

# DMX Channel Index



Software Version v.34



GLP® KNV Dot and KNV Line DMX Channel Index – Revision 20210824-1

This document covers fixture software version 34

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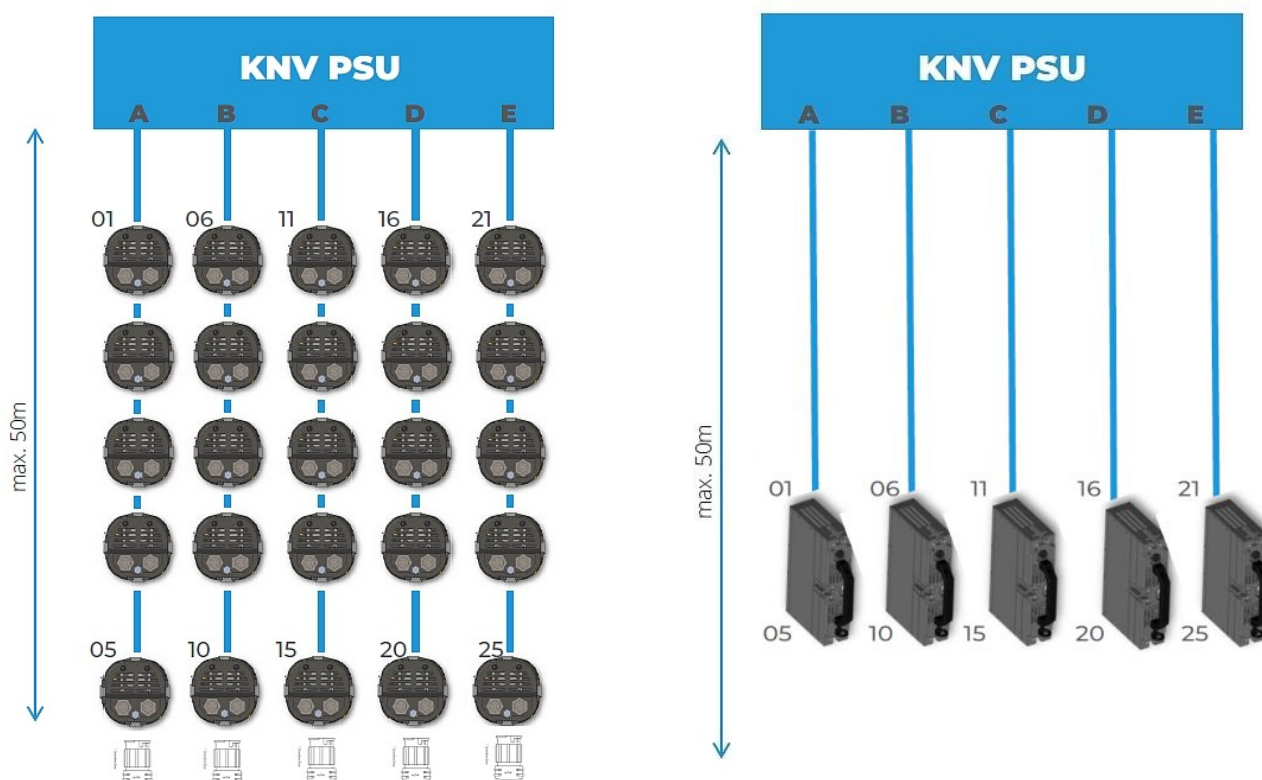
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## 1. KNV Dot and Line Pixel mapping

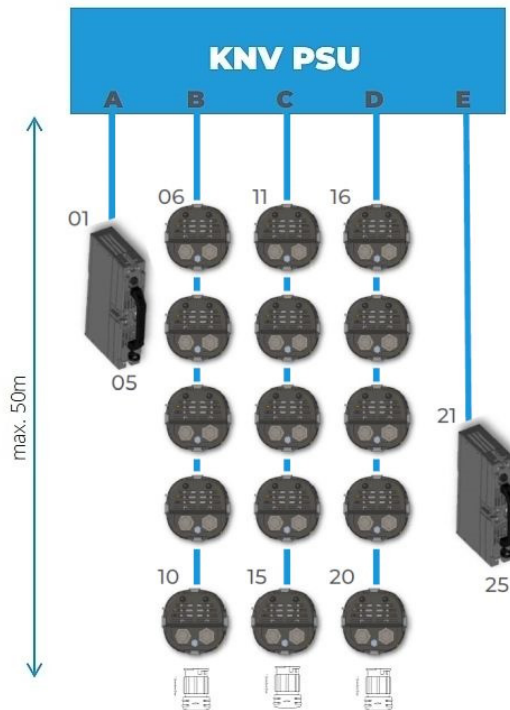
See Figure 1 and Figure 2. Pixels are automatically mapped as shown when you connect KNV Dot and / or Line fixtures to a KNV PSU.

For example:

- If you connect a chain of five KNV Dots to **Output D** on the PSU, the **first** KNV Dot in the chain will respond to commands sent to **Pixel 16** and the **last** KNV Dot in the chain will respond to commands sent to **Pixel 20**.
- If you connect a KNV Line to **Output B** on the PSU, the **first** pixel of the KNV Line (the pixel at the cable entry end of the fixture) will respond to commands sent to **Pixel 06**. The **last** pixel of the KNV Line (the pixel at the safety cable attachment end of the fixture) will respond to commands sent to **Pixel 10**.



**Figure 1. Pixel mapping – KNV Dot only and Line only**



**Figure 2. Pixel mapping – KNV Dot and Line mixed**

KNV Dot and Line fixtures can be integrated into installations containing KNV Dot and Arc fixtures if you follow the pixel mapping guidelines below.

**Matching normal pixel orientation in KNV Cube and Arc fixtures**

To create a matrix of KNV Dot or Line fixtures that have the same 5 x 5 pixel layout as a KNV Cube or Arc fixture in its normal (unmirrored and unrotated) pixel configuration, see Configuration A below: install the KNV Dots or Lines horizontally running from left to right, connecting the top row of pixels to PSU output **A**, the next row down to PSU output **B** and so on until you connect the bottom row of pixels to PSU output **E**.

**KNV Cube / Arc,  
normal pixel orientation**

01	02	03	04	05
06	07	08	09	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

**Configuration A: KNV Dot / Line  
installed in horizontal rows**

<b>A</b>	→	01	02	03	04	05
<b>B</b>	→	06	07	08	09	10
<b>C</b>	→	11	12	13	14	15
<b>D</b>	→	16	17	18	19	20
<b>E</b>	→	21	22	23	24	25

### Hanging vertically downwards and adjusting KNV Cube and Arc fixtures

If you prefer to create a matrix of KNV Dot or Line fixtures hanging vertically downwards from PSU outputs **A** to **E** (as shown in Figure 1, Figure 2 and Configuration B below) but you still want identical pixel mapping with a KNV Cube or Arc fixture, open the **Fixture Settings** control menu on the KNV Cube or Arc, set **Pixel Mirrored** to **ON** and set **Pixel Rotation** to **90° CCW**. The pixels in the KNV Cube or Arc will be mapped as shown below.

**KNV Cube / Arc,  
Pixel Mirrored = ON  
Pixel Rotation = 90° CCW**

01	06	11	16	21
02	07	12	17	22
03	08	13	18	23
04	09	14	19	24
05	10	23	20	25

**Configuration B: KNV Dot / Line  
suspended in vertical chains**

A	B	C	D	E
↓	↓	↓	↓	↓
01	06	11	16	21
02	07	12	17	22
03	08	13	18	23
04	09	14	19	24
05	10	23	20	25

## 2. DMX control modes

Eight DMX control modes are available in the KNV Dot and Line.

Note that the DMX channel layout in KNV Dot and Line fixtures is not exactly the same as the channel layout in KNV Cube and Arc fixtures.

In all DMX modes, a *Control / Settings* channel lets you adjust fixture settings remotely from the DMX control desk.

- **DMX Mode 1** lets you control all 25 pixels together as a group with 16-bit resolution. A separate Shutter channel provides strobe, pixel and ramp-up/down effects. This extra shutter affects all white and all RGB LEDs by default, but you can change this setting via the Control/Settings DMX Channel or the fixture's control panel so that the shutter applies to white LEDs only or RGB LEDs only.
- **DMX Mode 2** splits the KNV into a White Strobe and a separate RGB Strobe, each with standard strobe light control channels: Intensity, Flash Rate and Flash Duration. In addition, the Flare effect and pre-programmed dynamic FX are available for each strobe.
- **DMX Mode 3** provides an RGB strobe plus 25 individually controllable white pixels. The RGB strobe has standard strobe control channels: Intensity, Flash Rate and Flash Duration. It also has the Flare effect and pre-programmed dynamic FX. The 25 individual white pixels have a separate Shutter channel with strobe, pixel and ramp-up/down effects.
- **DMX Mode 4** provides a White Strobe plus 25 individually controllable RGB pixels. The White strobe has standard strobe control channels: Intensity, Flash Rate and Flash Duration. It also has the Flare effect and pre-programmed dynamic FX. The 25 individual RGB pixels have a separate Shutter channel with strobe, pixel and ramp-up/down effects.
- **DMX Mode 5** provides three different layers:
  - The **Base Layer** has lowest priority (other layers override it), so it acts as a background layer. The Base layer has RGBW intensity control.
  - **Layer 2** has priority over the base layer, so it acts as a middle layer.
  - **Layer 3** has highest priority, so it acts as a top layer.
  - **Layers 2 and 3** both have standard RGBW strobe control channels plus the Flare effect and pre-programmed dynamic FX. Layers 2 and 3 also have a 16-bit Layer Master Channel that controls the transparency of the layer.

FX layer priorities work in true color, which means that colors are not mixed. If you run a red snake FX on Layer 2 over the top of a blue background on the Base Layer, the snake will be red, not a mix of blue and red.

Applying transparency to a layer allows the color of the background layer or the lower priority layer to shine through.

If you want to dim a layer's colors without color from lower priority layers shining through, reduce the intensity of the colors without applying transparency to the layer. If you reduce the intensity of all the colors to zero, you can run a black effect over the top of lower priority layers.

- **DMX Mode 6** provides master shutter/strobe control plus 8-bit RGBW control of 25 individual pixels.
- **DMX Mode 7** provides master shutter/strobe control plus 16-bit RGBW control of 25 individual pixels.
- **DMX Mode 8** provides a base Layer 1 with RGBW 8-bit control of 25 individual pixels and an additional Layer 2 with RGBW FX. Layer 2 is the top layer with highest priority.
- In **DMX Modes 2, 3, 4, 5 and 8** if no FX is selected (FX Selection channel is set to zero), the Flash rate channel controls the flash rate of the Strobe. If an FX is selected, the Flash rate channel is redeployed and controls the speed of the effect instead.
- **DMX Modes 6 and 7** give individual control of 25 separate pixels plus a master Shutter channel. The extra shutter with strobe, pixel and ramp-up/down effects affects all the LEDs (white and RGB), by default, but you can change this setting via the *Control / Settings* DMX Channel or the fixture's control panel so that the shutter applies to white LEDs only or to RGB LEDs only.

### ***Managing unused DMX channels***

If you connect less than 25 pixels to a KNV PSU and you are operating in DMX Modes 3, 4, 6, 7 and 8, you can reduce the DMX footprint of the installation by deleting unused DMX channels in your controller patch. This will free up channels for use by other fixtures.

To give an example:

- You are operating in DMX Mode 6 and you only need to control 10 pixels. You have set the PSU to DMX address 001
- Connect pixels 1 – 5 to PSU output **A** and pixels 6 – 10 to PSU output **B**.
- PSU outputs **C**, **D** and **E** will not be connected to pixels.
- The KNV PSU will only work with data sent on DMX channels 001 – 042. DMX channels 043 – 102 will be ignored. You can simply unpatch these channels in your controller and give the next fixture DMX address 043.



### ***Special notes on the DMX tables***

In the following DMX channel layout tables:

- Default settings are indicated with **bold type**.
- 'L = xx' indicates the length of the FX expressed as the number of steps that make up the FX (like the number of frames in an animation). If a pattern is listed as 'L = 10', the FX consists of ten steps.
- FX crossfade times apply to crossfading between the steps in the FX. If you apply a long crossfade time to a moving FX pattern, it will appear to leave a tail behind it as the pixels in the pattern fade down to zero.
- Where commands are marked with an asterisk \* you must send that value continuously for 3 seconds (or other duration if indicated in the table) to apply the command.

### 3. Control channel layout

#### DMX Mode 1: RGBW 16-bit

##### 10 DMX Channels

Channel	Command	DMX range	Percent	Default DMX	Fade	
<b>RGBW</b>						
1	<b>Red coarse</b>	Red intensity 0-100%	0-65535	0-100%	0	Fade
2	<b>Red fine</b>					
3	<b>Green coarse</b>	Green intensity 0-100%	0-65535	0-100%	0	Fade
4	<b>Green fine</b>					
5	<b>Blue coarse</b>	Blue intensity 0-100%	0-65535	0-100%	0	Fade
6	<b>Blue fine</b>					
7	<b>White coarse</b>	White intensity 0-100%	0-65535	0-100%	0	Fade
8	<b>White fine</b>					
9	<b>Shutter</b>	Shutter closed	0-4	0-1.6%	255	Snap
		Sync ramp up slow > fast	5-39	2.0-15.3%		Fade
		Sync ramp down slow > fast	40-74	15.7-29.0%		Fade
		Sync ramp up-down slow > fast	75-109	29.4-42.7%		Fade
		Sync double flash slow > fast	110-144	43.1-56.5%		Fade
		Random pixel slow > fast	145-179	56.9-70.2%		Fade
		Random strobe slow > fast	180-214	70.6-83.9%		Fade
		Sync strobe 0.289 > 16.67 Hz	215-249	84.3-97.6%		Fade
		Hyperspeed	250-252	98.0-98.8%		Snap
		Open	253-255	99.2-100%		Snap
<b>Control / Settings</b>						
10	<b>Control / Settings</b>	Idle	0-11	0-4.3%	0	Snap
		Effect sync – Immediate (1 sec.)	12-15	4.7-5.9%		
		<b>Effect sync – Power line (3 sec.)</b>	16-29	6.3-11.4%		
		Effect sync – Internal (3 sec.)	30-32	11.8-12.5%		
		No function	33-38	12.9-14.9%		
		<b>Dimmer flash Off*</b>	39-41	15.3-16.1%		
		Dimmer flash On*	42-44	16.5-17.3%		
		Dimming curve ESoft*	45-47	17.6-18.4%		
		<b>Dimming curve Soft*</b>	48-50	18.8-19.6%		
		Dimming curve Linear*	51-53	20.0-20.8%		
		No function	54-56	21.2-22.0%		
		<b>Extra Shutter RGBW*</b> (Modes 1/6/7)	57-59	22.4-23.1%		
		Extra Shutter RGB only* (Modes 1/6/7)	60-62	23.5-24.3%		
		Extra Shutter White only* (Modes 1/6/7)	63-65	24.7-25.5%		
		No function	66-68	25.9-26.7%		
		<b>Fan mode regulated*</b>	69-71	27.1-27.8%		
		Fan mode high*	72-74	28.2-29.0%		
		Fan mode medium*	75-77	29.4-30.2%		
		Fan mode low*	78-80	30.6-31.4%		
		No function	81-83	31.8-32.5%		
Display On*	84-86	32.9-33.7%				
Display Off*	87-89	34.1-34.9%				

<b>Control / Settings (continued)</b>	<b>Display Auto*</b>	90-92	35.3-36.1%
	<b>Display invert Off*</b>	93-95	36.5-37.3%
	Display invert On*	96-98	37.6-38.4%
	No DMX = Capture scene*	99-101	38.8-39.6%
	No DMX = Stand-alone*	102-104	40.0-40.8%
	<b>No DMX = Blackout*</b>	105-107	41.2-42.0%
	No DMX = Hold*	108-110	42.4-43.1%
	Test pattern On*	111-113	43.5-44.3%
	<b>Test pattern Off*</b>	114-116	44.7-45.5%
	No function	117-134	45.9-52.5%
	<b>White output limitation Off*</b>	135-137	52.9-53.7%
	White output limitation 80%*	138-140	54.1-54.9%
	White output limitation 60%*	141-143	55.3-56.1%
	White output limitation 40%*	144-146	56.5-57.3%
	White output limitation 20%*	147-149	57.6-58.4%
	White output limitation 10%*	150-152	55.8-59.6%
	No function	153-158	60.0-62.0%
	<b>RGB output limitation Off*</b>	159-161	62.4-63.1%
	RGB output limitation 80%*	162-164	63.5-64.3%
	RGB output limitation 60%*	165-167	64.7-65.5%
	RGB output limitation 40%*	168-170	65.9-66.7%
	RGB output limitation 20%*	171-173	67.1-67.8%
	RGB output limitation 10%*	174-176	68.2-69.0%
	No function	177-191	69.4-74.9%
	Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%
	<b>Main LED PWM 3000 Hz (5 sec.)</b>	195-197	76.5-77.3%
	Main LED PWM 4800 Hz (5 sec.)	198-200	77.6-78.4%
	Main LED PWM 9600 Hz (5 sec.)	201-203	78.8-79.6%
	No function	204-206	80.0-80.8%
	Main LED PWM 25 kHz (5 sec.)	207-209	81.2-82.0%
	No function	210-251	82.4-98.4%
	Reboot fixture*	252-255	98.8-100%

