DMX REFERENCE

DIAMONDBACK

EK Lights



Manufacturer	EK Lights
GDTF file	EK_Lights_Diamondback_146490.gdtf
GDTF revision	230518 · 2026-06-11
Generated	2026-11-23

Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 5
5 Installation 5
6 Connections 5
7 Operation 6
8 Functions at a glance 7
9 DMX channels 8
Mode 14CH 9
Mode 32CH 12
Mode 91CH 17
Mode 118CH 18
Mode 119CH 20
Mode 88CH 22
10 Technical specifications 24
11 Maintenance and cleaning 24
12 Troubleshooting 25
13 Disposal 25

1 About this manual

This document describes the DIAMONDBACK by EK Lights. It was compiled from the GDTF file EK_Lights_Diamondback_146490.gdtf from the GDTF-Share library.

File revision: “230518”.

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 EK Lights; 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	20.3 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
14CH	14	36	1, 15, 29, 43, ...
32CH	32	16	1, 33, 65, 97, ...
91CH	91	5	1, 92, 183, 274, ...
118CH	118	4	1, 119, 237, 355
119CH	119	4	1, 120, 239, 358
88CH	88	5	1, 89, 177, 265, ...

No light? Check these channels

- 14CH: CH 3 Shutter 1 at 104–107 or 208–212 or 252–255; CH 4 Dimmer 1 above 0; CH 5 Shutter 2 at 104–107 or 208–212 or 252–255; CH 6 Dimmer 2 above 0
- 32CH: CH 4 Shutter 1 at 104–107 or 208–212 or 252–255; CH 5 Dimmer 1 above 0; CH 10 Shutter 2 at 104–107 or 208–212 or 252–255; CH 11 Dimmer 2 above 0
- 91CH: CH 3 Shutter 1 at 104–107 or 208–212 or 252–255; CH 4 Dimmer 1 above 0; CH 5 Shutter 2 at 104–107 or 208–212 or 252–255; CH 6 Dimmer 2 above 0
- 118CH: CH 3 Shutter 1 at 104–107 or 208–212 or 252–255; CH 4 Dimmer 1 above 0; CH 5 Shutter 2 at 104–107 or 208–212 or 252–255; CH 6 Dimmer 2 above 0
- 119CH: CH 3 Shutter 1 at 104–107 or 208–212 or 252–255; CH 4 Dimmer 1 above 0; CH 5 Shutter 2 at 104–107 or 208–212 or 252–255; CH 6 Dimmer 2 above 0
- 88CH: CH 3 Dimmer 1 above 0; CH 4 Dimmer 2 above 0


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

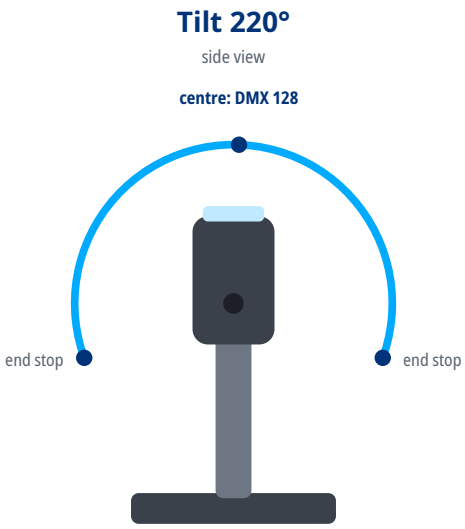
- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them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



5 Installation

⚠ WARNING

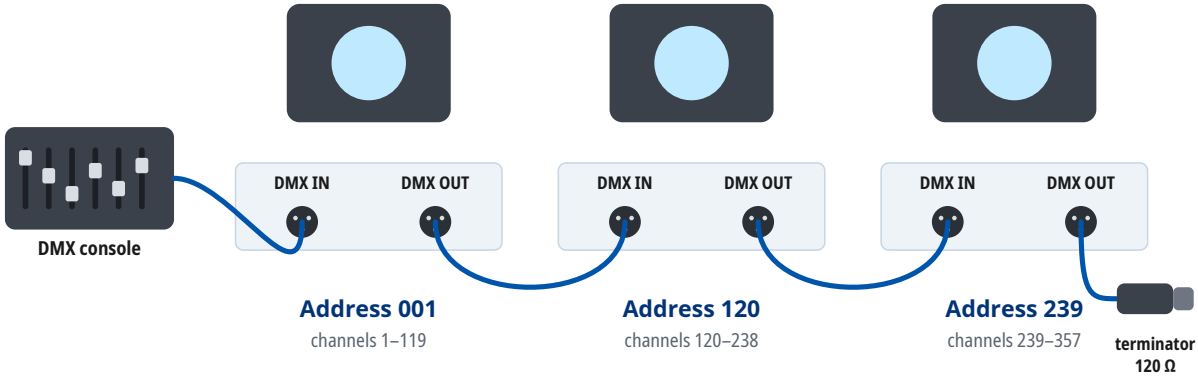
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 20.3 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 119CH: every unit occupies 119 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

