

DMX protocol

Robin BMFL Wash XF - DMX protocol				
Version 1.3 Mode 1 - Standard 16 bit, Mode 2 - Reduced 8 bit				
Mode/channel		DMX Value	Function	Type of control
1	2			
1	1		Pan	
		0 - 255	Pan movement by 540°	proportional
2	2		Pan Fine	
		0 - 255	Fine control of pan movement	proportional
3	3		Tilt	
		0 - 255	Tilt movement by 270°	proportional
4	4		Tilt fine	
		0 - 255	Fine control of tilt movement	proportional
5	5		Pan/Tilt speed , Pan/Tilt time	
		0	Standard mode	step
		1	Max. Speed Mode	step
			Pan/Tilt speed mode	
		2 - 255	Speed from max. to min.	proportional
			Pan/Tilt time mode	
		2 - 255	Time from 0.2 s to 25.5 sec.	proportional
6	6		Power/Special functions	
		0 - 9	Reserved	
			<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 32/29 must be at range: 0-31 DMX). Corresponding menu items are temporarily overridden except DMX Input.</i>	
		10-14	DMX input: Wired DMX *	step
		15-19	DMX input: Wireless DMX *	step
			* function is active only 10 seconds after switching the fixture on	
		20-24	Graphic display On	step
		25-29	Graphic display Off	step
		30-34	Reserved	
		35-39	Lamp power 1500W	step
		40-44	Lamp power 1700W	step
		45-49	Quiet mode	step
		50-54	Dimmer curve: Square law	step
		55-59	Dimmer curve: Linear	step
		60-64	Fans mode: Auto	step
		65-69	Fans mode: High	step
		70-74	Home position on	step
		75-79	Home position off	step
		80-89	Reserved	
		90 - 94	Pan/Tilt speed mode	step
		95-99	Pan/Tilt time mode	step
		100 - 104	Blackout while pan/tilt moving	step
		105 -109	Disabled blackout while pan/tilt moving	step
		110-114	Blackout while colour wheels moving	step
		115 -119	Disabled blackout while colour wheels moving	step
		120-129	Reserved	
			<i>To activate following functions, stop in DMX value for at least 3 seconds.</i>	
		130 - 139	Lamp On	step

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Mode/channel		DMX Value	Function	Type of control
1	2			
		140 - 149	Pan/Tilt reset	step
		150 - 159	Colour system reset	step
		160 - 169	Reserved	step
		170 - 179	Dimmer/Shutter reset	step
		180 - 189	Zoom/frost reset	step
		190 - 199	Barndoors/scrim reset	step
		200 - 209	Total reset	step
		210 - 229	Reserved	
		230 - 239	Lamp Off	step
		240 - 255	Reserved	step
7	7		Colour wheel 1	
			<i>Continual positioning</i>	
		0	Open/white	proportional
		18	Deep red	proportional
		37	Deep blue	proportional
		55	Orange	proportional
		73	Green	proportional
		91	Magenta	proportional
		110	Congo blue (UV)	proportional
		128-129	White	step
			<i>Positioning</i>	
		130-139	Deep red	step
		140-149	Deep blue	step
		150-159	Orange	step
		160-169	Green	step
		170-179	Magenta	step
		180-189	Congo blue (UV)	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 1 - fine positioning	
		0 - 255	Fine positioning	proportional
9	8		Colour wheel 2	
			<i>Continual positioning</i>	
		0	Open/white	proportional
		18	Pink	proportional
		37	Lavander	proportional
		55	Laser green	proportional
		73	CTB	proportional
		91	minus 1/1 green	proportional
		110	minus 1/2 green	proportional
		128-129	White	step
			<i>Positioning</i>	
		130-139	Pink	step
		140-149	Lavander	step

