DMX REFERENCE

NEOS X1

SG NEOSX1

Sagitter



Manufacturer	Sagitter
GDTF file	Sagitter_NEOS_X1_153411.gdtf
GDTF revision	Initial version · 2026-07-31
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1 About this manual

This document describes the SG NEOSX1 by Sagitter. It was compiled from the GDTF file Sagitter_NEOS_X1_153411.gdtf from the GDTF-Share library.

File revision: “Initial version”.

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 Sagitter; 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
Power consumption	30 W

DMX modes

Mode	Channels	Units in one universe	First start addresses
87 Ch	87	5	1, 88, 175, 262, ...
80 Ch	80	6	1, 81, 161, 241, ...
48 Ch	48	10	1, 49, 97, 145, ...
12 Ch	12	42	1, 13, 25, 37, ...
5 Ch	5	102	1, 6, 11, 16, ...
3 Ch	3	170	1, 4, 7, 10, ...
2 Ch	2	256	1, 3, 5, 7, ...

No light? Check these channels

- 87 Ch: CH 1 Dimmer above 0
- 12 Ch: CH 1 Dimmer above 0
- 3 Ch: CH 3 Dimmer above 0


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

3 Safety instructions


Read the manual before use


Risk of electric shock


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

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: 100–240 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

⚠ 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.

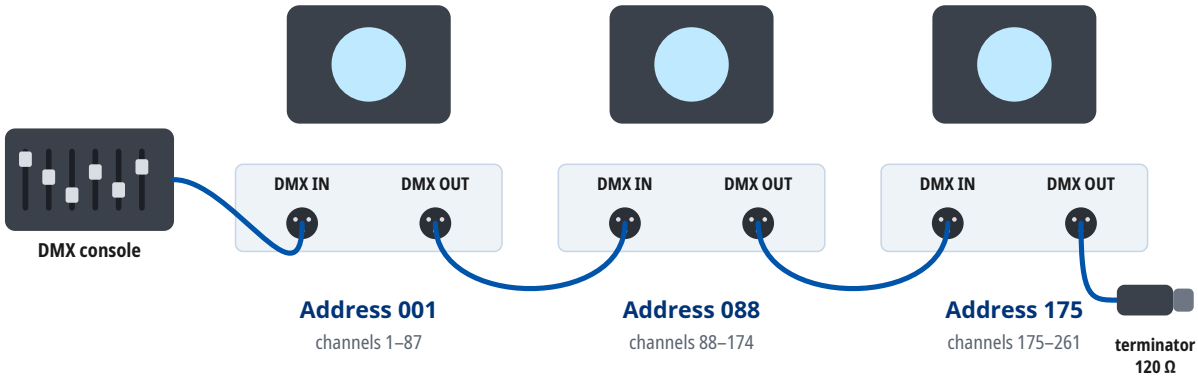
4 Installation

> ⚠ **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.

5 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 87 Ch: every unit occupies 87 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.

6 Operation

Setting the DMX address

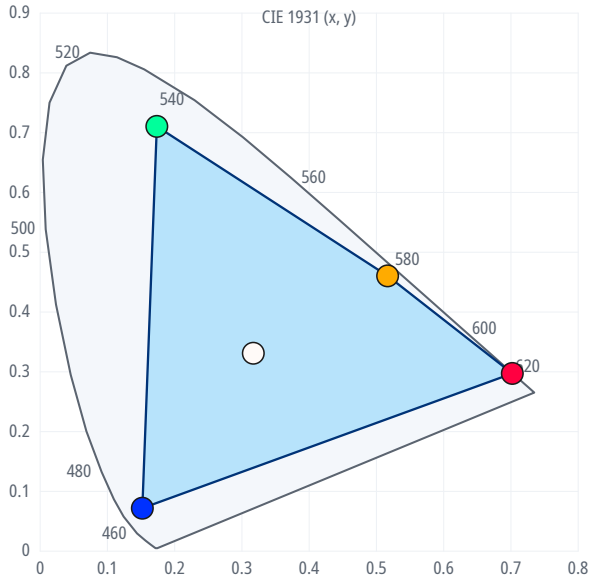
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “87 Ch”: 87.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “87 Ch”, you can use, for example, the start addresses 1, 88, 175, 262.
- 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.

