DMX REFERENCE

mpro v8

dez_Mpro v8

User Test



Manufacturer	User Test
GDTF file	User_Test_mpro_v8_19096.gdtf
GDTF revision	mproV8 · 2021-11-16
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1 About this manual

This document describes the dez_Mpro v8 by User Test. It was compiled from the GDTF file User_Test_mpro_v8_19096.gdtf from the GDTF-Share library.

File revision: “mproV8”.

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 User Test; 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
Power consumption	2,000 W
Weight	37.9 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 2 - Standard 8 bit	36	14	1, 37, 73, 109, ...

No light? Check these channels

- Mode 2 - Standard 8 bit: CH 7 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 35 Dimmer Mode above 3


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

3 Safety instructions


Read the manual before use


Risk of electric shock


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

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: 100–240 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

⚠ 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.

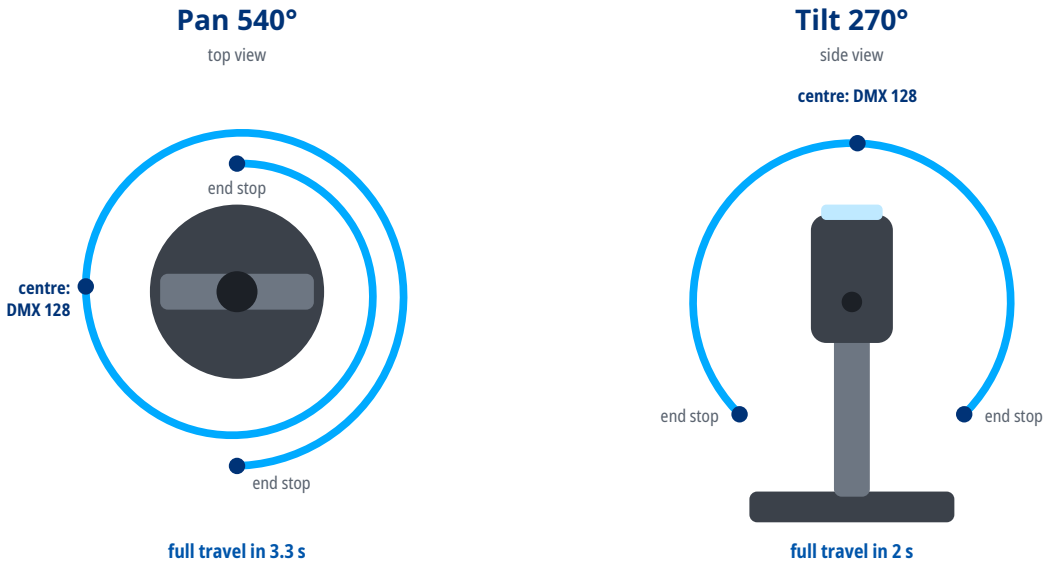
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do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

“Four fast shutter blades with smooth and precise movement in the new BMFL Blade lighting fixture. Individually angled and positioned within a frame - which itself can rotate through 90 degrees, providing a sharp or soft, precisely repeatable, frame for the projected image.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

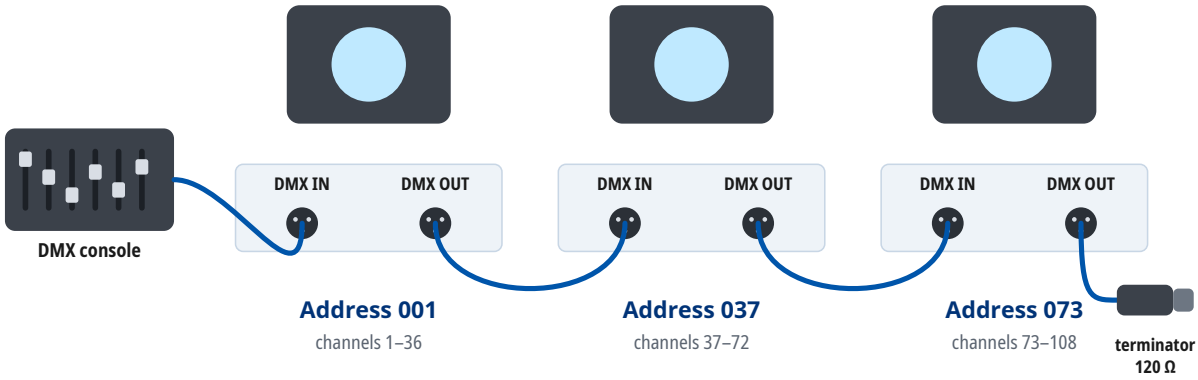
⚠ **WARNING**

- 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: 37.9 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 2 - Standard 8 bit: every unit occupies 36 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 2 - Standard 8 bit”: 36.
- 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 2 - Standard 8 bit”, you can use, for example, the start addresses 1, 37, 73, 109.
- 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

	Mode 2 - Standard 8 bit 36 channels
Pan / Tilt	1, 3
Dimmer	6
Shutter / strobe	7
Color mixing	8–10
Color temperature	11
Color wheel	12
Gobo wheel	14, 17
Gobo rotation	15 *
Prism	21, 22
Frost	23
Zoom	18
Focus	19
Iris	20
Animation wheel	25
Effects / macros	21

