DMX REFERENCE

BS1100IP Outdoor Stroboscope

User Test



Manufacturer	User Test
GDTF file	User_Test_BS1100IP_Outdoor_Stroboscope_79009.gdtf
GDTF revision	BS1100IP · 2024-11-21
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1 About this manual

This document describes the BS1100IP Outdoor Stroboscope by User Test. It was compiled from the GDTF file User_Test_BS1100IP_Outdoor_Stroboscope_79009.gdtf from the GDTF-Share library.

File revision: “BS1100IP”.

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 User Test; 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	7 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
4 Channels	4	128	1, 5, 9, 13, ...
17 Channels	17	30	1, 18, 35, 52, ...
129 Channels	129	3	1, 130, 259

No light? Check these channels

- 17 Channels: CH 1 Dimmer 1 above 0; CH 15 Dimmer 2 above 0
- 129 Channels: CH 1 Dimmer 1 above 0; CH 15 Dimmer 2 above 0; CH 18 Dimmer above 0 (the same in each of the 16 cells)



Read the manual before use



Do not stare into the light

3 Safety instructions



Read the manual before use



Do not stare into the light

⚠ 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.

⚠ CAUTION

- The device is rated IP65 and may be used outdoors within the limits of this rating.
- This protection is effective only when all connectors are mated or closed with their protective caps and all seals are intact. Use cables and connectors with the same or a higher protection rating.
- Do not open the housing; opening it breaks the seals and the protection rating can no longer be guaranteed.
- Install the device so that water cannot collect around connectors and cable glands, and inspect seals and cables regularly.

⚠ 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

“The BS1100IP is a powerful multi-use fixture and is specially designed to be used as a strobe or blinder, thanks to the 768 SMD LEDs. The LED panel is divided in 96 sections and can flash in any colour you desire thanks to its RGB mixing system. This strobe is also equipped with a strip of 128 white SMD LEDs in the centre of the fixture, controllable in 16 different sections to create the traditional look of a strobe. The BS1100IP makes it possible to create unique colourful effects and control is easy via DMX or in stand-alone mode with automatic function. Dust and water-resistant, the IP65 rating guarantees reliable performance in any weather condition. Suitable for all kind of indoor and outdoor shows and events.”

5 Installation

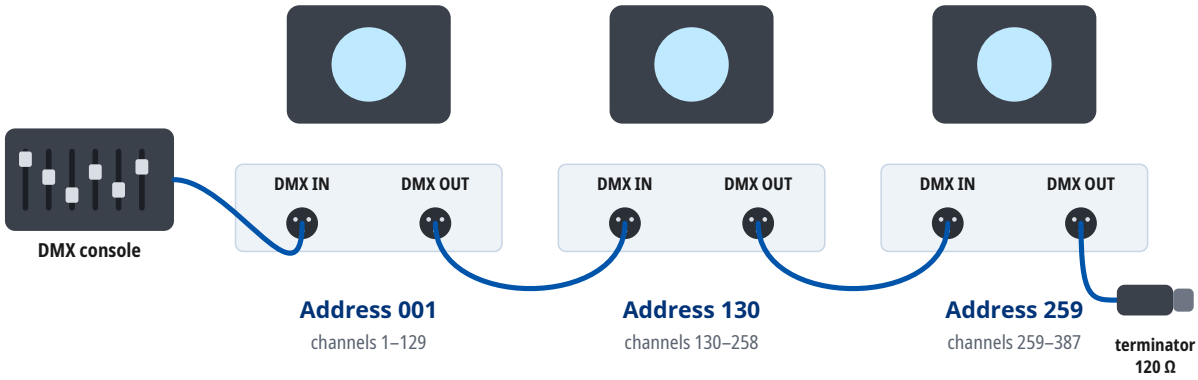
⚠ **WARNING**

- 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: 7.05 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 129 Channels: every unit occupies 129 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 “129 Channels”: 129.
- 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 “129 Channels”, you can use, for example, the start addresses 1, 130, 259.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

