DMX REFERENCE

Opus X Profile

Opus X Profile (CLOXP)

Cameo



Manufacturer	Cameo
GDTF file	Cameo_Opus_X_Profile_32350.gdtf
GDTF revision	Firmware_1.0.1_GDTF_V02c Control Channel Default · 2023-01-02
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1 About this manual

This document describes the Opus X Profile (CLOXP) by Cameo. It was compiled from the GDTF file Cameo_Opus_X_Profile_32350.gdtf from the GDTF-Share library.

File revision: “Firmware_1.0.1_GDTF_V02c Control Channel Default”.

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 Cameo; 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	39 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Standard	37	13	1, 38, 75, 112, ...
Extended	55	9	1, 56, 111, 166, ...

No light? Check these channels

- Standard: CH 5 Dimmer above 0; CH 7 Shutter at 0–5 or 251–255 “Open”
- Extended: CH 5 Dimmer above 0; CH 7 Shutter at 0–5 or 251–255 “Open”


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

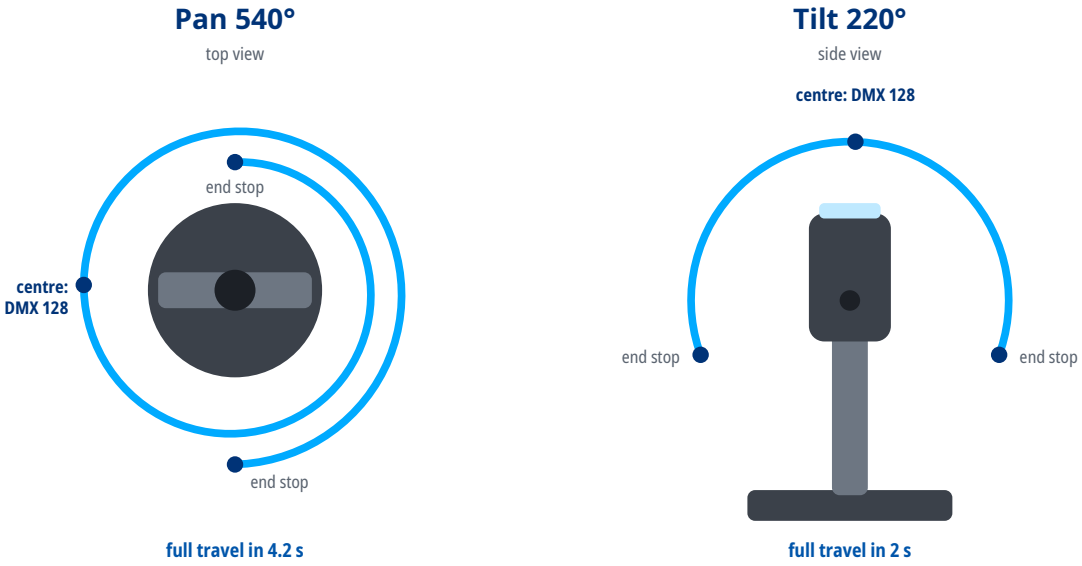
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

Description in the GDTF file

“High-Power Profile Moving Head with 33.000 lm / 72.000 Lux (@ 5 m)”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

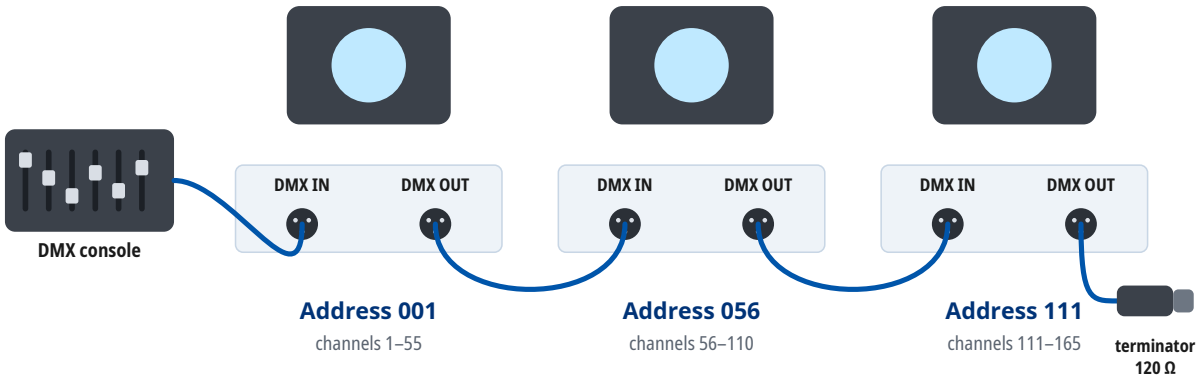
⚠ WARNING

- 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: 39 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 Extended: every unit occupies 55 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 “Extended”: 55.
- 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 “Extended”, you can use, for example, the start addresses 1, 56, 111, 166.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

