DMX REFERENCE

Robin BMFL Blade

Robe Lighting



Manufacturer	Robe Lighting
GDTF file	Robe_Lighting_Robin_BMFL_Blade_154216.gdtf
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1 About this manual

This document describes the Robin BMFL Blade by Robe Lighting. It was compiled from the GDTF file Robe_Lighting_Robin_BMFL_Blade_154216.gdtf from the GDTF-Share library.

File revision: “Robin BMFL Blade 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 Robe Lighting; 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 1 - Standard 16 bit	49	10	1, 50, 99, 148, ...
Mode 2 - Standard 8 bit	42	12	1, 43, 85, 127, ...

No light? Check these channels

- Mode 1 - Standard 16 bit: CH 47 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”
- Mode 2 - Standard 8 bit: CH 41 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”


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.

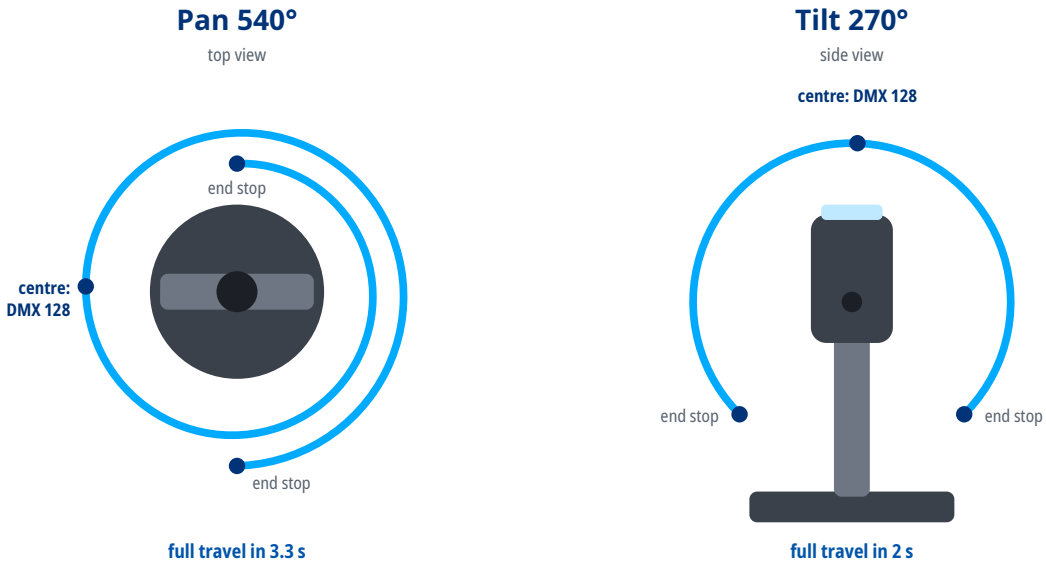
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do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

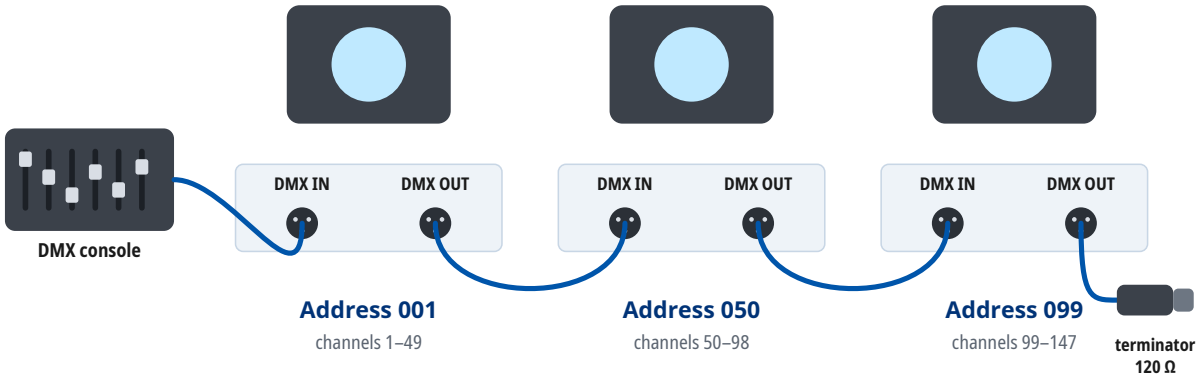
⚠ **WARNING**

- 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 1 - Standard 16 bit: every unit occupies 49 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 1 - Standard 16 bit”: 49.
- 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 1 - Standard 16 bit”, you can use, for example, the start addresses 1, 50, 99, 148.
- 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 1 - Standard 16 bit 49 channels	Mode 2 - Standard 8 bit 42 channels
Pan / Tilt	1, 3	1, 3
Dimmer	48	42
Dimmer resolution	16 bit	8 bit
Shutter / strobe	47	41
Color mixing	11–13	9–11
Color temperature	14	12
Color wheel	7, 9	7, 8
Gobo wheel	22, 23	20, 21
Gobo rotation	24 *	22 *
Prism	26, 27	23, 24
Frost	28	25
Zoom	31	27
Focus	33	28
Iris	29	26
Animation wheel	19–21	17–19
Effects / macros	5 channels (15–45)	5 channels (13–39)

* 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 - continual
   DMX 0–7
2. Deep red - continual
   DMX 8–26
3. Deep blue - continual
   DMX 27–45
4. Orange - continual
   DMX 46–62
5. Green - continual
   DMX 63–81
6. Magenta - continual
   DMX 82–98
7. Congo blue (UV) - continual
   DMX 99–119

Color wheel 2

1. Open/white - continual
   DMX 0–7
2. Pink - continual
   DMX 8–26
3. Lavender - continual
   DMX 27–45
4. Laser green - continual
   DMX 46–62
5. CTB - continual
   DMX 63–81
6. Minus green - continual
   DMX 82–98
7. Minus 1/2 green - continual
   DMX 99–119

