

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

<i>Mode</i>	<i>Number of Parameter</i>	<i>Colour Control</i>	<i>Notes</i>
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

<i>Mode</i>	<i>Number of Parameter</i>	<i>Colour Control</i>	<i>Notes</i>
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	Dimmer
10	Strobe	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	-

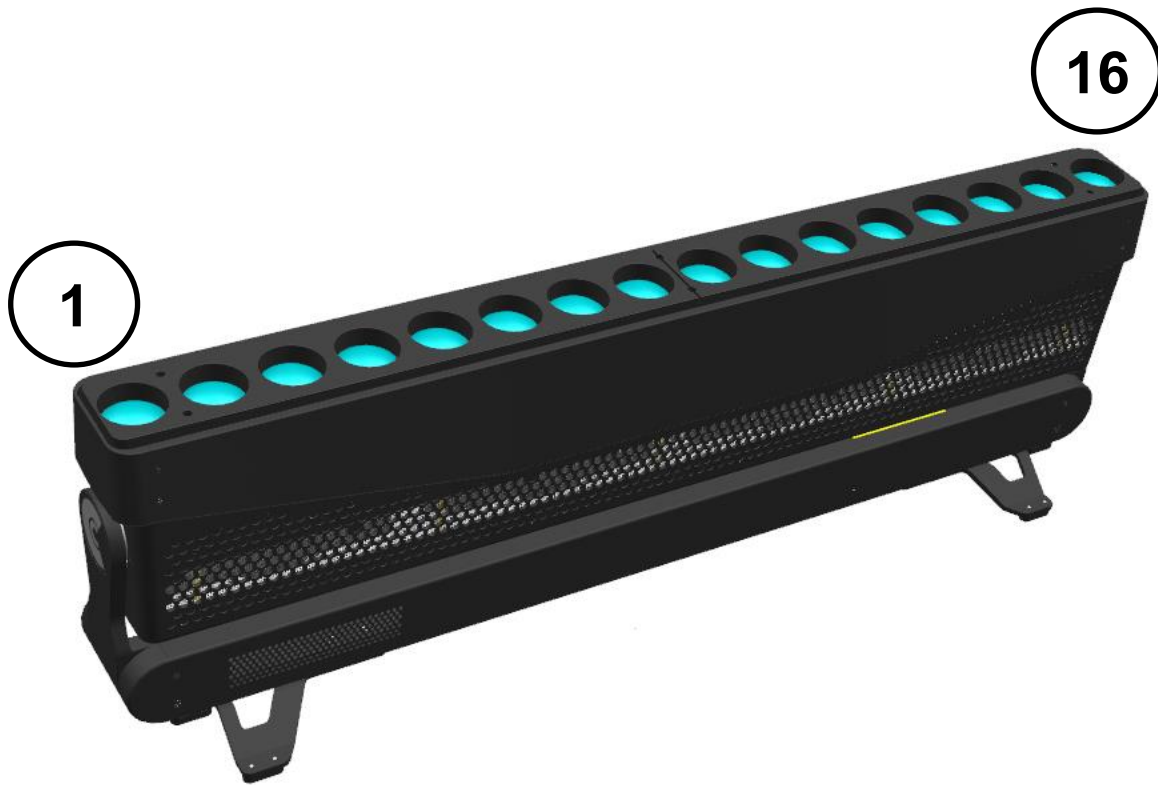
Pixels Engine DMX list

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	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	000 - 009 010 - 255	CTO linear correction from 8000K to 2500K Unused range 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	000 - 255	DIMMER.
8	12	8	12	000 - 255	DIMMER FINE (16 bit)
9	13	9	13	000 - 255	TILT
10	14	10	14	000 - 255	TILT FINE
11	15	11	15	000 - 255	ZOOM linearly from narrow to wide beam

