DMX REFERENCE

Bee Eye Moving Head Wash 1940B

Bee Eye LED Moving Head Wash Light 1940B

User Test



Manufacturer	User Test
GDTF file	User_Test_Bee_Eye_Moving_Head_Wash_1940B_107738.gdtf
GDTF revision	19x40W Big Bee Eye LED Moving Head Wash from Beyond Lighting, Uploaded to GDTF Share. ·
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1 About this manual

This document describes the Bee Eye LED Moving Head Wash Light 1940B by User Test. It was compiled from the GDTF file User_Test_Bee_Eye_Moving_Head_Wash_1940B_107738.gdtf from the GDTF-Share library.

File revision: “19x40W Big Bee Eye LED Moving Head Wash from Beyond Lighting, Uploaded to GDTF Share.”.

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

This document was not issued or endorsed by User Test; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

Parameter	Value
Power consumption	640 W
Weight	16.7 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Model 1 - CH21	21	24	1, 22, 43, 64, ...
Model 2 - CH23	23	22	1, 24, 47, 70, ...
Model 3 - CH35	35	14	1, 36, 71, 106, ...
Model 4 - CH 78	78	6	1, 79, 157, 235, ...
Model 5 - CH 92	92	5	1, 93, 185, 277, ...

No light? Check these channels

- Model 1 - CH21: CH 11 Shutter at 0–3 “Open”; CH 12 Dimmer above 0
- Model 2 - CH23: CH 8 Dimmer above 0; CH 9 Shutter at 0–3 “Open”
- Model 3 - CH35: CH 11 Shutter at 0–3 “Open”; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0
- Model 4 - CH 78: CH 11 Shutter at 0–3 “Open”; CH 12 Dimmer above 0
- Model 5 - CH 92: CH 11 Shutter at 0–3 “Open”; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 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

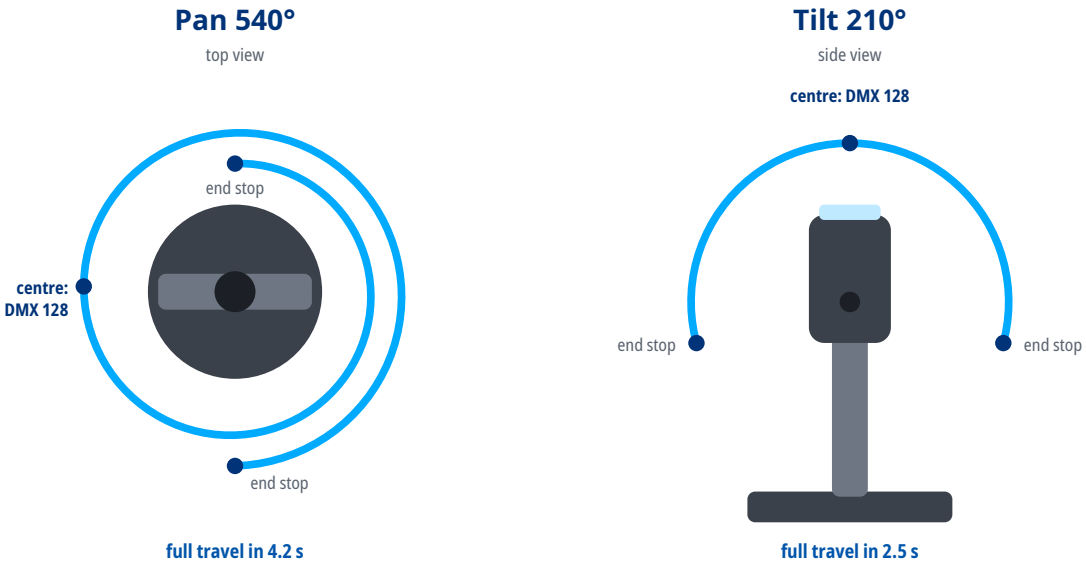
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

Description in the GDTF file

“With 19x40W(RGBW / 4-IN-1) LEDs, variable motorized zoom (3.5 – 50 degrees), and individual pixel control, capable of creating a kaleidoscope effect. It not only has a beam zoom wash visual effect but also has built-in various macro function effects.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

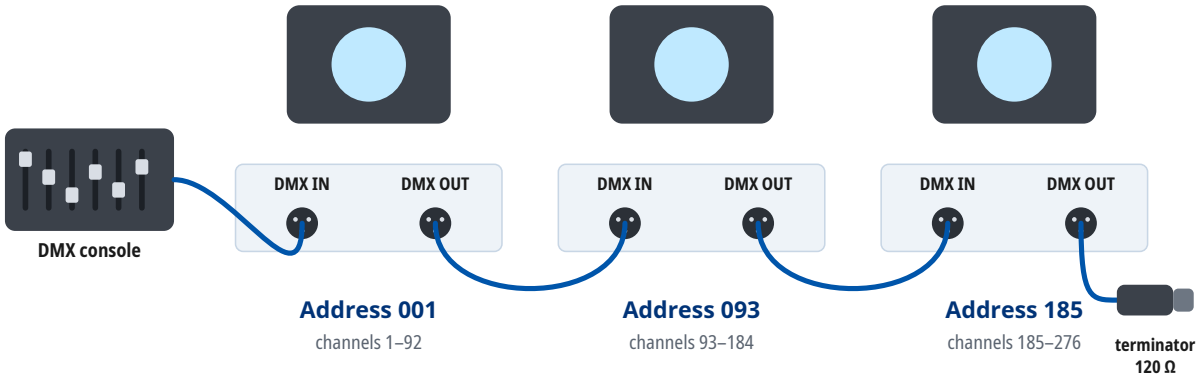
⚠ **WARNING**

- 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: 16.7 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 Model 5 - CH 92: every unit occupies 92 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 “Model 5 - CH 92”: 92.
- 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 “Model 5 - CH 92”, you can use, for example, the start addresses 1, 93, 185, 277.
- 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

	Model 1 - CH21 21 channels	Model 2 - CH23 23 channels	Model 3 - CH35 35 channels	Model 4 - CH 78 78 channels	Model 5 - CH 92 92 channels
Pan / Tilt	14, 16	1, 3	14, 16	14, 16	14, 16
Dimmer	12	8	12, 29, 30	12	12, 29, 30
Dimmer resolution	16 bit	8 bit	16 bit	16 bit	16 bit
Shutter / strobe	11	9	11, 33, 34	11	11, 33, 34
Color mixing	4× (1–7)	10–13, 19–22	8 channels (1–28)	61 channels (1–78)	65 channels (1–92)
Color temperature	9	14	9	9	9
Color wheel	10	15	10	10	10
Zoom	20	6	20	20	20
Effects / macros			9	9	9
Pixel control			✓	19 cells	10 + 9 cells

