DMX REFERENCE

Romeo 700 FS6 HD Theater

Coemar Lighting



Manufacturer	Coemar Lighting
GDTF file	Coemar_Lighting_Romeo_700_FS6_HD_Theater_101119.gdtf
GDTF revision	rev08 23/06/25 · 2025-06-23
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1 About this manual

This document describes the Romeo 700 FS6 HD Theater by Coemar Lighting. It was compiled from the GDTF file Coemar_Lighting_Romeo_700_FS6_HD_Theater_101119.gdtf from the GDTF-Share library.

File revision: “rev08 23/06/25”.

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 Coemar Lighting; 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	20 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
16 channels	16	32	1, 17, 33, 49, ...
7 channels	7	73	1, 8, 15, 22, ...
1 channel	1	512	1, 2, 3, 4, ...
Studio mode	7	73	1, 8, 15, 22, ...
RGB mode	9	56	1, 10, 19, 28, ...
fine RGB mode	12	42	1, 13, 25, 37, ...
SUNRISE mode	6	85	1, 7, 13, 19, ...

No light? Check these channels

- 16 channels: CH 1 Dimmer above 0; CH 8 Shutter at 0–9 “No effect”
- 7 channels: CH 1 Dimmer above 0
- 1 channel: CH 1 Dimmer above 0
- Studio mode: CH 1 Dimmer above 0
- RGB mode: CH 1 Dimmer above 0; CH 8 Shutter at 0–9 “No effect”
- fine RGB mode: CH 1 Dimmer above 0; CH 11 Shutter at 0–9 “No effect”
- SUNRISE mode: CH 1 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.

4 Product description

Description in the GDTF file

“Fast LED retrofitting for Robert Juliat 700 series moulders, with 6 RGBCLA colours, with light output comparable to halogen lamps. - LED Source: RGBCLA COB LED (Red, Green, Blue, Cyan, Lime, Amber) - Color mixing with hue and saturation control - CCT Range: 2.700 K → 10.000 K - Color Rendition

Average: CRI > 95, TLCI > 95 - Green-Magenta adjustment: Continuously adjustable from full minus-green to full plus-green - Dimming: 8 or 16 bit, 5 selectable curves: Exponential, Logarithmic, Linear, Halo and Standard - Dimming Smooth Selection: Fast, Slow and Very Slow - Strobe: Electronic strobe, synchronized, random, pulse effect - Camera flicker control/Hz range: Yes: 20.000 Hz - Calibrated Cob: Yes - L80 Rating: 50.000 Hours - Voltage Input: 90-240 V, 50/60 Hz, auto-sensing - Power Consumption: 350 W Maximum - Power Connection: In and Out PowerCON TRUE1 Top - Data Connection: In and Out DMX 5 pin locking XLR connectors - Fan (controllable): Yes, 4 different settings: Silent, Studio, Auto, DMX regulated - Protocols: DMX-512, RDM (Remote Device Management) - RDM configuration: Yes - DMX Channels: 16 / 7 / 1 / Studio / RGB / Fine RGB / Sunrise Mode - Display: Graphic OLED with on-board selector for quick setting - Software Upload: Through DMX input (With RDM inteface code AC10011A001)”

5 Installation

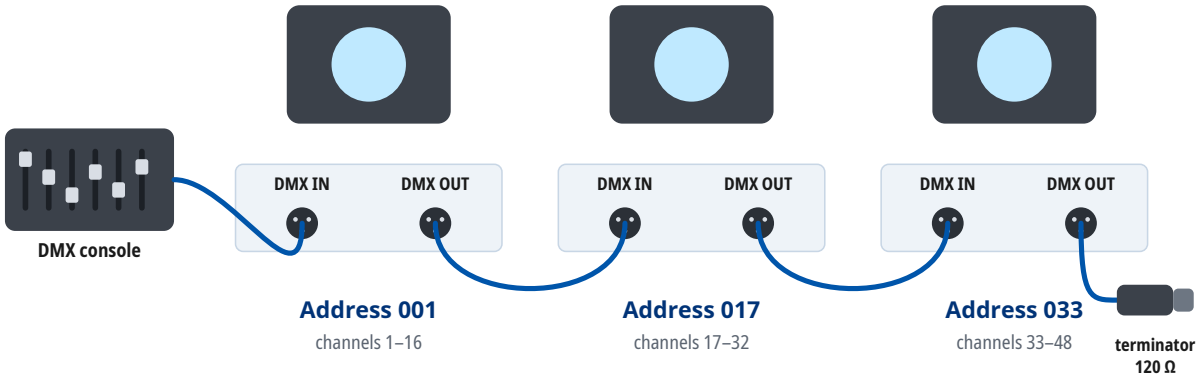
⚠ **WARNING**

- 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: 20 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 16 channels: 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 “16 channels”: 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 “16 channels”, 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

