LaserAnimation
SOLLINGER

DeeMagiX: DMX Channel Assignment

Version 3.x

Certified
TÜV SÜD ISO 9001
ISO 9001

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MADE IN GERMANY

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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 26 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, brightness and focus of the projection.
- Direction and speed of the rotation of the grating wheels.

<u>Note:</u>

All Gobo 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 channels 1 - 11 are internally used to control the Gobowheel.

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Overview DMX Channels

Channel 1/2 *Pan* (Stage units only)

Channel 1 and 2 control the horizontal movement of the projector head.
Channel 1 is used to set the coarse value (8Bit). The range of the movement for pan is 360°. With the default setting of 128 the head is positioned at 180°.
When working in fine mode channel 2 is added and a resolution of 16Bit is available for precise movements.

Channel 3/4 *Tilt* (Stage units only)

Channel 3 and 4 control the vertical movement of the projector head.
Channel 3 is used to set the coarse value (8Bit). The range of the movement for tilt is 270°. With the default setting of 128 the head is positioned at 135°.
When working in fine mode channel 4 is added and a resolution of 16Bit is available for precise movements.

Channel 5 *Wheel 1*

Channel 5 controls wheel 1 of the grating module.
The grating module contains two wheels each equipped with three glass gratings and is positioned in front of the scanners. It is therefore freely combinable with gobos, animations and texts. So you can for instance project gobos through a glass grating and create quite interesting effects.

You can choose three different gratings from wheel 1.

For DMX values from 64 to 159 you will find the indexed gratings.

The following DMX values from 160 to 255 will select the gratings with rotation.

If the DMX value is set from 0 to 63 no grating is positioned in front of the scanners.

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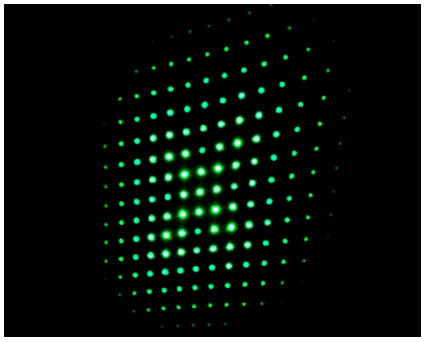
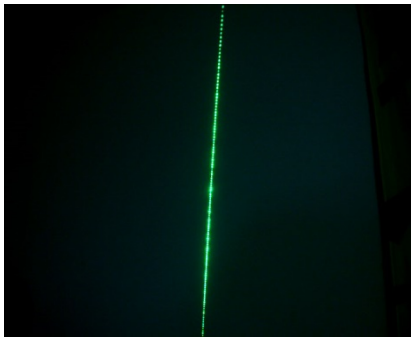
Wheel 1 is equipped with following gratings:



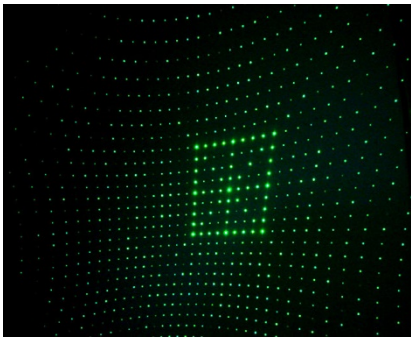
Grid WT (Cross Grid)

DMX value:
64 – 95 (indexed)
160 – 191 (rotation)



Machado (Narrow Line Grid)

DMX value:
96 – 127 (indexed)
192 – 223 (rotation)



Stargate (Cross Grid)

DMX value:
128 – 159 (indexed)
224 – 255 (rotation)

Channel 6 *Wheel 1 Index / Rotation*

Channel 6 controls the index position resp. rotation of the wheel 1.

If channel 5 has a value from 64 to 159 channel 6 controls the index position of the selected grating.

Some values for index positions:

DMX value of channel 6	Index position
0	– 90°
43	– 60°
64	– 45°
85	– 30°
128	0°
171	+ 30°
192	+ 45°
213	+ 60°
255	+ 90°

Notes:

Numerous small steps may cause an increasing difference between actual and desired position.
To get a precise position it might be necessary to reset the index by either changing the grating or rotate to the 0° position (DMX value 128).

If channel 5 has a value from 160 to 255 channel 6 controls the speed of the rotation of the selected grating.

