DMX REFERENCE

Klemantis AS 1000

ADB



Manufacturer	ADB
GDTF file	ADB_Klemantis_AS_1000_9045.gdtf
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Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 4
5 Installation 5
6 Connections 5
7 Operation 6
8 Functions at a glance 6
9 DMX channels 7
Mode Default RGB 8
Mode Default CMY 9
Mode Default HSV 10
Mode Extended RGB 11
Mode Extended CMY 12
Mode Extended HSV 14
10 Technical specifications 15
11 Maintenance and cleaning 16
12 Troubleshooting 16
13 Disposal 17

1 About this manual

This document describes the Klemantis AS 1000 by ADB. It was compiled from the GDTF file ADB_Klemantis_AS_1000_9045.gdtf from the GDTF-Share library.

File revision: “Revision 1”.

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 ADB; 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

DMX modes

Mode	Channels	Units in one universe	First start addresses
Default RGB	14	36	1, 15, 29, 43, ...
Default CMY	14	36	1, 15, 29, 43, ...
Default HSV	14	36	1, 15, 29, 43, ...
Extended RGB	27	18	1, 28, 55, 82, ...
Extended CMY	27	18	1, 28, 55, 82, ...
Extended HSV	27	18	1, 28, 55, 82, ...

No light? Check these channels

- Default RGB: CH 7 Dimmer above 0
- Default CMY: CH 7 Dimmer above 0
- Default HSV: CH 7 Dimmer above 0
- Extended RGB: CH 16 Dimmer above 0
- Extended CMY: CH 16 Dimmer above 0
- Extended HSV: CH 16 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

“an asymmetric cyc light based on a six-colour LED module, which uses cutting-edge HCR (High Color Rendering) LED technology to deliver a wide selection of colors from bold hues to pastel shades.”

5 Installation

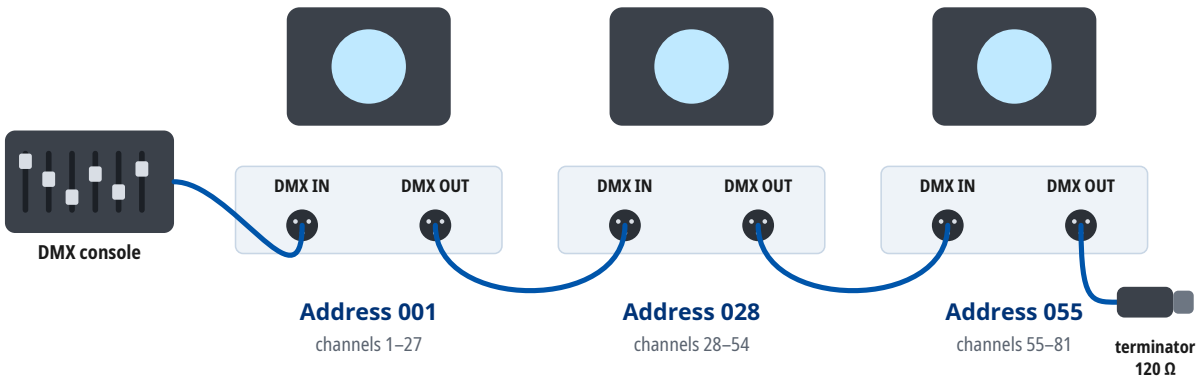
⚠ WARNING

- 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.
- 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 RGB: every unit occupies 27 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