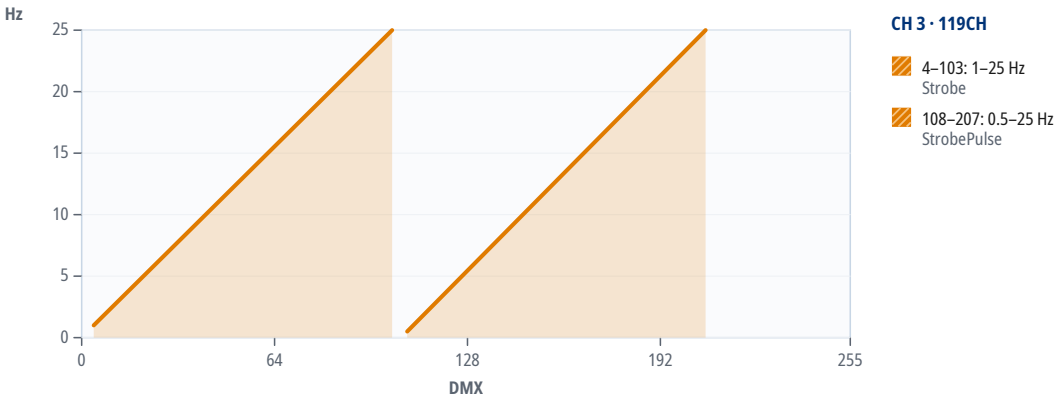
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “119CH”: 119.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “119CH”, you can use, for example, the start addresses 1, 120, 239, 358.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

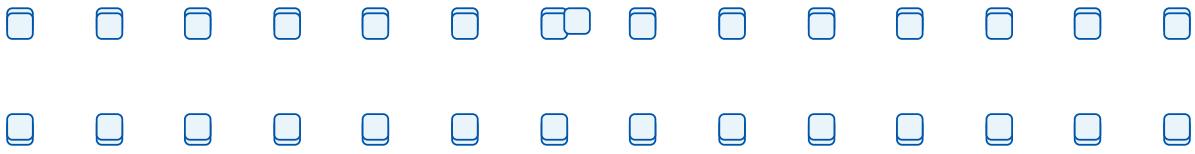
Functions in each DMX mode

	14CH 14 channels	32CH 32 channels	91CH 91 channels	118CH 118 channels	119CH 119 channels	88CH 88 channels
Pan / Tilt	1	1	1	1	1	1
Pan / Tilt resolution	8 bit	16 bit	8 bit	8 bit	8 bit	8 bit
Dimmer	4, 6	5, 11	4, 6	4, 6	4, 6	3, 4
Shutter / strobe	3, 5	4, 10	3, 5	3, 5	3, 5	
Color mixing	7–14	17–32	1–91	1–118	1–119	1–88
Color temperature		6, 7, 12, 13				
Zoom	2	3	2	2	2	2
Effects / macros		8, 9, 14, 15				
Pixel control	✓	✓	14 + 14 cells	14 + 28 cells	14 + 28 cells	14 + 14 cells

Strobe rate



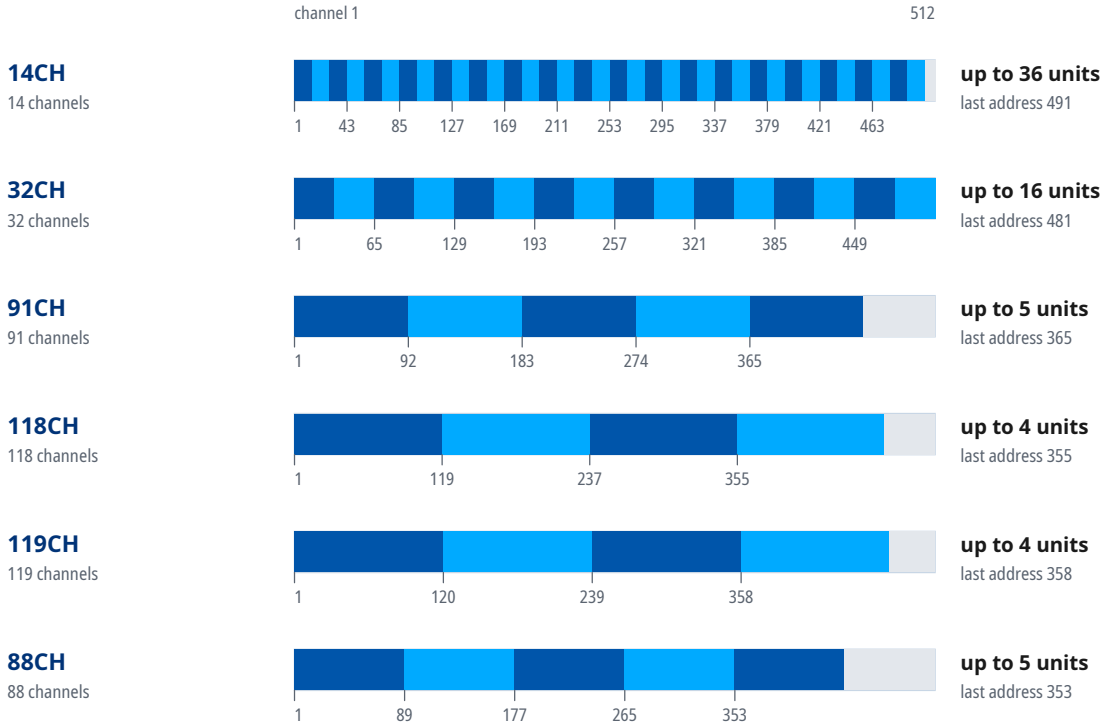
Cells (pixels)



Cells where the GDTF file places them (seen from above), 57 in all in the mode “119CH”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “119CH”

