DMX REFERENCE

LED LED-K15

LED



Manufacturer	LED
GDTF file	led_LED_LED-K15_143093.gdtf
GDTF revision	LED-K15 · 2026-05-18
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1 About this manual

This document describes the LED LED-K15 by LED. It was compiled from the GDTF file led_LED_LED-K15_143093.gdtf from the GDTF-Share library.

File revision: “LED-K15”.

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 LED; 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	21 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
106 DMX	106	4	1, 107, 213, 319
30 DMX	30	17	1, 31, 61, 91, ...
97 DMX	97	5	1, 98, 195, 292, ...
92 DMX	92	5	1, 93, 185, 277, ...
35 DMX	35	14	1, 36, 71, 106, ...
21 DMX	21	24	1, 22, 43, 64, ...
78 DMX	78	6	1, 79, 157, 235, ...
42 DMX	42	12	1, 43, 85, 127, ...

No light? Check these channels

- 106 DMX: CH 8 Dimmer 1 above 0; CH 9 Shutter 1 at 0–3 “Open”; CH 24 Dimmer 2 above 0; CH 25 Shutter 2 at 0–4 “Open” or 251–255
- 30 DMX: CH 8 Dimmer 1 above 0; CH 9 Shutter 1 at 0–3 “Open”; CH 24 Dimmer 2 above 0; CH 25 Shutter 2 at 0–4 “Open” or 251–255
- 97 DMX: CH 11 Shutter at 0–3, 104–107 “Open” or 252–255; CH 12 Dimmer above 0
- 92 DMX: CH 11 Shutter 1 at 104–107 “Open” or 208–212 or 252–255; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0; CH 33 Shutter 2 at 104–107 “Open” or 208–212 or 252–255; CH 34 Shutter 3 at 104–107 “Open” or 208–212 or 252–255
- 35 DMX: CH 11 Shutter 1 at 104–107 “Open” or 208–212 or 252–255; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0; CH 33 Shutter 2 at 104–107 “Open” or 208–212 or 252–255; CH 34 Shutter 3 at 104–107 “Open” or 208–212 or 252–255
- 21 DMX: CH 11 Shutter at 104–107 “Open” or 208–212 or 252–255; CH 12 Dimmer above 0
- 78 DMX: CH 11 Shutter at 0–3, 104–107 “Open” or 252–255; CH 12 Dimmer above 0
- 42 DMX: CH 11 Shutter 1 at 104–107 “Open” or 208–212 or 252–255; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0; CH 33 Shutter 2 at 104–107 “Open” or 208–212 or 252–255; CH 34 Shutter 3 at 104–107 “Open” or 208–212 or 252–255; CH 36 Dimmer 4 above 0; CH 37 Shutter 4 at 0–4 “Open” or 251–255


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

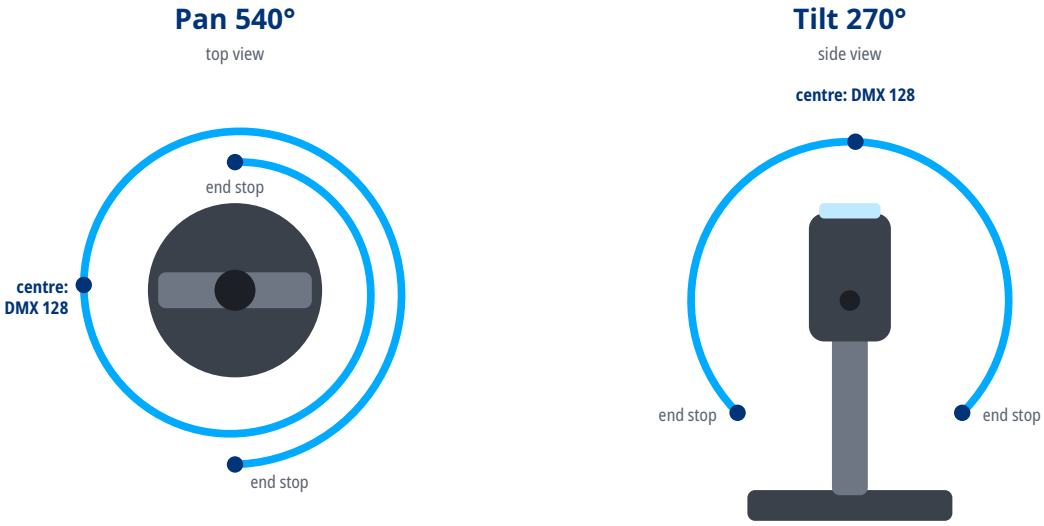
- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them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

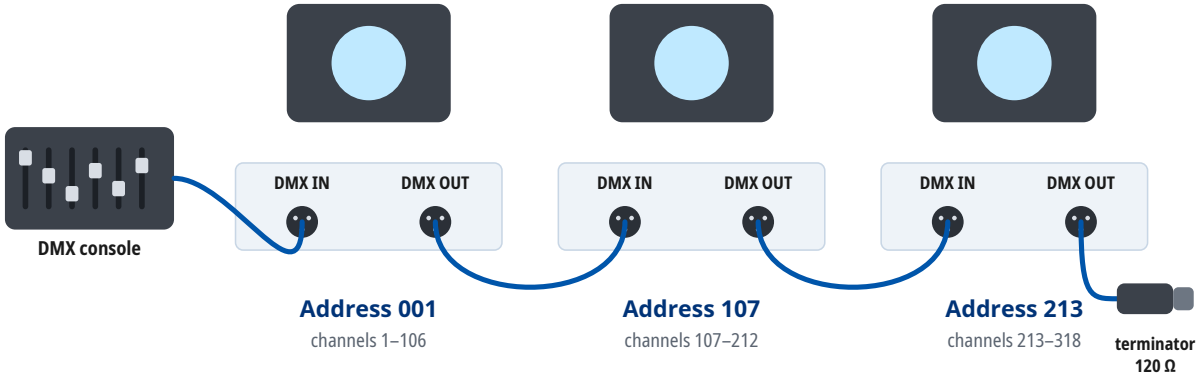
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 21 kg.
- 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 106 DMX: every unit occupies 106 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

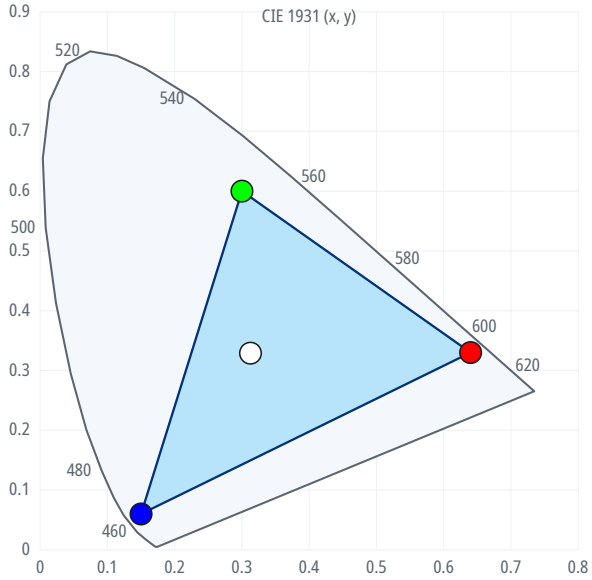
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “106 DMX”: 106.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “106 DMX”, you can use, for example, the start addresses 1, 107, 213, 319.
- 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

	106 DMX 106 channels	30 DMX 30 channels	97 DMX 97 channels	92 DMX 92 channels	35 DMX 35 channels	21 DMX 21 channels	78 DMX 78 channels	42 DMX 42 channels
Pan / Tilt	**1, 3**	**1, 3**	**14, 16**	**14, 16**	**14, 16**	**14, 16**	**14, 16**	**14, 16**
Dimmer	**8, 24**	**8, 24**	**12**	**12, 29, 30**	**12, 29, 30**	**12**	**12**	**12, 29, 30, 36**
Dimmer resolution	8 bit	8 bit	16 bit	16 bit	16 bit	16 bit	16 bit	16 bit
Shutter / strobe	**9, 25**	**9, 25**	**11**	**11, 33, 34**	**11, 33, 34**	**11**	**11**	**11, 33, 34, 37**
Color mixing	10–13, 19–106	10–13, 19–22, 26–28	89 channels (1–106)	86 channels (1–105)	8 channels (1–28)	**4× (1–7)**	86 channels (1–105)	11 channels (1–40)
Color wheel	**15**	**15**	**10**	**10**	**10**	**10**	**10**	**10**
Zoom	**6**	**6**	**20**	**20**	**20**	**20**	**20**	**20**
Effects / macros			**18**	**18**	**18**	**18**	**18**	**18, 24**
Pixel control	**19 cells**	✓		**19 cells**				✓

