DMX REFERENCE

Scorpion 5 AQUA

Lotus Light



Manufacturer	Lotus Light
GDTF file	Lotus_Light_Scorpion_5_AQUA_129934.gdtf
GDTF revision	Scorpion 5 · 2026-02-22
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Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 5
5 Installation 6
6 Connections 6
7 Operation 7
8 Functions at a glance 7
9 DMX channels 11
Mode 1 21DMX 1 12
Mode 2 41DMX 16
Mode 3 71 DMX 22
Mode 4 75 DMX 29
Mode 5 85 MDX 35
Mode 6 170DMX 40
10 Technical specifications 44
11 Maintenance and cleaning 44
12 Troubleshooting 45
13 Disposal 45

1 About this manual

This document describes the Scorpion 5 AQUA by Lotus Light. It was compiled from the GDTF file Lotus_Light_Scorpion_5_AQUA_129934.gdtf from the GDTF-Share library.

File revision: “Scorpion 5”.

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 Lotus Light; 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	29 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 1 21DMX 1	21	24	1, 22, 43, 64, ...
Mode 2 41DMX	41	12	1, 42, 83, 124, ...
Mode 3 71 DMX	71	7	1, 72, 143, 214, ...
Mode 4 75 DMX	75	6	1, 76, 151, 226, ...
Mode 5 85 MDX	85	6	1, 86, 171, 256, ...
Mode 6 170DMX	170	3	1, 171, 341

No light? Check these channels

- Mode 1 21DMX 1: CH 16 Dimmer above 0
- Mode 2 41DMX: CH 36 Dimmer above 0; CH 38 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 39 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 3 71 DMX: CH 66 Dimmer above 0; CH 68 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 69 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 4 75 DMX: CH 9 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 23 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 37 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 51 Shutter 4 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 65 Shutter 5 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 71 Dimmer above 0; CH 73 Shutter 6 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 5 85 MDX: CH 9 Dimmer 1 above 0; CH 11 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 25 Dimmer 2 above 0; CH 27 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 41 Dimmer 3 above 0; CH 43 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 57 Dimmer 4 above 0; CH 59 Shutter 4 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 73 Dimmer 5 above 0; CH 75 Shutter 5 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 81 Dimmer 6 above 0; CH 83 Shutter 6 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 6 170DMX: CH 166 Dimmer 1 above 0; CH 167 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 168 Dimmer 2 above 0; CH 169 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255



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.

⚠ WARNING

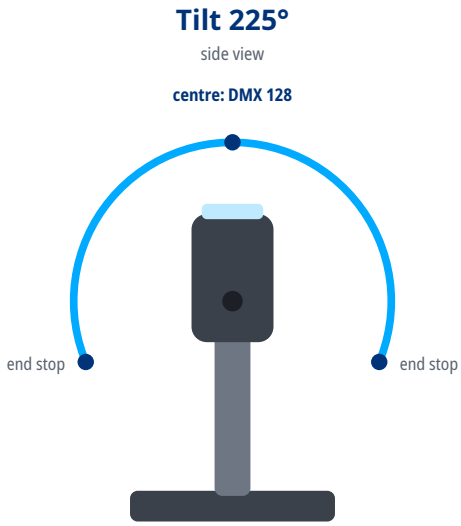
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, 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

Description in the GDTF file

“Light SourceMain Light: 5 x 150W RGBL LEDsOuter Circle: 120 x 0.5W RGB LEDsOptical System Beam Angles: 3.9°-25.1° Field Angles: 4.7°-29.8°Control and Program 4 button touch control panel Display: LCD display Protocols: DMX512, RDM DMX Protocol Modes: 6 Control Channels: 21CH/41CH /71CH/75CH/85CH/170CHFirmware Upgrade: Upgrade via DMX linkPan & TiltPan Movement: 59°Tilt Movement: 221°Other EffectsMultiple speed stroboscopic effectsDimming: 0-100% smooth dimmingExtraordinary color-mixing function 3Extraordinary color macro effectsAgile and fast linear focusingElectrical and ConnectorsInput Voltage Range: 100-240V~ 50/60Hz Power Consumption: 660WPower socket: Power connector input/outputSignal input/output: Five-PIN XLR socket, RJ45Power In/Out: Waterproof power connector in/out (True1 type)Fixture Specification Net Weight: 26.3kgLamp size: 1019×206×356mmWork environmentProtection Rating: IP65”

Range of movement



5 Installation

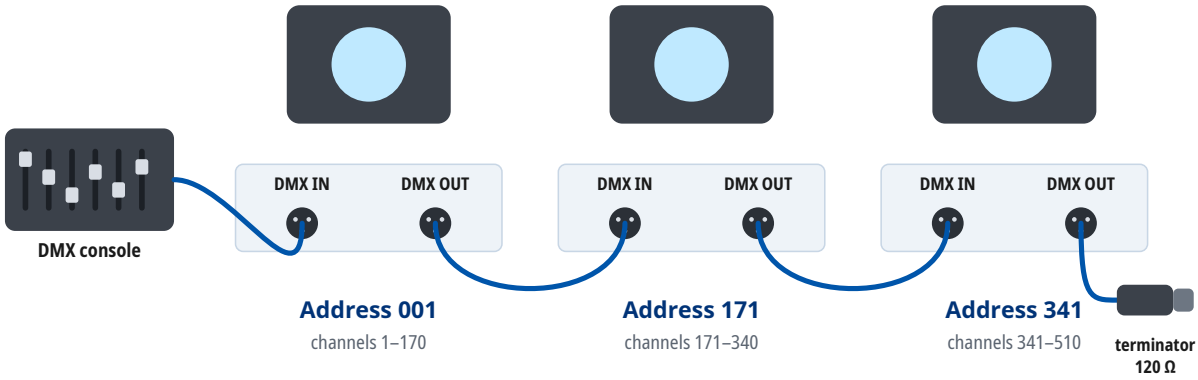
⚠ WARNING

- 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: 29 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 6 170DMX: every unit occupies 170 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 “Mode 6 170DMX”: 170.
- 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 “Mode 6 170DMX”, you can use, for example, the start addresses 1, 171, 341.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

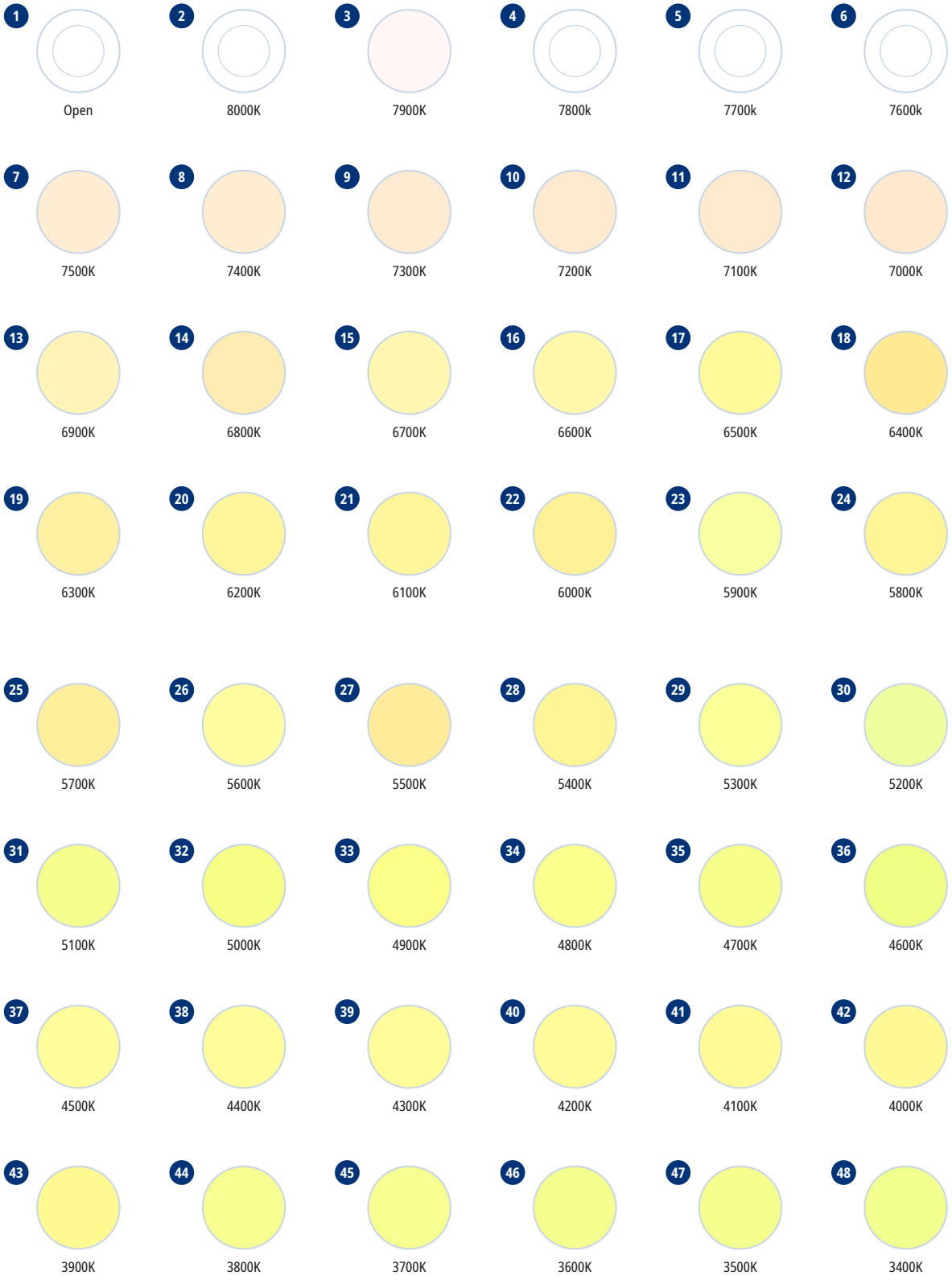
Functions in each DMX mode

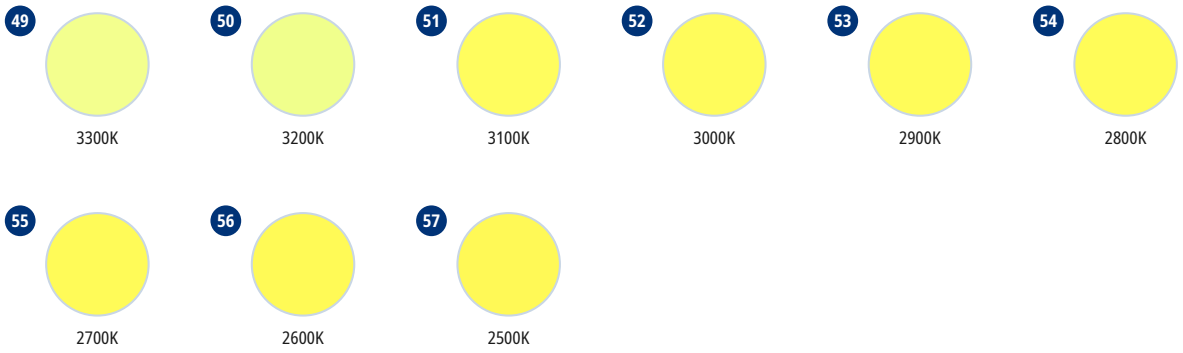
	Mode 1 21DMX 1 21 channels	Mode 2 41DMX 41 channels	Mode 3 71 DMX 71 channels	Mode 4 75 DMX 75 channels	Mode 5 85 MDX 85 channels	Mode 6 170DMX 170 channels
Pan / Tilt	**1, 3**	**10 channels (1–23)**	**10 channels (1–55)**	**10 channels (1–59)**	**10 channels (1–67)**	10 channels (1–135)
Dimmer	**16**	**36**	**66**	**71**	**6 channels (9–81)**	**166, 168**
Dimmer resolution	16 bit	16 bit	16 bit	16 bit	16 bit	8 bit
Shutter / strobe	**18, 19**	**38, 39**	**68, 69**	**6 channels (9–73)**	**6 channels (11–83)**	**167, 169**
Color mixing	**6–9, 12–14**	**26–29, 32–34**	**35 channels (5–64)**	**35 channels (5–69)**	**35 channels (5–79)**	140 channels (5–165)
Color temperature	**10**	**30**				
Color wheel	**11**	**31**				
Zoom	**5**	**5× (5–25)**	**5× (9–61)**	**5× (10–66)**	**5× (12–76)**	**5× (9–141)**
Pixel control			✓	✓	✓	8 + 8 + 8 + 8 + 8 cells

