DMX REFERENCE

Ovation E-910FC

Chauvet Professional



Manufacturer	Chauvet Professional
GDTF file	Chauvet_Professional_Ovation_E-910FC_124752.gdtf
GDTF revision	Ovation E-910FC · 2026-01-14
Generated	2026-11-23

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1 About this manual

This document describes the Ovation E-910FC by Chauvet Professional. It was compiled from the GDTF file Chauvet_Professional_Ovation_E-910FC_124752.gdtf from the GDTF-Share library.

File revision: “Ovation E-910FC”.

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 Chauvet Professional; 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	9 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
1Ch	1	512	1, 2, 3, 4, ...
3Ch Mode	3	170	1, 4, 7, 10, ...
5Ch Mode	5	102	1, 6, 11, 16, ...
7Ch Mode	7	73	1, 8, 15, 22, ...
10Ch Mode	10	51	1, 11, 21, 31, ...
12Ch Mode	12	42	1, 13, 25, 37, ...
13Ch Mode	13	39	1, 14, 27, 40, ...
16Ch Mode	16	32	1, 17, 33, 49, ...
HSV	3	170	1, 4, 7, 10, ...



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.

4 Product description

Description in the GDTF file

“Ovation E-910FC is fully featured color mixing ERS-style fixture. It features full RGBA-Lime color mixing with output rivaling an incandescent fixture. Sacrifice nothing when it comes to control options with modes providing full 16-bit dimming (per color and master), selectable PWM, RDM and on-board

dimming curve selection. Also accessible is our Virtual Color Wheel which matches popular gel colors when projected by a tungsten source, in addition we have added color temperature presets from 2800 to 6500 K that match a tungsten source to perfection."

5 Installation

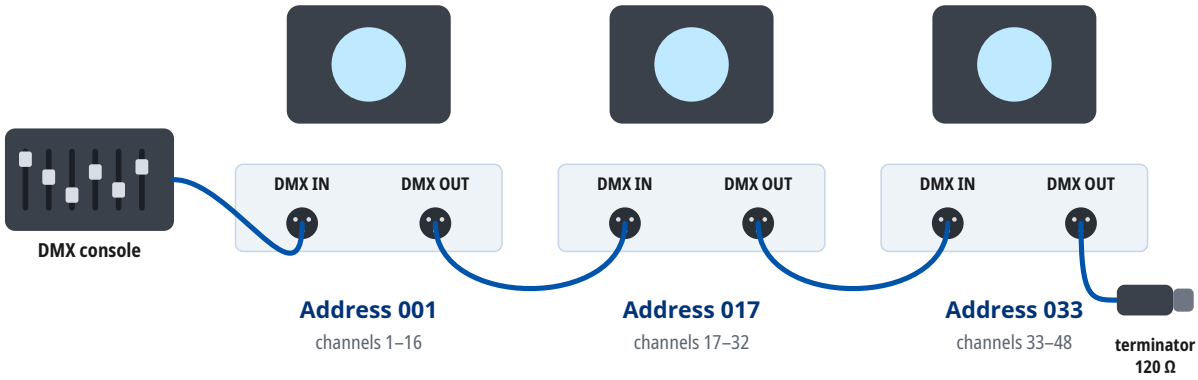
⚠ **WARNING**

- 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: 9 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 16Ch Mode: every unit occupies 16 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 “16Ch Mode”: 16.
- 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 “16Ch Mode”, you can use, for example, the start addresses 1, 17, 33, 49.
- 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

	1Ch 1 channel	3Ch Mode 3 channels	5Ch Mode 5 channels	7Ch Mode 7 channels	10Ch Mode 10 channels	12Ch Mode 12 channels	13Ch Mode 13 channels	16Ch Mode 16 channels
Dimmer	1	1		1	1	1	1	1
Dimmer resolution	8 bit	8 bit		8 bit	16 bit	8 bit	16 bit	16 bit
Shutter / strobe				7	8	7	13	13
Color mixing			1–5	2–6	3–7	2–6	5× (3–11)	5× (3–11)
Color temperature		3			10	9		15
Color wheel		2			9	8		14
Effects / macros						10–12		16

