DMX REFERENCE

CS-8000RGB FX MK2 v1

CS-8000RGB FX MK2

Laserworld



Manufacturer	Laserworld
GDTF file	Laserworld_CS-8000RGB_FX_MK2_v1_91522.gdtf
GDTF revision	0010 · 2025-03-29
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1 About this manual

This document describes the CS-8000RGB FX MK2 by Laserworld. It was compiled from the GDTF file Laserworld_CS-8000RGB_FX_MK2_v1_91522.gdtf from the GDTF-Share library.

File revision: “0010”.

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 Laserworld; 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	7.7 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Normal	18	28	1, 19, 37, 55, ...

No light? Check these channels

- Normal: 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 Installation

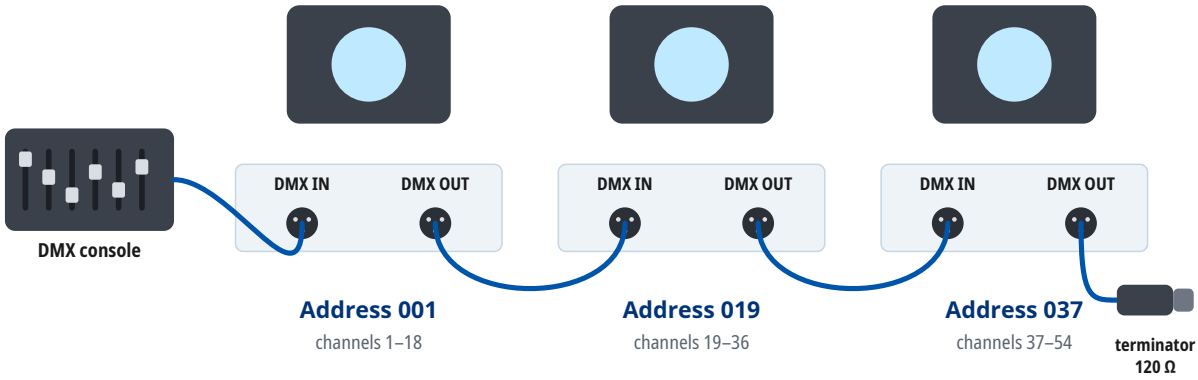
⚠ **WARNING**

- 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: 7.7 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 Normal: every unit occupies 18 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

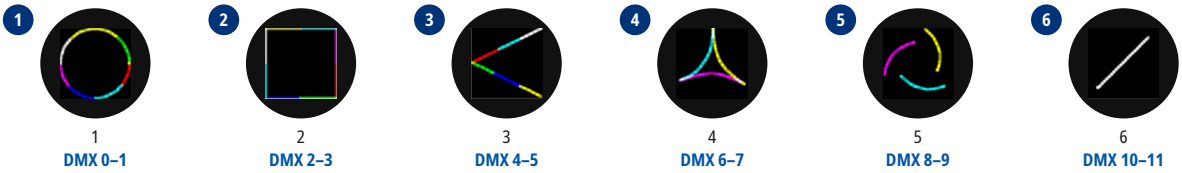
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Normal”: 18.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “Normal”, you can use, for example, the start addresses 1, 19, 37, 55.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

7 Functions at a glance

Functions in each DMX mode

	Normal 18 channels
Dimmer	1
Color mixing	16–18
Gobo wheel	2
Animation wheel	10
Effects / macros	10, 12–14

Gobo wheel



1	2	3	4	5	6
DMX 0–1	DMX 2–3	DMX 4–5	DMX 6–7	DMX 8–9	DMX 10–11
7	8	9	10	11	12
DMX 12–13	DMX 14–15	DMX 16–17	DMX 18–19	DMX 20–21	DMX 22–23
13	14	15	16	17	18
DMX 24–25	DMX 26–27	DMX 28–29	DMX 30–31	DMX 32–33	DMX 34–35
19	20	21	22	23	24
DMX 36–37	DMX 38–39	DMX 40–41	DMX 42–43	DMX 44–45	DMX 46–47
25	26	27	28	29	30
DMX 48–49	DMX 50–51	DMX 52–53	DMX 54–55	DMX 56–57	DMX 58–59
31	32	33	34	35	36
DMX 60–61	DMX 62–63	DMX 64–65	DMX 66–67	DMX 68–69	DMX 70–71
37	38	39	40	41	42
DMX 72–73	DMX 74–75	DMX 76–77	DMX 78–79	DMX 80–81	DMX 82–83
43	44	45	46	47	48
DMX 84–85	DMX 86–87	DMX 88–89	DMX 90–91	DMX 92–93	DMX 94–95