Animation wheel

1. Animation Wheel Index: Open
   DMX 0–19
2. 
   Proportional indexing min
   DMX 20

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

No function
DMX 0–7

2

Colour Macro 1
DMX 8–9

3

Colour Macro 2
DMX 10–11

4

Colour Macro 3
DMX 12–13

5

Colour Macro 4
DMX 14–15

6

Colour Macro 5
DMX 16–17

7

Colour Macro 6
DMX 18–19

8

Colour Macro 7
DMX 20–21

9

Colour Macro 8
DMX 22–23

10

Colour Macro 9
DMX 24–25

11

Colour Macro 10
DMX 26–27

12

Colour Macro 11
DMX 28–29

13

Colour Macro 12
DMX 30–31

14

Colour Macro 13
DMX 32–33

15

Colour Macro 14
DMX 34–35

16

Colour Macro 15
DMX 36–37

17

Colour Macro 16
DMX 38–39

18

Colour Macro 17
DMX 40–41

19

Colour Macro 18
DMX 42–43

20

Colour Macro 19
DMX 44–45

21

Colour Macro 20
DMX 46–47

22

Colour Macro 21
DMX 48–49

23

Colour Macro 22
DMX 50–51

24

Colour Macro 23
DMX 52–53

25 Colour Macro 24
DMX 54–55

26 Colour Macro 25
DMX 56–57

27 Colour Macro 26
DMX 58–59

28 Colour Macro 27
DMX 60–61

29 Colour Macro 28
DMX 62–63

30 Colour Macro 29
DMX 64–65

31 Colour Macro 30
DMX 66–67

32 Filter 4 (Medium Bastard Amber)
DMX 68–69

33 Filter 10 (Medium Yellow)
DMX 70–71

34 Filter 19 (Fire)
DMX 72–73

35 Filter 26 (Bright Red)
DMX 74–75

36 Filter 58 (Lavender)
DMX 76–77

37 Filter 68 (Sky Blue)
DMX 78–79

38 Filter 71 (Tokyo Blue)
DMX 80–81

39 Filter 79 (Just Blue)
DMX 82–83

40 Filter 88 (Lime Green)
DMX 84–85

41 Filter 90 (Dark Yellow Green)
DMX 86–87

42 Filter 100 (Spring Yellow)
DMX 88–89

43 Filter 101 (Yellow)
DMX 90–91

44 Filter 102 (Light Amber)
DMX 92–93

45 Filter 103 (Straw)
DMX 94–95

46 Filter 104 (Deep Amber)
DMX 96–97

47 Filter 105 (Orange)
DMX 98–99

48 Filter 106 (Primary Red)
DMX 100–101

49 Filter 111 (Dark Pink)
DMX 102–103

50 Filter 115 (Peacock Blue)
DMX 104–105

51 Filter 116 (Medium Blue - Green)
DMX 106–107

52 Filter 117 (Steel Blue)
DMX 108–109

53 Filter 118 (Light Blue)
DMX 110–111

54 Filter 119 (Dark Blue)
DMX 112–113

55 Filter 120 (Deep Blue)
DMX 114–115

56 Filter 121 (Filter Green)
DMX 116–117

57 Filter 128 (Bright Pink)
DMX 118–119

58 Filter 131 (Marine Blue)
DMX 120–121

59 Filter 132 (Medium Blue)
DMX 122–123

60 Filter 134 (Golden Amber)
DMX 124–125

61 Filter 135 (Deep Golden Amber)
DMX 126–127

62 Filter 136 (Pale Lavender)
DMX 128–129

63 Filter 137 (Special Lavender)
DMX 130–131

64 Filter 138 (Pale Green)
DMX 132–133

65 Filter 139 (Primary Green)
DMX 134–135

66 Filter 141 (Bright Blue)
DMX 136–137

67 Filter 147 (Apricot)
DMX 138–139

68 Filter 152 (Pale Gold)
DMX 142–143

69 Filter 154 (Pale Rose)
DMX 144–145

70 Filter 154 (Pale Rose)

71 Filter 157 (Pink)
DMX 146–147

72 Filter 158 (Deep Orange)
DMX 148–149

73 Filter 162 (Bastard Amber)
DMX 150–151

74 Filter 164 (Flame Red)
DMX 152–153

75 Filter 165 (Daylight Blue)
DMX 154–155

76 Filter 169 (Lilac Tint)
DMX 156–157

77 Filter 170 (Deep Lavender)
DMX 158–159

78 Filter 172 (Lagoon Blue)
DMX 160–161

79 Filter 179 (Chrome Orange)
DMX 162–163

80 Filter 180 (Dark Lavender)
DMX 164–165

81 Filter 181 (Congo Blue)
DMX 166–167

82 Filter 197 (Alice Blue)
DMX 168–169

83 Filter 201 (Full CT Blue)
DMX 170–171

84 Filter 202 (Half CT Blue)
DMX 172–173

85 Filter 203 (Quarter CT Blue)
DMX 174–175

86 Filter 204 (Full CT Orange)
DMX 176–177

87 Filter 205 (Half CT Orange)
DMX 178–179

88 Filter 206 (Quarter CT Orange)
DMX 180–181

89 Filter 247 (Filter Minus Green)
DMX 182–183

90 Filter 248 (Half Minus Green)
DMX 184–185

91 Filter 281 (Three Quarter CT Blue)
DMX 186–187

92 Filter 285 (Three Quarter CT Orange)
DMX 188–189

93 Filter 352 (Glacier Blue)
DMX 190–191

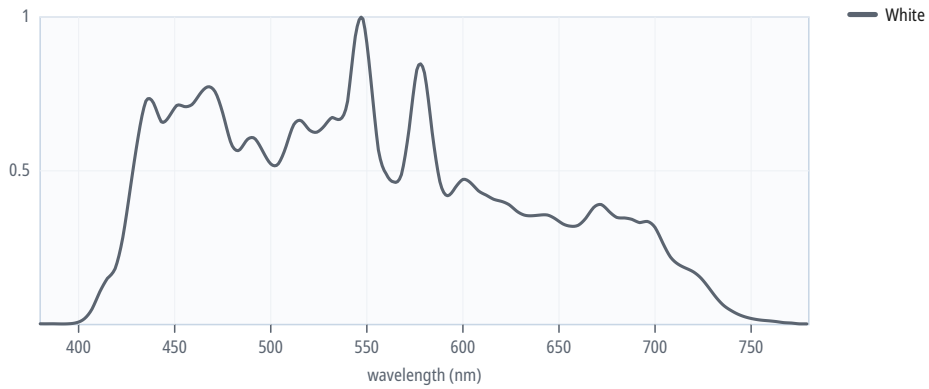
94 Filter 353 (Lighter Blue)
DMX 192–193

