DMX REFERENCE

Outshine ACE Q480

MegaLite



Manufacturer	MegaLite
GDTF file	MegaLite_Outshine_ACE_Q480_167855.gdtf
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1 About this manual

This document describes the Outshine ACE Q480 by MegaLite. It was compiled from the GDTF file MegaLite_Outshine_ACE_Q480_167855.gdtf from the GDTF-Share library.

File revision: “Initial upload by GDTFservice powered by Q2Q Technologies commissioned by MegaLite”.

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 MegaLite; 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	6.8 kg
Ingress protection	IP67

DMX modes

Mode	Channels	Units in one universe	First start addresses
1 Channel Mode	1	512	1, 2, 3, 4, ...
2 Channel Mode	2	256	1, 3, 5, 7, ...
3 Channel Mode	3	170	1, 4, 7, 10, ...
4 Channel Mode	4	128	1, 5, 9, 13, ...
11 Channel Mode	11	46	1, 12, 23, 34, ...
16 Channel Mode	16	32	1, 17, 33, 49, ...
18 Channel Mode	18	28	1, 19, 37, 55, ...
24 Channel Mode RGBW x6	24	21	1, 25, 49, 73, ...
34 Channel Mode	34	15	1, 35, 69, 103, ...



Read the manual before use



Do not stare into the light

3 Safety instructions



Read the manual before use



Do not stare into the light

⚠ 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.

⚠ CAUTION

- The device is rated IP67 and may be used outdoors within the limits of this rating.
- This protection is effective only when all connectors are mated or closed with their protective caps and all seals are intact. Use cables and connectors with the same or a higher protection rating.
- Do not open the housing; opening it breaks the seals and the protection rating can no longer be guaranteed.
- Install the device so that water cannot collect around connectors and cable glands, and inspect seals and cables regularly.

⚠ 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 Product description

Description in the GDTF file

“Outshine ACE Q480 is a compact IP67-rated, high-power, pixable, strobe, wash fixture. It features twelve 40W LEDs grouped into 6 bright pixels. It creates a narrow 15deg beam ideal for long-throw applications. Its 11 DMX modes allow simplified two-channel control or full pixel control with 58 channels of RDM DMX control. The fixture's 385W power makes it ideal for production applications or as a permanent outdoor architectural fixture. Its RGBW LEDs let you create a wide range of color saturations and include 2000 K to 10000 K CCT control, 4 built-in dimmer curves, tungsten mode, and multiple strobing options.”

“Its portable, modern design and multiple mounting holes enable quick, easy installation. It features multiple filter options via a quick magnetic mounting system. Barndoor, shroud, and top hat accessories are also available to suit your design needs.”

5 Installation

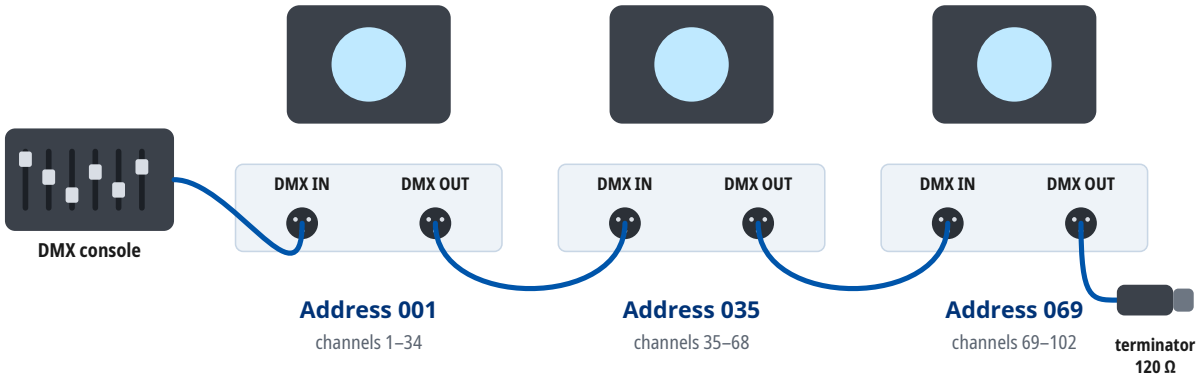
⚠ **WARNING**

- 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: 6.8 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 34 Channel Mode: every unit occupies 34 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

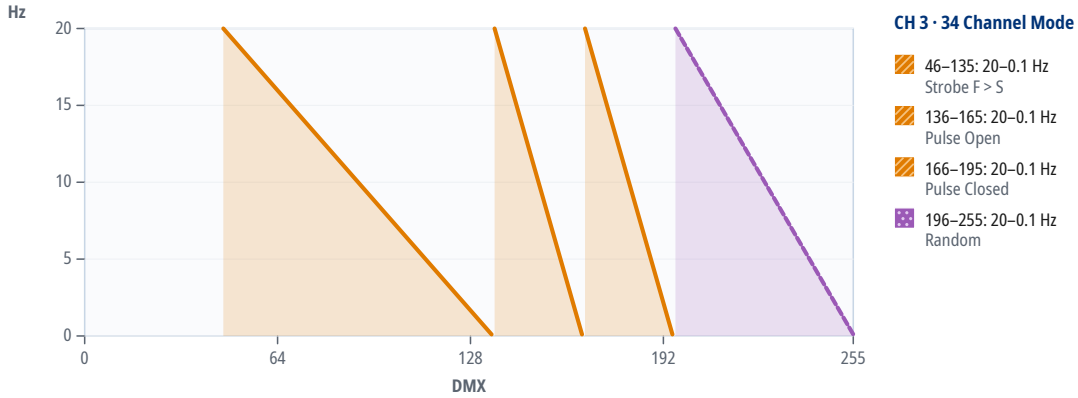
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “34 Channel Mode”: 34.
- Choose start addresses so that the channels of individual devices do not overlap and the last 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 “34 Channel Mode”, you can use, for example, the start addresses 1, 35, 69, 103.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