49
DMX 96–97


50
DMX 98–99


51
DMX 100–101


52
DMX 102–103


53
DMX 104–105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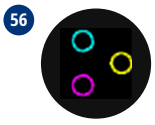
DMX 106–107


55
DMX 108–109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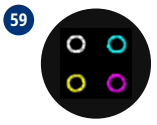
DMX 110–111


57
DMX 112–113


58
DMX 114–115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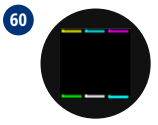
DMX 116–117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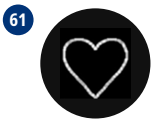
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DMX 120–121


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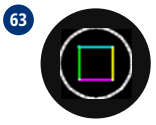
DMX 122–123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DMX 124–125


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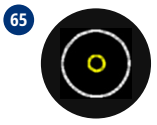
DMX 126–127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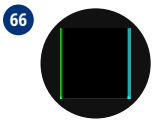
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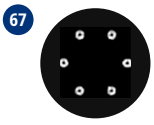
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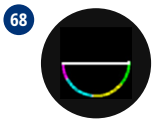
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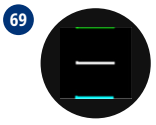
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DMX 138–139


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DMX 140–141


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DMX 142–143


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DMX 144–145


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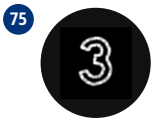
DMX 146–147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DMX 150–151


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DMX 152–153


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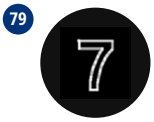
DMX 154–155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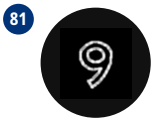
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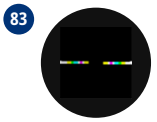
DMX 162–163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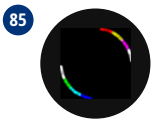
DMX 166–167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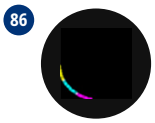
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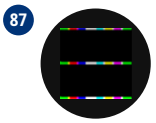
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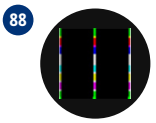
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DMX 176–177

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DMX 178–179

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DMX 180–181

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DMX 182–183

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DMX 186–187

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DMX 188–189

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DMX 190–191


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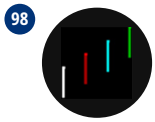
DMX 192–193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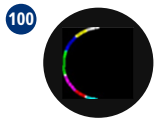
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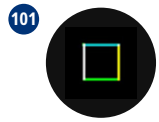
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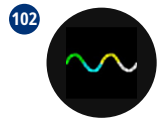
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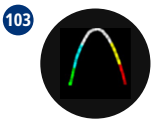
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DMX 208–209


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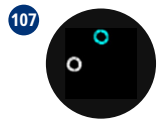
DMX 210–211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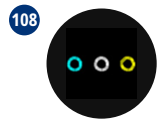
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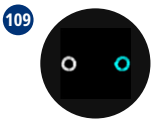
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DMX 218–219


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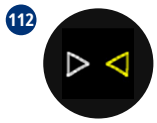
DMX 220–221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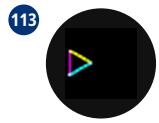
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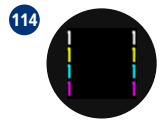
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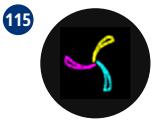
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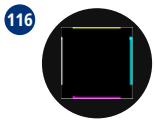
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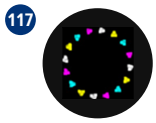
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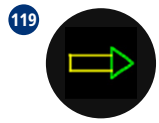
DMX 234–235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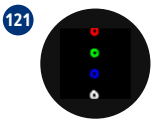
DMX 238–239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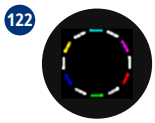
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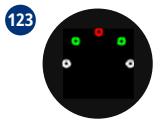
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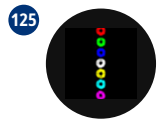
DMX 246–247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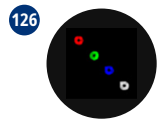
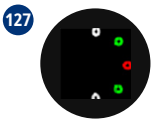
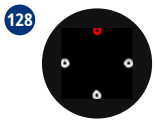
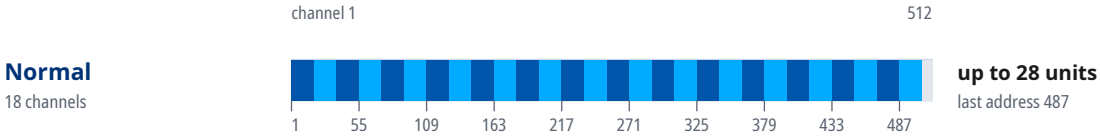