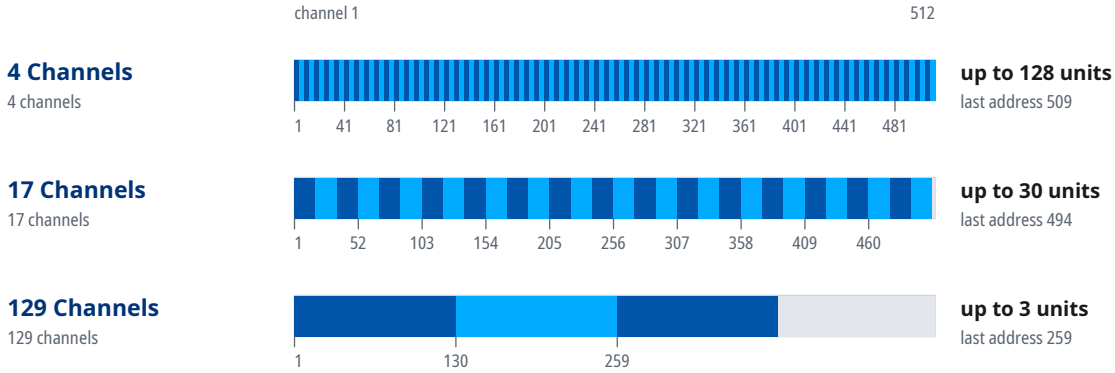
8 Functions at a glance

Functions in each DMX mode

	4 Channels 4 channels	17 Channels 17 channels	129 Channels 129 channels
Dimmer		1, 15	1, 15, 18–33
Shutter / strobe		2	2
Color mixing	1–4	3–6	3–6, 34–129
Animation wheel		16, 17	16, 17
Effects / macros		7, 9, 10	7, 9, 10
Pixel control			16 + 32 cells

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “129 Channels”

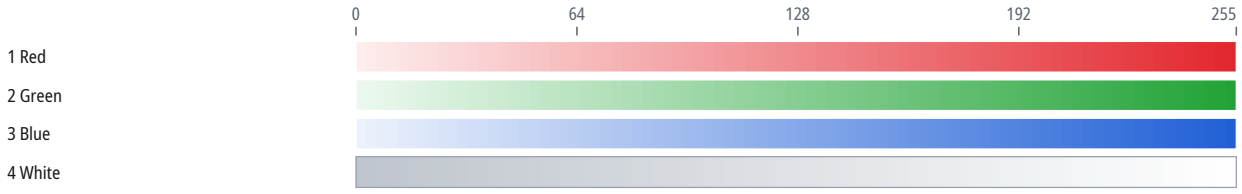
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 259	11	U4 · 130	16	U6 · 1
2	130	7	U3 · 1	12	U4 · 259	17	U6 · 130
3	259	8	U3 · 130	13	U5 · 1	18	U6 · 259
4	U2 · 1	9	U3 · 259	14	U5 · 130	19	U7 · 1
5	U2 · 130	10	U4 · 1	15	U5 · 259	20	U7 · 130

