

DeeMagiX: DMX Channel Assignment



Version 4.0

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Introduction

The DeeMagiX software allows controlling extraordinary laser effects using a DMX lighting console without special knowledge of laser show programming. It is like the link between laser and DMX.

DeeMagiX is part of the Lasergraph DSP *Mark 2* Production Suite and is included with every PHAENON *Stage* or BLITZ *Stage* system.

For DMX controlling of the laser projection system 40 channels can be used to select or set the following:

- Positions resp. movements of the projector head (*Stage* systems only).
- Gobos, animations, texts, beams and special effects.
- Size, position, movement, color, brightness and focus of the projection.
- Direction and speed of the rotation of the grating wheels.

Note:

All grating wheel channels are only available with laser projectors containing a built-in grating module.

If you want to use the same Lasergraph DSP as a DMX source that runs DeeMagiX make sure to set an offset because DMX channel 1 - 11 are internally used to control the Gobowheel.

DMX Channel Assignment

Overview

CHANNEL	FUNCTION	DEFAULT	AUTO FADE
Moving Yoke (Stage units only)			
1	Pan Coarse	32768	yes
2	Pan Fine		
3	Tilt Coarse	32768	yes
4	Tilt Fine		
5	Yoke Speed	255	
6	reserved	-	
Mechanics (grating wheels)			
7	Wheel 1	0	no
8	Wheel 1 Index / Rotation	128	yes
9	Wheel 2	0	no
10	Wheel 2 Index / Rotation	128	yes
Projection			
11	Dimmer	0	yes
12	Strobe	0	yes
13	Object Bank	0	no
14	Object Slot	0	no
15	Effect	0	no
16	Effect Speed	192	yes
17	Object Size	255	yes
18	Zoom	255	yes
19	Index	128	yes
20	Mask	0	yes
21	Aspect Ratio	128	yes
22	Offset X Coarse	32768	yes
23	Offset X Fine		
24	Offset Y Coarse	32768	yes
25	Offset Y Fine		
26	Sparkle	0	yes
27	Color	0	yes
28	Red	0	
29	Green	0	
30	Blue	0	
31	Cyan	0	
32	Indigo	0	
33	Yellow	0	



CHANNEL	FUNCTION	DEFAULT	AUTO FADE
Projection			
34	Scanning Frequency Coarse	0	
35	Scanning Frequency Fine		
36	DGC Select	0	
37	reserved for future use	0	
38	reserved for future use	0	
39	reserved for future use	0	
40	reserved for future use	0	



Detailed Assignment

VALUE	FUNCTION	
Channel 1/2 Moving Yoke Pan (Stage units only)		
0-65535	0 – 360°	
Channel 3/4 Moving Yoke Tilt (Stage units only)		
0-65535	0 – 270°	
Channel 5 Yoke Speed		
0-255	min. - max.	
Channel 6 reserved		
0-255	reserved for future use	
Channel 7 Wheel 1		
0 – 63		Open
64 – 95	Indexed	Grid WT
96 – 127	Indexed	Machado
128 – 159	Indexed	Stargate
160 – 191	Rotation	Grid WT
192 – 223	Rotation	Machado
224 – 255	Rotation	Stargate
Channel 8 Wheel 1 – Index / Rotation		
0 – 255	Index	-90° ... 0° ... +90°
0 – 127	Rotation	CCW Fast ... CCW Slow
128	Rotation	No Rotation
129 – 255	Rotation	CW Slow... CW Fast
Channel 9 Wheel 2		
0 – 63		Open
64 – 95	Indexed	Grid XT
96 – 127	Indexed	Line
128 – 159	Indexed	Lumia
160 – 191	Rotation	Grid XT
192 – 223	Rotation	Line
224 – 255	Rotation	Lumia
Channel 10 Wheel 2 – Index / Rotation		
0 – 255	Index	-90° ... 0° ... +90°
0 – 127	Rotation	CCW Fast... CCW Slow
128	Rotation	No Rotation
129 – 255	Rotation	CW Slow... CW Fast
Channel 11 Dimmer		
0-185	Intensity 0 – 100%	
186-255	Fade to White (bleaching colors)	

