DMX REFERENCE

Tambora

Tambora LED

Kadence



Manufacturer	Kadence
GDTF file	Kadence_Tambora_63933.gdtf
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1 About this manual

This document describes the Tambora LED by Kadence. It was compiled from the GDTF file Kadence_Tambora_63933.gdtf from the GDTF-Share library.

File revision: “Ver 2”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by Kadence; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

Parameter	Value
Weight	14 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
13 Channels Mode	13	39	1, 14, 27, 40, ...

No light? Check these channels

- 13 Channels Mode: CH 6 Shutter at 104–107, 208–212 or 252–255 “Open”


Read the manual before use


Do not stare into the light


Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

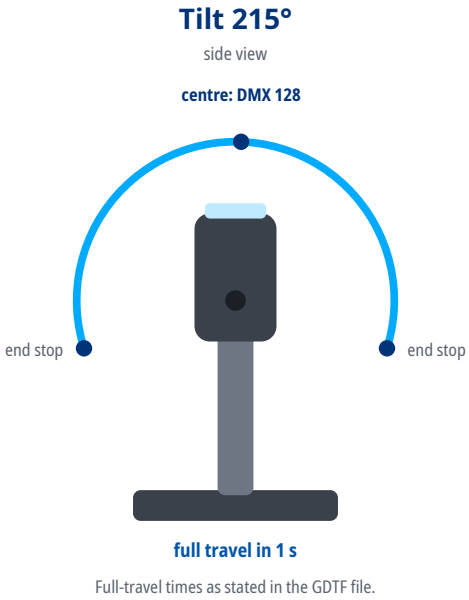
⚠ CAUTION

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, move them by hand, or obstruct their movement; this can cause injury (pinching) and damage the drive.
> - Do not carry the device by its moving parts. If the device has a transport lock, engage it before transport and release it before switching on.

4 Product description

Range of movement



Full-travel times as stated in the GDTF file.

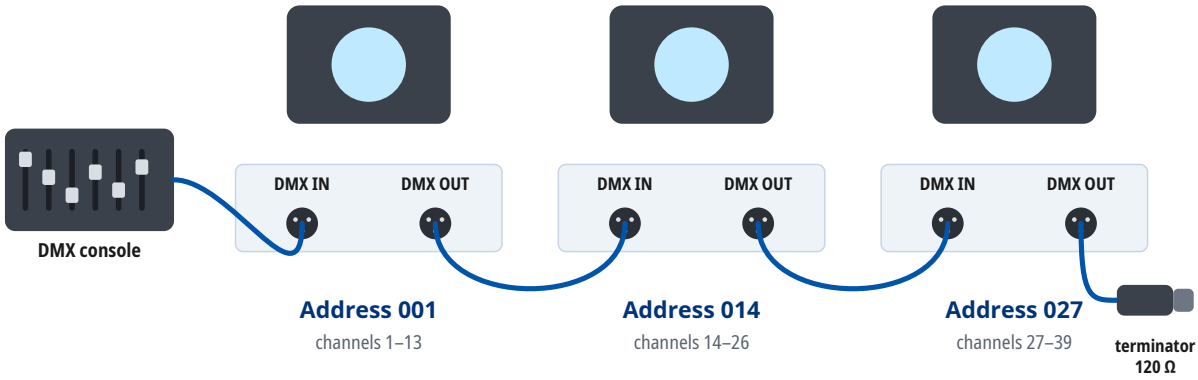
5 Installation

> ⚠ **WARNING**
>
> - Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
> - The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
> - Weight of the device: 14 kg.
> - Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
> - Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
> - During installation and removal, keep people out of the area below the work position.
> - Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

6 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

DMX line



Mode 13 Channels Mode: every unit occupies 13 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

7 Operation

Setting the DMX address

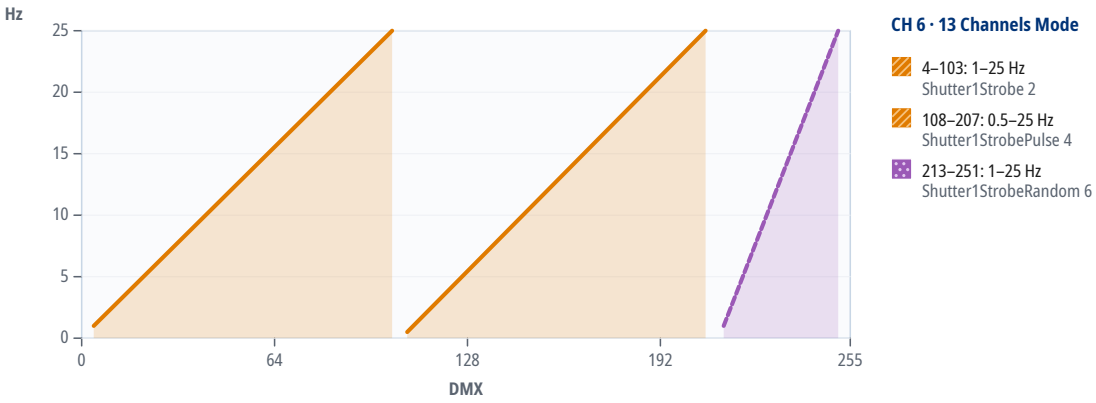
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “13 Channels Mode”: 13.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “13 Channels Mode”, you can use, for example, the start addresses 1, 14, 27, 40.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

