DMX REFERENCE

Neutron Atom TM IP65

Neutron Atom TM

BeamZ Pro



Manufacturer	BeamZ Pro
GDTF file	BeamZ_Pro_Neutron_Atom_TM_IP65_123578.gdtf
GDTF revision	rev100 RELEASE · 2026-01-06
Generated	2026-11-23

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1 About this manual

This document describes the Neutron Atom TM by BeamZ Pro. It was compiled from the GDTF file BeamZ_Pro_Neutron_Atom_TM_IP65_123578.gdtf from the GDTF-Share library.

File revision: “rev100 RELEASE”.

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 BeamZ Pro; 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	3.8 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
4 Channel + VIRTUAL DIMMER	4	128	1, 5, 9, 13, ...
9 Channel	9	56	1, 10, 19, 28, ...
11 Channel	11	46	1, 12, 23, 34, ...
15 Channel	15	34	1, 16, 31, 46, ...
18 Channel	18	28	1, 19, 37, 55, ...
112 Channel	112	4	1, 113, 225, 337
112 Channel + VIRTUAL DIMMERS	112	4	1, 113, 225, 337
123 Channel	123	4	1, 124, 247, 370
123 Channel + VIRTUAL DIMMERS	123	4	1, 124, 247, 370



Read the manual before use



Do not stare into the light

3 Safety instructions



Read the manual before use



Do not stare into the light

⚠ 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.

⚠ CAUTION

- The device is rated IP65 and may be used outdoors within the limits of this rating.
- This protection is effective only when all connectors are mated or closed with their protective caps and all seals are intact. Use cables and connectors with the same or a higher protection rating.
- Do not open the housing; opening it breaks the seals and the protection rating can no longer be guaranteed.
- Install the device so that water cannot collect around connectors and cable glands, and inspect seals and cables regularly.

⚠ 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.

4 Product description

Description in the GDTF file

“Strobe / Wash / Pixel :: 1 x 160 W 2700 K / 36 x 1 W RGB / IP65 / linkable housing”

5 Installation

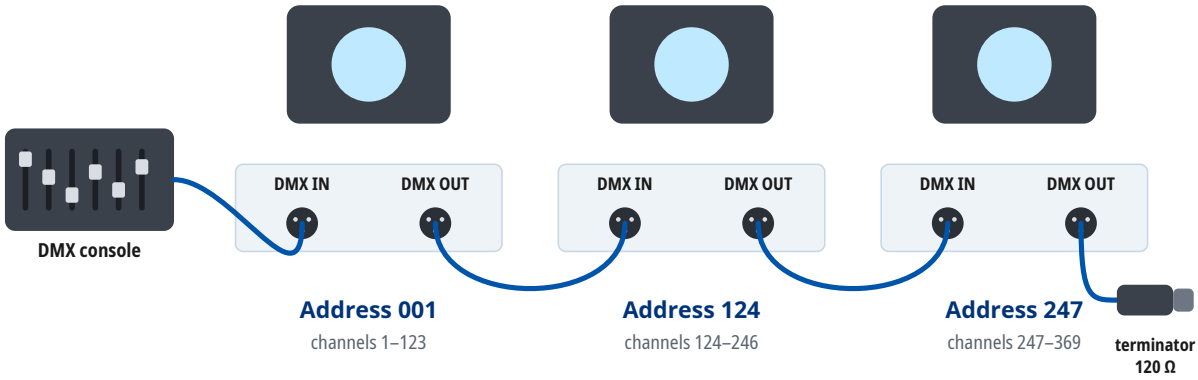
⚠ **WARNING**

- 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: 3.75 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 123 Channel: every unit occupies 123 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 “123 Channel”: 123.
- 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 “123 Channel”, you can use, for example, the start addresses 1, 124, 247, 370.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

8 Functions at a glance

Functions in each DMX mode

	4 Channel + VIRTUAL DIMMER 4 channels	9 Channel 9 channels	11 Channel 11 channels	15 Channel 15 channels	18 Channel 18 channels	112 Channel 112 channels	112 Channel + VIRTUAL DIMMERS 112 channels	123 Channel 123 channels
Pan / Tilt		✓	✓	✓	✓		✓	✓
Dimmer	1	1	1	1, 4	4 channels (1–15)	1	1	4 channels (1–120)
Shutter / strobe		2, 3	2–5	5–8	5–8	2	2	5–8
Color mixing	2–4	4–8	6–10	2, 3, 9–11	2, 3, 9–11	3–112	3–112	2, 3, 9–116
Color wheel				12	12, 14			117, 119
Effects / macros				13, 14	16, 17			121, 122
Pixel control					✓	36 cells	36 cells	36 cells