VALUE	FUNCTION					
Channel 12 Strobe						
0	No Strobe					
1-127	Strobe (Slow → Fast)					
Channel 13 Object Bank						
0 – 7	Gobo Bank 1	Gobo 0 – 31				
8 – 15	Gobo Bank 2	Gobo 32 – 63				
16 – 23	Gobo Bank 3	Gobo 64 – 95				
24 – 31	Gobo Bank 4	Gobo 96 – 127				
32 – 39	Gobo Bank 5	Gobo 128 – 159				
40 – 47	Gobo Bank 6	Gobo 160 – 191				
48 – 55	Gobo Bank 7	Gobo 192 – 223				
56 – 63	Gobo Bank 8	Gobo 224 – 255				
128 – 135	Animation Bank	Animation 1 – 32				
192 – 199	Text Bank	Text 1 – 32				
216 – 223	Special Bank	Special 1 – 5				
232 – 239	Beam Bank	Beam 1 – 18				
248 – 255	Test Picture	(independent of Channel 14 and Channel 15)				
Channel 14 Used Object Slots (depending on Channel 13)						
Value	Slot	Gobo	Animation	Text	Special	Beam
0 – 7	1	0, 32, 64, ...	1	1	Wave	Pattern
8 – 15	2	1, 33, 65, ...	2	2	Heartbeat	Pattern
16 – 23	3	2, 34, 66, ...	3	3	Digital Clock	Pattern
24 – 31	4	3, 35, 67, ...	4	4	Analog Clock 1	Pattern
32 – 39	5	4, 36, 68, ...	5	5	Analog Clock 2	Pattern
40 – 47	6	5, 37, 69, ...	6	6		Pattern
48 – 55	7	6, 38, 70, ...	7	7		Pattern
56 – 63	8	7, 39, 71, ...	8	8		Pattern
64 – 71	9	8, 40, 72, ...	9	9		Pattern
72 – 79	10	9, 41, 73, ...	10	10		Pattern
80 – 87	11	10, 42, 74, ...	11	11		Single
88 – 95	12	11, 43, 75, ...	12	12		Single
96 – 103	13	12, 44, 76, ...	13	13		Single
104 – 111	14	13, 45, 77, ...	14	14		Single
112 – 119	15	14, 46, 78, ...	15	15		Single
120 – 127	16	15, 47, 79, ...	16	16		Single
128 – 135	17	16, 48, 80, ...	17	17		Single
136 – 143	18	17, 49, 81, ...	18	18		Single
144 – 151	19	18, 50, 82, ...	19	19		
152 – 159	20	19, 51, 83, ...	20	20		
160 – 167	21	20, 52, 84, ...	21	21		
168 – 175	22	21, 53, 85, ...	22	22		
176 – 183	23	22, 54, 86, ...	23	23		
184 – 191	24	23, 55, 87, ...	24	24		
192 – 199	25	24, 56, 88, ...	25	25		
200 – 207	26	25, 57, 89, ...	26	26		



Channel 14 Used Object Slots (depending on Channel 13)						
Value	Slot	Gobo	Animation	Text	Special	Beam
208 – 215	27	26, 58, 90, ...	27	27		
216 – 223	28	27, 59, 91, ...	28	28		
224 – 231	29	28, 60, 92, ...	29	29		
232 – 239	30	29, 61, 93, ...	30	30		
240 – 247	31	30, 62, 94, ...	31	31		
248 – 255	32	31, 63, 95, ...	32	32		

Channel 14 Object Slot Gobo Bank 1							
0 – 7	8 – 15	16 – 23	24 – 31	32 – 39	40 – 47	48 – 55	56 – 63
000	001	002	003	004	005	006	007
64 – 71	72 – 79	80 – 87	88 – 95	96 – 103	104 – 111	112 – 119	120 – 127
008	009	010	011	012	013	014	015
128 – 135	136 – 143	144 – 151	152 – 159	160 – 167	168 – 175	176 – 183	184 – 191
016	017	018	019	020	021	022	023
192 – 199	200 – 207	208 – 215	216 – 223	224 – 231	232 – 239	240 – 247	248 – 255
024	025	026	027	028	029	030	031

