DMX REFERENCE

SUPER SCOPE COLOR

LIGHT SKY



Manufacturer	LIGHT SKY
GDTF file	LIGHT_SKY_SUPER_SCOPE_COLOR_140485.gdtf
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Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 5
5 Installation 6
6 Connections 6
7 Operation 7
8 Functions at a glance 8
9 DMX channels 12
Mode 49CH 13
Mode 60CH 27
Mode 64CH 33
Mode 35CH 38
10 Technical specifications 42
11 Maintenance and cleaning 43
12 Troubleshooting 43
13 Disposal 44

1 About this manual

This document describes the SUPER SCOPE COLOR by LIGHT SKY. It was compiled from the GDTF file LIGHT_SKY_SUPER_SCOPE_COLOR_140485.gdtf from the GDTF-Share library.

File revision: “V1.2”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by LIGHT SKY; 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	750 W
Weight	37.6 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
49CH	49	10	1, 50, 99, 148, ...
60CH	60	8	1, 61, 121, 181, ...
64CH	64	8	1, 65, 129, 193, ...
35CH	35	14	1, 36, 71, 106, ...

No light? Check these channels

- 49CH: CH 47 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 48 Dimmer above 0
- 60CH: CH 58 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 59 Dimmer above 0
- 64CH: CH 62 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 63 Dimmer above 0
- 35CH: CH 34 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 35 Dimmer above 0


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.

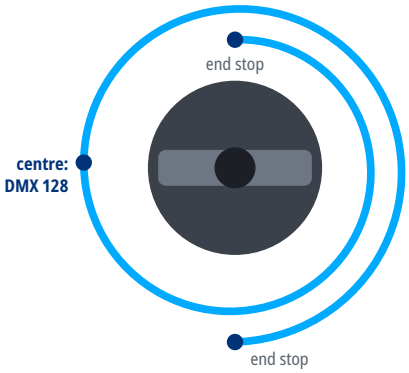
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do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

Range of movement

Pan 540°

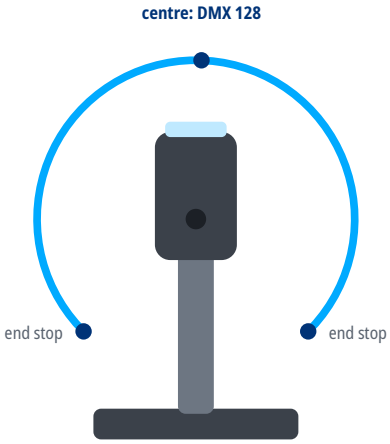
top view



full travel in 3.9 s

Tilt 270°

side view



full travel in 2.5 s

Full-travel times as stated in the GDTF file.

5 Installation

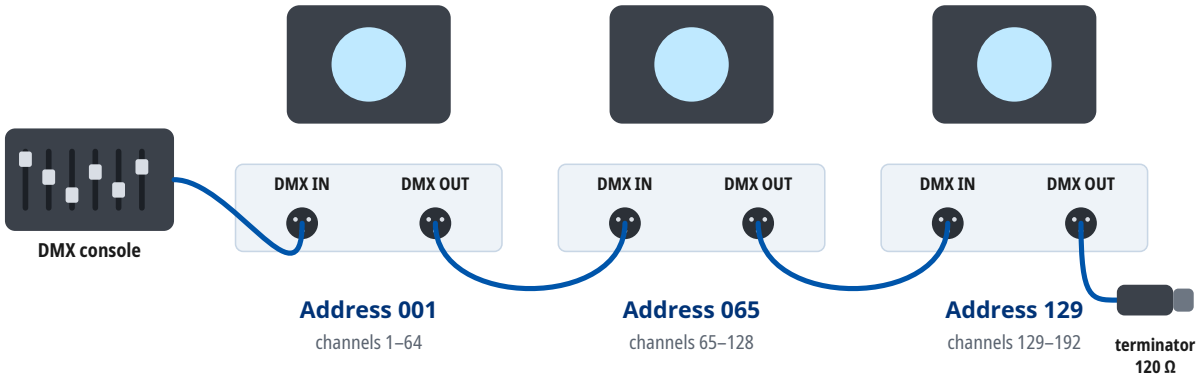
⚠ **WARNING**

- 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: 37.6 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 64CH: every unit occupies 64 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 “64CH”: 64.
- 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 “64CH”, you can use, for example, the start addresses 1, 65, 129, 193.
- 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

	49CH 49 channels	60CH 60 channels	64CH 64 channels	35CH 35 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3
Dimmer	48	59	63	35
Dimmer resolution	16 bit	16 bit	16 bit	8 bit
Shutter / strobe	47	58	62	34
Color mixing	12, 14, 16	12, 14, 16	5× (12–20)	9–11
Color temperature	18	18	22	12
Gobo wheel	26	26, 29	30, 33	15, 17
Gobo rotation	27 *	27, 30 *	31, 34 *	16, 18 *
Prism	29, 30	32, 33	36, 37	19, 20
Frost	31	34	38	21
Zoom	34	37	41	23
Focus	36	39	43	24
Iris	32	35	39	22
Animation wheel	23–25	23–25	27–29	13, 14
Effects / macros	11, 29	11, 32	11, 36	19

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

Gobo wheel 1

1
Gobo 1 Step Index: Open/hole
DMX 0–3

2 
Gobo 1
DMX 4–7

3 
Gobo 2
DMX 8–11

4 
Gobo 3
DMX 12–15

5 
Gobo 4
DMX 16–19

6 
Gobo 5
DMX 20–23

7 
Gobo 6
DMX 24–27

8 
G07
DMX 28–32

Animation wheel

1	Animation Wheel Index: Open	DMX 0–19	
2	Animation Wheel	DMX 20–128	

Color wheel

1 No function
DMX 0

2 Filter 4 (Medium Bastard Amber)
DMX 1–2

3 Filter 10 (Medium Yellow)
DMX 3–4

4 Filter 19 (Fire)
DMX 5–6

5 Filter 26 (Bright Red)
DMX 7–8

6 Filter 58 (Lavender)
DMX 9–10

7 Filter 68 (Sky Blue)
DMX 11–12

8 Filter 71 (Tokyo Blue)
DMX 13–14

9 Filter 79 (Just Blue)
DMX 15–16

10 Filter 88 (Lime Green)
DMX 17–18

11 Filter 90 (Dark Yellow Green)
DMX 19–20

12 Filter 100 (Spring Yellow)
DMX 21–22

13 Filter 101 (Yellow)
DMX 23–24

14 Filter 102 (Light Amber)
DMX 25–26

15 Filter 103 (Straw)
DMX 27–28

16 Filter 104 (Deep Amber)
DMX 29–30

17 Filter 105 (Orange)
DMX 31–32

18 Filter 106 (Primary Red)
DMX 33–34

19 Filter 111 (Dark Pink)
DMX 35–36

20 Filter 115 (Peacock Blue)
DMX 37–38

21 Filter 116 (Medium Blue - Green)
DMX 39–40

22 Filter 117 (Steel Blue)
DMX 41–42

23 Filter 118 (Light Blue)
DMX 43–44

24 Filter 119 (Dark Blue)
DMX 45–46

25 Filter 120 (Deep Blue)
DMX 47–48

26 Filter 121 (Filter Green)
DMX 49–50

27 Filter 128 (Bright Pink)
DMX 51–52

28 Filter 131 (Marine Blue)
DMX 53–54

29 Filter 132 (Medium Blue)
DMX 55–56

30 Filter 134 (Golden Amber)
DMX 57–58

31 Filter 135 (Deep Golden Amber)
DMX 59–60

32 Filter 136 (Pale Lavender)
DMX 61–62

33 Filter 137 (Special Lavender)
DMX 63–64

34 Filter 138 (Pale Green)
DMX 65–66

35 Filter 139 (Primary Green)
DMX 67–68

36 Filter 141 (Bright Blue)
DMX 69–70

37 Filter 147 (Apricot)
DMX 71–72

38 Filter 148 (Bright Rose)
DMX 73–74

39 Filter 152 (Pale Gold)
DMX 75–76

40 Filter 154 (Pale Rose)
DMX 77–78

41 Filter 157 (Pink)
DMX 79–80

42 Filter 158 (Deep Orange)
DMX 81–82

43 Filter 162 (Bastard Amber)
DMX 83–84

44 Filter 164 (Flame Red)
DMX 85–86

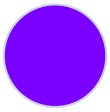
45 Filter 165 (Daylight Blue)
DMX 87–88

46 Filter 169 (Lilac Tint)
DMX 89–90

47 Filter 170 (Deep Lavender)
DMX 91–92

48 Filter 172 (Lagoon Blue)
DMX 93–94

49 
Filter 179 (Chrome Orange)
DMX 95–96

50 
Filter 180 (Dark Lavender)
DMX 97–98

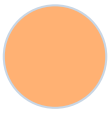
51 
Filter 181 (Congo Blue)
DMX 99–100

52 
Filter 197 (Alice Blue)
DMX 101–102

53 
Filter 201 (Full CT Blue)
DMX 103–104

54
Filter 202 (Half CT Blue)
DMX 105–106

55
Filter 203 (Quarter CT Blue)
DMX 107–108

56 
Filter 204 (Full CT Orange)
DMX 109–110

57
Filter 205 (Half CT Orange)
DMX 111–112

58
Filter 206 (Quarter CT Orange)
DMX 113–114

59
Filter 247 (Filter Minus Green)
DMX 115–116

60
Filter 248 (Half Minus Green)
DMX 117–118

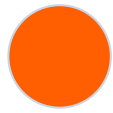
61 
Filter 281 (Three Quarter CT Blue)
DMX 119–120

