DMX REFERENCE

Lotus LT-990B

Lotus Light



Manufacturer	Lotus Light
GDTF file	Lotus_Light_Lotus_LT-990B_167151.gdtf
GDTF revision	Lotus LT-990B · 2026-10-30
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1 About this manual

This document describes the Lotus LT-990B by Lotus Light. It was compiled from the GDTF file Lotus_Light_Lotus_LT-990B_167151.gdtf from the GDTF-Share library.

File revision: “Lotus LT-990B”.

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	5.6 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
28CH	28	18	1, 29, 57, 85, ...
46CH	46	11	1, 47, 93, 139, ...
228CH	228	2	1, 229

No light? Check these channels

- 28CH: CH 9 Dimmer 1 above 0; CH 11 Shutter 1 at 0–5 or 251–255 “Open”; CH 16 Shutter 2 at 0–5 or 251–255 “Open”; CH 19 Dimmer 2 above 0; CH 21 Shutter 3 at 0–5 or 251–255 “Open”; CH 26 Shutter 4 at 0–5 or 251–255 “Open”
- 46CH: CH 9 Dimmer 1 above 0; CH 11 Dimmer 2 above 0; CH 13 Shutter 1 at 0–5 or 251–255 “Open”; CH 18 Dimmer 3 above 0; CH 19 Shutter 2 at 0–5 or 251–255 “Open”; CH 30 Dimmer 4 above 0; CH 32 Shutter 3 at 0–5 or 251–255 “Open”; CH 37 Dimmer 5 above 0; CH 38 Shutter 4 at 0–5 or 251–255 “Open”
- 228CH: CH 9 Dimmer 1 above 0; CH 11 Dimmer 2 above 0; CH 13 Shutter 1 at 0–5 or 251–255 “Open”; CH 14 Dimmer 3 above 0; CH 15 Shutter 2 at 0–5 or 251–255 “Open”; CH 16 Dimmer 4 above 0; CH 18 Shutter 3 at 0–5 or 251–255 “Open”; CH 19 Dimmer 5 above 0; CH 20 Shutter 4 at 0–5 or 251–255 “Open”



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

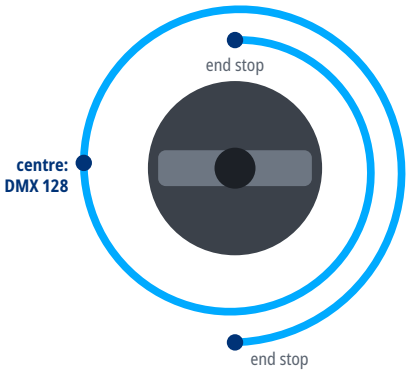
“Lotus Lightt Lotus LT980”

“1.Technical Specifications Parameter Light Source •Side A(Wash Effect): 9 x 90W RGBL (Main LED) 84 x 1W CW&WW (Aura LED,3 LEDs per group,Total 28 independent segments) •Side B(Strobe Effect): 576 x 2W RGBWW (Main LED,36 LEDs per group,Total 16 independent segments) 288 x 1W CW (Aura LED,6 LEDs per group,Total 48 independent segments) Optical • Beam Angle: • Side A: 4° – 7° (Narrow) / 30° – 45° (Wide) • Side B: 66° – 110° (RGBWW) / 58° – 87° (CW Strobe) • Flicker-Free: 1kHz – 25kHz adjustable PWM (Ideal for high-speed cameras) Electrical Data • Input Voltage: AC 100V–240V, 50/60Hz (Auto-ranging) • Max. Power Consumption: 1586W @ 230V / 1634W @ 110V • Input Current: 7.14A @ 230V / 15.0A @ 110V • Power Factor (PF): 0.98 • Protection: F20AL250V Fuse Control & Programming • Control Protocols: DMX512, RDM, Art-Net, sACN, NFC • DMX Channels: 28CH / 46CH / 228CH (Multi-mode) • NFC Technology: Built-in NFC for offline configuration via mobile app Physical & Construction • IP Rating: IP65 • Dimensions: 499 x 280 x 606 mm • Net Weight: 32.75 kg • Gross Weight: 34.00 kg • Operating Temp: -20°C to 45°C”