Color wheel

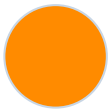
1
Medium Yellow - Color
DMX 6–13

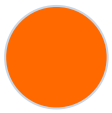
2
Light Yellow - Color
DMX 14–21

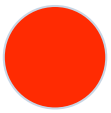
3 
Amber Yellow - Color
DMX 22–28

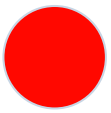
4
Very Light Amber - Color
DMX 29–35

5
Light Amber - Color
DMX 36–43

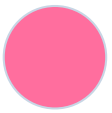
6 
Medium Amber - Color
DMX 44–51

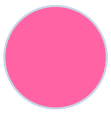
7 
Dark Amber - Color
DMX 52–59

8 
Light Red - Color
DMX 60–67

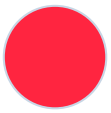
9 
Medium Red - Color
DMX 68–75

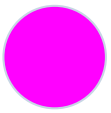
10
No Color Pink - Color
DMX 76–83

11 
Medium Pink - Color
DMX 84–91

12 
Dark Pink - Color
DMX 92–99

13 
Medium Red Amber - Color
DMX 100–107

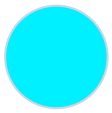
14 
Dark Red Amber - Color
DMX 108–115

15 
Magenta - Color
DMX 116–121

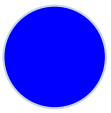
16 
Dark Magenta - Color
DMX 122–130

17
Light Lavender - Color
DMX 131–138

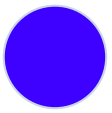
18 
Light Blue - Color
DMX 139–146

19 
Very Light Blue - Color
DMX 147–154

20 
Light Blue 2 - Color
DMX 155–162

21 
Blue - Color
DMX 163–170

22 
Medium Blue - Color
DMX 171–178

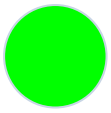
23 
Dark Blue - Color
DMX 179–186

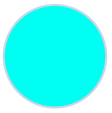
24 
Indigo - Color
DMX 187–194

25 
Very Dark Blue - Color
DMX 195–202

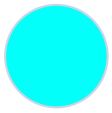
26 
Very Dark Blue 2 - Color
DMX 203–210

27
Yellow Green - Color
DMX 211–218

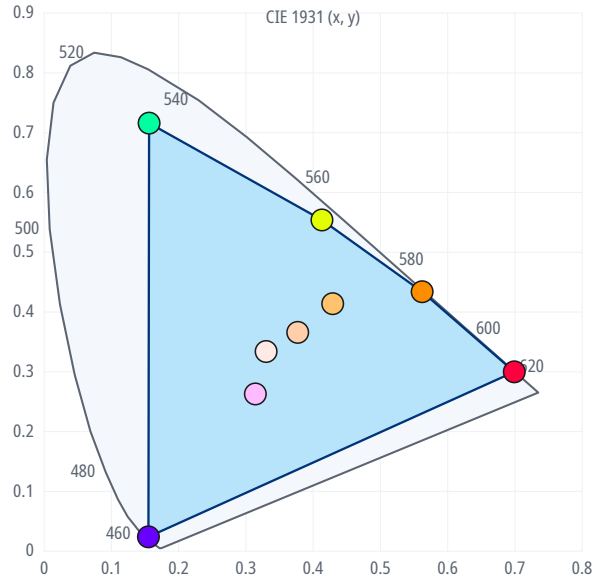
28 
Green - Color
DMX 219–226

29 
Turquoise - Color
DMX 227–234

30
Aqua - Color
DMX 235–242

31 
Blue Green
DMX 243–251

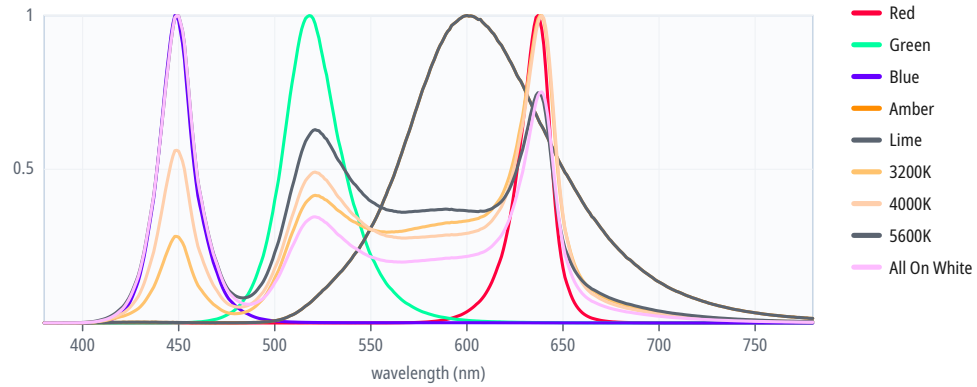
LED colors and the colors they mix



LED	x	y	nm
Red	0.699	0.300	625
Green	0.156	0.716	525
Blue	0.155	0.024	453
Amber	0.562	0.434	588
Lime	0.413	0.554	567
3200K	0.429	0.414	
4000K	0.377	0.366	
5600K	0.330	0.334	
All On White	0.314	0.263	