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 4 Channels

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

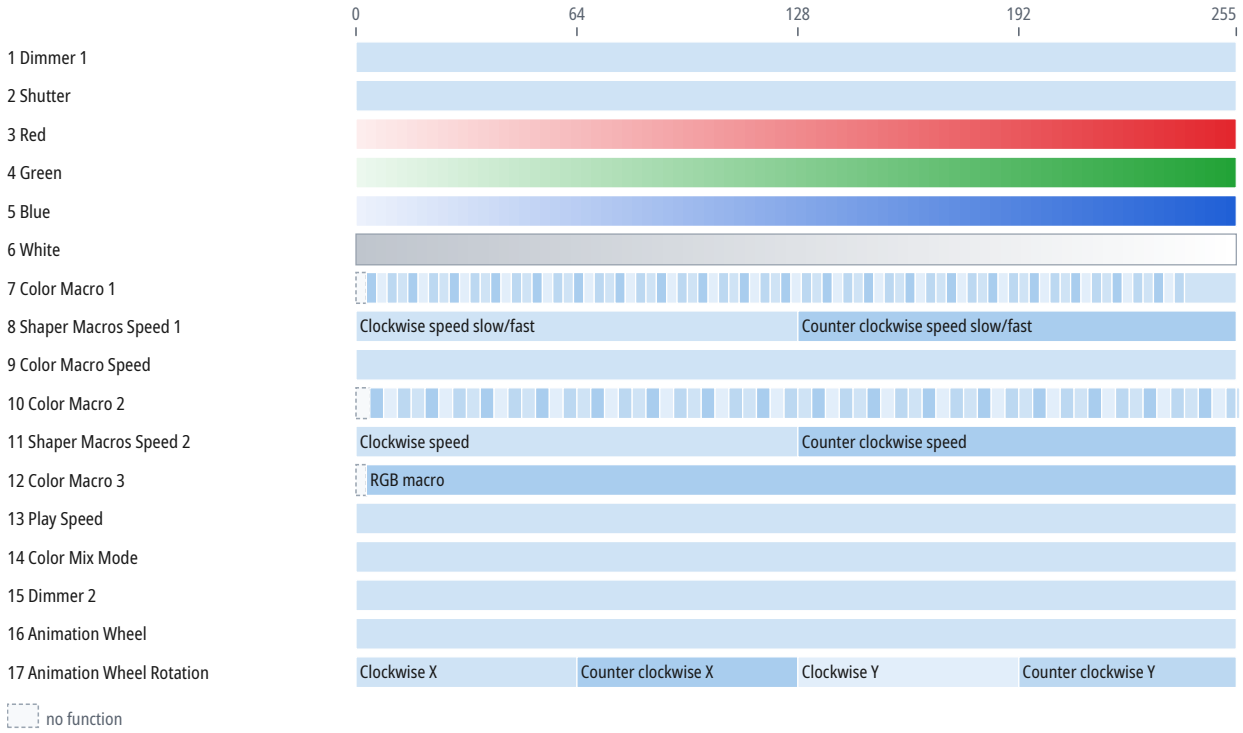


CH	Function	DMX	Description
1	Red	0–255	
2	Green	0–255	
3	Blue	0–255	
4	White	0–255	

Mode 17 Channels

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 15 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 3 Red 255, CH 4 Green 255, CH 5 Blue 255, CH 6 White 255, CH 7 Color Macro 1 255, CH 15 Dimmer 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Shutter	0–255	
3	Red	0–255	
4	Green	0–255	
5	Blue	0–255	
6	White	0–255	
7	Color Macro 1	0–2	No Function
		3–5	Macro 1
		6–8	Macro 2
		9–11	Macro 3
		12–14	Macro 4
		15–17	Macro 5
		18–20	Macro 6
		21–23	Macro 7
		24–26	Macro 8
		27–29	Macro 9
		30–32	Macro 10

CH	Function	DMX	Description
7	Color Macro 1 (continued)	33–35	Macro 11
		36–38	Macro 12
		39–41	Macro 13
		42–44	Macro 14
		45–47	Macro 15
		48–50	Macro 16
		51–53	Macro 17
		54–56	Macro 18
		57–59	Macro 19
		60–62	Macro 20
		63–65	Macro 21
		66–68	Macro 22
		69–71	Macro 23
		72–74	Macro 24
		75–77	Macro 25
		78–80	Macro 26
		81–83	Macro 27
		84–86	Macro 28
		87–89	Macro 29
		90–92	Macro 30
		93–95	Macro 31
		96–98	Macro 32
		99–101	Macro 33
		102–104	Macro 34
		105–107	Macro 35
		108–110	Macro 36
		111–113	Macro 37
		114–116	Macro 38
		117–119	Macro 39
		120–122	Macro 40
		123–125	Macro 41
		126–128	Macro 42
		129–131	Macro 43
		132–134	Macro 44
		135–137	Macro 45
		138–140	Macro 46
		141–143	Macro 47
		144–146	Macro 48
		147–149	Macro 49
		150–152	Macro 50
		153–155	Macro 51
		156–158	Macro 52

CH	Function	DMX	Description
7	Color Macro 1 (continued)	159–161	Macro 53
		162–164	Macro 54
		165–167	Macro 55
		168–170	Macro 56
		171–173	Macro 57
		174–176	Macro 58
		177–179	Macro 59
		180–182	Macro 60
		183–185	Macro 61
		186–188	Macro 62
		189–191	Macro 63
		192–194	Macro 64
		195–197	Macro 65
		198–200	Macro 66
		201–203	Macro 67
		204–206	Macro 68
		207–209	Macro 69
		210–212	Macro 70
		213–215	Macro 71
		216–218	Macro 72
		219–221	Macro 73
		222–224	Macro 74
		225–227	Macro 75
		228–230	Macro 76
		231–233	Macro 77
		234–236	Macro 78
		237–239	Macro 79
		240–255	Multi macro
8	Shaper Macros Speed 1	0–127	Clockwise speed slow/fast
		128–255	Counter clockwise speed slow/fast
9	Color Macro Speed	0–255	
10	Color Macro 2	0–3	No Function
		4–7	Macro 1
		8–11	Macro 2
		12–15	Macro 3
		16–19	Macro 4
		20–23	Macro 5
		24–27	Macro 6
		28–31	Macro 7
		32–35	Macro 8
		36–39	Macro 9
		40–43	Macro 10