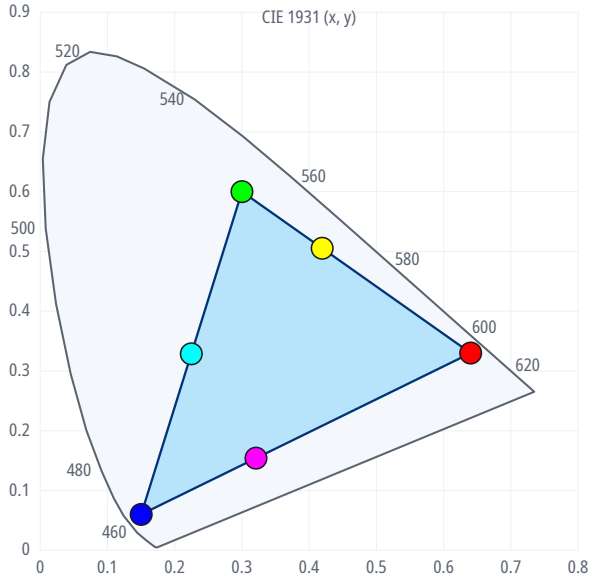
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Extended RGB”: 27.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 RGB”, you can use, for example, the start addresses 1, 28, 55, 82.
- 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

	Default RGB 14 channels	Default CMY 14 channels	Default HSV 14 channels	Extended RGB 27 channels	Extended CMY 27 channels	Extended HSV 27 channels
Dimmer	7	7	7	16	16	16
Shutter / strobe	6	6	6	15	15	15
Color mixing	1–3	1–3		9 channels (1–20)	9 channels (1–20)	7 channels (1–18)
Color temperature	4	4	4	13	13	13
Effects / macros	5, 9	5, 9	5, 9	14, 21	14, 21	14, 21

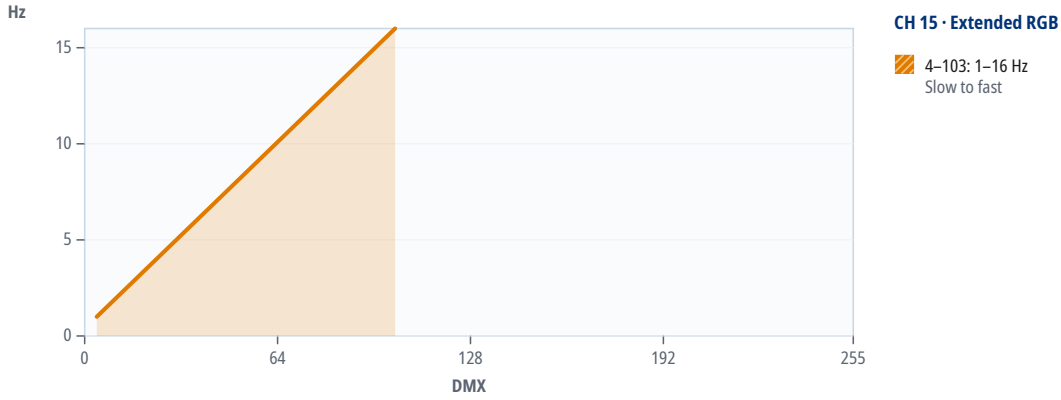
LED colors and the colors they mix



LED	x	y
Red	0.640	0.330
Green	0.300	0.600
Blue	0.150	0.060
Cyan	0.225	0.329
Magenta	0.321	0.154
Yellow	0.419	0.505