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

Gobo wheel 1

1
Static Gobo: Open
DMX 0–7

2 
Static Gobo: G01 (Dot Breakup)
DMX 8–19

3 
Static Gobo: G02 (Pick Up Sticks 2)
DMX 20–31

4 
Static Gobo: G03 (Snail Trails)
DMX 32–43

5 
Static Gobo: G04 (Tiger Print)
DMX 44–55

6 
Static Gobo: G05 (Summer Branches)
DMX 56–67

7 
Static Gobo: G06 (Leaf Breakup)
DMX 68–79

8 
Static Gobo: G07 (Radial Dashes 18)
DMX 80–91

9 
G08 (Dots 8)
DMX 92–104

Gobo wheel 2

1
Gobo 2 Index: Open
DMX 0–4

2 
G01 Index (New Raylines)
DMX 5–8

3 
G02 Index (Moon Scape XL)
DMX 9–13

4 
G03 Index (Leaf Breakup Medium)
DMX 14–17

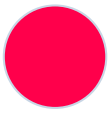
5 
G04 Index (Rotating Dots)
DMX 18–22

6 
G05 Index (Leaves)
DMX 23–26

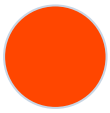
7 
G06 (Organic)
DMX 27–32

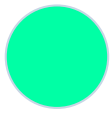
Color wheel 1

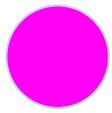
1
Open/white
DMX 0–11

2 
Deep red
DMX 12–32

3 
Deep blue
DMX 33–54

4 
Orange
DMX 55–76

5 
Green
DMX 77–97

6 
Congo Blue
DMX 98–118

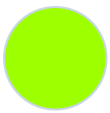
7 
C06 (Congo Blue)

Color wheel 2

1
Open

2 
C01 (Pink)

3 
C02 (Lavender)

4 
C03 (Laser Green)

5
C04 (Ctb 8000K)

6
C05 (Minus 1/1 Green)

7
C06 (Minus 1/2 Green)

Animation wheel

1	Open	2	Proportional indexing min	DMX 20	3 Wheel Slot 1

Prism

1 Open position/hole
DMX 0–19

2 
6 facets
6 - facet linear prism - indexing
DMX 20–49

3 
6 facets
6 - facet circular prism - indexing
DMX 76–105

Color wheel 3

1 Color Macro 1
2 Color Macro 2
3 Color Macro 3
4 Color Macro 4
5 Color Macro 5
6 Color Macro 6
7 Color Macro 7
8 Color Macro 8
9 Color Macro 9
10 Color Macro 10
11 Color Macro 11
12 Color Macro 12
13 Color Macro 13
14 Color Macro 14
15 Color Macro 15
16 Color Macro 16
17 Color Macro 17
18 Color Macro 18
19 Color Macro 19
20 Color Macro 20
21 Color Macro 21
22 Color Macro 22
23 Color Macro 23
24 Color Macro 24

