DMX MODES

Tambora has three different operating modes:

Basic, Standard, Advanced

CONTROL LAYER
- The Basic mode allow to control the fixtures general parameter.
- The Standard mode allows user to select and manage countless type of graphic effects the background color
- Advanced mode allows easy control with three independent overlapping layers that can operate by enable Pixels Engine (active in 0 seconds) the users can control RGB/RGBW simultaneously

LAYER CONCEPT
- Layer 1 Control general fixture parameters and function channel
- Layer 2 Control Shape Engine and Background engine fade color speed transition in Dynamic or Static mode.
- Layer 2 in Shape mode can be set in Master/Slave mode
- Layer 2 and 3 in advanced mode can be set in Master/Slave mode
- Layer 3 control dimmer and strobe of pixel engine.

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 becomes black
If a layer is set in slave mode, the layer below prevails

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

DMX MODE

Mode	*Number of Parameter*	*Color Control*	*Notes*
Basic	10	RGBW 8bit	Color control in 1 layer
Standard	32	RGBW 16bit	Color control in 2 layers.
Advanced	26	RGBW 8bit	Color control, in 3 layers.

IMPORTANT: The Standard is the default operating mode.

## *PIXELS ENGINE MODE*

Mode	*Number of Parameter*
Disable	-
RGB	81
RGBW	108

Functions Details

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

Led reference number

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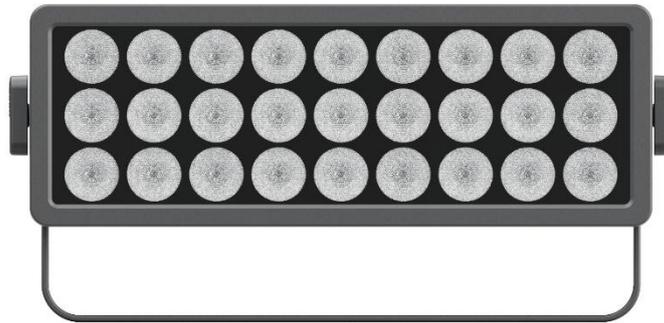
Function details

Basic	Standard	DMX Default Value	Bit Value	Function
1	**1**	**000**	**000 - 255**	**RED** Linear 0 – 100%
-	**2**	**000**	**000 - 255**	**RED FINE (16 Bit)**
2	**3**	**000**	**000 - 255**	**GREEN** Linear 0 – 100%
-	**4**	**000**	**000 - 255**	**GREEN FINE (16 Bit)** fine control
3	**5**	**000**	**000 - 255**	**BLUE** Linear 0 – 100%
-	**6**	**000**	**000 - 255**	**BLUE FINE (16 bit)**
4	**7**	**000**	**000 - 255**	**WHITE** Linear 0 – 100%
-	**8**	**000**	**000 - 255**	**WHITE FINE (16 bit)** fine control
5	**9**	**000**		**CTO** linear from 8000K to 2700K
			000 - 009	Unused range/CTO OFF
			010 - 255	8000 K - 2700 K
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**	**000**	**000 - 255**	**DIMMER**.
8	**12**	**000**	**000 - 255**	**DIMMER FINE (16 bit)**
9	**13**	**000**	**000 - 255**	**COLOR CROSSFADE** Fast to Slow

Basic	Standard	DMX Default Value	BIT Value	Function	
				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 - 037	Unused range	
			038 - 042	Dimmer curve Linear **(Default)**	→**Details at page 16**
			043 - 047	Dimmer curve Quadratic	
			048 - 052	Dimmer curve Square	
			053 - 055	Dimmer curve Sine Wave	
			056 - 057	Dimmer curve Sync Linear	
10	**14**	**000**	058 - 062	Raw color gamma 1	→**Details at page 16**
			063 - 067	Raw color gamma 1.5	
			068 - 072	Raw color gamma 2.2 **(Default)**	
			073 - 084	Unused range	
			085 - 086	Reverse mapping OFF **(Default)**	
			087 - 088	Reverse mapping ON	
			089 - 092	Unused range	
			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 - 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	

