DMX REFERENCE

RB90 Deco Blinder

User Test

Manufacturer	User Test
GDTF file	User_Test_RB90_Deco_Blinder_136284.gdtf
GDTF revision	BeamZ RB90 Deco 2-0 · 2026-03-31
Generated	2026-11-24

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1 About this manual

This document describes the RB90 Deco Blinder by User Test. It was compiled from the GDTF file User_Test_RB90_Deco_Blinder_136284.gdtf from the GDTF-Share library.

File revision: “BeamZ RB90 Deco 2-0”.

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	5.3 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
16 Channels	16	32	1, 17, 33, 49, ...
34 Channels	34	15	1, 35, 69, 103, ...

No light? Check these channels

- 16 Channels: CH 1 Dimmer 1 above 0; CH 2 Shutter 1 at 0–8, 132–139, 182–189 or 232–255 “No function”; CH 3 Dimmer 2 above 0; CH 4 Dimmer 3 above 0; CH 5 Dimmer 4 above 0; CH 8 Shutter 2 at 0–8 “No function”
- 34 Channels: CH 1 Dimmer 1 above 0; CH 2 Shutter 1 at 0–8, 132–139, 182–189 or 232–255 “No function”; CH 3 Dimmer 2 above 0; CH 4 Dimmer 3 above 0; CH 5 Dimmer 4 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.

⚠ WARNING

- This device produces very intense flashes of light.
- Flash rates of about 3 to 30 flashes per second carry the highest risk for people with photosensitive epilepsy.
- Do not aim the device into the eyes of the audience or performers at close range.
- At public events, always give clear advance notice that strobe effects will be used.

4 Product description

Description in the GDTF file

“Combine retro trend with modern LED technology! The Deco Retro Blinder is a unique and stylish LED effect that can emit very warm, vintage-coloured light via its 3x 30W High power LEDs, as well as RGB-coloured effects via the additional 72x SMD LEDs located around the perimeter of its highly reflective aluminium inner housing. Each of its amber coloured COB LEDs can be independently controlled via DMX as a strobe effect with full RGB colour mix. This dual retro effect creates vibrant lighting with several spectacular visual effects.”

5 Installation

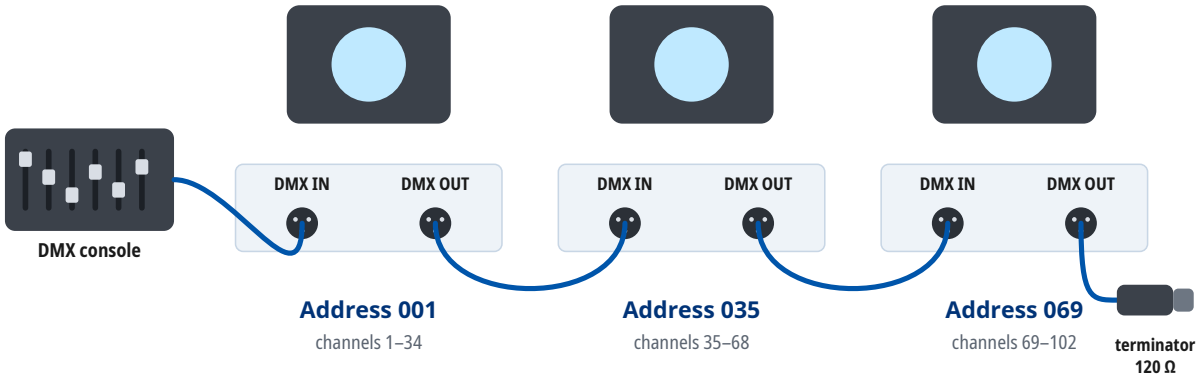
⚠ **WARNING**

- 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: 5.3 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 34 Channels: every unit occupies 34 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

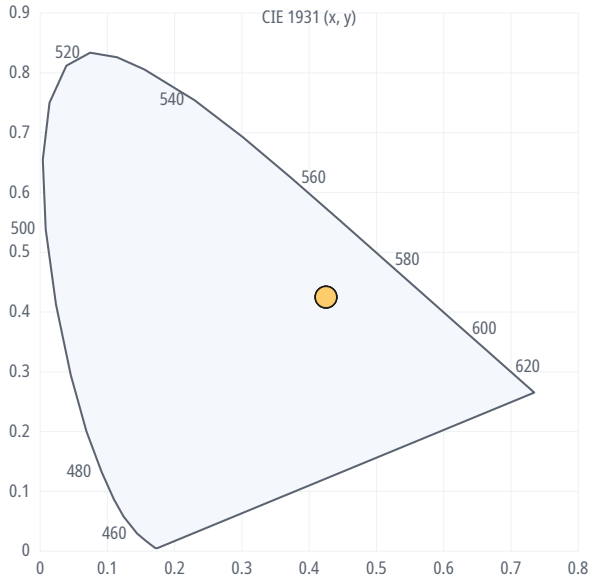
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “34 Channels”: 34.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “34 Channels”, you can use, for example, the start addresses 1, 35, 69, 103.
- 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