25 Color Macro 25

26 Color Macro 26

27 Color Macro 27

28 Color Macro 28

29 Color Macro 29

30 Color Macro 30

31 Filter 4 (Medium Bastard Amber)

32 Filter 10 (Medium Yellow)

33 Filter 19 (Fire)

34 Filter 26 (Bright Red)

35 Filter 58 (Lavender)

36 Filter 68 (Sky Blue)

37 Filter 71 (Tokyo Blue)

38 Filter 79 (Just Blue)

39 Filter 88 (Lime Green)

40 Filter 90 (Dark Yellow Green)

41 Filter 100 (Spring Yellow)

42 Filter 101 (Yellow)

43 Filter 102 (Light Amber)

44 Filter 103 (Straw)

45 Filter 104 (Deep Amber)

46 Filter 105 (Orange)

47 Filter 106 (Primary Red)

48 Filter 111 (Dark Pink)

49 Filter 115 (Peacock Blue)

50 Filter 116 (Medium Blue-Green)

51 Filter 117 (Steel Blue)

52 Filter 118 (Light Blue)

53 Filter 119 (Dark Blue)

54 Filter 120 (Deep Blue)

55 Filter 121 (Filter Green)

56 Filter 128 (Bright Pink)

57 Filter 131 (Marine Blue)

58 Filter 132 (Medium Blue)

59 Filter 134 (Golden Amber)

60 Filter 135 (Deep Golden Amber)

61 Filter 136 (Pale Lavender)

62 Filter 137 (Special Lavender)

63 Filter 138 (Pale Green)

64 Filter 139 (Primary Green)

65 Filter 141 (Bright Blue)

66 Filter 147 (Apricot)

67 Filter 148 (Bright Rose)

68 Filter 152 (Pale Gold)

69 Filter 154 (Pale Rose)

70 Filter 157 (Pink)

71 Filter 158 (Deep Orange)

72 Filter 162 (Bastard Amber)

73 Filter 164 (Flame Red)

74 Filter 165 (Daylight Blue)

75 Filter 169 (Lilac Tint)

76 Filter 170 (Deep Lavender)

77 Filter 172 (Lagoon Blue)

78 Filter 179 (Chrome Orange)

79 Filter 180 (Dark Lavender)

80 Filter 181 (Congo Blue)

81 Filter 197 (Alice Blue)

82 Filter 201 (Full CT Blue)

83 Filter 202 (Half CT Blue)

84 Filter 203 (Quarter CT Blue)

85 Filter 204 (Full CT Orange)

86 Filter 205 (Half CT Orange)

87 Filter 206 (Quarter CT Orange)

88 Filter 247 (Filter Minus Green)

89 Filter 248 (Half Minus Green)

90 Filter 281 (Three Quarter CT Blue)

91 Filter 285 (Three Quarter CT Orange)

92 Filter 352 (Glacier Blue)

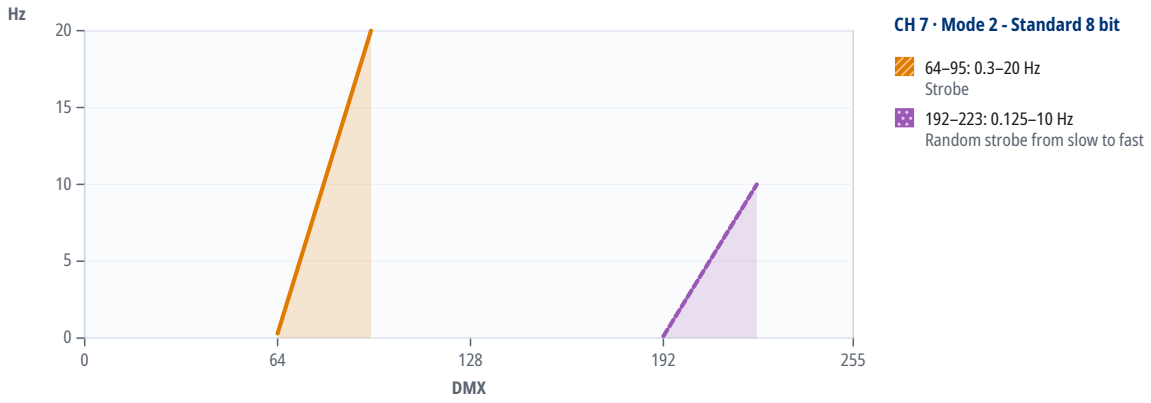
93 Filter 353 (Lighter Blue)

94 Filter 715 (Cabana Blue)

95 Filter 778 (Millennium Gold)

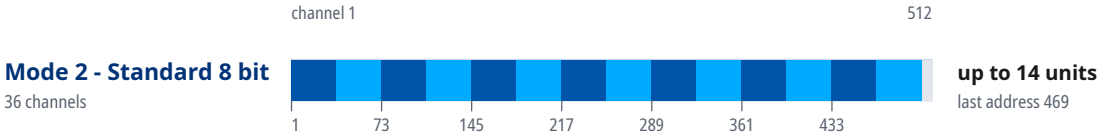
96 Filter 793 (Vanity Fair)

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Mode 2 - Standard 8 bit”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	181	11	361	16	U2 · 37
2	37	7	217	12	397	17	U2 · 73
3	73	8	253	13	433	18	U2 · 109
4	109	9	289	14	469	19	U2 · 145
5	145	10	325	15	U2 · 1	20	U2 · 181

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.

RDM personalities

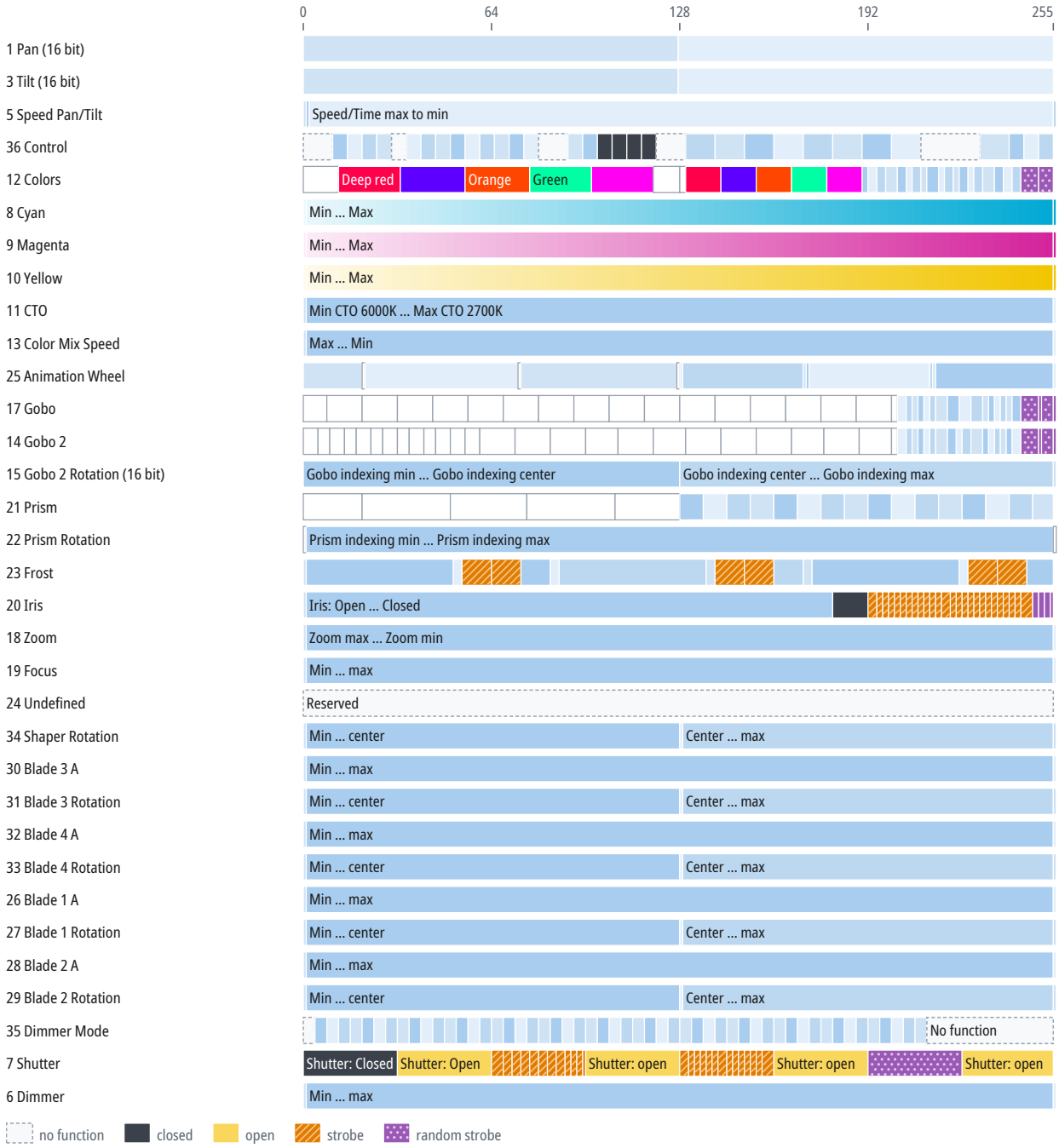
Mode	Channels	RDM personality
Mode 2 - Standard 8 bit	36	2