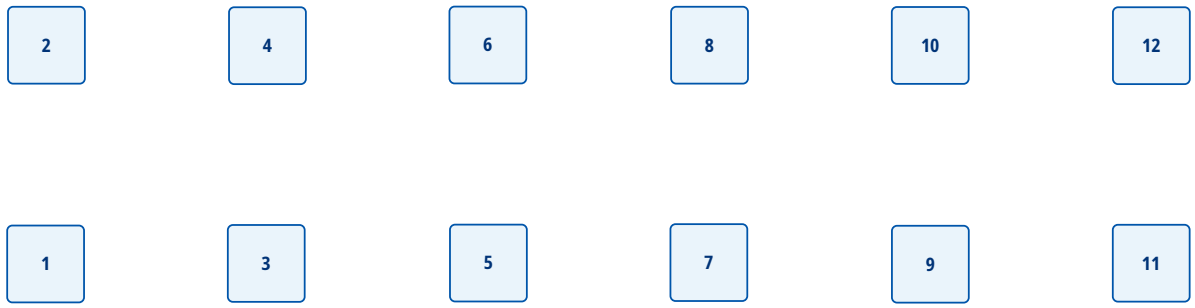
Functions in each DMX mode

	1 Channel Mode 1 channel	2 Channel Mode 2 channels	3 Channel Mode 3 channels	4 Channel Mode 4 channels	11 Channel Mode 11 channels	16 Channel Mode 16 channels	18 Channel Mode 18 channels	24 Channel Mode RGBW x6 24 channels
Dimmer	1	1	1	✓	1	1, 10–15	1, 3	✓
Dimmer resolution	8 bit	8 bit	8 bit		8 bit	16 bit	16 bit	
Shutter / strobe					2	3		
Color mixing				1–4	3–6	4–7	4× (4–10)	1–24
Color temperature			3		8		13	
Effects / macros		2	2		7, 9–11	8	12, 15–17	
Pixel control						✓		✓

Strobe rate



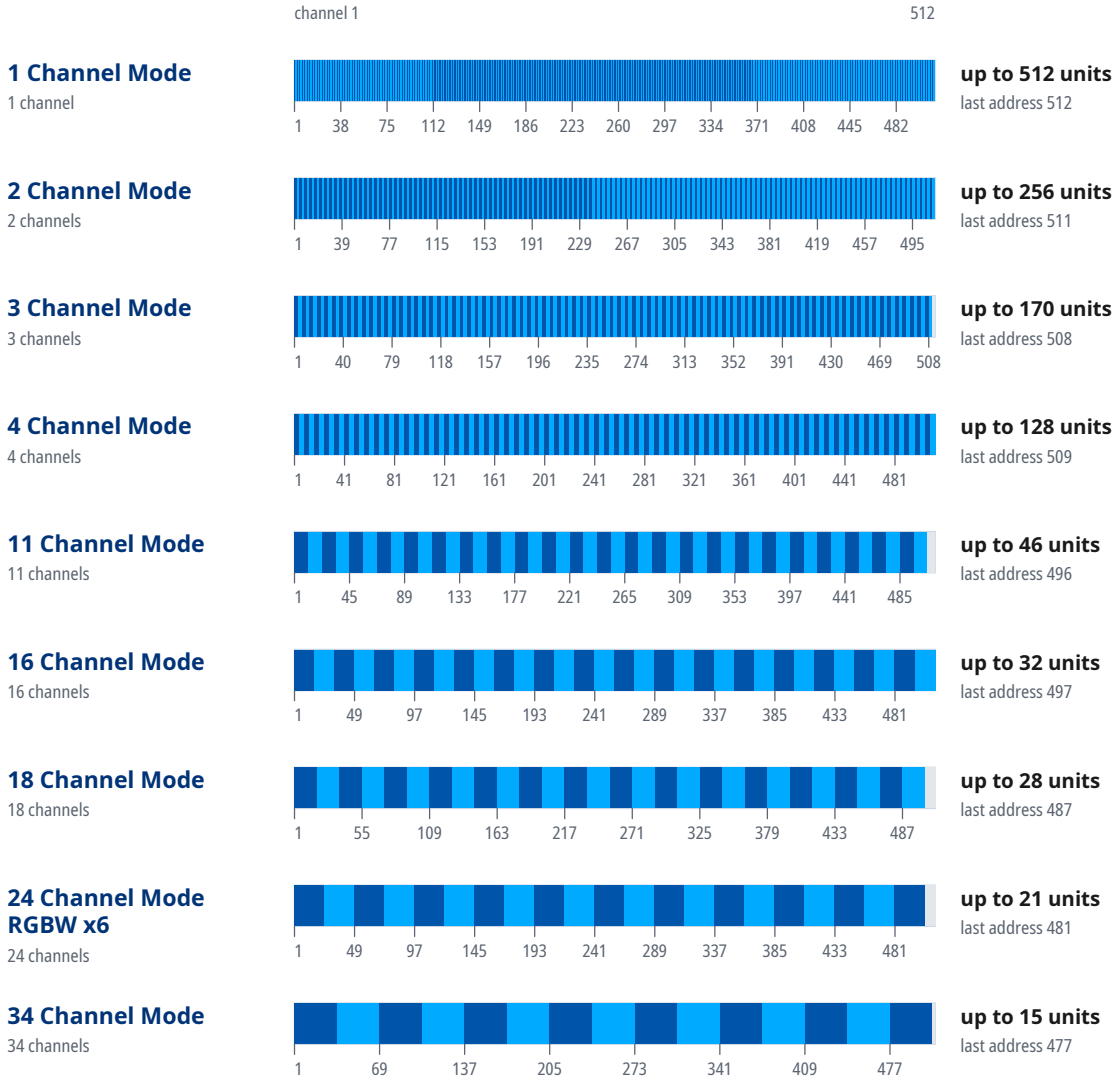
Cells (pixels)