Basic	Standard	DMX Default Value	BIT Value	Function	
If Layer 2 shape engine is active pixel not involved on pattern become black and take control from background!				
-	15	000		**LAYER 2 SHAPE SELECTION**	
			000 - 005	Normal	
			006 - 130	Static	
			131 - 255	Dynamic	
-	16	000		**LAYER 2 SHAPE EFFECT**	
			000 - 015	Effect 1	
			016 - 031	Effect 2	
			032 - 047	Effect 3	
			048 - 239	.....	
			240 - 255	Effect 16	
-	17	000		**LAYER 2 SHAPE INDEXING SPEED**	
			000 - 255	Indexing	**If Static mode is selected on shape selection**
			000 - 124	Speed from fast to slow, forward	**If Dynamic mode is selected on shape selection**
			125 - 130	STOP	
			131 -255	Speed from slow to fast, backward	
-	18	000		**LAYER 2 SHAPE FADE**	
			000 - 005	OFF	
			006 - 130	Fade change from fast to slow	
			131 - 255	Wake change from fast to slow	
-	19	104		**LAYER 2 SHAPE 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 (**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**)	
-	20	255	0 - 255	**LAYER 2 SHAPE DIMMER**	
-	21	000	0 - 255	**LAYER 2 SHAPE TRANSITION**	
-	22	000	000 - 255	**LAYER 1 RED** Linear 0 – 100%	
-	23	000	000 - 255	**LAYER 1 RED FINE**	
-	24	000	000 - 255	**LAYER 1 GREEN** Linear 0 – 100%	
-	25	000	000 - 255	**LAYER 1 GREEN FINE**	
-	26	000	000 - 255	**LAYER 1 BLUE** Linear 0 – 100%	
-	27	000	000 - 255	**LAYER 1 BLUE FINE**	
-	28	000	000 - 255	**LAYER 1 WHITE** Linear 0 – 100%	
-	29	000	000 - 255	**LAYER 1 WHITE FINE**	
-	30	000		**LAYER 1 CTO** from 8000K to 2700K	
			000 - 009	Unused Range/CTO OFF	
			010 - 255	8000K – 2700K	

Basic	Standard	DMX Default Value	BIT Value	Function
-	31	255		**LAYER 1 STROBE**
			000 - 003	Light OFF
			004 - 103	Strobe linear 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
-	32	255	000 - 255	**LAYER 1 DIMMER**

Advanced	DMX Default Value	Bit Value	Function
1	000	000 - 255	**LAYER 1 RED** Linear 0 – 100%
2	000	000 - 255	**LAYER 1 GREEN** Linear 0 – 100%
3	000	000 - 255	**LAYER 1 BLUE** Linear 0 – 100%
4	000	000 - 255	**LAYER 1 WHITE** Linear 0 – 100%
5	000		**LAYER 1 CTO**
		000 - 009	Unused Range/CTO OFF
		010 - 255	from 8000K to 2700K
6	255		**LAYER 1 STROBE**
		000 - 003	Light OFF
		004 - 103	Strobe linear 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		000 - 255	**LAYER 1 DIMMER** Linear 0 – 100%
8	104		**MASTER 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
9	000	000 - 255	**MASTER DIMMER**. Linear 0 – 100%
10	000	000 - 255	**MASTER DIMMER FINE (16 bit)**
11	000	000 - 255	**COLOR CROSSFADE** Fast to Slow
12			Same **FUNCTION** channel as the other DMX modes.
13	000		**LAYER 2 SELECTION**
		000 - 005	Normal
		006 - 130	Static
		131 - 255	Dynamic
14	000		**LAYER 2 EFFECT**
		000 - 015	Effect 1
		016 - 031	Effect 2
		032 - 047	Effect 3
		048 - 239	…..
		240 - 255	Effect 16

Advanced	DMX Default Value	Bit Value	Function	
15	000		**LAYER 2 INDEXING/SPEED**	
		000 - 255	Indexing	**If Static mode is selected on layer 2 selection**
		000 - 124	Speed from fast to slow, forward	**If Dynamic mode is selected on layer 2 selection**
		125 - 130	Stop	
		131 - 255	Speed from slow to fast, backward	
16	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 front on the selected shape.	
17	255		**LAYER 2 STROBE**	
		000 - 003	Light OFF	
		004 - 103	Strobe linear from slow (1Hz) to fast (25Hz).	
		104 - 107	Light ON	
		108 - 207	Pulsation linear 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)	
18	000	000 - 255	**LAYER 2 DIMMER** Linear 0 – 100%	
19	000	000 - 255	**LAYER 2 TRANSITION** Crossfade between shape.	
20	000	000 - 255	**LAYER 2 RED** Linear 0 – 100%	
21	000	000 - 255	**LAYER 2 GREEN** Linear 0 – 100%	
22	000	000 - 255	**LAYER 2 BLUE** Linear 0 – 100%	
23	000	000 - 255	**LAYER 2 WHITE** Linear 0 – 100%	
24	000		**LAYER 2 CTO**	
		000 - 009	Unused range/CTO OFF	
		010 - 255	CTO from 8000K to 2700K	
25	255		**LAYER 3 STROBE**	
		000 - 003	Light OFF	
		004 - 103	Strobe linear from slow (1Hz) to fast (25Hz)..	
		104 - 107	Light ON	
		108 - 207	Pulsation linear 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)	
26	000	000 - 255	**LAYER 3 DIMMER** Linear 0 – 100%.	