95 Filter 715 (Cabana Blue)
DMX 194–195

96 Filter 778 (Millennium Gold)
DMX 196–197

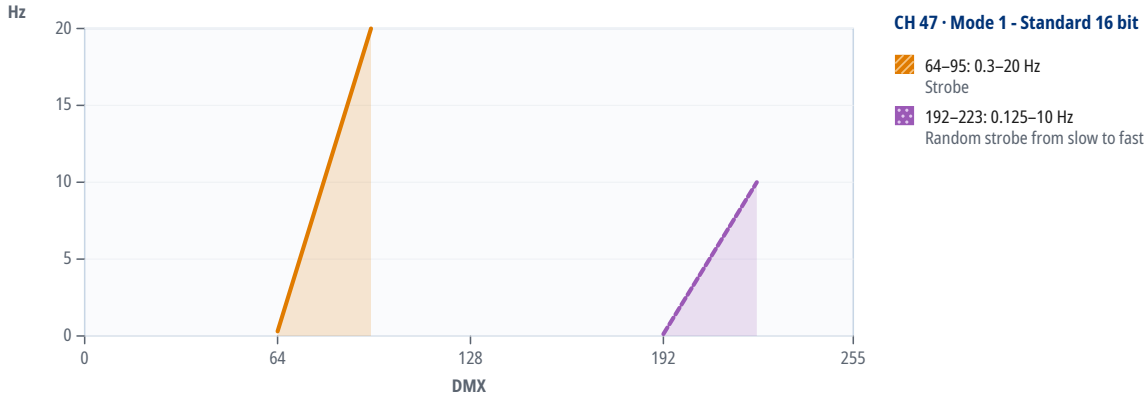
97 Filter 793 (Vanity Fair)
DMX 198–199

Spectra of the light sources



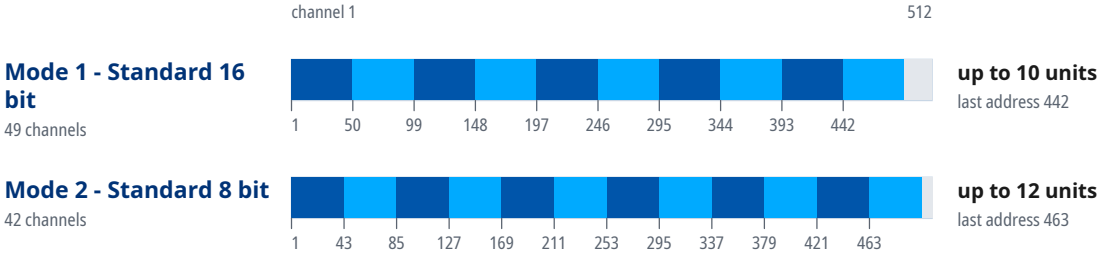
Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Mode 1 - Standard 16 bit”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	246	11	U2 · 1	16	U2 · 246
2	50	7	295	12	U2 · 50	17	U2 · 295
3	99	8	344	13	U2 · 99	18	U2 · 344
4	148	9	393	14	U2 · 148	19	U2 · 393
5	197	10	442	15	U2 · 197	20	U2 · 442

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 1 - Standard 16 bit	49	1
Mode 2 - Standard 8 bit	42	2

Mode 1 - Standard 16 bit

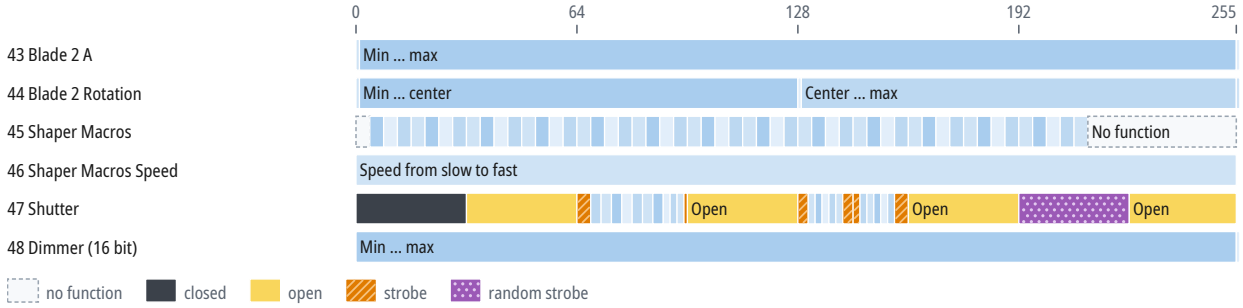
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 47 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 7 Colors 0, CH 9 Colors 2 0, CH 11 Cyan 0, CH 12 Magenta 0, CH 13 Yellow 0, CH 15 Color Macro 0, CH 47 Shutter 32, CH 48 Dimmer 255.

