DMX REFERENCE

xSpot

Media LED

Manufacturer	Media LED
GDTF file	Media_LED_xSpot_25771.gdtf
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1 About this manual

This document describes the xSpot by Media LED. It was compiled from the GDTF file Media_LED_xSpot_25771.gdtf from the GDTF-Share library.

File revision: “xSpot live”.

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 Media LED; 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

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 1	24	21	1, 25, 49, 73, ...
Mode 2	16	32	1, 17, 33, 49, ...
Mode 3	30	17	1, 31, 61, 91, ...

No light? Check these channels

- Mode 1: CH 22 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 23 Dimmer above 0
- Mode 2: CH 15 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 16 Dimmer above 0
- Mode 3: CH 28 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 29 Dimmer above 0



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.

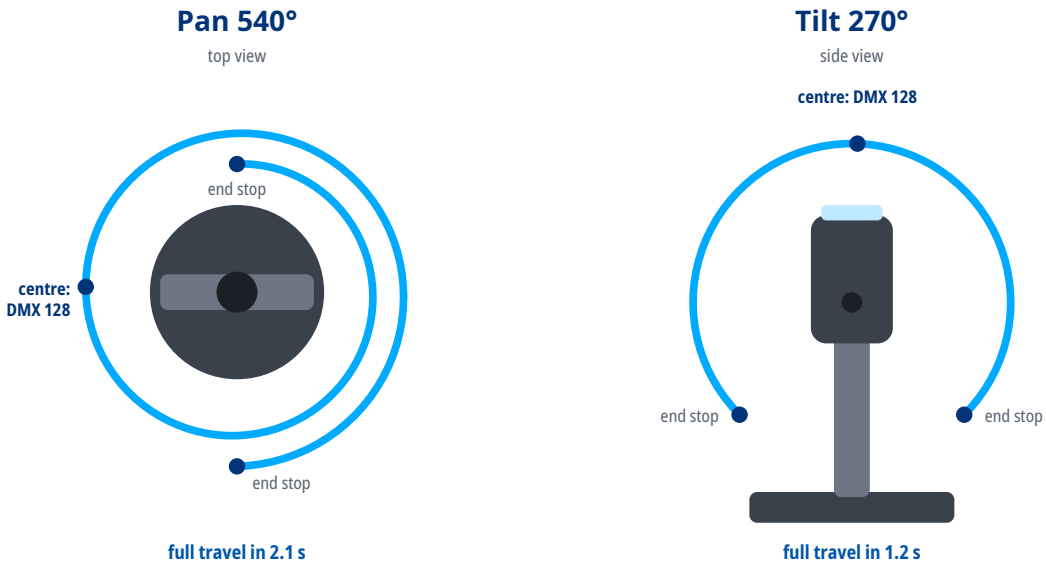
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do 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

“Der MediaLED X-Spot ist das neue, äußerst dynamische Movinglight von MediaLED. Mit diesem Gerät erhält der Anwender gleichzeitig einen Beam und Spot der sich Dank seines optischen Systems zudem auch als Wash einsetzen lassen kann. Der X-Spot zeichnet sich vor allem durch seinen super-hellen, parallel verlaufenden und über die gesamte Länge scharf zeichnenden Beam aus.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

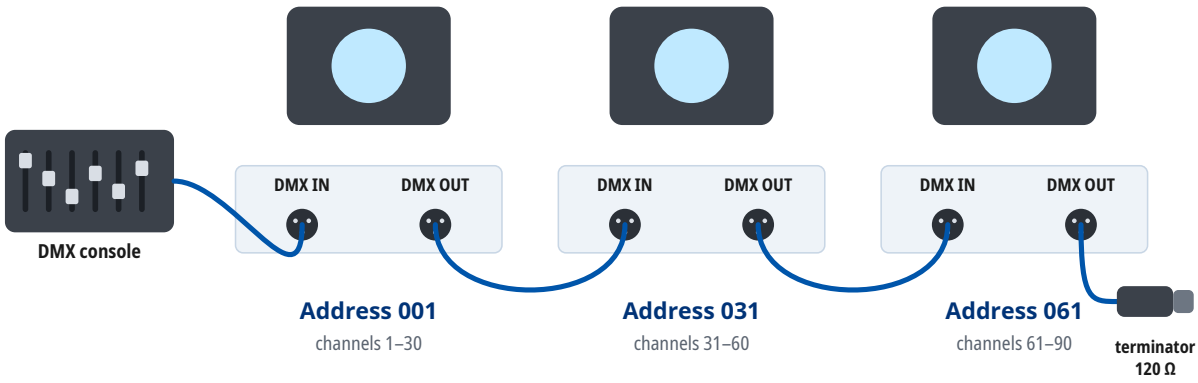
⚠ WARNING

- 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.
- 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 3: every unit occupies 30 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

7 Operation

Setting the DMX address

- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Mode 3”: 30.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “Mode 3”, you can use, for example, the start addresses 1, 31, 61, 91.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

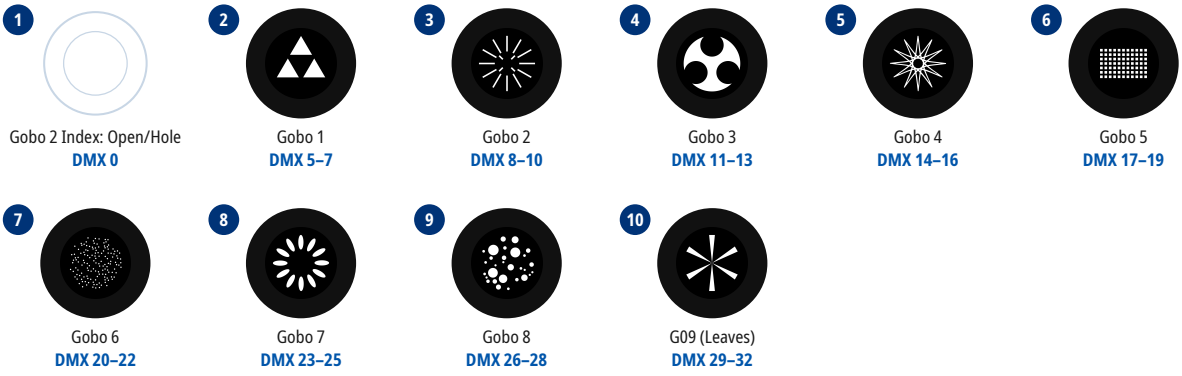
8 Functions at a glance

Functions in each DMX mode

	Mode 1 24 channels	Mode 2 16 channels	Mode 3 30 channels
Pan / Tilt	**1, 3**	**1, 2**	**1, 3**
Pan / Tilt resolution	16 bit	8 bit	16 bit
Dimmer	**23**	**16**	**29**
Dimmer resolution	16 bit	8 bit	16 bit
Shutter / strobe	**22**	**15**	**28**
Color wheel	**7**	**5**	**7**
Gobo wheel	**10, 11**	**7, 8**	**16, 17**
Gobo rotation	**12 ***	**9 ***	**18 ***
Prism	**14, 15**	**10, 11**	**20, 21**
Frost	**16**	**12**	**22**
Zoom	**17**	**13**	**23**
Focus	**19, 21**	**14**	**25, 27**
Effects / macros	**9, 14**	**6, 10**	**9, 20**

* The function works only when another channel switches it on; see the DMX table.

Gobo wheel 1



Color wheel 1

1
Open/White - Positioning
DMX 0–3

2
Deep Red - Positioning
DMX 4–12

3
Deep Blue - Positioning
DMX 13–21

4
Yellow - Positioning
DMX 22–31

5
Green - Positioning
DMX 32–40

6
Magenta - Positioning
DMX 41–49

7
Azure - Positioning
DMX 50–58

8
Red - Positioning
DMX 59–67

9
Dark green - Positioning
DMX 68–76

10
Amber - Positioning
DMX 77–85

11 
Blue - Positioning
DMX 86–95

12
Orange - Positioning
DMX 96–104

13
CTO - Positioning
DMX 105–113

14
UV (Kongo blue) - Positioning
DMX 114–127

Gobo wheel 2

1
Open/Hole
DMX 0–3

2 
Static Gobo: Gobo 1
DMX 4–9

3 
Static Gobo: Gobo 2
DMX 10–15

4 
Static Gobo: Gobo 3
DMX 16–21

5 
Static Gobo: Gobo 4
DMX 22–27

6 
Static Gobo: Gobo 5
DMX 28–33

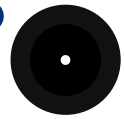
7 
Static Gobo: Gobo 6
DMX 34–39

8 
Static Gobo: Gobo 7
DMX 40–45

9 
Static Gobo: Gobo 8
DMX 46–51

10 
Static Gobo: Gobo 9
DMX 52–57

11 
Static Gobo: Gobo 10
DMX 58–63

12 
Static Gobo: Beam reducer 1
DMX 64–69

13 
Static Gobo: Beam reducer 2
DMX 70–75

14 
Static Gobo: Beam reducer 3
DMX 76–81

15 
G14
DMX 82–88

Animation wheel

1
Open

2 
Animation

Prism

1
Open position
DMX 0–19

2 
6 facets
Prism 1 - 6 - facet linear - Indexing
DMX 20–49

3 
8 facets
Prism 2 - 8 - facet circular - Indexing
DMX 76–105

Color wheel 2

1
Open

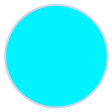
2
Filter 4 (Medium Bastard Amber)

