

DMX protocol

**PATT Driver - DMX protocol**

Version: 1.3 Mode 1-Wash, Mode 2-Pattern, Mode 3-Pixel RGB, Mode 4-Pixel RGBW, Mode 5-Pattern full RGB, Mode 6-Pattern full RGBW, Mode 7-Pixel RGBW only

Mode/channel							DMX Value	Function	Type of control
1	2	3	4	5	6	7			
1	1	1	1	1	1	*		<b>Power/Special functions</b>	
							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. („Master Shutter/Strobe“ channel 12/30/17/17/30/30 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	Display ON	step
							25-29	Display OFF	step
							30-34	RGBW colour mixing mode	step
							35-39	CMY colour mixing mode	step
							40-44	Dimmer curve-square law	step
							45-49	Dimmer curve-linear	step
							50-54	White point 8000K ON	step
							55-59	White point 8000K OFF	step
							60-64	Automatic white pixel On	step
							65-69	Automatic white pixel Off	step
							70-109	Reserved	
							110-114	Kling-Net On	step
							115-119	Kling-Net Off	step
							120-169	Reserved	
								<i>To activate following functions, stop in DMX value. Corresponding menu items are temporarily overridden</i>	
							170-171	Tungsten effect simulation (750W) On **	step
							172-173	Tungsten effect simulation (1000W) On **	step
							174-175	Tungsten effect simulation (1200W) On **	step
							176-177	Tungsten effect simulation (2000W) On **	step
							178-179	Tungsten effect simulation (2500W) On **	step
							180-181	Tungsten effect simulation Off	step
							182-184	Reserved	
							185	PWM output frequency of LEDS: Standard (300Hz)**	step
							186	PWM output frequency of LEDS: High (1200Hz)**	step
								** You can adjust selected frequency in 6 steps Up or Down around selected frequency - see table below . Default value of PWM frequency set in the fixture is Standard.	
							187	LED Frequency (step -6)	step
							188	LED Frequency (step -5)	step
							189	LED Frequency (step -4)	step
							190	LED Frequency (step -3)	step
							191	LED Frequency (step -2)	step
							192	LED Frequency (step -1)	step
							193	LED Frequency (Standard or High)	step
							194	LED Frequency (step +1)	step
							195	LED Frequency (step +2)	step

DMX protocol

Mode/channel							DMX Value	Function	Type of control
1	2	3	4	5	6	7			
							196	LED Frequency (step +3)	step
							197	LED Frequency (step +4)	step
							198	LED Frequency (step +5)	step
							199	LED Frequency (step +6)	step
							200 - 255	Reserved	
<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>*</b>		<b>Background - Virtual colour wheel</b>	
							0	No function (0=default)	step
							1-2	Filter 4 (Medium Bastard Amber)	step
							3-4	Filter 25 (Sunset Red)	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 36 (Medium Pink)	step
							15-16	Filter 89 (Moss Green)	step
							17-18	Filter 88 (Lime Green)	step
							19-20	Filter 90 (Dark Yellow Green)	step
							21-22	Filter 49 (Medium Purple)	step
							23-24	Filter 52 (Light Lavender)	step
							25-26	Filter 102 (Light Amber)	step
							27-28	Filter 103 (Straw)	step
							29-30	Filter 140 (Summer Blue)	step
							31-32	Filter 124 (Dark Green)	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 126 (Mauve)	step
							41-42	Filter 117 (Steel Blue)	step
							43-44	Filter 118 (Light Blue)	step
							45-46	Filter 122 (Fern Green)	step
							47-48	Filter 182 (Light Red)	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 798 (Chrysalis Pink)	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 143 (Pale Navy Blue)	step