## DMX Mode 2: White strobe with FX, RGB with FX

### 23 DMX Channels

Channel	Command	DMX range	Percent	Default DMX	Fade	
<b>Channel group A: White strobe with FX</b>						
1	White LEDs intensity	Intensity 0-100%	0-255	0-100%	0	Fade
2	White LEDs flash duration	Flash duration 7-650 ms	0-255	0-100%	0	Fade
3	White LEDs flash rate (if FX are not active)	No flash <i>Single flash if Dimmer Flash = ON and value is changed on Ch 1</i>	0-1	0-0.4%	0	Snap
		Flash rate 0.289-16.67 Hz	2-250	0.8-98%		Fade
		Hyperspeed	251-252	98.4-98.8%		Snap
		Continuously on	253-255	99.2-100%		Snap
	FX speed (if FX are active)	FX speed = stop	0-1	0-0.4%		Snap
		FX speed = slow > fast	2-253	0.8-98.8%		Fade
		FX speed = stop	254-255	99.2-100%		Snap
4	White LEDs Flare effect	Off	0-9	0-3.5%	0	Snap
		Slow > fast	10-49	3.9-19.2%		Fade
		Off	50-59	19.6-23.1%		Snap
		Random slow > fast	60-109	23.5-42.7%		Fade
		Off	110-119	43.1-46.7%		Snap
		Random pixel slow > fast	120-169	47.1-66.3%		Fade
		Off	170-255	66.7-100%		Snap
5	White LEDs FX selection	Sync strobe - all	0-2	0-0.8%	0	Snap
		Sync strobe - circle mask	3-5	1.2-2.0%		
		Sync strobe - 4 dot mask	6-8	2.4-3.1%		
		Sync strobe - 1 dot mask	9-11	3.5-4.3%		
		Random strobe - all	12-14	4.7-5.5%		
		Random strobe - circle mask	15-17	5.9-6.7%		
		Random strobe - 4 dot mask	18-20	7.1-7.8%		
		Random strobe - 1 dot mask	21-23	8.2-9.0%		
		Lite in/out - all	24-26	9.4-10.2%		
		Lite in/out - circle mask	27-29	10.6-11.4%		
		Lite in/out - 4 dot mask	30-32	11.8-12.6%		
		Lite in/out - 1 dot mask	33-35	12.9-13.7%		
		Snake	36-38	14.1-14.9%		
		Raindrops	39-41	15.3-16.1%		
		Random pixel	42-44	16.5-17.3%		
		Random fake x 2 (L = 13)	45-47	17.6-18.4%		
		Random fake x 4 (L = 7)	48-50	18.8-19.6%		
		Line (L = 5)	51-53	20.0-20.8%		
		Double line (L = 3)	54-56	21.2-22.0%		
		Corner to corner line (L = 9)	57-59	22.4-23.1%		
		Tilted double lines (L = 5)	60-62	23.5-24.3%		
		Tilted double lines in to out (L = 3)	63-65	24.7-25.5%		
		Center line running dot (L = 5)	66-68	25.9-26.7%		
		Middle line running dot (L = 5)	69-71	27.1-27.8%		
		Outer line running dot (L = 5)	72-74	28.2-29.0%		
		Corner to corner (L = 5)	75-77	29.4-30.2%		
Arrow (L = 7)	78-80	30.6-31.4%				
Wave (L = 8)	81-83	31.8-32.5%				

		Wheel (L = 8)	84-86	32.9-33.7%		
		Half wheel (L = 16)	87-89	34.1-34.9%		
		Circling dot (L = 8)	90-92	35.3-36.1%		
		Outer circle (L = 8)	93-95	36.5-37.3%		
		Inner circle (L = 4)	96-98	37.6-38.4%		
		Outer 4 dots (L = 4)	99-101	38.8-39.6%		
		Outer single dot (L = 16)	102-104	40.0-40.8%		
		Middle single dot (L = 8)	105-107	41.2-42.0%		
		Spinning 2x1 dots (L = 8)	108-110	42.4-43.1%		
		Asymmetrical 4 dots (L = 8)	111-113	43.5-44.3%		
		Symmetrical 4 dots (L = 8)	114-116	44.7-45.5%		
		Square (L = 3)	117-119	45.9-46.7%		
		Inside out (L = 6)	120-122	47.1-48.8%		
		Inside out 2 (L = 3)	123-125	48.2-49.0%		
		Abstract 1 (L = 3)	126-128	49.4-50.2%		
		Abstract 2 (L = 3)	129-131	50.6-51.4%		
		Abstract 3 (L = 3)	132-134	51.8-52.5%		
		Hash tag (L = 2)	135-137	52.9-53.7%		
		Flip flop (L = 2)	138-140	54.1-54.9%		
		Jumping slash (L = 13)	141-143	55.3-56.1%		
		Jumping 'L' (L = 12)	144-146	56.5-57.3%		
		Jumping pins (L = 12)	147-149	57.6-58.4%		
		Fat dot (L = 4)	150-152	58.8-59.6%		
		Bars (L = 2)	153-155	60.0-60.8%		
		3 x lines (L = 5)	156-158	61.2-62.0%		
		2 x lines (L = 5)	159-161	62.4-63.1%		
		Spiral (L = 28)	162-164	63.5-64.3%		
		Off - No Strobe or FX	165-255	64.7-100%		
6	White LEDs FX crossfade time	Off	0-1	0-0.4%	0	Snap
		Crossfade fast > slow	2-127	0.8-49.8%		Fade
		Crossfade and tail slow > fast	128-255	50.2-100%		Fade
7	White LEDs FX orientation	Off	0-4	0-1.6%	0	Snap
		Rotate 90°	5-9	2.0-3.5%		
		Rotate 180°	10-14	3.9-5.5%		
		Rotate 270°	15-19	5.9-7.5%		
		Horizontal flip	20-24	7.8-9.4%		
		Rotate 90° & vertical flip	25-29	9.8-11.4%		
		Rotate 180° & horizontal flip	30-34	11.8-13.3%		
		Rotate 270° & vertical flip	35-39	13.7-15.3%		
		Off	40-44	15.7-17.3%		
		Random rotate & flip	45-49	17.7-19.2%		
		Random position	50-54	19.6-21.2%		
		Rotate 90° & random position	55-59	21.6-23.1%		
		Rotate 180° & random position	60-64	23.5-25.1%		
		Rotate 270° & random position	65-69	25.5-27.1%		
		Off	70-74	27.5-29.0%		
		Bounce	75-79	29.4-31.0%		
		Rotate 90° & bounce	80-84	31.4-32.9%		
		Rotate 180° & bounce	85-89	33.3-34.9%		
		Rotate 270° & bounce	90-94	35.3-36.9%		
		Off	95-99	37.3-38.8%		
		Rotate CCW at end	100-104	39.2-40.8%		
Rotate CW at end	105-109	41.2-42.7%				
Random rotate at end	110-114	43.1-44.7%				
Off	115-134	45.1-52.5%				

		Rotate 90° **	135-139	52.9-54.5%		
		Rotate 180° **	140-144	54.9-56.5%		
		Rotate 270° **	145-149	56.9-58.4%		
		Horizontal flip **	150-154	58.8-60.4%		
		Rotate 90° & vertical flip **	155-159	60.8-62.4%		
		Rotate 180° & horizontal flip **	160-164	62.7-64.3%		
		Rotate 270° & vertical flip **	165-169	64.7-66.3%		
		Off	170-174	66.7-68.2%		
		Random rotate & flip **	175-179	68.6-70.2%		
		Random position **	180-184	70.6-72.2%		
		Rotate 90° & random position **	185-189	72.5-74.1%		
		Rotate 180° & random position **	190-194	74.5-76.1%		
		Rotate 270° & random position **	195-199	76.5-78.0%		
		Off	200-204	78.4-80.0%		
		Bounce **	205-209	80.4-82.0%		
		Rotate 90° & bounce **	210-214	82.4-83.9%		
		Rotate 180° & bounce **	215-219	84.3-85.9%		
		Rotate 270° & bounce **	220-224	86.3-87.8%		
		Off	225-229	88.2-89.8%		
		Rotate CCW at end **	230-234	90.2-91.8%		
		Rotate CW at end **	235-239	92.2-93.7%		
		Random rotate at end **	240-244	94.1-95.7%		
		Off	245-255	96.1-100%		
<b>8</b>	<b>White LEDs FX offset</b>	0-100%	0-255	0-100%	0	Fade
<b>9</b>	<b>White LEDs FX length</b>	0-100%	0-255	0-100%	0	Fade
<b>Channel group B: RGB strobe with FX</b>						
<b>10</b>	<b>RGB LEDs dimmer</b>	Intensity 0-100%	0-255	0-100%	0	Fade
<b>11</b>	<b>RGB LEDs flash duration</b>	Flash duration 7-650 ms	0-255	0-100%	0	Fade
<b>12</b>	<b>RGB LEDs flash rate (if FX are not active)</b>	No flash	0-1	0-0.4%	0	Snap
		Flash rate 0.289-16.67 Hz	2-250	0.8-98%		Fade
		Hyperspeed	251-254	98.4-99.6%		Snap
		Continuously on	255	100%		Snap
	<b>FX speed (if FX are active)</b>	FX speed = stop	0-1	0-0.4%		Snap
		FX speed = slow > fast	2-253	0.8-98.8%		Fade
		FX speed = stop	254-255	99.2-100%		Snap
<b>13</b>	<b>Red</b>	Red intensity 0-100%	0-255	0-100%	255	Fade
<b>14</b>	<b>Green</b>	Green intensity 0-100%	0-255	0-100%	255	Fade
<b>15</b>	<b>Blue</b>	Blue intensity 0-100%	0-255	0-100%	255	Fade
<b>16</b>	<b>RGB LEDs Flare effect</b>	Off	0-9	0-3.5%	0	Snap
		Slow > fast	10-49	3.9-19.2%		Fade
		Off	50-59	19.6-23.1%		Snap
		Random slow > fast	60-109	23.5-42.7%		Fade
		Off	110-119	43.1-46.7%		Snap
		Random pixel slow > fast	120-169	47.1-66.3%		Fade
		Off	170-255	66.7-100%		Snap

17	RGB LEDs FX selection	Sync strobe - all	0-2	0-0.8%	0	Snap
		Sync strobe - circle mask	3-5	1.2-2.0%		
		Sync strobe - 4 dot mask	6-8	2.4-3.1%		
		Sync strobe - 1 dot mask	9-11	3.5-4.3%		
		Random strobe - all	12-14	4.7-5.5%		
		Random strobe - circle mask	15-17	5.9-6.7%		
		Random strobe - 4 dot mask	18-20	7.1-7.8%		
		Random strobe - 1 dot mask	21-23	8.2-9.0%		
		Lite in/out - all	24-26	9.4-10.2%		
		Lite in/out - circle mask	27-29	10.6-11.4%		
		Lite in/out - 4 dot mask	30-32	11.8-12.6%		
		Lite in/out - 1 dot mask	33-35	12.9-13.7%		
		Snake	36-38	14.1-14.9%		
		Raindrops	39-41	15.3-16.1%		
		Random pixel	42-44	16.5-17.3%		
		Random fake x 2 (L = 13)	45-47	17.6-18.4%		
		Random fake x 4 (L = 7)	48-50	18.8-19.6%		
		Line (L = 5)	51-53	20.0-20.8%		
		Double line (L = 3)	54-56	21.2-22.0%		
		Corner to corner line (L = 9)	57-59	22.4-23.1%		
		Tilted double lines (L = 5)	60-62	23.5-24.3%		
		Tilted double lines in to out (L = 3)	63-65	24.7-25.5%		
		Center line running dot (L = 5)	66-68	25.9-26.7%		
		Middle line running dot (L = 5)	69-71	27.1-27.8%		
		Outer line running dot (L = 5)	72-74	28.2-29.0%		
		Corner to corner (L = 5)	75-77	29.4-30.2%		
		Arrow (L = 7)	78-80	30.6-31.4%		
		Wave (L = 8)	81-83	31.8-32.5%		
		Wheel (L = 8)	84-86	32.9-33.7%		
		Half wheel (L = 16)	87-89	34.1-34.9%		
		Circling dot (L = 8)	90-92	35.3-36.1%		
		Outer circle (L = 8)	93-95	36.5-37.3%		
		Inner circle (L = 4)	96-98	37.6-38.4%		
		Outer 4 dots (L = 4)	99-101	38.8-39.6%		
		Outer single dot (L = 16)	102-104	40.0-40.8%		
		Middle single dot (L = 8)	105-107	41.2-42.0%		
		Spinning 2x1 dots (L = 8)	108-110	42.4-43.1%		
		Asymmetrical 4 dots (L = 8)	111-113	43.5-44.3%		
		Symmetrical 4 dots (L = 8)	114-116	44.7-45.5%		
		Square (L = 3)	117-119	45.9-46.7%		
		Inside out (L = 6)	120-122	47.1-48.8%		
		Inside out 2 (L = 3)	123-125	48.2-49.0%		
		Abstract 1 (L = 3)	126-128	49.4-50.2%		
		Abstract 2 (L = 3)	129-131	50.6-51.4%		
		Abstract 3 (L = 3)	132-134	51.8-52.5%		
		Hash tag (L = 2)	135-137	52.9-53.7%		
		Flip flop (L = 2)	138-140	54.1-54.9%		
		Jumping slash (L = 13)	141-143	55.3-56.1%		
		Jumping 'L' (L = 12)	144-146	56.5-57.3%		
		Jumping pins (L = 12)	147-149	57.6-58.4%		
		Fat dot (L = 4)	150-152	58.8-59.6%		
		Bars (L = 2)	153-155	60.0-60.8%		

		3 x lines (L = 5)	156-158	61.2-62.0%		
		2 x lines (L = 5)	159-161	62.4-63.1%		
		Spiral (L = 28)	162-164	63.5-64.3%		
		Off - No Strobe or FX	165-255	64.7-100%		
18	RGB LEDs FX crossfade time	Off	0-1	0-0.4%	0	Snap
		Crossfade fast > slow	2-127	0.8-49.8%		Fade
		Crossfade and tail slow > fast	128-255	50.2-100%		Fade
19	RGB LEDs FX orientation	Off	0-4	0-1.6%	0	Snap
		Rotate 90°	5-9	2.0-3.5%		
		Rotate 180°	10-14	3.9-5.5%		
		Rotate 270°	15-19	5.9-7.5%		
		Horizontal flip	20-24	7.8-9.4%		
		Rotate 90° & vertical flip	25-29	9.8-11.4%		
		Rotate 180° & horizontal flip	30-34	11.8-13.3%		
		Rotate 270° & vertical flip	35-39	13.7-15.3%		
		Off	40-44	15.7-17.3%		
		Random rotate & flip	45-49	17.7-19.2%		
		Random position	50-54	19.6-21.2%		
		Rotate 90° & random position	55-59	21.6-23.1%		
		Rotate 180° & random position	60-64	23.5-25.1%		
		Rotate 270° & random position	65-69	25.5-27.1%		
		Off	70-74	27.5-29.0%		
		Bounce	75-79	29.4-31.0%		
		Rotate 90° & bounce	80-84	31.4-32.9%		
		Rotate 180° & bounce	85-89	33.3-34.9%		
		Rotate 270° & bounce	90-94	35.3-36.9%		
		Off	95-99	37.3-38.8%		
		Rotate CCW at end	100-104	39.2-40.8%		
		Rotate CW at end	105-109	41.2-42.7%		
		Random rotate at end	110-114	43.1-44.7%		
		Off	115-134	45.1-52.5%		
		Rotate 90° **	135-139	52.9-54.5%		
		Rotate 180° **	140-144	54.9-56.5%		
		Rotate 270° **	145-149	56.9-58.4%		
		Horizontal flip **	150-154	58.8-60.4%		
		Rotate 90° & vertical flip **	155-159	60.8-62.4%		
		Rotate 180° & horizontal flip **	160-164	62.7-64.3%		
		Rotate 270° & vertical flip **	165-169	64.7-66.3%		
		Off	170-174	66.7-68.2%		
		Random rotate & flip **	175-179	68.6-70.2%		
		Random position **	180-184	70.6-72.2%		
		Rotate 90° & random position **	185-189	72.5-74.1%		
		Rotate 180° & random position **	190-194	74.5-76.1%		
		Rotate 270° & random position **	195-199	76.5-78.0%		
		Off	200-204	78.4-80.0%		
		Bounce **	205-209	80.4-82.0%		
		Rotate 90° & bounce **	210-214	82.4-83.9%		
		Rotate 180° & bounce **	215-219	84.3-85.9%		
Rotate 270° & bounce **	220-224	86.3-87.8%				
Off	225-229	88.2-89.8%				
Rotate CCW at end **	230-234	90.2-91.8%				
Rotate CW at end **	235-239	92.2-93.7%				
Random rotate at end **	240-244	94.1-95.7%				
Off	245-255	96.1-100%				