Functions in each DMX mode

	13 Channels Mode 13 channels
Pan / Tilt	1, 4
Dimmer	5
Shutter / strobe	6
Color mixing	7–10
Zoom	3

Strobe rate



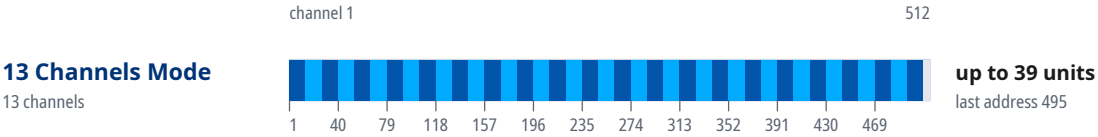
Cells (pixels)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

16 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “13 Channels Mode” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “13 Channels Mode”

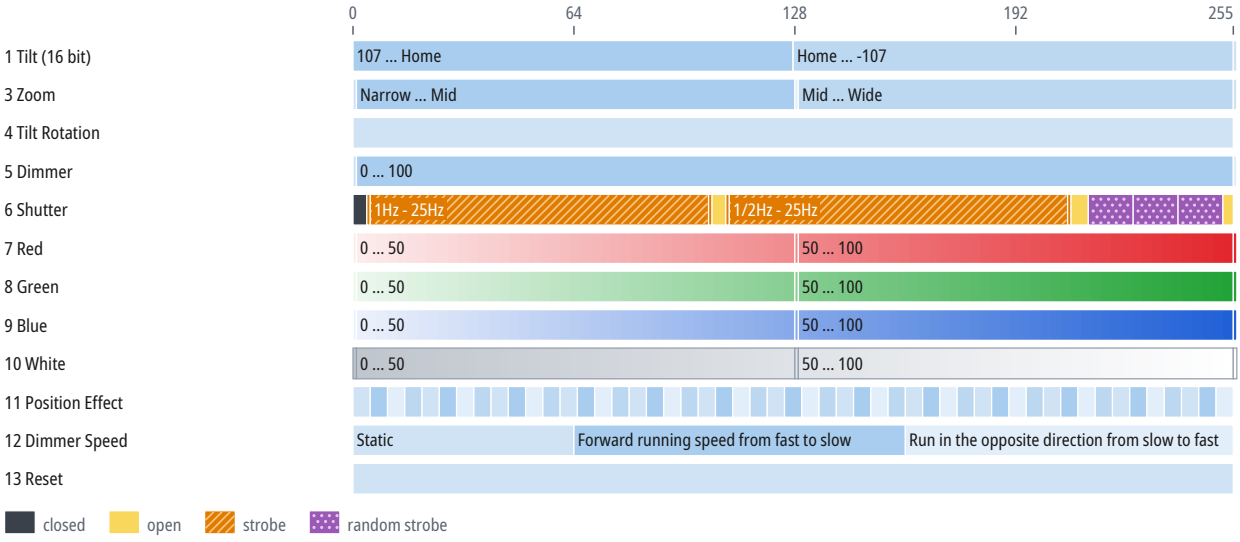
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	66	11	131	16	196
2	14	7	79	12	144	17	209
3	27	8	92	13	157	18	222
4	40	9	105	14	170	19	235
5	53	10	118	15	183	20	248

Mode 13 Channels Mode

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 104–107, 208–212 or 252–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 5 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0–127	107 ... Home
		128–255	Home ... -107
		255	-107
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Zoom	0	Narrow
		1–127	Narrow ... Mid