	16 channels 16 channels	7 channels 7 channels	1 channel 1 channel	Studio mode 7 channels	RGB mode 9 channels	fine RGB mode 12 channels	SUNRISE mode 6 channels
Dimmer	1	1	1	1	1	1	1
Dimmer resolution	16 bit	8 bit	8 bit	16 bit	16 bit	16 bit	16 bit
Shutter / strobe	8				8	11	
Color mixing	2–7	2–7			3–5	3, 5, 7	
Color temperature	14			2	6	9	3, 4
Color wheel	11–13						

Color wheel

1 Open
CH 11: DMX 0–9

2 CL106
CH 11: DMX 10–34

3 CL162
CH 11: DMX 35–59

4 CL164
CH 11: DMX 60–84

5 CL179
CH 11: DMX 85–109

6 CL204
CH 11: DMX 110–134

7 CL205
CH 11: DMX 135–159

8 GEL RED 7
CH 11: DMX 160–184

9 GEL RED 8
CH 11: DMX 185–209

10 GEL RED 9
CH 11: DMX 210–234

11 GEL RED 10
CH 11: DMX 235–255

12 GEL GREEN 1
CH 12: DMX 10–34

13 GEL GREEN 2
CH 12: DMX 35–59

14 GEL GREEN 3
CH 12: DMX 60–84

15 GEL GREEN 4
CH 12: DMX 85–109

16 GEL GREEN 5
CH 12: DMX 110–134

17 GEL GREEN 6
CH 12: DMX 135–159

18 GEL GREEN 7
CH 12: DMX 160–184

19 GEL GREEN 8
CH 12: DMX 185–209

20 GEL GREEN 9
CH 12: DMX 210–234

21 GEL GREEN 10