Mode 2 - Standard 8 bit

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 7 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 35 Dimmer Mode above 3. The GDTF file gives these values for a console's Highlight function: CH 7 Shutter 32, CH 12 Colors 0.

Channel functions at a glance



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

CH	Function	DMX	Description
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	0	Standard mode
		1	Max Speed Mode
		2–254	Speed/Time max to min
		255	Min Speed Mode
6	Dimmer	0	Min
		1–254	Min ... max
		255	Max
7	Shutter	0–31	Shutter: Closed
		32–63	Shutter: Open
		64–67	Strobe: Slow to fast 1/12 (0.41–0.55 Hz)
		68–70	Strobe: Slow to fast 2/12 (0.55–0.73 Hz)
		71–73	Strobe: Slow to fast 3/12 (0.73–1.08 Hz)
		74–76	Strobe: Slow to fast 4/12 (1.08–1.6 Hz)
		77–79	Strobe: Slow to fast 5/12 (1.6–2.5 Hz)
		80–82	Strobe: Slow to fast 6/12 (2.5–5.71 Hz)
		83–85	Strobe: Slow to fast 7/12 (5.71–7.22 Hz)
		86–88	Strobe: Slow to fast 8/12 (7.22–9.35 Hz)
		89–90	Strobe: Slow to fast 9/12 (9.35–10.2 Hz)
		91–92	Strobe: Slow to fast 10/12 (10.2–10.9 Hz)
		93–94	Strobe: Slow to fast 11/12 (10.9–11.2 Hz)
		95	Strobe: Slow to fast 12/12
		96–127	Shutter: open
		128–130	Strobe Pulse Open: Slow to fast 1/7 (0.042–0.091 Hz)
		131–132	Strobe Pulse Open: Slow to fast 2/7 (0.091–0.163 Hz)
		133–134	Strobe Pulse Open: Slow to fast 3/7 (0.163–0.312 Hz)
		135–136	Strobe Pulse Open: Slow to fast 4/7 (0.312–0.625 Hz)
		137–138	Strobe Pulse Open: Slow to fast 5/7 (0.625–1 Hz)
		139–140	Strobe Pulse Open: Slow to fast 6/7 (1–1.28 Hz)
		141–143	Strobe Pulse Open: Slow to fast 7/7
		144–145	Strobe Pulse Close: Fast to slow 1/7 (1.82–1.28 Hz)
		146–147	Strobe Pulse Close: Fast to slow 2/7 (1.28–1 Hz)
		148–149	Strobe Pulse Close: Fast to slow 3/7 (1–0.625 Hz)
		150–151	Strobe Pulse Close: Fast to slow 4/7 (0.625–0.312 Hz)
		152–153	Strobe Pulse Close: Fast to slow 5/7 (0.312–0.164 Hz)
		154–155	Strobe Pulse Close: Fast to slow 6/7 (0.164–0.091 Hz)
		156–159	Strobe Pulse Close: Fast to slow 7/7 (0.091–0.042 Hz)
		160–191	Shutter: open

CH	Function	DMX	Description
7	Shutter (continued)	192–223	Random strobe from slow to fast (0.125–10 Hz)
		224–255	Shutter: open
8	Cyan	0	Min
		1–254	Min ... Max
		255	Max
9	Magenta	0	Min
		1–254	Min ... Max
		255	Max
10	Yellow	0	Min
		1–254	Min ... Max
		255	Max
11	CTO		CTO filter
		0	Min CTO 6000K
		1–254	Min CTO 6000K ... Max CTO 2700K
		255	Max CTO 2700K
12	Colors	0–11	Open/white
		12–32	Deep red
		33–54	Deep blue
		55–76	Orange
		77–97	Green
		98–118	Congo Blue
		119–127	Open/white
		128–129	Open/white step
		130–141	Deep red step
		142–153	Deep blue step
		154–165	Orange step
		166–177	Green step
		178–189	Congo blue step
		190–191	Color 1 Wheel Spin: Fast to slow 1/9 (576–402.2 °/s)
		192–194	Color 1 Wheel Spin: Fast to slow 2/9 (402.2–249.8 °/s)
		195–197	Color 1 Wheel Spin: Fast to slow 3/9 (249.8–166 °/s)
		198–201	Color 1 Wheel Spin: Fast to slow 4/9 (166–101.8 °/s)
		202–204	Color 1 Wheel Spin: Fast to slow 5/9 (101.8–77.6 °/s)
		205–206	Color 1 Wheel Spin: Fast to slow 6/9 (77.6–57.7 °/s)
		207–209	Color 1 Wheel Spin: Fast to slow 7/9 (57.7–31.6 °/s)
		210–211	Color 1 Wheel Spin: Fast to slow 8/9 (31.6–15.5 °/s)
		212–215	Color 1 Wheel Spin: Fast to slow 9/9 (15.5–1.86 °/s)
		216–217	No Rotation middle
		218–220	Color 1 Wheel Spin: Slow to fast 1/9 (1.86–15.5 °/s)
		221–222	Color 1 Wheel Spin: Slow to fast 2/9 (15.5–31.6 °/s)
		223–225	Color 1 Wheel Spin: Slow to fast 3/9 (31.6–57.7 °/s)
		226–227	Color 1 Wheel Spin: Slow to fast 4/9 (57.7–77.6 °/s)