62
Filter 285 (Three Quarter CT Orange)
DMX 121–122

63 
Filter 352 (Glacier Blue)
DMX 123–124

64 
Filter 353 (Lighter Blue)
DMX 125–126

65 
Filter 715 (Cabana Blue)
DMX 127–128

66 
Filter 778 (Millennium Gold)
DMX 129–130

67 
Filter 793 (Vanity Fair)
DMX 131–132

Prism

1
Open position (hole)
DMX 0–19

2 
8 facets
Prism
DMX 20–128

Gobo wheel 2

1
Gobo 2 Step Index: Open/hole
DMX 0–3

2 
Gobo 1
DMX 4–7

3 
Gobo 2
DMX 8–11

4 
Gobo 3
DMX 12–15

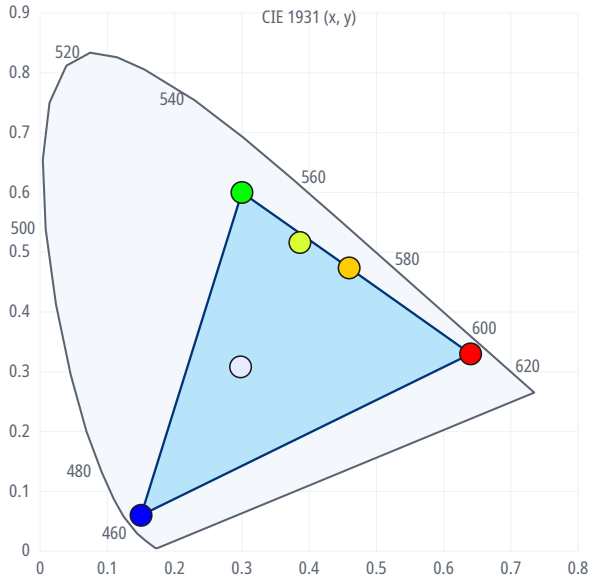
5 
Gobo 4
DMX 16–19

6 
Gobo 5
DMX 20–23

7 
Gobo 6
DMX 24–27

8 
G07
DMX 28–32

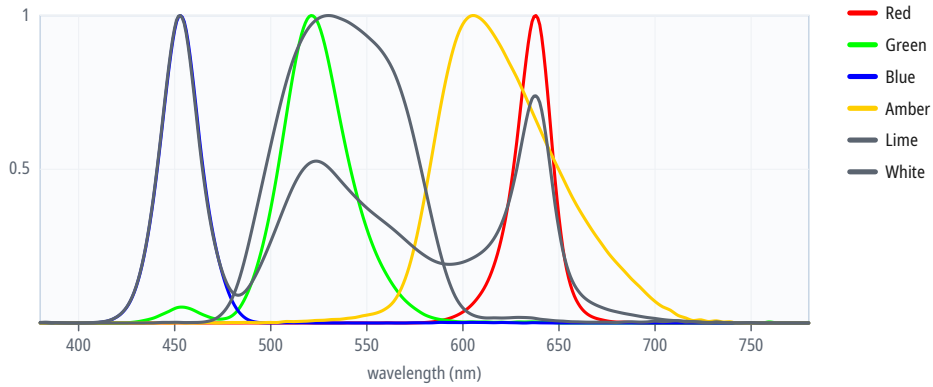
LED colors and the colors they mix



LED	x	y	nm
Red	0.640	0.330	626
Green	0.300	0.600	524
Blue	0.150	0.060	455
Amber	0.459	0.474	600
Lime	0.386	0.516	546
White	0.298	0.308	

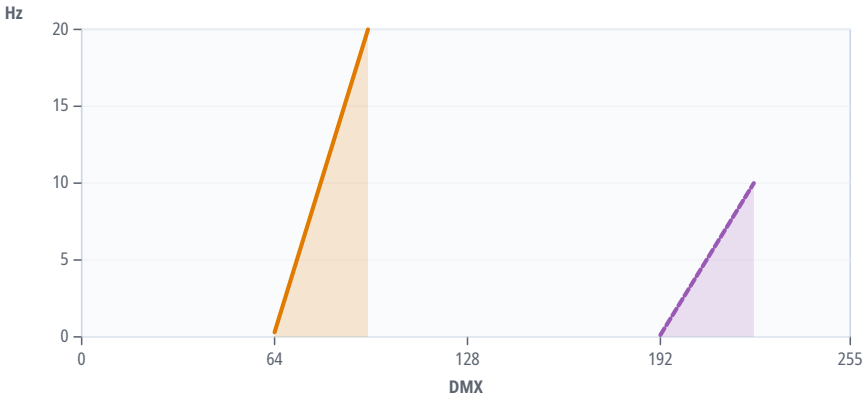
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

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



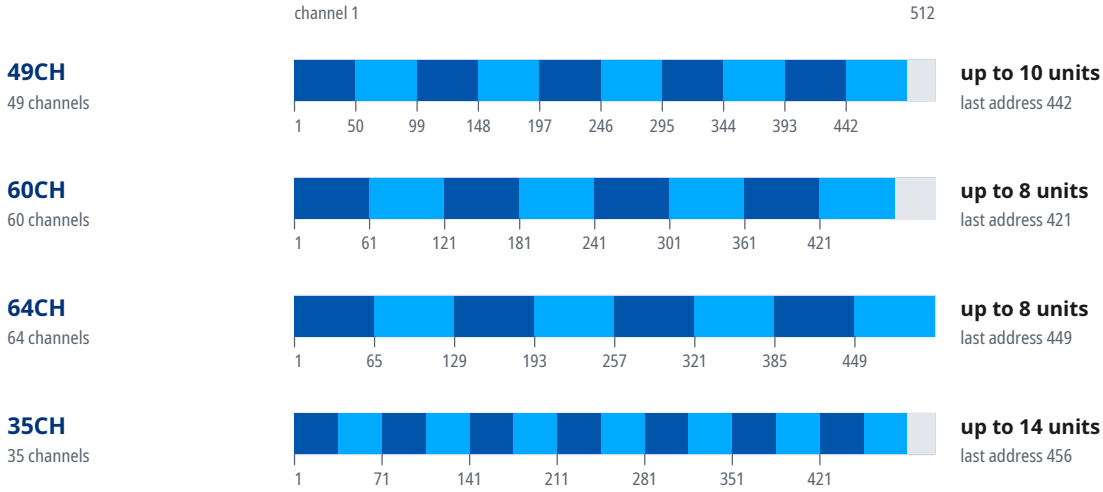
CH 62 · 64CH

64–95: 0.3–20 Hz
Strobe

192–223: 0.125–10 Hz
Random strobe from slow to fast

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “64CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	321	11	U2 · 129	16	U2 · 449
2	65	7	385	12	U2 · 193	17	U3 · 1
3	129	8	449	13	U2 · 257	18	U3 · 65
4	193	9	U2 · 1	14	U2 · 321	19	U3 · 129
5	257	10	U2 · 65	15	U2 · 385	20	U3 · 193

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 49CH

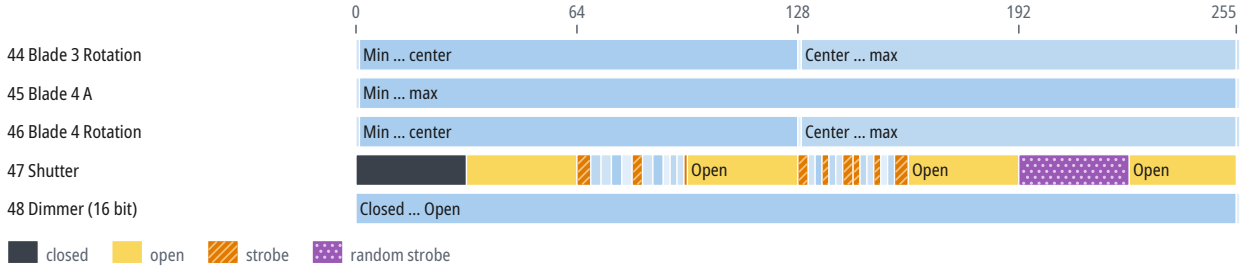
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

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”; CH 48 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: 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	Min ... Center
		128–255	Center ... Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	PT Speed	0	Standard
		1–254	Standard ... Min
		255	Min
6	Control	0–9	No Function
		10–14	DMX Input
		15–19	Art-Net Input
		20–24	Dis Back On
		25–29	Dis Back Auto
		30–34	Zoom Invert
		35–39	Zoom Forward
		40–44	P/T Mode:Speed
		45–49	P/T Mode:Time
		50–54	Moving Blackout On
		55–59	Moving Blackout Off
		60–69	Moving Blackout Off ... Fan Silent
		70–74	Fan Silent
		75–79	Fan Standard
		80–84	Fan HighOutput
		85–89	DMX State:Black
		90–94	DMX State:Hold
		95–99	iCC Off
		100–104	iCC On
		105–119	iCC On ... Parking Position On
		120–124	Parking Position On
		125–129	Parking Position Off

CH	Function	DMX	Description
6	Control (continued)	130–139	Head Reset
		140–149	P/T Reset
		150–159	P/T Reset ... Gobo Reset
		160–169	Gobo Reset
		170–179	Gobo Reset ... Zoom Reset
		180–189	Zoom Reset
		190–199	Fram Reset
		200–209	Fixture Reset
		210–211	Green Correction
		212–213	FX Auto Focus On
		214–215	FX Auto Focus Off
		216–218	Control
		219–220	Maximum speed and shortcut
		221–222	Follow speed and direction
		223–224	Empty Channel SetMaximum speed and follow direction
		225–229	RoboSpot enabled
		230–234	RoboSpot disabled
		235–239	RoboSpot fully disabled
		240	Disabled "Quiet mode"
		241–255	Quiet mode
7	LED Frequency	0–4	PWM frequency from Display menu
		5–9	4000 Hz
		10–14	8000 Hz
		15–19	16000 Hz
		20–24	25000 Hz
		25–255	No function
8	LED Frequency Adjust	0–1	Selected LED frequency
		2–127	LED Frequency (step -126...-1)
		128	Selected LED Frequency
		129–254	LED Frequency (step 1...126)
		255	Selected LED Frequency
9	Color Control	0	No Function
		1–39	No Function ... CMY Mode
		40–44	CMY Mode
		45–49	RGB Mode
		50–54	Square Curve
		55–59	Linear Curve
		60–64	I-Square Curve
		65–69	S Curve
		70–79	S Curve ... Tungsten (750W/80V)
		80–84	Tungsten (750W/80V)
		85–89	Tungsten (1000W/240V)

