

Channel	Function	Time and Value	DMX	HEX	%
1) PAN-coarse	0 .. 530°	min. 2,65 s	0..255	00..FF	0..100
2) PAN-fine	High- Pos ... High- Pos + 2,1° (16 Bit)		0..255	00..FF	0..100
3) Tilt-coarse	0 .. 285°	min. 1,8 s	0..255	00..FF	0..100
4) Tilt-fine	High- Pos ... High- Pos + 1,1° (16 Bit)		0..255	00..FF	0..100
5) Color	open (fast)	Chaser from color to color max. 140 BPM => 0,43 s	0..1	00..01	0,2
	open / color 1 (fast)		2..3	02..03	1,0
	color 1, Brilliant Blue (fast)		4..5	04..05	1,8
	color 1 / color 2 (fast)		6..7	06..07	2,5
	color 2, Blue (fast)		8..9	08..09	3,3
	color 2 / color 3 (fast)		10..11	0A..0B	4,1
	color 3, Blue Purple (fast)		12..13	0C..0D	4,9
	color 3 / color 4 (fast)		14..15	0E..0F	5,7
	color 4, Magenta (fast)		16..17	10..11	6,5
	color 4 / color 5 (fast)		18..19	12..13	7,3
	color 5, Pink (fast)		20..21	14..15	8,0
	color 5 / color 6 (fast)		22..23	16..17	8,8
	color 6, Orange (fast)		24..25	18..19	9,6
	color 6 / color 7 (fast)		26..27	1A..1B	10,4
	color 7, Canary (fast)		28..29	1C..1D	11,2
	color 7 / color 8 (fast)		30..31	1E..1F	12,0
	color 8, Italian Blue (fast)		32..33	20..21	12,7
	color 8 / color 9 (fast)		34..35	22..23	13,5
	color 9, Turquoise (fast)	36..37	24..25	14,3	
	color 9 / color 10 (fast)	38..39	26..27	15,1	
	color 10, Jade (fast)	40..41	28..29	15,9	
	color 10 / color 11 (fast)	42..43	2A..2B	16,7	
	color 11, Red (fast)	44..45	2C..2D	17,5	
	color 11 / open (fast)	46..47	2E..2F	18,2	
	open (fast)	48..63	30..3F	19,0	
	open (slow)	Chaser from color to color max. 70 BPM => 0,86 s	64..65	40..41	25,3
	open / color 1 (slow)		66..67	42..43	26,1
	color 1, Brilliant Blue (slow)		68..69	44..45	26,9
	color 1 / color 2 (slow)		70..71	46..47	27,6
	color 2, Blue (slow)		72..73	48..49	28,4
	color 2 / color 3 (slow)		74..75	4A..4B	29,2
	color 3, Blue Purple (slow)		76..77	4C..4D	30,0
	color 3 / color 4 (slow)		78..79	4E..4F	30,8
	color 4, Magenta (slow)		80..81	50..51	31,6
	color 4 / color 5 (slow)		82..83	52..53	32,4
	color 5, Pink (slow)		84..85	54..55	33,1
	color 5 / color 6 (slow)		86..87	56..57	33,9
	color 6, Orange (slow)		88..89	58..59	34,7
	color 6 / color 7 (slow)		90..91	5A..5B	35,5
	color 7, Canary (slow)		92..93	5C..5D	36,3
	color 7 / color 8 (slow)		94..95	5E..5F	37,1
	color 8, Italian Blue (slow)		96..97	60..61	37,8
color 8 / color 9 (slow)	98..99		62..63	38,6	
color 9, Turquoise (slow)	100..101	64..65	39,4		
color 9 / color 10 (slow)	102..103	66..67	40,2		
color 10, Jade (slow)	104..105	68..69	41,0		
color 10 / color 11 (slow)	106..107	6A..6B	41,8		
color 11, Red (slow)	108..109	6C..6D	42,5		

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	color 11 / open (slow)		110..111	6E..6F	43,3	
	open (slow)		112..127	70..7F	44,1	
	color rotation STOP		128..129	80..81	50	
	color rotation, slow-fast, CW	min. 1,4 turns/h	130..191	82..BF	51..75	
	color rotation, fast-slow, CCW	max. 2,9 turns/sec.	192..253	C0..FD	76..98	
	Audio color chaser slow	each 4 <sup>th</sup> sound impulse → new color	254	FE	99	
	Audio color chaser fast	each sound impulse → new color	255	FF	100	
<b>6) Gobo 1</b>	Gobo 1 (open, fast)	Chaser from gobo to gobo max. 100 BPM => 0,6 s	0..7	0..7	0..2,9	