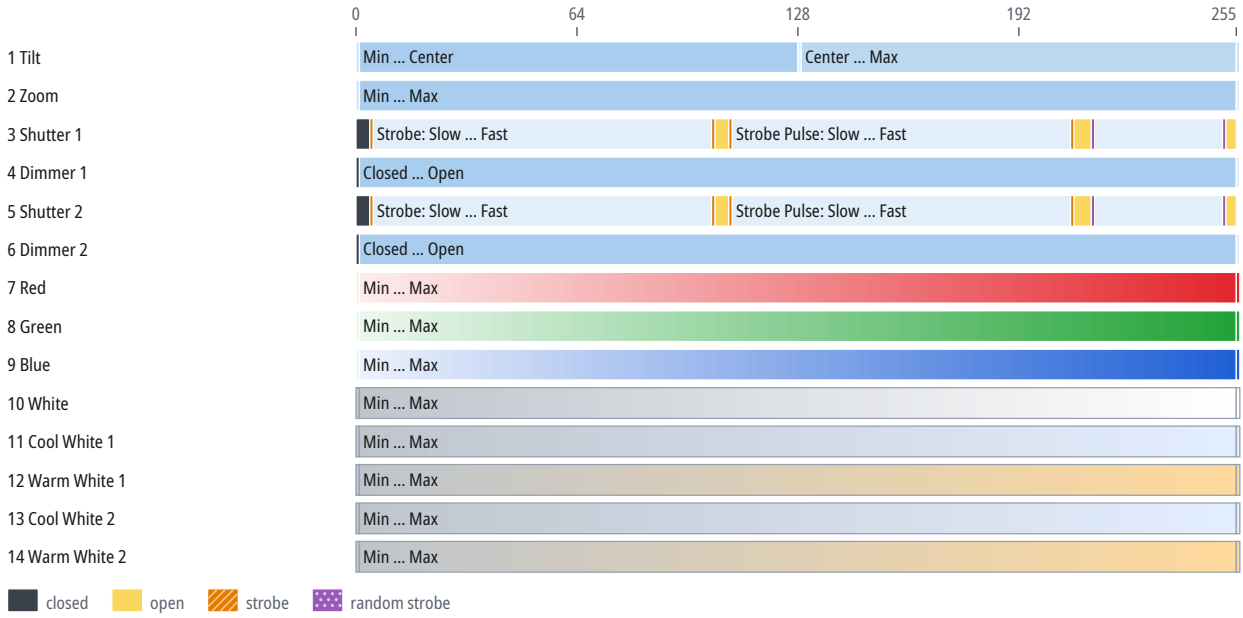
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 120	11	U3 · 239	16	U4 · 358
2	120	7	U2 · 239	12	U3 · 358	17	U5 · 1
3	239	8	U2 · 358	13	U4 · 1	18	U5 · 120
4	358	9	U3 · 1	14	U4 · 120	19	U5 · 239
5	U2 · 1	10	U3 · 120	15	U4 · 239	20	U5 · 358

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 14CH

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Shutter 1 at 104–107 or 208–212 or 252–255; CH 4 Dimmer 1 above 0; CH 5 Shutter 2 at 104–107 or 208–212 or 252–255; CH 6 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 3 Shutter 1 255, CH 4 Dimmer 1 255, CH 5 Shutter 2 255, CH 6 Dimmer 2 255, CH 7 Red 255, CH 8 Green 255, CH 9 Blue 255, CH 10 White 255, CH 11 Cool White 1 255, CH 12 Warm White 1 255, CH 13 Cool White 2 255, CH 14 Warm White 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0	Min
		1–127	Min … Center
		128	Center
		129–254	Center … Max
		255	Max
2	Zoom	0	Min
		1–254	Min … Max
		255	Max
3	Shutter 1	0–3	Closed
		4	Strobe: Slow
		5–102	Strobe: Slow … Fast
		103	Strobe: Fast
		104–107	Open 1
		108	Strobe Pulse: Slow
		109–206	Strobe Pulse: Slow … Fast
		207	Strobe Pulse: Fast
		208–212	Open 2
		213	Strobe Random: Slow

CH	Function	DMX	Description
3	Shutter 1 (continued)	214–250	Strobe Random: Slow … Fast
		251	Strobe Random: Fast
		252–255	Open 3
4	Dimmer 1	0	Closed
		1–254	Closed … Open
		255	Open
5	Shutter 2	0–3	Closed
		4	Strobe: Slow
		5–102	Strobe: Slow … Fast
		103	Strobe: Fast
		104–107	Open 1
		108	Strobe Pulse: Slow
		109–206	Strobe Pulse: Slow … Fast
		207	Strobe Pulse: Fast
		208–212	Open 2
		213	Strobe Random: Slow
		214–250	Strobe Random: Slow … Fast
		251	Strobe Random: Fast
		252–255	Open 3
6	Dimmer 2		White Dimmer 1
		0	Closed
		1–254	Closed … Open
		255	Open
7	Red	0	Min
		1–254	Min … Max
		255	Max
8	Green	0	Min
		1–254	Min … Max
		255	Max
9	Blue	0	Min
		1–254	Min … Max
		255	Max
10	White	0	Min
		1–254	Min … Max
		255	Max
11	Cool White 1		Top CW 1
		0	Min
		1–254	Min … Max
		255	Max
12	Warm White 1		Top WW 1
		0	Min
		1–254	Min … Max