Color wheel 1

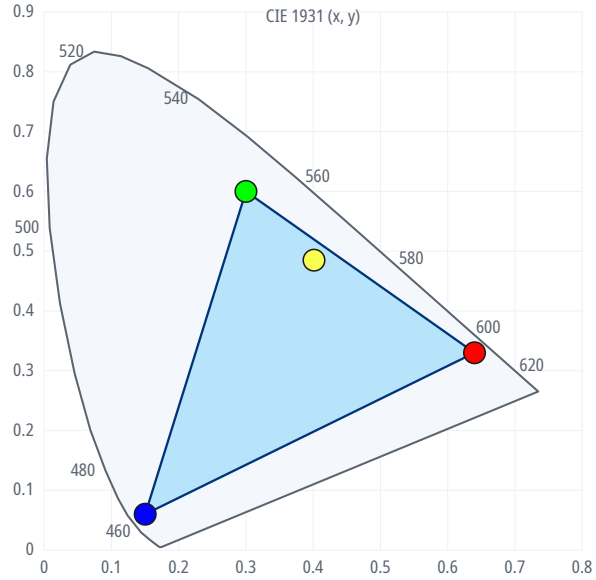


Color wheel 2





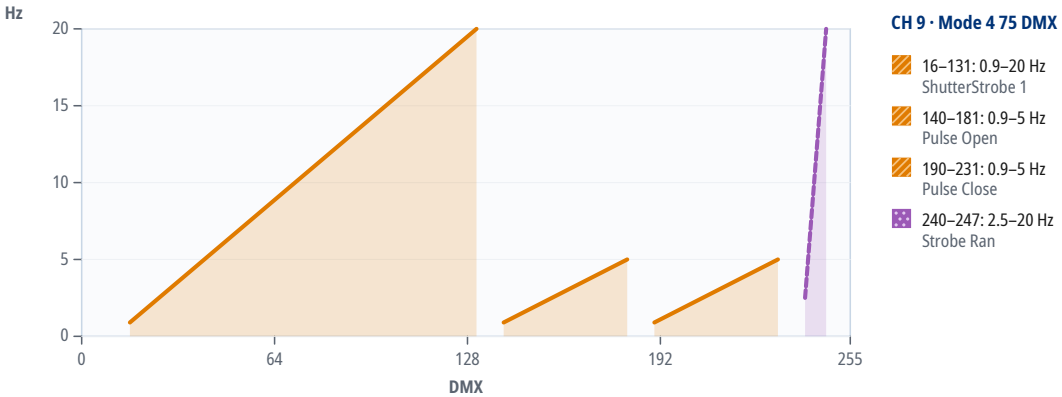
LED colors and the colors they mix



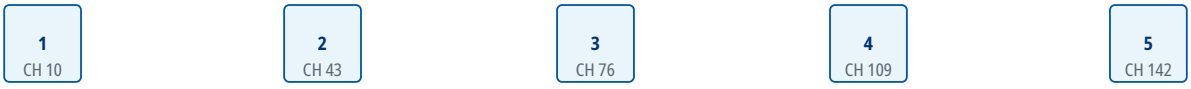
LED	x	y
Red	0.640	0.330
Green	0.300	0.600
Blue	0.150	0.060
Lime	0.401	0.485

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

Strobe rate



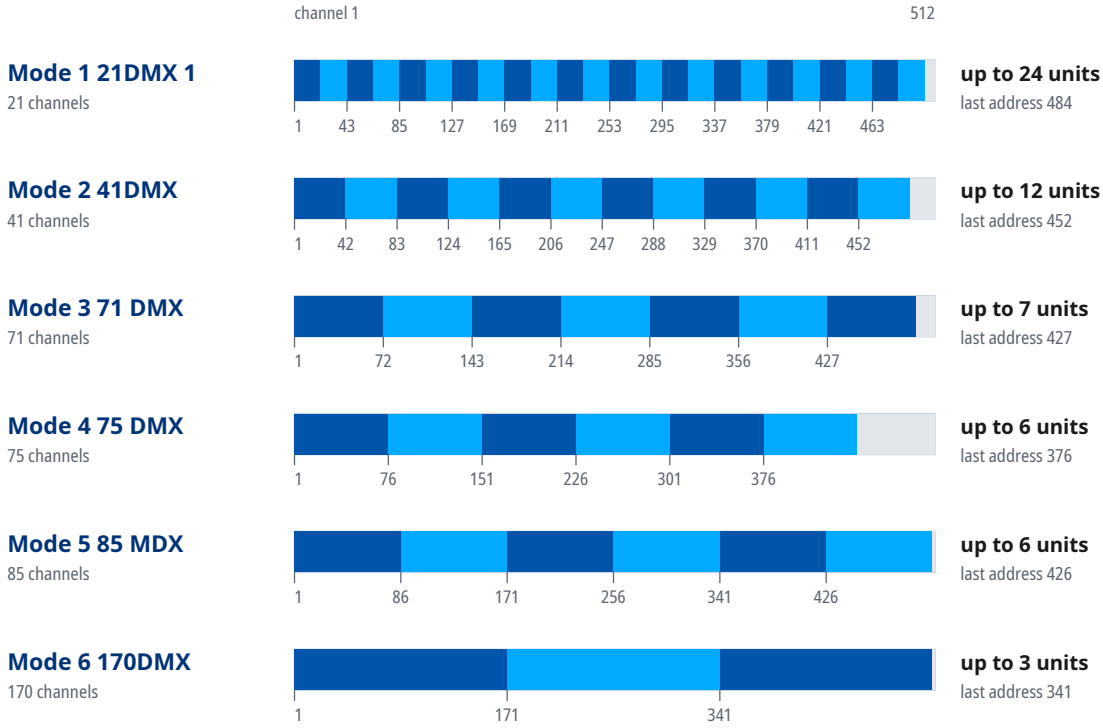
Cells (pixels)



5 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “Mode 4 75 DMX”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Mode 6 170DMX”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 341	11	U4 · 171	16	U6 · 1
2	171	7	U3 · 1	12	U4 · 341	17	U6 · 171
3	341	8	U3 · 171	13	U5 · 1	18	U6 · 341
4	U2 · 1	9	U3 · 341	14	U5 · 171	19	U7 · 1
5	U2 · 171	10	U4 · 1	15	U5 · 341	20	U7 · 171

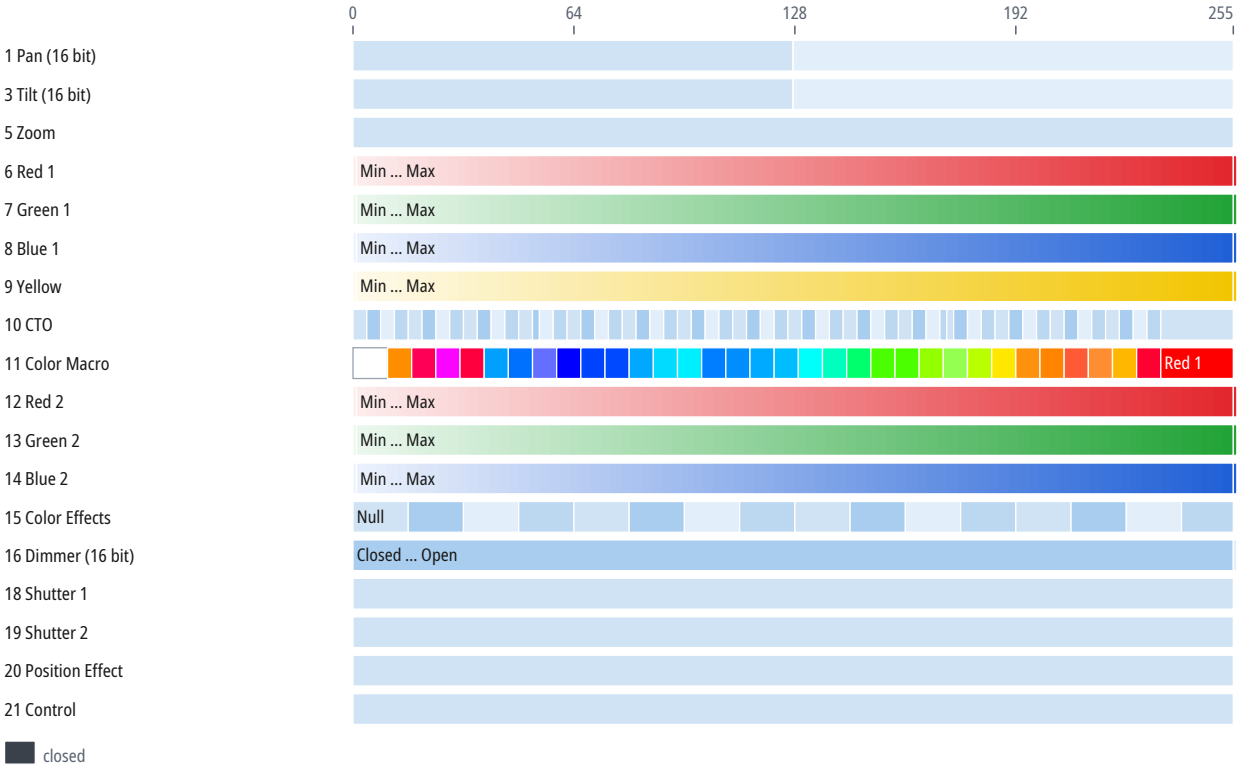
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 1 21DMX 1

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 16 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		128	Center
		128–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt 1
		128	Center
		128–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Zoom	0–255	
6	Red 1	0	Min
		1–254	Min ... Max
		255	Max
7	Green 1	0	Min
		1–254	Min ... Max
		255	Max
8	Blue 1	0	Min
		1–254	Min ... Max

CH	Function	DMX	Description
8	Blue 1 (continued)	255	Max
9	Yellow	0	Min
		1–254	Min ... Max
		255	Max
10	CTO	0–3	Open
		4–7	8000K
		8–11	7900K
		12–15	7800k
		16–19	7700k
		20–23	7600k
		24–27	7500K
		28–31	7400K
		32–35	7300K
		36–39	7200K
		40–43	7100K
		44–47	7000K
		48–51	6900K
		52–53	6900K ... 6800K
		54–57	6800K
		58–61	6700K
		62–65	6600K
		66–69	6500K
		70–73	6400K
		74–77	6300K
		78–81	6200K
		82–85	6100K
		86–89	6000K
		90–93	5900K
		94–97	5800K
		98–101	5700K
		102–105	5600K
		106–109	5500K
		110–117	5400K
		118–121	5300K
		122–125	5200K
		126–129	5100K
		130–133	5000K
		134–137	4900K
		138–141	4800K
		142–145	4700K
		146–149	4600K
		150–153	4500K

CH	Function	DMX	Description
10	CTO (continued)	154–157	4400K
		158–161	4300K
		162–165	4200K
		166–169	4100K
		170–171	4100K ... 4000K
		172–173	4000K
		174–177	3900K
		178–181	3800K
		182–185	3700K
		186–189	3600K
		190–193	3500K
		194–197	3400K
		198–201	3300K
		202–205	3200K
		206–209	3100K
		210–213	3000K
		214–217	2900K
		218–221	2800K
		222–225	2700K
		226–229	2600K
		230–233	2500K
		234–255	CTO1
11	Color Macro	0–9	Open
		10–16	Orange
		17–23	Red
		24–30	Purple
		31–37	Purple Red
		38–44	Blue
		45–51	Deep Blue
		52–58	Light Blue
		59–65	Blue 2
		66–72	Bue 3
		73–79	Blue 4
		80–86	White Blue
		87–93	Cyan
		94–100	Cyan 2
		101–107	Cyan 3
		108–114	Cyan 4
		115–121	Cyan 5
		122–128	Cya 6
		129–135	Cyan Green
		136–142	Light Green

