DMX REFERENCE

Aqubar16P

Aqubar16P RGBW

Sagitter

Manufacturer	Sagitter
GDTF file	Sagitter_Aqubar16P_137538.gdtf
GDTF revision	07/04/2026 · 2026-04-07
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Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Installation 5
5 Connections 5
6 Operation 6
7 Functions at a glance 6
8 DMX channels 8
Mode 73 Ch 9
Mode 64 Ch 13
Mode 13 Ch 14
Mode 7 Ch 15
Mode 4b Ch 15
Mode 4 Ch 16
Mode 13 Ch 1 16
9 Technical specifications 17
10 Maintenance and cleaning 17
11 Troubleshooting 18
12 Disposal 18

1 About this manual

This document describes the Aqubar16P RGBW by Sagitter. It was compiled from the GDTF file Sagitter_Aqubar16P_137538.gdtf from the GDTF-Share library.

File revision: “07/04/2026”.

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
Weight	9.2 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
73 Ch	73	7	1, 74, 147, 220, ...
64 Ch	64	8	1, 65, 129, 193, ...
13 Ch	13	39	1, 14, 27, 40, ...
7 Ch	7	73	1, 8, 15, 22, ...
4b Ch	4	128	1, 5, 9, 13, ...
4 Ch	4	128	1, 5, 9, 13, ...
13 Ch 1	3	170	1, 4, 7, 10, ...

No light? Check these channels

- 73 Ch: CH 1 Dimmer above 0; CH 3 Strobe at 0–9, 110–119, 180–189 or 250–255
- 13 Ch: CH 1 Dimmer above 0; CH 3 Strobe at 0–9, 110–119, 180–189 or 250–255
- 7 Ch: CH 1 Dimmer above 0; CH 2 Strobe at 0–9, 110–119, 180–189 or 250–255


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

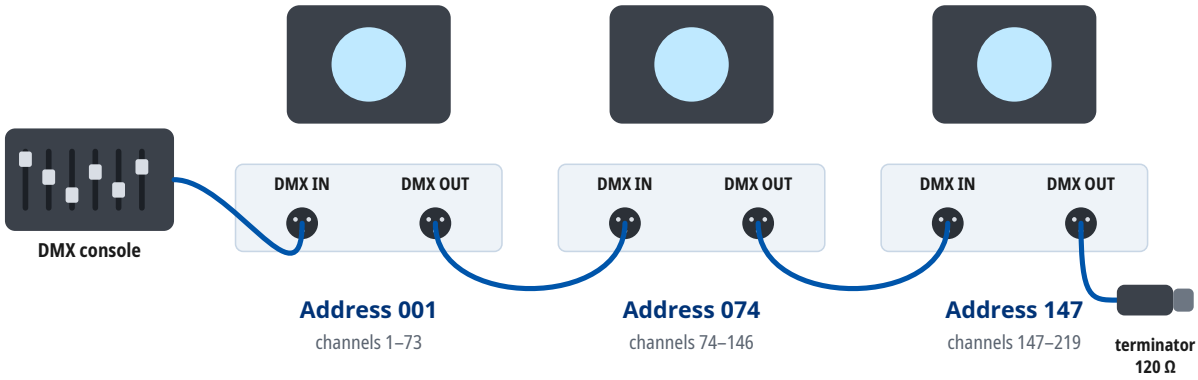
⚠ **WARNING**

- 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.
- Weight of the device: 9.15 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.

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 73 Ch: every unit occupies 73 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

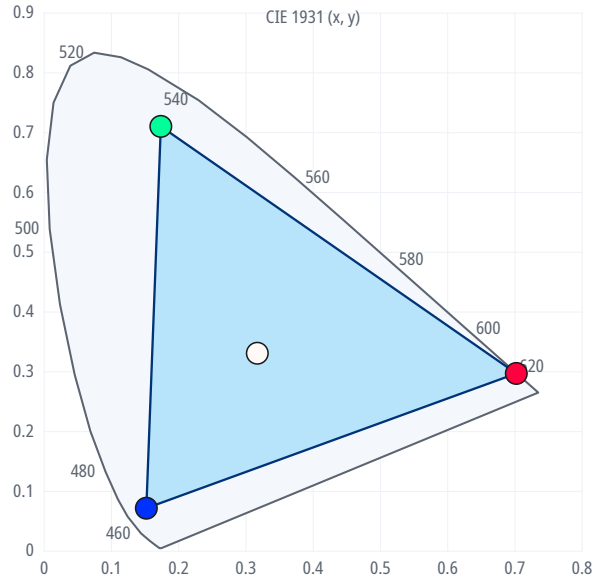
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “73 Ch”: 73.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “73 Ch”, you can use, for example, the start addresses 1, 74, 147, 220.
- 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