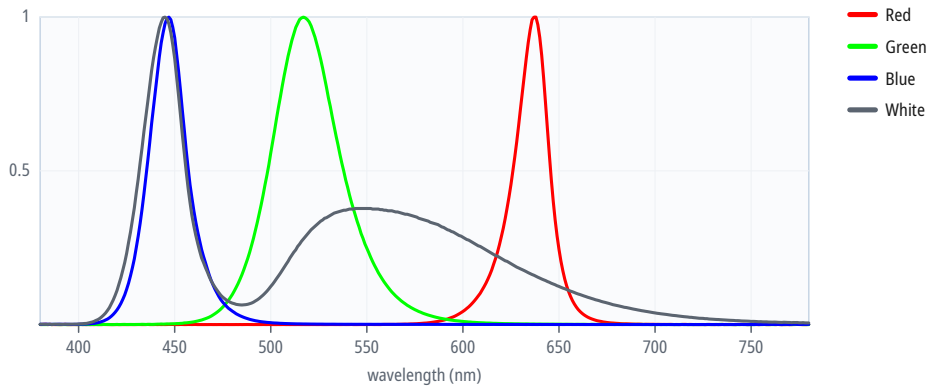
LED colors and the colors they mix



LED	x	y
Red	0.640	0.330
Green	0.300	0.600
Blue	0.150	0.060
White	0.313	0.329

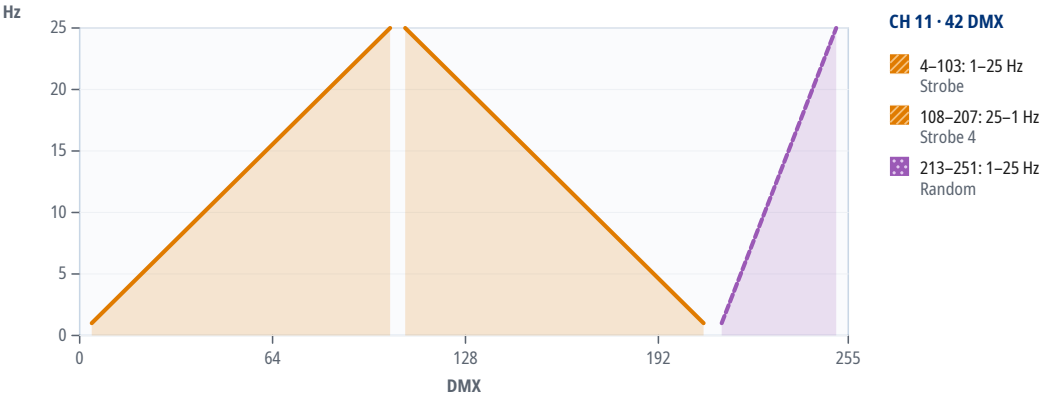
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources

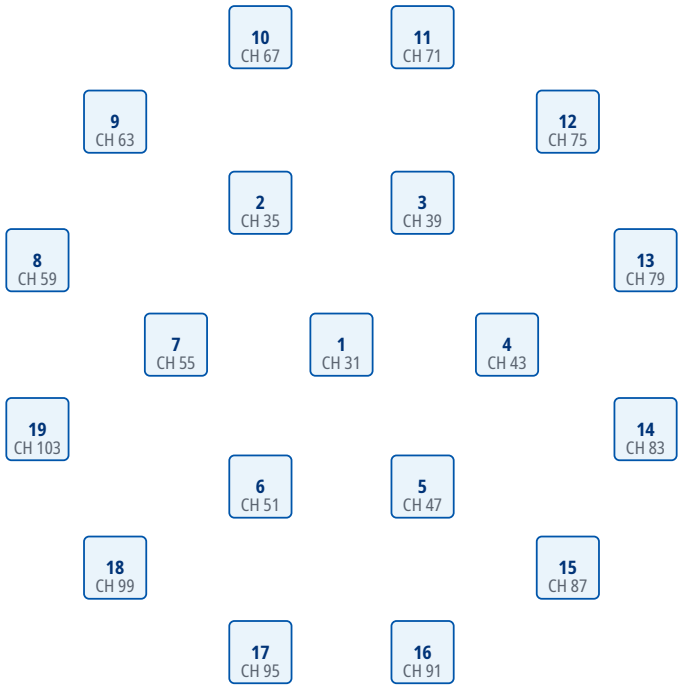


Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



Cells (pixels)



19 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “42 DMX ”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “106 DMX”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 107	11	U3 · 213	16	U4 · 319
2	107	7	U2 · 213	12	U3 · 319	17	U5 · 1
3	213	8	U2 · 319	13	U4 · 1	18	U5 · 107
4	319	9	U3 · 1	14	U4 · 107	19	U5 · 213
5	U2 · 1	10	U3 · 107	15	U4 · 213	20	U5 · 319

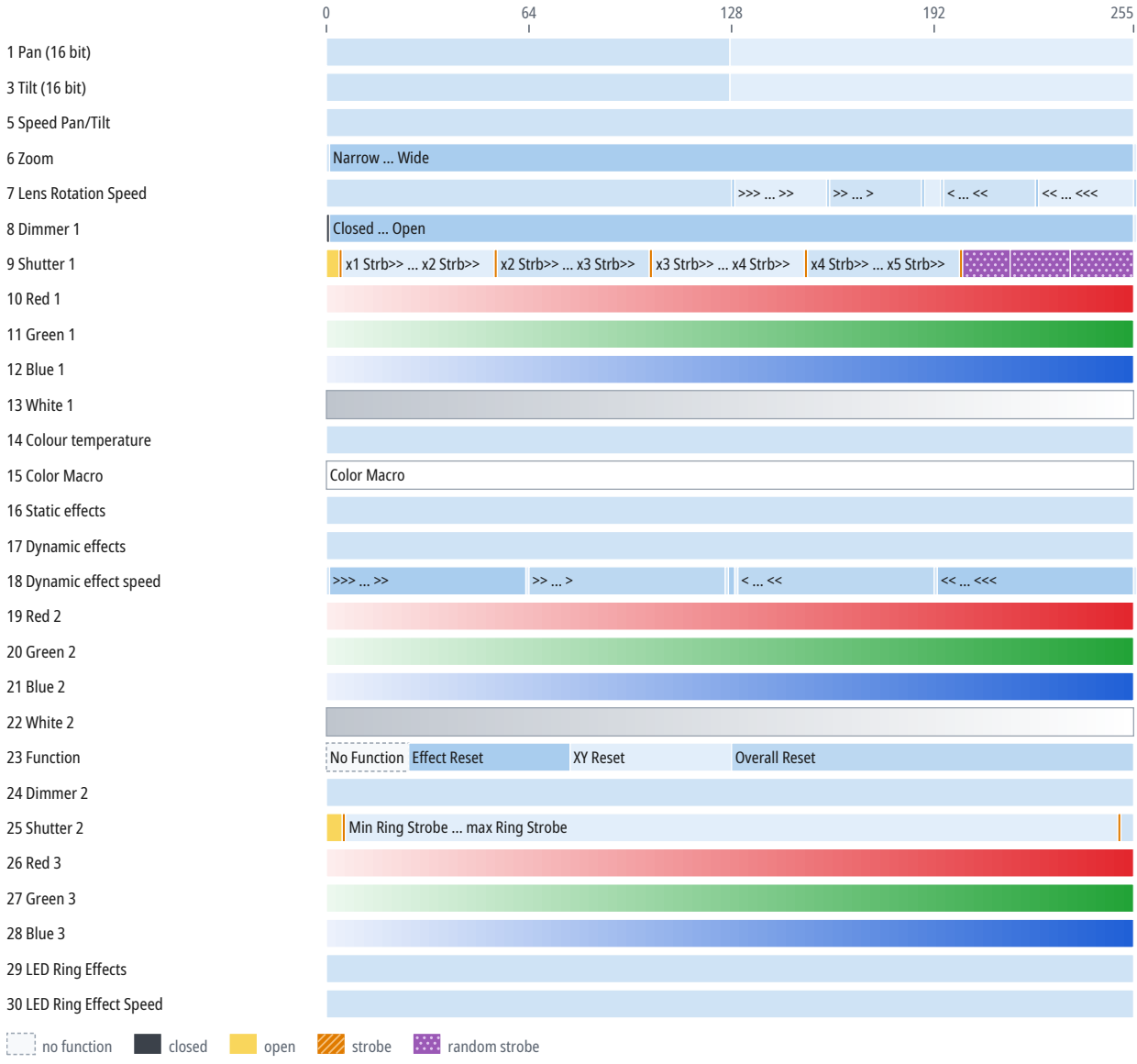
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 106 DMX