CH	Function	DMX	Description
11	Color Macro (continued)	143–149	Green
		150–156	Green 2
		157–163	Green 3
		164–170	Green 4
		171–177	Green 5
		178–184	Green Yellow
		185–191	Yellow
		192–198	Yellow 2
		199–205	Yellow 3
		206–212	Orange 1
		213–219	Orange 2
		220–226	Orange 3
		227–233	Red 2
		234–255	Red 1
12	Red 2	0	Min
		1–254	Min ... Max
		255	Max
13	Green 2	0	Min
		1–254	Min ... Max
		255	Max
14	Blue 2	0	Min
		1–254	Min ... Max
		255	Max
15	Color Effects	0–15	Null
		16–31	Macro Effect 1 Fast to Slow
		32–47	Macro Effect 2 Fast to Slow
		48–63	Macro Effect 3 Fast to Slow
		64–79	Macro Effect 4 Fast to Slow
		80–95	Macro Effect 5 Fast to Slow
		96–111	Macro Effect 6 Fast to Slow
		112–127	Macro Effect 7 Fast to Slow
		128–143	Macro Effect 8 Fast to Slow
		144–159	Macro Effect 9 Fast to Slow
		160–175	Macro Effect 10 Fast to Slow
		176–191	Macro Effect 11 Fast to Slow
		192–207	Macro Effect 12 Fast to Slow
		208–223	Macro Effect 13 Fast to Slow
		224–239	Macro Effect 14 Fast to Slow
		240–255	Macro Effect 15 Fast to Slow
16	Dimmer	0–255	Closed ... Open
		255	Open
17	Dimmer Fine	0–255	Fine adjustment of CH 16

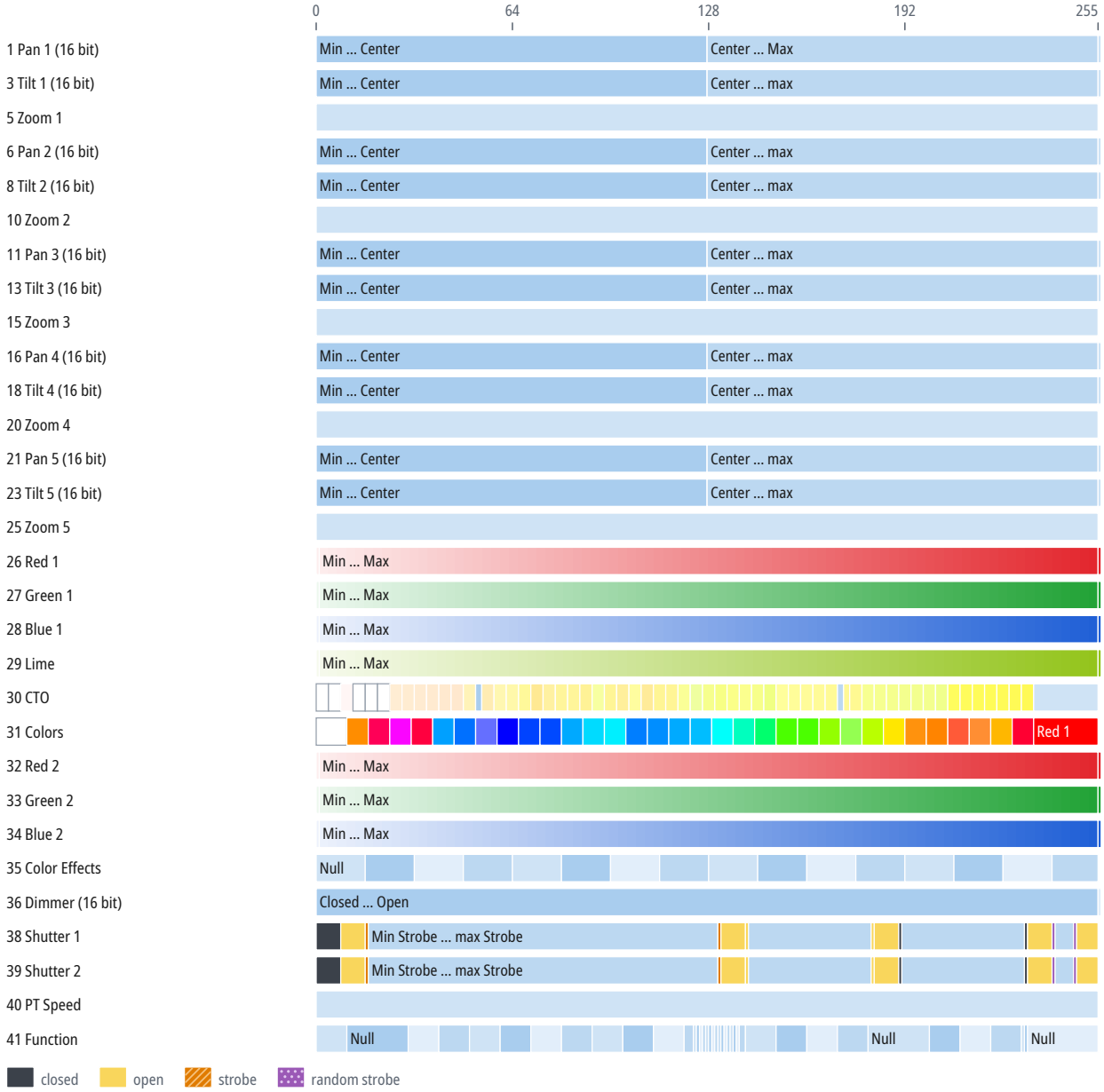
CH	Function	DMX	Description
18	Shutter 1	0–255	
19	Shutter 2	0–255	
20	Position Effect	0–255	
21	Control	0–255	

Mode 2 41DMX

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 36 Dimmer above 0; CH 38 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 39 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 26 Red 1 255, CH 27 Green 1 255, CH 28 Blue 1 255, CH 32 Red 2 255, CH 33 Green 2 255, CH 34 Blue 2 255, CH 36 Dimmer 255, CH 38 Shutter 1 255, CH 39 Shutter 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan 1	0–127	Min … Center
		128–255	Center … Max
		255	Max
2	Pan 1 Fine	0–255	Fine adjustment of CH 1
3	Tilt 1	0–127	Min … Center
		128–255	Center … max
		255	Max
4	Tilt 1 Fine	0–255	Fine adjustment of CH 3
5	Zoom 1	0–255	35–3°
6	Pan 2	0–127	Min … Center
		128–255	Center … max
		255	Max
7	Pan 2 Fine	0–255	Fine adjustment of CH 6
8	Tilt 2	0–127	Min … Center
		128–255	Center … max
		255	Max
9	Tilt 2 Fine	0–255	Fine adjustment of CH 8
10	Zoom 2	0–255	35–3°
11	Pan 3	0–127	Min … Center
		128–255	Center … max
		255	Max
12	Pan 3 Fine	0–255	Fine adjustment of CH 11
13	Tilt 3	0–127	Min … Center
		128–255	Center … max
		255	Max
14	Tilt 3 Fine	0–255	Fine adjustment of CH 13
15	Zoom 3	0–255	35–3°
16	Pan 4	0–127	Min … Center
		128–255	Center … max
		255	Max
17	Pan 4 Fine	0–255	Fine adjustment of CH 16
18	Tilt 4	0–127	Min … Center
		128–255	Center … max
		255	Max
19	Tilt 4 Fine	0–255	Fine adjustment of CH 18
20	Zoom 4	0–255	35–3°
21	Pan 5	0–127	Min … Center
		128–255	Center … max
		255	Max
22	Pan 5 Fine	0–255	Fine adjustment of CH 21
23	Tilt 5	0–127	Min … Center

CH	Function	DMX	Description
23	Tilt 5 (continued)	128–255	Center ... max
		255	Max
24	Tilt 5 Fine	0–255	Fine adjustment of CH 23
25	Zoom 5	0–255	35–3°
26	Red 1		Same as CH 6 in the mode “Mode 1 21DMX 1” (p. 12)
27	Green 1		Same as CH 7 in the mode “Mode 1 21DMX 1” (p. 12)
28	Blue 1		Same as CH 8 in the mode “Mode 1 21DMX 1” (p. 12)
29	Lime	0	Min
		1–254	Min ... Max
		255	Max
30	CTO		Same as CH 10 in the mode “Mode 1 21DMX 1” (p. 13)
31	Colors	0–9	Open
		10–16	Orange
		17–23	Red
		24–30	Purple
		31–37	Purple Red
		38–44	Blue
		45–51	Deep Blue
		52–58	Light Blue
		59–65	Blue 2
		66–72	Bue 3
		73–79	Blue 4
		80–86	White Blue
		87–93	Cyan
		94–100	Cyan 2
		101–107	Cyan 3
		108–114	Cyan 4
		115–121	Cyan 5
		122–128	Cya 6
		129–135	Cyan Green
		136–142	Light Green
		143–149	Green
		150–156	Green 2
		157–163	Green 3
		164–170	Green 4
		171–177	Green 5
		178–184	Green Yellow
		185–191	Yellow
		192–198	Yellow 2
		199–205	Yellow 3
		206–212	Orange 1

CH	Function	DMX	Description
31	Colors (continued)	213–219	Orange 2
		220–226	Orange 3
		227–233	Red 2
		234–255	Red 1
32	Red 2		Same as CH 12 in the mode “Mode 1 21DMX 1” (p. 15)
33	Green 2		Same as CH 13 in the mode “Mode 1 21DMX 1” (p. 15)
34	Blue 2		Same as CH 14 in the mode “Mode 1 21DMX 1” (p. 15)
35	Color Effects		Same as CH 15 in the mode “Mode 1 21DMX 1” (p. 15)
36	Dimmer		Same as CH 16 in the mode “Mode 1 21DMX 1” (p. 15)
37	Dimmer Fine	0–255	Fine adjustment of CH 36
38	Shutter 1	0–7	Closed
		8–15	Open
		16	Min Strobe
		17–130	Min Strobe ... max Strobe
		131	Max Strobe
		132–139	Open 2
		140	Min Pulse Open
		141–180	Min Pulse Open ... max Pulse Open
		181	Max Pulse Open
		182–189	Open 3
		190	Min Pulse Close
		191–230	Min Pulse Close ... max Pulse Close
		231	Max Pulse Close
		232–239	Open 4
		240	Min Strobe Rand
		241–246	Min Strobe Rand ... max Strobe Rand
		247	Max Strobe Rand
		248–255	Open 5
39	Shutter 2	0–7	Closed
		8–15	Open
		16	Min Strobe
		17–130	Min Strobe ... max Strobe
		131	Max Strobe
		132–139	Open 2
		140	Min Pulse Open
		141–180	Min Pulse Open ... max Pulse Open
		181	Max Pulse Open
		182–189	Open 3
		190	Min Pulse Close
		191–230	Min Pulse Close ... max Pulse Close
		231	Max Pulse Close

CH	Function	DMX	Description
39	Shutter 2 (continued)	232–239	Open 4
		240	Min Strobe Rand
		241–246	Min Strobe Rand ... max Strobe Rand
		247	Max Strobe Rand
		248–255	Open 5
40	PT Speed	0–255	
41	Function	0–9	Null 2
		10–29	Null
		30–39	Dimmer Curve: Linear
		40–49	Dimmer Curve: Square Law
		50–59	Dimmer Curve: Inv SQ Law
		60–69	Dimmer Curve: S Curve
		70–79	Cooling Mode: Standard
		80–89	Cooling Mode: Quiet
		90–99	Null 3
		100–109	Led Frequency Setting Enable
		110–119	Led Frequency Setting Disable
		120–122	Refresh Rate: Null
		123	900Hz
		124	1000Hz
		125	1100Hz
		126	1200Hz
		127	1300Hz
		128	1400Hz
		129	1500Hz
		130	2500Hz
		131	4000Hz
		132	5000Hz
		133	6000Hz
		134	10KHz
		135	15KHz
		136	20KHz
		137	25KHz
		138–139	Refresh Rate: Null
		140–149	P/T Reset
		150–159	Eff Reset
		160–169	Head Invert: Yes
		170–179	Head Invert: No
		180–199	Null
		200–209	All Reset
		210–219	Dimmer Speed: Fast
		220–229	Dimmer Speed: Smooth

