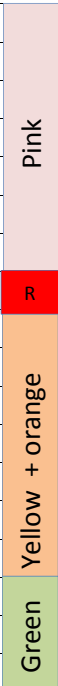


DMX protocol

Robin MMX Spot - DMX protocol, version 1.4						
Mode/channel			DMX Value	Function	Type of control	
1	2	3				
1	1	1		Pan		
			0 - 255	Pan movement by 540°	proportional	
2	2	*		Pan Fine		
			0 - 255	Fine control of pan movement	proportional	
3	3	2		Tilt		
			0 - 255	Tilt movement by 270°	proportional	
4	4	*		Tilt fine		
			0 - 255	Fine control of tilt movement	proportional	
5	5	3		Pan/Tilt speed , Pan/Tilt time		
			0	Max. speed (tracking mode)	step	
				<i>P./T. speed-set Speed Mode in menu: Pan/Tilt Mode</i>		
			1 - 255	Speed from max. to min. (vector mode)	proportional	
				<i>P./T. time - set Time Mode in menu: Pan/Tilt Mode</i>		
			1 - 255	Time from 0.1 s to 25.5 sec.	proportional	
6	6	4		Power/Special functions		
			0 - 9	Reserved		
				<i>To activate following junctions, stop in DMX value for at least 3 s and shutter must be closed at least 3 sec. („Shutter,Strobe“ channel 36/30/28 must be at range: 0-31 DMX). Corresponding menu items are temporarily overridden).</i>		
			10-39	Reserved		
			40-44	Dimmer-Compatible curve	step	
			45-49	Dimmer-SYNC curve	step	
			50 - 59	Pan/Tilt speed mode	step	
			60 - 69	Pan/Tilt time mode	step	
			70 - 79	Blackout while pan/tilt moving	step	
			80 - 89	Disabled blackout while pan/tilt moving	step	
			90 - 99	Blackout while colour wheel moving	step	
			100 - 109	Disabled blackout while colour wheel moving	step	
			110 - 119	Blackout while gobo wheel moving	step	
			120-129	Disabled blackout while gobo wheel moving	step	
				<i>To activate following functions, stop in DMX value for at least 3 seconds.</i>		
			130 - 139	Lamp On,reset(total reset except pan/tilt reset)	step	
			140 - 149	Pan/Tilt reset	step	
			150 - 159	Colour system reset	step	
			160 - 169	Gobo wheels reset	step	
			170 - 179	Dimmer/Shutter/Hot-spot reset	step	
			180 - 189	Zoom/focus/frost/prism reset	step	
			190 - 199	Iris/dual gaphic wheel reset	step	
			200 - 209	Total reset	step	
			210 - 229	Reserved		
			230 - 239	Lamp Off	step	
			240	Disabled "Silent" mode of fans	step	
				<i>To activate the "Silent mode", stop in range of 241-255 at least 3 sec.</i>		
			241-255	Silent mode of fans: Fans noise fom min. to max	proportional	
7	7	5		Colour wheel		
				<i>Continual positioning</i>		
			0	Open/white	proportional	

DMX protocol

Mode/channel			DMX Value	Function	Type of control
1	2	3			
			18	Deep red	proportional
			34	Deep blue	proportional
			55	Orange	proportional
			73	Green	proportional
			91	Amber	proportional
			110	UV filter	proportional
			128-129	White	step
				Positioning	
			130-139	Deep red	step
			140-149	Deep blue	step
			150-159	Orange	step
			160-169	Green	step
			170-179	Amber	step
			180-189	UV filter	step
			190 - 215	Forwards rainbow effect from fast to slow	proportional
			216 - 217	No rotation	step
			218 - 243	Backwards rainbow effect from slow to fast	proportional
			244 - 249	Random colour selection by audio control (Set microphone sensitivity in menu „Personality“)	step
			250 - 255	Auto random colour selection from fast to slow	proportional
8	*	*		Colour wheel - fine positioning	
			0 - 255	Fine positioning	proportional
9	8	6		Cyan	
			0 - 255	Cyan (0-white, 255-full cyan)	proportional
10	9	7		Magenta	
			0 - 255	Magenta (0-white, 255-full magenta)	proportional
11	10	8		Yellow	
			0 - 255	Yellow (0-white, 255-full yellow)	proportional
12	11	9		CTO filter	
			0 - 255	(0-6900K, 255-3200K)	proportional
13	12	10		CMY colour macros	
			0 - 7	No function	step
			8 - 15	Macro 1	step
			16 -23	Macro 2	step
			24-31	Macro 3	step
			32-39	Macro 4	step
			40-47	Macro 5	step
			48-55	Macro 6	step
			56-63	Macro 7	step
			64-71	Macro 8	step
			72-79	Macro 9	step
			80-87	Macro 10	step
			88-95	Macro 11	step
			96-103	Macro 12	step
			104-111	Macro 13	step
			112-119	Macro 14	step
			120-127	Macro 15	step
			128-135	Macro 16	step
			136-143	Macro 17	step
			144-151	Macro 18	step