Channel functions at a glance



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	0	Standard mode
		1	Max Speed Mode
		2–254	Speed/Time max to min
		255	Min Speed Mode
6	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

CH	Function	DMX	Description
6	Control (continued)	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
		240–244	RoboSpot enabled
		245–249	RoboSpot disabled except faders and PT
		250–255	RoboSpot fully disabled
7	Colors	0–8	Open/white - continual
		8–27	Deep red - continual
		27–46	Deep blue - continual
		46–63	Orange - continual
		63–82	Green - continual
		82–99	Magenta - continual
		99–120	Congo blue (UV) - continual
		120–129	White - continual
		130–139	Deep red - step
		140–149	Deep blue - step
		150–159	Orange - step
		160–169	Green - step
		170–179	Magenta - step
		180–189	Congo blue - step
		190–191	Color 1 Wheel Spin: Fast to slow - Fast (800–561.6 °/s)
		192–211	Color 1 Wheel Spin: Fast to slow - Fast ... Fast to slow - Slow (561.6–21.8 °/s)
		212–215	Color 1 Wheel Spin: Fast to slow - Slow (21.8–2.92 °/s)
		216–217	No rotation middle
		218–220	Color 1 Wheel Spin: Slow to fast - Slow (2.92–21.8 °/s)
		221–240	Color 1 Wheel Spin: Slow to fast - Slow ... Slow to fast - Fast (21.8–561.6 °/s)
		241–243	Color 1 Wheel Spin: Slow to fast - Fast (561.6–800 °/s)
		244–249	Random colour selection by audio control
		250–255	Color 1 Wheel Random: fast

CH	Function	DMX	Description
7	Colors (continued)	255	Color 1 Wheel Random: slow
8	Colors Fine	0–255	Fine adjustment of CH 7
9	Colors 2	0–8	Open/white - continual
		8–27	Pink - continual
		27–46	Lavender - continual
		46–63	Laser green - continual
		63–82	CTB - continual
		82–99	Minus green - continual
		99–120	Minus 1/2 green - continual
		120–129	White - continual
		130–139	Pink - step
		140–149	Lavender - step
		150–159	Laser green - step
		160–169	CTB - step
		170–179	Minus green - step
		180–189	Minus 1/2 green - step
		190–191	Color 2 Wheel Spin: Fast to slow - Fast (800–561.6 °/s)
		192–211	Color 2 Wheel Spin: Fast to slow - Fast ... Fast to slow - Slow (561.6–21.8 °/s)
		212–215	Color 2 Wheel Spin: Fast to slow - Slow (21.8–2.92 °/s)
		216–217	No rotation middle
		218–220	Color 2 Wheel Spin: Slow to fast - Slow (2.92–21.8 °/s)
		221–240	Color 2 Wheel Spin: Slow to fast - Slow ... Slow to fast - Fast (21.8–561.6 °/s)
		241–243	Color 2 Wheel Spin: Slow to fast - Fast (561.6–800 °/s)
		244–249	Random colour selection by audio control
		250–255	Color 2 Wheel Random: fast
		255	Color 2 Wheel Random: slow
10	Colors 2 Fine	0–255	Fine adjustment of CH 9
11	Cyan	0	Min
		1–254	Min ... Max
		255	Max
12	Magenta	0	Min
		1–254	Min ... Max
		255	Max
13	Yellow	0	Min
		1–254	Min ... Max
		255	Max
14	CTO		CTO filter
		0	Min CTO 6000K
		1–254	Min CTO 6000K ... Max CTO 2700K
		255	Max CTO 2700K

CH	Function	DMX	Description
15	Color Macro	0–7	No function
		8–9	Colour Macro 1
		10–11	Colour Macro 2
		12–13	Colour Macro 3
		14–15	Colour Macro 4
		16–17	Colour Macro 5
		18–19	Colour Macro 6
		20–21	Colour Macro 7
		22–23	Colour Macro 8
		24–25	Colour Macro 9
		26–27	Colour Macro 10
		28–29	Colour Macro 11
		30–31	Colour Macro 12
		32–33	Colour Macro 13
		34–35	Colour Macro 14
		36–37	Colour Macro 15
		38–39	Colour Macro 16
		40–41	Colour Macro 17
		42–43	Colour Macro 18
		44–45	Colour Macro 19
		46–47	Colour Macro 20
		48–49	Colour Macro 21
		50–51	Colour Macro 22
		52–53	Colour Macro 23
		54–55	Colour Macro 24
		56–57	Colour Macro 25
		58–59	Colour Macro 26
		60–61	Colour Macro 27
		62–63	Colour Macro 28
		64–65	Colour Macro 29
		66–67	Colour Macro 30
		68–69	Filter 4 (Medium Bastard Amber)
		70–71	Filter 10 (Medium Yellow)
		72–73	Filter 19 (Fire)
		74–75	Filter 26 (Bright Red)
		76–77	Filter 58 (Lavender)
		78–79	Filter 68 (Sky Blue)
		80–81	Filter 71 (Tokyo Blue)
		82–83	Filter 79 (Just Blue)
		84–85	Filter 88 (Lime Green)
		86–87	Filter 90 (Dark Yellow Green)
		88–89	Filter 100 (Spring Yellow)

CH	Function	DMX	Description
15	Color Macro (continued)	90–91	Filter 101 (Yellow)
		92–93	Filter 102 (Light Amber)
		94–95	Filter 103 (Straw)
		96–97	Filter 104 (Deep Amber)
		98–99	Filter 105 (Orange)
		100–101	Filter 106 (Primary Red)
		102–103	Filter 111 (Dark Pink)
		104–105	Filter 115 (Peacock Blue)
		106–107	Filter 116 (Medium Blue - Green)
		108–109	Filter 117 (Steel Blue)
		110–111	Filter 118 (Light Blue)
		112–113	Filter 119 (Dark Blue)
		114–115	Filter 120 (Deep Blue)
		116–117	Filter 121 (Filter Green)
		118–119	Filter 128 (Bright Pink)
		120–121	Filter 131 (Marine Blue)
		122–123	Filter 132 (Medium Blue)
		124–125	Filter 134 (Golden Amber)
		126–127	Filter 135 (Deep Golden Amber)
		128–129	Filter 136 (Pale Lavender)
		130–131	Filter 137 (Special Lavender)
		132–133	Filter 138 (Pale Green)
		134–135	Filter 139 (Primary Green)
		136–137	Filter 141 (Bright Blue)
		138–139	Filter 147 (Apricot)
		140–141	Filter 148 (Bright Rose)
		142–143	Filter 152 (Pale Gold)
		144–145	Filter 154 (Pale Rose)
		146–147	Filter 157 (Pink)
		148–149	Filter 158 (Deep Orange)
		150–151	Filter 162 (Bastard Amber)
		152–153	Filter 164 (Flame Red)
		154–155	Filter 165 (Daylight Blue)
		156–157	Filter 169 (Lilac Tint)
		158–159	Filter 170 (Deep Lavender)
		160–161	Filter 172 (Lagoon Blue)
		162–163	Filter 179 (Chrome Orange)
		164–165	Filter 180 (Dark Lavender)
		166–167	Filter 181 (Congo Blue)
		168–169	Filter 197 (Alice Blue)
		170–171	Filter 201 (Full CT Blue)
		172–173	Filter 202 (Half CT Blue)