20	RGB LEDs FX offset	0-100%	0-255	0-100%	0	Fade
21	RGB LEDs FX length	0-100%	0-255	0-100%	0	Fade
22	RGB LEDs color generator	Off	0-9	0-3.5%	0	Snap
		Random all pixels RGBCMY	10-19	3.9-7.5%		Snap
		Random single pixel RGBCMY	20-29	7.8-11.4%		Snap
		Random all pixels bright colors	30-39	11.8-15.3%		Snap
		Random single pixel bright colors	40-49	15.7-19.2%		Snap
		Red / Blue	50-59	19.6-23.1%		Snap
		Red / Green	60-69	23.5-27.1%		Snap
		Blue / Green	70-79	27.5-31.0%		Snap
		Yellow / Magenta	80-89	31.4-34.9%		Snap
		Yellow / Cyan	90-99	35.3-38.8%		Snap
		Cyan / Magenta	100-109	39.2-42.7%		Snap
		Yellow / Blue	110-119	43.1-46.7%		Snap
		Green / Magenta	120-129	47.1-50.6%		Snap
		Red / Green / Blue	130-139	51.0-54.5%		Snap
		Red / Yellow / Blue	140-149	54.9-58.4%		Snap
		Red / Green / Blue / Yellow / Magenta / Cyan	150-159	58.8%-62.4%		Snap
		Red / Green / Blue - Horizontal line	160-169	62.7-66.3%		Snap
		Red / Green / Blue - Vertical line	170-179	66.7-70.2%		Snap
		No function	180-219	70.6-85.9%		Snap
		Color scroll, slow -> fast	220-229	86.3-89.8%		Fade
Lite in	230-239	90.2-93.7%	Snap			
Lite out	240-249	94.1-97.6%	Snap			
Off	250-255	98.0-100%	Snap			
<b>Control / Settings</b>						
23	Control / Settings	Idle	0-11	0-4.3%	0	Snap
		Effect sync – Immediate (1 sec.)	12-15	4.7-5.9%		
		<b>Effect sync – Power line (3 sec.)</b>	16-29	6.3-11.4%		
		Effect sync – Internal (3 sec.)	30-32	11.8-12.5%		
		No function	33-38	12.9-14.9%		
		<b>Dimmer flash Off*</b>	39-41	15.3-16.1%		
		Dimmer flash On*	42-44	16.5-17.3%		
		Dimming curve ESoft*	45-47	17.6-18.4%		
		<b>Dimming curve Soft*</b>	48-50	18.8-19.6%		
		Dimming curve Linear*	51-53	20.0-20.8%		
		No function	54-68	21.2-26.7%		
		<b>Fan mode regulated*</b>	69-71	27.1-27.8%		
		Fan mode high*	72-74	28.2-29.0%		
		Fan mode medium*	75-77	29.4-30.2%		
		Fan mode low*	78-80	30.6-31.4%		
		No function	81-83	31.8-32.5%		
		Display On*	84-86	32.9-33.7%		
		Display Off*	87-89	34.1-34.9%		
		<b>Display Auto*</b>	90-92	35.3-36.1%		
		<b>Display invert Off*</b>	93-95	36.5-37.3%		
		Display invert On*	96-98	37.6-38.4%		
		No DMX = Capture scene*	99-101	38.8-39.6%		
		No DMX = Stand-alone*	102-104	40.0-40.8%		
<b>No DMX = Blackout*</b>	105-107	41.2-42.0%				
No DMX = Hold*	108-110	42.4-43.1%				
Test pattern On*	111-113	43.5-44.3%				
<b>Test pattern Off*</b>	114-116	44.7-45.5%				

	<b>Rotation Off*</b>	117-119	45.9-46.7%	
	Rotate 90° *	120-122	47.1-47.8%	
	Rotate 180° *	123-125	48.2-49.0%	
	Rotate 270° *	126-128	49.4-50.2%	
	<b>Pixel mirror Off*</b>	129-131	50.6-51.4%	
	Pixel mirror On*	132-134	51.8-52.5%	
	<b>White output limitation Off*</b>	135-137	52.9-53.7%	
	White output limitation 80%*	138-140	54.1-54.9%	
	White output limitation 60%*	141-143	55.3-56.1%	
	White output limitation 40%*	144-146	56.5-57.3%	
	White output limitation 20%*	147-149	57.6-58.4%	
	White output limitation 10%*	150-152	55.8-59.6%	
	No function	153-158	60.0-62.0%	
	<b>RGB output limitation Off*</b>	159-161	62.4-63.1%	
	RGB output limitation 80%*	162-164	63.5-64.3%	
	RGB output limitation 60%*	165-167	64.7-65.5%	
	RGB output limitation 40%*	168-170	65.9-66.7%	
	RGB output limitation 20%*	171-173	67.1-67.8%	
	RGB output limitation 10%*	174-176	68.2-69.0%	
	No function	177-191	69.4-74.9%	
	Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%	
	<b>Main LED PWM 3000 Hz (5 sec.)</b>	195-197	76.5-77.3%	
	Main LED PWM 4800 Hz (5 sec.)	198-200	77.6-78.4%	
	Main LED PWM 9600 Hz (5 sec.)	201-203	78.8-79.6%	
	No function	204-206	80.0-80.8%	
	Main LED PWM 25 kHz (5 sec.)	207-209	81.2-82.0%	
	No function	210-251	82.4-98.4%	
	Reboot fixture*	252-255	98.8-100%	

**DMX Mode 3: RGB strobe with FX, White individual pixels**

**40 DMX Channels**

Channel	Command	DMX range	Percent	Default DMX	Fade	
<b>Channel group A: RGB strobe with FX</b>						
1	<b>RGB LEDs dimmer</b>	Intensity 0-100%	0-255	0-100%	0	Fade
2	<b>RGB LEDs flash duration</b>	Flash duration 7-650 ms	0-255	0-100%	255	Fade
3	<b>RGB LEDs flash rate (if FX not active)</b>	No flash <i>Single flash if Dimmer Flash = ON and value is changed on Ch 1</i>	0-1	0-0.4%	0	Snap
		Flash rate 0.289-16.67 Hz	2-250	0.8-98%		Fade
		Hyperspeed	251-254	98.4-99.6%		Snap
		Continuously on	255	100%		Snap
	<b>RGB LEDs FX speed (if FX active)</b>	<i>FX speed = stop</i>	0-1	0-0.4%		Snap
		<i>FX speed = slow &gt; fast</i>	2-253	0.8-98.8%		Fade
		<i>FX speed = stop</i>	254-255	99.2-100%		Snap
4	<b>Red</b>	Red intensity 0-100%	0-255	0-100%	255	Fade
5	<b>Green</b>	Green intensity 0-100%	0-255	0-100%	255	Fade
6	<b>Blue</b>	Blue intensity 0-100%	0-255	0-100%	255	Fade
7	<b>RGB LEDs Flare effect</b>	Off	0-9	0-3.5%	0	Snap
		Slow > fast	10-49	3.9-19.2%		Fade
		Off	50-59	19.6-23.1%		Snap
		Random slow > fast	60-109	23.5-42.7%		Fade
		Off	110-119	43.1-46.7%		Snap
		Random pixel slow > fast	120-169	47.1-66.3%		Fade
		Off	170-255	66.7-100%		Snap
8	<b>RGB LEDs FX selection</b>	Sync strobe - all	0-2	0-0.8%	0	Snap
		Sync strobe - circle mask	3-5	1.2-2.0%		
		Sync strobe - 4 dot mask	6-8	2.4-3.1%		
		Sync strobe - 1 dot mask	9-11	3.5-4.3%		
		Random strobe - all	12-14	4.7-5.5%		
		Random strobe - circle mask	15-17	5.9-6.7%		
		Random strobe - 4 dot mask	18-20	7.1-7.8%		
		Random strobe - 1 dot mask	21-23	8.2-9.0%		
		Lite in/out - all	24-26	9.4-10.2%		
		Lite in/out - circle mask	27-29	10.6-11.4%		
		Lite in/out - 4 dot mask	30-32	11.8-12.6%		
		Lite in/out - 1 dot mask	33-35	12.9-13.7%		
		Snake	36-38	14.1-14.9%		
		Raindrops	39-41	15.3-16.1%		
		Random pixel	42-44	16.5-17.3%		
		Random fake x 2 (L = 13)	45-47	17.6-18.4%		
		Random fake x 4 (L = 7)	48-50	18.8-19.6%		
		Line (L = 5)	51-53	20.0-20.8%		
		Double line (L = 3)	54-56	21.2-22.0%		
		Corner to corner line (L = 9)	57-59	22.4-23.1%		
		Tilted double lines (L = 5)	60-62	23.5-24.3%		
Tilted double lines in to out (L = 3)	63-65	24.7-25.5%				
Center line running dot (L = 5)	66-68	25.9-26.7%				
Middle line running dot (L = 5)	69-71	27.1-27.8%				
Outer line running dot (L = 5)	72-74	28.2-29.0%				

		Corner to corner (L = 5)	75-77	29.4-30.2%		
		Arrow (L = 7)	78-80	30.6-31.4%		
		Wave (L = 8)	81-83	31.8-32.5%		
		Wheel (L = 8)	84-86	32.9-33.7%		
		Half wheel (L = 16)	87-89	34.1-34.9%		
		Circling dot (L = 8)	90-92	35.3-36.1%		
		Outer circle (L = 8)	93-95	36.5-37.3%		
		Inner circle (L = 4)	96-98	37.6-38.4%		
		Outer 4 dots (L = 4)	99-101	38.8-39.6%		
		Outer single dot (L = 16)	102-104	40.0-40.8%		
		Middle single dot (L = 8)	105-107	41.2-42.0%		
		Spinning 2x1 dots (L = 8)	108-110	42.4-43.1%		
		Asymmetrical 4 dots (L = 8)	111-113	43.5-44.3%		
		Symmetrical 4 dots (L = 8)	114-116	44.7-45.5%		
		Square (L = 3)	117-119	45.9-46.7%		
		Inside out (L = 6)	120-122	47.1-48.8%		
		Inside out 2 (L = 3)	123-125	48.2-49.0%		
		Abstract 1 (L = 3)	126-128	49.4-50.2%		
		Abstract 2 (L = 3)	129-131	50.6-51.4%		
		Abstract 3 (L = 3)	132-134	51.8-52.5%		
		Hash tag (L = 2)	135-137	52.9-53.7%		
		Flip flop (L = 2)	138-140	54.1-54.9%		
		Jumping slash (L = 13)	141-143	55.3-56.1%		
		Jumping 'L' (L = 12)	144-146	56.5-57.3%		
		Jumping pins (L = 12)	147-149	57.6-58.4%		
		Fat dot (L = 4)	150-152	58.8-59.6%		
		Bars (L = 2)	153-155	60.0-60.8%		
		3 x lines (L = 5)	156-158	61.2-62.0%		
		2 x lines (L = 5)	159-161	62.4-63.1%		
		Spiral (L = 28)	162-164	63.5-64.3%		
		Off - No Strobe or FX	165-255	64.7-100%		
9	RGB LEDs FX crossfade time	Off	0-1	0-0.4%	0	Snap
		Crossfade fast > slow	2-127	0.8-49.8%		Fade
		Crossfade and tail slow > fast	128-255	50.2-100%		Fade
10	RGB LEDs FX orientation	Off	0-4	0-1.6%	0	Snap
		Rotate 90°	5-9	2.0-3.5%		
		Rotate 180°	10-14	3.9-5.5%		
		Rotate 270°	15-19	5.9-7.5%		
		Horizontal flip	20-24	7.8-9.4%		
		Rotate 90° & vertical flip	25-29	9.8-11.4%		
		Rotate 180° & horizontal flip	30-34	11.8-13.3%		
		Rotate 270° & vertical flip	35-39	13.7-15.3%		
		Off	40-44	15.7-17.3%		
		Random rotate & flip	45-49	17.7-19.2%		
		Random position	50-54	19.6-21.2%		
		Rotate 90° & random position	55-59	21.6-23.1%		
		Rotate 180° & random position	60-64	23.5-25.1%		
		Rotate 270° & random position	65-69	25.5-27.1%		
		Off	70-74	27.5-29.0%		
		Bounce	75-79	29.4-31.0%		
		Rotate 90° & bounce	80-84	31.4-32.9%		
		Rotate 180° & bounce	85-89	33.3-34.9%		
		Rotate 270° & bounce	90-94	35.3-36.9%		
Off	95-99	37.3-38.8%				
Rotate CCW at end	100-104	39.2-40.8%				

		Rotate CW at end	105-109	41.2-42.7%		
		Random rotate at end	110-114	43.1-44.7%		
		Off	115-134	45.1-52.5%		
		Rotate 90° **	135-139	52.9-54.5%		
		Rotate 180° **	140-144	54.9-56.5%		
		Rotate 270° **	145-149	56.9-58.4%		
		Horizontal flip **	150-154	58.8-60.4%		
		Rotate 90° & vertical flip **	155-159	60.8-62.4%		
		Rotate 180° & horizontal flip **	160-164	62.7-64.3%		
		Rotate 270° & vertical flip **	165-169	64.7-66.3%		
		Off	170-174	66.7-68.2%		
		Random rotate & flip **	175-179	68.6-70.2%		
		Random position **	180-184	70.6-72.2%		
		Rotate 90° & random position **	185-189	72.5-74.1%		
		Rotate 180° & random position **	190-194	74.5-76.1%		
		Rotate 270° & random position **	195-199	76.5-78.0%		
		Off	200-204	78.4-80.0%		
		Bounce **	205-209	80.4-82.0%		
		Rotate 90° & bounce **	210-214	82.4-83.9%		
		Rotate 180° & bounce **	215-219	84.3-85.9%		
		Rotate 270° & bounce **	220-224	86.3-87.8%		
		Off	225-229	88.2-89.8%		
		Rotate CCW at end **	230-234	90.2-91.8%		
		Rotate CW at end **	235-239	92.2-93.7%		
		Random rotate at end **	240-244	94.1-95.7%		
		Off	245-255	96.1-100%		
<b>11</b>	<b>RGB LEDs FX offset</b>	0-100%	0-255	0-100%	0	Fade
<b>12</b>	<b>RGB LEDs FX length</b>	0-100%	0-255	0-100%	0	Fade
<b>13</b>	<b>RGB LEDs color generator</b>	Off	0-9	0-3.5%	0	Snap
		Random all pixels RGBCMY	10-19	3.9-7.5%		Snap
		Random single pixel RGBCMY	20-29	7.8-11.4%		Snap
		Random all pixels bright colors	30-39	11.8-15.3%		Snap
		Random single pixel bright colors	40-49	15.7-19.2%		Snap
		Red / Blue	50-59	19.6-23.1%		Snap
		Red / Green	60-69	23.5-27.1%		Snap
		Blue / Green	70-79	27.5-31.0%		Snap
		Yellow / Magenta	80-89	31.4-34.9%		Snap
		Yellow / Cyan	90-99	35.3-38.8%		Snap
		Cyan / Magenta	100-109	39.2-42.7%		Snap
		Yellow / Blue	110-119	43.1-46.7%		Snap
		Green / Magenta	120-129	47.1-50.6%		Snap
		Red / Green / Blue	130-139	51.0-54.5%		Snap
		Red / Yellow / Blue	140-149	54.9-58.4%		Snap
		Red / Green / Blue / Yellow / Magenta / Cyan	150-159	58.8%-62.4%		Snap
		Red / Green / Blue - Horizontal line	160-169	62.7-66.3%		Snap
		Red / Green / Blue - Vertical line	170-179	66.7-70.2%		Snap
		No function	180-219	70.6-85.9%		Snap
		Color scroll, slow -> fast	220-229	86.3-89.8%		Fade
		Lite in	230-239	90.2-93.7%		Snap
		Lite out	240-249	94.1-97.6%		Snap
		Off	250-255	98.0-100%		Snap