DMX protocol

Mode/channel			DMX Value	Function	Type of control	
1	2	3				
			152-159	Macro 19	Cyan	step
			160-167	Macro 20		step
			168-175	Macro 21	Blue	step
			176-183	Macro 22		step
			184-191	Macro 23		step
			192-199	Macro 24		step
			200 - 207	Macro 25		step
			208 - 215	Macro 26		step
			216 - 223	Macro 27		step
			224 - 231	Macro 28		step
			232 - 239	Macro 29		step
			240 - 243	Macro 30		proportional
			244 - 249	Random macro selection by audio control (Set microphone sensitivity in menu "Personality")	step	
			250 - 255	Auto random macro selection from fast to slow	proportional	
14	13	11		Effect Speed		
				<i>Speed of CMY&CTO movement and Rot. Gobo selection</i>		
			0-255	Speed of CMY+CTO movement from max. to min.	proportional	
			0-255	Speed of Rot. Gobo Selection from max. to min. (0-25.5sec.)	proportional	
15	14	12		Dual graphic wheel positioning		
			0-19	No function	step	
			20-127	Proportional indexing (73-center)	proportional	
			128-170	Ramping from open to full position (max--->min. speed)	proportional	
			171-213	Ramping from open to half position (max. --->min. speed)	proportional	
			214-255	Ramp. from half position to full position (max. --->min. speed)	proportional	
16	15	13		Dual graphic wheel-Graphic wheel 1 rotation		
			0	No rotation	step	
			1 - 127	Forwards rotation from slow to fast	proportional	
			128 - 129	No rotation	step	
			130 - 255	Backwards rotation from slow to fast	proportional	
17	16	14		Dual graphic wheel-Graphic wheel 2 rotation		
			0	No rotation	step	
			1 - 127	Forwards rotation from slow to fast	proportional	
			128 - 129	No rotation	step	
			130 - 255	Backwards rotation from slow to fast	proportional	
18	17	15		Dual graphic wheel animations		
			0-7	No animation		
				Note : Set suitable DMX value at Focus channel to get desired animation. All animation were created at distance 7 m from screen with zoom=135DMX, Focus value was different for each effect (focus value is stated in parentheses for this distance)		
				Distance=7m, Zoom=135, Focus- see below		
				Colour animations (standard graphic wheels)		
				Note : The channels are blocked: Colour wheel, Cyan, Magenta, Yellow, CMY colour macros, Rotating gobo wheel 1 and 2, Prism, Prism rotation		
				<i>* use Rot. Gobo 1 indexing and rotation channel to index the animation</i>		
			8-9	Fire (Focus=95) *	step	
			10-11	Bonfire (F=93) *	step	