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 8 Dimmer 1 above 0; CH 9 Shutter 1 at 0–3 “Open”; CH 24 Dimmer 2 above 0; CH 25 Shutter 2 at 0–4 “Open” or 251–255. The GDTF file gives these values for a console's Highlight function: CH 8 Dimmer 1 100, CH 9 Shutter 1 255, CH 15 Color Macro 0, CH 24 Dimmer 2 100, CH 26 Red 3 255, CH 27 Green 3 255, CH 28 Blue 3 255, CH 31 Red 255 (the same in each of the 19 cells), CH 32 Green 255 (the same in each of the 19 cells), CH 33 Blue 255 (the same in each of the 19 cells), CH 34 White 0 (the same in each of the 19 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		128	Home
		128–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt

CH	Function	DMX	Description
3	Tilt (continued)	128	Home
		128–255	Tilt
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Zoom	0	Narrow
		1–254	Narrow ... Wide
		255	Wide
7	Lens Rotation Speed	0–127	Zoom Pos
		128	>>>
		129–157	>>> ... >>
		158	>>
		159–187	>> ... >
		188	>
		189–193	Zoom Pos: Stop
		194	<
		195–223	< ... <<
		224	<<
		225–254	<< ... <<<
		255	<<<
8	Dimmer 1	0	Closed
		1–254	Closed ... Open
		255	Open
9	Shutter 1	0–3	Open
		4	x1 Strb>>
		5–52	x1 Strb>> ... x2 Strb>>
		53	x2 Strb>>
		54–101	x2 Strb>> ... x3 Strb>>
		102	x3 Strb>>
		103–150	x3 Strb>> ... x4 Strb>>
		151	x4 Strb>>
		152–199	x4 Strb>> ... x5 Strb>>
		200	x5 Strb>>
		201–215	Low Rnd Strb>>
		216–234	Medium Rnd Strb>>
		235–255	High Rnd Strb>>
10	Red 1	0–255	
11	Green 1	0–255	
12	Blue 1	0–255	
13	White 1	0–255	
14	Colour temperature	0–255	
15	Color Macro	0–255	Color Macro
16	Static effects	0–255	

CH	Function	DMX	Description
17	Dynamic effects	0–255	
18	Dynamic effect speed	0	>>>
		1–62	>>> ... >>
		63	>>
		64–125	>> ... >
		126	>
		127–128	Spot
		129	<
		130–191	< ... <<
		192	<<
		193–254	<< ... <<<
		255	<<<
19	Red 2	0–255	
20	Green 2	0–255	
21	Blue 2	0–255	
22	White 2	0–255	
23	Function	0–25	No Function
		26–76	Effect Reset
		77–127	XY Reset
		128–255	Overall Reset
24	Dimmer 2	0–255	
25	Shutter 2	0–4	Open
		5	Min Ring Strobe
		6–249	Min Ring Strobe ... max Ring Strobe
		250	Max Ring Strobe
		251–255	Open 2
26	Red 3	0–255	
27	Green 3	0–255	
28	Blue 3	0–255	
29	LED Ring Effects		LED Ring Effects 1
		0–255	LED Ring Effects 1
30	LED Ring Effect Speed	0–255	
31	Red 4	0–255	
32	Green 4	0–255	
33	Blue 4	0–255	
34	White 3	0–255	

CH 31–106: 19 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 31–34); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	31	32	33	34	2	35	36	37	38
3	39	40	41	42	4	43	44	45	46
5	47	48	49	50	6	51	52	53	54

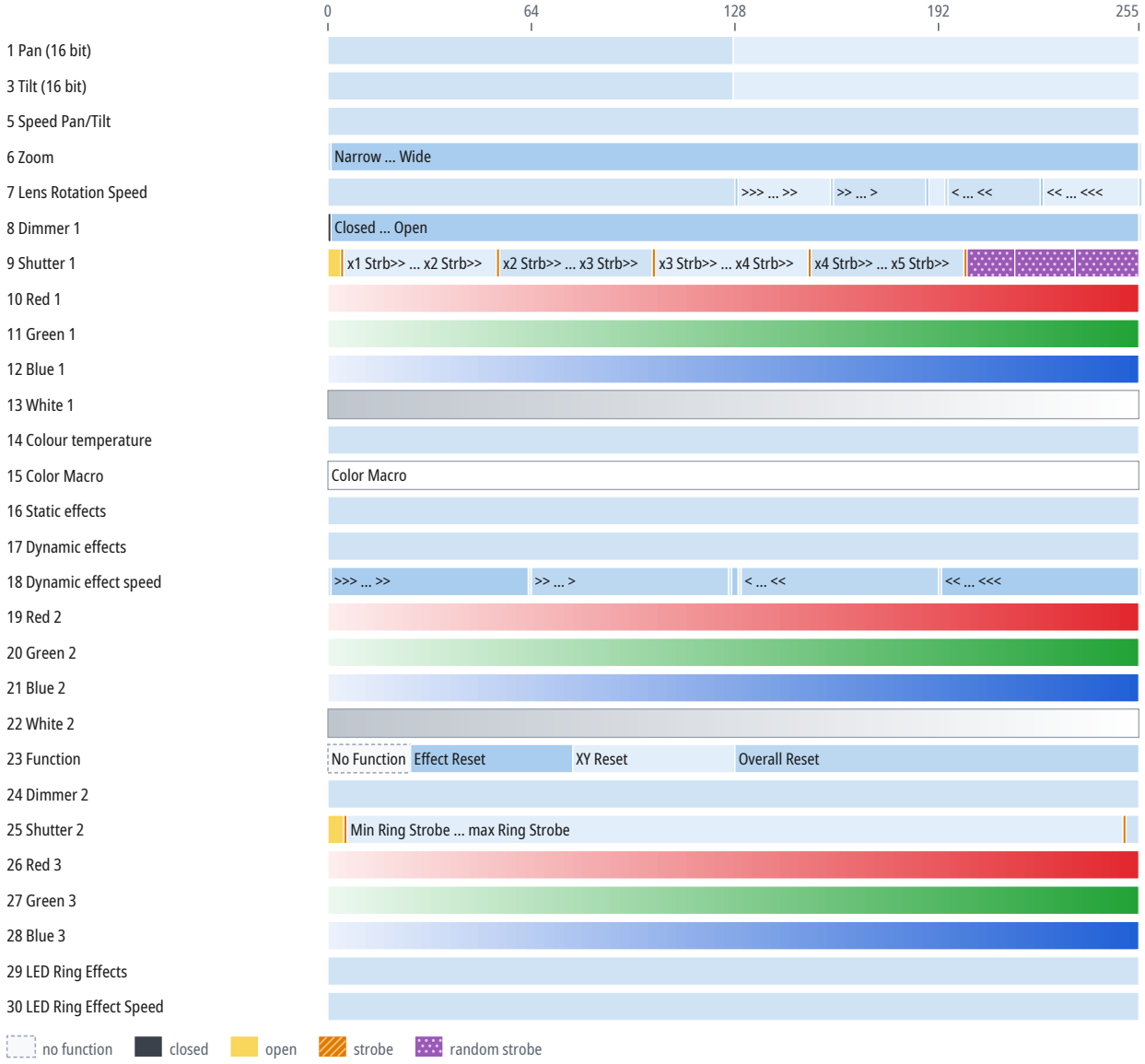
Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
7	55	56	57	58	8	59	60	61	62
9	63	64	65	66	10	67	68	69	70
11	71	72	73	74	12	75	76	77	78
13	79	80	81	82	14	83	84	85	86
15	87	88	89	90	16	91	92	93	94
17	95	96	97	98	18	99	100	101	102
19	103	104	105	106					

Mode 30 DMX

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 8 Dimmer 1 above 0; CH 9 Shutter 1 at 0–3 “Open”; CH 24 Dimmer 2 above 0; CH 25 Shutter 2 at 0–4 “Open” or 251–255. The GDTF file gives these values for a console's Highlight function: CH 8 Dimmer 1 100, CH 9 Shutter 1 255, CH 10 Red 1 255, CH 11 Green 1 255, CH 12 Blue 1 255, CH 15 Color Macro 0, CH 24 Dimmer 2 100, CH 26 Red 3 255, CH 27 Green 3 255, CH 28 Blue 3 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “106 DMX” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “106 DMX” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Zoom		Same as CH 6 in the mode “106 DMX” (p. 11)