Range of movement

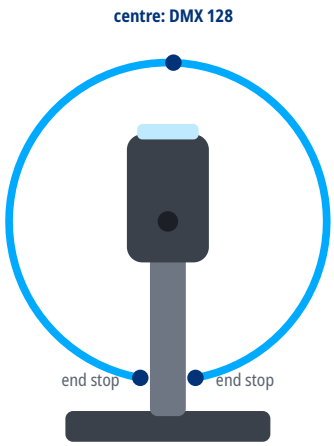
Pan 540°

top view



Tilt 450°

side view



5 Installation

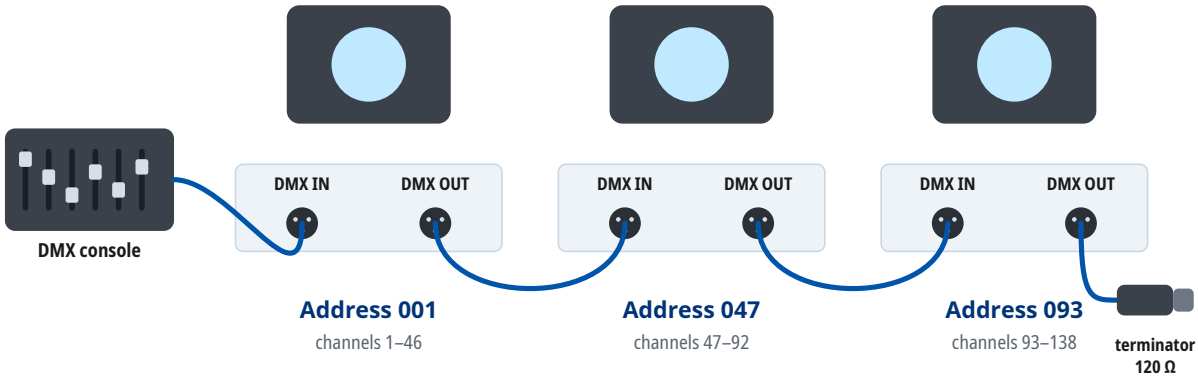
⚠ **WARNING**

- 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: 5.6 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 46CH: every unit occupies 46 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

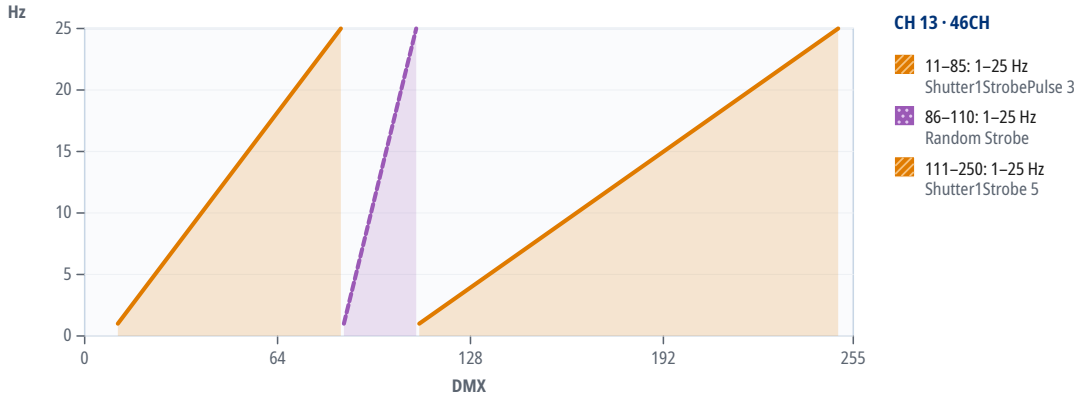
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “228CH”: 228.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “228CH”, you can use, for example, the start addresses 1, 229.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

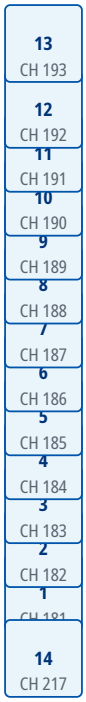
Functions in each DMX mode

	28CH 28 channels	46CH 46 channels	228CH 228 channels
Pan / Tilt	1, 3, 5	1, 3, 5	1, 3, 5
Dimmer	9, 19	5 channels (9–37)	5 channels (9–19)
Shutter / strobe	4× (11–26)	4 channels (13–38)	4 channels (13–20)
Color mixing	11 channels (12–27)	11 channels (14–39)	25–228
Color temperature		22	21
Zoom	8	8	8
Effects / macros		24–29, 40–45	23
Pixel control	✓	✓	9 + 28 + 16 + 48 cells

Strobe rate



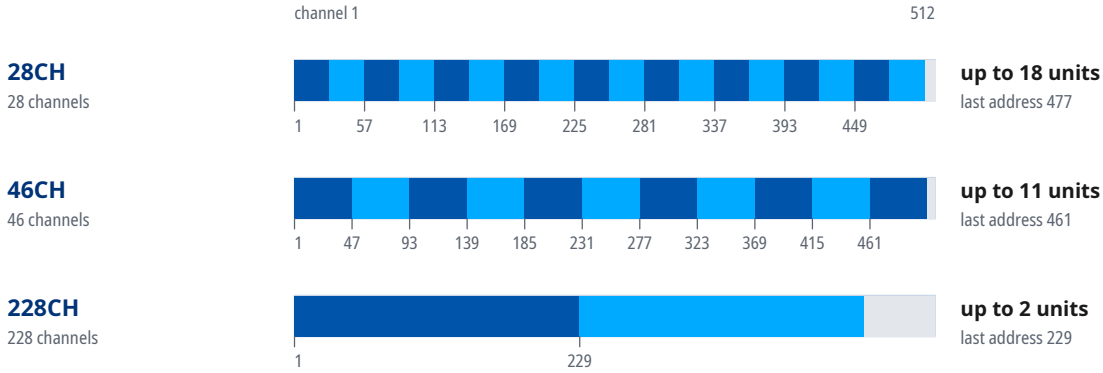
Cells (pixels)



