

DMX protocol

Robin Square - DMX protocol						
Version: 1.7 Mode 1 -Basic, Mode 2 -Advanced, Mode 3 -Full RGB						
Mode/channel			DMX Value	Function	Type of control	
1	2	3				
1	1	1	0 - 255	Pan (8 bit) Pan movement by 540°/360° (128=default)	proportional	
2	2	2	0 - 255	Pan Fine (16 bit) Fine control of pan movement (0=default)	proportional	
3	3	3	0 - 255	Tilt (8 bit) Tilt movement by 360° (128=default)	proportional	
4	4	4	0 - 255	Tilt fine (16 bit) Fine control of tilt movement (0=default)	proportional	
5	5	5	0	Pan control Pan range 540°, shortcut Off (0=default)	step	
			1	Pan range 360°, shortcut On	step	
			2-127	No function		
			128-189	Continuous rotation fast -> slow , Forwards	proportional	
			190-193	Stop rotation	step	
			194-255	Continuous rotation slow -> fast , Backwards	proportional	
6	6	6	0	Tilt control Tilt range 360°, Shortcut Off (0=default)	step	
			1	Tilt range 360°, Shortcut On	step	
			2-127	No function		
			128-189	Continuous rotation fast -> slow , Forwards	proportional	
			190-193	Stop rotation	step	
			194-255	Continuous rotation slow -> fast , Backwards	proportional	
7	7	7	0	Pan/Tilt speed , Pan/Tilt time Max. speed-Standard Mode (0=default)	step	
			1 - 255	P./T. speed-set Speed Mode in menu: Pan/Tilt Mode Speed from max. to min.	proportional	
			1 - 255	P./T. time - set Time Mode in menu: Pan/Tilt Mode Time from 0.1 s to 25.5 sec.	proportional	
8	8	8	0 - 9	Power/Special functions Reserved (0=default) <i>To activate following functions, stop in DMX value for at least 3 s and shutter must be closed at least 3 sec. („Shutter,Strobe“ channel 23/41 must be at range: 0-31 DMX). Corresponding menu items are temporarily overridden).</i>		
			10-14	DMX input: Wired DMX	step	
			15-19	DMX input: Wireless DMX * <small>* function is active only 10 seconds after switching the fixture on</small>	step	
			20-24	Graphic display ON	step	
			25-29	Graphic display OFF	step	
			30-34	RGBW colour mixing mode	step	
			35-39	CMY colour mixing mode	step	
			40-44	Pan/Tilt speed mode	step	
			45 - 49	Pan/Tilt time mode	step	
			50 - 54	Blackout while pan/tilt moving	step	
			55 - 59	Disabled blackout while pan/tilt moving	step	
			60 - 64	Dimmer curve-square law	step	
			65 - 69	Dimmer curve-linear	step	

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1	2	3			
			70 - 74	Fans mode: Auto	step
			75 - 79	Fans mode: High	step
			80 -109	Reserved	
			110-114	Kling-Net On	step
			115-119	Kling-Net Off	step
			120-129	Reserved	
				<i>To activate following functions, stop in DMX value for at least 3 seconds.</i>	
			130 - 139	Fixture reset (except pan/tilt)	
			140 - 149	Pan/Tilt reset	step
			150 - 159	Zoom reset	step
			160 - 169	Effects reset	step
			170 - 199	Reserved	step
			200 - 209	Total fixture reset	step
			210 - 255	Reserved	
9	9	9		Virtual colour wheel	
			0	No function (0=default)	step
			1-2	White 2700 K	step
			3	White 2700 K (Halogen lamp mode**)	step
			4-5	White 3200 K	step
			6	White 3200 K (Halogen lamp mode**)	step
			7-9	White 4200 K	step
			10-12	White 5600 K	step
			13-15	White 8000 K	step
			16	Blue (Blue=full, Red+Green+White=0)	step
			17-55	Red=0, Green->up,Blue =full, White=0	proportional
			56	Light Blue (Red=0, Green=full, Blue =full, White=0)	step
			57 - 95	Red=0, Green=full, Blue->down, White=0	proportional
			96	Green (Red=0, Green=full, Blue =0, White=0)	step
			97 – 134	Red->up, Green=full, Blue=0, White=0	proportional
			135	Yellow (Red=full, Green=full, Blue=0, White=0)	step
			136 - 174	Red=full, Green->down, Blue=0, White=0	proportional
			175	Red(Red=full, Green=0, Blue=0, White=0)	step
			176 -214	Red=full, Green=0, Blue->up, White=0	proportional
			215	Magenta (Red=full, Green=0, Blue=full, White=0)	step
			216 - 246	Red -> down, Green=0, Blue=full, White=0	proportional
			247	Blue (Red=0, Green=0, Blue=full, White=0)	step
			248-251	Rainbow effect (with fade time)from slow-> fast	proportional
			252-255	Rainbow effect(without fade time) from slow-> fast	proportional
10	10	10		Red/Cyan (8 bit)- all pixels***	
			0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	11	11		Red/Cyan (16bit)- all pixels***	
			0 - 255	Colour saturation control - fine (255=default)	proportional
11	12	12		Green/Magenta (8 bit) - all pixels ***	
			0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	13	13		Green/Magenta (16bit) - all pixels***	
			0 - 255	Colour saturation control - fine (255=default)	proportional
12	14	14		Blue/Yellow (8 bit) - all pixels ***	
			0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	15	15		Blue/ Yellow (16bit) -all pixels***	