Color wheel 1

1 No Macro Color
DMX 0–9

2 Red
DMX 10

3 Green
DMX 11

4 Blue
DMX 12

5 Cyan
DMX 13

6 Yellow
DMX 14

7 Magenta
DMX 15

8 White 7000K
DMX 16

9 White 3700K
DMX 17

10 White 5000K
DMX 18

11 Black
DMX 19

12 Medium Yellow
DMX 20–22

13 Straw Tint
DMX 23–26

14 Surprise Peach
DMX 27–28

15 Fire
DMX 29

16 Medium Amber
DMX 30

17 Gold Amber
DMX 31

18 Dark Amber
DMX 32–34

19 Sunrise Red
DMX 35–44

20 Light Pink
DMX 45

21 Medium Pink
DMX 46–48

22 Pink Carnation
DMX 49–61

23 Light Lavender
DMX 62–67

24 Lavender
DMX 68–77

25 Sky Blue
DMX 78–88

26 Just Blue
DMX 89–99

27 Dark Yellow Green
DMX 100–109

28 Sping Yellow
DMX 110–111

29 Light Amber
DMX 112

30 Straw
DMX 113

31 Deep Amber
DMX 114

32 Orange
DMX 115–116

33 Light Rose
DMX 117

34 English Rose
DMX 118

35 Light Salmon
DMX 119

36 Middle Rose
DMX 120

37 Dark Pink
DMX 121–122

38 Magenta2
DMX 123–124

39 Peacock Blue
DMX 125

40 Med Blue Green
DMX 126

41 Steel Blue
DMX 127

42 Light Blue
DMX 128

43 Dark Blue
DMX 129–130

44 Leaf Green
DMX 131–133

45 Dark Green
DMX 134–135

46 Mauve
DMX 136–137

47 Bright Pink
DMX 138–141

48 Medium Blue
DMX 142–144

49 Deep Golden Amber
DMX 145

50 Pale Lavender
DMX 146

51 Special Lavender
DMX 147–148

52 Primary Green
DMX 149–150

53 Bright Blue
DMX 151–156

54 Apricot
DMX 157–161

55 Pale Gold
DMX 162–167

56 Deep Orange
DMX 168–171

57 Bastard Amber
DMX 172–173

58 Flame Red
DMX 174

59 Daylight Blue
DMX 175–178

60 Lilac Tint
DMX 179

61 Deep Lavender
DMX 180–183

62 Dark Steel Blue
DMX 184–190

63 Congo Blue
DMX 191–206

64 Alice Blue
DMX 207

65 Dirty White
DMX 208

66 White
DMX 209–255

Color wheel 2

1 R100% - G UP - B0%
DMX 16–35

2 R DOWM - G100% - B0%
DMX 36–55

3 R0% - G100% - B UP
DMX 56–75

4 R0% - G DOWM - B100%
DMX 76–95

5 R UP - G0% - B100%
DMX 96–115

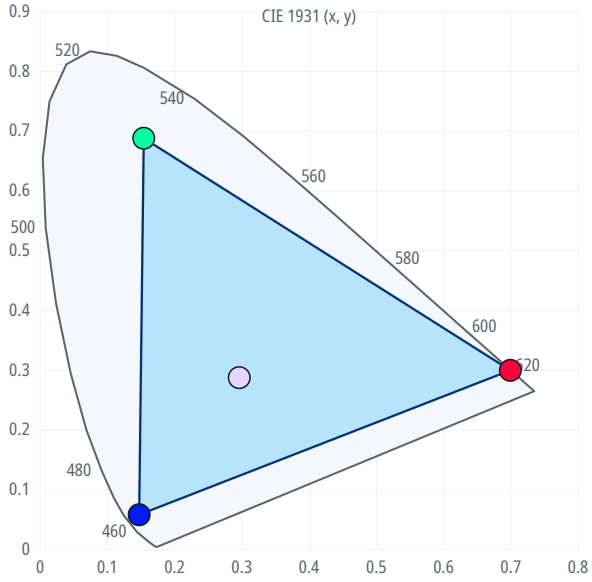
6 R100% - G0% - B DOWM
DMX 116–135

7 R100% - G UP - B UP
DMX 136–155

8 R DOWM - G DOWM - B 100%
DMX 156–175

9 R100%- G100%- B100%- W100%
DMX 176–196

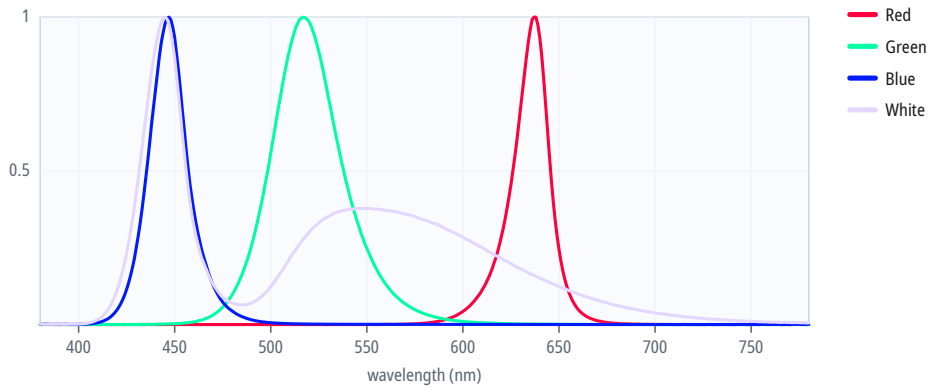
LED colors and the colors they mix



LED	x	y
Red	0.699	0.300
Green	0.154	0.688
Blue	0.147	0.059
White	0.296	0.288

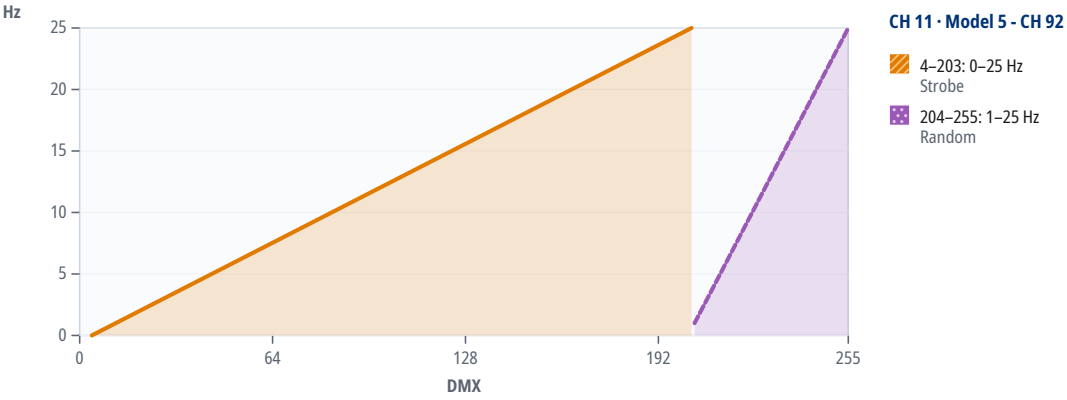
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources

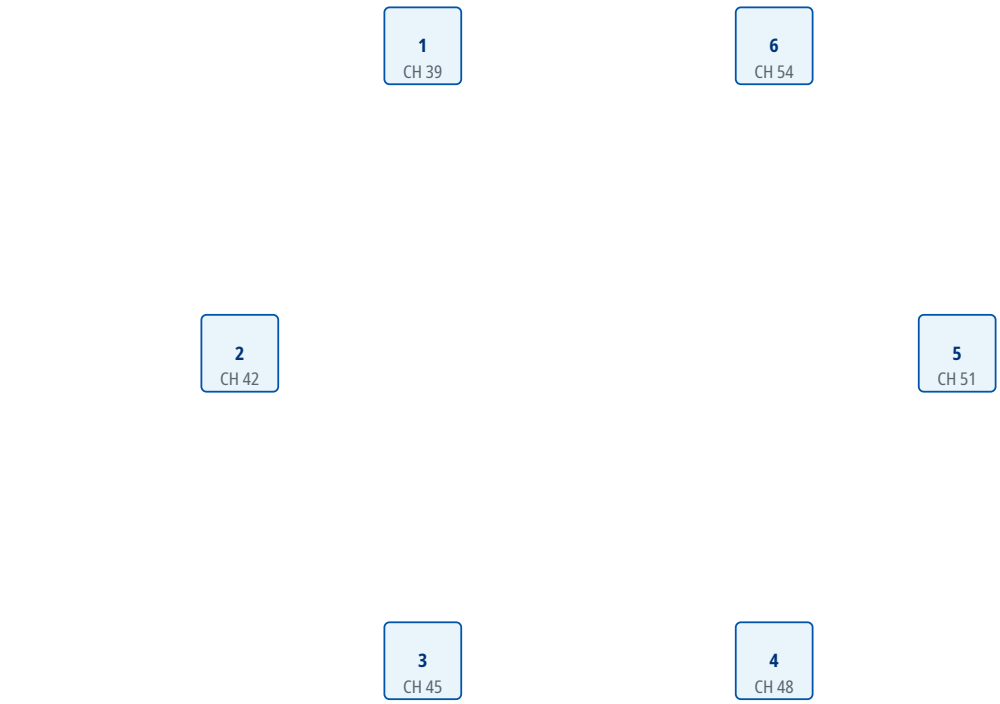


Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



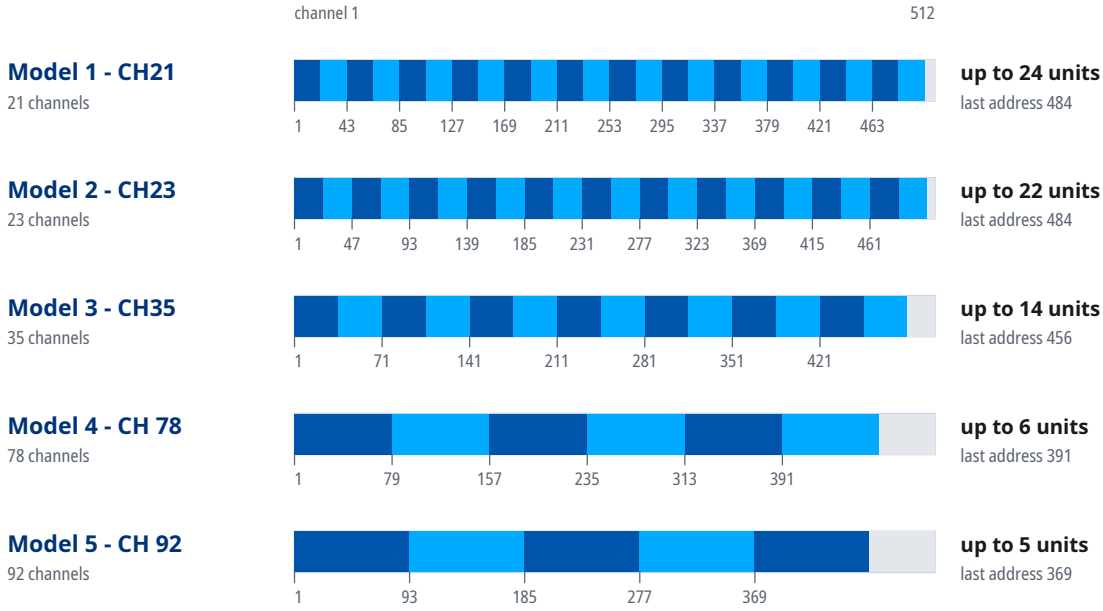
Cells (pixels)



6 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “Model 5 - CH 92”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Model 5 - CH 92”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 1	11	U3 · 1	16	U4 · 1
2	93	7	U2 · 93	12	U3 · 93	17	U4 · 93
3	185	8	U2 · 185	13	U3 · 185	18	U4 · 185
4	277	9	U2 · 277	14	U3 · 277	19	U4 · 277
5	369	10	U2 · 369	15	U3 · 369	20	U4 · 369