14 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “46CH”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “228CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U3 · 229	11	U6 · 1	16	U8 · 229
2	229	7	U4 · 1	12	U6 · 229	17	U9 · 1
3	U2 · 1	8	U4 · 229	13	U7 · 1	18	U9 · 229
4	U2 · 229	9	U5 · 1	14	U7 · 229	19	U10 · 1
5	U3 · 1	10	U5 · 229	15	U8 · 1	20	U10 · 229

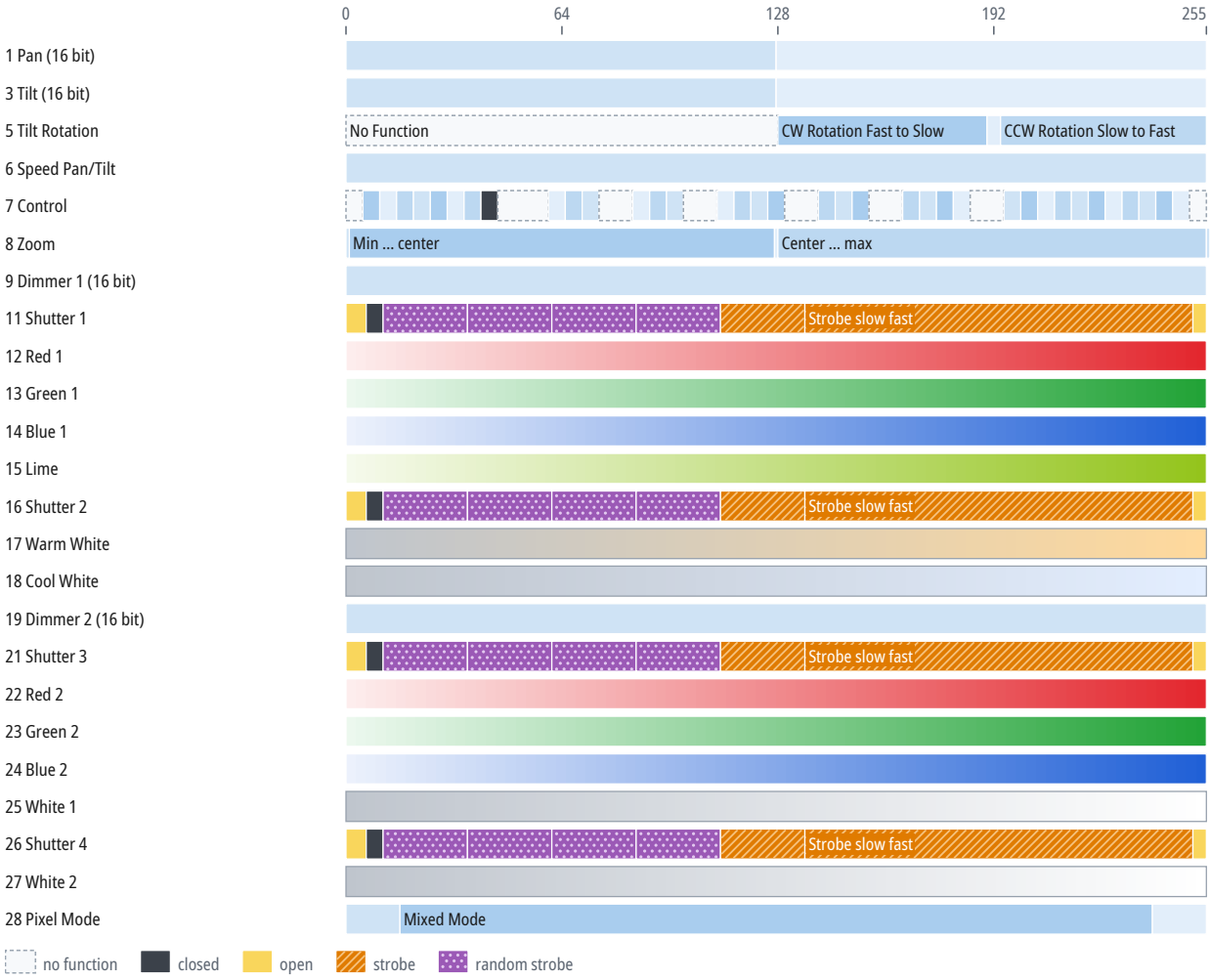
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 28CH