	16 Channels 16 channels	34 Channels 34 channels
Dimmer	1, 3–5	1, 3–5
Shutter / strobe	2, 8	2, 8
Color mixing	10–15	9–26, 28–33
Effects / macros	6, 7, 9, 16	6, 7, 27, 34
Pixel control	✓	✓

LED colors and the colors they mix

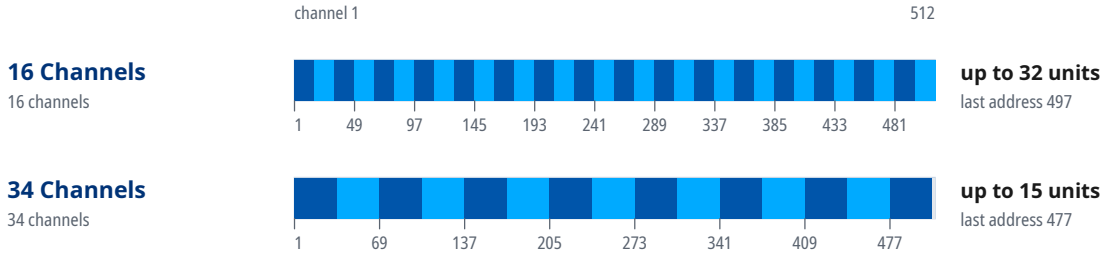


LED	x	y
Emitter 1	0.425	0.425
Emitter 2	0.425	0.425
Emitter 3	0.425	0.425

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

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “34 Channels”

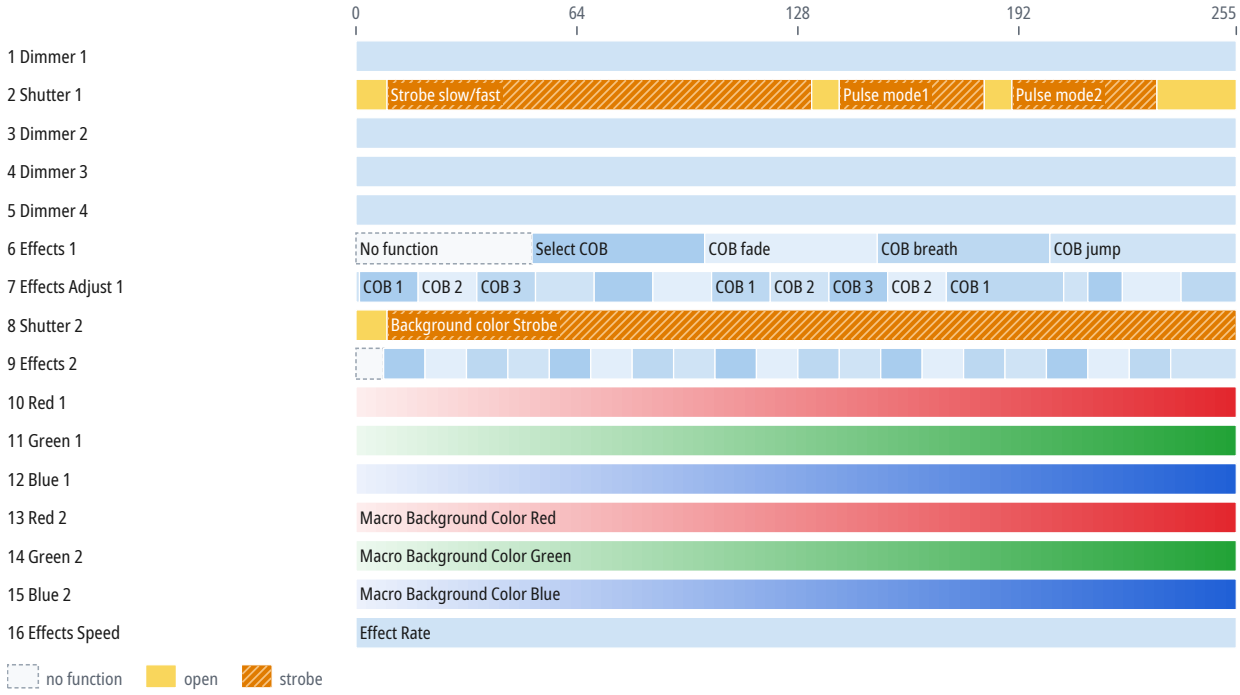
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	171	11	341	16	U2 · 1
2	35	7	205	12	375	17	U2 · 35
3	69	8	239	13	409	18	U2 · 69
4	103	9	273	14	443	19	U2 · 103
5	137	10	307	15	477	20	U2 · 137