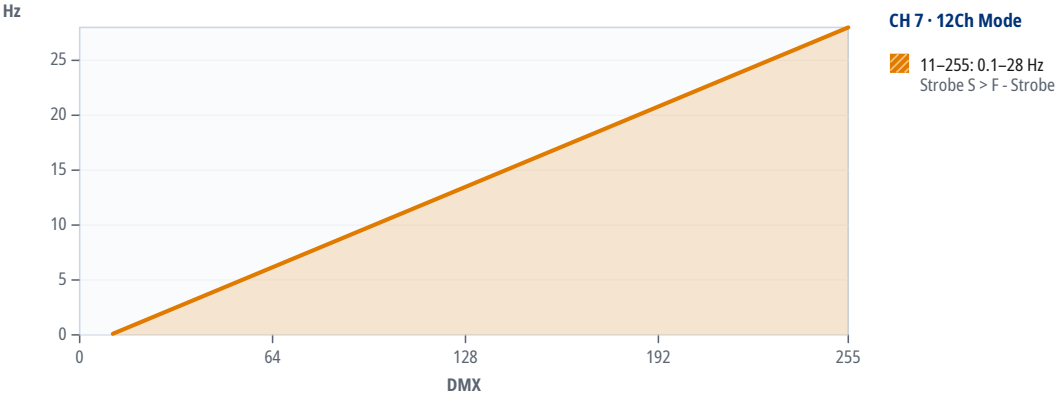
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources



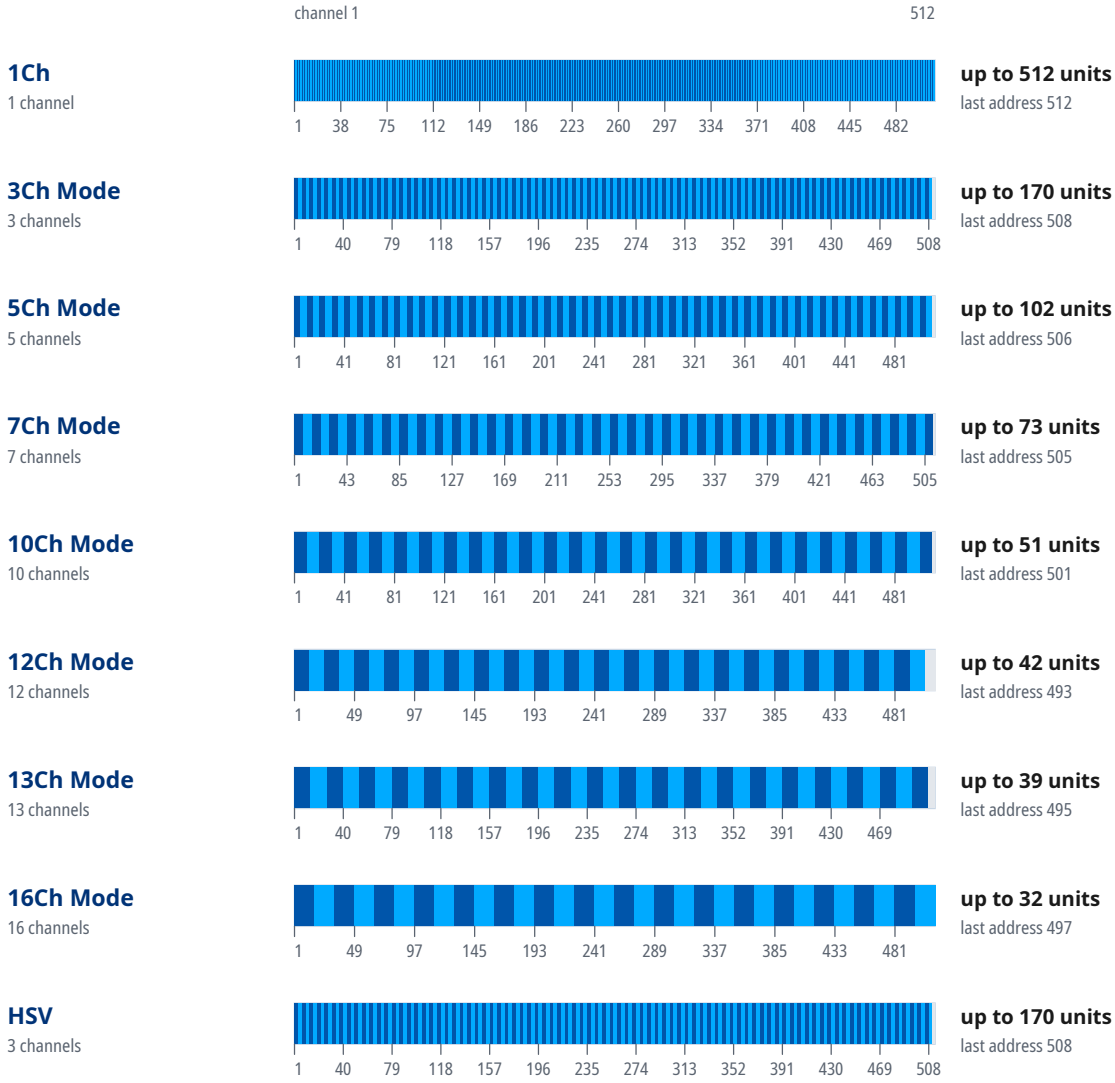
Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “16Ch Mode”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	81	11	161	16	241
2	17	7	97	12	177	17	257
3	33	8	113	13	193	18	273
4	49	9	129	14	209	19	289
5	65	10	145	15	225	20	305