CH	Function	DMX	Description
9	Color Control (continued)	90–94	Tungsten (1200W/240V)
		95–99	Tungsten (2000W/230V)
		100–104	Tungsten (2500W/230V)
		105–109	Tungsten Off
		110–114	Tungsten Off ... Chromatic white:On (Use in future now no function)
		115–119	Chromatic white:On (Use in future now no function)
		120–124	Chromatic white:Off (Use in future now no function)
		125–129	Light output stability On
		130–134	Light output stability Off
		135–139	Uniformity On (Use in future now no function)
		140–144	Uniformity Off (Use in future now no function)
		145–255	Color Control
10	CRI Mode	0	Standard
		1–254	Standard ... High light
		255	High light
11	Color Macro	0	No function
		1–2	Filter 4 (Medium Bastard Amber)
		3–4	Filter 10 (Medium Yellow)
		5–6	Filter 19 (Fire)
		7–8	Filter 26 (Bright Red)
		9–10	Filter 58 (Lavender)
		11–12	Filter 68 (Sky Blue)
		13–14	Filter 71 (Tokyo Blue)
		15–16	Filter 79 (Just Blue)
		17–18	Filter 88 (Lime Green)
		19–20	Filter 90 (Dark Yellow Green)
		21–22	Filter 100 (Spring Yellow)
		23–24	Filter 101 (Yellow)
		25–26	Filter 102 (Light Amber)
		27–28	Filter 103 (Straw)
		29–30	Filter 104 (Deep Amber)
		31–32	Filter 105 (Orange)
		33–34	Filter 106 (Primary Red)
		35–36	Filter 111 (Dark Pink)
		37–38	Filter 115 (Peacock Blue)
		39–40	Filter 116 (Medium Blue - Green)
		41–42	Filter 117 (Steel Blue)
		43–44	Filter 118 (Light Blue)
		45–46	Filter 119 (Dark Blue)
		47–48	Filter 120 (Deep Blue)
		49–50	Filter 121 (Filter Green)

CH	Function	DMX	Description
11	Color Macro (continued)	51–52	Filter 128 (Bright Pink)
		53–54	Filter 131 (Marine Blue)
		55–56	Filter 132 (Medium Blue)
		57–58	Filter 134 (Golden Amber)
		59–60	Filter 135 (Deep Golden Amber)
		61–62	Filter 136 (Pale Lavender)
		63–64	Filter 137 (Special Lavender)
		65–66	Filter 138 (Pale Green)
		67–68	Filter 139 (Primary Green)
		69–70	Filter 141 (Bright Blue)
		71–72	Filter 147 (Apricot)
		73–74	Filter 148 (Bright Rose)
		75–76	Filter 152 (Pale Gold)
		77–78	Filter 154 (Pale Rose)
		79–80	Filter 157 (Pink)
		81–82	Filter 158 (Deep Orange)
		83–84	Filter 162 (Bastard Amber)
		85–86	Filter 164 (Flame Red)
		87–88	Filter 165 (Daylight Blue)
		89–90	Filter 169 (Lilac Tint)
		91–92	Filter 170 (Deep Lavender)
		93–94	Filter 172 (Lagoon Blue)
		95–96	Filter 179 (Chrome Orange)
		97–98	Filter 180 (Dark Lavender)
		99–100	Filter 181 (Congo Blue)
		101–102	Filter 197 (Alice Blue)
		103–104	Filter 201 (Full CT Blue)
		105–106	Filter 202 (Half CT Blue)
		107–108	Filter 203 (Quarter CT Blue)
		109–110	Filter 204 (Full CT Orange)
		111–112	Filter 205 (Half CT Orange)
		113–114	Filter 206 (Quarter CT Orange)
		115–116	Filter 247 (Filter Minus Green)
		117–118	Filter 248 (Half Minus Green)
		119–120	Filter 281 (Three Quarter CT Blue)
		121–122	Filter 285 (Three Quarter CT Orange)
		123–124	Filter 352 (Glacier Blue)
		125–126	Filter 353 (Lighter Blue)
		127–128	Filter 715 (Cabana Blue)
		129–130	Filter 778 (Millennium Gold)
		131–132	Filter 793 (Vanity Fair)
		133–202	Multicolor 1...70

CH	Function	DMX	Description
11	Color Macro (continued)	203–215	Reserved
		216–217	User colour 1
		218–219	User colour 2
		220–221	User colour 3
		222–223	User colour 4
		224–225	User colour 5
		226–227	User colour 6
		228–229	User colour 7
		230–231	User colour 8
		232–233	User colour 9
		234–235	User colour 10
		236–245	Rainbow effect (with fade time) from slow - > fast
		246–255	Rainbow effect (without fade time) from slow - > fast
12	Cyan	0–255	Min ... Max
		255	Max
13	Cyan Fine	0–255	Fine adjustment of CH 12
14	Magenta	0–255	Min ... Max
		255	Max
15	Magenta Fine	0–255	Fine adjustment of CH 14
16	Yellow	0–255	Min ... Max
		255	Max
17	Yellow Fine	0–255	Fine adjustment of CH 16
18	CTO	0–1	8000 K
		2–64	7978 K - > 6622 K (7978–6622 K)
		65	6600 K
		66–109	6578K - > 5622 K (6578–5622 K)
		110	5600 K
		111–179	5580 K - > 4220 K (5580–4220 K)
		180	4200 K
		181–229	4180 K - > 3220 K (4180–3220 K)
		230	3200 K
		231–254	3180 K - > 2720 K (3180–2720 K)
		255	2700K
19	Tint		Green correction
		0	Uncorrected white
		1–127	Minus green - > Uncorrected white
		128	Uncorrected white
		129–255	Uncorrected white - > Plus green
20	Color Mix Mode	0–9	Virtual colours (Virtual has priority)
		10–19	Maximum mode (highest values have priority)
		20–29	Minimum mode (lowest values have priority)
		30–39	Multiply mode (multiply Virtual and Colour mix)

CH	Function	DMX	Description
20	Color Mix Mode (continued)	40–49	Addition mode (Virtual + Colour mix)
		50–59	Subtraction mode (Virtual - Colour mix)
		60–69	Inverted Subtraction mode (Colour mix - Virtual)
		70–79	White Point Off
		80–128	Reserved
		129	Crossfade Virtual only
		130–254	Crossfade between Virtual and Colour mix
		255	Crossfade Color mix only
21	Gobo Wheel Speed	0	Max
		1–254	Max ... min
		255	Min
22	Focus Speed	0	Standard mode
		1	Max Speed Mode
		2–254	Max Speed Mode ... Min Speed Mode
		255	Min Speed Mode
23	Animation Wheel	0–19	Animation Wheel Index: Open
		20–127	Proportional indexing max
		128	Ramping from open to full position max
		129–169	Ramping from open to full position max ... Ramping from open to full position min
		170	Ramping from open to full position min
		171	Ramping from open to half position max
		172–212	Ramping from open to half position max ... Ramping from open to half position min
		213	Ramping from open to half position min
		214	Ramp from half position to full position max
		215–254	Ramp from half position to full position max ... Ramp from half position to full position min
		255	Ramp from half position to full position min
24	Animation Wheel Rotation	0	No rotation
		1–24	Fast to slow 1/7 (220.5–113.9 °/s)
		25–49	Fast to slow 2/7 (113.9–43.6 °/s)
		50–74	Fast to slow 3/7 (43.6–29.6 °/s)
		75–99	Fast to slow 4/7 (up to 29.6 °/s (4.9 rpm))
		100–119	Fast to slow 5/7 (12.3–2.71 °/s)
		120–124	Fast to slow 6/7 (2.71–1.62 °/s)
		125–127	Fast to slow 7/7 (1.62–0.378 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.378–1.62 °/s)
		132–136	Slow to fast 2/7 (1.62–2.71 °/s)
		137–156	Slow to fast 3/7 (2.71–12.3 °/s)
		157–181	Slow to fast 4/7 (12.3–29.6 °/s)
		182–206	Slow to fast 5/7 (29.6–43.6 °/s)

CH	Function	DMX	Description
24	Animation Wheel Rotation (continued)	207–232	Slow to fast 6/7 (43.6–113.9 °/s)
		233–255	Slow to fast 7/7 (113.9–220.5 °/s)
25	Animation Wheel Effects	0–7	No animation
		8–9	Macro 1 (Focus=94)
		10–11	Macro 2 (Focus=95)
		12–13	Macro 3 (Focus=96)
		14–15	Macro 4 (Focus=97)
		16–17	Macro 5 (Focus=98)
		18–19	Macro 6 (Focus=99)
		20–21	Macro 7 (Focus=100)
		22–23	Macro 8 (Focus=101)
		24–25	Macro 9 (Focus=102)
		26–27	Macro 10 (Focus=103)
		28–29	Macro 11 (Focus=103)
		30–31	Macro 12 (Focus=103)
		32–33	Macro 13 (Focus=103)
		34–35	Macro 14 (Focus=103)
		36–37	Macro 15 (Focus=103)
		38–39	Macro 16 (Focus=103)
		40–41	Macro 17 (Focus=103)
		42–43	Macro 18 (Focus=103)
		44–45	Macro 19 (Focus=103)
		46–47	Macro 20 (Focus=103)
		48–255	No function
26	Gobo	0–3	Gobo 1 Step Index: Open/hole
		4–7	Gobo 1
		8–11	Gobo 2
		12–15	Gobo 3
		16–19	Gobo 4
		20–23	Gobo 5
		24–27	Gobo 6
		28–31	Gobo 7
		32–35	Gobo 1 - Rotation
		36–39	Gobo 2 - Rotation
		40–43	Gobo 3 - Rotation
		44–47	Gobo 4 - Rotation
		48–51	Gobo 5 - Rotation
		52–55	Gobo 6 - Rotation
		56–59	Gobo 7 - Rotation
		60–69	Gobo 1 - Shaking Index (0.588–6.67 Hz)
		70–79	Gobo 2 - Shaking Index (0.588–6.67 Hz)
		80–89	Gobo 3 - Shaking Index (0.588–6.67 Hz)