CH	Function	DMX	Description
15	Color Macro (continued)	174–175	Filter 203 (Quarter CT Blue)
		176–177	Filter 204 (Full CT Orange)
		178–179	Filter 205 (Half CT Orange)
		180–181	Filter 206 (Quarter CT Orange)
		182–183	Filter 247 (Filter Minus Green)
		184–185	Filter 248 (Half Minus Green)
		186–187	Filter 281 (Three Quarter CT Blue)
		188–189	Filter 285 (Three Quarter CT Orange)
		190–191	Filter 352 (Glacier Blue)
		192–193	Filter 353 (Lighter Blue)
		194–195	Filter 715 (Cabana Blue)
		196–197	Filter 778 (Millennium Gold)
		198–199	Filter 793 (Vanity Fair)
		200–243	Reserved
		244–249	Random macro selection by audio control
		250–255	Auto random macro selection from fast to slow
16	Effects Fade		Effect Time
		0	Max
		1–254	Max … Min
		255	Min
17	Color Mix Speed	0	Max
		1–254	Max … Min
		255	Min
18	Zoom Speed	0	Max
		1–254	Max … Min
		255	Min
19	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

CH	Function	DMX	Description
19	Animation Wheel (continued)	255	Ramping from half to full max
20	Animation Wheel Rotation	0	No rotation
		1–24	Fast to slow - Fast (220.5–113.9 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (113.9–0.995 °/s)
		124–127	Fast to slow - Slow (0.995–0.426 °/s)
		128	No rotation middle
		129–232	No rotation middle ... Slow to fast - Fast (0.426–113.9 °/s)
		233–255	Slow to fast - Fast (113.9–220.5 °/s)
21	Animation Wheel Macro	0–7	No animation
		8–9	Animation 1 - Colour
		10–11	Animation 2 - Colour
		12–13	Animation 3 - Colour
		14–15	Animation 4 - Colour
		16–17	Animation 5 - Colour
		18–19	Animation 6 - Colour
		20–21	Animation 7 - Colour
		22–23	Animation 8 - Colour
		24–25	Animation 9 - Colour
		26–27	Animation 10 - Colour
		28–29	Animation 1 - Black and white
		30–31	Animation 2 - Black and white
		32–33	Animation 3 - Black and white
		34–35	Animation 4 - Black and white
		36–37	Animation 5 - Black and white
		38–39	Animation 6 - Black and white
		40–41	Animation 7 - Black and white
		42–43	Animation 8 - Black and white
		44–45	Animation 9 - Black and white
		46–47	Animation 10 - Black and white
		48–255	No function
22	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)

CH	Function	DMX	Description
22	Gobo (continued)	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 - Fast (491.1–226.3 °/s)
		205–222	Static Gobo Spin: Fast to slow - Fast ... Slow to fast - Fast (226.3–1.68 °/s)
		223–226	Static Gobo Spin: Slow to fast - Fast (1.68–4.26 °/s)
		227–230	Static Gobo Spin: Slow to fast -Slow (4.26–14.6 °/s)
		231–240	Static Gobo Spin: Slow to fast -Slow ... Slow to fast - Fast (14.6–226.3 °/s)
		241–243	Static Gobo Spin: Slow to fast - Fast (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
23	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)

CH	Function	DMX	Description
23	Gobo 2 (continued)	189–199	G06 Shaking Rotation (Organic) (0.857–8.62 Hz)
		200–201	Open/hole
		202–204	Gobo 2 Wheel Spin: Fast to slow - Fast (521–206.8 °/s)
		205–218	Gobo 2 Wheel Spin: Fast to slow - Fast ... Fast to slow - Slow (206.8–3.39 °/s)
		219–221	Gobo 2 Wheel Spin: Fast to slow - Slow (3.39–2.35 °/s)
		222–223	No rotation middle
		224–226	Gobo 2 Wheel Spin: Slow to fast - Slow (2.35–3.39 °/s)
		227–240	Gobo 2 Wheel Spin: Slow to fast - Slow ... Slow to fast - Fast (3.39–206.8 °/s)
		241–243	Gobo 2 Wheel Spin: Slow to fast - Fast (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
24	Gobo 2 Rotation		When CH 23 is 0–31:
		0–127	Gobo indexing min ... Gobo indexing center
		128–255	Gobo indexing center ... Gobo indexing max
		255	Gobo indexing max
25	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 24
26	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
27	Prism Rotation		When CH 26 is 20–49:
		0	Prism indexing min

CH	Function	DMX	Description
27	Prism Rotation (continued)	1–254	Prism indexing min ... Prism indexing max
		255	Prism indexing max
			When CH 26 is 50–75:
		0	No rotation
		1–24	Fast to slow - Fast (751.6–358.6 °/s)
		25–124	Fast to slow - Fast ... Fast to slow - Slow (358.6–1.11 °/s)
		125–127	Fast to slow - Slow (1.11–0.362 °/s)
		128	No rotation middle
		129–131	Slow to fast - Slow (0.362–1.11 °/s)
		132–232	Slow to fast - Slow ... Slow to fast - Fast (1.11–358.6 °/s)
		233–255	Slow to fast - Fast (358.6–751.6 °/s)
			When CH 26 is 0–19:
		0–255	
			When CH 26 is 128–255:
		0–255	
			When CH 26 is 76–105:
		0	Prism indexing min
		1–254	Prism indexing min ... Prism indexing max
		255	Prism indexing max
			When CH 26 is 106–127:
		0	No rotation
		1–24	Fast to slow - Fast (751.6–358.6 °/s)
		25–124	Fast to slow - Fast ... Fast to slow - Slow (358.6–1.11 °/s)
		125–127	Fast to slow - Slow (1.11–0.362 °/s)
		128	No rotation middle
		129–131	Slow to fast - Slow (0.362–1.11 °/s)
		132–232	Slow to fast - Slow ... Slow to fast - Fast (1.11–358.6 °/s)
		233–255	Slow to fast - Fast (358.6–751.6 °/s)
28	Frost	0	Light Frost: Open
		1–50	Light Frost from 0% to 100%
		51–53	100% Light Frost
		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%

