

# DMX Channel Index

VOLKS | LICHT  
SPOT



from software version 1.07  
(Instruction version 1.01)



— since 1994 —

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## DMX Channel Selection (DMX Protocol)

### Normal-Mode 20 DMX channels

Channel	Function	Time and Value	DMX	HEX	%
<b>1) PAN-coarse</b>	0 .. 660°		0..255	00..FF	0..100
<b>2) PAN-fine</b>	High- Pos ... High- Pos + 2,6° (16 Bit)		0..255	00..FF	0..100
<b>3) Tilt-coarse</b>	0 .. 300°		0..255	00..FF	0..100
<b>4) Tilt-fine</b>	High- Pos ... High- Pos + 1,2° (16 Bit)		0..255	00..FF	0..100
<b>5) Color (fixed)</b>	Colors adjustable via RGB		0..7	00..07	0..2,5
	Color 01 - Red <sup>1)</sup>		8..15	08..0F	3..5,5
	Color 02 - Amber <sup>1)</sup>		16..23	10..17	6..8,5
	Color 03 - Warm Yellow <sup>1)</sup>		24..31	18..1F	9..12,5
	Color 04 - Yellow <sup>1)</sup>		32..39	20..27	13..15,5
	Color 05 - Green <sup>1)</sup>		40..47	28..2F	16..18,5
	Color 06 - Turquoise <sup>1)</sup>		48..55	30..37	19..21,5
	Color 07 - Cyan <sup>1)</sup>		56..63	38..3F	22..24,5
	Color 08 - Blue <sup>1)</sup>		64..71	40..47	25..27,5
	Color 09 - Lavender <sup>1)</sup>		72..79	48..4F	28..30,5
	Color 10 - Mauve <sup>1)</sup>		80..87	50..57	31..34,5
	Color 11 - Magenta <sup>1)</sup>		88..95	58..5F	35..37,5
	Color 12 - Pink <sup>1)</sup>		96..103	60..67	38..40,5
	White - CTO		104..111	68..6F	41..43,5
	White		112..119	70..77	44..46,5
	White - CTB		120..127	78..7F	47..49,5
Rainbow Effect Stop <sup>2)</sup>		128	80	50	
Rainbow Effect <sup>3)</sup>	slow - fast	129..223	81..DF	51..88	
Rainbow Effect, random colors	slow - fast	224..255	E0..FF	89..100	
<b>6) Red</b>	Color mixing system - Red	0 - 100%	0..255	00..FF	0..100
<b>7) Green</b>	Color mixing system - Green	0 - 100%	0..255	00..FF	0..100
<b>8) Blue</b>	Color mixing system - Blue	0 - 100%	0..255	00..FF	0..100
<b>9) Shutter</b>	Shutter closed		0..15	00..0F	0..5,5
	Random Pulse effect <sup>4)</sup>	slow - fast	16..47	10..2F	6..18,5
	Up-dimming then Shutter closing (random patterns) <sup>4)</sup>	slow - fast	48..79	30..4F	19..31
	Shutter open then down-dimming (random patterns) <sup>4)</sup>	slow - fast	80..111	50..6F	32..43
	Up-dimming then down-dimming (random patterns) <sup>4)</sup>	slow - fast	112..143	70..8F	44..56
	Strobe effect pause	5s .. 1s	144..199	A0..C7	57..77
	Strobe effect, slow - fast	1 Hz .. 10 Hz	200..239	C8..EF	78..94
	Shutter open		240..255	F0..FF	94..100
<b>10) Dimmer</b>	Dimmer	0 - 100%	0..255	0..FF	0..100
<b>11) Color temp.</b>	Continuous color temperature correction between 10000k - 2500k	Applicable for ALL colors	0..255	0..FF	0..100
<b>12) Gobo 1 (indexed)</b>	Open position		0..15	0..0F	0..5,5
	Gobo 1		16..31	10..1F	6..12
	Gobo 2		32..47	20..2F	12,5..18
	Gobo 3		48..63	30..3F	19..24,5
	Gobo 4		64..79	40..4F	25..31
	Gobo 5		80..95	50..5F	31,5..37
	Gobo 6		96..111	60..6F	38..43,5
	Gobo 7		112..129	70..81	44..50,5