Channel 14 Object Slot Gobo Bank 2							
0 - 7	8 - 15	16 - 23	24 - 31	32 - 39	40 - 47	48 - 55	56 - 63
032	033	034	035	036	037	038	039
64 - 71	72 - 79	80 - 87	88 - 95	96 - 103	104 - 111	112 - 119	120 - 127
040	041	042	043	044	045	046	047
128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183	184 - 191
048	049	050	051	052	053	054	055
192 - 199	200 - 207	208 - 215	216 - 223	224 - 231	232 - 239	240 - 247	248 - 255
056	057	058	059	060	061	062	063

Channel 14 Object Slot Gobo Bank 3							
0 - 7	8 - 15	16 - 23	24 - 31	32 - 39	40 - 47	48 - 55	56 - 63
064	065	066	067	068	069	070	071
64 - 71	72 - 79	80 - 87	88 - 95	96 - 103	104 - 111	112 - 119	120 - 127
072	073	074	075	076	077	078	079
128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183	184 - 191
080	081	082	083	084	085	086	087
192 - 199	200 - 207	208 - 215	216 - 223	224 - 231	232 - 239	240 - 247	248 - 255
088	089	090	091	092	093	094	095



Channel 14 Object Slot Gobo Bank 4							
0 – 7	8 – 15	16 – 23	24 – 31	32 – 39	40 – 47	48 – 55	56 – 63
096	097	098	099	100	101	102	103
64 – 71	72 – 79	80 – 87	88 – 95	96 – 103	104 – 111	112 – 119	120 – 127
104	105	106	107	108	109	110	111
128 – 135	136 – 143	144 – 151	152 – 159	160 – 167	168 – 175	176 – 183	184 – 191
112	113	114	115	116	117	118	119
192 – 199	200 – 207	208 – 215	216 – 223	224 – 231	232 – 239	240 – 247	248 – 255
120	121	122	123	124	125	126	127
Channel 14 Object Slot Gobo Bank 5							
0 – 7	8 – 15	16 – 23	24 – 31	32 – 39	40 – 47	48 – 55	56 – 63
128	129	130	131	132	133	134	135
64 – 71	72 – 79	80 – 87	88 – 95	96 – 103	104 – 111	112 – 119	120 – 127
136	137	138	139	140	141	142	143
128 – 135	136 – 143	144 – 151	152 – 159	160 – 167	168 – 175	176 – 183	184 – 191
144	145	146	147	148	149	150	151
192 – 199	200 – 207	208 – 215	216 – 223	224 – 231	232 – 239	240 – 247	248 – 255
152	153	154	155	156	157	158	159

Channel 14 Object Slot Gobo Bank 6							
0 - 7	8 - 15	16 - 23	24 - 31	32 - 39	40 - 47	48 - 55	56 - 63
160	161	162	163	164	165	166	167
64 - 71	72 - 79	80 - 87	88 - 95	96 - 103	104 - 111	112 - 119	120 - 127
168	169	170	171	172	173	174	175
128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183	184 - 191
176	177	178	179	180	181	182	183
192 - 199	200 - 207	208 - 215	216 - 223	224 - 231	232 - 239	240 - 247	248 - 255
184	185	186	187	188	189	190	191
Channel 14 Object Slot Gobo Bank 7							
0 - 7	8 - 15	16 - 23	24 - 31	32 - 39	40 - 47	48 - 55	56 - 63
192	193	194	195	196	197	198	199
64 - 71	72 - 79	80 - 87	88 - 95	96 - 103	104 - 111	112 - 119	120 - 127
200	201	202	203	204	205	206	207
128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183	184 - 191
208	209	210	211	212	213	214	215
192 - 199	200 - 207	208 - 215	216 - 223	224 - 231	232 - 239	240 - 247	248 - 255
216	217	218	219	220	221	222	223