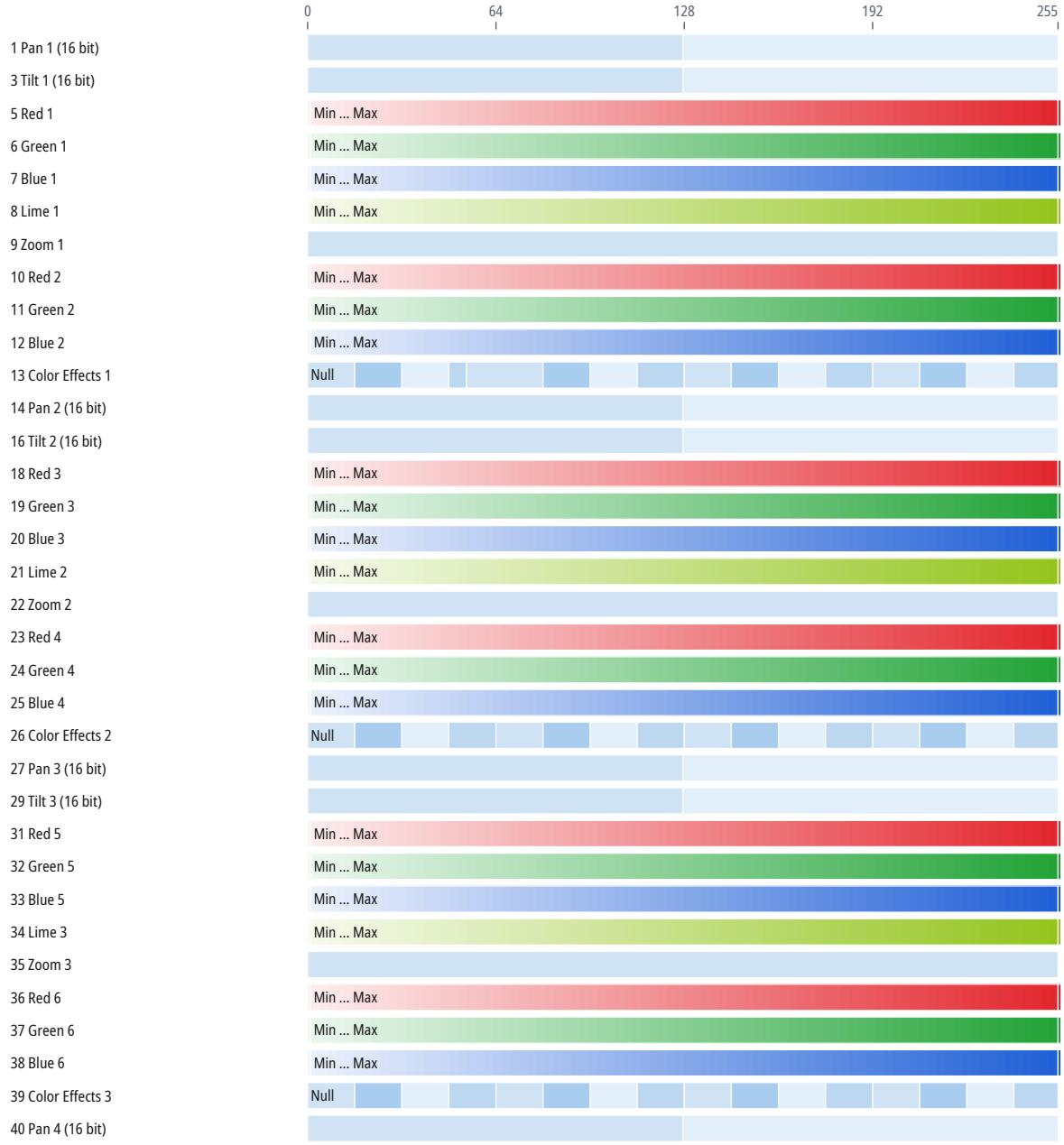
CH	Function	DMX	Description
41	Function (continued)	230	Dimming Start Mode: High
		231	Dimming Start Mode: Low
		232–255	Null

Mode 3 71 DMX

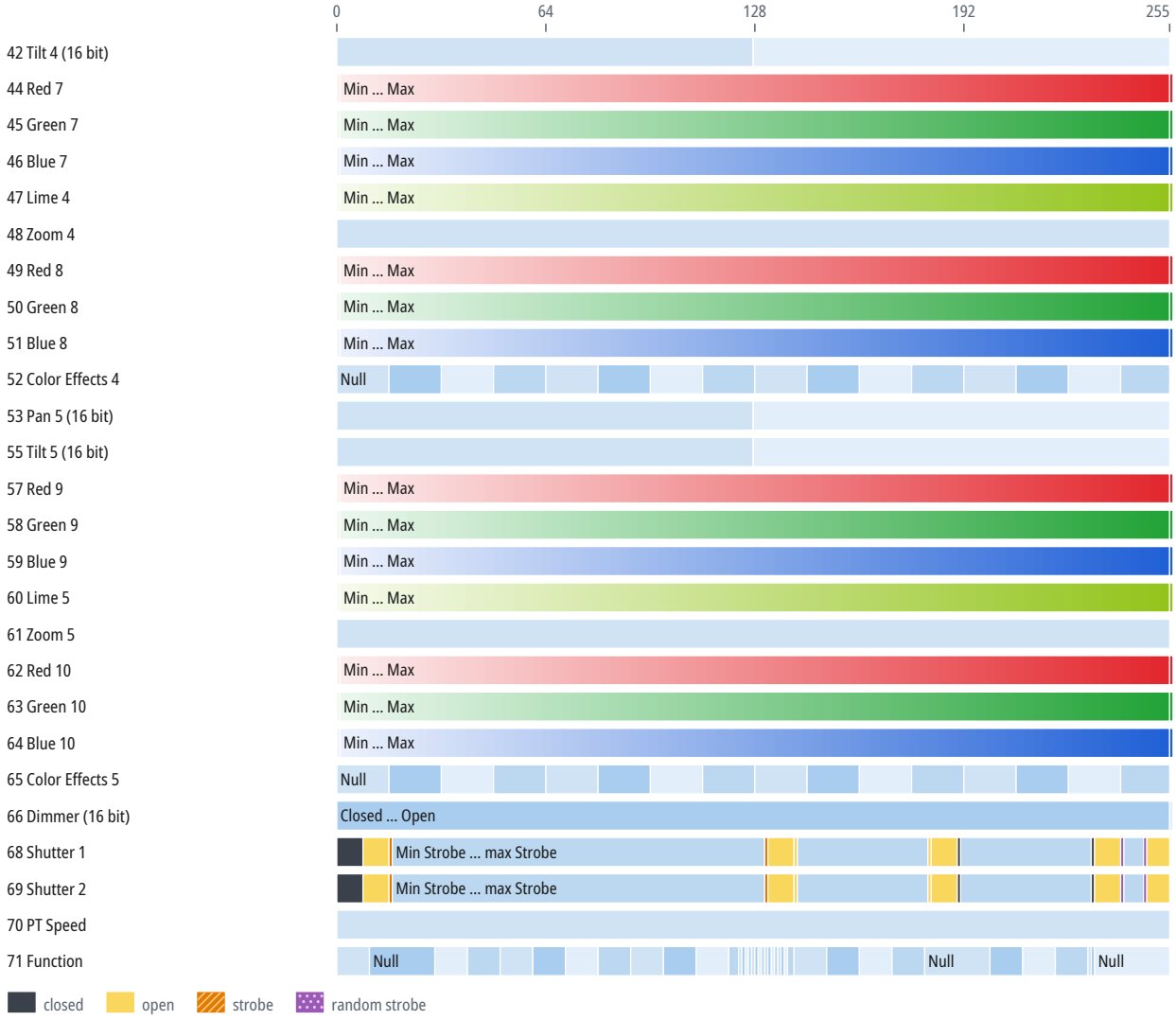
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 66 Dimmer above 0; CH 68 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 69 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 5 Red 1 255, CH 6 Green 1 255, CH 7 Blue 1 255, CH 10 Red 2 255, CH 11 Green 2 255, CH 12 Blue 2 255, CH 18 Red 3 255, CH 19 Green 3 255, CH 20 Blue 3 255, CH 23 Red 4 255, CH 24 Green 4 255, CH 25 Blue 4 255, CH 31 Red 5 255, CH 32 Green 5 255, CH 33 Blue 5 255, CH 36 Red 6 255, CH 37 Green 6 255, CH 38 Blue 6 255, CH 44 Red 7 255, CH 45 Green 7 255, CH 46 Blue 7 255, CH 49 Red 8 255, CH 50 Green 8 255, CH 51 Blue 8 255, CH 57 Red 9 255, CH 58 Green 9 255, CH 59 Blue 9 255, CH 62 Red 10 255, CH 63 Green 10 255, CH 64 Blue 10 255, CH 66 Dimmer 255, CH 68 Shutter 1 255, CH 69 Shutter 2 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan 1	0–127	Tilt 2
		128	Center
		128–255	Tilt 2
2	Pan 1 Fine	0–255	Fine adjustment of CH 1
3	Tilt 1	0–127	Tilt 1
		128	Center
		128–255	Tilt 1
4	Tilt 1 Fine	0–255	Fine adjustment of CH 3
5	Red 1		Same as CH 6 in the mode “Mode 1 21DMX 1” (p. 12)
6	Green 1		Same as CH 7 in the mode “Mode 1 21DMX 1” (p. 12)
7	Blue 1		Same as CH 8 in the mode “Mode 1 21DMX 1” (p. 12)
8	Lime 1	0	Min
		1–254	Min ... Max
		255	Max
9	Zoom 1	0–255	35–3°

CH	Function	DMX	Description
10	Red 2		Same as CH 12 in the mode “Mode 1 21DMX 1” (p. 15)
11	Green 2		Same as CH 13 in the mode “Mode 1 21DMX 1” (p. 15)
12	Blue 2		Same as CH 14 in the mode “Mode 1 21DMX 1” (p. 15)
13	Color Effects 1	0–15	Null
		16–31	Macro Effect 1 Fast to Slow
		32–47	Macro Effect 2 Fast to Slow
		48–53	Macro Effect 3 Fast to Slow
		54–79	Macro Effect 4 Fast to Slow
		80–95	Macro Effect 5 Fast to Slow
		96–111	Macro Effect 6 Fast to Slow
		112–127	Macro Effect 7 Fast to Slow
		128–143	Macro Effect 8 Fast to Slow
		144–159	Macro Effect 9 Fast to Slow
		160–175	Macro Effect 10 Fast to Slow
		176–191	Macro Effect 11 Fast to Slow
		192–207	Macro Effect 12 Fast to Slow
		208–223	Macro Effect 13 Fast to Slow
		224–239	Macro Effect 14 Fast to Slow
		240–255	Macro Effect 15 Fast to Slow
14	Pan 2	0–127	Tilt 2
		128	Center
		128–255	Tilt 2
15	Pan 2 Fine	0–255	Fine adjustment of CH 14
16	Tilt 2	0–127	Tilt 1
		128	Center
		128–255	Tilt 1
17	Tilt 2 Fine	0–255	Fine adjustment of CH 16
18	Red 3	0	Min
		1–254	Min ... Max
		255	Max
19	Green 3	0	Min
		1–254	Min ... Max
		255	Max
20	Blue 3	0	Min
		1–254	Min ... Max
		255	Max
21	Lime 2	0	Min
		1–254	Min ... Max
		255	Max
22	Zoom 2	0–255	35–3°
23	Red 4	0	Min
		1–254	Min ... Max

CH	Function	DMX	Description
23	Red 4 (continued)	255	Max
24	Green 4	0	Min
		1–254	Min … Max
		255	Max
25	Blue 4	0	Min
		1–254	Min … Max
		255	Max
26	Color Effects 2	0–15	Null
		16–31	Macro Effect 1 Fast to Slow
		32–47	Macro Effect 2 Fast to Slow
		48–63	Macro Effect 3 Fast to Slow
		64–79	Macro Effect 4 Fast to Slow
		80–95	Macro Effect 5 Fast to Slow
		96–111	Macro Effect 6 Fast to Slow
		112–127	Macro Effect 7 Fast to Slow
		128–143	Macro Effect 8 Fast to Slow
		144–159	Macro Effect 9 Fast to Slow
		160–175	Macro Effect 10 Fast to Slow
		176–191	Macro Effect 11 Fast to Slow
		192–207	Macro Effect 12 Fast to Slow
		208–223	Macro Effect 13 Fast to Slow
		224–239	Macro Effect 14 Fast to Slow
		240–255	Macro Effect 15 Fast to Slow
27	Pan 3	0–127	Tilt 2
		128	Center
		128–255	Tilt 2
28	Pan 3 Fine	0–255	Fine adjustment of CH 27
29	Tilt 3	0–127	Tilt 1
		128	Center
		128–255	Tilt 1
30	Tilt 3 Fine	0–255	Fine adjustment of CH 29
31	Red 5	0	Min
		1–254	Min … Max
		255	Max
32	Green 5	0	Min
		1–254	Min … Max
		255	Max
33	Blue 5	0	Min
		1–254	Min … Max
		255	Max
34	Lime 3	0	Min
		1–254	Min … Max

