DMX REFERENCE

K-EYE K20 HCR

Clay Paky



Manufacturer	Clay Paky
GDTF file	Clay_Paky_K-EYE_K20_HCR_103843.gdtf
GDTF revision	ClayPaky Official File Fw Ver 2_25_005 · 2025-07-14
Generated	2026-11-23

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 7
9 DMX channels 11
Mode Extended RAW 12
Mode Extended RGB 18
Mode Extended HSV 19
Mode Basic RGB 20
Mode Basic HSV 22
10 Technical specifications 23
11 Maintenance and cleaning 24
12 Troubleshooting 24
13 Disposal 25

1 About this manual

This document describes the K-EYE K20 HCR by Clay Paky. It was compiled from the GDTF file Clay_Paky_K-EYE_K20_HCR_103843.gdtf from the GDTF-Share library.

File revision: “ClayPaky Official File Fw Ver 2_25_005”.

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 Clay Paky; 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
Weight	22.5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Extended RAW	32	16	1, 33, 65, 97, ...
Extended RGB	32	16	1, 33, 65, 97, ...
Extended HSV	32	16	1, 33, 65, 97, ...
Basic RGB	19	26	1, 20, 39, 58, ...
Basic HSV	19	26	1, 20, 39, 58, ...

No light? Check these channels

- Extended RAW: CH 15 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 16 Dimmer above 0
- Extended RGB: CH 15 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 16 Dimmer above 0
- Extended HSV: CH 15 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 16 Dimmer above 0
- Basic RGB: CH 6 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 7 Dimmer above 0
- Basic HSV: CH 6 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 7 Dimmer above 0


Read the manual before use


Do not stare into the light


Indoor use only

3 Safety instructions



Read the manual before use



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

- 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.

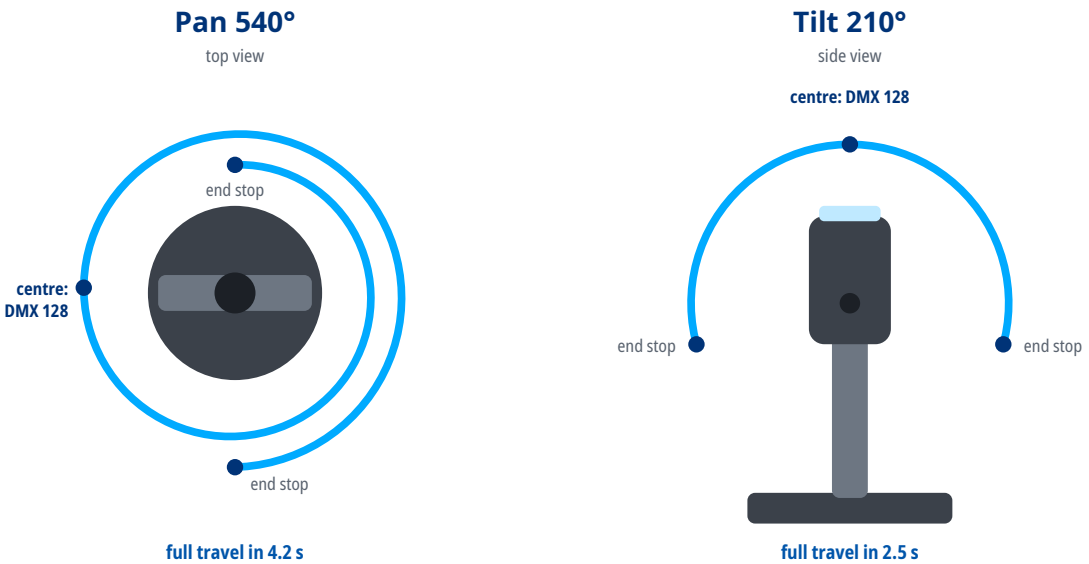
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do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

“K-EYE HCR is an LEDwash light which provides total control over the quality of all forms of white or colored light. The new HCR technology used in the K-EYE is an exclusive electronic platform developed by Claypaky in conjunction with Osram to meet the needs of lighting designers all over the world who were not fully satisfied with the performance of LED devices in comparison with traditional lamps, in particular because of their incomplete color range, poor color rendering index and lack of consistency. All these limitations have been overcome in the K-EYE HCR, and it is finally possible to produce every color, every nuance and every shade with satisfactory quality. The heart of the K-EYE HCR wash light is a LED light source consisting of a module with six colors: besides the three “classic” basic red, green and blue colors, Claypaky has added amber, cyan and lime. This exclusive Claypaky device provides a very wide color range with excellent color spectrum coverage.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