	73 Ch 73 channels	64 Ch 64 channels	13 Ch 13 channels	7 Ch 7 channels	4b Ch 4 channels	4 Ch 4 channels	13 Ch 1 3 channels
Dimmer	1	✓	1	1	✓		✓
Dimmer resolution	16 bit		16 bit	8 bit			
Shutter / strobe	3		3	2			
Color mixing	4–67	1–64	4–7	3–6	1–4		
Effects / macros	68, 70–72		8, 10–12				1
Pixel control	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	

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

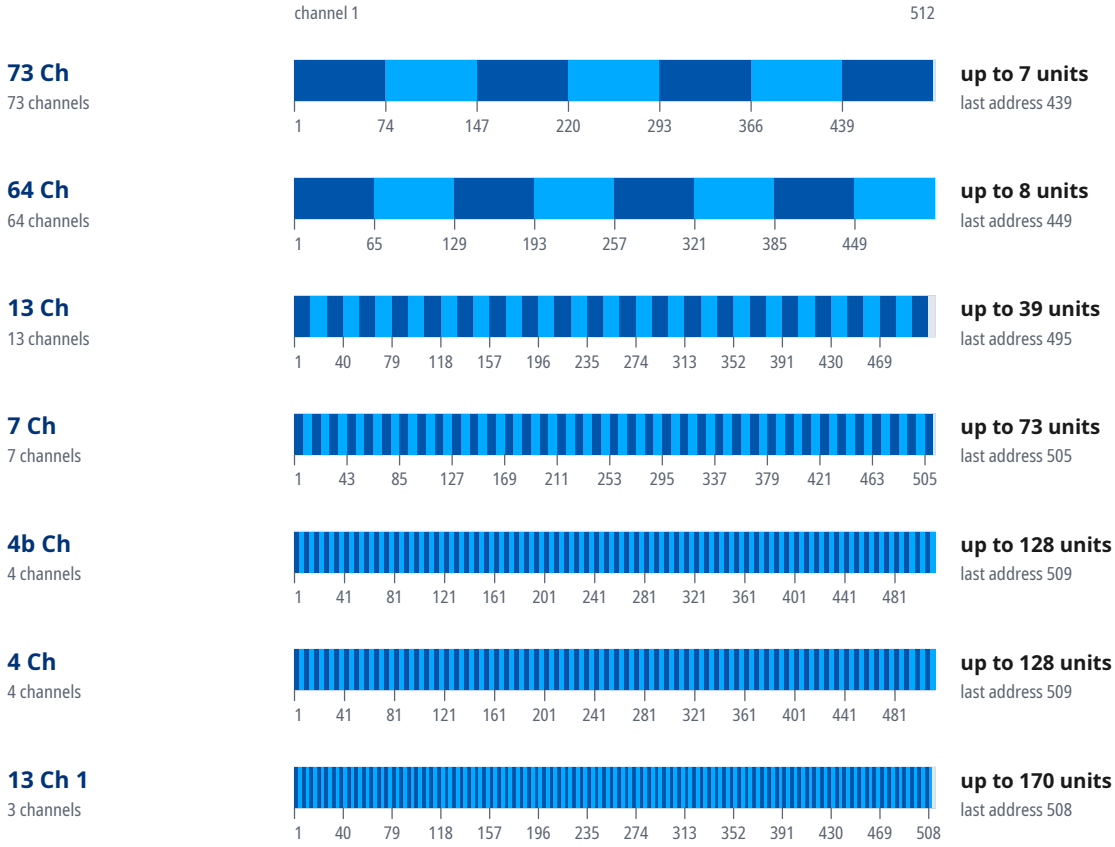
Cells (pixels)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CH 4	CH 8	CH 12	CH 16	CH 20	CH 24	CH 28	CH 32	CH 36	CH 40	CH 44	CH 48	CH 52	CH 56	CH 60	CH 64

16 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “73 Ch”.