CH	Function	DMX	Description
34	Lime 3 (continued)	255	Max
35	Zoom 3	0–255	35–3°
36	Red 6	0	Min
		1–254	Min … Max
		255	Max
37	Green 6	0	Min
		1–254	Min … Max
		255	Max
38	Blue 6	0	Min
		1–254	Min … Max
		255	Max
39	Color Effects 3	0–15	Null
		16–31	Macro Effect 1 Fast to Slow
		32–47	Macro Effect 2 Fast to Slow
		48–63	Macro Effect 3 Fast to Slow
		64–79	Macro Effect 4 Fast to Slow
		80–95	Macro Effect 5 Fast to Slow
		96–111	Macro Effect 6 Fast to Slow
		112–127	Macro Effect 7 Fast to Slow
		128–143	Macro Effect 8 Fast to Slow
		144–159	Macro Effect 9 Fast to Slow
		160–175	Macro Effect 10 Fast to Slow
		176–191	Macro Effect 11 Fast to Slow
		192–207	Macro Effect 12 Fast to Slow
		208–223	Macro Effect 13 Fast to Slow
		224–239	Macro Effect 14 Fast to Slow
		240–255	Macro Effect 15 Fast to Slow
40	Pan 4	0–127	Tilt 2
		128	Center
		128–255	Tilt 2
41	Pan 4 Fine	0–255	Fine adjustment of CH 40
42	Tilt 4	0–127	Tilt 1
		128	Center
		128–255	Tilt 1
43	Tilt 4 Fine	0–255	Fine adjustment of CH 42
44	Red 7	0	Min
		1–254	Min … Max
		255	Max
45	Green 7	0	Min
		1–254	Min … Max
		255	Max
46	Blue 7	0	Min

CH	Function	DMX	Description
46	Blue 7 (continued)	1–254	Min ... Max
		255	Max
47	Lime 4	0	Min
		1–254	Min ... Max
		255	Max
48	Zoom 4	0–255	35–3°
49	Red 8	0	Min
		1–254	Min ... Max
		255	Max
50	Green 8	0	Min
		1–254	Min ... Max
		255	Max
51	Blue 8	0	Min
		1–254	Min ... Max
		255	Max
52	Color Effects 4	0–15	Null
		16–31	Macro Effect 1 Fast to Slow
		32–47	Macro Effect 2 Fast to Slow
		48–63	Macro Effect 3 Fast to Slow
		64–79	Macro Effect 4 Fast to Slow
		80–95	Macro Effect 5 Fast to Slow
		96–111	Macro Effect 6 Fast to Slow
		112–127	Macro Effect 7 Fast to Slow
		128–143	Macro Effect 8 Fast to Slow
		144–159	Macro Effect 9 Fast to Slow
		160–175	Macro Effect 10 Fast to Slow
		176–191	Macro Effect 11 Fast to Slow
		192–207	Macro Effect 12 Fast to Slow
		208–223	Macro Effect 13 Fast to Slow
		224–239	Macro Effect 14 Fast to Slow
		240–255	Macro Effect 15 Fast to Slow
53	Pan 5	0–127	Tilt 2
		128	Center
		128–255	Tilt 2
54	Pan 5 Fine	0–255	Fine adjustment of CH 53
55	Tilt 5	0–127	Tilt 1
		128	Center
		128–255	Tilt 1
56	Tilt 5 Fine	0–255	Fine adjustment of CH 55
57	Red 9	0	Min
		1–254	Min ... Max
		255	Max

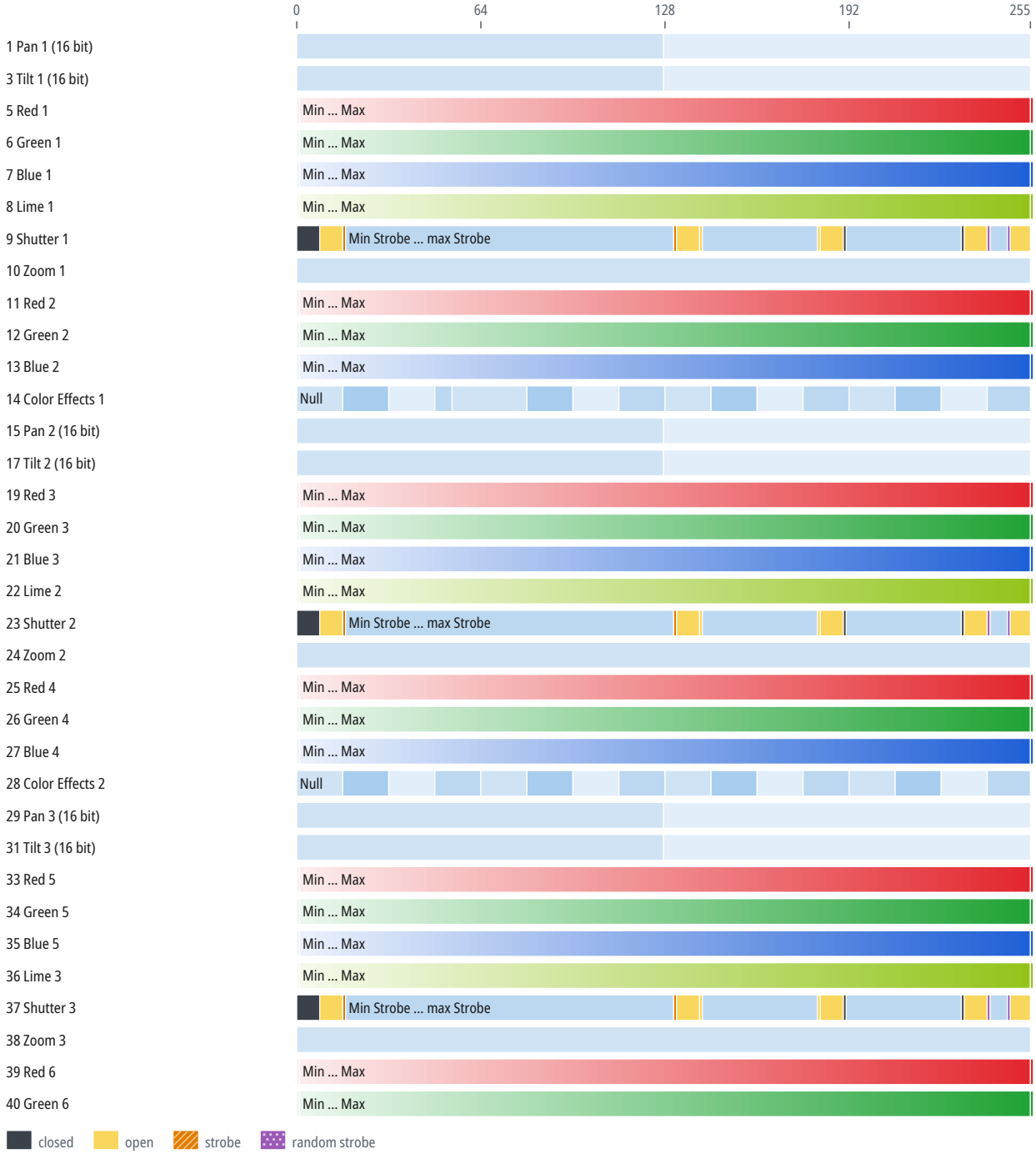
CH	Function	DMX	Description
58	Green 9	0	Min
		1–254	Min ... Max
		255	Max
59	Blue 9	0	Min
		1–254	Min ... Max
		255	Max
60	Lime 5	0	Min
		1–254	Min ... Max
		255	Max
61	Zoom 5	0–255	35–3°
62	Red 10	0	Min
		1–254	Min ... Max
		255	Max
63	Green 10	0	Min
		1–254	Min ... Max
		255	Max
64	Blue 10	0	Min
		1–254	Min ... Max
		255	Max
65	Color Effects 5	0–15	Null
		16–31	Macro Effect 1 Fast to Slow
		32–47	Macro Effect 2 Fast to Slow
		48–63	Macro Effect 3 Fast to Slow
		64–79	Macro Effect 4 Fast to Slow
		80–95	Macro Effect 5 Fast to Slow
		96–111	Macro Effect 6 Fast to Slow
		112–127	Macro Effect 7 Fast to Slow
		128–143	Macro Effect 8 Fast to Slow
		144–159	Macro Effect 9 Fast to Slow
		160–175	Macro Effect 10 Fast to Slow
		176–191	Macro Effect 11 Fast to Slow
		192–207	Macro Effect 12 Fast to Slow
		208–223	Macro Effect 13 Fast to Slow
		224–239	Macro Effect 14 Fast to Slow
		240–255	Macro Effect 15 Fast to Slow
66	Dimmer		Same as CH 16 in the mode “Mode 1 21DMX 1” (p. 15)
67	Dimmer Fine	0–255	Fine adjustment of CH 66
68	Shutter 1		Same as CH 38 in the mode “Mode 2 41DMX” (p. 19)
69	Shutter 2		Same as CH 39 in the mode “Mode 2 41DMX” (p. 19)
70	PT Speed	0–255	
71	Function		Same as CH 41 in the mode “Mode 2 41DMX” (p. 20)

Mode 4 75 DMX

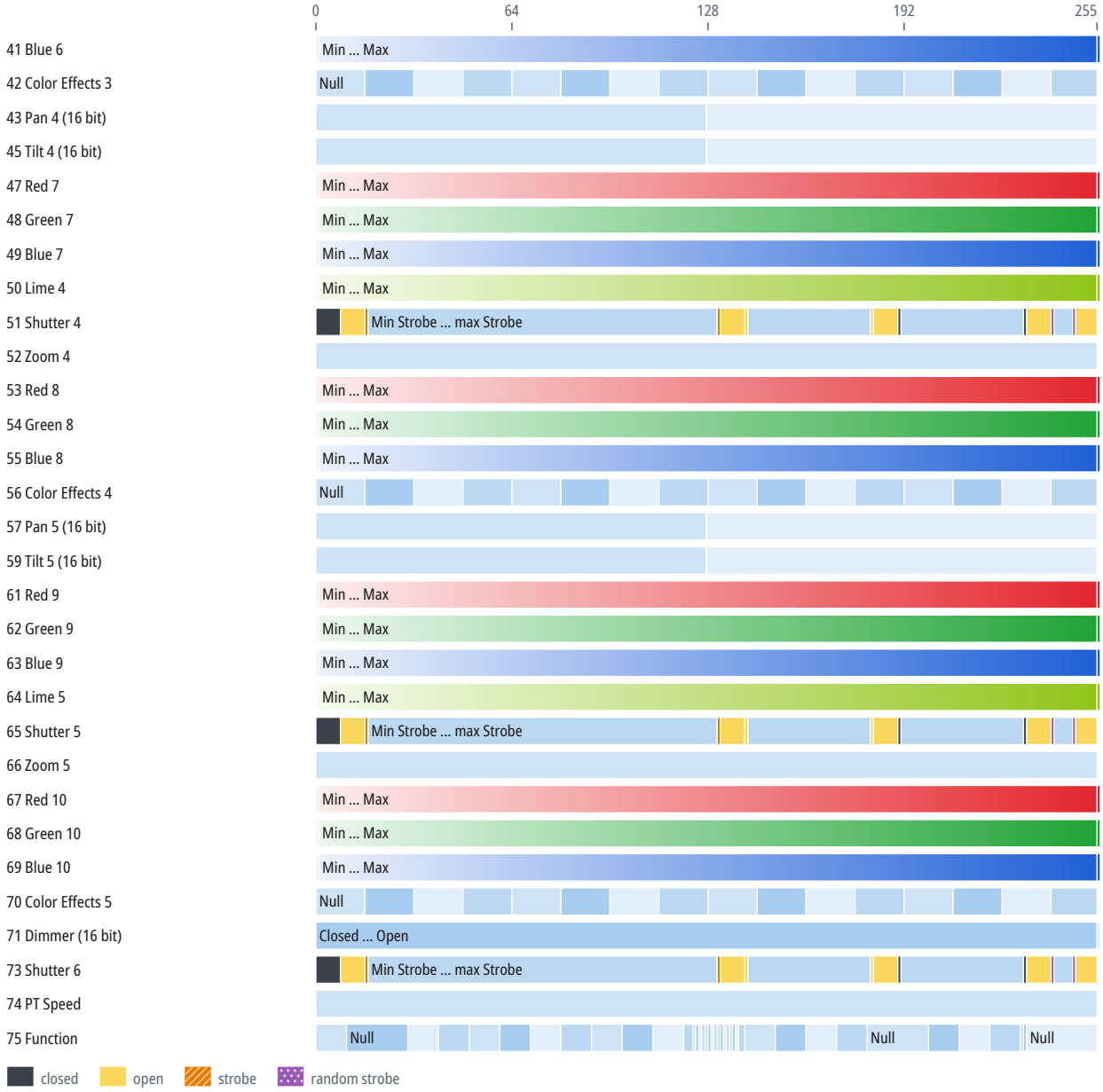
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 9 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 23 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 37 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 51 Shutter 4 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 65 Shutter 5 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 71 Dimmer above 0; CH 73 Shutter 6 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 5 Red 1 255, CH 6 Green 1 255, CH 7 Blue 1 255, CH 9 Shutter 1 255, CH 11 Red 2 255, CH 12 Green 2 255, CH 13 Blue 2 255, CH 19 Red 3 255, CH 20 Green 3 255, CH 21 Blue 3 255, CH 23 Shutter 2 255, CH 25 Red 4 255, CH 26 Green 4 255, CH 27 Blue 4 255, CH 33 Red 5 255, CH 34 Green 5 255, CH 35 Blue 5 255, CH 37 Shutter 3 255, CH 39 Red 6 255, CH 40 Green 6 255, CH 41 Blue 6 255, CH 47 Red 7 255, CH 48 Green 7 255, CH 49 Blue 7 255, CH 51 Shutter 4 255, CH 53 Red 8 255, CH 54 Green 8 255, CH 55 Blue 8 255, CH 61 Red 9 255, CH 62 Green 9 255, CH 63 Blue 9 255, CH 65 Shutter 5 255, CH 67 Red 10 255, CH 68 Green 10 255, CH 69 Blue 10 255, CH 71 Dimmer 255, CH 73 Shutter 6 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan 1		Same as CH 1 in the mode “Mode 3 71 DMX” (p. 23)
2	Pan 1 Fine	0–255	Fine adjustment of CH 1
3	Tilt 1		Same as CH 3 in the mode “Mode 3 71 DMX” (p. 23)
4	Tilt 1 Fine	0–255	Fine adjustment of CH 3
5	Red 1		Same as CH 6 in the mode “Mode 1 21DMX 1” (p. 12)
6	Green 1		Same as CH 7 in the mode “Mode 1 21DMX 1” (p. 12)
7	Blue 1		Same as CH 8 in the mode “Mode 1 21DMX 1” (p. 12)
8	Lime 1		Same as CH 8 in the mode “Mode 3 71 DMX” (p. 23)
9	Shutter 1		Same as CH 38 in the mode “Mode 2 41DMX” (p. 19)
10	Zoom 1	0–255	35–3°
11	Red 2		Same as CH 12 in the mode “Mode 1 21DMX 1” (p. 15)

