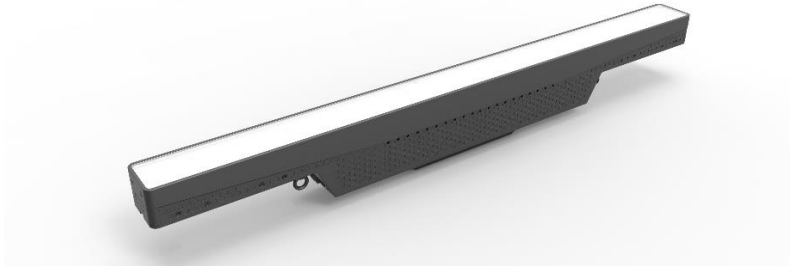


This document is valid for Tambora Linear 100 models.



OPERATING MODES

Tambora has five different operating modes:

- Standard RGBW 8bit
- Standard RGBW 16bit
- Shape RGBW
- Shape RGBW 16bit
- Advanced

The Standard modes allow to control the fixtures with a single colour layer.

The Shape mode allows user to select and manage countless type of graphic effects,

by enable Pixels/Strobe Engine (active in 0 seconds) the users can control RGB or Strobe of any single Led.

Advanced mode allows easy control with independent overlapping layers that can operate simultaneously

LAYER CONCEPT

Layer 1 control general fixture parameters.

Layer 2 control Shape Engine, fade colour speed transition in Dynamic or Static mode.

Layer 3 control dimmer and strobe of pixel mapping engine.

Strobe engine allows controls Strobe Shape Engine speed, fade, rate, duration, in Dynamic or Static mode,

Layer 2 and 3 can be set in master/slave mode

When a layer is set in master mode, it wins on the below layer even if the intensity is set at 0%

If a layer is set in master mode the pixel become black with involved layer dimmer set at 0%

If a layer is set in slave mode the layer become visible with involved dimmer set over 0%

Pixel/Strobe Mapping function ON (RGB) enable Pixel/Strobe Mapping engine. Function is activated in zero seconds.

BASIC ENGINE MODES

<i>Mode</i>	<i>Number of Parameter</i>	<i>Colour Control</i>	<i>Notes</i>
Standard RGBW	9	RGBW 8bit	Colour control as single layer.
Standard RGBW 16bit	13	RGBW 16bit	Colour control as single layer.
Shape RGBW	31	RGBW 8bit	Colour control in 2 layers and strobe engine
Shape RGBW 16bit	39	RGBW 16bit	Colour control in 2 layers and strobe engine
Advanced	33	RGBW	Colour control, in 3 layers and strobe engine

IMPORTANT: The Shape RGBW is the default operating mode.

PIXELS ENGINE MODES

<i>Mode</i>	<i>Number of Parameter</i>	<i>Colour Control</i>	<i>Notes</i>
Disable	-	-	Disable the colour control for each led.
RGB	75	RGB 8bit	Colour control for each led.

STROBE ENGINE MODES

<i>Mode</i>	<i>Number of Parameter</i>	<i>Colour Control</i>	<i>Notes</i>
Disable	-	-	Disable the colour control for strobe led.
Enable	25	W 8bit	White strobe control for each led.

Basic Engine DMX list

<i>DMX Parameter</i>	<i>Standard RGBW</i>	<i>Standard RGBW 16bit</i>
1	Red	Red
2	Green	Red fine
3	Blue	Green
4	White	Green fine
5	CTO	Blue
6	Strobe	Blue fine
7	Dimmer	White
8	Dimmer fine	White fine
9	Function	CTO
10	-	Strobe
11	-	Dimmer
12	-	Dimmer Fine
13	-	Function