8 Functions at a glance

Functions in each DMX mode

	Standard 37 channels	Extended 55 channels
Pan / Tilt	1, 3	1, 3
Dimmer	5	5
Shutter / strobe	7	7
Color mixing	8–10	10, 12, 14
Color temperature	11	16
Color wheel	12	18
Gobo wheel	13, 16	20, 23
Gobo rotation	14	21
Prism	20, 21	29, 30
Frost	22, 23	31, 32
Zoom	17	24
Focus	18	26
Iris	19	28
Animation wheel	24, 25	33, 34

Gobo wheel 1

1 
Color open
DMX 0–13

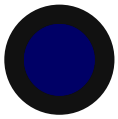
2 
Deep red
DMX 14–40

3 
Medium Blue
DMX 41–67

4 
Deep Green
DMX 68–94

5 
Lavender
DMX 95–121

6 
Amber
DMX 122–148

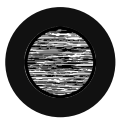
7 
Congo Blue
DMX 149–175

Gobo wheel 2

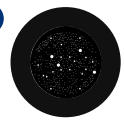
1 
Select: Open
DMX 0–9

2 
Gobo 1
DMX 10–27

3 
Gobo 2
DMX 28–45

4 
Gobo 3
DMX 46–63

5 
Gobo 4
DMX 64–81

6 
Gobo 5
DMX 82–99

7 
Gobo 6
DMX 100–117

Gobo wheel 3

1

Fix Gobos: Open
DMX 0–7

2

Gobo 1
DMX 8–22

3

Gobo 2
DMX 23–37

4

Gobo 3
DMX 38–52

5

Gobo 4
DMX 53–67

6

Gobo 5
DMX 68–82

7

Gobo 6
DMX 83–97

8

Gobo 7
DMX 98–112

Animation wheel

1

Open

2

Animation Wheel

Prism

1

Open
DMX 0–5

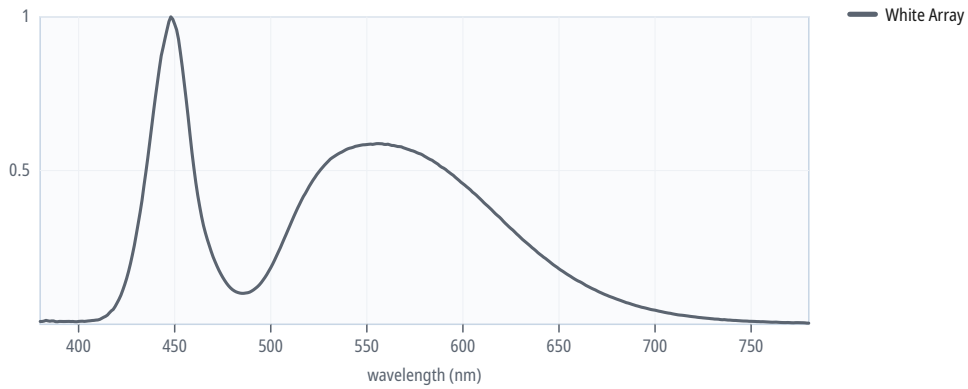
2

6 facets
Prism 1 (linear)
DMX 6–127

3

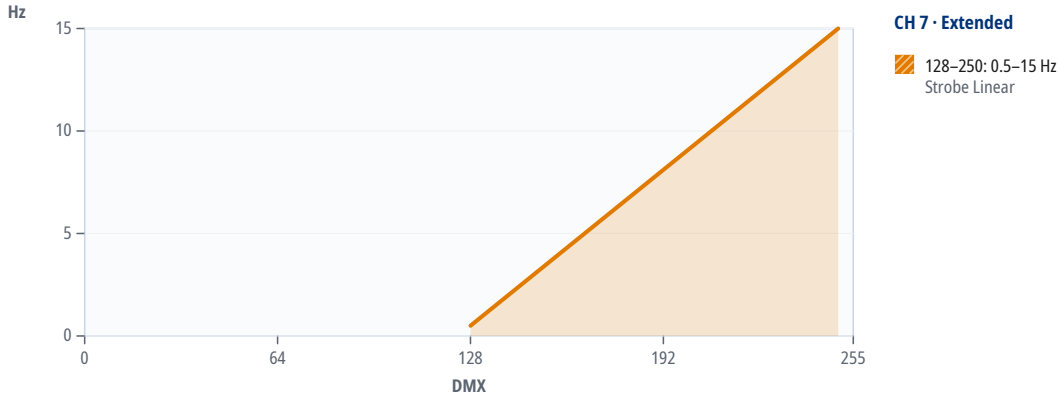
6 facets
Prism 2 (square)
DMX 128–255

Spectra of the light sources



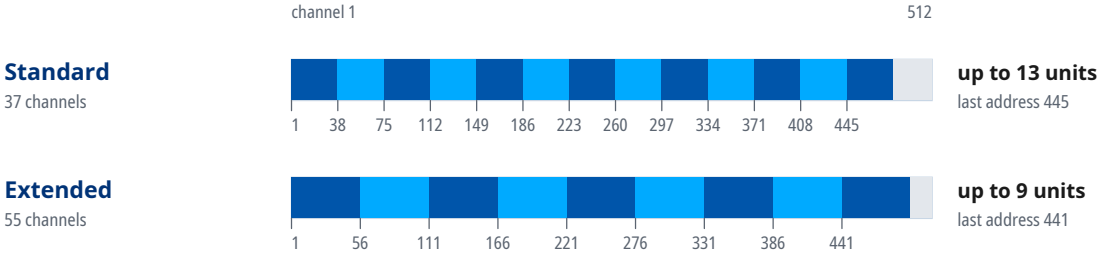
Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	276	11	U2 · 56	16	U2 · 331
2	56	7	331	12	U2 · 111	17	U2 · 386
3	111	8	386	13	U2 · 166	18	U2 · 441
4	166	9	441	14	U2 · 221	19	U3 · 1
5	221	10	U2 · 1	15	U2 · 276	20	U3 · 56

