

# DMX protocol

## iEsprite® iEsprite® FS- DMX protocol

Version: 1.1 Mode 1 - Standard 16 bit, Mode 2 - Reduced 8 bit, Mode 3 -Standard 16 bit + green corre., Mode 4 -Reduced 8 bit + green corre.

Mode 5 - Enhanced gobo control

### Quick overview of default DMX values for each channel

Mode/channel					Default DMX Value	Function
1	2	3	4	5		
1	1	1	1	1	128	Pan
2	2	2	2	2	0	Pan Fine
3	3	3	3	3	128	Tilt
4	4	4	4	4	0	Tilt fine
5	5	5	5	5	0	Pan/Tilt speed , Pan/Tilt time
6	6	6	6	6	0	Power/Special functions
7	7	7	7	7	10	LED frequency selection
8	8	8	8	8	128	LED frequency fine adjusting
9	9	9	9	9	0	Max. light intensity indication and setting
10	10	10	10	10	0	Colour wheel 1
11	*	11	*	11	0	Colour wheel 1-fine positioning
12	11	12	11	12	0	Colour wheel 2
13	*	13	*	13	0	Colour wheel 2-fine positioning
14	12	14	12	14	0	Cyan
15	13	15	13	15	0	Magenta
16	14	16	14	16	0	Yellow
17	15	17	15	17	0	CTO
*	*	18	16	18	128	Green Correction
18	16	19	17	19	0	Virtual colour wheel
19	17	20	18	20	0	Effects speed
20	18	21	19	21	0	CMY+CTO+Colour wheels time
21	19	22	20	22	0	Static gobo/ Framing shutters/Zoom/Focus/Iris/Frost/Prism time
22	20	23	21	23	0	Effect wheel positioning
23	21	24	22	24	128	Effect wheel rotation
24	22	25	23	25	0	Effect wheel animations
25	23	26	24	26	0	Static gobo wheel
26	24	27	25	27	0	Rotating gobo wheel
*	*	*	*	28	0	Rotating gobo wheel- fine positioning
27	25	28	26	29	128	Rot. gobo indexing and rotation
28	*	29	*	30	0	Rot. gobo indexing/rotation - fine
29	26	30	27	31	0	Prism
30	27	31	28	32	128	Prism indexing/rotation
31	28	32	29	33	0	Frost
32	29	33	30	34	0	Iris
33	*	34	*	35	0	Iris - fine
34	30	35	31	36	128	Zoom
35	*	36	*	37	0	Zoom - fine
36	31	37	32	38	128	Focus
37	*	38	*	39	0	Focus - fine
38	32	39	33	40	128	Framing shutters module rotation
39	33	40	34	41	0	Framing shutter 1- movement
40	34	41	35	42	128	Framing shutter 1- swivelling
41	35	42	36	43	0	Framing shutter 2- movement

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Mode/channel					Default DMX Value	Function	
1	2	3	4	5			
42	36	43	37	44	128	Framing shutter 2- swivelling	
43	37	44	38	45	0	Framing shutter 3 movement	
44	38	45	39	46	128	Framing shutter 3- swivelling	
45	39	46	40	47	0	Framing shutter 4 movement	
46	40	47	41	48	128	Framing shutter 4- swivelling	
47	41	48	42	49	32	Shutter/ strobe	
48	42	49	43	50	0	Dimmer intensity	
49	*	50	*	51	0	Dimmer intensity - fine	
Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
1	1	1	1	1		<b>Pan</b>	
					0 - 255	Pan movement by 540° (128=default)	proportional
2	2	2	2	2		<b>Pan Fine</b>	
					0 - 255	Fine control of pan movement (0=default)	proportional
3	3	3	3	3		<b>Tilt</b>	
					0 - 255	Tilt movement by 265° (128=default)	proportional
4	4	4	4	4		<b>Tilt fine</b>	
					0 - 255	Fine control of tilt movement (0=default)	proportional
5	5	5	5	5		<b>Pan/Tilt speed , Pan/Tilt time</b>	
					0	Standard mode (0=default)	step
					1	Max. Speed Mode	step
						<b>Pan/Tilt speed mode</b>	
					2 - 255	Speed from max. to min.	proportional
						<b>Pan/Tilt time mode</b>	
					2 - 255	Time from 0.2 sec. to 25.5 sec.	proportional
6	6	6	6	6		<b>Power/Special functions</b>	
						Factory display menu setting: DMX Input-Wired ,Graphic display-On, Pan/tilt Mode-Speed,Blackout while pan/tilt moving-Off, Blackout while gobo wheels moving-Off,Blackout while colour wheels moving-Off, Fans mode-Auto, High-power mode - Off, Focus Tracking- Off, Gobo transition - Maximum speed and shortcut	
					0 -5	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. (Channel „Shutter/ Strobe“ 47/41/48/42/49 must be at range: 0-31 DMX). Corresponding menu items are temporarily overwritten.</i>	
					6	Standby mode: On (fixture effects are deactivated, light output is closed)	step
					7	Standby mode: Off	step
					8	Pressure test: On ( fixture does not respond to DMX during the test except value 9 (Pressure test Off))	step
					9	Pressure test: Off	step
					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