CH 12: DMX 235–255

22 CL119
CH 13: DMX 10–34

23 CL197
CH 13: DMX 35–59

24 CL201
CH 13: DMX 60–84

25 CL202
CH 13: DMX 85–109

26 GEL BLUE 5
CH 13: DMX 110–134

27 GEL BLUE 6
CH 13: DMX 135–159

28 GEL BLUE 7
CH 13: DMX 160–184

29 GEL BLUE 8
CH 13: DMX 185–209

30 GEL BLUE 9
CH 13: DMX 210–234

31 GEL BLUE 10
CH 13: DMX 235–255

32 2700K
CH 14: DMX 10–16

33 3200K
CH 14: DMX 31–46

34 4000K
CH 14: DMX 61–76

35 5000K
CH 14: DMX 91–106

36 5600K
CH 14: DMX 121–136

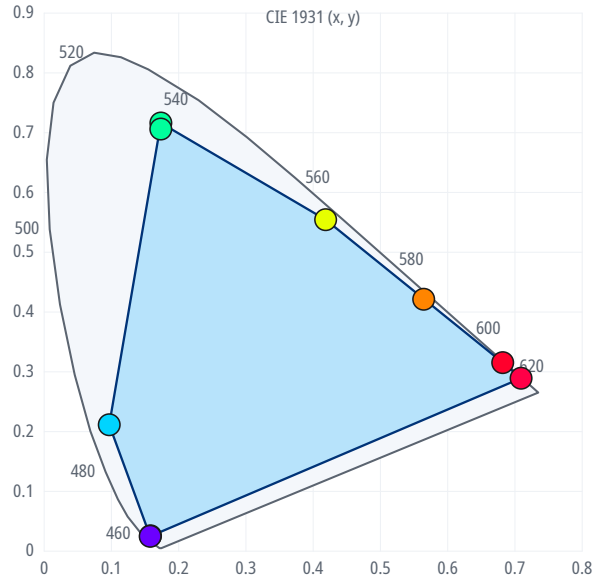
37 7000K
CH 14: DMX 151–166

38 8000K
CH 14: DMX 181–196

39 9000K
CH 14: DMX 211–226

40 10000K
CH 14: DMX 241–255

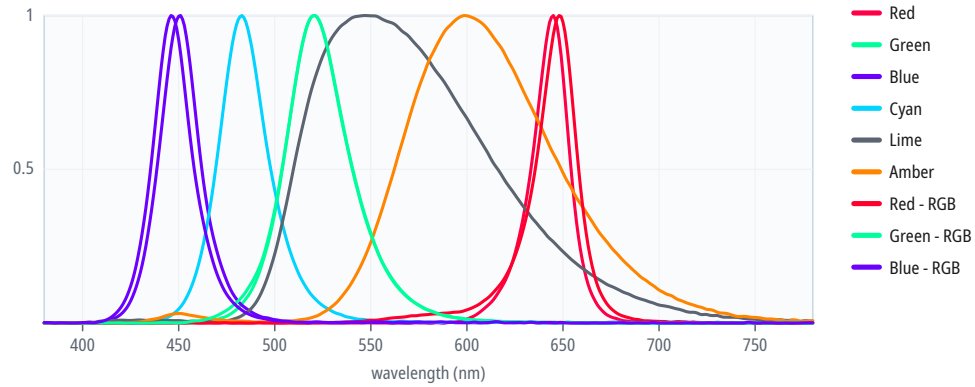
LED colors and the colors they mix



LED	x	y	nm
Red	0.709	0.289	632
Green	0.173	0.716	527
Blue	0.158	0.026	452
Cyan	0.097	0.211	485
Lime	0.418	0.554	567
Amber	0.564	0.421	590
Red - RGB	0.682	0.315	617
Green - RGB	0.173	0.706	526
Blue - RGB	0.158	0.025	452

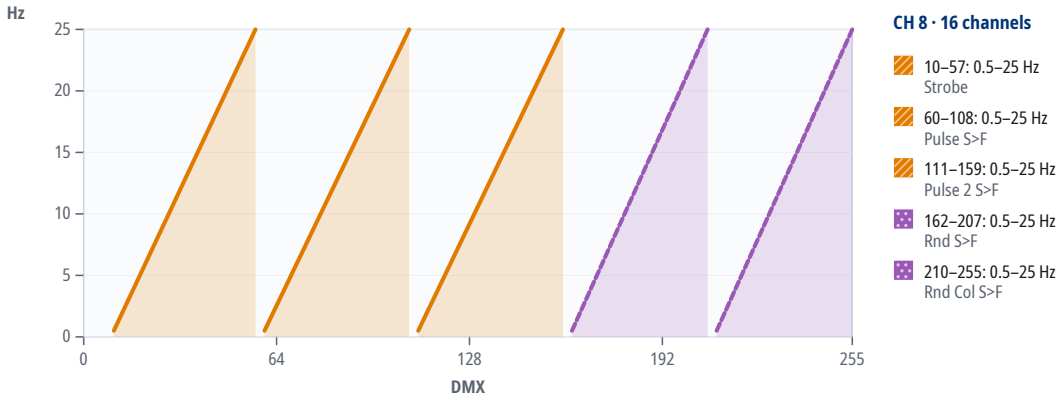
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources