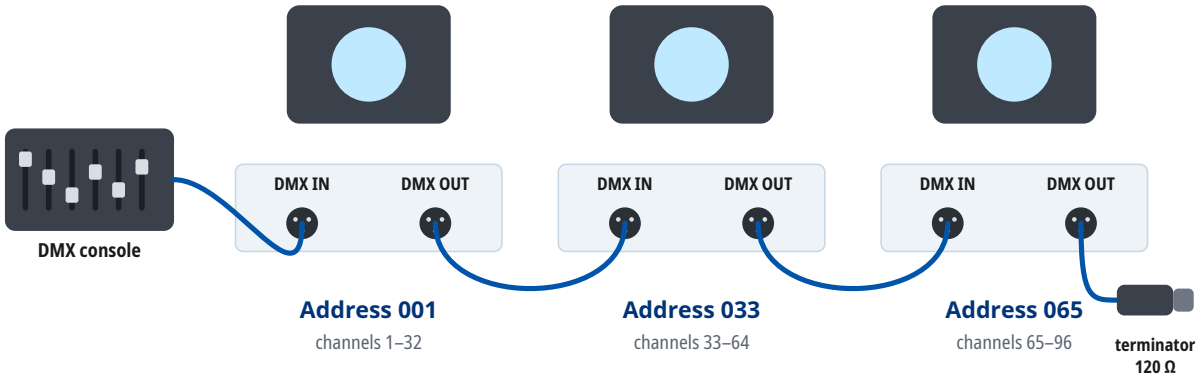
⚠ **WARNING**

- 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: 22.5 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 Extended RAW: every unit occupies 32 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 “Extended RAW”: 32.
- 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 “Extended RAW”, you can use, for example, the start addresses 1, 33, 65, 97.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

8 Functions at a glance

Functions in each DMX mode

	Extended RAW 32 channels	Extended RGB 32 channels	Extended HSV 32 channels	Basic RGB 19 channels	Basic HSV 19 channels
Pan / Tilt	25, 27	25, 27	25, 27	12, 14	12, 14
Dimmer	16	16	16	7	7
Shutter / strobe	15	15	15	6	6
Color mixing	6× (1–11)	18–20		1–3 *	
Color temperature	13	13	13	4	4
Color wheel	14	14	14	5	5
Zoom	29	29	29	16	16