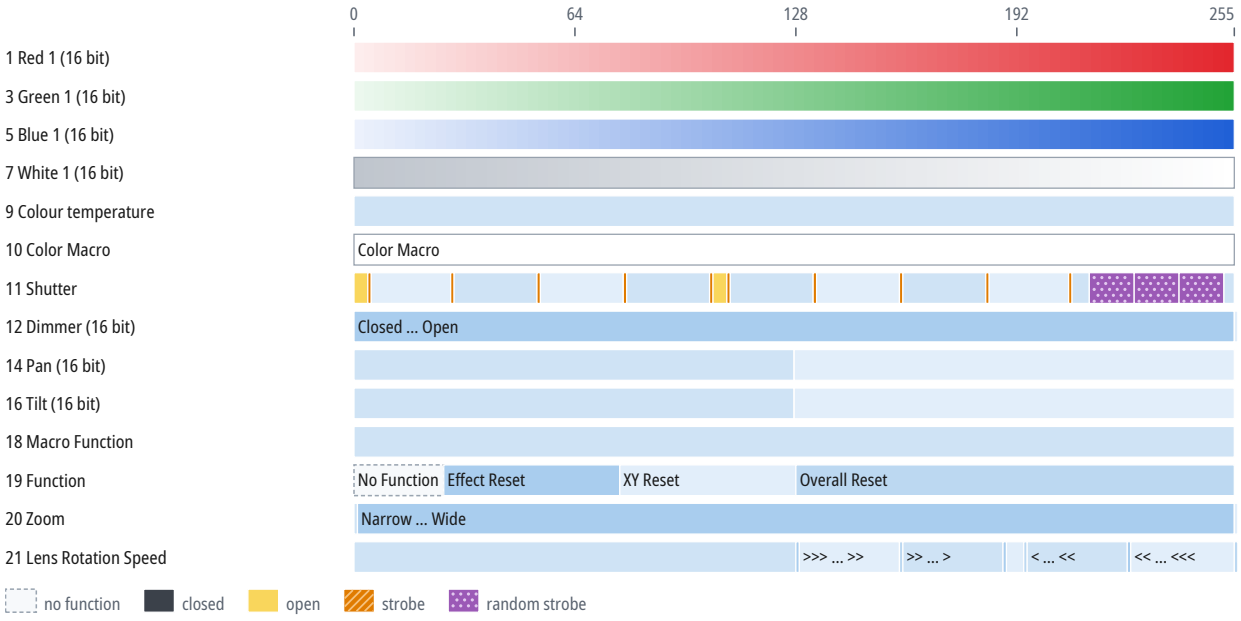
CH	Function	DMX	Description
7	Lens Rotation Speed		Same as CH 7 in the mode “106 DMX” (p. 11)
8	Dimmer 1		Same as CH 8 in the mode “106 DMX” (p. 11)
9	Shutter 1	0–3	Open
		4	x1 Strb>>
		5–52	x1 Strb>> ... x2 Strb>>
		53	x2 Strb>>
		54–101	x2 Strb>> ... x3 Strb>>
		102	x3 Strb>>
		103–150	x3 Strb>> ... x4 Strb>>
		151	x4 Strb>>
		152–199	x4 Strb>> ... x5 Strb>>
		200	x5 Strb>>
		201–215	Low Rnd Strb
		216–234	Medium Rnd Strb>>
		235–255	High Rnd Strb>>
10	Red 1	0–255	
11	Green 1	0–255	
12	Blue 1	0–255	
13	White 1	0–255	
14	Colour temperature	0–255	
15	Color Macro	0–255	Color Macro
16	Static effects	0–255	
17	Dynamic effects	0–255	
18	Dynamic effect speed		Same as CH 18 in the mode “106 DMX” (p. 12)
19	Red 2	0–255	
20	Green 2	0–255	
21	Blue 2	0–255	
22	White 2	0–255	
23	Function		Same as CH 23 in the mode “106 DMX” (p. 12)
24	Dimmer 2	0–255	
25	Shutter 2		Same as CH 25 in the mode “106 DMX” (p. 12)
26	Red 3	0–255	
27	Green 3	0–255	
28	Blue 3	0–255	
29	LED Ring Effects		Same as CH 29 in the mode “106 DMX” (p. 12)
30	LED Ring Effect Speed	0–255	

Mode 97 DMX

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 11 Shutter at 0–3, 104–107 “Open” or 252–255; CH 12 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 10 Color Macro 0, CH 11 Shutter 255, CH 12 Dimmer 100, CH 22 Red 255 (the same in each of the 19 cells), CH 23 Green 255 (the same in each of the 19 cells), CH 24 Blue 255 (the same in each of the 19 cells), CH 25 White 0 (the same in each of the 19 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1	0–255	
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1	0–255	
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White 1	0–255	
8	White 1 Fine	0–255	Fine adjustment of CH 7
9	Colour temperature	0–255	
10	Color Macro	0–255	Color Macro
11	Shutter	0–3	OFF: Open
		4	Strobe: x1 Strb>>
		5–27	x1 Strb>> ... x2 Strb>>
		28	Strobe: x2 Strb>>
		29–52	x2 Strb>> ... x3 Strb>>
		53	Strobe: x3 Strb>>
		54–77	x3 Strb>> ... x4 Strb>>
		78	Strobe: x4 Strb>>

CH	Function	DMX	Description
11	Shutter (continued)	79–102	x4 Strb>> ... x5 Strb>>
		103	Strobe: x5 Strb>>
		104–107	Open
		108	Strobe: x5 Strb>>
		109–132	x5 Strb>> ... x4 Strb>>
		133	Strobe: x4 Strb>>
		134–157	x4 Strb>> ... x3 Strb>>
		158	Strobe: x3 Strb>>
		159–182	x3 Strb>> ... x2 Strb>>
		183	Strobe: x2 Strb>>
		184–206	x2 Strb>> ... x1 Strb>>
		207	Strobe: x1 Strb>>
		208–212	Open2
		213–225	Low Rnd Strb>
		226–238	Medium Rnd Strb>>
		239–251	High Rnd Strb>>>
		252–255	Open 3
12	Dimmer	0–255	Closed ... Open
		255	Open
13	Dimmer Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 1 in the mode “106 DMX” (p. 10)
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt		Same as CH 3 in the mode “106 DMX” (p. 10)
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Macro Function	0–255	
19	Function		Same as CH 23 in the mode “106 DMX” (p. 12)
20	Zoom		Same as CH 6 in the mode “106 DMX” (p. 11)
21	Lens Rotation Speed		Same as CH 7 in the mode “106 DMX” (p. 11)
22	Red 2	0–255	
23	Green 2	0–255	
24	Blue 2	0–255	
25	White 2	0–255	

CH 22–97: 19 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 22–25); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	22	23	24	25	2	26	27	28	29
3	30	31	32	33	4	34	35	36	37
5	38	39	40	41	6	42	43	44	45
7	46	47	48	49	8	50	51	52	53
9	54	55	56	57	10	58	59	60	61
11	62	63	64	65	12	66	67	68	69
13	70	71	72	73	14	74	75	76	77