Color wheel 1

1 Open
DMX 0–11

2 Blue
DMX 11

3 Blue>Cyan
DMX 12–48

4 Cyan
DMX 49

5 Cyan>Green
DMX 50–86

6 Green
DMX 87

7 Green>Yellow
DMX 88–124

8 Yellow
DMX 125

9 Yellow>Red
DMX 126–162

10 Red
DMX 163

11 Red>Magenta
DMX 164–200

12 Magenta
DMX 201

13 Magenta>Blue
DMX 202–238

Color wheel 2

1 Open

2 Red 1

3 Amber

4 AmberYellow

5 Yellow 1

6 Green

7 Turquoise

8 Cyan

9 Blue

10 Lavender

11 Mauve

12 Magenta

13 Pink

14 White 1

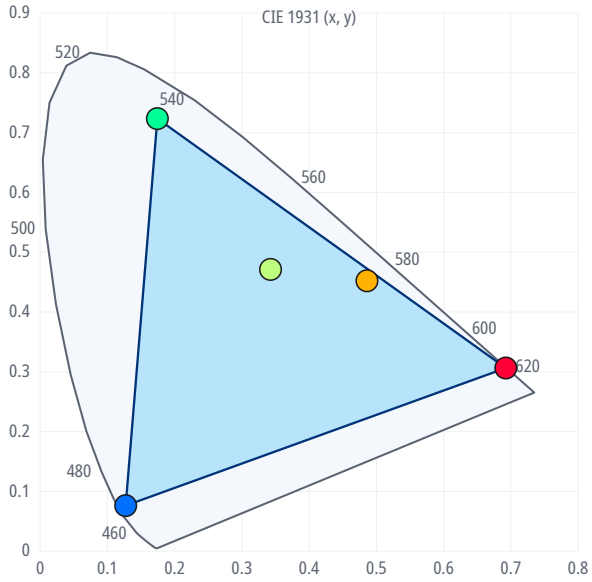
15 White 2

16 White 3

17 White 4

18 White 5

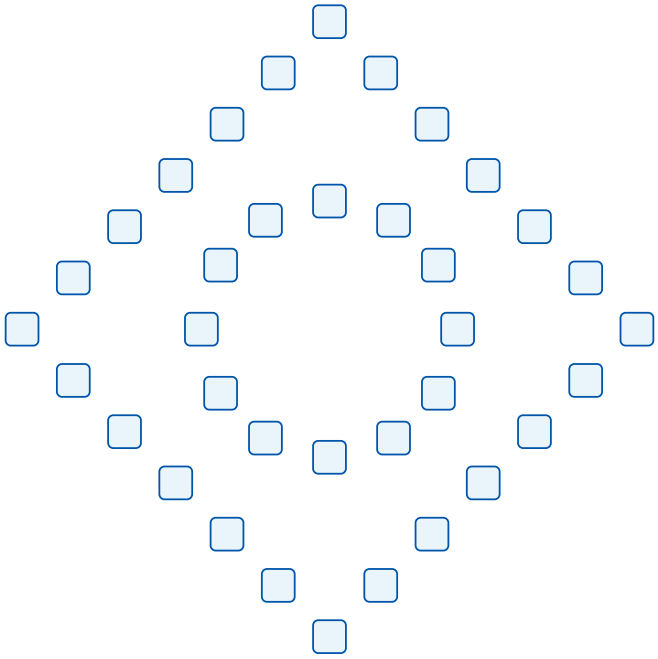
LED colors and the colors they mix



LED	x	y
BeamAmber	0.486	0.452
BeamLime	0.343	0.471
AuraRed	0.692	0.306
AuraGreen	0.174	0.724
AuraBlue	0.127	0.076

The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

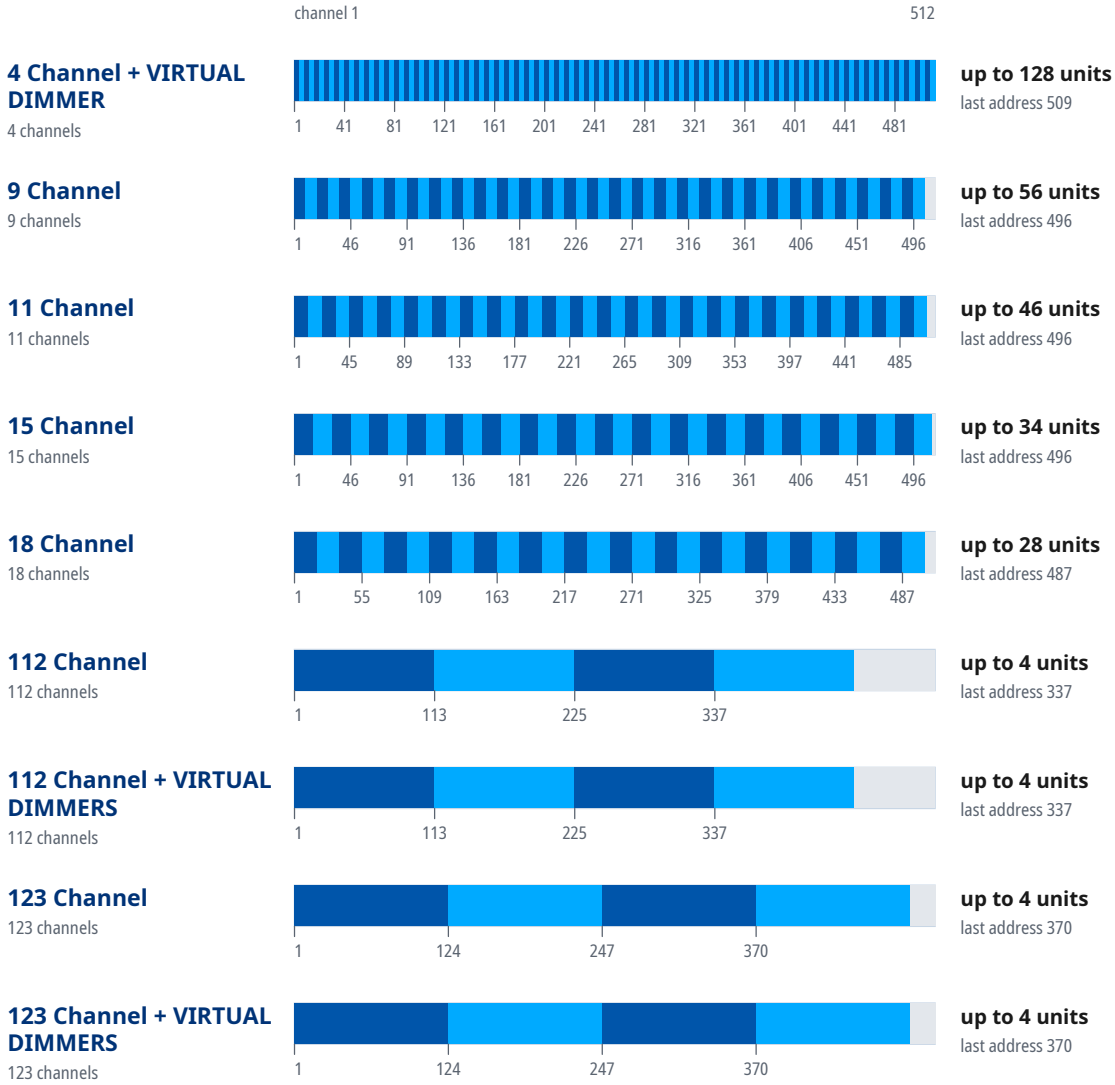
Cells (pixels)



Cells where the GDTF file places them (seen from above), 36 in all in the mode “123 Channel + VIRTUAL DIMMERS”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “123 Channel”

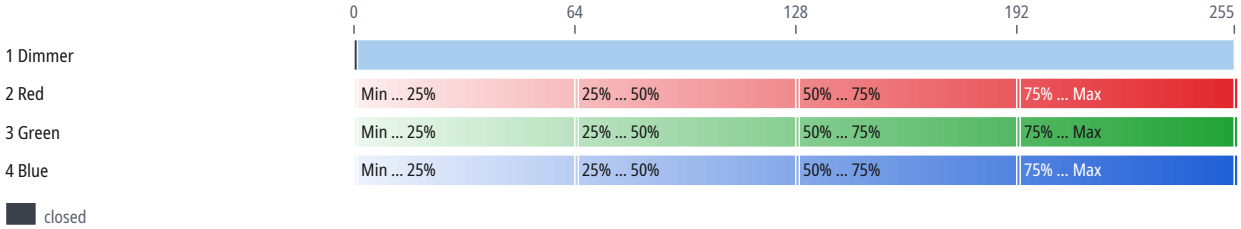
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 124	11	U3 · 247	16	U4 · 370
2	124	7	U2 · 247	12	U3 · 370	17	U5 · 1
3	247	8	U2 · 370	13	U4 · 1	18	U5 · 124
4	370	9	U3 · 1	14	U4 · 124	19	U5 · 247
5	U2 · 1	10	U3 · 124	15	U4 · 247	20	U5 · 370

Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 4 Channel + VIRTUAL DIMMER

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Red 255, CH 3 Green 255, CH 4 Blue 255.

