DMX REFERENCE

HERITAGE Fresnel 250

Starway



Manufacturer	Starway
GDTF file	Starway_HERITAGE_Fresnel_250_160805.gdtf
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1 About this manual

This document describes the HERITAGE Fresnel 250 by Starway. It was compiled from the GDTF file Starway_HERITAGE_Fresnel_250_160805.gdtf from the GDTF-Share library.

File revision: “Revision_1R”.

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 Starway; 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	330 W
Weight	6.2 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
RGBALC 16bit 23CH	23	22	1, 24, 47, 70, ...
RGBALC 8bit 17CH	17	30	1, 18, 35, 52, ...
XY 16Bit 15CH	15	34	1, 16, 31, 46, ...
RGBW 16bit 19CH	19	26	1, 20, 39, 58, ...
CMY 16Bit 17CH	17	30	1, 18, 35, 52, ...
HSI 14CH	14	36	1, 15, 29, 43, ...
Dimmer + CCT 3CH	3	170	1, 4, 7, 10, ...
Dimmer 16bit 2CH	2	256	1, 3, 5, 7, ...
Dimmer 1CH	1	512	1, 2, 3, 4, ...


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: 100–277 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.

4 Installation

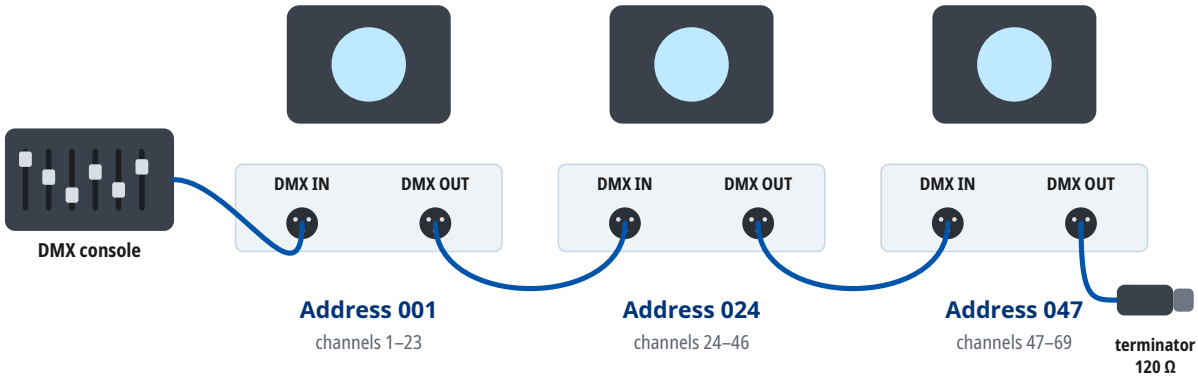
⚠ WARNING

- 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: 6.2 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.

5 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 RGBALC 16bit 23CH: every unit occupies 23 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.

6 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 “RGBALC 16bit 23CH”: 23.
- 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 “RGBALC 16bit 23CH”, you can use, for example, the start addresses 1, 24, 47, 70.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

7 Functions at a glance

Functions in each DMX mode

	RGBALC 16bit 23CH 23 channels	RGBALC 8bit 17CH 17 channels	XY 16Bit 15CH 15 channels	RGBW 16bit 19CH 19 channels	CMY 16Bit 17CH 17 channels	HSI 14CH 14 channels	Dimmer + CCT 3CH 3 channels	Dimmer 16bit 2CH 2 channels
Dimmer	1	1	1	1	1	1	1	1
Shutter / strobe	3	3	3	3	3	3		
Color mixing	6× (5–15)	5–10		4× (5–11)	5, 7, 9			
Color temperature	17	11	9	13	11	8	3	
Effects / macros	20, 21	14, 15	12, 13	16, 17	14, 15	11, 12		

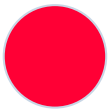
Color wheel

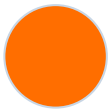
1
Idle
DMX 0–1

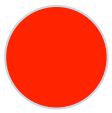
2
007 Pale Yellow
DMX 2–4

3
010 Medium Yellow
DMX 5–7

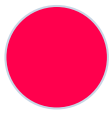
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015 Deep Straw
DMX 8–10

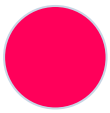
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019 Fire
DMX 11–13

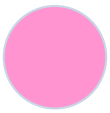
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021 Gold Amber
DMX 14–16

7 
022 Dark Amber
DMX 17–19

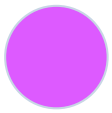
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024 Scarlet
DMX 20–22

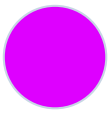
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026 Bright Red
DMX 23–25

10 
027 Medium Red
DMX 26–28

11 
036 Medium Pink
DMX 29–31

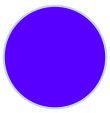
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046 Dark Magenta
DMX 32–34

13 
048 Rose Purple
DMX 35–37

14 
049 Medium Purple
DMX 38–40

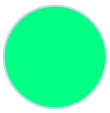
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058 Lavender
DMX 41–43

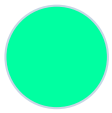
16 
068 Sky Blue
DMX 44–46

17 
071 Tokyo Blue
DMX 47–49

18 
079 Just Blue
DMX 50–52

19
088 Lime Green
DMX 53–55

20 
089 Moss Green
DMX 56–58

21 
090 Dark Yellow Green
DMX 59–61

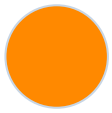
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100 Spring Yellow
DMX 62–64

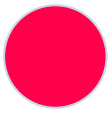
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DMX 65–67

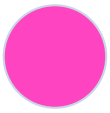
24
102 Light Amber
DMX 68–70

25
103 Straw
DMX 71–73

26 
104 Deep Amber
DMX 74–76

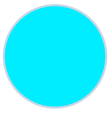
27 
105 Orange
DMX 77–79

28 
106 Primary Red
DMX 80–82

29 
111 Dark Pink
DMX 83–85

30 
113 Magenta
DMX 86–88

31 
115 Peacock Blue
DMX 89–91

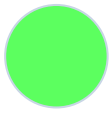
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116 Medium Blue-Green
DMX 92–94

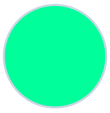
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117 Steel Blue
DMX 95–97