14	White LEDs shutter	Shutter closed	0-4	0-1.6%	255	Snap
		Sync ramp up slow > fast	5-39	2.0-15.3%		Fade
		Sync ramp down slow > fast	40-74	15.7-29.0%		Fade
		Sync ramp up-down slow > fast	75-109	29.4-42.7		Fade
		Sync double flash slow > fast	110-144	43.1-56.5%		Fade
		Pixel flare effect slow > fast	145-179	56.9-70.2%		Fade
		Random strobe slow > fast	180-214	70.6-83.9%		Fade
		Sync strobe 0.289 > 16.67 Hz	215-249	84.3-97.6%		Fade
		Hyperspeed	250-252	98.0-98.8%		Snap
		Open	253-255	99.2-100%		Snap
<b>Control / Settings</b>						
15	Control / Settings	Idle	0-11	0-4.3%	0	Snap
		Effect sync – Immediate (1 sec.)	12-15	4.7-5.9%		
		<b>Effect sync – Power line (3 sec.)</b>	16-29	6.3-11.4%		
		Effect sync – Internal (3 sec.)	30-32	11.8-12.5%		
		No function	33-38	12.9-14.9%		
		<b>Dimmer flash Off*</b>	39-41	15.3-16.1%		
		Dimmer flash On*	42-44	16.5-17.3%		
		Dimming curve ESoft*	45-47	17.6-18.4%		
		<b>Dimming curve Soft*</b>	48-50	18.8-19.6%		
		Dimming curve Linear*	51-53	20.0-20.8%		
		No function	54-68	21.2-26.7%		
		<b>Fan mode regulated*</b>	69-71	27.1-27.8%		
		Fan mode high*	72-74	28.2-29.0%		
		Fan mode medium*	75-77	29.4-30.2%		
		Fan mode low*	78-80	30.6-31.4%		
		No function	81-83	31.8-32.5%		
		Display On*	84-86	32.9-33.7%		
		Display Off*	87-89	34.1-34.9%		
		<b>Display Auto*</b>	90-92	35.3-36.1%		
		<b>Display invert Off*</b>	93-95	36.5-37.3%		
		Display invert On*	96-98	37.6-38.4%		
		No DMX = Capture scene*	99-101	38.8-39.6%		
		No DMX = Stand-alone*	102-104	40.0-40.8%		
		<b>No DMX = Blackout*</b>	105-107	41.2-42.0%		
		No DMX = Hold*	108-110	42.4-43.1%		
		Test pattern On*	111-113	43.5-44.3%		
		<b>Test pattern Off*</b>	114-116	44.7-45.5%		
		<b>Rotation Off*</b>	117-119	45.9-46.7%		
		Rotate 90° *	120-122	47.1-47.8%		
		Rotate 180° *	123-125	48.2-49.0%		
		Rotate 270° *	126-128	49.4-50.2%		
		<b>Pixel mirror Off*</b>	129-131	50.6-51.4%		
		Pixel mirror On*	132-134	51.8-52.5%		
<b>White output limitation Off*</b>	135-137	52.9-53.7%				
White output limitation 80%*	138-140	54.1-54.9%				
White output limitation 60%*	141-143	55.3-56.1%				
White output limitation 40%*	144-146	56.5-57.3%				
White output limitation 20%*	147-149	57.6-58.4%				
White output limitation 10%*	150-152	55.8-59.6%				
No function	153-158	60.0-62.0%				

		<b>RGB output limitation Off*</b>	159-161	62.4-63.1%		
		RGB output limitation 80%*	162-164	63.5-64.3%		
		RGB output limitation 60%*	165-167	64.7-65.5%		
		RGB output limitation 40%*	168-170	65.9-66.7%		
		RGB output limitation 20%*	171-173	67.1-67.8%		
		RGB output limitation 10%*	174-176	68.2-69.0%		
		No function	177-191	69.4-74.9%		
		Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%		
		<b>Main LED PWM 3000 Hz (5 sec.)</b>	195-197	76.5-77.3%		
		Main LED PWM 4800 Hz (5 sec.)	198-200	77.6-78.4%		
		Main LED PWM 9600 Hz (5 sec.)	201-203	78.8-79.6%		
		No function	204-206	80.0-80.8%		
		Main LED PWM 25 kHz (5 sec.)	207-209	81.2-82.0%		
		No function	210-251	82.4-98.4%		
		Reboot fixture*	252-255	98.8-100%		
<b>Channel group B: White individual pixels</b>						
<b>16</b>	<b>White pixel 1</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>17</b>	<b>White pixel 2</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>18</b>	<b>White pixel 3</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>19</b>	<b>White pixel 4</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>20</b>	<b>White pixel 5</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>21</b>	<b>White pixel 6</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>22</b>	<b>White pixel 7</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>23</b>	<b>White pixel 8</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>24</b>	<b>White pixel 9</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>25</b>	<b>White pixel 10</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>26</b>	<b>White pixel 11</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>27</b>	<b>White pixel 12</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>28</b>	<b>White pixel 13</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>29</b>	<b>White pixel 14</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>30</b>	<b>White pixel 15</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>31</b>	<b>White pixel 16</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>32</b>	<b>White pixel 17</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>33</b>	<b>White pixel 18</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>34</b>	<b>White pixel 19</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>35</b>	<b>White pixel 20</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>36</b>	<b>White pixel 21</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>37</b>	<b>White pixel 22</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>38</b>	<b>White pixel 23</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>39</b>	<b>White pixel 24</b>	Intensity 0-100%	0-255	0-100%	0	fade
<b>40</b>	<b>White pixel 25</b>	Intensity 0-100%	0-255	0-100%	0	fade

Individual white pixel control on channels 16-40 can be mapped independently at the controller depending on how many pixels are connected to the KNV PSU outputs **A – E**.

Unused DMX channels can be deleted from the controller patch leaving them free for use by other fixtures.



## DMX Mode 4: White strobe with FX, RGB 25-pixel

### 86 DMX Channels

Channel	Command	DMX range	Percent	Default DMX	Fade	
<b>Channel group A: White strobe with FX</b>						
1	<b>White LEDs dimmer</b>	Intensity 0-100%	0-255	0-100%	0	Fade
2	<b>White LEDs flash duration</b>	Flash duration 7-650 ms	0-255	0-100%	0	Fade
3	<b>White LEDs flash rate (if FX are not active)</b>	No flash	0-1	0-0.4%	0	Snap
		<i>Single flash if Dimmer Flash = ON and value is changed on Ch 1</i>				
		Flash rate 0.289-16.67 Hz	2-250	0.8-98%		Fade
		Hyperspeed	251-252	98.4-98.8%		Snap
	Continuously on	253-255	99.2-100%	Snap		
	<b>FX speed (if FX are active)</b>	FX speed = stop	0-1	0-0.4%		Snap
		FX speed = slow > fast	2-253	0.8-98.8%		Fade
FX speed = stop		254-255	99.2-100%	Snap		
4	<b>White LEDs Flare effect</b>	Off	0-9	0-3.5%	0	Snap
		Slow > fast	10-49	3.9-19.2%		Fade
		Off	50-59	19.6-23.1%		Snap
		Random slow > fast	60-109	23.5-42.7%		Fade
		Off	110-119	43.1-46.7%		Snap
		Random pixel slow > fast	120-169	47.1-66.3%		Fade
		Off	170-255	66.7-100%		Snap
5	<b>White LEDs FX selection</b>	Sync strobe - all	0-2	0-0.8%	0	Snap
		Sync strobe - circle mask	3-5	1.2-2.0%		
		Sync strobe - 4 dot mask	6-8	2.4-3.1%		
		Sync strobe - 1 dot mask	9-11	3.5-4.3%		
		Random strobe - all	12-14	4.7-5.5%		
		Random strobe - circle mask	15-17	5.9-6.7%		
		Random strobe - 4 dot mask	18-20	7.1-7.8%		
		Random strobe - 1 dot mask	21-23	8.2-9.0%		
		Lite in/out - all	24-26	9.4-10.2%		
		Lite in/out - circle mask	27-29	10.6-11.4%		
		Lite in/out - 4 dot mask	30-32	11.8-12.6%		
		Lite in/out - 1 dot mask	33-35	12.9-13.7%		
		Snake	36-38	14.1-14.9%		
		Raindrops	39-41	15.3-16.1%		
		Random pixel	42-44	16.5-17.3%		
		Random fake x 2 (L = 13)	45-47	17.6-18.4%		
		Random fake x 4 (L = 7)	48-50	18.8-19.6%		
		Line (L = 5)	51-53	20.0-20.8%		
		Double line (L = 3)	54-56	21.2-22.0%		
		Corner to corner line (L = 9)	57-59	22.4-23.1%		
		Tilted double lines (L = 5)	60-62	23.5-24.3%		
		Tilted double lines in to out (L = 3)	63-65	24.7-25.5%		
		Center line running dot (L = 5)	66-68	25.9-26.7%		
		Middle line running dot (L = 5)	69-71	27.1-27.8%		
Outer line running dot (L = 5)	72-74	28.2-29.0%				
Corner to corner (L = 5)	75-77	29.4-30.2%				
Arrow (L = 7)	78-80	30.6-31.4%				
Wave (L = 8)	81-83	31.8-32.5%				



		Wheel (L = 8)	84-86	32.9-33.7%						
		Half wheel (L = 16)	87-89	34.1-34.9%						
		Circling dot (L = 8)	90-92	35.3-36.1%						
		Outer circle (L = 8)	93-95	36.5-37.3%						
		Inner circle (L = 4)	96-98	37.6-38.4%						
		Outer 4 dots (L = 4)	99-101	38.8-39.6%						
		Outer single dot (L = 16)	102-104	40.0-40.8%						
		Middle single dot (L = 8)	105-107	41.2-42.0%						
		Spinning 2x1 dots (L = 8)	108-110	42.4-43.1%						
		Asymmetrical 4 dots (L = 8)	111-113	43.5-44.3%						
		Symmetrical 4 dots (L = 8)	114-116	44.7-45.5%						
		Square (L = 3)	117-119	45.9-46.7%						
		Inside out (L = 6)	120-122	47.1-48.8%						
		Inside out 2 (L = 3)	123-125	48.2-49.0%						
		Abstract 1 (L = 3)	126-128	49.4-50.2%						
		Abstract 2 (L = 3)	129-131	50.6-51.4%						
		Abstract 3 (L = 3)	132-134	51.8-52.5%						
		Hash tag (L = 2)	135-137	52.9-53.7%						
		Flip flop (L = 2)	138-140	54.1-54.9%						
		Jumping slash (L = 13)	141-143	55.3-56.1%						
		Jumping 'L' (L = 12)	144-146	56.5-57.3%						
		Jumping pins (L = 12)	147-149	57.6-58.4%						
		Fat dot (L = 4)	150-152	58.8-59.6%						
		Bars (L = 2)	153-155	60.0-60.8%						
		3 x lines (L = 5)	156-158	61.2-62.0%						
		2 x lines (L = 5)	159-161	62.4-63.1%						
		Spiral (L = 28)	162-164	63.5-64.3%						
		Off - No Strobe or FX	165-255	64.7-100%						
		<b>6</b>	<b>White LEDs FX crossfade time</b>	Off			0-1	0-0.4%	0	Snap Fade Fade
				Crossfade fast > slow			2-127	0.8-49.8%		
Crossfade and tail slow > fast	128-255			50.2-100%						
<b>7</b>	<b>White LEDs FX orientation</b>	Off	0-4	0-1.6%	0	Snap				
		Rotate 90°	5-9	2.0-3.5%						
		Rotate 180°	10-14	3.9-5.5%						
		Rotate 270°	15-19	5.9-7.5%						
		Horizontal flip	20-24	7.8-9.4%						
		Rotate 90° & vertical flip	25-29	9.8-11.4%						
		Rotate 180° & horizontal flip	30-34	11.8-13.3%						
		Rotate 270° & vertical flip	35-39	13.7-15.3%						
		Off	40-44	15.7-17.3%						
		Random rotate & flip	45-49	17.7-19.2%						
		Random position	50-54	19.6-21.2%						
		Rotate 90° & random position	55-59	21.6-23.1%						
		Rotate 180° & random position	60-64	23.5-25.1%						
		Rotate 270° & random position	65-69	25.5-27.1%						
		Off	70-74	27.5-29.0%						
		Bounce	75-79	29.4-31.0%						
		Rotate 90° & bounce	80-84	31.4-32.9%						
		Rotate 180° & bounce	85-89	33.3-34.9%						
		Rotate 270° & bounce	90-94	35.3-36.9%						
		Off	95-99	37.3-38.8%						
		Rotate CCW at end	100-104	39.2-40.8%						
		Rotate CW at end	105-109	41.2-42.7%						
		Random rotate at end	110-114	43.1-44.7%						
Off	115-134	45.1-52.5%								

		Rotate 90° **	135-139	52.9-54.5%		
		Rotate 180° **	140-144	54.9-56.5%		
		Rotate 270° **	145-149	56.9-58.4%		
		Horizontal flip **	150-154	58.8-60.4%		
		Rotate 90° & vertical flip **	155-159	60.8-62.4%		
		Rotate 180° & horizontal flip **	160-164	62.7-64.3%		
		Rotate 270° & vertical flip **	165-169	64.7-66.3%		
		Off	170-174	66.7-68.2%		
		Random rotate & flip **	175-179	68.6-70.2%		
		Random position **	180-184	70.6-72.2%		
		Rotate 90° & random position **	185-189	72.5-74.1%		
		Rotate 180° & random position **	190-194	74.5-76.1%		
		Rotate 270° & random position **	195-199	76.5-78.0%		
		Off	200-204	78.4-80.0%		
		Bounce **	205-209	80.4-82.0%		
		Rotate 90° & bounce **	210-214	82.4-83.9%		
		Rotate 180° & bounce **	215-219	84.3-85.9%		
		Rotate 270° & bounce **	220-224	86.3-87.8%		
		Off	225-229	88.2-89.8%		
		Rotate CCW at end **	230-234	90.2-91.8%		
		Rotate CW at end **	235-239	92.2-93.7%		
		Random rotate at end **	240-244	94.1-95.7%		
		Off	245-255	96.1-100%		
8	White LEDs FX offset	0-100%	0-255	0-100%	0	Fade
9	White LEDs FX length	0-100%	0-255	0-100%	0	Fade
10	RGBW shutter	Shutter closed	0-4	0-1.6%	255	Snap
		Sync ramp up slow > fast	5-39	2.0-15.3%		Fade
		Sync ramp down slow > fast	40-74	15.7-29.0%		Fade
		Sync ramp up-down slow > fast	75-109	29.4-42.7%		Fade
		Sync double flash slow > fast	110-144	43.1-56.5%		Fade
		Pixel flare effect slow > fast	145-179	56.9-70.2%		Fade
		Random strobe slow > fast	180-214	70.6-83.9%		Fade
		Sync strobe 0.289 > 16.67 Hz	215-249	84.3-97.6%		Fade
		Hyperspeed	250-252	98.0-98.8%		Snap
		Open	253-255	99.2-100%		Snap
<b>Control / Settings</b>						
11	Control / Settings	Idle	0-11	0-4.3%	0	Snap
		Effect sync – Immediate (1 sec.)	12-15	4.7-5.9%		
		<b>Effect sync – Power line (3 sec.)</b>	16-29	6.3-11.4%		
		Effect sync – Internal (3 sec.)	30-32	11.8-12.5%		
		No function	33-38	12.9-14.9%		
		<b>Dimmer flash Off*</b>	39-41	15.3-16.1%		
		Dimmer flash On*	42-44	16.5-17.3%		
		Dimming curve ESoft*	45-47	17.6-18.4%		
		<b>Dimming curve Soft*</b>	48-50	18.8-19.6%		
		Dimming curve Linear*	51-53	20.0-20.8%		
		No function	54-68	21.2-26.7%		
		<b>Fan mode regulated*</b>	69-71	27.1-27.8%		
		Fan mode high*	72-74	28.2-29.0%		
		Fan mode medium*	75-77	29.4-30.2%		
		Fan mode low*	78-80	30.6-31.4%		
No function	81-83	31.8-32.5%				

		Display On*	84-86	32.9-33.7%		
		Display Off*	87-89	34.1-34.9%		
		<b>Display Auto*</b>	90-92	35.3-36.1%		
		<b>Display invert Off*</b>	93-95	36.5-37.3%		
		Display invert On*	96-98	37.6-38.4%		
		No DMX = Capture scene*	99-101	38.8-39.6%		
		No DMX = Stand-alone*	102-104	40.0-40.8%		
		<b>No DMX = Blackout*</b>	105-107	41.2-42.0%		
		No DMX = Hold*	108-110	42.4-43.1%		
		Test pattern On*	111-113	43.5-44.3%		
		<b>Test pattern Off*</b>	114-116	44.7-45.5%		
		<b>Rotation Off*</b>	117-119	45.9-46.7%		
		Rotate 90° *	120-122	47.1-47.8%		
		Rotate 180° *	123-125	48.2-49.0%		
		Rotate 270° *	126-128	49.4-50.2%		
		<b>Pixel mirror Off*</b>	129-131	50.6-51.4%		
		Pixel mirror On*	132-134	51.8-52.5%		
		<b>White output limitation Off*</b>	135-137	52.9-53.7%		
		White output limitation 80%*	138-140	54.1-54.9%		
		White output limitation 60%*	141-143	55.3-56.1%		
		White output limitation 40%*	144-146	56.5-57.3%		
		White output limitation 20%*	147-149	57.6-58.4%		
		White output limitation 10%*	150-152	55.8-59.6%		
		No function	153-158	60.0-62.0%		
		<b>RGB output limitation Off*</b>	159-161	62.4-63.1%		
		RGB output limitation 80%*	162-164	63.5-64.3%		
		RGB output limitation 60%*	165-167	64.7-65.5%		
		RGB output limitation 40%*	168-170	65.9-66.7%		
		RGB output limitation 20%*	171-173	67.1-67.8%		
		RGB output limitation 10%*	174-176	68.2-69.0%		
		No function	177-191	69.4-74.9%		
		Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%		
		<b>Main LED PWM 3000 Hz (5 sec.)</b>	195-197	76.5-77.3%		
		Main LED PWM 4800 Hz (5 sec.)	198-200	77.6-78.4%		
		Main LED PWM 9600 Hz (5 sec.)	201-203	78.8-79.6%		
		No function	204-206	80.0-80.8%		
		Main LED PWM 25 kHz (5 sec.)	207-209	81.2-82.0%		
		No function	210-251	82.4-98.4%		
		Reboot fixture*	252-255	98.8-100%		
		<b>RGB output limitation Off*</b>	159-161	62.4-63.1%		
		RGB output limitation 80%*	162-164	63.5-64.3%		
		RGB output limitation 10%*	174-176	68.2-69.0%		
		No function	177-191	69.4-74.9%		
		Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%		
<b>Channel group B: RGB 25-pixel</b>						
<b>12</b>	<b>RGB Pixel 1</b>	Red	0-100%	0-255	255	Fade
<b>13</b>		Green	0-100%	0-255	255	Fade
<b>14</b>		Blue	0-100%	0-255	255	Fade
...	<b>RGB Pixels 2 ... 24</b>	Red	0-100%	0-255	255	Fade
...		Green	0-100%	0-255	255	Fade
...		Blue	0-100%	0-255	255	Fade
<b>84</b>	<b>RGB Pixel 25</b>	Red	0-100%	0-255	255	Fade
<b>85</b>		Green	0-100%	0-255	255	Fade
<b>86</b>		Blue	0-100%	0-255	255	Fade

Individual RGB pixel control on channels 12-86 be mapped independently at the controller depending on how many pixels are connected to the KNV PSU outputs **A – E**. Unused DMX channels can be deleted from the controller patch leaving them free for use by other fixtures.

