DMX REFERENCE

Centipede B4

JMAZ PROFESSIONAL



Manufacturer	JMAZ PROFESSIONAL
GDTF file	JMAZ_PROFESSIONAL_Centipede_B4_113610.gdtf
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1 About this manual

This document describes the Centipede B4 by JMAZ PROFESSIONAL. It was compiled from the GDTF file JMAZ_PROFESSIONAL_Centipede_B4_113610.gdtf from the GDTF-Share library.

File revision: “Version 1.0, Uploaded to GDTF Share.”.

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 JMAZ PROFESSIONAL; 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	19.5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
24CH Simple	24	21	1, 25, 49, 73, ...
50CH Basic	50	10	1, 51, 101, 151, ...
66CH Standard	66	7	1, 67, 133, 199, ...
86CH Extended	86	5	1, 87, 173, 259, ...

No light? Check these channels

- 24CH Simple: CH 6 Dimmer 1 above 0; CH 8 Shutter 1 at 104, 106–107 or 105, 209, 255 “Open” or 208, 210–212 or 252–254; CH 17 Dimmer 2 above 0; CH 18 Shutter 2 at 0 “Open”
- 50CH Basic: CH 14 Dimmer 1 above 0; CH 16 Shutter 1 at 104, 106–107 or 105, 209, 255 “Open” or 208, 210–212 or 252–254; CH 29 Dimmer 2 above 0; CH 30 Shutter 2 at 0 “Open”; CH 36 Shutter 3 at 104–107 or 208–212 or 252–255; CH 37 Dimmer 3 above 0; CH 43 FOREGROUND SHUTTER at 104–107 or 208–212 or 252–255
- 66CH Standard: CH 14 Dimmer 1 above 0; CH 16 Shutter 1 at 104, 106–107 or 105, 209, 255 “Open” or 208, 210–212 or 252–254; CH 45 Dimmer 2 above 0; CH 46 Shutter 2 at 0 “Open”; CH 52 Shutter 3 at 104–107 or 208–212 or 252–255; CH 53 Dimmer 3 above 0; CH 59 FOREGROUND SHUTTER at 104–107 or 208–212 or 252–255
- 86CH Extended: CH 14 Dimmer 1 above 0; CH 16 Shutter 1 at 104, 106–107 or 105, 209, 255 “Open” or 208, 210–212 or 252–254; CH 45 Dimmer 2 above 0; CH 46 Shutter 2 at 0 “Open”; CH 50 Dimmer 3 above 0; CH 55 Dimmer 4 above 0; CH 60 Dimmer 5 above 0; CH 65 Dimmer 6 above 0; CH 72 Shutter 7 at 104–107 or 208–212 or 252–255; CH 73 Dimmer 7 above 0; CH 79 FOREGROUND SHUTTER at 104–107 or 208–212 or 252–255


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.

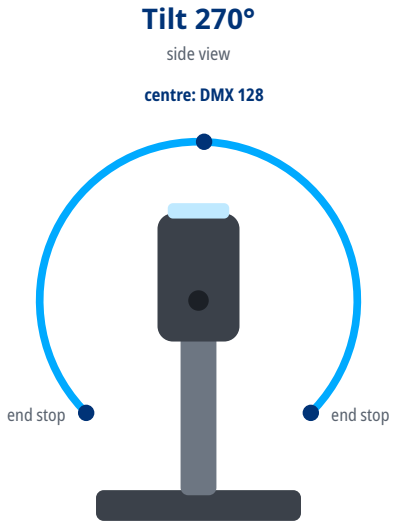
⚠ CAUTION

- 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



Full-travel times as stated in the GDTF file.

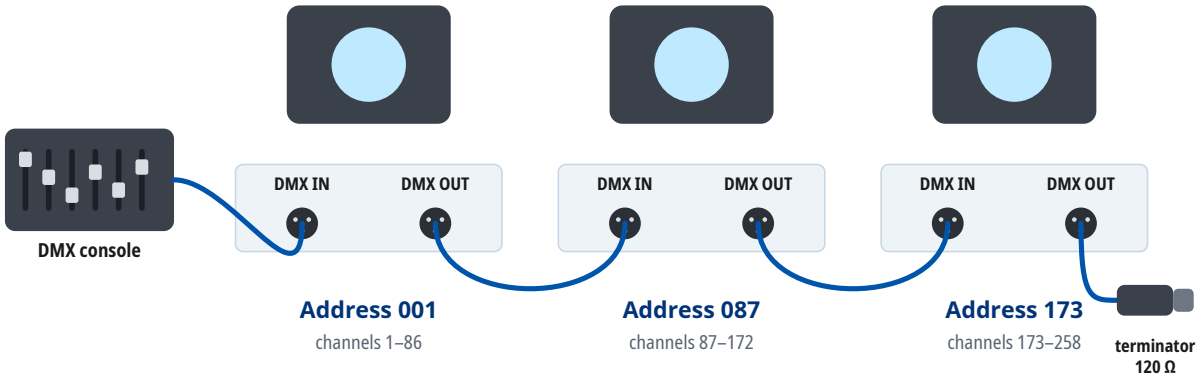
5 Installation

> ⚠ **WARNING**
>
> - Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
> - The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
> - Weight of the device: 19.5 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 86CH Extended: every unit occupies 86 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

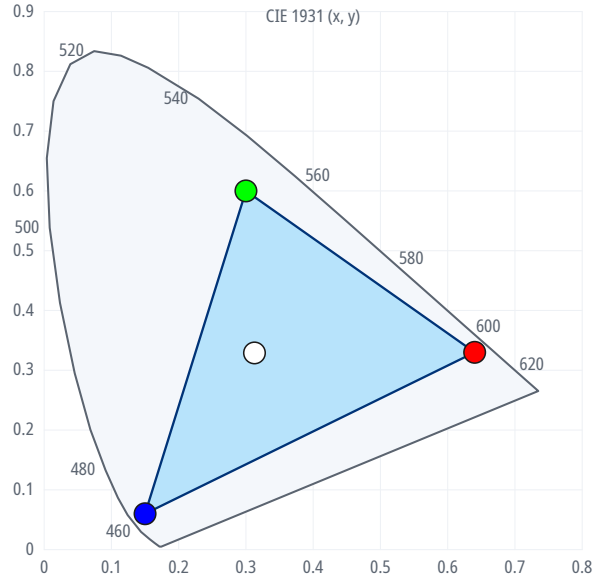
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “86CH Extended”: 86.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “86CH Extended”, you can use, for example, the start addresses 1, 87, 173, 259.
- 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

	24CH Simple 24 channels	50CH Basic 50 channels	66CH Standard 66 channels	86CH Extended 86 channels
Pan / Tilt	1, 4	1, 4–12	1, 4–12	1, 4–12
Dimmer	6, 13, 17	4 channels (14–37)	4 channels (14–53)	12 channels (10–73)
Shutter / strobe	8, 18	4 channels (16–43)	4 channels (16–59)	12 channels (11–79)
Color mixing	9–12, 19–21	11 channels (17–41)	27 channels (17–57)	47 channels (12–77)
Color temperature	13	25, 42	25, 58	25, 78
Effects / macros	14–16, 22, 23	26–28, 34, 35, 46–49	9 channels (26–65)	9 channels (26–85)
Pixel control	✓	✓	✓	✓