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 0–5 or 251–255 “Open”; CH 16 Shutter 2 at 0–5 or 251–255 “Open”; CH 19 Dimmer 2 above 0; CH 21 Shutter 3 at 0–5 or 251–255 “Open”; CH 26 Shutter 4 at 0–5 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 9 Dimmer 1 255, CH 12 Red 1 255, CH 13 Green 1 255, CH 14 Blue 1 255, CH 17 Warm White 255, CH 18 Cool White 255, CH 19 Dimmer 2 255, CH 22 Red 2 255, CH 23 Green 2 255, CH 24 Blue 2 255, CH 27 White 2 255.

Channel functions at a glance



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

CH	Function	DMX	Description
5	Tilt Rotation	0–127	No Function
		128–189	CW Rotation Fast to Slow
		190–193	Stop
		194–255	CCW Rotation Slow to Fast
6	Speed Pan/Tilt	0–255	
7	Control	0–4	No Function
		5–9	Display Always On
		10–14	Display on for 10s
		15–19	Display on for 30s
		20–24	Display on for 1min
		25–29	Screen Lock Off
		30–34	Screen Lock On
		35–39	Signal Hold Keep DMX
		40–44	Blackout
		45–59	No Function
		60–64	Dimming Standard
		65–69	Dimming Fast
		70–74	Dimming Slow
		75–84	No Function
		85–89	Linear Curve
		90–94	Square Curve
		95–99	S Curve
		100–109	No Function
		110–114	4000Hz PWM
		115–119	8000Hz
		120–124	16000Hz
		125–129	24000Hz
		130–139	No Function
		140–144	Fan Auto
		145–149	Fan Quiet Silent Mode
		150–154	Fan High Speed
		155–164	No Function
		165–169	Red Shift Off Tungsten Emulation
		170–174	Red Shift On
		175–179	Pixel Invert Off
		180–184	Pixel Invert On
		185–194	No Function
		195–199	Pan Invert Off
		200–204	Pan Invert On
		205–209	Pan Position Correction Off
		210–214	Pan Position Correction On
		215–219	Tilt Invert Off

CH	Function	DMX	Description
7	Control (continued)	220–224	Tilt Invert On
		225–229	Tilt Position Correction Off
		230–234	Tilt Position Correction On
		235–239	Pan Tilt Reset
		240–244	Focus Reset
		245–249	All Reset
		250–255	No Function
8	Zoom	0	Min
		1–126	Min ... center
		127	Center
		128–254	Center ... max
		255	Max
9	Dimmer 1	0–255	
10	Dimmer 1 Fine	0–255	Fine adjustment of CH 9
11	Shutter 1	0–5	Open
		6–10	Closed
		11–35	Pulse Random
		36–60	Ramp up Random
		61–85	Ramp down Random
		86–110	Random Strobe (1–25 Hz)
		111–135	Strobe Break
		136–250	Strobe slow fast
		251–255	Open
12	Red 1	0–255	
13	Green 1	0–255	
14	Blue 1	0–255	
15	Lime	0–255	
16	Shutter 2	0–5	Open
		6–10	Closed
		11–35	Pulse Random
		36–60	Ramp up Random
		61–85	Ramp down Random
		86–110	Random Strobe (1–25 Hz)
		111–135	Strobe Break
		136–250	Strobe slow fast
		251–255	Open
17	Warm White	0–255	
18	Cool White	0–255	
19	Dimmer 2	0–255	
20	Dimmer 2 Fine	0–255	Fine adjustment of CH 19
21	Shutter 3	0–5	Open
		6–10	Closed