8 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “73 Ch”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	366	11	U2 · 220	16	U3 · 74
2	74	7	439	12	U2 · 293	17	U3 · 147
3	147	8	U2 · 1	13	U2 · 366	18	U3 · 220
4	220	9	U2 · 74	14	U2 · 439	19	U3 · 293
5	293	10	U2 · 147	15	U3 · 1	20	U3 · 366

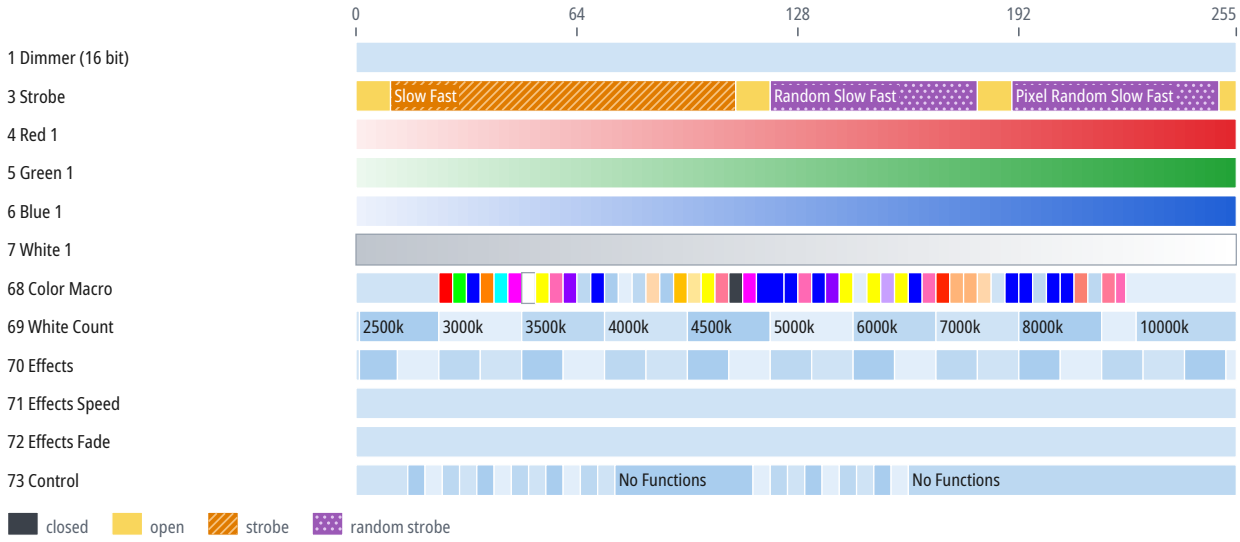
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 73 Ch

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 3 Strobe at 0–9, 110–119, 180–189 or 250–255. The GDTF file gives these values for a console's Highlight function: CH 4 Red 255 (the same in each of the 16 cells), CH 5 Green 255 (the same in each of the 16 cells), CH 6 Blue 255 (the same in each of the 16 cells), CH 7 White 255 (the same in each of the 16 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Strobe	0–9	Led On
		10–109	Slow Fast
		110–119	Led On
		120–179	Random Slow Fast
		180–189	Led On
		190–249	Pixel Random Slow Fast
		250–255	Led On
4	Red 1	0–255	
5	Green 1	0–255	
6	Blue 1	0–255	
7	White 1	0–255	
68	Color Macro	0–23	No Functions
		24–27	Red
		28–31	Green
		32–35	Blue
		36–39	Orange
		40–43	Cyan
		44–47	Magenta

CH	Function	DMX	Description
68	Color Macro (continued)	48–51	White
		52–55	Yellow
		56–59	Pink
		60–63	Violet
		64–67	Aquamarine
		68–71	Pale Blue
		72–75	Full White
		76–79	Coll White
		80–83	Day Light
		84–87	Warm White
		88–91	Tungsten
		92–95	Medium Amber
		96–99	Straw
		100–103	Spring Yellow
		104–107	Light Rose
		108–111	Dark Pink
		112–115	Magenta 2
		116–123	Med blue gree
		124–127	Blue 2
		128–131	Bright Pink
		132–135	Medium Blue
		136–139	Violet
		140–143	Medium Yellow
		144–147	Apricot
		148–151	Pale Yellow
		152–155	Pale Lavender
		156–159	Pale Yellow 2
		160–163	Evening Blue
		164–167	Surprise Pink
		168–171	Scarlet
		172–175	Surprise Peach
		176–179	Light Peach
		180–183	Warm White 2
		184–187	Mauve
		188–191	Bright Blue
		192–195	Alice Blue
		196–199	Rose Indigo
		200–203	Urban Blue
		204–207	Cool Blue
		208–211	Light Salmon
		212–215	Mayan Sun
		216–219	Cherry Rose

