

DMX protocol

Robin Esprite Fresnel/Robin Esprite PC - DMX protocol				
Version: 1.2 Mode 1 - Standard 16 bit, Mode 2 - Reduced 8 bit				
Quick overview of default DMX values for each channel				
Mode/channel		Default DMX Value	Function	
1	2			
1	1	128	Pan	
2	2	0	Pan Fine	
3	3	128	Tilt	
4	4	0	Tilt fine	
5	5	0	Pan/Tilt speed , Pan/Tilt time	
6	6	0	Power/Special functions	
7	7	10	LED frequency selection	
8	8	128	LED frequency fine adjusting	
9	9	0	Max. light intensity indication and setting	
10	10	0	Colour wheel 1	
11	*	0	Colour wheel 1- fine positioning	
12	11	0	Colour wheel 2	
13	*	0	Colour wheel 2- fine positioning	
14	12	0	Cyan	
15	13	0	Magenta	
16	14	0	Yellow	
17	15	0	CTO filter	
18	16	0	Virtual colour wheel	
19	17	0	Effects Speed	
20	18	0	CMY/CTO/Barndoors/Zoom/Frost time	
21	19	0	Scrim positioning	
22	20	128	Scrim indexing	
23	21	0	Frost	
24	22	128	Zoom	
25	*	0	Zoom - fine	
26	23	128	Edge colour correction	
27	24	128	Barndoors rotation	
28	25	0	Barndoor 1-movement	
29	26	0	Barndoor 2-movement	
30	27	0	Barndoor 3-movement	
31	28	0	Barndoor 4-movement	
32	29	32	Shutter/ strobe	
33	30	0	Dimmer intensity	
34	*	0	Dimmer intensity - fine	
Mode/channel		DMX Value	Function	Type of control
1	2			
1	1	0 - 255	Pan	proportional
			Pan movement by 540° (128=default)	
2	2	0 - 255	Pan Fine	proportional
			Fine control of pan movement (0=default)	

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Mode/channel		DMX Value	Function	Type of control
1	2			
3	3	0 - 255	Tilt Tilt movement by 265° (128=default)	proportional
4	4	0 - 255	Tilt fine Fine control of tilt movement (0=default)	proportional
5	5		Pan/Tilt speed , Pan/Tilt time	
		0	Standard mode (0=default)	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 sec. to 25.5 sec.	proportional
6	6		Power/Special functions Factory display menu setting: DMX Input-Wired ,Graphic display-On, Pan/tilt Mode-Speed,Blackout while pan/tilt moving-Off,Blackout while colour wheels moving-Off, Fans mode-Auto, High-power mode-Off	
		0 -9	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 33/30 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 *	step
			* function is active only 10 seconds after switching the fixture on	
		20-24	Graphic display: On	step
		25-29	Graphic display: Off	step
		30-39	Reserved	
		40-44	Pan/Tilt mode: Speed	step
		45-49	Pan/Tilt mode: Time	step
		50-54	Blackout while pan/tilt moving: On	step
		55-59	Blackout while pan/tilt moving: Off	step
		60-64	Blackout while colour wheels moving: On	step
		65-69	Blackout while colour wheels moving: Off	step
		70-79	Reserved	
		80-84	Fans mode: Auto	step
		85-89	Fans mode: High	step
		90-94	High-power mode: On	step
		95-99	High power mode: Off	step
		100-109	Reserved	
		110-114	Dimmer curve: Square law	step
		115-119	Dimmer curve: Linear	step
		120-124	Parking position: On	step
		125-129	Parking position: Off	step
			<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	Colour system reset	
		160-179	Reserved	