7 Functions at a glance

Functions in each DMX mode

	87 Ch 87 channels	80 Ch 80 channels	48 Ch 48 channels	12 Ch 12 channels	5 Ch 5 channels	3 Ch 3 channels	2 Ch 2 channels
Dimmer	1	✓	✓	1	✓	3	
Shutter / strobe	2			2			
Color mixing	3–82	1–80	1–48	3–7	1–5		
Color temperature	85			10			2
Effects / macros	84, 86, 87			9, 11, 12			1
Pixel control	16 cells	16 cells	16 cells				

LED colors and the colors they mix

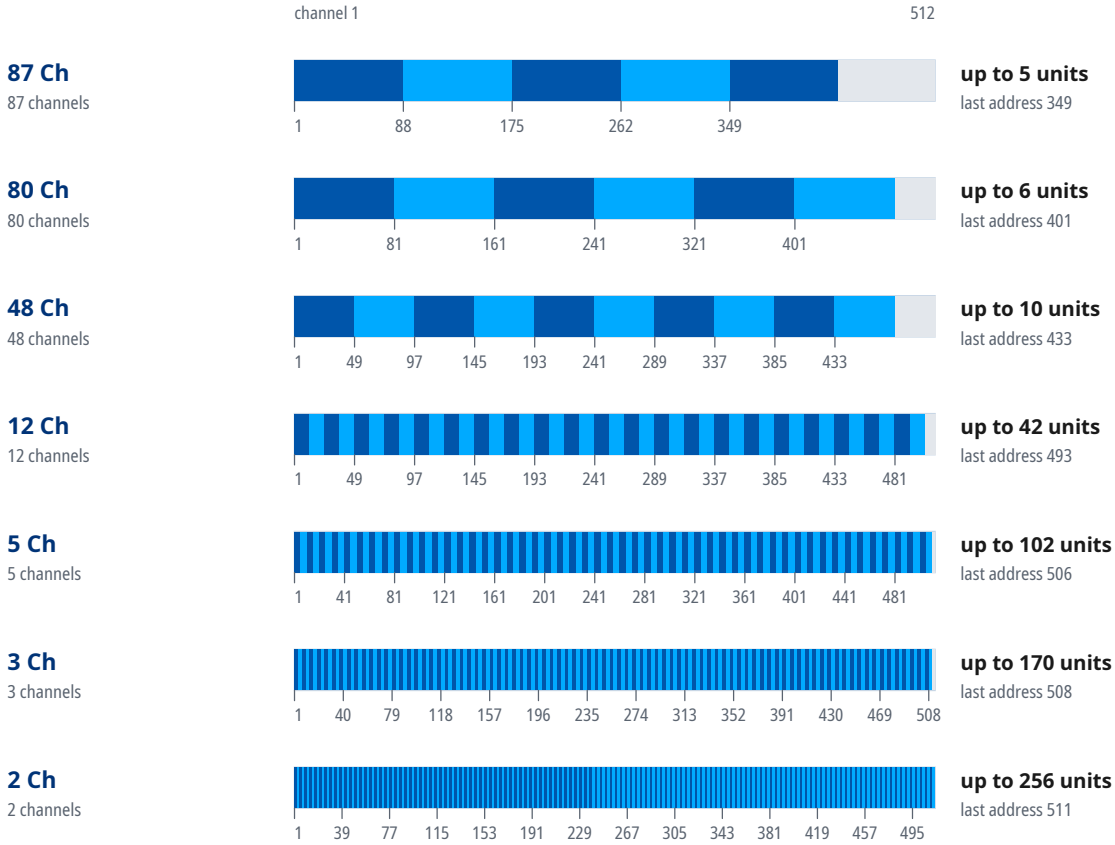


LED	x	y	nm
Red	0.702	0.297	626
Green	0.173	0.711	527
Blue	0.152	0.072	452
White	0.317	0.331	
Amber	0.517	0.461	

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

8 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “87 Ch”

