Tambora Batten

03/2025

This document is valid for Tambora Batten Square and Tambora Batten Round models.



DMX MODE

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 CONCEPTS
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.

DMX MODE

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 DMX 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.

DMX MODE

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

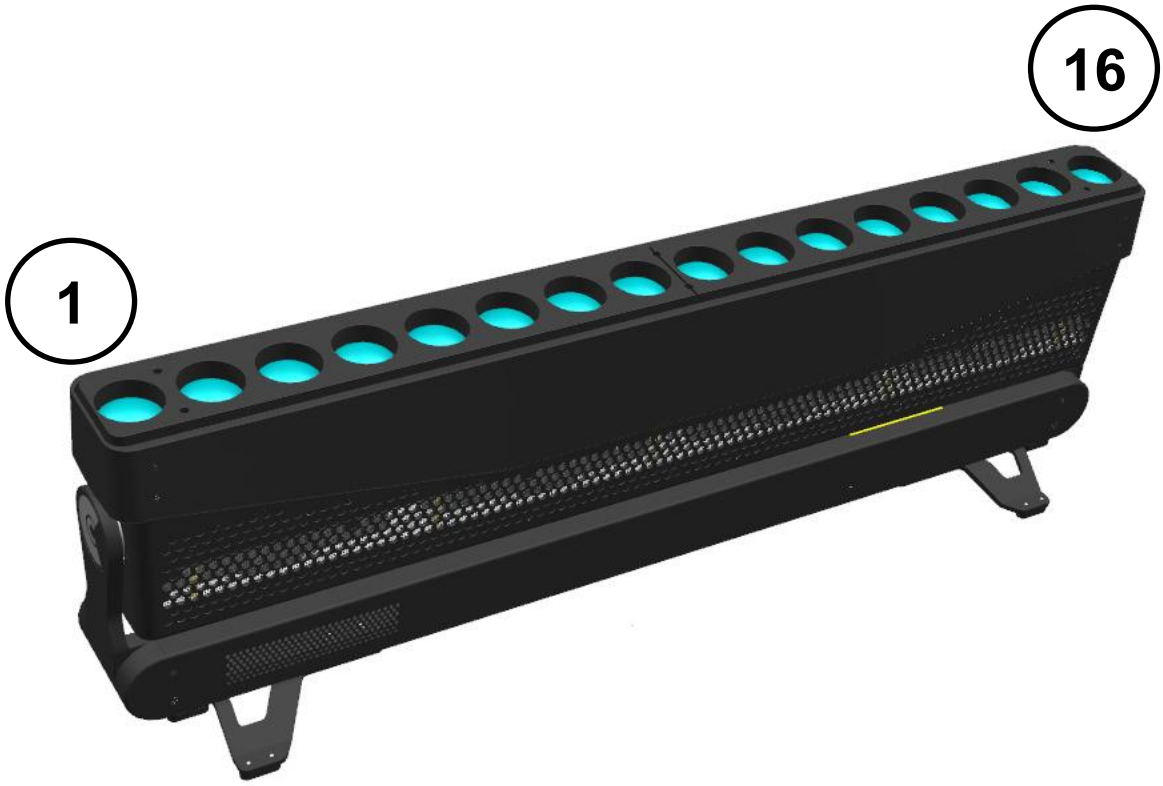
DMX Parameter	Shape RGBW 16bit	Advanced
1	Red	Layer 1 Red
2	Red fine	Layer 1 Green
3	Green	Layer 1 Blue
4	Green fine	Layer 1 White
5	Blue	Layer 1 CTO
6	Blue fine	Layer 1 Strobe
7	White	Layer 1 Dimmer
8	White fine	Strobe
9	CTO	Master Dimmer
10	Strobe	Master Dimmer Fine
11	Dimmer	Tilt
12	Dimmer Fine	Tilt 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	-

PIXEL ENGINE MODE

DMX Parameter	Pixels RGB Mode		DMX Parameter	Pixels RGBW Mode
1	Red Led 1		1	Red Led 1
2	Green Led 1		2	Green Led 1
3	Blue Led 1		3	Blue Led 1
4	Red Led 2		4	White Led 1
5	Green Led 2		5	Red Led 2
6	Blue Led 2		6	Green Led 2
7	Red Led 3		7	Blue Led 2
8	Green Led 3		8	White Led 2
9	Blue Led 3		⋮	⋮
⋮	⋮		57	Red Led 15
46	Red Led 16		58	Green Led 15
47	Green Led 16		59	Blue Led 15
48	Blue Led 16		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



