

DMX protocol

iTetra2 - DMX protocol								
Version: 1.0 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/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
1	1	1	1	1	1		Tilt (8 bit)	
						0 - 255	Tilt movement by 191° (128=default)	proportional
2	2	2	2	2	2		Tilt fine (16 bit)	
						0 - 255	Fine control of tilt movement (0=default)	proportional
3	3	3	3	3	3		Tilt speed , Tilt time	
						0	Standard mode (0=default)	step
						1	Max. Speed Mode	step
							Tilt speed mode	
						2 - 255	Speed from max. to min.	proportional
							Tilt time mode	
						2 - 255	Time from 0.2 s to 25.5 sec.	proportional
4	4	4	4	4	4		Power/Special functions	
						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. („Master Shutter/Strobe“ channel 33/54/41/41/54/54 must be at range: 0-31 DMX). Corresponding menu items are temporarily overridden (unless otherwise stated).</i>	
						6	Standby mode: On (fixture effects are deactivated, light output is closed)	step
						7	Standby mode: Off	
						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
						20-24	Graphic display: On	step
						25-29	Graphic display: Off	step
						30-34	RGBW colour mixing mode	step
						35-39	CMY colour mixing mode	step
						40-44	Tilt speed mode	step
						45-49	Tilt time mode	step
						50-54	Blackout while tilt moving	step
						55-59	Disabled blackout while tilt moving	step
						60-64	Dimmer curve: Square law	step
						65-69	Dimmer curve: Linear	step
						70-74	Fans mode: Auto	step
						75-79	Fans mode: High	step
						80-84	White point 8000K: On	step
						85-89	White point 8000K: Off	step
						90-94	Automatic white pixel: On	step
						95-99	Automatic white pixel: Off	step
						100-104	Quiet mode: Fans On at blackout	step
						105-109	Quiet mode: Fans Off at blackout	step
						110-114	Kling-Net: On	step
						115-119	Kling-Net: Off	step

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Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						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 (except Pixel index and Pixel mirror). Corresponding menu items are temporarily overridden.</i>	
						130 - 139	Fixture reset (except pan/tilt)	
						140 - 149	Tilt reset	step
						150 - 159	Zoom reset	step
						160 - 169	Flower effects reset	step
						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
						182-199	Reserved	
						200 - 209	Total fixture reset	step
						210-227	Pixel index	proportional
						228-229	Pixel mirror: On	step
						230-231	Pixel mirror: Off	step
						232-236	Reserved	
						237	Save Pixel index and mirror to fixture	step
						238-239	Reserved	
						240	Disabled "Quiet mode"	step
						241 - 255	Quiet mode - fan noise control from min. to max.	proportional
5	5	5	5	5	5		LED frequency selection	
							Factory display menu setting: 300Hz	
							<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 (5=default)	step
						10-14	Reserved	
						15-19	600 Hz	step
						20-255	Reserved (fixture utilizes PWM frequency set in the display menu item Frequency Setup).	
6	6	6	6	6	6		LED frequency fine adjusting	
							Factory display menu setting: 300Hz	
							<i>Select desired PWM output frequency of LEDs on the channel above.</i>	
						0-121	Selected LED Frequency	step
						122	LED Frequency (step -6)	step
						123	LED Frequency (step -5)	step
						124	LED Frequency (step -4)	
						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

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Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						129	LED Frequency (step +1)	step
						130	LED Frequency (step +2)	step
						131	LED Frequency (step +3)	step
						132	LED Frequency (step +4)	
						133	LED Frequency (step +5)	step
						134	LED Frequency (step +6)	step
						135-255	Selected LED Frequency	step
7	7	7	7	7	7		Background -Virtual colour wheel	
						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