CH	Function	DMX	Description
26	Gobo (continued)	90–99	Gobo 4 - Shaking Index (0.588–6.67 Hz)
		100–109	Gobo 5 - Shaking Index (0.588–6.67 Hz)
		110–119	Gobo 6 - Shaking Index (0.588–6.67 Hz)
		120–129	Gobo 7 - Shaking Index (0.588–6.67 Hz)
		130–139	Gobo 1 - Shaking Rotation (0.588–6.67 Hz)
		140–149	Gobo 2 - Shaking Rotation (0.588–6.67 Hz)
		150–159	Gobo 3 - Shaking Rotation (0.588–6.67 Hz)
		160–169	Gobo 4 - Shaking Rotation (0.588–6.67 Hz)
		170–179	Gobo 5 - Shaking Rotation (0.588–6.67 Hz)
		180–189	Gobo 6 - Shaking Rotation (0.588–6.67 Hz)
		190–199	Gobo 7 - Shaking Rotation (0.588–6.67 Hz)
		200–201	Gobo 1 Shake Rotation: Open/hole (0.588–6.67 Hz)
		202	Gobo 1 Wheel Spin: Fast to slow - Fast
		203–218	Gobo 1 Wheel Spin: Fast to slow - Fast ... Fast to slow - Slow (78.8–8.25 °/s)
		219–222	Gobo 1 Wheel Spin: Fast to slow - Slow (8.25–1.37 °/s)
		223–226	Gobo 1 Wheel Spin: Slow to fast - Slow (1.37–8.25 °/s)
		227–242	Gobo 1 Wheel Spin: Slow to fast - Slow ... Slow to fast - Fast (8.25–78.8 °/s)
		243	Gobo 1 Wheel Spin: Slow to fast - Fast
		244–249	Gobo 1 Wheel Audio: Stop
		250–255	Auto random gobo selection from fast to slow
27	Gobo Rotation		When CH 26 is 0–31:
		0–127	Gobo indexing min
		128	Gobo indexing center
		128–255	Gobo indexing max
			When CH 26 is 32–59:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
			When CH 26 is 60–129:
		0–127	Gobo indexing min
		128	Gobo indexing center
		128–255	Gobo indexing max
			When CH 26 is 130–201:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)

CH	Function	DMX	Description
27	Gobo Rotation (continued)	124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
28	Gobo Rotation Fine	0–255	Fine adjustment of CH 27
29	Prism	0–19	Open position (hole)
		20–127	6 - facet rotating prism
		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
30	Prism Rotation	0	No rotation
		1–24	Fast to slow 1/7 (733.2–363.3 °/s)
		25–49	Fast to slow 2/7 (363.3–138.5 °/s)
		50–74	Fast to slow 3/7 (138.5–64.9 °/s)
		75–99	Fast to slow 4/7 (64.9–26.7 °/s)
		100–119	Fast to slow 5/7 (26.7–3.34 °/s)
		120–124	Fast to slow 6/7 (3.34–1.1 °/s)
		125–127	Fast to slow 7/7 (1.1–0.362 °/s)
		128	No rotation middle
		129–131	Slow to fast 1/7 (0.362–1.1 °/s)
		132–136	Slow to fast 2/7 (1.1–3.34 °/s)
		137–156	Slow to fast 3/7 (3.34–26.7 °/s)
		157–181	Slow to fast 4/7 (26.7–64.9 °/s)
		182–206	Slow to fast 5/7 (64.9–138.5 °/s)
		207–232	Slow to fast 6/7 (138.5–363.3 °/s)
		233–255	Slow to fast 7/7 (363.3–733.2 °/s)
31	Frost	0	Light Frost: Open
		1–50	Light Frost from 0% to 100%

CH	Function	DMX	Description
31	Frost (continued)	51–53	100% Light frost
		54–63	Light Frost: Pulse closing from slow to fast
		64–73	Light Frost: Pulse opening from fast to slow
		74–83	Light Frost: Ramping from fast to slow
		84–86	Medium Frost: Open
		87–136	Medium Frost from 0% to 100%
		137–139	100% Medium Frost
		140–149	Medium Frost: Pulse closing from slow to fast
		150–159	Medium Frost: Pulse opening from fast to slow
		160–169	Medium Frost: Ramping from fast to slow
		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
		236–245	Combined Frost: Pulse opening from fast to slow
		246–255	Combined Frost: Ramping from fast to slow
32	Iris	0–180	Iris: Open ... Closed
		180–191	Iris: Closed
		192–194	Iris Pulse Open: Slow to fast 1/13 (0.014–0.023 Hz)
		195–196	Iris Pulse Open: Slow to fast 2/13 (0.023–0.042 Hz)
		197–198	Iris Pulse Open: Slow to fast 3/13 (0.042–0.05 Hz)
		199–200	Iris Pulse Open: Slow to fast 4/13 (0.05–0.077 Hz)
		201–202	Iris Pulse Open: Slow to fast 5/13 (0.077–0.147 Hz)
		203–204	Iris Pulse Open: Slow to fast 6/13 (0.147–0.217 Hz)
		205–206	Iris Pulse Open: Slow to fast 7/13 (0.217–0.25 Hz)
		207–208	Iris Pulse Open: Slow to fast 8/13 (0.25–0.286 Hz)
		209–210	Iris Pulse Open: Slow to fast 9/13 (0.286–0.345 Hz)
		211–212	Iris Pulse Open: Slow to fast 10/13 (0.345–0.435 Hz)
		213–214	Iris Pulse Open: Slow to fast 11/13 (0.435–0.667 Hz)
		215–216	Iris Pulse Open: Slow to fast 12/13 (0.667–1 Hz)
		217–219	Iris Pulse Open: Slow to fast 13/13 (1–2.96 Hz)
		220–221	Iris Pulse Close: Fast to slow 1/13 (2.96–1 Hz)
		222–223	Iris Pulse Close: Fast to slow 2/13 (1–0.667 Hz)
		224–225	Iris Pulse Close: Fast to slow 3/13 (0.667–0.435 Hz)
		226–227	Iris Pulse Close: Fast to slow 4/13 (0.435–0.345 Hz)
		228–229	Iris Pulse Close: Fast to slow 5/13 (0.345–0.286 Hz)
		230–231	Iris Pulse Close: Fast to slow 6/13 (0.286–0.25 Hz)
		232–233	Iris Pulse Close: Fast to slow 7/13 (0.25–0.217 Hz)
		234–235	Iris Pulse Close: Fast to slow 8/13 (0.217–0.147 Hz)
		236–237	Iris Pulse Close: Fast to slow 9/13 (0.147–0.077 Hz)
		238–239	Iris Pulse Close: Fast to slow 10/13 (0.077–0.05 Hz)
		240–241	Iris Pulse Close: Fast to slow 11/13 (0.05–0.042 Hz)

CH	Function	DMX	Description
32	Iris (continued)	242–243	Iris Pulse Close: Fast to slow 12/13 (0.042–0.023 Hz)
		244–247	Iris Pulse Close: Fast to slow 13/13 (0.023–0.014 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
33	Iris Fine	0–255	Fine adjustment of CH 32
34	Zoom	0–255	Max ... min
		255	Min
35	Zoom Fine	0–255	Fine adjustment of CH 34
36	Focus	0–255	Min ... max
		255	Max
37	Focus Fine	0–255	Fine adjustment of CH 36
38	Shaper Rotation	0	Min
		1–127	Min ... mid
		128	Mid
		129–254	Mid ... max
		255	Max
39	Blade 1 A		Blade 1
		0	Min
		1–254	Min ... max
		255	Max
40	Blade 1 Rotation		Blade 1 rot
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
41	Blade 2 A		Blade 2
		0	Min
		1–254	Min ... max
		255	Max
42	Blade 2 Rotation		Blade 2 rot
		0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
43	Blade 3 A		Blade 3
		0	Min
		1–254	Min ... max
		255	Max

CH	Function	DMX	Description
44	Blade 3 Rotation		Blade 3 rot
		0	Min
		1–127	Min … center
		128	Center
		129–254	Center … max
		255	Max
45	Blade 4 A		Blade 4
		0	Min
		1–254	Min … max
		255	Max
46	Blade 4 Rotation		Blade 4 rot
		0	Min
		1–127	Min … center
		128	Center
		129–254	Center … max
		255	Max
47	Shutter	0–31	Open/Closed: Closed
		32–63	Open/Closed: Open
		64–67	Strobe: Slow to fast 1/12 (0.295–0.445 Hz)
		68–79	Strobe: Slow to fast 1/12 … Slow to fast 6/12 (0.495–3.31 Hz)
		80–82	Strobe: Slow to fast 6/12 (3.87–4.66 Hz)
		83–94	Strobe: Slow to fast 6/12 … Slow to fast 12/12 (5.02–17 Hz)
		95	Strobe: Slow to fast 12/12
		96–127	Open
		128–130	Strobe Pulse Open: Slow to fast 1/7 (0.112–0.167 Hz)
		131–134	Strobe Pulse Open: Slow to fast 1/7 … Slow to fast 4/7 (0.194–0.276 Hz)
		135–136	Strobe Pulse Open: Slow to fast 4/7 (0.303–0.329 Hz)
		137–140	Strobe Pulse Open: Slow to fast 4/7 … Slow to fast 7/7 (0.355–0.433 Hz)
		141–143	Strobe Pulse Open: Slow to fast 7/7 (0.486–0.589 Hz)
		144–145	Strobe Pulse Close: Fast to slow 1/7 (0.589–0.538 Hz)
		146–149	Strobe Pulse Close: Fast to slow 1/7 … Fast to slow 4/7 (0.486–0.382 Hz)
		150–151	Strobe Pulse Close: Fast to slow 4/7 (0.355–0.329 Hz)
		152–155	Strobe Pulse Close: Fast to slow 4/7 … Fast to slow 7/7 (0.303–0.221 Hz)
		156–159	Strobe Pulse Close: Fast to slow 7/7 (0.194–0.112 Hz)
		160–191	Open
		192–223	Random strobe from slow to fast (0.125–10 Hz)
		224–255	Open

