DMX REFERENCE

ORON H2

Cameo



Manufacturer	Cameo
GDTF file	Cameo_Oron_H2_66217.gdtf
GDTF revision	Firmware-V1.0ffV0.01_GDTF-V1.2 · 2024-06-12
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1 About this manual

This document describes the ORON H2 by Cameo. It was compiled from the GDTF file Cameo_Oron_H2_66217.gdtf from the GDTF-Share library.

File revision: “Firmware-V1.0ffV0.01_GDTF-V1.2”.

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	32 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
33CH	33	15	1, 34, 67, 100, ...
27CH	27	18	1, 28, 55, 82, ...
24CH	24	21	1, 25, 49, 73, ...

No light? Check these channels

- 33CH: CH 5 Dimmer above 0; CH 7 Shutter at 0–5 or 251–255 “Open”
- 27CH: CH 5 Dimmer above 0; CH 7 Shutter at 0–5 or 251–255 “Open”
- 24CH: CH 5 Dimmer above 0; CH 6 Shutter 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

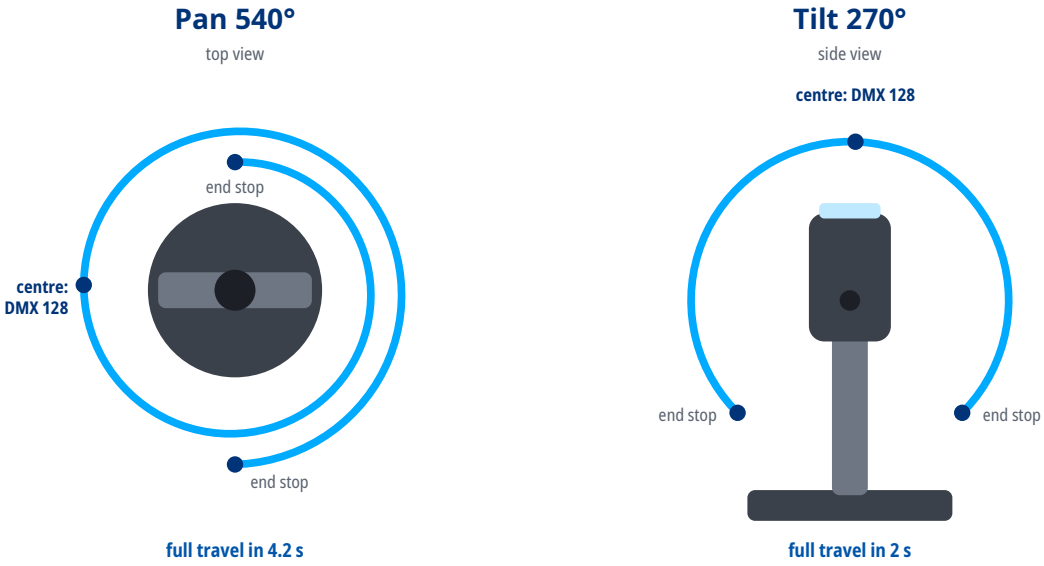
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

“ORON H2 IP65 Hybrid Phosphor Laser 260W Moving Head”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

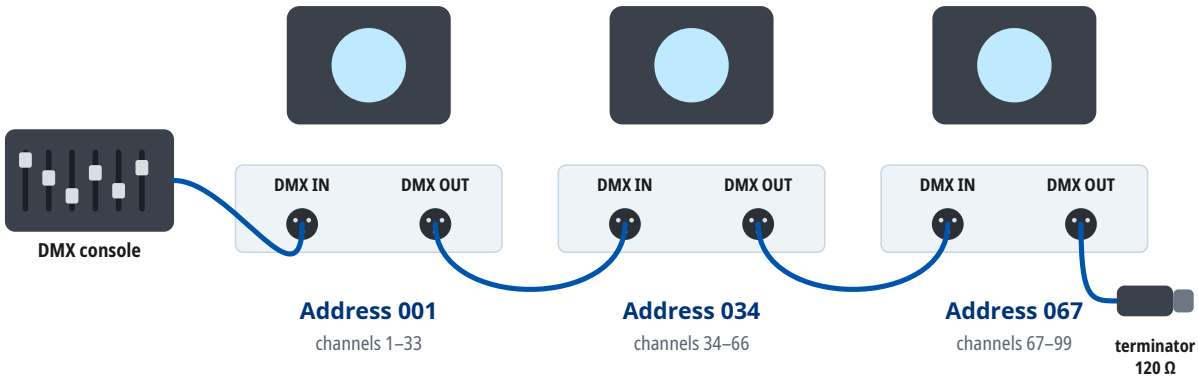
⚠ WARNING

- 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: 32 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 33CH: every unit occupies 33 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 “33CH”: 33.
- 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 “33CH”, you can use, for example, the start addresses 1, 34, 67, 100.
- 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