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1	2			
		150-159	Laser green	step
		160-169	CTB	step
		170-179	minus 1/1 green	step
		180-189	minus 1/2 green	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
10	*		Colour wheel 2 - fine positioning	
		0 - 255	Fine positioning	proportional
11	9		Cyan	
		0 - 255	Cyan (0-white, 255-full cyan)	proportional
12	10		Magenta	
		0 - 255	Magenta (0-white, 255-full magenta)	proportional
13	11		Yellow	
		0 - 255	Yellow (0-white, 255-full yellow)	proportional
14	12		CTO filter	
		0 - 255	(0-6000K, 255-2700K)	proportional
15	13		CMY +CTO + CW1+CW2 macros	
			See table "Colour macros" to find components of each colour	
			The following channels are disabled: 7-14 (Mode 1,3),7-12 (Mode2,4)	
		0 - 7	No function	step
		8 - 9	Colour Macro 1	step
		10-11	Colour Macro 2	step
		12-13	Colour Macro 3	step
		14-15	Colour Macro 4	step
		16-17	Colour Macro 5	step
		18-19	Colour Macro 6	step
		20-21	Colour Macro 7	step
		22-23	Colour Macro 8	step
		24-25	Colour Macro 9	step
		26-27	Colour Macro 10	step
		28-29	Colour Macro 11	step
		30-31	Colour Macro 12	step
		32-33	Colour Macro 13	step
		34-35	Colour Macro 14	step
		36-37	Colour Macro 15	step
		38-39	Colour Macro 16	step
		40-41	Colour Macro 17	step
		42-43	Colour Macro 18	step
		44-45	Colour Macro 19	step
		46-47	Colour Macro 20	step
		48-49	Colour Macro 21	step
		50-51	Colour Macro 22	step
		52-53	Colour Macro 23	step
		54-55	Colour Macro 24	step

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Mode/channel		DMX Value	Function	Type of control
1	2			
		56-57	Colour Macro 25	step
		58-59	Colour Macro 26	step
		60-61	Colour Macro 27	step
		62-63	Colour Macro 28	step
		64-65	Colour Macro 29	step
		66-67	Colour Macro 30	step
			LEE colour swatches	
		68-69	LEE 4 (Medium Bastard Amber)	step
		70-71	LEE 10 (Medium Yellow)	step
		72-73	LEE 19 (Fire)	step
		74-75	LEE 26 (Bright Red)	step
		76-77	LEE 58 (Lavender)	step
		78-79	LEE 68 (Sky Blue)	step
		80-81	LEE 71 (Tokyo Blue)	step
		82-83	LEE 79 (Just Blue)	step
		84-85	LEE 88 (Lime Green)	step
		86-87	LEE 90 (Dark Yellow Green)	step
		88-89	LEE 100 (Spring Yellow)	step
		90-91	LEE 101 (Yellow)	step
		92-93	LEE 102 (Light Amber)	step
		94-95	LEE 103 (Straw)	step
		96-97	Lee 104 (Deep Amber)	step
		98-99	LEE 105 (Orange)	step
		100-101	LEE 106 (Primary Red)	step
		102-103	LEE 111 (Dark Pink)	step
		104-105	LEE 115 (Peacock Blue)	step
		106-107	LEE 116 (Medium Blue-Green)	step
		108-109	LEE 117 (Steel Blue)	step
		110-111	LEE 118 (Light Blue)	step
		112-113	LEE 119 (Dark Blue)	step
		114-115	LEE 120 (Deep Blue)	step
		116-117	LEE 121 (LEE Green)	step
		118-119	LEE 128 (Bright Pink)	step
		120-121	LEE 131 (Marine Blue)	step
		122-123	LEE 132 (Medium Blue)	step
		124-125	LEE 134 (Golden Amber)	step
		126-127	LEE 135 (Deep Golden Amber)	step
		128-129	LEE 136 (Pale Lavender)	step
		130-131	LEE 137 (Special Lavender)	step
		132-133	LEE 138 (Pale Green)	step
		134-135	LEE 139 (Primary Green)	step
		136-137	LEE 141 (Bright Blue)	step
		138-139	LEE 147 (Apricot)	step
		140-141	LEE 148 (Bright Rose)	step
		142-143	LEE 152 (Pale Gold)	step
		144-145	LEE 154 (Pale Rose)	step
		146-147	LEE 157 (Pink)	step
		148-149	LEE 158 (Deep Orange)	step