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Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					25-29	Graphic display: Off	step
					30-31	Quiet mode: Fans On at blackout	step
					32-33	Quiet mode: Fans Off at blackout	step
					34-35	Dimmer curve: Super Square Law	step
					36-39	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 gobo wheels moving: On	step
					65-69	Blackout while gobo wheels moving: Off	step
					70-74	Blackout while colour wheels moving: On	step
					75-79	Blackout while colour wheels moving: Off	step
					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
					100-104	Focus Tracking: On	step
					105-109	Focus Tracking: Off	step
					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	Total fixture reset (without pan/tilt)	step
					140 - 149	Pan and Tilt reset	step
					150 - 159	Colour system reset	step
					160 - 169	Gobo wheels/effect wheel reset	step
					170-174	Pan reset	step
					175-179	Tilt reset	step
					180 - 189	Zoom/focus/frost/prism reset	step
					190 - 199	Iris /framing shutters reset	step
					200 - 209	Total fixture reset (including pan/tilt)	step
					210 - 218	Reserved	
						The following three commands define transition from gobo rotation to gobo indexing:	
					219 - 220	Gobo indexing: Maximum speed and shortcut	step
					221 - 222	Gobo indexing: Follow speed and direction	step
					223 - 224	Gobo indexing: Maximum speed and follow direction	step
						The following RoboSpot related commands are only applicable when the RoboSpot is connected:	
					225 - 229	RoboSpot enabled	step
					230 - 234	RoboSpot disabled - except handle faders and pan/tilt	step
					235 - 239	RoboSpot fully disabled	step
					240	Disabled "Quiet mode"	step
					241 - 255	Quiet mode - fan noise control from min. to max.	proportional
<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>		<b>LED frequency selection</b>	
						Factory display menu setting: 600Hz	

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Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
						<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).	
<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>		<b>LED frequency fine adjusting</b>	
						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
<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>		<b>Max. light intensity indication and setting</b>	
					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: 0-5%, (WHITE /new LED module/) 6-10% (RED) 11-15% (GREEN) 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%).</i>	

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Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
						<i>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“ 47/41 must be at range: 0-31 DMX). Corresponding menu items are permanently overwritten.</i>	
					21-30	Set drop by 6-10% (RED)	step
					31-40	Set drop by 11-15% (GREEN)	step
					41-50	Set 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	
<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>		<b>Colour wheel 1</b>	
						<b>Continual positioning</b>	
					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
						<b>Positioning</b>	
					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	Reserved	
					250 - 255	Auto random colour selection from fast to slow	proportional
<b>11</b>	<b>*</b>	<b>11</b>	<b>*</b>	<b>11</b>		<b>Colour wheel 1 - fine positioning</b>	
					0 - 255	Fine positioning (0=default)	proportional
<b>12</b>	<b>11</b>	<b>12</b>	<b>11</b>	<b>12</b>		<b>Colour wheel 2</b>	
						<b>Continual positioning</b>	
					0	Open/white (0=default)	proportional
					21	Multicolour	proportional
					43	Laser green	proportional
					64	Lavender	proportional
					86	Filter CRI 80	proportional
					107	Filter CRI 90	proportional
					128-129	Open/White	step
						<b>Positioning</b>	
					130-141	Multicolour	step
					142-153	Laser green	step
					154-165	Lavender	step