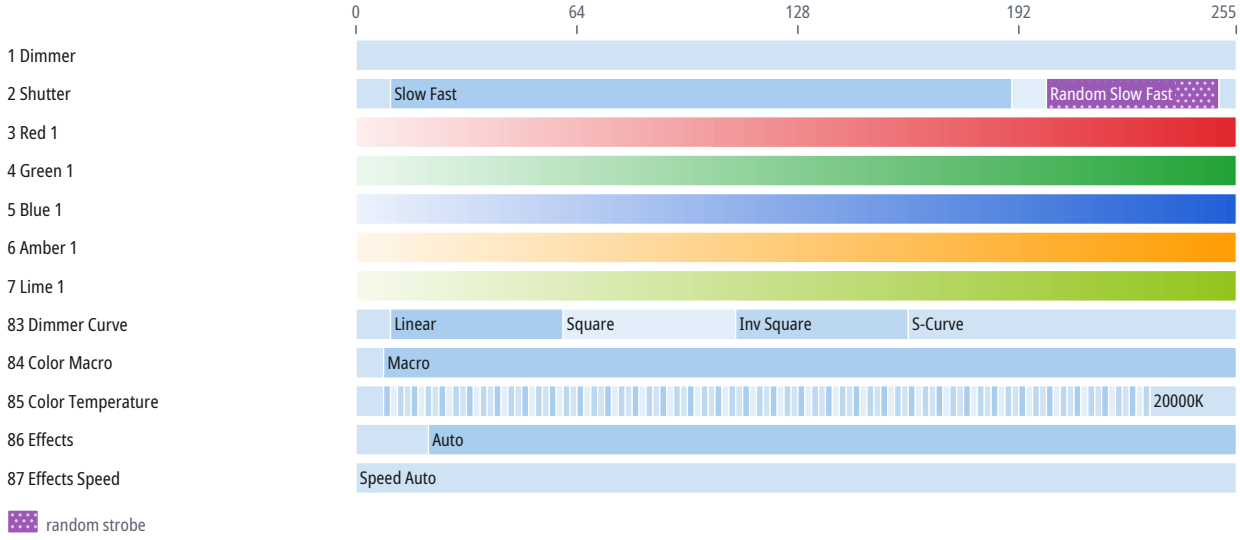
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 1	11	U3 · 1	16	U4 · 1
2	88	7	U2 · 88	12	U3 · 88	17	U4 · 88
3	175	8	U2 · 175	13	U3 · 175	18	U4 · 175
4	262	9	U2 · 262	14	U3 · 262	19	U4 · 262
5	349	10	U2 · 349	15	U3 · 349	20	U4 · 349

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 87 Ch

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Shutter	0–9	No Functions
		10–189	Slow Fast
		190–199	No Functions
		200–249	Random Slow Fast
		250–255	No Functions
3	Red 1	0–255	
4	Green 1	0–255	
5	Blue 1	0–255	
6	Amber 1	0–255	
7	Lime 1	0–255	
83	Dimmer Curve	0–9	No Functions
		10–59	Linear
		60–109	Square
		110–159	Inv Square
		160–255	S-Curve
84	Color Macro	0–7	No Functions
		8–255	Macro
85	Color Temperature	0–7	No Functions
		8–9	1750k
		10–11	1800K
		12–13	1850K
		14–15	1900K
		16–17	1950K

CH	Function	DMX	Description
85	Color Temperature (continued)	18–19	2000K
		20–21	2050K
		22–23	2100K
		24–25	2150K
		26–27	2200K
		28–29	2250K
		30–31	2300K
		32–33	2350K
		34–35	2400K
		36–37	2450K
		38–39	2500K
		40–41	2550K
		42–43	2600K
		44–45	2650K
		46–47	2700K
		48–49	2750K
		50–51	2800K
		52–53	2850K
		54–55	2900K
		56–57	2950K
		58–59	3000K
		60–61	3050K
		62–63	3100K
		64–65	3150K
		66–67	3200K
		68–69	3250K
		70–71	3300K
		72–73	3350K
		74–75	3400K
		76–77	3450K
		78–79	3500K
		80–81	3550K
		82–83	3600K
		84–85	3650K
		86–87	3700K
		88–89	3750K
		90–91	3800K
		92–93	3850K
		94–95	3900K
		96–97	3950K
		98–99	4000K
		100–101	4050K