**DMX Mode 5: Multi-layer RGBW with FX**

**35 DMX Channels**

Channel	Command	DMX range	Percent	Default DMX	Fade	
<b>Channel group A: Base layer RGBW (low priority)</b>						
1	<b>Red</b>	Intensity 0-100%	0-255	0-100%	0	Fade
2	<b>Green</b>	Intensity 0-100%	0-255	0-100%	0	Fade
3	<b>Blue</b>	Intensity 0-100%	0-255	0-100%	0	Fade
4	<b>White</b>	Intensity 0-100%	0-255	0-100%	0	Fade
<b>Channel group B: Layer 2 RGBW strobe with FX (medium priority, true color)</b>						
5	<b>Layer 2 master (16-bit)</b>	Layer 2 = transparent	0-1	0-0.4%	0	Snap
6		Layer 2 intensity 0-100%	2-65535	0.8-100%		Fade
7	<b>Layer 2 flash duration</b>	7-650 ms	0-255	0-100%	0	Fade
8	<b>Layer 2 flash rate (if FX not active)</b>	No flash	0-1	0-0.4%	0	Snap
		Single flash if Dimmer Flash = ON and value is changed on Ch 5				
		Flash rate 0.289-16.67 Hz	2-250	0.8-98%		Fade
		Hyperspeed	251-252	98.4-98.8%		Snap
	Continuously on	253-255	99.2-100%	Snap		
	<b>Layer 2 FX speed (if FX active)</b>	FX speed = stop	0-1	0-0.4%	Snap	
FX speed = slow > fast		2-253	0.8-98.8%	Fade		
FX speed = stop		254-255	99.2-100%	Snap		
9	<b>Layer 2 Flare effect</b>	Off	0-9	0-3.5%	0	Snap
		Slow > fast	10-49	3.9-19.2%		Fade
		Off	50-59	19.6-23.1%		Snap
		Random slow > fast	60-109	23.5-42.7%		Fade
		Off	110-119	43.1-46.7%		Snap
		Random pixel slow > fast	120-169	47.1-66.3%		Fade
		Off	170-255	66.7-100%		Snap
10	<b>Layer 2 Red</b>	Intensity 0-100%	0-255	0-100%	0	Fade
11	<b>Layer 2 Green</b>	Intensity 0-100%	0-255	0-100%	0	Fade
12	<b>Layer 2 Blue</b>	Intensity 0-100%	0-255	0-100%	0	Fade
13	<b>Layer 2 White</b>	Intensity 0-100%	0-255	0-100%	0	Fade
14	<b>Layer 2 FX selection</b>	Sync strobe - all	0-2	0-0.8%	0	Snap
		Sync strobe - circle mask	3-5	1.2-2.0%		
		Sync strobe - 4 dot mask	6-8	2.4-3.1%		
		Sync strobe - 1 dot mask	9-11	3.5-4.3%		
		Random strobe - all	12-14	4.7-5.5%		
		Random strobe - circle mask	15-17	5.9-6.7%		
		Random strobe - 4 dot mask	18-20	7.1-7.8%		
		Random strobe - 1 dot mask	21-23	8.2-9.0%		
		Lite in/out - all	24-26	9.4-10.2%		
		Lite in/out - circle mask	27-29	10.6-11.4%		
		Lite in/out - 4 dot mask	30-32	11.8-12.6%		
		Lite in/out - 1 dot mask	33-35	12.9-13.7%		
		Snake	36-38	14.1-14.9%		
		Raindrops	39-41	15.3-16.1%		
		Random pixel	42-44	16.5-17.3%		
		Random fake x 2 (L = 13)	45-47	17.6-18.4%		
		Random fake x 4 (L = 7)	48-50	18.8-19.6%		
Line (L = 5)	51-53	20.0-20.8%				
Double line (L = 3)	54-56	21.2-22.0%				

		Corner to corner line (L = 9)	57-59	22.4-23.1%		
		Tilted double lines (L = 5)	60-62	23.5-24.3%		
		Tilted double lines in to out (L = 3)	63-65	24.7-25.5%		
		Center line running dot (L = 5)	66-68	25.9-26.7%		
		Middle line running dot (L = 5)	69-71	27.1-27.8%		
		Outer line running dot (L = 5)	72-74	28.2-29.0%		
		Corner to corner (L = 5)	75-77	29.4-30.2%		
		Arrow (L = 7)	78-80	30.6-31.4%		
		Wave (L = 8)	81-83	31.8-32.5%		
		Wheel (L = 8)	84-86	32.9-33.7%		
		Half wheel (L = 16)	87-89	34.1-34.9%		
		Circling dot (L = 8)	90-92	35.3-36.1%		
		Outer circle (L = 8)	93-95	36.5-37.3%		
		Inner circle (L = 4)	96-98	37.6-38.4%		
		Outer 4 dots (L = 4)	99-101	38.8-39.6%		
		Outer single dot (L = 16)	102-104	40.0-40.8%		
		Middle single dot (L = 8)	105-107	41.2-42.0%		
		Spinning 2x1 dots (L = 8)	108-110	42.4-43.1%		
		Asymmetrical 4 dots (L = 8)	111-113	43.5-44.3%		
		Symmetrical 4 dots (L = 8)	114-116	44.7-45.5%		
		Square (L = 3)	117-119	45.9-46.7%		
		Inside out (L = 6)	120-122	47.1-48.8%		
		Inside out 2 (L = 3)	123-125	48.2-49.0%		
		Abstract 1 (L = 3)	126-128	49.4-50.2%		
		Abstract 2 (L = 3)	129-131	50.6-51.4%		
		Abstract 3 (L = 3)	132-134	51.8-52.5%		
		Hash tag (L = 2)	135-137	52.9-53.7%		
		Flip flop (L = 2)	138-140	54.1-54.9%		
		Jumping slash (L = 13)	141-143	55.3-56.1%		
		Jumping 'L' (L = 12)	144-146	56.5-57.3%		
		Jumping pins (L = 12)	147-149	57.6-58.4%		
		Fat dot (L = 4)	150-152	58.8-59.6%		
		Bars (L = 2)	153-155	60.0-60.8%		
		3 x lines (L = 5)	156-158	61.2-62.0%		
		2 x lines (L = 5)	159-161	62.4-63.1%		
		Spiral (L = 28)	162-164	63.5-64.3%		
		Off - No Strobe or FX	165-255	64.7-100%		
15	Layer 2 FX crossfade time	Off	0-1	0-0.4%	0	Snap
		Crossfade fast > slow	2-127	0.8-49.8%		Fade
		Crossfade and tail slow > fast	128-255	50.2-100%		Fade
16	Layer 2 FX orientation	Off	0-4	0-1.6%	0	Snap
		Rotate 90°	5-9	2.0-3.5%		
		Rotate 180°	10-14	3.9-5.5%		
		Rotate 270°	15-19	5.9-7.5%		
		Horizontal flip	20-24	7.8-9.4%		
		Rotate 90° & vertical flip	25-29	9.8-11.4%		
		Rotate 180° & horizontal flip	30-34	11.8-13.3%		
		Rotate 270° & vertical flip	35-39	13.7-15.3%		
		Off	40-44	15.7-17.3%		
		Random rotate & flip	45-49	17.7-19.2%		
		Random position	50-54	19.6-21.2%		
		Rotate 90° & random position	55-59	21.6-23.1%		
		Rotate 180° & random position	60-64	23.5-25.1%		
		Rotate 270° & random position	65-69	25.5-27.1%		
		Off	70-74	27.5-29.0%		

		Bounce	75-79	29.4-31.0%		
		Rotate 90° & bounce	80-84	31.4-32.9%		
		Rotate 180° & bounce	85-89	33.3-34.9%		
		Rotate 270° & bounce	90-94	35.3-36.9%		
		Off	95-99	37.3-38.8%		
		Rotate CCW at end	100-104	39.2-40.8%		
		Rotate CW at end	105-109	41.2-42.7%		
		Random rotate at end	110-114	43.1-44.7%		
		Off	115-134	45.1-52.5%		
		Rotate 90° **	135-139	52.9-54.5%		
		Rotate 180° **	140-144	54.9-56.5%		
		Rotate 270° **	145-149	56.9-58.4%		
		Horizontal flip **	150-154	58.8-60.4%		
		Rotate 90° & vertical flip **	155-159	60.8-62.4%		
		Rotate 180° & horizontal flip **	160-164	62.7-64.3%		
		Rotate 270° & vertical flip **	165-169	64.7-66.3%		
		Off	170-174	66.7-68.2%		
		Random rotate & flip **	175-179	68.6-70.2%		
		Random position **	180-184	70.6-72.2%		
		Rotate 90° & random position **	185-189	72.5-74.1%		
		Rotate 180° & random position **	190-194	74.5-76.1%		
		Rotate 270° & random position **	195-199	76.5-78.0%		
		Off	200-204	78.4-80.0%		
		Bounce **	205-209	80.4-82.0%		
		Rotate 90° & bounce **	210-214	82.4-83.9%		
		Rotate 180° & bounce **	215-219	84.3-85.9%		
		Rotate 270° & bounce **	220-224	86.3-87.8%		
		Off	225-229	88.2-89.8%		
		Rotate CCW at end **	230-234	90.2-91.8%		
		Rotate CW at end **	235-239	92.2-93.7%		
		Random rotate at end **	240-244	94.1-95.7%		
		Off	245-255	96.1-100%		
<b>17</b>	<b>Layer 2 FX offset</b>	0-100%	0-255	0-100%	0	Fade
<b>18</b>	<b>Layer 2 FX length</b>	0-100%	0-255	0-100%	0	Fade
<b>19</b>	<b>Layer 2 FX color generator</b>	Off	0-9	0-3.5%	0	Snap
		Random all pixels RGBCMY	10-19	3.9-7.5%		Snap
		Random single pixel RGBCMY	20-29	7.8-11.4%		Snap
		Random all pixels bright colors	30-39	11.8-15.3%		Snap
		Random single pixel bright colors	40-49	15.7-19.2%		Snap
		Red / Blue	50-59	19.6-23.1%		Snap
		Red / Green	60-69	23.5-27.1%		Snap
		Blue / Green	70-79	27.5-31.0%		Snap
		Yellow / Magenta	80-89	31.4-34.9%		Snap
		Yellow / Cyan	90-99	35.3-38.8%		Snap
		Cyan / Magenta	100-109	39.2-42.7%		Snap
		Yellow / Blue	110-119	43.1-46.7%		Snap
		Green / Magenta	120-129	47.1-50.6%		Snap
		Red / Green / Blue	130-139	51.0-54.5%		Snap
		Red / Yellow / Blue	140-149	54.9-58.4%		Snap
		Red / Green / Blue / Yellow / Magenta / Cyan	150-159	58.8%-62.4%		Snap
		Red / Green / Blue - Horizontal line	160-169	62.7-66.3%		Snap
		Red / Green / Blue - Vertical line	170-179	66.7-70.2%		Snap
		No function	180-219	70.6-85.9%		Snap
		Color scroll, slow -> fast	220-229	86.3-89.8%		Fade

		Lite in	230-239	90.2-93.7%		Snap	
		Lite out	240-249	94.1-97.6%		Snap	
		Off	250-255	98.0-100%		Snap	
<b>Channel group C: Layer 3 RGBW strobe with FX (high priority, true color)</b>							
20	Layer 3 master	Layer 3 = transparent	0-1	0-0.4%	0	Snap	
21		Layer 3 intensity 0-100%	2-65535	0.8-100%		Fade	
22	Layer 3 flash duration	7-650 ms	0-255	0-100%	0	Fade	
23	Layer 3 flash rate (if FX are not active)	No flash	0-1	0-0.4%	0	Snap	
		<i>Single flash if Dimmer Flash = ON and value is changed on Ch 20</i>					Fade
		Flash rate 0.289-16.67 Hz	2-250	0.8-98%		Snap	
		Hyperspeed	251-252	98.4-98.8%		Snap	
	Continuously on	253-255	99.2-100%	Snap			
	Layer 3 FX speed (if FX are active)	FX speed = stop	0-1	0-0.4%		Snap	
		FX speed = slow > fast	2-253	0.8-98.8%		Fade	
FX speed = stop		254-255	99.2-100%	Snap			
24	Layer 3 Flare effect	Off	0-9	0-3.5%	0	Snap	
		Slow > fast	10-49	3.9-19.2%		Fade	
		Off	50-59	19.6-23.1%		Snap	
		Random slow > fast	60-109	23.5-42.7%		Fade	
		Off	110-119	43.1-46.7%		Snap	
		Random pixel slow > fast	120-169	47.1-66.3%		Fade	
		Off	170-255	66.7-100%		Snap	
25	Layer 3 Red	Intensity 0-100%	0-255	0-100%	0	Fade	
26	Layer 3 Green	Intensity 0-100%	0-255	0-100%	0	Fade	
27	Layer 3 Blue	Intensity 0-100%	0-255	0-100%	0	Fade	
28	Layer 3 White	Intensity 0-100%	0-255	0-100%	0	Fade	
29	Layer 3 FX selection	Sync strobe - all	0-2	0-0.8%	0	Snap	
		Sync strobe - circle mask	3-5	1.2-2.0%			
		Sync strobe - 4 dot mask	6-8	2.4-3.1%			
		Sync strobe - 1 dot mask	9-11	3.5-4.3%			
		Random strobe - all	12-14	4.7-5.5%			
		Random strobe - circle mask	15-17	5.9-6.7%			
		Random strobe - 4 dot mask	18-20	7.1-7.8%			
		Random strobe - 1 dot mask	21-23	8.2-9.0%			
		Lite in/out - all	24-26	9.4-10.2%			
		Lite in/out - circle mask	27-29	10.6-11.4%			
		Lite in/out - 4 dot mask	30-32	11.8-12.6%			
		Lite in/out - 1 dot mask	33-35	12.9-13.7%			
		Snake	36-38	14.1-14.9%			
		Raindrops	39-41	15.3-16.1%			
		Random pixel	42-44	16.5-17.3%			
		Random fake x 2 (L = 13)	45-47	17.6-18.4%			
		Random fake x 4 (L = 7)	48-50	18.8-19.6%			
		Line (L = 5)	51-53	20.0-20.8%			
		Double line (L = 3)	54-56	21.2-22.0%			
		Corner to corner line (L = 9)	57-59	22.4-23.1%			
		Tilted double lines (L = 5)	60-62	23.5-24.3%			
		Tilted double lines in to out (L = 3)	63-65	24.7-25.5%			
		Center line running dot (L = 5)	66-68	25.9-26.7%			
		Middle line running dot (L = 5)	69-71	27.1-27.8%			
		Outer line running dot (L = 5)	72-74	28.2-29.0%			
		Corner to corner (L = 5)	75-77	29.4-30.2%			
		Arrow (L = 7)	78-80	30.6-31.4%			
Wave (L = 8)	81-83	31.8-32.5%					