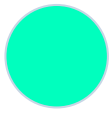
34 
118 Light Blue
DMX 98–100

35 
119 Dark Blue
DMX 101–103

36 
120 Deep Blue
DMX 104–106

37 
121 Green
DMX 107–109

38 
122 Fern Green
DMX 110–112

39 
124 Dark Green
DMX 113–115

40 
128 Bright Pink
DMX 116–118

41
131 Marine Blue
DMX 119–121

42
132 Medium Blue
DMX 122–124

43
134 Golden Amber
DMX 125–127

44
135 Deep Golden Amber
DMX 128–130

45
136 Pale Lavender
DMX 131–133

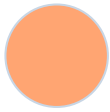
46
137 Special Lavender
DMX 134–136

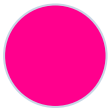
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138 Pale Green
DMX 137–139

48
139 Primary Green
DMX 140–142

49 
141 Bright Blue
DMX 143–145

50 
143 Pale Navy Blue
DMX 146–148

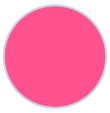
51 
147 Apricot
DMX 149–151

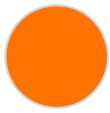
52 
148 Bright Rose
DMX 152–154

53
151 Gold Tint
DMX 155–157

54
152 Pale Gold
DMX 158–160

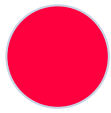
55
154 Pale Rose
DMX 161–163

56 
157 Pink
DMX 164–166

57 
158 Deep Orange
DMX 167–169

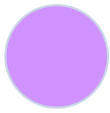
58 
161 Slate Blue
DMX 170–172

59
162 Bastard Amber
DMX 173–175

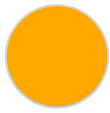
60 
164 Flame Red
DMX 176–178

61 
165 Daylight Blue
DMX 179–181

62
169 Lilac Tint
DMX 182–184

63 
170 Deep Lavender
DMX 185–187

64 
172 Lagoon Blue
DMX 188–190

65 
179 Chrome Orange
DMX 191–193

66 
180 Dark Lavender
DMX 194–196

67 
181 Congo Blue
DMX 197–199

68 
197 Alice Blue
DMX 200–202

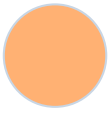
69 
198 Palace Blue
DMX 203–205

70 
200 Double CT Blue
DMX 206–208

71 
201 Full CT Blue
DMX 209–211

72
202 Half CT Blue
DMX 212–214

73
203 Quarter CT Blue
DMX 215–217

74 
204 Full CT Orange
DMX 218–220

75
205 Half CT Orange
DMX 221–223

76
206 Quarter CT Orange
DMX 224–226

77
247 MinusGreen
DMX 227–229

78
248 Half Minus Green
DMX 230–232

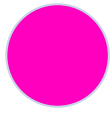
79 
281 Three Quarter CT Blue
DMX 233–235

80
285 Three Quarter CT Orange
DMX 236–238

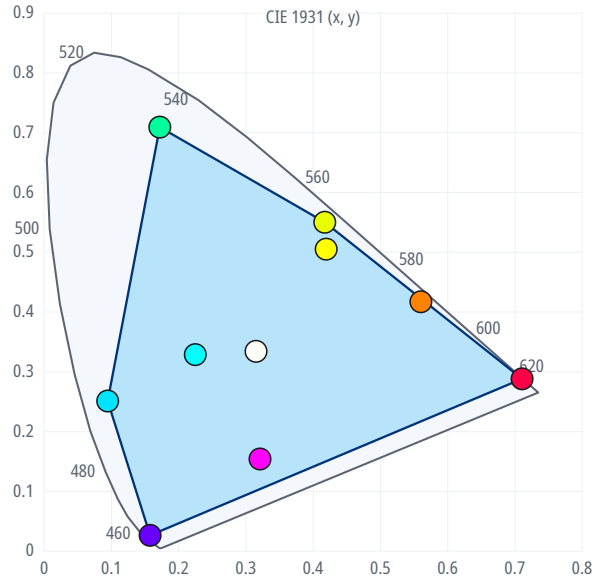
81 
352 Glacier Blue
DMX 239–241

82 
353 Lighter Blue
DMX 242–244

83 
715 Cabana Blue
DMX 245–247

84 
793 Vanity Fair
DMX 248–251

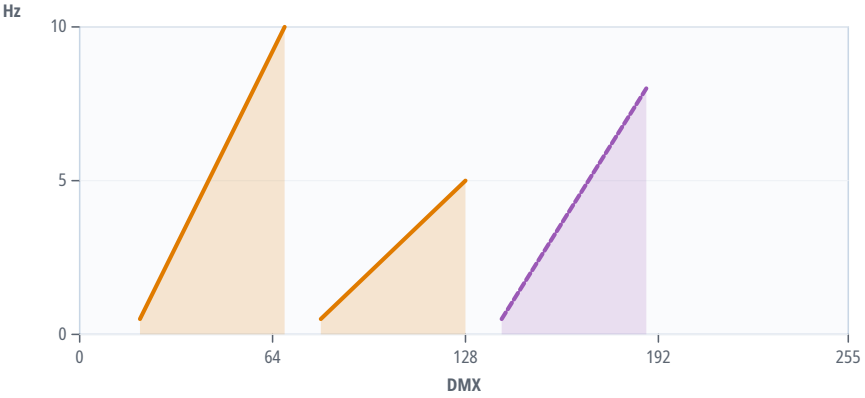
LED colors and the colors they mix



LED	x	y
Red	0.711	0.288
Green	0.172	0.709
Blue	0.158	0.026
Amber	0.560	0.417
Lime	0.417	0.550
Cyan	0.094	0.251
White	0.315	0.334
Cyan 1	0.225	0.329
Magenta	0.321	0.154
Yellow	0.419	0.505