Tambora Rays

Function details – Pixels Engine

RGB	RGBW	Bit Value	Function
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%.
⋮	⋮	⋮	**Functionalities are the same for all the Led's**
76	101	000 - 255	**RED LED 26** Linear 0 – 100%.
77	102	000 - 255	**GREEN LED 26** Linear 0 – 100%.
78	103	000 - 255	**BLUE LED 26** Linear 0 – 100%.
-	104	000 - 255	**WHITE LED 26** Linear 0 – 100%.
79	105	000 - 255	**RED LED 27** Linear 0 – 100%.
80	106	000 - 255	**GREEN LED 27** Linear 0 – 100%.
81	107	000 - 255	**BLUE LED 27** Linear 0 – 100%.
-	108	000 - 255	**WHITE LED 27** Linear 0 – 100%.
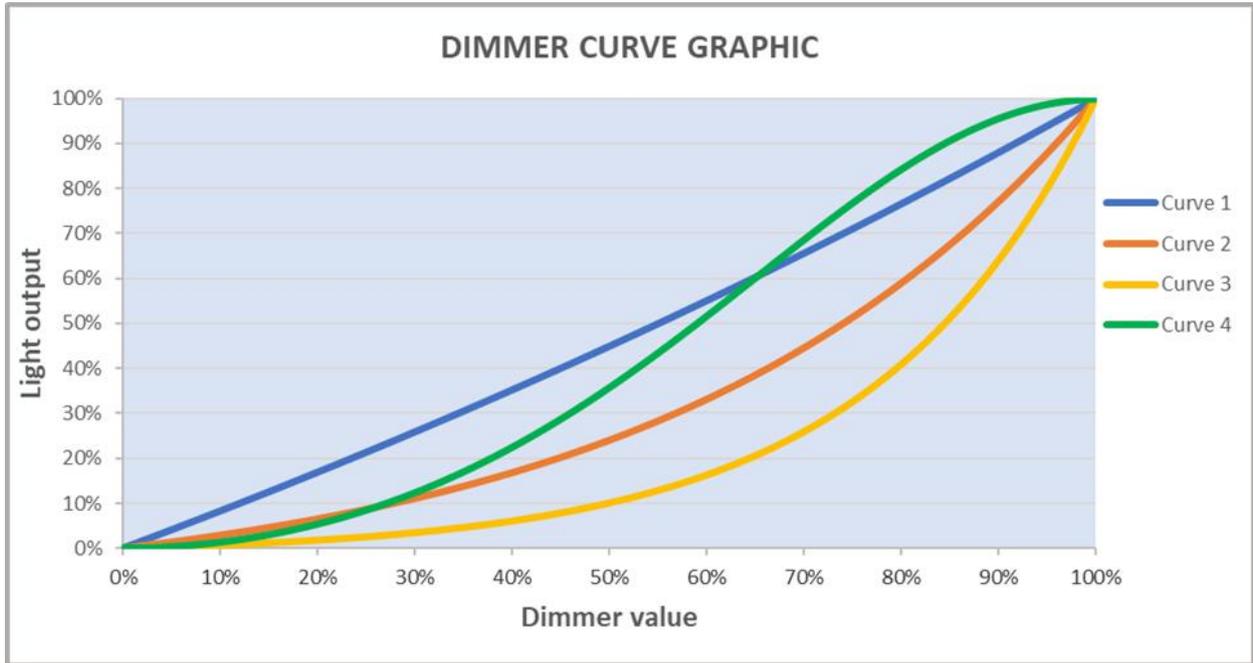
IMPORTANT NOTE: Dimmer Curve 5 has all the Leds synchronized, for balanced behavior in white.

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