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 16 Channels

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 2 Shutter 1 at 0–8, 132–139, 182–189 or 232–255 “No function”; CH 3 Dimmer 2 above 0; CH 4 Dimmer 3 above 0; CH 5 Dimmer 4 above 0; CH 8 Shutter 2 at 0–8 “No function”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 3 Dimmer 2 255, CH 4 Dimmer 3 255, CH 5 Dimmer 4 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Shutter 1	0–8	No function
		9–131	Strobe slow/fast
		132–139	No function
		140–181	Pulse mode1
		182–189	No function
		190–231	Pulse mode2
		232–255	No function
3	Dimmer 2	0–255	
4	Dimmer 3	0–255	
5	Dimmer 4	0–255	
6	Effects 1	0–50	No function
		51–100	Select COB
		101–150	COB fade
		151–200	COB breath
		201–255	COB jump
7	Effects Adjust 1		COB Control

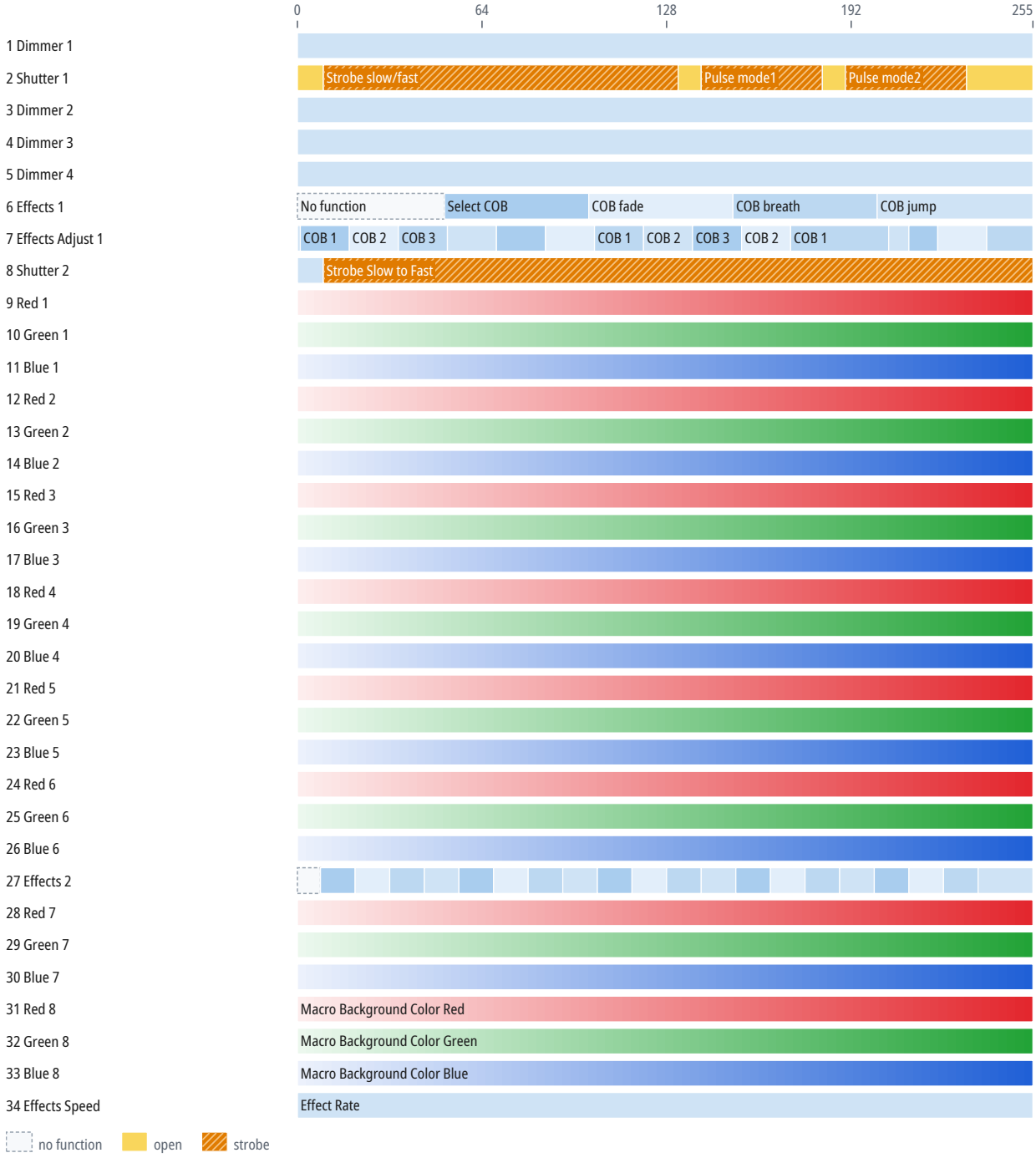
CH	Function	DMX	Description
7	Effects Adjust 1 (continued)	0	COB Control
		1–17	COB 1
		18–34	COB 2
		35–51	COB 3
		52–68	COB 1+2
		69–85	COB 2+3
		86–102	COB 1+3
		103–119	COB 1
		120–136	COB 2
		137–153	COB 3
		154–170	COB 2
		171–204	COB 1
		205–211	COB 1+2
		212–221	COB 1+2 ... COB 1+2+3
		222–238	COB 1+2+3
		239–255	COB 2+3
8	Shutter 2	0–8	No function
		9–255	Background color Strobe
9	Effects 2		Color Macro 1 1
		0–7	No function
		8–19	Background Macro 1
		20–31	Background Macro 2
		32–43	Background Macro 3
		44–55	Background Macro 4
		56–67	Background Macro 5
		68–79	Background Macro 6
		80–91	Background Macro 7
		92–103	Background Macro 8
		104–115	Background Macro 9
		116–127	Background Macro 10
		128–139	Background Macro 11
		140–151	Background Macro 12
		152–163	Background Macro 13
		164–175	Background Macro 14
		176–187	Background Macro 15
		188–199	Background Macro 16
		200–211	Background Macro 17
		212–223	Background Macro 18
		224–235	Background Macro 19
		236–255	Background Macro 20
10	Red 1	0–255	
11	Green 1	0–255	