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

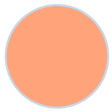
Color wheel

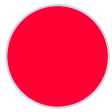
1
No Color Macro
DMX 0–9

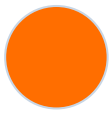
2
Med Bastard Amber
DMX 10–11

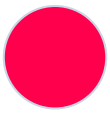
3
Pale Amber Gold
DMX 12–13

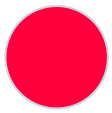
4
Reserved
DMX 14–15

5 
Surprise Peach
DMX 16–17

6 
Fire
DMX 18–19

7 
Gold Amber
DMX 20–21

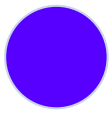
8 
Bright Red
DMX 22–23

9 
Plasa Red
DMX 24–25

10
Light Pink
DMX 26–27

11 
Lavender
DMX 28–29

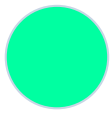
12 
Sky Blue
DMX 30–31

13 
Tokyo Blue
DMX 32–33

14 
Evening Blue
DMX 34–35

15 
Just Blue
DMX 36–37

16
Lime Green
DMX 38–39

17 
Dark Yellow/Green
DMX 40–41

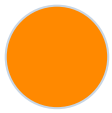
18
Spring Yellow
DMX 42–43

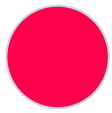
19
Yellow
DMX 44–45

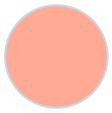
20
Light Amber
DMX 46–47

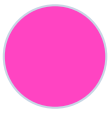
21
Straw
DMX 48–49

22 
Deep Amber
DMX 50–51

23 
Orange
DMX 52–53

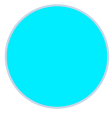
24 
Primary Red
DMX 54–55

25 
English Rose
DMX 56–57

26 
Dark Pink
DMX 58–59

27 
Magenta
DMX 60–61

28 
Peacock Blue
DMX 62–63

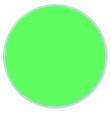
29 
Med Blue-Green
DMX 64–65

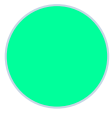
30 
Steel Blue
DMX 66–67

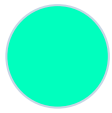
31 
Light Blue
DMX 68–69

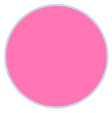
32 
Dark Blue
DMX 70–71

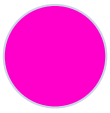
33 
Deep Blue
DMX 72–73

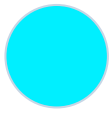
34 
Lee Green
DMX 74–75

35 
Fern Green
DMX 76–77

36 
Dark Green
DMX 78–79

37 
Smokey Pink
DMX 80–81

38 
Bright Pink
DMX 82–83

39 
Marine Blue
DMX 84–85

40 
Med Blue
DMX 86–87

41
Golden Amber
DMX 88–89

42
Deep Golden Amber
DMX 90–91

43
Pale Lavender
DMX 92–93

44
Special Lavender
DMX 94–95

45
Pale Green
DMX 96–97

46
Primary Green
DMX 98–99

47
Bright Blue
DMX 100–101

48
Pale Navy Blue
DMX 102–103

49 Apricot
DMX 104–105

50 Pale Gold
DMX 106–107

51 Pale Rose
DMX 108–109

52 Pink
DMX 110–111

53 Deep Orange
DMX 112–113

54 Slate Blue
DMX 114–115

55 Bastard Amber
DMX 116–117

56 Flame Red
DMX 118–119

57 Daylight Blue
DMX 120–121

58 Lilac Tint
DMX 122–123

59 Deep Lavender
DMX 124–125

60 Lagoon Blue
DMX 126–127

61 Dark Steel Blue
DMX 128–129

62 Chrome Orange
DMX 130–131

63 Dark Lavendar
DMX 132–133

64 Congo Blue
DMX 134–135

65 Light Red
DMX 136–137

66 Alice Blue
DMX 138–139

67 Double CTB
DMX 140–141

68 Full CTB
DMX 142–143

69 1/2 CTB
DMX 144–145

70 1/4 CTB
DMX 146–147

71 Full CTO
DMX 148–149

72 1/2 CTO
DMX 150–151

73 1/4 CTO
DMX 152–153

74 LEE Fluorescent 5700k
DMX 154–155

75 LEE Fluorescent 4300k
DMX 156–157

76 LEE Minus Green
DMX 158–159

77 1/2 Minus Green
DMX 160–161

78 3/4 CTB
DMX 162–163

79 3/4 CTO
DMX 164–165

80 Follies Pink
DMX 166–167

81 Glacier Blue
DMX 168–169

82 Lighter Blue
DMX 170–171

83 Special Medium Blue
DMX 172–173

84 King Fals Lavender
DMX 174–175

85 Cold Blue
DMX 176–177

86 Ocean Blue
DMX 178–179

87 Steel Green
DMX 180–181

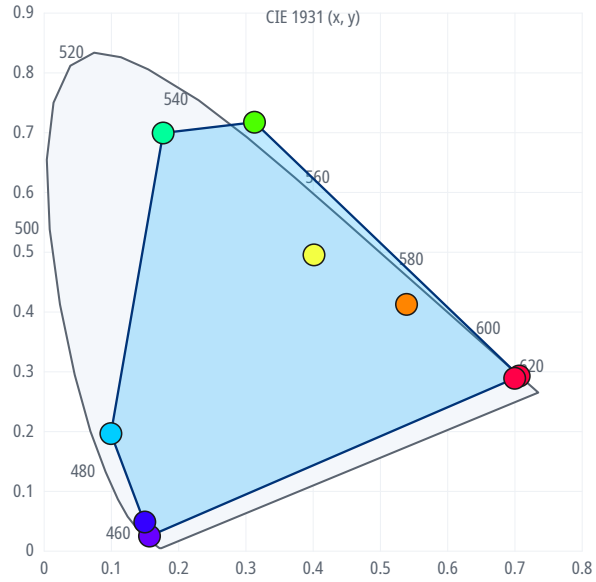
88 Easy White
DMX 182–183

89 Millenium Gold
DMX 184–185

90 Vanity Fair
DMX 186–187

91 Rose Tint
DMX 188–190

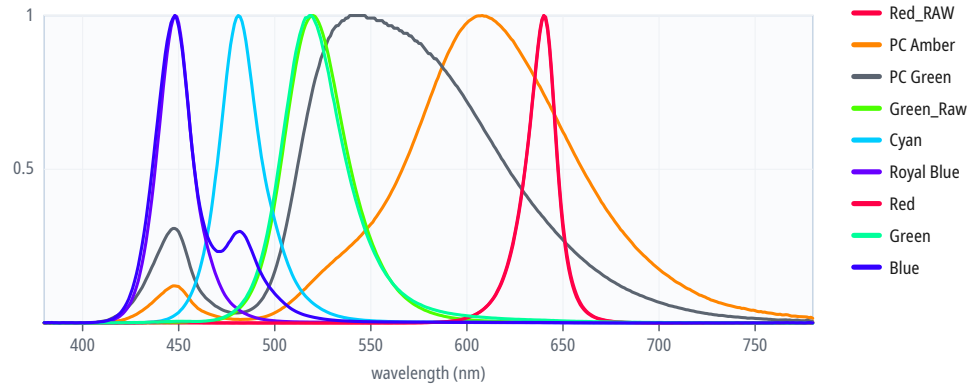
LED colors and the colors they mix



LED	x	y
Red_RAW	0.706	0.293
PC Amber	0.539	0.413
PC Green	0.401	0.496
Green_Raw	0.313	0.718
Cyan	0.099	0.197
Royal Blue	0.157	0.025
Red	0.700	0.289
Green	0.177	0.700
Blue	0.150	0.049

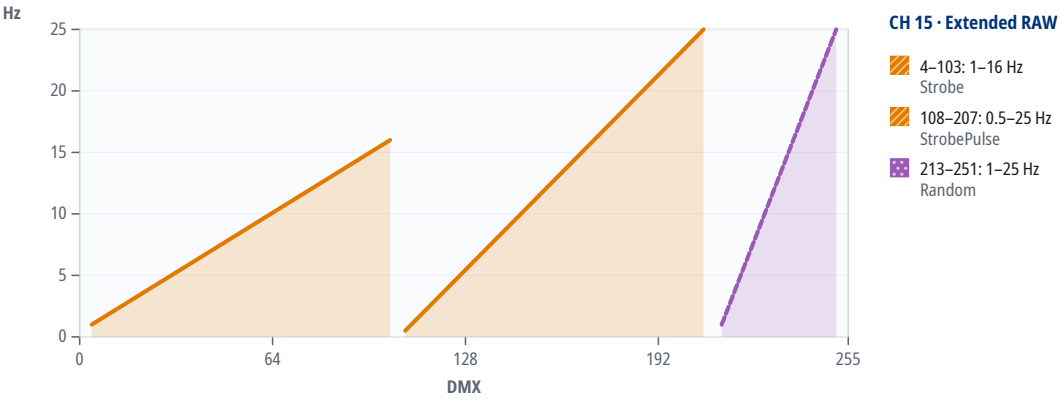
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources



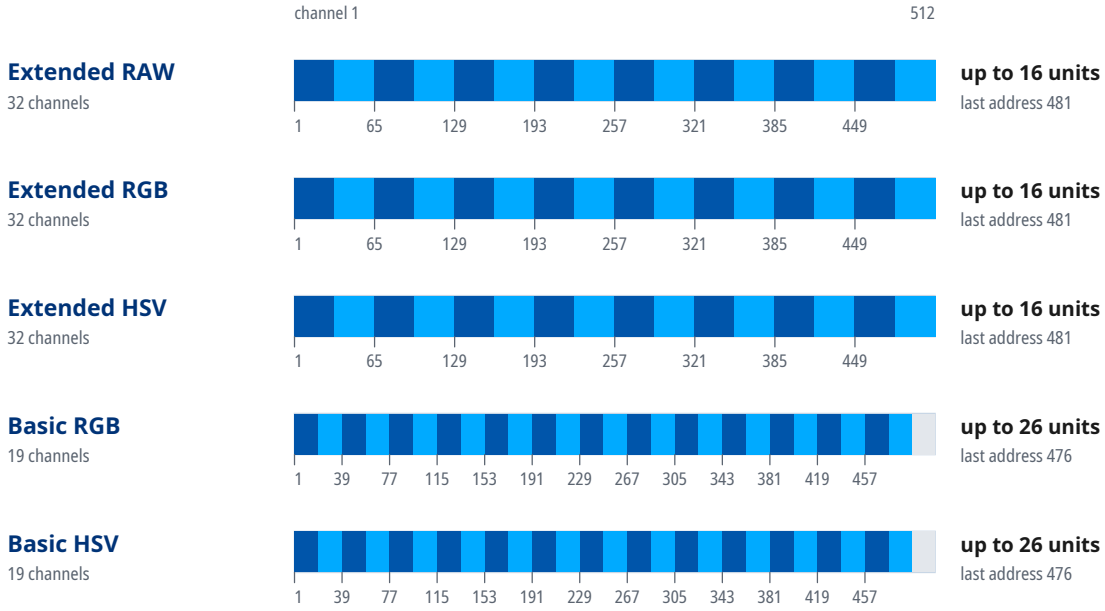
Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended RAW”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	161	11	321	16	481
2	33	7	193	12	353	17	U2 · 1
3	65	8	225	13	385	18	U2 · 33
4	97	9	257	14	417	19	U2 · 65
5	129	10	289	15	449	20	U2 · 97

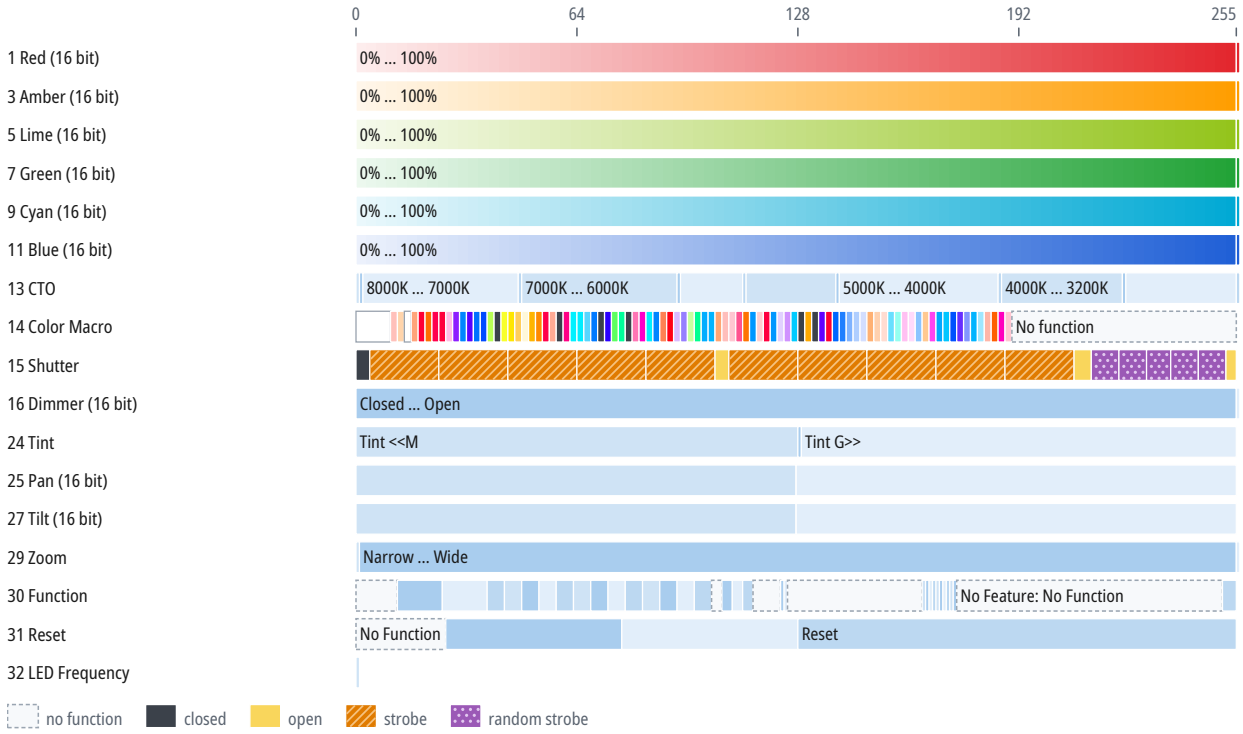
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Extended RAW