CH	Function	DMX	Description
68	Color Macro (continued)	220–222	Flesh Pink
		223–255	Skelton Excotic Sangria
69	White Count	0	No Functions
		1–23	2500k
		24–47	3000k
		48–71	3500k
		72–95	4000k
		96–119	4500k
		120–143	5000k
		144–167	6000k
		168–191	7000k
		192–215	8000k
		216–225	9000k
		226–255	10000k
70	Effects	0	No Functions
		1–11	Auto Mode 1
		12–23	Auto Mode 2
		24–35	Auto Mode 3
		36–47	Auto Mode 4
		48–59	Auto Mode 5
		60–71	Auto Mode 6
		72–83	Auto Mode 7
		84–95	Auto Mode 8
		96–107	Auto Mode 9
		108–119	Auto Mode 10
		120–131	Auto Mode 11
		132–143	Auto Mode 12
		144–155	Auto Mode 13
		156–167	Auto Mode 14
		168–179	Auto Mode 15
		180–191	Auto Mode 16
		192–203	Auto Mode 17
		204–215	Auto Mode 18
		216–227	Auto Mode 19
		228–239	Auto Mode 20
		240–251	Auto Mode 21
		252–255	Auto Mode 22
71	Effects Speed	0–255	
72	Effects Fade	0–255	
73	Control	0–14	No Functions
		15–19	Pixel orientation ON
		20–24	Pixel orientation Off

CH	Function	DMX	Description
73	Control (continued)	25–29	No Functions
		30–34	Dimmer Linear
		35–39	Dimmer Square
		40–44	Dimmer InvSquare
		45–49	Dimmer S-Curve
		50–54	No Functions
		55–59	Dimmer Speed 1
		60–64	Dimmer Speed 2
		65–69	Dimmer Speed 3
		70–74	Dimmer Speed 4
		75–114	No Functions
		115–119	600 hz
		120–124	1200 hz
		125–129	2400 hz
		130–134	4800 hz
		135–139	9600 hz
		140–144	12000 hz
		145–149	1800 hz
		150–154	No Functions
		155–159	Reset
		160–255	No Functions

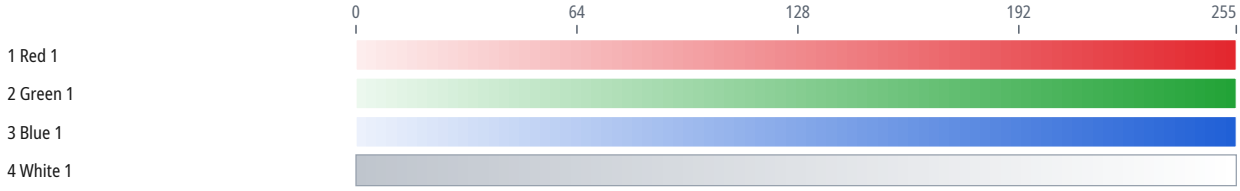
CH 4–67: 16 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 4–7); the table below gives each cell's channel numbers.

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

Mode 64 Ch

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255 (the same in each of the 16 cells), CH 2 Green 255 (the same in each of the 16 cells), CH 3 Blue 255 (the same in each of the 16 cells), CH 4 White 255 (the same in each of the 16 cells).

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	White 1	0–255	

CH 1–64: 16 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 1–4); the table below gives each cell's channel numbers.