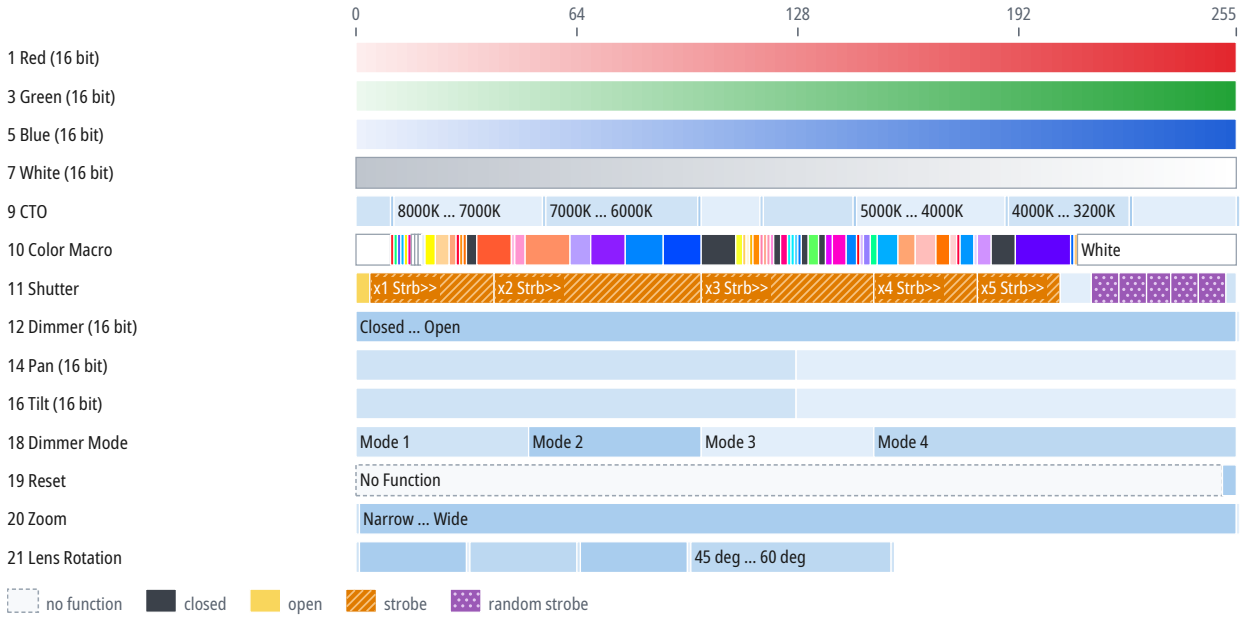
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Model 1 - CH21

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 11 Shutter at 0–3 “Open”; CH 12 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 3 Green 255, CH 5 Blue 255, CH 7 White 255, CH 10 Color Macro 0, CH 12 Dimmer 255, CH 18 Dimmer Mode 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0–255	
2	Red Fine	0–255	Fine adjustment of CH 1
3	Green	0–255	
4	Green Fine	0–255	Fine adjustment of CH 3
5	Blue	0–255	
6	Blue Fine	0–255	Fine adjustment of CH 5
7	White	0–255	
8	White Fine	0–255	Fine adjustment of CH 7
9	CTO	0–9	No CTO
		10	8000K
		11–53	8000K ... 7000K
		54	7000K
		55–98	7000K ... 6000K
		99	6000K
		100–116	6000K ... 5600K
		117	5600K
		118–143	5600K ... 5000K
		144	5000K
		145–187	5000K ... 4000K

CH	Function	DMX	Description
9	CTO (continued)	188	4000K
		189–223	4000K ... 3200K
		224	3200K
		225–254	3200K ... 2500K
		255	2500K
10	Color Macro	0–9	No Macro Color
		10	Red
		11	Green
		12	Blue
		13	Cyan
		14	Yellow
		15	Magenta
		16	White 7000K
		17	White 3700K
		18	White 5000K
		19	Black
		20–22	Medium Yellow
		23–26	Straw Tint
		27–28	Surprise Peach
		29	Fire
		30	Medium Amber
		31	Gold Amber
		32–34	Dark Amber
		35–44	Sunrise Red
		45	Light Pink
		46–48	Medium Pink
		49–61	Pink Carnation
		62–67	Light Lavender
		68–77	Lavender
		78–88	Sky Blue
		89–99	Just Blue
		100–109	Dark Yellow Green
		110–111	Sping Yellow
		112	Light Amber
		113	Straw
		114	Deep Amber
		115–116	Orange
		117	Light Rose
		118	English Rose
		119	Light Salmon
		120	Middle Rose
		121–122	Dark Pink

CH	Function	DMX	Description
10	Color Macro (continued)	123–124	Magenta2
		125	Peacock Blue
		126	Med Blue Green
		127	Steel Blue
		128	Light Blue
		129–130	Dark Blue
		131–133	Leaf Green
		134–135	Dark Green
		136–137	Mauve
		138–141	Bright Pink
		142–144	Medium Blue
		145	Deep Golden Amber
		146	Pale Lavender
		147–148	Special Lavender
		149–150	Primary Green
		151–156	Bright Blue
		157–161	Apricot
		162–167	Pale Gold
		168–171	Deep Orange
		172–173	Bastard Amber
		174	Flame Red
		175–178	Daylight Blue
		179	Lilac Tint
		180–183	Deep Lavender
		184–190	Dark Steel Blue
		191–206	Congo Blue
		207	Alice Blue
		208	Dirty White
		209–255	White
11	Shutter	0–3	No Strobe: Open
		4–39	x1 Strb>>
		40–99	x2 Strb>>
		100–149	x3 Strb>>
		150–179	x4 Strb>>
		180–203	x5 Strb>>
		204–212	Random
		213–220	x1 RndStrb>>
		221–228	x2 RndStrb>>
		229–235	x3 RndStrb>>
		236–243	x4 RndStrb>>
		244–251	x5 RndStrb>>
		252–255	Random

CH	Function	DMX	Description
12	Dimmer	0–255	Closed ... Open
		255	Open
13	Dimmer Fine	0–255	Fine adjustment of CH 12
14	Pan	0–127	Pan
		128	Center
		128–255	Pan
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt	0–127	Tilt
		128	Center
		128–255	Tilt
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Dimmer Mode	0–49	Mode 1
		50–99	Mode 2
		100–149	Mode 3
		150–255	Mode 4
19	Reset	0–250	No Function
		251–255	Reset
20	Zoom	0	Narrow
		1–254	Narrow ... Wide
		255	Wide
21	Lens Rotation		When CH 20 is 0–45:
		0	0 deg
		1–31	0 deg ... 15 deg
		32	15 deg
		33–63	15 deg ... 30 deg
		64	30 deg
		65–95	30 deg ... 45 deg
		96	45 deg
		97–154	45 deg ... 60 deg
		155	60 deg
		156–205	Clockwise Zoom Rotation>> (60–0 °/s)
		206–255	Counterclockwise Zoom Rotation<< (0–60 °/s)
			When CH 20 is 46–255:
		0–255	