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 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 5 Dimmer above 0; CH 7 Shutter at 0–5 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 5 Dimmer 255, CH 8 Cyan 0, CH 9 Magenta 0, CH 10 Yellow 0, CH 11 CTO 0, CH 12 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan
		128	Home
		128–255	Pan

CH	Function	DMX	Description
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt
		128	Home
		128–255	Tilt
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Dimmer	0–255	Closed ... Open
		255	Open
6	Dimmer Fine	0–255	Fine adjustment of CH 5
7	Shutter	0–5	Strobe: Open
		6–10	Strobe: Closed
		11	Ramp up down: Slow
		12–21	Ramp up down: Slow ... Fast
		22	Ramp up down: Fast
		23	Ramp up/down random: Slow
		24–32	Ramp up/down random: Slow ... Fast
		33	Ramp up/down random: Fast
		34	Ramp up: Slow
		35–44	Ramp up: Slow ... Fast
		45	Ramp up: Fast
		46	Ramp up random: Slow
		47–55	Ramp up random: Slow ... Fast
		56	Ramp up random: Fast
		57	Ramp down: Slow
		58–67	Ramp down: Slow ... Fast
		68	Ramp down: Fast
		69	Ramp down random: Slow
		70–78	Ramp down random: Slow ... Fast
		79	Ramp down random: Fast
		80	Random strobe effect: Slow
		81–101	Random strobe effect: Slow ... Fast
		102	Random strobe effect: Fast
		103	5s short burst with break
		104–126	5s short burst with break ... 1s short burst with break
		127	1s short burst with break
		128	Slow 1Hz
		129–249	1-20Hz (0.31–19.9 Hz)
		250	Fast 20Hz
		251–255	Strobe open: Open
8	Cyan	0	Saturated
		1–254	Saturated ... Open
		255	Open
9	Magenta	0	Saturated

CH	Function	DMX	Description
9	Magenta (continued)	1–254	Saturated … Open
		255	Open
10	Yellow	0	Saturated
		1–254	Saturated … openO
		255	openO
11	CTO	0	KW (6500K)
		1–59	KW - 5600K (6485–5598 K)
		60	5600K
		61–215	5600K - 3200K (5567–3212 K)
		216	3200K
		217–254	3200K - WW (3181–2615 K)
		255	WW (2600K)
12	Colors	0–13	Color open
		14–40	Deep red
		41–67	Medium Blue
		68–94	Deep Green
		95–121	Lavender
		122–148	Amber
		149–175	Congo Blue
		176–191	Color open
		192	Spin: fast forward (800–400 °/s)
		193–222	Spin: fast forward … slow forward
		223	Spin: slow forward (399–1 °/s)
		224	Spin: Stop
		225	Spin: slow backwards (1–399 °/s)
		226–254	Spin: slow backwards … fast backwards
		255	Spin: fast backwards (400–800 °/s)
13	Gobo	0–9	Select: Open
		10–27	Gobo 1
		28–45	Gobo 2
		46–63	Gobo 3
		64–81	Gobo 4
		82–99	Gobo 5
		100–117	Gobo 6
		118–128	Select: Open
		129	Gobo 1 slow
		130–137	Gobo 1 slow … Gobo 1 fast
		138	Gobo 1 fast
		139	Gobo 2 slow
		140–147	Gobo 2 slow … Gobo 2 fast
		148	Gobo 2 fast
		149	Gobo 3 slow

CH	Function	DMX	Description
13	Gobo (continued)	150–157	Gobo 3 slow … Gobo 3 fast
		158	Gobo 3 fast
		159	Gobo 4 slow
		160–167	Gobo 4 slow … Gobo 4 fast
		168	Gobo 4 fast
		169	Gobo 5 slow
		170–177	Gobo 5 slow … Gobo 5 fast
		178	Gobo 5 fast
		179	Gobo 6 slow
		180–187	Gobo 6 slow … Gobo 6 fast
		188	Gobo 6 fast
		189–191	Shake
		192	Wheel rotation: Fast forward
		193–222	Wheel rotation: Fast forward … Slow forward
		223	Wheel rotation: Slow forward
		224	Wheel rotation: Stop
		225	Wheel rotation: Slow backward
		226–254	Wheel rotation: Slow backward … Fast backward
		255	Wheel rotation: Fast backward
14	Gobo Rotation	0–46	Left
		46	Mid
		46–128	Right
		129–191	Gobo Rotate: Fast forward … Slow forward
		191	Gobo Rotate: Slow forward
		192	Rotation stop
		192–255	Gobo Rotate: Slow backward … Fast Backward
		255	Gobo Rotate: Fast Backward
15	Gobo Rotation Fine	0–255	Fine adjustment of CH 14
16	Gobo 2	0–7	Fix Gobos: Open
		8–22	Gobo 1
		23–37	Gobo 2
		38–52	Gobo 3
		53–67	Gobo 4
		68–82	Gobo 5
		83–97	Gobo 6
		98–112	Gobo 7
		113–125	Fix Gobos: Open
		126	Gobo 1 slow
		127–133	Gobo 1 slow … Gobo 1 fast
		134	Gobo 1 fast
		135	Gobo 2 slow
		136–142	Gobo 2 slow … Gobo 2 fast