DMX protocol

Mode/channel							DMX Value	Function	Type of control
1	2	3	4	5	6	7			
							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 194 (Surprise Pink)	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 219 (Fluorescent Green)	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 507 (Madge)	step
							129-130	Filter 778 (Millennium Gold)	step
							131-132	Filter 793 (Vanity Fair)	step
							133-235	Raw DMX	proportional
							236-245	Rainbow effect (with fade time) from slow-> fast	proportional
							246-255	Rainbow effect (without fade time) from slow-> fast	proportional
<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>*</b>		<b>Background - Red/Cyan (8 bit)***</b>	
							0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
<b>*</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>*</b>		<b>Background - Red/Cyan (16bit)***</b>	
							0 - 255	Colour saturation control - fine (255=default)	proportional
<b>4</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>*</b>		<b>Background - Green/Magenta (8 bit)***</b>	
							0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
<b>*</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>*</b>		<b>Background - Green/Magenta (16bit) ***</b>	
							0 - 255	Colour saturation control - fine (255=default)	proportional
<b>5</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>*</b>		<b>Background - Blue/Yellow (8 bit)***</b>	
							0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
<b>*</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>*</b>		<b>Background - Blue/ Yellow (16bit)***</b>	
							0 - 255	Colour saturation control - fine (255=default)	proportional
<b>6</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>*</b>		<b>Background - White (8 bit) - all pixels</b>	
							0-255	<i>If RGBW mode is selected:</i> Colour saturation control - coarse 0-100% (255=default)	proportional
							0 - 255	<i>If CMY mode is selected:</i> No function	
<b>*</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>*</b>		<b>Background - White (16 bit) - all pixels</b>	
							0 - 255	Colour saturation control - fine (255=default)	proportional
<b>7</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>*</b>		<b>Background - CTC</b>	

DMX protocol

Mode/channel							DMX Value	Function	Type of control
1	2	3	4	5	6	7			
							0-255	<i>If function "White Point 8000K" is ON</i> Col. temperature correction from 8000K to 2700K -for whites only (0=8000K, 64=5600K, 128=4200K, 192=3200K, 255=2700K) To get colour temperatures stated above, RGBW channels have to be set at the same value (e.g. 255DMX) or RGB=0 and White channel > 0 DMX (0=default) (To activate Tungsten effect at 2700K and 3200K , set DMX value at "Power/Special functions" channel) <i>If function "White Point 8000K" is OFF</i>	proportional
							0-255	Colour temperature correction from cool col. to warm colour	proportional
<b>8</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	*		<b>Background - 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
<b>9</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	*		<b>Background - Dimmer intensity (8 bit)</b>	
							0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
*	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	*		<b>Background Dimmer intensity - fine (16 bit)</b>	
							0 - 255	Fine dimming (255=default)	proportional
<b>10</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	*		<b>Background - Active zone</b>	
							0-2	All pixels (0=default)	
							3-4	Ring	step
							5-6	Halves	step
							7-8	Quarters	step
							9-255	Raw DMX	proportional
<b>11</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	*		<b>Colour Mix control</b>	
								<i>The channel defines relation between color channels</i> <i>Global = Global Colours (Background RGBW, Background Virtual Colour Wheel, Background CTC)</i> <i>Pixel = Pixel Colours (RGB individual pixels or Kling-Net)</i>	
							0-9	Global colours (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	Raw DMX	proportional
							128	Global colours only (Global has priority)	step
							129-254	Crossfade (crossfade between Global and Pixel)	proportional
							255	Pixel colours (Pixel has priority)	step
*	<b>17</b>	*	*	<b>17</b>	<b>17</b>	*		<b>Pattern selection</b>	
							0-2	No pattern (0=default)	