CH	Function	DMX	Description
28	Frost (continued)	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
29	Iris	0–180	Iris: Open ... Closed
		180–191	Iris: Closed
		192–194	Iris Pulse Open: Slow to fast - Slow (0.02–0.04 Hz)
		195–216	Iris Pulse Open: Slow to fast - Slow ... Slow to fast - Fast (0.04–1.32 Hz)
		217–219	Iris Pulse Open: Slow to fast - Fast (1.32–3.47 Hz)
		220–221	Iris Pulse Close: Fast to slow - Fast (3.47–1.32 Hz)
		222–243	Iris Pulse Close: Fast to slow - Fast ... Fast to slow - Slow (1.32–0.04 Hz)
		244–247	Iris Pulse Close: Fast to slow - Slow (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
30	Iris Fine	0–255	Fine adjustment of CH 29
31	Zoom	0–255	Zoom max ... Zoom min
		255	Zoom min
32	Zoom Fine	0–255	Fine adjustment of CH 31
33	Focus	0–255	Min ... max
		255	Max
34	Focus Fine	0–255	Fine adjustment of CH 33
35	Undefined	0–255	Reserved
36	Shaper Rotation	0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
37	Blade 1 A		Blade 1 - movement
		0	Min
		1–254	Min ... max
		255	Max
38	Blade 1 Rotation		Blade 1 - swivelling
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max

CH	Function	DMX	Description
39	Blade 4 A		Blade 2 - movement
		0	Min
		1–254	Min … max
		255	Max
40	Blade 4 Rotation		Blade 2 - swivelling
		0	Min
		1–127	Min … center
		128	Center
		129–254	Center … max
		255	Max
41	Blade 3 A		Blade 3 - movement
		0	Min
		1–254	Min … max
		255	Max
42	Blade 3 Rotation		Blade 3 - swivelling
		0	Min
		1–127	Min … center
		128	Center
		129–254	Center … max
		255	Max
43	Blade 2 A		Blade 4 - movement
		0	Min
		1–254	Min … max
		255	Max
44	Blade 2 Rotation		Blade 4 - swivelling
		0	Min
		1–127	Min … center
		128	Center
		129–254	Center … max
		255	Max
45	Shaper Macros	0–3	No function
		4–7	Macro 1
		8–11	Macro 2
		12–15	Macro 3
		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

CH	Function	DMX	Description
45	Shaper Macros (continued)	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
		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

CH	Function	DMX	Description
46	Shaper Macros Speed	0–255	Speed from slow to fast
47	Shutter	0–31	Open/Closed: Closed
		32–63	Open/Closed: Open
		64–67	Strobe: Slow to fast - Slow (0.41–0.55 Hz)
		68–94	Strobe: Slow to fast - Slow ... Slow to fast - Fast (0.55–11.2 Hz)
		95	Strobe: Slow to fast - Fast
		96–127	Open
		128–130	Strobe Pulse Open: Slow to fast - Slow (0.042–0.091 Hz)
		131–140	Strobe Pulse Open: Slow to fast - Slow ... Slow to fast - Fast (0.091–1.28 Hz)
		141–143	Strobe Pulse Open: Slow to fast - Fast
		144–145	Strobe Pulse Close: Fast to slow - Fast (1.82–1.28 Hz)
		146–155	Strobe Pulse Close: Fast to slow - Fast ... Fast to slow - Slow (1.28–0.091 Hz)
		156–159	Strobe Pulse Close: Fast to slow - Slow (0.091–0.042 Hz)
		160–191	Open
		192–223	Random strobe from slow to fast (0.125–10 Hz)
		224–255	Open
48	Dimmer	0–255	Min ... max
		255	Max
49	Dimmer Fine	0–255	Fine adjustment of CH 48