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 15 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 7 Green 255, CH 11 Blue 255, CH 14 Color Macro 0, CH 15 Shutter 255, CH 16 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0–255	0% ... 100%
		255	100%
2	Red Fine	0–255	Fine adjustment of CH 1
3	Amber	0–255	0% ... 100%
		255	100%
4	Amber Fine	0–255	Fine adjustment of CH 3
5	Lime	0–255	0% ... 100%
		255	100%
6	Lime Fine	0–255	Fine adjustment of CH 5
7	Green	0–255	0% ... 100%
		255	100%
8	Green Fine	0–255	Fine adjustment of CH 7
9	Cyan	0–255	0% ... 100%
		255	100%
10	Cyan Fine	0–255	Fine adjustment of CH 9
11	Blue	0–255	0% ... 100%

CH	Function	DMX	Description
11	Blue (continued)	255	100%
12	Blue Fine	0–255	Fine adjustment of CH 11
13	CTO	0	No CTO (6000–7000 K)
		1	8000K
		2–46	8000K … 7000K
		47	7000K
		48–92	7000K … 6000K
		93	6000K
		94–111	6000K … 5600K
		112	5600K
		113–138	5600K … 5000K
		139	5000K
		140–185	5000K … 4000K
		186	4000K
		187–221	4000K … 3200K
		222	3200K
		223–254	3200K … 2500K
		255	2500K
14	Color Macro	0–9	No Color Macro
		10–11	Med Bastard Amber
		12–13	Pale Amber Gold
		14–15	Reserved
		16–17	Surprise Peach
		18–19	Fire
		20–21	Gold Amber
		22–23	Bright Red
		24–25	Plasa Red
		26–27	Light Pink
		28–29	Lavender
		30–31	Sky Blue
		32–33	Tokyo Blue
		34–35	Evening Blue
		36–37	Just Blue
		38–39	Lime Green
		40–41	Dark Yellow/Green
		42–43	Spring Yellow
		44–45	Yellow
		46–47	Light Amber
		48–49	Straw
		50–51	Deep Amber
		52–53	Orange
		54–55	Primary Red

CH	Function	DMX	Description
14	Color Macro (continued)	56–57	English Rose
		58–59	Dark Pink
		60–61	Magenta
		62–63	Peacock Blue
		64–65	Med Blue-Green
		66–67	Steel Blue
		68–69	Light Blue
		70–71	Dark Blue
		72–73	Deep Blue
		74–75	Lee Green
		76–77	Fern Green
		78–79	Dark Green
		80–81	Smokey Pink
		82–83	Bright Pink
		84–85	Marine Blue
		86–87	Med Blue
		88–89	Golden Amber
		90–91	Deep Golden Amber
		92–93	Pale Lavender
		94–95	Special Lavender
		96–97	Pale Green
		98–99	Primary Green
		100–101	Bright Blue
		102–103	Pale Navy Blue
		104–105	Apricot
		106–107	Pale Gold
		108–109	Pale Rose
		110–111	Pink
		112–113	Deep Orange
		114–115	Slate Blue
		116–117	Bastard Amber
		118–119	Flame Red
		120–121	Daylight Blue
		122–123	Lilac Tint
		124–125	Deep Lavender
		126–127	Lagoon Blue
		128–129	Dark Steel Blue
		130–131	Chrome Orange
		132–133	Dark Lavendar
		134–135	Congo Blue
		136–137	Light Red
		138–139	Alice Blue

CH	Function	DMX	Description
14	Color Macro (continued)	140–141	Double CTB
		142–143	Full CTB
		144–145	1/2 CTB
		146–147	1/4 CTB
		148–149	Full CTO
		150–151	1/2 CTO
		152–153	1/4 CTO
		154–155	LEE Fluorescent 5700k
		156–157	LEE Fluorescent 4300k
		158–159	LEE Minus Green
		160–161	1/2 Minus Green
		162–163	3/4 CTB
		164–165	3/4 CTO
		166–167	Follies Pink
		168–169	Glacier Blue
		170–171	Lighter Blue
		172–173	Special Medium Blue
		174–175	King Fals Lavender
		176–177	Cold Blue
		178–179	Ocean Blue
		180–181	Steel Green
		182–183	Easy White
		184–185	Millenium Gold
		186–187	Vanity Fair
		188–189	Rose Tint
		190–255	No function
15	Shutter	0–3	Closed
		4–23	x1 Strb>>
		24–43	x2 Strb>>
		44–63	x3 Strb>>
		64–83	x4 Strb>>
		84–103	x5 Strb>>
		104–107	Open
		108–127	x1 PulseC>>
		128–147	x2 PulseC>>
		148–167	x3 PulseC>>
		168–187	x4 PulseC>>
		188–207	x5 PulseC>>
		208–212	Open
		213–220	x1 RndStrb>>
		221–228	x2 RndStrb>>
		229–235	x3 RndStrb>>