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

Strobe rate

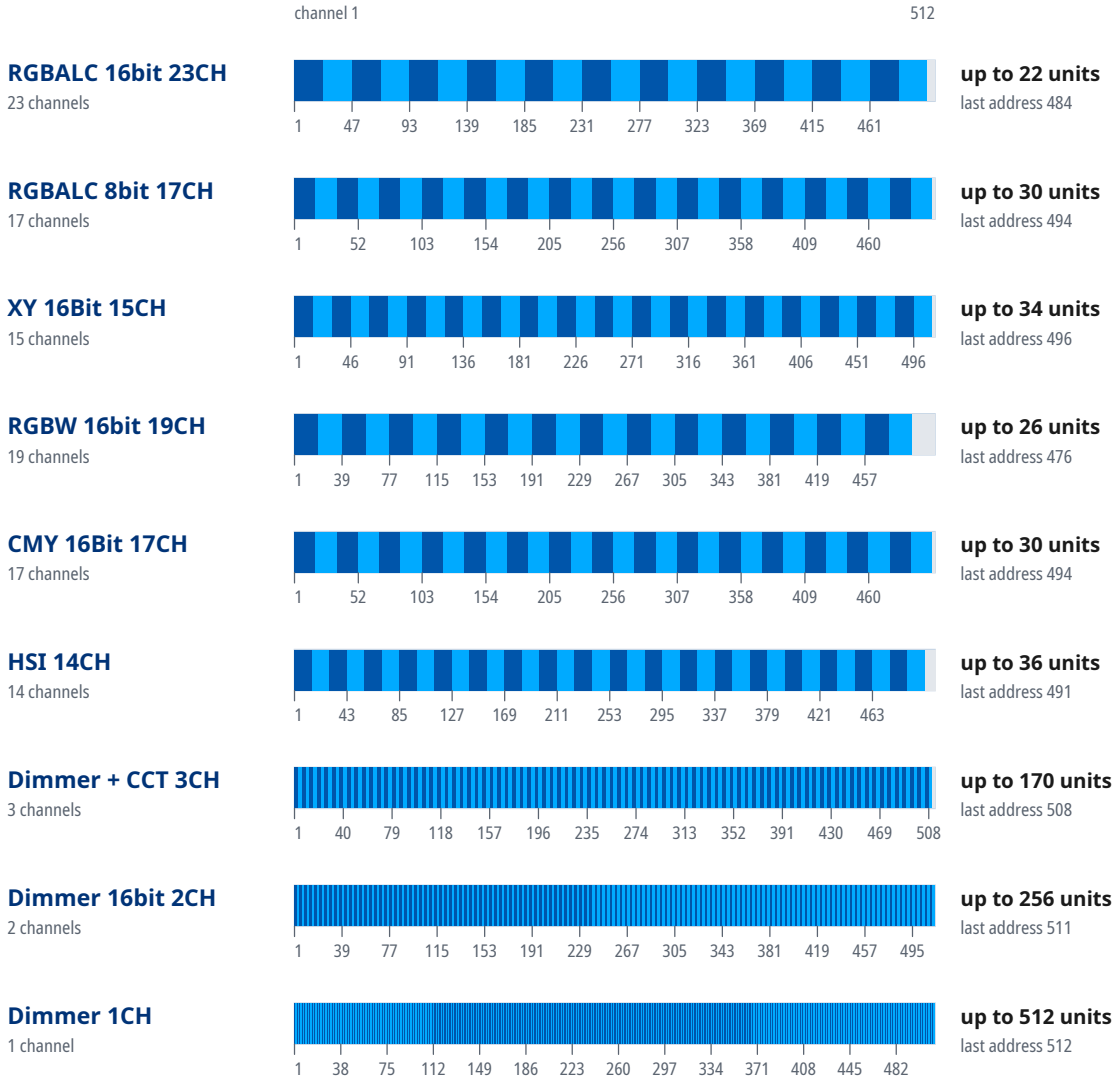


CH 3 · RGBALC 16bit 23CH

- 20–68: 0.5–10 Hz
  Strobe
- 80–128: 0.5–5 Hz
  Pulse
- 140–188: 0.5–8 Hz
  Random

8 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “RGBALC 16bit 23CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	116	11	231	16	346
2	24	7	139	12	254	17	369
3	47	8	162	13	277	18	392
4	70	9	185	14	300	19	415
5	93	10	208	15	323	20	438

RDM personalities

Mode	Channels	RDM personality
RGBALC 16bit 23CH	23	6
RGBALC 8bit 17CH	17	5
XY 16Bit 15CH	15	9
RGBW 16bit 19CH	19	8

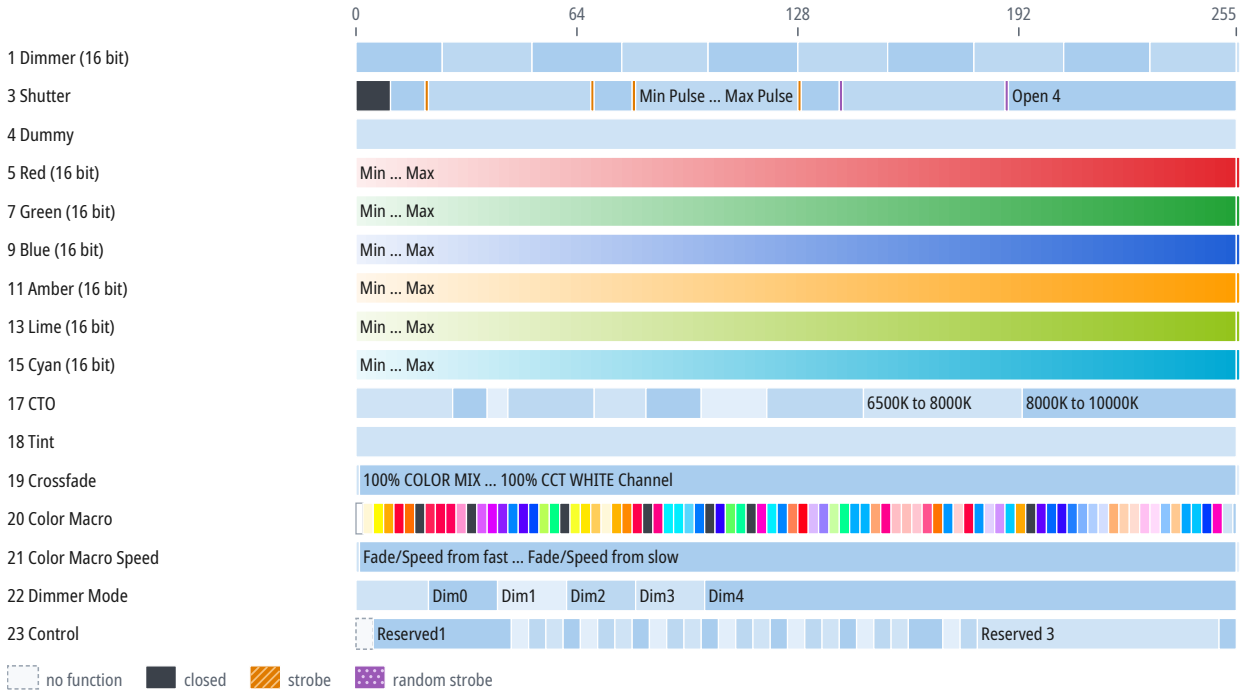
Mode	Channels	RDM personality
CMY 16Bit 17CH	17	7
HSI 14CH	14	4
Dimmer + CCT 3CH	3	3
Dimmer 16bit 2CH	2	2
Dimmer 1CH	1	1