CH	Function	DMX	Description
16	Gobo 2 (continued)	143	Gobo 2 fast
		144	Gobo 3 slow
		145–151	Gobo 3 slow ... Gobo 3 fast
		152	Gobo 3 fast
		153	Gobo 4 slow
		154–160	Gobo 4 slow ... Gobo 4 fast
		161	Gobo 4 fast
		162	Gobo 5 slow
		163–169	Gobo 5 slow ... Gobo 5 fast
		170	Gobo 5 fast
		171	Gobo 6 slow
		172–178	Gobo 6 slow ... Gobo 6 fast
		179	Gobo 6 fast
		180	Gobo 7 slow
		181–187	Gobo 7 slow ... Gobo 7 fast
		188	Gobo 7 fast
		189–191	Gobo Wheel rotation fwd
		192	Gobo Wheel rotation fwd: Fast backward
		193–222	Fast backward ... Sow backward
		223	Sow backward
		224	Gobo Wheel rotation fwd: Stop
		225	Gobo Wheel rotation fwd: Slow forward
		226–254	Gobo Wheel rotation fwd: Slow forward ... Fast forward
		255	Gobo Wheel rotation fwd: Fast forward
17	Zoom	0	Narrow
		1–126	Narrow ... Mid
		127	Mid
		128–254	Mid ... Wide
		255	Wide
18	Focus	0–255	Focus
19	Iris	0	Iris: Open
		1–190	Mid
		191	Iris: Close
		192	Puls with Dim: slow
		193–199	Puls with Dim: slow ... fast
		200	Puls with Dim: fast
		201	Puls without Dim: slow
		202–208	Puls without Dim: slow ... fast
		209	Puls without Dim: fast
		210	Puls Random without Dim: slow
		211–217	Puls Random without Dim: slow ... fast
		218	Puls Random without Dim: fast

CH	Function	DMX	Description
19	Iris (continued)	219	Ramp up with Dim: slow
		220–226	Ramp up with Dim: slow ... fast
		227	Ramp up with Dim: fast
		228	Ramp up without Dim: slow
		229–235	Ramp up without Dim: slow ... fast
		236	Ramp up without Dim: fast
		237	Ramp down with Dim: slow
		238–244	Ramp down with Dim: slow ... fast
		245	Ramp down with Dim: fast
		246	Ramp down without Dim: slow
		247–254	Ramp down without Dim: slow ... fast
		255	Ramp down without Dim: fast
20	Prism		Prisma select
		0–5	Open
		6–127	Prism 1 (linear)
		128–255	Prism 2 (square)
21	Prism Rotation	0–128	Prism position 0 to 540 (540°)
		129–191	Prism rotation fast to slow fwd (500–1 °/s)
		192	Prism rotation Stop
		193–255	Prism rotation fast to slow bwd (1–500 °/s)
22	Frost		Frost soft
		0	Open
		1–254	Open ... soft Frost in
		255	Soft Frost in
23	Frost 2		Frost heavy
		0	Open
		1–254	Open ... heavy Frost in
		255	Heavy Frost in
24	Animation Wheel	0	Animation Wheel In/Out: Open
		1–127	Open ... Animation In
		128	Animation In
		129–191	Bounce 1/3 in fast -> slow
		192	Bounce 2/3 in fast -> slow
		193–255	Bounce full in fast -> slow
25	Animation Wheel Rotation	0–128	Position 0 540 (540°)
		129–191	Rotation fast -> slow fwd
		192	Rotation stop
		193–255	Rotation slow -> fast bwd
26	Blade 2 B	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close

CH	Function	DMX	Description
26	Blade 2 B (continued)	255	Close
27	Blade 2 A	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
28	Blade 3 B	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
29	Blade 3 A	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
30	Blade 4 A	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
31	Blade 4 B	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
32	Blade 1 B	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
33	Blade 1 A	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
34	Shaper Rotation		Blade Modul rotation
		0	0 <-
		1–126	0 <- ... Mid
		127	Mid
		128–254	Mid ... 100 ->
		255	100 ->