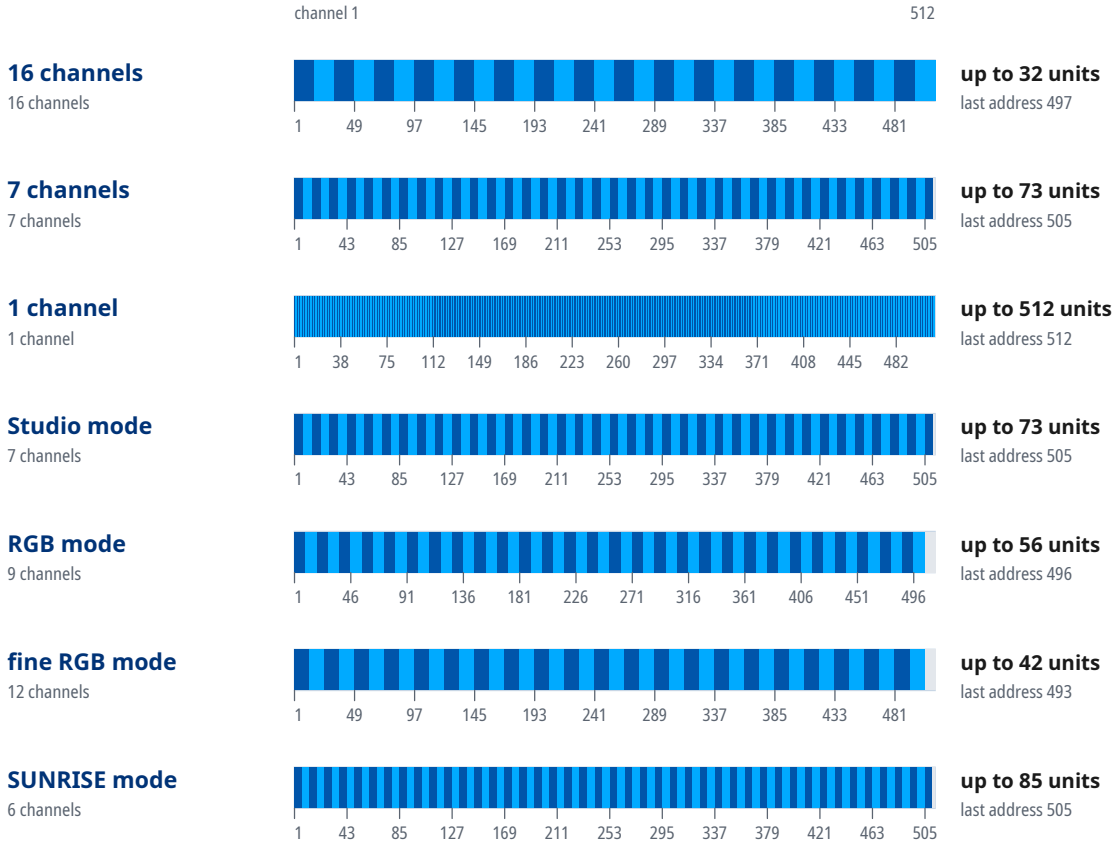
Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “16 channels”

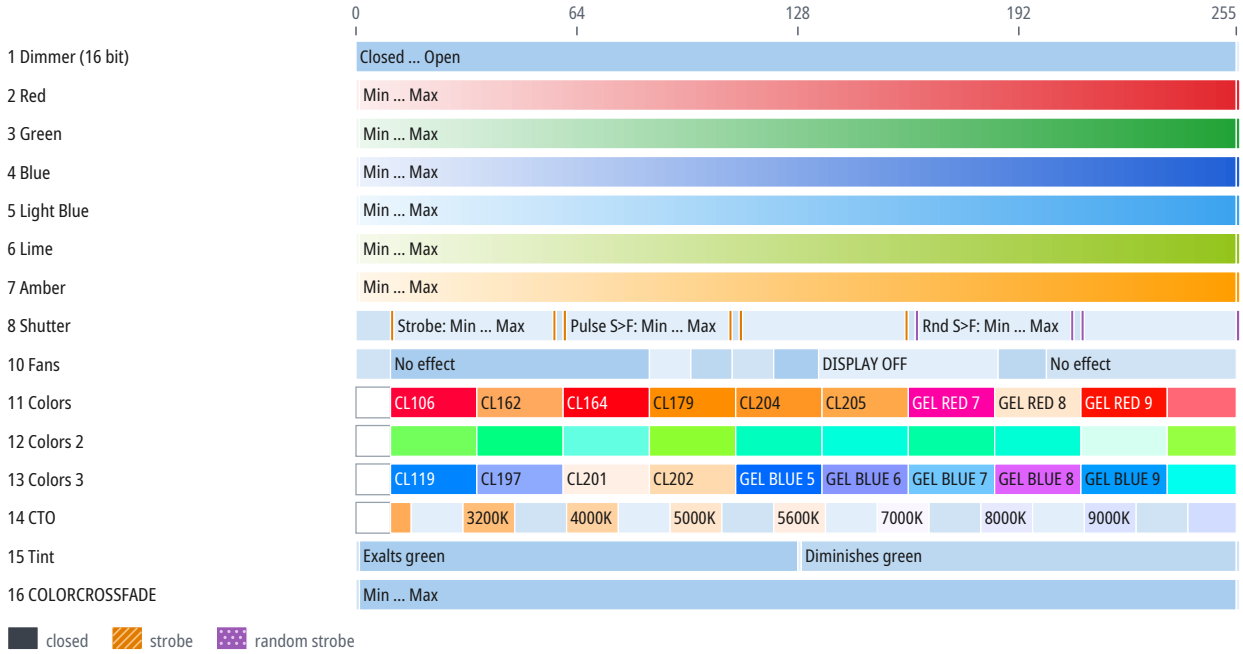
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	81	11	161	16	241
2	17	7	97	12	177	17	257
3	33	8	113	13	193	18	273
4	49	9	129	14	209	19	289
5	65	10	145	15	225	20	305