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Some values for rotation:

DMX value of channel 6	Speed	Direction
0	Fast	counter clockwise
64	Slow	counter clockwise
128	Stop	-
192	Slow	clockwise
255	Fast	clockwise

Channel 7 *Wheel 2*

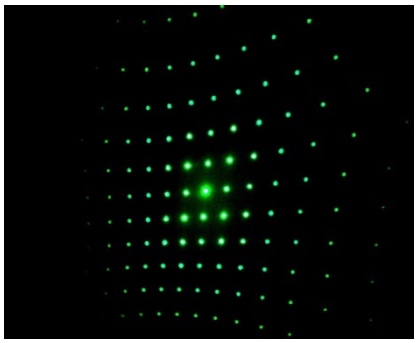
Channel 7 controls the wheel 2. You can choose also three different gratings.

For DMX values from 64 to 159 you will find the indexed gratings.

The following DMX values from 160 to 255 will select the gratings with rotation.

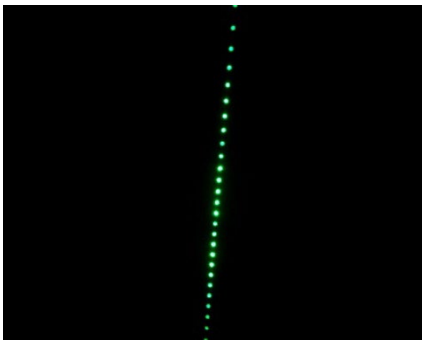
If the DMX value is set from 0 to 63 no grating is positioned in front of the scanners.

Wheel 2 is equipped with following gratings:



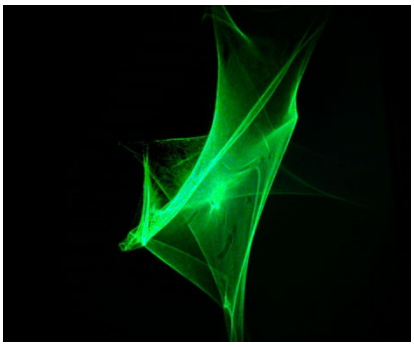
Grid XT (Cross Grid)

DMX value:
64 – 95 (indexed)
160 – 191 (rotation)



Line (Line Grid)

DMX value:
96 – 127 (indexed)
192 – 223 (rotation)



Lumia

DMX value:
128 – 159 (indexed)
224 – 255 (rotation)

Channel 8 *Wheel 2 Index / Rotation*

Channel 8 controls index position resp. rotation of the wheel 2.

If channel 7 has a value from 64 to 159 channel 8 controls the index position of the selected grating.
Some values for index positions:

DMX value of channel 8	Index position
0	– 90°
43	– 60°
64	– 45°
85	– 30°
128	0°
171	+ 30°
192	+ 45°
213	+ 60°
255	+ 90°

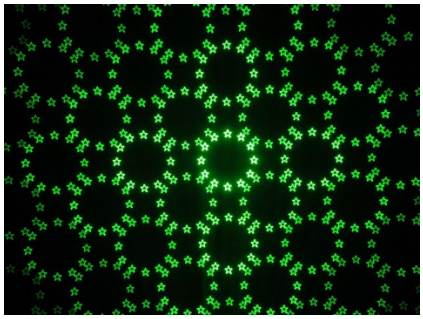
Note:

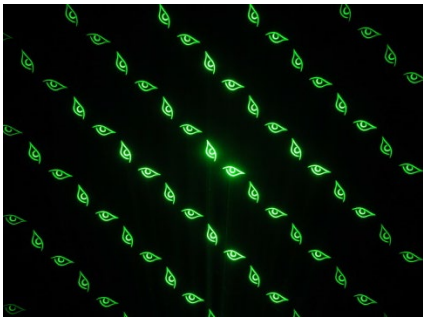
Numerous small steps may cause an increasing difference between actual and desired position.
To get a precise position it might be necessary to reset the index by either changing the grating or rotate to the 0° position (DMX value 128).