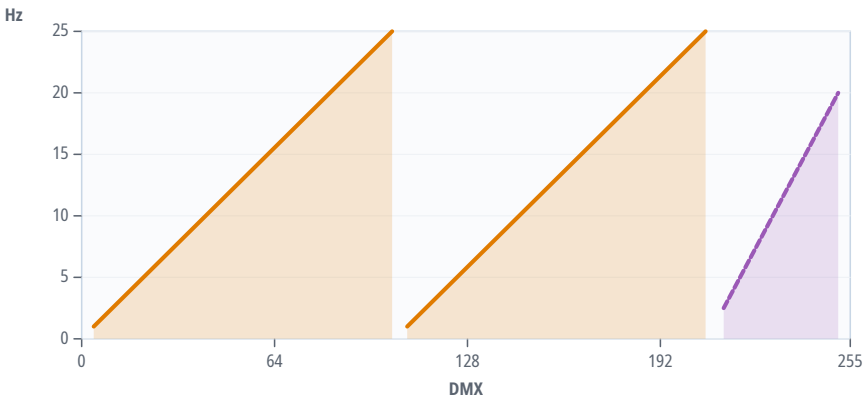
LED colors and the colors they mix



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.

Strobe rate



CH 16 · 50CH Basic

- 4–103: 1–25 Hz
  Strobe
- 108–207: 1–25 Hz
  Pulsation
- 213–251: 2.5–20 Hz
  Random

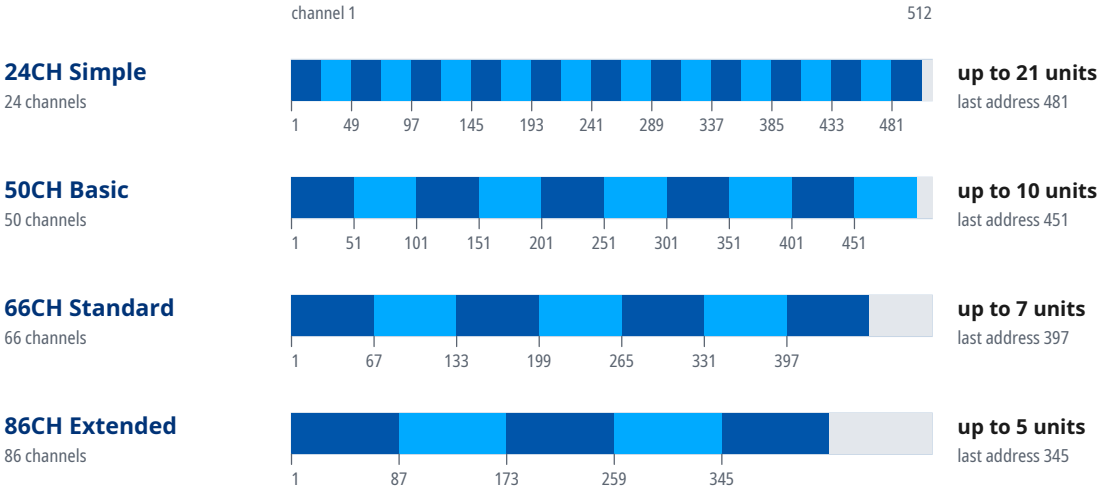
Cells (pixels)



4 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “50CH Basic” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “86CH Extended”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 1	11	U3 · 1	16	U4 · 1
2	87	7	U2 · 87	12	U3 · 87	17	U4 · 87
3	173	8	U2 · 173	13	U3 · 173	18	U4 · 173
4	259	9	U2 · 259	14	U3 · 259	19	U4 · 259
5	345	10	U2 · 345	15	U3 · 345	20	U4 · 345

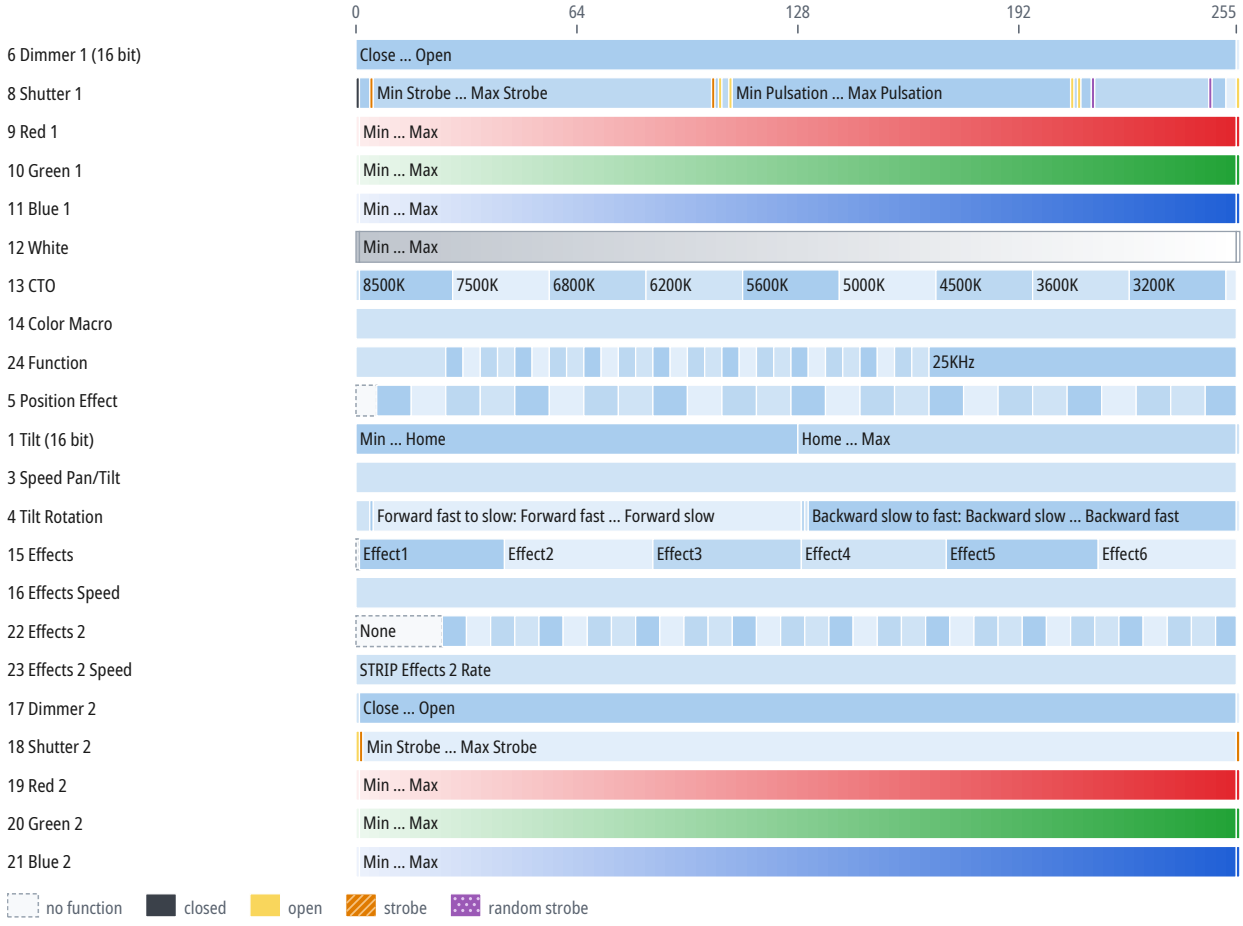
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 24CH Simple