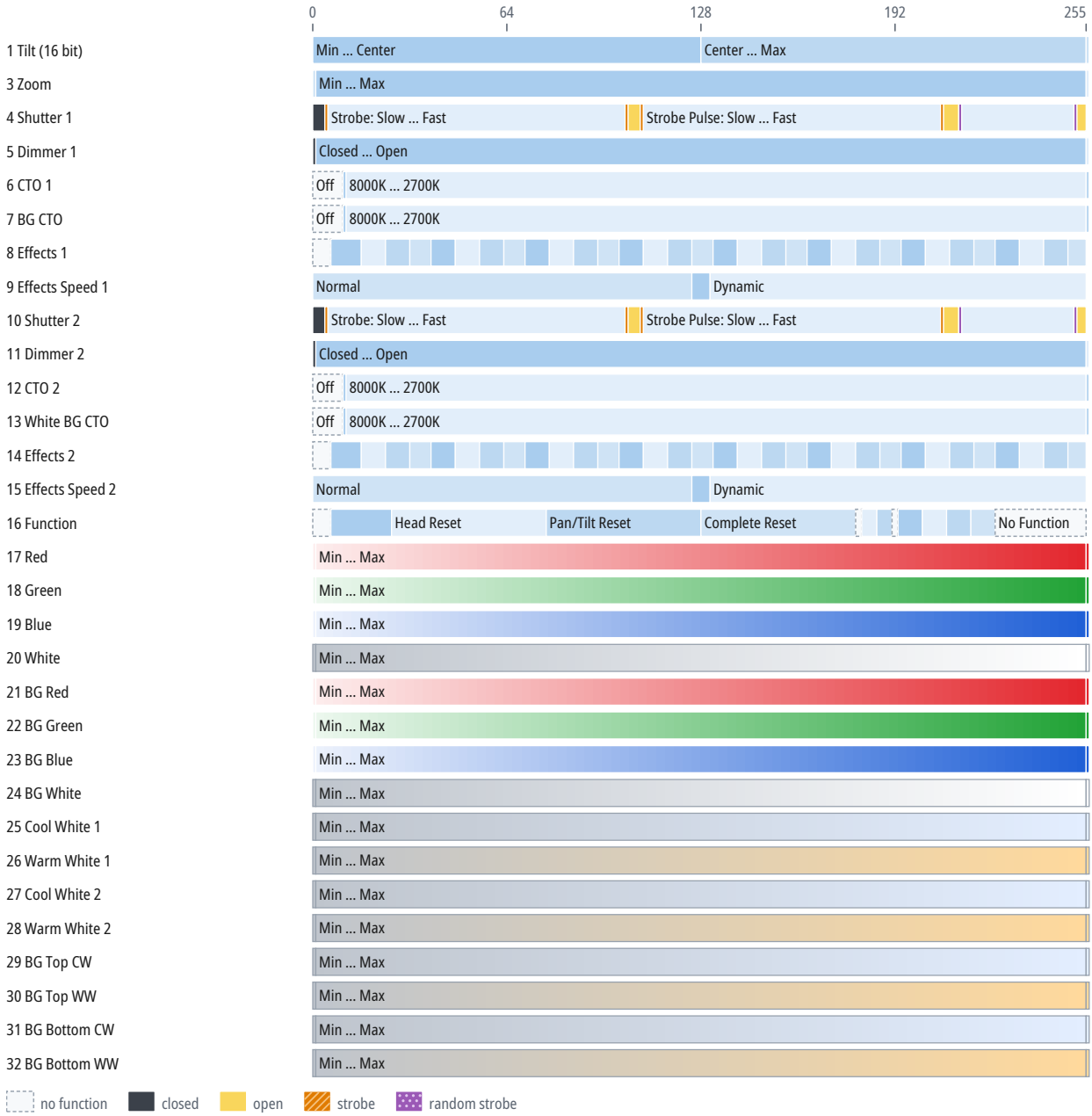
CH	Function	DMX	Description
12	Warm White 1 (continued)	255	Max
13	Cool White 2		Bottom CW 1
		0	Min
		1–254	Min … Max
		255	Max
14	Warm White 2		Bottom WW 1
		0	Min
		1–254	Min … Max
		255	Max

Mode 32CH

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 4 Shutter 1 at 104–107 or 208–212 or 252–255; CH 5 Dimmer 1 above 0; CH 10 Shutter 2 at 104–107 or 208–212 or 252–255; CH 11 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 4 Shutter 1 255, CH 5 Dimmer 1 255, CH 10 Shutter 2 255, CH 11 Dimmer 2 255, CH 17 Red 255, CH 18 Green 255, CH 19 Blue 255, CH 20 White 255, CH 25 Cool White 1 255, CH 26 Warm White 1 255, CH 27 Cool White 2 255, CH 28 Warm White 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0–128	Min … Center
		128–255	Center … Max
		255	Max
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Zoom		Same as CH 2 in the mode “14CH” (p. 9)
4	Shutter 1		Same as CH 3 in the mode “14CH” (p. 9)
5	Dimmer 1		Same as CH 4 in the mode “14CH” (p. 10)
6	CTO 1	0–9	Off
		10	8000K
		11–254	8000K … 2700K
		255	2700K
7	BG CTO		BG COT
		0–9	Off
		10	8000K
		11–254	8000K … 2700K
		255	2700K
8	Effects 1	0–5	No Function
		6–15	Effect 1
		16–23	Effect 2
		24–31	Effect 3
		32–38	Effect 4
		39–46	Effect 5
		47–54	Effect 6
		55–62	Effect 7
		63–69	Effect 8
		70–77	Effect 9
		78–85	Effect 10
		86–93	Effect 11
		94–100	Effect 12
		101–108	Effect 13
		109–116	Effect 14
		117–124	Effect 15
		125–131	Effect 16
		132–139	Effect 17
		140–147	Effect 18
		148–155	Effect 19
		156–162	Effect 20
		163–170	Effect 21
		171–178	Effect 22
		179–186	Effect 23