12 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “34 Channel Mode” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “34 Channel Mode”

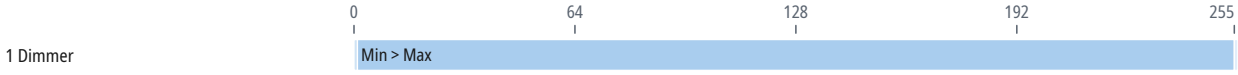
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	171	11	341	16	U2 · 1
2	35	7	205	12	375	17	U2 · 35
3	69	8	239	13	409	18	U2 · 69
4	103	9	273	14	443	19	U2 · 103
5	137	10	307	15	477	20	U2 · 137

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 1 Channel Mode

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

Channel functions at a glance

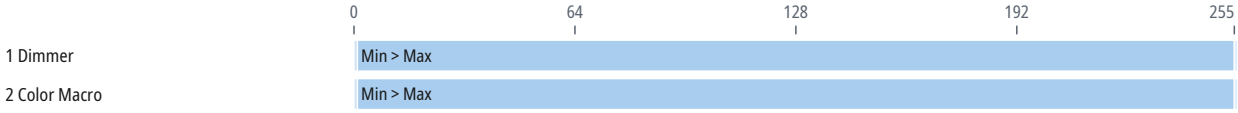


CH	Function	DMX	Description
1	Dimmer	0	Min
		1–254	Min > Max
		255	Max

Mode 2 Channel Mode

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

Channel functions at a glance

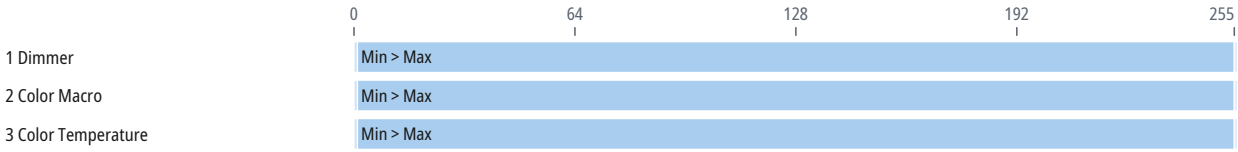


CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “1 Channel Mode” (p. 9)
2	Color Macro	0	Min
		1–254	Min > Max
		255	Max

Mode 3 Channel Mode

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

Channel functions at a glance

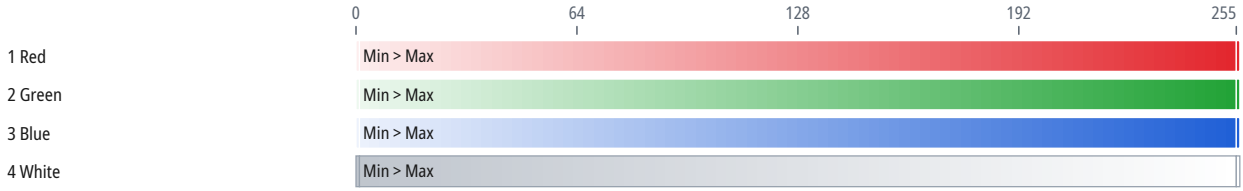


CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “1 Channel Mode” (p. 9)
2	Color Macro		Same as CH 2 in the mode “2 Channel Mode” (p. 9)
3	Color Temperature	0	Min
		1–254	Min > Max
		255	Max

Mode 4 Channel Mode

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 4 White 255.