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	000 - 025 026 - 076 077 - 127 128 - 255	RESET Important: The reset sequence is activated passing through the unused levels range and staying in the selected reset range for 5 seconds Unused range Zoom Reset Tilt Reset Complete Rese	
-	-	14	18	000 - 005 006 - 130 131 - 255	SHAPE SELECTION Normal Static Dynamic	
-	-	15	19	000 - 007 008 - 015 016 - 023 024 - 240 249 - 255	SHAPE EFFECT Effect 1 Effect 2 Effect 3 Effect 33	
-	-	16	20		INDEXING SPEED	
				000 - 255	Indexing	→ Static mode
				000 - 124 125 - 130 131 -255	Speed from fast to slow, forward STOP Speed from slow to fast, backward	→ Dynamic mode
-	-	17	21	000 - 005 006 - 130 131 - 255	SHAPE FADE OFF Fade change from fast to slow Wake change from fast to slow	
-	-	18	22	000 - 003 004 - 103 104 - 107 108 - 207 208 - 212 213 - 225 226 - 238 239 - 251 252 - 255	SHAPE STROBE Light OFF Strobe effect linearly variable from slow to fast Light ON Pulsation linearly variable speed from slow to fast Light ON (Shape Slave) Random Slow Strobe effect Random Medium Strobe effect Random Fast Strobe effect Light ON (Shape Master)	
-	-	19	23	0 - 255	SHAPE DIMMER	
-	-	20	24	0 - 255	SHAPE TRANSITION 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
-	-	22	27	000 - 255	BACKGROUND GREEN Linear 0 – 100%
-	-	-	28	000 - 255	BACKGROUND GREEN FINE
-	-	23	29	000 - 255	BACKGROUND BLUE Linear 0 – 100%
-	-	-	30	000 - 255	BACKGROUND BLUE FINE
-	-	24	31	000 - 255	BACKGROUND WHITE Linear 0 – 100%
-	-	-	32	000 - 255	BACKGROUND WHITE FINE
-	-	25	33	000 - 009 010 - 255	BACKGROUND CTO from 8000K to 2500K OFF 8000K – 2500K
-	-	26	34	000 - 003 004 - 103 104 - 107 108 - 207 208 - 212 213 - 225 226 - 238 239 - 251 252 - 255	BACKGROUND STROBE Light OFF Strobe effect linearly variable from slow to fast. Light ON Pulsation linearly variable speed from slow to fast. Light ON Random Slow Strobe effect Random Medium Strobe effect Random Fast Strobe effect Light ON
-	-	27	35	000 - 255	BACKGROUND DIMMER

ADVANCED MODE

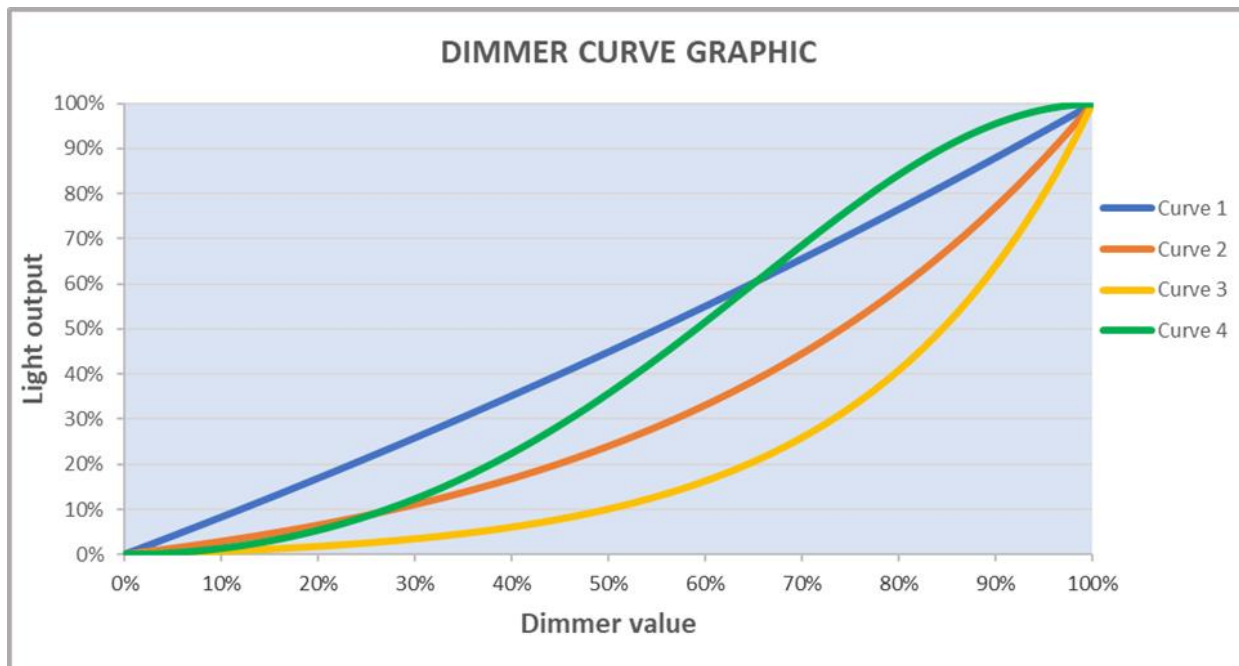
<i>Advanced</i>	<i>Bit Value</i>	<i>Function</i>
1	000 - 255	LAYER 1 RED Linear 0 – 100%
2	000 - 255	LAYER 1 GREEN Linear 0 – 100%
3	000 - 255	LAYER 1 BLUE Linear 0 – 100%
4	000 - 255	LAYER 1 WHITE Linear 0 – 100%
5	000 - 009 010 - 255	LAYER 1 CTO OFF from 8000K to 2500K
6	000 - 003 004 - 103 104 - 107 108 - 207 208 - 212 213 - 225 226 - 238	LAYER 1 STROBE Light OFF Layer 1 Strobe effect linearly variable from slow to fast. Light ON Layer 1 pulsation linearly variable speed from slow to fast. Light ON Random Slow Strobe effect Random Medium Strobe effect
7	000 - 255	LAYER 1 DIMMER Linear 0 – 100%
8	000 - 003 004 - 103 104 - 107 108 - 207 208 - 212 213 - 225 226 - 238 239 - 251 252 - 255	STROBE Light OFF Strobe effect linearly variable frequency from slow (1Hz) to fast (25Hz) Light ON Pulsation at linearly variable speed from slow (0.5 Hz) to fast (25 Hz) Light ON Random Slow Strobe effect Random Medium Strobe effect Random Fast Strobe effect Light On
9	000 - 255	DIMMER. Linear 0 – 100%
10	000 - 255	DIMMER FINE (16 bit)
11	000 - 255	TILT
12	000 - 255	TILT FINE