CH	Function	DMX	Description
85	Color Temperature (continued)	102–103	4100K
		104–105	4150K
		106–107	4200K
		108–109	4250K
		110–111	4300K
		112–113	4350K
		114–115	4400K
		116–117	4450K
		118–119	4500K
		120–121	4550K
		122–123	4600K
		124–125	4650K
		126–127	4700K
		128–129	4750K
		130–131	4800K
		132–133	4850K
		134–135	4900K
		136–137	4950K
		138–139	5000K
		140–141	5050K
		142–143	5100K
		144–145	5150K
		146–147	5200K
		148–149	5250K
		150–151	5300K
		152–153	5350K
		154–155	5400K
		156–157	5450K
		158–159	5500K
		160–161	5550K
		162–163	5600K
		164–165	5650K
		166–167	5700K
		168–169	5750K
		170–171	5800K
		172–173	5850K
		174–175	5900K
		176–177	5950K
		178–179	6000K
		180–181	6250K
		182–183	6500K
		184–185	6750K

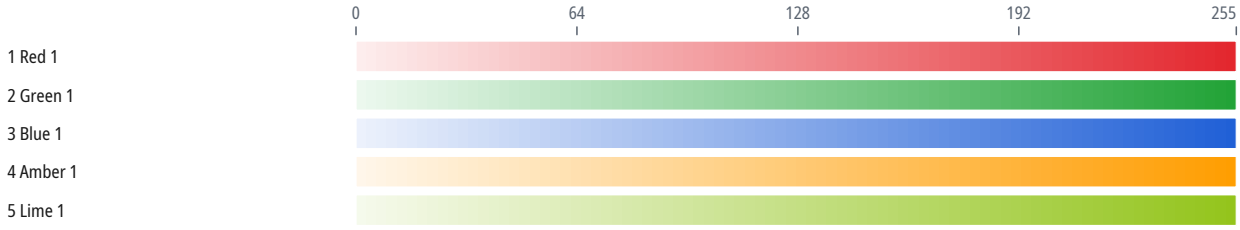
CH	Function	DMX	Description
85	Color Temperature (continued)	186–187	7000K
		188–189	7250K
		190–191	7500K
		192–193	7750K
		194–195	8000K
		196–197	8250K
		198–199	8500K
		200–201	8750K
		202–203	9000K
		204–205	9250K
		206–207	9500K
		208–209	9750K
		210–211	10000K
		212–213	11000K
		214–215	12000K
		216–217	13000K
		218–219	14000K
		220–221	15000K
		222–223	16000K
		224–225	17000K
		226–227	18000K
		228–229	19000K
		230–255	20000K
86	Effects	0–20	No Functions
		21–255	Auto
87	Effects Speed		Speed Auto
		0–255	Speed Auto

CH 3–82: 16 cells of 5 channels each. Every cell works as cell 1 in the table above (CH 3–7); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Amber	Lime	Cell	Red	Green	Blue	Amber	Lime
1	3	4	5	6	7	2	8	9	10	11	12
3	13	14	15	16	17	4	18	19	20	21	22
5	23	24	25	26	27	6	28	29	30	31	32
7	33	34	35	36	37	8	38	39	40	41	42
9	43	44	45	46	47	10	48	49	50	51	52
11	53	54	55	56	57	12	58	59	60	61	62
13	63	64	65	66	67	14	68	69	70	71	72
15	73	74	75	76	77	16	78	79	80	81	82

Mode 80 Ch

Channel functions at a glance



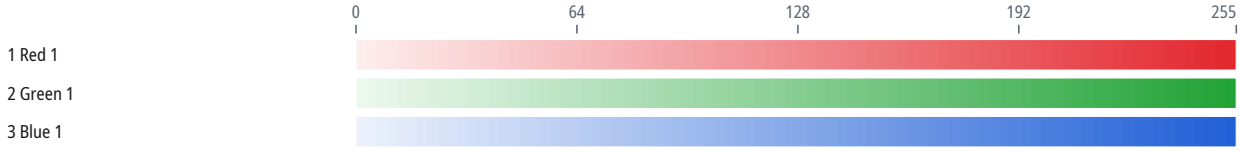
CH	Function	DMX	Description
1	Red 1	0–255	
2	Green 1	0–255	
3	Blue 1	0–255	
4	Amber 1	0–255	
5	Lime 1	0–255	