CH	Function	DMX	Description
12	Colors (continued)	228–230	Color 1 Wheel Spin: Slow to fast 5/9 (77.6–101.8 °/s)
		231–234	Color 1 Wheel Spin: Slow to fast 6/9 (101.8–166 °/s)
		235–237	Color 1 Wheel Spin: Slow to fast 7/9 (166–249.8 °/s)
		238–240	Color 1 Wheel Spin: Slow to fast 8/9 (249.8–402.2 °/s)
		241–243	Color 1 Wheel Spin: Slow to fast 9/9 (402.2–576 °/s)
		244–249	Random color selection by audio control
		250–255	Auto random color selection from fast to slow
13	Color Mix Speed	0	Max
		1–254	Max ... Min
		255	Min
14	Gobo 2	0–4	Gobo 2 Index: Open
		5–8	G01 Index (New Raylines)
		9–13	G02 Index (Moon Scape XL)
		14–17	G03 Index (Leaf Breakup Medium)
		18–22	G04 Index (Rotating Dots)
		23–26	G05 Index (Leaves)
		27–31	G06 Index (Organic)
		32–35	G01 Rotation (New Raylines)
		36–40	G02 Rotation (Moon Scape XL)
		41–44	G03 Rotation (Leaf Breakup Medium)
		45–49	G04 Rotation (Rotating Dots)
		50–54	G05 Rotation (Leaves)
		55–59	G06 Rotation (Organic)
		60–71	G01 Shaking Index (New Raylines) (0.857–8.62 Hz)
		72–83	G02 Shaking Index (Moon Scape XL) (0.857–8.62 Hz)
		84–95	G03 Shaking Index (Leaf Breakup Medium) (0.857–8.62 Hz)
		96–106	G04 Shaking Index (Rotating Dots) (0.857–8.62 Hz)
		107–118	G05 Shaking Index (Leaves) (0.857–8.62 Hz)
		119–129	G06 Shaking Index (Organic) (0.857–8.62 Hz)
		130–141	G01 Shaking Rotation (New Raylines) (0.857–8.62 Hz)
		142–153	G02 Shaking Rotation (Moon Scape XL) (0.857–8.62 Hz)
		154–165	G03 Shaking Rotation (Leaf Breakup Medium) (0.857–8.62 Hz)
		166–176	G04 Shaking Rotation (Rotating Dots) (0.857–8.62 Hz)
		177–188	G05 Shaking Rotation (Leaves) (0.857–8.62 Hz)
		189–199	G06 Shaking Rotation (Organic) (0.857–8.62 Hz)
		200–201	Open/hole
		202–204	Gobo 2 Wheel Spin: Fast to slow 1/8 (521–206.8 °/s)
		205–206	Gobo 2 Wheel Spin: Fast to slow 2/8 (206.8–59 °/s)
		207–208	Gobo 2 Wheel Spin: Fast to slow 3/8 (59–34.4 °/s)
		209–210	Gobo 2 Wheel Spin: Fast to slow 4/8 (34.4–20.7 °/s)
		211–212	Gobo 2 Wheel Spin: Fast to slow 5/8 (20.7–13.8 °/s)

CH	Function	DMX	Description
14	Gobo 2 (continued)	213–214	Gobo 2 Wheel Spin: Fast to slow 6/8 (13.8–9.62 °/s)
		215–218	Gobo 2 Wheel Spin: Fast to slow 7/8 (9.62–3.39 °/s)
		219–221	Gobo 2 Wheel Spin: Fast to slow 8/8 (3.39–2.35 °/s)
		222–223	No rotation middle
		224–226	Gobo 2 Wheel Spin: Slow to fast 1/8 (2.35–3.39 °/s)
		227–230	Gobo 2 Wheel Spin: Slow to fast 2/8 (3.39–9.62 °/s)
		231–232	Gobo 2 Wheel Spin: Slow to fast 3/8 (9.62–13.8 °/s)
		233–234	Gobo 2 Wheel Spin: Slow to fast 4/8 (13.8–20.7 °/s)
		235–236	Gobo 2 Wheel Spin: Slow to fast 5/8 (20.7–34.4 °/s)
		237–238	Gobo 2 Wheel Spin: Slow to fast 6/8 (34.4–59 °/s)
		239–240	Gobo 2 Wheel Spin: Slow to fast 7/8 (59–206.8 °/s)
		241–243	Gobo 2 Wheel Spin: Slow to fast 8/8 (206.8–521 °/s)
		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
15	Gobo 2 Rotation		When CH 14 is 0–31:
		0–128	Gobo indexing min ... Gobo indexing center
		128–255	Gobo indexing center ... Gobo indexing max
		255	Gobo indexing max
16	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 15
17	Gobo	0–7	Static Gobo: Open
		8–19	Static Gobo: G01 (Dot Breakup)
		20–31	Static Gobo: G02 (Pick Up Sticks 2)
		32–43	Static Gobo: G03 (Snail Trails)
		44–55	Static Gobo: G04 (Tiger Print)
		56–67	Static Gobo: G05 (Summer Branches)
		68–79	Static Gobo: G06 (Leaf Breakup)
		80–91	Static Gobo: G07 (Radial Dashes 18)
		92–103	Static Gobo: G08 (Dots 8)
		104–115	Static Gobo Shake: G01 (Dot Breakup) (0.857–8.62 Hz)
		116–127	Static Gobo Shake: G02 (Pick Up Sticks 2) (0.857–8.62 Hz)
		128–139	Static Gobo Shake: G03 (Snail Trails) (0.857–8.62 Hz)
		140–151	Static Gobo Shake: G04 (Tiger Print) (0.857–8.62 Hz)
		152–163	Static Gobo Shake: G05 (Summer Branches) (0.857–8.62 Hz)
		164–175	Static Gobo Shake: G06 (Leaf Breakup) (0.857–8.62 Hz)
		176–187	Static Gobo Shake: G07 (Radial Dashes 18) (0.857–8.62 Hz)
		188–199	Static Gobo Shake: G08 (Dots 8) (0.857–8.62 Hz)
		200–201	Static Gobo Shake: Open
		202–204	Static Gobo Spin: Fast to slow 1/8 (491.1–226.3 °/s)
		205–206	Static Gobo Spin: Fast to slow 2/8 (226.3–120.7 °/s)
		207–208	Static Gobo Spin: Fast to slow 3/8 (120.7–68.9 °/s)

