

**DMX-protocol 16 Bit-resolution (8 Bit-resolution)****Control-channel 1 (1) - Horizontal movement (Pan) (within 530°)**

Push slider up in order to move the head horizontally (PAN).

Gradual head adjustment from one end of the slider to the other (0-255, 128-center).

The head can be stopped at any position you wish.

**Control-channel 2 (2) - Vertical movement (Tilt) (within 280°)**

Push slider up in order to move the head vertically (TILT).

Gradual head adjustment from one end of the slider to the other (0-255, 128-center).

The head can be stopped at any position you wish.

**Control-channel 3 - Pan-movement with 16 Bit-resolution****Control-channel 4 - Tilt-movement with 16 Bit-resolution****Control-channel 5 (3) - Pan/Tilt-speed**

Decimal	Hexad.	Percentage	S/F	Feature			
0	00	0%	0%	S	Maximum speed (tracking mode)		
1	249	01	F9	0%	98%	F	Decreasing speed (vector mode)
250	252	FA	FC	98%	99%	S	Maximum speed (tracking mode), black-out color or gobo changes
253	255	FD	FF	99%	100%	S	Maximum speed (tracking mode), black-out while Pan, Tilt moving or color gobo changes

**Control-channel 6 (4) - Switch on/off the lamp, reset, speed control of cooling fan**

Decimal	Hexad.	Percentage	S/F	Feature	
0	127	00 7F	0% 50%	F	Decreasing speed of fan
128	139	80 8B	50% 55%	S	Switch on the lamp, reset, open position
140	229	8C E5	55% 90%	S	No function
230	239	E6 EF	90% 94%	S	Switch off the lamp after 3 seconds
240	255	F0 FF	94% 100%	S	No function

**Control-channel 7 (5) - Colour-wheel 1**

Linear colour change following the movement of the slider.

In this way you can stop the colour-wheel in any position - also between two colours

creating double-coloured beams. Between 128 and 190 and between 194 and 255, the colour-wheel rotates continuously the so-called "Rainbow" effect.

continuously the 66 called "rainbow" effect.

Decimal	Hexad.	Percentage	S/F	Feature	
0	12	00	0C	0% 5% S	Open/white
13	25	0D	19	5% 10% S	Light Blue
26	37	1A	25	10% 15% S	Red
38	50	26	32	15% 20% S	Blue
51	63	33	3F	20% 25% S	Light green
64	76	40	4C	25% 30% S	Yellow
77	89	4D	59	30% 35% S	Magenta
90	101	5A	65	35% 40% S	Cyan
102	114	66	72	40% 45% S	Green
115	127	73	7F	45% 50% S	Orange
128	190	80	BE	50% 75% F	Forwards rainbow effect with decreasing speed
191	193	BF	C1	75% 76% S	No rotation
194	255	C2	FF	76% 100% F	Backwards rainbow effect with increasing speed
0	255	00	FF	0% 100% S	Colour macro function (channel 8 set from 128-255) - 64 different colours in following order: white, pink, magenta, red, orange, yellow, green, cyan, blue, UV

**Control-channel 8 (6) - Colour-wheel 2**

Decimal	Hexad.	Percentage	S/F	Feature
0 11	00 0B	0% 4%	S	White
12 23	0C 17	5% 9%	S	Deep red
24 35	18 23	9% 14%	S	Deep blue
36 47	24 2F	14% 18%	S	Pink
48 59	30 3B	19% 23%	S	Cyan
60 71	3C 47	24% 28%	S	Magenta
72 83	48 53	28% 33%	S	Yellow
84 95	54 5F	33% 37%	S	6000 K correction filter
96 107	60 6B	38% 42%	S	3200 K correction filter
108 119	6C 77	42% 47%	S	UV filter
120 127	78 7F	47% 50%	S	White
128 255	80 FF	50% 100%	S	Enable macro color function on channel 7

**Control-channel 9 (7) - Rotating 3-facet-prism, macros**

Decimal	Hexad.	Percentage	S/F	Feature
0 0	00 00	0% 0%	S	Open
1 63	01 3F	0% 25%	F	Forwards rotation with decreasing speed
64 64	40 40	25% 25%	S	No rotation
65 127	41 7F	25% 50%	F	Backwards rotation with increasing speed
128 135	80 87	50% 53%	S	Macro 1
136 143	88 8F	53% 56%	S	Macro 2
144 151	90 97	56% 59%	S	Macro 3
152 159	98 9F	60% 62%	S	Macro 4
160 167	A0 A7	63% 65%	S	Macro 5
168 175	A8 AF	66% 69%	S	Macro 6
176 183	B0 B7	69% 72%	S	Macro 7
184 191	B8 BF	72% 75%	S	Macro 8
192 199	C0 C7	75% 78%	S	Macro 9
200 207	C8 CF	78% 81%	S	Macro 10
208 215	D0 D7	82% 84%	S	Macro 11
216 223	D8 DF	85% 87%	S	Macro 12
224 231	E0 E7	88% 91%	S	Macro 13
232 239	E8 EF	91% 94%	S	Macro 14
240 247	F0 F7	94% 97%	S	Macro 15
248 255	F8 FF	97% 100%	S	Macro 16