Mode 16 channels

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 1 Dimmer above 0; CH 8 Shutter at 0–9 “No effect”. 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	0–255	Closed ... Open
		255	Open
2	Red	0	Min
		1–254	Min ... Max
		255	Max
3	Green	0	Min
		1–254	Min ... Max
		255	Max
4	Blue	0	Min
		1–254	Min ... Max
		255	Max
5	Light Blue	0	Min
		1–254	Min ... Max
		255	Max
6	Lime	0	Min
		1–254	Min ... Max
		255	Max
7	Amber	0	Min
		1–254	Min ... Max

CH	Function	DMX	Description
7	Amber (continued)	255	Max
8	Shutter	0–9	No effect
		10	Strobe: Min
		11–56	Strobe: Min ... Max
		57	Strobe: Max
		58–59	Open: Stop strobe
		60	Pulse S>F: Min
		61–107	Pulse S>F: Min ... Max
		108	Pulse S>F: Max
		109–110	Open: Stop strobe
		111	Pulse 2 S>F: Min
		112–158	Pulse 2 S>F: Min ... Max
		159	Pulse 2 S>F: Max
		160–161	Open: Stop strobe
		162	Rnd S>F: Min
		163–206	Rnd S>F: Min ... Max
		207	Rnd S>F: Max
		208–209	Open: Stop strobe
		210	Rnd Col S>F: Min
		211–254	Rnd Col S>F: Min ... Max
		255	Rnd Col S>F: Max
9	Dimmer Fine	0–255	Fine adjustment of CH 1
10	Fans	0–9	Park
		10–84	No effect
		85–96	FAN SILENT
		97–108	FAN STUDIO
		109–120	FAN AUTO
		121–133	FAN MANUAL
		134–185	DISPLAY OFF
		186–199	DISPLAY ON
		200–255	No effect
11	Colors	0–9	Open
		10–34	CL106
		35–59	CL162
		60–84	CL164
		85–109	CL179
		110–134	CL204
		135–159	CL205
		160–184	GEL RED 7
		185–209	GEL RED 8
		210–234	GEL RED 9
		235–255	GEL RED 10