CH	Function	DMX	Description
17	Gobo (continued)	209–210	Static Gobo Spin: Fast to slow 4/8 (68.9–22.3 °/s)
		211–212	Static Gobo Spin: Fast to slow 5/8 (22.3–17.3 °/s)
		213–214	Static Gobo Spin: Fast to slow 6/8 (17.3–14.6 °/s)
		215–218	Static Gobo Spin: Fast to slow 7/8 (14.6–4.26 °/s)
		219–222	Static Gobo Spin: Fast to slow 8/8 (4.26–1.68 °/s)
		223–226	Static Gobo Spin: Slow to fast 1/8 (1.68–4.26 °/s)
		227–230	Static Gobo Spin: Slow to fast 2/8 (4.26–14.6 °/s)
		231–232	Static Gobo Spin: Slow to fast 3/8 (14.6–17.3 °/s)
		233–234	Static Gobo Spin: Slow to fast 4/8 (17.3–22.3 °/s)
		235–236	Static Gobo Spin: Slow to fast 5/8 (22.3–68.9 °/s)
		237–238	Static Gobo Spin: Slow to fast 6/8 (68.9–120.7 °/s)
		239–240	Static Gobo Spin: Slow to fast 7/8 (120.7–226.3 °/s)
		241–243	Static Gobo Spin: Slow to fast 8/8 (226.3–491.1 °/s)
		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
18	Zoom	0	Zoom max
		1–254	Zoom max ... Zoom min
		255	Zoom min
19	Focus	0	Min
		1–254	Min ... max
		255	Max
20	Iris	0	Iris: Open
		1–179	Iris: Open ... Closed
		180–191	Iris: Closed
		192–194	Iris Pulse Open: Slow to fast 1/13 (0.02–0.04 Hz)
		195–196	Iris Pulse Open: Slow to fast 2/13 (0.04–0.053 Hz)
		197–198	Iris Pulse Open: Slow to fast 3/13 (0.053–0.071 Hz)
		199–200	Iris Pulse Open: Slow to fast 4/13 (0.071–0.1 Hz)
		201–202	Iris Pulse Open: Slow to fast 5/13 (0.1–0.213 Hz)
		203–204	Iris Pulse Open: Slow to fast 6/13 (0.213–0.263 Hz)
		205–206	Iris Pulse Open: Slow to fast 7/13 (0.263–0.333 Hz)
		207–208	Iris Pulse Open: Slow to fast 8/13 (0.333–0.385 Hz)
		209–210	Iris Pulse Open: Slow to fast 9/13 (0.385–0.5 Hz)
		211–212	Iris Pulse Open: Slow to fast 10/13 (0.5–0.578 Hz)
		213–214	Iris Pulse Open: Slow to fast 11/13 (0.578–0.909 Hz)
		215–216	Slow t ofast 12/13 (0.909–1.32 Hz)
		217–219	Iris Pulse Open: Slow to fast 13/13 (1.32–3.47 Hz)
		220–221	Iris Pulse Close: Fast to slow 1/13 (3.47–1.32 Hz)
		222–223	Iris Pulse Close: Fast to slow 2/13 (1.32–0.909 Hz)
		224–225	Iris Pulse Close: Fast to slow 3/13 (0.909–0.578 Hz)

