setting	DMX range		fade	Note
Load User Setting Preset 3	242	243	snap	(3s hold)
Load Settings Default	244	245	snap	(3s hold)
No function	246	249		
Reset Tilt	250	251	snap	(3s Hold) - Will trigger only one time. To trigger an additional time this value slot need to be left first for 3s.
Reset HEAD	252	253	snap	(3s Hold) - Will trigger only one time. To trigger an additional time this value slot need to be left first for 3s.
Reset ALL	254	255	snap	(3s Hold) - Will trigger only one time. To trigger an additional time this value slot need to be left first for 3s.

Color Wheel

Color Wheel	DMX range		fade	Note / (x;y)	
Open	0	9	snap	Selected White Point	
Filter 004 (Medium Bastard Amber)	10	12	snap	0,37	0,335
Filter 019 (Fire)	13	15	snap	0,664	0,31
Filter 025 (Sunset Red)	16	18	snap	0,566	0,359
Filter 026 (Bright Red)	19	21	snap	0,712	0,281
Filter 036 (Medium Pink)	22	24	snap	0,36	0,268
Filter 049 (Medium Purple)	25	27	snap	0,283	0,101
Filter 058 (Lavender)	28	30	snap	0,212	0,099
Filter 068 (Sky Blue)	31	33	snap	0,151	0,128
Filter 088 (Lime Green)	34	36	snap	0,356	0,511
Filter 089 (Moss Green)	37	39	snap	0,259	0,547
Filter 090 (Dark Yellow Green)	40	42	snap	0,184	0,641
Filter 102 (Light Amber)	43	45	snap	0,434	0,44
Filter 103 (Straw)	46	48	snap	0,336	0,359
Filter 106 (Primary Red)	49	51	snap	0,699	0,285
Filter 111 (Dark Pink)	52	54	snap	0,389	0,215
Filter 115 (Peacock Blue)	55	57	snap	0,134	0,296
Filter 117 (Steel Blue)	58	60	snap	0,223	0,278
Filter 118 (Light Blue)	61	63	snap	0,149	0,113
Filter 121 (Filter Green)	64	66	snap	0,302	0,534
Filter 122 (Fern Green)	67	69	snap	0,234	0,543
Filter 124 (Dark Green)	70	72	snap	0,123	0,586
Filter 126 (Mauve)	73	75	snap	0,287	0,082
Filter 128 (Bright Pink)	76	78	snap	0,401	0,151
Filter 131 (Marine Blue)	79	81	snap	0,199	0,305
Filter 132 (Medium Blue)	82	84	snap	0,137	0,11
Filter 134 (Golden Amber)	85	87	snap	0,501	0,371
Filter 135 (Deep Golden Amber)	88	90	snap	0,667	0,326
Filter 136 (Pale Lavender)	91	93	snap	0,288	0,254
Filter 137 (Special Lavender)	94	96	snap	0,231	0,175
Filter 138 (Pale Green)	97	99	snap	0,331	0,433
Filter 140 (Summer Blue)	100	102	snap	0,201	0,245
Filter 141 (Bright Blue)	103	105	snap	0,129	0,159
Filter 143 (Pale Navy Blue)	106	108	snap	0,17	0,205

Color Wheel	DMX range		fade	Note / (x;y)	
Filter 147 (Apricot)	109	111	snap	0,446	0,381
Filter 148 (Bright Rose)	112	114	snap	0,482	0,238
Filter 152 (Pale Gold)	115	117	snap	0,37	0,332
Filter 154 (Pale Rose)	118	120	snap	0,35	0,318
Filter 157 (Pink)	121	123	snap	0,457	0,272
Filter 162 (Bastard Amber)	124	126	snap	0,348	0,328
Filter 164 (Flame Red)	127	129	snap	0,659	0,302
Filter 165 (Daylight Blue)	130	132	snap	0,159	0,158
Filter 169 (Lilac Tint)	133	135	snap	0,294	0,281
Filter 170 (Deep Lavender)	136	138	snap	0,278	0,211
Filter 172 (Lagoon Blue)	139	141	snap	0,141	0,22
Filter 180 (Dark Lavender)	142	144	snap	0,191	0,072
Filter 182 (Light Red)	145	147	snap	0,67	0,313
Filter 194 (Surprise Pink)	148	150	snap	0,24	0,183
Filter 197 (Alice Blue)	151	153	snap	0,164	0,118
Filter 201 (Full C.T. Blue)	154	156	snap	0,228	0,233
Filter 202 (Half C.T. Blue)	157	159	snap	0,261	0,273
Filter 203 (Quarter C.T. Blue)	160	162	snap	0,285	0,294
Filter 204 (Full C.T. Orange)	163	165	snap	0,437	0,392
Filter 206 (Quarter C.T. Orange)	166	168	snap	0,346	0,34
Filter 219 (Fluorescent Green)	169	171	snap	0,219	0,334
Filter 247 (Filter Minus Green)	172	174	snap	0,325	0,279
Filter 248 (Half Minus Green)	175	177	snap	0,317	0,297
Filter 281 (Three Quarter C.T. Blue)	178	180	snap	0,239	0,258
Filter 285 (Three Quarter C.T. Orange)	181	183	snap	0,4	0,387
Filter 352 (Glacier Blue)	184	186	snap	0,171	0,19
Filter 353 (Lighter Blue)	187	189	snap	0,193	0,246
Filter 507 (Madge)	190	192	snap	0,662	0,337
Filter 778 (Millennium Gold)	193	195	snap	0,606	0,382
Filter 793 (Vanity Fair)	196	198	snap	0,419	0,17
Filter 798 (Chrysalis Pink)	199	201	snap	0,191	0,061
Rainbow Stop - at first Color	202	204	snap	Rainbow first Color : Lila	
Rainbow slow..fast	205	252	fade	Rainbow with relative cross fade to next color. Color fade is depending on speed (snappy at fast speed, soft at low speed) slow..fast (Purple / Blue / Light Blue / Turquoise / Green / Yellow / Orange / Red / Pink)	
Rainbow Stop - at current Color	253	255	snap	Rainbow current color	

