

This document is valid for Tambora Batten Square and Tambora Batten Round 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 Engine (active in 0 seconds) the users can control RGB or RGBW of any single Led's.

Advanced mode allow easy control with three 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.

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

If a layer is set in slave mode the layer below win

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

BASIC ENGINE MODES

Mode	Number of Parameter	Colour Control	Notes
Standard RGBW	13	RGBW 8bit	Colour control as single layer.
Standard RGBW 16bit	17	RGBW 16bit	Colour control as single layer.
Shape RGBW	27	RGBW 8bit	Colour control in 2 layers with background effect.
Shape RGBW 16bit	35	RGBW 16bit	Colour control in 2 layers with background effect.
Advanced	29	RGBW	Colour control, in 3 layers with background effect.

IMPORTANT: The Shape RGBW is the default operating mode.

PIXELS ENGINE MODES

Mode	Number of Parameter	Colour Control	Notes
Disable	-	-	Disable the colour control for each led.
RGB	48	RGB 8bit	Colour control for each led.
RGBW	64	RGBW 8bit	Colour control for each led.

Basic Engine DMX list

DMX Parameter	Standard RGBW	Standard RGBW 16bit	Shape RGBW
1	Red	Red	Red
2	Green	Red fine	Green
3	Blue	Green	Blue
4	White	Green fine	White
5	CTO	Blue	CTO
6	Strobe	Blue fine	Strobe
7	Dimmer	White	Dimmer
8	Dimmer fine	White fine	Dimmer Fine
9	Tilt	CTO	Tilt
10	Tilt fine	Strobe	Tilt Fine
11	Zoom	Dimmer	Zoom
12	Function	Dimmer Fine	Function
13	Reset	Tilt	Reset
14	-	Tilt Fine	Shape Selection
15	-	Zoom	Shape Effect
16	-	Function	Indexing Speed
17	-	Reset	Shape Fade
18	-	-	Shape Strobe
19	-	-	Shape Dimmer
20	-	-	Shape Transition
21	-	-	Background Red
22	-	-	Background Green
23	-	-	Background Blue
24	-	-	Background White
25	-	-	Background CTO
26	-	-	Background Strobe
27	-	-	Background Dimmer

DMX Parameter	Shape RGBW 16bit	Advanced
1	Red	Layer 1 Red
2	Red fine	Layer 1 Green
3	Green	Layer 1 Blue
4	Green fine	Layer 1 White
5	Blue	Layer 1 CTO
6	Blue fine	Layer 1 Strobe
7	White	Layer 1 Dimmer
8	White fine	Strobe
9	CTO	Master Dimmer
10	Strobe	Master Dimmer Fine
11	Dimmer	Tilt
12	Dimmer Fine	Tilt Fine
13	Tilt	Zoom
14	Tilt Fine	Function
15	Zoom	Reset
16	Function	Layer 2 Selection
17	Reset	Layer 2 Effect
18	Shape Selection	Indexing/Speed
19	Shape Effect	Layer 2 Fade
20	Indexing Speed	Layer 2 Strobe
21	Shape Fade	Layer 2 Dimmer
22	Shape Strobe	Layer 2 Transition
23	Shape Dimmer	Layer 2 Red
24	Shape Transition	Layer 2 Green
25	Background Red	Layer 2 Blue
26	Background Red Fine	Layer 2 White
27	Background Green	Layer2 CTO
28	Background Green Fine	Layer 3 Strobe
29	Background Blue	Layer 3 Dimmer
30	Background Blue Fine	-
31	Background White	-
32	Background White Fine	-
33	Background CTO	-
34	Background Strobe	-
35	Background Dimmer	-