Channel	Function	Time and Value	DMX	HEX	%	
	Gobo rotation CCW	slow → fast	130..192	82..C0	51..75	
	Gobo rotation CW	fast → slow	193..254	C1..FE	75.5..99	
	Gobo rotation Stop		255	FF	100	
<b>13) Gobo 1 Posi./Rot.</b>	Gobo position 0 ... 540°		0..127	00..7F	0..49	
	Gobo rotation STOP		128..129	80..81	50	
	Gobo rotation CW	slow → fast	130..192	82..C0	51..75	
	Gobo Rotation CCW	fast → slow	193..254	C1..FE	76..99	
<b>14) Gobo 2 (fixed)</b>	Open position		0..7	00..07	0..2.5	
	Gobo 1		8..15	08..0F	3..5.5	
	Gobo 2		16..23	10..17	6..9	
	Gobo 3		24..31	17..1F	9.5..12	
	Gobo 4		32..39	20..27	12.5..15	
	Gobo 5		40..47	28..2F	15.5..18	
	Gobo 6		48..56	30..38	18.5..22	
	Gobo 7		57..63	39..3F	23..24.5	
	Gobo 8		64..71	40..47	25..27.5	
	Gobo 9		72..79	48..4F	28..31	
	Gobo 10		80..87	50..57	31.5..34	
	Gobo 11		88..95	58..5F	34.5..37	
	Gobo wheel rotation CCW	slow → fast	130..193	82..C1	51..75.5	
	Gobo wheel rotation CW	fast → slow	194..254	C2..FE	76..99	
Gobo wheel rotation Stop		255	FF	100		
<b>15) Focus</b>	Continues Focus	infinity – near	0 .. 255	0..FF	0..100	
<b>16) Prism</b>	Prism swing out		0..5	00..05	0..2	
	Prism position		6..127	06..7F	0..50	
	Prism rotation stop		128..129	80..81	50,1	
	Prism rotation		130..253	82..FD	51..99	
	Prism by audio	slow	254	FE	99.5	
	Prism by audio	fast	255	FF	100	
<b>17) Iris</b>	Iris	open - close	0 .. 255	00..FF	0 ..100	
<b>18) Special</b>	<b>RESET</b>	keep for 3 sec.	<b>250..255</b>	<b>FA..FF</b>	<b>98..100</b>	
	Goboshake – Gobo 2	slow → fast	80..143	50..8F	31..56	
	Goboshake – Gobo 1	slow → fast	16..79	10..4F	6..30	
	Gobo – short cut off		8..15	08..0F	3..5	
<b>19) Movement</b>	<b>No movement</b>		0	0	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

Channel	Function	Time and Value	DMX	HEX	%
	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>20) Speed Pan/Tilt</b>	Pan/Tilt relative movement		0..01	00..01	0..1
	Pan/Tilt slow – fast Use this channel also for the SPEED of the movements		02..255	02..FF	1.5..100