RDM personalities

Mode	Channels	RDM personality
1Ch	1	1
3Ch Mode	3	2
5Ch Mode	5	3
7Ch Mode	7	4

Mode	Channels	RDM personality
10Ch Mode	10	5
12Ch Mode	12	6
13Ch Mode	13	7
16Ch Mode	16	8
HSV	3	9

Mode 1Ch

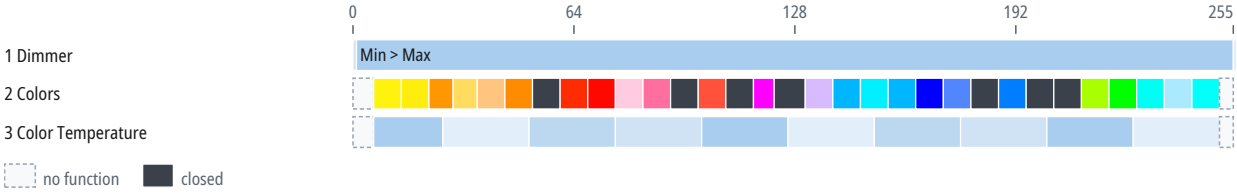
Channel functions at a glance



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

Mode 3Ch Mode

Channel functions at a glance

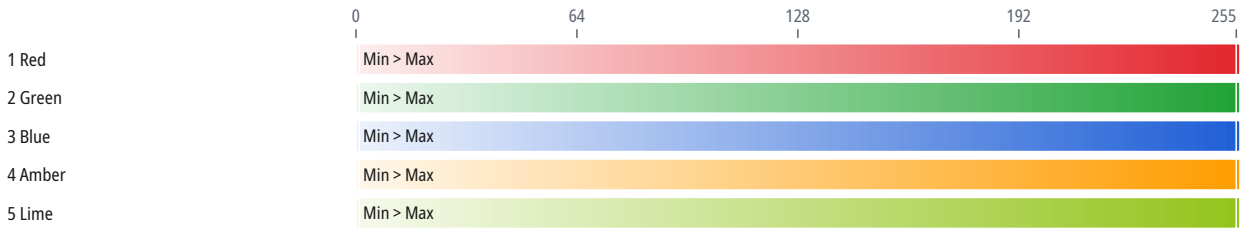


CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “1Ch” (p. 10)
2	Colors	0–5	VIRTUAL COLOR WHEEL: No Func - Custom
		6–13	Medium Yellow - Color
		14–21	Light Yellow - Color
		22–28	Amber Yellow - Color
		29–35	Very Light Amber - Color
		36–43	Light Amber - Color
		44–51	Medium Amber - Color
		52–59	Dark Amber - Color
		60–67	Light Red - Color
		68–75	Medium Red - Color
		76–83	No Color Pink - Color
		84–91	Medium Pink - Color
		92–99	Dark Pink - Color
		100–107	Medium Red Amber - Color
		108–115	Dark Red Amber - Color
		116–121	Magenta - Color

CH	Function	DMX	Description
2	Colors (continued)	122–130	Dark Magenta - Color
		131–138	Light Lavender - Color
		139–146	Light Blue - Color
		147–154	Very Light Blue - Color
		155–162	Light Blue 2 - Color
		163–170	Blue - Color
		171–178	Medium Blue - Color
		179–186	Dark Blue - Color
		187–194	Indigo - Color
		195–202	Very Dark Blue - Color
		203–210	Very Dark Blue 2 - Color
		211–218	Yellow Green - Color
		219–226	Green - Color
		227–234	Turquoise - Color
		235–242	Aqua - Color
		243–250	Blue Green - Color
		251–255	VIRTUAL COLOR WHEEL: No Func - Custom
3	Color Temperature	0–5	No Func - Custom
		6–25	2800K - CTC
		26–50	3000K - CTC
		51–75	3200K - CTC
		76–100	3500K - CTC
		101–125	4000K - CTC
		126–150	4500K - CTC
		151–175	5000K - CTC
		176–200	5600K - CTC
		201–225	6000K - CTC
		226–250	6500K - CTC
		251–255	No Function - Custom