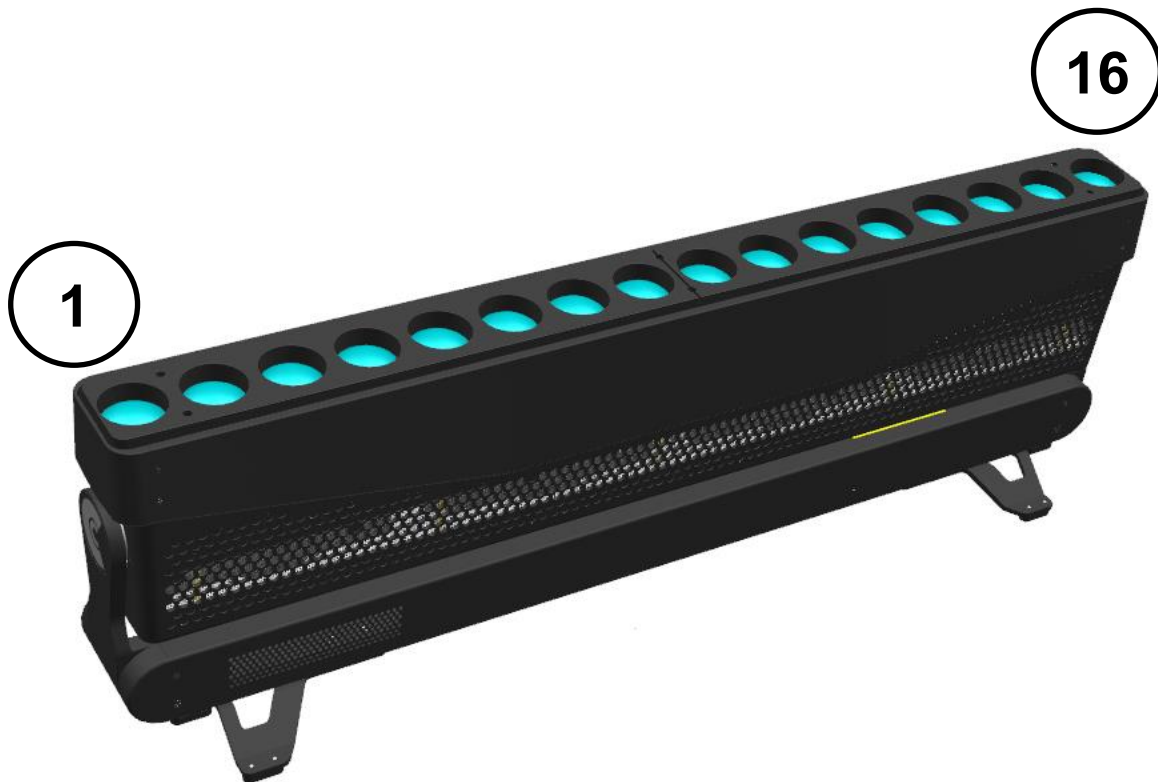
Pixels Engine DMX list

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
⋮	⋮
46	Red Led 16
47	Green Led 16
48	Blue Led 16
-	-
-	-
-	-
-	-

DMX Parameter	Pixels RGBW Mode
1	Red Led 1
2	Green Led 1
3	Blue Led 1
4	White Led 1
5	Red Led 2
6	Green Led 2
7	Blue Led 2
8	White Led 2
⋮	⋮
57	Red Led 15
58	Green Led 15
59	Blue Led 15
60	White Led 15
61	Red Led 16
62	Green Led 16
63	Blue Led 16
64	White Led 16

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		RED
				000 - 255	Linear 0 – 100%
-	2	-	2		RED FINE
				000 - 255	Fine Red Intensity (16 Bit)
2	3	2	3		GREEN
				000 - 255	Linear 0 – 100%
-	4	-	4		GREEN FINE
				000 - 255	Fine Green Intensity (16Bit)
3	5	3	5		BLUE
				000 - 255	Linear 0 – 100%
-	6	-	6		BLUE FINE
				000 - 255	Fine Blue Intensity (16Bit)
4	7	4	7		WHITE
				000 - 255	Linear 0 – 100%
-	8	-	8		WHITE FINE
				000 - 255	Fine White Intensity (16Bit)
5	9	5	9	000 - 009	Unused range/CTO OFF
				000 - 009	CTO from 8000K to 2500K
				010 - 255	8000 K - 2500 K
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	Pulsation 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		DIMMER
				000 - 255	Dimmer from 0 to100%
8	12	8	12		DIMMER FINE
				000 - 255	Fine Dimmer Intensity
9	13	9	13		TILT
				000 - 255	Tilt positioning by 220°
10	14	10	14		TILT FINE
				000 - 255	Fine Tilt Positioning
11	15	11	15		ZOOM
				000 - 255	Zoom narrow to wide

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	BIT Value	Function	
12	16	12	16		FUNCTION	
					IMPORTANT : Setting are activated and saved holding the DMX level for three seconds.	
				000 - 001	Unused range	
				002 - 003	Auto (Default): Fans increase/decrease according to the LEDs temperature.	
				004 - 005	SLN : Fans power always at minimum range, light output change accordingly with ambient temperature.	
				006 - 007	Theatre : Fans power always at a constant range, light output constantly reduced.	
				008 - 009	Constant : Fans power at maximum range.	
				010 - 011	Unused range	
				012 - 024	Tilt speed: Fast (Default).	
				025 - 037	Tilt speed: Standard.	
				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	None	
				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	Pixel mapping ON RGBW Mode (active in 0 seconds)	
				108 - 112	Zoom reposition ON (Default)	
				113 - 117	Zoom reposition OFF	
				118 - 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
13	17	13	17		RESET Important: The reset sequence is activated passing through the unused levels range and staying in the selected reset range for 5 seconds
				000 - 025	Unused range
				026 - 076	Zoom Reset
				077 - 127	Tilt Reset
				128 - 255	Complete Reset
-	-	14	18		SHAPE SELECTION
				000 - 005	Normal
				006 - 130	Static
				131 - 255	Dynamic