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Mode/channel		DMX Value	Function	Type of control
1	2			
		150-151	LEE 162 (Bastard Amber)	step
		152-153	LEE 164 (Flame Red)	step
		154-155	LEE 165 (Daylight Blue)	step
		156-157	LEE 169 (Lilac Tint)	step
		158-159	LEE 170 (Deep Lavender)	step
		160-161	LEE 172 (Lagoon Blue)	step
		162-163	LEE 179 (Chrome Orange)	step
		164-165	LEE 180 (Dark Lavender)	step
		166-167	LEE 181 (Congo Blue)	step
		168-169	LEE 197 (Alice Blue)	step
		170-171	LEE 201 (Full C.T. Blue)	step
		172-173	LEE 202 (Half C.T. Blue)	step
		174-175	LEE 203 (Quarter C.T. Blue)	step
		176-177	LEE 204 (Full C.T. Orange)	step
		178-179	LEE 205 (Half C.T. Orange)	step
		180-181	LEE 206 (Quarter C.T. Orange)	step
		182-183	LEE 247 (LEE Minus Green)	step
		184-185	LEE 248 (Half Minus Green)	step
		186-187	LEE 281 (Three Quarter C.T. Blue)	step
		188-189	LEE 285 (Three Quarter C.T. Orange)	step
		190-191	LEE 352 (Glacier Blue)	step
		192-193	LEE 353 (Lighter Blue)	step
		194-195	LEE 715 (Cabana Blue)	step
		196-197	LEE 778 (Millennium Gold)	step
		198-199	LEE 793 (Vanity Fair)	step
		200-243	Reserved	
		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
16	14		Effect Speed	
			<i>Speed of CMY&CTO movement</i>	
		0-255	Speed of CMY+CTO movement from max. to min.	proportional
17	15		CMY+CTO+Colour wheel time	
		0	Function is off	step
		1 - 255	Time of CMY, CTO and Colour wheel movement (0.1sec-->25.5sec.)	proportional
18	16		Barndoors+Zoom+Frost time	
		0	Function is off	step
		1 - 255	Time of barndoors, zoom and frost movement (0.1 sec-->25.5 sec.)	proportional
19	17		Scrim positioning	
		0	No function	step
		1-255	Scrim inserting (0.5%-->100%)	proportional
20	18		Scrim indexing	
		0-255	Scrim indexing 0°-360° (1.4°per 1 DMX) (0 DMX=0°, 64DMX=90°, 128DMX=180°, 192DMX=270°, 255DMX=360°)	proportional
21	19		Frost	
		0-255	Frost from 0% to 100%	proportional
22	20		Zoom	

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Mode/channel		DMX Value	Function	Type of control
1	2			
		0 - 255	Zoom from max. to min.beam angle	proportional
23	*		Zoom - fine	
		0-255	Fine zooming	proportional
24	21		Edge colour correction	
		0-255	Fine correction of the colour of the image edge	proportional
25	22		Barndoors rotation	
		0-255	Rotation 0°--> 180°	proportional
26	23		Barndoor 1 - momement	
		0-255	Movement from Outward to Inward	proportional
27	24		Barndoor 2 - momement	
		0-255	Movement from Outward to Inward	proportional
28	25		Barndoor 3 - momement	
		0-255	Movement from Outward to Inward	proportional
29	26		Barndoor 4 - momement	
		0-255	Movement from Outward to Inward	proportional
30	27		Barndoors macros	
		0-3	No function	
		4-7	Macro 1	step
		8-11	Macro 2	step
		12-15	Macro 3	step
		16-19	Macro 4	step
		20-23	Macro 5	step
		24-27	Macro 6	step
		28-31	Macro 7	step
		32-35	Macro 8	step
		36-39	Macro 9	step
		40-43	Macro 10	step
		44-47	Macro 11	step
		48-51	Macro 12	step
		52-55	Macro 13	step
		56-59	Macro 14	step
		60-63	Macro 15	step
		64-67	Macro 16	step
		68-71	Macro 17	step
		72-75	Macro 18	step
		76-79	Macro 19	step
		80-83	Macro 20	step
		84-87	Macro 21	step
		88-91	Macro 22	step
		92-95	Macro 23	step
		96-99	Macro 24	step
		100-103	Macro 25	step
		104-107	Macro 26	step
		108-111	Macro 27	step
		112-115	Macro 28	step
		116-119	Macro 29	step
		120-123	Macro 30	step
		124-127	Macro 31	step