Channel functions at a glance

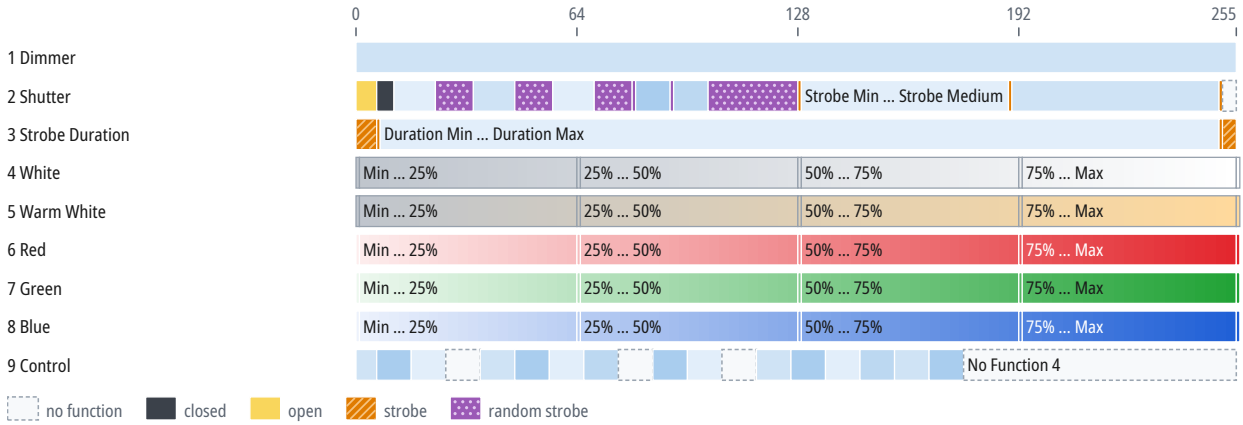


CH	Function	DMX	Description
1	Dimmer	0	Closed
		1–255	Dimmer
2	Red	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
3	Green	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
4	Blue	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max

Mode 9 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 2 Shutter at 0–5 “Shutter OPEN”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Shutter 0, CH 3 Strobe Duration 255, CH 4 White 255, CH 5 Warm White 255, CH 6 Red 255, CH 7 Green 255, CH 8 Blue 255.

Channel functions at a glance



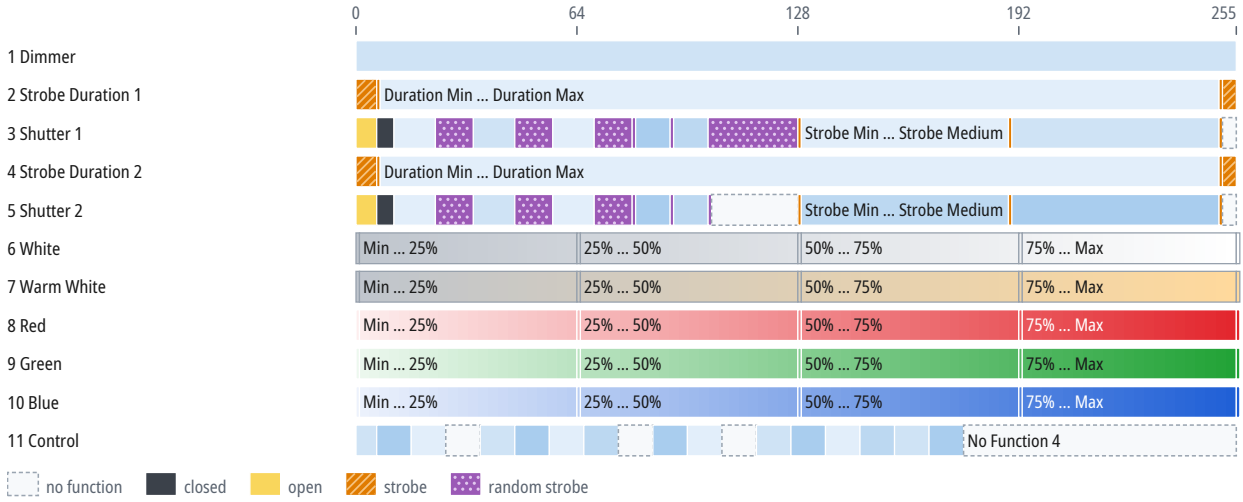
CH	Function	DMX	Description
1	Dimmer	0–255	
2	Shutter	0–5	Shutter OPEN
		6–10	Shutter CLOSED
		11–22	Ramp
		23–33	Ramp Random
		34–45	Ramp Snap
		46–56	RampSnap Random
		57–68	Snap Ramp
		69–79	SnapRamp Random
		80	Random Min
		81–90	Random Min ... Random Medium
		91	Random Medium
		92–101	Random Medium ... Random Max
		102–127	Random Max
		128	Strobe Min
		129–188	Strobe Min ... Strobe Medium
		189	Strobe Medium
		190–249	Strobe Medium ... Strobe Max
		250	Strobe Max
		251–255	No function
3	Strobe Duration	0–5	Duration OFF
		6	Duration Min
		7–249	Duration Min ... Duration Max
		250	Duration Max
		251–255	Duration OFF

CH	Function	DMX	Description
4	White	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Max
		255	Max
5	Warm White	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Max
		255	Max
6	Red		Same as CH 2 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
7	Green		Same as CH 3 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
8	Blue		Same as CH 4 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
9	Control	0–5	Idle
		6–15	Display ON
		16–25	Display OFF
		26–35	No Function 1
		36–45	Linear (1s)
		46–55	Square (1s)
		56–65	Inverse Square (1s)
		66–75	S-Curve (1s)
		76–85	No Function 2
		86–95	Mode LED
		96–105	Mode Halogen
		106–115	No Function 3
		116–125	LED Freq 800Hz
		126–135	LED Freq 1200Hz
		136–145	LED Freq 2000Hz
		146–155	LED Freq 3600Hz
		156–165	LED Freq 6000Hz
		166–175	LED Freq 25000Hz
		176–255	No Function 4

Mode 11 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 3 Shutter 1 at 0–5 “Shutter OPEN”; CH 5 Shutter 2 at 0–5 “Shutter OPEN”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Strobe Duration 1 255, CH 3 Shutter 1 0, CH 4 Strobe Duration 2 255, CH 5 Shutter 2 0, CH 6 White 255, CH 7 Warm White 255, CH 8 Red 255, CH 9 Green 255, CH 10 Blue 255.