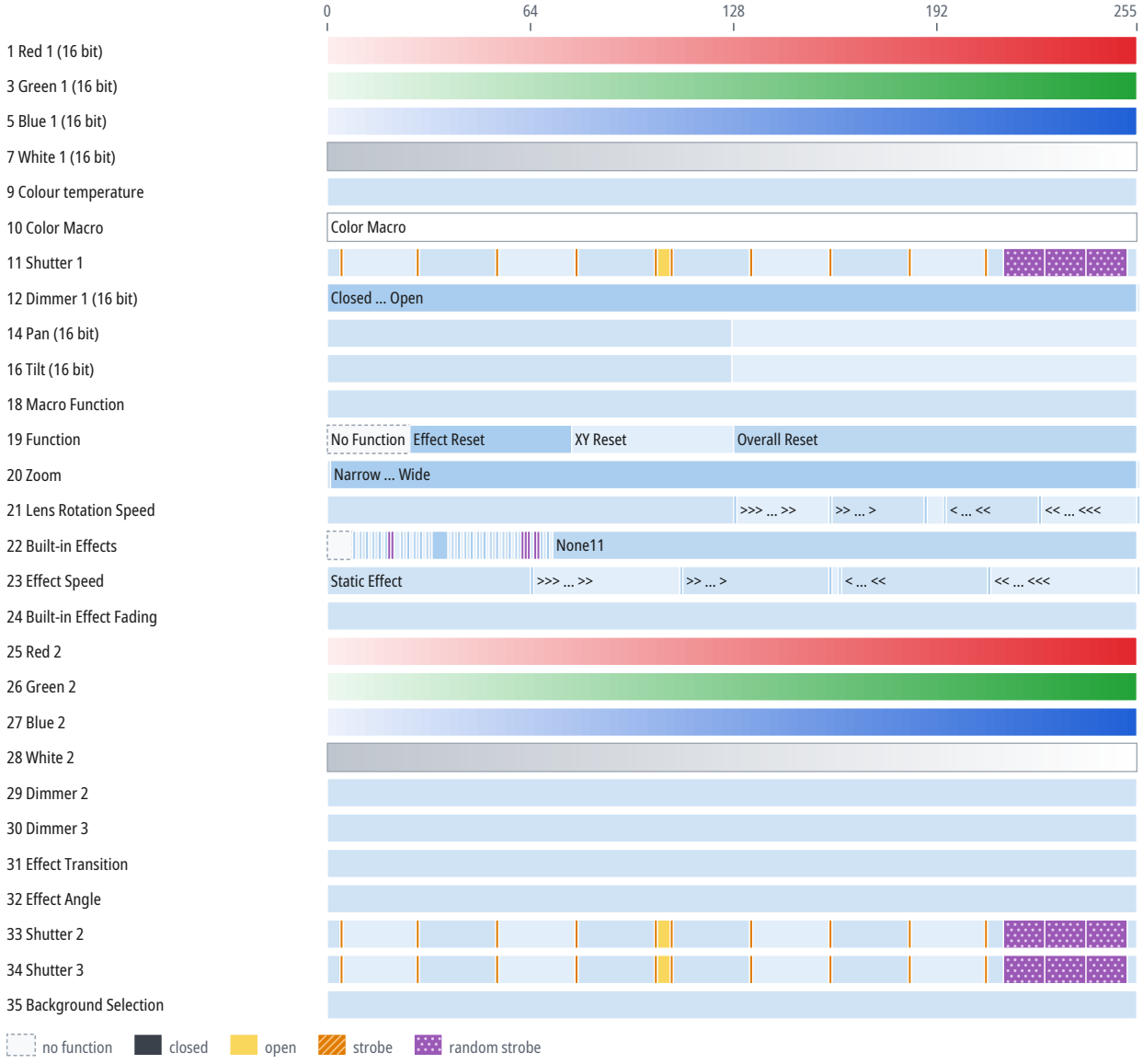
Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
15	78	79	80	81	16	82	83	84	85
17	86	87	88	89	18	90	91	92	93
19	94	95	96	97					

Mode 92 DMX

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 11 Shutter 1 at 104–107 “Open” or 208–212 or 252–255; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0; CH 33 Shutter 2 at 104–107 “Open” or 208–212 or 252–255; CH 34 Shutter 3 at 104–107 “Open” or 208–212 or 252–255. The GDTF file gives these values for a console's Highlight function: CH 10 Color Macro 0, CH 11 Shutter 1 255, CH 12 Dimmer 1 100, CH 36 Red 255 (the same in each of the 19 cells), CH 37 Green 255 (the same in each of the 19 cells), CH 38 Blue 255 (the same in each of the 19 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1	0–255	
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1	0–255	
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White 1	0–255	
8	White 1 Fine	0–255	Fine adjustment of CH 7
9	Colour temperature	0–255	
10	Color Macro	0–255	Color Macro
11	Shutter 1	0–3	OFF
		4	Strobe: x1 Strb>>
		5–27	Strobe: x1 Strb>> ... x2 Strb>>
		28	Strobe: x2 Strb>>
		29–52	Strobe: x2 Strb>> ... x3 Strb>>
		53	Strobe: x3 Strb>>
		54–77	Strobe: x3 Strb>> ... x4 Strb>>
		78	Strobe: x4 Strb>>
		79–102	Strobe: x4 Strb>> ... x5 Strb>>
		103	Strobe: x5 Strb>>
		104–107	Open
		108	Strobe: x1 Strb>>
		109–132	Strobe: x1 Strb>> ... x2 Strb>>
		133	Strobe: x2 Strb>>
		134–157	Strobe: x2 Strb>> ... x3 Strb>>
		158	Strobe: x3 Strb>>
		159–182	Strobe: x3 Strb>> ... x4 Strb>>
		183	Strobe: x4 Strb>>
		184–206	Strobe: x4 Strb>> ... x5 Strb>>
		207	Strobe: x5 Strb>>
		208–212	Open 2
		213–225	Low Rnd Strb>
		226–238	Medium Rnd Strb>>
		239–251	High Rnd Strb>>>
		252–255	Open 3
12	Dimmer 1	0–255	Closed ... Open
		255	Open
13	Dimmer 1 Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 1 in the mode “106 DMX” (p. 10)
15	Pan Fine	0–255	Fine adjustment of CH 14

CH	Function	DMX	Description
16	Tilt		Same as CH 3 in the mode “106 DMX” (p. 10)
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Macro Function	0–255	
19	Function		Same as CH 23 in the mode “106 DMX” (p. 12)
20	Zoom		Same as CH 6 in the mode “106 DMX” (p. 11)
21	Lens Rotation Speed		Same as CH 7 in the mode “106 DMX” (p. 11)
22	Built-in Effects	0–7	None
		8	Static Effect 1
		9	Static Effect 2
		10	Static Effect 3
		11	None2
		12	Static Effect 4
		13	Static Effect 5
		14	None3
		15	Dynamic Effect 1
		16	Dynamic Effect 2
		17	Dynamic Effect 3
		18	Dynamic Effect 4
		19	Single-color Random
		20	Allcolors Random
		21–22	None4
		23–32	Dynamic Effect 5...14
		33–37	None5
		38	Dynamic Effect 18
		39	Dynamic Effect 19
		40	Dynamic Effect 20
		41	None6
		42	Dynamic Effect 21
		43	None7
		44–59	Dynamic Effect 22...37
		60	None8
		61	Random location 1
		62	Random location 2
		63	Random location 3
		64	None9
		65	Random location 4
		66	Random location 5
		67	Dynamic Effect 39
		68	Dynamic Effect 40
		69	None10
		70	Dynamiceffect41

CH	Function	DMX	Description
22	Built-in Effects (continued)	71–255	None11
23	Effect Speed	0–63	Static Effect
		64	>>>
		65–110	>>> ... >>
		111	>>
		112–157	>> ... >
		158	>
		159–160	Static
		161	<
		162–207	< ... <<
		208	<<
		209–254	<< ... <<<
		255	<<<
24	Built-in Effect Fading	0–255	
25	Red 2	0–255	
26	Green 2	0–255	
27	Blue 2	0–255	
28	White 2	0–255	
29	Dimmer 2	0–255	
30	Dimmer 3	0–255	
31	Effect Transition	0–255	
32	Effect Angle	0–255	
33	Shutter 2	0–3	OFF
		4	Strobe: x1 Strb>>
		5–27	x1 Strb>> ... x2 Strb>>
		28	Strobe: x2 Strb>>
		29–52	x2 Strb>> ... x3 Strb>>
		53	Strobe: x3 Strb>>
		54–77	x3 Strb>> ... x4 Strb>>
		78	Strobe: x4 Strb>>
		79–102	x4 Strb>> ... x5 Strb>>
		103	Strobe: x5 Strb>>
		104–107	Open
		108	Strobe: x5 Strb>>
		109–132	x5 Strb>> ... x4 Strb>>
		133	Strobe: x4 Strb>>
		134–157	x4 Strb>> ... x3 Strb>>
		158	Strobe: x3 Strb>>
		159–182	x3 Strb>> ... x2 Strb>>
		183	Strobe: x2 Strb>>
		184–206	x2 Strb>> ... x1 Strb>>

CH	Function	DMX	Description
33	Shutter 2 (continued)	207	Strobe: x1 Strb>>
		208–212	Open 2
		213–225	Low Rnd Strb>
		226–238	Medium Rnd Strb>>
		239–251	High Rnd Strb>>>
		252–255	Open 3
34	Shutter 3	0–3	OFF
		4	Strobe: x1 Strb>>
		5–27	x1 Strb>> ... x2 Strb>>
		28	Strobe: x2 Strb>>
		29–52	x2 Strb>> ... x3 Strb>>
		53	Strobe: x3 Strb>>
		54–77	x3 Strb>> ... x4 Strb>>
		78	Strobe: x4 Strb>>
		79–102	x4 Strb>> ... x5 Strb>>
		103	Strobe: x5 Strb>>
		104–107	Open
		108	Strobe: x5 Strb>>
		109–132	x5 Strb>> ... x4 Strb>>
		133	Strobe: x4 Strb>>
		134–157	x4 Strb>> ... x3 Strb>>
		158	Strobe: x3 Strb>>
		159–182	x3 Strb>> ... x2 Strb>>
		183	Strobe: x2 Strb>>
		184–206	x2 Strb>> ... x1 Strb>>
		207	Strobe: x1 Strb>>
		208–212	Open 2
		213–225	Low Rnd Strb>
		226–238	Medium Rnd Strb>>
		239–251	High Rnd Strb>>>
		252–255	Open 3
35	Background Selection	0–255	
36	Red 3	0–255	
37	Green 3	0–255	
38	Blue 3	0–255	

CH 36–92: 19 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 36–38); the table below gives each cell's channel numbers.