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Mode/channel		DMX Value	Function	Type of control
1	2			
		180 - 189	Zoom/focus/frost reset	step
		190 - 199	Barndoors/scrim reset	step
		200 - 209	Total fixture reset	step
		210-239	Reserved	
		240	Disabled "Quiet mode"	step
		241 - 255	"Quiet mode" - fan noise control from min. to max.	proportional
7	7		LED frequency selection	
			Factory display menu setting: 600Hz <i>Select PWM output frequency of LEDs. Selected PWM frequency can be fine adjusted in 127 steps up/down around selected PWM frequency on the channel below. Corresponding menu item (Frequency Setup) is temporarily overridden.</i>	
		0-4	PWM frequency from Display menu (fixture utilizes PWM frequency set in the display menu item Frequency Setup).	step
		5-9	300 Hz	step
		10-14	600 Hz (10=default)	step
		15-19	1200 Hz	step
		20-24	2400 Hz	step
		25-255	Reserved (fixture utilizes PWM frequency set in the display menu item Frequency Setup).	
8	8		LED frequency fine adjusting	
			Factory display menu setting: 600Hz <i>Select desired PWM output frequency of LEDs on the channel above.</i>	
		0-1	Selected LED Frequency	step
		2	LED Frequency (step -126)	step
		3	LED Frequency (step -125)	step
		4	LED Frequency (step -124)	step
		:		
		125	LED Frequency (step -3)	step
		126	LED Frequency (step -2)	step
		127	LED Frequency (step -1)	step
		128	Selected LED Frequency (128=default)	step
		129	LED Frequency (step +1)	step
		130	LED Frequency (step +2)	step
		131	LED Frequency (step +3)	step
		:		
		252	LED Frequency (step +124)	step
		253	LED Frequency (step +125)	step
		254	LED Frequency (step +126)	step
		255	Selected LED Frequency	step
9	9		Max. light intensity indication and setting	
		0-10	No function (0=default)	
		11-20	Indication of drop of max. light intensity	step
			<i>A drop of max. light intensity of the fixture (compared to its original intensity) is indicated by a corresponding colour output:</i> <i>0-5%, (WHITE /new LED module/)</i> <i>6-10% (RED)</i> <i>11-15% (GREEN)</i>	

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Mode/channel		DMX Value	Function	Type of control
1	2			
			16-20% (BLUE) 21-25% (CYAN) 26-30% (MAGENTA) 31-35% (YELLOW) 36-40% (ORANGE) Pan/tilt/zoom is set at 128 DMX (50%), Dimmer is open at 255 DMX (100%). To set a drop of max. light intensity (compared to original light intensity), stay at DMX value for at least 3 sec. and shutter must be closed at least 3 sec. (Channel „Shutter/ Strobe” 33/30 must be at range: 0-31 DMX). Corresponding menu items are permanently overwritten.	
		21-30	Set drop by 6-10% (RED)	step
		31-40	Set drop by 11-15% (GREEN)	step
		41-50	Drop by 16-20% (BLUE)	step
		51-60	Set drop by 21-25% (CYAN)	step
		61-70	Set drop by 26-30% (MAGENTA)	step
		71-80	Set drop by 31-35% (YELLOW)	step
		81-90	Set drop by 36-40% (ORANGE)	step
		91-100	Original intensity (WHITE)	step
		101-255	Reserved	
10	10		Colour wheel 1	
			Continual positioning	
		0	Open/white (0=default)	proportional
		21	Deep red	proportional
		43	Deep blue	proportional
		64	Orange	proportional
		86	Green	proportional
		107	Congo blue	proportional
		128-129	Open/White	step
			Positioning	
		130-141	Deep red	step
		142-153	Deep blue	step
		154-165	Orange	step
		166-177	Green	step
		178-189	Congo blue	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
11	*		Colour wheel 1 - fine positioning	
		0 - 255	Fine positioning (0=default)	proportional
12	11		Colour wheel 2	
			Continual positioning	
		0	Open/white (0=default)	proportional
		21	Multicolour	proportional
		43	Laser green	proportional