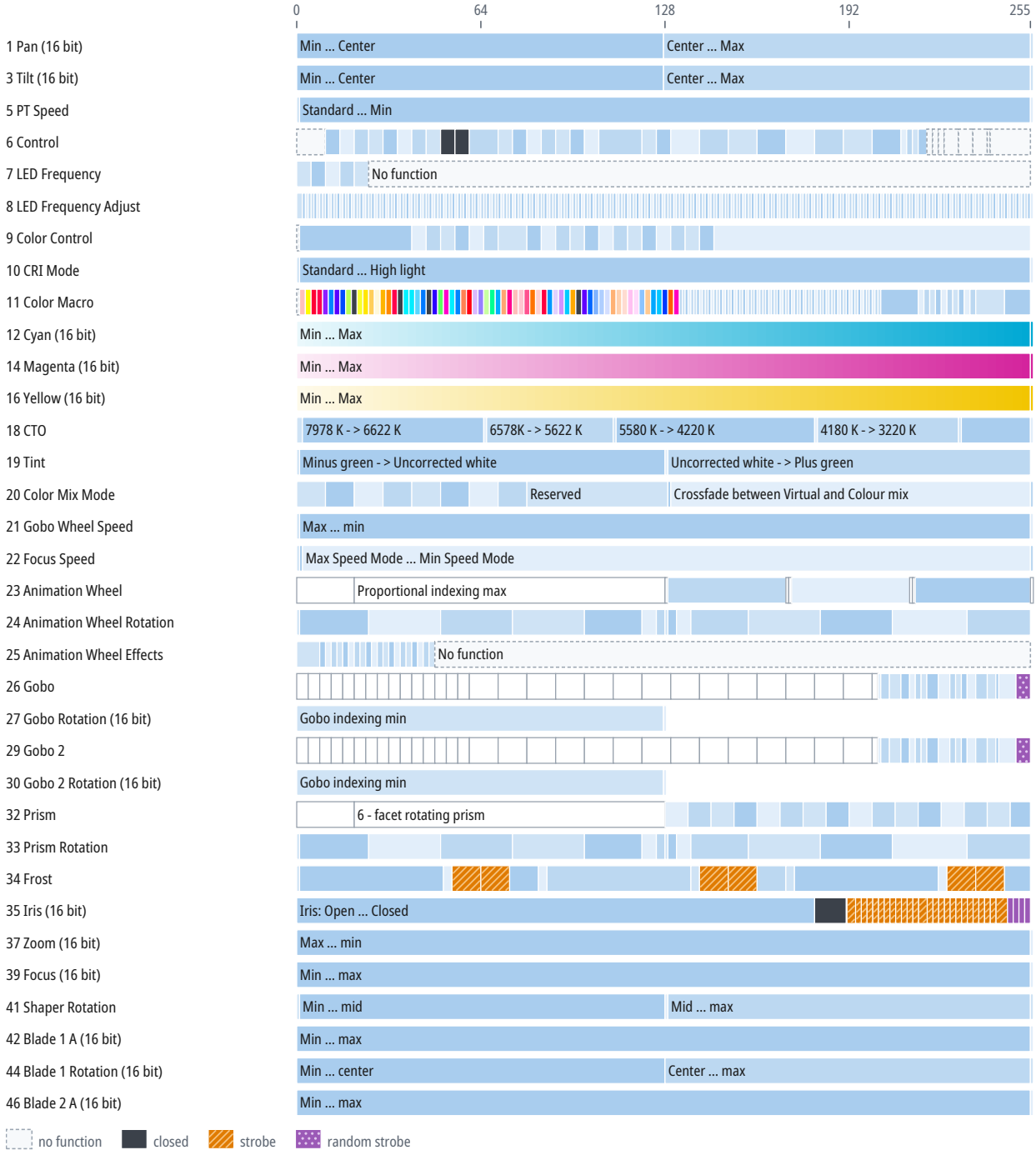
CH	Function	DMX	Description
48	Dimmer	0–255	Closed … Open
		255	Open
49	Dimmer Fine	0–255	Fine adjustment of CH 48

Mode 60CH

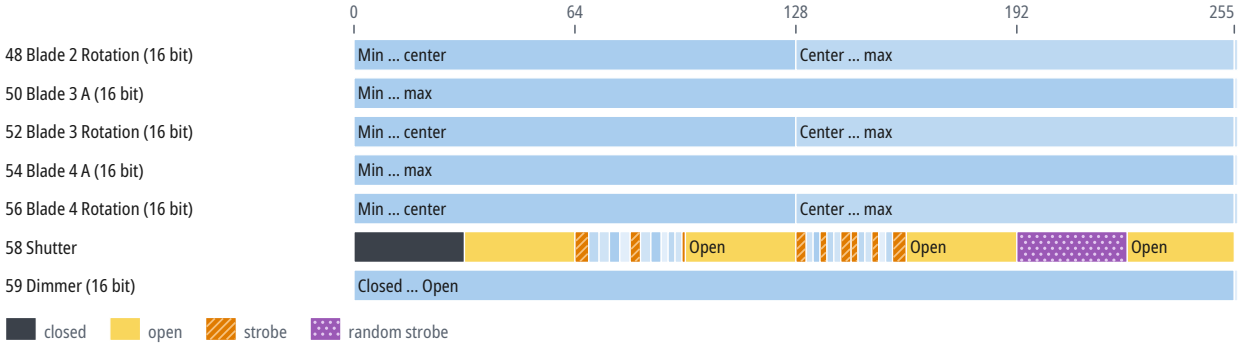
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 58 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 59 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 58 Shutter 32, CH 59 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 “49CH” (p. 14)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “49CH” (p. 14)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	PT Speed		Same as CH 5 in the mode “49CH” (p. 14)
6	Control	0–9	No Function
		10–14	DMX Input
		15–19	Art-Net Input
		20–24	Dis Back On
		25–29	Dis Back Auto
		30–34	Zoom Invert
		35–39	Zoom Forward
		40–44	P/T Mode:Speed
		45–49	P/T Mode:Time
		50–54	Moving Blackout On
		55–59	Moving Blackout Off
		60–69	Moving Blackout Off ... Fan Silent
		70–74	Fan Silent
		75–79	Fan Standard
		80–84	Fan HighOutput
		85–89	DMX State:Black
		90–94	DMX State:Hold
		95–99	iCC Off
		100–104	iCC On
		105–119	iCC On ... Parking Position On
		120–124	Parking Position On
		125–129	Parking Position Off
		130–139	Head Reset
		140–149	XY Reset
		150–159	XY Reset ... Gobo Reset
		160–169	Gobo Reset

CH	Function	DMX	Description
6	Control (continued)	170–179	Gobo Reset ... Zoom Reset
		180–189	Zoom Reset
		190–199	Fram Reset
		200–209	Fixture Reset
		210–211	Green Correction
		212–213	FX Auto Focus On
		214–215	FX Auto Focus Off
		216–218	Control
		219–220	Maximum speed and shortcut
		221–222	Follow speed and direction
		223–224	Empty Channel SetMaximum speed and follow direction
		225–229	RoboSpot enabled
		230–234	RoboSpot disabled
		235–239	RoboSpot fully disabled
		240	Disabled "Quiet mode"
		241–255	Quiet mode
7	LED Frequency		Same as CH 7 in the mode “49CH” (p. 15)
8	LED Frequency Adjust		Same as CH 8 in the mode “49CH” (p. 15)
9	Color Control		Same as CH 9 in the mode “49CH” (p. 15)
10	CRI Mode		Same as CH 10 in the mode “49CH” (p. 16)
11	Color Macro		Same as CH 11 in the mode “49CH” (p. 16)
12	Cyan		Same as CH 12 in the mode “49CH” (p. 18)
13	Cyan Fine	0–255	Fine adjustment of CH 12
14	Magenta		Same as CH 14 in the mode “49CH” (p. 18)
15	Magenta Fine	0–255	Fine adjustment of CH 14
16	Yellow		Same as CH 16 in the mode “49CH” (p. 18)
17	Yellow Fine	0–255	Fine adjustment of CH 16
18	CTO		Same as CH 18 in the mode “49CH” (p. 18)
19	Tint		Same as CH 19 in the mode “49CH” (p. 18)
20	Color Mix Mode		Same as CH 20 in the mode “49CH” (p. 18)
21	Gobo Wheel Speed		Same as CH 21 in the mode “49CH” (p. 19)
22	Focus Speed		Same as CH 22 in the mode “49CH” (p. 19)
23	Animation Wheel		Same as CH 23 in the mode “49CH” (p. 19)
24	Animation Wheel Rotation		Same as CH 24 in the mode “49CH” (p. 19)
25	Animation Wheel Effects		Same as CH 25 in the mode “49CH” (p. 20)
26	Gobo		Same as CH 26 in the mode “49CH” (p. 20)
27	Gobo Rotation		Same as CH 27 in the mode “49CH” (p. 21)
28	Gobo Rotation Fine	0–255	Fine adjustment of CH 27
29	Gobo 2	0–3	Gobo 2 Step Index: Open/hole
		4–7	Gobo 1
		8–11	Gobo 2
		12–15	Gobo 3