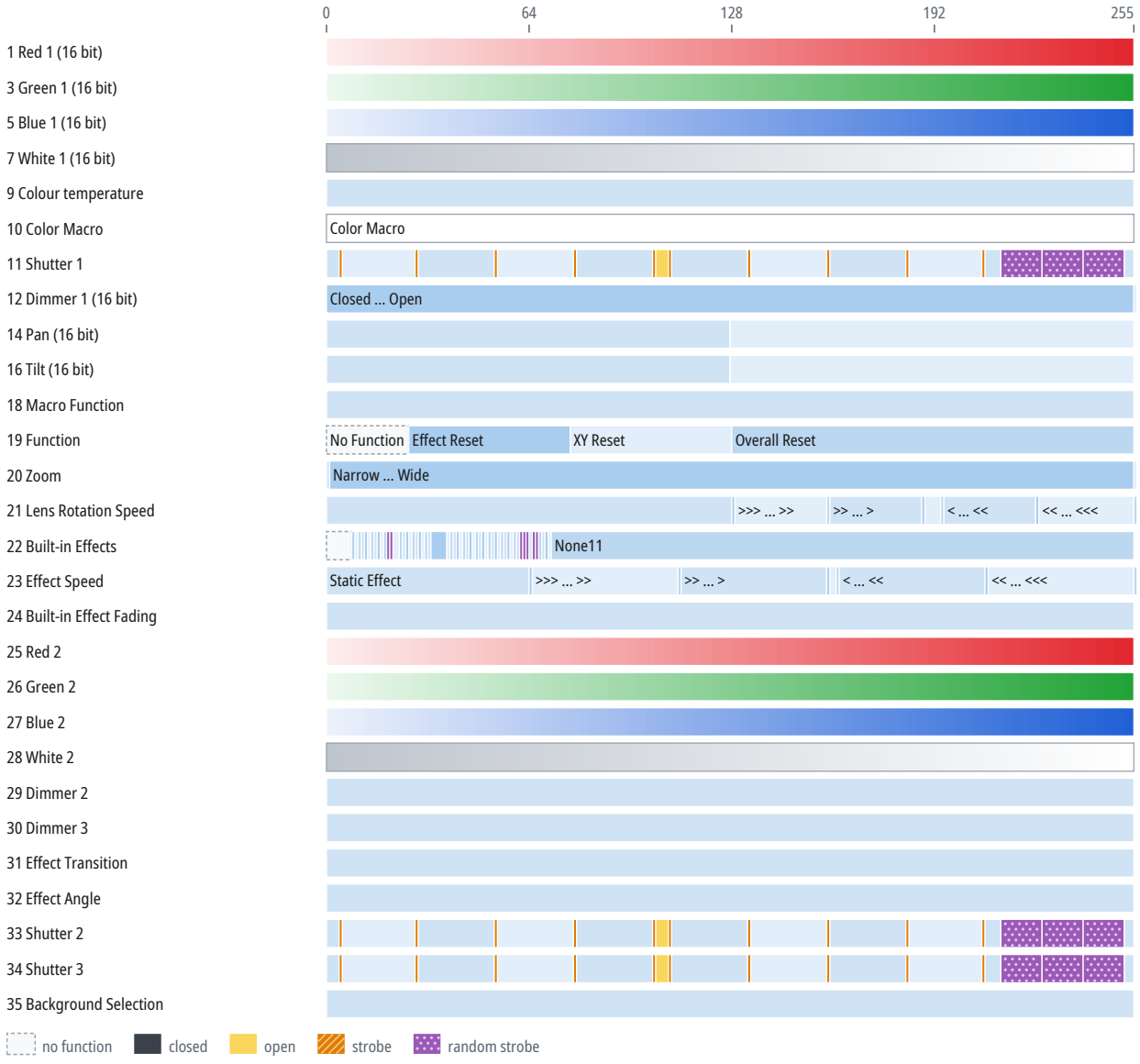
Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	36	37	38	2	39	40	41	3	42	43	44
4	45	46	47	5	48	49	50	6	51	52	53
7	54	55	56	8	57	58	59	9	60	61	62
10	63	64	65	11	66	67	68	12	69	70	71
13	72	73	74	14	75	76	77	15	78	79	80
16	81	82	83	17	84	85	86	18	87	88	89
19	90	91	92								

Mode 35 DMX

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 11 Shutter 1 at 104–107 “Open” or 208–212 or 252–255; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0; CH 33 Shutter 2 at 104–107 “Open” or 208–212 or 252–255; CH 34 Shutter 3 at 104–107 “Open” or 208–212 or 252–255. The GDTF file gives these values for a console's Highlight function: CH 1 Red 1 255, CH 3 Green 1 255, CH 5 Blue 1 255, CH 7 White 1 0, CH 10 Color Macro 0, CH 11 Shutter 1 255, CH 12 Dimmer 1 255, CH 29 Dimmer 2 100, CH 30 Dimmer 3 100.

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1	0–255	
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1	0–255	

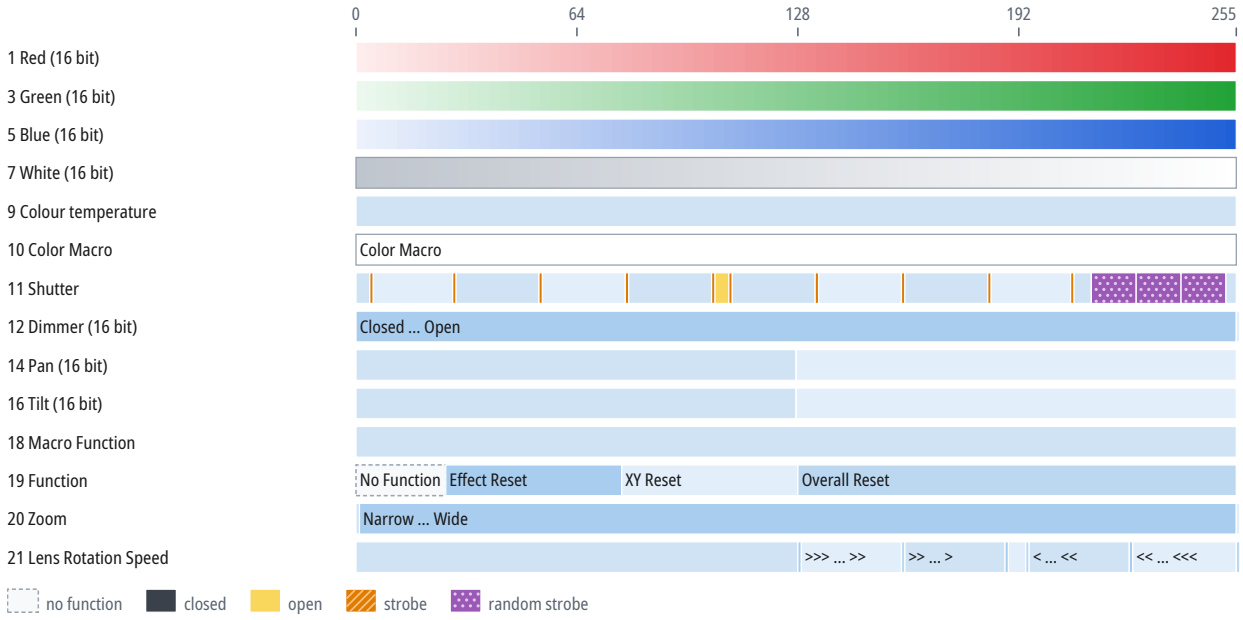
CH	Function	DMX	Description
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White 1	0–255	
8	White 1 Fine	0–255	Fine adjustment of CH 7
9	Colour temperature	0–255	
10	Color Macro	0–255	Color Macro
11	Shutter 1		Same as CH 11 in the mode “92 DMX” (p. 19)
12	Dimmer 1		Same as CH 12 in the mode “92 DMX” (p. 19)
13	Dimmer 1 Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 1 in the mode “106 DMX” (p. 10)
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt		Same as CH 3 in the mode “106 DMX” (p. 10)
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Macro Function	0–255	
19	Function		Same as CH 23 in the mode “106 DMX” (p. 12)
20	Zoom		Same as CH 6 in the mode “106 DMX” (p. 11)
21	Lens Rotation Speed		Same as CH 7 in the mode “106 DMX” (p. 11)
22	Built-in Effects		Same as CH 22 in the mode “92 DMX” (p. 20)
23	Effect Speed		Same as CH 23 in the mode “92 DMX” (p. 21)
24	Built-in Effect Fading	0–255	
25	Red 2	0–255	
26	Green 2	0–255	
27	Blue 2	0–255	
28	White 2	0–255	
29	Dimmer 2	0–255	
30	Dimmer 3	0–255	
31	Effect Transition	0–255	
32	Effect Angle	0–255	
33	Shutter 2		Same as CH 33 in the mode “92 DMX” (p. 21)
34	Shutter 3		Same as CH 34 in the mode “92 DMX” (p. 22)
35	Background Selection	0–255	