Channel functions at a glance



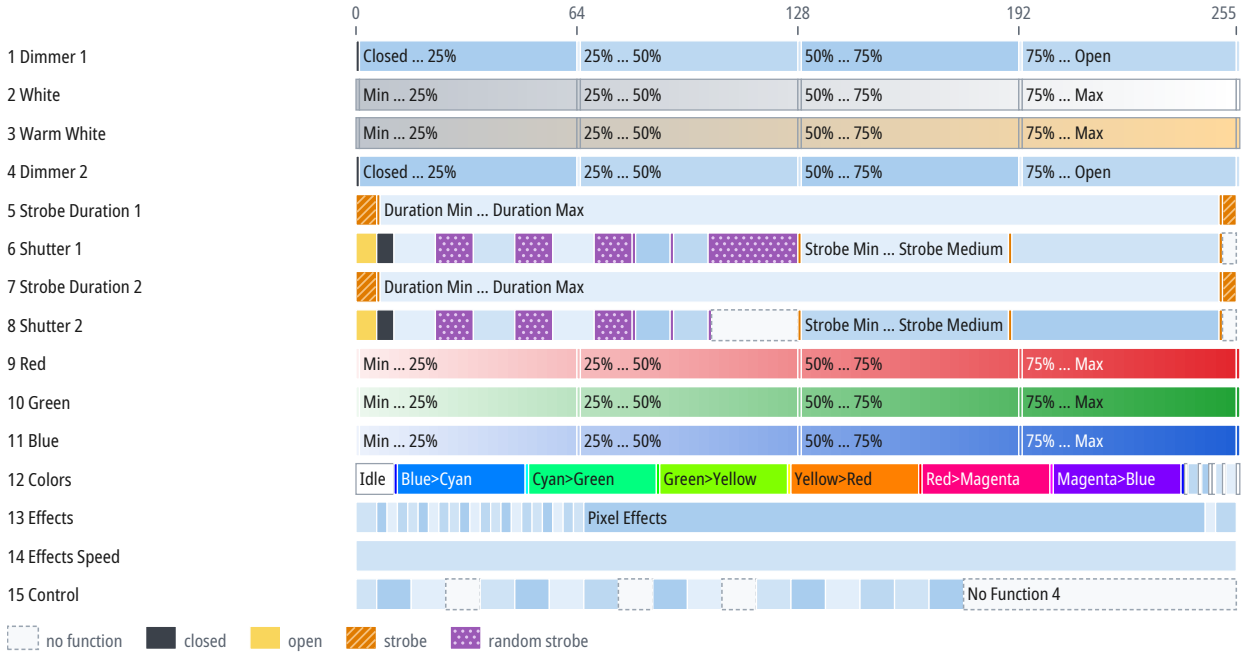
CH	Function	DMX	Description
1	Dimmer	0–255	
2	Strobe Duration 1	0–5	Duration OFF
		6	Duration Min
		7–249	Duration Min ... Duration Max
		250	Duration Max
		251–255	Duration OFF
3	Shutter 1	0–5	Shutter OPEN
		6–10	Shutter CLOSED
		11–22	Ramp
		23–33	Ramp Random
		34–45	Ramp Snap
		46–56	RampSnap Random
		57–68	Snap Ramp
		69–79	SnapRamp Random
		80	Random Min
		81–90	Random Min ... Random Medium
		91	Random Medium
		92–101	Random Medium ... Random Max
		102–127	Random Max
		128	Strobe Min
		129–188	Strobe Min ... Strobe Medium
		189	Strobe Medium

CH	Function	DMX	Description
3	Shutter 1 (continued)	190–249	Strobe Medium ... Strobe Max
		250	Strobe Max
		251–255	No function
4	Strobe Duration 2	0–5	Duration OFF
		6	Duration Min
		7–249	Duration Min ... Duration Max
		250	Duration Max
		251–255	Duration OFF
5	Shutter 2	0–5	Shutter OPEN
		6–10	Shutter CLOSED
		11–22	Ramp
		23–33	Ramp Random
		34–45	Ramp Snap
		46–56	RampSnap Random
		57–68	Snap Ramp
		69–79	SnapRamp Random
		80	Random Min
		81–90	Random Min ... Random Medium
		91	Random Medium
		92–101	Random Medium ... Random Max
		102	Random Max
		103–127	No function
		128	Strobe Min
		129–188	Strobe Min ... Strobe Medium
		189	Strobe Medium
		190–249	Strobe Medium ... Strobe Max
		250	Strobe Max
		251–255	No function
6	White		Same as CH 4 in the mode “9 Channel” (p. 12)
7	Warm White		Same as CH 5 in the mode “9 Channel” (p. 12)
8	Red		Same as CH 2 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
9	Green		Same as CH 3 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
10	Blue		Same as CH 4 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
11	Control		Same as CH 9 in the mode “9 Channel” (p. 12)

Mode 15 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 4 Dimmer 2 above 0; CH 6 Shutter 1 at 0–5 “Shutter OPEN”; CH 8 Shutter 2 at 0–5 “Shutter OPEN”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 2 White 255, CH 3 Warm White 255, CH 4 Dimmer 2 255, CH 5 Strobe Duration 1 255, CH 6 Shutter 1 0, CH 7 Strobe Duration 2 255, CH 8 Shutter 2 0, CH 9 Red 255, CH 10 Green 255, CH 11 Blue 255, CH 12 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0	Closed
		1–63	Closed ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Open
		255	Open
2	White		Same as CH 4 in the mode “9 Channel” (p. 12)
3	Warm White		Same as CH 5 in the mode “9 Channel” (p. 12)
4	Dimmer 2	0	Closed
		1–63	Closed ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%