Mode RGBALC 16bit 23CH

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 3 Shutter at 69–79 or 129–139 or 189–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Shutter 255, CH 5 Red 255, CH 7 Green 255, CH 9 Blue 255, CH 11 Amber 255, CH 13 Lime 255, CH 15 Cyan 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–25	0% Dim ... 10% Dim
		25–51	10% Dim ... 20% Dim
		51–77	20% Dim ... 30% DIm
		77–102	30% DIm ... 40% Dim
		102–128	40% Dim ... 50% Dim
		128–154	50% Dim ... 60% Dim
		154–179	60% Dim ... 70% Dim
		179–205	70% Dim ... 80% Dim
		205–230	80% Dim ... 90% Dim
		230–255	90% Dim ... 100% Dim
		255	100% Dim

CH	Function	DMX	Description
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter	0–9	Shutter: Closed
		10–19	Shutter: Open1
		20	Min Strobe
		21–67	Min Strobe ... Max Strobe
		68	Max Strobe
		69–79	Open 2
		80	Min Pulse
		81–127	Min Pulse ... Max Pulse
		128	Max Pulse
		129–139	Open 3
		140	Min Random
		141–187	Min Random ... Max Random
		188	Max Random
		189–255	Open 4
4	Dummy	0–255	
5	Red	0–255	Min ... Max
		255	Max
6	Red Fine	0–255	Fine adjustment of CH 5
7	Green	0–255	Min ... Max
		255	Max
8	Green Fine	0–255	Fine adjustment of CH 7
9	Blue	0–255	Min ... Max
		255	Max
10	Blue Fine	0–255	Fine adjustment of CH 9
11	Amber	0–255	Min ... Max
		255	Max
12	Amber Fine	0–255	Fine adjustment of CH 11
13	Lime	0–255	Min ... Max
		255	Max
14	Lime Fine	0–255	Fine adjustment of CH 13
15	Cyan	0–255	Min ... Max
		255	Max
16	Cyan Fine	0–255	Fine adjustment of CH 15
17	CTO	0–27	1800K to 2700K (1800–2700 K)
		28–37	2700K to 3000K (2700–3000 K)
		38–43	3000K to 3200K (3000–3200 K)
		44–68	3200K to 4000K (3200–4000 K)
		69–83	4000K to 4500K (4000–4500 K)
		84–99	4500K to 5000K (4500–5000 K)
		100–118	5000K to 5600K (5000–5600 K)
		119–146	5600K to 6500K (5600–6500 K)

CH	Function	DMX	Description
17	CTO (continued)	147–192	6500K to 8000K (6500–8000 K)
		193–255	8000K to 10000K (8000–10000 K)
18	Tint	0–255	
19	Crossfade	0	100% COLOR MIX
		1–254	100% COLOR MIX ... 100% CCT WHITE Channel
		255	100% CCT WHITE Channel
20	Color Macro	0–1	Idle
		2–4	007 Pale Yellow
		5–7	010 Medium Yellow
		8–10	015 Deep Straw
		11–13	019 Fire
		14–16	021 Gold Amber
		17–19	022 Dark Amber
		20–22	024 Scarlet
		23–25	026 Bright Red
		26–28	027 Medium Red
		29–31	036 Medium Pink
		32–34	046 Dark Magenta
		35–37	048 Rose Purple
		38–40	049 Medium Purple
		41–43	058 Lavender
		44–46	068 Sky Blue
		47–49	071 Tokyo Blue
		50–52	079 Just Blue
		53–55	088 Lime Green
		56–58	089 Moss Green
		59–61	090 Dark Yellow Green
		62–64	100 Spring Yellow
		65–67	101 Yellow
		68–70	102 Light Amber
		71–73	103 Straw
		74–76	104 Deep Amber
		77–79	105 Orange
		80–82	106 Primary Red
		83–85	111 Dark Pink
		86–88	113 Magenta
		89–91	115 Peacock Blue
		92–94	116 Medium Blue-Green
		95–97	117 Steel Blue
		98–100	118 Light Blue
		101–103	119 Dark Blue
		104–106	120 Deep Blue

CH	Function	DMX	Description
20	Color Macro (continued)	107–109	121 Green
		110–112	122 Fern Green
		113–115	124 Dark Green
		116–118	128 Bright Pink
		119–121	131 Marine Blue
		122–124	132 Medium Blue
		125–127	134 Golden Amber
		128–130	135 Deep Golden Amber
		131–133	136 Pale Lavender
		134–136	137 Special Lavender
		137–139	138 Pale Green
		140–142	139 Primary Green
		143–145	141 Bright Blue
		146–148	143 Pale Navy Blue
		149–151	147 Apricot
		152–154	148 Bright Rose
		155–157	151 Gold Tint
		158–160	152 Pale Gold
		161–163	154 Pale Rose
		164–166	157 Pink
		167–169	158 Deep Orange
		170–172	161 Slate Blue
		173–175	162 Bastard Amber
		176–178	164 Flame Red
		179–181	165 Daylight Blue
		182–184	169 Lilac Tint
		185–187	170 Deep Lavender
		188–190	172 Lagoon Blue
		191–193	179 Chrome Orange
		194–196	180 Dark Lavender
		197–199	181 Congo Blue
		200–202	197 Alice Blue
		203–205	198 Palace Blue
		206–208	200 Double CT Blue
		209–211	201 Full CT Blue
		212–214	202 Half CT Blue
		215–217	203 Quarter CT Blue
		218–220	204 Full CT Orange
		221–223	205 Half CT Orange
		224–226	206 Quarter CT Orange
		227–229	247 MinusGreen
		230–232	248 Half Minus Green