Mode 21 DMX

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 11 Shutter at 104–107 “Open” or 208–212 or 252–255; CH 12 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 3 Green 255, CH 5 Blue 255, CH 7 White 0, CH 10 Color Macro 0, CH 11 Shutter 255, CH 12 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0–255	
2	Red Fine	0–255	Fine adjustment of CH 1
3	Green	0–255	
4	Green Fine	0–255	Fine adjustment of CH 3
5	Blue	0–255	
6	Blue Fine	0–255	Fine adjustment of CH 5
7	White	0–255	
8	White Fine	0–255	Fine adjustment of CH 7
9	Colour temperature	0–255	
10	Color Macro	0–255	Color Macro
11	Shutter	0–3	OFF
		4	Strobe: x1 Strb>>
		5–27	Strobe: x1 Strb>> ... x2 Strb>>
		28	Strobe: x2 Strb>>
		29–52	Strobe: x2 Strb>> ... x3 Strb>>
		53	Strobe: x3 Strb>>
		54–77	Strobe: x3 Strb>> ... x4 Strb>>
		78	Strobe: x4 Strb>>
		79–102	Strobe: x4 Strb>> ... x5 Strb>>

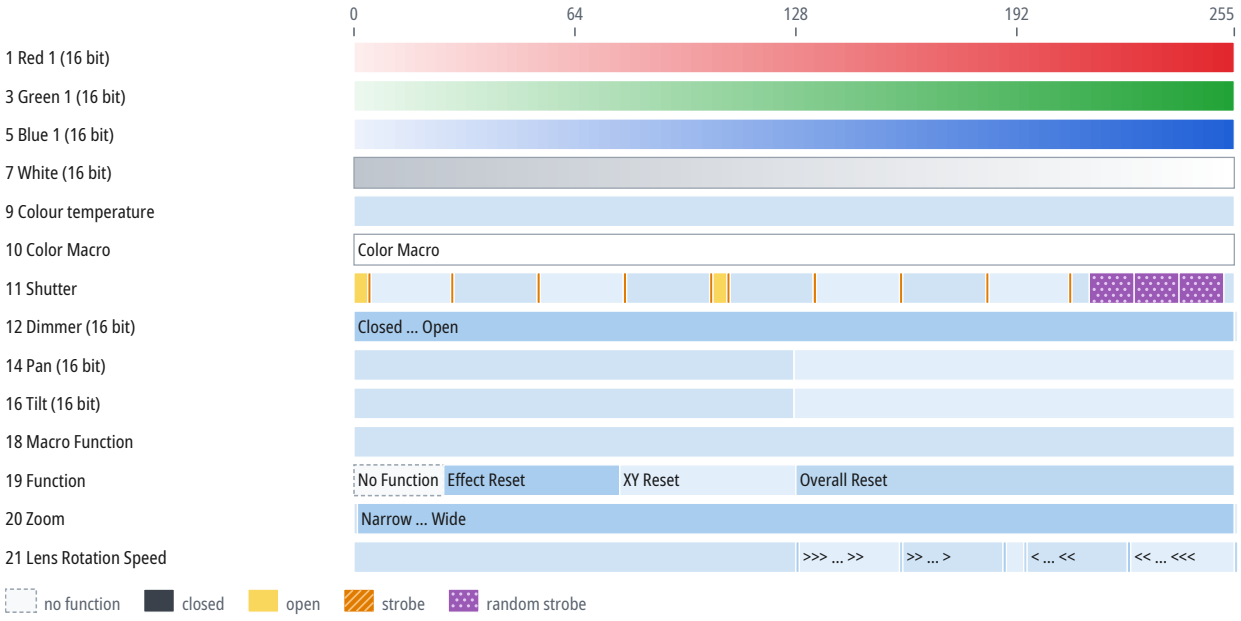
CH	Function	DMX	Description
11	Shutter (continued)	103	Strobe: x5 Strb>>
		104–107	Open
		108	Strobe: x1 Strb>>
		109–132	Strobe: x1 Strb>> ... x2 Strb>>
		133	Strobe: x2 Strb>>
		134–157	Strobe: x2 Strb>> ... x3 Strb>>
		158	Strobe: x3 Strb>>
		159–182	Strobe: x3 Strb>> ... x4 Strb>>
		183	Strobe: x4 Strb>>
		184–206	Strobe: x4 Strb>> ... x5 Strb>>
		207	Strobe: x5 Strb>>
		208–212	Open 2
		213–225	Low Rnd Strb>
		226–238	Medium Rnd Strb>>
		239–251	High Rnd Strb>>>
		252–255	Open 3
12	Dimmer		Same as CH 12 in the mode “97 DMX” (p. 17)
13	Dimmer Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 1 in the mode “106 DMX” (p. 10)
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt		Same as CH 3 in the mode “106 DMX” (p. 10)
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Macro Function	0–255	
19	Function		Same as CH 23 in the mode “106 DMX” (p. 12)
20	Zoom		Same as CH 6 in the mode “106 DMX” (p. 11)
21	Lens Rotation Speed		Same as CH 7 in the mode “106 DMX” (p. 11)

Mode 78 DMX

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 11 Shutter at 0–3, 104–107 “Open” or 252–255; CH 12 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 10 Color Macro 0, CH 11 Shutter 255, CH 12 Dimmer 100, CH 22 Red 255 (the same in each of the 19 cells), CH 23 Green 255 (the same in each of the 19 cells), CH 24 Blue 255 (the same in each of the 19 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1	0–255	
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1	0–255	
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White	0–255	
8	White Fine	0–255	Fine adjustment of CH 7
9	Colour temperature	0–255	
10	Color Macro	0–255	Color Macro
11	Shutter		Same as CH 11 in the mode “97 DMX” (p. 16)
12	Dimmer		Same as CH 12 in the mode “97 DMX” (p. 17)
13	Dimmer Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 1 in the mode “106 DMX” (p. 10)
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt		Same as CH 3 in the mode “106 DMX” (p. 10)
17	Tilt Fine	0–255	Fine adjustment of CH 16

CH	Function	DMX	Description
18	Macro Function	0–255	
19	Function		Same as CH 23 in the mode “106 DMX” (p. 12)
20	Zoom		Same as CH 6 in the mode “106 DMX” (p. 11)
21	Lens Rotation Speed		Same as CH 7 in the mode “106 DMX” (p. 11)
22	Red 2	0–255	
23	Green 2	0–255	
24	Blue 2	0–255	

CH 22–78: 19 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 22–24); the table below gives each cell's channel numbers.