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Mode/channel		DMX Value	Function	Type of control
1	2			
		64	Lavender	proportional
		86	Filter CRI 80	proportional
		107	Filter CRI 90	proportional
		128-129	Open/White	step
			Positioning	
		130-141	Multicolour	step
		142-153	Laser green	step
		154-165	Lavender	step
		166-177	Filter CRI 80	step
		178-189	Filter CRI 90	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
13	*		Colour wheel 2 - fine positioning	
		0 - 255	Fine positioning (0=default)	proportional
14	12		Cyan	
		0 - 255	Cyan from min. saturation --> full cyan (0=default)	proportional
15	13		Magenta	
		0 - 255	Magenta from min. saturation --> full magenta (0=default)	proportional
16	14		Yellow	
		0 - 255	Yellow from min. saturation --> full yellow (0=default)	proportional
17	15		CTO filter	
		0 - 255	CTO from 6700K --> 3000K (0=default)	proportional
18	16		Virtual colour wheel	
		0	No function (0=default)	step
		1-2	Filter 4 (Medium Bastard Amber)	step
		3-4	Filter 10 (Medium Yellow)	step
		5-6	Filter 19 (Fire)	step
		7-8	Filter 26 (Bright Red)	step
		9-10	Filter 58 (Lavender)	step
		11-12	Filter 68 (Sky Blue)	step
		13-14	Filter 71 (Tokyo Blue)	step
		15-16	Filter 79 (Just Blue)	step
		17-18	Filter 88 (Lime Green)	step
		19-20	Filter 90 (Dark Yellow Green)	step
		21-22	Filter 100 (Spring Yellow)	step
		23-24	Filter 101 (Yellow)	step
		25-26	Filter 102 (Light Amber)	step
		27-28	Filter 103 (Straw)	step
		29-30	Filter 104 (Deep Amber)	step
		31-32	Filter 105 (Orange)	step
		33-34	Filter 106 (Primary Red)	step
		35-36	Filter 111 (Dark Pink)	step
		37-38	Filter 115 (Peacock Blue)	step
		39-40	Filter 116 (Medium Blue-Green)	step

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Mode/channel		DMX Value	Function	Type of control
1	2			
		41-42	Filter 117 (Steel Blue)	step
		43-44	Filter 118 (Light Blue)	step
		45-46	Filter 119 (Dark Blue)	step
		47-48	Filter 120 (Deep Blue)	step
		49-50	Filter 121 (Filter Green)	step
		51-52	Filter 128 (Bright Pink)	step
		53-54	Filter 131 (Marine Blue)	step
		55-56	Filter 132 (Medium Blue)	step
		57-58	Filter 134 (Golden Amber)	step
		59-60	Filter 135 (Deep Golden Amber)	step
		61-62	Filter 136 (Pale Lavender)	step
		63-64	Filter 137 (Special Lavender)	step
		65-66	Filter 138 (Pale Green)	step
		67-68	Filter 139 (Primary Green)	step
		69-70	Filter 141 (Bright Blue)	step
		71-72	Filter 147 (Apricot)	step
		73-74	Filter 148 (Bright Rose)	step
		75-76	Filter 152 (Pale Gold)	step
		77-78	Filter 154 (Pale Rose)	step
		79-80	Filter 157 (Pink)	step
		81-82	Filter 158 (Deep Orange)	step
		83-84	Filter 162 (Bastard Amber)	step
		85-86	Filter 164 (Flame Red)	step
		87-88	Filter 165 (Daylight Blue)	step
		89-90	Filter 169 (Lilac Tint)	step
		91-92	Filter 170 (Deep Lavender)	step
		93-94	Filter 172 (Lagoon Blue)	step
		95-96	Filter 179 (Chrome Orange)	step
		97-98	Filter 180 (Dark Lavender)	step
		99-100	Filter 181 (Congo Blue)	step
		101-102	Filter 197 (Alice Blue)	step
		103-104	Filter 201 (Full C.T. Blue)	step
		105-106	Filter 202 (Half C.T. Blue)	step
		107-108	Filter 203 (Quarter C.T. Blue)	step
		109-110	Filter 204 (Full C.T. Orange)	step
		111-112	Filter 205 (Half C.T. Orange)	step
		113-114	Filter 206 (Quarter C.T. Orange)	step
		115-116	Filter 247 (Filter Minus Green)	step
		117-118	Filter 248 (Half Minus Green)	step
		119-120	Filter 281 (Three Quarter C.T. Blue)	step
		121-122	Filter 285 (Three Quarter C.T. Orange)	step
		123-124	Filter 352 (Glacier Blue)	step
		125-126	Filter 353 (Lighter Blue)	step
		127-128	Filter 715 (Cabana Blue)	step
		129-130	Filter 778 (Millennium Gold)	step
		131-132	Filter 793 (Vanity Fair)	step
		133-255	Reserved	
19	17		Effects Speed	