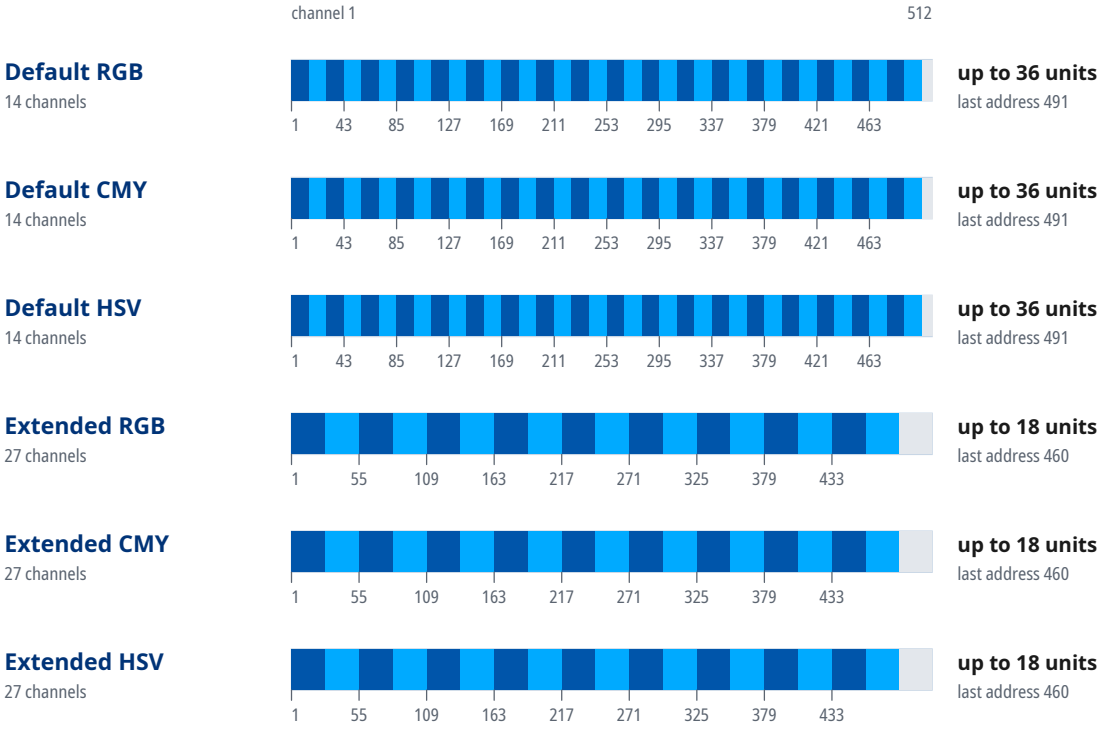
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Strobe rate



9 DMX channels

Units in one DMX universe



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

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	136	11	271	16	406
2	28	7	163	12	298	17	433
3	55	8	190	13	325	18	460
4	82	9	217	14	352	19	U2 · 1
5	109	10	244	15	379	20	U2 · 28

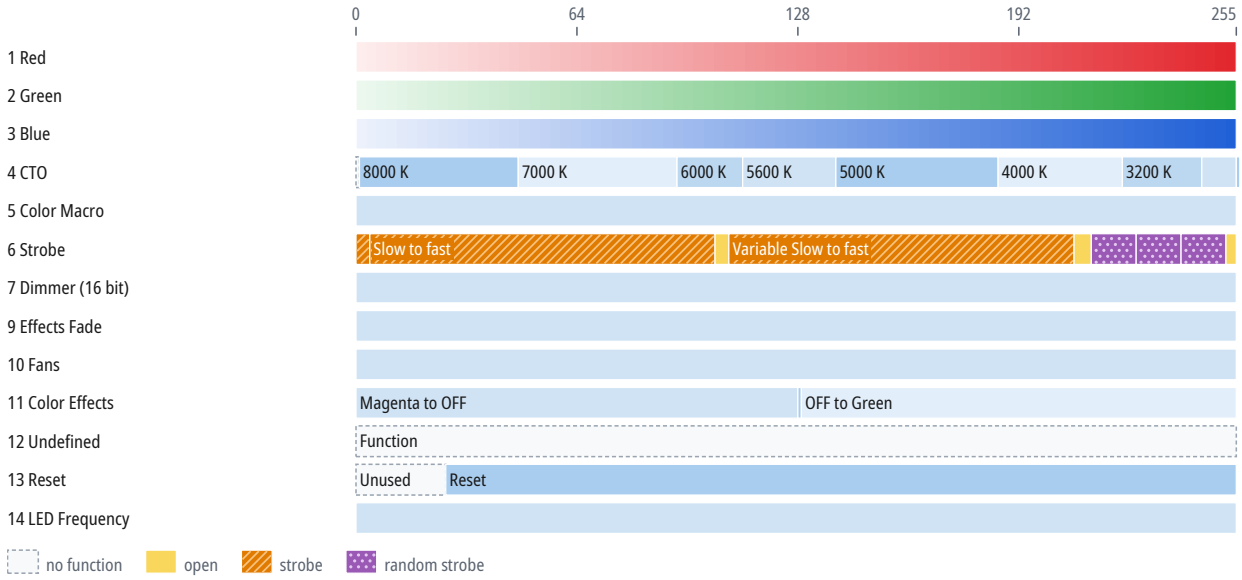
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Default 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 7 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0–255	
2	Green	0–255	
3	Blue	0–255	
4	CTO	0	Off
		1–46	8000 K
		47–92	7000 K
		93–111	6000 K
		112–138	5600 K
		139–185	5000 K
		186–221	4000 K
		222–244	3200 K
		245–254	2700 K
		255	2500 K
5	Color Macro	0–255	
6	Strobe	0–3	Light Off
		4–103	Slow to fast (1–16 Hz)
		104–107	Light ON 1
		108–207	Variable Slow to fast (0.5–25 Hz)
		208–212	Light ON
		213–225	Random Strobe Slow
		226–238	Random Medium Strobe
		239–251	Random Fast Strobe
		252–255	Light On

