

## 4 DMX Channel Selection (DMX Protocol)

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 (fast)		4..5	04..05	1,8
	color 1 / color 2 (fast)		6..7	06..07	2,5
	color 2 (fast)		8..9	08..09	3,3
	color 2 / color 3 (fast)		10..11	0A..0B	4,1
	color 3 (fast)		12..13	0C..0D	4,9
	color 3 / color 4 (fast)		14..15	0E..0F	5,7
	color 4 (fast)		16..17	10..11	6,5
	color 4 / color 5 (fast)		18..19	12..13	7,3
	color 5 (fast)		20..21	14..15	8,0
	color 5 / color 6 (fast)		22..23	16..17	8,8
	color 6 (fast)		24..25	18..19	9,6
	color 6 / color 7 (fast)		26..27	1A..1B	10,4
	color 7 (fast)		28..29	1C..1D	11,2
	color 7 / color 8 (fast)		30..31	1E..1F	12,0
	color 8 (fast)		32..33	20..21	12,7
	color 8 / color 9 (fast)		34..35	22..23	13,5
	color 9 (fast)		36..37	24..25	14,3
	color 9 / color 10 (fast)		38..39	26..27	15,1
	color 10 (fast)		40..41	28..29	15,9
	color 10 / color 11 (fast)		42..43	2A..2B	16,7
	color 11 (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 (slow)		68..69	44..45	26,9
	color 1 / color 2 (slow)		70..71	46..47	27,6
	color 2 (slow)		72..73	48..49	28,4
	color 2 / color 3 (slow)		74..75	4A..4B	29,2
	color 3 (slow)		76..77	4C..4D	30,0
	color 3 / color 4 (slow)		78..79	4E..4F	30,8
color 4 (slow)		80..81	50..51	31,6	
color 4 / color 5 (slow)		82..83	52..53	32,4	
color 5 (slow)		84..85	54..55	33,1	
color 5 / color 6 (slow)		86..87	56..57	33,9	
color 6 (slow)		88..89	58..59	34,7	
color 6 / color 7 (slow)		90..91	5A..5B	35,5	
color 7 (slow)		92..93	5C..5D	36,3	
color 7 / color 8 (slow)		94..95	5E..5F	37,1	
color 8 (slow)		96..97	60..61	37,8	
color 8 / color 9 (slow)		98..99	62..63	38,6	

## Power Spot 250™

Channel	Function	Time and Value	DMX	HEX	%
	color 9 (slow)		100..10 1	64..65	39,4
	color 9 / color 10 (slow)		102..10 3	66..67	40,2
	color 10 (slow)		104..10 5	68..69	41,0
	color 10 / color 11 (slow)		106..10 7	6A..6B	41,8
	color 11 (slow)		108..10 9	6C..6D	42,5
	color 11 / open (slow)		110..11 1	6E..6F	43,3
	open slow		112..127	70..7F	44,1
	color rotation, slow-fast, CW	min. 1,4 turns/h	128..19 1	80..BF	50..75
	color rotation, fast-slow, CCW	max. 2,9 turns/sec.	192..25 3	C0..FD	76..98
	Audio color chaser slow	each 4 <sup>th</sup> sound impulse → new color	254	DE	99
	Audio color chaser fast	each sound impulse → new color	255	FF	100
<b>6) Gobo</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 1 (open, 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..11 1	68..6F	40..42, 9
	Gobo 7 (slow)		112..11 9	70..77	43..45, 9
	Gobo 1 (open, slow)		120..12 7	78..7F	46..49
	Gobo rotation, slow-fast, CW	min. 1,4 turns/h	128..19 1	80..BF	50..75
	Gobo rotation, fast-slow, CCW	max. 1.0 turns/sec.	192..25 3	C0..FD	76..98
	Audio gobo chase, slow	each 4 <sup>th</sup> sound impulse → new gobo	254	FE	99

## Power Spot 250™

Channel	Function	Time and Value	DMX	HEX	%
	Audio gobo chase, fast	each sound impulse → new gobo	255	FF	100
7) Gobo Posi./Rot	Gobo position 0 ... 540°		0..131	00..7F	0..50
	Gobo rotation, slow-fast, CW	min. 2,0 turns/h	132..191	80..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
	Audio gobo rotation, fast	each sound impulse → new position	255	FF	100
8) Prism	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
9) Shutter	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
10) Dimmer	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
11) Focus	in - out	full distance 1,5 sec.	0..255	0..FF	0..100
12) Special	no function		0..15	00..0F	0..6
	Gobo-seesaw +/- 10° slow – fast	3,5 moves / min. up to 60 moves / max.	16..31	10..1F	7..12
	Gobo-seesaw +/- 20° slow – fast	3,5 moves / min. up to 60 moves / max.	32..47	20..2F	13..18
	Gobo-seesaw +/- 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..F9	50..97
	Lamp OFF (3 sec.)		230..249	6E..9F	92..97

# Power Spot 250™

Channel	Function	Time and Value	DMX	HEX	%	
	Reset		250..25 5	FA..FF	98..100	
<b>13) Movement</b>	no movement		0	00	0	
	<b>Movement</b>	<b>Size</b>	<b>Phase</b>			
	PAN	1	0°	01..01	01..01	0,5
		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
		3	270°	22..23	16..17	8,8
	PAN	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>14) 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>15) Laser</b>	Laser Off		0-15		0-6	
	Laser Strobe Slow – Fast		16-239		7-96	
	Laser On		240-255		97-100	
<b>Lamp ON</b>	Shutter open		240..255 5	F0..FF	94..100	
<b>Lamp OFF</b>	Channel 12 ( min. 3 sec. ) (only if shutter is closed, channel 9 = 0 ..15)		230..249 9	6E..9F	92..97	