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Mode/channel		DMX Value	Function	Type of control
1	2			
		128-131	Macro 32	step
		132-135	Macro 33	step
		136-139	Macro 34	step
		140-143	Macro 35	step
		144-147	Macro 36	step
		148-151	Macro 37	step
		152-155	Macro 38	step
		156-159	Macro 39	step
		160-163	Macro 40	step
		164-167	Macro 41	step
		168-255	Reserved	
31	28		Barndoors macro speed	
		0- 255	Speed from slow to fast.	proportional
32	29		Shutter/ strobe	
		0 - 31	Shutter closed	step
		32 - 63	Shutter open	step
		64 - 95	Strobe effect from slow --> fast	proportional
			(64-0.4Hz, 67 - 0.5Hz, 74-1Hz, 83 - 5Hz, 91 - 10Hz, 95 - 11Hz)	
		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, Electronic strobing „ZAP” from slow to fast	proportional
		192 - 223	Random strobe-effect from slow to fast	proportional
		224 - 255	Shutter open	step
33	30		Dimmer intensity	
		0 - 255	Dimmer intensity from 0% to 100%	proportional
34	*		Dimmer intensity - fine	
		0 - 255	Fine dimming	proportional

Colour macros								
Color name	CW1 DMX	CW1 fine DMX	CW2 DMX	CW2 fine DMX	Cyan DMX	Magenta DMX	Yellow DMX	CTO DMX
Colour Macro 1	0	0	0	0	0	116	0	95
Colour Macro 2	0	0	0	0	0	148	0	108
Colour Macro 3	0	0	0	0	0	196	0	108
Colour Macro 4	0	0	0	0	0	255	0	98
Colour Macro 5	0	0	0	0	0	255	0	215
Colour Macro 6	0	0	0	0	0	255	161	0
Colour Macro 7	0	0	0	0	0	255	210	0
Colour Macro 8	0	0	0	0	0	255	255	0
Colour Macro 9	0	0	0	0	0	220	255	0
Colour Macro 10	0	0	0	0	0	192	255	0
Colour Macro 11	0	0	0	0	0	144	255	0
Colour Macro 12	0	0	0	0	0	97	255	0
Colour Macro 13	0	0	0	0	0	0	255	95
Colour Macro 14	0	0	0	0	0	0	255	65
Colour Macro 15	0	0	0	0	0	0	255	0
Colour Macro 16	0	0	0	0	91	0	255	0
Colour Macro 17	0	0	0	0	152	0	255	0
Colour Macro 18	0	0	0	0	213	0	255	0
Colour Macro 19	0	0	0	0	255	0	231	0
Colour Macro 20	0	0	0	0	255	0	188	0
Colour Macro 21	0	0	0	0	255	0	90	0
Colour Macro 22	0	0	0	0	255	0	70	0
Colour Macro 23	0	0	0	0	255	0	0	0
Colour Macro 24	0	0	0	0	255	57	0	0
Colour Macro 25	0	0	0	0	255	83	0	0
Colour Macro 26	0	0	0	0	255	127	0	0
Colour Macro 27	0	0	0	0	255	166	0	0
Colour Macro 28	0	0	0	0	255	226	0	0
Colour Macro 29	0	0	0	0	255	255	0	0
Colour Macro 30	0	0	0	0	255	255	95	0
LEE 4 (Medium Bastard Amber)	0	0	0	0	0	94	107	0
LEE 10 (Medium Yellow)	0	0	0	0	110	0	255	0
LEE 19 (Fire)	0	0	0	0	0	222	236	0
LEE 26 (Bright Red)	175	0	0	0	0	255	221	255
LEE 58 (Lavender)	0	0	0	0	200	166	0	0
LEE 68 (Sky Blue)	0	0	0	0	226	125	0	0
LEE 71 (Tokyo Blue)	145	0	0	0	241	116	0	0
LEE 79 (Just Blue)	0	0	0	0	254	149	0	0
LEE 88 (Lime Green)	0	0	155	0	89	0	134	0
LEE 90 (Dark Yellow Green)	0	0	0	0	228	0	236	0
LEE 100 (Spring Yellow)	0	0	0	0	128	0	231	0
LEE 101 (Yellow)	0	0	0	0	97	0	245	0
LEE 102 (Light Amber)	0	0	0	0	84	0	190	0
LEE 103 (Straw)	0	0	0	0	0	52	106	0
Lee 104 (Deep Amber)	0	0	0	0	0	9	218	0
LEE 105 (Orange)	0	0	0	0	0	132	242	0