**Control-channel 10 (8) - Static gobo-wheel, gobo shake**

Decimal	Hexad.	Percentage	S/F	Feature
0 7	00 07	0% 3%	S	Open
8 15	08 0F	3% 6%	S	Gobo 1
16 23	10 17	6% 9%	S	Gobo 2
24 31	18 1F	9% 12%	S	Gobo 3
32 39	20 27	13% 15%	S	Gobo 4
40 47	28 2F	16% 18%	S	Gobo 5
48 55	30 37	19% 22%	S	Gobo 6
56 63	38 3F	22% 25%	S	Gobo 7
64 71	40 47	25% 28%	S	Gobo 8
72 79	48 4F	28% 31%	S	Gobo 9
80 95	50 5F	31% 37%	F	Gobo 1 shake with variable speed
96 111	60 6F	38% 44%	F	Gobo 2 shake with variable speed
112 127	70 7F	44% 50%	F	Gobo 3 shake with variable speed
128 143	80 8F	50% 56%	F	Gobo 4 shake with variable speed

144	159	90	9F	56%	62%	F	Gobo 5 shake with variable speed
160	175	A0	AF	63%	69%	F	Gobo 6 shake with variable speed
176	191	B0	BF	69%	75%	F	Gobo 7 shake with variable speed
192	207	C0	CF	75%	81%	F	Gobo 8 shake with variable speed
208	223	D0	DF	82%	87%	F	Gobo 9 shake with variable speed
224	255	E0	FF	88%	100%	F	Gobo wheel rotation from with increasing speed

### Control-channel 11 (9) - Rotating gobo-wheel

Decimal	Hexad.	Percentage	S/F	Feature
0	31	00	1F	0% 12% S Open
32	63	20	3F	13% 25% S Rot. gobo 1
64	95	40	5F	25% 37% S Rot. gobo 2
96	127	60	7F	38% 50% S Rot. gobo 3
128	159	80	9F	50% 62% S Rot. gobo 4
160	191	A0	BF	63% 75% S Rot. gobo 5
192	223	C0	DF	75% 87% S Rot. gobo 6
224	255	E0	FF	88% 100% F Rotating gobo-wheel cont. rotation with increasing speed

### Control-channel 12 (10)- Rotating gobo index, gobo rotation

Decimal	Hexad.	Percentage	S/F	Feature
0	127	00	7F	0% 50% S Gobo indexing
128	191	80	BF	50% 75% F Forwards gobo rotation with decreasing speed
192	192	C0	C0	75% 75% S No rotation
193	255	C1	FF	76% 100% F Backwards gobo rotation with increasing speed

### Control-channel 13 (11) - Iris

Decimal	Hexad.	Percentage	S/F	Feature
0	0	00	00	0% 0% S Open
1	179	01	B3	0% 70% F Max. diameter to min. diameter
180	191	B4	BF	71% 75% F Closed
192	223	C0	DF	75% 87% F Pulse closing with increasing speed
224	255	E0	FF	88% 100% F Pulse opening with decreasing speed

### Control-channel 14 (12) - Focus & Zoom

Decimal	Hexad.	Percentage	S/F	Feature
0	85	00	55	0% 33% F Zoom 1 & Continuous adjustment from near to far
86	170	56	AA	34% 67% F Zoom 2 & Continuous adjustment from near to far
171	255	AB	FF	67% 100% F Zoom 3 & Continuous adjustment from near to far

### Control-channel 15 (13) Shutter, strobe

Decimal	Hexad.	Percentage	S/F	Feature
0	31	00	1F	0% 12% S Shutter closed
32	63	20	3F	13% 25% S No function (shutter open)
64	95	40	5F	25% 37% F Strobe-effect with increasing speed (max. 10 flashes/sec.)
96	127	60	7F	38% 50% S No function (shutter open)
128	159	80	9F	50% 62% F Pulse effect in sequence
160	191	A0	BF	63% 75% S No function (shutter open)
192	223	C0	DF	75% 87% F Random strobe-effect with increasing speed
224	255	E0	FF	88% 100% S No function (shutter open)

### Control-channel 16 (14) - Dimmer intensity

Decimal	Hexad.	Percentage	S/F	Feature
0	255	00	FF	0% 100% F Gradual adjustment of the dimmer intensity from 0 to 100 %