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Mode/channel		DMX Value	Function	Type of control
1	2			
		0-255	Speed of CMY+CTO movement from max. to min. (0=default)	proportional
20	18		CMY/CTO/Colour wheels/Barndoors/Zoom/Frost time	
		0	Function is off (0=default)	step
		1 - 255	Time of CMY, CTO, colour wheels, barndoors, zoom, frost movement (0.1sec-->25.5sec.)	proportional
21	19		Scrim positioning	
		0	No function (0=default)	step
		1-255	Scrim inserting (0.5%-->100%)	proportional
22	20		Scrim indexing	
		0-255	Scrim indexing 0°-360° /1.4°per 1 DMX/, (128=default)	
			(0 DMX=0°, 64DMX=90°, 128DMX=180°, 192DMX=270°, 255DMX=360°)	proportional
23	21		Frost	
		0	Open (0=default)	step
			Light Frost	
		1-50	Light Frost from 0% to 100%	proportional
		51-53	100% Light Frost	step
		54-63	Pulse closing from slow to fast	proportional
		64-73	Pulse opening from fast to slow	proportional
		74-83	Ramping from fast to slow	proportional
		84-86	Open	step
			Medium Frost	
		87-136	Medium Frost from 0% to 100%	proportional
		137-139	100% Medium Frost	step
		140-149	Pulse closing from slow to fast	proportional
		150-159	Pulse opening from fast to slow	proportional
		160-169	Ramping from fast to slow	proportional
		170-172	Open	step
			Combined Frost	
		173-222	Medium Frost from 0% to 100% (Light Frost inserted)	proportional
		223-225	100% Medium Frost (Light Frost inserted)	step
		226-235	Pulse closing from slow to fast	proportional
		236-245	Pulse opening from fast to slow	proportional
		246-255	Ramping from fast to slow	proportional
24	22		Zoom	
		0 - 255	Zoom from max. to min. beam angle (128=default)	proportional
25	*		Zoom - fine	
		0-255	Fine zooming (0=default)	proportional
26	23		Edge colour correction	
		0-255	Fine correction of the colour of the image edge (128=default)	proportional
27	24		Barndoors rotation	
		0-255	Rotation 0°--> 180° (128=default)	proportional
28	25		Barndoor 1 - movement	
		0-255	Movement from Outward to Inward (0=default)	proportional
29	26		Barndoor 2 - movement	
		0-255	Movement from Outward to Inward (0=default)	proportional
30	27		Barndoor 3 - movement	
		0-255	Movement from Outward to Inward (0=default)	proportional
31	28		Barndoor 4 - movement	

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Mode/channel		DMX Value	Function	Type of control
1	2			
		0-255	Movement from Outward to Inward (0=default)	proportional
32	29		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
33	30		Dimmer intensity	
		0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
34	*		Dimmer intensity - fine	
		0 - 255	Fine dimming (0=default)	proportional
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Robin Esprite PC/Robin Esprite Fresnel - Colours on Virtual Colour Wheel