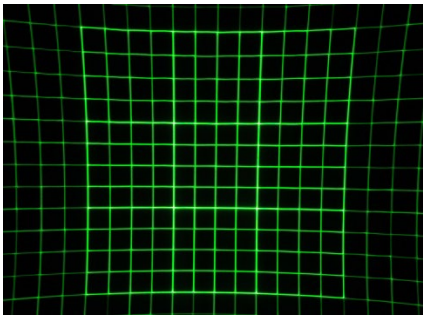
If channel 7 has a value from 160 to 255 channel 8 controls the speed of the rotation of the selected grating.
Some values for rotation:

DMX value of channel 8	Speed	Direction
0	Fast	counter clockwise
64	Slow	counter clockwise
128	Stop	-
192	Slow	clockwise
255	Fast	clockwise

Example of combinations of gratings with different gobos:


Grid XT & Gobo 142


Line & Grid WT & Gobo 174


Stargate & Gobo 056

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Channel 9 *Focus (for laser systems with focus control only)*

Channel 9 controls the beam focus with laser projectors containing a motorized focus -included with BLITZ Stage units. This parameter is used to influence the divergence of the laser beam. You can make the complete output look continuously more and more diffuse between the values 0 and 255. This can be very effective e.g. when a logo or a graphic (even projected through a prism) is to get slowly clearer from a diffuse blur!

This feature is also very useful for a safer laser beam. The laser becomes safer after expanding the beam. For details have a look at your local laser safety regulations or ask your laser safety officer.

Channel 10 *Dimmer*

Channel 13 controls the output power.
The default setting, the DMX value 185, means 100% output power. By reducing this value you can dim the brightness continuously.

The DMX values from 186 to 255 continuously "bleach" out the colors until the projection is white (full color laser projectors only).

Channel 11 *Strobe*

With this parameter you can apply a strobe effect to the scanner output.
The default setting is 0, i.e. the picture is displayed permanently.
An increase in the value turns the picture on and off. The higher the value is set the faster the strobe effect gets.

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Channel 12 *Object Bank*

Channels 12 and 13 select the output. Channel 13 depends on channel 12.
Channel 14 adds an effect depending on the selected object bank. Channel 15 controls the speed of the selected effect.

DMX value	Bank	Categories by default
0 – 7	Gobos	beam show elements
8 – 15	Gobos	beam show elements
16 – 23	Gobos	ornaments
24 – 31	Gobos	templates
32 – 39	Gobos	arrows, x-mas, music
40 – 47	Gobos	humans, buildings
48 – 55	Gobos	vehicles, nature
56 – 63	Gobos	misc., 3d objects
128 – 135	Animations	-
192 – 199	Texts	-
216 – 223	Specials	-
232 – 239	Beams	single beams, pattern
248 – 255	Test Picture	-

Channel 13 *Object Slot*

Within this channel a gobo, an animation, a text, a beam or a special output will be selected. It depends on channel 12 (see table above). The channel is divided into 32 sections, where each 8th section represents a new slot. You can compare it to a gobo wheel with 32 gobo slots in a moving light.

Channel 14 *Effect*

The function of this channel depends on channel 12 too.
There are different types of effects, e.g. rotation effects or moving effects. You can compare this channel to the effect engine in your lighting console, but with a higher resolution than 16Bit on two channels.

Channel 15 *Speed, Direction*

Channel 15 controls the movement speed and the direction of the effects. The default setting is DMX value 192 which results in a medium speed in forward turning direction. When you increase the value the movement speed increases, when you reduce the value it gets slower until it stops at the DMX value 128.
With values from 128 - 0 you reverse the direction of the movement and increase the speed continuously up to the DMX value 0.

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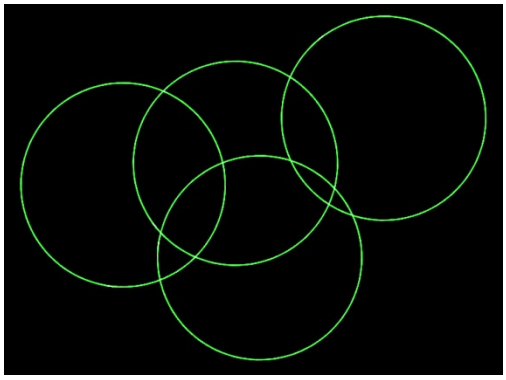
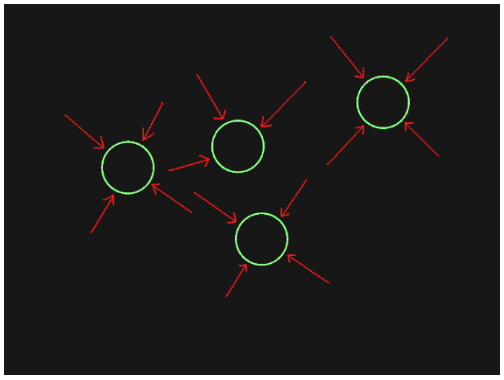
This channel will also control the speed of an animation or text. If e.g. the text bank is selected and this channel is set to value 128, the output may be black. The reason is that the texts move sideways into the screen and are no more visible.