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Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					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	Reserved	
					250 - 255	Auto random colour selection from fast to slow	proportional
<b>13</b>	<b>*</b>	<b>13</b>	<b>*</b>	<b>13</b>		<b>Colour wheel 2 - fine positioning</b>	
					0 - 255	Fine positioning (0=default)	proportional
<b>14</b>	<b>12</b>	<b>14</b>	<b>12</b>	<b>14</b>		<b>Cyan</b>	
					0 - 255	Cyan from min. saturation --> full cyan (0=default)	proportional
<b>15</b>	<b>13</b>	<b>15</b>	<b>13</b>	<b>15</b>		<b>Magenta</b>	
					0 - 255	Magenta from min. saturation --> full magenta (0=default)	proportional
<b>16</b>	<b>14</b>	<b>16</b>	<b>14</b>	<b>16</b>		<b>Yellow</b>	
					0 - 255	Yellow from min. saturation --> full yellow (0=default)	proportional
<b>17</b>	<b>15</b>	<b>17</b>	<b>15</b>	<b>17</b>		<b>CTO</b>	
					0 - 255	CTO from 6500K --> 3000K (0=default), HP LED module	proportional
						CTO from 5800K --> 2200K (0=default), HCF LED module	proportional
<b>*</b>	<b>*</b>	<b>18</b>	<b>16</b>	<b>18</b>		<b>Green correction</b>	
					0	Uncorrected white	step
					1-127	Minus green --> uncorrected white	proportional
					128	Uncorrected white (128=default)	step
					129-255	Uncorrected white --> Plus green	proportional
<b>18</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>19</b>		<b>Virtual colour wheel</b>	
						<i>See table "Colours on Virtual Colour Wheel" to find components of each colour</i>	
						<i>The following channels are disabled: 9-17 (Mode 1), 9-15 (Mode 2), 9-18 (Mode 3), 9-14 (Mode ), 9-18(Mode 5)</i>	
					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

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Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					39-40	Filter 116 (Medium Blue-Green)	step
					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	

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Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
19	17	20	18	20		<b>Effects Speed</b> <i>Speed of CMY&amp;CTO movement and Rot. Gobo/Static Gobo selection</i>	
					0-255	Speed of CMY+CTO movement from max. to min. (0=default)	proportional
					0-255	Speed of Rot. Gobo/Stat. Gobo selection from max. to min.	proportional
20	18	21	19	21		<b>CMY+CTO+Colour wheels time</b>	
					0	Function is off (0=default)	step
					1 - 255	Time of CMY, CTO and Colour wheels movement (0.1sec-->25.5sec.)	proportional
21	19	22	20	22		<b>Static gobo wheel/ Framing shutters/Zoom/Focus/Iris/Frost/Prism time</b>	
					0	Function is off (0=default)	step
					1-255	Time of Static gobo movement (0.1 sec-->25.5 sec.)	proportional
					1 - 255	Time of framing shutters, zoom, focus, iris and frost movement (0.1 sec-->25.5 sec.)	proportional
					1-50	Time of prism movement (0.1 sec-->5 sec.)	proportional
22	20	23	21	23		<b>Effect wheel positioning</b>	
					0-19	No function (0=default)	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
23	21	24	22	24		<b>Effect wheel rotation</b>	
					0	No rotation	step
					1 - 127	Forwards rotation from fast to slow	proportional
					128	No rotation (128=default)	step
					129 - 255	Backwards rotation from slow to fast	proportional
24	22	25	23	25		<b>Effect wheel animations</b>	
					0-7	No animation (0=default)	
						<i>Note : Set suitable DMX value at Focus channel to get desired animation. All animations were created at distance of 5 m from screen with zoom=128 DMX, Focus value is different for each effect (focus value is stated in parentheses for this distance)</i>	
						<i>The following channels are blocked: Effect wheel positioning, Effect wheel rotation,Static gobo wheel. Rotating gobo wheel, Rot. Gobo indexing and rotation, Rot. Gobo wheel fine rotation.</i>	
					8-9	Macro 1 (Focus=159)	step
					10-11	Macro 2 (Focus=144)	step
					12-13	Macro 3 (Focus=146)	step
					14-15	Macro 4 (Focus=160)	step
					16-17	Macro 5 (Focus=181)	step
					18-19	Macro 6 (Focus=181)	step
					20-21	Macro 7 (Focus=166)	step
					22-23	Macro 8 (Focus=142)	step
					24-25	Macro 9 (Focus=151)	step
					26-27	Macro 10 (Focus=152)	step
					28-255	Reserved	
25	23	26	24	26		<b>Static gobo wheel</b>	
					0-8	Open/hole (0=default)	step
					9-17	Gobo 1	step
					18-26	Gobo 2	step