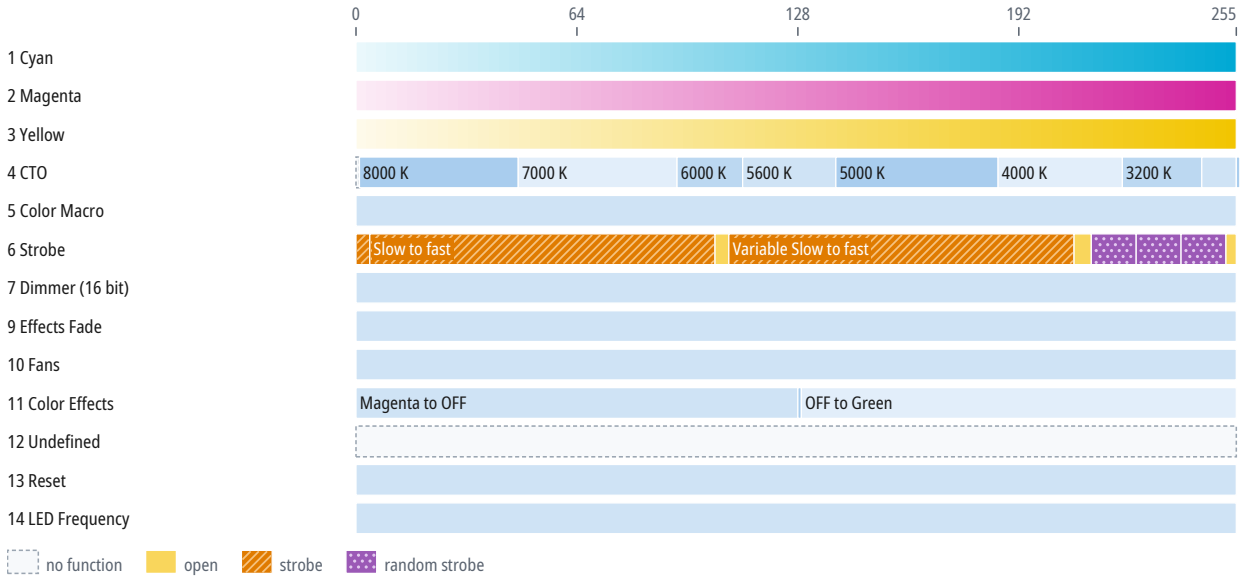
CH	Function	DMX	Description
7	Dimmer	0–255	
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Effects Fade	0–255	
10	Fans	0–255	
11	Color Effects	0–127	Magenta to OFF
		128	Tint OFF
		129–255	OFF to Green
12	Undefined	0–255	Function
13	Reset	0–25	Unused
		26–255	Reset
14	LED Frequency	0–255	