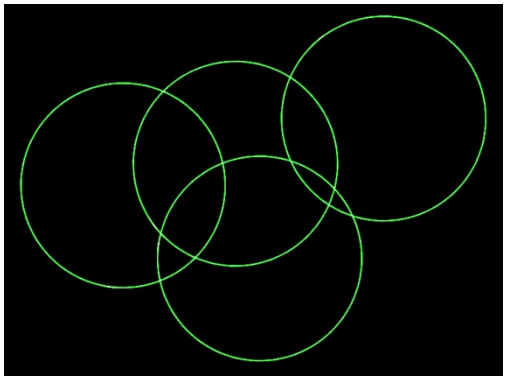
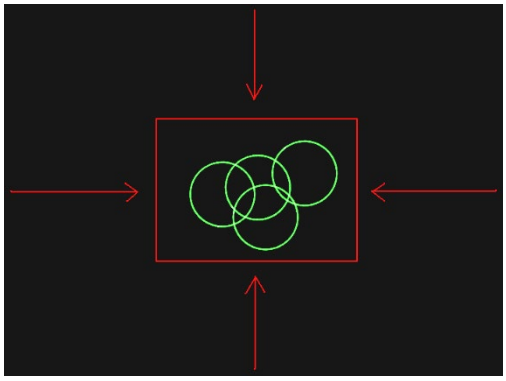
Channel 16 *Object Size*

This channel increases or decreases the size of the selected gobos/animations/characters.
With the default setting 255 the object has its maximum size, with 0 the object size is at its minimum.
For safety reasons it is not possible to reduce the size to one single point.
This channel only influences the size of the object, the movement radius is not changed.

Channel 17 *Zoom*

This channel increases or decreases the size of the whole projection.
Movement radius and object size are influenced by the same ratio.
With the default setting 255 the maximum projection size is reached.
From 255 to the DMX value 0 you can continuously reduce the size of the projection.

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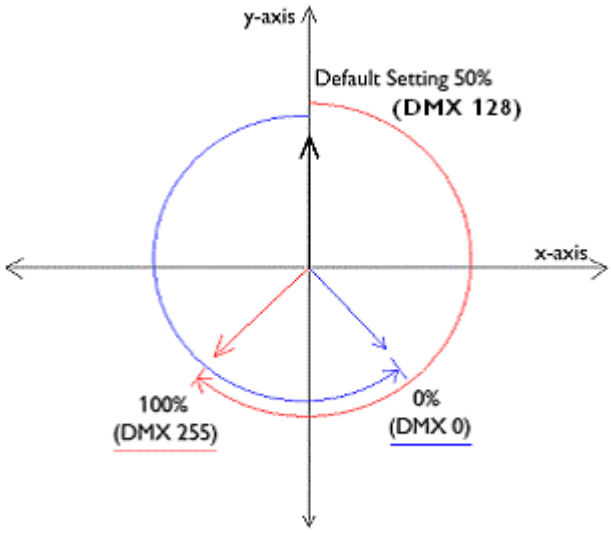
Channel 18 *Index*

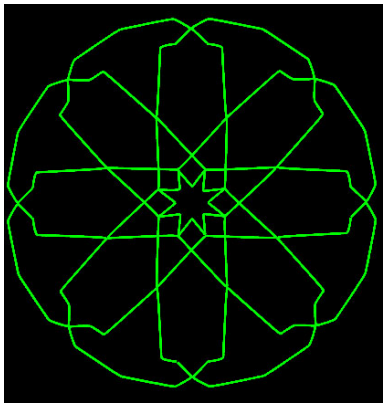
With this channel you can rotate the object around the z-axis.
The default setting is 128, which shows the object in its original position.

Reducing the value from 128 to 0 rotates the object counterclockwise by 240°.
Increasing the value from 128 to 255 rotates the object clockwise by 240°.