DMX Parameter	Shape RGBW	Shape RGBW 16bit
1	Red	Red
2	Green	Red fine
3	Blue	Green
4	White	Green fine
5	CTO	Blue
6	Strobe	Blue fine
7	Dimmer	White
8	Dimmer Fine	White fine
9	Function	CTO
10	Shape Selection	Strobe
11	Shape Effect	Dimmer
12	Indexing Speed	Dimmer Fine
13	Shape Fade	Function
14	Shape Strobe	Shape Selection
15	Shape Dimmer	Shape Effect
16	Shape Transition	Indexing Speed
17	Background Red	Shape Fade
18	Background Green	Shape Strobe
19	Background Blue	Shape Dimmer
20	Background White	Shape Transition
21	Background CTO	Background Red
22	Background Strobe	Background Red Fine
23	Background Dimmer	Background Green
24	Strobe Engine Strobe	Background Green Fine
25	Strobe Engine Dimmer	Background Blue
26	Strobe Engine Duration	Background Blue Fine
27	Strobe Engine Rate	Background White
28	Strobe Effect Selection	Background White Fine
29	Strobe Effect	Background CTO
30	Strobe Indexing/speed	Background Strobe
31	Strobe Fade	Background Dimmer
32		Strobe Engine Strobe
33		Strobe Engine Dimmer
34		Strobe Engine Duration
35		Strobe Engine Rate
36		Strobe Effect Selection
37		Strobe Effect
38		Strobe Indexing/speed
39		Strobe Fade

DMX Parameter	Advanced
1	Layer 1 Red
2	Layer 1 Green
3	Layer 1 Blue
4	Layer 1 White
5	Layer 1 CTO
6	Layer 1 Strobe
7	Layer 1 Dimmer
8	Strobe
9	Dimmer
10	Dimmer Fine
11	Function
12	Layer 2 Selection
13	Layer 2 Effect
14	Indexing/Speed
15	Layer 2 Fade
16	Layer 2 Strobe
17	Layer 2 Dimmer
18	Layer 2 Transition
19	Layer 2 Red
20	Layer 2 Green
21	Layer 2 Blue
22	Layer 2 White
23	Layer2 CTO
24	Layer 3 Strobe
25	Layer 3 Dimmer
26	Strobe Engine Strobe
27	Strobe Engine Dimmer
28	Strobe Engine Duration
29	Strobe Engine Rate
30	Strobe Effect Selection
31	Strobe Effect
32	Strobe Indexing/speed
33	Strobe Fade