Channel functions at a glance

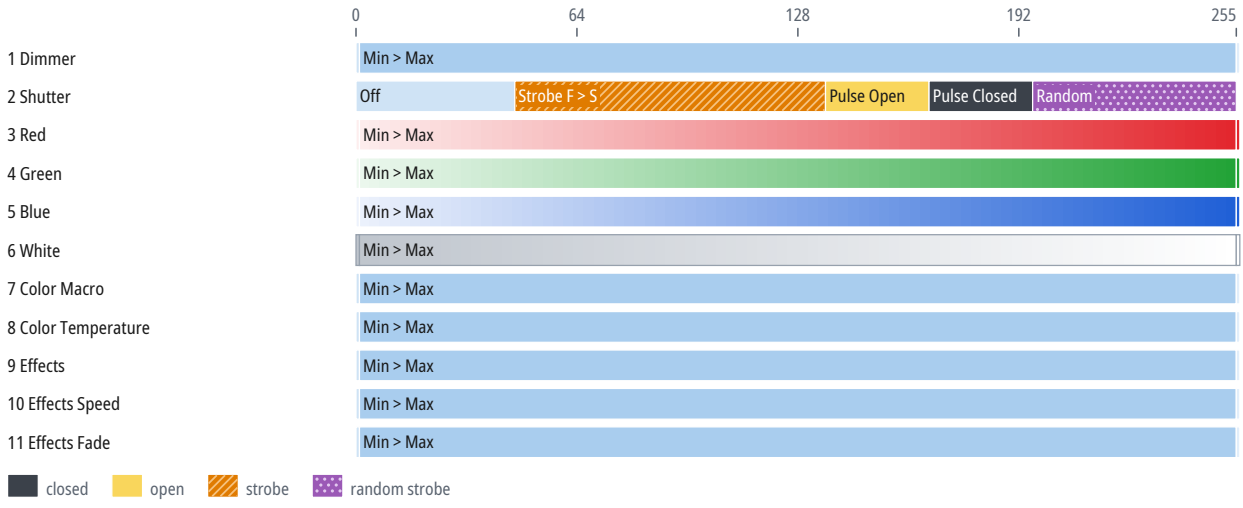


CH	Function	DMX	Description
1	Red	0	Min
		1–254	Min > Max
		255	Max
2	Green	0	Min
		1–254	Min > Max
		255	Max
3	Blue	0	Min
		1–254	Min > Max
		255	Max
4	White	0	Min
		1–254	Min > Max
		255	Max

Mode 11 Channel Mode

The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Red 255, CH 4 Green 255, CH 5 Blue 255, CH 6 White 255.

Channel functions at a glance



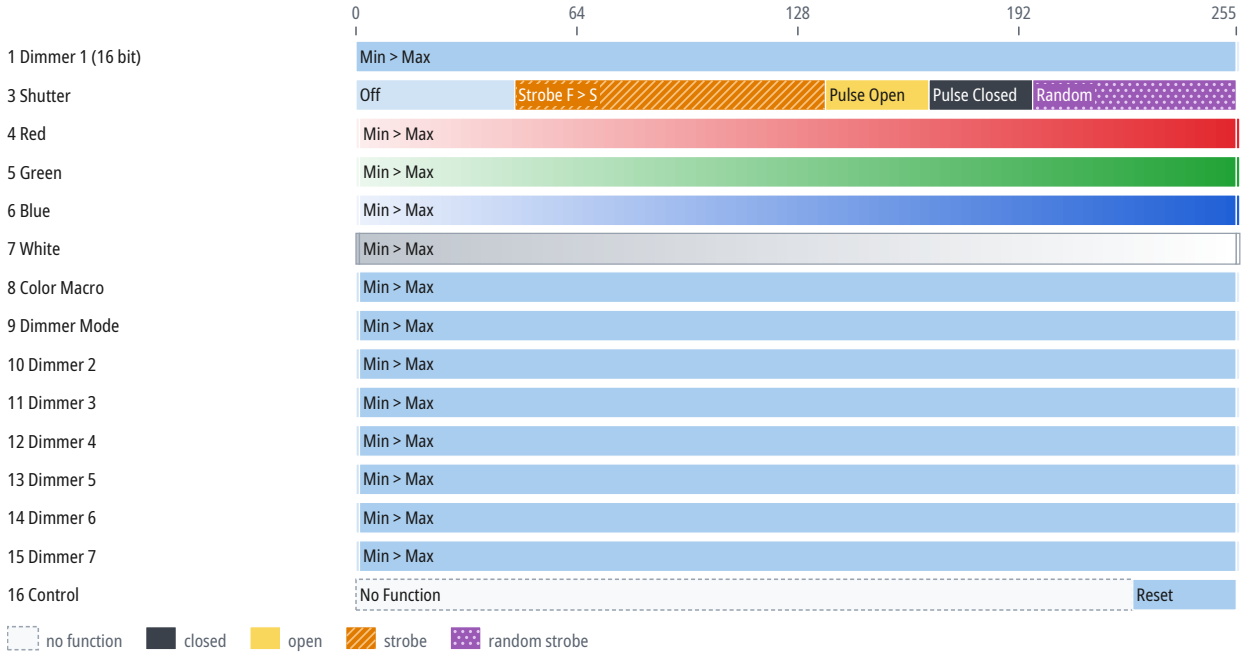
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “1 Channel Mode” (p. 9)
2	Shutter	0–45	Off
		46–135	Strobe F > S (20–0.1 Hz)
		136–165	Pulse Open (20–0.1 Hz)
		166–195	Pulse Closed (20–0.1 Hz)
		196–255	Random (20–0.1 Hz)
3	Red		Same as CH 1 in the mode “4 Channel Mode” (p. 10)
4	Green		Same as CH 2 in the mode “4 Channel Mode” (p. 10)
5	Blue		Same as CH 3 in the mode “4 Channel Mode” (p. 10)
6	White		Same as CH 4 in the mode “4 Channel Mode” (p. 10)
7	Color Macro		Same as CH 2 in the mode “2 Channel Mode” (p. 9)
8	Color Temperature		Same as CH 3 in the mode “3 Channel Mode” (p. 9)
9	Effects	0	Min
		1–254	Min > Max
		255	Max
10	Effects Speed		MACROS SPEED
		0	Min
		1–254	Min > Max
		255	Max
11	Effects Fade	0	Min
		1–254	Min > Max
		255	Max