CH	Function	DMX	Description
20	Color Macro (continued)	233–235	281 Three Quarter CT Blue
		236–238	285 Three Quarter CT Orange
		239–241	352 Glacier Blue
		242–244	353 Lighter Blue
		245–247	715 Cabana Blue
		248–250	793 Vanity Fair
		251–253	Color rotation CW
		254–255	Color rotation backward CCW
21	Color Macro Speed	0	Fade/Speed from fast
		1–254	Fade/Speed from fast ... Fade/Speed from slow
		255	Fade/Speed from slow
22	Dimmer Mode	0–20	Default unit setting
		21–40	Dim0
		41–60	Dim1
		61–80	Dim2
		81–100	Dim3
		101–255	Dim4
23	Control	0–4	No function
		5–44	Reserved1
		45–49	Fan Quiet(Hold 3s)
		50–54	Fan Auto (Hold 3s)
		55–59	Fan High (Hold 3s)
		60–64	Linear Dimmer Curve (hold 3s)
		65–69	Square Dimmer Curve (hold 3s)
		70–74	Inv-Square Dimmer Curve (hold 3s)
		75–79	S - Dimmer Curve (hold 3s)
		80–84	Fast Dim disable (hold 3s)
		85–89	Fast dim enable (hold 3s)
		90–94	900 Hz (hold 3s)
		95–99	1000 Hz (hold 3s)
		100–104	1100 Hz (hold 3s)
		105–109	1200 Hz (hold 3s)
		110–114	1300 Hz (hold 3s)
		115–119	1400 Hz (hold 3s)
		120–124	1500 Hz (hold 3s)
		125–129	2500 Hz (hold 3s)
		130–134	4000 Hz (hold 3s)
		135–139	5000 Hz (hold 3s)
		140–144	10000 Hz (hold 3s)
		145–149	15000 Hz (hold 3s)
		150–154	20000 Hz (hold 3s)
		155–159	25000 Hz (hold 3s)

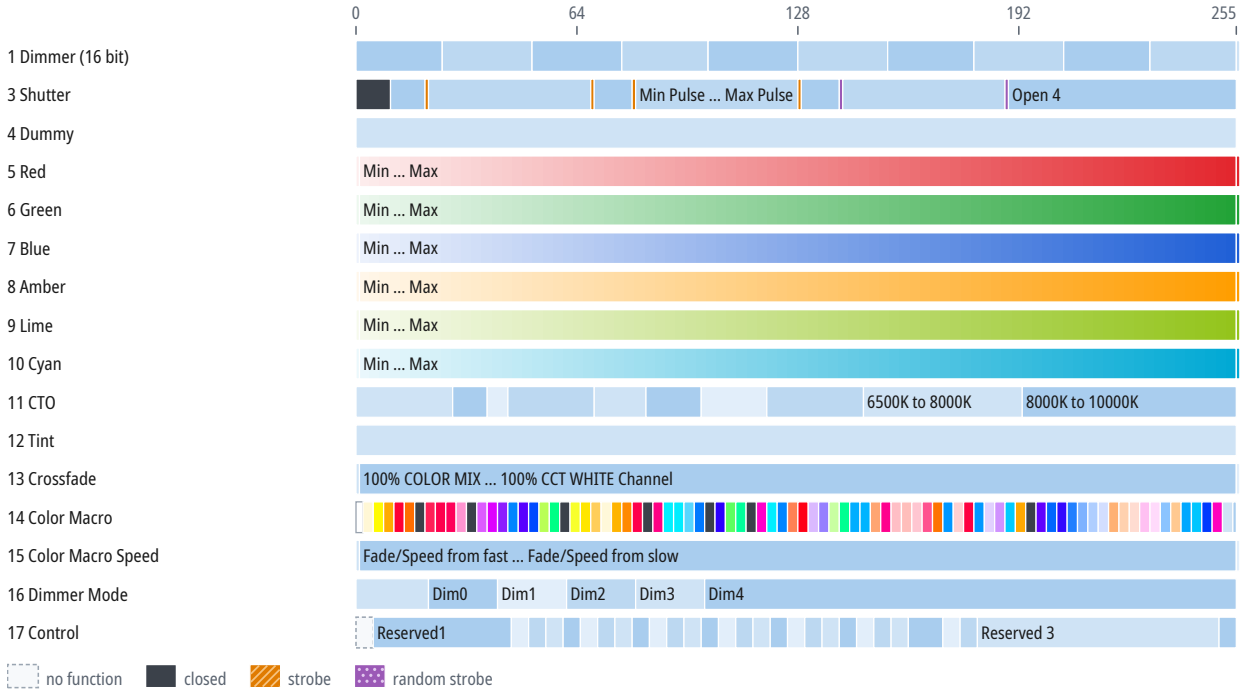
CH	Function	DMX	Description
23	Control (continued)	160–169	Reserved 2
		170–174	DTW ON
		175–179	DTW OFF
		180–255	Reserved 3

Mode RGBALC 8bit 17CH

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 3 Shutter at 69–79 or 129–139 or 189–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Shutter 255, CH 5 Red 255, CH 6 Green 255, CH 7 Blue 255, CH 8 Amber 255, CH 9 Lime 255, CH 10 Cyan 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “RGBALC 16bit 23CH” (p. 11)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 3 in the mode “RGBALC 16bit 23CH” (p. 12)
4	Dummy	0–255	
5	Red	0	Min
		1–254	Min ... Max
		255	Max
6	Green	0	Min
		1–254	Min ... Max
		255	Max
7	Blue	0	Min
		1–254	Min ... Max