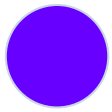
3
Filter 10 (Medium Yellow)

4
Filter 19 (Fire)

5
Filter 26 (Bright Red)

6
Filter 58 (Lavender)

7 
Filter 68 (Sky Blue)

8 
Filter 71 (Tokyo Blue)

9 
Filter 79 (Just Blue)

10
Filter 88 (Lime Green)

11
Filter 90 (Dark Yellow Green)

12
Filter 100 (Spring Yellow)

13
Filter 101 (Yellow)

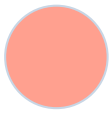
14
Filter 102 (Light Amber)

15
Filter 103 (Straw)

16
Filter 104 (Deep Amber)

17
Filter 105 (Orange)

18
Filter 106 (Primary Red)

19 
Filter 111 (Dark Pink)

20
Filter 115 (Peacock Blue)

21
Filter 116 (Medium Blue - Green)

22
Filter 117 (Steel Blue)

23
Filter 118 (Light Blue)

24 
Filter 119 (Dark Blue)

25 Filter 120 (Deep Blue)

26 Filter 121 (Filter Green)

27 Filter 128 (Bright Pink)

28 Filter 131 (Marine Blue)

29 Filter 132 (Medium Blue)

30 Filter 134 (Golden Amber)

31 Filter 135 (Deep Golden Amber)

32 Filter 136 (Pale Lavender)

33 Filter 137 (Special Lavender)

34 Filter 138 (Pale Green)

35 Filter 139 (Primary Green)

36 Filter 141 (Bright Blue)

37 Filter 147 (Apricot)

38 Filter 148 (Bright Rose)

39 Filter 152 (Pale Gold)

40 Filter 154 (Pale Rose)

41 Filter 157 (Pink)

42 Filter 158 (Deep Orange)

43 Filter 162 (Bastard Amber)

44 Filter 164 (Flame Red)

45 Filter 165 (Daylight Blue)

46 Filter 169 (Lilac Tint)

47 Filter 170 (Deep Lavender)

48 Filter 172 (Lagoon Blue)

49 Filter 179 (Chrome Orange)

50 Filter 180 (Dark Lavender)

51 Filter 181 (Congo Blue)

52 Filter 197 (Alice Blue)

53 Filter 201 (Full CT Blue)

54 Filter 202 (Half CT Blue)

55 Filter 203 (Quarter CT Blue)

56 Filter 204 (Full CT Orange)

57 Filter 205 (Half CT Orange)

58 Filter 206 (Quarter CT Orange)

59 Filter 247 (Filter Minus Green)

60 Filter 248 (Half Minus Green)

61 Filter 281 (Three Quarter CT Blue)

62 Filter 285 (Three Quarter CT Orange)

63 Filter 352 (Glacier Blue)

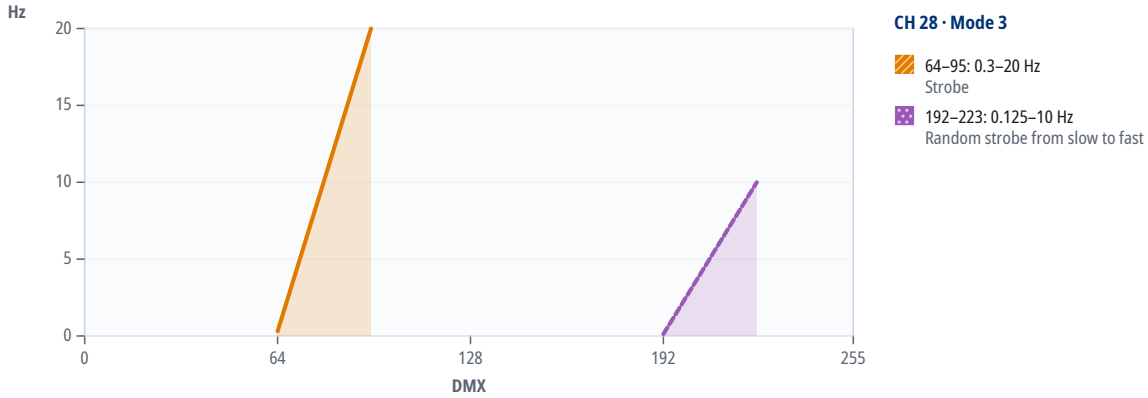
64 Filter 353 (Lighter Blue)

65 Filter 715 (Cabana Blue)

66 Filter 778 (Millennium Gold)

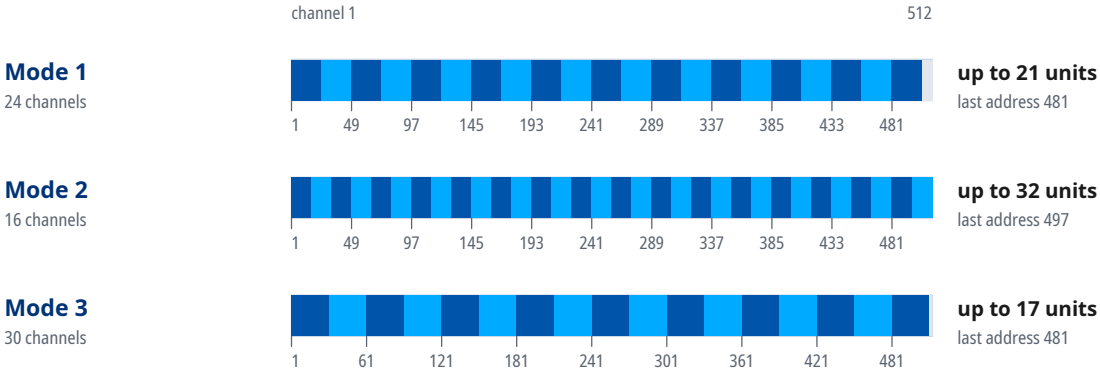
67 Filter 793 (Vanity Fair)

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Mode 3”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	151	11	301	16	451
2	31	7	181	12	331	17	481
3	61	8	211	13	361	18	U2 · 1
4	91	9	241	14	391	19	U2 · 31
5	121	10	271	15	421	20	U2 · 61

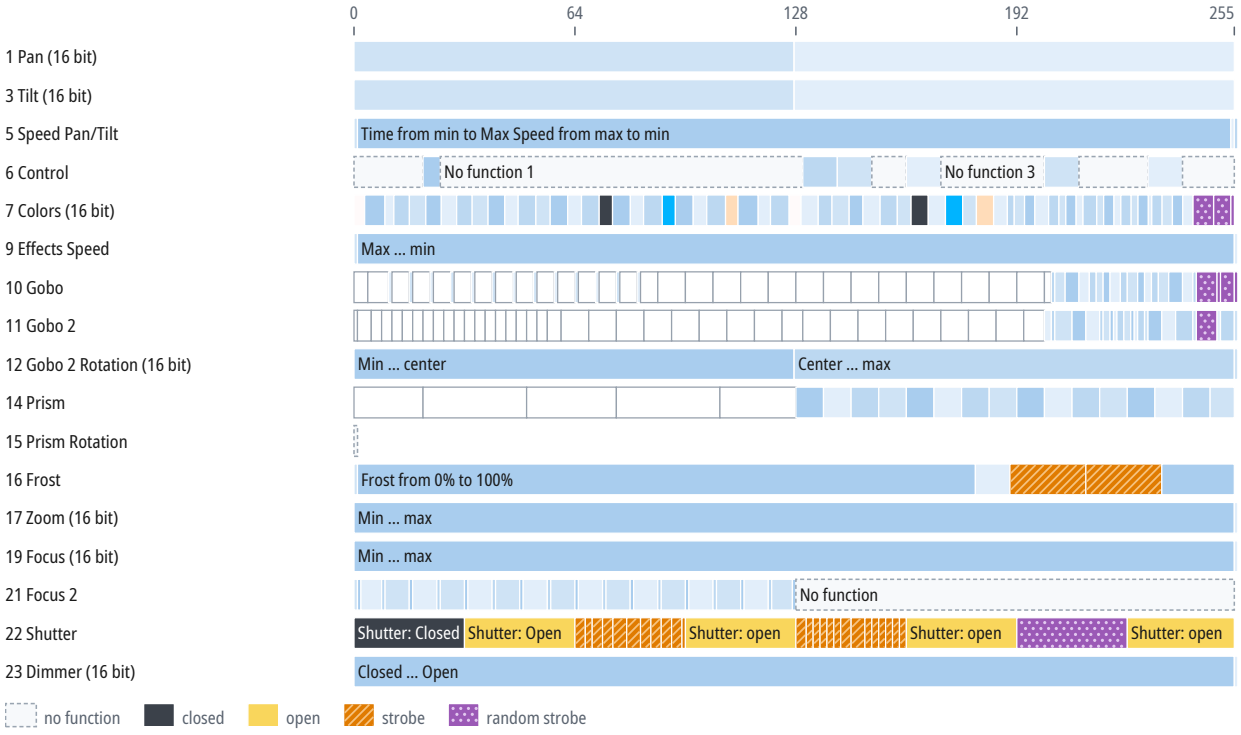
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 1