Mode 5Ch Mode

Channel functions at a glance

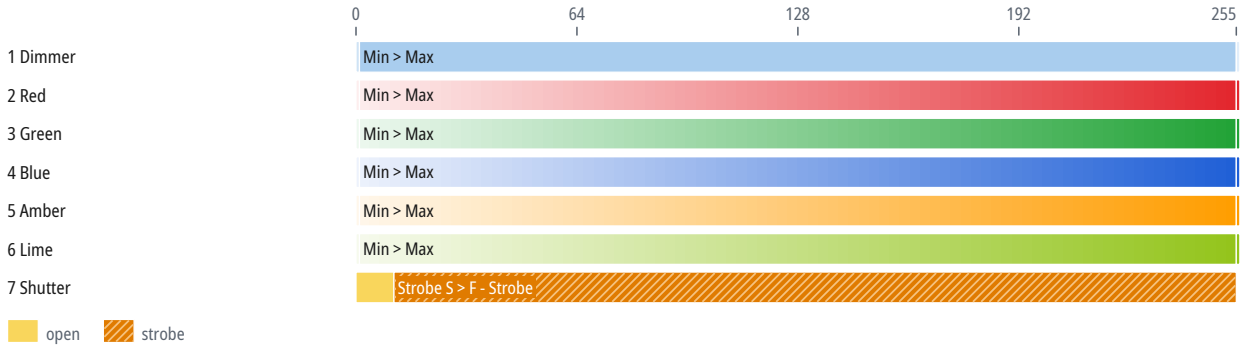


CH	Function	DMX	Description
1	Red	0	Min
		1–254	Min > Max
		255	Max
2	Green	0	Min
		1–254	Min > Max
		255	Max
3	Blue	0	Min
		1–254	Min > Max
		255	Max
4	Amber	0	Min
		1–254	Min > Max
		255	Max
5	Lime	0	Min
		1–254	Min > Max
		255	Max

Mode 7Ch Mode

If the device receives DMX in this mode but gives no light, check these channels: CH 7 Shutter at 0–10.

Channel functions at a glance



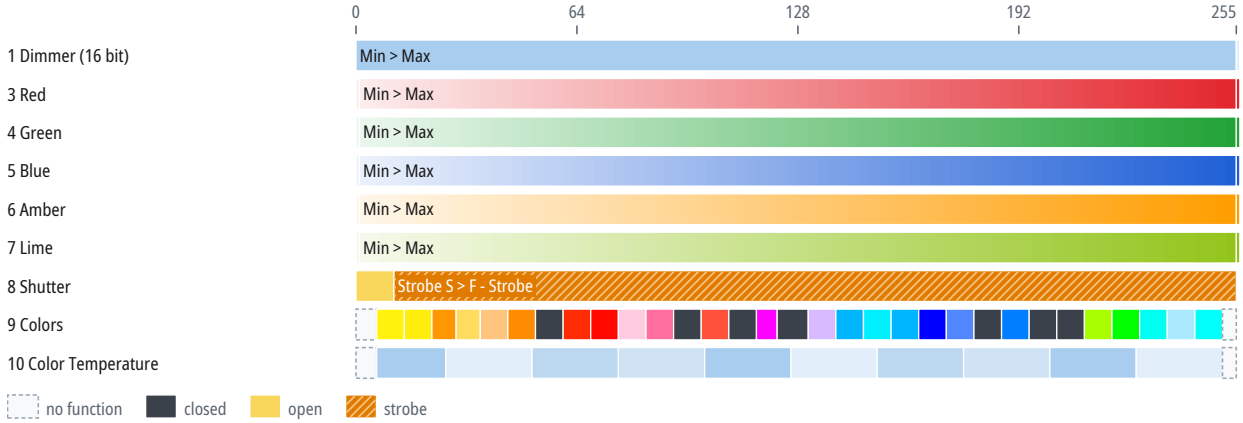
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “1Ch” (p. 10)
2	Red		Same as CH 1 in the mode “5Ch Mode” (p. 12)
3	Green		Same as CH 2 in the mode “5Ch Mode” (p. 12)
4	Blue		Same as CH 3 in the mode “5Ch Mode” (p. 12)
5	Amber		Same as CH 4 in the mode “5Ch Mode” (p. 12)
6	Lime		Same as CH 5 in the mode “5Ch Mode” (p. 12)
7	Shutter	0–10	Open - Shutter Open
		11–255	Strobe S > F - Strobe (0.1–28 Hz)