CH	Function	DMX	Description
35	Position Effect		Pan/Tilt Macro
		0–5	Off
		6–40	PAN small > big
		41–75	TILT small > big
		76–110	PAN / TILT small > big
		111–145	PAN / TILT (invers) small > big
		146–180	Circle small > big
		181–215	Circle (invers) small > big
		216–255	Random small > big
36	Position Effect Speed		Pan/Tilt Speed
		0	Fast
		1–254	Fast ... Slow
		255	Slow
37	Control	0–5	Control off
		6–7	Blackout while moving on (hold 3s)
		8–9	Blackout while moving off (hold 3s)
		10–11	Blackout while Prism moving on (hold 3s)
		12–13	3 Blackout while Prism moving off (hold 3s)
		14–15	Blackout while Gobo moving on (hold 3s)
		16–17	Blackout while Gobo moving off (hold 3s)
		18–19	Blackout while Color moving on (hold 3s)
		20–21	Blackout while Color moving off (hold 3s)
		22–41	Pan Tilt
		42–43	Invert Pan on (hold 3s)
		44–45	Invert Pan off (hold 3s)
		46–47	Invert Tilt on (hold 3s)
		48–49	Invert Tilt off (hold 3s)
		50–51	Pan Angle 540 (Hold 3s)
		52–53	Pan Angle 630 (Hold 3s)
		54–73	Dimmer Response
		74–75	Dimmer Response LED (Hold 2 s)
		76–77	Dimmer Response (Hold 2 s)
		78–93	Noise
		94–95	Silent movement (slow) on (Hold 3s)
		96–97	Silent movement (slow) off (Hold 5s)
		98–99	Fan off (hold 3s)
		100–101	Silent Fan (Hold 3s)
		102–103	Auto Fan (Hold 3s)
		104–119	PWM
		120–121	PWM 650 Hz (hold 3s)
		122–123	PWM 1530 Hz (hold 3s)
		124–125	PWM 3600 Hz (hold 3s)

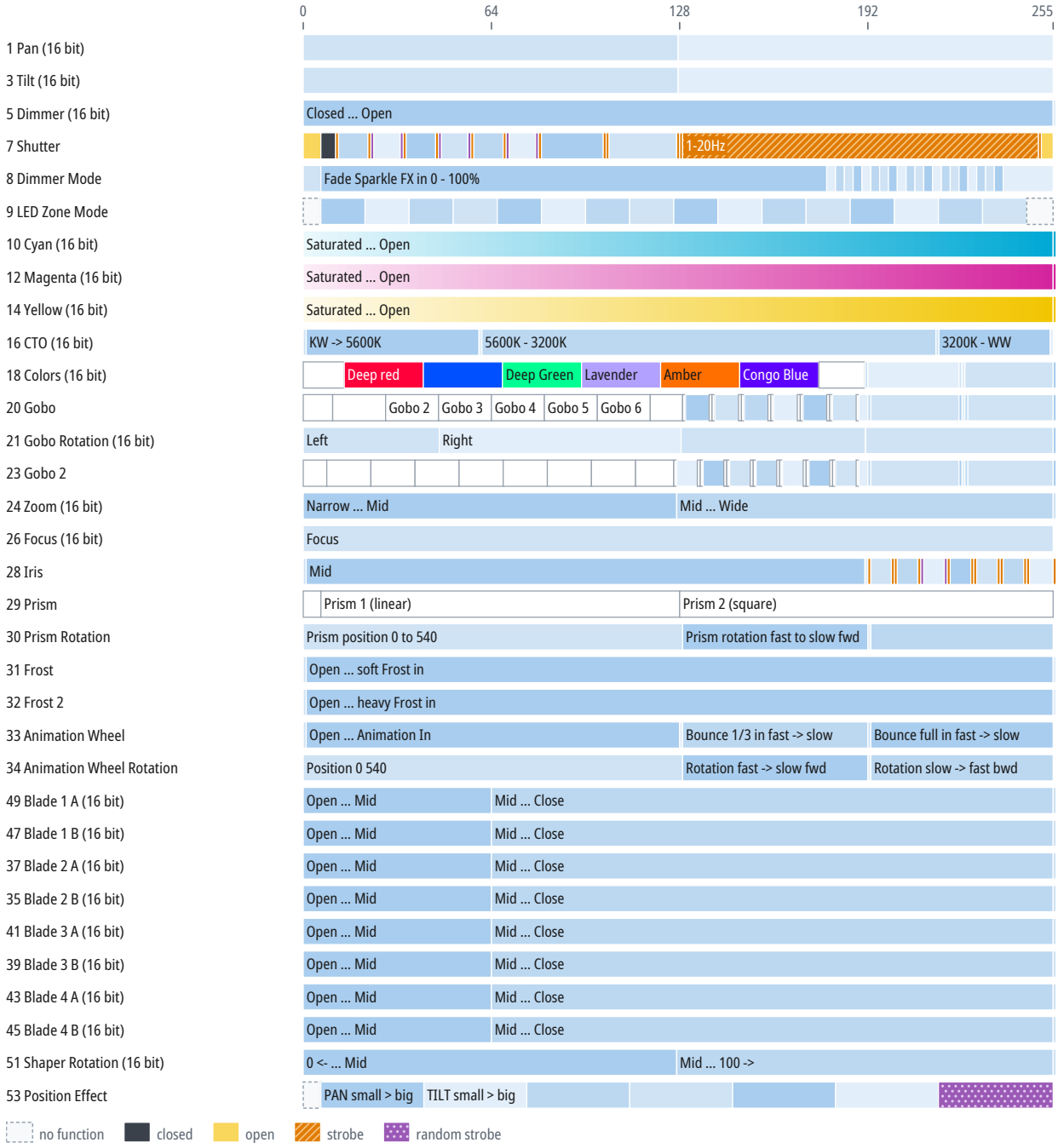
CH	Function	DMX	Description
37	Control (continued)	126–127	PWM 12kHz (hold 3s)
		128–129	PWM 18900Hz (hold 3s)
		130–131	PWM 25kHz (hold 3s)
		132–139	Display
		140–141	Display on (Hold 3s)
		142–143	Display off (Hold 3s)
		144–147	Display
		148–149	Color Wheel snap (Hold 3s)
		150–151	Color Wheel scroll (Hold 3s)
		152–153	Gobo Wheel snap (Hold 3s)
		154–155	Gobo Wheel scroll (Hold 3s)
		156	Wheels Snap/Linear
		157–163	Dimmer Curve
		164–165	Dimmer Curve Linear (Hold 3s)
		166–167	Dimmer Curve Exponential (Hold 3s)
		168–169	Dimmer Curve Logarithmic (Hold 3s)
		170–171	Dimmer Curve S-Curve (Hold 3s)
		172–209	Wheel Rotation
		210–211	Color Pos Mode quick (Hold 3s)
		212–213	Color Pos Mode Clockwise (Hold 3s)
		214–215	Gobo Pos Mode quick (Hold 3s)
		216–217	Gobo Pos Mode Clockwise (Hold 3s)
		218–221	Control / Reset
		222–223	Reset Pan / Tilt (Hold 3s)
		224–234	Reset Pan / Tilt (Hold 3s) ... Reset Head complete (Hold 3s)
		235	Reset Head complete (Hold 3s)
		236–237	Reset All Functions (Hold 3s)
		238–254	Reset All Functions (Hold 3s) ... no function
		255	No function