Functions details

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	DMX Default Value	Bit Value	Functions
1	1	1	1	000		**RED**
					000 - 255	Linear 0 – 100%
-	2	-	2	000		**RED FINE**
					000 - 255	Fine Red Intensity (16 Bit)
2	3	2	3	000		**GREEN**
					000 - 255	Linear 0 – 100%
-	4	-	4	000		**GREEN FINE**
					000 - 255	Fine Green Intensity (16Bit)
3	5	3	5	000		**BLUE**
					000 - 255	Linear 0 – 100%
-	6	-	6	000		**BLUE FINE**
					000 - 255	Fine Blue Intensity (16Bit)
4	7	4	7	000		**WHITE**
					000 - 255	Linear 0 – 100%
-	8	-	8	000		**WHITE FINE**
					000 - 255	Fine White Intensity (16Bit)
5	9	5	9	000		**CTO**
					000 - 009	Unused range/CTO OFF
					010 - 255	8000 K - 2500 K
6	10	6	10	255		**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	000		**DIMMER**
					000 - 255	Dimmer from 0 to100%
8	12	8	12	000		**DIMMER FINE**
					000 - 255	Fine Dimmer Intensity
9	13	9	13	128		**TILT**
					000 - 255	Tilt positioning by 220°
10	14	10	14	128		**TILT FINE**
					000 - 255	Fine Tilt Positioning
11	15	11	15	000		**ZOOM**
					000 - 255	Zoom narrow to wide

Standard RGBW	*Standard RGBW 16bit*	*Shape RGBW*	*Shape RGBW 16bit*	*BIT Value*	*Functions*	
12	**16**	**12**	**16**		**FUNCTION** (DMX Default value 000 bit)	
				IMPORTANT: Setting are activated and saved holding the DMX level for three seconds.		
				000 - 001	Unused range	
				002 - 003	**Auto (Default):** Fans increase/decrease accordingly with LEDs temperature.	
				004 - 005	**SLN**: Fans spin always at minimum range, light output change accordingly with ambient temperature.	
				006 - 007	**Theatre**: Fans 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 **043 - 047** **048 - 052** **053 - 055** **056 - 057**	Dimmer curve 1 **(Default)** Dimmer curve 2 Dimmer curve 3 Dimmer curve 4 Dimmer curve 5	**→Details at page 19**
				058 - 062 **063 - 067** **068 - 072**	Raw colour gamma 1 Raw colour gamma 1.5 Raw colour gamma 2.2 **(Default)**	**→Details at page 19**
				073 - 074	Colour calibration OFF **(Default)**	
				075 - 076	Colour calibration Factory	
				077 - 078	Colour Calibration Customized	
				079 - 080 **081 - 082** **083 - 084**	Set customized calibration at full white. Set customized calibration at 3200K Set customized calibration at 5600K	
				085 - 086	Record customized calibration	
				087 - 088	Unused range	
				089 - 090 **091 - 092**	Reverse mapping OFF **(Default)** 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 **113 - 117**	Zoom reposition ON **(Default)** Zoom reposition OFF	
				118 - 122 **123 - 127**	Dimmer Fade OFF **(Default)** Dimmer Fade ON	
				128 - 167	Unused range	
				168 - 188 **189 - 199** **200 - 210** **211 - 221** **222 - 232** **233 - 243**	PWM frequency=600Hz PWM frequency=1200Hz PWM frequency=2000Hz **(Default)** PWM frequency=4000Hz PWM frequency=6000Hz PWM frequency=25000Hz	
				244 - 248	Display OFF **(Default)**	
				249 - 253 **254 - 255**	Display ON Default function recall **IMPORTANT: The "Default Function Recall" (Bit 254-255) is now activated passing through the "000-001" range and staying in the necessary range for 5 seconds.**	

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	DMX Default Value	BIT Value	Functions
13	17	13	17	000		**RESET** **IMPORTANT:** Reset sequences are activated and saved holding the DMX level for 5 seconds.
					000 - 025 **026 - 076** **077 - 127** **128 - 255**	Unused range Zoom Reset Tilt Reset Complete Reset
-	-	14	18	000		**SHAPE SELECTION**
					000 - 005 **006 - 130** **131 - 255**	Normal Static Dynamic