		Wheel (L = 8)	84-86	32.9-33.7%		
		Half wheel (L = 16)	87-89	34.1-34.9%		
		Circling dot (L = 8)	90-92	35.3-36.1%		
		Outer circle (L = 8)	93-95	36.5-37.3%		
		Inner circle (L = 4)	96-98	37.6-38.4%		
		Outer 4 dots (L = 4)	99-101	38.8-39.6%		
		Outer single dot (L = 16)	102-104	40.0-40.8%		
		Middle single dot (L = 8)	105-107	41.2-42.0%		
		Spinning 2x1 dots (L = 8)	108-110	42.4-43.1%		
		Asymmetrical 4 dots (L = 8)	111-113	43.5-44.3%		
		Symmetrical 4 dots (L = 8)	114-116	44.7-45.5%		
		Square (L = 3)	117-119	45.9-46.7%		
		Inside out (L = 6)	120-122	47.1-48.8%		
		Inside out 2 (L = 3)	123-125	48.2-49.0%		
		Abstract 1 (L = 3)	126-128	49.4-50.2%		
		Abstract 2 (L = 3)	129-131	50.6-51.4%		
		Abstract 3 (L = 3)	132-134	51.8-52.5%		
		Hash tag (L = 2)	135-137	52.9-53.7%		
		Flip flop (L = 2)	138-140	54.1-54.9%		
		Jumping slash (L = 13)	141-143	55.3-56.1%		
		Jumping 'L' (L = 12)	144-146	56.5-57.3%		
		Jumping pins (L = 12)	147-149	57.6-58.4%		
		Fat dot (L = 4)	150-152	58.8-59.6%		
		Bars (L = 2)	153-155	60.0-60.8%		
		3 x lines (L = 5)	156-158	61.2-62.0%		
		2 x lines (L = 5)	159-161	62.4-63.1%		
		Spiral (L = 28)	162-164	63.5-64.3%		
		Off - No Strobe or FX	165-255	64.7-100%		
30	Layer 3 FX crossfade time	Off	0-1	0-0.4%	0	Snap
		Crossfade fast > slow	2-127	0.8-49.8%		Fade
		Crossfade and tail slow > fast	128-255	50.2-100%		Fade
31	Layer 3 FX orientation	Off	0-4	0-1.6%	0	Snap
		Rotate 90°	5-9	2.0-3.5%		
		Rotate 180°	10-14	3.9-5.5%		
		Rotate 270°	15-19	5.9-7.5%		
		Horizontal flip	20-24	7.8-9.4%		
		Rotate 90° & vertical flip	25-29	9.8-11.4%		
		Rotate 180° & horizontal flip	30-34	11.8-13.3%		
		Rotate 270° & vertical flip	35-39	13.7-15.3%		
		Off	40-44	15.7-17.3%		
		Random rotate & flip	45-49	17.7-19.2%		
		Random position	50-54	19.6-21.2%		
		Rotate 90° & random position	55-59	21.6-23.1%		
		Rotate 180° & random position	60-64	23.5-25.1%		
		Rotate 270° & random position	65-69	25.5-27.1%		
		Off	70-74	27.5-29.0%		
		Bounce	75-79	29.4-31.0%		
		Rotate 90° & bounce	80-84	31.4-32.9%		
		Rotate 180° & bounce	85-89	33.3-34.9%		
		Rotate 270° & bounce	90-94	35.3-36.9%		
		Off	95-99	37.3-38.8%		
		Rotate CCW at end	100-104	39.2-40.8%		
		Rotate CW at end	105-109	41.2-42.7%		
		Random rotate at end	110-114	43.1-44.7%		
Off	115-134	45.1-52.5%				

		Rotate 90° **	135-139	52.9-54.5%		
		Rotate 180° **	140-144	54.9-56.5%		
		Rotate 270° **	145-149	56.9-58.4%		
		Horizontal flip **	150-154	58.8-60.4%		
		Rotate 90° & vertical flip **	155-159	60.8-62.4%		
		Rotate 180° & horizontal flip **	160-164	62.7-64.3%		
		Rotate 270° & vertical flip **	165-169	64.7-66.3%		
		Off	170-174	66.7-68.2%		
		Random rotate & flip **	175-179	68.6-70.2%		
		Random position **	180-184	70.6-72.2%		
		Rotate 90° & random position **	185-189	72.5-74.1%		
		Rotate 180° & random position **	190-194	74.5-76.1%		
		Rotate 270° & random position **	195-199	76.5-78.0%		
		Off	200-204	78.4-80.0%		
		Bounce **	205-209	80.4-82.0%		
		Rotate 90° & bounce **	210-214	82.4-83.9%		
		Rotate 180° & bounce **	215-219	84.3-85.9%		
		Rotate 270° & bounce **	220-224	86.3-87.8%		
		Off	225-229	88.2-89.8%		
		Rotate CCW at end **	230-234	90.2-91.8%		
		Rotate CW at end **	235-239	92.2-93.7%		
		Random rotate at end **	240-244	94.1-95.7%		
		Off	245-255	96.1-100%		
<b>32</b>	<b>Layer 3 FX offset</b>	0-100%	0-255	0-100%	0	Fade
<b>33</b>	<b>Layer 3 FX length</b>	0-100%	0-255	0-100%	0	Fade
<b>34</b>	<b>Layer 3 FX color generator</b>	Off	0-9	0-3.5%	0	Snap
		Random all pixels RGBCMY	10-19	3.9-7.5%		Snap
		Random single pixel RGBCMY	20-29	7.8-11.4%		Snap
		Random all pixels bright colors	30-39	11.8-15.3%		Snap
		Random single pixel bright colors	40-49	15.7-19.2%		Snap
		Red / Blue	50-59	19.6-23.1%		Snap
		Red / Green	60-69	23.5-27.1%		Snap
		Blue / Green	70-79	27.5-31.0%		Snap
		Yellow / Magenta	80-89	31.4-34.9%		Snap
		Yellow / Cyan	90-99	35.3-38.8%		Snap
		Cyan / Magenta	100-109	39.2-42.7%		Snap
		Yellow / Blue	110-119	43.1-46.7%		Snap
		Green / Magenta	120-129	47.1-50.6%		Snap
		Red / Green / Blue	130-139	51.0-54.5%		Snap
		Red / Yellow / Blue	140-149	54.9-58.4%		Snap
		Red / Green / Blue / Yellow / Magenta / Cyan	150-159	58.8%-62.4%		Snap
		Red / Green / Blue - Horizontal line	160-169	62.7-66.3%		Snap
		Red / Green / Blue - Vertical line	170-179	66.7-70.2%		Snap
		No function	180-219	70.6-85.9%		Snap
		Color scroll, slow -> fast	220-229	86.3-89.8%		Fade
		Lite in	230-239	90.2-93.7%		Snap
		Lite out	240-249	94.1-97.6%		Snap
		Off	250-255	98.0-100%		Snap

Control / Settings						
35	Control / Settings	Idle	0-11	0-4.3%	0	Snap
		Effect sync – Immediate (1 sec.)	12-15	4.7-5.9%		
		<b>Effect sync – Power line (3 sec.)</b>	16-29	6.3-11.4%		
		Effect sync – Internal (3 sec.)	30-32	11.8-12.5%		
		No function	33-38	12.9-14.9%		
		<b>Dimmer flash Off*</b>	39-41	15.3-16.1%		
		Dimmer flash On*	42-44	16.5-17.3%		
		Dimming curve ESoft*	45-47	17.6-18.4%		
		<b>Dimming curve Soft*</b>	48-50	18.8-19.6%		
		Dimming curve Linear*	51-53	20.0-20.8%		
		No function	54-68	21.2-26.7%		
		<b>Fan mode regulated*</b>	69-71	27.1-27.8%		
		Fan mode high*	72-74	28.2-29.0%		
		Fan mode medium*	75-77	29.4-30.2%		
		Fan mode low*	78-80	30.6-31.4%		
		No function	81-83	31.8-32.5%		
		Display On*	84-86	32.9-33.7%		
		Display Off*	87-89	34.1-34.9%		
		<b>Display Auto*</b>	90-92	35.3-36.1%		
		<b>Display invert Off*</b>	93-95	36.5-37.3%		
		Display invert On*	96-98	37.6-38.4%		
		No DMX = Capture scene*	99-101	38.8-39.6%		
		No DMX = Stand-alone*	102-104	40.0-40.8%		
		<b>No DMX = Blackout*</b>	105-107	41.2-42.0%		
		No DMX = Hold*	108-110	42.4-43.1%		
		Test pattern On*	111-113	43.5-44.3%		
		<b>Test pattern Off*</b>	114-116	44.7-45.5%		
		<b>Rotation Off*</b>	117-119	45.9-46.7%		
		Rotate 90° *	120-122	47.1-47.8%		
		Rotate 180° *	123-125	48.2-49.0%		
		Rotate 270° *	126-128	49.4-50.2%		
		<b>Pixel mirror Off*</b>	129-131	50.6-51.4%		
		Pixel mirror On*	132-134	51.8-52.5%		
		<b>White output limitation Off*</b>	135-137	52.9-53.7%		
		White output limitation 80%*	138-140	54.1-54.9%		
		White output limitation 60%*	141-143	55.3-56.1%		
		White output limitation 40%*	144-146	56.5-57.3%		
		White output limitation 20%*	147-149	57.6-58.4%		
		White output limitation 10%*	150-152	55.8-59.6%		
		No function	153-158	60.0-62.0%		
		<b>RGB output limitation Off*</b>	159-161	62.4-63.1%		
RGB output limitation 80%*	162-164	63.5-64.3%				
RGB output limitation 60%*	165-167	64.7-65.5%				
RGB output limitation 40%*	168-170	65.9-66.7%				
RGB output limitation 20%*	171-173	67.1-67.8%				
RGB output limitation 10%*	174-176	68.2-69.0%				
No function	177-191	69.4-74.9%				

		Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%		
		<b>Main LED PWM 3000 Hz (5 sec.)</b>	195-197	76.5-77.3%		
		Main LED PWM 4800 Hz (5 sec.)	198-200	77.6-78.4%		
		Main LED PWM 9600 Hz (5 sec.)	201-203	78.8-79.6%		
		No function	204-206	80.0-80.8%		
		Main LED PWM 25 kHz (5 sec.)	207-209	81.2-82.0%		
		No function	210-251	82.4-98.4%		
		Reboot fixture*	252-255	98.8-100%		

**DMX Mode 6: RGBW 25-pixel, 8-bit**

102 DMX Channels

Channel	Command	DMX range	Percent	Default DMX	Fade	
<b>RGBW Shutter / Strobe</b>						
1	Shutter, all pixels	Shutter closed	0-4	0-1.6%	255	Snap
		Sync ramp up slow > fast	5-39	2.0-15.3%		Fade
		Sync ramp down slow > fast	40-74	15.7-29.0%		Fade
		Sync ramp up-down slow > fast	75-109	29.4-42.7%		Fade
		Sync double flash slow > fast	110-144	43.1-56.5%		Fade
		Pixel flare effect slow > fast	145-179	56.9-70.2%		Fade
		Random strobe slow > fast	180-214	70.6-83.9%		Fade
		Sync strobe 0.289 > 16.67 Hz	215-249	84.3-97.6%		Fade
		Hyperspeed	250-252	98.0-98.8%		Snap
		Open	253-255	99.2-100%		Snap
<b>Control / Settings</b>						
2	Control / Settings	Idle	0-11	0-4.3%	0	Snap
		Effect sync – Immediate (1 sec.)	12-15	4.7-5.9%		
		<b>Effect sync – Power line (3 sec.)</b>	16-29	6.3-11.4%		
		Effect sync – Internal (3 sec.)	30-32	11.8-12.5%		
		No function	33-38	12.9-14.9%		
		<b>Dimmer flash Off*</b>	39-41	15.3-16.1%		
		Dimmer flash On*	42-44	16.5-17.3%		
		Dimming curve ESoft*	45-47	17.6-18.4%		
		<b>Dimming curve Soft*</b>	48-50	18.8-19.6%		
		Dimming curve Linear*	51-53	20.0-20.8%		
		No function	54-56	21.2-22.0%		
		<b>Extra Shutter RGBW*</b> (Modes 1/6/7)	57-59	22.4-23.1%		
		Extra Shutter RGB only* (Modes 1/6/7)	60-62	23.5-24.3%		
		Extra Shutter White only* (Modes 1/6/7)	63-65	24.7-25.5%		
		No function	66-68	25.9-26.7%		
		<b>Fan mode regulated*</b>	69-71	27.1-27.8%		
		Fan mode high*	72-74	28.2-29.0%		
		Fan mode medium*	75-77	29.4-30.2%		
		Fan mode low*	78-80	30.6-31.4%		
		No function	81-83	31.8-32.5%		
		Display On*	84-86	32.9-33.7%		
		Display Off*	87-89	34.1-34.9%		
		<b>Display Auto*</b>	90-92	35.3-36.1%		
		<b>Display invert Off*</b>	93-95	36.5-37.3%		
		Display invert On*	96-98	37.6-38.4%		
		No DMX = Capture scene*	99-101	38.8-39.6%		
		No DMX = Stand-alone*	102-104	40.0-40.8%		
		<b>No DMX = Blackout*</b>	105-107	41.2-42.0%		
		No DMX = Hold*	108-110	42.4-43.1%		
		Test pattern On*	111-113	43.5-44.3%		
<b>Test pattern Off*</b>	114-116	44.7-45.5%				

		No function	117-134	45.9-52.5%		
		<b>White output limitation Off*</b>	135-137	52.9-53.7%		
		White output limitation 80%*	138-140	54.1-54.9%		
		White output limitation 60%*	141-143	55.3-56.1%		
		White output limitation 40%*	144-146	56.5-57.3%		
		White output limitation 20%*	147-149	57.6-58.4%		
		White output limitation 10%*	150-152	55.8-59.6%		
		No function	153-158	60.0-62.0%		
		<b>RGB output limitation Off*</b>	159-161	62.4-63.1%		
		RGB output limitation 80%*	162-164	63.5-64.3%		
		RGB output limitation 60%*	165-167	64.7-65.5%		
		RGB output limitation 40%*	168-170	65.9-66.7%		
		RGB output limitation 20%*	171-173	67.1-67.8%		
		RGB output limitation 10%*	174-176	68.2-69.0%		
		No function	177-191	69.4-74.9%		
		Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%		
		<b>Main LED PWM 3000 Hz (5 sec.)</b>	195-197	76.5-77.3%		
		Main LED PWM 4800 Hz (5 sec.)	198-200	77.6-78.4%		
		Main LED PWM 9600 Hz (5 sec.)	201-203	78.8-79.6%		
		No function	204-206	80.0-80.8%		
		Main LED PWM 25 kHz (5 sec.)	207-209	81.2-82.0%		
		No function	210-251	82.4-98.4%		
		Reboot fixture*	252-255	98.8-100%		
<b>RGBW 25-pixel 8-bit</b>						
<b>3</b>	<b>Pixel 1 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
<b>4</b>		Green intensity 0-100%	0-255	0-100%	0	Fade
<b>5</b>		Blue intensity 0-100%	0-255	0-100%	0	Fade
<b>6</b>		White intensity 0-100%	0-255	0-100%	0	Fade
...	<b>Pixel 2 ... 24 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
...		Green intensity 0-100%	0-255	0-100%	0	Fade
...		Blue intensity 0-100%	0-255	0-100%	0	Fade
...		White intensity 0-100%	0-255	0-100%	0	Fade
<b>99</b>	<b>Pixel 25 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
<b>100</b>		Green intensity 0-100%	0-255	0-100%	0	Fade
<b>101</b>		Blue intensity 0-100%	0-255	0-100%	0	Fade
<b>102</b>		White intensity 0-100%	0-255	0-100%	0	Fade

Individual RGBW pixel control on channels 03-102 be mapped independently at the controller depending on how many pixels are connected to the KNV PSU outputs **A – E**.

Unused DMX channels can be deleted from the controller patch leaving them free for use by other fixtures.