DMX protocol

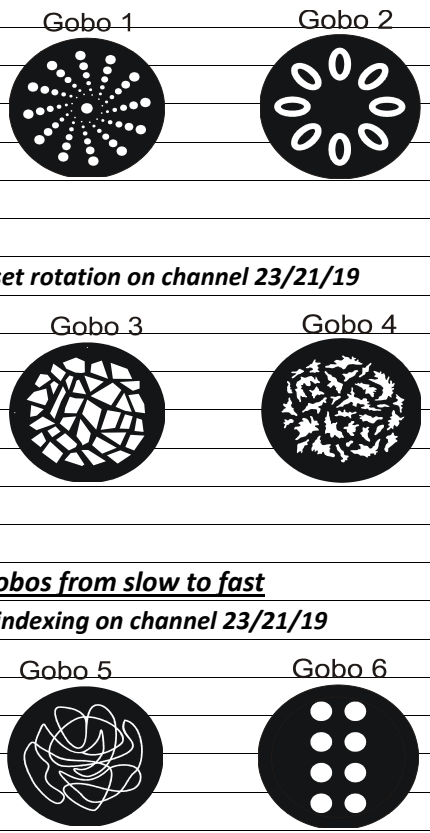
Mode/channel			DMX Value	Function	Type of control
1	2	3			
			12-13	Water (F=87)*	step
			14-15	Clouds (F=98)*	step
			16-17	Snowfall (F=78)	step
			18-19	Rain (F=91)*	step
			20-21	Gold fishes (F=39)	step
			22-23	Colour fishes (F=39)	step
			24-25	Fishes to shoal (F=39)	step
			26-27	Pie (F=85)	step
			28-29	Fishes from shoal (F=49)	step
			30-31	Sun (F=156)	step
			32-33	Falling leafs (F=43)	step
			34-35	Tunnel 1 (F=50)	step
			36-37	Tunel 2 (F=52)	step
			38-39	Pupil (F=81)	step
			40-41	Radial circles (F=135)	step
			42-43	Comet 1 (F=46)	step
			44-45	Comet 2 (F=39)	step
			46-47	Star cluster (F=74)	step
			48-49	Crochet ornament (F=78)	step
			50-51	Maelsrom (F=24)	step
			52-53	Sun on water (F=73)	step
			54-55	Pearly jewellery (F=95)	step
			56-57	Heap of bars (F=91)	step
			58-59	Nebula (F=20)	step
			60-61	Eccentric eye (F=67)	step
			62-63	Radial ellipses (F=102)	step
			64-65	Flying ball (F=70)	step
			66-67	Spaghetti (F=108)	step
				<i>Black and white animations (standard graphic wheels)</i>	
				Note : The channels are blocked: Rotating gobo wheel 1 and 2, Prism, Prism rotation	
				* use Rot. Gobo 1 indexing and rotation channel to index the animation	
			68-69	Fire (Focus=95) *	step
			70-71	Bonfire (F=93) *	step
			72-73	Water (F=87)*	step
			74-75	Clouds (F=98)*	step
			76-77	Snowfall (F=78)	step
			78-79	Rain (F=91)*	step
			80-81	Gold fishes (F=39)	step
			82-83	Colour fishes (F=39)	step
			84-85	Fishes to shoal (F=39)	step
			86-87	Pie (F=85)	step
			88-89	Fishes from shoal (F=49)	step
			90-91	Sun (F=156)	step
			92-93	Falling leafs (F=43)	step
			94-95	Tunnel 1 (F=50)	step
			96-97	Tunel 2 (F=52)	step
			98-99	Pupil (F=81)	step
			100-101	Radial circles (F=135)	step
			102-103	Comet 1 (F=46)	step

DMX protocol

Mode/channel			DMX Value	Function	Type of control
1	2	3			
			104-105	Comet 2 (F=39)	step
			106-107	Star cluster (F=74)	step
			108-109	Crochet ornament (F=78)	step
			110-111	Maelsrom (F=24)	step
			112-113	Sun on water (F=73)	step
			114-115	Pearly jewellery (F=95)	step
			116-117	Heap of bars (F=91)	step
			118-119	Nebula (F=20)	step
			120-121	Eccentric eye (F=67)	step
			122-123	Radial ellipses (F=102)	step
			124-125	Flying ball (F=70)	step
			126-127	Spaghetti (F=108)	step
			128-255	Reserved	
19	18	16		Rotating gobo wheel 1	
				<i>In the range of 0-59 DMX the gobo selection speed is controlled by the Effect Speed channel.</i>	
				<i>Index - set indexing on channel 20/19/17</i>	
			0-3	Open/hole	step
			4-7	Gobo 1	step
			8-11	Gobo 2	step
			12-15	Gobo 3	step
			16-19	Gobo 4	step
			20-23	Gobo 5	step
			24-27	Gobo 6	step
			28-31	Gobo 7	step
				<i>Rotation - set rotation on channel 20/19/17</i>	
			32-35	Gobo 1	step
			36-39	Gobo 2	step
			40-43	Gobo 3	step
			44-47	Gobo 4	step
			48-51	Gobo 5	step
			52-55	Gobo 6	step
			56-59	Gobo 7	step
				<i>Shaking gobos from slow to fast</i>	
				<i>Index - set indexing on channel 20/19/17</i>	
			60 - 69	Gobo 1	proportional
			70 - 79	Gobo 2	proportional
			80 - 89	Gobo 3	proportional
			90 - 99	Gobo 4	proportional
			100 - 109	Gobo 5	proportional
			110 - 119	Gobo 6	proportional
			120 - 129	Gobo 7	proportional
				<i>Shaking gobos from slow to fast</i>	
				<i>Rotation - set rotation on channel 20/19/17</i>	
			130 - 139	Gobo 1	proportional
			140 - 149	Gobo 2	proportional
			150 - 159	Gobo 3	proportional
			160 - 169	Gobo 4	proportional
			170 - 179	Gobo 5	proportional
			180 - 189	Gobo 6	proportional