CH	Function	DMX	Description
8	Effects 1 (continued)	187–193	Effect 24
		194–201	Effect 25
		202–209	Effect 26
		210–217	Effect 27
		218–224	Effect 28
		225–232	Effect 29
		233–240	Effect 30
		241–248	Effect 31
		249–255	Effect 32
9	Effects Speed 1		Effects Speed
		0–124	Normal
		125–130	Static
		131–255	Dynamic
10	Shutter 2		Same as CH 5 in the mode “14CH” (p. 10)
11	Dimmer 2		Same as CH 6 in the mode “14CH” (p. 10)
12	CTO 2		White CTO 1
		0–9	Off
		10	8000K
		11–254	8000K ... 2700K
		255	2700K
13	White BG CTO		White BG CTO 1
		0–9	Off
		10	8000K
		11–254	8000K ... 2700K
		255	2700K
14	Effects 2		White Effects
		0–5	No Function
		6–15	Effect 1
		16–23	Effect 2
		24–31	Effect 3
		32–38	Effect 4
		39–46	Effect 5
		47–54	Effect 6
		55–62	Effect 7
		63–69	Effect 8
		70–77	Effect 9
		78–85	Effect 10
		86–93	Effect 11
		94–100	Effect 12
		101–108	Effect 13
		109–116	Effect 14

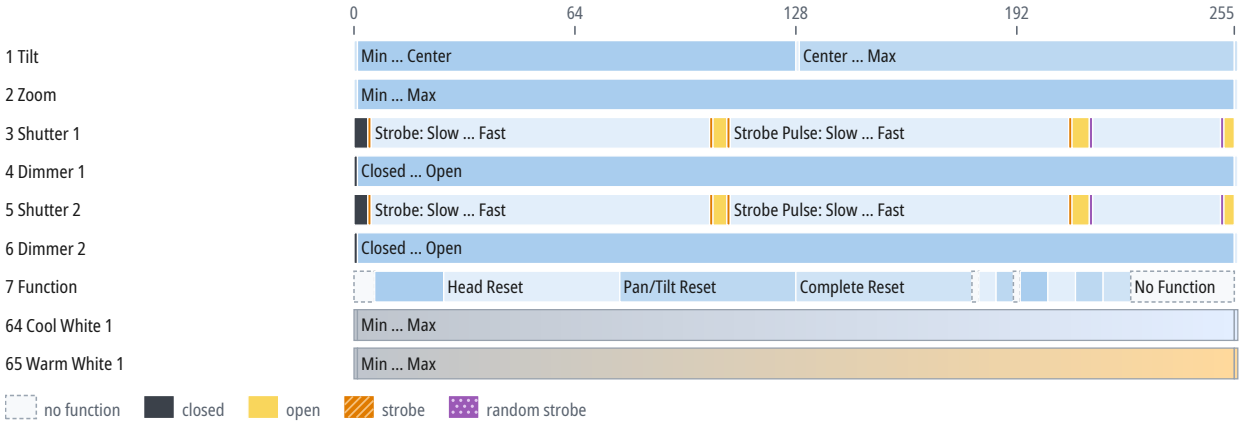
CH	Function	DMX	Description
14	Effects 2 (continued)	117–124	Effect 15
		125–131	Effect 16
		132–139	Effect 17
		140–147	Effect 18
		148–155	Effect 19
		156–162	Effect 20
		163–170	Effect 21
		171–178	Effect 22
		179–186	Effect 23
		187–193	Effect 24
		194–201	Effect 25
		202–209	Effect 26
		210–217	Effect 27
		218–224	Effect 28
		225–232	Effect 29
		233–240	Effect 30
		241–248	Effect 31
		249–255	Effect 32
15	Effects Speed 2		White Effects speed 1
		0–124	Normal
		125–130	Static
		131–255	Dynamic
16	Function	0–5	No Function
		6–25	No Function ... Head Reset
		26–76	Head Reset
		77–127	Pan/Tilt Reset
		128–178	Complete Reset
		179–180	No Function
		181–185	LED Reverse Off
		186–190	LED Reverse On
		191–192	No Function
		193–200	Dimmer Mode 1
		201–208	Dimmer Mode 2
		209–216	Dimmer Mode 3
		217–224	Dimmer Mode 4
		225–255	No Function
17	Red		Same as CH 7 in the mode “14CH” (p. 10)
18	Green		Same as CH 8 in the mode “14CH” (p. 10)
19	Blue		Same as CH 9 in the mode “14CH” (p. 10)
20	White		Same as CH 10 in the mode “14CH” (p. 10)
21	BG Red		BG Red 1