Mode 10Ch Mode

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

If the device receives DMX in this mode but gives no light, check these channels: CH 8 Shutter at 0–10. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance

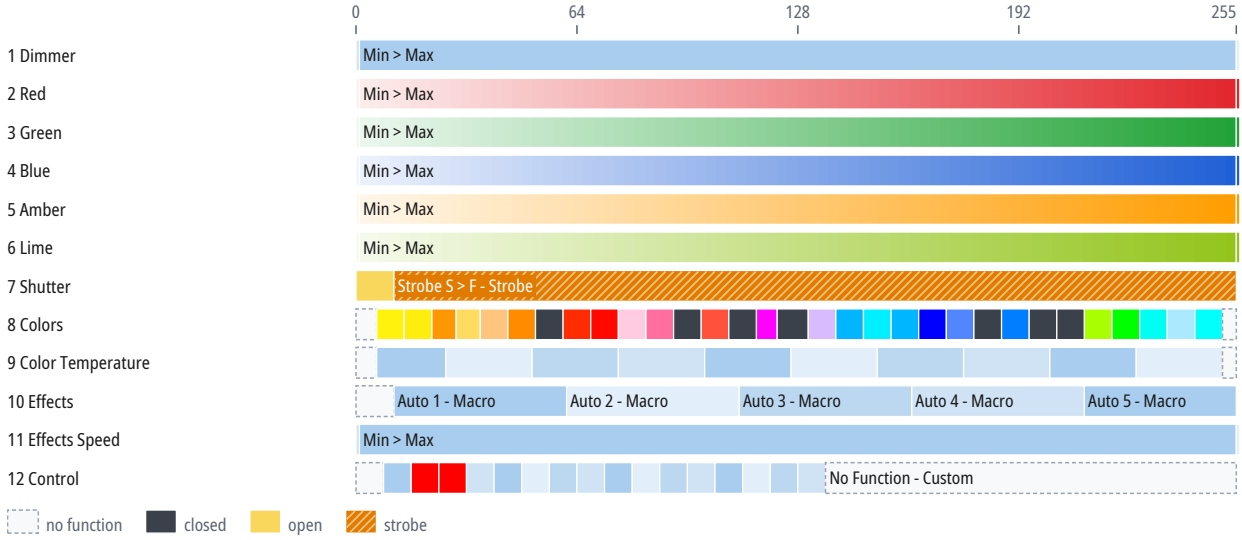


CH	Function	DMX	Description
1	Dimmer	0	Min
		0–255	Min > Max
		255	Max
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Red		Same as CH 1 in the mode “5Ch Mode” (p. 12)
4	Green		Same as CH 2 in the mode “5Ch Mode” (p. 12)
5	Blue		Same as CH 3 in the mode “5Ch Mode” (p. 12)
6	Amber		Same as CH 4 in the mode “5Ch Mode” (p. 12)
7	Lime		Same as CH 5 in the mode “5Ch Mode” (p. 12)
8	Shutter		Same as CH 7 in the mode “7Ch Mode” (p. 12)
9	Colors		Same as CH 2 in the mode “3Ch Mode” (p. 10)
10	Color Temperature		Same as CH 3 in the mode “3Ch Mode” (p. 11)

Mode 12Ch Mode

If the device receives DMX in this mode but gives no light, check these channels: CH 7 Shutter at 0–10.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “1Ch” (p. 10)
2	Red		Same as CH 1 in the mode “5Ch Mode” (p. 12)
3	Green		Same as CH 2 in the mode “5Ch Mode” (p. 12)
4	Blue		Same as CH 3 in the mode “5Ch Mode” (p. 12)
5	Amber		Same as CH 4 in the mode “5Ch Mode” (p. 12)
6	Lime		Same as CH 5 in the mode “5Ch Mode” (p. 12)
7	Shutter		Same as CH 7 in the mode “7Ch Mode” (p. 12)
8	Colors		Same as CH 2 in the mode “3Ch Mode” (p. 10)
9	Color Temperature		Same as CH 3 in the mode “3Ch Mode” (p. 11)
10	Effects	0–10	No Func - Custom
		11–60	Auto 1 - Macro
		61–110	Auto 2 - Macro
		111–160	Auto 3 - Macro
		161–210	Auto 4 - Macro
		211–255	Auto 5 - Macro
11	Effects Speed		AUTO SPEED
		0	Min
		1–254	Min > Max
		255	Max
12	Control	0–7	No Func - Custom
		8–15	Dimmer Reset - Reset
		16–23	Red Shift On - Color
		24–31	Red Shift Off - Color
		32–39	S-Curve Dimmer - Custom