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 22 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 23 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 7 Colors 0, CH 22 Shutter 32, CH 23 Dimmer 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan
		128	Center
		128–255	Pan
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt
		128	Center
		128–255	Tilt
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Pan/Tilt speed / Time
		0	Min Speed Mode
		1–253	Time from min to Max Speed from max to min
		254	Max Speed Mode
		255	Standard mode
6	Control	0–19	No function
		20–24	Energy saving mode(230 W)
		25–129	No function 1
		130–139	Lamp On

CH	Function	DMX	Description
6	Control (continued)	140–149	X/Y Reset
		150–159	No function 2
		160–169	Motor Reset
		170–199	No function 3
		200–209	Reset
		210–229	No function 4
		230–239	Lamp Off
		240–255	No function 5
7	Colors	0–3	Open/White - Positioning
		3–9	Open/White - Positioning ... Deep Red - Positioning
		9–11	Deep Red - Positioning
		11–16	Deep Red - Positioning ... Deep Blue - Positioning
		16–20	Deep Blue - Positioning
		20–25	Deep Blue - Positioning ... Yellow - Positioning
		25–29	Yellow - Positioning
		29–34	Yellow - Positioning ... Green - Positioning
		34–38	Green - Positioning
		38–43	Green - Positioning ... Magenta - Positioning
		43–47	Magenta - Positioning
		47–52	Magenta - Positioning ... Azure - Positioning
		52–57	Azure - Positioning
		57–62	Azure - Positioning ... Red - Positioning
		62–66	Red - Positioning
		66–71	Red - Positioning ... Dark green - Positioning
		71–75	Dark green - Positioning
		75–80	Dark green - Positioning ... Amber - Positioning
		80–84	Amber - Positioning
		84–89	Amber - Positioning ... Blue - Positioning
		89–93	Blue - Positioning
		93–98	Blue - Positioning ... Orange - Positioning
		98–102	Orange - Positioning
		102–108	Orange - Positioning ... CTO - Positioning
		108–111	CTO - Positioning
		111–117	CTO - Positioning ... UV (Kongo blue) - Positioning
		117–121	UV (Kongo blue) - Positioning
		121–126	UV (Kongo blue) - Positioning ... Open/White (1) - Positioning
		126–129	Open/White (1) - Positioning
		130–134	Deep Red - Indexing
		135–138	Deep Blue - Indexing
		139–143	Yellow - Indexing
		144–147	Green - Indexing
		148–152	Magenta - Indexing

CH	Function	DMX	Description
7	Colors (continued)	153–157	Azure - Indexing
		158–161	Red - Indexing
		162–166	Dark green - Indexing
		167–171	Amber - Indexing
		172–176	Blue - Indexing
		177–180	Orange - Indexing
		181–185	CTO - Indexing
		186–189	UV (Kongo blue) - Indexing
		190–191	Color 1 Wheel Spin: Fast to slow 1/9 (382.6–282.4 °/s)
		192–194	Color 1 Wheel Spin: Fast to slow 2/9 (282.4–175.6 °/s)
		195–197	Color 1 Wheel Spin: Fast to slow 3/9 (175.6–114.9 °/s)
		198–201	Color 1 Wheel Spin: Fast to slow 4/9 (114.9–71.5 °/s)
		202–204	Color 1 Wheel Spin: Fast to slow 5/9 (71.5–53.7 °/s)
		205–206	Color 1 Wheel Spin: Fast to slow 6/9 (53.7–41 °/s)
		207–209	Color 1 Wheel Spin: Fast to slow 7/9 (41–23.8 °/s)
		210–211	Color 1 Wheel Spin: Fast to slow 8/9 (23.8–10.8 °/s)
		212–215	Color 1 Wheel Spin: Fast to slow 9/9 (10.8–2.16 °/s)
		216–217	No rotation middle
		218–220	Color 1 Wheel Spin: Slow to fast 1/9 (2.16–10.8 °/s)
		221–222	Color 1 Wheel Spin: Slow to fast 2/9 (10.8–23.8 °/s)
		223–225	Color 1 Wheel Spin: Slow to fast 3/9 (23.8–41 °/s)
		226–227	Color 1 Wheel Spin: Slow to fast 4/9 (41–53.7 °/s)
		228–230	Color 1 Wheel Spin: Slow to fast 5/9 (53.7–71.5 °/s)
		231	Color 1 Wheel Spin: Slow to fast 5/9 ... Slow to fast 6/9
		232–234	Color 1 Wheel Spin: Slow to fast 6/9 (71.5–114.9 °/s)
		235–237	Color 1 Wheel Spin: Slow to fast 7/9 (114.9–175.6 °/s)
		238–240	Color 1 Wheel Spin: Slow to fast 8/9 (175.6–282.4 °/s)
		241–243	Color 1 Wheel Spin: Slow to fast 9/9 (282.4–382.6 °/s)
		244–249	Random colour selection by audio control
		250–254	Color 1 Wheel Random: fast
		255	Color 1 Wheel Random: slow
8	Colors Fine	0–255	Fine adjustment of CH 7
9	Effects Speed		Effect Speed
		0	Max
		1–254	Max ... min
		255	Min
10	Gobo	0–3	Open/Hole
		4–9	Static Gobo: Beam reducer 1
		10	Beam reducer 1 ... Beam reducer 2
		11–15	Static Gobo: Beam reducer 2
		16	Beam reducer 2 ... Beam reducer 3
		17–21	Static Gobo: Beam reducer 3

CH	Function	DMX	Description
10	Gobo (continued)	22	Beam reducer 3 ... Gobo 10
		23–27	Static Gobo: Gobo 10
		28	Gobo 10 ... Gobo 9
		29–33	Static Gobo: Gobo 9
		34	Gobo 9 ... Gobo 8
		35–39	Static Gobo: Gobo 8
		40	Gobo 8 ... Gobo 7
		41–45	Static Gobo: Gobo 7
		46	Gobo 7 ... Gobo 6
		47–51	Static Gobo: Gobo 6
		52	Gobo 6 ... Gobo 5
		53–57	Static Gobo: Gobo 5
		58	Gobo 5 ... Gobo 4
		59–63	Static Gobo: Gobo 4
		64	Gobo 4 ... Gobo 3
		65–69	Static Gobo: Gobo 3
		70	Gobo 3 ... Gobo 2
		71–75	Static Gobo: Gobo 2
		76	Gobo 2 ... Gobo 1
		77–81	Static Gobo: Gobo 1
		82	Gobo 1 ... Beam reducer 4
		83–87	Static Gobo: Beam reducer 4
		88–95	Static Gobo Shake: Gobo 1
		96–103	Static Gobo Shake: Gobo 2
		104–111	Static Gobo Shake: Gobo 3
		112–119	Static Gobo Shake: Gobo 4
		120–127	Static Gobo Shake: Gobo 5
		128–135	Static Gobo Shake: Gobo 6
		136–143	Static Gobo Shake: Gobo 7
		144–151	Static Gobo Shake: Gobo 8
		152–159	Static Gobo Shake: Gobo 9
		160–167	Static Gobo Shake: Gobo 10
		168–175	Static Gobo Shake: Beam reducer 1
		176–183	Static Gobo Shake: Beam reducer 2
		184–191	Static Gobo Shake: Beam reducer 3
		192–199	Static Gobo Shake: Beam reducer 4
		200–201	Open/hole
		202	Static Wheel Spin: Fast to slow 1/8
		203–205	Static Wheel Spin: Fast to slow 2/8 (188.7–138.9 °/s)
		206–209	Static Wheel Spin: Fast to slow 3/8 (138.9–78.8 °/s)
		210–212	Static Wheel Spin: Fast to slow 4/8 (78.8–39 °/s)
		213–214	Static Wheel Spin: Fast to slow 5/8 (39–22.4 °/s)