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

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Dimmer 1 above 0; CH 8 Shutter 1 at 104, 106–107 or 105, 209, 255 “Open” or 208, 210–212 or 252–254; CH 17 Dimmer 2 above 0; CH 18 Shutter 2 at 0 “Open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 1 0, CH 8 Shutter 1 255, CH 17 Dimmer 2 255, CH 19 Red 2 255, CH 20 Green 2 255, CH 21 Blue 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0–128	Min ... Home
		128–255	Home ... Max
		255	Max
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt	0–255	
4	Tilt Rotation	0–3	No Function: Stop
		4	Forward fast to slow: Forward fast
		5–128	Forward fast to slow: Forward fast ... Forward slow
		129	Forward fast to slow: Forward slow
		130	Backward slow to fast: Backward slow
		131–254	Backward slow to fast: Backward slow ... Backward fast

CH	Function	DMX	Description
4	Tilt Rotation (continued)	255	Backward slow to fast: Backward fast
5	Position Effect	0–5	None
		6–15	Pos 1
		16–25	Pos 2
		26–35	Pos 3
		36–45	Pos 4
		46–55	Pos 5
		56–65	Pos 6
		66–75	Pos 7
		76–85	Pos 8
		86–95	Pos 9
		96–105	Pos 10
		106–115	Pos 11
		116–125	Pos 12
		126–135	Pos 13
		136–145	Pos 14
		146–155	Pos 15
		156–165	Pos 16
		166–175	Pos 17
		176–185	Pos 18
		186–195	Pos 19
		196–205	Pos 20
		206–215	Pos 21
		216–225	Pos 22
		226–235	Pos 23
		236–245	Pos 24
		246–255	Pos 25
6	Dimmer 1	0–255	Close … Open
		255	Open
7	Dimmer 1 Fine	0–255	Fine adjustment of CH 6
8	Shutter 1	0	Closed: Close
		1–3	Closed
		4	Min Strobe
		5–102	Min Strobe … Max Strobe
		103	Max Strobe
		104	Open 3
		105	Open
		106–107	Open 3
		108	Min Pulsation
		109–206	Min Pulsation … Max Pulsation
		207	Max Pulsation
		208	Open 4

CH	Function	DMX	Description
8	Shutter 1 (continued)	209	Open
		210–212	Open 4
		213	Min Strobe Rand
		214–246	Min Strobe Rand ... max Strobe Rand
		247	Max Strobe Rand
		248–251	Random
		252–254	Open 5
		255	Open
9	Red 1	0	Min
		1–254	Min ... Max
		255	Max
10	Green 1	0	Min
		1–254	Min ... Max
		255	Max
11	Blue 1	0	Min
		1–254	Min ... Max
		255	Max
12	White	0	Min
		1–254	Min ... Max
		255	Max
13	CTO	0	CTO: Open
		1–27	8500K
		28–55	7500K
		56–83	6800K
		84–111	6200K
		112–139	5600K
		140–167	5000K
		168–195	4500K
		196–223	3600K
		224–251	3200K
		252–255	2800K
14	Color Macro	0–255	
15	Effects	0	None
		1–42	Effect1
		43–85	Effect2
		86–128	Effect3
		129–170	Effect4
		171–214	Effect5
		215–255	Effect6
16	Effects Speed	0–255	
17	Dimmer 2	0	Close
		1–254	Close ... Open

CH	Function	DMX	Description
17	Dimmer 2 (continued)	255	Open
18	Shutter 2	0	Open
		1	Min Strobe
		2–254	Min Strobe ... Max Strobe
		255	Max Strobe
19	Red 2	0	Min
		1–254	Min ... Max
		255	Max
20	Green 2	0	Min
		1–254	Min ... Max
		255	Max
21	Blue 2	0	Min
		1–254	Min ... Max
		255	Max
22	Effects 2		STRIP Effects 2
		0–24	None
		25–31	Effect1
		32–38	Effect2
		39–45	Effect3
		46–52	Effect4
		53–59	Effect5
		60–66	Effect6
		67–73	Effect7
		74–80	Effect8
		81–87	Effect9
		88–94	Effect10
		95–101	Effect11
		102–108	Effect12
		109–115	Effect13
		116–122	Effect14
		123–129	Effect15
		130–136	Effect16
		137–143	Effect17
		144–150	Effect18
		151–157	Effect19
		158–164	Effect20
		165–171	Effect21
		172–178	Effect22
		179–185	Effect23
		186–192	Effect24
		193–199	Effect25
		200–206	Effect26

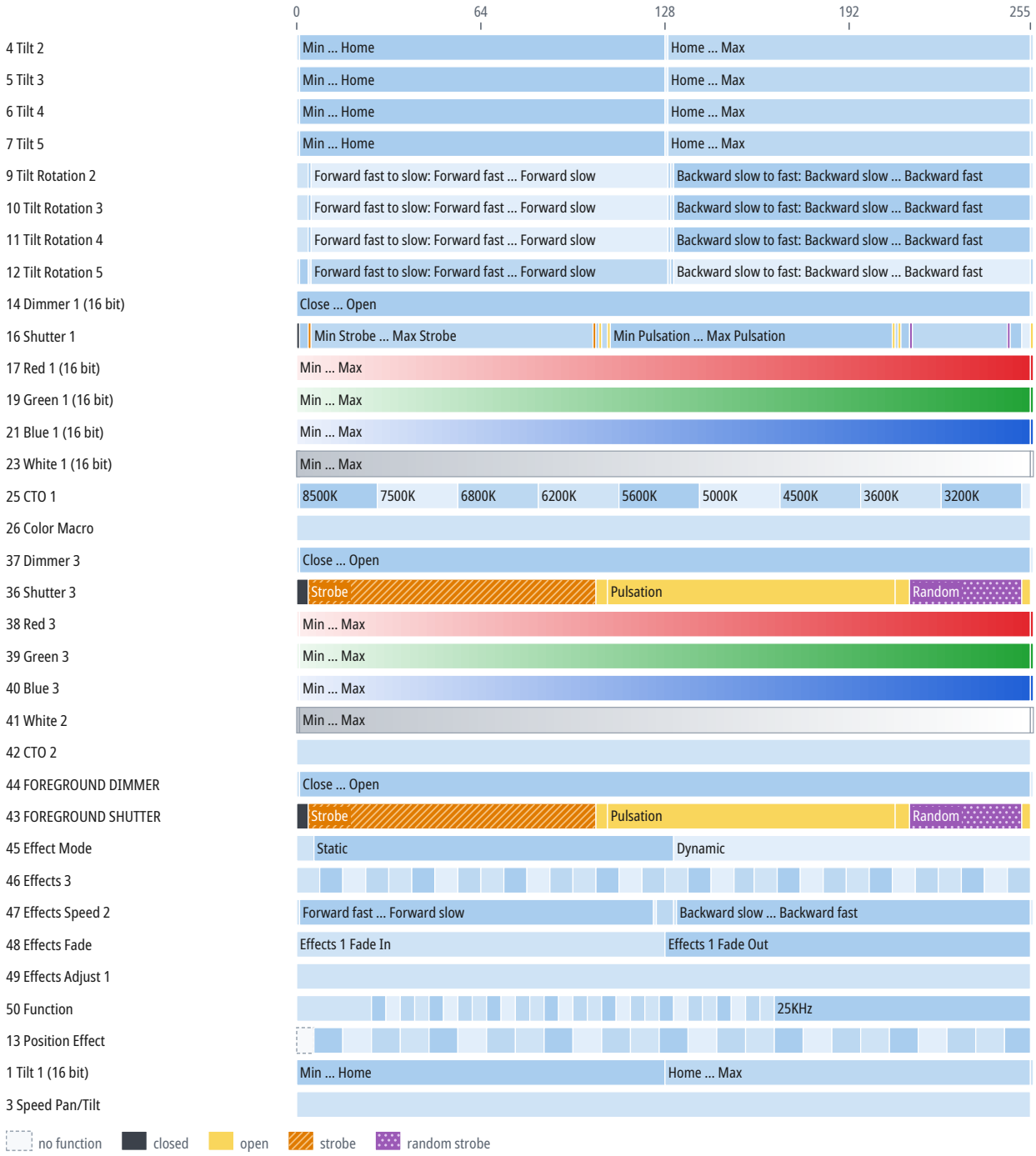
CH	Function	DMX	Description
22	Effects 2 (continued)	207–213	Effect27
		214–220	Effect28
		221–227	Effect29
		228–234	Effect30
		235–241	Effect31
		242–248	Effect32
		249–255	Effect33
23	Effects 2 Speed		STRIP Effects 2 Rate
		0–255	STRIP Effects 2 Rate
24	Function	0–25	RESERVE TBD
		26–30	Tilt Speed FAST
		31–35	Tilt Speed SMOOTH
		36–40	Tilt Invert OFF
		41–45	Tilt Invert ON
		46–50	Reverse Head OFF
		51–55	Reverse Head ON
		56–60	Reverse Mapping OFF
		61–65	Reverse Mapping ON
		66–70	Tilt Reset
		71–75	Complete Reset
		76–80	S Curve
		81–85	I Square
		86–90	Square
		91–95	Linear
		96–100	900Hz
		101–105	1000Hz
		106–110	1100Hz
		111–115	1200Hz
		116–120	1300Hz
		121–125	1400Hz
		126–130	1500Hz
		131–135	2500Hz
		136–140	4000Hz
		141–145	5000Hz
		146–150	6000Hz
		151–155	10KHz
		156–160	15KHz
		161–165	20KHz
		166–255	25KHz