CH	Function	DMX	Description
29	Gobo 2 (continued)	16–19	Gobo 4
		20–23	Gobo 5
		24–27	Gobo 6
		28–31	Gobo 7
		32–35	Gobo 1 - Rotation
		36–39	Gobo 2 - Rotation
		40–43	Gobo 3 - Rotation
		44–47	Gobo 4 - Rotation
		48–51	Gobo 5 - Rotation
		52–55	Gobo 6 - Rotation
		56–59	Gobo 7 - Rotation
		60–69	Gobo 1 - Shaking Index (0.588–6.67 Hz)
		70–79	Gobo 2 - Shaking Index (0.588–6.67 Hz)
		80–89	Gobo 3 - Shaking Index (0.588–6.67 Hz)
		90–99	Gobo 4 - Shaking Index (0.588–6.67 Hz)
		100–109	Gobo 5 - Shaking Index (0.588–6.67 Hz)
		110–119	Gobo 6 - Shaking Index (0.588–6.67 Hz)
		120–129	Gobo 7 - Shaking Index (0.588–6.67 Hz)
		130–139	Gobo 1 - Shaking Rotation (0.588–6.67 Hz)
		140–149	Gobo 2 - Shaking Rotation (0.588–6.67 Hz)
		150–159	Gobo 3 - Shaking Rotation (0.588–6.67 Hz)
		160–169	Gobo 4 - Shaking Rotation (0.588–6.67 Hz)
		170–179	Gobo 5 - Shaking Rotation (0.588–6.67 Hz)
		180–189	Gobo 6 - Shaking Rotation (0.588–6.67 Hz)
		190–199	Gobo 7 - Shaking Rotation (0.588–6.67 Hz)
		200–201	Gobo 2 Shake Rotation: Open/hole (0.588–6.67 Hz)
		202	Gobo 2 Wheel Spin: Fast to slow - Fast
		203–218	Gobo 2 Wheel Spin: Fast to slow - Fast ... Fast to slow - Slow (78.8–8.25 °/s)
		219–222	Gobo 2 Wheel Spin: Fast to slow - Slow (8.25–1.37 °/s)
		223–226	Gobo 2 Wheel Spin: Slow to fast - Slow (1.37–8.25 °/s)
		227–242	Gobo 2 Wheel Spin: Slow to fast - Slow ... Slow to fast - Fast (8.25–78.8 °/s)
		243	Gobo 2 Wheel Spin: Slow to fast - Fast
		244–249	Gobo 2 Wheel Audio: Stop
		250–255	Auto random gobo selection from fast to slow
30	Gobo 2 Rotation		When CH 26 is 0–31:
		0–127	Gobo indexing min
		128	Gobo indexing center
		128–255	Gobo indexing max
			When CH 26 is 32–59:

CH	Function	DMX	Description
30	Gobo 2 Rotation (continued)	0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
			When CH 26 is 60–129:
		0–127	Gobo indexing min
		128	Gobo indexing center
		128–255	Gobo indexing max
			When CH 26 is 130–201:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
31	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 30
32	Prism		Same as CH 29 in the mode “49CH” (p. 22)
33	Prism Rotation		Same as CH 30 in the mode “49CH” (p. 22)
34	Frost		Same as CH 31 in the mode “49CH” (p. 22)
35	Iris		Same as CH 32 in the mode “49CH” (p. 23)
36	Iris Fine	0–255	Fine adjustment of CH 35
37	Zoom		Same as CH 34 in the mode “49CH” (p. 24)
38	Zoom Fine	0–255	Fine adjustment of CH 37
39	Focus		Same as CH 36 in the mode “49CH” (p. 24)
40	Focus Fine	0–255	Fine adjustment of CH 39
41	Shaper Rotation		Same as CH 38 in the mode “49CH” (p. 24)
42	Blade 1 A		Blade 1
		0–255	Min ... max
		255	Max
43	Blade 1 A Fine	0–255	Fine adjustment of CH 42
44	Blade 1 Rotation		Blade 1 rot
		0–128	Min ... center
		128–255	Center ... max
		255	Max
45	Blade 1 Rotation Fine	0–255	Fine adjustment of CH 44

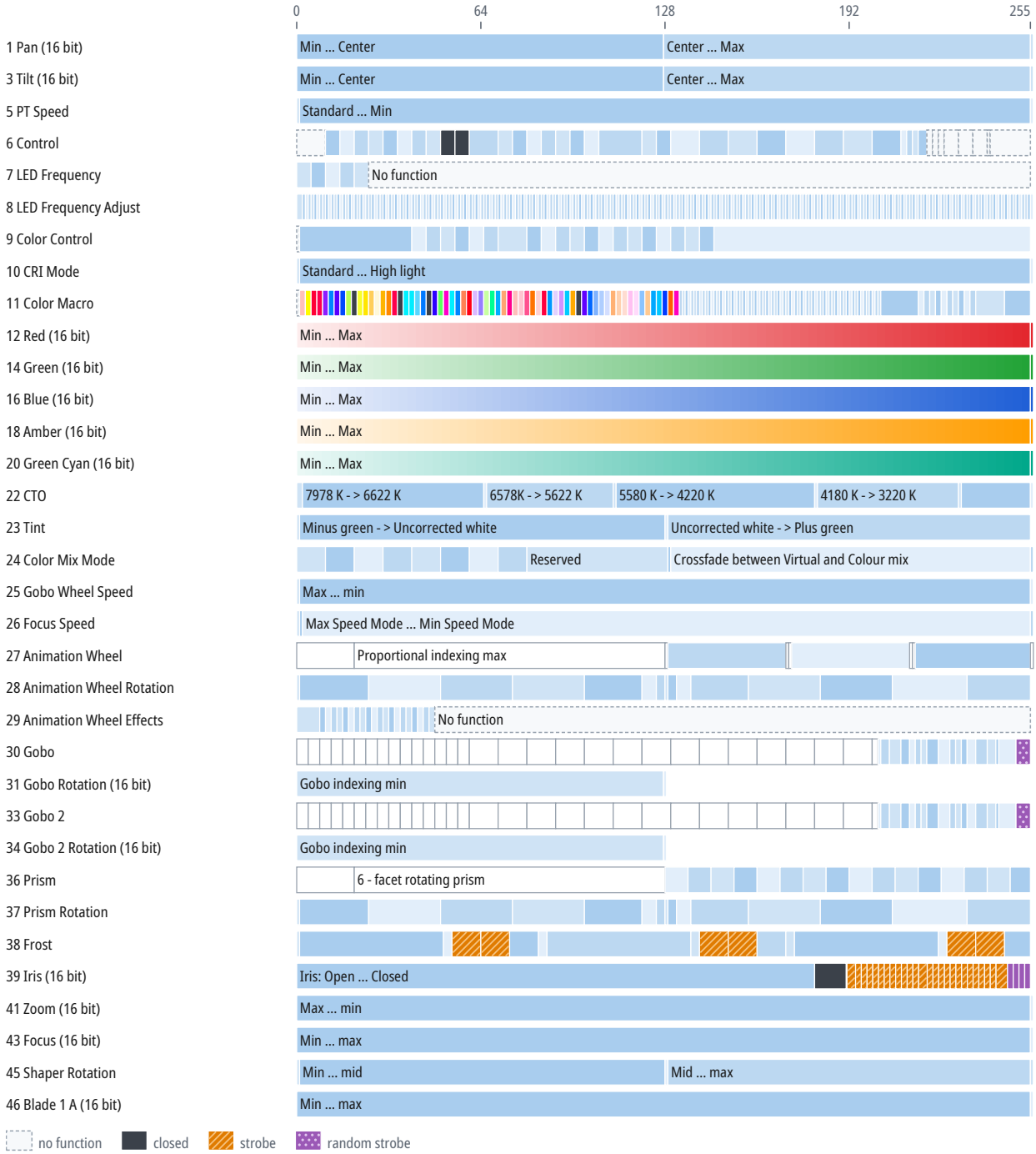
CH	Function	DMX	Description
46	Blade 2 A		Blade 2
		0–255	Min ... max
		255	Max
47	Blade 2 A Fine	0–255	Fine adjustment of CH 46
48	Blade 2 Rotation		Blade 2 rot
		0–128	Min ... center
		128–255	Center ... max
		255	Max
49	Blade 2 Rotation Fine	0–255	Fine adjustment of CH 48
50	Blade 3 A		Blade 3
		0–255	Min ... max
		255	Max
51	Blade 3 A Fine	0–255	Fine adjustment of CH 50
52	Blade 3 Rotation		Blade 3 rot
		0–128	Min ... center
		128–255	Center ... max
		255	Max
53	Blade 3 Rotation Fine	0–255	Fine adjustment of CH 52
54	Blade 4 A		Blade 4
		0–255	Min ... max
		255	Max
55	Blade 4 A Fine	0–255	Fine adjustment of CH 54
56	Blade 4 Rotation		Blade 4 rot
		0–128	Min ... center
		128–255	Center ... max
		255	Max
57	Blade 4 Rotation Fine	0–255	Fine adjustment of CH 56
58	Shutter		Same as CH 47 in the mode “49CH” (p. 25)
59	Dimmer		Same as CH 48 in the mode “49CH” (p. 26)
60	Dimmer Fine	0–255	Fine adjustment of CH 59