CH	Function	DMX	Description
20	Iris (continued)	226–227	Iris Pulse Close: Fast to slow 4/13 (0.578–0.5 Hz)
		228–229	Iris Pulse Close: Fast to slow 5/13 (0.5–0.385 Hz)
		230–231	Iris Pulse Close: Fast to slow 6/13 (0.385–0.333 Hz)
		232–233	Iris Pulse Close: Fast to slow 7/13 (0.333–0.263 Hz)
		234–235	Iris Pulse Close: Fast to slow 8/13 (0.263–0.213 Hz)
		236–237	Iris Pulse Close: Fast to slow 9/13 (0.213–0.1 Hz)
		238–239	Iris Pulse Close: Fast to slow 10/13 (0.1–0.071 Hz)
		240–241	Iris Pulse Close: Fast to slow 11/13 (0.071–0.053 Hz)
		242–243	Iris Pulse Close: Fast to slow 12/13 (0.053–0.04 Hz)
		244–247	Iris Pulse Close: Fast to slow 13/13 (0.04–0.02 Hz)
		248–249	Random pulse opening fast
		250–251	Random pulse opening slow
		252–253	Random pulse closing fast
		254–255	Random pulse closing slow
21	Prism	0–19	Open position/hole
		20–49	6 - facet linear prism - indexing
		50–75	6 - facet linear prism - rotating
		76–105	6 - facet circular prism - indexing
		106–127	6 - facet circular prism - rotating
		128–135	Macro 1
		136–143	Macro 2
		144–151	Macro 3
		152–159	Macro 4
		160–167	Macro 5
		168–175	Macro 6
		176–183	Macro 7
		184–191	Macro 8
		192–199	Macro 9
		200–207	Macro 10
		208–215	Macro 11
		216–223	Macro 12
		224–231	Macro 13
		232–239	Macro 14
		240–247	Macro 15
		248–255	Macro 16
22	Prism Rotation		When CH 21 is 20–49:
		0	Prism indexing min
		1–254	Prism indexing min ... Prism indexing max
		255	Prism indexing max
			When CH 21 is 50–75:
		0	No rotation
		1–24	Fast to slow 1/7 (751.6–358.6 °/s)

CH	Function	DMX	Description
22	Prism Rotation (continued)	25–49	Fast to slow 2/7 (358.6–138.4 °/s)
		50–74	Fast to slow 3/7 (138.4–66.2 °/s)
		75–99	Fast to slow 4/7 (66.2–26.8 °/s)
		100–119	Fast to slow 5/7 (26.8–3.35 °/s)
		120–124	Fast to slow 6/7 (3.35–1.11 °/s)
		125–127	Fast to slow 7/7 (1.11–0.362 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.362–1.11 °/s)
		132–136	Slow to fast 2/7 (1.11–3.35 °/s)
		137–156	Slow to fast 3/7 (3.35–26.8 °/s)
		157–181	Slow to fast 4/7 (26.8–66.2 °/s)
		182–206	Slow to fast 5/7 (66.2–138.4 °/s)
		207–232	Slow to fast 6/7 (138.4–358.6 °/s)
		233–255	Slow to fast 7/7 (358.6–751.6 °/s)
			When CH 21 is 0–19:
		0–255	
			When CH 21 is 128–255:
		0–255	
			When CH 21 is 76–105:
		0	Prism indexing min
		1–254	Prism indexing min ... Prism indexing max
		255	Prism indexing max
			When CH 21 is 106–127:
		0	No rotation
		1–24	Fast to slow 1/7 (751.6–358.6 °/s)
		25–49	Fast to slow 2/7 (358.6–138.4 °/s)
		50–74	Fast to slow 3/7 (138.4–66.2 °/s)
		75–99	Fast to slow 4/7 (66.2–26.8 °/s)
		100–119	Fast to slow 5/7 (26.8–3.35 °/s)
		120–124	Fast to slow 6/7 (3.35–1.11 °/s)
		125–127	Fast to slow 7/7 (1.11–0.362 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.362–1.11 °/s)
		132–136	Slow to fast 2/7 (1.11–3.35 °/s)
		137–156	Slow to fast 3/7 (3.35–26.8 °/s)
		157–181	Slow to fast 4/7 (26.8–66.2 °/s)
		182–206	Slow to fast 5/7 (66.2–138.4 °/s)
		207–232	Slow to fast 6/7 (138.4–358.6 °/s)
		233–255	Slow to fast 7/7 (358.6–751.6 °/s)
23	Frost	0	Light Frost: Open
		1–50	Light Frost from 0% to 100%
		51–53	100% Light Frost

CH	Function	DMX	Description
23	Frost (continued)	54–63	Pulse closing from slow to fast - Light frost
		64–73	Pulse opening from fast to slow - Light frost
		74–83	Ramping from fast to slow - Light frost
		84–86	Medium Frost: Open
		87–136	Medium Frost from 0% to 100%
		137–139	100% Medium Frost
		140–149	Pulse closing from slow to fast - Medium frost
		150–159	Pulse opening from fast to slow - Medium frost
		160–169	Ramping from fast to slow - Medium frost
		170–172	Combined Frost: Open
		173–222	Combined Frost from 0% to 100%
		223–225	100% Combined Frost
		226–235	Combined Frost: Pulse closing from slow to fast - Medium frost
		236–245	Combined Frost: Pulse opening from fast to slow - Medium frost
		246–255	Combined Frost: Ramping from fast to slow - Medium frost
24	Undefined	0–255	Reserved
25	Animation Wheel	0–19	Animation Wheel Index: Open
		20	Proportional indexing min
		21–72	Proportional indexing min ... Proportional indexing center
		73	Proportional indexing center
		74–126	Proportional indexing center ... Proportional indexing max
		127	Proportional indexing max
		128	Ramping from open to full max
		129–169	Ramping from open to full max ... Ramping from open to full min
		170	Ramping from open to full min
		171	Ramping from open to half max
		172–212	Ramping from open to half max ... Ramping from open to half min
		213	Ramping from open to half min
		214	Ramping from half to full min
		215–254	Ramping from half to full min ... Ramping from half to full max
		255	Ramping from half to full max
26	Blade 1 A		Blade 1 - movement
		0	Min
		1–254	Min ... max
		255	Max
27	Blade 1 Rotation		Blade 1 - swivelling
		0	Min
		1–127	Min ... center