### Compressed-Mode 17 DMX channels

Channel	Function	Time and Value	DMX	HEX	%	
<b>1) PAN-coarse</b>	0 .. 660°		0..255	00..FF	0..100	
<b>2) PAN-fine</b>	High- Pos ... High- Pos + 2,6° (16 Bit)		0..255	00..FF	0..100	
<b>3) Tilt-coarse</b>	0 .. 300°		0..255	00..FF	0..100	
<b>4) Tilt-fine</b>	High- Pos ... High- Pos + 1,2° (16 Bit)		0..255	00..FF	0..100	
<b>5) Color (fixed)</b>	Colors adjustable via RGB		0..7	00..07	0..2,5	
	Color 01 - Red <sup>1)</sup>		8..15	08..0F	3..5,5	
	Color 02 - Amber <sup>1)</sup>		16..23	10..17	6..8,5	
	Color 03 - Warm Yellow <sup>1)</sup>		24..31	18..1F	9..12,5	
	Color 04 - Yellow <sup>1)</sup>		32..39	20..27	13..15,5	
	Color 05 - Green <sup>1)</sup>		40..47	28..2F	16..18,5	
	Color 06 - Turquoise <sup>1)</sup>		48..55	30..37	19..21,5	
	Color 07 - Cyan <sup>1)</sup>		56..63	38..3F	22..24,5	
	Color 08 - Blue <sup>1)</sup>		64..71	40..47	25..27,5	
	Color 09 - Lavender <sup>1)</sup>		72..79	48..4F	28..30,5	
	Color 10 - Mauve <sup>1)</sup>		80..87	50..57	31..34,5	
	Color 11 - Magenta <sup>1)</sup>		88..95	58..5F	35..37,5	
	Color 12 - Pink <sup>1)</sup>		96..103	60..67	38..40,5	
	White - CTO		104..111	68..6F	41..43,5	
	White		112..119	70..77	44..46,5	
	White - CTB		120..127	78..7F	47..49,5	
Rainbow Effect Stop <sup>2)</sup>			128	80	50	
Rainbow Effect <sup>3)</sup>	slow - fast		129..223	81..DF	51..88	
Rainbow Effect, random colors	slow - fast		224..255	E0..FF	89..100	
<b>6) Red</b>	Color mixing system - Red	0 - 100%	0..255	00..FF	0..100	
<b>7) Green</b>	Color mixing system - Green	0 - 100%	0..255	00..FF	0..100	
<b>8) Blue</b>	Color mixing system - Blue	0 - 100%	0..255	00..FF	0..100	
<b>9) Shutter</b>	Shutter closed		0..15	00..0F	0..5,5	
	Random Pulse effect <sup>4)</sup>	slow - fast	16..47	10..2F	6..18,5	
	Up-dimming then Shutter closing (random patterns) <sup>4)</sup>	slow - fast	48..79	30..4F	19..31	
	Shutter open then down-dimming (random patterns) <sup>4)</sup>	slow - fast	80..111	50..6F	32..43	
	Up-dimming then down-dimming (random patterns) <sup>4)</sup>	slow - fast	112..143	70..8F	44..56	
	Strobe effect pause	5s .. 1s		144..199	A0..C7	57..77
	Strobe effect, slow - fast	1 Hz .. 10 Hz		200..239	C8..EF	78..94
Shutter open			240..255	F0..FF	94.4..100	

Channel	Function	Time and Value	DMX	HEX	%
<b>10) Dimmer</b>	Dimmer	0 - 100%	0..255	0..FF	0..100
<b>11) Gobo 1 (indexed)</b>	Open position		0..15	0..0F	0..5.5
	Gobo 1		16..31	10..1F	6..12
	Gobo 2		32..47	20..2F	12.5..18
	Gobo 3		48..63	30..3F	19..24.5
	Gobo 4		64..79	40..4F	25..31
	Gobo 5		80..95	50..5F	31.5..37
	Gobo 6		96..111	60..6F	38..43.5
	Gobo 7		112..129	70..81	44..50.5
	Gobo rotation CCW	slow → fast	130..192	82..C0	51..75
	Gobo rotation CW	fast → slow	193..254	C1..FE	75.5..99
	Gobo rotation Stop		255	FF	100
<b>12) Gobo 1 Posi./Rot.</b>	Gobo position 0 ... 540°		0..127	00..7F	0..49
	Gobo rotation STOP		128..129	80..81	50
	Gobo rotation CW	slow → fast	130..192	82..C0	51..75
	Gobo Rotation CCW	fast → slow	193..254	C1..FE	76..99
<b>13) Gobo 2 (fixed)</b>	Open position		0..7	00..07	0..2.5
	Gobo 1		8..15	08..0F	3..5.5
	Gobo 2		16..23	10..17	6..9
	Gobo 3		24..31	17..1F	9.5..12
	Gobo 4		32..39	20..27	12.5..15
	Gobo 5		40..47	28..2F	15.5..18
	Gobo 6		48..56	30..38	18.5..22
	Gobo 7		57..63	39..3F	23..24.5
	Gobo 8		64..71	40..47	25..27.5
	Gobo 9		72..79	48..4F	28..31
	Gobo 10		80..87	50..57	31.5..34
	Gobo 11		88..95	58..5F	34.5..37
	Gobo wheel rotation CCW	slow → fast	130..193	82..C1	51..75.5
	Gobo wheel rotation CW	fast → slow	194..254	C2..FE	76..99
	Gobo wheel rotation Stop		255	FF	100
<b>14) Focus</b>	Continues Focus	infinity – near	0 .. 255	0..FF	0..100
<b>15) Prism</b>	Prism swing out		0..5	00..05	0..2
	Prism position		6..127	06..7F	0..50
	Prism rotation stop		128..129	80..81	50,1
	Prism rotation		130..253	82..FD	51..99
	Prism by audio	slow	254	FE	99.5
	Prism by audio	fast	255	FF	100
<b>16) Iris</b>	Iris	open - close	0 .. 255	00..FF	0 ..100
<b>17) Special</b>	<b>RESET</b>	keep for 3 sec.	<b>250..255</b>	<b>FA..FF</b>	<b>98..100</b>
	Goboshake – Gobo 2	slow → fast	80..143	50..8F	31..56
	Goboshake – Gobo 1	slow → fast	16..79	10..4F	6..30
	Gobo – short cut off		8..15	08..0F	3..5