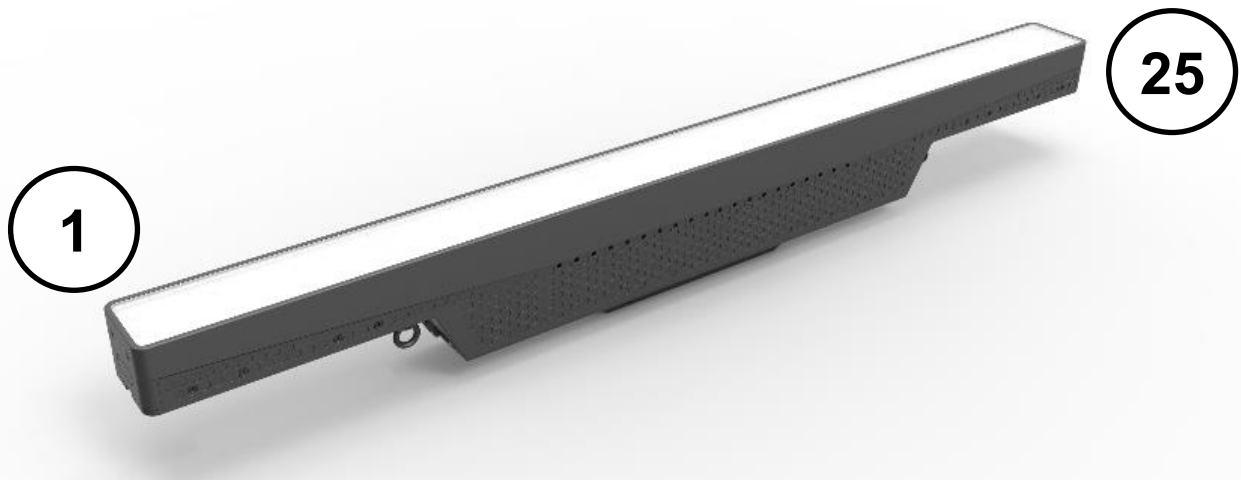
Pixels Engine DMX list

DMX Parameter	Pixels RGB Mode
1	Red Led 1
2	Green Led 1
3	Blue Led 1
4	Red Led 2
5	Green Led 2
6	Blue Led 2
7	Red Led 3
8	Green Led 3
9	Blue Led 3
⋮	⋮
73	Red Led 25
74	Green Led 25
75	Blue Led 25

DMX Parameter	Pixels STROBE Mode
1	White Led 1
2	White Led 2
3	White Led 3
4	White Led 4
⋮	⋮
23	White Led 23
24	White Led 24
25	White Led 25

Led reference number

IMPORTANT: The image refer to the fixture with the option
Reverse Mapping OFF



Function details – Basic Engine

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	Bit Value	Function
1	1	1	1	000 - 255	RED Linear 0 – 100%
-	2	-	2	000 - 255	RED FINE (16 Bit)
2	3	2	3	000 - 255	GREEN Linear 0 – 100%
-	4	-	4	000 - 255	GREEN FINE (16 Bit) Green colour fine control
3	5	3	5	000 - 255	BLUE Linear 0 – 100%
-	6	-	6	000 - 255	BLUE FINE (16 bit)
4	7	4	7	000 - 255	WHITE Linear 0 – 100%
-	8	-	8	000 - 255	WHITE FINE (16 bit) White colour fine control
5	9	5	9		CTO
				000 - 009	Unused range
				010 - 255	Col. temperature correction from 8000K to 2700K
6	10	6	10		STROBE
				000 - 003	Light OFF
				004 - 103	Strobe frequency from slow (1Hz) to fast (25Hz)
				104 - 107	Light ON
				108 - 207	Strobe Pulse freq. from slow (0.5 Hz) to fast (25 Hz)
				208 - 212	Light ON
				213 - 225	Random Slow Strobe effect
				226 - 238	Random Medium Strobe effect
				239 - 251	Random Fast Strobe effect
252 - 255	Light ON				
7	11	7	11	000 - 255	DIMMER.
8	12	8	12	000 - 255	DIMMER FINE (16 bit)

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	BIT Value	Function	
9	13	9	13		FUNCTION	
					IMPORTANT: Setting are activated and saved holding the DMX level for three seconds.	
				000 - 001	Unused range	
				002 - 003	Auto (Default): Speed Fans increase/decrease according to the LEDs temperature.	
				004 - 005	SLN: Speed Fans always at minimum range, light output change accordingly with ambient temperature.	
				006 - 007	Theatre: Speed Fans always at a constant range, light output constantly reduced.	
				008 - 009	Constant: Speed Fans at maximum range.	
				010 - 037	Unused range	
				038 - 042	Dimmer curve 1 (Default)	→Details at page 16
				043 - 047	Dimmer curve 2	
				048 - 052	Dimmer curve 3	
				053 - 055	Dimmer curve 4	
				056 - 057	Dimmer curve 5	
				058 - 062	Raw colour gamma 1	→Details at page 16
				063 - 067	Raw colour gamma 1.5	
				068 - 072	Raw colour gamma 2.2 (Default)	
				073 - 074	Colour calibration OFF (Default)	
				075 - 076	Colour calibration Factory	
				077 - 078	Colour calibration Customized	
				079 - 080	Set customized calibration at full white	
				081 - 082	Set customized calibration at 3200K	
				083 - 084	Set customized calibration at 5600K	
				085 - 086	Record customized calibration	
				087 - 088	Unused range	
				089 - 090	Reverse mapping OFF (Default)	
				091 - 092	Reverse mapping ON	
				093 - 097	Pixel mapping Disabled (Default)	
				098 - 102	Pixel mapping ON RGB Mode (active in 0 seconds)	
				103 - 107	Strobe Engine Disable (Default)	
				108 - 112	Strobe Engine Enable	
				113 - 167	Unused range	
				168 - 188	PWM frequency=600Hz	
				189 - 199	PWM frequency=1200Hz	
				200 - 210	PWM frequency=2000Hz (Default)	
				211 - 221	PWM frequency=4000Hz	
				222 - 232	PWM frequency=6000Hz	
				233 - 243	PWM frequency=25000Hz	
				244 - 248	Display OFF (Default)	
				249 - 253	Display ON	
				254 - 255	Default function recall	