CH	Function	DMX	Description
15	Shutter (continued)	236–243	x4 RndStrb>>
		244–251	x5 RndStrb>>
		252–255	Open
16	Dimmer	0–255	Closed ... Open
		255	Open
17	Dimmer Fine	0–255	Fine adjustment of CH 16
24	Tint	0–127	Tint <<M
		128	Tint OFF
		129–255	Tint G>>
25	Pan	0–127	Pan
		128	Home
		128–255	Pan
26	Pan Fine	0–255	Fine adjustment of CH 25
27	Tilt	0–127	Tilt
		128	Home
		128–255	Tilt
28	Tilt Fine	0–255	Fine adjustment of CH 27
29	Zoom	0	Narrow
		1–254	Narrow ... Wide
		255	Wide
30	Function	0–11	No Feature: No Function
		12–24	Fast Pan/Tilt
		25–37	Normal Pan/Tilt
		38–42	Dimmer Curve 1
		43–47	Dimmer Curve 2
		48–52	Dimmer Curve 3
		53–57	Dimmer Curve 4
		58–62	Gamma Curve 1
		63–67	Gamma Curve 1-5
		68–72	Gamma Curve 2-2
		73–77	Halo OFF
		78–82	Halo 750W
		83–87	Halo 1000W
		88–92	Halo 1200W
		93–97	Halo 2000W
		98–102	Halo 2500W
		103–105	No Feature: No Function
		106–108	RAW
		109–111	RGB
		112–114	CMY
		115–122	No Feature: No Function
		123	CTO Filt

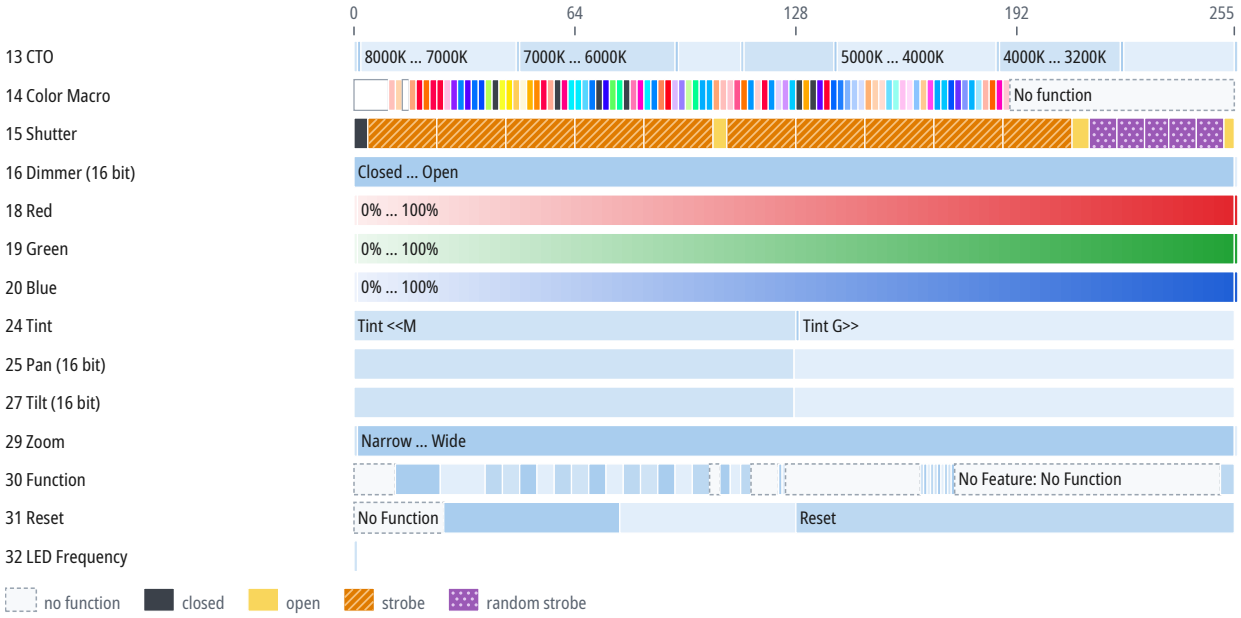
CH	Function	DMX	Description
30	Function (continued)	124	CTO White
		125–163	No Feature: No Function
		164	1000Hz
		165	1500Hz
		166	2400Hz
		167	3700Hz
		168	5600Hz
		169	9400Hz
		170	15100Hz
		171	21400Hz
		172	31000Hz
		173	43700Hz
		174–250	No Feature: No Function
		251–255	Default Recall
31	Reset	0–25	No Function
		26–76	Zoom Reset
		77–127	Position Reset
		128–255	Reset
32	LED Frequency		When CH 30 is 164:
		0–255	1000 Hz (746–1254 Hz)
			When CH 30 is 165:
		0–255	1500 Hz (1246–1754 Hz)
			When CH 30 is 166:
		0–255	2400 Hz (1765–3035 Hz)
			When CH 30 is 167:
		0–255	3700 Hz (3065–4335 Hz)
			When CH 30 is 168:
		0–255	5600 Hz (4330–6870 Hz)
			When CH 30 is 169:
		0–255	9400 Hz (6860–11940 Hz)
			When CH 30 is 170:
		0–255	15100 Hz (11925–18275 Hz)
			When CH 30 is 171:
		0–255	21400 Hz (18225–24575 Hz)
			When CH 30 is 172:
		0–255	31000 Hz (24650–37350 Hz)
			When CH 30 is 173:
		0–255	43700 Hz (37350–50050 Hz)