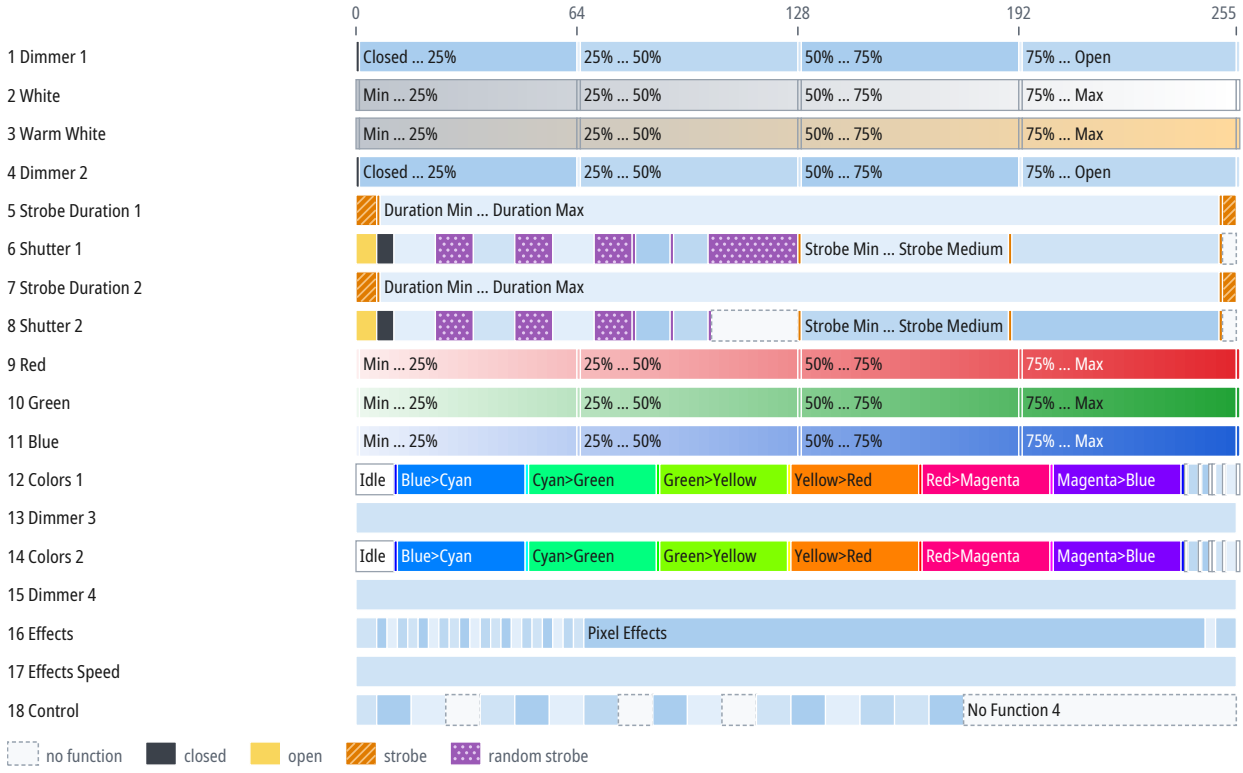
CH	Function	DMX	Description
4	Dimmer 2 (continued)	193–254	75% ... Open
		255	Open
5	Strobe Duration 1		Same as CH 2 in the mode “11 Channel” (p. 13)
6	Shutter 1		Same as CH 3 in the mode “11 Channel” (p. 13)
7	Strobe Duration 2		Same as CH 4 in the mode “11 Channel” (p. 14)
8	Shutter 2		Same as CH 5 in the mode “11 Channel” (p. 14)
9	Red		Same as CH 2 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
10	Green		Same as CH 3 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
11	Blue		Same as CH 4 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
12	Colors	0–10	Idle
		11	Blue
		12–48	Blue>Cyan
		49	Cyan
		50–86	Cyan>Green
		87	Green
		88–124	Green>Yellow
		125	Yellow
		126–162	Yellow>Red
		163	Red
		164–200	Red>Magenta
		201	Magenta
		202–238	Magenta>Blue
		239	Blue
		240	Color Snap: Fast
		241–243	Fast ... Medium
		244	Medium
		245–246	Medium ... Slow
		247	Color Snap: Slow
		248	Fade Max
		249–250	Fade Max ... Fade Medium
		251	Fade Medium
		252–254	Fade Medium ... Fade Min
		255	Fade Min
13	Effects	0–5	Pixel Effects OFF: No Effect
		6–8	Aura Effect 1
		9–11	Aura Effect 2
		12–14	Aura Effect 3
		15–17	Aura Effect 4
		18–20	Aura Effect 5

CH	Function	DMX	Description
13	Effects (continued)	21–23	Aura Effect 6
		24–65	Empty Channel Set
		66–245	Pixel Effects
		246–248	Empty Channel Set
		249–255	Pixel Effects OFF: No Effect
14	Effects Speed	0–255	
15	Control		Same as CH 9 in the mode “9 Channel” (p. 12)

Mode 18 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 4 Dimmer 2 above 0; CH 6 Shutter 1 at 0–5 “Shutter OPEN”; CH 8 Shutter 2 at 0–5 “Shutter OPEN”; CH 13 Dimmer 3 above 0; CH 15 Dimmer 4 above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 2 White 255, CH 3 Warm White 255, CH 4 Dimmer 2 255, CH 5 Strobe Duration 1 255, CH 6 Shutter 1 0, CH 7 Strobe Duration 2 255, CH 8 Shutter 2 0, CH 9 Red 255, CH 10 Green 255, CH 11 Blue 255, CH 12 Colors 1 0, CH 14 Colors 2 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1		Same as CH 1 in the mode “15 Channel” (p. 15)
2	White		Same as CH 4 in the mode “9 Channel” (p. 12)
3	Warm White		Same as CH 5 in the mode “9 Channel” (p. 12)
4	Dimmer 2		Same as CH 4 in the mode “15 Channel” (p. 15)
5	Strobe Duration 1		Same as CH 2 in the mode “11 Channel” (p. 13)
6	Shutter 1		Same as CH 3 in the mode “11 Channel” (p. 13)

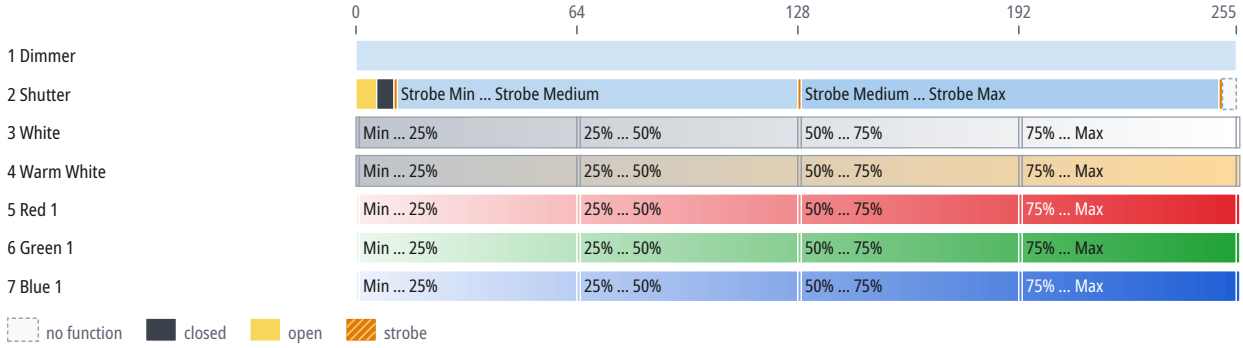
CH	Function	DMX	Description
7	Strobe Duration 2		Same as CH 4 in the mode “11 Channel” (p. 14)
8	Shutter 2		Same as CH 5 in the mode “11 Channel” (p. 14)
9	Red		Same as CH 2 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
10	Green		Same as CH 3 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
11	Blue		Same as CH 4 in the mode “4 Channel + VIRTUAL DIMMER” (p. 10)
12	Colors 1	0–10	Idle
		11	Blue
		12–48	Blue>Cyan
		49	Cyan
		50–86	Cyan>Green
		87	Green
		88–124	Green>Yellow
		125	Yellow
		126–162	Yellow>Red
		163	Red
		164–200	Red>Magenta
		201	Magenta
		202–238	Magenta>Blue
		239	Blue
		240	Color Snap: Fast
		241–243	Fast ... Medium
		244	Medium
		245–246	Medium ... Slow
		247	Color Snap: Slow
		248	Fade Max
		249–250	Fade Max ... Fade Medium
		251	Fade Medium
		252–254	Fade Medium ... Fade Min
		255	Fade Min
13	Dimmer 3	0–255	
14	Colors 2	0–10	Idle
		11	Blue
		12–48	Blue>Cyan
		49	Cyan
		50–86	Cyan>Green
		87	Green
		88–124	Green>Yellow
		125	Yellow
		126–162	Yellow>Red
		163	Red