CH	Function	DMX	Description
10	Gobo (continued)	215–216	Static Wheel Spin: Fast to slow 6/8 (22.4–12.4 °/s)
		217–218	Static Wheel Spin: Fast to slow 7/8 (12.4–2.49 °/s)
		219–221	Static Wheel Spin: Fast to slow 8/8
		222–223	No rotation middle
		224–226	Static Wheel Spin: Slow to fast 1/8
		227–228	Static Wheel Spin: Slow to fast 2/8 (2.49–12.4 °/s)
		229–230	Static Wheel Spin: Slow to fast 3/8 (12.4–22.4 °/s)
		231–232	Static Wheel Spin: Slow to fast 4/8 (22.4–39 °/s)
		233–235	Static Wheel Spin: Slow to fast 5/8 (39–78.8 °/s)
		236–239	Static Wheel Spin: Slow to fast 6/8 (78.8–138.9 °/s)
		240–242	Static Wheel Spin: Slow to fast 7/8 (138.9–188.7 °/s)
		243	Static Wheel Spin: Slow to fast 8/8
		244–249	Random gobo selection by audio control
		250	Auto random gobo selection fast
		251–254	Auto random gobo selection from fast to slow
		255	Auto random gobo selection slow
11	Gobo 2	0	Gobo 2 Index: Open/Hole
		1–4	Hole (flat field)
		5–7	Gobo 1
		8–10	Gobo 2
		11–13	Gobo 3
		14–16	Gobo 4
		17–19	Gobo 5
		20–22	Gobo 6
		23–25	Gobo 7
		26–28	Gobo 8
		29–31	Gobo 9
		32–34	Gobo 1 - Rotation
		35–37	Gobo 2 - Rotation
		38–40	Gobo 3 - Rotation
		41–43	Gobo 4 - Rotation
		44–46	Gobo 5 - Rotation
		47–49	Gobo 6 - Rotation
		50–52	Gobo 7 - Rotation
		53–55	Gobo 8 - Rotation
		56–59	Gobo 9 - Rotation
		60–67	Gobo 1 - Shaking Index
		68–75	Gobo 2 - Shaking Index (0.188–5.46 Hz)
		76–83	Gobo 3 - Shaking Index (0.188–5.46 Hz)
		84–91	Gobo 4 - Shaking Index (0.188–5.46 Hz)
		92–99	Gobo 5 - Shaking Index (0.188–5.46 Hz)
		100–107	Gobo 6 - Shaking Index (0.188–5.46 Hz)

CH	Function	DMX	Description
11	Gobo 2 (continued)	108–115	Gobo 7 - Shaking Index (0.188–5.46 Hz)
		116–123	Gobo 8 - Shaking Index (0.188–5.46 Hz)
		124–129	Gobo 9 - Shaking Index (0.188–5.46 Hz)
		130–137	Gobo 1 - Shaking Rotation (0.188–5.46 Hz)
		138–145	Gobo 2 - Shaking Rotation (0.188–5.46 Hz)
		146–153	Gobo 3 - Shaking Rotation (0.188–5.46 Hz)
		154–161	Gobo 4 - Shaking Rotation (0.188–5.46 Hz)
		162–169	Gobo 5 - Shaking Rotation (0.188–5.46 Hz)
		170–177	Gobo 6 - Shaking Rotation (0.188–5.46 Hz)
		178–185	Gobo 7 - Shaking Rotation (0.188–5.46 Hz)
		186–193	Gobo 8 - Shaking Rotation (0.188–5.46 Hz)
		194–199	Gobo 9 - Shaking Rotation (0.188–5.46 Hz)
		200–201	Gobo 2 Select Shake Rot: Open/Hole
		202	Gobo 2 Wheel Spin: Fast to slow 1/9
		203–207	Gobo 2 Wheel Spin: Fast to slow 2/9 (57.9–44.3 °/s)
		208–211	Gobo 2 Wheel Spin: Fast to slow 3/9 (44.3–20.7 °/s)
		212–215	Gobo 2 Wheel Spin: Fast to slow 4/9 (20.7–9.63 °/s)
		216	Gobo 2 Wheel Spin: Fast to slow 5/9 (9.63–9.63 °/s)
		217–218	Gobo 2 Wheel Spin: Fast to slow 6/9 (8.24–4.08 °/s)
		219	Gobo 2 Wheel Spin: Fast to slow 7/9 (4.08–4.02 °/s)
		220	Gobo 2 Wheel Spin: Fast to slow 8/9 (3.39–3.05 °/s)
		221–222	Gobo 2 Wheel Spin: Fast to slow 9/9 (3.05–2.35 °/s)
		223–224	Gobo 2 Wheel Spin: Slow to fast 1/9 (2.35–3.05 °/s)
		225	Gobo 2 Wheel Spin: Slow to fast 2/9 (3.05–3.39 °/s)
		226	Gobo 2 Wheel Spin: Slow to fast 3/9
		227–228	Gobo 2 Wheel Spin: Slow to fast 4/9 (4.08–8.24 °/s)
		229	Gobo 2 Wheel Spin: Slow to fast 5/9
		230–233	Gobo 2 Wheel Spin: Slow to fast 6/9 (9.63–20.7 °/s)
		234–237	Gobo 2 Wheel Spin: Slow to fast 7/9 (20.7–44.3 °/s)
		238–242	Gobo 2 Wheel Spin: Slow to fast 8/9 (44.3–57.9 °/s)
		243	Gobo 2 Wheel Spin: Slow to fast 9/9
		244–249	Random gobo selection by audio control
		250	Auto random gobo selection fast
		251–254	Auto random gobo selection from fast to slow
		255	Auto random gobo selection slow
12	Gobo 2 Rotation		When CH 11 is 0–31:
		0–127	Min ... center
		128–255	Center ... max
		255	Max
			When CH 11 is 32–59:
		0	No rotation
		1–24	Fast to slow 100% (900–369.2 °/s)

CH	Function	DMX	Description
12	Gobo 2 Rotation (continued)	25–49	Fast to slow 80% (369.2–74.1 °/s)
		50–74	Fast to slow 60% (74.1–18.4 °/s)
		75–99	Fast to slow 40% (18.4–4.42 °/s)
		100–119	Fast to slow 20% (4.42–1.1 °/s)
		120–123	Fast to slow 10% (1.1–0.638 °/s)
		124–127	Fast to slow 5% (0.638–0.221 °/s)
		128	No rotation middle
		129–132	Slow to fast 5% (0.221–0.638 °/s)
		133–136	Slow to fast 10% (0.638–1.1 °/s)
		137–156	Slow to fast 20% (1.1–4.42 °/s)
		157–181	Slow to fast 40% (4.42–18.4 °/s)
		182–206	Slow to fast 60% (18.4–74.1 °/s)
		207–231	Slow to fast 80% (74.1–369.2 °/s)
		232–255	Slow to fast 100% (369.2–900 °/s)
			When CH 11 is 60–129:
		0–127	Min ... center
		128–255	Center ... max
		255	Max
			When CH 11 is 130–199:
		0	No rotation
		1–24	Fast to slow 100% (900–369.2 °/s)
		25–49	Fast to slow 80% (369.2–74.1 °/s)
		50–74	Fast to slow 60% (74.1–18.4 °/s)
		75–99	Fast to slow 40% (18.4–4.42 °/s)
		100–119	Fast to slow 20% (4.42–1.1 °/s)
		120–123	Fast to slow 10% (1.1–0.638 °/s)
		124–127	Fast to slow 5% (0.638–0.221 °/s)
		128	No rotation middle
		129–132	Slow to fast 5% (0.221–0.638 °/s)
		133–136	Slow to fast 10% (0.638–1.1 °/s)
		137–156	Slow to fast 20% (1.1–4.42 °/s)
		157–181	Slow to fast 40% (4.42–18.4 °/s)
		182–206	Slow to fast 60% (18.4–74.1 °/s)
		207–231	Slow to fast 80% (74.1–369.2 °/s)
		232–255	Slow to fast 100% (369.2–900 °/s)
13	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 12
14	Prism	0–19	Open position
		20–49	Prism 1 - 6 - facet linear - Indexing
		50–75	Prism 1 - 6 - facet linear - Rotation
		76–105	Prism 2 - 8 - facet circular - Indexing
		106–127	Prism 2 - 8 - facet circular - Rotation
		128–135	Prism Macro 1