Mode 2 - Standard 8 bit

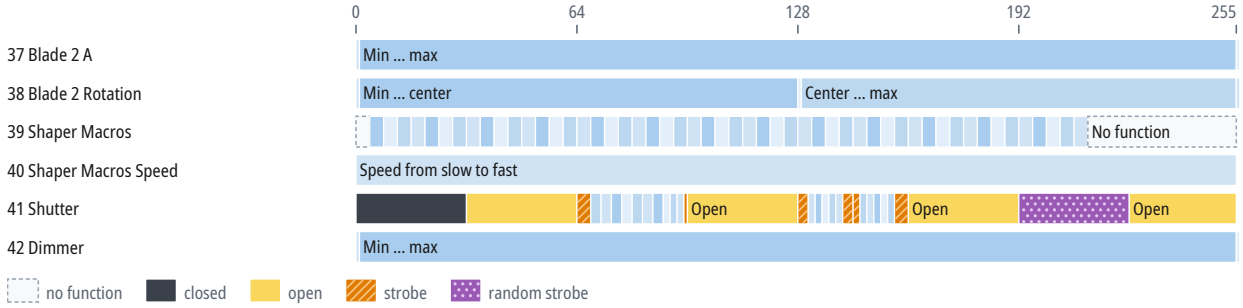
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 41 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 7 Colors 0, CH 8 Colors 2 0, CH 9 Cyan 0, CH 10 Magenta 0, CH 11 Yellow 0, CH 13 Color Macro 0, CH 41 Shutter 32, CH 42 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Mode 1 - Standard 16 bit” (p. 15)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Mode 1 - Standard 16 bit” (p. 15)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Mode 1 - Standard 16 bit” (p. 15)
6	Control		Same as CH 6 in the mode “Mode 1 - Standard 16 bit” (p. 15)
7	Colors	0–8	Open/white - continual
		9–27	Deep red - continual
		28–46	Deep blue - continual
		47–63	Orange - continual
		64–82	Green - continual
		83–99	Magenta - continual
		100–120	Congo blue (UV) - continual
		121–129	White - continual
		130–139	Deep red - step
		140–149	Deep blue - step
		150–159	Orange - step
		160–169	Green - step
		170–179	Magenta - step
		180–189	Congo blue - step
		190–191	Color 1 Wheel Spin: Fast to slow - Fast (800–561.6 °/s)
		192–211	Color 1 Wheel Spin: Fast to slow - Fast ... Fast to slow - Slow (561.6–21.8 °/s)
		212–215	Color 1 Wheel Spin: Fast to slow - Slow (21.8–2.92 °/s)
		216–217	No rotation middle
		218–220	Color 1 Wheel Spin: Slow to fast - Slow (2.92–21.8 °/s)
		221–240	Color 1 Wheel Spin: Slow to fast - Slow ... Slow to fast - Fast (21.8–561.6 °/s)
		241–243	Color 1 Wheel Spin: Slow to fast - Fast (561.6–800 °/s)
		244–249	Random colour selection by audio control
		250–254	Color 1 Wheel Random: fast
		255	Color 1 Wheel Random: slow

CH	Function	DMX	Description
8	Colors 2	0–8	Open/white - continual
		9–27	Pink - continual
		28–46	Lavender - continual
		47–63	Laser green - continual
		64–82	CTB - continual
		83–99	Minus green - continual
		100–120	Minus 1/2 green - continual
		121–129	White - continual
		130–139	Pink - step
		140–149	Lavender - step
		150–159	Laser green - step
		160–169	CTB - step
		170–179	Minus green - step
		180–189	Minus 1/2 green - step
		190–191	Color 2 Wheel Spin: Fast to slow - Fast (800–561.6 °/s)
		192–211	Color 2 Wheel Spin: Fast to slow - Fast ... Fast to slow - Slow (561.6–21.8 °/s)
		212–215	Color 2 Wheel Spin: Fast to slow - Slow (21.8–2.92 °/s)
		216–217	No rotation middle
		218–220	Color 2 Wheel Spin: Slow to fast - Slow (2.92–21.8 °/s)
		221–240	Color 2 Wheel Spin: Slow to fast - Slow ... Slow to fast - Fast (21.8–561.6 °/s)
		241–243	Color 2 Wheel Spin: Slow to fast - Fast (561.6–800 °/s)
		244–249	Random colour selection by audio control
		250–254	Color 2 Wheel Random: fast
		255	Color 2 Wheel Random: slow
9	Cyan		Same as CH 11 in the mode “Mode 1 - Standard 16 bit” (p. 17)
10	Magenta		Same as CH 12 in the mode “Mode 1 - Standard 16 bit” (p. 17)
11	Yellow		Same as CH 13 in the mode “Mode 1 - Standard 16 bit” (p. 17)
12	CTO		Same as CH 14 in the mode “Mode 1 - Standard 16 bit” (p. 17)
13	Color Macro		Same as CH 15 in the mode “Mode 1 - Standard 16 bit” (p. 18)
14	Effects Fade		Same as CH 16 in the mode “Mode 1 - Standard 16 bit” (p. 20)
15	Color Mix Speed		Same as CH 17 in the mode “Mode 1 - Standard 16 bit” (p. 20)
16	Zoom Speed		Same as CH 18 in the mode “Mode 1 - Standard 16 bit” (p. 20)
17	Animation Wheel		Same as CH 19 in the mode “Mode 1 - Standard 16 bit” (p. 20)
18	Animation Wheel Rotation	0	No rotation
		1–24	Fast to slow - Fast (220.5–113.9 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (113.9–0.995 °/s)
		124–127	Fast to slow - Slow (0.995–0.426 °/s)
		128	No rotation middle
		129–131	Slow to fast - Slow (0.426–0.995 °/s)
		132–232	Slow to fast - Slow ... Slow to fast - Fast (0.995–113.9 °/s)
		233–255	Slow to fast - Fast (113.9–220.5 °/s)

CH	Function	DMX	Description
19	Animation Wheel Macro		Same as CH 21 in the mode “Mode 1 - Standard 16 bit” (p. 21)
20	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 - Fast (491.1–226.3 °/s)
		205–218	Static Gobo Spin: Fast to slow - Fast ... Fast to slow - Slow (226.3–4.26 °/s)
		219–222	Static Gobo Spin: Fast to slow - Slow (4.26–1.68 °/s)
		223–226	Static Gobo Spin: Slow to fast - Slow (1.68–4.26 °/s)
		227–240	Static Gobo Spin: Slow to fast - Slow ... Slow to fast - Fast (4.26–226.3 °/s)
		241–243	Static Gobo Spin: Slow to fast - Fast (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
21	Gobo 2		Same as CH 23 in the mode “Mode 1 - Standard 16 bit” (p. 22)
22	Gobo 2 Rotation		When CH 21 is 0–31:
		0	Gobo indexing min
		1–127	Gobo indexing min ... Gobo indexing center
		128	Gobo indexing center
		129–254	Gobo indexing center ... Gobo indexing max
		255	Gobo indexing max
23	Prism		Same as CH 26 in the mode “Mode 1 - Standard 16 bit” (p. 23)
24	Prism Rotation		When CH 23 is 20–49:
		0	Prism indexing min
		1–254	Prism indexing min ... Prism indexing max
		255	Prism indexing max