CH	Function	DMX	Description
21	BG Red (continued)	0	Min
		1–254	Min ... Max
		255	Max
22	BG Green		BG Green 1
		0	Min
		1–254	Min ... Max
		255	Max
23	BG Blue		BG Blue 1
		0	Min
		1–254	Min ... Max
		255	Max
24	BG White		BG White 1
		0	Min
		1–254	Min ... Max
		255	Max
25	Cool White 1		Same as CH 11 in the mode “14CH” (p. 10)
26	Warm White 1		Same as CH 12 in the mode “14CH” (p. 10)
27	Cool White 2		Same as CH 13 in the mode “14CH” (p. 11)
28	Warm White 2		Same as CH 14 in the mode “14CH” (p. 11)
29	BG Top CW		BG Top CW 1
		0	Min
		1–254	Min ... Max
		255	Max
30	BG Top WW		BG Top WW 1
		0	Min
		1–254	Min ... Max
		255	Max
31	BG Bottom CW		BG Bottom CW 1
		0	Min
		1–254	Min ... Max
		255	Max
32	BG Bottom WW		BG Bottom WW 1
		0	Min
		1–254	Min ... Max
		255	Max

Mode 91CH

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Shutter 1 at 104–107 or 208–212 or 252–255; CH 4 Dimmer 1 above 0; CH 5 Shutter 2 at 104–107 or 208–212 or 252–255; CH 6 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 3 Shutter 1 255, CH 4 Dimmer 1 255, CH 5 Shutter 2 255, CH 6 Dimmer 2 255, CH 8 Red 255 (the same in each of the 14 cells), CH 9 Green 255 (the same in each of the 14 cells), CH 10 Blue 255 (the same in each of the 14 cells), CH 11 White 255 (the same in each of the 14 cells), CH 64 Cool White 255 (the same in each of the 14 cells), CH 65 Warm White 255 (the same in each of the 14 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “14CH” (p. 9)
2	Zoom		Same as CH 2 in the mode “14CH” (p. 9)
3	Shutter 1		Same as CH 3 in the mode “14CH” (p. 9)
4	Dimmer 1		Same as CH 4 in the mode “14CH” (p. 10)
5	Shutter 2		Same as CH 5 in the mode “14CH” (p. 10)
6	Dimmer 2		Same as CH 6 in the mode “14CH” (p. 10)
7	Function		Same as CH 16 in the mode “32CH” (p. 15)
8	Red 1	0	Min
		1–254	Min ... Max
		255	Max
9	Green 1	0	Min
		1–254	Min ... Max
		255	Max
10	Blue 1	0	Min
		1–254	Min ... Max
		255	Max
11	White 1	0	Min
		1–254	Min ... Max
		255	Max
64	Cool White 1	0	Min
		1–254	Min ... Max
		255	Max

CH	Function	DMX	Description
65	Warm White 1	0	Min
		1–254	Min … Max
		255	Max

CH 8–63: 14 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 8–11); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	8	9	10	11	2	12	13	14	15
3	16	17	18	19	4	20	21	22	23
5	24	25	26	27	6	28	29	30	31
7	32	33	34	35	8	36	37	38	39
9	40	41	42	43	10	44	45	46	47
11	48	49	50	51	12	52	53	54	55
13	56	57	58	59	14	60	61	62	63

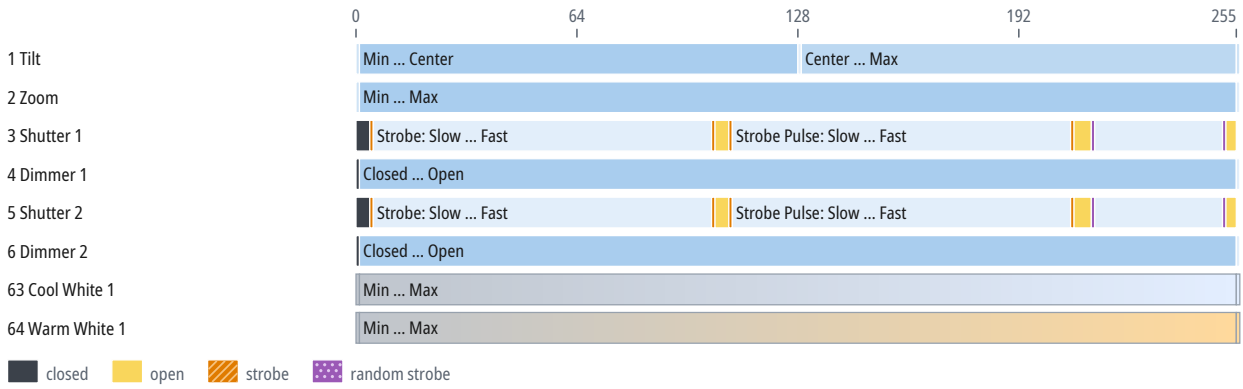
CH 64–91: 14 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 64–65); the table below gives each cell's channel numbers.

Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White
1	64	65	2	66	67	3	68	69	4	70	71
5	72	73	6	74	75	7	76	77	8	78	79
9	80	81	10	82	83	11	84	85	12	86	87
13	88	89	14	90	91						