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	DMX Default Value	BIT Value	Functions	
-	-	15	19	000		**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	000		**INDEXING SPEED**	
					000 - 255	Indexing	**Available only if shape selection is static is set**
					000 - 124	Speed from fast to slow, forward	**Available only 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	DMX Default Value	BIT Value	Functions
-	-	17	21	000		**SHAPE FADE**
					000 - 005	OFF
					006 - 130	Fade change from fast to slow
					131 - 255	Wake change from fast to slow
-	-	18	22	105		**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	000		**SHAPE DIMMER**
					000 - 255	Linear 0 – 100%
-	-	20	24	000		**SHAPE TRANSITION**
					000 - 255	Crossfade between macro shapes

Standard RGBW	Standard RGBW 16bit	Shape RGBW	Shape RGBW 16bit	DMX Default Value	BIT Value	Functions
-	-	21	25	000		**BACKGROUND RED**
					000 - 255	Linear 0 – 100%
-	-	-	26	000		**BACKGROUND RED FINE**
					000 - 255	Fine Red intensity
-	-	22	27	000		**BACKGROUND GREEN**
					000 - 255	Linear 0 – 100%
-	-	-	28	000		**BACKGROUND GREEN FINE**
					000 - 255	Fine Green Intensity
-	-	23	29	000		**BACKGROUND BLUE**
					000 - 255	Linear 0 – 100%
-	-	-	30	000		**BACKGROUND BLUE FINE**
					000 - 255	Fine Blue Intensity
-	-	24	31	000		**BACKGROUND WHITE**
					000 - 255	Linear 0 – 100%
-	-	-	32	000		**BACKGROUND WHITE FINE**
					000 - 255	Fine White Intensity
-	-	25	33	000		**BACKGROUND CTO**
					000 - 009	OFF
					010 - 255	8000K – 2500K
-	-	26	34	105		**BACKGROUND STROBE**
					000 - 003	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		**BACKGROUND DIMMER**
					000 - 255	Linear 0 – 100%

Function details ADVANCED MODE

Advanced	DMX Default Value	Bit Value	Functions
1	000		**LAYER 1 RED**
		000 - 255	Linear 0 – 100%
2	000		**LAYER 1 GREEN**
		000 - 255	Linear 0 – 100%
3	000		**LAYER 1 BLUE**
		000 - 255	Linear 0 – 100%
4	000		**LAYER 1 WHITE**
		000 - 255	Linear 0 – 100%
5	000		**LAYER 1 CTO**
		000 - 009	OFF
		010 - 255	8000K to 2500K
6	105		**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	000		**LAYER 1 DIMMER**
		000 - 255	Linear 0 – 100%
8	105		**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	000		**MASTER DIMMER**.
		000 - 255	Linear 0 – 100%
10	000		**MASTER DIMMER FINE (16 bit)**
		000 - 255	Fine Dimmer intensity (16bit)
11	128		**TILT**
		000 - 255	Tilt positioning by 220°
12	128		**TILT FINE**
		000 - 255	Fine Tilt Positioning