Mode 64CH

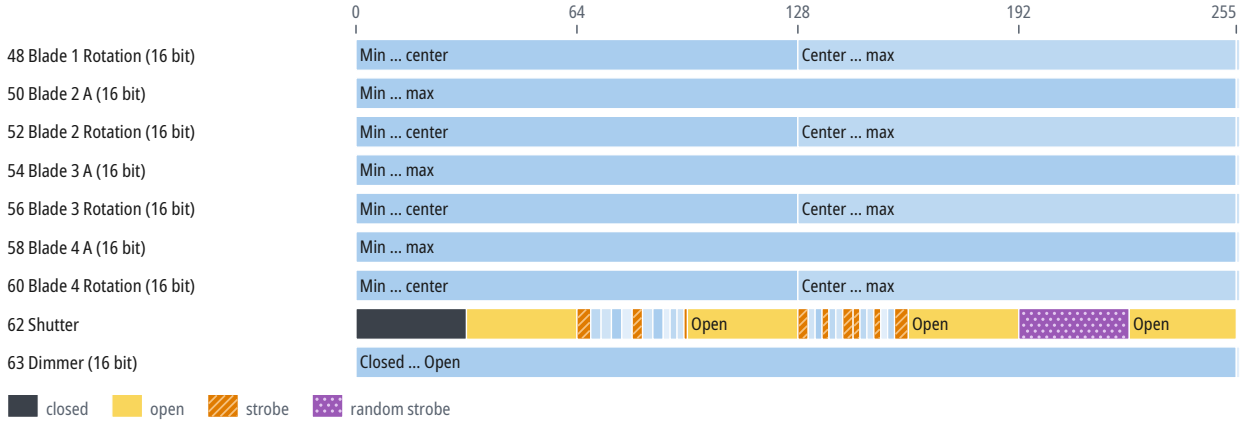
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 62 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 63 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 12 Red 255, CH 14 Green 255, CH 16 Blue 255, CH 18 Amber 255, CH 20 Green Cyan 255, CH 62 Shutter 32, CH 63 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 “49CH” (p. 14)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “49CH” (p. 14)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	PT Speed		Same as CH 5 in the mode “49CH” (p. 14)
6	Control		Same as CH 6 in the mode “60CH” (p. 28)
7	LED Frequency		Same as CH 7 in the mode “49CH” (p. 15)
8	LED Frequency Adjust		Same as CH 8 in the mode “49CH” (p. 15)
9	Color Control		Same as CH 9 in the mode “49CH” (p. 15)
10	CRI Mode		Same as CH 10 in the mode “49CH” (p. 16)
11	Color Macro		Same as CH 11 in the mode “49CH” (p. 16)
12	Red	0–255	Min ... Max
		255	Max
13	Red Fine	0–255	Fine adjustment of CH 12
14	Green	0–255	Min ... Max
		255	Max
15	Green Fine	0–255	Fine adjustment of CH 14
16	Blue	0–255	Min ... Max
		255	Max
17	Blue Fine	0–255	Fine adjustment of CH 16
18	Amber	0–255	Min ... Max
		255	Max
19	Amber Fine	0–255	Fine adjustment of CH 18
20	Green Cyan	0–255	Min ... Max
		255	Max
21	Green Cyan Fine	0–255	Fine adjustment of CH 20
22	CTO		Same as CH 18 in the mode “49CH” (p. 18)
23	Tint		Same as CH 19 in the mode “49CH” (p. 18)
24	Color Mix Mode		Same as CH 20 in the mode “49CH” (p. 18)

CH	Function	DMX	Description
25	Gobo Wheel Speed		Same as CH 21 in the mode “49CH” (p. 19)
26	Focus Speed		Same as CH 22 in the mode “49CH” (p. 19)
27	Animation Wheel		Same as CH 23 in the mode “49CH” (p. 19)
28	Animation Wheel Rotation		Same as CH 24 in the mode “49CH” (p. 19)
29	Animation Wheel Effects		Same as CH 25 in the mode “49CH” (p. 20)
30	Gobo		Same as CH 26 in the mode “49CH” (p. 20)
31	Gobo Rotation		When CH 30 is 0–31:
		0–127	Gobo indexing min
		128	Gobo indexing center
		128–255	Gobo indexing max
			When CH 30 is 32–59:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
			When CH 30 is 60–129:
		0–127	Gobo indexing min
		128	Gobo indexing center
		128–255	Gobo indexing max
			When CH 30 is 130–201:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
32	Gobo Rotation Fine	0–255	Fine adjustment of CH 31
33	Gobo 2		Same as CH 29 in the mode “60CH” (p. 29)
34	Gobo 2 Rotation		When CH 30 is 0–31:
		0–127	Gobo indexing min
		128	Gobo indexing center
		128–255	Gobo indexing max
			When CH 30 is 32–59:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)

CH	Function	DMX	Description
34	Gobo 2 Rotation (continued)	124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
			When CH 30 is 60–129:
		0–127	Gobo indexing min
		128	Gobo indexing center
		128–255	Gobo indexing max
			When CH 30 is 130–201:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
35	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 34
36	Prism		Same as CH 29 in the mode “49CH” (p. 22)
37	Prism Rotation		Same as CH 30 in the mode “49CH” (p. 22)
38	Frost		Same as CH 31 in the mode “49CH” (p. 22)
39	Iris		Same as CH 32 in the mode “49CH” (p. 23)
40	Iris Fine	0–255	Fine adjustment of CH 39
41	Zoom		Same as CH 34 in the mode “49CH” (p. 24)
42	Zoom Fine	0–255	Fine adjustment of CH 41
43	Focus		Same as CH 36 in the mode “49CH” (p. 24)
44	Focus Fine	0–255	Fine adjustment of CH 43
45	Shaper Rotation		Same as CH 38 in the mode “49CH” (p. 24)
46	Blade 1 A		Same as CH 42 in the mode “60CH” (p. 31)
47	Blade 1 A Fine	0–255	Fine adjustment of CH 46
48	Blade 1 Rotation		Same as CH 44 in the mode “60CH” (p. 31)
49	Blade 1 Rotation Fine	0–255	Fine adjustment of CH 48
50	Blade 2 A		Same as CH 46 in the mode “60CH” (p. 32)
51	Blade 2 A Fine	0–255	Fine adjustment of CH 50
52	Blade 2 Rotation		Same as CH 48 in the mode “60CH” (p. 32)
53	Blade 2 Rotation Fine	0–255	Fine adjustment of CH 52
54	Blade 3 A		Same as CH 50 in the mode “60CH” (p. 32)
55	Blade 3 A Fine	0–255	Fine adjustment of CH 54
56	Blade 3 Rotation		Same as CH 52 in the mode “60CH” (p. 32)
57	Blade 3 Rotation Fine	0–255	Fine adjustment of CH 56
58	Blade 4 A		Same as CH 54 in the mode “60CH” (p. 32)

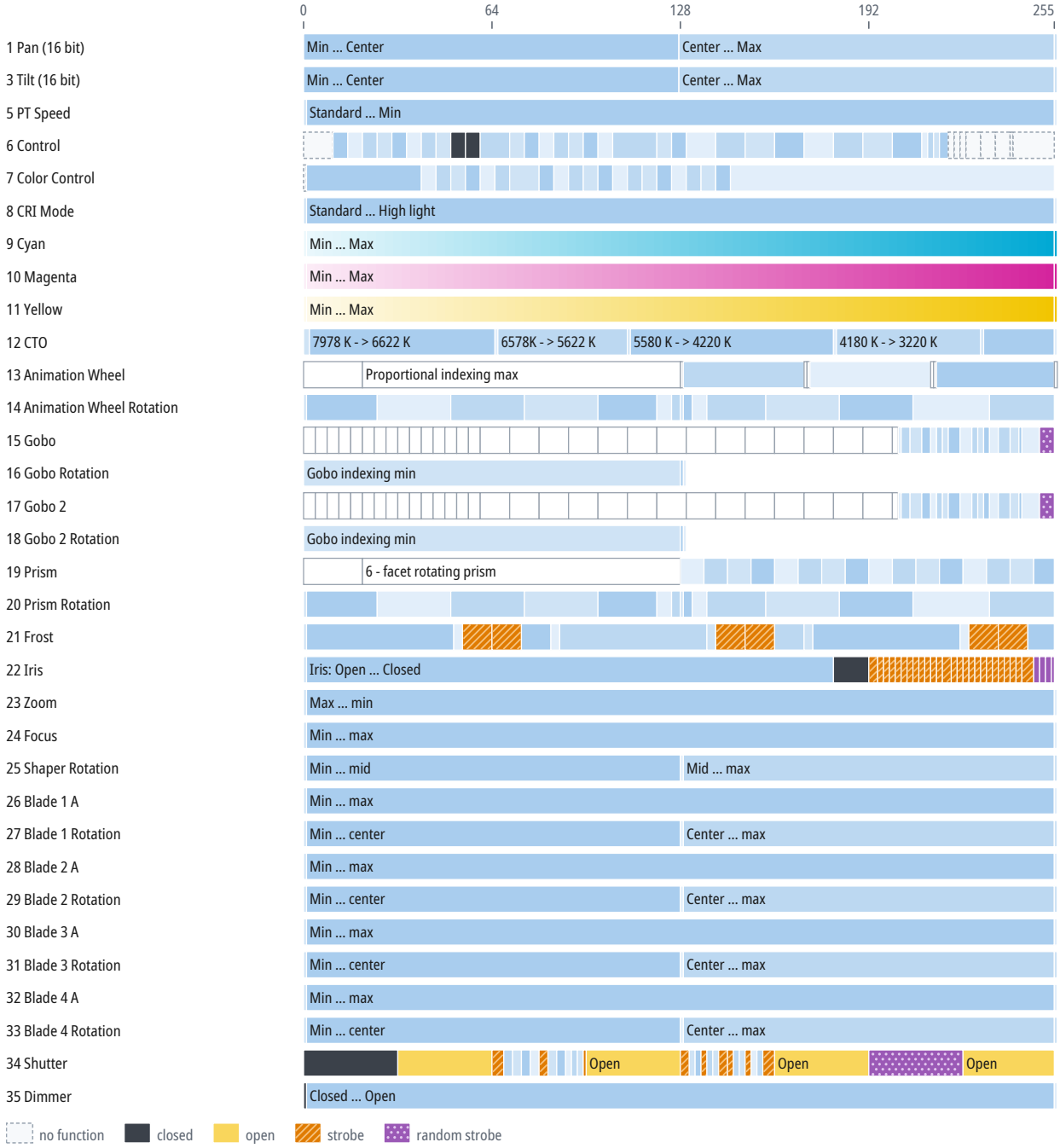
CH	Function	DMX	Description
59	Blade 4 A Fine	0–255	Fine adjustment of CH 58
60	Blade 4 Rotation		Same as CH 56 in the mode “60CH” (p. 32)
61	Blade 4 Rotation Fine	0–255	Fine adjustment of CH 60
62	Shutter		Same as CH 47 in the mode “49CH” (p. 25)
63	Dimmer		Same as CH 48 in the mode “49CH” (p. 26)
64	Dimmer Fine	0–255	Fine adjustment of CH 63