Mode 118CH

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Shutter 1 at 104–107 or 208–212 or 252–255; CH 4 Dimmer 1 above 0; CH 5 Shutter 2 at 104–107 or 208–212 or 252–255; CH 6 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 3 Shutter 1 255, CH 4 Dimmer 1 255, CH 5 Shutter 2 255, CH 6 Dimmer 2 255, CH 7 Red 255 (the same in each of the 14 cells), CH 8 Green 255 (the same in each of the 14 cells), CH 9 Blue 255 (the same in each of the 14 cells), CH 10 White 255 (the same in each of the 14 cells), CH 63 Cool White 255 (the same in each of the 28 cells), CH 64 Warm White 255 (the same in each of the 28 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “14CH” (p. 9)
2	Zoom		Same as CH 2 in the mode “14CH” (p. 9)
3	Shutter 1		Same as CH 3 in the mode “14CH” (p. 9)
4	Dimmer 1		Same as CH 4 in the mode “14CH” (p. 10)
5	Shutter 2		Same as CH 5 in the mode “14CH” (p. 10)
6	Dimmer 2		Same as CH 6 in the mode “14CH” (p. 10)
7	Red 1	0	Min
		1–254	Min … Max
		255	Max
8	Green 1	0	Min
		1–254	Min … Max
		255	Max
9	Blue 1	0	Min
		1–254	Min … Max
		255	Max
10	White 1	0	Min
		1–254	Min … Max
		255	Max
63	Cool White 1	0	Min
		1–254	Min … Max
		255	Max
64	Warm White 1	0	Min
		1–254	Min … Max
		255	Max

CH 7–62: 14 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 7–10); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	7	8	9	10	2	11	12	13	14
3	15	16	17	18	4	19	20	21	22
5	23	24	25	26	6	27	28	29	30
7	31	32	33	34	8	35	36	37	38
9	39	40	41	42	10	43	44	45	46
11	47	48	49	50	12	51	52	53	54
13	55	56	57	58	14	59	60	61	62

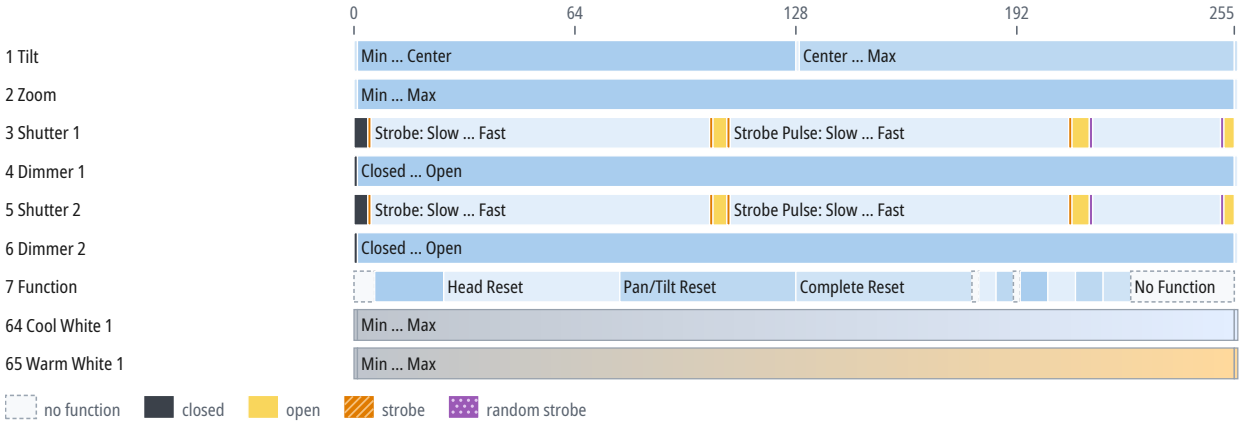
CH 63–118: 28 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 63–64); the table below gives each cell's channel numbers.

Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White
1	63	64	2	65	66	3	67	68	4	69	70
5	71	72	6	73	74	7	75	76	8	77	78
9	79	80	10	81	82	11	83	84	12	85	86
13	87	88	14	89	90	15	91	92	16	93	94
17	95	96	18	97	98	19	99	100	20	101	102
21	103	104	22	105	106	23	107	108	24	109	110
25	111	112	26	113	114	27	115	116	28	117	118

Mode 119CH

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Shutter 1 at 104–107 or 208–212 or 252–255; CH 4 Dimmer 1 above 0; CH 5 Shutter 2 at 104–107 or 208–212 or 252–255; CH 6 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 3 Shutter 1 255, CH 4 Dimmer 1 255, CH 5 Shutter 2 255, CH 6 Dimmer 2 255, CH 8 Red 255 (the same in each of the 14 cells), CH 9 Green 255 (the same in each of the 14 cells), CH 10 Blue 255 (the same in each of the 14 cells), CH 11 White 255 (the same in each of the 14 cells), CH 64 Cool White 255 (the same in each of the 28 cells), CH 65 Warm White 255 (the same in each of the 28 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “14CH” (p. 9)
2	Zoom		Same as CH 2 in the mode “14CH” (p. 9)
3	Shutter 1		Same as CH 3 in the mode “14CH” (p. 9)
4	Dimmer 1		Same as CH 4 in the mode “14CH” (p. 10)
5	Shutter 2		Same as CH 5 in the mode “14CH” (p. 10)
6	Dimmer 2		Same as CH 6 in the mode “14CH” (p. 10)
7	Function		Same as CH 16 in the mode “32CH” (p. 15)
8	Red 1	0	Min
		1–254	Min ... Max
		255	Max

CH	Function	DMX	Description
9	Green 1	0	Min
		1–254	Min … Max
		255	Max
10	Blue 1	0–255	
11	White 1	0–255	
64	Cool White 1	0	Min
		1–254	Min … Max
		255	Max
65	Warm White 1	0	Min
		1–254	Min … Max
		255	Max