Magenta-Green Shift

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
Cross fade	10	117	fade	If color is mixed, the cross fade will unsaturated 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	will saturate the color
High Output (HO) (saturated color)	246	255	snap	White point is mixed with RGBL with focus on highest Output

CTC (Color Temperature Control)

CTC	**DMX range**		**fade**	**Note**
Open	0	9	Snap	Selected White Point
10000K	10	11	fade	Fade through Color temperatures of 1000K to 2500K step less (interpolation)
9999..2501K	12	254		
2500K	255	255		

Tungsten (Tungsten simulation channel)

Tungsten	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 it . Tungsten simulation has higher priority than colormix, 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		

Main Color Control

The function of these channels depends on the Color Mix Mode of the fixture.
[1]=RGB mode
[2]=RGBL mode
[3]=x:y mode

Colormix of subfixtures are always in RGB mode

Colors	DMX range		fade
[1] RGB - Red coarse	0	65535	fade
[2] RGBL - Red coarse			
[3] x;y - x coarse			
[1] RGB - Red fine			
[2] RGBL - Red fine			
[3] x;y - x fine			
[1] RGB - Green coarse	0	65535	fade
[2] RGBL - Green coarse			
[3] x;y - y coarse			
[1] RGB - Green fine			
[2] RGBL - Green fine			
[3] x;y - y fine			
[1] RGB - Blue coarse	0	65535	fade
[2] RGBL - Blue coarse			
[3] x;y - not used			
[1] RGB - Blue fine			
[2] RGBL - Blue fine			
[3] x;y - not used			
[1] RGB - not used	0	65535	fade
[2] RGBL - Lime coarse			
[3] x;y - not used			
[1] RGB - not used			
[2] RGBL - Lime fine			
[3] x;y - not used			

Pixel Color Control

Colors	DMX range		fade	Note
[1] RGB - Red	0	255	fade	0% .. 100%
[1] RGB - Green	0	255	fade	0% .. 100%
[1] RGB - Blue	0	255	fade	0% .. 100%

Pattern Select

Pattern Select	Pattern Editor	DMX range		fade	Notes
Idle	1	0	9	snap	All Pixel
Static Pattern 01	2	10	11	snap	
Static Pattern 02	3	12	13	snap	
Static Pattern 03	4	14	15	snap	
Static Pattern 04	5	16	17	snap	
Static Pattern 05	6	18	19	snap	
Static Pattern 06	7	20	21	snap	
Static Pattern 07	8	22	23	snap	
Static Pattern 08	9	24	25	snap	
Static Pattern 09	10	26	27	snap	
Static Pattern 10	11	28	29	snap	
Static Pattern 11	12	30	31	snap	
Static Pattern 12	13	32	33	snap	
Static Pattern 13	14	34	35	snap	
Static Pattern 14	15	36	37	snap	
Static Pattern 15	16	38	39	snap	
Static Pattern 16	17	40	41	snap	
Static Pattern 17	18	42	43	snap	
Static Pattern 18	19	44	45	snap	
Static Pattern 19	20	46	47	snap	
Static Pattern 20	21	48	49	snap	
Static Pattern 21	22	50	51	snap	
Static Pattern 22	23	52	53	snap	
Static Pattern 23	24	54	55	snap	
Static Pattern 24	25	56	57	snap	
Static Pattern 25	26	58	59	snap	
Static Pattern 26	27	60	61	snap	
Static Pattern 27	28	62	63	snap	
Static Pattern 28	29	64	65	snap	
Static Pattern 29	30	66	67	snap	
Static Pattern 30	31	68	69	snap	
Static Pattern 31	32	70	71	snap	
Static Pattern 32	33	72	73	snap	
Static Pattern 33	34	74	75	snap	
Static Pattern 34	35	76	77	snap	
Static Pattern 35	36	78	79	snap	
Static Pattern 36	37	80	81	snap	
Static Pattern 37	38	82	83	snap	
Static Pattern 38	39	84	85	snap	
Static Pattern 39	40	86	87	snap	
Static Pattern 40	41	88	89	snap	
Static Pattern 41	42	90	91	snap	
Static Pattern 42	43	92	93	snap	
Static Pattern 43	44	94	95	snap	
Static Pattern 44	45	96	97	snap	
Static Pattern 45	46	98	99	snap	
Static Pattern 46	47	100	101	snap	
Static Pattern 47	48	102	103	snap	
Static Pattern 48	49	104	105	snap	
Static Pattern 49	50	106	107	snap	
Static Pattern 50	51	108	109	snap	
Static Pattern 51	52	110	111	snap	