Mode 35CH

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 34 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 35 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 34 Shutter 32, CH 35 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “49CH” (p. 14)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “49CH” (p. 14)

CH	Function	DMX	Description
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	PT Speed		Same as CH 5 in the mode “49CH” (p. 14)
6	Control		Same as CH 6 in the mode “60CH” (p. 28)
7	Color Control		Same as CH 9 in the mode “49CH” (p. 15)
8	CRI Mode		Same as CH 10 in the mode “49CH” (p. 16)
9	Cyan	0	Min
		1–254	Min ... Max
		255	Max
10	Magenta	0	Min
		1–254	Min ... Max
		255	Max
11	Yellow	0	Min
		1–254	Min ... Max
		255	Max
12	CTO		Same as CH 18 in the mode “49CH” (p. 18)
13	Animation Wheel		Same as CH 23 in the mode “49CH” (p. 19)
14	Animation Wheel Rotation		Same as CH 24 in the mode “49CH” (p. 19)
15	Gobo		Same as CH 26 in the mode “49CH” (p. 20)
16	Gobo Rotation		When CH 15 is 0–31:
		0–127	Gobo indexing min
		128	Gobo indexing center
		129–255	Gobo indexing max
			When CH 15 is 32–59:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
			When CH 15 is 60–129:
		0–127	Gobo indexing min
		128	Gobo indexing center
		129–255	Gobo indexing max
			When CH 15 is 130–201:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)

CH	Function	DMX	Description
16	Gobo Rotation (continued)	133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
17	Gobo 2		Same as CH 29 in the mode “60CH” (p. 29)
18	Gobo 2 Rotation		When CH 15 is 0–31:
		0–127	Gobo indexing min
		128	Gobo indexing center
		129–255	Gobo indexing max
			When CH 15 is 32–59:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
			When CH 15 is 60–129:
		0–127	Gobo indexing min
		128	Gobo indexing center
		129–255	Gobo indexing max
			When CH 15 is 130–201:
		0	No rotation
		1–24	Fast to slow - Fast (757.9–330 °/s)
		25–123	Fast to slow - Fast ... Fast to slow - Slow (330–0.715 °/s)
		124–127	Fast to slow - Slow (0.715–0.239 °/s)
		128	No rotation middle
		129–132	Slow to fast - Slow (0.239–0.715 °/s)
		133–231	Slow to fast - Slow ... Slow to fast - Fast (0.715–330 °/s)
		232–255	Slow to fast - Fast (330–757.9 °/s)
19	Prism		Same as CH 29 in the mode “49CH” (p. 22)
20	Prism Rotation		Same as CH 30 in the mode “49CH” (p. 22)
21	Frost		Same as CH 31 in the mode “49CH” (p. 22)
22	Iris	0	Iris: Open
		1–179	Iris: Open ... Closed
		180–191	Iris: Closed
		192–194	Iris Pulse Open: Slow to fast 1/13 (0.014–0.023 Hz)
		195–196	Iris Pulse Open: Slow to fast 2/13 (0.023–0.042 Hz)
		197–198	Iris Pulse Open: Slow to fast 3/13 (0.042–0.05 Hz)
		199–200	Iris Pulse Open: Slow to fast 4/13 (0.05–0.077 Hz)
		201–202	Iris Pulse Open: Slow to fast 5/13 (0.077–0.147 Hz)
		203–204	Iris Pulse Open: Slow to fast 6/13 (0.147–0.217 Hz)
		205–206	Iris Pulse Open: Slow to fast 7/13 (0.217–0.25 Hz)

CH	Function	DMX	Description
22	Iris (continued)	207–208	Iris Pulse Open: Slow to fast 8/13 (0.25–0.286 Hz)
		209–210	Iris Pulse Open: Slow to fast 9/13 (0.286–0.345 Hz)
		211–212	Iris Pulse Open: Slow to fast 10/13 (0.345–0.435 Hz)
		213–214	Iris Pulse Open: Slow to fast 11/13 (0.435–0.667 Hz)
		215–216	Iris Pulse Open: Slow to fast 12/13 (0.667–1 Hz)
		217–219	Iris Pulse Open: Slow to fast 13/13 (1–2.96 Hz)
		220–221	Iris Pulse Close: Fast to slow 1/13 (2.96–1 Hz)
		222–223	Iris Pulse Close: Fast to slow 2/13 (1–0.667 Hz)
		224–225	Iris Pulse Close: Fast to slow 3/13 (0.667–0.435 Hz)
		226–227	Iris Pulse Close: Fast to slow 4/13 (0.435–0.345 Hz)
		228–229	Iris Pulse Close: Fast to slow 5/13 (0.345–0.286 Hz)
		230–231	Iris Pulse Close: Fast to slow 6/13 (0.286–0.25 Hz)
		232–233	Iris Pulse Close: Fast to slow 7/13 (0.25–0.217 Hz)
		234–235	Iris Pulse Close: Fast to slow 8/13 (0.217–0.147 Hz)
		236–237	Iris Pulse Close: Fast to slow 9/13 (0.147–0.077 Hz)
		238–239	Iris Pulse Close: Fast to slow 10/13 (0.077–0.05 Hz)
		240–241	Iris Pulse Close: Fast to slow 11/13 (0.05–0.042 Hz)
		242–243	Iris Pulse Close: Fast to slow 12/13 (0.042–0.023 Hz)
		244–247	Iris Pulse Close: Fast to slow 13/13 (0.023–0.014 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
23	Zoom	0	Max
		1–254	Max … min
		255	Min
24	Focus	0	Min
		1–254	Min … max
		255	Max
25	Shaper Rotation		Same as CH 38 in the mode “49CH” (p. 24)
26	Blade 1 A		Same as CH 39 in the mode “49CH” (p. 24)
27	Blade 1 Rotation		Same as CH 40 in the mode “49CH” (p. 24)
28	Blade 2 A		Same as CH 41 in the mode “49CH” (p. 24)
29	Blade 2 Rotation		Same as CH 42 in the mode “49CH” (p. 24)
30	Blade 3 A		Same as CH 43 in the mode “49CH” (p. 24)
31	Blade 3 Rotation		Same as CH 44 in the mode “49CH” (p. 25)
32	Blade 4 A		Same as CH 45 in the mode “49CH” (p. 25)
33	Blade 4 Rotation		Same as CH 46 in the mode “49CH” (p. 25)
34	Shutter		Same as CH 47 in the mode “49CH” (p. 25)
35	Dimmer	0	Closed
		1–254	Closed … Open
		255	Open

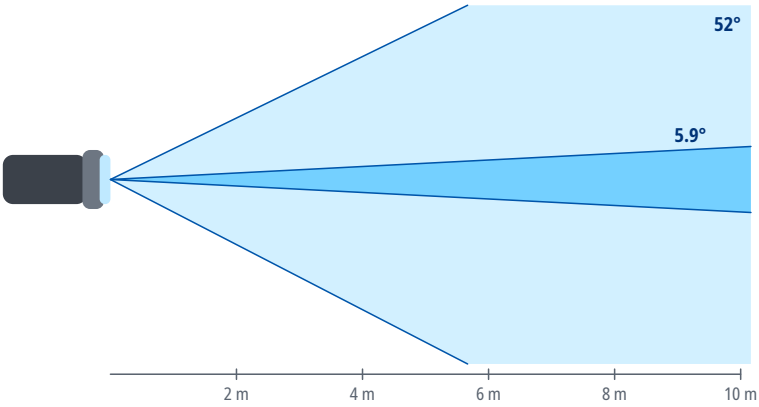
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	600 W
Luminous flux	17,600 lm
Color temperature	8,000 K
Color rendering index (CRI)	95
Optics	
Zoom	5.9–52°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	3-pin XLR IN/OUT
RJ45 connectors	RJ45
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	750 W
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	37.6 kg
Operating environment	
Operating temperature	-10 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2700–8000 K
Strobe frequency	0.3–20 Hz
Gobo wheel 1 rotation	up to 78.8 °/s (13 rpm)
Gobo wheel 2 rotation	up to 78.8 °/s (13 rpm)
Gobo 1 rotation	up to 757.9 °/s (126 rpm)
Gobo 2 rotation	up to 757.9 °/s (126 rpm)
Prism rotation	up to 1 °/s (0.2 rpm)
Animation wheel rotation	up to 220.5 °/s (37 rpm)

Spot diameter



Distance	Ø 5.9°	Ø 52°
2 m	0.21 m	2 m
4 m	0.41 m	3.9 m
6 m	0.62 m	5.9 m
8 m	0.82 m	7.8 m
10 m	1 m	9.8 m
15 m	1.5 m	14.6 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.