## DMX Mode 7: RGBW 25-pixel, 16-bit

### 202 DMX Channels

Channel	Command	DMX range	Percent	Default DMX	Fade	
<b>RGBW Shutter / Strobe</b>						
1	Shutter, all pixels	Shutter closed	0-4	0-1.6%	255	Snap
		Sync ramp up slow > fast	5-39	2.0-15.3%		Fade
		Sync ramp down slow > fast	40-74	15.7-29.0%		Fade
		Sync ramp up-down slow > fast	75-109	29.4-42.7%		Fade
		Sync double flash slow > fast	110-144	43.1-56.5%		Fade
		Pixel flare effect slow > fast	145-179	56.9-70.2%		Fade
		Random strobe slow > fast	180-214	70.6-83.9%		Fade
		Sync strobe 0.289 > 16.67 Hz	215-249	84.3-97.6%		Fade
		Hyperspeed	250-252	98.0-98.8%		Snap
		Open	253-255	99.2-100%		Snap
<b>Control / Settings</b>						
2	Control / Settings	Idle	0-11	0-4.3%	0	Snap
		Effect sync – Immediate (1 sec.)	12-15	4.7-5.9%		
		<b>Effect sync – Power line (3 sec.)</b>	16-29	6.3-11.4%		
		Effect sync – Internal (3 sec.)	30-32	11.8-12.5%		
		No function	33-38	12.9-14.9%		
		<b>Dimmer flash Off*</b>	39-41	15.3-16.1%		
		Dimmer flash On*	42-44	16.5-17.3%		
		Dimming curve ESoft*	45-47	17.6-18.4%		
		<b>Dimming curve Soft*</b>	48-50	18.8-19.6%		
		Dimming curve Linear*	51-53	20.0-20.8%		
		No function	54-56	21.2-22.0%		
		<b>Extra Shutter RGBW*</b> (Modes 1/6/7)	57-59	22.4-23.1%		
		Extra Shutter RGB only* (Modes 1/6/7)	60-62	23.5-24.3%		
		Extra Shutter White only* (Modes 1/6/7)	63-65	24.7-25.5%		
		No function	66-68	25.9-26.7%		
		<b>Fan mode regulated*</b>	69-71	27.1-27.8%		
		Fan mode high*	72-74	28.2-29.0%		
		Fan mode medium*	75-77	29.4-30.2%		
		Fan mode low*	78-80	30.6-31.4%		
		No function	81-83	31.8-32.5%		
		Display On*	84-86	32.9-33.7%		
		Display Off*	87-89	34.1-34.9%		
		<b>Display Auto*</b>	90-92	35.3-36.1%		
		<b>Display invert Off*</b>	93-95	36.5-37.3%		
		Display invert On*	96-98	37.6-38.4%		
		No DMX = Capture scene*	99-101	38.8-39.6%		
		No DMX = Stand-alone*	102-104	40.0-40.8%		
		<b>No DMX = Blackout*</b>	105-107	41.2-42.0%		
		No DMX = Hold*	108-110	42.4-43.1%		
		Test pattern On*	111-113	43.5-44.3%		
<b>Test pattern Off*</b>	114-116	44.7-45.5%				

		No function	117-134	45.9-52.5%		
		<b>White output limitation Off*</b>	135-137	52.9-53.7%		
		White output limitation 80%*	138-140	54.1-54.9%		
		White output limitation 60%*	141-143	55.3-56.1%		
		White output limitation 40%*	144-146	56.5-57.3%		
		White output limitation 20%*	147-149	57.6-58.4%		
		White output limitation 10%*	150-152	55.8-59.6%		
		No function	153-158	60.0-62.0%		
		<b>RGB output limitation Off*</b>	159-161	62.4-63.1%		
		RGB output limitation 80%*	162-164	63.5-64.3%		
		RGB output limitation 60%*	165-167	64.7-65.5%		
		RGB output limitation 40%*	168-170	65.9-66.7%		
		RGB output limitation 20%*	171-173	67.1-67.8%		
		RGB output limitation 10%*	174-176	68.2-69.0%		
		No function	177-191	69.4-74.9%		
		Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%		
		<b>Main LED PWM 3000 Hz (5 sec.)</b>	195-197	76.5-77.3%		
		Main LED PWM 4800 Hz (5 sec.)	198-200	77.6-78.4%		
		Main LED PWM 9600 Hz (5 sec.)	201-203	78.8-79.6%		
		No function	204-206	80.0-80.8%		
		Main LED PWM 25 kHz (5 sec.)	207-209	81.2-82.0%		
		No function	210-251	82.4-98.4%		
		Reboot fixture*	252-255	98.8-100%		
<b>RGBW 25-pixel 16-bit</b>						
<b>3</b>	<b>Pixel 1 RGBW (16 bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
<b>4</b>		Red intensity fine				
<b>5</b>		Green intensity coarse	0-65535	0-100%	0	Fade
<b>6</b>		Green intensity fine				
<b>7</b>		Blue intensity coarse	0-65535	0-100%	0	Fade
<b>8</b>		Blue intensity fine				
<b>9</b>		White intensity coarse	0-65535	0-100%	0	Fade
<b>10</b>		White intensity fine				
<b>11</b>	<b>Pixel 2 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
<b>12</b>		Red intensity fine				
<b>13</b>		Green intensity coarse	0-65535	0-100%	0	Fade
<b>14</b>		Green intensity fine				
<b>15</b>		Blue intensity coarse	0-65535	0-100%	0	Fade
<b>16</b>		Blue intensity fine				
<b>17</b>		White intensity coarse	0-65535	0-100%	0	Fade
<b>18</b>		White intensity fine				
<b>19</b>	<b>Pixel 3 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
<b>20</b>		Red intensity fine				
<b>21</b>		Green intensity coarse	0-65535	0-100%	0	Fade
<b>22</b>		Green intensity fine				
<b>23</b>		Blue intensity coarse	0-65535	0-100%	0	Fade
<b>24</b>		Blue intensity fine				
<b>25</b>		White intensity coarse	0-65535	0-100%	0	Fade
<b>26</b>		White intensity fine				
<b>27</b>	<b>Pixel 4 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
<b>28</b>		Red intensity fine				
<b>29</b>		Green intensity coarse	0-65535	0-100%	0	Fade
<b>30</b>		Green intensity fine				
<b>31</b>		Blue intensity coarse	0-65535	0-100%	0	Fade
<b>32</b>		Blue intensity fine				
<b>33</b>		White intensity coarse	0-65535	0-100%	0	Fade
<b>34</b>		White intensity fine				



35	<b>Pixel 5 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
36		Red intensity fine				
37		Green intensity coarse	0-65535	0-100%	0	Fade
38		Green intensity fine				
39		Blue intensity coarse	0-65535	0-100%	0	Fade
40		Blue intensity fine				
41		White intensity coarse	0-65535	0-100%	0	Fade
42		White intensity fine				
43	<b>Pixel 6 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
44		Red intensity fine				
45		Green intensity coarse	0-65535	0-100%	0	Fade
46		Green intensity fine				
47		Blue intensity coarse	0-65535	0-100%	0	Fade
48		Blue intensity fine				
49		White intensity coarse	0-65535	0-100%	0	Fade
50		White intensity fine				
51	<b>Pixel 7 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
52		Red intensity fine				
53		Green intensity coarse	0-65535	0-100%	0	Fade
54		Green intensity fine				
55		Blue intensity coarse	0-65535	0-100%	0	Fade
56		Blue intensity fine				
57		White intensity coarse	0-65535	0-100%	0	Fade
58		White intensity fine				
59	<b>Pixel 8 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
60		Red intensity fine				
61		Green intensity coarse	0-65535	0-100%	0	Fade
62		Green intensity fine				
63		Blue intensity coarse	0-65535	0-100%	0	Fade
64		Blue intensity fine				
65		White intensity coarse	0-65535	0-100%	0	Fade
66		White intensity fine				
67	<b>Pixel 9 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
68		Red intensity fine				
69		Green intensity coarse	0-65535	0-100%	0	Fade
70		Green intensity fine				
71		Blue intensity coarse	0-65535	0-100%	0	Fade
72		Blue intensity fine				
73		White intensity coarse	0-65535	0-100%	0	Fade
74		White intensity fine				
75	<b>Pixel 10 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
76		Red intensity fine				
77		Green intensity coarse	0-65535	0-100%	0	Fade
78		Green intensity fine				
79		Blue intensity coarse	0-65535	0-100%	0	Fade
80		Blue intensity fine				
81		White intensity coarse	0-65535	0-100%	0	Fade
82		White intensity fine				
83	<b>Pixel 11 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
84		Red intensity fine				
85		Green intensity coarse	0-65535	0-100%	0	Fade
86		Green intensity fine				
87		Blue intensity coarse	0-65535	0-100%	0	Fade
88		Blue intensity fine				
89		White intensity coarse	0-65535	0-100%	0	Fade
90		White intensity fine				

91	<b>Pixel 12 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
92		Red intensity fine				
93		Green intensity coarse	0-65535	0-100%	0	Fade
94		Green intensity fine				
95		Blue intensity coarse	0-65535	0-100%	0	Fade
96		Blue intensity fine				
97		White intensity coarse	0-65535	0-100%	0	Fade
98		White intensity fine				
99	<b>Pixel 13 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
100		Red intensity fine				
101		Green intensity coarse	0-65535	0-100%	0	Fade
102		Green intensity fine				
103		Blue intensity coarse	0-65535	0-100%	0	Fade
104		Blue intensity fine				
105		White intensity coarse	0-65535	0-100%	0	Fade
106		White intensity fine				
107	<b>Pixel 14 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
108		Red intensity fine				
109		Green intensity coarse	0-65535	0-100%	0	Fade
110		Green intensity fine				
111		Blue intensity coarse	0-65535	0-100%	0	Fade
112		Blue intensity fine				
113		White intensity coarse	0-65535	0-100%	0	Fade
114		White intensity fine				
115	<b>Pixel 15 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
116		Red intensity fine				
117		Green intensity coarse	0-65535	0-100%	0	Fade
118		Green intensity fine				
119		Blue intensity coarse	0-65535	0-100%	0	Fade
120		Blue intensity fine				
121		White intensity coarse	0-65535	0-100%	0	Fade
122		White intensity fine				
123	<b>Pixel 16 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
124		Red intensity fine				
125		Green intensity coarse	0-65535	0-100%	0	Fade
126		Green intensity fine				
127		Blue intensity coarse	0-65535	0-100%	0	Fade
128		Blue intensity fine				
129		White intensity coarse	0-65535	0-100%	0	Fade
130		White intensity fine				
131	<b>Pixel 17 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
132		Red intensity fine				
133		Green intensity coarse	0-65535	0-100%	0	Fade
134		Green intensity fine				
135		Blue intensity coarse	0-65535	0-100%	0	Fade
136		Blue intensity fine				
137		White intensity coarse	0-65535	0-100%	0	Fade
138		White intensity fine				
139	<b>Pixel 18 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
140		Red intensity fine				
141		Green intensity coarse	0-65535	0-100%	0	Fade
142		Green intensity fine				
143		Blue intensity coarse	0-65535	0-100%	0	Fade
144		Blue intensity fine				
145		White intensity coarse	0-65535	0-100%	0	Fade
146		White intensity fine				

147	<b>Pixel 19 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
148		Red intensity fine				
149		Green intensity coarse	0-65535	0-100%	0	Fade
150		Green intensity fine				
151		Blue intensity coarse	0-65535	0-100%	0	Fade
152		Blue intensity fine				
153		White intensity coarse	0-65535	0-100%	0	Fade
154		White intensity fine				
155	<b>Pixel 20 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
156		Red intensity fine				
157		Green intensity coarse	0-65535	0-100%	0	Fade
158		Green intensity fine				
159		Blue intensity coarse	0-65535	0-100%	0	Fade
160		Blue intensity fine				
161		White intensity coarse	0-65535	0-100%	0	Fade
162		White intensity fine				
163	<b>Pixel 21 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
164		Red intensity fine				
165		Green intensity coarse	0-65535	0-100%	0	Fade
166		Green intensity fine				
167		Blue intensity coarse	0-65535	0-100%	0	Fade
168		Blue intensity fine				
169		White intensity coarse	0-65535	0-100%	0	Fade
170		White intensity fine				
171	<b>Pixel 22 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
172		Red intensity fine				
173		Green intensity coarse	0-65535	0-100%	0	Fade
174		Green intensity fine				
175		Blue intensity coarse	0-65535	0-100%	0	Fade
176		Blue intensity fine				
177		White intensity coarse	0-65535	0-100%	0	Fade
178		White intensity fine				
179	<b>Pixel 23 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
180		Red intensity fine				
181		Green intensity coarse	0-65535	0-100%	0	Fade
182		Green intensity fine				
183		Blue intensity coarse	0-65535	0-100%	0	Fade
184		Blue intensity fine				
185		White intensity coarse	0-65535	0-100%	0	Fade
186		White intensity fine				
187	<b>Pixel 24 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
188		Red intensity fine				
189		Green intensity coarse	0-65535	0-100%	0	Fade
190		Green intensity fine				
191		Blue intensity coarse	0-65535	0-100%	0	Fade
192		Blue intensity fine				
193		White intensity coarse	0-65535	0-100%	0	Fade
194		White intensity fine				
195	<b>Pixel 25 RGBW (16-bit)</b>	Red intensity coarse	0-65535	0-100%	0	Fade
196		Red intensity fine				
197		Green intensity coarse	0-65535	0-100%	0	Fade
198		Green intensity fine				
199		Blue intensity coarse	0-65535	0-100%	0	Fade
200		Blue intensity fine				
201		White intensity coarse	0-65535	0-100%	0	Fade
202		White intensity fine				

Individual RGBW pixel control on channels 03-202 be mapped independently at the controller depending on how many pixels are connected to the KNV PSU outputs **A – E**. Unused DMX channels can be deleted from the controller patch leaving them free for use by other fixtures.

**DMX Mode 8: RGBW 25-pixel, 8-bit with RGBW FX**

116 DMX Channels

Channel	Command	DMX range	Percent	Default DMX	Fade		
<b>Channel group A: Layer 2 (high priority) RGBW strobe with FX</b>							
1	<b>Layer 2 master (16-bit)</b>	Layer 2 = transparent	0-1	0-0.4%	0	Snap	
2		Layer 2 intensity 0-100%	2-65535	0.8-100%		Fade	
3	<b>Layer 2 flash duration</b>	Flash duration 7-650 ms	0-255	0-100%	255	Fade	
4	<b>Layer 2 flash rate (if FX not active)</b>	No flash	0-1	0-0.4%	0	Snap	
		Single flash if Dimmer Flash = ON and value is changed on Ch 1					
		Flash rate 0.289-16.67 Hz	2-250	0.8-98%		Fade	
		Hyperspeed	251-254	98.4-99.6%		Snap	
	<b>Layer 2 FX speed (if FX active)</b>	Continuously on	255	100%		Snap	
		FX speed = stop	0-1	0-0.4%		Snap	
		FX speed = slow > fast	2-253	0.8-98.8%		Fade	
5	<b>Layer 2 Flare effect</b>	FX speed = stop	254-255	99.2-100%	Snap		
6		<b>Red</b>	Off	0-9	0-3.5%	0	Snap
			Slow > fast	10-49	3.9-19.2%		Fade
			Off	50-59	19.6-23.1%		Snap
			Random slow > fast	60-109	23.5-42.7%		Fade
			Off	110-119	43.1-46.7%		Snap
			Random pixel slow > fast	120-169	47.1-66.3%		Fade
	Off		170-255	66.7-100%	Snap		
7	<b>Green</b>	Layer 2 green intensity 0-100%	0-255	0-100%	0	Fade	
8	<b>Blue</b>	Layer 2 blue intensity 0-100%	0-255	0-100%	0	Fade	
9	<b>White</b>	Layer 2 white intensity 0-100%	0-255	0-100%	0	Fade	
10	<b>Layer 2 FX selection</b>	Sync strobe - all	0-2	0-0.8%	0	Snap	
		Sync strobe - circle mask	3-5	1.2-2.0%			
		Sync strobe - 4 dot mask	6-8	2.4-3.1%			
		Sync strobe - 1 dot mask	9-11	3.5-4.3%			
		Random strobe - all	12-14	4.7-5.5%			
		Random strobe - circle mask	15-17	5.9-6.7%			
		Random strobe - 4 dot mask	18-20	7.1-7.8%			
		Random strobe - 1 dot mask	21-23	8.2-9.0%			
		Lite in/out - all	24-26	9.4-10.2%			
		Lite in/out - circle mask	27-29	10.6-11.4%			
		Lite in/out - 4 dot mask	30-32	11.8-12.6%			
		Lite in/out - 1 dot mask	33-35	12.9-13.7%			
		Snake	36-38	14.1-14.9%			
		Raindrops	39-41	15.3-16.1%			
		Random pixel	42-44	16.5-17.3%			
		Random fake x 2 (L = 13)	45-47	17.6-18.4%			
		Random fake x 4 (L = 7)	48-50	18.8-19.6%			
		Line (L = 5)	51-53	20.0-20.8%			
		Double line (L = 3)	54-56	21.2-22.0%			
		Corner to corner line (L = 9)	57-59	22.4-23.1%			
Tilted double lines (L = 5)	60-62	23.5-24.3%					
Tilted double lines in to out (L = 3)	63-65	24.7-25.5%					
Center line running dot (L = 5)	66-68	25.9-26.7%					
Middle line running dot (L = 5)	69-71	27.1-27.8%					