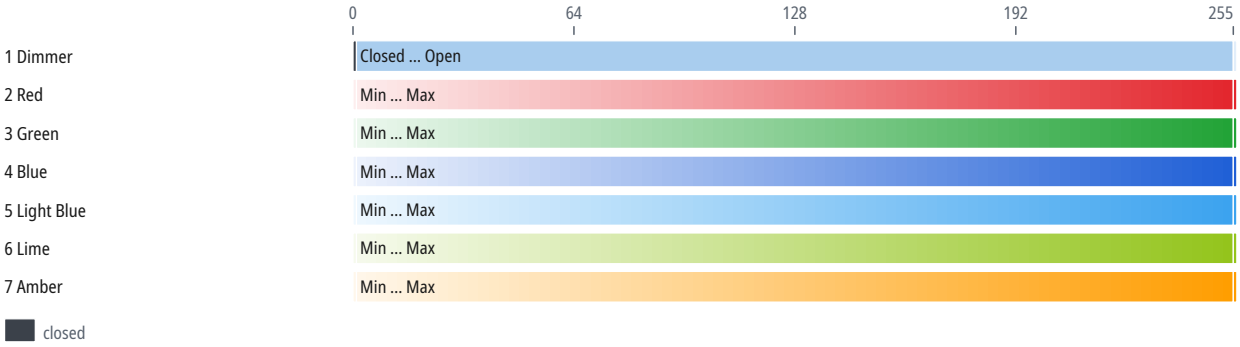
CH	Function	DMX	Description
12	Colors 2	0–9	No effect
		10–34	GEL GREEN 1
		35–59	GEL GREEN 2
		60–84	GEL GREEN 3
		85–109	GEL GREEN 4
		110–134	GEL GREEN 5
		135–159	GEL GREEN 6
		160–184	GEL GREEN 7
		185–209	GEL GREEN 8
		210–234	GEL GREEN 9
		235–255	GEL GREEN 10
13	Colors 3	0–9	No effect
		10–34	CL119
		35–59	CL197
		60–84	CL201
		85–109	CL202
		110–134	GEL BLUE 5
		135–159	GEL BLUE 6
		160–184	GEL BLUE 7
		185–209	GEL BLUE 8
		210–234	GEL BLUE 9
		235–255	GEL BLUE 10
14	CTO	0–9	No effect
		10–15	2700 K
		16–30	2700K-3200K (2701–3199 K)
		31–45	3200K
		46–60	3200K-4000K (3201–3999 K)
		61–75	4000K
		76–90	4000K-5000K (4001–4999 K)
		91–105	5000K
		106–120	5000K-5600K (5001–5599 K)
		121–135	5600K
		136–150	5600K-7000K (5601–6999 K)
		151–165	7000K
		166–180	7000K-8000K (7001–7999 K)
		181–195	8000K
		196–210	8000K-9000K (8001–8999 K)
		211–225	9000K
		226–240	9000K-10000K (9001–9999 K)
		241–255	10000K
15	Tint	0	No effect
		1–127	Exalts green

CH	Function	DMX	Description
15	Tint (continued)	128	No effect
		129–254	Diminishes green
		255	No effect
16	COLORCROSSFADE	0	Min
		1–254	Min ... Max
		255	Max

Mode 7 channels

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

Channel functions at a glance

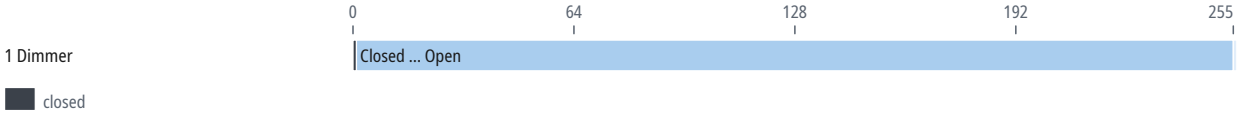


CH	Function	DMX	Description
1	Dimmer	0	Closed
		1–254	Closed ... Open
		255	Open
2	Red		Same as CH 2 in the mode “16 channels” (p. 10)
3	Green		Same as CH 3 in the mode “16 channels” (p. 10)
4	Blue		Same as CH 4 in the mode “16 channels” (p. 10)
5	Light Blue		Same as CH 5 in the mode “16 channels” (p. 10)
6	Lime		Same as CH 6 in the mode “16 channels” (p. 10)
7	Amber		Same as CH 7 in the mode “16 channels” (p. 10)

Mode 1 channel

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

Channel functions at a glance



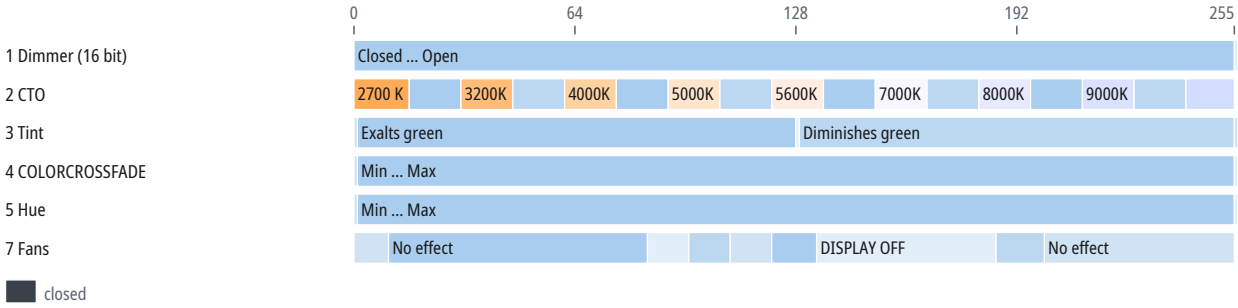
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “7 channels” (p. 13)