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	BIT Value	Function	
-	-	10	14		SHAPE SELECTION	
				000 - 005	Normal	
				006 - 130	Static	
				131 - 255	Dynamic	
-	-	11	15		SHAPE EFFECT	
				000 - 007	Effect 1	
				008 - 015	Effect 2	
				016 - 023	Effect 3	
				024 - 248	
				249 - 255	Effect 33	
-	-	12	16		INDEXING SPEED	
				000 - 255	Indexing	→ Static mode
				000 - 124	Speed from fast to slow, forward	→ Dynamic mode
				125 - 130	STOP	
				131 - 255	Speed from slow to fast, backward	
-	-	13	17		SHAPE FADE	
				000 - 005	OFF	
				006 - 130	Fade change from fast to slow	
				131 - 255	Wake change from fast to slow	
-	-	14	18		SHAPE STROBE	
				000 - 003	Light OFF	
				004 - 103	Strobe frequency from slow (1Hz) to fast (25Hz)	
				104 - 107	Light ON	
				108 - 207	Strobe Pulse freq. from slow (0.5 Hz) to fast (25 Hz)	
				208 - 212	Light ON (Shape Slave)	
				213 - 225	Random Slow Strobe effect	
				226 - 238	Random Medium Strobe effect	
				239 - 251	Random Fast Strobe effect	
				252 - 255	Light ON (Shape Master)	
-	-	15	19	000 - 255	SHAPE DIMMER	
-	-	16	20	000 - 255	SHAPE TRANSITION Crossfade between macro shape	
-	-	17	21	000 - 255	BACKGROUND RED Linear 0 – 100%	
-	-	-	22	000 - 255	BACKGROUND RED FINE	
-	-	18	23	000 - 255	BACKGROUND GREEN Linear 0 – 100%	
-	-	-	24	000 - 255	BACKGROUND GREEN FINE	
-	-	19	25	000 - 255	BACKGROUND BLUE Linear 0 – 100%	
-	-	-	26	000 - 255	BACKGROUND BLUE FINE	
-	-	20	27	000 - 255	BACKGROUND WHITE Linear 0 – 100%	
-	-	-	28	000 - 255	BACKGROUND WHITE FINE	

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	BIT Value	Function
-	-	21	29		BACKGROUND CTO
				000 - 009	OFF
				010 - 255	Col. temperature correction from 8000K to 2700K
-	-	22	30		BACKGROUND STROBE
				000 - 003	Light OFF
				004 - 103	Strobe frequency from slow (1Hz) to fast (25Hz)
				104 - 107	Light ON
				108 - 207	Strobe Pulse freq. from slow (0.5 Hz) to fast (25 Hz)
				208 - 212	Light ON
				213 - 225	Random Slow Strobe effect
				226 - 238	Random Medium Strobe effect
				239 - 251	Random Fast Strobe effect
	252 - 255	Light ON			
-	-	23	31	000 - 255	BACKGROUND DIMMER
-	-	24	32		STROBE ENGINE STROBE
				000 - 005	Light OFF
				006 - 042	Ramp UP
				043 - 085	Ramp Down
				086 - 128	Ramp Up – Ramp Down
				129 - 171	Random.
				172 - 214	Lightning
215 - 225	Spikes (Flash over low light)				
-	-	25	33	000 - 255	STROBE ENGINE DIMMER