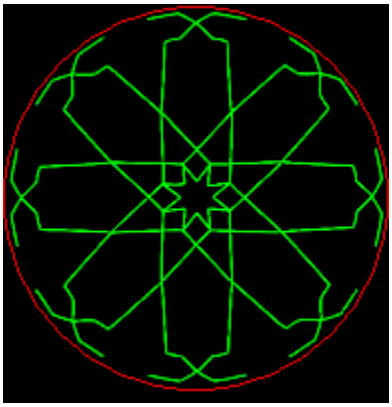


Channel 19 *Mask*

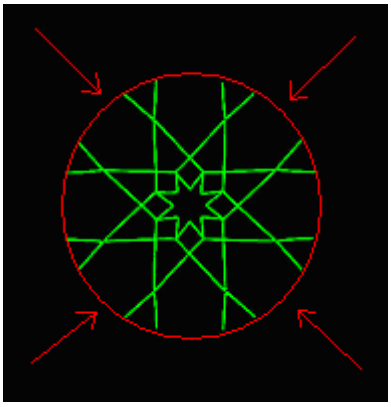
With this channel you can limit the laser output horizontally as well as vertically in different ways.
All objects located outside this virtual limiting line will be "cut off", they are no longer visible.
The default setting is 0, the output is completely visible.
With DMX values between 0 and 63 the output is limited circularly, like an iris in a moving light, until it completely disappears at value 63.



DMX Value 0



DMX Value between 0 and 63



DMX Value between 0 and 63

The DMX values 64 -127 result in a square-shaped clipping.

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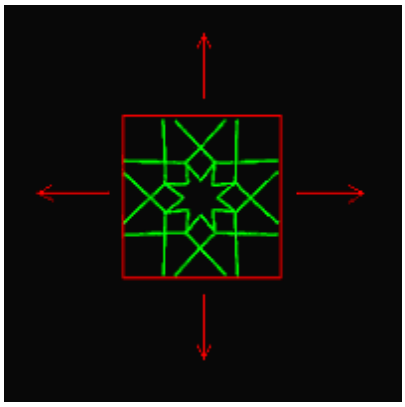
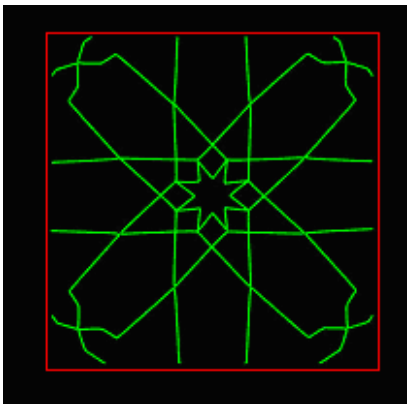
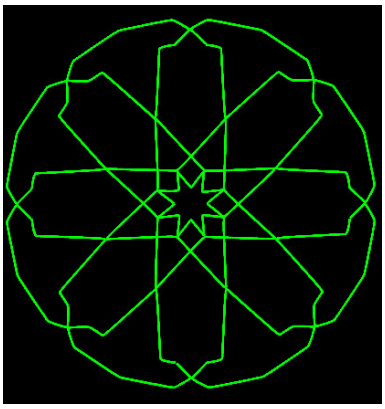


DMX Value 64 – 127



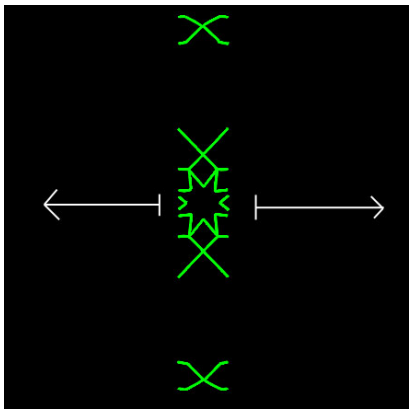
DMX Value between 64 and 127



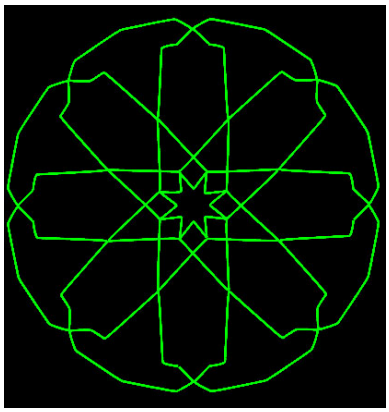
DMX Value 127

At DMX value 128 the graphic is invisible and continuously builds itself up along the x-axis when the values are increased up to 192.

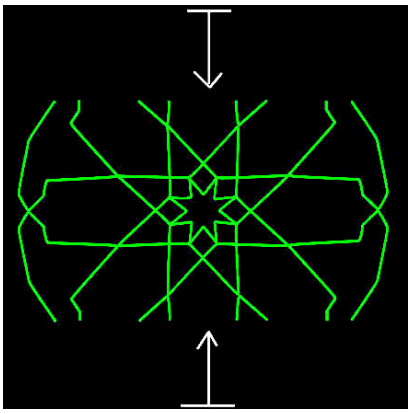
At DMX value 192 the graphic is completely visible and is "cut off" at the top and the bottom when the values are increased up to 255.