CH	Function	DMX	Description
14	Prism (continued)	136–143	Prism Macro 2
		144–151	Prism Macro 3
		152–159	Prism Macro 4
		160–167	Prism Macro 5
		168–175	Prism Macro 6
		176–183	Prism Macro 7
		184–191	Prism Macro 8
		192–199	Prism Macro 9
		200–207	Prism Macro 10
		208–215	Prism Macro 11
		216–223	Prism Macro 12
		224–231	Prism Macro 13
		232–239	Prism Macro 14
		240–247	Prism Macro 15
		248–255	Prism Macro 16
15	Prism Rotation		When CH 14 is 0–19:
		0–255	
			When CH 14 is 20–49:
		0	Max
		1–126	Max … center
		127	Center
		128–254	Center … min
		255	Min
			When CH 14 is 50–75:
		0	No rotation
		1–24	Fast to slow 1/7 (1237–865.4 °/s)
		25–49	Fast to slow 2/7 (865.4–491.1 °/s)
		50–74	Fast to slow 3/7 (491.1–308.7 °/s)
		75–99	Fast to slow 4/7 (308.7–122.9 °/s)
		100–119	Fst to slow 5/7 (122.9–7.58 °/s)
		120–124	Fast to slow 6/7 (7.58–2.15 °/s)
		125–127	Fast to slow 7/7 (2.15–0.644 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.644–2.15 °/s)
		132–136	Slow to fast 2/7 (2.15–7.58 °/s)
		137–156	Slow to fast 3/7 (7.58–122.9 °/s)
		157–181	Slow to fast 4/7 (122.9–308.7 °/s)
		182–206	Slow to fast 5/7 (308.7–491.1 °/s)
		207–232	Slow to fast 6/7 (491.1–865.4 °/s)
		233–255	Slow to fast 7/7 (865.4–1237 °/s)
			When CH 14 is 76–105:
		0	Min

CH	Function	DMX	Description
15	Prism Rotation (continued)	1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
			When CH 14 is 106–127:
		0	No rotation
		1–24	Fast to slow 1/7 (1237–865.4 °/s)
		25–49	Fast to slow 2/7 (865.4–491.1 °/s)
		50–74	Fast to slow 3/7 (491.1–308.7 °/s)
		75–99	Fast to slow 4/7 (308.7–122.9 °/s)
		100–119	Fst to slow 5/7 (122.9–7.58 °/s)
		120–124	Fast to slow 6/7 (7.58–2.15 °/s)
		125–127	Fast to slow 7/7 (2.15–0.644 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.644–2.15 °/s)
		132–136	Slow to fast 2/7 (2.15–7.58 °/s)
		137–156	Slow to fast 3/7 (7.58–122.9 °/s)
		157–181	Slow to fast 4/7 (122.9–308.7 °/s)
		182–206	Slow to fast 5/7 (308.7–491.1 °/s)
		207–232	Slow to fast 6/7 (491.1–865.4 °/s)
		233–255	Slow to fast 7/7 (865.4–1237 °/s)
16	Frost	0	Open
		1–179	Frost from 0% to 100%
		180–189	100% Frost
		190–211	Pulse closing from slow to fast
		212–233	Pulse opening from fast to slow
		234–255	Ramping from fast to slow
17	Zoom		When CH 11 is 0:
		0–255	Min ... max
		255	Max
			When CH 11 is 1–255:
		0–255	Min ... max
		255	Max
18	Zoom Fine	0–255	Fine adjustment of CH 17
19	Focus	0–255	Min ... max
		255	Max
20	Focus Fine	0–255	Fine adjustment of CH 19
21	Focus 2	0	Autofocus Off
		1	Autofocus - Rotationg gobos: 10 metres
		2–7	10 metres ... 15 metres
		8	15 metres
		9–15	15 metres ... 20 metres

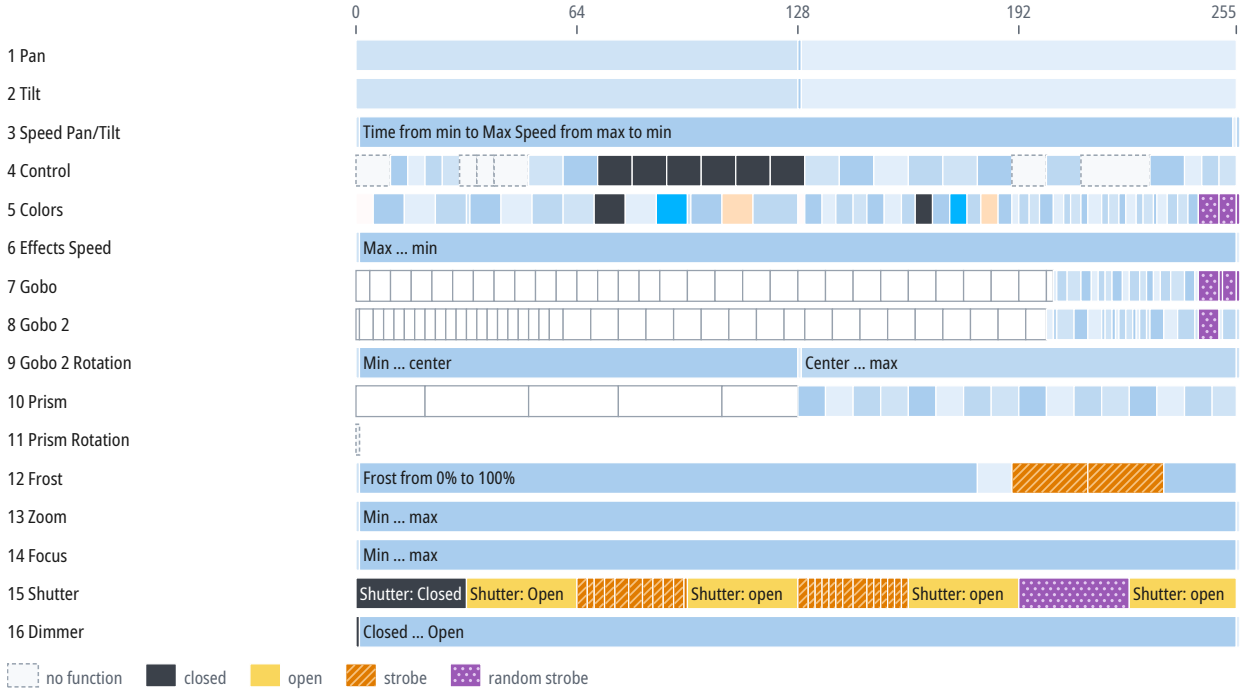
CH	Function	DMX	Description
21	Focus 2 (continued)	16	Autofocus - Rotationg gobos: 20 metres
		17–23	20 metres ... 25 metres
		24	25 metres
		25–31	25 metres ... 30 metres
		32	Autofocus - Rotationg gobos: 30 metres
		33–39	30 metres ... 35 metres
		40	35 metres
		41–47	35 metres ... 40 metres
		48	Autofocus - Rotationg gobos: 40 metres
		49–55	40 metres ... 45 metres
		56	45 metres
		57–63	Autofocus - Rotationg gobos
		64	Autofocus - Static gobos: 10 metres
		65–71	10 metres ... 20 metres
		72	Autofocus - Static gobos: 20 metres
		73–79	20 metres ... 30 metres
		80	Autofocus - Static gobos: 30 metres
		81–87	30 metres ... 40 metres
		88	Autofocus - Static gobos: 40 metres
		89–95	40 metres ... 50 metres
		96	50 metres
		97–103	50 metres ... 60 metres
		104	60 metres
		105–111	60 metres ... 70 metres
		112	70 metres
		113–119	70 metres ... 80 metres
		120	80 metres
		121–126	80 metres ... Infinity
		127	Infinity
		128–255	No function
22	Shutter	0–31	Shutter: Closed
		32–63	Shutter: Open
		64–66	Strobe: Slow to fast 1/12 (0.412–0.47 Hz)
		67–68	Strobe: Slow to fast 2/12 (0.501–0.544 Hz)
		69–71	Strobe: Slow to fast 3/12 (0.596–0.72 Hz)
		72–74	Strobe: Slow to fast 4/12 (0.814–1.07 Hz)
		75–78	Strobe: Slow to fast 5/12 (1.25–1.76 Hz)
		79–82	Strobe: Slow to fast 6/12 (2.03–3.73 Hz)
		83–85	Strobe: Slow to fast 7/12 (5.29–5.95 Hz)
		86–88	Strobe: Slow to fast 8/12 (6.33–7.3 Hz)
		89–91	Strobe: Slow to fast 9/12 (7.94–8.93 Hz)
		92–94	Strobe: Slow to fast 10/12 (9.26–10.3 Hz)