Advanced	Bit Value	Function	
13	0 - 255	ZOOM from narrow to wide beam	
14		Same as the FUNCTION parameter of the other DMX modes.	
15	000 - 025 026 - 076 077 - 127 128 - 255	RESET Unused range Zoom reset Tilt reset Complete reset	
16	000 - 005 006 - 130 131 - 255	LAYER 2 SELECTION Normal Static Dynamic	
17	000 - 007 008 - 015 ... 241 - 248 249 - 255	LAYER 2 EFFECT Effect 1 Effect 2 ... Effect 32 Effect 33	
18	000 - 255	Indexing	→ Static mode
	000 - 124 125 - 130 131 - 255	Speed from fast to slow, forward Stop Speed from slow to fast, backward	→ Dynamic mode
19	000 - 005 006 - 130 131 - 255	LAYER 2 FADE OFF Fade control on shape from fast to slow. Wake linearly increase of pixel back and front on the selected shape.	
20	000 - 003 004 - 103 104 - 107 108 - 207 208 - 212 213 - 225 226 - 238 239 - 251 252 - 255	LAYER 2 STROBE Light OFF Layer 2 Strobe effect linearly variable from slow to fast. Light ON Layer 2 pulsation linearly variable speed from slow to fast. Light ON (Layer 2 Slave) I Random Slow Strobe effect Random Medium Strobe effect Random Fast Strobe effect Light ON (Layer 2 Master)	

<i>Advanced</i>	<i>Bit Value</i>	<i>Function</i>
21	000 - 255	LAYER 2 DIMMER Linear 0 – 100%
22	000 - 255	LAYER 2 TRANSITION Crossfade between shape.
23	000 - 255	LAYER 2 RED Linear 0 – 100%
24	000 - 255	LAYER 2 GREEN Linear 0 – 100%
25	000 - 255	LAYER 2 BLUE Linear 0 – 100%
26	000 - 255	LAYER 2 WHITE Linear 0 – 100%
27	000 - 009 010 - 255	LAYER 2 CTO CTO Off Layer 2 from 8000K to 2500K
28	000 - 003 004 - 103 104 - 107 108 - 207 208 - 212 213 - 225 226 - 238 239 - 251 252 - 255	LAYER 3 STROBE Light OFF Layer 3 Strobe effect from slow to fast. Light ON Layer 3 pulsation from slow to fast. Light ON (Layer 3 Slave) Random Slow Strobe effect Random Medium Strobe effect Random Fast Strobe effect Light ON (Layer 3 Master)
29	000 - 255	LAYER 3 DIMMER Linear 0 – 100%.

Function details – Pixels Engine

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



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