CH	Function	DMX	Description
12	Green 2		Same as CH 13 in the mode “Mode 1 21DMX 1” (p. 15)
13	Blue 2		Same as CH 14 in the mode “Mode 1 21DMX 1” (p. 15)
14	Color Effects 1		Same as CH 13 in the mode “Mode 3 71 DMX” (p. 24)
15	Pan 2		Same as CH 14 in the mode “Mode 3 71 DMX” (p. 24)
16	Pan 2 Fine	0–255	Fine adjustment of CH 15
17	Tilt 2		Same as CH 16 in the mode “Mode 3 71 DMX” (p. 24)
18	Tilt 2 Fine	0–255	Fine adjustment of CH 17
19	Red 3		Same as CH 18 in the mode “Mode 3 71 DMX” (p. 24)
20	Green 3		Same as CH 19 in the mode “Mode 3 71 DMX” (p. 24)
21	Blue 3		Same as CH 20 in the mode “Mode 3 71 DMX” (p. 24)
22	Lime 2		Same as CH 21 in the mode “Mode 3 71 DMX” (p. 24)
23	Shutter 2		Same as CH 39 in the mode “Mode 2 41DMX” (p. 19)
24	Zoom 2	0–255	35–3°
25	Red 4		Same as CH 23 in the mode “Mode 3 71 DMX” (p. 24)
26	Green 4		Same as CH 24 in the mode “Mode 3 71 DMX” (p. 25)
27	Blue 4		Same as CH 25 in the mode “Mode 3 71 DMX” (p. 25)
28	Color Effects 2		Same as CH 26 in the mode “Mode 3 71 DMX” (p. 25)
29	Pan 3		Same as CH 27 in the mode “Mode 3 71 DMX” (p. 25)
30	Pan 3 Fine	0–255	Fine adjustment of CH 29
31	Tilt 3		Same as CH 29 in the mode “Mode 3 71 DMX” (p. 25)
32	Tilt 3 Fine	0–255	Fine adjustment of CH 31
33	Red 5		Same as CH 31 in the mode “Mode 3 71 DMX” (p. 25)
34	Green 5		Same as CH 32 in the mode “Mode 3 71 DMX” (p. 25)
35	Blue 5		Same as CH 33 in the mode “Mode 3 71 DMX” (p. 25)
36	Lime 3		Same as CH 34 in the mode “Mode 3 71 DMX” (p. 25)
37	Shutter 3	0–7	Closed
		8–15	Open
		16	Min Strobe
		17–130	Min Strobe ... max Strobe
		131	Max Strobe
		132–139	Open 2
		140	Min Pulse Open
		141–180	Min Pulse Open ... max Pulse Open
		181	Max Pulse Open
		182–189	Open 3
		190	Min Pulse Close
		191–230	Min Pulse Close ... max Pulse Close
		231	Max Pulse Close
		232–239	Open 4
		240	Min Strobe Rand
		241–246	Min Strobe Rand ... max Strobe Rand
		247	Max Strobe Rand

CH	Function	DMX	Description
37	Shutter 3 (continued)	248–255	Open 5
38	Zoom 3	0–255	35–3°
39	Red 6		Same as CH 36 in the mode “Mode 3 71 DMX” (p. 26)
40	Green 6		Same as CH 37 in the mode “Mode 3 71 DMX” (p. 26)
41	Blue 6		Same as CH 38 in the mode “Mode 3 71 DMX” (p. 26)
42	Color Effects 3		Same as CH 39 in the mode “Mode 3 71 DMX” (p. 26)
43	Pan 4		Same as CH 40 in the mode “Mode 3 71 DMX” (p. 26)
44	Pan 4 Fine	0–255	Fine adjustment of CH 43
45	Tilt 4		Same as CH 42 in the mode “Mode 3 71 DMX” (p. 26)
46	Tilt 4 Fine	0–255	Fine adjustment of CH 45
47	Red 7		Same as CH 44 in the mode “Mode 3 71 DMX” (p. 26)
48	Green 7		Same as CH 45 in the mode “Mode 3 71 DMX” (p. 26)
49	Blue 7		Same as CH 46 in the mode “Mode 3 71 DMX” (p. 26)
50	Lime 4		Same as CH 47 in the mode “Mode 3 71 DMX” (p. 27)
51	Shutter 4	0–7	Closed
		8–15	Open
		16	Min Strobe
		17–130	Min Strobe ... max Strobe
		131	Max Strobe
		132–139	Open 2
		140	Min Pulse Open
		141–180	Min Pulse Open ... max Pulse Open
		181	Max Pulse Open
		182–189	Open 3
		190	Min Pulse Close
		191–230	Min Pulse Close ... max Pulse Close
		231	Max Pulse Close
		232–239	Open 4
		240	Min Strobe Rand
		241–246	Min Strobe Rand ... max Strobe Rand
		247	Max Strobe Rand
		248–255	Open 5
52	Zoom 4	0–255	35–3°
53	Red 8		Same as CH 49 in the mode “Mode 3 71 DMX” (p. 27)
54	Green 8		Same as CH 50 in the mode “Mode 3 71 DMX” (p. 27)
55	Blue 8		Same as CH 51 in the mode “Mode 3 71 DMX” (p. 27)
56	Color Effects 4		Same as CH 52 in the mode “Mode 3 71 DMX” (p. 27)
57	Pan 5		Same as CH 53 in the mode “Mode 3 71 DMX” (p. 27)
58	Pan 5 Fine	0–255	Fine adjustment of CH 57
59	Tilt 5		Same as CH 55 in the mode “Mode 3 71 DMX” (p. 27)
60	Tilt 5 Fine	0–255	Fine adjustment of CH 59
61	Red 9		Same as CH 57 in the mode “Mode 3 71 DMX” (p. 27)

CH	Function	DMX	Description
62	Green 9		Same as CH 58 in the mode “Mode 3 71 DMX” (p. 28)
63	Blue 9		Same as CH 59 in the mode “Mode 3 71 DMX” (p. 28)
64	Lime 5		Same as CH 60 in the mode “Mode 3 71 DMX” (p. 28)
65	Shutter 5	0–7	Closed
		8–15	Open
		16	Min Strobe
		17–130	Min Strobe ... max Strobe
		131	Max Strobe
		132–139	Open 2
		140	Min Pulse Open
		141–180	Min Pulse Open ... max Pulse Open
		181	Max Pulse Open
		182–189	Open 3
		190	Min Pulse Close
		191–230	Min Pulse Close ... max Pulse Close
		231	Max Pulse Close
		232–239	Open 4
		240	Min Strobe Rand
		241–246	Min Strobe Rand ... max Strobe Rand
		247	Max Strobe Rand
		248–255	Open 5
66	Zoom 5	0–255	35–3°
67	Red 10		Same as CH 62 in the mode “Mode 3 71 DMX” (p. 28)
68	Green 10		Same as CH 63 in the mode “Mode 3 71 DMX” (p. 28)
69	Blue 10		Same as CH 64 in the mode “Mode 3 71 DMX” (p. 28)
70	Color Effects 5		Same as CH 65 in the mode “Mode 3 71 DMX” (p. 28)
71	Dimmer		Same as CH 16 in the mode “Mode 1 21DMX 1” (p. 15)
72	Dimmer Fine	0–255	Fine adjustment of CH 71
73	Shutter 6	0–7	Closed
		8–15	Open
		16	Min Strobe
		17–130	Min Strobe ... max Strobe
		131	Max Strobe
		132–139	Open 2
		140	Min Pulse Open
		141–180	Min Pulse Open ... max Pulse Open
		181	Max Pulse Open
		182–189	Open 3
		190	Min Pulse Close
		191–230	Min Pulse Close ... max Pulse Close
		231	Max Pulse Close
		232–239	Open 4

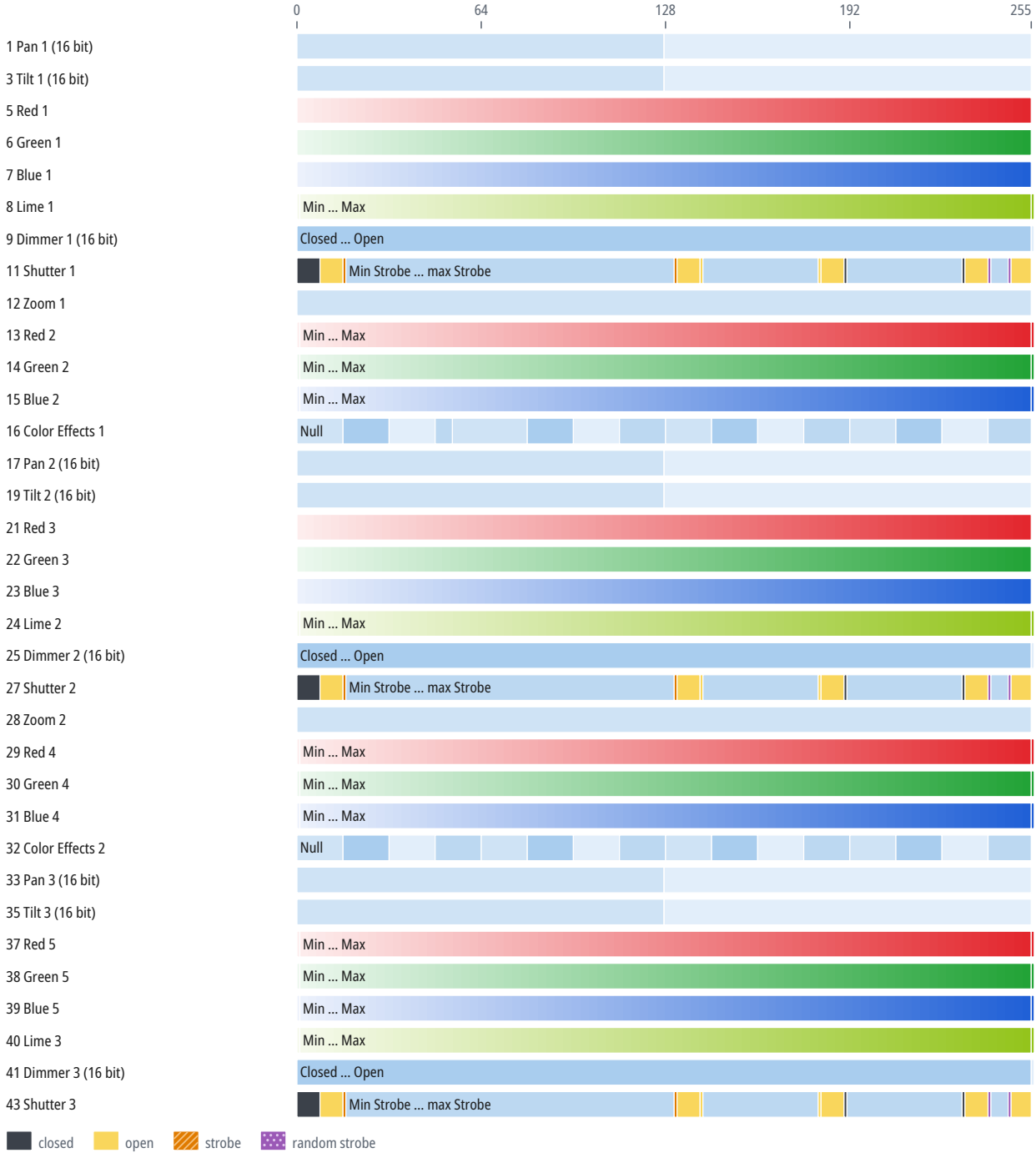
CH	Function	DMX	Description
73	Shutter 6 (continued)	240	Min Strobe Rand
		241–246	Min Strobe Rand ... max Strobe Rand
		247	Max Strobe Rand
		248–255	Open 5
74	PT Speed	0–255	
75	Function		Same as CH 41 in the mode “Mode 2 41DMX” (p. 20)