CH	Function	DMX	Description
22	Shutter (continued)	95	Strobe: Slow to fast 11/12
		96–127	Shutter: open
		128–130	Strobe Pulse Open: Slow to fast 1/7
		131–132	Strobe Pulse Open: Slow to fast 2/7
		133–134	Strobe Pulse Open: Slow to fast 3/7 (0.136–0.286 Hz)
		135–136	Strobe Pulse Open: Slow to fast 4/7 (0.357–0.426 Hz)
		137–138	Strobe Pulse Open: Slow to fast 5/7 (0.556–0.676 Hz)
		139–140	Strobe Pulse Open: Slow to fast 6/7 (0.833–1 Hz)
		141–143	Strobe Pulse Open: Slow to fast 7/7 (1.18–1.65 Hz)
		144–147	Strobe Pulse Close: Fast to slow 7/7
		148–149	Strobe Pulse Close: Fast to slow 6/7
		150–151	Strobe Pulse Close: Fast to slow 5/7 (0.286–0.357 Hz)
		152–153	Strobe Pulse Close: Fast to slow 4/7 (0.426–0.556 Hz)
		154–155	Strobe Pulse Close: Fast to slow 3/7 (0.676–0.833 Hz)
		156–157	Strobe Pulse Close: Fast to slow 2/7 (1–1.18 Hz)
		158–159	Strobe Pulse Close: Fast to slow 1/7 (1.26–1.65 Hz)
		160–191	Shutter: open
		192–223	Random strobe from slow to fast (0.125–10 Hz)
		224–255	Shutter: open
23	Dimmer	0–255	Closed … Open
		255	Open
24	Dimmer Fine	0–255	Fine adjustment of CH 23

Mode 2

If the device receives DMX in this mode but gives no light, check these channels: CH 15 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 5 Colors 0, CH 15 Shutter 32.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan
		128	Center
		129–255	Pan
2	Tilt	0–127	Tilt
		128	Center
		129–255	Tilt
3	Speed Pan/Tilt		Same as CH 5 in the mode “Mode 1” (p. 12)
4	Control	0–9	No function
		10–14	DMX input: Wired DMX
		15–19	DMX input: Wireless DMX
		20–24	Eco mode
		25–29	Standard mode
		30–34	High CRI (CRI=90+)
		35–39	Standard CRI (CRI=80)
		40–49	No function
		50–59	Pan/Tilt speed mode
		60–69	Pan/Tilt time mode
		70–79	Blackout while pan/tilt moving
		80–89	Disabled blackout while pan/tilt moving

CH	Function	DMX	Description
4	Control (continued)	90–99	Blackout while color wheel moving
		100–109	Disabled blackout while color wheel moving
		110–119	Blackout while gobo wheel moving
		120–129	Disabled blackout while gobo wheel moving
		130–139	Lamp On + reset (total reset except pan/tilt
		140–149	Pan/Tilt reset
		150–159	Color system reset
		160–169	Gobo wheels reset
		170–179	Dimmer/Shutter reset
		180–189	Zoom/Focus/Prism reset
		190–199	No function
		200–209	Total reset
		210–229	No function
		230–239	Lamp Off
		240–244	RoboSpot enabled
		245–249	RoboSpot disabled - except handle faders and pan/tilt
		250–255	RoboSpot fully disabled except pan/tilt
5	Colors	0–4	Open/White - Positioning
		5–13	Deep Red - Positioning
		14–22	Deep Blue - Positioning
		23–31	Yellow - Positioning
		32	Yellow - Positioning ... Green - Positioning
		33–41	Green - Positioning
		42–50	Magenta - Positioning
		51–59	Azure - Positioning
		60–68	Red - Positioning
		69–77	Dark green - Positioning
		78–86	Amber - Positioning
		87–95	Blue - Positioning
		96	Blue - Positioning ... Orange - Positioning
		97–105	Orange - Positioning
		106–114	CTO - Positioning
		115–127	UV (Kongo blue) - Positioning
		128–129	Open/White (1) - Positioning
		130–134	Deep Red - Indexing
		135–138	Deep Blue - Indexing
		139–143	Yellow - Indexing
		144–147	Green - Indexing
		148–152	Magenta - Indexing
		153–157	Azure - Indexing
		158–161	Red - Indexing
		162–166	Dark green - Indexing

CH	Function	DMX	Description
5	Colors (continued)	167–171	Amber - Indexing
		172–176	Blue - Indexing
		177–180	Orange - Indexing
		181–185	CTO - Indexing
		186–189	UV (Kongo blue) - Indexing
		190–191	Color 1 Wheel Spin: Fast to slow 1/9 (382.6–282.4 °/s)
		192–194	Color 1 Wheel Spin: Fast to slow 2/9 (282.4–175.6 °/s)
		195–197	Color 1 Wheel Spin: Fast to slow 3/9 (175.6–114.9 °/s)
		198–201	Color 1 Wheel Spin: Fast to slow 4/9 (114.9–71.5 °/s)
		202–204	Color 1 Wheel Spin: Fast to slow 5/9 (71.5–53.7 °/s)
		205–206	Color 1 Wheel Spin: Fast to slow 6/9 (53.7–41 °/s)
		207–209	Color 1 Wheel Spin: Fast to slow 7/9 (41–23.8 °/s)
		210–211	Color 1 Wheel Spin: Fast to slow 8/9 (23.8–10.8 °/s)
		212–215	Color 1 Wheel Spin: Fast to slow 9/9 (10.8–2.16 °/s)
		216–217	No rotation middle
		218–220	Color 1 Wheel Spin: Slow to fast 1/9 (2.16–10.8 °/s)
		221–222	Color 1 Wheel Spin: Slow to fast 2/9 (10.8–23.8 °/s)
		223–225	Color 1 Wheel Spin: Slow to fast 3/9 (23.8–41 °/s)
		226–227	Color 1 Wheel Spin: Slow to fast 4/9 (41–53.7 °/s)
		228–230	Color 1 Wheel Spin: Slow to fast 5/9 (53.7–71.5 °/s)
		231	Color 1 Wheel Spin: Slow to fast 5/9 ... Slow to fast 6/9
		232–234	Color 1 Wheel Spin: Slow to fast 6/9 (71.5–114.9 °/s)
		235–237	Color 1 Wheel Spin: Slow to fast 7/9 (114.9–175.6 °/s)
		238–240	Color 1 Wheel Spin: Slow to fast 8/9 (175.6–282.4 °/s)
		241–243	Color 1 Wheel Spin: Slow to fast 9/9 (282.4–382.6 °/s)
		244–249	Random colour selection by audio control
		250–254	Color 1 Wheel Random: fast
		255	Color 1 Wheel Random: slow
6	Effects Speed		Same as CH 9 in the mode “Mode 1” (p. 14)
7	Gobo	0–3	Open/Hole
		4–9	Static Gobo: Gobo 1
		10–15	Static Gobo: Gobo 2
		16–21	Static Gobo: Gobo 3
		22–27	Static Gobo: Gobo 4
		28–33	Static Gobo: Gobo 5
		34–39	Static Gobo: Gobo 6
		40–45	Static Gobo: Gobo 7
		46–51	Static Gobo: Gobo 8
		52–57	Static Gobo: Gobo 9
		58–63	Static Gobo: Gobo 10
		64–69	Static Gobo: Beam reducer 1
		70–75	Static Gobo: Beam reducer 2

CH	Function	DMX	Description
7	Gobo (continued)	76–81	Static Gobo: Beam reducer 3
		82–87	Static Gobo: Beam reducer 4
		88–95	Static Gobo Shake: Gobo 1
		96–103	Static Gobo Shake: Gobo 2
		104–111	Static Gobo Shake: Gobo 3
		112–119	Static Gobo Shake: Gobo 4
		120–127	Static Gobo Shake: Gobo 5
		128–135	Static Gobo Shake: Gobo 6
		136–143	Static Gobo Shake: Gobo 7
		144–151	Static Gobo Shake: Gobo 8
		152–159	Static Gobo Shake: Gobo 9
		160–167	Static Gobo Shake: Gobo 10
		168–175	Static Gobo Shake: Beam reducer 1
		176–183	Static Gobo Shake: Beam reducer 2
		184–191	Static Gobo Shake: Beam reducer 3
		192–199	Static Gobo Shake: Beam reducer 4
		200–201	Open/hole
		202	Static Wheel Spin: Fast to slow 1/8
		203–205	Static Wheel Spin: Fast to slow 2/8 (188.7–138.9 °/s)
		206–209	Static Wheel Spin: Fast to slow 3/8 (138.9–78.8 °/s)
		210–212	Static Wheel Spin: Fast to slow 4/8 (78.8–39 °/s)
		213–214	Static Wheel Spin: Fast to slow 5/8 (39–22.4 °/s)
		215–216	Static Wheel Spin: Fast to slow 6/8 (22.4–12.4 °/s)
		217–218	Static Wheel Spin: Fast to slow 7/8 (12.4–2.49 °/s)
		219–221	Static Wheel Spin: Fast to slow 8/8
		222–223	No rotation middle
		224–226	Static Wheel Spin: Slow to fast 1/8
		227–228	Static Wheel Spin: Slow to fast 2/8 (2.49–12.4 °/s)
		229–230	Static Wheel Spin: Slow to fast 3/8 (12.4–22.4 °/s)
		231–232	Static Wheel Spin: Slow to fast 4/8 (22.4–39 °/s)
		233–235	Static Wheel Spin: Slow to fast 5/8 (39–78.8 °/s)
		236–239	Static Wheel Spin: Slow to fast 6/8 (78.8–138.9 °/s)
		240–242	Static Wheel Spin: Slow to fast 7/8 (138.9–188.7 °/s)
		243	Static Wheel Spin: Slow to fast 8/8
		244–249	Random gobo selection by audio control
		250	Auto random gobo selection fast
		251–254	Auto random gobo selection from fast to slow
		255	Auto random gobo selection slow
8	Gobo 2		Same as CH 11 in the mode “Mode 1” (p. 16)
9	Gobo 2 Rotation		When CH 8 is 0–31:
		0	Min
		1–127	Min ... center