Mode Default CMY

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 7 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Cyan	0–255	
2	Magenta	0–255	
3	Yellow	0–255	
4	CTO		Same as CH 4 in the mode “Default RGB” (p. 8)
5	Color Macro	0–255	
6	Strobe		Same as CH 6 in the mode “Default RGB” (p. 8)
7	Dimmer	0–255	
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Effects Fade	0–255	
10	Fans	0–255	

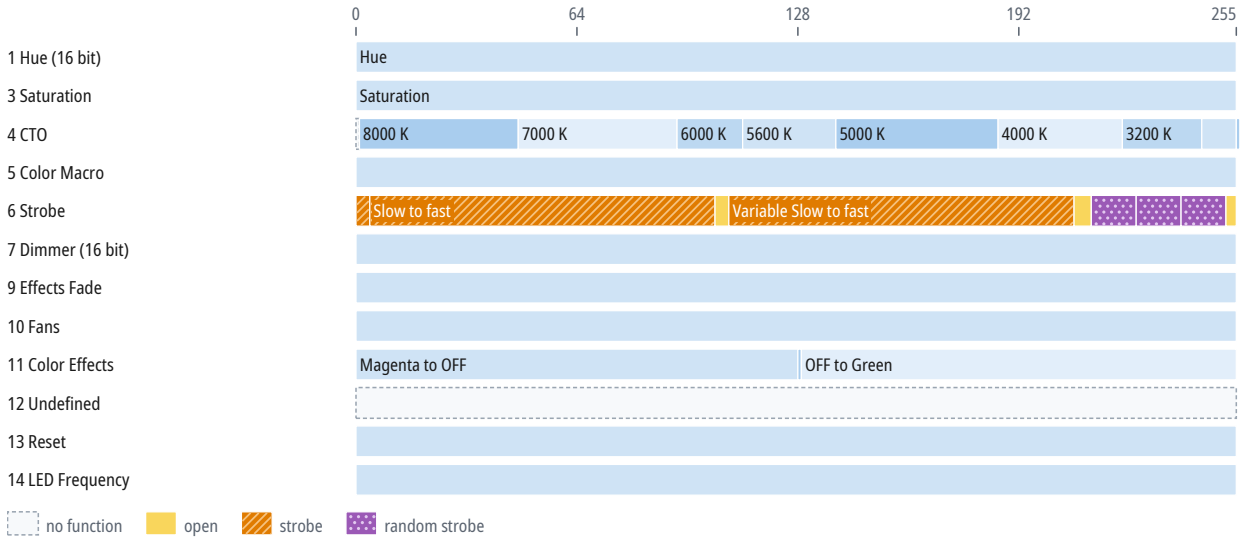
CH	Function	DMX	Description
11	Color Effects		Same as CH 11 in the mode “Default RGB” (p. 9)
12	Undefined	0–255	
13	Reset	0–255	
14	LED Frequency	0–255	

Mode Default 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 7 Dimmer above 0.