DMX protocol

Mode/channel			DMX Value	Function	Type of control
1	2	3			
			190 - 199	Gobo 7	proportional
			200 - 201	Open/hole	step
			202 - 221	Forwards gobo wheel rotation from fast to slow	proportional
			222 - 223	No rotation	step
			224 - 243	Backwards gobo wheel rotation from slow to fast	proportional
			244 - 249	Random gobo selection by audio control	step
				(Set microphone sensitivity in menu „Personality“)	
			250 - 255	Auto random gobo selection from fast to slow	proportional
20	19	17		Rot. Gobo 1 indexing and rotation	
				<i>Gobo indexing - set position on channel 19/18/16</i>	
			0 - 255	Gobo indexing	proportional
				<i>Gobo rotation - set position on channel 19/18/16</i>	
			0	No rotation	step
			1 - 127	Forwards gobo rotation from fast to slow	proportional
			128 - 129	No rotation	step
			130 - 255	Backwards gobo rotation from slow to fast	proportional
21	*	*		Rot. Gobo 1 indexing/rotation - fine	
				Fine indexing (rotation)	proportional
22	20	18		Rotating gobo wheel 2	
				<i>In the range of 0-59 DMX the gobo selection speed is controlled by the Effect Speed channel.</i>	
				<i>Index - set indexing on channel 23/21/19</i>	
			0-3	Open/hole	step
			4-7	Gobo 1	step
			8-11	Gobo 2	step
			12-15	Gobo 3	step
			16-19	Gobo 4	step
			20-23	Gobo 5	step
			24-27	Gobo 6	step
			28-31	Gobo 7	step
				<i>Rotation - set rotation on channel 23/21/19</i>	
			32-35	Gobo 1	step
			36-39	Gobo 2	step
			40-43	Gobo 3	step
			44-47	Gobo 4	step
			48-51	Gobo 5	step
			52-55	Gobo 6	step
			56-59	Gobo 7	step
				<i>Shaking gobos from slow to fast</i>	
				<i>Index - set indexing on channel 23/21/19</i>	
			60 - 69	Gobo 1	proportional
			70 - 79	Gobo 2	proportional
			80 - 89	Gobo 3	proportional
			90 - 99	Gobo 4	proportional
			100 - 109	Gobo 5	proportional
			110 - 119	Gobo 6	proportional
			120 - 129	Gobo 7	proportional
				<i>Shaking gobos from slow to fast</i>	
				<i>Rotation - set rotation on channel 23/21/19</i>	
			130 - 139	Gobo 1	proportional



DMX protocol

Mode/channel			DMX Value	Function	Type of control
1	2	3			
			140 - 149	Gobo 2	proportional
			150 - 159	Gobo 3	proportional
			160 - 169	Gobo 4	proportional
			170 - 179	Gobo 5	proportional
			180 - 189	Gobo 6	proportional
			190 - 199	Gobo 7	proportional
			200 - 201	Open/hole	step
			202 - 221	Forwards gobo wheel rotation from fast to slow	proportional
			222 - 223	No rotation	step
			224 - 243	Backwards gobo wheel rotation from slow to fast	proportional
			244 - 249	Random gobo selection by audio control	step
				(Set microphone sensitivity in menu „Personality“)	
			250 - 255	Auto random gobo selection from fast to slow	proportional
23	21	19		Rot. Gobo 2 indexing and rotation	
				<i>Gobo indexing - set position on channel 22/20/18</i>	
			0 - 255	Gobo indexing	proportional
				<i>Gobo rotation - set position on channel 22/20/18</i>	
			0	No rotation	step
			1 - 127	Forwards gobo rotation from fast to slow	proportional
			128 - 129	No rotation	step
			130 - 255	Backwards gobo rotation from slow to fast	proportional
24	*	*		Rot. Gobo 2 indexing/rotation - fine	
			0-255	Fine indexing (rotation)	proportional
25	22	20		Prism	
			0 - 19	Open position (hole)	step
			20 - 127	3-facet rotating prism	step
			128 - 255	Prism/gobo macros	
			128 - 135	Macro 1	step
			136 - 143	Macro 2	step
			144 - 151	Macro 3	step
			152 - 159	Macro 4	step
			160 - 167	Macro 5	step
			168 - 175	Macro 6	step
			176 - 183	Macro 7	step
			184 - 191	Macro 8	step
			192 - 199	Macro 9	step
			200 - 207	Macro 10	step
			208 - 215	Macro 11	step
			216 - 223	Macro 12	step
			224 - 231	Macro 13	step
			232 - 239	Macro 14	step
			240 - 247	Macro 15	step
			248 - 255	Macro 16	step
26	23	21		Prism rotation	
			0	No rotation	step
			1 - 127	Forwards rotation from slow to fast	proportional
			128 - 129	No rotation	step
			130 - 255	Backwards rotation from slow to fast	proportional
27	24	22		Frost	
			0	Open	step