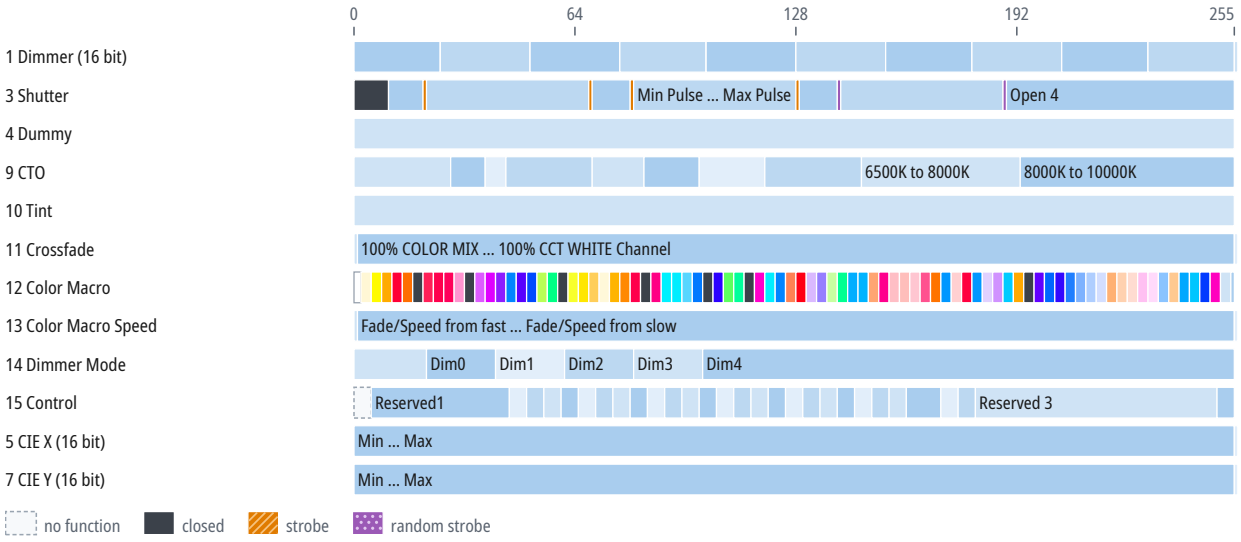
CH	Function	DMX	Description
7	Blue (continued)	255	Max
8	Amber	0	Min
		1–254	Min ... Max
		255	Max
9	Lime	0	Min
		1–254	Min ... Max
		255	Max
10	Cyan	0	Min
		1–254	Min ... Max
		255	Max
11	CTO		Same as CH 17 in the mode “RGBALC 16bit 23CH” (p. 12)
12	Tint	0–255	
13	Crossfade		Same as CH 19 in the mode “RGBALC 16bit 23CH” (p. 13)
14	Color Macro		Same as CH 20 in the mode “RGBALC 16bit 23CH” (p. 13)
15	Color Macro Speed		Same as CH 21 in the mode “RGBALC 16bit 23CH” (p. 15)
16	Dimmer Mode		Same as CH 22 in the mode “RGBALC 16bit 23CH” (p. 15)
17	Control		Same as CH 23 in the mode “RGBALC 16bit 23CH” (p. 15)

Mode XY 16Bit 15CH

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 3 Shutter at 69–79 or 129–139 or 189–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Shutter 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “RGBALC 16bit 23CH” (p. 11)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 3 in the mode “RGBALC 16bit 23CH” (p. 12)

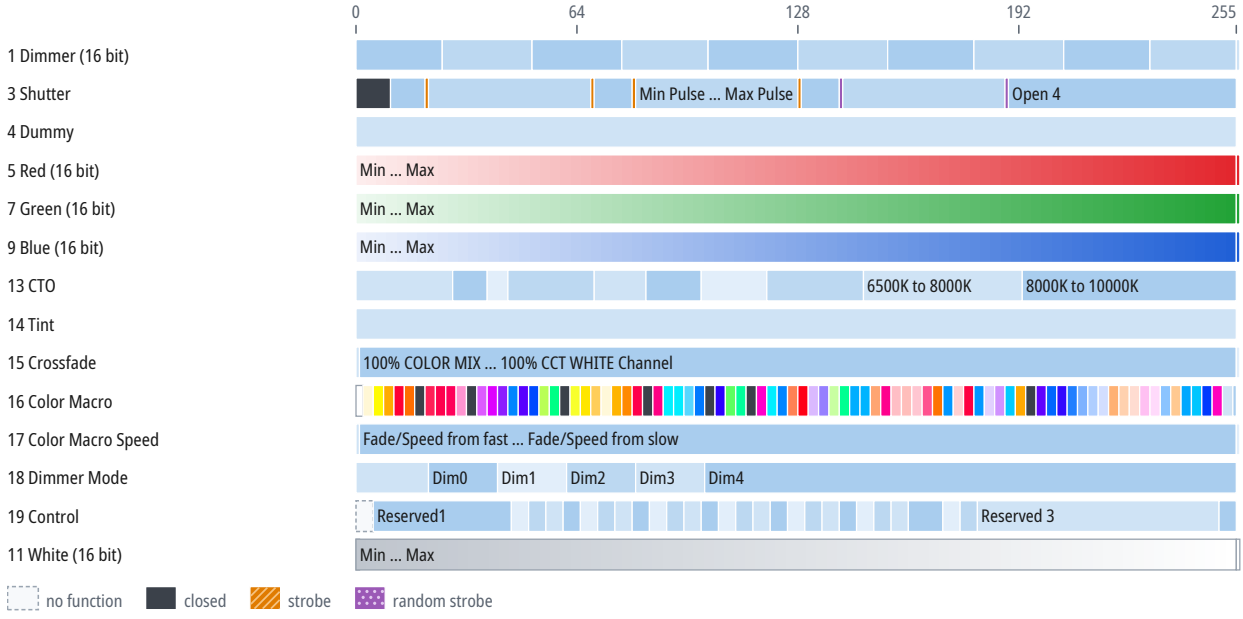
CH	Function	DMX	Description
4	Dummy	0–255	
5	CIE X	0–255	Min ... Max
		255	Max
6	CIE X Fine	0–255	Fine adjustment of CH 5
7	CIE Y	0–255	Min ... Max
		255	Max
8	CIE Y Fine	0–255	Fine adjustment of CH 7
9	CTO		Same as CH 17 in the mode “RGBALC 16bit 23CH” (p. 12)
10	Tint	0–255	
11	Crossfade		Same as CH 19 in the mode “RGBALC 16bit 23CH” (p. 13)
12	Color Macro		Same as CH 20 in the mode “RGBALC 16bit 23CH” (p. 13)
13	Color Macro Speed		Same as CH 21 in the mode “RGBALC 16bit 23CH” (p. 15)
14	Dimmer Mode		Same as CH 22 in the mode “RGBALC 16bit 23CH” (p. 15)
15	Control		Same as CH 23 in the mode “RGBALC 16bit 23CH” (p. 15)