CH 8–63: 14 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 8–11); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	8	9	10	11	2	12	13	14	15
3	16	17	18	19	4	20	21	22	23
5	24	25	26	27	6	28	29	30	31
7	32	33	34	35	8	36	37	38	39
9	40	41	42	43	10	44	45	46	47
11	48	49	50	51	12	52	53	54	55
13	56	57	58	59	14	60	61	62	63

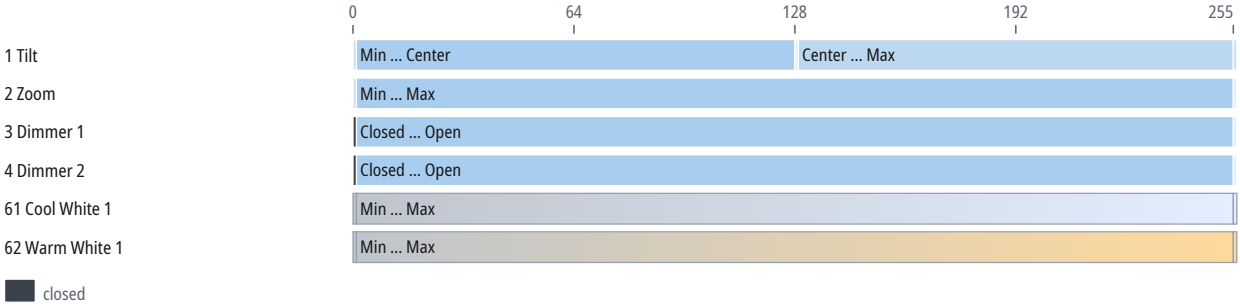
CH 64–119: 28 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 64–65); the table below gives each cell's channel numbers.

Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White
1	64	65	2	66	67	3	68	69	4	70	71
5	72	73	6	74	75	7	76	77	8	78	79
9	80	81	10	82	83	11	84	85	12	86	87
13	88	89	14	90	91	15	92	93	16	94	95
17	96	97	18	98	99	19	100	101	20	102	103
21	104	105	22	106	107	23	108	109	24	110	111
25	112	113	26	114	115	27	116	117	28	118	119

Mode 88CH

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Dimmer 1 above 0; CH 4 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 4 Dimmer 2 255, CH 5 Red 255 (the same in each of the 14 cells), CH 6 Green 255 (the same in each of the 14 cells), CH 7 Blue 255 (the same in each of the 14 cells), CH 8 White 255 (the same in each of the 14 cells), CH 61 Cool White 255 (the same in each of the 14 cells), CH 62 Warm White 255 (the same in each of the 14 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “14CH” (p. 9)
2	Zoom		Same as CH 2 in the mode “14CH” (p. 9)
3	Dimmer 1		Same as CH 4 in the mode “14CH” (p. 10)
4	Dimmer 2		Same as CH 6 in the mode “14CH” (p. 10)
5	Red 1	0	Min
		1–254	Min ... Max
		255	Max
6	Green 1	0	Min
		1–254	Min ... Max
		255	Max
7	Blue 1	0	Min
		1–254	Min ... Max
		255	Max
8	White 1	0	Min
		1–254	Min ... Max
		255	Max
61	Cool White 1	0	Min
		1–254	Min ... Max
		255	Max
62	Warm White 1	0	Min
		1–254	Min ... Max
		255	Max

CH 5–60: 14 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 5–8); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	5	6	7	8	2	9	10	11	12
3	13	14	15	16	4	17	18	19	20
5	21	22	23	24	6	25	26	27	28
7	29	30	31	32	8	33	34	35	36
9	37	38	39	40	10	41	42	43	44
11	45	46	47	48	12	49	50	51	52
13	53	54	55	56	14	57	58	59	60

CH 61–88: 14 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 61–62); the table below gives each cell's channel numbers.

Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White
1	61	62	2	63	64	3	65	66	4	67	68
5	69	70	6	71	72	7	73	74	8	75	76
9	77	78	10	79	80	11	81	82	12	83	84
13	85	86	14	87	88						

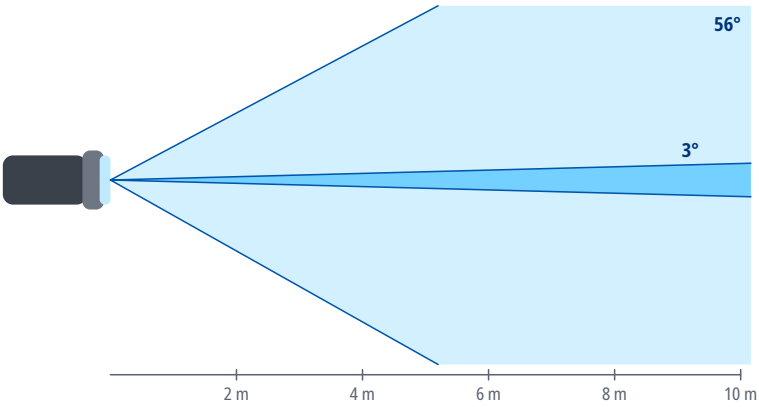
10 Technical specifications

Parameter	Value
Light source	LED
Zoom	3–56°
Tilt	220°
Weight	20.3 kg
Operating temperature	-10 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2700–8000 K
Strobe frequency	1–25 Hz

Spot diameter



Distance	Ø 3°	Ø 56°
2 m	0.1 m	2.1 m
4 m	0.21 m	4.3 m
6 m	0.31 m	6.4 m
8 m	0.42 m	8.5 m
10 m	0.52 m	10.6 m
15 m	0.79 m	16 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.