Mode 5 85 MDX

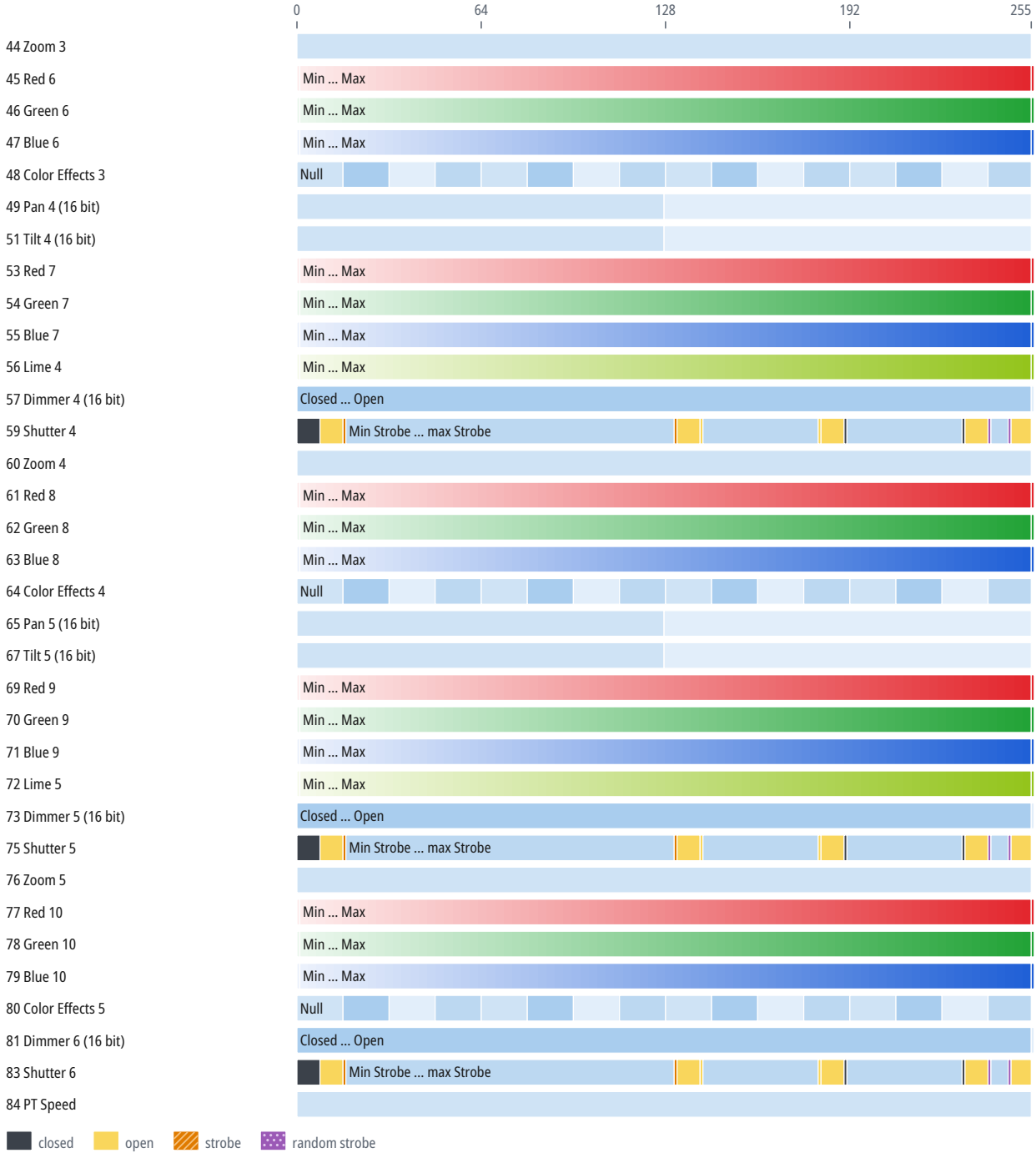
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 9 Dimmer 1 above 0; CH 11 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 25 Dimmer 2 above 0; CH 27 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 41 Dimmer 3 above 0; CH 43 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 57 Dimmer 4 above 0; CH 59 Shutter 4 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 73 Dimmer 5 above 0; CH 75 Shutter 5 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 81 Dimmer 6 above 0; CH 83 Shutter 6 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 5 Red 1 255, CH 6 Green 1 255, CH 7 Blue 1 255, CH 9 Dimmer 1 255, CH 11 Shutter 1 255, CH 13 Red 2 255, CH 14 Green 2 255, CH 15 Blue 2 255, CH 21 Red 3 255, CH 22 Green 3 255, CH 23 Blue 3 255, CH 25 Dimmer 2 255, CH 27 Shutter 2 255, CH 29 Red 4 255, CH 30 Green 4 255, CH 31 Blue 4 255, CH 37 Red 5 255, CH 38 Green 5 255, CH 39 Blue 5 255, CH 41 Dimmer 3 255, CH 43 Shutter 3 255, CH 45 Red 6 255, CH 46 Green 6 255, CH 47 Blue 6 255, CH 53 Red 7 255, CH 54 Green 7 255, CH 55 Blue 7 255, CH 57 Dimmer 4 255, CH 59 Shutter 4 255, CH 61 Red 8 255, CH 62 Green 8 255, CH 63 Blue 8 255, CH 69 Red 9 255, CH 70 Green 9 255, CH 71 Blue 9 255, CH 73 Dimmer 5 255, CH 75 Shutter 5 255, CH 77 Red 10 255, CH 78 Green 10 255, CH 79 Blue 10 255, CH 81 Dimmer 6 255, CH 83 Shutter 6 255.

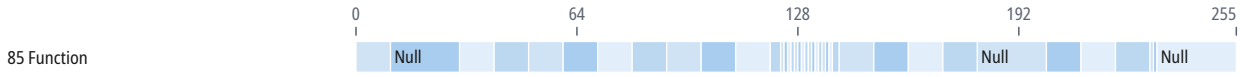
Channel functions at a glance



Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan 1		Same as CH 1 in the mode “Mode 3 71 DMX” (p. 23)
2	Pan 1 Fine	0–255	Fine adjustment of CH 1
3	Tilt 1		Same as CH 3 in the mode “Mode 3 71 DMX” (p. 23)

CH	Function	DMX	Description
4	Tilt 1 Fine	0–255	Fine adjustment of CH 3
5	Red 1	0–255	
6	Green 1	0–255	
7	Blue 1	0–255	
8	Lime 1		Same as CH 8 in the mode “Mode 3 71 DMX” (p. 23)
9	Dimmer 1	0–255	Closed … Open
		255	Open
10	Dimmer 1 Fine	0–255	Fine adjustment of CH 9
11	Shutter 1		Same as CH 38 in the mode “Mode 2 41DMX” (p. 19)
12	Zoom 1	0–255	35–3°
13	Red 2		Same as CH 12 in the mode “Mode 1 21DMX 1” (p. 15)
14	Green 2		Same as CH 13 in the mode “Mode 1 21DMX 1” (p. 15)
15	Blue 2		Same as CH 14 in the mode “Mode 1 21DMX 1” (p. 15)
16	Color Effects 1		Same as CH 13 in the mode “Mode 3 71 DMX” (p. 24)
17	Pan 2		Same as CH 14 in the mode “Mode 3 71 DMX” (p. 24)
18	Pan 2 Fine	0–255	Fine adjustment of CH 17
19	Tilt 2		Same as CH 16 in the mode “Mode 3 71 DMX” (p. 24)
20	Tilt 2 Fine	0–255	Fine adjustment of CH 19
21	Red 3	0–255	
22	Green 3	0–255	
23	Blue 3	0–255	
24	Lime 2		Same as CH 21 in the mode “Mode 3 71 DMX” (p. 24)
25	Dimmer 2	0–255	Closed … Open
		255	Open
26	Dimmer 2 Fine	0–255	Fine adjustment of CH 25
27	Shutter 2		Same as CH 39 in the mode “Mode 2 41DMX” (p. 19)
28	Zoom 2	0–255	35–3°
29	Red 4		Same as CH 23 in the mode “Mode 3 71 DMX” (p. 24)
30	Green 4		Same as CH 24 in the mode “Mode 3 71 DMX” (p. 25)
31	Blue 4		Same as CH 25 in the mode “Mode 3 71 DMX” (p. 25)
32	Color Effects 2		Same as CH 26 in the mode “Mode 3 71 DMX” (p. 25)
33	Pan 3		Same as CH 27 in the mode “Mode 3 71 DMX” (p. 25)
34	Pan 3 Fine	0–255	Fine adjustment of CH 33
35	Tilt 3		Same as CH 29 in the mode “Mode 3 71 DMX” (p. 25)
36	Tilt 3 Fine	0–255	Fine adjustment of CH 35
37	Red 5		Same as CH 31 in the mode “Mode 3 71 DMX” (p. 25)
38	Green 5		Same as CH 32 in the mode “Mode 3 71 DMX” (p. 25)
39	Blue 5		Same as CH 33 in the mode “Mode 3 71 DMX” (p. 25)
40	Lime 3		Same as CH 34 in the mode “Mode 3 71 DMX” (p. 25)
41	Dimmer 3	0–255	Closed … Open
		255	Open
42	Dimmer 3 Fine	0–255	Fine adjustment of CH 41