Mode 50CH Basic

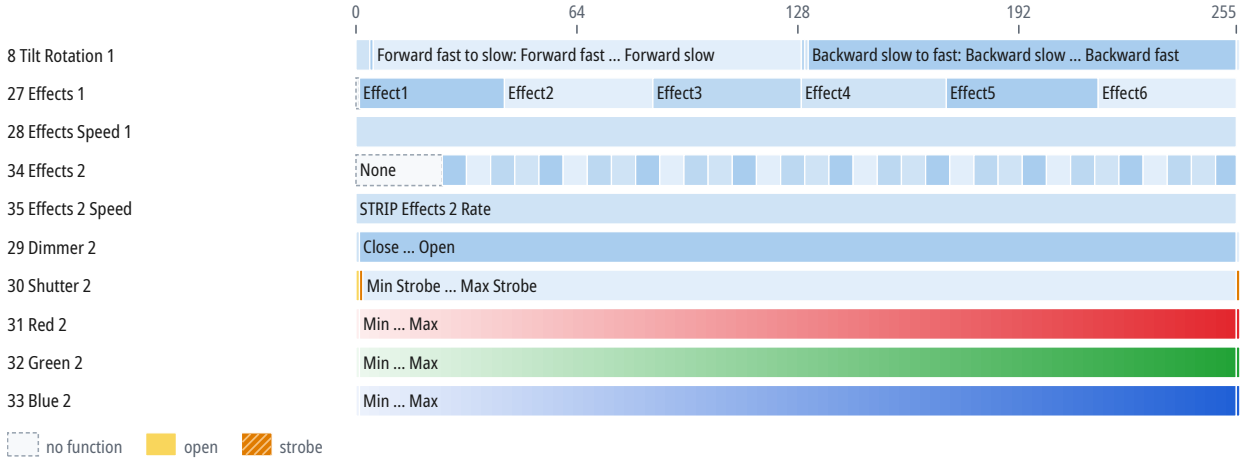
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 14 Dimmer 1 above 0; CH 16 Shutter 1 at 104, 106–107 or 105, 209, 255 “Open” or 208, 210–212 or 252–254; CH 29 Dimmer 2 above 0; CH 30 Shutter 2 at 0 “Open”; CH 36 Shutter 3 at 104–107 or 208–212 or 252–255; CH 37 Dimmer 3 above 0; CH 43 FOREGROUND SHUTTER at 104–107 or 208–212 or 252–255. The GDTF file gives these values for a console's Highlight function: CH 14 Dimmer 1 0, CH 16 Shutter 1 255, CH 29 Dimmer 2 255, CH 31 Red 2 255, CH 32 Green 2 255, CH 33 Blue 2 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Tilt 1	0–128	Min ... Home
		128–255	Home ... Max
		255	Max
2	Tilt 1 Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt	0–255	
4	Tilt 2	0	Min
		1–127	Min ... Home
		128	Home
		129–254	Home ... Max
		255	Max
5	Tilt 3	0	Min
		1–127	Min ... Home
		128	Home
		129–254	Home ... Max
		255	Max
6	Tilt 4	0	Min
		1–127	Min ... Home
		128	Home
		129–254	Home ... Max
		255	Max
7	Tilt 5	0	Min
		1–127	Min ... Home
		128	Home
		129–254	Home ... Max
		255	Max
8	Tilt Rotation 1	0–3	No Function: Stop
		4	Forward fast to slow: Forward fast
		5–128	Forward fast to slow: Forward fast ... Forward slow

CH	Function	DMX	Description
8	Tilt Rotation 1 (continued)	129	Forward fast to slow: Forward slow
		130	Backward slow to fast: Backward slow
		131–254	Backward slow to fast: Backward slow ... Backward fast
		255	Backward slow to fast: Backward fast
9	Tilt Rotation 2	0–3	No Function: Stop
		4	Forward fast to slow: Forward fast
		5–128	Forward fast to slow: Forward fast ... Forward slow
		129	Forward fast to slow: Forward slow
		130	Backward slow to fast: Backward slow
		131–254	Backward slow to fast: Backward slow ... Backward fast
		255	Backward slow to fast: Backward fast
10	Tilt Rotation 3	0–3	No Function: Stop
		4	Forward fast to slow: Forward fast
		5–128	Forward fast to slow: Forward fast ... Forward slow
		129	Forward fast to slow: Forward slow
		130	Backward slow to fast: Backward slow
		131–254	Backward slow to fast: Backward slow ... Backward fast
		255	Backward slow to fast: Backward fast
11	Tilt Rotation 4	0–3	No Function: Stop
		4	Forward fast to slow: Forward fast
		5–128	Forward fast to slow: Forward fast ... Forward slow
		129	Forward fast to slow: Forward slow
		130	Backward slow to fast: Backward slow
		131–254	Backward slow to fast: Backward slow ... Backward fast
		255	Backward slow to fast: Backward fast
12	Tilt Rotation 5	0	No Function: Stop
		1–3	No Function
		4	Forward fast to slow: Forward fast
		5–128	Forward fast to slow: Forward fast ... Forward slow
		129	Forward fast to slow: Forward slow
		130	Backward slow to fast: Backward slow
		131–254	Backward slow to fast: Backward slow ... Backward fast
		255	Backward slow to fast: Backward fast
13	Position Effect		Same as CH 5 in the mode “24CH Simple” (p. 10)
14	Dimmer 1		Same as CH 6 in the mode “24CH Simple” (p. 10)
15	Dimmer 1 Fine	0–255	Fine adjustment of CH 14
16	Shutter 1		Same as CH 8 in the mode “24CH Simple” (p. 10)
17	Red 1	0–255	Min ... Max
		255	Max
18	Red 1 Fine	0–255	Fine adjustment of CH 17
19	Green 1	0–255	Min ... Max
		255	Max