126
DMX 250–251


127
DMX 252–253


128
DMX 254–255

8 DMX channels

Units in one DMX universe



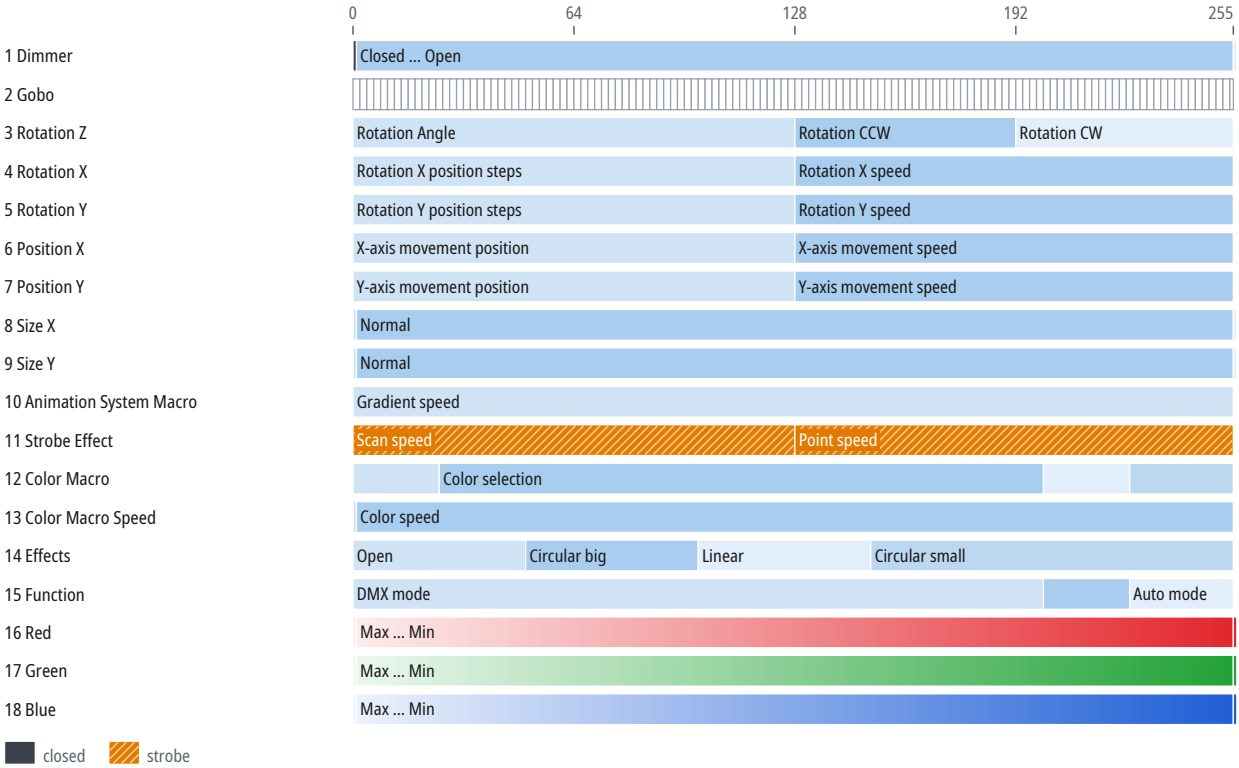
Start addresses of 20 units in the mode “Normal”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	91	11	181	16	271
2	19	7	109	12	199	17	289
3	37	8	127	13	217	18	307
4	55	9	145	14	235	19	325
5	73	10	163	15	253	20	343

Mode Normal

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

CH	Function	DMX	Description
2	Gobo	0–1	1
		2–3	2
		4–5	3
		6–7	4
		8–9	5
		10–11	6
		12–13	7
		14–15	8
		16–17	9
		18–19	10
		20–21	11
		22–23	12
		24–25	13
		26–27	14
		28–29	15
		30–31	16
		32–33	17
		34–35	18
		36–37	19
		38–39	20
		40–41	21
		42–43	22
		44–45	23
		46–47	24
		48–49	25
		50–51	26
		52–53	27
		54–55	28
		56–57	29
		58–59	30
		60–61	31
		62–63	32
		64–65	33
		66–67	34
		68–69	35
		70–71	36
		72–73	37
		74–75	38
		76–77	39
		78–79	40
		80–81	41
		82–83	42