Pattern Select	Pattern Editor	DMX range		fade	Notes
Static Pattern 52	53	112	113	snap	
Static Pattern 53	54	114	115	snap	
Static Pattern 54	55	116	117	snap	
Static Pattern 55	56	118	119	snap	
Static Pattern 56	57	120	121	snap	
Static Pattern 57	58	122	123	snap	
Static Pattern 58	59	124	125	snap	
Static Pattern 59	60	126	127	snap	
Dynamic Pattern 01	61	128	129	snap	
Dynamic Pattern 02	62	130	131	snap	
Dynamic Pattern 03	63	132	133	snap	
Dynamic Pattern 04	64	134	135	snap	
Dynamic Pattern 05	65	136	137	snap	
Dynamic Pattern 06	66	138	139	snap	
Dynamic Pattern 07	67	140	141	snap	
Dynamic Pattern 08	68	142	143	snap	
Dynamic Pattern 09	69	144	145	snap	
Dynamic Pattern 10	70	146	147	snap	
Dynamic Pattern 11	71	148	149	snap	
Dynamic Pattern 12	72	150	151	snap	
Dynamic Pattern 13	73	152	153	snap	
Dynamic Pattern 14	74	154	155	snap	
Dynamic Pattern 15	75	156	157	snap	
Dynamic Pattern 16	76	158	159	snap	
Dynamic Pattern 17	77	160	161	snap	
Dynamic Pattern 18	78	162	163	snap	
Dynamic Pattern 19	79	164	165	snap	
Dynamic Pattern 20	80	166	167	snap	
Dynamic Pattern 21	81	168	169	snap	
Dynamic Pattern 22	82	170	171	snap	
Dynamic Pattern 23	83	172	173	snap	
Dynamic Pattern 24	84	174	175	snap	
Dynamic Pattern 25	85	176	177	snap	
Dynamic Pattern 26	86	178	179	snap	
Dynamic Pattern 27	87	180	181	snap	
Dynamic Pattern 28	88	182	183	snap	
Dynamic Pattern 29	89	184	185	snap	
Dynamic Pattern 30	90	186	187	snap	
Dynamic Pattern 31	91	188	189	snap	
Dynamic Pattern 32	92	190	191	snap	
Dynamic Pattern 33	93	192	193	snap	
Dynamic Pattern 34	94	194	195	snap	
Dynamic Pattern 35	95	196	197	snap	
Dynamic Pattern 36	96	198	199	snap	
Dynamic Pattern 37	97	200	201	snap	
Dynamic Pattern 38	98	202	203	snap	
Dynamic Pattern 39	99	204	205	snap	
Dynamic Pattern 40	100	206	207	snap	Beam Shaper
Dynamic Pattern 41	101	208	209	snap	Beam Shaper
Dynamic Pattern 42	102	210	211	snap	Beam Shaper
Dynamic Pattern 43	103	212	213	snap	Beam Shaper
Dynamic Pattern 44	104	214	215	snap	Beam Shaper
Dynamic Pattern 45	105	216	217	snap	Beam Shaper
Dynamic Pattern 46	106	218	219	snap	Beam Shaper
Dynamic Pattern 47	107	220	221	snap	Beam Shaper