CH	Function	DMX	Description
20	Green 1 Fine	0–255	Fine adjustment of CH 19
21	Blue 1	0–255	Min ... Max
		255	Max
22	Blue 1 Fine	0–255	Fine adjustment of CH 21
23	White 1	0–255	Min ... Max
		255	Max
24	White 1 Fine	0–255	Fine adjustment of CH 23
25	CTO 1	0	CTO: Open
		1–27	8500K
		28–55	7500K
		56–83	6800K
		84–111	6200K
		112–139	5600K
		140–167	5000K
		168–195	4500K
		196–223	3600K
		224–251	3200K
		252–255	2800K
26	Color Macro	0–255	
27	Effects 1	0	None
		1–42	Effect1
		43–85	Effect2
		86–128	Effect3
		129–170	Effect4
		171–214	Effect5
		215–255	Effect6
28	Effects Speed 1	0–255	
29	Dimmer 2		Same as CH 17 in the mode “24CH Simple” (p. 11)
30	Shutter 2		Same as CH 18 in the mode “24CH Simple” (p. 12)
31	Red 2		Same as CH 19 in the mode “24CH Simple” (p. 12)
32	Green 2		Same as CH 20 in the mode “24CH Simple” (p. 12)
33	Blue 2		Same as CH 21 in the mode “24CH Simple” (p. 12)
34	Effects 2		Same as CH 22 in the mode “24CH Simple” (p. 12)
35	Effects 2 Speed		Same as CH 23 in the mode “24CH Simple” (p. 13)
36	Shutter 3	0–3	Closed
		4–103	Strobe (1–25 Hz)
		104–107	Open 3
		108–207	Pulsation (1–25 Hz)
		208–212	Open 4
		213–251	Random (2.5–20 Hz)
		252–255	Open 5
37	Dimmer 3	0	Close

CH	Function	DMX	Description
37	Dimmer 3 (continued)	1–254	Close … Open
		255	Open
38	Red 3	0	Min
		1–254	Min … Max
		255	Max
39	Green 3	0	Min
		1–254	Min … Max
		255	Max
40	Blue 3	0	Min
		1–254	Min … Max
		255	Max
41	White 2	0	Min
		1–254	Min … Max
		255	Max
42	CTO 2	0–255	
43	FOREGROUND SHUTTER	0–3	Closed
		4–103	Strobe (1–25 Hz)
		104–107	Open 3
		108–207	Pulsation (1–25 Hz)
		208–212	Open 4
		213–251	Random (2.5–20 Hz)
		252–255	Open 5
44	FOREGROUND DIMMER	0	Close
		1–254	Close … Open
		255	Open
45	Effect Mode	0–5	Normal
		6–130	Static
		131–255	Dynamic
46	Effects 3	0–7	Effect 1
		8–15	Effect 2
		16–23	Effect 3
		24–31	Effect 4
		32–39	Effect 5
		40–47	Effect 6
		48–55	Effect 7
		56–63	Effect 8
		64–71	Effect 9
		72–79	Effect 10
		80–87	Effect 11
		88–95	Effect 12
		96–103	Effect 13
		104–111	Effect 14

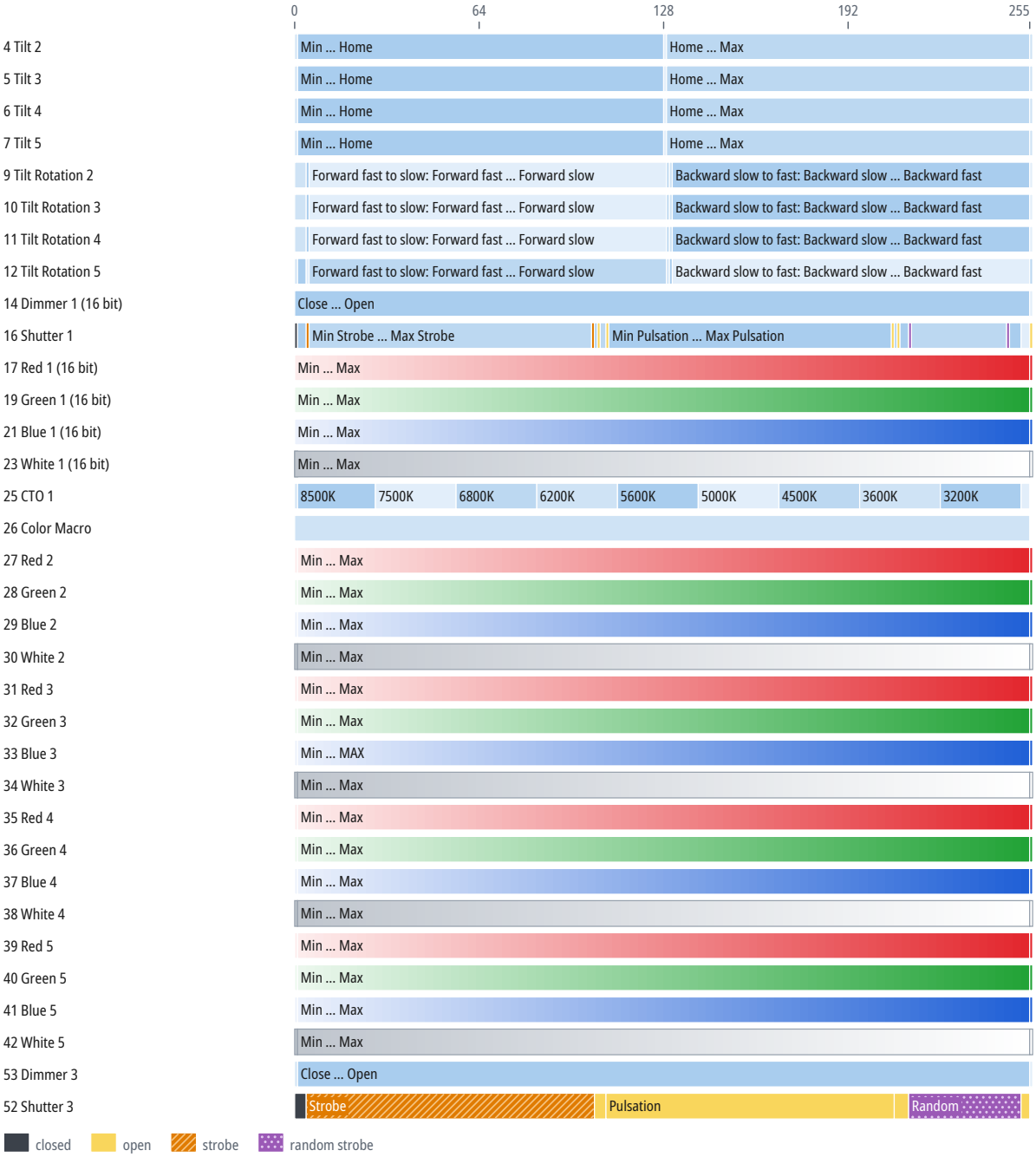
CH	Function	DMX	Description
46	Effects 3 (continued)	112–119	Effect 15
		120–127	Effect 16
		128–135	Effect 17
		136–143	Effect 18
		144–151	Effect 19
		152–158	Effect 20
		159–166	Effect 21
		167–174	Effect 22
		175–182	Effect 23
		183–190	Effect 24
		191–198	Effect 25
		199–206	Effect 26
		207–214	Effect 27
		215–222	Effect 28
		223–230	Effect 29
		231–238	Effect 30
		239–246	Effect 31
		247–255	Effect 32
47	Effects Speed 2	0	Forward fast
		1–123	Forward fast ... Forward slow
		124	Forward slow
		125–130	Stop
		131	Backward slow
		132–254	Backward slow ... Backward fast
		255	Backward fast
48	Effects Fade	0–127	Effects 1 Fade In
		128–255	Effects 1 Fade Out
49	Effects Adjust 1	0–255	
50	Function		Same as CH 24 in the mode “24CH Simple” (p. 13)