DMX Value 128 - 192



DMX Value 192



DMX Value 192 - 255

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Channel 20 *Aspect Ratio*

With channel 20 you compress the output in the x- resp. y-direction until it expands again in the opposite direction.
The default setting is 128.

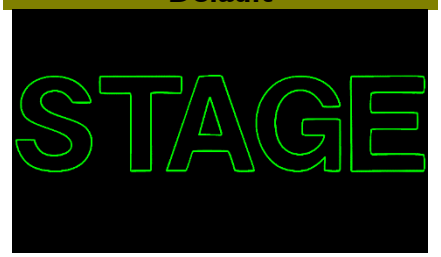
Sometimes it is important to adapt the output to the local conditions. If you want to make a rear projection use the DMX value 255 and the projection will be mirrored so it appears the right way around to the viewers.

Horizontally Mirrored

DMX value 0

DMX value 0 – 127

Default



DMX value 128

Vertically Mirrored

DMX value 128 – 255

DMX value 255

Channel 21/22 *Offset X*

Channel 21 allows a rough positioning of the scanner output on the horizontal plane with a resolution of 8Bit.
The DMX value 128 is the default setting which positions the projected scanner picture in the center.
Values from 128 to 0 move the picture left, values over 128 move it right.
In the fine mode channel 22 is used for a more exact setting and slower movement with a resolution of 16Bit.

Channel 23/24 *Offset Y*

Channel 23 allows a rough positioning of the scanner output on the vertical plane with a resolution of 8Bit.
The DMX value 128 is the default setting which positions the projected scanner picture in the center.
Values from 128 to 0 move the picture up, values over 128 move it down.
In the fine mode channel 24 is used for a more exact setting and slower movement with a resolution of 16Bit.

Channel 25 *Sparkle*

With channel 25 you influence the intensity of individual points of the gobos. With DMX values from 0 – 128 the repeats of the individual points of the gobo are increased - the points therefore appear brighter.

Tip:

To use this function the gobos have to be prepared.
By default the gobos in bank 1 and bank 2 are prepared for this function.

With the DMX values from 129 - 255 you control a striking special effect of all banks with which you can make individual points of an object light up briefly. The blinking is created by repeating different alternating points during the projection. You can influence the frequency, the number and the intensity of the points, i.e. the higher the DMX value the more and brighter the flashing points. It is not possible to influence which specific points light up.

Channel 26 *Color*

This channel is used for RGB laser systems.
The default setting is 0.

Note:

For single color laser systems it should be kept unchanged in order to guarantee maximum power with the color e.g. green.

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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		
Mechanics (grating wheels, motorized focus)			
5	Wheel 1	0	no
6	Wheel 1 Index / Rotation	128	yes
7	Wheel 2	0	no
8	Wheel 2 Index / Rotation	128	yes
9	Focus (BLITZ Stage only)	0	yes
Projection			
10	Dimmer	0	yes
11	Strobe	0	yes
12	Object Bank	0	no
13	Object Slot	0	no
14	Effect	0	no
15	Effect Speed	192	yes
16	Object Size	255	yes
17	Zoom	255	yes
18	Index	128	yes
19	Mask	0	yes
20	Aspect Ratio	128	yes
21	Offset X Coarse	32768	yes
22	Offset X Fine		
23	Offset Y Coarse	32768	yes
24	Offset Y Fine		
25	Sparkle	0	yes
26	Color	0	yes

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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 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 6 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 7 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 8 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 9 Focus (BLITZ Stage only)		
0	Beam focused	
1 – 254	Beam defocused	
255	Beam fully defocused	
Channel 10 Dimmer		
0-185	Intensity 0 – 100%	
186-255	Fade to White (bleaching colors)	