	33CH 33 channels	27CH 27 channels	24CH 24 channels
Pan / Tilt	1, 3	1, 3	1, 3
Dimmer	5	5	5
Dimmer resolution	16 bit	16 bit	8 bit
Shutter / strobe	7	7	6
Color mixing	8, 10, 12	8–10	7–9
Color temperature	14	11	10
Color wheel	16	12	11
Gobo wheel	18, 21	13, 16	12, 14
Gobo rotation	19	14	13
Prism	26–29	20–23	17–20
Zoom	22	17	15
Focus	24	18	16
Animation wheel	30, 31	24, 25	21, 22

Color wheel

1. Color open — DMX 0–5
2. Deep red — DMX 6–13
3. Medium Blue — DMX 14–22
4. Yellow — DMX 23–31
5. Magenta — DMX 32–40
6. Blue-Green — DMX 41–49
7. Lavender — DMX 50–58
8. 1/2 minus green — DMX 59–67
9. CTO 5600K — DMX 68–76
10. CTB 7800K — DMX 77–85
11. Deep Green — DMX 86–94
12. Pink — DMX 95–103
13. Deep Orange — DMX 104–112
14. Light Orange — DMX 113–121
15. Lime — DMX 122–130
16. Deep Blue — DMX 131–139
17. CTO 2600K — DMX 140–148
18. Amber — DMX 149–157
19. CTO 3200K — DMX 158–166
20. Congo Blue — DMX 167–175