Mode Model 2 - CH23

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 8 Dimmer above 0; CH 9 Shutter at 0–3 “Open”. The GDTF file gives these values for a console's Highlight function: CH 8 Dimmer 255, CH 10 Red 1 255, CH 11 Green 1 255, CH 12 Blue 1 255, CH 13 White 1 255, CH 15 Color Macro 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 14 in the mode “Model 1 - CH21” (p. 16)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 16 in the mode “Model 1 - CH21” (p. 16)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0	Fast
		1–254	Fast ... Slow
		255	Slow
6	Zoom		Same as CH 20 in the mode “Model 1 - CH21” (p. 16)
7	Lens Rotation		When CH 6 is 0–45:
		0	0 deg
		1–31	0 deg ... 15 deg
		32	15 deg
		33–63	15 deg ... 30 deg

CH	Function	DMX	Description
7	Lens Rotation (continued)	64	30 deg
		65–95	30 deg ... 45 deg
		96	45 deg
		97–154	45 deg ... 60 deg
		155	60 deg
		156–205	Clockwise Zoom Rotation>> (60–0 °/s)
		206–255	Counterclockwise Zoom Rotation<< (0–60 °/s)
			When CH 6 is 46–255:
		0–255	
8	Dimmer	0	Closed
		1–254	Closed ... Open
		255	Open
9	Shutter		Same as CH 11 in the mode “Model 1 - CH21” (p. 15)
10	Red 1	0–255	
11	Green 1	0–255	
12	Blue 1	0–255	
13	White 1	0–255	
14	CTO		Same as CH 9 in the mode “Model 1 - CH21” (p. 13)
15	Color Macro		Same as CH 10 in the mode “Model 1 - CH21” (p. 14)
16	Shaper Macros	0–9	No
		10–209	Monochrome Pattern
		210–255	Mixed Colour Pattern
17	Shape Selection	0–9	Shape OFF
		10–14	Pixel 1
		15–19	Ring 1
		20–24	Ring 2
		25–29	No Shape
		30–34	Pixel1 + Ring1
		35–39	Pixel1 + Ring2
		40–44	No Shape
		45–49	Single Ring
		50–54	Filled Ring2
		55–59	Open/Close 1
		60–64	Open/Close 2
		65–69	Rnd Pixels 1
		70–74	Rnd Pixels 2
		75–79	Rainbow 1
		80–84	Rainbow 2
		85–89	Fan
		90–94	Bar 1
		95–99	Half Moon
		100–104	Triangle

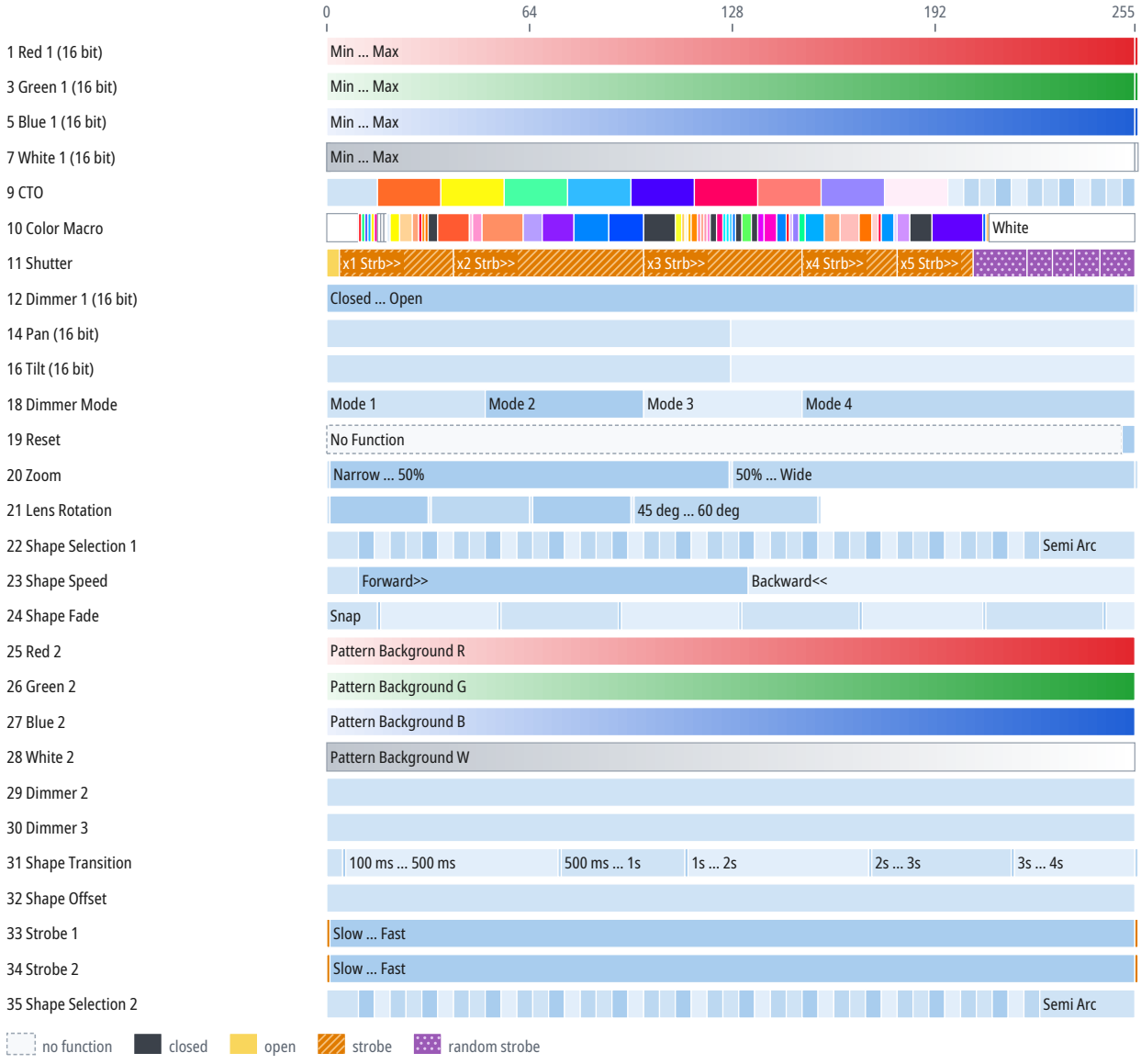
CH	Function	DMX	Description
17	Shape Selection (continued)	105–109	Segment 1
		110–114	Arc 1
		115–119	Arc 2
		120–124	Bar 2
		125–129	Rnd Explotion
		130–134	Segment 2
		135–144	No Shape
		145–149	Bumping Sel
		150–154	Ramp x6
		155–159	Ramp x4
		160–164	LR Scrolling Bar
		165–169	UD Scrolling Bar
		170–174	Bar 3
		175–179	No Shape
		180–184	V Arc 2
		185–189	No Shape
		190–194	H Arc 2
		195–199	Mirrored Pixel
		200–204	Pixel Anim 1
		205–209	Pixel Anim 2
		210–214	Pixel Anim 3
		215–219	Pixel Anim 4
		220–224	Pixel Anim 5
		225–255	Semi Arc
18	Shape Speed	0–9	No
		10–63	Shape Speed
		64–82	x5 Speed<< (95–77 °/s)
		83–101	x4 Speed<< (76–58 °/s)
		102–120	x3 Speed<< (57–39 °/s)
		121–139	x2 Speed<< (38–20 °/s)
		140–158	x1 Speed<< (19–1 °/s)
		159–160	Shape Speed: Speed><
		161–179	x1 Speed>> (1–19 °/s)
		180–198	x2 Speed>> (20–38 °/s)
		199–217	x3 Speed>> (39–57 °/s)
		218–236	x4 Speed>> (58–76 °/s)
		237–255	x5 Speed>> (77–95 °/s)
19	Red 2	0–255	
20	Green 2	0–255	
21	Blue 2	0–255	
22	White 2	0–255	
23	Reset		Same as CH 19 in the mode “Model 1 - CH21” (p. 16)