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	BIT Value	Function	
-	-	26	34	000 - 255	STROBE ENGINE DURATION	
-	-	27	35	000 - 003	STROBE ENGINE RATE Light OFF	
-	-	27	35	004 - 103	Strobe from slow (0.3Hz) to fast (25Hz).	
-	-	28	36		STROBE EFFECT SELECTION	
-	-	28	36	000 - 005	Normal	
-	-	28	36	006 - 130	Static	
-	-	28	36	131 - 255	Dynamic	
-	-	29	37		STROBE ENGINE EFFECT	
-	-	29	37	000 - 007	Effect 1	
-	-	29	37	008 - 015	Effect 2	
-	-	29	37	016 - 023	Effect 3	
-	-	29	37	024 - 232	
-	-	29	37	233 - 240	Effect 31	
-	-	29	37	241 - 248	Effect 32	
-	-	29	37	249 - 255	Effect 33	
-	-	30	38		STROBE INDEXING / SPEED	
-	-	30	38	000 - 255	Indexing	→ Static mode
-	-	30	38	000 - 124	Speed from Fast to Slow, forward	→ Dynamic mode
-	-	30	38	125 - 130	Stop	
-	-	30	38	131 - 255	Speed from slow to Fast, backward	
-	-	31	39		STROBE FADE	
-	-	31	39	000 - 005	Unused range	
-	-	31	39	006 - 130	Fade speed from fast to slow	
-	-	31	39	131 - 255	Wake speed from fast to slow	

<i>Advanced</i>	<i>Bit Value</i>	<i>Function</i>
1	000 - 255	LAYER 1 RED Linear 0 – 100%
2	000 - 255	LAYER 1 GREEN Linear 0 – 100%
3	000 - 255	LAYER 1 BLUE Linear 0 – 100%
4	000 - 255	LAYER 1 WHITE Linear 0 – 100%
5		LAYER 1 CTO
	000 - 009	OFF
	010 - 255	Col. temperature correction from 8000K to 2700K
6		LAYER 1 STROBE
	000 - 003	Light OFF
	004 - 103	Layer 1 Strobe frequency from slow (1Hz) to fast (25Hz)
	104 - 107	Light ON
	108 - 207	Layer 1 Strobe Pulse freq. from slow (0.5 Hz) to fast (25 Hz)
	208 - 212	Light ON
	213 - 225	Random Slow Strobe effect
	226 - 238	Random Medium Strobe effect
	239 - 251	Random Fast Strobe effect
	252 - 255	Light ON
7	000 - 255	LAYER 1 DIMMER Linear 0 – 100%
8		STROBE
	000 - 003	Light OFF
	004 - 103	Strobe frequency from slow (1Hz) to fast (25Hz)
	104 - 107	Light ON
	108 - 207	Strobe Pulse freq. from slow (0.5 Hz) to fast (25 Hz)
	208 - 212	Light ON
	213 - 225	Random Slow Strobe effect
	226 - 238	Random Medium Strobe effect
	239 - 251	Random Fast Strobe effect
	252 - 255	Light ON
9	000 - 255	DIMMER. Linear 0 – 100%
10	000 - 255	DIMMER FINE (16 bit)
11		Same as the FUNCTION parameter of the other DMX modes.
12		LAYER 2 SELECTION
	000 - 005	Normal
	006 - 130	Static
	131 - 255	Dynamic
13		LAYER 2 EFFECT
	000 - 007	Effect 1
	008 - 015	Effect 2