CH	Function	DMX	Description
24	Prism Rotation (continued)		When CH 23 is 50–75:
		0	No rotation
		1–24	Fast to slow - Fast (751.6–358.6 °/s)
		25–124	Fast to slow - Fast ... Fast to slow - Slow (358.6–1.11 °/s)
		125–127	Fast to slow - Slow (1.11–0.362 °/s)
		128	No rotation middle
		129–131	Slow to fast - Slow (0.362–1.11 °/s)
		132–232	Slow to fast - Slow ... Slow to fast - Fast (1.11–358.6 °/s)
		233–255	Slow to fast - Fast (358.6–751.6 °/s)
			When CH 23 is 0–19:
		0–255	
			When CH 23 is 128–255:
		0–255	
			When CH 23 is 76–105:
		0	Prism indexing min
		1–254	Prism indexing min ... Prism indexing max
		255	Prism indexing max
			When CH 23 is 106–127:
		0	No rotation
		1–24	Fast to slow - Fast (751.6–358.6 °/s)
		25–124	Fast to slow - Fast ... Fast to slow - Slow (358.6–1.11 °/s)
		125–127	Fast to slow - Slow (1.11–0.362 °/s)
		128	No rotation middle
		129–131	Slow to fast - Slow (0.362–1.11 °/s)
		132–232	Slow to fast - Slow ... Slow to fast - Fast (1.11–358.6 °/s)
		233–255	Slow to fast - Fast (358.6–751.6 °/s)
25	Frost		Same as CH 28 in the mode “Mode 1 - Standard 16 bit” (p. 24)
26	Iris	0	Iris: Open
		1–179	Iris: Open ... Closed
		180–191	Iris: Closed
		192–194	Iris Pulse Open: Slow to fast - Slow (0.02–0.04 Hz)
		195–216	Iris Pulse Open: Slow to fast - Slow ... Slow to fast - Fast (0.04–1.32 Hz)
		217–219	Iris Pulse Open: Slow to fast - Fast (1.32–3.47 Hz)
		220–221	Iris Pulse Close: Fast to slow - Fast (3.47–1.32 Hz)
		222–243	Iris Pulse Close: Fast to slow - Fast ... Fast to slow - Slow (1.32–0.04 Hz)
		244–247	Iris Pulse Close: Fast to slow - Slow (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
27	Zoom	0	Zoom max

CH	Function	DMX	Description
27	Zoom (continued)	1–254	Zoom max ... Zoom min
		255	Zoom min
28	Focus	0	Min
		1–254	Min ... max
		255	Max
29	Undefined	0–255	Reserved
30	Shaper Rotation		Same as CH 36 in the mode “Mode 1 - Standard 16 bit” (p. 25)
31	Blade 1 A		Same as CH 37 in the mode “Mode 1 - Standard 16 bit” (p. 25)
32	Blade 1 Rotation		Same as CH 38 in the mode “Mode 1 - Standard 16 bit” (p. 25)
33	Blade 4 A		Same as CH 39 in the mode “Mode 1 - Standard 16 bit” (p. 26)
34	Blade 4 Rotation		Same as CH 40 in the mode “Mode 1 - Standard 16 bit” (p. 26)
35	Blade 3 A		Same as CH 41 in the mode “Mode 1 - Standard 16 bit” (p. 26)
36	Blade 3 Rotation		Same as CH 42 in the mode “Mode 1 - Standard 16 bit” (p. 26)
37	Blade 2 A		Same as CH 43 in the mode “Mode 1 - Standard 16 bit” (p. 26)
38	Blade 2 Rotation		Same as CH 44 in the mode “Mode 1 - Standard 16 bit” (p. 26)
39	Shaper Macros		Same as CH 45 in the mode “Mode 1 - Standard 16 bit” (p. 26)
40	Shaper Macros Speed	0–255	Speed from slow to fast
41	Shutter	0–31	Open/Closed: Closed
		32–63	Open/Closed: Open
		64–67	Strobe: Slow to fast - Slow (0.41–0.55 Hz)
		68–94	Strobe: Slow to fast - Slow ... Slow to fast - Fast (0.55–11.2 Hz)
		95	Strobe: Slow to fast - Fast
		96–127	Open
		128–130	Strobe Pulse Open: Slow to fast - Slow (0.042–0.091 Hz)
		131–140	Strobe Pulse Open: Slow to fast - Slow ... Slow to fast - Fast (0.091–1.28 Hz)
		141–143	Strobe Pulse Open: Slow to fast - Fast
		144–145	Strobe Pulse Close: Fast to slow - Fast (1.82–1.28 Hz)
		146–155	Strobe Pulse Close (1.28–0.091 Hz)
		156–159	Strobe Pulse Close: Fast to slow - Fast (0.091–0.042 Hz)
		160–191	Open
		192–223	Random strobe from slow to fast (0.125–10 Hz)
		224–255	Open
42	Dimmer	0	Min
		1–254	Min ... max
		255	Max

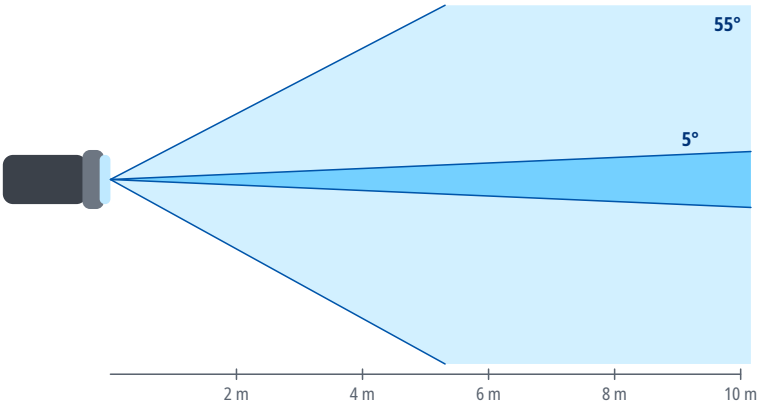
10 Technical specifications

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 0x00A0)
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	2,000 W
Power connectors	NAC3MPA IN
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 30 °/s (5 rpm)
Color wheel 2 rotation	up to 30 °/s (5 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)
Animation wheel rotation	up to 30 °/s (5 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.