CH	Function	DMX	Description
9	Gobo 2 Rotation (continued)	128	Center
		129–254	Center ... max
		255	Max
			When CH 8 is 32–59:
		0	No rotation
		1–24	Fast to slow 100% (900–369.2 °/s)
		25–49	Fast to slow 80% (369.2–74.1 °/s)
		50–74	Fast to slow 60% (74.1–18.4 °/s)
		75–99	Fast to slow 40% (18.4–4.42 °/s)
		100–119	Fast to slow 20% (4.42–1.1 °/s)
		120–123	Fast to slow 10% (1.1–0.638 °/s)
		124–127	Fast to slow 5% (0.638–0.221 °/s)
		128	No rotation middle
		129–132	Slow to fast 5% (0.221–0.638 °/s)
		133–136	Slow to fast 10% (0.638–1.1 °/s)
		137–156	Slow to fast 20% (1.1–4.42 °/s)
		157–181	Slow to fast 40% (4.42–18.4 °/s)
		182–206	Slow to fast 60% (18.4–74.1 °/s)
		207–231	Slow to fast 80% (74.1–369.2 °/s)
		232–255	Slow to fast 100% (369.2–900 °/s)
			When CH 8 is 60–129:
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
			When CH 8 is 130–199:
		0	No rotation
		1–24	Fast to slow 100% (900–369.2 °/s)
		25–49	Fast to slow 80% (369.2–74.1 °/s)
		50–74	Fast to slow 60% (74.1–18.4 °/s)
		75–99	Fast to slow 40% (18.4–4.42 °/s)
		100–119	Fast to slow 20% (4.42–1.1 °/s)
		120–123	Fast to slow 10% (1.1–0.638 °/s)
		124–127	Fast to slow 5% (0.638–0.221 °/s)
		128	No rotation middle
		129–132	Slow to fast 5% (0.221–0.638 °/s)
		133–136	Slow to fast 10% (0.638–1.1 °/s)
		137–156	Slow to fast 20% (1.1–4.42 °/s)
		157–181	Slow to fast 40% (4.42–18.4 °/s)
		182–206	Slow to fast 60% (18.4–74.1 °/s)
		207–231	Slow to fast 80% (74.1–369.2 °/s)

CH	Function	DMX	Description
9	Gobo 2 Rotation (continued)	232–255	Slow to fast 100% (369.2–900 °/s)
10	Prism		Same as CH 14 in the mode “Mode 1” (p. 18)
11	Prism Rotation		When CH 10 is 0–19:
		0–255	
			When CH 10 is 20–49:
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
			When CH 10 is 50–75:
		0	No rotation
		1–24	Fast to slow 1/7 (1237–865.4 °/s)
		25–49	Fast to slow 2/7 (865.4–491.1 °/s)
		50–74	Fast to slow 3/7 (491.1–308.7 °/s)
		75–99	Fast to slow 4/7 (308.7–122.9 °/s)
		100–119	Fst to slow 5/7 (122.9–7.58 °/s)
		120–124	Fast to slow 6/7 (7.58–2.15 °/s)
		125–127	Fast to slow 7/7 (2.15–0.644 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.644–2.15 °/s)
		132–136	Slow to fast 2/7 (2.15–7.58 °/s)
		137–156	Slow to fast 3/7 (7.58–122.9 °/s)
		157–181	Slow to fast 4/7 (122.9–308.7 °/s)
		182–206	Slow to fast 5/7 (308.7–491.1 °/s)
		207–232	Slow to fast 6/7 (491.1–865.4 °/s)
		233–255	Slow to fast 7/7 (865.4–1237 °/s)
			When CH 10 is 76–105:
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
			When CH 10 is 106–127:
		0	No rotation
		1–24	Fast to slow 1/7 (1237–865.4 °/s)
		25–49	Fast to slow 2/7 (865.4–491.1 °/s)
		50–74	Fast to slow 3/7 (491.1–308.7 °/s)
		75–99	Fast to slow 4/7 (308.7–122.9 °/s)
		100–119	Fst to slow 5/7 (122.9–7.58 °/s)
		120–124	Fast to slow 6/7 (7.58–2.15 °/s)
		125–127	Fast to slow 7/7 (2.15–0.644 °/s)

CH	Function	DMX	Description
11	Prism Rotation (continued)	128	No rotation middle
		129–131	Slow to fast 1/7 (0.644–2.15 °/s)
		132–136	Slow to fast 2/7 (2.15–7.58 °/s)
		137–156	Slow to fast 3/7 (7.58–122.9 °/s)
		157–181	Slow to fast 4/7 (122.9–308.7 °/s)
		182–206	Slow to fast 5/7 (308.7–491.1 °/s)
		207–232	Slow to fast 6/7 (491.1–865.4 °/s)
		233–255	Slow to fast 7/7 (865.4–1237 °/s)
12	Frost		Same as CH 16 in the mode “Mode 1” (p. 20)
13	Zoom		When CH 8 is 0:
		0	Min
		1–254	Min ... max
		255	Max
			When CH 8 is 1–255:
		0	Min
		1–254	Min ... max
		255	Max
14	Focus	0	Min
		1–254	Min ... max
		255	Max
15	Shutter		Same as CH 22 in the mode “Mode 1” (p. 21)
16	Dimmer	0	Closed
		1–254	Closed ... Open
		255	Open

Mode 3

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 28 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 29 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 7 Colors 0, CH 28 Shutter 32, CH 29 Dimmer 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Mode 1” (p. 12)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Mode 1” (p. 12)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Mode 1” (p. 12)
6	Control		Same as CH 4 in the mode “Mode 2” (p. 23)
7	Colors	0–4	Open/White - Positioning
		4–13	Deep Red - Positioning
		13–22	Deep Blue - Positioning
		22–31	Yellow - Positioning
		32–41	Green - Positioning
		41–50	Magenta - Positioning

CH	Function	DMX	Description
7	Colors (continued)	50–59	Azure - Positioning
		59–68	Red - Positioning
		68–77	Dark green - Positioning
		77–86	Amber - Positioning
		86–95	Blue - Positioning
		96–105	Orange - Positioning
		105–114	CTO - Positioning
		114–127	UV (Kongo blue) - Positioning
		128–129	Open/White (1) - Positioning
		130–134	Deep Red - Indexing
		135–138	Deep Blue - Indexing
		139–143	Yellow - Indexing
		144–147	Green - Indexing
		148–152	Magenta - Indexing
		153–157	Azure - Indexing
		158–161	Red - Indexing
		162–166	Dark green - Indexing
		167–171	Amber - Indexing
		172–176	Blue - Indexing
		177–180	Orange - Indexing
		181–185	CTO - Indexing
		186–189	UV (Kongo blue) - Indexing
		190–191	Color 1 Wheel Spin: Fast to slow 1/9 (382.6–282.4 °/s)
		192–194	Color 1 Wheel Spin: Fast to slow 2/9 (282.4–175.6 °/s)
		195–197	Color 1 Wheel Spin: Fast to slow 3/9 (175.6–114.9 °/s)
		198–201	Color 1 Wheel Spin: Fast to slow 4/9 (114.9–71.5 °/s)
		202–204	Color 1 Wheel Spin: Fast to slow 5/9 (71.5–53.7 °/s)
		205–206	Color 1 Wheel Spin: Fast to slow 6/9 (53.7–41 °/s)
		207–209	Color 1 Wheel Spin: Fast to slow 7/9 (41–23.8 °/s)
		210–211	Color 1 Wheel Spin: Fast to slow 8/9 (23.8–10.8 °/s)
		212–215	Color 1 Wheel Spin: Fast to slow 9/9 (10.8–2.16 °/s)
		216–217	No rotation middle
		218–220	Color 1 Wheel Spin: Slow to fast 1/9 (2.16–10.8 °/s)
		221–222	Color 1 Wheel Spin: Slow to fast 2/9 (10.8–23.8 °/s)
		223–225	Color 1 Wheel Spin: Slow to fast 3/9 (23.8–41 °/s)
		226–227	Color 1 Wheel Spin: Slow to fast 4/9 (41–53.7 °/s)
		228–230	Color 1 Wheel Spin: Slow to fast 5/9 (53.7–71.5 °/s)
		231	Color 1 Wheel Spin: Slow to fast 5/9 ... Slow to fast 6/9
		232–234	Color 1 Wheel Spin: Slow to fast 6/9 (71.5–114.9 °/s)
		235–237	Color 1 Wheel Spin: Slow to fast 7/9 (114.9–175.6 °/s)
		238–240	Color 1 Wheel Spin: Slow to fast 8/9 (175.6–282.4 °/s)
		241–243	Color 1 Wheel Spin: Slow to fast 9/9 (282.4–382.6 °/s)