Mode 16 Channel Mode

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 1 255, CH 4 Red 255, CH 5 Green 255, CH 6 Blue 255, CH 7 White 255, CH 10 Dimmer 2 255, CH 11 Dimmer 3 255, CH 12 Dimmer 4 255, CH 13 Dimmer 5 255, CH 14 Dimmer 6 255, CH 15 Dimmer 7 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0	Min
		0–255	Min > Max
		255	Max
2	Dimmer 1 Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 2 in the mode “11 Channel Mode” (p. 11)
4	Red		Same as CH 1 in the mode “4 Channel Mode” (p. 10)
5	Green		Same as CH 2 in the mode “4 Channel Mode” (p. 10)
6	Blue		Same as CH 3 in the mode “4 Channel Mode” (p. 10)
7	White		Same as CH 4 in the mode “4 Channel Mode” (p. 10)
8	Color Macro		Same as CH 2 in the mode “2 Channel Mode” (p. 9)
9	Dimmer Mode		DIMMER RESPONSE
		0	Min
		1–254	Min > Max
		255	Max
10	Dimmer 2		LED SEGMENT DIMMER
		0	Min
		1–254	Min > Max
		255	Max
11	Dimmer 3		LED SEGMENT DIMMER

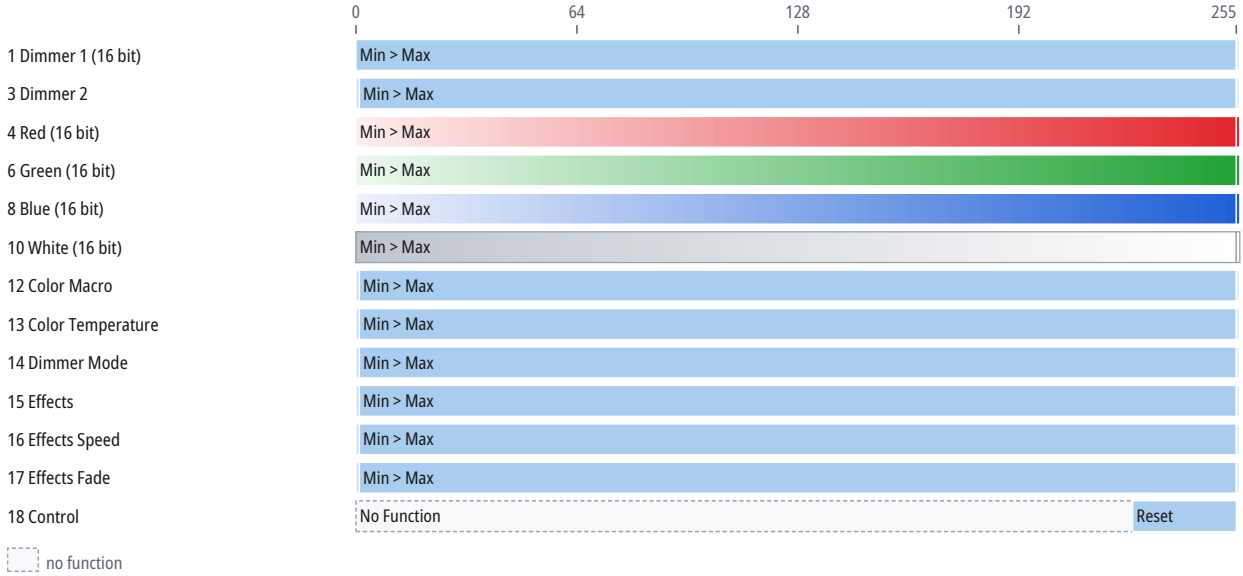
CH	Function	DMX	Description
11	Dimmer 3 (continued)	0	Min
		1–254	Min > Max
		255	Max
12	Dimmer 4		LED SEGMENT DIMMER
		0	Min
		1–254	Min > Max
		255	Max
13	Dimmer 5		LED SEGMENT DIMMER
		0	Min
		1–254	Min > Max
		255	Max
14	Dimmer 6		LED SEGMENT DIMMER
		0	Min
		1–254	Min > Max
		255	Max
15	Dimmer 7		LED SEGMENT DIMMER
		0	Min
		1–254	Min > Max
		255	Max
16	Control	0–224	No Function
		225–255	Reset

Mode 18 Channel Mode

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 1 255, CH 3 Dimmer 2 255, CH 4 Red 255, CH 6 Green 255, CH 8 Blue 255.