CH	Function	DMX	Description
2	Gobo (continued)	84–85	43
		86–87	44
		88–89	45
		90–91	46
		92–93	47
		94–95	48
		96–97	49
		98–99	50
		100–101	51
		102–103	52
		104–105	53
		106–107	54
		108–109	55
		110–111	56
		112–113	57
		114–115	58
		116–117	59
		118–119	60
		120–121	61
		122–123	62
		124–125	63
		126–127	64
		128–129	65
		130–131	66
		132–133	67
		134–135	68
		136–137	69
		138–139	70
		140–141	71
		142–143	72
		144–145	73
		146–147	74
		148–149	75
		150–151	76
		152–153	77
		154–155	78
		156–157	79
		158–159	80
		160–161	81
		162–163	82
		164–165	83
		166–167	84

CH	Function	DMX	Description
2	Gobo (continued)	168–169	85
		170–171	86
		172–173	87
		174–175	88
		176–177	89
		178–179	90
		180–181	91
		182–183	92
		184–185	93
		186–187	94
		188–189	95
		190–191	96
		192–193	97
		194–195	98
		196–197	99
		198–199	100
		200–201	101
		202–203	102
		204–205	103
		206–207	104
		208–209	105
		210–211	106
		212–213	107
		214–215	108
		216–217	109
		218–219	110
		220–221	111
		222–223	112
		224–225	113
		226–227	114
		228–229	115
		230–231	116
		232–233	117
		234–235	118
		236–237	119
		238–239	120
		240–241	121
		242–243	122
		244–245	123
		246–247	124
		248–249	125
		250–251	126

CH	Function	DMX	Description
2	Gobo (continued)	252–253	127
		254–255	128
3	Rotation Z	0–127	Rotation Angle
		128–191	Rotation CCW
		192–255	Rotation CW
4	Rotation X	0–127	Rotation X position steps
		128–255	Rotation X speed
5	Rotation Y	0–127	Rotation Y position steps
		128–255	Rotation Y speed
6	Position X	0–127	X-axis movement position
		128–255	X-axis movement speed
7	Position Y	0–127	Y-axis movement position
		128–255	Y-axis movement speed
8	Size X	0	Max
		1–254	Normal
		255	Min
9	Size Y	0	Max
		1–254	Normal
		255	Min
10	Animation System Macro		Pattern gradient
		0–255	Gradient speed
11	Strobe Effect		Scan Speed
		0–127	Scan speed
		128–255	Point speed
12	Color Macro	0–24	Original color
		25–199	Color selection
		200–224	Automatic color change effect
		225–255	Rainbow color change effect
13	Color Macro Speed		Color speed
		0	Color effect speed
		1–255	Color speed
14	Effects		Grating effect
		0–49	Open
		50–99	Circular big
		100–149	Linear
		150–255	Circular small
15	Function		Operation mode
		0–199	DMX mode
		200–224	Sound mode
		225–255	Auto mode
16	Red		Red adjust
		0	Max

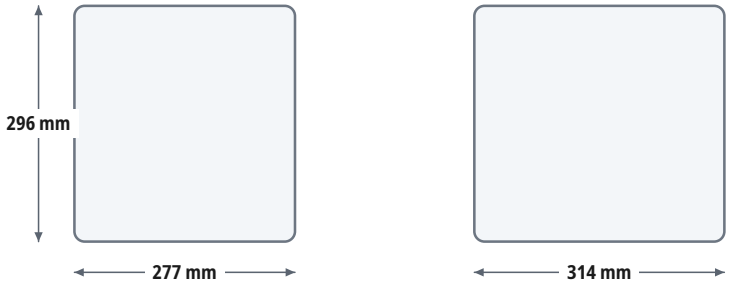
CH	Function	DMX	Description
16	Red (continued)	1–254	Max … Min
		255	Min
17	Green		Green adjust
		0	Max
		1–254	Max … Min
		255	Min
18	Blue		Blue adjust
		0	Max
		1–254	Max … Min
		255	Min

9 Technical specifications

Parameter	Value
Weight	7.7 kg
Operating temperature	10 to 35 °C

Dimensions

weight 7.7 kg



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.