Mode Extended RGB

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 15 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 14 Color Macro 0, CH 15 Shutter 255, CH 16 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
13	CTO		Same as CH 13 in the mode “Extended RAW” (p. 13)
14	Color Macro		Same as CH 14 in the mode “Extended RAW” (p. 13)
15	Shutter		Same as CH 15 in the mode “Extended RAW” (p. 15)
16	Dimmer		Same as CH 16 in the mode “Extended RAW” (p. 16)
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Red	0	0%
		1–254	0% ... 100%
		255	100%
19	Green	0	0%
		1–254	0% ... 100%
		255	100%
20	Blue	0	0%
		1–254	0% ... 100%
		255	100%
24	Tint		Same as CH 24 in the mode “Extended RAW” (p. 16)
25	Pan		Same as CH 25 in the mode “Extended RAW” (p. 16)
26	Pan Fine	0–255	Fine adjustment of CH 25
27	Tilt		Same as CH 27 in the mode “Extended RAW” (p. 16)
28	Tilt Fine	0–255	Fine adjustment of CH 27
29	Zoom		Same as CH 29 in the mode “Extended RAW” (p. 16)

CH	Function	DMX	Description
30	Function		Same as CH 30 in the mode “Extended RAW” (p. 16)
31	Reset		Same as CH 31 in the mode “Extended RAW” (p. 17)
32	LED Frequency		Same as CH 32 in the mode “Extended RAW” (p. 17)

Mode Extended HSV

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 15 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 14 Color Macro 0, CH 15 Shutter 255, CH 16 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
13	CTO		Same as CH 13 in the mode “Extended RAW” (p. 13)
14	Color Macro		Same as CH 14 in the mode “Extended RAW” (p. 13)
15	Shutter		Same as CH 15 in the mode “Extended RAW” (p. 15)
16	Dimmer		Same as CH 16 in the mode “Extended RAW” (p. 16)
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Hue	0–255	Hue
19	Hue Fine	0–255	Fine adjustment of CH 18
20	Saturation	0	Pure Color
		1–254	Pure Color ... White
		255	White
24	Tint		Same as CH 24 in the mode “Extended RAW” (p. 16)
25	Pan		Same as CH 25 in the mode “Extended RAW” (p. 16)
26	Pan Fine	0–255	Fine adjustment of CH 25
27	Tilt		Same as CH 27 in the mode “Extended RAW” (p. 16)
28	Tilt Fine	0–255	Fine adjustment of CH 27
29	Zoom		Same as CH 29 in the mode “Extended RAW” (p. 16)

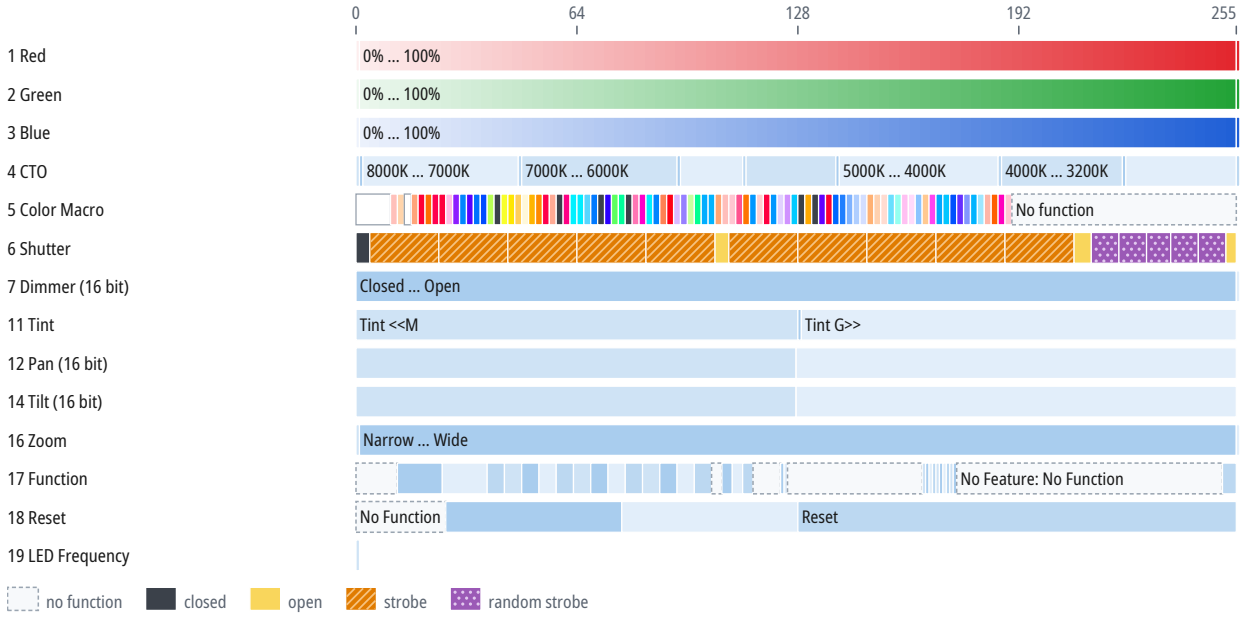
CH	Function	DMX	Description
30	Function		Same as CH 30 in the mode “Extended RAW” (p. 16)
31	Reset		Same as CH 31 in the mode “Extended RAW” (p. 17)
32	LED Frequency		Same as CH 32 in the mode “Extended RAW” (p. 17)

Mode Basic RGB

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 6 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255, CH 5 Color Macro 0, CH 6 Shutter 255, CH 7 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red		When CH 17 is 109–111:
		0	0%
		1–254	0% ... 100%
		255	100%
			When CH 17 is 112–114:
		0	0%
		1–254	0% ... 100%
		255	100%
2	Green		When CH 17 is 109–111:
		0	0%
		1–254	0% ... 100%
		255	100%
			When CH 17 is 112–114:
		0	0%
		1–254	0% ... 100%