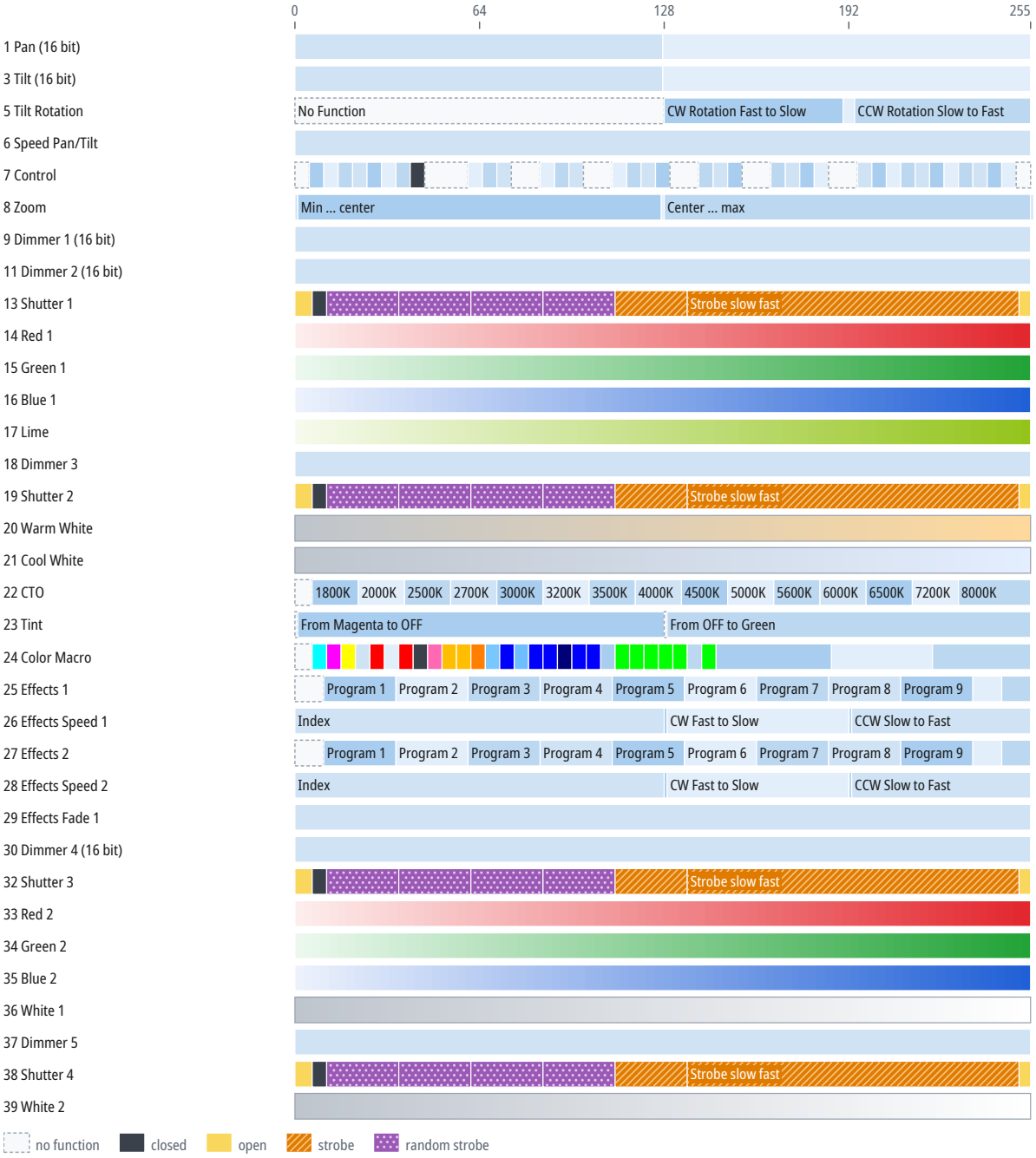
CH	Function	DMX	Description
21	Shutter 3 (continued)	11–35	Pulse Random
		36–60	Ramp up Random
		61–85	Ramp down Random
		86–110	Random Strobe (1–25 Hz)
		111–135	Strobe Break
		136–250	Strobe slow fast
		251–255	Open
22	Red 2	0–255	
23	Green 2	0–255	
24	Blue 2	0–255	
25	White 1	0–255	
26	Shutter 4	0–5	Open
		6–10	Closed
		11–35	Pulse Random
		36–60	Ramp up Random
		61–85	Ramp down Random
		86–110	Random Strobe (1–25 Hz)
		111–135	Strobe Break
		136–250	Strobe slow fast
		251–255	Open
27	White 2	0–255	
28	Pixel Mode	0–15	DMX Control
		16–238	Mixed Mode
		239–255	Network Control