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Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						79-80	Filter 157 (Pink)	step
						81-82	Filter 143 (Pale Navy Blue)	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 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
8	8	8	8	8	8		Background - Red/Cyan (8 bit)***	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	9	9	9	9	9		Background - Red/Cyan (16bit)***	
						0 - 255	Colour saturation control - fine (255=default)	proportional
9	10	10	10	10	10		Background - Green/Magenta (8 bit)***	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	11	11	11	11	11		Background - Green/Magenta (16bit) ***	
						0 - 255	Colour saturation control - fine (255=default)	proportional
10	12	12	12	12	12		Background - Blue/Yellow (8 bit)***	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	13	13	13	13	13		Background - Blue/ Yellow (16bit)***	
						0 - 255	Colour saturation control - fine (255=default)	proportional
11	14	14	14	14	14		Background - White (8 bit) - all pixels	
							<i>If RGBW mode is selected:</i>	
						0-255	Colour saturation control - coarse 0-100% (255=default)	proportional
							<i>If CMY mode is selected:</i>	
						0 - 255	No function	
*	15	15	15	15	15		Background - White (16 bit) - all pixels	

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1	2	3	4	5	6			
						0 - 255	Colour saturation control - fine (255=default)	proportional
12	16	16	16	16	16		Background - CTO	
						0-255	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)	proportional
13	17	17	17	17	17		Background - 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
14	18	18	18	18	18		Background - Dimmer intensity (8 bit)	
						0 - 255	Dimmer intensity from 0% to 100% (255=default)	proportional
*	19	19	19	19	19		Background Dimmer intensity - fine (16 bit)	
						0 - 255	Fine dimming (255=default)	proportional
15	20	20	20	20	20		Colour Mix control	
							<i>The channel defines relation between color channels</i>	
							<i>IF Flower effect is active, its colour channels always have priority!</i>	
							<i>Global = Global Colours (RGBW colours, Virtual Colour Wheel, CTO)</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
16	21	21	21	21	21		Flower Effect 1	
						0	Open position-without Flower Effect (0=default)	step
						1 - 127	Flower Effect forwards rotation from fast to slow	proportional
						128	Flower Effect -without rotation	step
						129-255	Backwards rotation from slow to fast	proportional
17	22	22	22	22	22		Flower Effect 1 - Red/Cyan (8 bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
18	23	23	23	23	23		Flower Effect 1 - Green/Magenta (8 bit)	

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Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
19	24	24	24	24	24		Flower effect 1 - Blue/Yellow (8 bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
20	25	25	25	25	25		Flower Effect 1 - White (8 bit)	
						0-255	Colour saturation control - coarse 0-100% (255=default)	proportional
21	26	26	26	26	26		Flower Effect 1 - 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
22	27	27	27	27	27		Flower Effect 1 - Dimmer intensity (8 bit)	
						0 - 255	Dimmer intensity from 0% to 100% (255=default)	proportional
23	28	28	28	28	28		Flower Effect 2	
						0	Open position-without Flower Effect (0=default)	step
						1 - 127	Flower Effect forwards rotation from fast to slow	proportional
						128	Flower Effect -without rotation	step
						129-255	Backwards rotation from slow to fast	proportional
24	29	29	29	29	29		Flower Effect 2 - Red/Cyan (8 bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
25	30	30	30	30	30		Flower Effect 2 - Green/Magenta (8 bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
26	31	31	31	31	31		Flower effect 2 - Blue/Yellow (8 bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
27	32	32	32	32	32		Flower Effect 2 - White (8 bit)	
						0-255	Colour saturation control - coarse 0-100% (255=default)	proportional
28	33	33	33	33	33		Flower Effect 2 - 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
29	34	34	34	34	34		Flower Effect 2 - Dimmer intensity (8 bit)	
						0 - 255	Dimmer intensity from 0% to 100% (255=default)	proportional
30	35	35	35	35	35		Master Zoom	
						0-255	Zoom from max. to min.beam angle (128=default)	proportional
*	36	36	36	36	36		Master Zoom - fine	
						0-255	Fine zooming (0=default)	proportional
31	37	37	37	37	37		Zoom 1	
						0-255	Zoom from max. to min.beam angle (128=default)	proportional