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	BIT Value	Function	
-	-	15	19		SHAPE EFFECT	
				000 - 007	1 Pix →	
				008 - 015	1 Pix Bounce	
				016 - 023	1 Pix Mirror Bouce	
				024 - 031	1 Pix Mirror Implode ><	
				032 - 038	1 Pix Mirror Explode <>	
				039 - 046	o→o→	
				047 - 054	o→o→Bounce	
				055 - 062	Double Fill + ←o←o	
				063 - 069	Double Fill + 2x 1 Pix Bounce	
				070 - 077	o→Bounce+o→Bounce	
				078 - 085	Fill Implode	
				086 - 093	Fill Implode 2	
				094 - 100	Fill implode + sing pix explode	
				101 - 108	Double Pix Bouncing	
				109 - 116	2 Pix Block	
				117 - 124	3 Pix Block	
				125 - 131	Fill→Empty→	
				132 - 139	Fill→ + Empty←2	
				140 - 147	Fill→ + o→	
				148 - 155	Fill→ + o→	
				156 - 162	Fill→ + 1 Pix Bounce	
				163 - 170	Fill/Empty→ + Fill Empty←	
				171 - 178	2 Blocks L/R	
				179 - 186	Odd/Even	
				187 - 193	2 Pix Block Expolde	
				194 - 201	2 Pix Block expl/impl	
				202 - 209	2 Pix Block expl/impl 2	
				210 - 217	2 Pixblock →	
				218 - 224	5 Pix Block	
225 - 232	Fill Explode					
233 - 240	Fill Explode/Implode					
241 - 248	Fill Explode/implode 2					
249 - 255	Fill Explode + Empty Explode					
-	-	16	20		INDEXING SPEED	
				000 - 255	Indexing	If shape selection static is set
				000 - 124	Speed from fast to slow, forward	If shape selection Dynamic is set
				125 - 130	STOP	
	131 - 255	Speed from slow to fast, backward				

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	BIT Value	Function
-	-	17	21		SHAPE FADE
				000 - 005	OFF
				006 - 130	Fade change from fast to slow
				131 - 255	Wake change from fast to slow
-	-	18	22		SHAPE STROBE
				000 - 003	Light OFF
				004 - 103	Strobe from slow to fast
				104 - 107	Light ON
				108 - 207	Pulsation from slow to fast
				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)
-	-	19	23		SHAPE DIMMER
				000 - 255	Linear 0 – 100%
-	-	20	24		SHAPE TRANSITION
				000 - 255	Crossfade between macro shape

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	BIT Value	Function
-	-	21	25	000 - 255	BACKGROUND RED Linear 0 – 100%
-	-	-	26	000 - 255	BACKGROUND RED FINE Fine Red intensity
-	-	22	27	000 - 255	BACKGROUND GREEN Linear 0 – 100%
-	-	-	28	000 - 255	BACKGROUND GREEN FINE Fine Green Intensity
-	-	23	29	000 - 255	BACKGROUND BLUE Linear 0 – 100%
-	-	-	30	000 - 255	BACKGROUND BLUE FINE Fine Blue Intensity
-	-	24	31	000 - 255	BACKGROUND WHITE Linear 0 – 100%
-	-	-	32	000 - 255	BACKGROUND WHITE FINE Fine White Intensity
-	-	25	33	000 - 009	BACKGROUND CTO OFF
-	-	-	-	010 - 255	8000K – 2500K
-	-	26	34	000 - 003	BACKGROUND STROBE Light OFF
-	-	-	-	004 – 103	Strobe frequency from slow to fast (1Hz) to fast (25Hz)
-	-	-	-	104 – 107	Light ON
-	-	-	-	108 – 207	Pulsation frequency from slow to fast (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
-	-	27	35	000 - 255	BACKGROUND DIMMER Linear 0 – 100%