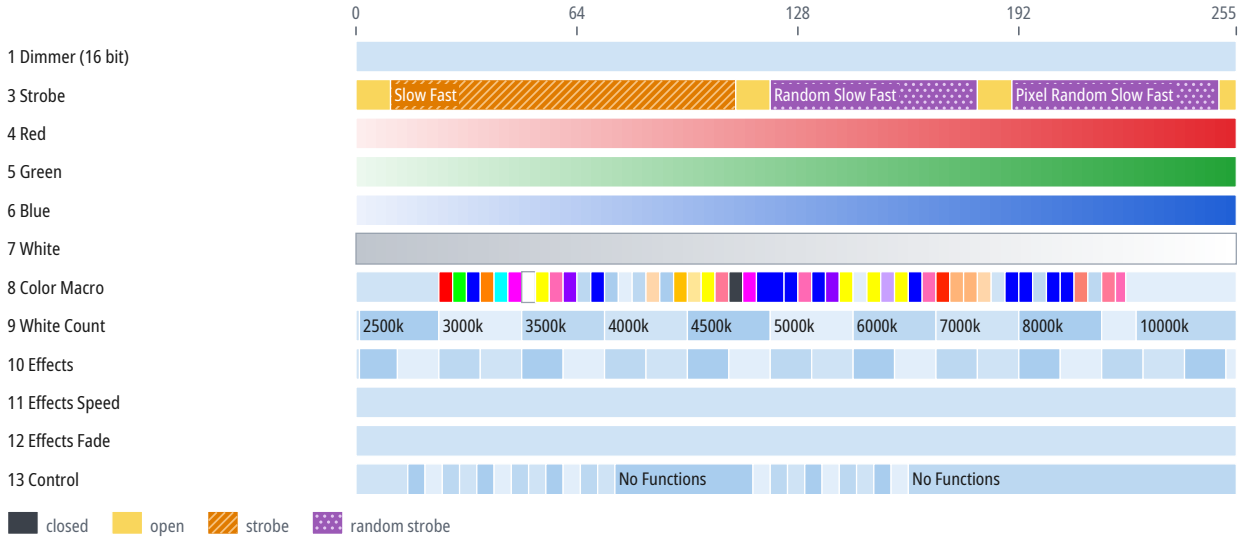
Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	1	2	3	4	2	5	6	7	8
3	9	10	11	12	4	13	14	15	16
5	17	18	19	20	6	21	22	23	24
7	25	26	27	28	8	29	30	31	32
9	33	34	35	36	10	37	38	39	40
11	41	42	43	44	12	45	46	47	48
13	49	50	51	52	14	53	54	55	56
15	57	58	59	60	16	61	62	63	64

Mode 13 Ch

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 3 Strobe at 0–9, 110–119, 180–189 or 250–255. The GDTF file gives these values for a console's Highlight function: CH 4 Red 255, CH 5 Green 255, CH 6 Blue 255, CH 7 White 255.

Channel functions at a glance

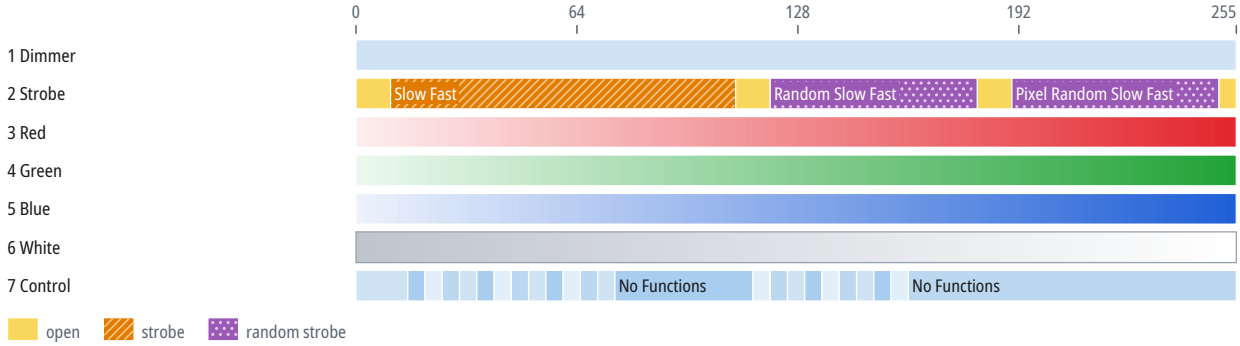


CH	Function	DMX	Description
1	Dimmer	0–255	
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Strobe		Same as CH 3 in the mode “73 Ch” (p. 9)
4	Red	0–255	
5	Green	0–255	
6	Blue	0–255	
7	White	0–255	
8	Color Macro		Same as CH 68 in the mode “73 Ch” (p. 9)
9	White Count		Same as CH 69 in the mode “73 Ch” (p. 11)
10	Effects		Same as CH 70 in the mode “73 Ch” (p. 11)
11	Effects Speed	0–255	
12	Effects Fade	0–255	
13	Control		Same as CH 73 in the mode “73 Ch” (p. 11)

Mode 7 Ch

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 2 Strobe at 0–9, 110–119, 180–189 or 250–255. The GDTF file gives these values for a console's Highlight function: CH 3 Red 255, CH 4 Green 255, CH 5 Blue 255, CH 6 White 255.