Mode RGBW 16bit 19CH

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 3 Shutter at 69–79 or 129–139 or 189–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Shutter 255, CH 5 Red 255, CH 7 Green 255, CH 9 Blue 255, CH 11 White 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “RGBALC 16bit 23CH” (p. 11)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 3 in the mode “RGBALC 16bit 23CH” (p. 12)
4	Dummy	0–255	
5	Red		Same as CH 5 in the mode “RGBALC 16bit 23CH” (p. 12)

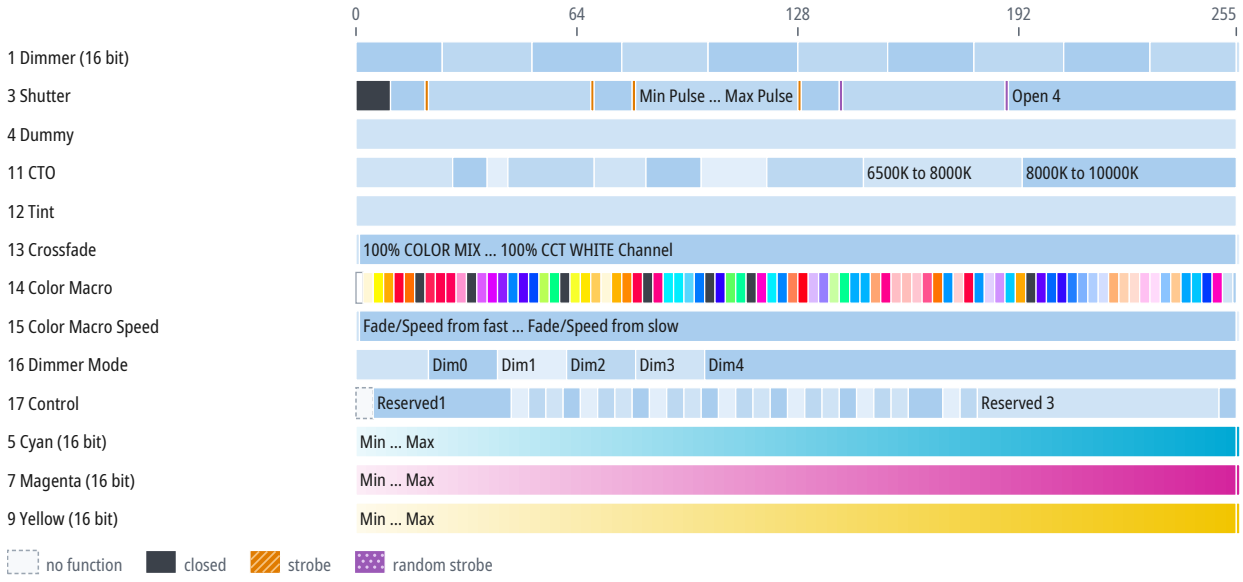
CH	Function	DMX	Description
6	Red Fine	0–255	Fine adjustment of CH 5
7	Green		Same as CH 7 in the mode “RGBALC 16bit 23CH” (p. 12)
8	Green Fine	0–255	Fine adjustment of CH 7
9	Blue		Same as CH 9 in the mode “RGBALC 16bit 23CH” (p. 12)
10	Blue Fine	0–255	Fine adjustment of CH 9
11	White	0–255	Min … Max
		255	Max
12	White Fine	0–255	Fine adjustment of CH 11
13	CTO		Same as CH 17 in the mode “RGBALC 16bit 23CH” (p. 12)
14	Tint	0–255	
15	Crossfade		Same as CH 19 in the mode “RGBALC 16bit 23CH” (p. 13)
16	Color Macro		Same as CH 20 in the mode “RGBALC 16bit 23CH” (p. 13)
17	Color Macro Speed		Same as CH 21 in the mode “RGBALC 16bit 23CH” (p. 15)
18	Dimmer Mode		Same as CH 22 in the mode “RGBALC 16bit 23CH” (p. 15)
19	Control		Same as CH 23 in the mode “RGBALC 16bit 23CH” (p. 15)

Mode CMY 16Bit 17CH

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 3 Shutter at 69–79 or 129–139 or 189–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Shutter 255, CH 5 Cyan 0, CH 7 Magenta 0, CH 9 Yellow 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “RGBALC 16bit 23CH” (p. 11)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 3 in the mode “RGBALC 16bit 23CH” (p. 12)
4	Dummy	0–255	

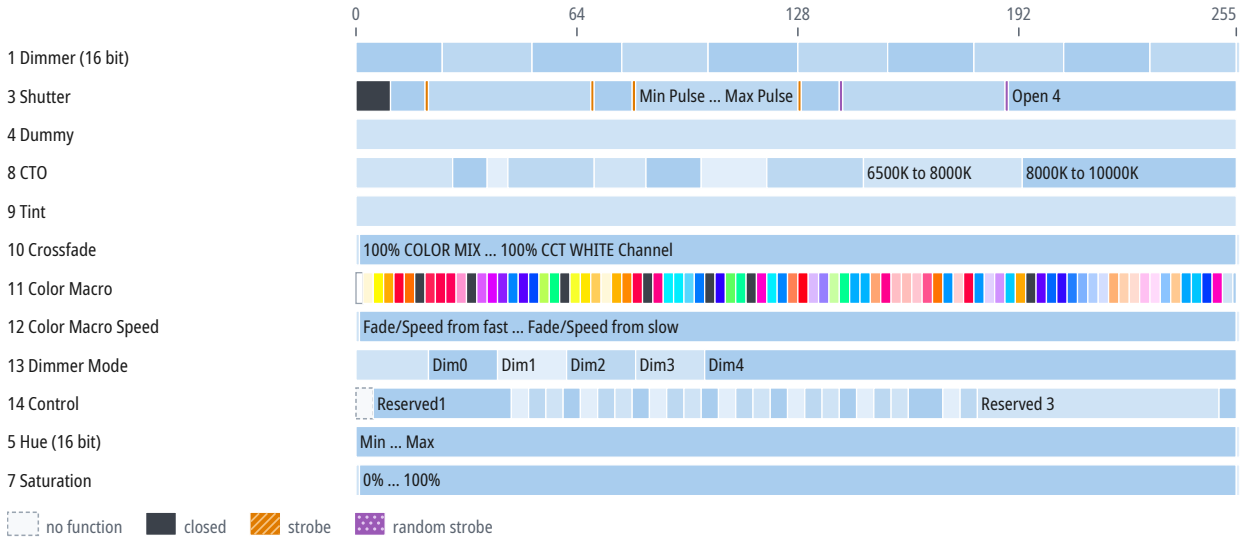
CH	Function	DMX	Description
5	Cyan	0–255	Min … Max
		255	Max
6	Cyan Fine	0–255	Fine adjustment of CH 5
7	Magenta	0–255	Min … Max
		255	Max
8	Magenta Fine	0–255	Fine adjustment of CH 7
9	Yellow	0–255	Min … Max
		255	Max
10	Yellow Fine	0–255	Fine adjustment of CH 9
11	CTO		Same as CH 17 in the mode “RGBALC 16bit 23CH” (p. 12)
12	Tint	0–255	
13	Crossfade		Same as CH 19 in the mode “RGBALC 16bit 23CH” (p. 13)
14	Color Macro		Same as CH 20 in the mode “RGBALC 16bit 23CH” (p. 13)
15	Color Macro Speed		Same as CH 21 in the mode “RGBALC 16bit 23CH” (p. 15)
16	Dimmer Mode		Same as CH 22 in the mode “RGBALC 16bit 23CH” (p. 15)
17	Control		Same as CH 23 in the mode “RGBALC 16bit 23CH” (p. 15)