CH	Function	DMX	Description
43	Shutter 3		Same as CH 37 in the mode “Mode 4 75 DMX” (p. 32)
44	Zoom 3	0–255	35–3°
45	Red 6		Same as CH 36 in the mode “Mode 3 71 DMX” (p. 26)
46	Green 6		Same as CH 37 in the mode “Mode 3 71 DMX” (p. 26)
47	Blue 6		Same as CH 38 in the mode “Mode 3 71 DMX” (p. 26)
48	Color Effects 3		Same as CH 39 in the mode “Mode 3 71 DMX” (p. 26)
49	Pan 4		Same as CH 40 in the mode “Mode 3 71 DMX” (p. 26)
50	Pan 4 Fine	0–255	Fine adjustment of CH 49
51	Tilt 4		Same as CH 42 in the mode “Mode 3 71 DMX” (p. 26)
52	Tilt 4 Fine	0–255	Fine adjustment of CH 51
53	Red 7		Same as CH 44 in the mode “Mode 3 71 DMX” (p. 26)
54	Green 7		Same as CH 45 in the mode “Mode 3 71 DMX” (p. 26)
55	Blue 7		Same as CH 46 in the mode “Mode 3 71 DMX” (p. 26)
56	Lime 4		Same as CH 47 in the mode “Mode 3 71 DMX” (p. 27)
57	Dimmer 4	0–255	Closed ... Open
		255	Open
58	Dimmer 4 Fine	0–255	Fine adjustment of CH 57
59	Shutter 4		Same as CH 51 in the mode “Mode 4 75 DMX” (p. 33)
60	Zoom 4	0–255	35–3°
61	Red 8		Same as CH 49 in the mode “Mode 3 71 DMX” (p. 27)
62	Green 8		Same as CH 50 in the mode “Mode 3 71 DMX” (p. 27)
63	Blue 8		Same as CH 51 in the mode “Mode 3 71 DMX” (p. 27)
64	Color Effects 4		Same as CH 52 in the mode “Mode 3 71 DMX” (p. 27)
65	Pan 5		Same as CH 53 in the mode “Mode 3 71 DMX” (p. 27)
66	Pan 5 Fine	0–255	Fine adjustment of CH 65
67	Tilt 5		Same as CH 55 in the mode “Mode 3 71 DMX” (p. 27)
68	Tilt 5 Fine	0–255	Fine adjustment of CH 67
69	Red 9		Same as CH 57 in the mode “Mode 3 71 DMX” (p. 27)
70	Green 9		Same as CH 58 in the mode “Mode 3 71 DMX” (p. 28)
71	Blue 9		Same as CH 59 in the mode “Mode 3 71 DMX” (p. 28)
72	Lime 5		Same as CH 60 in the mode “Mode 3 71 DMX” (p. 28)
73	Dimmer 5	0–255	Closed ... Open
		255	Open
74	Dimmer 5 Fine	0–255	Fine adjustment of CH 73
75	Shutter 5		Same as CH 65 in the mode “Mode 4 75 DMX” (p. 34)
76	Zoom 5	0–255	35–3°
77	Red 10		Same as CH 62 in the mode “Mode 3 71 DMX” (p. 28)
78	Green 10		Same as CH 63 in the mode “Mode 3 71 DMX” (p. 28)
79	Blue 10		Same as CH 64 in the mode “Mode 3 71 DMX” (p. 28)
80	Color Effects 5		Same as CH 65 in the mode “Mode 3 71 DMX” (p. 28)
81	Dimmer 6	0–255	Closed ... Open
		255	Open

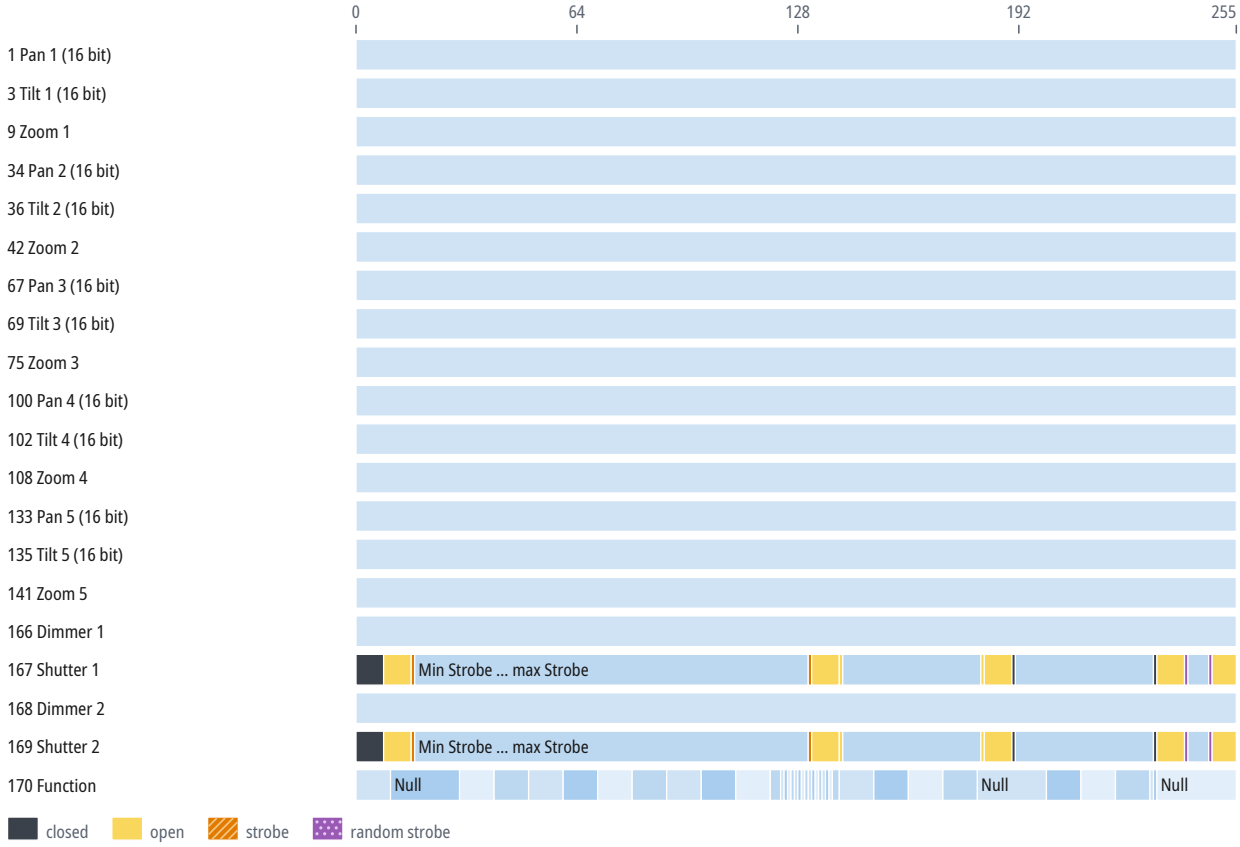
CH	Function	DMX	Description
82	Dimmer 6 Fine	0–255	Fine adjustment of CH 81
83	Shutter 6		Same as CH 73 in the mode “Mode 4 75 DMX” (p. 34)
84	PT Speed	0–255	
85	Function		Same as CH 41 in the mode “Mode 2 41DMX” (p. 20)

Mode 6 170DMX

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 166 Dimmer 1 above 0; CH 167 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 168 Dimmer 2 above 0; CH 169 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 5 Red 1 255, CH 6 Green 1 255, CH 7 Blue 1 255, CH 10 Red 255 (the same in each of the 8 cells), CH 11 Green 255 (the same in each of the 8 cells), CH 12 Blue 255 (the same in each of the 8 cells), CH 38 Red 10 255, CH 39 Green 10 255, CH 40 Blue 10 255, CH 43 Red 255 (the same in each of the 8 cells), CH 44 Green 255 (the same in each of the 8 cells), CH 45 Blue 255 (the same in each of the 8 cells), CH 71 Red 19 255, CH 72 Green 19 255, CH 73 Blue 19 255, CH 76 Red 255 (the same in each of the 8 cells), CH 77 Green 255 (the same in each of the 8 cells), CH 78 Blue 255 (the same in each of the 8 cells), CH 104 Red 28 255, CH 105 Green 28 255, CH 106 Blue 28 255, CH 109 Red 255 (the same in each of the 8 cells), CH 110 Green 255 (the same in each of the 8 cells), CH 111 Blue 255 (the same in each of the 8 cells), CH 137 Red 37 255, CH 138 Green 37 255, CH 139 Blue 37 255, CH 142 Red 255 (the same in each of the 8 cells), CH 143 Green 255 (the same in each of the 8 cells), CH 144 Blue 255 (the same in each of the 8 cells), CH 166 Dimmer 1 255, CH 167 Shutter 1 255, CH 168 Dimmer 2 255, CH 169 Shutter 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan 1	0–255	62°
2	Pan 1 Fine	0–255	Fine adjustment of CH 1
3	Tilt 1	0–255	225°
4	Tilt 1 Fine	0–255	Fine adjustment of CH 3
5	Red 1	0–255	
6	Green 1	0–255	
7	Blue 1	0–255	
8	Lime 1	0–255	
9	Zoom 1	0–255	35–3°
10	Red 2	0–255	
11	Green 2	0–255	
12	Blue 2	0–255	
34	Pan 2	0–255	62°
35	Pan 2 Fine	0–255	Fine adjustment of CH 34
36	Tilt 2	0–255	225°
37	Tilt 2 Fine	0–255	Fine adjustment of CH 36
38	Red 10	0–255	
39	Green 10	0–255	
40	Blue 10	0–255	
41	Lime 2	0–255	
42	Zoom 2	0–255	35–3°
43	Red 11	0–255	
44	Green 11	0–255	
45	Blue 11	0–255	
67	Pan 3	0–255	62°
68	Pan 3 Fine	0–255	Fine adjustment of CH 67
69	Tilt 3	0–255	225°
70	Tilt 3 Fine	0–255	Fine adjustment of CH 69
71	Red 19	0–255	
72	Green 19	0–255	
73	Blue 19	0–255	
74	Lime 3	0–255	
75	Zoom 3	0–255	35–3°
76	Red 20	0–255	
77	Green 20	0–255	
78	Blue 20	0–255	
100	Pan 4	0–255	62°
101	Pan 4 Fine	0–255	Fine adjustment of CH 100
102	Tilt 4	0–255	225°
103	Tilt 4 Fine	0–255	Fine adjustment of CH 102

CH	Function	DMX	Description
104	Red 28	0–255	
105	Green 28	0–255	
106	Blue 28	0–255	
107	Lime 4	0–255	
108	Zoom 4	0–255	35–3°
109	Red 29	0–255	
110	Green 29	0–255	
111	Blue 29	0–255	
133	Pan 5	0–255	62°
134	Pan 5 Fine	0–255	Fine adjustment of CH 133
135	Tilt 5	0–255	225°
136	Tilt 5 Fine	0–255	Fine adjustment of CH 135
137	Red 37	0–255	
138	Green 37	0–255	
139	Blue 37	0–255	
140	Lime 5	0–255	
141	Zoom 5	0–255	35–3°
142	Red 38	0–255	
143	Green 38	0–255	
144	Blue 38	0–255	
166	Dimmer 1	0–255	
167	Shutter 1		Same as CH 38 in the mode “Mode 2 41DMX” (p. 19)
168	Dimmer 2	0–255	
169	Shutter 2		Same as CH 39 in the mode “Mode 2 41DMX” (p. 19)
170	Function		Same as CH 41 in the mode “Mode 2 41DMX” (p. 20)

CH 10–33: 8 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 10–12); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	10	11	12	2	13	14	15	3	16	17	18
4	19	20	21	5	22	23	24	6	25	26	27
7	28	29	30	8	31	32	33				

CH 43–66: 8 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 43–45); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	43	44	45	2	46	47	48	3	49	50	51
4	52	53	54	5	55	56	57	6	58	59	60
7	61	62	63	8	64	65	66				

CH 76–99: 8 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 76–78); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	76	77	78	2	79	80	81	3	82	83	84
4	85	86	87	5	88	89	90	6	91	92	93
7	94	95	96	8	97	98	99				

CH 109–132: 8 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 109–111); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	109	110	111	2	112	113	114	3	115	116	117
4	118	119	120	5	121	122	123	6	124	125	126
7	127	128	129	8	130	131	132				

CH 142–165: 8 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 142–144); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	142	143	144	2	145	146	147	3	148	149	150
4	151	152	153	5	154	155	156	6	157	158	159
7	160	161	162	8	163	164	165				

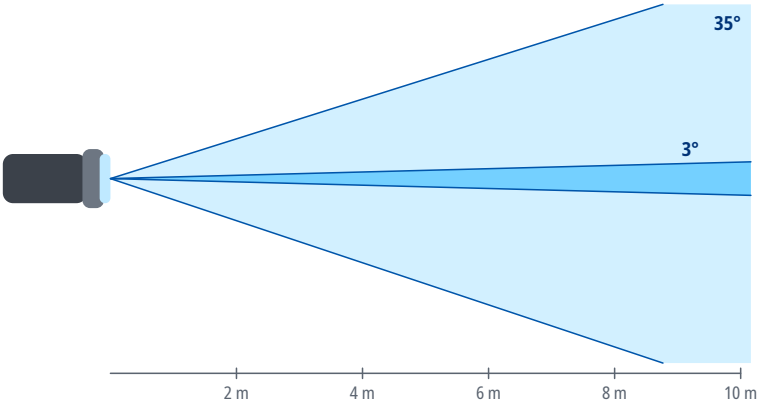
10 Technical specifications

Parameter	Value
Light source	LED
Zoom	3–35°
Tilt	225°
Weight	29 kg
Ingress protection	IP65
Meaning of the IP code (IEC 60529)	Dust-tight; protected against water jets
Operating temperature	-10 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2500–8000 K
Strobe frequency	0.9–20 Hz

Spot diameter



Distance	Ø 3°	Ø 35°
2 m	0.1 m	1.3 m
4 m	0.21 m	2.5 m
6 m	0.31 m	3.8 m
8 m	0.42 m	5 m
10 m	0.52 m	6.3 m
15 m	0.79 m	9.5 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.