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1	2	3	4	5	6			
*	38	38	38	38	38	0-255	Zoom 1 - fine Fine zooming (0=default)	proportional
32	39	39	39	39	39	0-255	Zoom 2 Zoom from max. to min.beam angle (128=default)	proportional
*	40	40	40	40	40	0-255	Zoom 2- fine Fine zooming (0=default)	proportional
*	41	*	*	41	41	0-2	Pattern selection No pattern (0=default)	
						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
						25-26	Pattern 12	step
						27-255	RAW DMX	proportional
*	42	*	*	42	42	0-2	Pattern - Repeat (Size) 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
						23-24	Variant 12	step
						25-26	Variant 13	step
						27-28	Variant 14	step
						29-30	Variant 15	step
						31-32	Variant 16	step
						33-34	Variant 17	step
						35-255	Raw DMX	proportional
*	43	*	*	43	43	0	Pattern - Movement No movement	step
						1-127	Pattern movement from fast to slow	proportional
						128	Pause - without movement (128=default)	step
						129-255	Backwards pattern movement from slow to fast	proportional
*	44	*	*	44	44	0	Pattern - Fade Snap (0=default)	step
						1-255	Fade from min. to max.	proportional

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Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
*	45	*	*	45	45		Pattern - Transition	
						0	No fade (0=default)	step
						1	100ms	step
						:		
						255	4 sec	step
*	46	*	*	46	46		Pattern - Crossfade	
						0	Background	step
						1-255	Crossfade between Background and Pattern 0-100% (255=default)	proportional
*	47	*	*	47	47		Pattern - Red (8-bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	48	*	*	48	48		Pattern - Green (8-bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	49	*	*	49	49		Pattern - Blue (8-bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	50	*	*	50	50		Pattern - White (8-bit)	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	51	*	*	51	51		Pattern - Colour macro	
						0-2	No macro (0=default)	step
							<i>Macros 2-23 allow control of colour change speed from max. to min.</i>	
						3-8	Macro 1	step
						9-14	Macro 2	proportional
						15-20	Macro 3	proportional
						21-26	Macro 4	proportional
						27-32	Macro 5	proportional
						33-38	Macro 6	proportional
						39-44	Macro 7	proportional
						45-50	Macro 8	proportional
						51-56	Macro 9	proportional
						57-62	Macro 10	proportional
						63-68	Macro 11	proportional
						69-74	Macro 12	proportional
						75-80	Macro 13	proportional
						81-86	Macro 14	proportional
						87-92	Macro 15	proportional
						93-98	Macro 16	proportional
						99-104	Macro 17	proportional
						105-110	Macro 18	proportional
						111-116	Macro 19	proportional
						117-122	Macro 20	proportional
						123-128	Macro 21	proportional
						129-134	Macro 22	proportional
						135-140	Macro 23	proportional
						141-255	Raw DMX	proportional
*	52	*	*	52	52		Pattern - Shutter/ strobe	
						0 - 31	Shutter closed	step
						32 - 63	Shutter open (32=default)	step
						64 - 95	Strobe effect from slow to fast	proportional

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Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						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
*	53	*	*	53	53		Pattern - Dimmer intensity (8 bit)	
						0 - 255	Dimmer intensity from 0% to 100% (255=default)	proportional
33	54	41	41	54	54		Master 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
34	55	42	42	55	55		Master Dimmer intensity (8 bit)	
						0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
*	56	43	43	56	56		Master Dimmer intensity - fine (16 bit)	
						0 - 255	Fine dimming (0=default)	proportional
*	*	44	44	57	57		Red pixel 1	
						0-255	Red LED saturation control 0-100% (0=default)	proportional
*	*	45	45	58	58		Green pixel 1	
						0-255	Green LED saturation control 0-100% (0=default)	proportional
*	*	46	46	59	59		Blue pixel 1	
						0-255	Blue LED saturation control 0-100% (0=default)	proportional
*	*	*	47	*	60		White pixel 1	
						0-255	White LED saturation control 0-100% (0=default)	proportional
							:	
*	*	95	112	108	125		Red pixel 18	
						0-255	Red LED saturation control 0-100% (0=default)	proportional
*	*	96	113	109	126		Green pixel 18	
						0-255	Green LED saturation control 0-100% (0=default)	proportional
*	*	97	114	110	127		Blue pixel 18	
						0-255	Blue LED saturation control 0-100% (0=default)	proportional
*	*	*	115	*	128		White pixel 18	
						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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