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1	2	3			
			0 - 255	Colour saturation control - fine (255=default)	proportional
13	16	16		White (8 bit) - all pixels	
				<i>If RGBW mode is selected:</i>	
			0-255	Colour saturation control - coarse 0-100% (255=default)	proportional
				<i>If CMY mode is selected:</i>	
			0 - 255	No function	
*	17	17		White (16 bit) - all pixels	
			0 - 255	Colour saturation control - fine (255=default)	proportional
14	18	18		CTC	
			0-255	Colour temperature correction for from cool col. to warm colour	proportional
15	19	19		Colour Mix control	
				<i>The channel defines relation between color channels</i>	
				<i>Global = Global Colours (RGBW, CTO, Virtual Color Wheel)</i>	
				<i>Pixel = Pixel Colors (RGB individual pixels or Kling-Net)</i>	
			0-9	Global colors (Global has priority)	
			10-19	Maximum mode (highest values have priority)	step
			20-29	Minimum mode (lowest values have priority)	step
			30-39	Multiply mode (multiply Global and Pixel)	step
			40-49	Addition mode (Global + Pixel) (45=default)	step
			50-59	Subtraction mode (Global – Pixel)	step
			60-69	Inverted Subtraction mode (Pixel – Global)	step
			70-79	Coloured background	step
			80-127	Reserved	
			128	Global colors (Global has priority)	step
			129-254	Crossfade (crossfade between Global and Pixel)	proportional
			255	Pixel colors (Pixel has priority)	step
16	20	20		Pixel effects	
			0-2	No function (0=default)	
			3-4	Effect 1	step
			5-6	Effect 2	step
			:	:	:
			171-172	Effect 85	step
			173-255	Reserved	
17	21	21		Pixel effects speed	
			0-127	Speed from min. to max. (0=default)	proportional
			128-255	Speed from max. to min. (opposite direction)	proportional
18	22	22		Pixel effects fade	
			0	Without fade time (0=default)	step
			1-255	Fade time from min. to max.	proportional
*	23	23		MBE 1 (Multiple Beam Engine 1)	
			0	Open position -without Effect (0=default)	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional
*	24	24		MBE 2 (Multiple Beam Engine 2)	
			0	Open position -without Effect (0=default)	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional

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Mode/channel			DMX Value	Function	Type of control
1	2	3			
*	25	25		MBE 3 (Multiple Beam Engine 3)	
			0	Open position -without Effect (0=default)	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional
*	26	26		MBE 4 (Multiple Beam Engine 4)	
			0	Open position (without Effect)	step
			1 - 127	Open position -without Effect (0=default)	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional
*	27	27		MBE 5 (Multiple Beam Engine 5)	
			0	Open position -without Effect (0=default)	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional
*	28	28		MBE 6 (Multiple Beam Engine 6)	
			0	Open position -without Effect (0=default)	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional
*	29	29		MBE 7 (Multiple Beam Engine 7)	
			0	Open position -without Effect (0=default)	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional
*	30	30		MBE 8 (Multiple Beam Engine 8)	
			0	Open position -without Effect (0=default)	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional
*	31	31		MBE 9 (Multiple Beam Engine 9)	
			0	Open position -without Effect (0=default)	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation (Effect inserted)	step
			129-255	Backwards rotation from slow to fast	proportional
19	32	32		MBE effects	
			0-2	Open position -without Effect (0=default)	step
			3-4	All MBEs together (synchronous rotation - set rotation at channel 20/33)	step
			5-6	Effect 1	step
			7-8	Effect 2	step
			9-10	Effect 3	step
			11-12	Effect 4	step
			13-14	Effect 5	step
			15-16	Effect 6	step
			17-18	Effect 7	step
			19-20	Effect 8	step
			21-22	Effect 9	step
			23-24	Effect 10	step
			25-26	Effect 11	step