Gobo wheel 1

1
Select: open
DMX 0–5

2 
Select: Gobo 1
DMX 6–23

3 
Select: Gobo 2
DMX 24–26

4 
Select: Gobo 3
DMX 27–42

5 
Select: Gobo 4
DMX 43–47

6 
Select: Gobo 5
DMX 48–61

7 
Select: Gobo 6
DMX 62–67

8 
Select: Gobo 7
DMX 68–82

9 
Select: Gobo 8
DMX 83–87

10 
Select: Gobo 9
DMX 88–101

11 
Select: Gobo 10
DMX 102–107

12 
Select: Gobo 11
DMX 108–122

13 
Select: Gobo 12
DMX 123–127

Gobo wheel 2

1
Fix Gobos: open
DMX 0–5

2 
Fix Gobos: Gobo 1
DMX 6

3 
Fix Gobos: Gobo 2
DMX 7–16

4 
Fix Gobos: Gobo 3
DMX 17–19

5 
Fix Gobos: Gobo 4
DMX 20–28

6 
Fix Gobos: Gobo 5
DMX 29–31

7 
Fix Gobos: Gobo 6
DMX 32–39

8 
Fix Gobos: Gobo 7
DMX 40–44

9 
Fix Gobos: Gobo 8
DMX 45–51

10 
Fix Gobos: Gobo 9
DMX 52–56

11 
Fix Gobos: Gobo 10
DMX 57–62

12 
Fix Gobos: Gobo 11
DMX 63–69

13 
Fix Gobos: Gobo 12
DMX 70–74

14 
Fix Gobos: Gobo 13
DMX 75–80

15 
Fix Gobos: Gobo 14
DMX 81–87

16 
Fix Gobos: Gobo 15
DMX 88–92

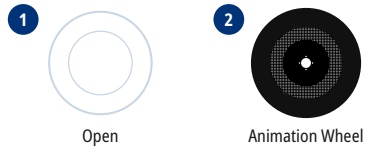
17 
Fix Gobos: Gobo 16
DMX 93–99

18 
Fix Gobos: Gobo 17
DMX 100–104

19 
Fix Gobos: Gobo 18
DMX 105–110

20 
Fix Gobos: Gobo 19
DMX 111–117

Animation wheel



1 Open

2 Animation Wheel

Prism 1



1 Open
DMX 0–5

2 5 facets
Prisma 5-circular
DMX 6–55

3 8 facets
Prisma 8-circular
DMX 56–105

4 2 facets
Prisma 2-linear
DMX 106–155

5 4 facets
Prisma 4-linear
DMX 156–205

6 6 facets
Prisma 6-linear
DMX 206–255

Prism 2



1 Open
DMX 0–5

2 4 facets
Prisma 4-circular
DMX 6–55

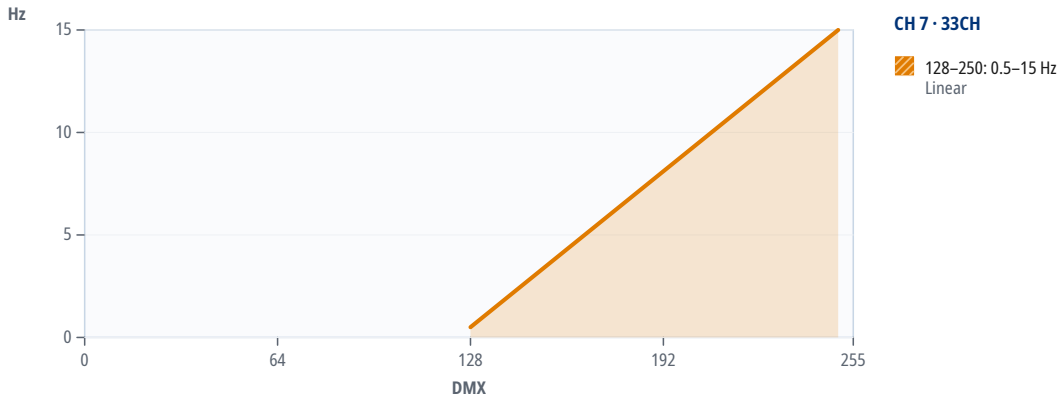
3 1 facet
Ovalizer
DMX 56–105

4 Frost Light
DMX 106–155

5 Frost Medium
DMX 156–205

6 Frost Heavy
DMX 206–255

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “33CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	166	11	331	16	U2 · 1
2	34	7	199	12	364	17	U2 · 34
3	67	8	232	13	397	18	U2 · 67
4	100	9	265	14	430	19	U2 · 100
5	133	10	298	15	463	20	U2 · 133

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 33CH

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 7 Shutter 0, CH 8 Cyan 0, CH 10 Magenta 0, CH 12 Yellow 0, CH 14 CTO 0, CH 16 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan
		128	Home
		128–255	Pan
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	Open/Close: Open

CH	Function	DMX	Description
7	Shutter (continued)	6–10	Open/Close: 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	Open
8	Cyan	0–255	Saturated ... Open
		255	Open
9	Cyan Fine	0–255	Fine adjustment of CH 8
10	Magenta	0–255	Saturated ... Open
		255	Open
11	Magenta Fine	0–255	Fine adjustment of CH 10
12	Yellow	0–255	Saturated ... Open
		255	Open
13	Yellow Fine	0–255	Fine adjustment of CH 12
14	CTO	0	KW (6500K)
		1–59	KW -> 5600K (6485–5598 K)
		60	5600K
		61–215	5600K - 3200K (5567–3212 K)

CH	Function	DMX	Description
14	CTO (continued)	216	3200K
		217–254	3200K - WW (3181–2615 K)
		255	WW (2600K)
15	CTO Fine	0–255	Fine adjustment of CH 14
16	Colors	0–5	Color open
		6–13	Deep red
		14–22	Medium Blue
		23–31	Yellow
		32–40	Magenta
		41–49	Blue-Green
		50–58	Lavender
		59–67	1/2 minus green
		68–76	CTO 5600K
		77–85	CTB 7800K
		86–94	Deep Green
		95–103	Pink
		104–112	Deep Orange
		113–121	Light Orange
		122–130	Lime
		131–139	Deep Blue
		140–148	CTO 2600K
		149–157	Amber
		158–166	CTO 3200K
		167–175	Congo Blue
		176–192	Color: Open
		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)
17	Colors Fine	0–255	Fine adjustment of CH 16
18	Gobo	0–5	Select: open
		6–23	Select: Gobo 1
		24–26	Select: Gobo 2
		27–42	Select: Gobo 3
		43–47	Select: Gobo 4
		48–61	Select: Gobo 5
		62–67	Select: Gobo 6
		68–82	Select: Gobo 7
		83–87	Select: Gobo 8
		88–101	Select: Gobo 9
		102–107	Select: Gobo 10