	Gobo 2 (fast)		8..15	8..F	3..5,9	
	Gobo 3 (fast)		16..23	10..17	6..8,9	
	Gobo 4 (fast)		24..31	18..1F	9..11,9	
	Gobo 5 (fast)		32..39	20..27	12..14,9	
	Gobo 6 (fast)		40..47	28..2F	15..17,9	
	Gobo 7 (fast)		48..55	30..37	18..20,9	
	Gobo 8 (fast)		56..63	38..3F	21..23	
	Gobo 1 (open, slow)	Chaser from gobo to gobo max. 40 BPM => 1,51 s	64..71	40..47	24..26,9	
	Gobo 2 (slow)		72..79	48..4F	27..29,9	
	Gobo 3 (slow)		80..87	50..57	30..33,9	
	Gobo 4 (slow)		88..95	58..5F	34..36,9	
	Gobo 5 (slow)		96..103	60..67	37..39,9	
	Gobo 6 (slow)		104..111	68..6F	40..42,9	
	Gobo 7 (slow)		112..119	70..77	43..45,9	
	Gobo 8 (slow)		120..127	78..7F	46..49	
		Gobo rotation STOP		128..129	80..81	50
		Gobo rotation, slow-fast, CW	min. 1,4 turns/h	130..191	82..BF	51..75
		Gobo rotation, fast-slow, CCW	max. 1.0 turns/sec.	192..253	C0..FD	76..98
		Audio gobo chase, slow	each 4 <sup>th</sup> sound impulse → new gobo	254	FE	99
	Audio gobo chase, fast	each sound impulse → new gobo	255	FF	100	
<b>7) Gobo Posi./Rot</b>	Gobo position 0 ... 540°		0..127	00..7F	0..49	
	Gobo rotation STOP		128..129	80..81	50	
	Gobo rotation, slow-fast, CW	min. 2,0 turns/h	130..191	82..BF	51..75	
	Gobo rotation, fast-slow, CCW	max. 3,8 turns/sec.	192..253	C0..FD	76..100	
	Audio gobo rotation, slow	each 4 <sup>th</sup> sound impulse → new position	254	FE	99	
<b>8) Gobo 2</b>	Gobo 1 (open, fast)	Chaser from gobo to gobo max. 100 BPM => 0,6 s	0..3	0..3	0..1	
	Gobo 2 (fast)		4..7	4..7	2..2,9	
	Gobo 3 (fast)		8..11	8..B	3..4	
	Gobo 4 (fast)		12..15	C..F	5..5,9	
	Gobo 5 (fast)		16..19	10..13	6..7	
	Gobo 6 (fast)		20..23	14..17	8..8,9	
	Gobo 7 (fast)		24..27	18..1B	9..10,9	
	Gobo 8 (fast)		28..31	1C..1F	11..12	
	Gobo 9 (fast)		32..35	20..23	13..13,9	
	Gobo 10 (fast)		36..63	24..3F	14..24,9	
	Gobo 1 (open, fast)	Chaser from gobo to gobo max. 40 BPM => 1,51 s	64..65	40..41	25..25,9	
	Gobo 1 (open, slow)		66..67	42..43	26..26,9	
	Gobo 2 (slow)		68..71	44..47	27..27,9	
	Gobo 3 (slow)		72..75	48..4B	28..29	
	Gobo 4 (slow)		76..79	4C..4F	30..30,9	

Channel	Function	Time and Value	DMX	HEX	%	
	Gobo 5 (slow)		80..83	50..53	31..32	
	Gobo 6 (slow)		84..87	54..57	33..34	
	Gobo 7 (slow)		88..91	58..5B	35..35,9	
	Gobo 8 (slow)		92..95	5C..5F	36..37	
	Gobo 9 (slow)		96..99	60..63	38..38,9	
	Gobo 10 (slow)		100..127	64..7F	39..50	
	Gobo rotation STOP		128..129	80..81	50	
	Gobo rotation, slow-fast, CW	min. 1,4 turns/h	130..191	82..BF	51..75	
	Gobo rotation, fast-slow, CCW	max. 1.0 turns/sec.	192..253	C0..FD	76..98	
	Audio gobo chase, slow	each 4 <sup>th</sup> sound impulse → new gobo	254	FE	99	
	Audio gobo chase, fast	each sound impulse → new gobo	255	FF	100	
	Audio gobo rotation, fast	each sound impulse → new position	255	FF	100	
<b>9) Shutter</b>	Shutter closed		0..15	00..0F	0..6	
	Random Strobe (different pattern)		16..31	10..1F	7..11,9	
	Strobe Pulse effect , slow - fast	min. frequent 0,7 Hz	32..47	20..2F	12..12,9	
	Strobe effect , slow - fast	max. frequent 10 Hz	48..239	30..EF	13..93	
	Shutter open (lamp start)		240..255	F0..FF	94..100	
<b>10) Dimmer</b>	Dimmer closed (0%)		0..3	0..3	0..1	
	Dimmer 1%...99%	movement time 0,3 sec.	4..251	4..FB	2..98	