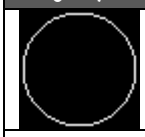
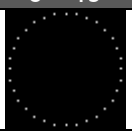
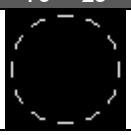
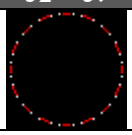
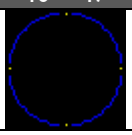
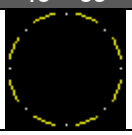
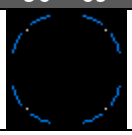
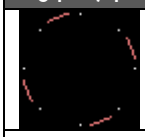
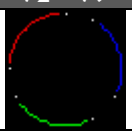
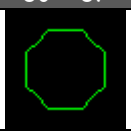
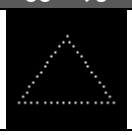
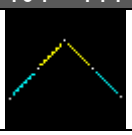
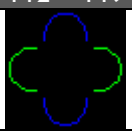
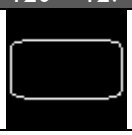
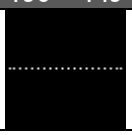
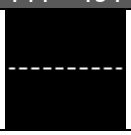
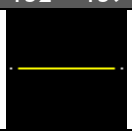
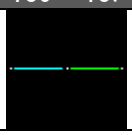
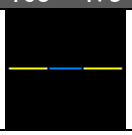
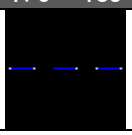
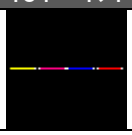
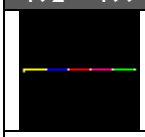
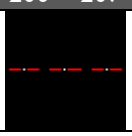
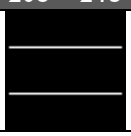
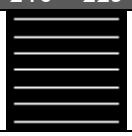
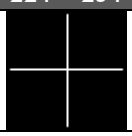
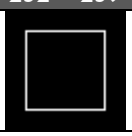
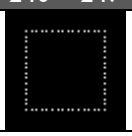
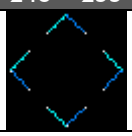
VALUE	FUNCTION	
Channel 11	**Strobe**	
0	No Strobe	
1-127	Strobe (Slow ➔ Fast)	
Channel 12	**Object Bank**	
0 – 7	Gobo Bank 1	Gobo 0 – 31
8 – 15	Gobo Bank 2	Gobo 32 – 63
16 – 23	Gobo Bank 3	Gobo 64 – 95
24 – 31	Gobo Bank 4	Gobo 96 – 127
32 – 39	Gobo Bank 5	Gobo 128 – 159
40 – 47	Gobo Bank 6	Gobo 160 – 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 13 and Channel 14)

Channel 13 Used Object Slots (depending on Channel 12)

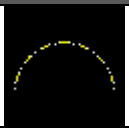
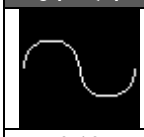
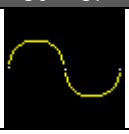
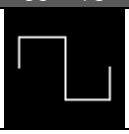
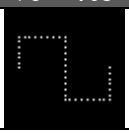
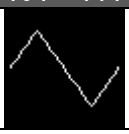
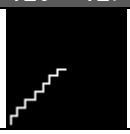
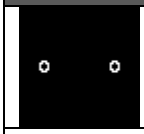
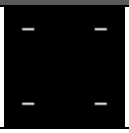
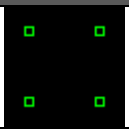
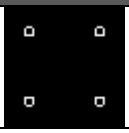
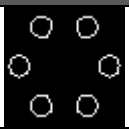
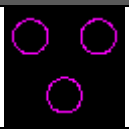
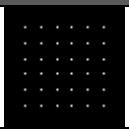
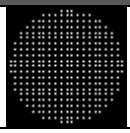
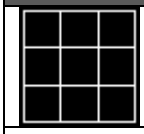
Value	Slot	Gobo	Animation	Text	Special	Beam
0 – 7	1	0, 32, 64, …	1	1	Wave	Pattern
8 – 15	2	1, 33, 65, …	2	2	Heartbeat	Pattern
16 – 23	3	2, 34, 66, …	3	3	Digital Clock	Pattern
24 – 31	4	3, 35, 67, …	4	4	Analog Clock 1	Pattern
32 – 39	5	4, 36, 68, …	5	5	Analog Clock 2	Pattern
40 – 47	6	5, 37, 69, …	6	6		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		

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		

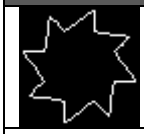
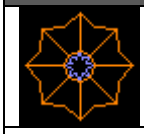
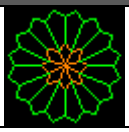
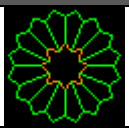
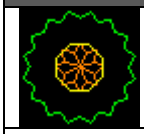
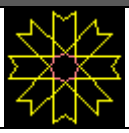
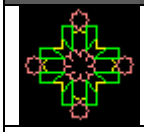
Channel 13 Object Slot
Gobo
Bank 1

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 13 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 13 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

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Channel 13 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 13 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