Channel functions at a glance

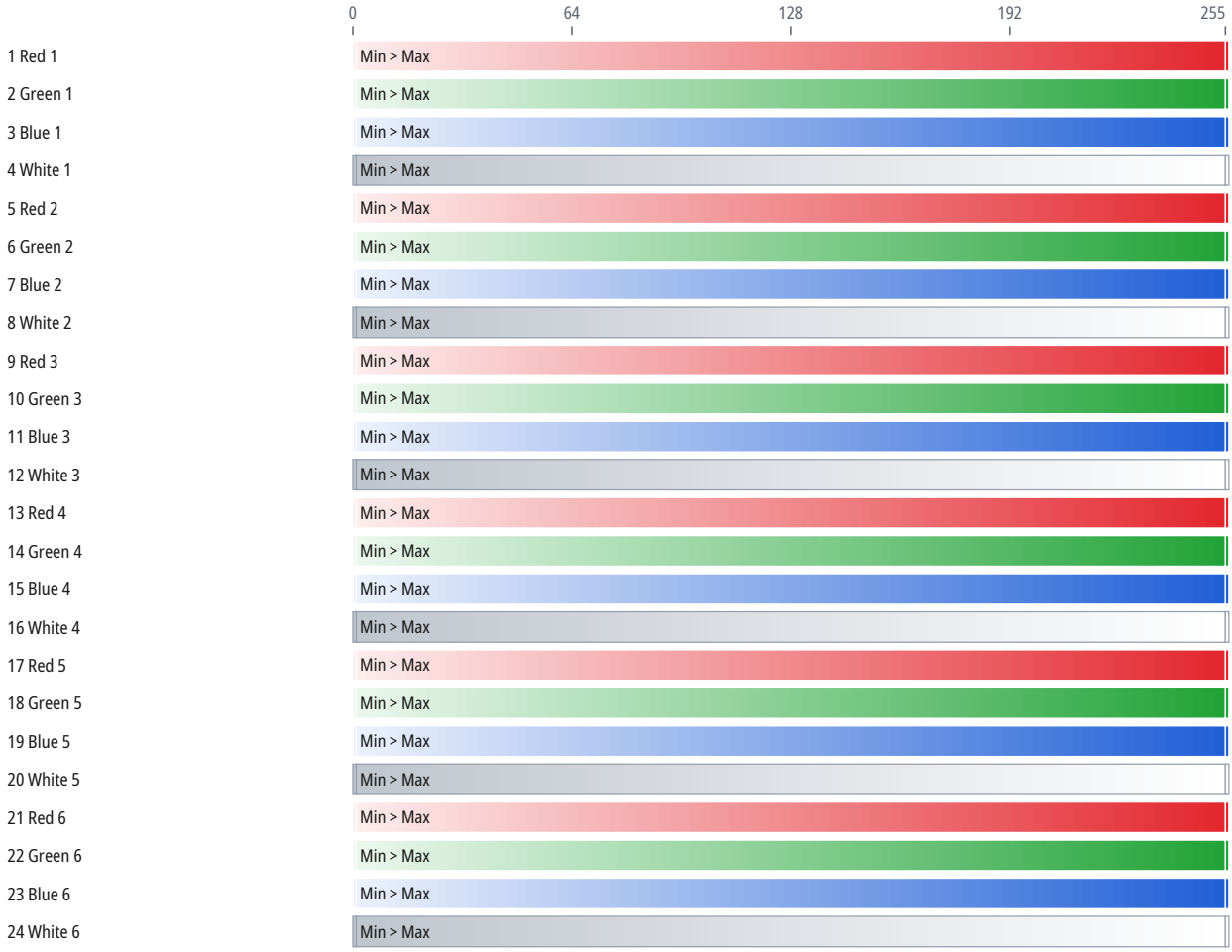


CH	Function	DMX	Description
1	Dimmer 1		Same as CH 1 in the mode “16 Channel Mode” (p. 12)
2	Dimmer 1 Fine	0–255	Fine adjustment of CH 1
3	Dimmer 2		HALOGEN DIMMER
		0	Min
		1–254	Min > Max
		255	Max
4	Red	0	Min
		0–255	Min > Max
		255	Max
5	Red Fine	0–255	Fine adjustment of CH 4
6	Green	0	Min
		0–255	Min > Max
		255	Max
7	Green Fine	0–255	Fine adjustment of CH 6
8	Blue	0	Min
		0–255	Min > Max
		255	Max
9	Blue Fine	0–255	Fine adjustment of CH 8
10	White	0	Min
		0–255	Min > Max
		255	Max
11	White Fine	0–255	Fine adjustment of CH 10
12	Color Macro		Same as CH 2 in the mode “2 Channel Mode” (p. 9)
13	Color Temperature		Same as CH 3 in the mode “3 Channel Mode” (p. 9)
14	Dimmer Mode		Same as CH 9 in the mode “16 Channel Mode” (p. 12)
15	Effects		Same as CH 9 in the mode “11 Channel Mode” (p. 11)
16	Effects Speed		Same as CH 10 in the mode “11 Channel Mode” (p. 11)
17	Effects Fade		Same as CH 11 in the mode “11 Channel Mode” (p. 11)
18	Control		Same as CH 16 in the mode “16 Channel Mode” (p. 13)

Mode 24 Channel Mode RGBW x6

The GDTF file gives these values for a console's Highlight function: CH 1 Red 1 255, CH 2 Green 1 255, CH 3 Blue 1 255, CH 4 White 1 255, CH 5 Red 2 255, CH 6 Green 2 255, CH 7 Blue 2 255, CH 8 White 2 255, CH 9 Red 3 255, CH 10 Green 3 255, CH 11 Blue 3 255, CH 12 White 3 255, CH 13 Red 4 255, CH 14 Green 4 255, CH 15 Blue 4 255, CH 16 White 4 255, CH 17 Red 5 255, CH 18 Green 5 255, CH 19 Blue 5 255, CH 20 White 5 255, CH 21 Red 6 255, CH 22 Green 6 255, CH 23 Blue 6 255, CH 24 White 6 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0	Min
		1–254	Min > Max
		255	Max
2	Green 1	0	Min
		1–254	Min > Max
		255	Max
3	Blue 1	0	Min
		1–254	Min > Max
		255	Max
4	White 1	0	Min