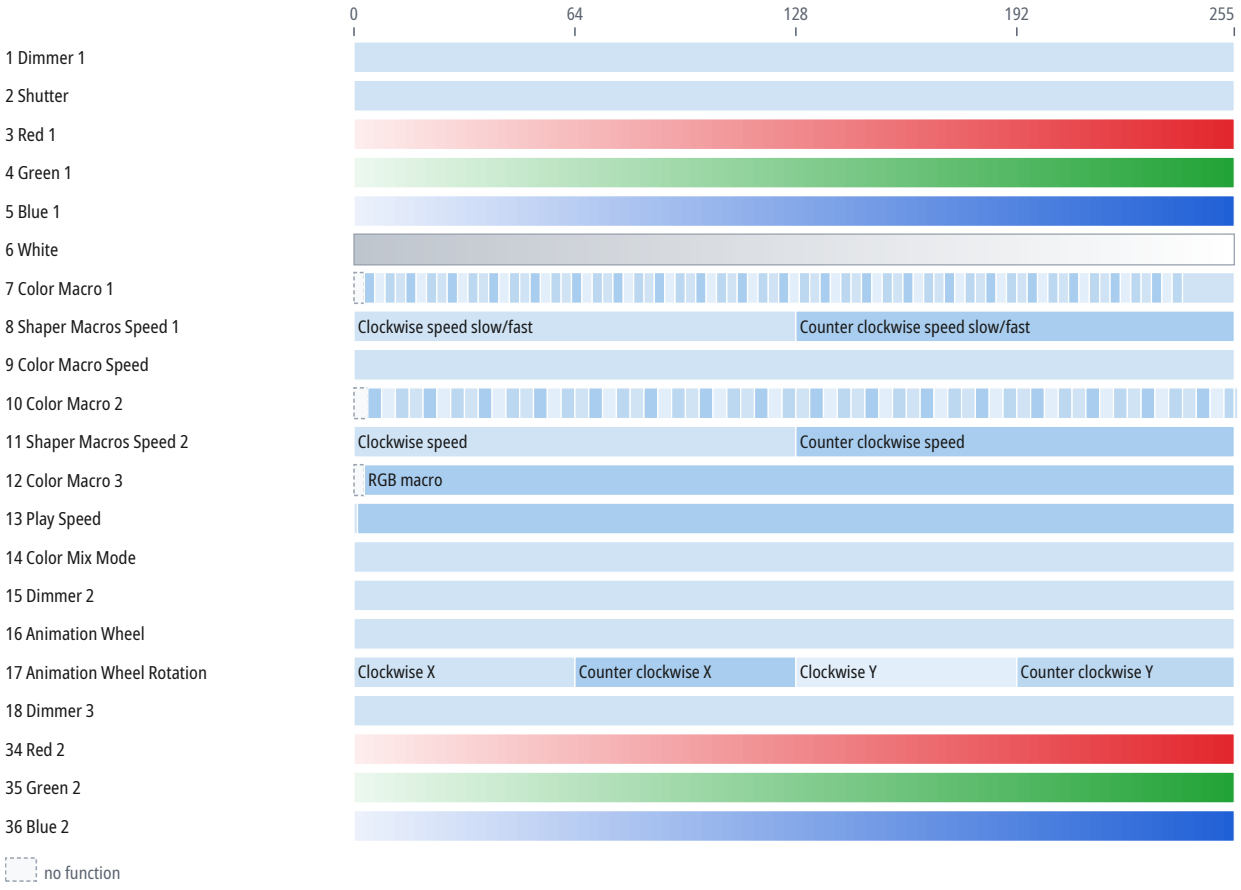
CH	Function	DMX	Description
10	Color Macro 2 (continued)	44–47	Macro 11
		48–51	Macro 12
		52–55	Macro 13
		56–59	Macro 14
		60–63	Macro 15
		64–67	Macro 16
		68–71	Macro 17
		72–75	Macro 18
		76–79	Macro 19
		80–83	Macro 20
		84–87	Macro 21
		88–91	Macro 22
		92–95	Macro 23
		96–99	Macro 24
		100–103	Macro 25
		104–107	Macro 26
		108–111	Macro 27
		112–115	Macro 28
		116–119	Macro 29
		120–123	Macro 30
		124–127	Macro 31
		128–131	Macro 32
		132–135	Macro 33
		136–139	Macro 34
		140–143	Macro 35
		144–147	Macro 36
		148–151	Macro 37
		152–155	Macro 38
		156–159	Macro 39
		160–163	Macro 40
		164–167	Macro 41
		168–171	Macro 42
		172–175	Macro 43
		176–179	Macro 44
		180–183	Macro 45
		184–187	Macro 46
		188–191	Macro 47
		192–195	Macro 48
		196–199	Macro 49
		200–203	Macro 50
		204–207	Macro 51
		208–211	Macro 52