Mode Model 3 - CH35

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 11 Shutter at 0–3 “Open”; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Red 1 255, CH 3 Green 1 255, CH 5 Blue 1 255, CH 7 White 1 255, CH 9 CTO 0, CH 10 Color Macro 0, CH 11 Shutter 0, CH 12 Dimmer 1 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	Min ... Max
		255	Max
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1	0–255	Min ... Max
		255	Max
4	Green 1 Fine	0–255	Fine adjustment of CH 3

CH	Function	DMX	Description
5	Blue 1	0–255	Min ... Max
		255	Max
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White 1	0–255	Min ... Max
		255	Max
8	White 1 Fine	0–255	Fine adjustment of CH 7
9	CTO	0–15	No CTO
		16–35	R100% - G UP - B0%
		36–55	R DOWM - G100% - B0%
		56–75	R0% - G100% - B UP
		76–95	R0% - G DOWM - B100%
		96–115	R UP - G0% - B100%
		116–135	R100% - G0% - B DOWM
		136–155	R100% - G UP - B UP
		156–175	R DOWM - G DOWM - B 100%
		176–195	R100%- G100%- B100%- W100%
		196–200	2800K
		201–205	3200K
		206–210	3500K
		211–215	4000K
		216–220	4500K
		221–225	5000K
		226–230	5500K
		231–235	6000K
		236–240	6500K
		241–245	7000K
		246–250	7500K
		251–255	8000K
10	Color Macro		Same as CH 10 in the mode “Model 1 - CH21” (p. 14)
11	Shutter	0–3	Open
		4–39	x1 Strb>>
		40–99	x2 Strb>>
		100–149	x3 Strb>>
		150–179	x4 Strb>>
		180–203	x5 Strb>>
		204–220	x1 RndStrb>>
		221–228	x2 RndStrb>>
		229–235	x3 RndStrb>>
		236–243	x4 RndStrb>>
		244–255	x5 RndStrb>>
12	Dimmer 1	0–255	Closed ... Open
		255	Open

CH	Function	DMX	Description
13	Dimmer 1 Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 14 in the mode “Model 1 - CH21” (p. 16)
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt		Same as CH 16 in the mode “Model 1 - CH21” (p. 16)
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Dimmer Mode		Same as CH 18 in the mode “Model 1 - CH21” (p. 16)
19	Reset		Same as CH 19 in the mode “Model 1 - CH21” (p. 16)
20	Zoom	0	Narrow
		1–126	Narrow ... 50%
		127	50%
		128–254	50% ... Wide
		255	Wide
21	Lens Rotation		Same as CH 21 in the mode “Model 1 - CH21” (p. 16)
22	Shape Selection 1	0–9	Shape OFF
		10–14	Pixel 1
		15–19	Ring 1
		20–24	Ring 2
		25–29	No Shape
		30–34	Pixel1 + Ring1
		35–39	Pixel1 + Ring2
		40–44	No Shape
		45–49	Single Ring
		50–54	Filled Ring2
		55–59	Open/Close 1
		60–64	Open/Close 2
		65–69	Rnd Pixels 1
		70–74	Rnd Pixels 2
		75–79	Rainbow 1
		80–84	Rainbow 2
		85–89	Fan
		90–94	Bar 1
		95–99	Half Moon
		100–104	Triangle
		105–109	Segment 1
		110–114	Arc 1
		115–119	Arc 2
		120–124	Bar 2
		125–129	Rnd Explotion
		130–134	Segment 2
		135–144	No Shape
		145–149	Bumping Sel
		150–154	Ramp x6

CH	Function	DMX	Description
22	Shape Selection 1 (continued)	155–159	Ramp x4
		160–164	LR Scrolling Bar
		165–169	UD Scrolling Bar
		170–174	Bar 3
		175–179	No Shape
		180–184	V Arc 2
		185–189	No Shape
		190–194	H Arc 2
		195–199	Mirrored Pixel
		200–204	Pixel Anim 1
		205–209	Pixel Anim 2
		210–214	Pixel Anim 3
		215–219	Pixel Anim 4
		220–224	Pixel Anim 5
		225–255	Semi Arc
23	Shape Speed	0–9	No Spin
		10–132	Forward>> (95–1 °/s)
		133–255	Backward<< (up to 95 °/s (16 rpm))
24	Shape Fade	0–15	Snap
		16	Gamma 050
		17–53	Gamma 050 ... Gamma 075
		54	Gamma 075
		55–91	Gamma 075 ... Gamma 100
		92	Gamma 100
		93–129	Gamma 100 ... Gamma 125
		130	Gamma 125
		131–167	Gamma 125 ... Gamma 150
		168	Gamma 150
		169–206	Gamma 150 ... Gamma 175
		207	Gamma 175
		208–244	Gamma 175 ... Gamma 200
		245	Gamma 200
		246–255	Gamma Auto
25	Red 2		Pattern Background R
		0–255	Pattern Background R
26	Green 2		Pattern Background G
		0–255	Pattern Background G
27	Blue 2		Pattern Background B
		0–255	Pattern Background B
28	White 2		Pattern Background W
		0–255	Pattern Background W
29	Dimmer 2	0–255	