Colour name	Col. Wheel 1 DMX	Col. Wheel 2 DMX	Cyan DMX	Magenta DMX	Yellow DMX	CTO DMX
Filter 4 (Medium Bastard Amber)	0	0	0	134	150	225
Filter 10 (Medium Yellow)	0	0	0	45	210	255
Filter 19 (Fire)	154	0	0	210	0	0
Filter 26 (Bright Red)	130	0	0	45	255	90
Filter 58 (Lavender)	0	0	10	205	93	101
Filter 68 (Sky Blue)	0	154	165	120	0	0
Filter 71 (Tokyo Blue)	144	0	0	0	0	0
Filter 79 (Just Blue)	0	154	165	135	0	0
Filter 88 (Lime Green)	0	142	0	90	0	225
Filter 90 (Dark Yellow Green)	0	142	201	0	147	0
Filter 100 (Spring Yellow)	0	0	0	0	210	165
Filter 101 (Yellow)	0	0	0	75	210	255
Filter 102 (Light Amber)	0	0	0	60	165	240
Filter 103 (Straw)	0	0	0	0	150	240
Filter 104 (Deep Amber)	0	0	0	150	225	210
Filter 105 (Orange)	0	0	0	195	240	150
Filter 106 (Primary Red)	154	0	0	240	0	15
Filter 111 (Dark Pink)	0	0	0	182	164	255
Filter 115 (Peacock Blue)	0	0	246	0	185	0
Filter 116 (Medium Blue-Green)	0	0	239	0	193	0
Filter 117 (Steel Blue)	0	0	180	90	165	15
Filter 118 (Light Blue)	0	0	225	0	165	30
Filter 119 (Dark Blue)	0	0	255	120	0	0
Filter 120 (Deep Blue)	0	154	255	30	0	105
Filter 121 (Filter Green)	0	142	135	0	210	0
Filter 128 (Bright Pink)	0	0	52	235	194	113
Filter 131 (Marine Blue)	0	0	210	15	135	30
Filter 132 (Medium Blue)	0	0	240	0	15	105
Filter 134 (Golden Amber)	0	0	49	201	237	28
Filter 135 (Deep Golden Amber)	0	0	49	223	254	40
Filter 136 (Pale Lavender)	0	0	64	198	131	0
Filter 137 (Special Lavender)	0	0	34	159	112	0
Filter 138 (Pale Green)	0	0	120	81	201	50
Filter 139 (Primary Green)	166	0	0	0	0	240
Filter 141 (Bright Blue)	0	0	240	0	45	195
Filter 147 (Apricot)	0	0	0	182	221	0
Filter 148 (Bright Rose)	0	0	0	225	217	0
Filter 152 (Pale Gold)	0	0	57	190	204	0
Filter 154 (Pale Rose)	0	0	57	185	189	67
Filter 157 (Pink)	0	0	59	224	223	0
Filter 158 (Deep Orange)	0	0	0	220	255	0
Filter 162 (Bastard Amber)	0	0	0	165	195	0
Filter 164 (Flame Red)	154	0	0	240	30	195
Filter 165 (Daylight Blue)	0	0	210	0	0	75
Filter 169 (Lilac Tint)	0	0	87	202	169	0

Colour name	Col. Wheel 1 DMX	Col. Wheel 2 DMX	Cyan DMX	Magenta DMX	Yellow DMX	CTO DMX
Filter 170 (Deep Lavender)	0	0	98	200	133	0
Filter 172 (Lagoon Blue)	0	0	225	30	135	15
Filter 179 (Chrome Orange)	0	0	57	190	240	0
Filter 180 (Dark Lavender)	0	0	175	185	0	0
Filter 181 (Congo Blue)	0	0	195	225	0	15
Filter 197 (Alice Blue)	0	154	225	0	0	60
Filter 201 (Full C.T. Blue)	0	0	180	0	105	60
Filter 202 (Half C.T. Blue)	0	0	168	0	37	118
Filter 203 (Quarter C.T. Blue)	0	0	135	45	120	0
Filter 204 (Full C.T. Orange)	0	0	0	195	240	30
Filter 205 (Half C.T. Orange)	0	0	90	180	210	0
Filter 206 (Quarter C.T. Orange)	0	0	0	165	163	30
Filter 247 (Filter Minus Green)	0	0	0	184	131	20
Filter 248 (Half Minus Green)	0	0	48	134	110	24
Filter 281 (Three Quarter C.T. Blue)	0	0	180	0	105	120
Filter 285 (Three Quarter C.T. Orange)	0	0	0	173	234	90
Filter 352 (Glacier Blue)	0	0	210	0	105	60
Filter 353 (Lighter Blue)	0	0	220	0	144	0
Filter 715 (Cabana Blue)	0	154	255	0	0	105
Filter 778 (Millennium Gold)	0	0	0	215	255	0
Filter 793 (Vanity Fair)	0	0	15	225	0	255