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

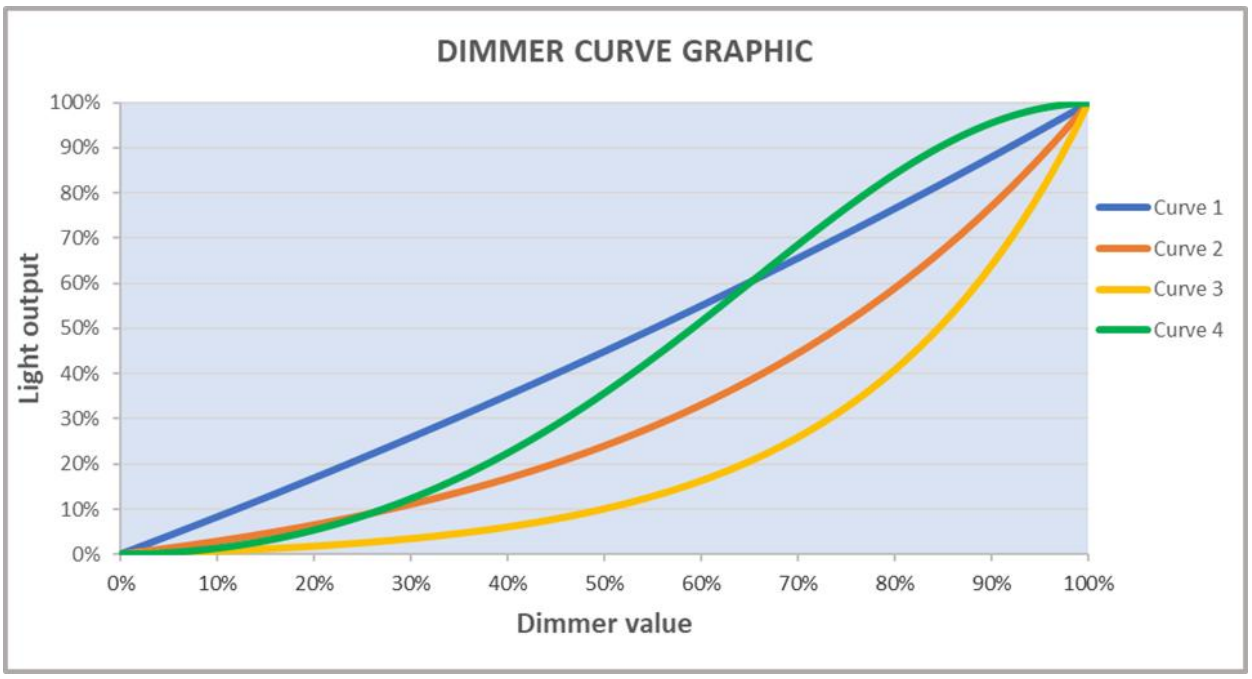
Advanced	DMX Default Value	Bit Value	Functions	
17	000		**LAYER 2 EFFECT**	
		000 - 007	1 Pix →	
		008 - 015	1 Pix Bounce	
		016 - 023	1 Pix Mirror Bouce	
		024 - 031	1 Pix Mirror Implode ><	
		032 - 038	1 Pix Mirror Explode <>	
		039 - 046	o→o→	
		047 - 054	o→o→Bounce	
		055 - 062	Double Fill + ←o←o	
		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	000		**INDEXING/SPEED**	
		000 - 255	Indexing	**Available only If shape selection is static is set**
		000 - 124	Speed from fast to slow, forward	**Available only if shape selection Dynamic is set**
		125 - 130	Stop	
		131 - 255	Speed from slow to fast, backward	

Advanced	DMX Default Value	Bit Value	Functions
19	000		**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 forth on the selected shape
20	000		**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)
		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)

Advanced	DMX Default Value	Bit Value	Functions
21	000		**LAYER 2 DIMMER**
		000 - 255	Linear 0 – 100%
22	000		**LAYER 2 TRANSITION**
		000 - 255	Crossfade between shape.
23	000		**LAYER 2 RED**
		000 - 255	Linear 0 – 100%
24	000		**LAYER 2 GREEN**
		000 - 255	Linear 0 – 100%
25	000		**LAYER 2 BLUE**
		000 - 255	Linear 0 – 100%
26	000		**LAYER 2 WHITE**
		000 - 255	Linear 0 – 100%
27	000		**LAYER 2 CTO**
		000 - 009	CTO OFF
		010 - 255	Layer 2 8000K to 2500K
28	105		**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	000		**LAYER 3 DIMMER**
		000 - 255	Linear 0 – 100%.

Functions details – Pixels Engine

RGB	RGBW	DMX Default Value	Bit Value	Functions
1	1	000		**RED LED 1**
			000 - 255	Linear 0 – 100%.
2	2	000		**GREEN LED 1**
			000 - 255	Linear 0 – 100%.
3	3	000		**BLUE LED 1**
			000 - 255	Linear 0 – 100%.
-	4	000		**WHITE LED 1**
			000 - 255	Linear 0 – 100%.
4	5	000		**RED LED 2**
			000 - 255	Linear 0 – 100%.
5	6	000		**GREEN LED 2**
			000 - 255	Linear 0 – 100%.
6	7	000		**BLUE LED 2** Linear
			000 - 255	Linear 0 – 100%.
-	8	000		**WHITE LED 2**
			000 - 255	Linear 0 – 100%.
⋮	⋮		⋮	**Functionalities are the same for all the Leds**
46	61	000		**RED LED 16**
			000 - 255	Linear 0 – 100%.
47	62	000		**GREEN LED 16**
			000 - 255	Linear 0 – 100%.
48	63	000		**BLUE LED 16**
			000 - 255	Linear 0 – 100%.
-	64	000		**WHITE LED 16** .
			000 - 255	Linear 0 – 100%.



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