Mode 46CH

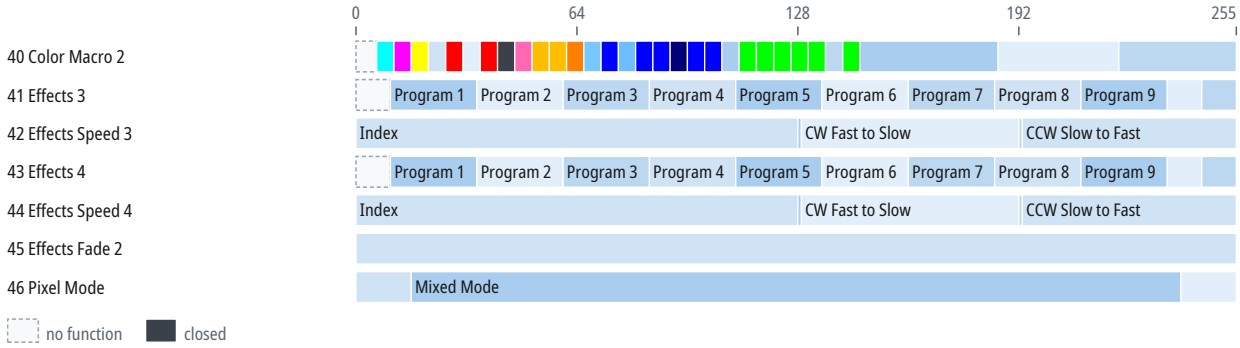
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 9 Dimmer 1 above 0; CH 11 Dimmer 2 above 0; CH 13 Shutter 1 at 0–5 or 251–255 “Open”; CH 18 Dimmer 3 above 0; CH 19 Shutter 2 at 0–5 or 251–255 “Open”; CH 30 Dimmer 4 above 0; CH 32 Shutter 3 at 0–5 or 251–255 “Open”; CH 37 Dimmer 5 above 0; CH 38 Shutter 4 at 0–5 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 9 Dimmer 1 0, CH 11 Dimmer 2 255, CH 14 Red 1 255, CH 15 Green 1 255, CH 16 Blue 1 255, CH 18 Dimmer 3 255, CH 20 Warm White 255, CH 21 Cool White 255, CH 30 Dimmer 4 255, CH 33 Red 2 255, CH 34 Green 2 255, CH 35 Blue 2 255, CH 37 Dimmer 5 255, CH 39 White 2 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “28CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “28CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Tilt Rotation		Same as CH 5 in the mode “28CH” (p. 11)
6	Speed Pan/Tilt	0–255	
7	Control		Same as CH 7 in the mode “28CH” (p. 11)
8	Zoom		Same as CH 8 in the mode “28CH” (p. 12)
9	Dimmer 1	0–255	
10	Dimmer 1 Fine	0–255	Fine adjustment of CH 9
11	Dimmer 2	0–255	
12	Dimmer 2 Fine	0–255	Fine adjustment of CH 11
13	Shutter 1		Same as CH 11 in the mode “28CH” (p. 12)
14	Red 1	0–255	
15	Green 1	0–255	
16	Blue 1	0–255	
17	Lime	0–255	
18	Dimmer 3	0–255	
19	Shutter 2		Same as CH 16 in the mode “28CH” (p. 12)
20	Warm White	0–255	
21	Cool White	0–255	
22	CTO	0–5	No function
		6–21	1800K
		22–37	2000K
		38–53	2500K
		54–69	2700K
		70–85	3000K
		86–101	3200K
		102–117	3500K
		118–133	4000K
		134–149	4500K
		150–165	5000K

CH	Function	DMX	Description
22	CTO (continued)	166–181	5600K
		182–197	6000K
		198–213	6500K
		214–229	7200K
		230–255	8000K
23	Tint	0	OFF
		1–127	From Magenta to OFF
		128	OFF
		129–255	From OFF to Green
24	Color Macro	0–5	No function
		6–10	Cyan
		11–15	Magenta
		16–20	Yellow
		21–25	CTO 3200K
		26–30	Flame Red
		31–35	Rose Red
		36–40	Sunset Red
		41–45	Dark Pink
		46–50	Bright Pink
		51–55	Golden Amber
		56–60	Bastard Amber
		61–65	Full CT Orange
		66–70	Sky Blue
		71–75	Steel Blue
		76–80	Light Blue
		81–85	Medium Blue
		86–90	Summer Blue
		91–95	Pale Navy Blue
		96–100	Lagoon Blue
		101–105	Lighter Blue
		106–110	Lime Green
		111–115	Moss Green
		116–120	Forest Green
		121–125	Pale Green
		126–130	Sea Green
		131–135	Spring Green
		136–140	Aquamarine
		141–145	Emerald Green
		146–185	Rainbow Effect Smooth Fade
		186–220	Color Macro Snap Jump
		221–255	Color Macro Fade Smooth Fade

CH	Function	DMX	Description
25	Effects 1	0–9	No function
		10–34	Program 1
		35–59	Program 2
		60–84	Program 3
		85–109	Program 4
		110–134	Program 5
		135–159	Program 6
		160–184	Program 7
		185–209	Program 8
		210–234	Program 9
		235–244	Program 10
		245–255	Program 1-10 Cycle
26	Effects Speed 1	0–127	Index
		128	Stop
		129–191	CW Fast to Slow
		192	Stop
		193–255	CCW Slow to Fast
27	Effects 2	0–9	No function
		10–34	Program 1
		35–59	Program 2
		60–84	Program 3
		85–109	Program 4
		110–134	Program 5
		135–159	Program 6
		160–184	Program 7
		185–209	Program 8
		210–234	Program 9
		235–244	Program 10
		245–255	Program 1-10 Cycle
28	Effects Speed 2	0–127	Index
		128	Stop
		129–191	CW Fast to Slow
		192	Stop
		193–255	CCW Slow to Fast
29	Effects Fade 1	0–255	
30	Dimmer 4	0–255	
31	Dimmer 4 Fine	0–255	Fine adjustment of CH 30
32	Shutter 3		Same as CH 21 in the mode “28CH” (p. 12)
33	Red 2	0–255	
34	Green 2	0–255	
35	Blue 2	0–255	