Mode Extended

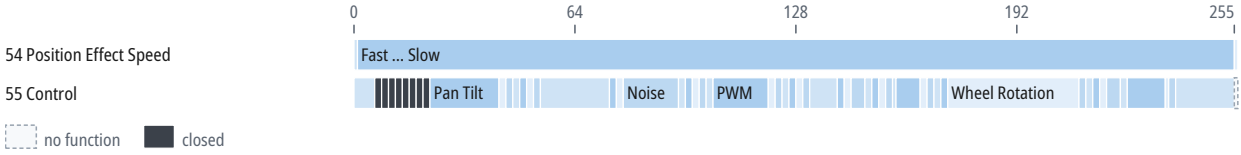
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 5 Dimmer above 0; CH 7 Shutter at 0–5 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 5 Dimmer 255, CH 8 Dimmer Mode 0, CH 10 Cyan 0, CH 12 Magenta 0, CH 14 Yellow 0, CH 16 CTO 0, CH 18 Colors 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Dimmer		Same as CH 5 in the mode “Standard” (p. 11)
6	Dimmer Fine	0–255	Fine adjustment of CH 5
7	Shutter	0–5	Strobe: Open
		6–10	Strobe: Closed
		11	Ramp up down: Slow
		12–21	Ramp up down: Slow ... Fast
		22	Ramp up down: Fast
		23	Ramp up/down random: Slow
		24–32	Ramp up/down random: Slow ... Fast
		33	Ramp up/down random: Fast
		34	Ramp up: Slow
		35–44	Ramp up: Slow ... Fast
		45	Ramp up: Fast
		46	Ramp up random: Slow
		47–55	Ramp up random: Slow ... Fast
		56	Ramp up random: Fast
		57	Ramp down: Slow
		58–67	Ramp down: Slow ... Fast
		68	Ramp down: Fast
		69	Ramp down random: Slow
		70–78	Ramp down random: Slow ... Fast
		79	Ramp down random: Fast
		80	Random Strobe effect: Slow
		81–101	Random Strobe effect: Slow ... Fast
		102	Random Strobe effect: Fast
		103	5s short burst with break
		104–126	5s short burst with break ... 1s short burst with break
		127	1s short burst with break
		128	Slow 1Hz
		129–249	1-20Hz (0.31–19.9 Hz)
		250	Fast 20Hz

CH	Function	DMX	Description
7	Shutter (continued)	251–255	Strobe open: Open
8	Dimmer Mode		LED-segment Dim
		0–5	All segments on
		6–177	Fade Sparkle FX in 0 - 100%
		178–180	LED 1 on
		181–183	LED 2 on
		184–186	LED 3 on
		187–189	LED 4 on
		190–192	LED 5 on
		193–195	LED 6 on
		196–198	LED 7 on
		199–201	LED 8 on
		202–204	LED 1 + 2 on
		205–207	LED 3 + 4 on
		208–210	LED 5 + 6 on
		211–213	LED 7 + 8 on
		214–216	LED 1 + 8 on
		217–219	LED 2 + 7 on
		220–222	LED 3 + 6 on
		223–225	LED 4 + 5 on
		226–228	LED 1 + 2 + 3 + 4 on
		229–231	LED 5 + 6 + 7 + 8 on
		232–234	LED 1 + 3 + 5 + 7 on
		235–237	LED 2 + 4 + 6 + 8 on
		238–255	All segments on
9	LED Zone Mode		Sparkle FX
		0–5	No function
		6–125	Chaser 1 jump (slow to fast)
		126–245	Chaser 1 fade (slow to fast)
		246–255	No function
10	Cyan	0–255	Saturated ... Open
		255	Open
11	Cyan Fine	0–255	Fine adjustment of CH 10
12	Magenta	0–255	Saturated ... Open
		255	Open
13	Magenta Fine	0–255	Fine adjustment of CH 12
14	Yellow	0–255	Saturated ... Open
		255	Open
15	Yellow Fine	0–255	Fine adjustment of CH 14
16	CTO	0	KW (6500K)
		1–59	KW -> 5600K (6485–5598 K)
		60	5600K