DMX protocol

Mode/channel			DMX Value	Function	Type of control
1	2	3			
			1 - 179	Frost from 0% to 100%	proportional
			180 - 189	100% frost	step
			190 - 211	Pulse closing from slow to fast	proportional
			212 - 233	Pulse opening from fast to slow	proportional
			234 - 255	Ramping from fast to slow	proportional
28	25	23		Iris	
			0	Open	step
			1 - 179	From max.diameter to min.diameter	proportional
			180 - 191	Closed	step
				Pulse effects with Iris blackout:	
			192 - 219	Pulse opening from slow to fast	proportional
			220 - 247	Pulse closing from fast to slow	proportional
			248 - 249	Random pulse opening (fast)	step
			250 - 251	Random pulse opening (slow)	step
			252 - 253	Random pulse closing (fast)	step
			254 - 255	Random pulse closing (slow)	step
29	*	*		Iris - fine	
			0 - 255	Fine iris movement	proportional
30	26	24		Zoom	
			0 - 255	Zoom from max. to min.beam angle	proportional
31	*	*		Zoom - fine	
			0-255	Fine zooming	proportional
32	27	25		Focus	
			0 - 255	Continuous adjustment from far to near	proportional
33	*	*		Focus - fine	
			0- 255	Fine focusing	proportional
34	28	26		Autofocus (priority & distance selection)	
				Select desired distance and effect on which you need to focus and use "Focus" channel (32/27/25) to focus the image.	
			0	Autofocus Off	step
				Iris (hole)	
			1	4 metres	proportional
			8	7 metres	proportional
			16	10 metres	proportional
			24	15 metres	proportional
			32	20 metres	proportional
			40	30 metres	proportional
			48	40 metres	proportional
			56	50 metres	proportional
				Gobo wheel 1	
			64	4 metres	proportional
			72	7 metres	proportional
			80	10 metres	proportional
			88	15 metres	proportional
			96	20 metres	proportional
			104	30 metres	proportional
			112	40 metres	proportional
			120	50 metres	proportional
				Gobo wheel 2	
			128	4 metres	proportional

DMX protocol

Mode/channel			DMX Value	Function	Type of control
1	2	3			
			136	7 metres	proportional
			144	10 metres	proportional
			152	15 metres	proportional
			160	20 metres	proportional
			168	30 metres	proportional
			176	40 metres	proportional
			184	50 metres	proportional
				Graphic wheel	
			192	4 metres	proportional
			200	7 metres	proportional
			208	10 metres	proportional
			216	15 metres	proportional
			224	20 metres	proportional
			232	30 metres	proportional
			240	40 metres	proportional
			248	50 metres	proportional
			255	Infinity	proportional
35	29	27		Hot-spot	
			0-255	Beam distribution control from max. intensity to min. intensity	proportional
36	30	28		Shutter/ strobe	
			0 - 31	Shutter closed, Lamp power reduced to 500 W	step
			32 - 63	Shutter open, Full lamp power	step
			64 - 95	Strobe-effect from slow to fast	proportional
			96 - 127	Shutter open, Lamp power reduced to 500 W	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, Electronic strobing „ZAP“ from slow to fast	proportional
			192 - 223	Random strobe-effect from slow to fast	proportional
			224 - 255	Shutter open, Full lamp power	step
37	31	29		Dimmer intensity	
			0 - 255	Dimmer intensity from 0% to 100%	proportional
38	*	*		Dimmer intensity - fine	
			0 - 255	Fine dimming	proportional