CH	Function	DMX	Description
36	White 1	0–255	
37	Dimmer 5	0–255	
38	Shutter 4		Same as CH 26 in the mode “28CH” (p. 13)
39	White 2	0–255	
40	Color Macro 2	0–5	No function
		6–10	Cyan
		11–15	Magenta
		16–20	Yellow
		21–25	CTO 3200K
		26–30	Flame Red
		31–35	Rose Red
		36–40	Sunset Red
		41–45	Dark Pink
		46–50	Bright Pink
		51–55	Golden Amber
		56–60	Bastard Amber
		61–65	Full CT Orange
		66–70	Sky Blue
		71–75	Steel Blue
		76–80	Light Blue
		81–85	Medium Blue
		86–90	Summer Blue
		91–95	Pale Navy Blue
		96–100	Lagoon Blue
		101–105	Lighter Blue
		106–110	Lime Green
		111–115	Moss Green
		116–120	Forest Green
		121–125	Pale Green
		126–130	Sea Green
		131–135	Spring Green
		136–140	Aquamarine
		141–145	Emerald Green
		146–185	Rainbow Effect Smooth Fade
		186–220	Color Macro Snap Jump
		221–255	Color Macro Fade Smooth Fade
41	Effects 3	0–9	No function
		10–34	Program 1
		35–59	Program 2
		60–84	Program 3
		85–109	Program 4

CH	Function	DMX	Description
41	Effects 3 (continued)	110–134	Program 5
		135–159	Program 6
		160–184	Program 7
		185–209	Program 8
		210–234	Program 9
		235–244	Program 10
		245–255	Program 1-10 Cycle
42	Effects Speed 3	0–127	Index
		128	Stop
		129–191	CW Fast to Slow
		192	Stop
		193–255	CCW Slow to Fast
43	Effects 4	0–9	No function
		10–34	Program 1
		35–59	Program 2
		60–84	Program 3
		85–109	Program 4
		110–134	Program 5
		135–159	Program 6
		160–184	Program 7
		185–209	Program 8
		210–234	Program 9
		235–244	Program 10
		245–255	Program 1-10 Cycle
44	Effects Speed 4	0–127	Index
		128	Stop
		129–191	CW Fast to Slow
		192	Stop
		193–255	CCW Slow to Fast
45	Effects Fade 2	0–255	
46	Pixel Mode		Same as CH 28 in the mode “28CH” (p. 13)

Mode 228CH

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 Dimmer 2 above 0; CH 13 Shutter 1 at 0–5 or 251–255 “Open”; CH 14 Dimmer 3 above 0; CH 15 Shutter 2 at 0–5 or 251–255 “Open”; CH 16 Dimmer 4 above 0; CH 18 Shutter 3 at 0–5 or 251–255 “Open”; CH 19 Dimmer 5 above 0; CH 20 Shutter 4 at 0–5 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 9 Dimmer 1 0, CH 11 Dimmer 2 255, CH 14 Dimmer 3 255, CH 16 Dimmer 4 255, CH 19 Dimmer 5 255, CH 25 Red 254 (the same in each of the 9 cells), CH 26 Green 254 (the same in each of the 9 cells), CH 27 Blue 254 (the same in each of the 9 cells), CH 61 Warm White 254 (the same in each of the 28 cells), CH 62 Cool White 254 (the same in each of the 28 cells), CH 117 Red 255 (the same in each of the 16 cells), CH 118 Green 255 (the same in each of the 16 cells), CH 119 Blue 255 (the same in each of the 16 cells), CH 181 White 255 (the same in each of the 48 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “28CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “28CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Tilt Rotation		Same as CH 5 in the mode “28CH” (p. 11)
6	Speed Pan/Tilt	0–255	
7	Control		Same as CH 7 in the mode “28CH” (p. 11)
8	Zoom		Same as CH 8 in the mode “28CH” (p. 12)
9	Dimmer 1	0–255	
10	Dimmer 1 Fine	0–255	Fine adjustment of CH 9