CH	Function	DMX	Description
14	Colors 2 (continued)	164–200	Red>Magenta
		201	Magenta
		202–238	Magenta>Blue
		239	Blue
		240	Color Snap: Fast
		241–243	Fast ... Medium
		244	Medium
		245–246	Medium ... Slow
		247	Color Snap: Slow
		248	Fade Max
		249–250	Fade Max ... Fade Medium
		251	Fade Medium
		252–254	Fade Medium ... Fade Min
		255	Fade Min
15	Dimmer 4	0–255	
16	Effects		Same as CH 13 in the mode “15 Channel” (p. 16)
17	Effects Speed	0–255	
18	Control		Same as CH 9 in the mode “9 Channel” (p. 12)

Mode 112 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 2 Shutter at 0–5 “Shutter OPEN”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Shutter 0, CH 3 White 255, CH 4 Warm White 255, CH 5 Red 255 (the same in each of the 36 cells), CH 6 Green 255 (the same in each of the 36 cells), CH 7 Blue 255 (the same in each of the 36 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Shutter	0–5	Shutter OPEN
		6–10	Shutter CLOSED
		11	Strobe Min
		12–127	Strobe Min ... Strobe Medium
		128	Strobe Medium

CH	Function	DMX	Description
2	Shutter (continued)	129–249	Strobe Medium ... Strobe Max
		250	Strobe Max
		251–255	No function
3	White		Same as CH 4 in the mode “9 Channel” (p. 12)
4	Warm White		Same as CH 5 in the mode “9 Channel” (p. 12)
5	Red 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
6	Green 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
7	Blue 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max

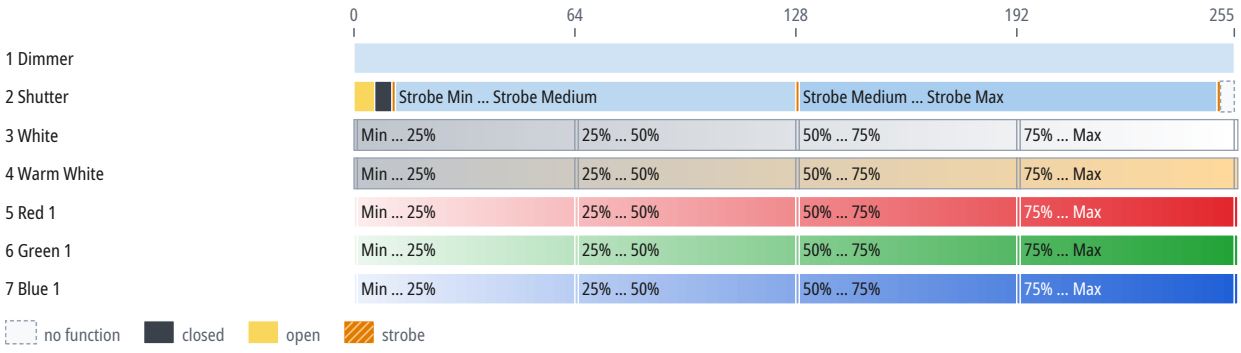
CH 5–112: 36 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 5–7); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	5	6	7	2	8	9	10	3	11	12	13
4	14	15	16	5	17	18	19	6	20	21	22
7	23	24	25	8	26	27	28	9	29	30	31
10	32	33	34	11	35	36	37	12	38	39	40
13	41	42	43	14	44	45	46	15	47	48	49
16	50	51	52	17	53	54	55	18	56	57	58
19	59	60	61	20	62	63	64	21	65	66	67
22	68	69	70	23	71	72	73	24	74	75	76
25	77	78	79	26	80	81	82	27	83	84	85
28	86	87	88	29	89	90	91	30	92	93	94
31	95	96	97	32	98	99	100	33	101	102	103
34	104	105	106	35	107	108	109	36	110	111	112

Mode 112 Channel + VIRTUAL DIMMERS

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 2 Shutter at 0–5 “Shutter OPEN”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Shutter 0, CH 3 White 255, CH 4 Warm White 255, CH 5 Red 255 (the same in each of the 36 cells), CH 6 Green 255 (the same in each of the 36 cells), CH 7 Blue 255 (the same in each of the 36 cells). CH 1 Dimmer multiplies CH 3–4 (White, Warm White).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Shutter		Same as CH 2 in the mode “112 Channel” (p. 19)
3	White		Same as CH 4 in the mode “9 Channel” (p. 12)
4	Warm White		Same as CH 5 in the mode “9 Channel” (p. 12)
5	Red 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%

CH	Function	DMX	Description
5	Red 1 (continued)	129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
6	Green 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
7	Blue 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max