CH	Function	DMX	Description
27	Blade 1 Rotation (continued)	128	Center
		129–254	Center ... max
		255	Max
28	Blade 2 A		Blade 1 - movement
		0	Min
		1–254	Min ... max
		255	Max
29	Blade 2 Rotation		Blade 1 - swivelling
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
30	Blade 3 A		Blade 1 - movement
		0	Min
		1–254	Min ... max
		255	Max
31	Blade 3 Rotation		Blade 1 - swivelling
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
32	Blade 4 A		Blade 1 - movement
		0	Min
		1–254	Min ... max
		255	Max
33	Blade 4 Rotation		Blade 1 - swivelling
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
34	Shaper Rotation	0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
35	Dimmer Mode	0–3	No function
		4–7	Macro 1
		8–11	Macro 2
		12–15	Macro 3

CH	Function	DMX	Description
35	Dimmer Mode (continued)	16–19	Macro 4
		20–23	Macro 5
		24–27	Macro 6
		28–31	Macro 7
		32–35	Macro 8
		36–39	Macro 9
		40–43	Macro 10
		44–47	Macro 11
		48–51	Macro 12
		52–55	Macro 13
		56–59	Macro 14
		60–63	Macro 15
		64–67	Macro 16
		68–71	Macro 17
		72–75	Macro 18
		76–79	Macro 19
		80–83	Macro 20
		84–87	Macro 21
		88–91	Macro 22
		92–95	Macro 23
		96–99	Macro 24
		100–103	Macro 25
		104–107	Macro 26
		108–111	Macro 27
		112–115	Macro 28
		116–119	Macro 29
		120–123	Macro 30
		124–127	Macro 31
		128–131	Macro 32
		132–135	Macro 33
		136–139	Macro 34
		140–143	Macro 35
		144–147	Macro 36
		148–151	Macro 37
		152–155	Macro 38
		156–159	Macro 39
		160–163	Macro 40
		164–167	Macro 41
		168–171	Macro 42
		172–175	Macro 43
		176–179	Macro 44
		180–183	Macro 45

CH	Function	DMX	Description
35	Dimmer Mode (continued)	184–187	Macro 46
		188–191	Macro 47
		192–195	Macro 48
		196–199	Macro 49
		200–203	Macro 50
		204–207	Macro 51
		208–211	Macro 52
		212–255	No function
36	Control	0–9	No function
		10–14	Wired DMX
		15–19	Wireless DMX
		20–24	Display On
		25–29	Display Off
		30–34	No function
		35–39	Lamp power 1500W
		40–44	Lamp power 1700W
		45–49	Quiet mode
		50–54	Dimmer curve Square law
		55–59	Dimmer curve Linear
		60–64	Fans mode Auto
		65–69	Fans mode High
		70–74	Parking position ON
		75–79	Parking position OFF
		80–89	No function
		90–94	Pan/Tilt speed mode
		95–99	Pan/Tilt time mode
		100–104	Blackout while pan/tilt moving
		105–109	Disabled blackout while pan/tilt moving
		110–114	Blackout while colour wheels moving
		115–119	Disabled blackout while colour wheels moving
		120–129	No function
		130–139	Lamp On
		140–149	Pan/Tilt reset
		150–159	Colour system reset
		160–169	Gobo wheels reset
		170–179	Dimmer/Shutter reset
		180–189	Zoom/focus/frost/prism reset
		190–199	Iris/dual graphic wheel reset
		200–209	Total reset
		210–229	No function
		230–239	Lamp Off

CH	Function	DMX	Description
36	Control (continued)	240–244	RoboSpot enabled
		245–249	RoboSpot disabled except faders and PT
		250–255	RoboSpot fully disabled

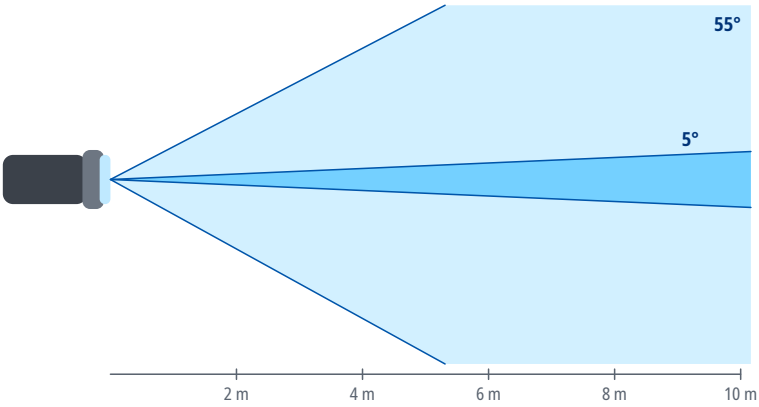
10 Technical specifications

Parameter	Value
Light	
Light source	discharge lamp
Lamp power	1,700 W
Luminous flux	40,000 lm
Color temperature	6,000 K
Color rendering index (CRI)	92
Optics	
Zoom	5–55°
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 0x5253, device model ID 0x0091)
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	2,000 W
Dimensions and construction	
Weight	37.9 kg
Operating environment	
Operating temperature	-5 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2700–6000 K
Strobe frequency	0.3–20 Hz
Color wheel 1 rotation	up to 576 °/s (96 rpm)
Gobo wheel 1 rotation	up to 491.1 °/s (82 rpm)
Gobo wheel 2 rotation	up to 558 °/s (93 rpm)
Gobo 2 rotation	up to 1212 °/s (202 rpm)
Prism rotation	up to 1 °/s (0.2 rpm)

Spot diameter



Distance	Ø 5°	Ø 55°
2 m	0.17 m	2.1 m
4 m	0.35 m	4.2 m
6 m	0.52 m	6.2 m
8 m	0.7 m	8.3 m
10 m	0.87 m	10.4 m
15 m	1.3 m	15.6 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.