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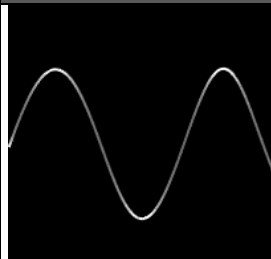
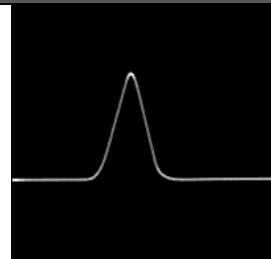
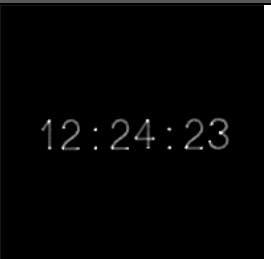
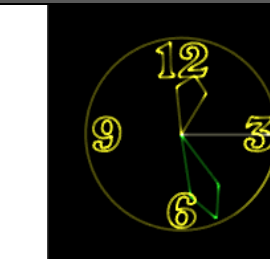



Channel 14 Object Slot Gobo Bank 8							
0 - 7	8 - 15	16 - 23	24 - 31	32 - 39	40 - 47	48 - 55	56 - 63
224	225	226	227	228	229	230	231
64 - 71	72 - 79	80 - 87	88 - 95	96 - 103	104 - 111	112 - 119	120 - 127
232	233	234	235	236	237	238	239
128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183	184 - 191
240	241	242	243	244	245	246	247
192 - 199	200 - 207	208 - 215	216 - 223	224 - 231	232 - 239	240 - 247	248 - 255
248	249	250	251	252	253	254	255

Channel 14 Object Slot Animation Bank							
0 - 7	8 - 15	16 - 23	24 - 31	32 - 39	40 - 47	48 - 55	56 - 63
Ani_01	Ani_02	Ani_03	Ani_04	Ani_05	Ani_06	Ani_07	Ani_08
64 - 71	72 - 79	80 - 87	88 - 95	96 - 103	104 - 111	112 - 119	120 - 127
Ani_09	Ani_10	Ani_11	Ani_12	Ani_13	Ani_14	Ani_15	Ani_16
128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183	184 - 191
Ani_17	Ani_18	Ani_19	Ani_20	Ani_21	Ani_22	Ani_23	Ani_24
192 - 199	200 - 207	208 - 215	216 - 223	224 - 231	232 - 239	240 - 247	248 - 255
Ani_25	Ani_26	Ani_27	Ani_28	Ani_29	Ani_30	Ani_31	Ani_32



VALUE	FUNCTION	
Channel 14	Object Slot Text Bank	
Value	Slot	Default Text
0 – 7	1	WELCOME
8 – 15	2	WELCOME, LADIES AND GENTLEMEN
16 – 23	3	GOOD EVENING, LADIES AND GENTLEMEN
24 – 31	4	HAPPY BIRTHDAY
32 – 39	5	MERRY CHRISTMAS
40 – 47	6	HAPPY NEW YEAR
48 – 55	7	HAPPY EASTER
56 – 63	8	HAPPY HALLOWEEN
64 – 71	9	JUST MARRIED
72 – 79	10	CONGRATULATIONS
80 – 87	11	IT'S SHOWTIME
88 – 95	12	IT'S PARTY TIME
96 – 103	13	HAVE A NICE PARTY
104 – 111	14	HAVE A NICE EVENING
112 – 119	15	HAVE A NICE DAY
120 – 127	16	LET'S DANCE
128 – 135	17	READY TO RUMBLE
136 – 143	18	COME ON EVERYBODY
144 – 151	19	APPLAUSE
152 – 159	20	THANK YOU
160 – 167	21	QUIET PLEASE
168 – 175	22	LISTEN
176 – 183	23	GOAL!
184 – 191	24	START
192 – 199	25	FINISH
200 – 207	26	BREAK
208 – 215	27	CHEERS
216 – 223	28	NO SMOKING PLEASE
224 – 231	29	TIME TO SAY GOOD BYE
232 – 239	30	GOOD BYE
240 – 247	31	ACCURATE BLITZ STAGE
248 – 255	32	10 9 8 7 6 5 4 3 2 1 GO!