### Extended-Mode 20 DMX channels

Channel	Function	Time and Value	DMX	HEX	%
<b>1) PAN-coarse</b>	0 .. 660°		0..255	00..FF	0..100
<b>2) PAN-fine</b>	High- Pos ... High- Pos + 2,6° (16 Bit)		0..255	00..FF	0..100
<b>3) Tilt-coarse</b>	0 .. 300°		0..255	00..FF	0..100

Channel	Function	Time and Value	DMX	HEX	%
<b>4) Tilt-fine</b>	High- Pos ... High- Pos + 1,2° (16 Bit)		0..255	00..FF	0..100
<b>5) Red-coarse</b>	Color mixing system - Red	0 - 100%	0..7	00..07	0..2,5
<b>6) Red-fine</b>	Color mixing system – Red low		0..255	00..FF	0..100
<b>7) Green-coarse</b>	Color mixing system - Green	0 - 100%	0..255	00..FF	0..100
<b>8) Green-fine</b>	Color mixing system – Green low				
<b>9) Blue coarse</b>	Color mixing system - Blue	0 - 100%			
<b>10) Blue-fine</b>	Color mixing system – Blue low		0..255	00..FF	0..100
<b>11) Shutter</b>	Shutter closed		0..15	00..0F	0..5,5
	Random Pulse effect <sup>4)</sup>	slow - fast	16..47	10..2F	6..18,5
	Up-dimming then Shutter closing (random patterns) <sup>4)</sup>	slow - fast	48..79	30..4F	19..31
	Shutter open then down-dimming (random patterns) <sup>4)</sup>	slow - fast	80..111	50..6F	32..43
	Up-dimming then down-dimming (random patterns) <sup>4)</sup>	slow - fast	112..143	70..8F	44..56
	Strobe effect pause	5s .. 1s	144..199	A0..C7	57..77
	Strobe effect, slow - fast	1 Hz .. 10 Hz	200..239	C8..EF	78..94
	Shutter open		240..255	F0..FF	94.4..100
<b>12) Dimmer-coarse</b>	Dimmer	0 - 100%	0..255	0..FF	0..100
<b>13) Dimmer-fine</b>	Dimmer low				
<b>14) Gobo 1 (indexed)</b>	Open position		0..15	0..0F	0..5.5
	Gobo 1		16..31	10..1F	6..12
	Gobo 2		32..47	20..2F	12.5..18
	Gobo 3		48..63	30..3F	19..24.5
	Gobo 4		64..79	40..4F	25..31
	Gobo 5		80..95	50..5F	31.5..37
	Gobo 6		96..111	60..6F	38..43.5
	Gobo 7		112..129	70..81	44..50.5
	Gobo rotation CCW	slow → fast	130..192	82..C0	51..75
	Gobo rotation CW	fast → slow	193..254	C1..FE	75.5..99
	Gobo rotation Stop		255	FF	100
<b>15) Gobo 1 Posi./Rot.</b>	Gobo position 0 ... 540°		0..127	00..7F	0..49
	Gobo rotation STOP		128..129	80..81	50
	Gobo rotation CW	slow → fast	130..192	82..C0	51..75
	Gobo Rotation CCW	fast → slow	193..254	C1..FE	76..99
<b>16) Gobo 2 (fixed)</b>	Open position		0..7	00..07	0..2.5
	Gobo 1		8..15	08..0F	3..5.5
	Gobo 2		16..23	10..17	6..9
	Gobo 3		24..31	17..1F	9.5..12
	Gobo 4		32..39	20..27	12.5..15
	Gobo 5		40..47	28..2F	15.5..18
	Gobo 6		48..56	30..38	18.5..22
	Gobo 7		57..63	39..3F	23..24.5
	Gobo 8		64..71	40..47	25..27.5
	Gobo 9		72..79	48..4F	28..31
	Gobo 10		80..87	50..57	31.5..34
	Gobo 11		88..95	58..5F	34.5..37
	Gobo wheel rotation CCW	slow → fast	130..193	82..C1	51..75.5