Mode 66CH Standard

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 14 Dimmer 1 above 0; CH 16 Shutter 1 at 104, 106–107 or 105, 209, 255 “Open” or 208, 210–212 or 252–254; CH 45 Dimmer 2 above 0; CH 46 Shutter 2 at 0 “Open”; CH 52 Shutter 3 at 104–107 or 208–212 or 252–255; CH 53 Dimmer 3 above 0; CH 59 FOREGROUND SHUTTER at 104–107 or 208–212 or 252–255. The GDTF file gives these values for a console's Highlight function: CH 14 Dimmer 1 0, CH 16 Shutter 1 255, CH 27 Red 2 255, CH 28 Green 2 255, CH 29 Blue 2 255, CH 31 Red 3 255, CH 32 Green 3 255, CH 33 Blue 3 255, CH 35 Red 4 255, CH 36 Green 4 255, CH 37 Blue 4 255, CH 39 Red 5 255, CH 40 Green 5 255, CH 41 Blue 5 255, CH 45 Dimmer 2 255, CH 47 Red 6 255, CH 48 Green 6 255, CH 49 Blue 6 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Tilt 1		Same as CH 1 in the mode “50CH Basic” (p. 15)
2	Tilt 1 Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt	0–255	
4	Tilt 2		Same as CH 4 in the mode “50CH Basic” (p. 15)
5	Tilt 3		Same as CH 5 in the mode “50CH Basic” (p. 15)
6	Tilt 4		Same as CH 6 in the mode “50CH Basic” (p. 15)
7	Tilt 5		Same as CH 7 in the mode “50CH Basic” (p. 15)
8	Tilt Rotation 1		Same as CH 8 in the mode “50CH Basic” (p. 15)
9	Tilt Rotation 2		Same as CH 9 in the mode “50CH Basic” (p. 16)
10	Tilt Rotation 3		Same as CH 10 in the mode “50CH Basic” (p. 16)
11	Tilt Rotation 4		Same as CH 11 in the mode “50CH Basic” (p. 16)
12	Tilt Rotation 5		Same as CH 12 in the mode “50CH Basic” (p. 16)
13	Position Effect		Same as CH 5 in the mode “24CH Simple” (p. 10)
14	Dimmer 1		Same as CH 6 in the mode “24CH Simple” (p. 10)
15	Dimmer 1 Fine	0–255	Fine adjustment of CH 14

CH	Function	DMX	Description
16	Shutter 1		Same as CH 8 in the mode “24CH Simple” (p. 10)
17	Red 1		Same as CH 17 in the mode “50CH Basic” (p. 16)
18	Red 1 Fine	0–255	Fine adjustment of CH 17
19	Green 1		Same as CH 19 in the mode “50CH Basic” (p. 16)
20	Green 1 Fine	0–255	Fine adjustment of CH 19
21	Blue 1		Same as CH 21 in the mode “50CH Basic” (p. 17)
22	Blue 1 Fine	0–255	Fine adjustment of CH 21
23	White 1		Same as CH 23 in the mode “50CH Basic” (p. 17)
24	White 1 Fine	0–255	Fine adjustment of CH 23
25	CTO 1		Same as CH 25 in the mode “50CH Basic” (p. 17)
26	Color Macro	0–255	
27	Red 2		Same as CH 19 in the mode “24CH Simple” (p. 12)
28	Green 2		Same as CH 20 in the mode “24CH Simple” (p. 12)
29	Blue 2		Same as CH 21 in the mode “24CH Simple” (p. 12)
30	White 2		Same as CH 41 in the mode “50CH Basic” (p. 18)
31	Red 3		Same as CH 38 in the mode “50CH Basic” (p. 18)
32	Green 3		Same as CH 39 in the mode “50CH Basic” (p. 18)
33	Blue 3	0	Min
		1–254	Min … MAX
		255	MAX
34	White 3	0	Min
		1–254	Min … Max
		255	Max
35	Red 4	0	Min
		1–254	Min … Max
		255	Max
36	Green 4	0	Min
		1–254	Min … Max
		255	Max
37	Blue 4	0	Min
		1–254	Min … Max
		255	Max
38	White 4	0	Min
		1–254	Min … Max
		255	Max
39	Red 5	0	Min
		1–254	Min … Max
		255	Max
40	Green 5	0	Min
		1–254	Min … Max
		255	Max
41	Blue 5	0	Min

CH	Function	DMX	Description
41	Blue 5 (continued)	1–254	Min ... Max
		255	Max
42	White 5	0	Min
		1–254	Min ... Max
		255	Max
43	Effects 1		Same as CH 27 in the mode “50CH Basic” (p. 17)
44	Effects Speed 1	0–255	
45	Dimmer 2		Same as CH 17 in the mode “24CH Simple” (p. 11)
46	Shutter 2		Same as CH 18 in the mode “24CH Simple” (p. 12)
47	Red 6	0	Min
		1–254	Min ... Max
		255	Max
48	Green 6	0	Min
		1–254	Min ... Max
		255	Max
49	Blue 6	0	Min
		1–254	Min ... Max
		255	Max
50	Effects 2		Same as CH 22 in the mode “24CH Simple” (p. 12)
51	Effects 2 Speed		Same as CH 23 in the mode “24CH Simple” (p. 13)
52	Shutter 3		Same as CH 36 in the mode “50CH Basic” (p. 17)
53	Dimmer 3		Same as CH 37 in the mode “50CH Basic” (p. 17)
54	Red 7	0	Min
		1–254	Min ... Max
		255	Max
55	Green 7	0	Min
		1–254	Min ... Max
		255	Max
56	Blue 7	0	Min
		1–254	Min ... Max
		255	Max
57	White 6	0	Min
		1–254	Min ... Max
		255	Max
58	CTO 2	0–255	
59	FOREGROUND SHUTTER		Same as CH 43 in the mode “50CH Basic” (p. 18)
60	FOREGROUND DIMMER		Same as CH 44 in the mode “50CH Basic” (p. 18)
61	Effect Mode		Same as CH 45 in the mode “50CH Basic” (p. 18)
62	Effects 3		Same as CH 46 in the mode “50CH Basic” (p. 18)
63	Effects Speed 2		Same as CH 47 in the mode “50CH Basic” (p. 19)