CH	Function	DMX	Description
16	CTO (continued)	61–215	5600K - 3200K (5567–3212 K)
		216	3200K
		217–254	3200K - WW (3181–2615 K)
		255	WW (2600K)
17	CTO Fine	0–255	Fine adjustment of CH 16
18	Colors	0–13	Color open
		14–40	Deep red
		41–67	Medium Blue
		68–94	Deep Green
		95–121	Lavender
		122–148	Amber
		149–175	Congo Blue
		176–191	Color open
		191–192	Spin
		192–223	Spin: fast forward ... slow forward
		223–224	Spin: slow forward ... Stop
		224–225	Spin: Stop ... slow backwards
		225–255	Spin: slow backwards ... fast backwards
		255	Spin: fast backwards (400–800 °/s)
19	Colors Fine	0–255	Fine adjustment of CH 18
20	Gobo	0–9	Select: Open
		10–27	Gobo 1
		28–45	Gobo 2
		46–63	Gobo 3
		64–81	Gobo 4
		82–99	Gobo 5
		100–117	Gobo 6
		118–128	Select: Open
		129	Gobo 1 slow
		130–137	Gobo 1 slow ... Gobo 1 fast
		138	Gobo 1 fast
		139	Gobo 2 slow
		140–147	Gobo 2 slow ... Gobo 2 fast
		148	Gobo 2 fast
		149	Gobo 3 slow
		150–157	Gobo 3 slow ... Gobo 3 fast
		158	Gobo 3 fast
		159	Gobo 4 slow
		160–167	Gobo 4 slow ... Gobo 4 fast
		168	Gobo 4 fast
		169	Gobo 5 slow
		170–177	Gobo 5 slow ... Gobo 5 fast

CH	Function	DMX	Description
20	Gobo (continued)	178	Gobo 5 fast
		179	Gobo 6 slow
		180–187	Gobo 6 slow ... Gobo 6 fast
		188	Gobo 6 fast
		189–191	Wheel rotation
		192	Wheel rotation: Fast forward
		193–222	Wheel rotation: Fast forward ... Slow forward
		223	Wheel rotation: Slow forward
		224	Wheel rotation: Stop
		225	Wheel rotation: Slow backward
		226–254	Wheel rotation: Slow backward ... Fast backward
		255	Wheel rotation: Fast backward
21	Gobo Rotation	0–46	Left
		46	Mid
		46–128	Right
		129–191	Gobo Pos Rotate: Fast forward ... Slow forward
		191	Gobo Pos Rotate: Slow forward
		192	Rotation stop
		192–255	Gobo Pos Rotate: Slow backward ... Fast backward
		255	Gobo Pos Rotate: Fast backward
22	Gobo Rotation Fine	0–255	Fine adjustment of CH 21
23	Gobo 2	0–7	Fix Gobos: Open
		8–22	Gobo 1
		23–37	Gobo 2
		38–52	Gobo 3
		53–67	Gobo 4
		68–82	Gobo 5
		83–97	Gobo 6
		98–112	Gobo 7
		113–125	Fix Gobos: Open
		126	Gobo 1 slow
		127–133	Gobo 1 slow ... Gobo 1 fast
		134	Gobo 1 fast
		135	Gobo 2 slow
		136–142	Gobo 2 slow ... Gobo 2 fast
		143	Gobo 2 fast
		144	Gobo 3 slow
		145–151	Gobo 3 slow ... Gobo 3 fast
		152	Gobo 3 fast
		153	Gobo 4 slow
		154–160	Gobo 4 slow ... Gobo 4 fast
		161	Gobo 4 fast