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Mode/channel							DMX Value	Function	Type of control
1	2	3	4	5	6	7			
							3-4	Pattern 1	step
							5-6	Pattern 2	step
							7-8	Pattern 3	step
							9-10	Pattern 4	step
							11-12	Pattern 5	step
							13-14	Pattern 6	step
							15-16	Pattern 7	step
							17-18	Pattern 8	step
							19-20	Pattern 9	step
							21-22	Pattern 10	step
							23-24	Pattern 11	step
							25-255	RAW DMX	proportional
*	18	*	*	18	18	*		<b>Pattern - Repeat (Size)</b>	
							0-2	Variant 1 (0=default)	step
							3-4	Variant 2	step
							5-6	Variant 3	step
							7-8	Variant 4	step
							9-10	Variant 5	step
							11-12	Variant 6	step
							13-14	Variant 7	step
							15-16	Variant 8	step
							17-18	Variant 9	step
							19-20	Variant 10	step
							21-22	Variant 11	step
							23-255	Raw DMX	proportional
*	19	*	*	19	19	*		<b>Pattern - Rotation</b>	
							0	No rotation (0=default)	step
							1-127	Pattern indexing	proportional
							128-190	Forwards rotation from fast to slow	proportional
							191-192	Pause - without rotation	step
							193-255	Backwards rotation from slow to fast	proportional
*	20	*	*	20	20	*		<b>Pattern - Fade</b>	
							0	Snap (0=default)	step
							1-255	Fade from min. to max.	proportional
*	21	*	*	21	21	*		<b>Pattern - Transition</b>	
							0	No fade (0=default)	step
							1	100ms	step
							:		
							255	4 sec	step
*	22	*	*	22	22	*		<b>Pattern - Crossfade</b>	
							0	Background	step
							1-255	Crossfade between Background and Pattern 0-100% (255=default)	proportional
*	23	*	*	23	23	*		<b>Pattern - Red (8-bit)</b>	
							0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	24	*	*	24	24	*		<b>Pattern - Green (8-bit)</b>	
							0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	25	*	*	25	25	*		<b>Pattern - Blue (8-bit)</b>	
							0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional

DMX protocol

Mode/channel							DMX Value	Function	Type of control
1	2	3	4	5	6	7			
*	26	*	*	26	26	*	0 - 255	<b>Pattern - White (8-bit)</b> Colour saturation control - coarse 0-100% (255=default)	proportional
*	27	*	*	27	27	*	0-2	<b>Pattern - Colour macro</b> No macro (0=default) <i>Macros 1-5 allow control of colour change speed from min. to max.</i>	step
							3-8	Macro 1	proportional
							9-14	Macro 2	proportional
							15-20	Macro 3	proportional
							21-26	Macro 4	proportional
							27-32	Macro 5	proportional
							33-255	Raw DMX	proportional
*	28	*	*	28	28	*	0 - 31	<b>Pattern - Shutter/ strobe</b> 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
*	29	*	*	29	29	*	0 - 255	<b>Pattern - Dimmer intensity (8 bit)</b> Dimmer intensity from 0% to 100% (255=default)	proportional
12	30	17	17	30	30	*	0 - 31	<b>Master Shutter/ strobe</b> 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
13	31	18	18	31	31	*	0 - 255	<b>Master Dimmer intensity (8 bit)</b> Dimmer intensity from 0% to 100% (0=default)	proportional
*	32	19	19	32	32	*	0 - 255	<b>Master Dimmer intensity - fine (16 bit)</b> Fine dimming (0=default)	proportional
*	*	20	20	33	33	1	0-255	<b>Red pixel 1</b> Red LED saturation control 0-100% (0=default)	proportional
*	*	21	21	34	34	2	0-255	<b>Green pixel 1</b> Green LED saturation control 0-100% (0=default)	proportional
*	*	22	22	35	35	3	0-255	<b>Blue pixel 1</b> Blue LED saturation control 0-100% (0=default)	proportional
*	*	*	23	*	36	4	0-255	<b>White pixel 1</b> White LED saturation control 0-100% (0=default)	proportional
							:		
*	*	38	44	51	57	25	0-255	<b>Red pixel 7</b> Red LED saturation control 0-100% (0=default)	proportional