Channel functions at a glance



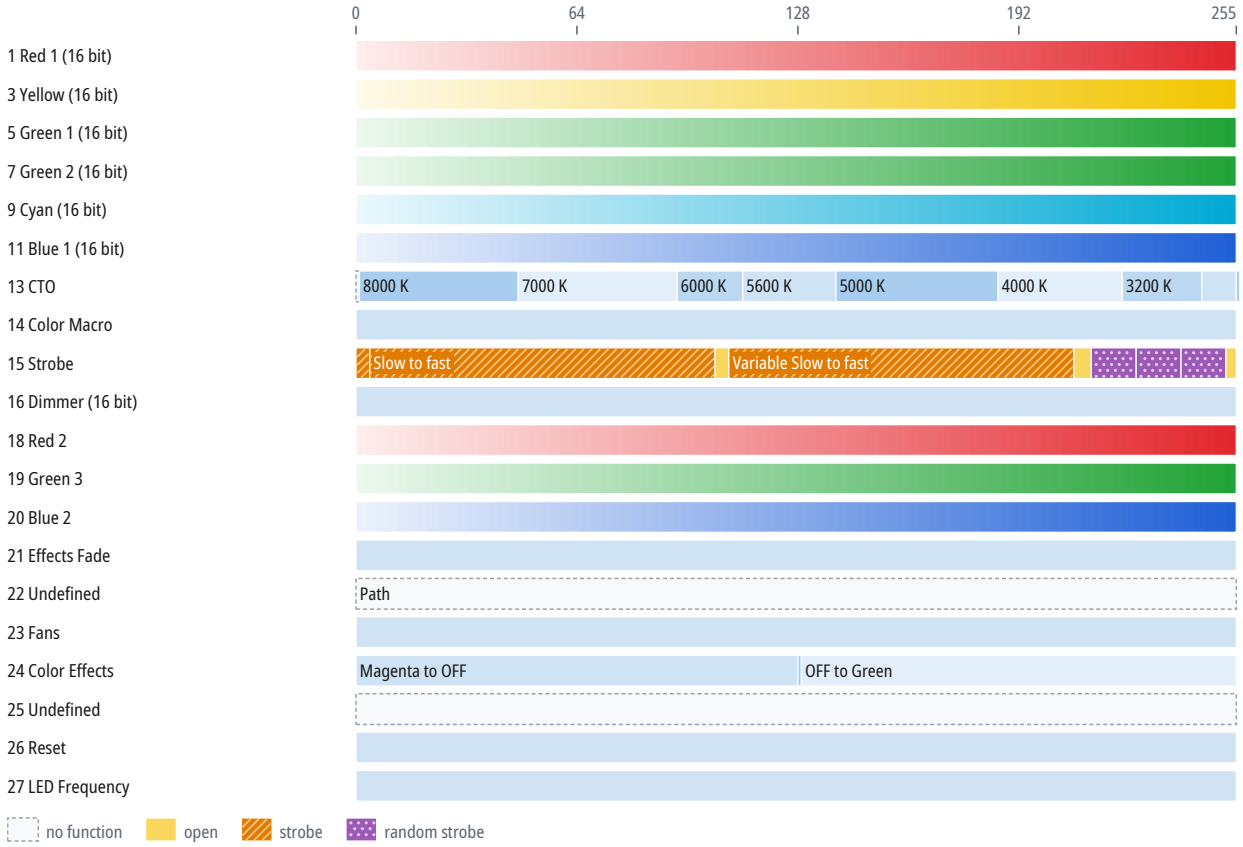
CH	Function	DMX	Description
1	Hue	0–255	Hue
2	Hue Fine	0–255	Fine adjustment of CH 1
3	Saturation	0–255	Saturation
4	CTO		Same as CH 4 in the mode “Default RGB” (p. 8)
5	Color Macro	0–255	
6	Strobe		Same as CH 6 in the mode “Default RGB” (p. 8)
7	Dimmer	0–255	
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Effects Fade	0–255	
10	Fans	0–255	
11	Color Effects		Same as CH 11 in the mode “Default RGB” (p. 9)
12	Undefined	0–255	
13	Reset	0–255	
14	LED Frequency	0–255	

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 16 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Yellow	0–255	
4	Yellow Fine	0–255	Fine adjustment of CH 3
5	Green 1	0–255	
6	Green 1 Fine	0–255	Fine adjustment of CH 5
7	Green 2	0–255	
8	Green 2 Fine	0–255	Fine adjustment of CH 7
9	Cyan	0–255	
10	Cyan Fine	0–255	Fine adjustment of CH 9
11	Blue 1	0–255	
12	Blue 1 Fine	0–255	Fine adjustment of CH 11
13	CTO		Same as CH 4 in the mode “Default RGB” (p. 8)
14	Color Macro	0–255	
15	Strobe		Same as CH 6 in the mode “Default RGB” (p. 8)