LEE 106 (Primary Red)	155	0	135	0	91	255	0	255
LEE 111 (Dark Pink)	0	0	0	0	0	152	80	0
LEE 115 (Peacock Blue)	0	0	0	0	200	0	124	0
LEE 116 (Medium Blue-Green)	0	0	0	0	236	0	145	0
LEE 117 (Steel Blue)	0	0	0	0	106	7	0	0
LEE 118 (Light Blue)	0	0	0	0	196	76	0	0
LEE 119 (Dark Blue)	0	0	145	0	238	47	0	0
LEE 120 (Deep Blue)	145	0	0	0	79	1	0	0
LEE 121 (LEE Green)	0	0	0	0	182	0	225	70
LEE 128 (Bright Pink)	0	0	0	0	89	216	0	0
LEE 131 (Marine Blue)	0	0	0	0	173	0	125	0
LEE 132 (Medium Blue)	0	0	0	0	255	136	0	0
LEE 134 (Golden Amber)	0	0	0	0	0	108	176	0
LEE 135 (Deep Golden Amber)	0	0	0	0	0	193	246	0
LEE 136 (Pale Lavender)	0	0	0	0	104	105	0	0
LEE 137 (Special Lavender)	0	0	0	0	155	117	0	0
LEE 138 (Pale Green)	0	0	0	0	143	0	179	0
LEE 139 (Primary Green)	0	0	0	0	216	0	236	0
LEE 141 (Bright Blue)	0	0	0	0	217	74	0	0
LEE 147 (Apricot)	0	0	0	0	0	99	143	0
LEE 148 (Bright Rose)	0	0	0	0	0	210	110	0
LEE 152 (Pale Gold)	0	0	0	0	0	86	103	0
LEE 154 (Pale Rose)	0	0	0	0	0	93	101	0
LEE 157 (Pink)	0	0	0	0	0	159	117	0
LEE 158 (Deep Orange)	0	0	0	0	0	156	231	0
LEE 162 (Bastard Amber)	0	0	0	0	0	83	100	0
LEE 164 (Flame Red)	0	0	0	0	0	217	210	0
LEE 165 (Daylight Blue)	0	0	0	0	191	94	0	0
LEE 169 (Lilac Tint)	0	0	0	0	76	85	0	0
LEE 170 (Deep Lavender)	0	0	0	0	118	123	0	0
LEE 172 (Lagoon Blue)	0	0	0	0	191	0	80	0
LEE 179 (Chrome Orange)	0	0	0	0	0	90	251	0
LEE 180 (Dark Lavender)	0	0	0	0	206	166	0	0
LEE 181 (Congo Blue)	145	0	145	0	131	0	103	0
LEE 197 (Alice Blue)	0	0	0	0	203	137	0	0
LEE 201 (Full C.T. Blue)	0	0	0	0	123	95	0	0
LEE 202 (Half C.T. Blue)	0	0	0	0	96	75	0	0
LEE 203 (Quarter C.T. Blue)	0	0	0	0	73	59	0	0
LEE 204 (Full C.T. Orange)	0	0	0	0	0	71	142	0
LEE 205 (Half C.T. Orange)	0	0	0	0	0	49	106	0
LEE 206 (Quarter C.T. Orange)	0	0	0	0	0	12	93	0
LEE 247 (LEE Minus Green)	0	0	0	0	0	99	72	0
LEE 248 (Half Minus Green)	0	0	0	0	0	83	71	0
LEE 281 (Three Quarter C.T. Blue)	0	0	0	0	111	81	0	0
LEE 285 (Three Quarter C.T. Orange)	0	0	0	0	0	49	124	0
LEE 352 (Glacier Blue)	0	0	0	0	171	83	0	0
LEE 353 (Lighter Blue)	0	0	0	0	153	0	77	0
LEE 715 (Cabana Blue)	0	0	0	0	248	155	0	0
LEE 778 (Millennium Gold)	0	0	0	0	0	171	240	0
LEE 793 (Vanity Fair)	0	0	0	0	72	222	18	0