Channel	Function	Time and Value	DMX	HEX	%
	Gobo wheel rotation CW	fast → slow	194..254	C2..FE	76..99
	Gobo wheel rotation Stop		255	FF	100
<b>17) Focus</b>	Continues Focus	infinity – near	0 .. 255	0..FF	0..100
<b>18) Prism</b>	Prism swing out		0..5	00..05	0..2
	Prism position		6..127	06..7F	0..50
	Prism rotation stop		128..129	80..81	50,1
	Prism rotation		130..253	82..FD	51..99
	Prism by audio	slow	254	FE	99.5
	Prism by audio	fast	255	FF	100
<b>19) Iris</b>	Iris	open - close	0 .. 255	00..FF	0 ..100
<b>20) Special</b>	<b>RESET</b>	keep for 3 sec.	<b>250..255</b>	<b>FA..FF</b>	<b>98..100</b>
	Goboshake – Gobo 2	slow → fast	80..143	50..8F	31..56
	Goboshake – Gobo 1	slow → fast	16..79	10..4F	6..30
	Gobo – short cut off		8..15	08..0F	3..5

### <sup>1)</sup> **Color**

The predefined colors can be used as start colors for the Rainbow effect. First select a desired start color, then activate the rainbow effect. All **VOLKSLICHT SPOT** will then begin from that color and execute the rainbow effect synchronously. Different **VOLKSLICHT SPOT** can have different start colors but will still execute the rainbow effect synchronously. If you choose a color different from the ones marked with <sup>1)</sup> in the tables above the rainbow start-color will be red.

### <sup>2)</sup> **Rainbow-effect Stop**

This will pause this function. After resuming the rainbow-effect will be continued with the current color.

### <sup>3)</sup> **The Rainbow-effect**

This will run synchronously only if it is started from one of the predefined colors (see also <sup>1)</sup> before).

### <sup>4)</sup> **ATTENTION Shutter:**

Please note that shutter frequencies over 10 Hz are prohibited in some countries. Especially frequencies in the range of 5 - 12 Hz can possibly cause epileptic seizures → continuous blink irritation with a latency period of min. 70 ms. Please also refer to the relevant legislation of each country (For Germany for example: BGI 810-4 (Anhang 2) "Sicherheit bei Produktionen und Veranstaltungen - Scheinwerfer").

### **Random Shutter Timing:**

Function	DMX value XX to YY	timing
Random Pulse Effect	16..46	60 sec..30 sec
	47	0.3 sec..0.1 sec
Dimming in then shutter close (random)	48..78	60 sec..30 sec
	79	0.3 sec..0.1 sec
Shutter open then dimming out (random)	80..110	60 sec..30 sec
	111	0.3 sec..0.1 sec
Dimming in then dimming out (random)	112..142	60 sec..30 sec
	143	0.3 sec..0.1 sec