CH	Function	DMX	Description
11	Dimmer 2	0–255	
12	Dimmer 2 Fine	0–255	Fine adjustment of CH 11
13	Shutter 1		Same as CH 11 in the mode “28CH” (p. 12)
14	Dimmer 3	0–255	
15	Shutter 2		Same as CH 16 in the mode “28CH” (p. 12)
16	Dimmer 4	0–255	
17	Dimmer 4 Fine	0–255	Fine adjustment of CH 16
18	Shutter 3		Same as CH 21 in the mode “28CH” (p. 12)
19	Dimmer 5	0–255	
20	Shutter 4		Same as CH 26 in the mode “28CH” (p. 13)
21	CTO		Same as CH 22 in the mode “46CH” (p. 15)
22	Tint		Same as CH 23 in the mode “46CH” (p. 16)
23	Color Macro		Same as CH 24 in the mode “46CH” (p. 16)
24	Pixel Mode		Same as CH 28 in the mode “28CH” (p. 13)
25	Red 1	0–255	
26	Green 1	0–255	
27	Blue 1	0–255	
28	Lime 1	0–255	
61	Warm White 1	0–255	
62	Cool White 1	0–255	
117	Red 10	0–255	
118	Green 10	0–255	
119	Blue 10	0–255	
120	White 1	0–255	
181	White 17	0–255	

CH 25–60: 9 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 25–28); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Lime	Cell	Red	Green	Blue	Lime
1	25	26	27	28	2	29	30	31	32
3	33	34	35	36	4	37	38	39	40
5	41	42	43	44	6	45	46	47	48
7	49	50	51	52	8	53	54	55	56
9	57	58	59	60					

CH 61–116: 28 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 61–62); the table below gives each cell's channel numbers.

Cell	Warm White	Cool White	Cell	Warm White	Cool White	Cell	Warm White	Cool White	Cell	Warm White	Cool White
1	61	62	2	63	64	3	65	66	4	67	68
5	69	70	6	71	72	7	73	74	8	75	76
9	77	78	10	79	80	11	81	82	12	83	84
13	85	86	14	87	88	15	89	90	16	91	92
17	93	94	18	95	96	19	97	98	20	99	100
21	101	102	22	103	104	23	105	106	24	107	108
25	109	110	26	111	112	27	113	114	28	115	116

CH 117–180: 16 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 117–120); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	117	118	119	120	2	121	122	123	124
3	125	126	127	128	4	129	130	131	132
5	133	134	135	136	6	137	138	139	140
7	141	142	143	144	8	145	146	147	148
9	149	150	151	152	10	153	154	155	156
11	157	158	159	160	12	161	162	163	164
13	165	166	167	168	14	169	170	171	172
15	173	174	175	176	16	177	178	179	180

CH 181–228: 48 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 181); the table below gives each cell's channel numbers.

Cell	White	Cell	White	Cell	White	Cell	White	Cell	White	Cell	White
1	181	2	182	3	183	4	184	5	185	6	186
7	187	8	188	9	189	10	190	11	191	12	192
13	193	14	194	15	195	16	196	17	197	18	198
19	199	20	200	21	201	22	202	23	203	24	204
25	205	26	206	27	207	28	208	29	209	30	210
31	211	32	212	33	213	34	214	35	215	36	216
37	217	38	218	39	219	40	220	41	221	42	222
43	223	44	224	45	225	46	226	47	227	48	228

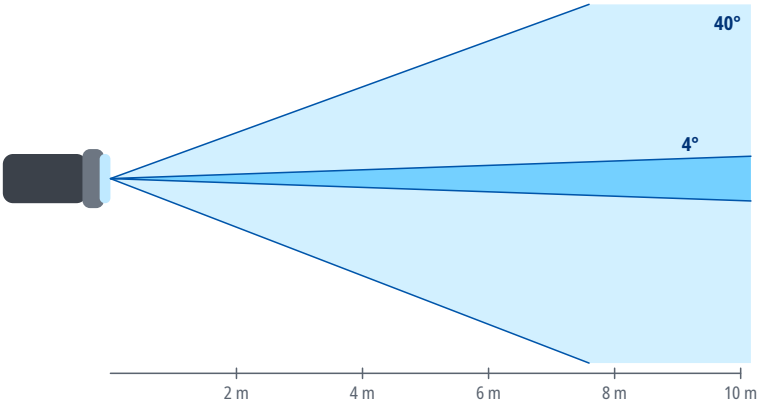
10 Technical specifications

Parameter	Value
Zoom	4–40°
Pan	540°
Tilt	450°
Weight	5.6 kg
Ingress protection	IP65
Meaning of the IP code (IEC 60529)	Dust-tight; protected against water jets
Operating temperature	-20 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	1800–8000 K
Strobe frequency	1–25 Hz

Spot diameter



Distance	Ø 4°	Ø 40°
2 m	0.14 m	1.5 m
4 m	0.28 m	2.9 m
6 m	0.42 m	4.4 m
8 m	0.56 m	5.8 m
10 m	0.7 m	7.3 m
15 m	1 m	10.9 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.