CH	Function	DMX	Description
4	White 1 (continued)	1–254	Min > Max
		255	Max
5	Red 2	0	Min
		1–254	Min > Max
		255	Max
6	Green 2	0	Min
		1–254	Min > Max
		255	Max
7	Blue 2	0	Min
		1–254	Min > Max
		255	Max
8	White 2	0	Min
		1–254	Min > Max
		255	Max
9	Red 3	0	Min
		1–254	Min > Max
		255	Max
10	Green 3	0	Min
		1–254	Min > Max
		255	Max
11	Blue 3	0	Min
		1–254	Min > Max
		255	Max
12	White 3	0	Min
		1–254	Min > Max
		255	Max
13	Red 4	0	Min
		1–254	Min > Max
		255	Max
14	Green 4	0	Min
		1–254	Min > Max
		255	Max
15	Blue 4	0	Min
		1–254	Min > Max
		255	Max
16	White 4	0	Min
		1–254	Min > Max
		255	Max
17	Red 5	0	Min
		1–254	Min > Max
		255	Max

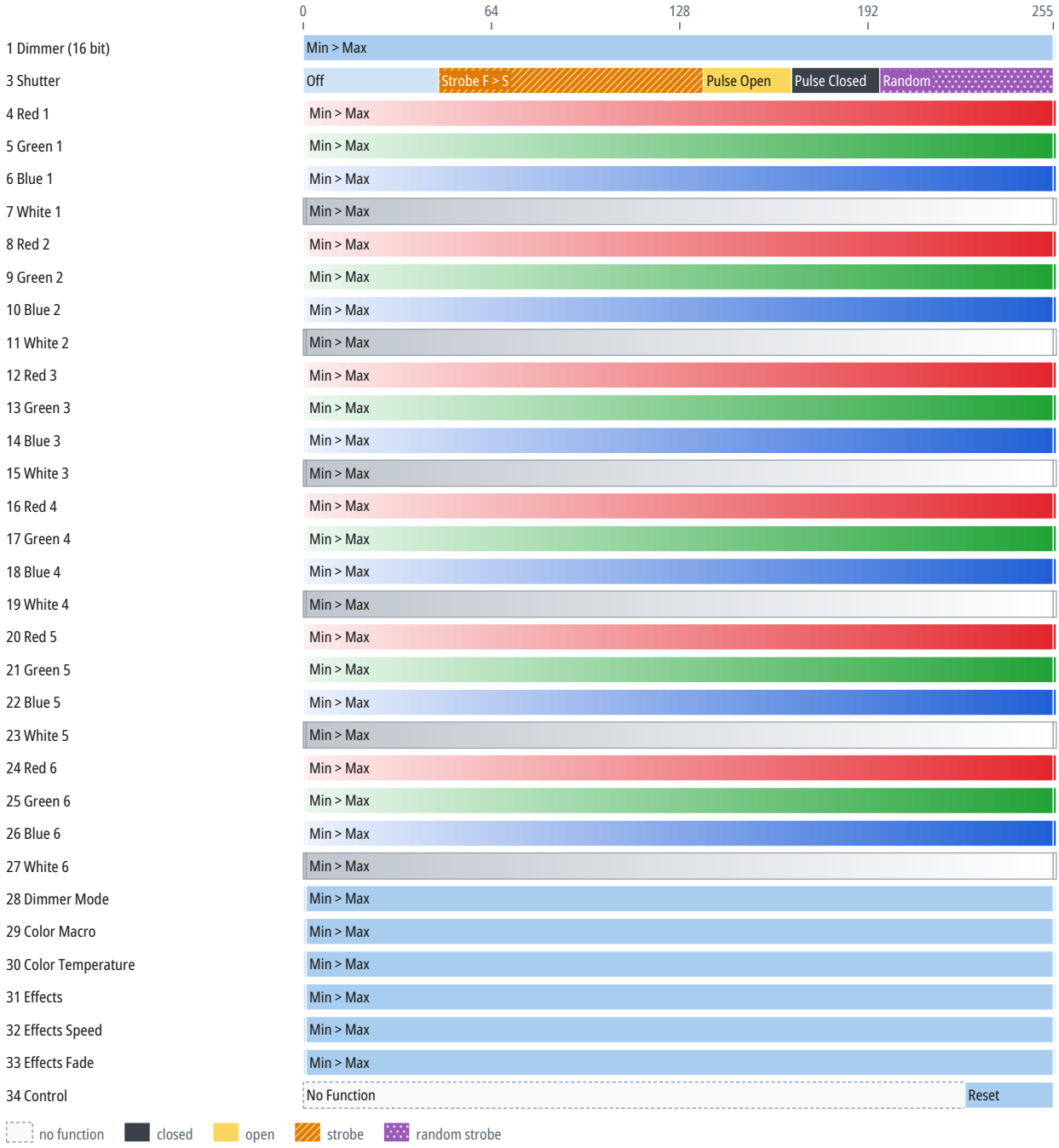
CH	Function	DMX	Description
18	Green 5	0	Min
		1–254	Min > Max
		255	Max
19	Blue 5	0	Min
		1–254	Min > Max
		255	Max
20	White 5	0	Min
		1–254	Min > Max
		255	Max
21	Red 6	0	Min
		1–254	Min > Max
		255	Max
22	Green 6	0	Min
		1–254	Min > Max
		255	Max
23	Blue 6	0	Min
		1–254	Min > Max
		255	Max
24	White 6	0	Min
		1–254	Min > Max
		255	Max