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Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					27-35	Gobo 3	step
					36-44	Gobo 4	step
					45-53	Gobo 5	step
					54-62	Gobo 6	step
					63-71	Gobo 7	step
					72-80	Gobo 8	step
					81-91	Gobo 9	step
						<b><u>Shaking gobos from slow to fast</u></b>	
					92-103	Gobo 1	proportional
					104-115	Gobo 2	proportional
					116-127	Gobo 3	proportional
					128-139	Gobo 4	proportional
					140-151	Gobo 5	proportional
					152-163	Gobo 6	proportional
					164-175	Gobo 7	proportional
					176-187	Gobo 8	proportional
					188-199	Gobo 9	proportional
					200 - 201	Open/hole	step
					202 - 222	Forwards gobo wheel rotation from fast to slow	proportional
					223 - 243	Backwards gobo wheel rotation from slow to fast	proportional
					244 - 249	Reserved	
					250 - 255	Auto random gobo selection from fast to slow	proportional
<b>26</b>	<b>24</b>	<b>27</b>	<b>25</b>	<b>*</b>		<b>Rotating gobo wheel</b>	
						<i>Index - set indexing on channel 27/25/28/26</i>	
					0-3	Open/hole (0=default)	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 27/25/28/26</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
						<b><u>Shaking gobos from slow to fast</u></b>	
						<i>Index - set indexing on channel 27/25/28/26</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

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Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					120 - 129	Gobo 7 <b><i>Shaking gobos from slow to fast</i></b> <i>Rotation - set rotation on channel 27/25/28/26</i>	proportional
					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
					190 - 199	Gobo 7	proportional
					200 - 201	Open/hole	step
					202 - 222	Forwards gobo wheel rotation from fast to slow	proportional
					223 - 243	Backwards gobo wheel rotation from slow to fast	proportional
					244 - 249	Reserved	
					250 - 255	Auto random gobo selection from fast to slow	proportional
*	*	*	*	27		<b>Rotating gobo wheel</b> <i>Index - set indexing on channel 29</i>	
					0-3	Open/hole (0=default)	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 29</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
						<b>Continual positioning</b> <i>Index - set indexing on channel 29</i>	
					60	Open/hole	proportional
					68	Gobo 1	proportional
					76	Gobo 2	proportional
					84	Gobo 3	proportional
					92	Gobo 4	proportional
					100	Gobo 5	proportional
					108	Gobo 6	proportional
					116	Gobo 7	proportional
					124	Open/hole	proportional
						<b>Continual positioning</b> <i>Rotation - set rotation on channel 29</i>	
					125	Open/hole	proportional
					133	Gobo 1	proportional

DMX protocol

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					141	Gobo 2	proportional
					149	Gobo 3	proportional
					157	Gobo 4	proportional
					165	Gobo 5	proportional
					173	Gobo 6	proportional
					181	Gobo 7	proportional
					189	Open/hole	proportional
					190-201	Open/hole	step
					202 - 222	Forwards gobo wheel rotation from fast to slow	proportional
					223 - 243	Backwards gobo wheel rotation from slow to fast	proportional
					244 - 249	Reserved	
					250 - 255	Auto random gobo selection from fast to slow	proportional
*	*	*	*	28		<b>Rotating gobo wheel - fine positioning</b>	
					0 - 255	Fine positioning (0=default)	proportional
27	25	28	26	29		<b>Rot. gobo indexing and rotation</b>	
						<i>Gobo indexing - set position on channel 26/24/27/25/27</i>	
					0 - 255	Gobo indexing (128=default)	proportional
						<i>Gobo rotation - set position on channel 26/24/27/25/27</i>	
					0	No rotation	step
					1 - 127	Forwards gobo rotation from fast to slow	proportional
					128	No rotation (128=default)	step
					129 - 255	Backwards gobo rotation from slow to fast	proportional
28	*	29	*	30		<b>Rot. gobo indexing/rotation - fine</b>	
					0-255	Fine indexing/rotation (0=default)	proportional
29	26	30	27	31		<b>Prism</b>	
					0 - 19	Open position - hole (0=default)	step
					20 - 73	Prism indexing	step
					74-127	Prism rotation	step
						<b>Prism/gobo macros</b>	
						<i>The following channels are blocked: Prism, Prism rotation, Static gobo wheel, Rotating gobo wheel, Rot. Gobo indexing and rotation, Rot. Gobo wheel fine rotation.</i>	
					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