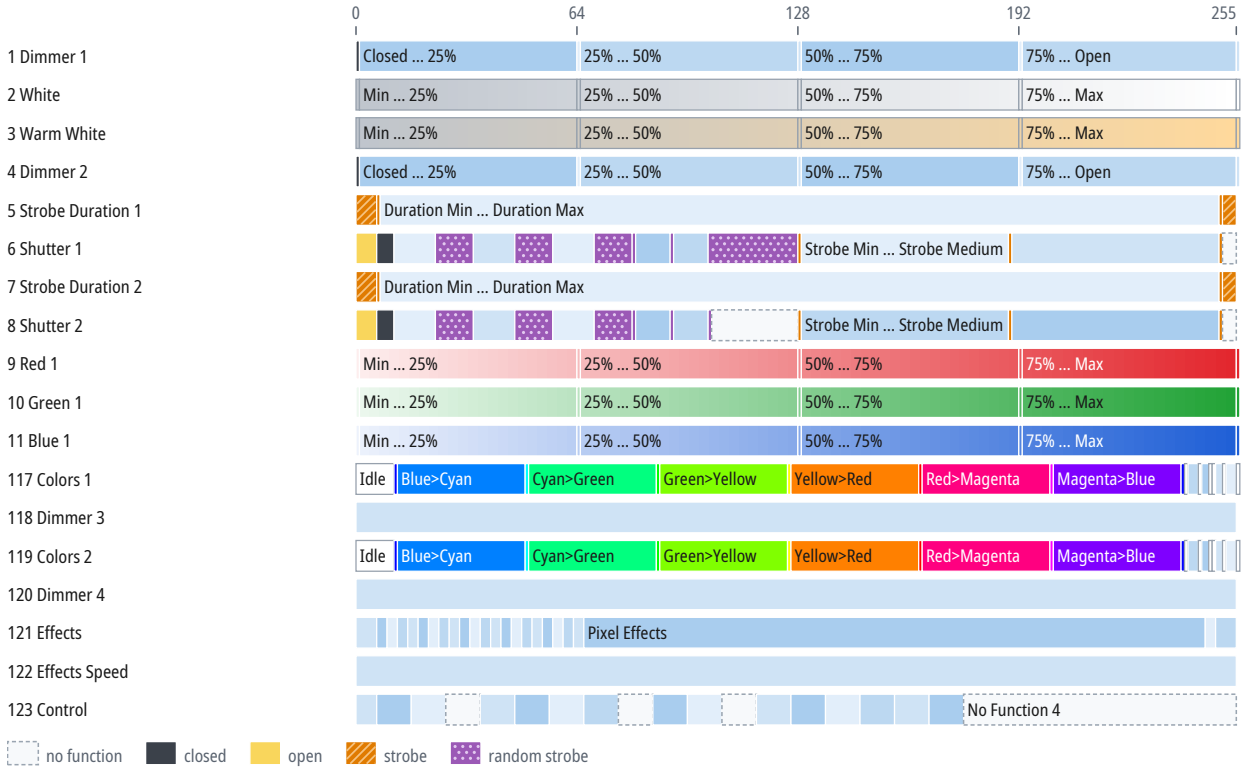
CH 5–112: 36 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 5–7); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	5	6	7	2	8	9	10	3	11	12	13
4	14	15	16	5	17	18	19	6	20	21	22
7	23	24	25	8	26	27	28	9	29	30	31
10	32	33	34	11	35	36	37	12	38	39	40
13	41	42	43	14	44	45	46	15	47	48	49
16	50	51	52	17	53	54	55	18	56	57	58
19	59	60	61	20	62	63	64	21	65	66	67
22	68	69	70	23	71	72	73	24	74	75	76
25	77	78	79	26	80	81	82	27	83	84	85
28	86	87	88	29	89	90	91	30	92	93	94
31	95	96	97	32	98	99	100	33	101	102	103
34	104	105	106	35	107	108	109	36	110	111	112

Mode 123 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 4 Dimmer 2 above 0; CH 6 Shutter 1 at 0–5 “Shutter OPEN”; CH 8 Shutter 2 at 0–5 “Shutter OPEN”; CH 118 Dimmer 3 above 0; CH 120 Dimmer 4 above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 2 White 255, CH 3 Warm White 255, CH 4 Dimmer 2 255, CH 5 Strobe Duration 1 255, CH 6 Shutter 1 0, CH 7 Strobe Duration 2 255, CH 8 Shutter 2 0, CH 9 Red 255 (the same in each of the 36 cells), CH 10 Green 255 (the same in each of the 36 cells), CH 11 Blue 255 (the same in each of the 36 cells), CH 117 Colors 1 0, CH 119 Colors 2 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1		Same as CH 1 in the mode “15 Channel” (p. 15)
2	White		Same as CH 4 in the mode “9 Channel” (p. 12)
3	Warm White		Same as CH 5 in the mode “9 Channel” (p. 12)
4	Dimmer 2		Same as CH 4 in the mode “15 Channel” (p. 15)
5	Strobe Duration 1		Same as CH 2 in the mode “11 Channel” (p. 13)
6	Shutter 1		Same as CH 3 in the mode “11 Channel” (p. 13)
7	Strobe Duration 2		Same as CH 4 in the mode “11 Channel” (p. 14)
8	Shutter 2		Same as CH 5 in the mode “11 Channel” (p. 14)
9	Red 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%

CH	Function	DMX	Description
9	Red 1 (continued)	192	75%
		193–254	75% … Max
		255	Max
10	Green 1	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Max
		255	Max
11	Blue 1	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Max
		255	Max
117	Colors 1		Same as CH 12 in the mode “18 Channel” (p. 18)
118	Dimmer 3	0–255	
119	Colors 2		Same as CH 14 in the mode “18 Channel” (p. 18)
120	Dimmer 4	0–255	
121	Effects		Same as CH 13 in the mode “15 Channel” (p. 16)
122	Effects Speed	0–255	
123	Control		Same as CH 9 in the mode “9 Channel” (p. 12)

CH 9–116: 36 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 9–11); the table below gives each cell's channel numbers.

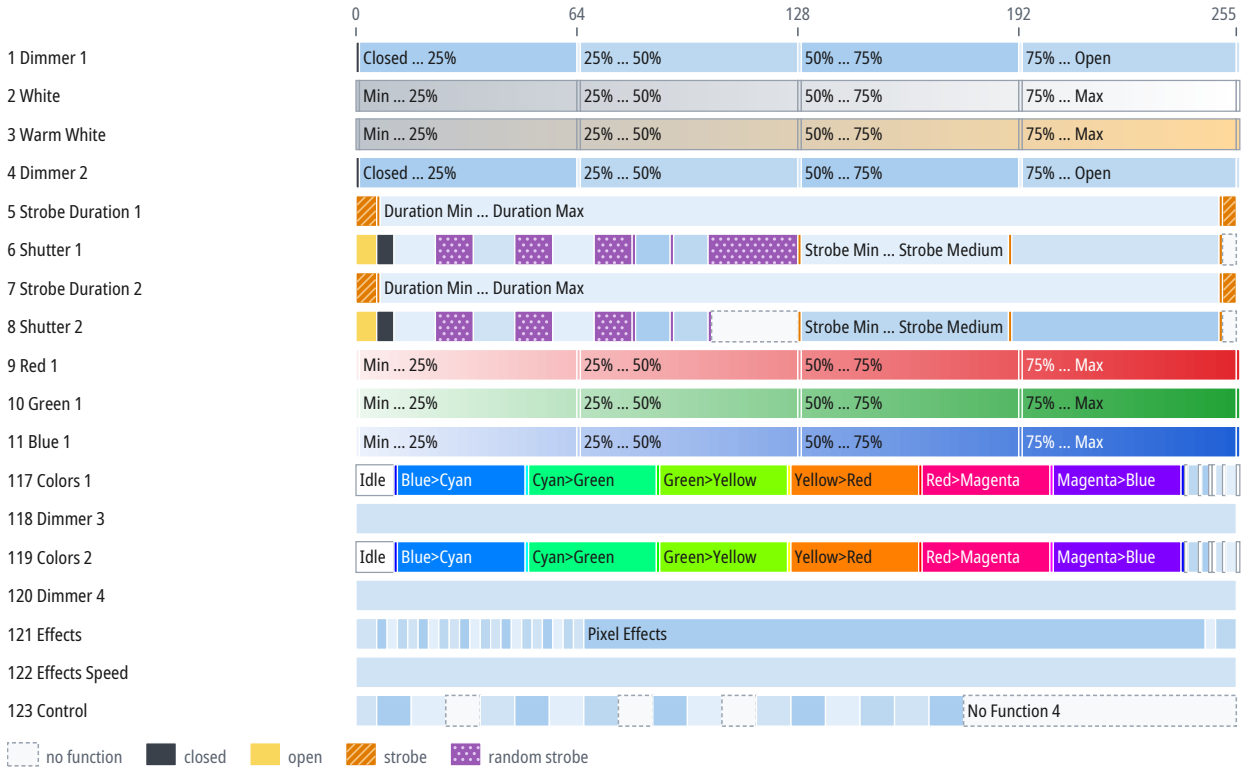
Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	9	10	11	2	12	13	14	3	15	16	17
4	18	19	20	5	21	22	23	6	24	25	26
7	27	28	29	8	30	31	32	9	33	34	35
10	36	37	38	11	39	40	41	12	42	43	44
13	45	46	47	14	48	49	50	15	51	52	53
16	54	55	56	17	57	58	59	18	60	61	62
19	63	64	65	20	66	67	68	21	69	70	71
22	72	73	74	23	75	76	77	24	78	79	80
25	81	82	83	26	84	85	86	27	87	88	89