		Outer line running dot (L = 5)	72-74	28.2-29.0%		
		Corner to corner (L = 5)	75-77	29.4-30.2%		
		Arrow (L = 7)	78-80	30.6-31.4%		
		Wave (L = 8)	81-83	31.8-32.5%		
		Wheel (L = 8)	84-86	32.9-33.7%		
		Half wheel (L = 16)	87-89	34.1-34.9%		
		Circling dot (L = 8)	90-92	35.3-36.1%		
		Outer circle (L = 8)	93-95	36.5-37.3%		
		Inner circle (L = 4)	96-98	37.6-38.4%		
		Outer 4 dots (L = 4)	99-101	38.8-39.6%		
		Outer single dot (L = 16)	102-104	40.0-40.8%		
		Middle single dot (L = 8)	105-107	41.2-42.0%		
		Spinning 2x1 dots (L = 8)	108-110	42.4-43.1%		
		Asymmetrical 4 dots (L = 8)	111-113	43.5-44.3%		
		Symmetrical 4 dots (L = 8)	114-116	44.7-45.5%		
		Square (L = 3)	117-119	45.9-46.7%		
		Inside out (L = 6)	120-122	47.1-48.8%		
		Inside out 2 (L = 3)	123-125	48.2-49.0%		
		Abstract 1 (L = 3)	126-128	49.4-50.2%		
		Abstract 2 (L = 3)	129-131	50.6-51.4%		
		Abstract 3 (L = 3)	132-134	51.8-52.5%		
		Hash tag (L = 2)	135-137	52.9-53.7%		
		Flip flop (L = 2)	138-140	54.1-54.9%		
		Jumping slash (L = 13)	141-143	55.3-56.1%		
		Jumping 'L' (L = 12)	144-146	56.5-57.3%		
		Jumping pins (L = 12)	147-149	57.6-58.4%		
		Fat dot (L = 4)	150-152	58.8-59.6%		
		Bars (L = 2)	153-155	60.0-60.8%		
		3 x lines (L = 5)	156-158	61.2-62.0%		
		2 x lines (L = 5)	159-161	62.4-63.1%		
		Spiral (L = 28)	162-164	63.5-64.3%		
		Off - No Strobe or FX	165-255	64.7-100%		
11	<b>Layer 2 FX crossfade time</b>	Off	0-1	0-0.4%	0	Snap
		Crossfade fast > slow	2-127	0.8-49.8%		Fade
		Crossfade and tail slow > fast	128-255	50.2-100%		Fade
12	<b>Layer 2 FX orientation</b>	Off	0-4	0-1.6%	0	Snap
		Rotate 90°	5-9	2.0-3.5%		
		Rotate 180°	10-14	3.9-5.5%		
		Rotate 270°	15-19	5.9-7.5%		
		Horizontal flip	20-24	7.8-9.4%		
		Rotate 90° & vertical flip	25-29	9.8-11.4%		
		Rotate 180° & horizontal flip	30-34	11.8-13.3%		
		Rotate 270° & vertical flip	35-39	13.7-15.3%		
		Off	40-44	15.7-17.3%		
		Random rotate & flip	45-49	17.7-19.2%		
		Random position	50-54	19.6-21.2%		
		Rotate 90° & random position	55-59	21.6-23.1%		
		Rotate 180° & random position	60-64	23.5-25.1%		
		Rotate 270° & random position	65-69	25.5-27.1%		
		Off	70-74	27.5-29.0%		
		Bounce	75-79	29.4-31.0%		
		Rotate 90° & bounce	80-84	31.4-32.9%		
		Rotate 180° & bounce	85-89	33.3-34.9%		
		Rotate 270° & bounce	90-94	35.3-36.9%		
Off	95-99	37.3-38.8%				

		Rotate CCW at end	100-104	39.2-40.8%		
		Rotate CW at end	105-109	41.2-42.7%		
		Random rotate at end	110-114	43.1-44.7%		
		Off	115-134	45.1-52.5%		
		Rotate 90° **	135-139	52.9-54.5%		
		Rotate 180° **	140-144	54.9-56.5%		
		Rotate 270° **	145-149	56.9-58.4%		
		Horizontal flip **	150-154	58.8-60.4%		
		Rotate 90° & vertical flip **	155-159	60.8-62.4%		
		Rotate 180° & horizontal flip **	160-164	62.7-64.3%		
		Rotate 270° & vertical flip **	165-169	64.7-66.3%		
		Off	170-174	66.7-68.2%		
		Random rotate & flip **	175-179	68.6-70.2%		
		Random position **	180-184	70.6-72.2%		
		Rotate 90° & random position **	185-189	72.5-74.1%		
		Rotate 180° & random position **	190-194	74.5-76.1%		
		Rotate 270° & random position **	195-199	76.5-78.0%		
		Off	200-204	78.4-80.0%		
		Bounce **	205-209	80.4-82.0%		
		Rotate 90° & bounce **	210-214	82.4-83.9%		
		Rotate 180° & bounce **	215-219	84.3-85.9%		
		Rotate 270° & bounce **	220-224	86.3-87.8%		
		Off	225-229	88.2-89.8%		
		Rotate CCW at end **	230-234	90.2-91.8%		
		Rotate CW at end **	235-239	92.2-93.7%		
		Random rotate at end **	240-244	94.1-95.7%		
		Off	245-255	96.1-100%		
<b>13</b>	<b>Layer 2 FX offset</b>	0-100%	0-255	0-100%	0	Fade
<b>14</b>	<b>Layer 2 FX length</b>	0-100%	0-255	0-100%	0	Fade
<b>15</b>	<b>Layer 2 FX color generator</b>	Off	0-9	0-3.5%	0	Snap
		Random all pixels RGBCMY	10-19	3.9-7.5%		Snap
		Random single pixel RGBCMY	20-29	7.8-11.4%		Snap
		Random all pixels bright colors	30-39	11.8-15.3%		Snap
		Random single pixel bright colors	40-49	15.7-19.2%		Snap
		Red / Blue	50-59	19.6-23.1%		Snap
		Red / Green	60-69	23.5-27.1%		Snap
		Blue / Green	70-79	27.5-31.0%		Snap
		Yellow / Magenta	80-89	31.4-34.9%		Snap
		Yellow / Cyan	90-99	35.3-38.8%		Snap
		Cyan / Magenta	100-109	39.2-42.7%		Snap
		Yellow / Blue	110-119	43.1-46.7%		Snap
		Green / Magenta	120-129	47.1-50.6%		Snap
		Red / Green / Blue	130-139	51.0-54.5%		Snap
		Red / Yellow / Blue	140-149	54.9-58.4%		Snap
		Red / Green / Blue / Yellow / Magenta / Cyan	150-159	58.8%-62.4%		Snap
		Red / Green / Blue - Horizontal line	160-169	62.7-66.3%		Snap
		Red / Green / Blue - Vertical line	170-179	66.7-70.2%		Snap
		No function	180-219	70.6-85.9%		Snap
		Color scroll, slow -> fast	220-229	86.3-89.8%		Fade
		Lite in	230-239	90.2-93.7%		Snap
Lite out	240-249	94.1-97.6%	Snap			
Off	250-255	98.0-100%	Snap			

Control / Settings						
16	Control / Settings	Idle	0-11	0-4.3%	0	Snap
		Effect sync – Immediate (1 sec.)	12-15	4.7-5.9%		
		<b>Effect sync – Power line (3 sec.)</b>	16-29	6.3-11.4%		
		Effect sync – Internal (3 sec.)	30-32	11.8-12.5%		
		No function	33-38	12.9-14.9%		
		<b>Dimmer flash Off*</b>	39-41	15.3-16.1%		
		Dimmer flash On*	42-44	16.5-17.3%		
		Dimming curve ESoft*	45-47	17.6-18.4%		
		<b>Dimming curve Soft*</b>	48-50	18.8-19.6%		
		Dimming curve Linear*	51-53	20.0-20.8%		
		No function	54-68	21.2-26.7%		
		<b>Fan mode regulated*</b>	69-71	27.1-27.8%		
		Fan mode high*	72-74	28.2-29.0%		
		Fan mode medium*	75-77	29.4-30.2%		
		Fan mode low*	78-80	30.6-31.4%		
		No function	81-83	31.8-32.5%		
		Display On*	84-86	32.9-33.7%		
		Display Off*	87-89	34.1-34.9%		
		<b>Display Auto*</b>	90-92	35.3-36.1%		
		<b>Display invert Off*</b>	93-95	36.5-37.3%		
		Display invert On*	96-98	37.6-38.4%		
		No DMX = Capture scene*	99-101	38.8-39.6%		
		No DMX = Stand-alone*	102-104	40.0-40.8%		
		<b>No DMX = Blackout*</b>	105-107	41.2-42.0%		
		No DMX = Hold*	108-110	42.4-43.1%		
		Test pattern On*	111-113	43.5-44.3%		
		<b>Test pattern Off*</b>	114-116	44.7-45.5%		
		<b>Rotation Off*</b>	117-119	45.9-46.7%		
		Rotate 90° *	120-122	47.1-47.8%		
		Rotate 180° *	123-125	48.2-49.0%		
		Rotate 270° *	126-128	49.4-50.2%		
		<b>Pixel mirror Off*</b>	129-131	50.6-51.4%		
		Pixel mirror On*	132-134	51.8-52.5%		
		<b>White output limitation Off*</b>	135-137	52.9-53.7%		
		White output limitation 80%*	138-140	54.1-54.9%		
		White output limitation 60%*	141-143	55.3-56.1%		
		White output limitation 40%*	144-146	56.5-57.3%		
		White output limitation 20%*	147-149	57.6-58.4%		
		White output limitation 10%*	150-152	58.8-59.6%		
		No function	153-158	60.0-62.0%		
		<b>RGB output limitation Off*</b>	159-161	62.4-63.1%		
RGB output limitation 80%*	162-164	63.5-64.3%				
RGB output limitation 60%*	165-167	64.7-65.5%				
RGB output limitation 40%*	168-170	65.9-66.7%				
RGB output limitation 20%*	171-173	67.1-67.8%				
RGB output limitation 10%*	174-176	68.2-69.0%				
No function	177-191	69.4-74.9%				



		Main LED PWM 2400 Hz (5 sec.)	192-194	75.3-76.1%		
		<b>Main LED PWM 3000 Hz (5 sec.)</b>	195-197	76.5-77.3%		
		Main LED PWM 4800 Hz (5 sec.)	198-200	77.6-78.4%		
		Main LED PWM 9600 Hz (5 sec.)	201-203	78.8-79.6%		
		No function	204-206	80.0-80.8%		
		Main LED PWM 25 kHz (5 sec.)	207-209	81.2-82.0%		
		No function	210-251	82.4-98.4%		
		Reboot fixture*	252-255	98.8-100%		
<b>Layer 1 (base layer) RGBW 25-pixel 8-bit</b>						
17	<b>Pixel 1 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
18		Green intensity 0-100%	0-255	0-100%	0	Fade
19		Blue intensity 0-100%	0-255	0-100%	0	Fade
20		White intensity 0-100%	0-255	0-100%	0	Fade
21	<b>Pixel 2 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
22		Green intensity 0-100%	0-255	0-100%	0	Fade
23		Blue intensity 0-100%	0-255	0-100%	0	Fade
24		White intensity 0-100%	0-255	0-100%	0	Fade
25	<b>Pixel 3 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
26		Green intensity 0-100%	0-255	0-100%	0	Fade
27		Blue intensity 0-100%	0-255	0-100%	0	Fade
28		White intensity 0-100%	0-255	0-100%	0	Fade
29	<b>Pixel 4 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
30		Green intensity 0-100%	0-255	0-100%	0	Fade
31		Blue intensity 0-100%	0-255	0-100%	0	Fade
32		White intensity 0-100%	0-255	0-100%	0	Fade
33	<b>Pixel 5 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
34		Green intensity 0-100%	0-255	0-100%	0	Fade
35		Blue intensity 0-100%	0-255	0-100%	0	Fade
36		White intensity 0-100%	0-255	0-100%	0	Fade
37	<b>Pixel 6 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
38		Green intensity 0-100%	0-255	0-100%	0	Fade
39		Blue intensity 0-100%	0-255	0-100%	0	Fade
40		White intensity 0-100%	0-255	0-100%	0	Fade
41	<b>Pixel 7 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
42		Green intensity 0-100%	0-255	0-100%	0	Fade
43		Blue intensity 0-100%	0-255	0-100%	0	Fade
44		White intensity 0-100%	0-255	0-100%	0	Fade
45	<b>Pixel 8 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
46		Green intensity 0-100%	0-255	0-100%	0	Fade
47		Blue intensity 0-100%	0-255	0-100%	0	Fade
48		White intensity 0-100%	0-255	0-100%	0	Fade
49	<b>Pixel 9 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
50		Green intensity 0-100%	0-255	0-100%	0	Fade
51		Blue intensity 0-100%	0-255	0-100%	0	Fade
52		White intensity 0-100%	0-255	0-100%	0	Fade
53	<b>Pixel 10 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
54		Green intensity 0-100%	0-255	0-100%	0	Fade
55		Blue intensity 0-100%	0-255	0-100%	0	Fade
56		White intensity 0-100%	0-255	0-100%	0	Fade
57	<b>Pixel 11 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
58		Green intensity 0-100%	0-255	0-100%	0	Fade
59		Blue intensity 0-100%	0-255	0-100%	0	Fade
60		White intensity 0-100%	0-255	0-100%	0	Fade
61	<b>Pixel 12 RGBW</b>	Red intensity 0-100%	0-255	0-100%	0	Fade
62		Green intensity 0-100%	0-255	0-100%	0	Fade
63		Blue intensity 0-100%	0-255	0-100%	0	Fade
64		White intensity 0-100%	0-255	0-100%	0	Fade

65	Pixel 13 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
66		Green intensity 0-100%	0-255	0-100%	0	Fade
67		Blue intensity 0-100%	0-255	0-100%	0	Fade
68		White intensity 0-100%	0-255	0-100%	0	Fade
69	Pixel 14 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
70		Green intensity 0-100%	0-255	0-100%	0	Fade
71		Blue intensity 0-100%	0-255	0-100%	0	Fade
72		White intensity 0-100%	0-255	0-100%	0	Fade
73	Pixel 15 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
74		Green intensity 0-100%	0-255	0-100%	0	Fade
75		Blue intensity 0-100%	0-255	0-100%	0	Fade
76		White intensity 0-100%	0-255	0-100%	0	Fade
77	Pixel 16 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
78		Green intensity 0-100%	0-255	0-100%	0	Fade
79		Blue intensity 0-100%	0-255	0-100%	0	Fade
80		White intensity 0-100%	0-255	0-100%	0	Fade
81	Pixel 17 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
82		Green intensity 0-100%	0-255	0-100%	0	Fade
83		Blue intensity 0-100%	0-255	0-100%	0	Fade
84		White intensity 0-100%	0-255	0-100%	0	Fade
85	Pixel 18 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
86		Green intensity 0-100%	0-255	0-100%	0	Fade
87		Blue intensity 0-100%	0-255	0-100%	0	Fade
88		White intensity 0-100%	0-255	0-100%	0	Fade
89	Pixel 19 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
90		Green intensity 0-100%	0-255	0-100%	0	Fade
91		Blue intensity 0-100%	0-255	0-100%	0	Fade
92		White intensity 0-100%	0-255	0-100%	0	Fade
93	Pixel 20 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
94		Green intensity 0-100%	0-255	0-100%	0	Fade
95		Blue intensity 0-100%	0-255	0-100%	0	Fade
96		White intensity 0-100%	0-255	0-100%	0	Fade
97	Pixel 21 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
98		Green intensity 0-100%	0-255	0-100%	0	Fade
99		Blue intensity 0-100%	0-255	0-100%	0	Fade
100		White intensity 0-100%	0-255	0-100%	0	Fade
101	Pixel 22 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
102		Green intensity 0-100%	0-255	0-100%	0	Fade
103		Blue intensity 0-100%	0-255	0-100%	0	Fade
104		White intensity 0-100%	0-255	0-100%	0	Fade
105	Pixel 23 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
106		Green intensity 0-100%	0-255	0-100%	0	Fade
107		Blue intensity 0-100%	0-255	0-100%	0	Fade
108		White intensity 0-100%	0-255	0-100%	0	Fade
109	Pixel 24 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
110		Green intensity 0-100%	0-255	0-100%	0	Fade
111		Blue intensity 0-100%	0-255	0-100%	0	Fade
112		White intensity 0-100%	0-255	0-100%	0	Fade
113	Pixel 25 RGBW	Red intensity 0-100%	0-255	0-100%	0	Fade
114		Green intensity 0-100%	0-255	0-100%	0	Fade
115		Blue intensity 0-100%	0-255	0-100%	0	Fade
116		White intensity 0-100%	0-255	0-100%	0	Fade

Individual RGBW pixel control on channels 17-116 be mapped independently at the controller depending on how many pixels are connected to the KNV PSU outputs **A – E**.

Unused DMX channels can be deleted from the controller patch leaving them free for use by other fixtures.