DMX protocol

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
30	27	31	28	32		<b>Prism indexing/rotation</b>	
						<i>Prism indexing - set position on channel 29/26/30/27/31</i>	
					0 - 255	Prism 1 indexing	proportional
						<i>Prism rotation - set position on channel 29/26/30/27/31</i>	
					0	No rotation	step
					1 - 127	Forwards prism rotation from fast to slow	proportional
					128	No rotation (128=default)	step
					129-255	Backwards prism rotation from slow to fast	proportional
31	28	32	29	33		<b>Frost</b>	
					0	Open (0=default) Frost cannot stay in intermediate position, it will auto-move to full/open position.	step
						<i>Light Frost</i>	
					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
						<i>Medium Frost</i>	
					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
						<i>Combined Frost</i>	
					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
32	29	33	30	34		<b>Iris</b>	
					0	Open (0=default)	step
					1 - 179	From max. diameter to min. diameter	proportional
					180 - 191	Closed	step
						<i>Pulse effects with Iris blackout</i>	
					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
33	*	34	*	35		<b>Iris - fine</b>	
					0 - 255	Fine iris movement (0=default)	proportional
34	30	35	31	36		<b>Zoom</b>	
					0 - 255	Zoom from max. to min. beam angle (128=default)	proportional
35	*	36	*	37		<b>Zoom - fine</b>	

DMX protocol

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					0-255	Fine zooming (0=default)	proportional
36	31	37	32	38		<b>Focus</b>	
					0 - 255	Continuous adjustment from far to near (128=default)	proportional
37	*	38	*	39		<b>Focus - fine</b>	
					0- 255	Fine focusing (0=default)	proportional
38	32	39	33	40		<b>Framing shutters module rotation</b>	
					0-127	Rotation from right (0°) to 60°	proportional
					128	Centre (128=default)	step
					129-255	Rotation from 60° to left (120°)	proportional
39	33	40	34	41		<b>Framing shutter 1- movement</b>	
					0-255	Movement from Outward to Inward (0=default)	proportional
40	34	41	35	42		<b>Framing shutter 1- swivelling</b>	
					0-127	Swivelling from -30 degrees towards 0 degrees	proportional
					128	0 degrees (128=default)	step
					129-255	Swivelling from 0 degrees to +30 degrees	proportional
41	35	42	36	43		<b>Framing shutter 2- movement</b>	
					0-255	Movement from Outward to Inward (0=default)	proportional
42	36	43	37	44		<b>Framing shutter 2- swivelling</b>	
					0-127	Swivelling from -30 degrees towards 0 degrees	proportional
					128	0 degrees (128=default)	step
					129-255	Swivelling from 0 degrees to +30 degrees	proportional
43	37	44	38	45		<b>Framing shutter 3 movement</b>	
					0-255	Movement from Outward to Inward (0=default)	proportional
44	38	45	39	46		<b>Framing shutter 3- swivelling</b>	
					0-127	Swivelling from -30 degrees towards 0 degrees	proportional
					128	0 degrees (128=default)	step
					129-255	Swivelling from 0 degrees to +30 degrees	proportional
45	39	46	40	47		<b>Framing shutter 4 movement</b>	
					0-255	Movement from Outward to Inward (0=default)	proportional
46	40	47	41	48		<b>Framing shutter 4- swivelling</b>	
					0-127	Swivelling from -30 degrees towards 0 degrees	proportional
					128	0 degrees (128=default)	step
					129-255	Swivelling from 0 degrees to +30 degrees	proportional
47	41	48	42	49		<b>Shutter/ strobe</b>	
					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
48	42	49	43	50		<b>Dimmer intensity</b>	
					0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
49	*	50	*	51		<b>Dimmer intensity - fine</b>	
					0 - 255	Fine dimming (0=default)	proportional

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DMX protocol

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
All Specifications subject to change without notice							

<b>iEsprite® iEsprite® FS - Colours on Virtual Colour Wheel</b>						
<b>Colour name</b>	<b>Col. Wheel 1 DMX</b>	<b>Col. Wheel 2 DMX</b>	<b>Cyan DMX</b>	<b>Magenta DMX</b>	<b>Yellow DMX</b>	<b>CTO DMX</b>
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

<b>Colour name</b>	<b>Col. Wheel 1 DMX</b>	<b>Col. Wheel 2 DMX</b>	<b>Cyan DMX</b>	<b>Magenta DMX</b>	<b>Yellow DMX</b>	<b>CTO DMX</b>
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