CH	Function	DMX	Description
18	Gobo (continued)	108–122	Select: Gobo 11
		123–127	Select: Gobo 12
		128–139	Select: Open
		140–143	Shake: Gobo 1
		144–147	Shake: Gobo 2
		148–151	Shake: Gobo 3
		152–155	Shake: Gobo 4
		156–159	Shake: Gobo 5
		160–163	Shake: Gobo 6
		164–167	Shake: Gobo 7
		168–171	Shake: Gobo 8
		172–175	Shake: Gobo 9
		176–179	Shake: Gobo 10
		180–183	Shake: Gobo 11
		184–187	Shake: Gobo 12
		188–192	Shake: Open
		193	Wheel rotation: Fast forward
		194–222	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
19	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
20	Gobo Rotation Fine	0–255	Fine adjustment of CH 19
21	Gobo 2	0–5	Fix Gobos: open
		6	Fix Gobos: Gobo 1
		7–16	Fix Gobos: Gobo 2
		17–19	Fix Gobos: Gobo 3
		20–28	Fix Gobos: Gobo 4
		29–31	Fix Gobos: Gobo 5
		32–39	Fix Gobos: Gobo 6
		40–44	Fix Gobos: Gobo 7
		45–51	Fix Gobos: Gobo 8
		52–56	Fix Gobos: Gobo 9

CH	Function	DMX	Description
21	Gobo 2 (continued)	57–62	Fix Gobos: Gobo 10
		63–69	Fix Gobos: Gobo 11
		70–74	Fix Gobos: Gobo 12
		75–80	Fix Gobos: Gobo 13
		81–87	Fix Gobos: Gobo 14
		88–92	Fix Gobos: Gobo 15
		93–99	Fix Gobos: Gobo 16
		100–104	Fix Gobos: Gobo 17
		105–110	Fix Gobos: Gobo 18
		111–117	Fix Gobos: Gobo 19
		118–120	Fix Gobos: Open
		121–131	Fix Gobos
		132–134	Shake: Gobo 1
		135–137	Shake: Gobo 2
		138–140	Shake: Gobo 3
		141–143	Shake: Gobo 4
		144–146	Shake: Gobo 5
		147–149	Shake: Gobo 6
		150–152	Shake: Gobo 7
		153–155	Shake: Gobo 8
		156–158	Shake: Gobo 9
		159–161	Shake: Gobo 10
		162–164	Shake: Gobo 11
		165–167	Shake: Gobo 12
		168–170	Shake: Gobo 13
		171–173	Shake: Gobo 14
		174–176	Shake: Gobo 15
		177–179	Shake: Gobo 16
		180–182	Shake: Gobo 17
		183–185	Shake: Gobo 18
		186–188	Shake: Gobo 19
		189–192	Shake: open
		193	Gobo Wheel rotation: Fast forward
		194–222	Fast forward ... Slow foreward
		223	Slow foreward
		224	Gobo Wheel rotation: Stop
		225	Gobo Wheel rotation: Slow backward
		226–254	Gobo Wheel rotation: Slow backward ... Fast backward
		255	Gobo Wheel rotation: Fast backward
22	Zoom	0–127	Narrow ... Mid
		127–255	Mid ... Wide
		255	Wide

CH	Function	DMX	Description
23	Zoom Fine	0–255	Fine adjustment of CH 22
24	Focus	0–255	Focus
25	Focus Fine	0–255	Fine adjustment of CH 24
26	Prism		Effect Wheel 1 Selection
		0–5	Open
		6–55	Prisma 5-circular
		56–105	Prisma 8-circular
		106–155	Prisma 2-linear
		156–205	Prisma 4-linear
		206–255	Prisma 6-linear
27	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)
28	Prism 2		Effect Wheel 2 Selection
		0–5	Open
		6–55	Prisma 4-circular
		56–105	Ovalizer
		106–155	Frost Light
		156–205	Frost Medium
		206–255	Frost Heavy
29	Prism 2 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)
30	Animation Wheel		Animation Wheel In/Out
		0	Open
		1–254	Open ... Animation In
		255	Animation In
31	Animation Wheel Rotation	0–128	Position 0 540 (540°)
		129–191	Rotation fast -> slow fwd
		192	Rotation stop
		193–255	Rotation slow -> fast bwd
32	Lamp Control		Blackout Zone
		0–5	Off
		6–46	Save Position 1
		47–87	Save Position 2
		88–108	Save Position 3
		109–129	Save Position 4
		130–150	Save Positions to Zone A
		151–171	Save Positions to Zone B
		172–192	Save Positions to Zone C