Channel 14 Object Slot Special Bank			
0 – 7	8 – 15	16 – 23	24 – 31
			
Wave	Heartbeat	Digital Clock	Analog Clock 1
32 – 39			
			
Analog Clock 2			

Channel 14 Object Slot Beam Bank											
VALUE	Slot	FUNCTION									
		Beam Pattern									
		1	2	3	4	5	6	7	8	9	10
0 – 7	1	X	X	X	X	X	X	X	X	X	X
8 – 15	2	X	X								
16 – 23	3									X	X
24 – 31	4					X	X				
32 – 39	5	X		X					X		X
40 – 47	6		X		X						
48 – 55	7							X		X	
56 – 63	8	X	X							X	X
64 – 71	9				X	X	X	X			
72 – 79	10		X	X	X	X	X	X	X	X	
		Single Beams									
80 – 87	11	X									
88 – 95	12		X								
96 – 103	13			X							
104 – 111	14				X						
112 – 119	15					X					
120 – 127	16						X				
128 – 135	17							X			
136 – 143	18								X		
144 - 151	19									X	
152 - 159	20										X

VALUE	FUNCTION			
Channel 15 Effect (depending on Channel 13)				
		Gobo Channel 13 = 0...63	Animation Channel 13 = 128...135	Text Channel 13 = 192...199
0 – 7	Effect 1	Static	Static	Right to left
8 – 15	Effect 2	Rotate	Rotate	Diagonal
16 – 23	Effect 3	Draw, extinguish	Prism	Diagonal, fade in
24 – 31	Effect 4	Prism		Half rotating characters
32 – 39	Effect 5	Movement, horizontal		Rotating characters
40 – 47	Effect 6	Movement, vertical		Swaying characters
48 – 55	Effect 7	Movement in circle around center		Twisting characters
56 – 63	Effect 8	Movement in circle and Rotate around center		Wave
64 – 71	Effect 9	Movement in square and rotate around center		Distorting characters
72 – 79	Effect 10	Rotate, zooming 1		Zooming characters
80 – 87	Effect 11	3 Gobos: Rotate and up / down		
88 – 95	Effect 12	Rotate and Ratio		
96 – 103	Effect 13	3 Gobos: Rotate, ratio and up / down		
104 – 111	Effect 14	3 Gobos: Zoom and movement around center		
112 – 119	Effect 15	3 Gobos: Rotate, clipped		

VALUE	FUNCTION		
Channel 15 Effect (depending on Channel 13)			
120 – 127	Effect 16	3 Gobos: Rotation	
128 – 135	Effect 17	4 Gobos: Movement diagonal and rotation	
136 – 143	Effect 18	2 Gobos: Rotation, stretched	
144 – 151	Effect 19	2 Gobos: Up/down and left/right 1	
152 – 159	Effect 20	Rotate, zooming 2	
160 – 167	Effect 21	4 Gobos: Move through center	
168 – 175	Effect 22	4 Gobos: Rotation and move through center	
176 – 183	Effect 23	2 Gobos: Fly around 1	
184 – 191	Effect 24	2 Gobos: Fly around 2	
192 – 199	Effect 25	2 Gobos: Up / down and left / right 2	
200 – 207	Effect 26	3 Gobos: Up / down, rotation	
208 – 215	Effect 27	2 Gobos: Movement and rotate	
216 – 223	Effect 28	2 Gobos: Movement from top to bottom	
224 – 231	Effect 29	2 Gobos: Rotate, zooming 3	
232 – 239	Effect 30	2 Gobos: Rotate, zooming 4	
240 – 247	Effect 31	2 Gobos: Rotate, zooming 5	
248 – 255	Effect 32	2 Gobos: Rotate, clipped	
Channel 16 Effect Speed / Direction			
0 – 127	Backward fast ... slow		
128	Stop		
129 – 255	Forward slow ... fast		
Channel 17 Object Size			
0 – 255	10% - 100%		
Channel 18 Zoom			
0 – 255	10% - 100%		
Channel 19 Index			
0 – 255	-240° ... 0° ... +240°		
Channel 20 Mask			
0 – 63	Open – Close (Iris)		
64 – 127	Close – Open (Square)		
128 – 191	Close – Open (Horizontal)		
192 – 255	Open – Close (Vertical)		
Channel 21 Aspect Ratio			
0 – 127	Y-Size -100% → +100%		
128 – 255	X-Size +100% → -100%		
Channel 22/23 Offset X			
0 – 65535	Left... Center... Right		
Channel 24/25 Offset Y			
0 – 65535	Top... Center... Bottom		