CH	Function	DMX	Description
23	Gobo 2 (continued)	162	Gobo 5 slow
		163–169	Gobo 5 slow ... Gobo 5 fast
		170	Gobo 5 fast
		171	Gobo 6 slow
		172–178	Gobo 6 slow ... Gobo 6 fast
		179	Gobo 6 fast
		180	Gobo 7 slow
		181–187	Gobo 7 slow ... Gobo 7 fast
		188	Gobo 7 fast
		189–191	Gobo Wheel rotation fwd
		192	Gobo Wheel rotation fwd: Fast forward
		193–222	Fast forward ... Slow foreward
		223	Slow foreward
		224	Gobo Wheel rotation fwd: Stop
		225	Gobo Wheel rotation fwd: Slow backward
		226–254	Gobo Wheel rotation fwd: Slow backward ... Fast backward
		255	Gobo Wheel rotation fwd: Fast backward
24	Zoom	0–127	Narrow ... Mid
		127–255	Mid ... Wide
		255	Wide
25	Zoom Fine	0–255	Fine adjustment of CH 24
26	Focus	0–255	Focus
27	Focus Fine	0–255	Fine adjustment of CH 26
28	Iris		Same as CH 19 in the mode “Standard” (p. 14)
29	Prism		Same as CH 20 in the mode “Standard” (p. 15)
30	Prism Rotation		Same as CH 21 in the mode “Standard” (p. 15)
31	Frost		Same as CH 22 in the mode “Standard” (p. 15)
32	Frost 2		Same as CH 23 in the mode “Standard” (p. 15)
33	Animation Wheel		Same as CH 24 in the mode “Standard” (p. 15)
34	Animation Wheel Rotation		Same as CH 25 in the mode “Standard” (p. 15)
35	Blade 2 B	0–64	Open ... Mid
		64–255	Mid ... Close
		255	Close
36	Blade 2 B Fine	0–255	Fine adjustment of CH 35
37	Blade 2 A	0–64	Open ... Mid
		64–255	Mid ... Close
		255	Close
38	Blade 2 A Fine	0–255	Fine adjustment of CH 37
39	Blade 3 B	0–64	Open ... Mid
		64–255	Mid ... Close
		255	Close
40	Blade 3 B Fine	0–255	Fine adjustment of CH 39

CH	Function	DMX	Description
41	Blade 3 A	0–64	Open ... Mid
		64–255	Mid ... Close
		255	Close
42	Blade 3 A Fine	0–255	Fine adjustment of CH 41
43	Blade 4 A	0–64	Open ... Mid
		64–255	Mid ... Close
		255	Close
44	Blade 4 A Fine	0–255	Fine adjustment of CH 43
45	Blade 4 B	0–64	Open ... Mid
		64–255	Mid ... Close
		255	Close
46	Blade 4 B Fine	0–255	Fine adjustment of CH 45
47	Blade 1 B	0–64	Open ... Mid
		64–255	Mid ... Close
		255	Close
48	Blade 1 B Fine	0–255	Fine adjustment of CH 47
49	Blade 1 A	0–64	Open ... Mid
		64–255	Mid ... Close
		255	Close
50	Blade 1 A Fine	0–255	Fine adjustment of CH 49
51	Shaper Rotation		Blade Modul rotation
		0–127	0 <- ... Mid
		127–255	Mid ... 100 ->
		255	100 ->
52	Shaper Rotation Fine	0–255	Fine adjustment of CH 51
53	Position Effect		Same as CH 35 in the mode “Standard” (p. 17)
54	Position Effect Speed		Same as CH 36 in the mode “Standard” (p. 17)
55	Control		Same as CH 37 in the mode “Standard” (p. 17)

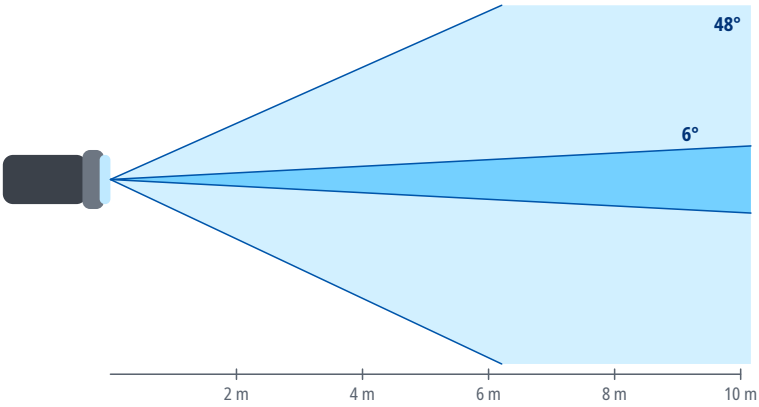
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	750 W
Luminous flux	33,000 lm
Color temperature	6,100 K
Color rendering index (CRI)	71
Optics	
Zoom	6–48°
Movement	
Pan	540°
Tilt	220°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45
RDM	yes (manufacturer ID 0x08A4, device model ID 0x0037)
Electrical	
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	39 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2600–6500 K
Strobe frequency	0.5–15 Hz
Color wheel 1 rotation	up to 800 °/s (133 rpm)
Gobo wheel 2 rotation	up to 3.14 °/s (0.5 rpm)
Gobo wheel 3 rotation	up to 3.14 °/s (0.5 rpm)
Gobo 2 rotation	up to 800 °/s (133 rpm)
Prism rotation	up to 500 °/s (83 rpm)
Animation wheel rotation	up to 5 °/s (0.8 rpm)

Spot diameter



Distance	Ø 6°	Ø 48°
2 m	0.21 m	1.8 m
4 m	0.42 m	3.6 m
6 m	0.63 m	5.3 m
8 m	0.84 m	7.1 m
10 m	1 m	8.9 m
15 m	1.6 m	13.4 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.