CH	Function	DMX	Description
3	Zoom (continued)	128	Mid
		129–254	Mid ... Wide
		255	Wide
4	Tilt Rotation	0–255	
5	Dimmer	0	0
		1–254	0 ... 100
		255	100
6	Shutter	0–3	Close
		4	1Hz
		5–102	1Hz - 25Hz
		103	25Hz
		104–107	Open
		108	Pulse 1/2Hz
		109–206	1/2Hz - 25Hz
		207	Pulse 25Hz
		208–212	Open
		213–225	Random Slow
		226–238	Random Mid
		239–251	Random Fast
		252–255	Open
7	Red		Color RGB_R 1
		0	0
		1–127	0 ... 50
		128	50
		129–254	50 ... 100
		255	100
8	Green		Color RGB_G 1
		0	0
		1–127	0 ... 50
		128	50
		129–254	50 ... 100
		255	100
9	Blue		Color RGB_B 1
		0	0
		1–127	0 ... 50
		128	50
		129–254	50 ... 100
		255	100
10	White		Color RGB_W 1
		0	0
		1–127	0 ... 50
		128	50

CH	Function	DMX	Description
10	White (continued)	129–254	50 … 100
		255	100
11	Position Effect	0–4	Void
		5–9	Effect 1
		10–14	Effect 2
		15–19	Effect 3
		20–24	Effect 4
		25–29	Effect 5
		30–34	Effect 6
		35–39	Effect 7
		40–44	Effect 8
		45–49	Effect 9
		50–54	Effect 10
		55–59	Effect 11
		60–64	Effect 12
		65–69	Effect 13
		70–74	Effect 14
		75–79	Effect 15
		80–84	Effect 16
		85–89	Effect 17
		90–94	Effect 18
		95–99	Effect 19
		100–104	Effect 20
		105–109	Effect 21
		110–114	Effect 22
		115–119	Effect 23
		120–124	Effect 24
		125–129	Effect 25
		130–134	Effect 26
		135–139	Effect 27
		140–144	Effect 28
		145–149	Effect 29
		150–154	Effect 30
		155–159	Effect 31
		160–164	Effect 32
		165–169	Effect 33
		170–174	Effect 34
		175–179	Effect 35
		180–184	Effect 36
		185–189	Effect 37
		190–194	Effect 38
		195–199	Effect 39

CH	Function	DMX	Description
11	Position Effect (continued)	200–204	Effect 40
		205–209	Effect 41
		210–214	Effect 42
		215–219	Effect 43
		220–224	Effect 44
		225–229	Effect 45
		230–234	Effect 46
		235–239	Effect 47
		240–244	Effect 48
		245–249	Effect 49
		250–255	Effect 50
12	Dimmer Speed	0–63	Static
		64–159	Forward running speed from fast to slow
		160–255	Run in the opposite direction from slow to fast
13	Reset	0–255	

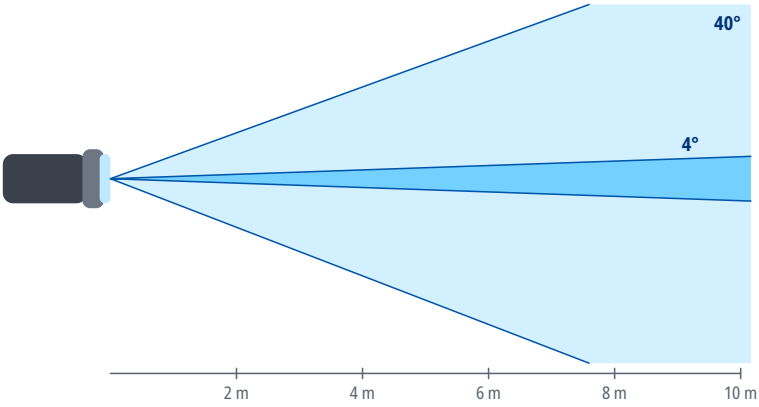
10 Technical specifications

Parameter	Value
Light source	LED
Zoom	4–40°
Tilt	215°
Weight	14 kg
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–25 Hz

Spot diameter



Distance	Ø 4°	Ø 40°
2 m	0.14 m	1.5 m
4 m	0.28 m	2.9 m
6 m	0.42 m	4.4 m
8 m	0.56 m	5.8 m
10 m	0.7 m	7.3 m
15 m	1 m	10.9 m

Spot diameter square to the beam axis, calculated from the beam angle.

11 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

12 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.
The device does not respond to DMX	Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
The device behaves erratically or flickers	Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
Only some devices on the line respond	Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
Devices respond to the wrong channels or affect each other	Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
The device or the connected load does not light up although it receives DMX	Check the values of the dimmer, shutter and strobe channels against the DMX channel table. For the DMX modes for which the sources state it, the chapter DMX channels gives under the mode's heading which channels must be open.
Movement is reversed	Check whether Pan/Tilt inversion is enabled in the device menu or in the controller.
Moving parts do not reach the correct position after power-on or transport	Switch the device off and on again to reset the position, and make sure the transport lock, if any, is released. If this does not help, contact a service center.
Movement is jerky	Check the value of the Pan/Tilt speed channel, if the device has one, and the stability of the DMX signal.

13 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

Recycle the packaging materials according to their type.