ADVANCED MODE

<i>Advanced</i>	<i>Bit Value</i>	<i>Function</i>
1		LAYER 1 RED
	000 - 255	Linear 0 – 100%
2		LAYER 1 GREEN
	000 - 255	Linear 0 – 100%
3		LAYER 1 BLUE
	000 - 255	Linear 0 – 100%
4		LAYER 1 WHITE
	000 - 255	Linear 0 – 100%
5		LAYER 1 CTO
	000 - 009	OFF
	010 - 255	8000K to 2500K
6		LAYER 1 STROBE
	000 - 003	Light OFF
	004 - 103	Layer 1 Strobe from slow to fast (1Hz) to fast (25Hz)
	104 - 107	Light ON
	108 - 207	Layer 1 Pulsation from slow to fast (0.5 Hz) to fast (25 Hz)
	208 - 212	Light ON
	213 - 225	Random Slow Strobe effect
226 - 238	Random Medium Strobe effect	
7		LAYER 1 DIMMER
	000 - 255	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	Pulsation frequency 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		MASTER DIMMER.
	000 - 255	Linear 0 – 100%
10		MASTER DIMMER FINE (16 bit)
	000 - 255	Fine Dimmer intensity (16bit)
11		TILT
	000 - 255	Tilt positioning by 220°
12		TILT FINE
	000 - 255	Fine Tilt Positioning

<i>Advanced</i>	<i>Bit Value</i>	<i>Function</i>
13		ZOOM
	000 - 255	narrow to wide
14		Same as the FUNCTION parameter of the other DMX modes.
15		RESET
	000 - 025	Unused range
	026 - 076	Zoom reset
	077 - 127	Tilt reset
	128 - 255	Complete reset
16		LAYER 2 SELECTION
	000 - 005	Normal
	006 - 130	Static
	131 - 255	Dynamic

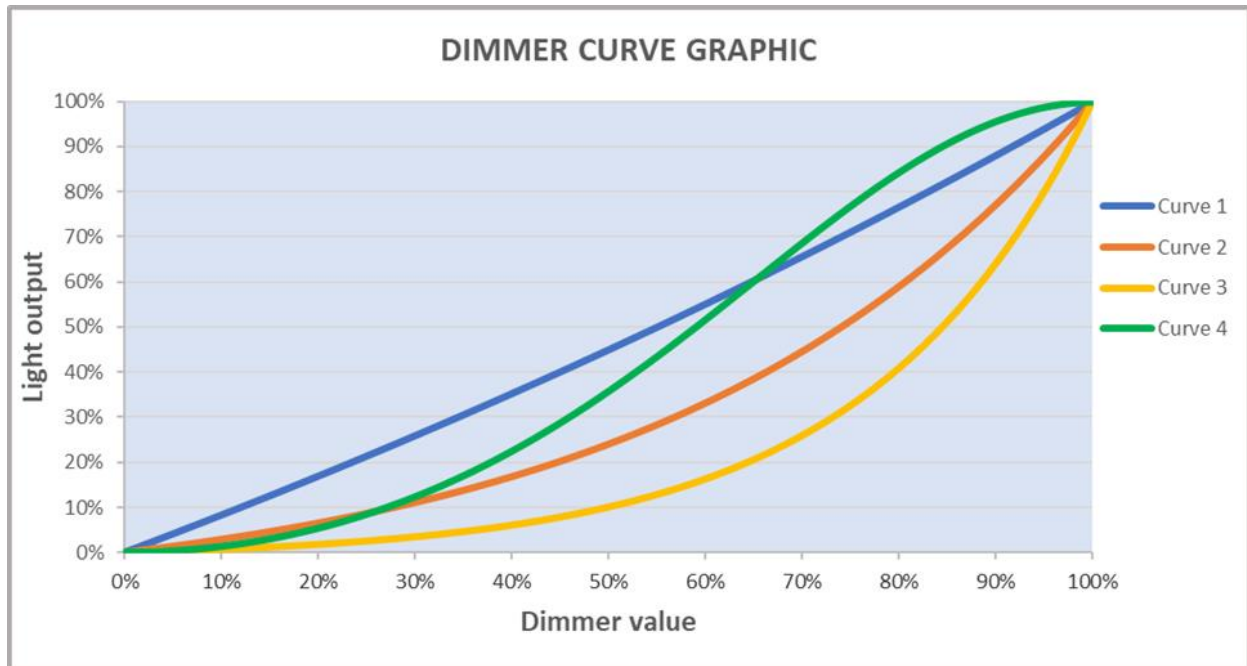
Advanced	Bit Value	Function	
17		LAYER 2 EFFECT	
	000 - 007	1 Pix →	
	008 - 015	1 Pix Bounce	
	016 - 023	1 Pix Mirror Bouce	
	024 - 031	1 Pix Mirror Implode ><	
	032 - 038	1 Pix Mirror Explode <>	
	039 - 046	o→o→	
	047 - 054	o→o→Bounce	
	055 - 062	Double Fill + ←o←o	
	063 - 069	Double Fill + 2x 1 Pix Bounce	
	070 - 077	o→Bounce+o→Bounce	
	078 - 085	Fill Implode	
	086 - 093	Fill Implode 2	
	094 - 100	Fill implode + sing pix explode	
	101 - 108	Double Pix Bouncing	
	109 - 116	2 Pix Block	
	117 - 124	3 Pix Block	
	125 - 131	Fill→Empty→	
	132 - 139	Fill→ + Empty←-2	
	140 - 147	Fill→ + o→	
	148 - 155	Fill→ + o→	
	156 - 162	Fill→ + 1 Pix Bounce	
	163 - 170	Fill/Empty→ + Fill Empty←-	
	171 - 178	2 Blocks L/R	
	179 - 186	Odd/Even	
	187 - 193	2 Pix Block Expolde	
	194 - 201	2 Pix Block expl/impl	
	202 - 209	2 Pix Block expl/impl 2	
	210 - 217	2 Pixblock →	
	218 - 224	5 Pix Block	
225 - 232	Fill Explode		
233 - 240	Fill Explode/Implode		
241 - 248	Fill Explode/implode 2		
249 - 255	Fill Explode + Empty Explode		
18		INDEXING/SPEED	
	000 - 255	Indexing	If shape selection static is set
	000 - 124	Speed from fast to slow, forward	If shape selection Dynamic is set
	125 - 130	Stop	
131 - 255	Speed from slow to fast, backward		