DMX protocol

Mode/channel							DMX Value	Function	Type of control
1	2	3	4	5	6	7			
*	*	39	45	52	58	26		<b>Green pixel 7</b>	
							0-255	Green LED saturation control 0-100% (0=default)	proportional
*	*	40	46	53	59	27		<b>Blue pixel 7</b>	
							0-255	Blue LED saturation control 0-100% (0=default)	proportional
*	*	*	47	*	60	28		<b>White pixel 7</b>	
							0-255	White LED saturation control 0-100% (0=default)	proportional
* function is active only 10 seconds after switching the fixture on									
** In the Tungsten effect simulation 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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<b>PATT Driver - colours on Virtual Colour Wheel</b>				
<b>Colour name</b>	<b>Red (DMX)</b>	<b>Green (DMX)</b>	<b>Blue (DMX)</b>	<b>White (DMX)</b>
Filter 4 (Medium Bastard Amber)	255	1320	0	160
Filter 25 (Sunset Red)	255	76	0	3
Filter 19 (Fire)	255	26	0	0
Filter 26 (Bright Red)	255	12	0	0
Filter 58 (Lavender)	117	0	94	62
Filter 68 (Sky Blue)	31	164	146	10
Filter 36 (Medium Pink)	255	74	8	84
Filter 89 (Moss Green)	69	232	0	0
Filter 88 (Lime Green)	175	255	0	0
Filter 90 (Dark Yellow Green)	5	255	0	0
Filter 49 (Medium Purple)	255	0	61	0
Filter 52 (Light Lavender)	219	77	31	141
Filter 102 (Light Amber)	206	144	0	0
Filter 103 (Straw)	191	123	0	41
Filter 140 (Summer Blue)	0	166	48	201
Filter 124 (Dark Green)	24	255	0	27
Filter 106 (Primary Red)	255	9	0	0
Filter 111 (Dark Pink)	255	56	32	12
Filter 115 (Peacock Blue)	0	255	54	22
Filter 126 (Mauve)	255	0	75	0
Filter 117 (Steel Blue)	133	189	41	186
Filter 118 (Light Blue)	0	255	105	27
Filter 122 (Fern Green)	98	255	0	18
Filter 182 (Light Red)	255	34	2	1
Filter 121 (Filter Green)	159	255	0	0
Filter 128 (Bright Pink)	255	0	36	46
Filter 131 (Marine Blue)	95	222	58	62
Filter 132 (Medium Blue)	0	213	157	0
Filter 134 (Golden Amber)	166	76	0	0
Filter 135 (Deep Golden Amber)	255	68	0	0
Filter 136 (Pale Lavender)	172	79	34	86
Filter 137 (Special Lavender)	162	72	71	86
Filter 138 (Pale Green)	208	255	7	90
Filter 798 (Chrysalis Pink)	93	0	98	26
Filter 141 (Bright Blue)	0	135	84	4
Filter 147 (Apricot)	201	107	0	15
Filter 148 (Bright Rose)	255	4	12	57
Filter 152 (Pale Gold)	179	91	0	57
Filter 154 (Pale Rose)	215	98	0	110
Filter 157 (Pink)	255	33	0	102
Filter 143 (Pale Navy Blue)	8	143	104	85
Filter 162 (Bastard Amber)	185	109	6	72
Filter 164 (Flame Red)	255	45	0	4
Filter 165 (Daylight Blue)	28	255	154	68
Filter 169 (Lilac Tint)	206	118	12	12
Filter 170 (Deep Lavender)	235	123	80	42
Filter 172 (Lagoon Blue)	0	236	91	5



<b>Colour name</b>	<b>Red (DMX)</b>	<b>Green (DMX)</b>	<b>Blue (DMX)</b>	<b>White (DMX)</b>
Filter 194 (Surprise Pink)	113	0	83	255
Filter 180 (Dark Lavender)	120	4	173	140
Filter 181 (Congo Blue)	22	0	255	20
Filter 197 (Alice Blue)	75	116	155	72
Filter 201 (Full C.T. Blue)	205	195	131	170
Filter 202 (Half C.T. Blue)	224	203	83	170
Filter 203 (Quarter C.T. Blue)	232	221	58	170
Filter 204 (Full C.T. Orange)	220	127	3	11
Filter 219 (Fluorescent Green)	99	101	18	50
Filter 206 (Quarter C.T. Orange)	205	138	0	96
Filter 247 (Filter Minus Green)	233	61	20	205
Filter 248 (Half Minus Green)	214	101	7	205
Filter 281 (Three Quarter C.T. Blue)	236	218	131	147
Filter 285 (Three Quarter C.T. Orange)	181	116	0	22
Filter 352 (Glacier Blue)	3	222	122	96
Filter 353 (Lighter Blue)	44	189	106	97
Filter 507 (Madge)	255	49	0	7
Filter 778 (Millennium Gold)	255	86	0	0
Filter 793 (Vanity Fair)	255	0	34	20