CH	Function	DMX	Description
2	Green (continued)	255	100%
3	Blue		When CH 17 is 109–111:
		0	0%
		1–254	0% … 100%
		255	100%
			When CH 17 is 112–114:
		0	0%
		1–254	0% … 100%
		255	100%
4	CTO		Same as CH 13 in the mode “Extended RAW” (p. 13)
5	Color Macro		Same as CH 14 in the mode “Extended RAW” (p. 13)
6	Shutter		Same as CH 15 in the mode “Extended RAW” (p. 15)
7	Dimmer		Same as CH 16 in the mode “Extended RAW” (p. 16)
8	Dimmer Fine	0–255	Fine adjustment of CH 7
11	Tint		Same as CH 24 in the mode “Extended RAW” (p. 16)
12	Pan		Same as CH 25 in the mode “Extended RAW” (p. 16)
13	Pan Fine	0–255	Fine adjustment of CH 12
14	Tilt		Same as CH 27 in the mode “Extended RAW” (p. 16)
15	Tilt Fine	0–255	Fine adjustment of CH 14
16	Zoom		Same as CH 29 in the mode “Extended RAW” (p. 16)
17	Function		Same as CH 30 in the mode “Extended RAW” (p. 16)
18	Reset		Same as CH 31 in the mode “Extended RAW” (p. 17)
19	LED Frequency		When CH 17 is 164:
		0–255	1000 Hz (746–1254 Hz)
			When CH 17 is 165:
		0–255	1500 Hz (1246–1754 Hz)
			When CH 17 is 166:
		0–255	2400 Hz (1765–3035 Hz)
			When CH 17 is 167:
		0–255	3700 Hz (3065–4335 Hz)
			When CH 17 is 168:
		0–255	5600 Hz (4330–6870 Hz)
			When CH 17 is 169:
		0–255	9400 Hz (6860–11940 Hz)
			When CH 17 is 170:
		0–255	15100 Hz (11925–18275 Hz)
			When CH 17 is 171:
		0–255	21400 Hz (18225–24575 Hz)
			When CH 17 is 172:
		0–255	31000 Hz (24650–37350 Hz)
			When CH 17 is 173:
		0–255	43700 Hz (37350–50050 Hz)

Mode Basic HSV

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 6 Shutter at 104–107, 208–212 or 252–255 “Open”; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 5 Color Macro 0, CH 6 Shutter 255, CH 7 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Hue	0–255	Hue
2	Hue Fine	0–255	Fine adjustment of CH 1
3	Saturation		Same as CH 20 in the mode “Extended HSV” (p. 19)
4	CTO		Same as CH 13 in the mode “Extended RAW” (p. 13)
5	Color Macro		Same as CH 14 in the mode “Extended RAW” (p. 13)
6	Shutter		Same as CH 15 in the mode “Extended RAW” (p. 15)
7	Dimmer		Same as CH 16 in the mode “Extended RAW” (p. 16)
8	Dimmer Fine	0–255	Fine adjustment of CH 7
11	Tint		Same as CH 24 in the mode “Extended RAW” (p. 16)
12	Pan		Same as CH 25 in the mode “Extended RAW” (p. 16)
13	Pan Fine	0–255	Fine adjustment of CH 12
14	Tilt		Same as CH 27 in the mode “Extended RAW” (p. 16)
15	Tilt Fine	0–255	Fine adjustment of CH 14
16	Zoom		Same as CH 29 in the mode “Extended RAW” (p. 16)
17	Function		Same as CH 30 in the mode “Extended RAW” (p. 16)
18	Reset		Same as CH 31 in the mode “Extended RAW” (p. 17)
19	LED Frequency		Same as CH 19 in the mode “Basic RGB” (p. 21)

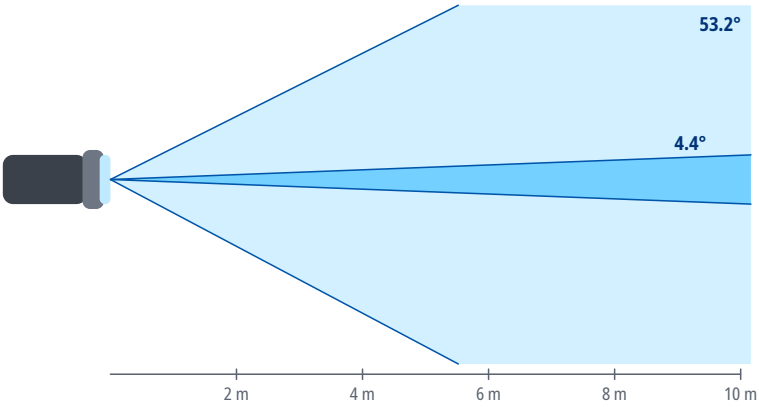
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	1,000 W
Luminous flux	11,000 lm
Color temperature	8,000 K
Color rendering index (CRI)	99
Optics	
Zoom	4.4–53.2°
Movement	
Pan	540°
Tilt	210°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45
RDM	yes (manufacturer ID 0x4350, device model ID 0x0282)
Electrical	
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	22.5 kg
Operating environment	
Operating temperature	-20 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2500–8000 K
Strobe frequency	1–16 Hz
LED frequency	746–50050 Hz

Spot diameter



Distance	Ø 4.4°	Ø 53.2°
2 m	0.15 m	2 m
4 m	0.31 m	4 m
6 m	0.46 m	6 m
8 m	0.61 m	8 m
10 m	0.77 m	10 m
15 m	1.2 m	15 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.