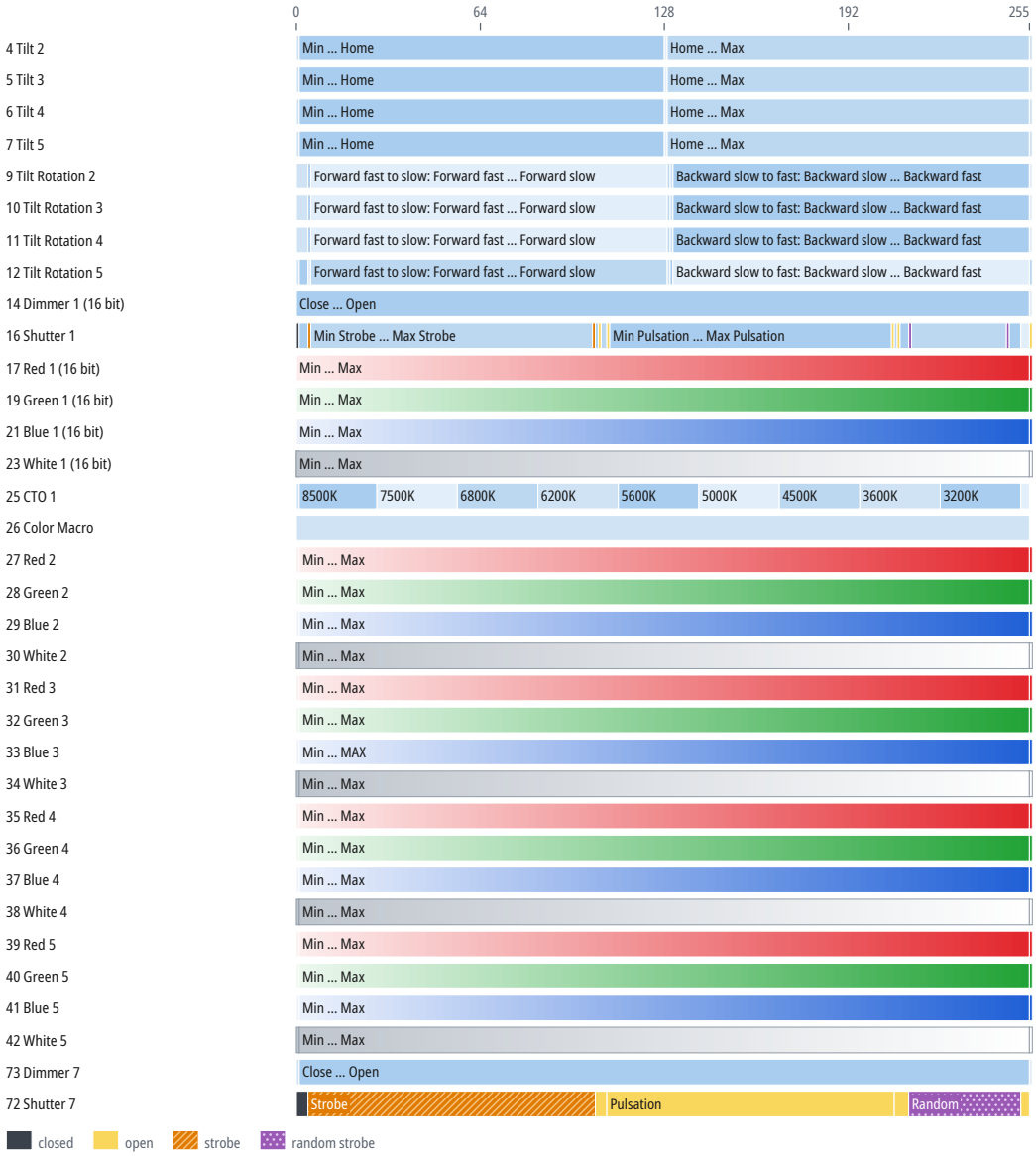
CH	Function	DMX	Description
64	Effects Fade		Same as CH 48 in the mode “50CH Basic” (p. 19)
65	Effects Adjust 1	0–255	
66	Function		Same as CH 24 in the mode “24CH Simple” (p. 13)

Mode 86CH Extended

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 14 Dimmer 1 above 0; CH 16 Shutter 1 at 104, 106–107 or 105, 209, 255 “Open” or 208, 210–212 or 252–254; CH 45 Dimmer 2 above 0; CH 46 Shutter 2 at 0 “Open”; CH 50 Dimmer 3 above 0; CH 55 Dimmer 4 above 0; CH 60 Dimmer 5 above 0; CH 65 Dimmer 6 above 0; CH 72 Shutter 7 at 104–107 or 208–212 or 252–255; CH 73 Dimmer 7 above 0; CH 79 FOREGROUND SHUTTER at 104–107 or 208–212 or 252–255. The GDTF file gives these values for a console's Highlight function: CH 14 Dimmer 1 0, CH 16 Shutter 1 255, CH 27 Red 2 255, CH 28 Green 2 255, CH 29 Blue 2 255, CH 31 Red 3 255, CH 32 Green 3 255, CH 33 Blue 3 255, CH 35 Red 4 255, CH 36 Green 4 255, CH 37 Blue 4 255, CH 39 Red 5 255, CH 40 Green 5 255, CH 41 Blue 5 255, CH 45 Dimmer 2 255, CH 47 Red 6 255, CH 48 Green 6 255, CH 49 Blue 6 255, CH 50 Dimmer 3 255, CH 51 Shutter 3 255, CH 52 Red 7 255, CH 53 Green 7 255, CH 54 Blue 7 255, CH 55 Dimmer 4 255, CH 56 Shutter 4 255, CH 57 Red 8 255, CH 58 Green 8 255, CH 59 Blue 8 255, CH 60 Dimmer 5 255, CH 61 Shutter 5 255, CH 62 Red 9 255, CH 63 Green 9 255, CH 64 Blue 9 255, CH 65 Dimmer 6 255, CH 66 Shutter 6 255, CH 67 Red 10 255, CH 68 Green 10 255, CH 69 Blue 10 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Tilt 1		Same as CH 1 in the mode “50CH Basic” (p. 15)
2	Tilt 1 Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt	0–255	
4	Tilt 2		Same as CH 4 in the mode “50CH Basic” (p. 15)
5	Tilt 3		Same as CH 5 in the mode “50CH Basic” (p. 15)
6	Tilt 4		Same as CH 6 in the mode “50CH Basic” (p. 15)
7	Tilt 5		Same as CH 7 in the mode “50CH Basic” (p. 15)
8	Tilt Rotation 1		Same as CH 8 in the mode “50CH Basic” (p. 15)
9	Tilt Rotation 2		Same as CH 9 in the mode “50CH Basic” (p. 16)
10	Tilt Rotation 3		Same as CH 10 in the mode “50CH Basic” (p. 16)
11	Tilt Rotation 4		Same as CH 11 in the mode “50CH Basic” (p. 16)
12	Tilt Rotation 5		Same as CH 12 in the mode “50CH Basic” (p. 16)
13	Position Effect		Same as CH 5 in the mode “24CH Simple” (p. 10)
14	Dimmer 1		Same as CH 6 in the mode “24CH Simple” (p. 10)
15	Dimmer 1 Fine	0–255	Fine adjustment of CH 14