	241 - 248	Effect 32
	249 - 255	Effect 33

Advanced	Bit Value	Function	
14		INDEXING/SPEED	
	000 - 255	Indexing	→ Static mode
	000 - 124	Speed from fast to slow, forward	→ Dynamic mode
	125 - 130	Stop	
131 - 255	Speed from slow to fast, backward		
15		LAYER 2 FADE	
	000 - 005	OFF	
	006 - 130	Fade speed shape from fast to slow.	
	131 - 255	Wake increase pixel back and front on the selected shape from fast to slow	
16		LAYER 2 STROBE	
	000 - 003	Light OFF	
	004 - 103	Layer 2 Strobe frequency from slow (1Hz) to fast (25Hz)	
	104 - 107	Light ON	
	108 - 207	Layer 2 Strobe Pulse freq. from slow (0.5 Hz) to fast (25 Hz)	
	208 - 212	Light ON (Layer 2 Slave)	
	213 - 225	Random Slow Strobe effect	
	226 - 238	Random Medium Strobe effect	
	239 - 251	Random Fast Strobe effect	
252 - 255	Light ON (Layer 2 Master)		
17	000 - 255	LAYER 2 DIMMER Linear 0 – 100%	
18	000 - 255	LAYER 2 TRANSITION Crossfade between shape.	
19	000 - 255	LAYER 2 RED Linear 0 – 100%	
20	000 - 255	LAYER 2 GREEN Linear 0 – 100%	
21	000 - 255	LAYER 2 BLUE Linear 0 – 100%	
22	000 - 255	LAYER 2 WHITE Linear 0 – 100%	
23		LAYER 2 CTO	
	000 - 009	CTO OFF	
	010 - 255	Col. temperature correction from 8000K to 2700K	
24		LAYER 3 STROBE	
	000 - 003	Light OFF	
	004 - 103	Layer 3 Strobe frequency from slow (1Hz) to fast (25Hz)	
	104 - 107	Light ON	
	108 - 207	Layer 2 Strobe Pulse freq. from slow (0.5 Hz) to fast (25 Hz)	
	208 - 212	Light ON (Layer 3 Slave)	
	213 - 225	Random Slow Strobe effect	
	226 - 238	Random Medium Strobe effect	
	239 - 251	Random Fast Strobe effect	
252 - 255	Light ON (Layer 3 Master)		
25	000 - 255	LAYER 3 DIMMER Linear 0 – 100%.	