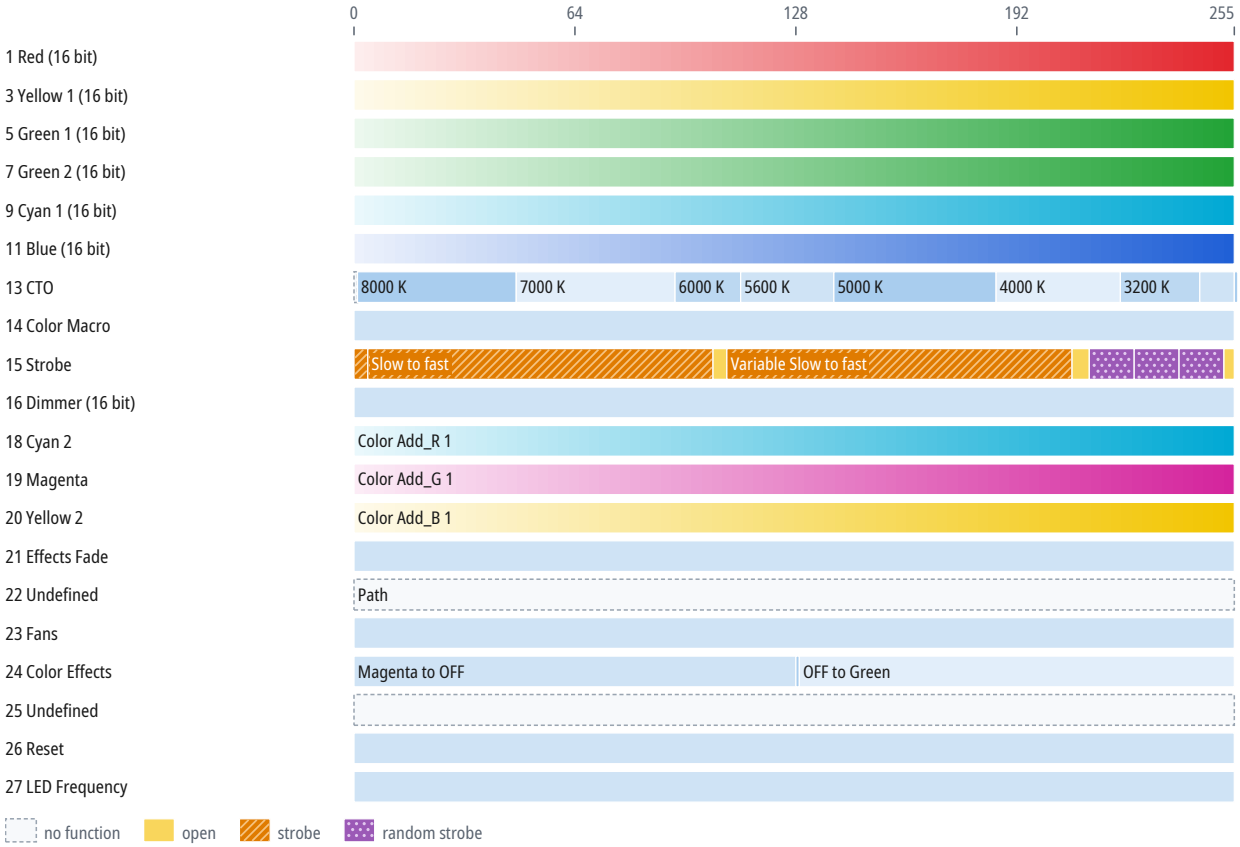
CH	Function	DMX	Description
16	Dimmer	0–255	
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Red 2	0–255	
19	Green 3	0–255	
20	Blue 2	0–255	
21	Effects Fade	0–255	
22	Undefined	0–255	Path
23	Fans	0–255	
24	Color Effects		Same as CH 11 in the mode “Default RGB” (p. 9)
25	Undefined	0–255	
26	Reset	0–255	
27	LED Frequency	0–255	