CH 1–80: 16 cells of 5 channels each. Every cell works as cell 1 in the table above (CH 1–5); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Amber	Lime	Cell	Red	Green	Blue	Amber	Lime
1	1	2	3	4	5	2	6	7	8	9	10
3	11	12	13	14	15	4	16	17	18	19	20
5	21	22	23	24	25	6	26	27	28	29	30
7	31	32	33	34	35	8	36	37	38	39	40
9	41	42	43	44	45	10	46	47	48	49	50
11	51	52	53	54	55	12	56	57	58	59	60
13	61	62	63	64	65	14	66	67	68	69	70
15	71	72	73	74	75	16	76	77	78	79	80

Mode 48 Ch

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Green 1	0–255	
3	Blue 1	0–255	

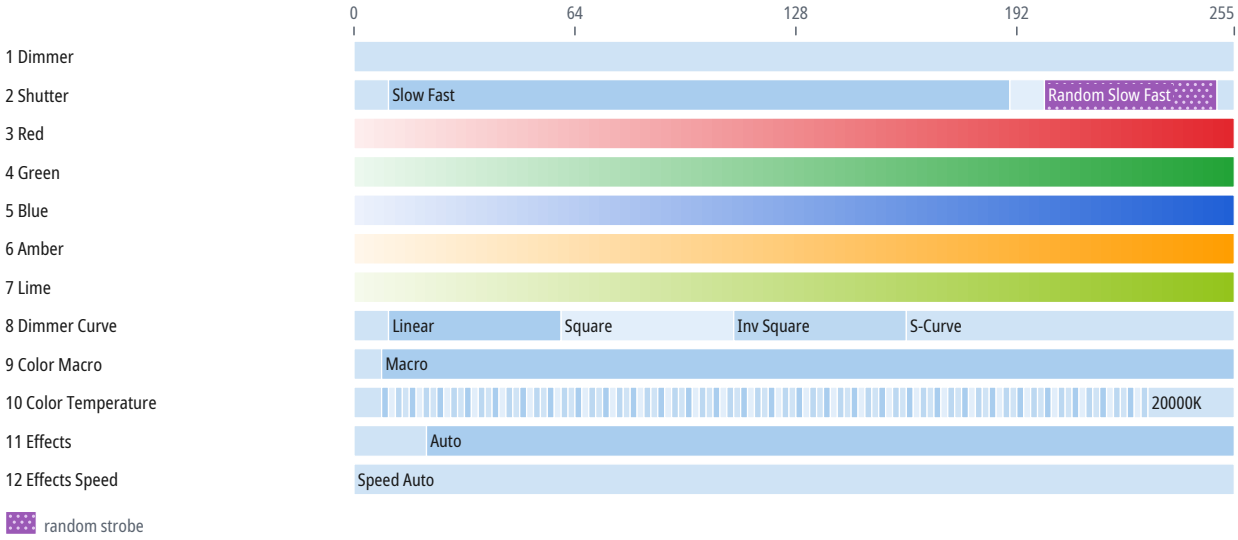
CH 1–48: 16 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 1–3); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	1	2	3	2	4	5	6	3	7	8	9
4	10	11	12	5	13	14	15	6	16	17	18
7	19	20	21	8	22	23	24	9	25	26	27
10	28	29	30	11	31	32	33	12	34	35	36
13	37	38	39	14	40	41	42	15	43	44	45
16	46	47	48								

Mode 12 Ch

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0.

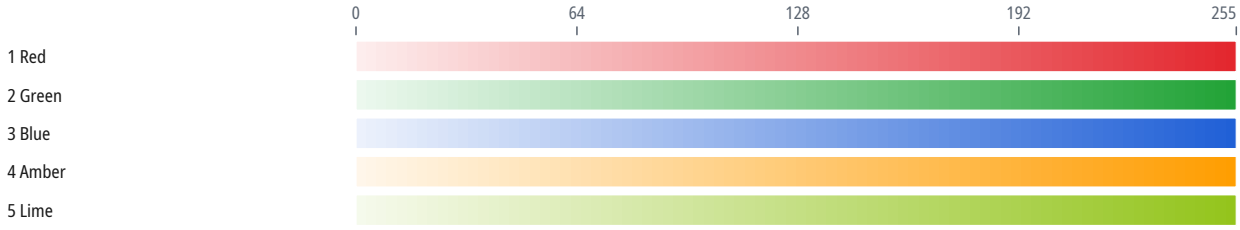
Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Shutter		Same as CH 2 in the mode “87 Ch” (p. 9)
3	Red	0–255	
4	Green	0–255	
5	Blue	0–255	
6	Amber	0–255	
7	Lime	0–255	
8	Dimmer Curve		Same as CH 83 in the mode “87 Ch” (p. 9)
9	Color Macro		Same as CH 84 in the mode “87 Ch” (p. 9)
10	Color Temperature		Same as CH 85 in the mode “87 Ch” (p. 9)
11	Effects		Same as CH 86 in the mode “87 Ch” (p. 12)
12	Effects Speed		Same as CH 87 in the mode “87 Ch” (p. 12)