CH	Function	DMX	Description
16	Shutter 1		Same as CH 8 in the mode “24CH Simple” (p. 10)
17	Red 1		Same as CH 17 in the mode “50CH Basic” (p. 16)
18	Red 1 Fine	0–255	Fine adjustment of CH 17
19	Green 1		Same as CH 19 in the mode “50CH Basic” (p. 16)
20	Green 1 Fine	0–255	Fine adjustment of CH 19
21	Blue 1		Same as CH 21 in the mode “50CH Basic” (p. 17)
22	Blue 1 Fine	0–255	Fine adjustment of CH 21
23	White 1		Same as CH 23 in the mode “50CH Basic” (p. 17)
24	White 1 Fine	0–255	Fine adjustment of CH 23
25	CTO 1		Same as CH 25 in the mode “50CH Basic” (p. 17)
26	Color Macro	0–255	
27	Red 2		Same as CH 19 in the mode “24CH Simple” (p. 12)
28	Green 2		Same as CH 20 in the mode “24CH Simple” (p. 12)
29	Blue 2		Same as CH 21 in the mode “24CH Simple” (p. 12)
30	White 2		Same as CH 41 in the mode “50CH Basic” (p. 18)
31	Red 3		Same as CH 38 in the mode “50CH Basic” (p. 18)
32	Green 3		Same as CH 39 in the mode “50CH Basic” (p. 18)
33	Blue 3		Same as CH 33 in the mode “66CH Standard” (p. 22)
34	White 3		Same as CH 34 in the mode “66CH Standard” (p. 22)
35	Red 4		Same as CH 35 in the mode “66CH Standard” (p. 22)
36	Green 4		Same as CH 36 in the mode “66CH Standard” (p. 22)
37	Blue 4		Same as CH 37 in the mode “66CH Standard” (p. 22)
38	White 4		Same as CH 38 in the mode “66CH Standard” (p. 22)
39	Red 5		Same as CH 39 in the mode “66CH Standard” (p. 22)
40	Green 5		Same as CH 40 in the mode “66CH Standard” (p. 22)
41	Blue 5		Same as CH 41 in the mode “66CH Standard” (p. 22)
42	White 5		Same as CH 42 in the mode “66CH Standard” (p. 23)
43	Effects 1		Same as CH 27 in the mode “50CH Basic” (p. 17)
44	Effects Speed 1	0–255	
45	Dimmer 2		Same as CH 17 in the mode “24CH Simple” (p. 11)
46	Shutter 2		Same as CH 18 in the mode “24CH Simple” (p. 12)
47	Red 6		Same as CH 47 in the mode “66CH Standard” (p. 23)
48	Green 6		Same as CH 48 in the mode “66CH Standard” (p. 23)
49	Blue 6		Same as CH 49 in the mode “66CH Standard” (p. 23)
50	Dimmer 3		Same as CH 37 in the mode “50CH Basic” (p. 17)
51	Shutter 3		When CH 46 is 0:
		0–255	Open
52	Red 7		Same as CH 54 in the mode “66CH Standard” (p. 23)
53	Green 7		Same as CH 55 in the mode “66CH Standard” (p. 23)
54	Blue 7		Same as CH 56 in the mode “66CH Standard” (p. 23)
55	Dimmer 4	0	Close
		1–254	Close … Open

CH	Function	DMX	Description
55	Dimmer 4 (continued)	255	Open
56	Shutter 4		When CH 46 is 0:
		0–255	Open
57	Red 8	0	Min
		1–254	Min ... Max
		255	Max
58	Green 8	0	Min
		1–254	Min ... Max
		255	Max
59	Blue 8	0	Min
		1–254	Min ... Max
		255	Max
60	Dimmer 5	0	Close
		1–254	Close ... Open
		255	Open
61	Shutter 5		When CH 46 is 0:
		0–255	Open
62	Red 9	0	Min
		1–254	Min ... Max
		255	Max
63	Green 9	0	Min
		1–254	Min ... Max
		255	Max
64	Blue 9	0	Min
		1–254	Min ... Max
		255	Max
65	Dimmer 6	0	Close
		1–254	Close ... Open
		255	Open
66	Shutter 6		When CH 46 is 0:
		0–255	Open
67	Red 10	0	Min
		1–254	Min ... Max
		255	Max
68	Green 10	0	Min
		1–254	Min ... Max
		255	Max
69	Blue 10	0	Min
		1–254	Min ... Max
		255	Max
70	Effects 2		Same as CH 22 in the mode “24CH Simple” (p. 12)
71	Effects 2 Speed		Same as CH 23 in the mode “24CH Simple” (p. 13)

CH	Function	DMX	Description
72	Shutter 7	0–3	Closed
		4–103	Strobe (1–25 Hz)
		104–107	Open 3
		108–207	Pulsation (1–25 Hz)
		208–212	Open 4
		213–251	Random (2.5–20 Hz)
		252–255	Open 5
73	Dimmer 7	0	Close
		1–254	Close ... Open
		255	Open
74	Red 11	0	Min
		1–254	Min ... Max
		255	Max
75	Green 11	0	Min
		1–254	Min ... Max
		255	Max
76	Blue 11	0	Min
		1–254	Min ... Max
		255	Max
77	White 6		Same as CH 57 in the mode “66CH Standard” (p. 23)
78	CTO 2	0–255	
79	FOREGROUND SHUTTER		Same as CH 43 in the mode “50CH Basic” (p. 18)
80	FOREGROUND DIMMER		Same as CH 44 in the mode “50CH Basic” (p. 18)
81	Effect Mode		Same as CH 45 in the mode “50CH Basic” (p. 18)
82	Effects 3		Same as CH 46 in the mode “50CH Basic” (p. 18)
83	Effects Speed 2		Same as CH 47 in the mode “50CH Basic” (p. 19)
84	Effects Fade		Same as CH 48 in the mode “50CH Basic” (p. 19)
85	Effects Adjust 1	0–255	
86	Function		Same as CH 24 in the mode “24CH Simple” (p. 13)

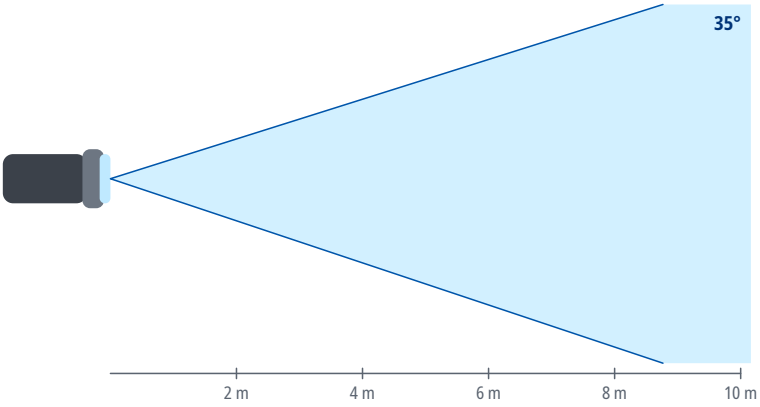
10 Technical specifications

Parameter	Value
Tilt	270°
Power connectors	powerCON TRUE1 IN
Weight	19.5 kg
Operating temperature	-10 to 60 °C

Speeds and ranges

Parameter	Value
Color temperature range	2800–8500 K
Strobe frequency	1–25 Hz

Spot diameter



Distance	Ø 35°
2 m	1.3 m
4 m	2.5 m
6 m	3.8 m
8 m	5 m
10 m	6.3 m
15 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.