CH	Function	DMX	Description
30	Dimmer 3	0–255	
31	Shape Transition	0–4	No Fade
		5	100 ms
		6–72	100 ms ... 500 ms
		73	500 ms
		74–112	500 ms ... 1s
		113	1s
		114–170	1s ... 2s
		171	2s
		172–215	2s ... 3s
		216	3s
		217–254	3s ... 4s
		255	4s
32	Shape Offset	0–255	
33	Strobe 1		Pattern Strobe
		0	Slow
		1–254	Slow ... Fast
		255	Fast
34	Strobe 2		Pattern Strobe
		0	Slow
		1–254	Slow ... Fast
		255	Fast
35	Shape Selection 2	0–9	Shape OFF
		10–14	Pixel 1
		15–19	Ring 1
		20–24	Ring 2
		25–29	No Shape
		30–34	Pixel1 + Ring1
		35–39	Pixel1 + Ring2
		40–44	No Shape
		45–49	Single Ring
		50–54	Filled Ring2
		55–59	Open/Close 1
		60–64	Open/Close 2
		65–69	Rnd Pixels 1
		70–74	Rnd Pixels 2
		75–79	Rainbow 1
		80–84	Rainbow 2
		85–89	Fan
		90–94	Bar 1
		95–99	Half Moon
		100–104	Triangle

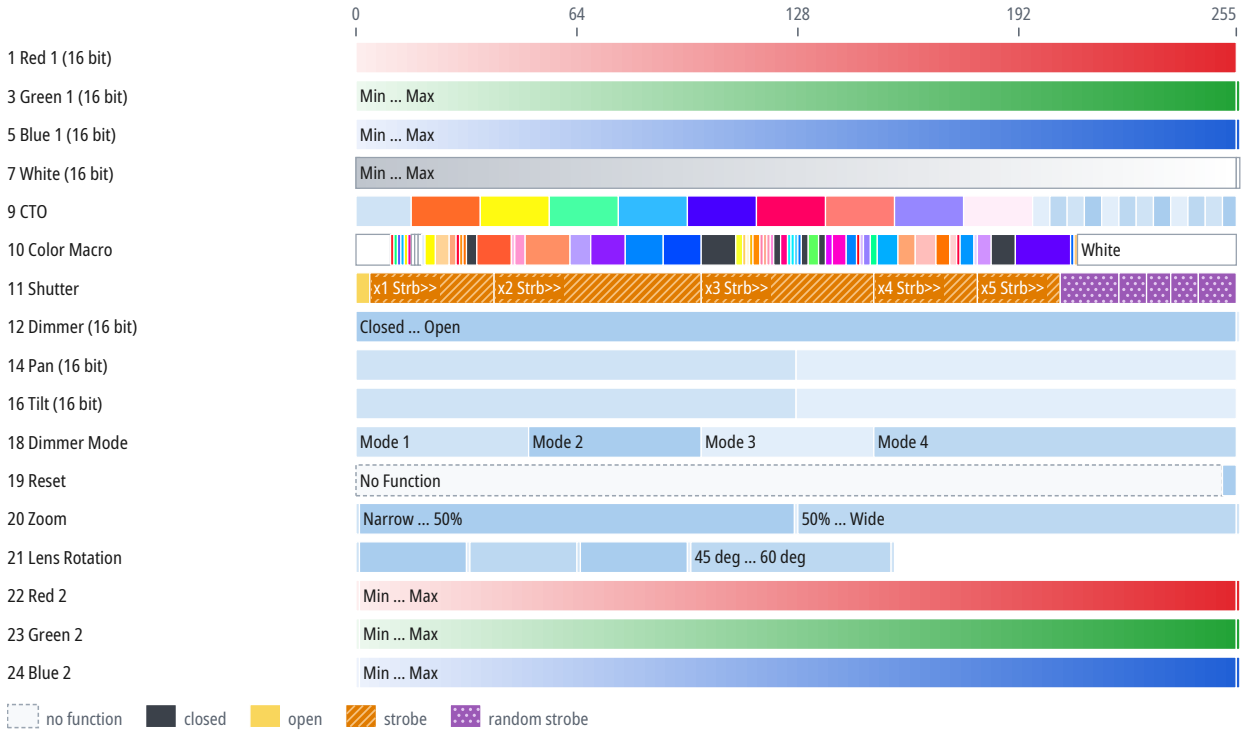
CH	Function	DMX	Description
35	Shape Selection 2 (continued)	105–109	Segment 1
		110–114	Arc 1
		115–119	Arc 2
		120–124	Bar 2
		125–129	Rnd Explotion
		130–134	Segment 2
		135–144	No Shape
		145–149	Bumping Sel
		150–154	Ramp x6
		155–159	Ramp x4
		160–164	LR Scrolling Bar
		165–169	UD Scrolling Bar
		170–174	Bar 3
		175–179	No Shape
		180–184	V Arc 2
		185–189	No Shape
		190–194	H Arc 2
		195–199	Mirrored Pixel
		200–204	Pixel Anim 1
		205–209	Pixel Anim 2
		210–214	Pixel Anim 3
		215–219	Pixel Anim 4
		220–224	Pixel Anim 5
		225–255	Semi Arc

Mode Model 4 - CH 78

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 11 Shutter at 0–3 “Open”; CH 12 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Red 1 255, CH 3 Green 1 255, CH 5 Blue 1 255, CH 7 White 255, CH 9 CTO 0, CH 10 Color Macro 0, CH 11 Shutter 0, CH 12 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1		Same as CH 3 in the mode “Model 3 - CH35” (p. 20)
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1		Same as CH 5 in the mode “Model 3 - CH35” (p. 21)
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White	0–255	Min ... Max
		255	Max
8	White Fine	0–255	Fine adjustment of CH 7
9	CTO		Same as CH 9 in the mode “Model 3 - CH35” (p. 21)
10	Color Macro		Same as CH 10 in the mode “Model 1 - CH21” (p. 14)
11	Shutter		Same as CH 11 in the mode “Model 3 - CH35” (p. 21)
12	Dimmer		Same as CH 12 in the mode “Model 1 - CH21” (p. 16)
13	Dimmer Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 14 in the mode “Model 1 - CH21” (p. 16)
15	Pan Fine	0–255	Fine adjustment of CH 14

CH	Function	DMX	Description
16	Tilt		Same as CH 16 in the mode “Model 1 - CH21” (p. 16)
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Dimmer Mode		Same as CH 18 in the mode “Model 1 - CH21” (p. 16)
19	Reset		Same as CH 19 in the mode “Model 1 - CH21” (p. 16)
20	Zoom		Same as CH 20 in the mode “Model 3 - CH35” (p. 22)
21	Lens Rotation		Same as CH 21 in the mode “Model 1 - CH21” (p. 16)
22	Red 2	0	Min
		1–254	Min ... Max
		255	Max
23	Green 2	0	Min
		1–254	Min ... Max
		255	Max
24	Blue 2	0	Min
		1–254	Min ... Max
		255	Max