Pattern Select	Pattern Editor	DMX range		fade	Notes
Dynamic Pattern 48	108	222	223	snap	Beam Shaper
Dynamic Pattern 49	109	224	225	snap	Beam Shaper
Dynamic Pattern 50	110	226	227	snap	Beam Shaper
Special Pattern 01	X	228	229	snap	Net pattern
Special Pattern 02	X	230	231	snap	Net pattern
Special Pattern 03	X	232	233	snap	Net pattern
Special Pattern 04	X	234	235	snap	Net pattern
Special Pattern 05	X	236	237	snap	Net pattern
Special Pattern 06	X	238	239	snap	Net pattern
Special Pattern 07	X	240	241	snap	Net pattern
Special Pattern 08	X	242	243	snap	Net pattern
Special Pattern 09	X	244	245	snap	Net pattern
Special Pattern 10	X	246	247	snap	Net pattern
Special Pattern 11	X	248	249	snap	Net pattern
Random Pixel	X	250	255	snap	Random Pixel Pattern

Pattern Step/Speed

Pattern Step/Speed	DMX range		fade
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
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/Speed	DMX range		fade
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
Pattern Step 61	248	249	snap
Pattern Step 62	250	251	snap
Pattern Step 63	252	253	snap
Pattern Step 64	254	255	snap

Pattern Step Crossfade

Sets crossfade in between steps of a pattern

Pattern Step Crossfade	DMX range		fade
Off (no Crossfade = Snap)	0	9	snap
XFade - Snap .. min. XFade .. max. XFade (Fade in and fade out time is identical)	10	127	fade
Off (no Crossfade = Snap)	128	137	snap
XFade with Tail - Snap .. min. XFade with Tail .. max. XFade with Tail (Fade-In time is shorter than Fade out time - this creates a shadow effect)	138	255	fade

Pattern Transition

Sets fade in between patterns when new pattern selected

Pattern Transition	**DMX range**		**fade**	**Notes**
Off (Snap between different Patterns)	0	9	snap	Pattern A to Pattern B will snap
Normal Transition (snap .. fade 5s)	10	63	fade	Pattern A to Pattern B will crossfade 0-5s
Off (Snap between different Patterns)	64	73	snap	Pattern A to Pattern B will snap
FOB Transition / Fade over Blackout (snap .. fade 5s)	74	127	fade	Pattern A to Pattern B will crossfade over Blackout 0-5s
Off (Snap between different Patterns)	128	137	snap	Pattern A to Pattern B will snap
FOF Transition / Fade over Full (snap .. fade 5s)	138	191	fade	Pattern A to Pattern B will crossfade over Full 0-5s
Off - reserved for additional feature	192	201		
No Transition Time - reserved for additional feature	202	255		

Mix Priority

Feature	DMX range		fade	Notes
Main & Sub (HTP)	0	9	snap	the highest color value of main- or subfixture defines the resulting color value of the color.
Main Only	10	19	snap	The color value of the sub fixture will be ignored. The resulting color value is the values of the main color value.
Sub Only	20	29	snap	The color value of the main fixture will be ignored. The resulting color value is the values of the sub color value.
Main + Sub additive	30	39	snap	The color value of the sub fixture will be added to the color value of the main color value. The resulting color value is the sum of both values.
Main - Sub subtractive	40	49	snap	The color value of the sub fixture will be subtracted from the color value of the main color value.
Sub - Main subtractive	50	59	snap	The color value of the main fixture will be subtracted from the color value of the sub color value.
TrueColor 1 : Main over Sub Snap	60	69	snap	Color Output from the Sub fixture Module stays in the background. Color Output from the Main fixture Module has higher priority and will not mix with the Sub color. As soon the color output value of the main module is >0 the Sub color will black out and the Main color will appear.
TrueColor2 : Sub over Main Snap https://glpdev.atlassian.net/browse/X5-66	70	79	snap	Color Output from the Main fixture Module stays in the background. Color Output from the Sub fixture Module has higher priority and will not mix with the main color. As soon the color output value of the sub module is >0 the main color will black out and the sub color will appear.
TrueColor3 : Main over Sub Crossfade	80	89	snap	Color Output from the Sub fixture Module stays in the background and the Color Output from the Main fixture Module has higher priority. If you fade in a Main color, the Sub color will crossfade to the Main color.
TrueColor4 : Sub over Main Crossfade	90	99	snap	Color Output from the Main fixture Module stays in the background and the Color Output from the Sub fixture Module has higher priority. If you fade in a Main color, the Sub color will crossfade to the Main color.
Not Used	100	127		Not used = Main & Sub (HTP)
Main only	128	130	snap	
Crossfade ...	...	...	fade	smooth fading
Main & Sub (HTP)	191	192	snap	
Crossfade ...	...	...	fade	smooth fading
Sub only	253	255	snap	

5. Key to conversion of x and y coordinates

The following formulas are used when converting DMX values to x/y coordinates on the RGB and RGBL color mixing channels:

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