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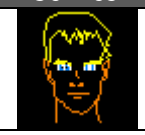
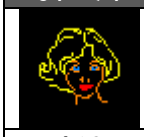
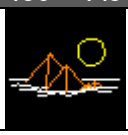
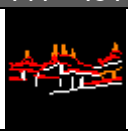
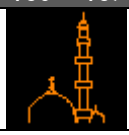
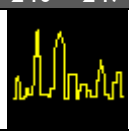
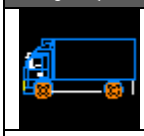
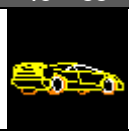
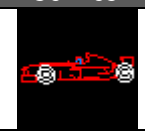
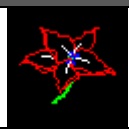
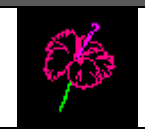
Channel 13 Object Slot Gobo Bank 6

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 13 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 13 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 13 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

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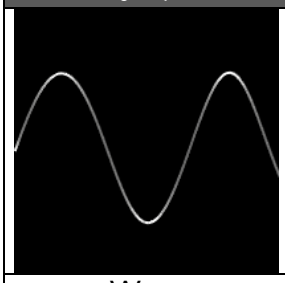
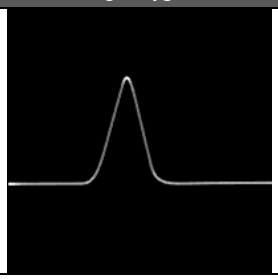
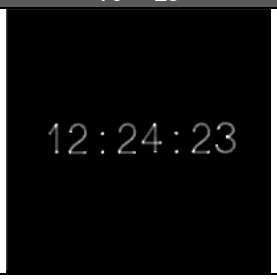
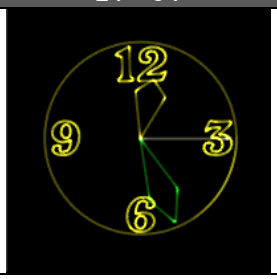
VALUE	FUNCTION	
Channel 13	**Object Slot Text Bank**	
Value	Slot	Default Text
0 – 7	1	WELCOME
8 – 15	2	WELCOME, LADIES AND GENTLEMEN
16 – 23	3	GOOD EVENING, LADIES AND GENTLEMEN
24 – 31	4	HAPPY BIRTHDAY
32 – 39	5	MERRY CHRISTMAS
40 – 47	6	HAPPY NEW YEAR
48 – 55	7	HAPPY EASTER
56 – 63	8	HAPPY HALLOWEEN
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 13 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 13 Object Slot Beam Bank

VALUE	Slot	FUNCTION							
		Beam Pattern							
		1	2	3	4	5	6	7	8
0 – 7	1	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
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

VALUE	FUNCTION			
Channel 14	**Effect (depending on Channel 12)**			
		Gobo Channel 12 = 0...63	**Animation** Channel 12 = 128...135	**Text** Channel 12 = 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 14	**Effect (depending on Channel 12)**			
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 15	**Effect Speed / Direction**			
0 – 127	Backward fast ... slow			
128	Stop			
129 – 255	Forward slow ... fast			
Channel 16	**Object Size**			
0 – 255	10% - 100%			
Channel 17	**Zoom**			
0 – 255	10% - 100%			
Channel 18	**Index**			
0 – 255	-240°... 0°... +240°			
Channel 19	**Mask**			
0 – 63	Open – Close (Iris)			
64 – 127	Close – Open (Square)			
128 – 191	Close – Open (Horizontal)			
192 – 255	Open – Close (Vertical)			
Channel 20	**Aspect Ratio**			
0 – 127	Y-Size -100% ➔ +100%			
128 – 255	X-Size +100% ➔ -100%			

Channel 21/22 Offset X	
0 – 65535	Left... Center... Right
Channel 23/24 Offset Y	
0 – 65535	Top... Center... Bottom
Channel 25 Sparkle	
0 – 7	No Sparkle
8 – 127	Static (Repeats 1 – 15)
128 – 255	Random

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VALUE	FUNCTION
Channel 26	**Color**

Attention:
To obtain the following colors DMX channel 10 *Dimmer* has to be set **to 80%** (DMX value: **185** or lower for reduced brightness).
If *Dimmer* is set to values higher than 185 output color will change to WHITE!

Notes:
(1) Using channels 1 to 64 the colors based on the "Primary Colors" (DSP Global Parameter Window) can be controlled.
(2) With channels 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…255	Color Cycle