Mode 34 Channel Mode

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, CH 4 Red 1 255, CH 5 Green 1 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0	Min
		0–255	Min > Max
		255	Max
2	Dimmer Fine	0–255	Fine adjustment of CH 1

CH	Function	DMX	Description
3	Shutter		Same as CH 2 in the mode “11 Channel Mode” (p. 11)
4	Red 1		Same as CH 1 in the mode “24 Channel Mode RGBW x6” (p. 15)
5	Green 1		Same as CH 2 in the mode “24 Channel Mode RGBW x6” (p. 15)
6	Blue 1		Same as CH 3 in the mode “24 Channel Mode RGBW x6” (p. 15)
7	White 1		Same as CH 4 in the mode “24 Channel Mode RGBW x6” (p. 15)
8	Red 2		Same as CH 5 in the mode “24 Channel Mode RGBW x6” (p. 16)
9	Green 2		Same as CH 6 in the mode “24 Channel Mode RGBW x6” (p. 16)
10	Blue 2		Same as CH 7 in the mode “24 Channel Mode RGBW x6” (p. 16)
11	White 2		Same as CH 8 in the mode “24 Channel Mode RGBW x6” (p. 16)
12	Red 3		Same as CH 9 in the mode “24 Channel Mode RGBW x6” (p. 16)
13	Green 3		Same as CH 10 in the mode “24 Channel Mode RGBW x6” (p. 16)
14	Blue 3		Same as CH 11 in the mode “24 Channel Mode RGBW x6” (p. 16)
15	White 3		Same as CH 12 in the mode “24 Channel Mode RGBW x6” (p. 16)
16	Red 4		Same as CH 13 in the mode “24 Channel Mode RGBW x6” (p. 16)
17	Green 4		Same as CH 14 in the mode “24 Channel Mode RGBW x6” (p. 16)
18	Blue 4		Same as CH 15 in the mode “24 Channel Mode RGBW x6” (p. 16)
19	White 4		Same as CH 16 in the mode “24 Channel Mode RGBW x6” (p. 16)
20	Red 5		Same as CH 17 in the mode “24 Channel Mode RGBW x6” (p. 16)
21	Green 5		Same as CH 18 in the mode “24 Channel Mode RGBW x6” (p. 17)
22	Blue 5		Same as CH 19 in the mode “24 Channel Mode RGBW x6” (p. 17)
23	White 5		Same as CH 20 in the mode “24 Channel Mode RGBW x6” (p. 17)
24	Red 6		Same as CH 21 in the mode “24 Channel Mode RGBW x6” (p. 17)
25	Green 6		Same as CH 22 in the mode “24 Channel Mode RGBW x6” (p. 17)
26	Blue 6		Same as CH 23 in the mode “24 Channel Mode RGBW x6” (p. 17)

CH	Function	DMX	Description
27	White 6		Same as CH 24 in the mode “24 Channel Mode RGBW x6” (p. 17)
28	Dimmer Mode		Same as CH 9 in the mode “16 Channel Mode” (p. 12)
29	Color Macro		Same as CH 2 in the mode “2 Channel Mode” (p. 9)
30	Color Temperature		Same as CH 3 in the mode “3 Channel Mode” (p. 9)
31	Effects		Same as CH 9 in the mode “11 Channel Mode” (p. 11)
32	Effects Speed		Same as CH 10 in the mode “11 Channel Mode” (p. 11)
33	Effects Fade		Same as CH 11 in the mode “11 Channel Mode” (p. 11)
34	Control		Same as CH 16 in the mode “16 Channel Mode” (p. 13)

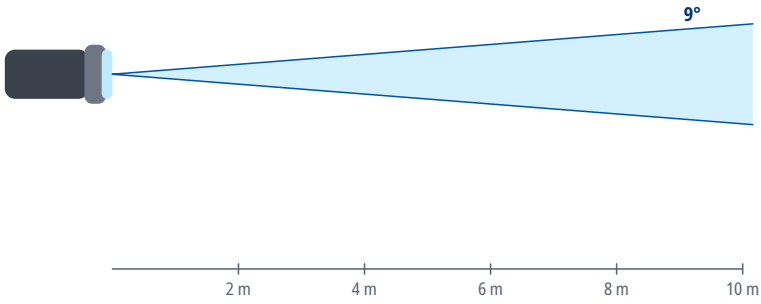
10 Technical specifications

Parameter	Value
Light source	LED
Weight	6.8 kg
Ingress protection	IP67
Meaning of the IP code (IEC 60529)	Dust-tight; protected against the effects of temporary immersion in water (up to 1 m)
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2000–10000 K
Strobe frequency	0.1–20 Hz

Spot diameter



Distance	Ø 9°
2 m	0.31 m
4 m	0.63 m
6 m	0.94 m
8 m	1.3 m
10 m	1.6 m
15 m	2.4 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.

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.