Mode Extended CMY

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 16 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0–255	
2	Red Fine	0–255	Fine adjustment of CH 1
3	Yellow 1	0–255	
4	Yellow 1 Fine	0–255	Fine adjustment of CH 3
5	Green 1	0–255	
6	Green 1 Fine	0–255	Fine adjustment of CH 5
7	Green 2	0–255	
8	Green 2 Fine	0–255	Fine adjustment of CH 7
9	Cyan 1	0–255	
10	Cyan 1 Fine	0–255	Fine adjustment of CH 9
11	Blue	0–255	
12	Blue Fine	0–255	Fine adjustment of CH 11
13	CTO		Same as CH 4 in the mode “Default RGB” (p. 8)
14	Color Macro	0–255	
15	Strobe		Same as CH 6 in the mode “Default RGB” (p. 8)
16	Dimmer	0–255	
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Cyan 2		Color Add_R 1
		0–255	Color Add_R 1
19	Magenta		Color Add_G 1
		0–255	Color Add_G 1
20	Yellow 2		Color Add_B 1
		0–255	Color Add_B 1
21	Effects Fade	0–255	
22	Undefined	0–255	Path
23	Fans	0–255	
24	Color Effects		Same as CH 11 in the mode “Default RGB” (p. 9)
25	Undefined	0–255	
26	Reset	0–255	
27	LED Frequency	0–255	

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 16 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0–255	
2	Red Fine	0–255	Fine adjustment of CH 1
3	Yellow	0–255	
4	Yellow Fine	0–255	Fine adjustment of CH 3
5	Green 1	0–255	
6	Green 1 Fine	0–255	Fine adjustment of CH 5
7	Green 2	0–255	
8	Green 2 Fine	0–255	Fine adjustment of CH 7
9	Cyan	0–255	
10	Cyan Fine	0–255	Fine adjustment of CH 9
11	Blue	0–255	
12	Blue Fine	0–255	Fine adjustment of CH 11
13	CTO		Same as CH 4 in the mode “Default RGB” (p. 8)
14	Color Macro	0–255	
15	Strobe		Same as CH 6 in the mode “Default RGB” (p. 8)
16	Dimmer	0–255	

CH	Function	DMX	Description
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Hue		Color Add_R 1
		0–255	Color Add_R 1
19	Hue Fine	0–255	Fine adjustment of CH 18
20	Saturation		Color Add_B 1
		0–255	Color Add_B 1
21	Effects Fade	0–255	
22	Undefined	0–255	Path
23	Fans	0–255	
24	Color Effects		Same as CH 11 in the mode “Default RGB” (p. 9)
25	Undefined	0–255	
26	Reset	0–255	
27	LED Frequency	0–255	

10 Technical specifications

Parameter	Value
Light source	LED
LED power	250 W
Luminous flux	2,024 lm
Color temperature	6,000 K
Color rendering index (CRI)	100
Beam angle	20°

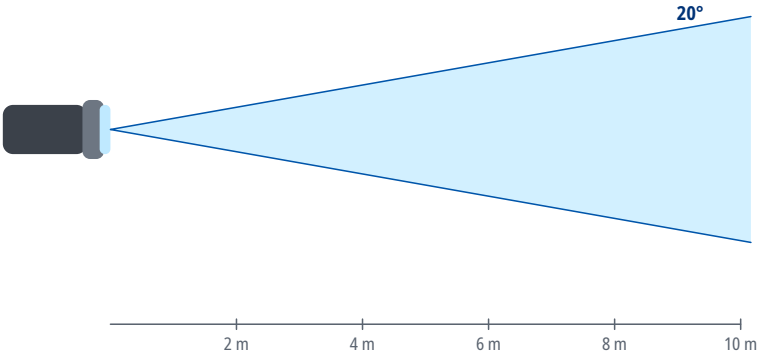
Speeds and ranges

Parameter	Value
Strobe frequency	0.5–25 Hz

Dimensions



Spot diameter



Distance	Ø 20°
2 m	0.71 m
4 m	1.4 m
6 m	2.1 m
8 m	2.8 m
10 m	3.5 m
15 m	5.3 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.