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1	2	3			
			27-28	Effect 12	step
			29-30	Effect 13	step
			31-32	Effect 14	step
			33-34	Effect 15	step
			35-36	Effect 16	step
			37-38	Effect 17	step
			39-40	Effect 18	step
			41-42	Effect 19	step
			43-44	Effect 20	step
			45-46	Effect 21	step
			47-48	Effect 22	step
			49-50	Effect 23	step
			51-52	Effect 24	step
			53-54	Effect 25	step
			55-56	Effect 26	step
			57-58	Effect 27	step
			59-60	Effect 28	step
			61-62	Effect 29	step
			63-64	Effect 30	step
			65-66	Effect 31	step
			67-68	Effect 32	step
			69-70	Effect 33	step
			71-72	Effect 34	step
			73-74	Effect 35	step
			75-76	Effect 36	step
			77-78	Effect 37	step
			79-80	Effect 38	step
			81-82	Effect 39	step
			83-84	Effect 40	step
			85-86	Effect 41	step
			87-88	Effect 42	step
			89-90	Effect 43	step
			91-92	Effect 44	step
			93-94	Effect 45	step
			95-96	Effect 46	step
			97-98	Effect 47	step
			99-100	Effect 48	step
			101-255	Reserved	
20	33	33		MBE effect rotation	
				<i>If "All MBEs together" is selected at channel 19/32</i>	
			0	No rotation	step
			1 - 127	Forwards rotation from fast to slow	proportional
			128	No rotation - MBEs inserted (128=default)	step
			129-255	Backwards rotation from slow to fast	proportional
				<i>If "Effect 1- 48" is selected at channel 19/32</i>	
			0-255	Effects proportional rotation	proportional
*	34	34		Zoom-zone 1	
			0 - 255	Zoom from max. to min.beam angle (128=default)	proportional
*	35	35		Zoom-zone 2	

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Mode/channel			DMX Value	Function	Type of control
1	2	3			
			0 - 255	Zoom from max. to min.beam angle (128=default)	proportional
*	36	36		Zoom-zone 3	
			0 - 255	Zoom from max. to min.beam angle (128=default)	proportional
*	37	37		Zoom-zone 4	
			0 - 255	Zoom from max. to min.beam angle (128=default)	proportional
*	38	38		Zoom-zone 5	
			0 - 255	Zoom from max. to min.beam angle (128=default)	proportional
21	39	39		Zoom effects	
			0-2	No function (0=default)	
			3-4	All zones together (synchronous movement - set zoom at channel 22/40)	step
			5-6	Effect 1	step
			7-8	Effect 2	step
			9-10	Effect 3	step
			11-12	Effect 4	step
			13-14	Effect 5	step
			15-255	Reserved	
22	40	40		Zoom effects speed	
				<i>If " All zones together" is selected at channel Zoom effects:</i>	
			0-255	Zoom from max. to min.beam angle (128=default)	proportional
				<i>If " Effect 1-Effect 5" is selected at channel Zoom effects:</i>	
			0-255	Speed from min. to max.	proportional
23	41	41		Shutter/ strobe	
			0 - 31	Shutter closed	step
			32 - 63	Shutter open (32=default)	step
			64 - 95	Strobe-effect from slow to fast	proportional
			96 - 127	Shutter open	step
			128 - 143	Opening pulse in sequences from slow to fast	proportional
			144 - 159	Closing pulse in sequences from fast to slow	proportional
			160 - 191	Shutter open	step
			192 - 223	Random strobe-effect from slow to fast	proportional
			224 - 255	Shutter open	step
24	42	42		Dimmer intensity (8 bit)	
			0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
*	43	43		Dimmer intensity - fine (16 bit)	
			0 - 255	Fine dimming (0=default)	proportional
*	*	44		Red pixel 1	
			0-255	Red LED saturation control 0-100% (0=default)	proportional
*	*	45		Green pixel 1	
			0-255	Green LED saturation control 0-100% (0=default)	proportional
*	*	46		Blue pixel 1	
			0-255	Blue LED saturation control 0-100% (0=default)	proportional
				:	
*	*	116		Red pixel 25	
			0-255	Red LED saturation control 0-100% (0=default)	proportional
*	*	117		Green pixel 25	
			0-255	Green LED saturation control 0-100% (0=default)	proportional
*	*	118		Blue pixel 25	
			0-255	Blue LED saturation control 0-100% (0=default)	proportional

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Mode/channel			DMX Value	Function	Type of control
1	2	3			
**				In the Halogen lamp mode the Dimmer channel imitates behaviour of the halogen lamp during dimming	
***				Select RGB or CMY mixing mode on channel "Power/Special functions"	
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