Mode HSI 14CH

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 3 Shutter at 69–79 or 129–139 or 189–255. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Shutter 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “RGBALC 16bit 23CH” (p. 11)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 3 in the mode “RGBALC 16bit 23CH” (p. 12)
4	Dummy	0–255	

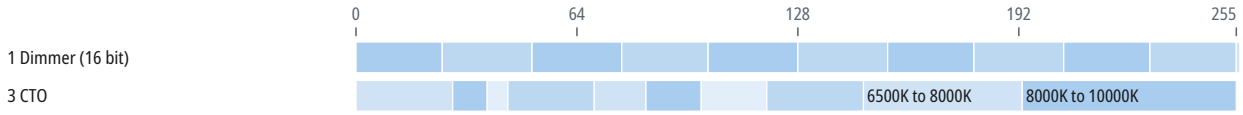
CH	Function	DMX	Description
5	Hue	0–255	Min ... Max
		255	Max
6	Hue Fine	0–255	Fine adjustment of CH 5
7	Saturation	0	0%
		1–254	0% ... 100%
		255	100%
8	CTO		Same as CH 17 in the mode “RGBALC 16bit 23CH” (p. 12)
9	Tint	0–255	
10	Crossfade		Same as CH 19 in the mode “RGBALC 16bit 23CH” (p. 13)
11	Color Macro		Same as CH 20 in the mode “RGBALC 16bit 23CH” (p. 13)
12	Color Macro Speed		Same as CH 21 in the mode “RGBALC 16bit 23CH” (p. 15)
13	Dimmer Mode		Same as CH 22 in the mode “RGBALC 16bit 23CH” (p. 15)
14	Control		Same as CH 23 in the mode “RGBALC 16bit 23CH” (p. 15)

Mode Dimmer + CCT 3CH

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

The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance



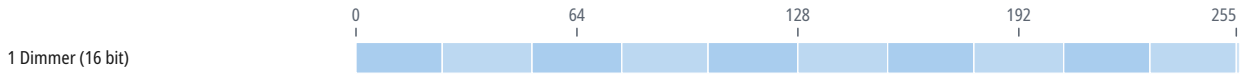
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “RGBALC 16bit 23CH” (p. 11)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	CTO		Same as CH 17 in the mode “RGBALC 16bit 23CH” (p. 12)

Mode Dimmer 16bit 2CH

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

The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “RGBALC 16bit 23CH” (p. 11)
2	Dimmer Fine	0–255	Fine adjustment of CH 1

Mode Dimmer 1CH

The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0	0% Dim
		1–24	0% Dim … 10% Dim
		25	10% Dim
		26–50	10% Dim … 20% Dim
		51	20% Dim
		52–76	20% Dim … 30% DIm
		77	30% DIm
		78–101	30% DIm … 40% Dim
		102	40% Dim
		103–127	40% Dim … 50% Dim
		128	50% Dim
		129–153	50% Dim … 60% Dim
		154	60% Dim
		155–178	60% Dim … 70% Dim
		179	70% Dim
		180–204	70% Dim … 80% Dim
		205	80% Dim
		206–229	80% Dim … 90% Dim
		230	90% Dim
		231–254	90% Dim … 100% Dim
		255	100% Dim

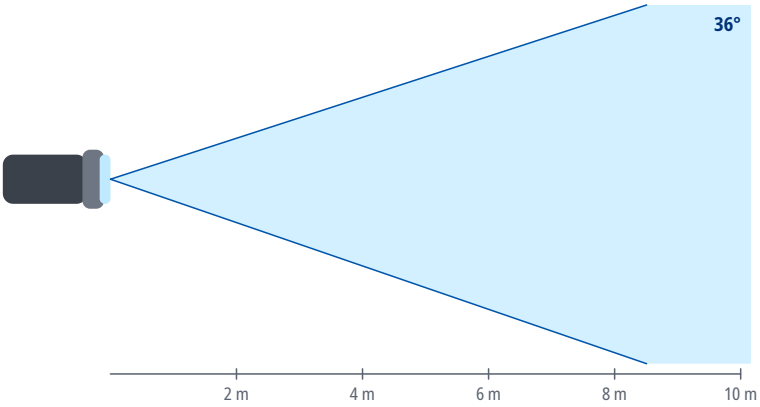
9 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	250 W
Luminous flux	10,239 lm
Color temperature	9,330 K
Color rendering index (CRI)	98
Optics	
Beam angle	36°
Control	
DMX connection	5-pin XLR IN/OUT
RDM	yes (manufacturer ID 0x09E9, device model ID 0x0026)
Electrical	
Power supply	100–277 V, 50/60 Hz
Power consumption	330 W
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	6.2 kg
Operating environment	
Operating temperature	-20 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	1800–10000 K
Strobe frequency	0.5–10 Hz
LED frequency	900–25000 Hz

Spot diameter



Distance	Ø 36°
2 m	1.3 m
4 m	2.6 m
6 m	3.9 m
8 m	5.2 m
10 m	6.5 m
15 m	9.7 m

Spot diameter square to the beam axis, calculated from the beam angle.

10 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.

11 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.

12 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.