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
28	90	91	92	29	93	94	95	30	96	97	98
31	99	100	101	32	102	103	104	33	105	106	107
34	108	109	110	35	111	112	113	36	114	115	116

Mode 123 Channel + VIRTUAL DIMMERS

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 4 Dimmer 2 above 0; CH 6 Shutter 1 at 0–5 “Shutter OPEN”; CH 8 Shutter 2 at 0–5 “Shutter OPEN”; CH 118 Dimmer 3 above 0; CH 120 Dimmer 4 above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 2 White 255, CH 3 Warm White 255, CH 4 Dimmer 2 255, CH 5 Strobe Duration 1 255, CH 6 Shutter 1 0, CH 7 Strobe Duration 2 255, CH 8 Shutter 2 0, CH 9 Red 255 (the same in each of the 36 cells), CH 10 Green 255 (the same in each of the 36 cells), CH 11 Blue 255 (the same in each of the 36 cells), CH 117 Colors 1 0, CH 119 Colors 2 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1		Same as CH 1 in the mode “15 Channel” (p. 15)
2	White		Same as CH 4 in the mode “9 Channel” (p. 12)
3	Warm White		Same as CH 5 in the mode “9 Channel” (p. 12)
4	Dimmer 2		Same as CH 4 in the mode “15 Channel” (p. 15)
5	Strobe Duration 1		Same as CH 2 in the mode “11 Channel” (p. 13)
6	Shutter 1		Same as CH 3 in the mode “11 Channel” (p. 13)
7	Strobe Duration 2		Same as CH 4 in the mode “11 Channel” (p. 14)
8	Shutter 2		Same as CH 5 in the mode “11 Channel” (p. 14)

CH	Function	DMX	Description
9	Red 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
10	Green 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
11	Blue 1	0	Min
		1–63	Min ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... Max
		255	Max
117	Colors 1		Same as CH 12 in the mode “18 Channel” (p. 18)
118	Dimmer 3	0–255	
119	Colors 2		Same as CH 14 in the mode “18 Channel” (p. 18)
120	Dimmer 4	0–255	
121	Effects		Same as CH 13 in the mode “15 Channel” (p. 16)
122	Effects Speed	0–255	
123	Control		Same as CH 9 in the mode “9 Channel” (p. 12)

CH 9–116: 36 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 9–11); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	9	10	11	2	12	13	14	3	15	16	17
4	18	19	20	5	21	22	23	6	24	25	26
7	27	28	29	8	30	31	32	9	33	34	35
10	36	37	38	11	39	40	41	12	42	43	44

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
13	45	46	47	14	48	49	50	15	51	52	53
16	54	55	56	17	57	58	59	18	60	61	62
19	63	64	65	20	66	67	68	21	69	70	71
22	72	73	74	23	75	76	77	24	78	79	80
25	81	82	83	26	84	85	86	27	87	88	89
28	90	91	92	29	93	94	95	30	96	97	98
31	99	100	101	32	102	103	104	33	105	106	107
34	108	109	110	35	111	112	113	36	114	115	116

10 Technical specifications

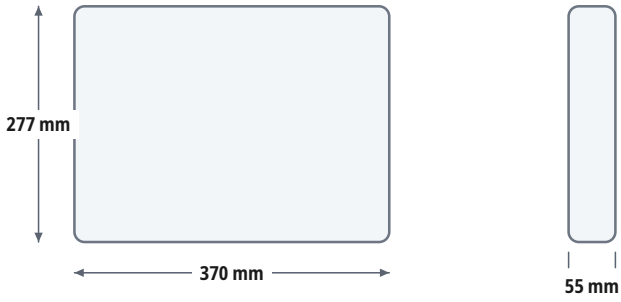
Parameter	Value
Light source	LED
DMX connection	Martin PDE IN/OUT
RDM	yes (manufacturer ID 0x076A, device model ID 0x090C)
Weight	3.8 kg
Ingress protection	IP65
Meaning of the IP code (IEC 60529)	Dust-tight; protected against water jets
Operating temperature	-5 to 45 °C

Speeds and ranges

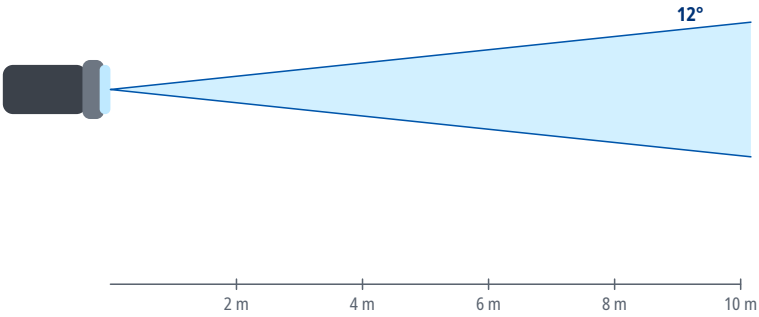
Parameter	Value
Strobe flash duration	0.007–0.65 s

Dimensions

weight 3.8 kg



Spot diameter



Distance	Ø 12°
2 m	0.42 m
4 m	0.84 m
6 m	1.3 m
8 m	1.7 m
10 m	2.1 m
15 m	3.2 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.

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.