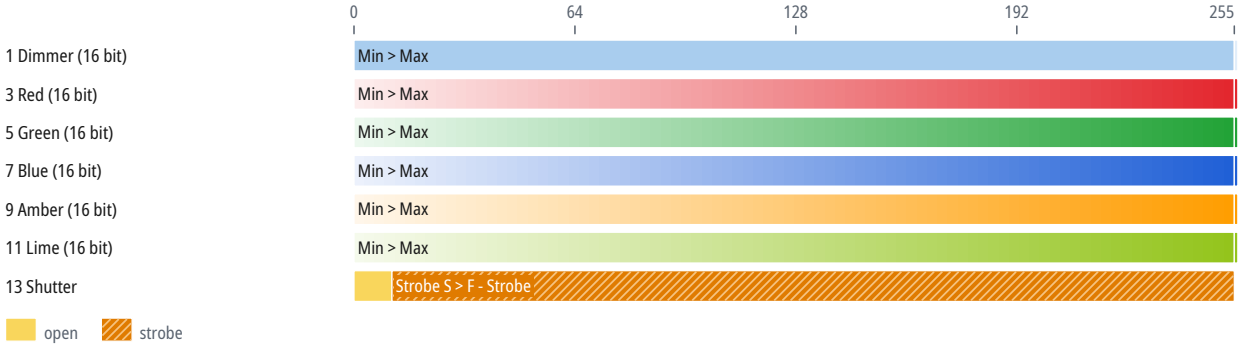
CH	Function	DMX	Description
12	Control (continued)	40–47	Linear Dimmer - Custom
		48–55	Square Dimmer Curve - Custom
		56–63	Inverse Square Dimmer Curve - Custom
		64–71	Dim Spd Mode Off - Speed
		72–79	Dim Spd 1 (Fastest) - Speed
		80–87	Dim Spd 2 - Speed
		88–95	Dim Spd 3 (Slowest) - Speed
		96–103	X-Fade Speed: Off - Speed
		104–111	X-Fade Speed:1 (Fastest) - Speed
		112–119	X-Fade Speed: 2 - Speed
		120–127	X-Fade Speed: 3 - Speed
		128–135	X-Fade Speed: 4 (Slowest) - Speed
		136–255	No Function - Custom

Mode 13Ch Mode

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 13 Shutter at 0–10. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Red 255, CH 5 Green 255, CH 7 Blue 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “10Ch Mode” (p. 13)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Red	0	Min
		0–255	Min > Max
		255	Max
4	Red Fine	0–255	Fine adjustment of CH 3
5	Green	0	Min
		0–255	Min > Max
		255	Max
6	Green Fine	0–255	Fine adjustment of CH 5
7	Blue	0	Min
		0–255	Min > Max

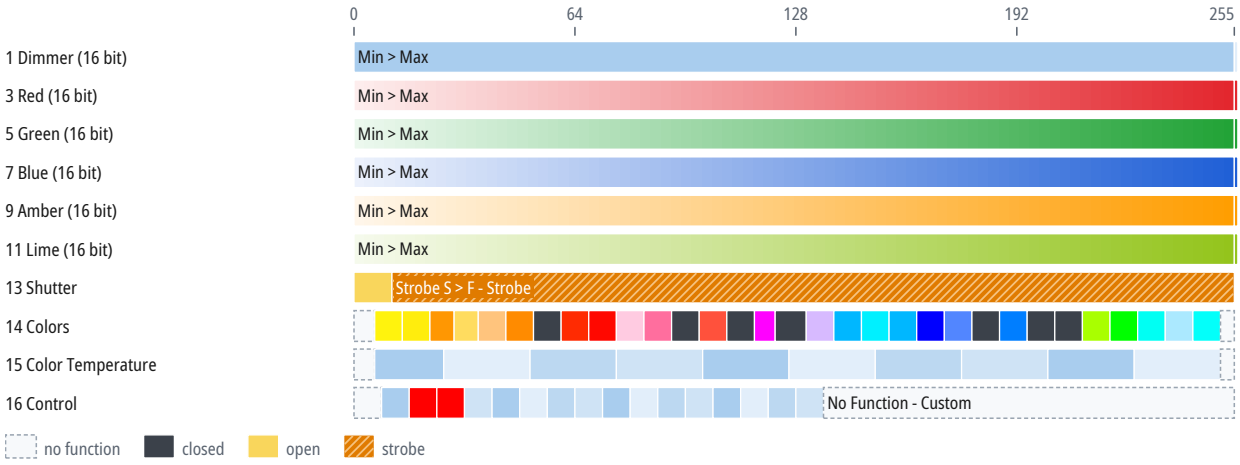
CH	Function	DMX	Description
7	Blue (continued)	255	Max
8	Blue Fine	0–255	Fine adjustment of CH 7
9	Amber	0	Min
		0–255	Min > Max
		255	Max
10	Amber Fine	0–255	Fine adjustment of CH 9
11	Lime	0	Min
		0–255	Min > Max
		255	Max
12	Lime Fine	0–255	Fine adjustment of CH 11
13	Shutter		Same as CH 7 in the mode “7Ch Mode” (p. 12)