CH	Function	DMX	Description
10	Color Macro 2 (continued)	212–215	Macro 53
		216–219	Macro 54
		220–223	Macro 55
		224–227	Macro 56
		228–231	Macro 57
		232–235	Macro 58
		236–239	Macro 59
		240–243	Macro 61
		244–247	Macro 62
		248–251	Multi Macro
		252–254	Multi Macro ... Macro 60
		255	Macro 60
11	Shaper Macros Speed 2	0–127	Clockwise speed
		128–255	Counter clockwise speed
12	Color Macro 3	0–2	No Function
		3–255	RGB macro
13	Play Speed	0–255	
14	Color Mix Mode	0–255	
15	Dimmer 2	0–255	
16	Animation Wheel	0–255	
17	Animation Wheel Rotation	0–63	Clockwise X
		64–127	Counter clockwise X
		128–191	Clockwise Y
		192–255	Counter clockwise Y

Mode 129 Channels

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 15 Dimmer 2 above 0; CH 18 Dimmer above 0 (the same in each of the 16 cells). The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 3 Red 1 255, CH 4 Green 1 255, CH 5 Blue 1 255, CH 6 White 255, CH 15 Dimmer 2 255, CH 18 Dimmer 255 (the same in each of the 16 cells), CH 34 Red 255 (the same in each of the 32 cells), CH 35 Green 255 (the same in each of the 32 cells), CH 36 Blue 255 (the same in each of the 32 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Shutter	0–255	
3	Red 1	0–255	
4	Green 1	0–255	
5	Blue 1	0–255	
6	White	0–255	
7	Color Macro 1		Same as CH 7 in the mode “17 Channels” (p. 8)
8	Shaper Macros Speed 1		Same as CH 8 in the mode “17 Channels” (p. 10)
9	Color Macro Speed	0–255	
10	Color Macro 2		Same as CH 10 in the mode “17 Channels” (p. 10)
11	Shaper Macros Speed 2		Same as CH 11 in the mode “17 Channels” (p. 12)
12	Color Macro 3		Same as CH 12 in the mode “17 Channels” (p. 12)

CH	Function	DMX	Description
13	Play Speed	0	Empty Channel Set
		1–255	Play Speed 1
14	Color Mix Mode	0–255	
15	Dimmer 2	0–255	
16	Animation Wheel	0–255	
17	Animation Wheel Rotation		Same as CH 17 in the mode “17 Channels” (p. 12)
18	Dimmer 3	0–255	
34	Red 2	0–255	
35	Green 2	0–255	
36	Blue 2	0–255	

CH 18–33: 16 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 18); the table below gives each cell's channel numbers.

Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer
1	18	2	19	3	20	4	21	5	22	6	23
7	24	8	25	9	26	10	27	11	28	12	29
13	30	14	31	15	32	16	33				

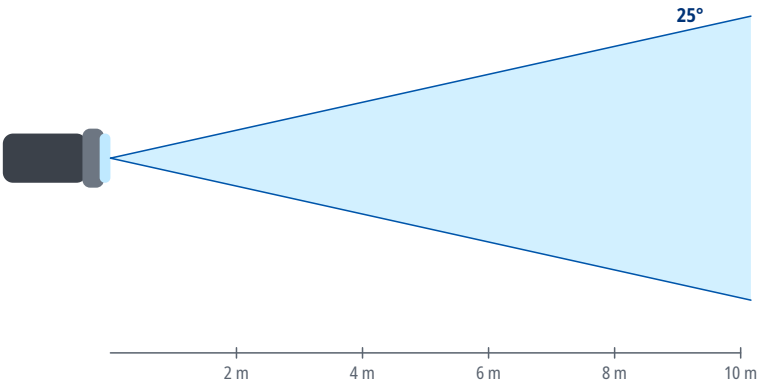
CH 34–129: 32 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 34–36); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	34	35	36	2	37	38	39	3	40	41	42
4	43	44	45	5	46	47	48	6	49	50	51
7	52	53	54	8	55	56	57	9	58	59	60
10	61	62	63	11	64	65	66	12	67	68	69
13	70	71	72	14	73	74	75	15	76	77	78
16	79	80	81	17	82	83	84	18	85	86	87
19	88	89	90	20	91	92	93	21	94	95	96
22	97	98	99	23	100	101	102	24	103	104	105
25	106	107	108	26	109	110	111	27	112	113	114
28	115	116	117	29	118	119	120	30	121	122	123
31	124	125	126	32	127	128	129				

10 Technical specifications

Parameter	Value
Light source	discharge lamp
Weight	7 kg
Ingress protection	IP65
Meaning of the IP code (IEC 60529)	Dust-tight; protected against water jets
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.

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.