CH	Function	DMX	Description
32	Lamp Control (continued)	193–213	Blackout Zone A active
		214–234	Blackout Zone B active
		235–255	Blackout Zone C active
33	Control	0–3	Control off
		4–5	Enable Savings BO Zone
		6–7	Blackout while moving on (hold 3s)
		8–9	Blackout while moving off (hold 3s)
		10–11	Blackout while Wheels moving on (hold 3s)
		12–13	Blackout while Wheels moving off (hold 3s)
		14–15	Sun Protection On
		16–17	Sun Protection Off
		18–19	Sleep Mode On
		20–21	Sleep Mode Off/Wake Up
		22–24	Sun / Sleep: No function
		25–32	Record User Scene 1...8
		33–41	Custom Color: No function
		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	Pan Tilt: No function
		74–75	Dimmer Response LED (Hold 2 s)
		76–77	Dimmer Response (Hold 2 s)
		78–93	Dimmer Response: No function
		94–95	Silent movement (slow) on (Hold 3s)
		96–97	Silent movement (slow) off (Hold 5s)
		98–99	Auto Fan (Hold 3s)
		100–101	Fan off (hold 3s)
		102–103	Fan Constant Low (Hold 3s)
		104–105	Fan Constant Mid (Hold 3s)
		106–107	Fan Constant High (Hold 3s)
		108–119	Noise: No function
		120–121	PWM 650 Hz (hold 3s)
		122–123	PWM 1530 Hz (hold 3s)
		124–125	PWM 3600 Hz (hold 3s)
		126–127	PWM 12kHz (hold 3s)
		128–129	PWM 18900Hz (hold 3s)
		130–131	PWM 25kHz (hold 3s)
		132–139	PWM: No function
		140–141	Display on (Hold 3s)

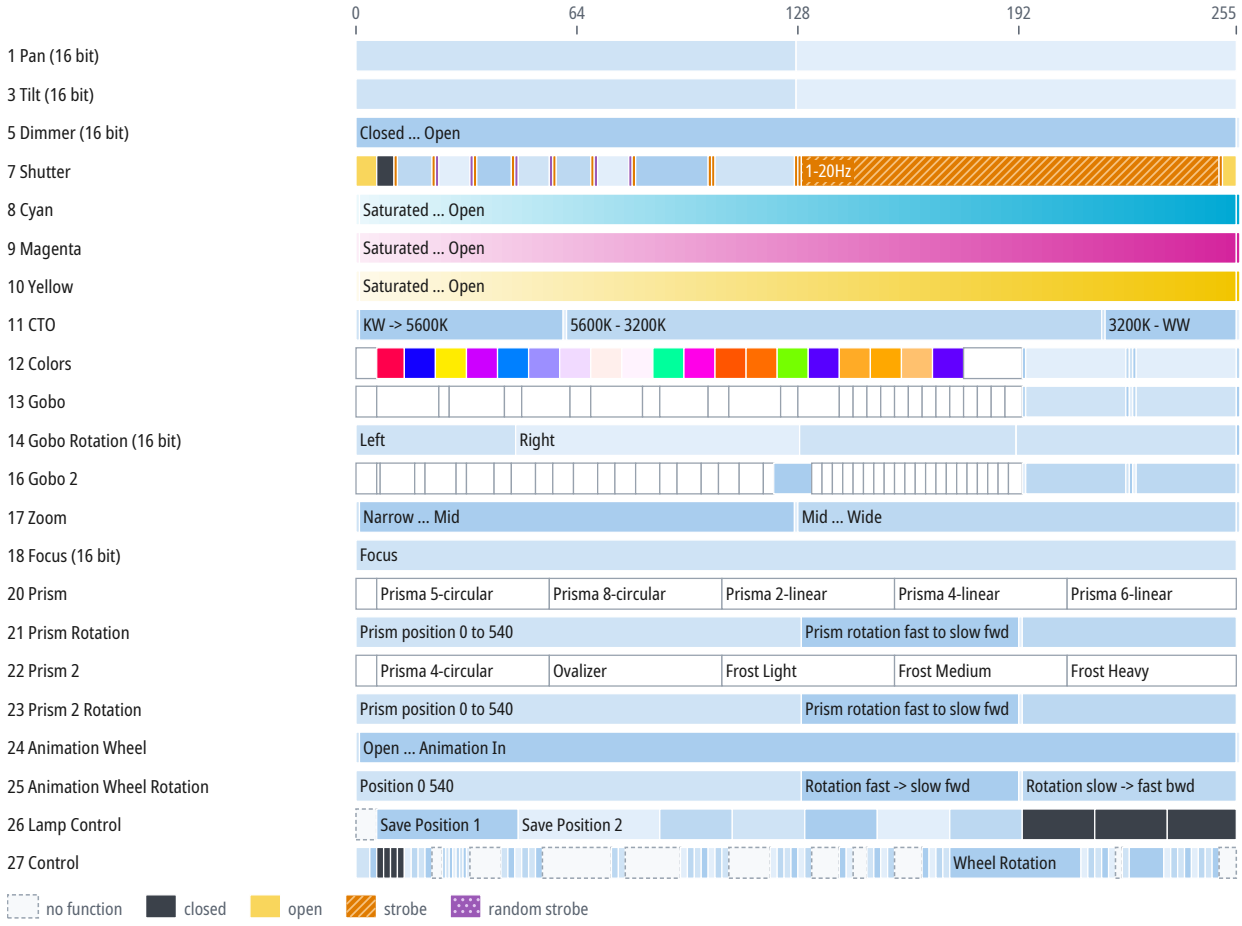
CH	Function	DMX	Description
33	Control (continued)	142–143	Display off (Hold 3s)
		144–147	Display: No function
		148–149	Color Wheel snap (Hold 3s)
		150–151	Color Wheel scroll (Hold 3s)
		152–153	Gobo Wheel snap (Hold 3s)
		154–155	Gobo Wheel scroll (Hold 3s)
		156–163	Dimmer Curve: No function
		164–165	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)
		218–219	Gobo Pos Mode Clockwise (Hold 3s) ... No function
		220–221	Wheel Rotation: No function
		222–223	Reset Pan / Tilt (Hold 3s)
		224–233	Reset Pan / Tilt (Hold 3s) ... Reset Head complete (Hold 3s)
		234–235	Reset Head complete (Hold 3s)
		236–237	Reset All Functions (Hold 3s)
		238–239	Reset All Functions (Hold 3s) ... Load Factory Defaults
		240–241	Load Factory Defaults
		242–243	Load Factory Defaults ... Load User Default A
		244–245	Load User Default A
		246–247	Load User Default B
		248–249	Load User Default C
		250–255	No function