VALUE	FUNCTION
Channel 26 Sparkle	
0 – 7	No Sparkle
8 – 127	Static (Repeats 1 – 15)
128 – 255	Random
Channel 27 Color	
<p>Attention: To obtain the following colors DMX channel 10 <i>Dimmer</i> has to be set to 80% (DMX value: 185 or lower for reduced brightness). If <i>Dimmer</i> is set to values higher than 185 output color will change to WHITE, except in the RGBCIY (additive mixture) mode !</p> <p>Notes:</p> <ol style="list-style-type: none"> Using values from 1 to 64 the colors based on the "Primary Colors" (DSP Global Parameter Window) can be controlled. With values from 73 to 128 it is possible to influence the six "Laser lines" C1 - C6. Settings in the "Primary Colors" have no effect. 	
DMX Value	Color
0	Original color of frame
1...8	Red ⇔ Magenta
9...16	Black ⇔ Blue
17...24	Black ⇔ Cyan
25...32	Black ⇔ Green
33...40	Blue ⇔ Yellow
41...48	Green ⇔ Red
49...56	Magenta ⇔ White
57...64	Green ⇔ Power
65...72	Magenta (special) ⇔ Black
73...80	C2 Green & C6 Yellow ⇔ Black
81...88	C1 Red ⇔ Black
89...96	C4 Cyan & C6 Yellow ⇔ Black
97...104	C3 Blue ⇔ Black
105...112	C3 Blue & C4 Cyan ⇔ Black
113...120	C1 Red & C3 Blue & C6 Yellow ⇔ Black
121...128	C2 Green & C6 Yellow ⇔ C1 Red & C4 Cyan
128...191	Color Changer
192...229	Color Cycle
230...255	RGBCIY (additive mixture of colors)



VALUE	Valid if channel 27 → 230 - 255 !!!	
Channel 28 RED Value		
DMX Value	0 - 255	0% - 100%
Channel 29 Green Value		
DMX Value	0 - 255	0% - 100%
Channel 30 Blue Value		
DMX Value	0 - 255	0% - 100%
Channel 31 Cyan Value		
DMX Value	0 - 255	0% - 100%
Channel 32 Indigo Value		
DMX Value	0 - 255	0% - 100%
Channel 33 Yellow Value		
DMX Value	0 - 255	0% - 100%

VALUE	Function
Channel 34/35 Scanning Frequency	
0 - 99	"external"
100-65535	15.000 - 40.000
Channel 36 DGC Select	
0 - 15	"DGC 0"
16 - 31	"DGC 1"
32 - 47	"DGC 2"
48 - 63	"DGC 3"
64 - 79	"DGC 4"
80 - 95	"DGC 5"
96 - 111	"DGC 6"
112 - 127	"DGC 7"
128 - 143	"DGC 8"
144 - 159	"DGC 9"
160 - 175	"DGC 10"
176 - 191	"DGC 11"
192 - 207	"DGC 12"
208 - 223	"DGC 13"
224 - 239	"DGC 14"
240 - 255	"DGC 15"

Channels 37-40 reserved for future use