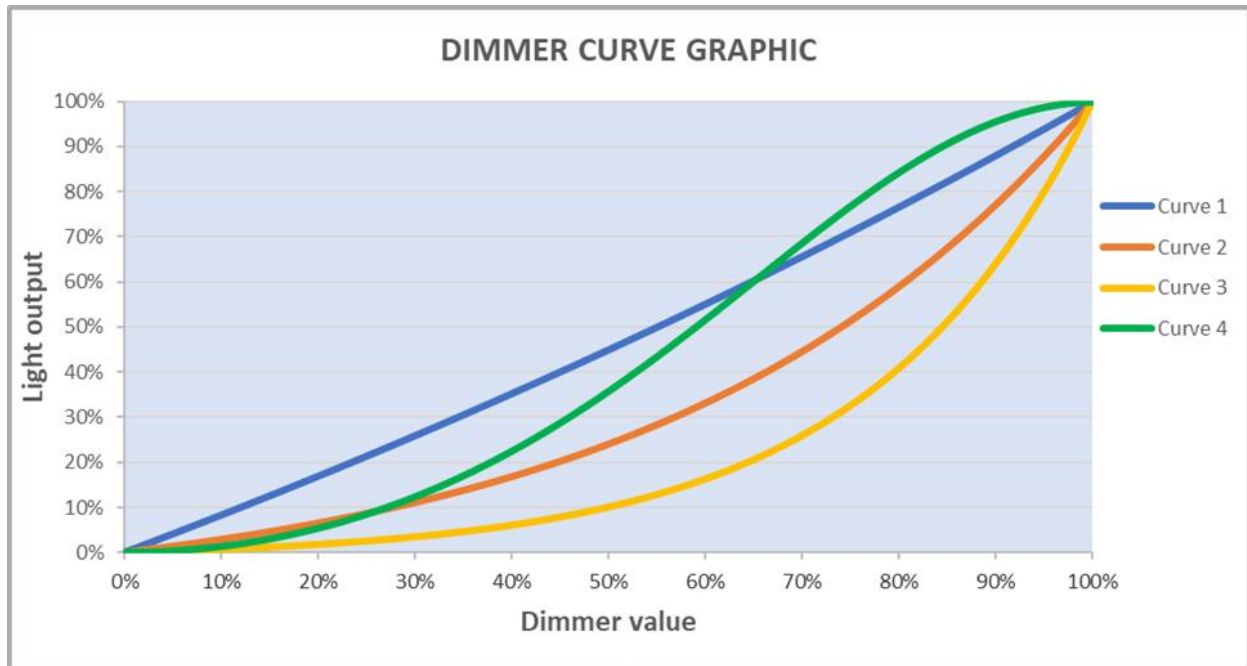
Advanced	Bit Value	Function	
26		STROBE ENGINE STROBE	
	000 - 005	Unused Range	
	006 - 042	Ramp UP	
	043 - 085	Ramp DOWN	
	086 - 128	Ramp UP, DOWN	
	129 - 171	Random	
	172 - 214	Lightning	
	215 - 255	Spike flash over low light	
27	000 - 255	STROBE ENGINE DIMMER Linear 0 – 100%.	
28	000 - 255	STROBE ENGINE DURATION	
29		STROBE ENGINE RATE	
	000 - 005	Light OFF	
	006 - 255	Strobe speed from slow (0,3Hz) to fast (25Hz).	
30		STROBE EFFECT SELECTION	
	000 - 005	Normal	
	006 - 130	Static	
	131 - 255	Dynamic	
31		STROBE ENGINE EFFECT	
	000 - 007	Effect 1	
	008 - 015	Effect 2	
	016 - 023	Effect 3	
	024 - 232	
	233 - 240	Effect 31	
	241 - 248	Effect 32	
	249 - 255	Effect 33	
32		STROBE INDEXING/SPEED	
	000 - 255	Indexing	→ Static mode
	000 - 124	Speed from fast to slow, forward	→ Dynamic mode
	125 - 130	Stop	
	131 - 255	Speed from slow to fast, backward	
33		STROBE FADE	
	000 - 005	Unused range	
	006 - 130	Fade speed shape from fast to slow	
	131 - 255	Wake increase pixel back and front on the selected shape from fast to slow	

Function details – Pixels Engine

<i>RGB</i>	<i>Bit Value</i>	<i>Function</i>
1	000 - 255	RED LED 1 Linear 0 – 100%.
2	000 - 255	GREEN LED 1 Linear 0 – 100%.
3	000 - 255	BLUE LED 1 Linear 0 – 100%.
4	000 - 255	RED LED 2 Linear 0 – 100%.
5	000 - 255	GREEN LED 2 Linear 0 – 100%.
6	000 - 255	BLUE LED 2 Linear 0 – 100%.
⋮	⋮	Functionality are the same for all the Led's
73	000 - 255	RED LED 25 Linear 0 – 100%.
74	000 - 255	GREEN LED 25 Linear 0 – 100%.
75	000 - 255	BLUE LED 25 Linear 0 – 100%.

Function details – Strobe Engine

<i>Advanced</i>	<i>Bit Value</i>	<i>Function</i>
1	000 - 255	WHITE LED 1 Linear 0 – 100%
2	000 - 255	WHITE LED 2 Linear 0 – 100%
3	000 - 255	WHITE LED 3 Linear 0 – 100%
⋮	⋮	Functionality are the same for all the Led's
23	000 - 255	WHITE LED 23 Linear 0 – 100%
24	000 - 255	WHITE LED 24 Linear 0 – 100%
25	000 - 255	WHITE LED 25 Linear 0 – 100%



IMPORTANT NOTE: Dimmer Curve 5 has all the Leds synchronized, for balanced behavior in white.