Channel functions at a glance

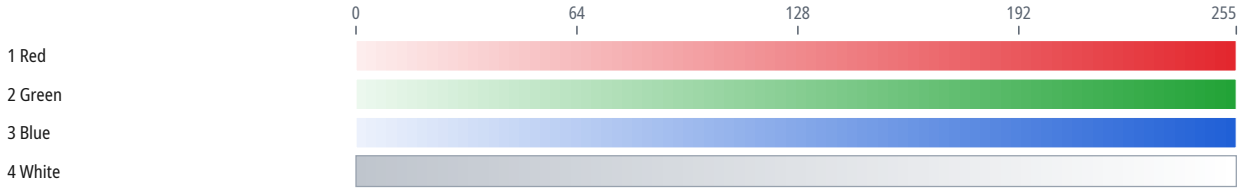


CH	Function	DMX	Description
1	Dimmer	0–255	
2	Strobe		Same as CH 3 in the mode “73 Ch” (p. 9)
3	Red	0–255	
4	Green	0–255	
5	Blue	0–255	
6	White	0–255	
7	Control		Same as CH 73 in the mode “73 Ch” (p. 11)

Mode 4b Ch

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.

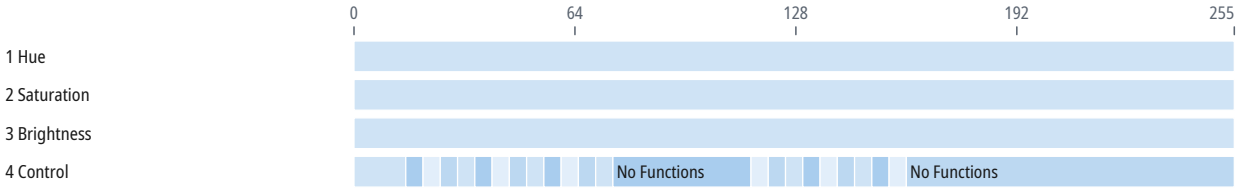
Channel functions at a glance



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

Mode 4 Ch

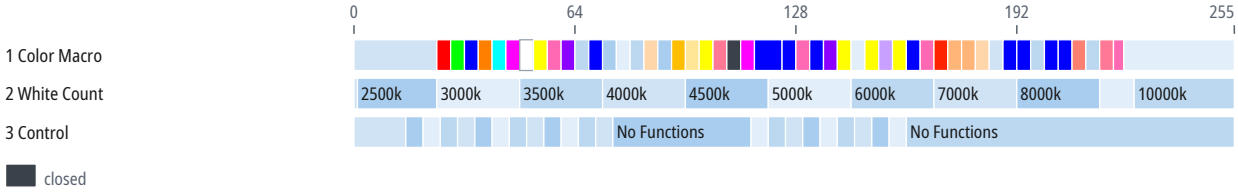
Channel functions at a glance



CH	Function	DMX	Description
1	Hue	0–255	
2	Saturation	0–255	
3	Brightness	0–255	
4	Control		Same as CH 73 in the mode “73 Ch” (p. 11)

Mode 13 Ch 1

Channel functions at a glance

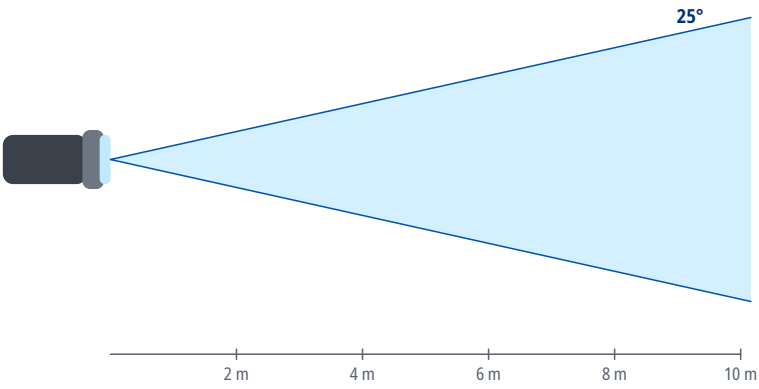


CH	Function	DMX	Description
1	Color Macro		Same as CH 68 in the mode “73 Ch” (p. 9)
2	White Count		Same as CH 69 in the mode “73 Ch” (p. 11)
3	Control		Same as CH 73 in the mode “73 Ch” (p. 11)

9 Technical specifications

Parameter	Value
Light	
Light source	LED
Control	
DMX connection	5-pin XLR IN/OUT
RDM	yes (manufacturer ID 0x1221, device model ID 0x000D)
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	30 W
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	9.2 kg
Operating environment	
Operating temperature	5 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.