Mode 27CH

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 7 Shutter 0, 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		Same as CH 1 in the mode “33CH” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “33CH” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Dimmer		Same as CH 5 in the mode “33CH” (p. 11)
6	Dimmer Fine	0–255	Fine adjustment of CH 5
7	Shutter		Same as CH 7 in the mode “33CH” (p. 11)
8	Cyan	0	Saturated
		1–254	Saturated ... Open
		255	Open
9	Magenta	0	Saturated
		1–254	Saturated ... Open

CH	Function	DMX	Description
9	Magenta (continued)	255	Open
10	Yellow	0	Saturated
		1–254	Saturated ... Open
		255	Open
11	CTO		Same as CH 14 in the mode “33CH” (p. 12)
12	Colors	0–5	Color open
		6–13	Deep red
		14–22	Medium Blue
		23–31	Yellow
		32–40	Magenta
		41–49	Blue-Green
		50–58	Lavender
		59–67	1/2 minus green
		68–76	CTO 5600K
		77–85	CTB 7800K
		86–94	Deep Green
		95–103	Pink
		104–112	Deep Orange
		113–121	Light Orange
		122–130	Lime
		131–139	Deep Blue
		140–148	CTO 2600K
		149–157	Amber
		158–166	CTO 3200K
		167–175	Congo Blue
		176–192	Color: Open
		193	Spin: fast forward (800–400 °/s)
		194–222	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		Same as CH 18 in the mode “33CH” (p. 13)
14	Gobo Rotation		Same as CH 19 in the mode “33CH” (p. 14)
15	Gobo Rotation Fine	0–255	Fine adjustment of CH 14
16	Gobo 2		Same as CH 21 in the mode “33CH” (p. 14)
17	Zoom	0	Narrow
		1–126	Narrow ... Mid
		127	Mid
		128–254	Mid ... Wide
		255	Wide