Mode 16Ch Mode

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 13 Shutter at 0–10. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Red 255, CH 5 Green 255, CH 7 Blue 255.

Channel functions at a glance

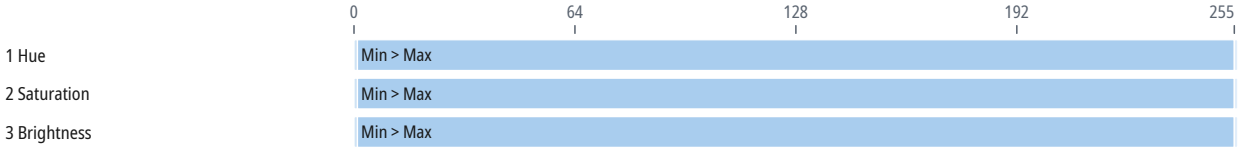


CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “10Ch Mode” (p. 13)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Red		Same as CH 3 in the mode “13Ch Mode” (p. 15)
4	Red Fine	0–255	Fine adjustment of CH 3
5	Green		Same as CH 5 in the mode “13Ch Mode” (p. 15)
6	Green Fine	0–255	Fine adjustment of CH 5
7	Blue		Same as CH 7 in the mode “13Ch Mode” (p. 15)
8	Blue Fine	0–255	Fine adjustment of CH 7
9	Amber		Same as CH 9 in the mode “13Ch Mode” (p. 16)
10	Amber Fine	0–255	Fine adjustment of CH 9
11	Lime		Same as CH 11 in the mode “13Ch Mode” (p. 16)

CH	Function	DMX	Description
12	Lime Fine	0–255	Fine adjustment of CH 11
13	Shutter		Same as CH 7 in the mode “7Ch Mode” (p. 12)
14	Colors		Same as CH 2 in the mode “3Ch Mode” (p. 10)
15	Color Temperature		Same as CH 3 in the mode “3Ch Mode” (p. 11)
16	Control		Same as CH 12 in the mode “12Ch Mode” (p. 14)

Mode HSV

Channel functions at a glance



CH	Function	DMX	Description
1	Hue	0	Min
		1–254	Min > Max
		255	Max
2	Saturation	0	Min
		1–254	Min > Max
		255	Max
3	Brightness	0	Min
		1–254	Min > Max
		255	Max

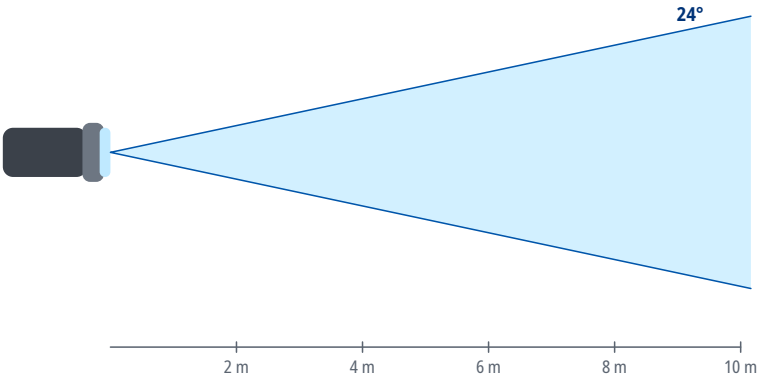
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	3 W
Luminous flux	4,316 lm
Color temperature	6,500 K
Color rendering index (CRI)	86
Optics	
Beam angle	24°
Control	
RDM	yes (manufacturer ID 0x21A4, device model ID 0x045C)
Dimensions and construction	
Weight	9 kg
Operating environment	
Operating temperature	-20 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0.1–28 Hz

Spot diameter



Distance	Ø 24°
2 m	0.85 m
4 m	1.7 m
6 m	2.6 m
8 m	3.4 m
10 m	4.3 m
15 m	6.4 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.