CH 22–78: 19 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 22–24); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	22	23	24	2	25	26	27	3	28	29	30
4	31	32	33	5	34	35	36	6	37	38	39
7	40	41	42	8	43	44	45	9	46	47	48
10	49	50	51	11	52	53	54	12	55	56	57
13	58	59	60	14	61	62	63	15	64	65	66
16	67	68	69	17	70	71	72	18	73	74	75
19	76	77	78								

Mode Model 5 - CH 92

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 11 Shutter at 0–3 “Open”; CH 12 Dimmer 1 above 0; CH 29 Dimmer 2 above 0; CH 30 Dimmer 3 above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Red 1 255, CH 3 Green 1 255, CH 5 Blue 1 255, CH 7 White 1 255, CH 9 CTO 0, CH 10 Color Macro 0, CH 11 Shutter 0, CH 12 Dimmer 1 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Red 1		Same as CH 1 in the mode “Model 3 - CH35” (p. 20)
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1		Same as CH 3 in the mode “Model 3 - CH35” (p. 20)
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1		Same as CH 5 in the mode “Model 3 - CH35” (p. 21)
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White 1		Same as CH 7 in the mode “Model 3 - CH35” (p. 21)
8	White 1 Fine	0–255	Fine adjustment of CH 7
9	CTO		Same as CH 9 in the mode “Model 3 - CH35” (p. 21)
10	Color Macro		Same as CH 10 in the mode “Model 1 - CH21” (p. 14)
11	Shutter		Same as CH 11 in the mode “Model 3 - CH35” (p. 21)
12	Dimmer 1		Same as CH 12 in the mode “Model 3 - CH35” (p. 21)
13	Dimmer 1 Fine	0–255	Fine adjustment of CH 12
14	Pan		Same as CH 14 in the mode “Model 1 - CH21” (p. 16)
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt		Same as CH 16 in the mode “Model 1 - CH21” (p. 16)
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Dimmer Mode		Same as CH 18 in the mode “Model 1 - CH21” (p. 16)
19	Reset		Same as CH 19 in the mode “Model 1 - CH21” (p. 16)
20	Zoom		Same as CH 20 in the mode “Model 3 - CH35” (p. 22)
21	Lens Rotation		Same as CH 21 in the mode “Model 1 - CH21” (p. 16)
22	Shape Selection 1		Same as CH 22 in the mode “Model 3 - CH35” (p. 22)
23	Shape Speed		Same as CH 23 in the mode “Model 3 - CH35” (p. 23)
24	Shape Fade		Same as CH 24 in the mode “Model 3 - CH35” (p. 23)
25	Red 2		Same as CH 25 in the mode “Model 3 - CH35” (p. 23)
26	Green 2		Same as CH 26 in the mode “Model 3 - CH35” (p. 23)
27	Blue 2		Same as CH 27 in the mode “Model 3 - CH35” (p. 23)
28	White 2		Same as CH 28 in the mode “Model 3 - CH35” (p. 23)
29	Dimmer 2	0–255	
30	Dimmer 3	0–255	
31	Shape Transition		Same as CH 31 in the mode “Model 3 - CH35” (p. 24)
32	Shape Offset	0–255	
33	Strobe 1		Same as CH 33 in the mode “Model 3 - CH35” (p. 24)
34	Strobe 2		Same as CH 34 in the mode “Model 3 - CH35” (p. 24)
35	Shape Selection 2		Same as CH 35 in the mode “Model 3 - CH35” (p. 24)
36	Red 3	0	Min
		1–254	Min ... Max

CH	Function	DMX	Description
36	Red 3 (continued)	255	Max
37	Green 3	0	Min
		1–254	Min ... Max
		255	Max
38	Blue 3	0	Min
		1–254	Min ... Max
		255	Max
66	Red 13	0	Min
		1–255	Color Add_R 1
67	Green 13	0	Min
		1–255	Color Add_G 1
68	Blue 13	0	Min
		1–255	Color Add_B 1

CH 36–65: 10 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 36–38); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	36	37	38	2	39	40	41	3	42	43	44
4	45	46	47	5	48	49	50	6	51	52	53
7	54	55	56	8	57	58	59	9	60	61	62
10	63	64	65								

CH 66–92: 9 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 66–68); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	66	67	68	2	69	70	71	3	72	73	74
4	75	76	77	5	78	79	80	6	81	82	83
7	84	85	86	8	87	88	89	9	90	91	92

10 Technical specifications

Parameter	Value
Light	
Light source	LED
Optics	
Zoom	4–50°
Movement	
Pan	540°
Tilt	210°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	640 W
Power connectors	PowerConBlue IN, NAC3FCB OUT, powerCON TRUE1 IN
Dimensions and construction	
Weight	16.7 kg
Operating environment	
Operating temperature	-20 to 40 °C

Speeds and ranges

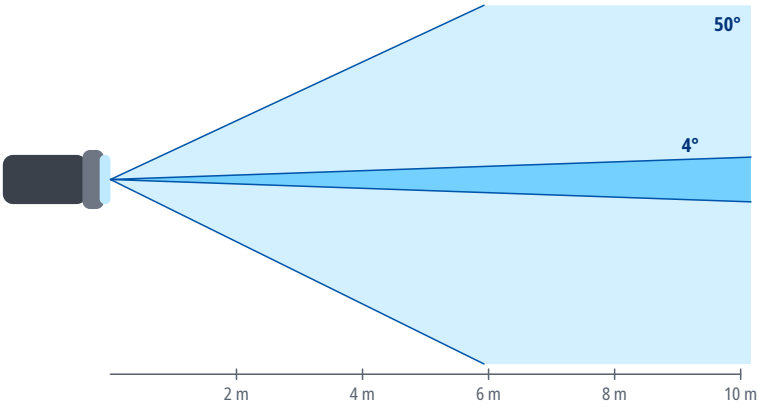
Parameter	Value
Color temperature range	2500–8000 K
Strobe frequency	0–25 Hz

Dimensions

weight 16.7 kg



Spot diameter



Distance	Ø 4°	Ø 50°
2 m	0.14 m	1.9 m
4 m	0.28 m	3.7 m
6 m	0.42 m	5.6 m
8 m	0.56 m	7.5 m
10 m	0.7 m	9.3 m
15 m	1 m	14 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.