<i>Advanced</i>	<i>Bit Value</i>	<i>Function</i>
19		LAYER 2 FADE
	000 - 005	OFF
	006 - 130	Fade control on shape from fast to slow.
	131 - 255	Wake linearly increase of pixel back and front on the selected shape
20		LAYER 2 STROBE
	000 - 003	Light OFF
	004 - 103	Layer 2 Strobe from slow to fast.
	104 - 107	Light ON
	108 - 207	Layer 2 pulsation from slow to fast.
	208 - 212	Light ON (Layer 2 Slave) I
	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)	

<i>Advanced</i>	<i>Bit Value</i>	<i>Function</i>
21		LAYER 2 DIMMER
	000 - 255	Linear 0 – 100%
22		LAYER 2 TRANSITION
	000 - 255	Crossfade between shape.
23		LAYER 2 RED
	000 - 255	Linear 0 – 100%
24		LAYER 2 GREEN
	000 - 255	Linear 0 – 100%
25		LAYER 2 BLUE
	000 - 255	Linear 0 – 100%
26		LAYER 2 WHITE
	000 - 255	Linear 0 – 100%
27		LAYER 2 CTO
	000 - 009	CTO OFF
	010 - 255	Layer 2 8000K to 2500K
28		LAYER 3 STROBE
	000 – 003	Light OFF
	004 – 103	Layer 3 Strobe effect from slow to fast.
	104 – 107	Light ON
	108 – 207	Layer 3 pulsation from slow to fast.
	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)	
29		LAYER 3 DIMMER
	000 - 255	Linear 0 – 100%.

Function details – Pixels Engine

<i>RGB</i>	<i>RGBW</i>	<i>Bit Value</i>	<i>Function</i>
1	1		RED LED 1
		000 - 255	Linear 0 – 100%.
2	2		GREEN LED 1
		000 - 255	Linear 0 – 100%.
3	3		BLUE LED 1
		000 - 255	Linear 0 – 100%.
-	4		WHITE LED 1
		000 - 255	Linear 0 – 100%.
4	5		RED LED 2
		000 - 255	Linear 0 – 100%.
5	6		GREEN LED 2
		000 - 255	Linear 0 – 100%.
6	7		BLUE LED 2 Linear
		000 - 255	Linear 0 – 100%.
-	8		WHITE LED 2
		000 - 255	Linear 0 – 100%.
⋮	⋮	⋮	Functionality are the same for all the Led's
46	61		RED LED 16
		000 - 255	Linear 0 – 100%.
47	62		GREEN LED 16
		000 - 255	Linear 0 – 100%.
48	63		BLUE LED 16
		000 - 255	Linear 0 – 100%.
-	64		WHITE LED 16 .
		000 - 255	Linear 0 – 100%.



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