Mode Studio 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 1 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance



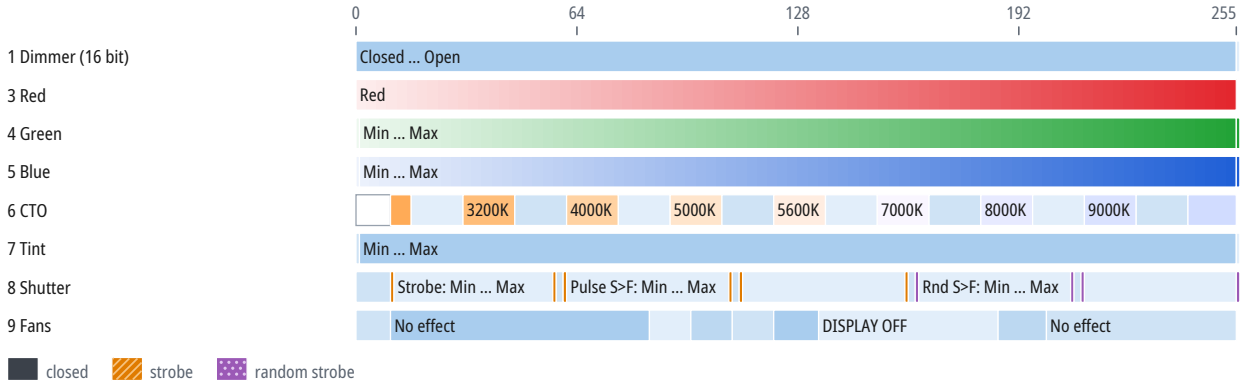
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “16 channels” (p. 10)
2	CTO	0–15	2700 K
		16–30	2700K-3200K (2701–3199 K)
		31–45	3200K
		46–60	3200K-4000K (3201–3999 K)
		61–75	4000K
		76–90	4000K-5000K (4001–4999 K)
		91–105	5000K
		106–120	5000K-5600K (5001–5599 K)
		121–135	5600K
		136–150	5600K-7000K (5601–6999 K)
		151–165	7000K
		166–180	7000K-8000K (7001–7999 K)
		181–195	8000K
		196–210	8000K-9000K (8001–8999 K)
		211–225	9000K
		226–240	9000K-10000K (9001–9999 K)
		241–255	10000K
3	Tint		Same as CH 15 in the mode “16 channels” (p. 12)
4	COLORCROSSFADE		Same as CH 16 in the mode “16 channels” (p. 13)
5	Hue	0	Min
		1–254	Min ... Max
		255	Max
6	Dimmer Fine	0–255	Fine adjustment of CH 1
7	Fans		Same as CH 10 in the mode “16 channels” (p. 11)

Mode RGB 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 1 Dimmer above 0; CH 8 Shutter at 0–9 “No effect”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance



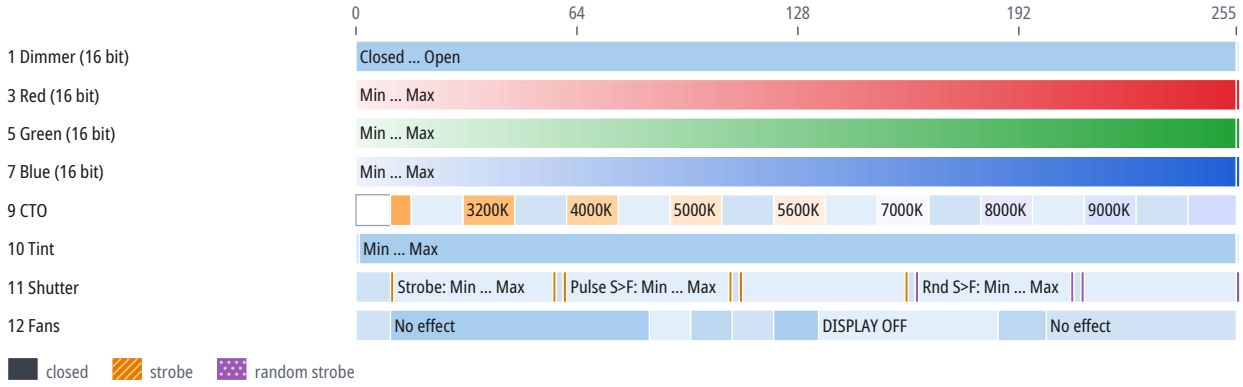
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “16 channels” (p. 10)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Red	0–255	Red
4	Green		Same as CH 3 in the mode “16 channels” (p. 10)
5	Blue		Same as CH 4 in the mode “16 channels” (p. 10)
6	CTO		Same as CH 14 in the mode “16 channels” (p. 12)
7	Tint	0	Min
		1–254	Min ... Max
		255	Max
8	Shutter		Same as CH 8 in the mode “16 channels” (p. 11)
9	Fans		Same as CH 10 in the mode “16 channels” (p. 11)

Mode fine RGB 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 1 Dimmer above 0; CH 11 Shutter at 0–9 “No effect”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance



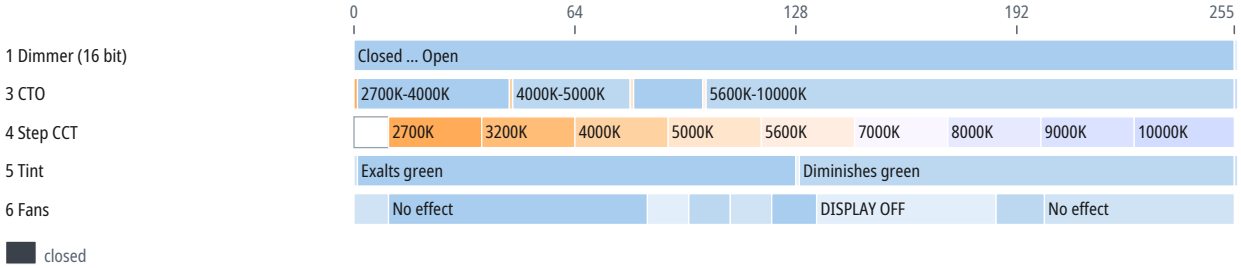
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “16 channels” (p. 10)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Red	0–255	Min ... Max
		255	Max
4	Red Fine	0–255	Fine adjustment of CH 3
5	Green	0–255	Min ... Max
		255	Max
6	Green Fine	0–255	Fine adjustment of CH 5
7	Blue	0–255	Min ... Max
		255	Max
8	Blue Fine	0–255	Fine adjustment of CH 7
9	CTO		Same as CH 14 in the mode “16 channels” (p. 12)
10	Tint		Same as CH 7 in the mode “RGB mode” (p. 15)
11	Shutter		Same as CH 8 in the mode “16 channels” (p. 11)
12	Fans		Same as CH 10 in the mode “16 channels” (p. 11)

Mode SUNRISE 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 1 Dimmer above 0. 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 “16 channels” (p. 10)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	CTO	0	2700 K
		1–44	2700K-4000K (2701–3999 K)
		45	4000K
		46–79	4000K-5000K (4001–4999 K)
		80	5000K
		81–100	5000K-5600K (5001–5599 K)
		101	5600K
		102–254	5600K-10000K (5601–9999 K)
		255	10000K
4	Step CCT		Step CTC
		0–9	No effect
		10–36	2700K
		37–63	3200K
		64–90	4000K
		91–117	5000K
		118–144	5600K
		145–171	7000K
		172–198	8000K
		199–225	9000K
		226–255	10000K
5	Tint		Same as CH 15 in the mode “16 channels” (p. 12)
6	Fans		Same as CH 10 in the mode “16 channels” (p. 11)

10 Technical specifications

Parameter	Value
RDM	yes (manufacturer ID 0x434D, device model ID 0x0E08)
Weight	20 kg
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2701–9999 K
Strobe frequency	0–25 Hz

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.