Mode 5 Ch

Channel functions at a glance

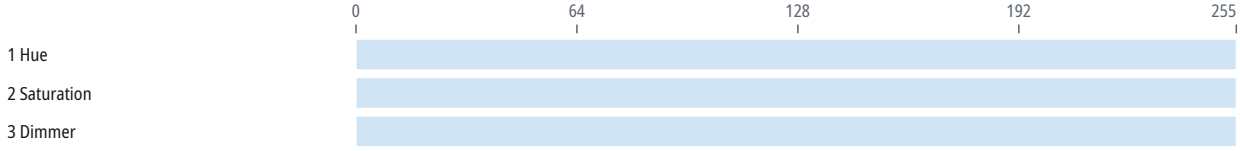


CH	Function	DMX	Description
1	Red	0–255	
2	Green	0–255	
3	Blue	0–255	
4	Amber	0–255	
5	Lime	0–255	

Mode 3 Ch

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Dimmer above 0.

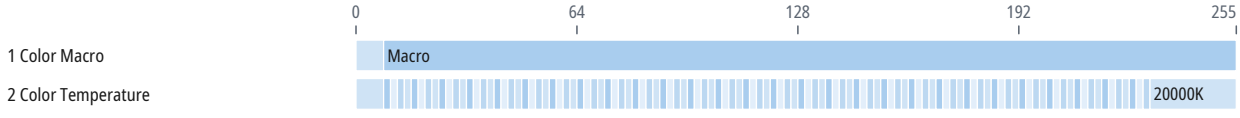
Channel functions at a glance



CH	Function	DMX	Description
1	Hue	0–255	
2	Saturation	0–255	
3	Dimmer	0–255	

Mode 2 Ch

Channel functions at a glance

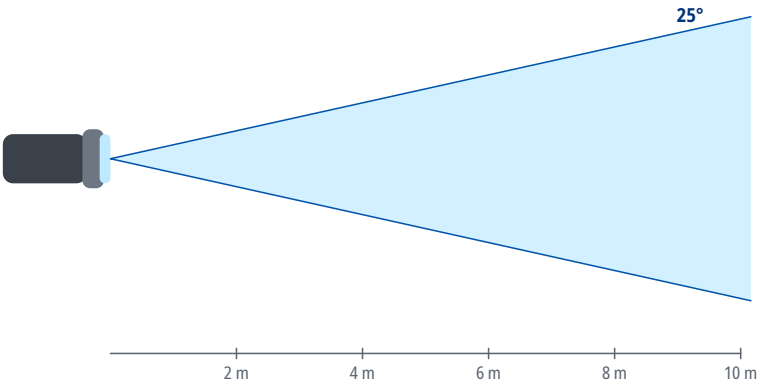


CH	Function	DMX	Description
1	Color Macro		Same as CH 84 in the mode “87 Ch” (p. 9)
2	Color Temperature		Same as CH 85 in the mode “87 Ch” (p. 9)

9 Technical specifications

Parameter	Value
Light source	LED
DMX connection	5-pin XLR IN/OUT
RDM	yes (manufacturer ID 0x1221, device model ID 0x1101)
Power supply	100–240 V, 50/60 Hz
Power consumption	30 W
Power connectors	powerCON TRUE1 IN
Operating temperature	0 to 40 °C

Spot diameter



Distance	Ø 25°
2 m	0.89 m
4 m	1.8 m
6 m	2.7 m
8 m	3.5 m
10 m	4.4 m
15 m	6.7 m

Spot diameter square to the beam axis, calculated from the beam angle.

10 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.

11 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.

12 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.