CH	Function	DMX	Description
7	Colors (continued)	244–249	Random colour selection by audio control
		250–254	Color 1 Wheel Random: fast
		255	Color 1 Wheel Random: slow
8	Colors Fine	0–255	Fine adjustment of CH 7
9	Effects Speed		Same as CH 9 in the mode “Mode 1” (p. 14)
10	Frost Speed		Frost time
		0	Function is off
		1–255	Time of frost movement
11	Color Wheel Speed		Color time
		0	Function is off
		1–255	Time of color wheel movement
12	Gobo Wheel Speed		Static gobo time
		0	Function is off
		1–255	Time of static gobo wheel movement
13	Prism Speed		Prism time
		0	Function is off
		1–255	Time of prism rotation
14	Zoom Speed		Zoom time
		0	Function is off
		1–255	Time of zoom movement
15	Focus Speed		Zoom Focus Frost Prism time
		0	Function is off
		1–255	Time of focus movement
16	Gobo		Same as CH 7 in the mode “Mode 2” (p. 25)
17	Gobo 2		Same as CH 11 in the mode “Mode 1” (p. 16)
18	Gobo 2 Rotation		When CH 17 is 0–31:
		0–127	Min ... center
		128–255	Center ... max
		255	Max
			When CH 17 is 32–59:
		0	No rotation
		1–24	Fast to slow 100% (900–369.2 °/s)
		25–49	Fast to slow 80% (369.2–74.1 °/s)
		50–74	Fast to slow 60% (74.1–18.4 °/s)
		75–99	Fast to slow 40% (18.4–4.42 °/s)
		100–119	Fast to slow 20% (4.42–1.1 °/s)
		120–123	Fast to slow 10% (1.1–0.638 °/s)
		124–127	Fast to slow 5% (0.638–0.221 °/s)
		128	No rotation middle
		129–132	Slow to fast 5% (0.221–0.638 °/s)
		133–136	Slow to fast 10% (0.638–1.1 °/s)

CH	Function	DMX	Description
18	Gobo 2 Rotation (continued)	137–156	Slow to fast 20% (1.1–4.42 °/s)
		157–181	Slow to fast 40% (4.42–18.4 °/s)
		182–206	Slow to fast 60% (18.4–74.1 °/s)
		207–231	Slow to fast 80% (74.1–369.2 °/s)
		232–255	Slow to fast 100% (369.2–900 °/s)
			When CH 17 is 60–129:
		0–127	Min ... center
		128–255	Center ... max
		255	Max
			When CH 17 is 130–199:
		0	No rotation
		1–24	Fast to slow 100% (900–369.2 °/s)
		25–49	Fast to slow 80% (369.2–74.1 °/s)
		50–74	Fast to slow 60% (74.1–18.4 °/s)
		75–99	Fast to slow 40% (18.4–4.42 °/s)
		100–119	Fast to slow 20% (4.42–1.1 °/s)
		120–123	Fast to slow 10% (1.1–0.638 °/s)
		124–127	Fast to slow 5% (0.638–0.221 °/s)
		128	No rotation middle
		129–132	Slow to fast 5% (0.221–0.638 °/s)
		133–136	Slow to fast 10% (0.638–1.1 °/s)
		137–156	Slow to fast 20% (1.1–4.42 °/s)
		157–181	Slow to fast 40% (4.42–18.4 °/s)
		182–206	Slow to fast 60% (18.4–74.1 °/s)
		207–231	Slow to fast 80% (74.1–369.2 °/s)
		232–255	Slow to fast 100% (369.2–900 °/s)
19	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 18
20	Prism		Same as CH 14 in the mode “Mode 1” (p. 18)
21	Prism Rotation		When CH 20 is 0–19:
		0–255	
			When CH 20 is 20–49:
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
			When CH 20 is 50–75:
		0	No rotation
		1–24	Fast to slow 1/7 (1237–865.4 °/s)
		25–49	Fast to slow 2/7 (865.4–491.1 °/s)
		50–74	Fast to slow 3/7 (491.1–308.7 °/s)

CH	Function	DMX	Description
21	Prism Rotation (continued)	75–99	Fast to slow 4/7 (308.7–122.9 °/s)
		100–119	Fst to slow 5/7 (122.9–7.58 °/s)
		120–124	Fast to slow 6/7 (7.58–2.15 °/s)
		125–127	Fast to slow 7/7 (2.15–0.644 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.644–2.15 °/s)
		132–136	Slow to fast 2/7 (2.15–7.58 °/s)
		137–156	Slow to fast 3/7 (7.58–122.9 °/s)
		157–181	Slow to fast 4/7 (122.9–308.7 °/s)
		182–206	Slow to fast 5/7 (308.7–491.1 °/s)
		207–232	Slow to fast 6/7 (491.1–865.4 °/s)
		233–255	Slow to fast 7/7 (865.4–1237 °/s)
			When CH 20 is 76–105:
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
			When CH 20 is 106–127:
		0	No rotation
		1–24	Fast to slow 1/7 (1237–865.4 °/s)
		25–49	Fast to slow 2/7 (865.4–491.1 °/s)
		50–74	Fast to slow 3/7 (491.1–308.7 °/s)
		75–99	Fast to slow 4/7 (308.7–122.9 °/s)
		100–119	Fst to slow 5/7 (122.9–7.58 °/s)
		120–124	Fast to slow 6/7 (7.58–2.15 °/s)
		125–127	Fast to slow 7/7 (2.15–0.644 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.644–2.15 °/s)
		132–136	Slow to fast 2/7 (2.15–7.58 °/s)
		137–156	Slow to fast 3/7 (7.58–122.9 °/s)
		157–181	Slow to fast 4/7 (122.9–308.7 °/s)
		182–206	Slow to fast 5/7 (308.7–491.1 °/s)
		207–232	Slow to fast 6/7 (491.1–865.4 °/s)
		233–255	Slow to fast 7/7 (865.4–1237 °/s)
22	Frost		Same as CH 16 in the mode “Mode 1” (p. 20)
23	Zoom		When CH 17 is 0:
		0–255	Min ... max
		255	Max
			When CH 17 is 1–255:
		0–255	Min ... max

CH	Function	DMX	Description
23	Zoom (continued)	255	Max
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Focus		Same as CH 19 in the mode “Mode 1” (p. 20)
26	Focus Fine	0–255	Fine adjustment of CH 25
27	Focus 2		Same as CH 21 in the mode “Mode 1” (p. 20)
28	Shutter		Same as CH 22 in the mode “Mode 1” (p. 21)
29	Dimmer		Same as CH 23 in the mode “Mode 1” (p. 22)
30	Dimmer Fine	0–255	Fine adjustment of CH 29

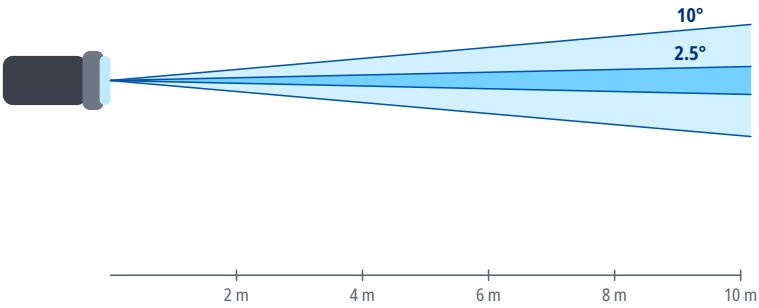
10 Technical specifications

Parameter	Value
Light	
Light source	discharge lamp
Lamp power	280 W
Luminous flux	9,870 lm
Color temperature	7,000 K
Color rendering index (CRI)	75
Optics	
Zoom	2.5–10°
Movement	
Pan	540°
Tilt	270°
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0.3–20 Hz
Color wheel 1 rotation	up to 470.3 °/s (78 rpm)
Gobo wheel 1 rotation	up to 56.6 °/s (9.4 rpm)
Gobo wheel 2 rotation	up to 188.7 °/s (31 rpm)
Gobo 1 rotation	up to 56.6 °/s (9.4 rpm)
Prism rotation	up to 30 °/s (5 rpm)

Spot diameter



Distance	Ø 2.5°	Ø 10°
2 m	0.09 m	0.35 m
4 m	0.17 m	0.7 m
6 m	0.26 m	1 m
8 m	0.35 m	1.4 m
10 m	0.44 m	1.7 m
15 m	0.65 m	2.6 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.