CH	Function	DMX	Description
12	Blue 1	0–255	
13	Red 2		Macro Background Color Red
		0–255	Macro Background Color Red
14	Green 2		Macro Background Color Green
		0–255	Macro Background Color Green
15	Blue 2		Macro Background Color Blue
		0–255	Macro Background Color Blue
16	Effects Speed		Effect Rate
		0–255	Effect Rate

Mode 34 Channels

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 2 Shutter 1 at 0–8, 132–139, 182–189 or 232–255 “No function”; CH 3 Dimmer 2 above 0; CH 4 Dimmer 3 above 0; CH 5 Dimmer 4 above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 1 255, CH 3 Dimmer 2 255, CH 4 Dimmer 3 255, CH 5 Dimmer 4 255.

Channel functions at a glance



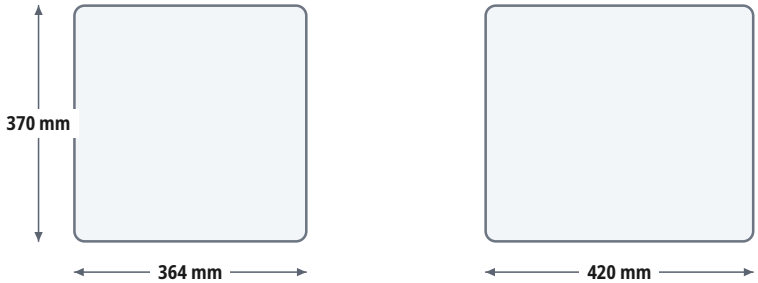
CH	Function	DMX	Description
1	Dimmer 1	0–255	
2	Shutter 1		Same as CH 2 in the mode “16 Channels” (p. 9)
3	Dimmer 2	0–255	
4	Dimmer 3	0–255	
5	Dimmer 4	0–255	
6	Effects 1		Same as CH 6 in the mode “16 Channels” (p. 9)
7	Effects Adjust 1		Same as CH 7 in the mode “16 Channels” (p. 9)
8	Shutter 2	0–8	Shutter 1 1
		9–255	Strobe Slow to Fast
9	Red 1	0–255	
10	Green 1	0–255	
11	Blue 1	0–255	
12	Red 2	0–255	
13	Green 2	0–255	
14	Blue 2	0–255	
15	Red 3	0–255	
16	Green 3	0–255	
17	Blue 3	0–255	
18	Red 4	0–255	
19	Green 4	0–255	
20	Blue 4	0–255	
21	Red 5	0–255	
22	Green 5	0–255	
23	Blue 5	0–255	
24	Red 6	0–255	
25	Green 6	0–255	
26	Blue 6	0–255	
27	Effects 2		Same as CH 9 in the mode “16 Channels” (p. 10)
28	Red 7	0–255	
29	Green 7	0–255	
30	Blue 7	0–255	
31	Red 8		Macro Background Color Red
		0–255	Macro Background Color Red
32	Green 8		Macro Background Color Green
		0–255	Macro Background Color Green
33	Blue 8		Macro Background Color Blue
		0–255	Macro Background Color Blue
34	Effects Speed		Same as CH 16 in the mode “16 Channels” (p. 11)

10 Technical specifications

Parameter	Value
Weight	5.3 kg
Operating temperature	0 to 40 °C

Dimensions

weight 5.3 kg



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.