	Dimmer open (100%)		252..255	FC..FF	99..100	
<b>11) Focus</b>	in - out	full distance 1,5 sec.	0..255	0..FF	0..100	
<b>12) Prism</b>	Prism swing out		0..5	00..02	0..2	
	Prism position 0 ... 540°		6..129	00..7F	0..50	
	Prism rotation, slow-fast, CW	min. 1,6 turns/h	130..191	80..BF	51..75	
	Prism rotation, fast-slow, CCW	max. 4,4 turns/sec.	192..253	C0..FD	76..100	
	Audio prism rotation, slow	each 4 <sup>th</sup> sound impulse → new prism	254	FE	99	
	Audio prism rotation, fast	each sound impulse → new prism	255	FF	100	
<b>13) Special</b>	no function		0..15	00..0F	0..6	
	Gobo-shake +/- 10° slow – fast	3,5 moves / min. up to 60 moves / max.	16..31	10..1F	7..12	
	Gobo-shake +/- 20° slow – fast	3,5 moves / min. up to 60 moves / max.	32..47	20..2F	13..18	
	Gobo-shake +/- 30° slow – fast	3,5 moves / min. up to 60 moves / max.	48..63	30..3F	19..24	
	Color-chaser C / C+1 slow – fast	0,7 BPS ... 2,3 BPS => 1,43 s ... 0,43 s	64..79	40..4F	25..31	
	Color-chaser C / C+2 slow – fast	0,7 BPS ... 2,0 BPS => 1,43 s ... 0,5 s	80..95	50..5F	32..37	
	Audio Pan / Tilt slow	each 4 <sup>th</sup> sound impulse → new position	96..111	60..6F	38..43	
	Audio Pan / Tilt fast	each sound impulse → new position	112..127	70..7F	44..50	
	no function		128..249	80..E5	50..97	
	fan on min. as long as temp. < 90°C		224..229	E0..E5	88..90	
	Lamp OFF (min. 3 sec.)		230..249	E6..F9	92..97	
	Reset		250..255	FA..FF	98..100	
	<b>14) Move- ment</b>	no movement		0	00	0
<b>Movement</b>		<b>Size</b>	<b>Phase</b>			
	PAN	1	0°	01..01	01..01	0,5

Channel	Function	Time and Value	DMX	HEX	%		
		1	90°	02..03	02..03	1,0	
		1	180°	04..05	04..05	1,7	
		1	270°	06..07	06..07	2,5	
	PAN	2	0°	08..09	08..09	3,3	
		2	90°	10..11	0A..0B	4,1	
		2	180°	12..13	0C..0D	4,9	
		2	270°	14..15	0E..0F	5,7	
	PAN	3	0°	16..17	11..11	6,5	
		3	90°	18..19	12..13	7,3	
		3	180°	20..21	14..15	8,0	
	PAN	3	270°	22..23	16..17	8,8	
		4	0°	24..25	18..19	9,6	
		4	90°	26..27	1A..1B	10,4	
		4	180°	28..29	1C..1D	11,2	
			4	270°	30..31	1E..1F	12
		TILT	size / phase see also PAN	32..63	20..3F	13..25	
		PAN / TILT	size / phase see also PAN	64..95	40..5F	26..37	
		PAN / TILT (inverse)	size / phase see also PAN	96..127	60..7F	38..50	
		Circle	size / phase see also PAN	128..159	80..9F	51..62	
		Circle (inverse)	size / phase see also PAN	160..191	A0..BF	63..75	
	lying eight	size / phase see also PAN	192..223	C0..DF	76..87		
	random movement	size see also PAN	224..255	E0..FF	88..100		
<b>15) Speed Pan/Tilt</b>	Pan/Tilt relative movement		0..15	00..0F	0..6		
	Pan/Tilt slow – fast Use this channel 14) also for the speed of the movements (channel 13).	Pan min. 530° = 200 s Pan max. 530° = 2,65 s Tilt min. 285° = 110 s Tilt max. 285° = 1,8 s	16..255	10..FF	7..100		
<b>16) Laser</b>	Laser OFF		0..15	00..0F	0..6		
	Laser flashing random		16..31	10..1F	7..12		
	Audio Laser		32..47	20..2F	13..18		
	Blinking slow - fast		48..127	30..7F	19..50		
	Flashing slow - fast		128..239	80..EF	51..93		
	Laser ON		240..255	FO..FF	94..100		
<b>Lamp ON</b>	Shutter open		240..255	F0..FF	94..100		
<b>Lamp OFF</b>	Channel 13 ( min. 3 sec. ) (only if shutter is closed, channel 10 = 0 ..15)		230..249	6E..9F	92..97		