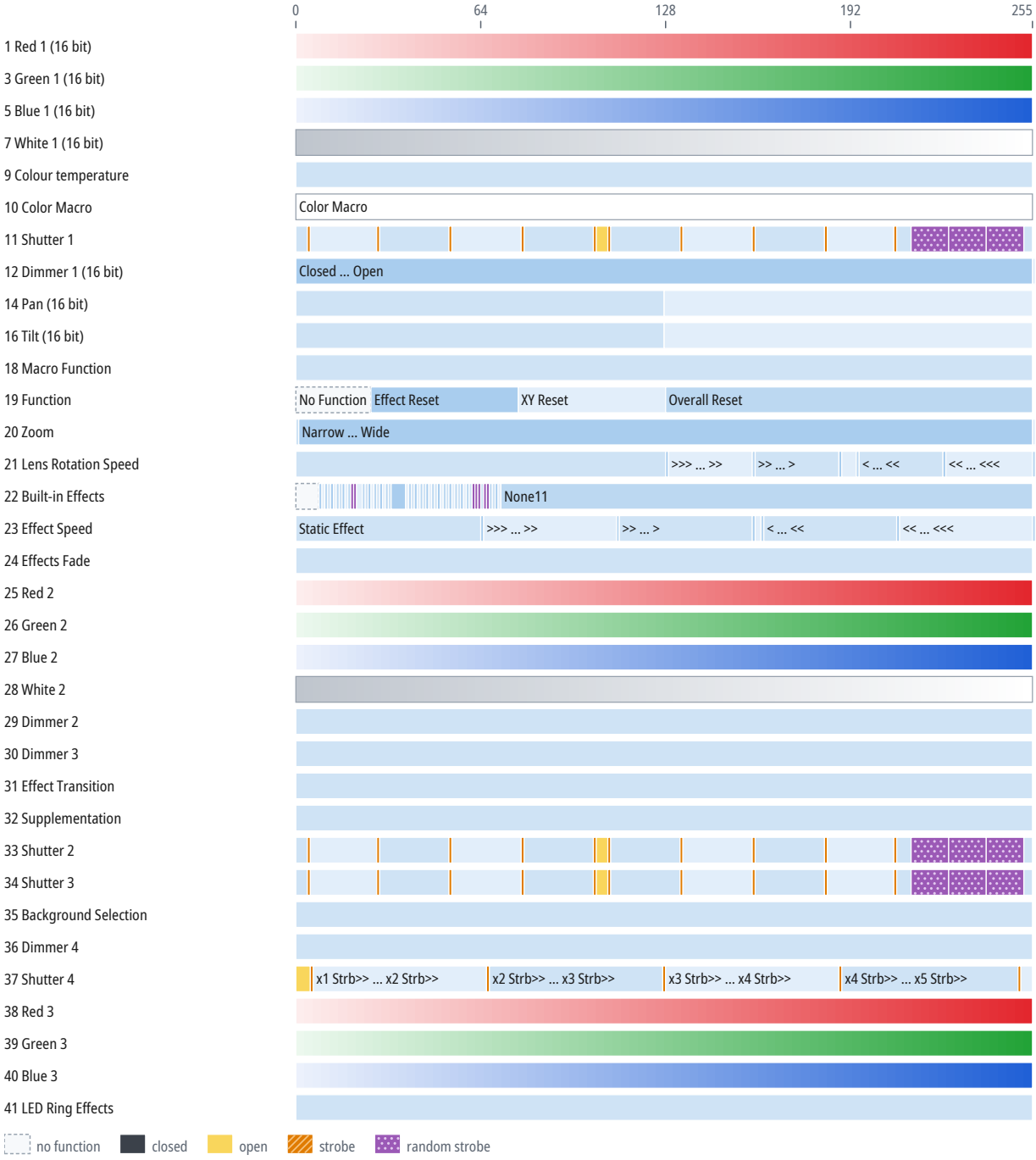
Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	22	23	24	2	25	26	27	3	28	29	30
4	31	32	33	5	34	35	36	6	37	38	39
7	40	41	42	8	43	44	45	9	46	47	48
10	49	50	51	11	52	53	54	12	55	56	57
13	58	59	60	14	61	62	63	15	64	65	66
16	67	68	69	17	70	71	72	18	73	74	75
19	76	77	78								

Mode 42 DMX

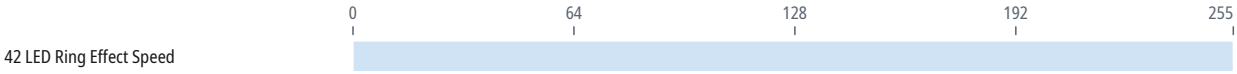
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 11 Shutter 1 at 104–107 “Open” or 208–212 or 252–255; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0; CH 33 Shutter 2 at 104–107 “Open” or 208–212 or 252–255; CH 34 Shutter 3 at 104–107 “Open” or 208–212 or 252–255; CH 36 Dimmer 4 above 0; CH 37 Shutter 4 at 0–4 “Open” or 251–255. The GDTF file gives these values for a console's Highlight function: CH 10 Color Macro 0, CH 11 Shutter 1 255, CH 12 Dimmer 1 100, CH 36 Dimmer 4 255, CH 38 Red 3 255, CH 39 Green 3 255, CH 40 Blue 3 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1	0–255	
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1	0–255	
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White 1	0–255	
8	White 1 Fine	0–255	Fine adjustment of CH 7
9	Colour temperature	0–255	
10	Color Macro	0–255	Color Macro
11	Shutter 1		Same as CH 11 in the mode “92 DMX” (p. 19)
12	Dimmer 1		Same as CH 12 in the mode “92 DMX” (p. 19)
13	Dimmer 1 Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 1 in the mode “106 DMX” (p. 10)
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt		Same as CH 3 in the mode “106 DMX” (p. 10)
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Macro Function	0–255	
19	Function		Same as CH 23 in the mode “106 DMX” (p. 12)
20	Zoom		Same as CH 6 in the mode “106 DMX” (p. 11)
21	Lens Rotation Speed		Same as CH 7 in the mode “106 DMX” (p. 11)
22	Built-in Effects		Same as CH 22 in the mode “92 DMX” (p. 20)
23	Effect Speed		Same as CH 23 in the mode “92 DMX” (p. 21)
24	Effects Fade	0–255	
25	Red 2	0–255	
26	Green 2	0–255	
27	Blue 2	0–255	
28	White 2	0–255	
29	Dimmer 2	0–255	
30	Dimmer 3	0–255	
31	Effect Transition	0–255	
32	Supplementation	0–255	
33	Shutter 2		Same as CH 33 in the mode “92 DMX” (p. 21)
34	Shutter 3		Same as CH 34 in the mode “92 DMX” (p. 22)
35	Background Selection	0–255	
36	Dimmer 4	0–255	
37	Shutter 4	0–4	Open

CH	Function	DMX	Description
37	Shutter 4 (continued)	5	x1 Strb>>
		6–65	x1 Strb>> … x2 Strb>>
		66	x2 Strb>>
		67–126	x2 Strb>> … x3 Strb>>
		127	x3 Strb>>
		128–187	x3 Strb>> … x4 Strb>>
		188	x4 Strb>>
		189–249	x4 Strb>> … x5 Strb>>
		250	x5 Strb>>
		251–255	Open 2
38	Red 3	0–255	
39	Green 3	0–255	
40	Blue 3	0–255	
41	LED Ring Effects	0–255	
42	LED Ring Effect Speed	0–255	

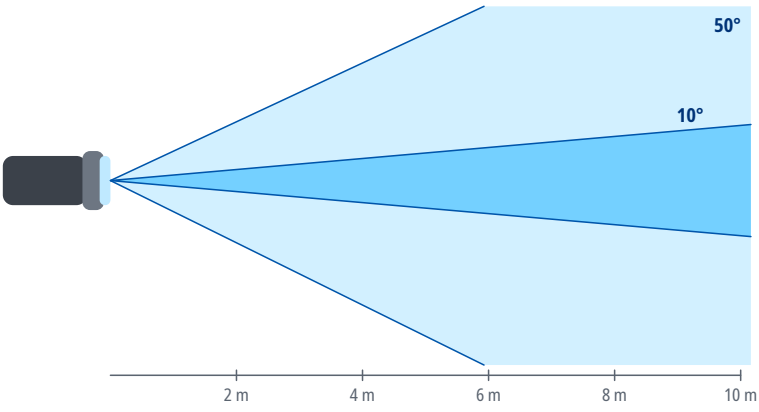
10 Technical specifications

Parameter	Value
Light	
Light source	discharge lamp
Optics	
Zoom	10–50°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45
Electrical	
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	21 kg
Operating environment	
Operating temperature	-20 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–25 Hz

Spot diameter



Distance	Ø 10°	Ø 50°
2 m	0.35 m	1.9 m
4 m	0.7 m	3.7 m
6 m	1 m	5.6 m
8 m	1.4 m	7.5 m
10 m	1.7 m	9.3 m
15 m	2.6 m	14 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.