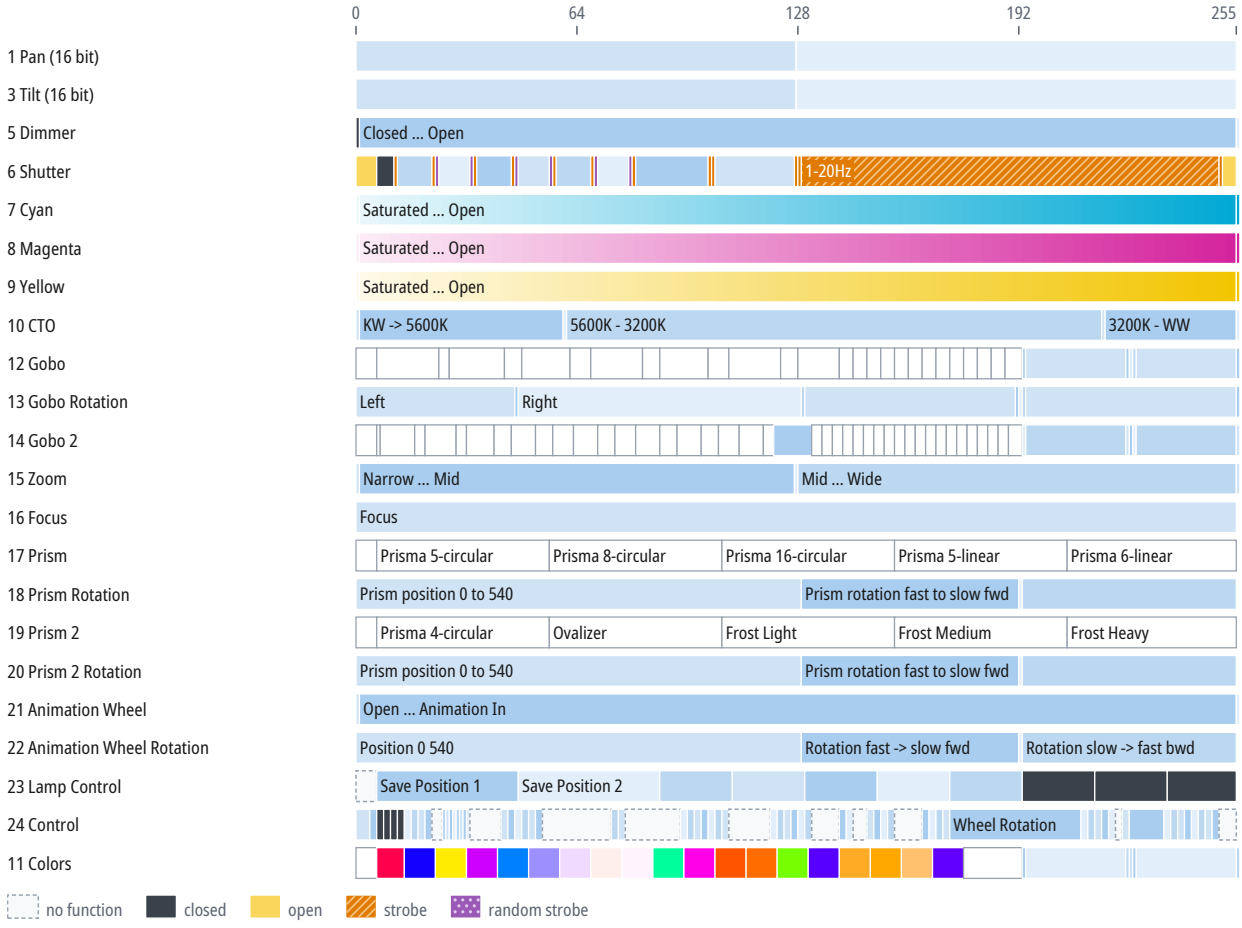
CH	Function	DMX	Description
18	Focus	0–255	Focus
19	Focus Fine	0–255	Fine adjustment of CH 18
20	Prism		Same as CH 26 in the mode “33CH” (p. 16)
21	Prism Rotation		Same as CH 27 in the mode “33CH” (p. 16)
22	Prism 2		Same as CH 28 in the mode “33CH” (p. 16)
23	Prism 2 Rotation		Same as CH 29 in the mode “33CH” (p. 16)
24	Animation Wheel		Same as CH 30 in the mode “33CH” (p. 16)
25	Animation Wheel Rotation		Same as CH 31 in the mode “33CH” (p. 16)
26	Lamp Control		Same as CH 32 in the mode “33CH” (p. 16)
27	Control		Same as CH 33 in the mode “33CH” (p. 17)

Mode 24CH

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 6 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 6 Shutter 0, CH 7 Cyan 0, CH 8 Magenta 0, CH 9 Yellow 0, CH 10 CTO 0, CH 11 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “33CH” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “33CH” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Dimmer	0	Closed
		1–254	Closed ... Open
		255	Open
6	Shutter		Same as CH 7 in the mode “33CH” (p. 11)
7	Cyan		Same as CH 8 in the mode “27CH” (p. 19)
8	Magenta		Same as CH 9 in the mode “27CH” (p. 19)
9	Yellow		Same as CH 10 in the mode “27CH” (p. 20)
10	CTO		Same as CH 14 in the mode “33CH” (p. 12)
11	Colors		Same as CH 12 in the mode “27CH” (p. 20)
12	Gobo		Same as CH 18 in the mode “33CH” (p. 13)
13	Gobo Rotation	0–45	Left
		46	Mid
		47–128	Right
		129	Gobo Pos Rotate: Fast forward
		130–190	Gobo Pos Rotate: Fast forward ... Slow forward
		191	Gobo Pos Rotate: Slow forward
		192	Rotation stop
		193	Gobo Pos Rotate: Slow backward
		194–254	Gobo Pos Rotate: Slow backward ... Fast backward
		255	Gobo Pos Rotate: Fast backward
14	Gobo 2		Same as CH 21 in the mode “33CH” (p. 14)
15	Zoom		Same as CH 17 in the mode “27CH” (p. 20)
16	Focus	0–255	Focus
17	Prism		Effect Wheel 1 Selection
		0–5	Open
		6–55	Prisma 5-circular
		56–105	Prisma 8-circular
		106–155	Prisma 16-circular
		156–205	Prisma 5-linear
		206–255	Prisma 6-linear
18	Prism Rotation		Same as CH 27 in the mode “33CH” (p. 16)
19	Prism 2		Same as CH 28 in the mode “33CH” (p. 16)
20	Prism 2 Rotation		Same as CH 29 in the mode “33CH” (p. 16)
21	Animation Wheel		Same as CH 30 in the mode “33CH” (p. 16)

CH	Function	DMX	Description
22	Animation Wheel Rotation		Same as CH 31 in the mode “33CH” (p. 16)
23	Lamp Control		Same as CH 32 in the mode “33CH” (p. 16)
24	Control		Same as CH 33 in the mode “33CH” (p. 17)

10 Technical specifications

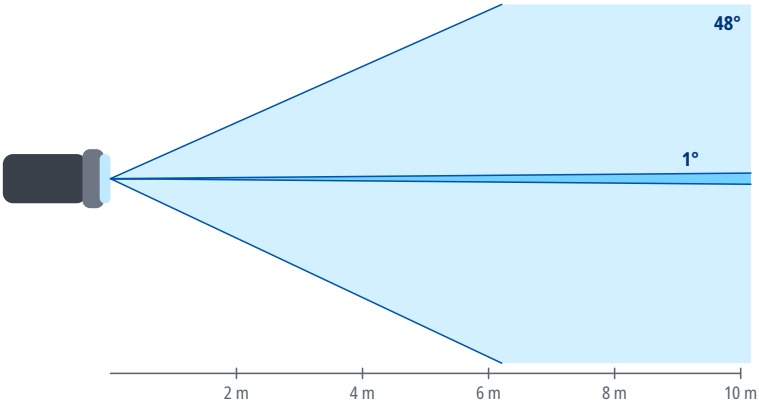
Parameter	Value
Light	
Light source	LED
LED power	750 W
Luminous flux	33,000 lm
Color temperature	6,100 K
Color rendering index (CRI)	71
Optics	
Zoom	1–48°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45
RDM	yes (manufacturer ID 0x08A4, device model ID 0x0504)
Electrical	
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	32 kg
Operating environment	
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	2600–6500 K
Strobe frequency	0.5–15 Hz
Color wheel rotation	up to 800 °/s (133 rpm)
Gobo wheel 1 rotation	up to 3.14 °/s (0.5 rpm)
Gobo wheel 2 rotation	up to 3.14 °/s (0.5 rpm)
Gobo 1 rotation	up to 800 °/s (133 rpm)

Parameter	Value
Prism 1 rotation	up to 500 °/s (83 rpm)
Prism 2 rotation	up to 500 °/s (83 rpm)
Animation wheel rotation	up to 5 °/s (0.8 rpm)

Spot diameter



Distance	Ø 1°	Ø 48°
2 m	0.03 m	1.8 m
4 m	0.07 m	3.6 m
6 m	0.1 m	5.3 m
8 m	0.14 m	7.1 m
10 m	0.17 m	8.9 m
15 m	0.26 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.

Problem	Remedy
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.