DMX REFERENCE

Nexys RGBW

Blizzard Lighting Nexys RGBW 80W Modular Retro Blinder

Blizzard Lighting LLC

Manufacturer	Blizzard Lighting LLC
GDTF file	Blizzard_Lighting_LLC_Nexys_RGBW_49644.gdtf
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1 About this manual

This document describes the Blizzard Lighting Nexys RGBW 80W Modular Retro Blinder by Blizzard Lighting LLC. It was compiled from the GDTF file Blizzard_Lighting_LLC_Nexys_RGBW_49644.gdtf from the GDTF-Share library.

File revision: “Update shutter”.

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 Blizzard Lighting LLC; 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	2.5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
18Ch Mode	18	28	1, 19, 37, 55, ...
45Ch Mode	45	11	1, 46, 91, 136, ...
57Ch Mode	57	8	1, 58, 115, 172, ...

No light? Check these channels

- 18Ch Mode: CH 1 Dimmer above 0; CH 2 Shutter at 0–3, 104–107 or 252–255 “Shutter Open”
- 45Ch Mode: CH 1 Dimmer above 0; CH 2 Shutter at 0–3, 104–107 or 252–255 “Shutter Open”
- 57Ch Mode: CH 1 Dimmer above 0; CH 2 Shutter at 0–3, 104–107 or 252–255 “Shutter Open”


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 Installation

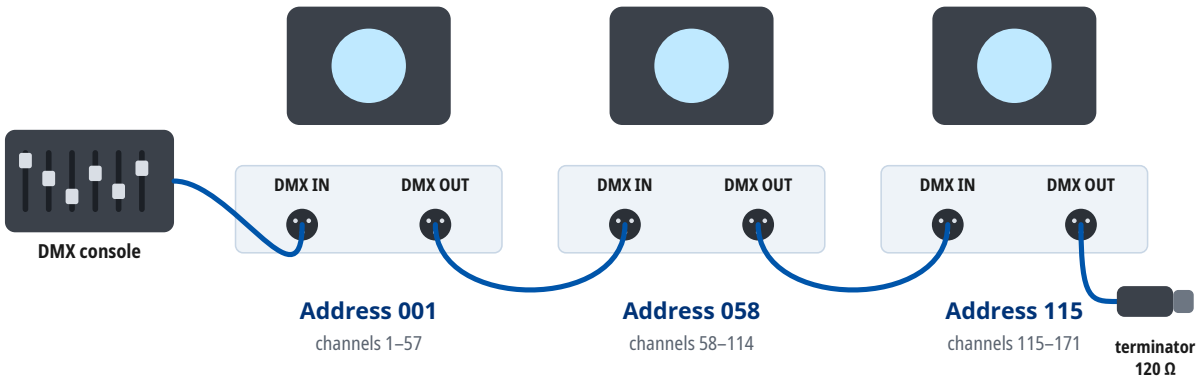
⚠ WARNING

- 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: 2.5 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 57Ch Mode: every unit occupies 57 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 “57Ch Mode”: 57.
- 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 “57Ch Mode”, you can use, for example, the start addresses 1, 58, 115, 172.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

7 Functions at a glance

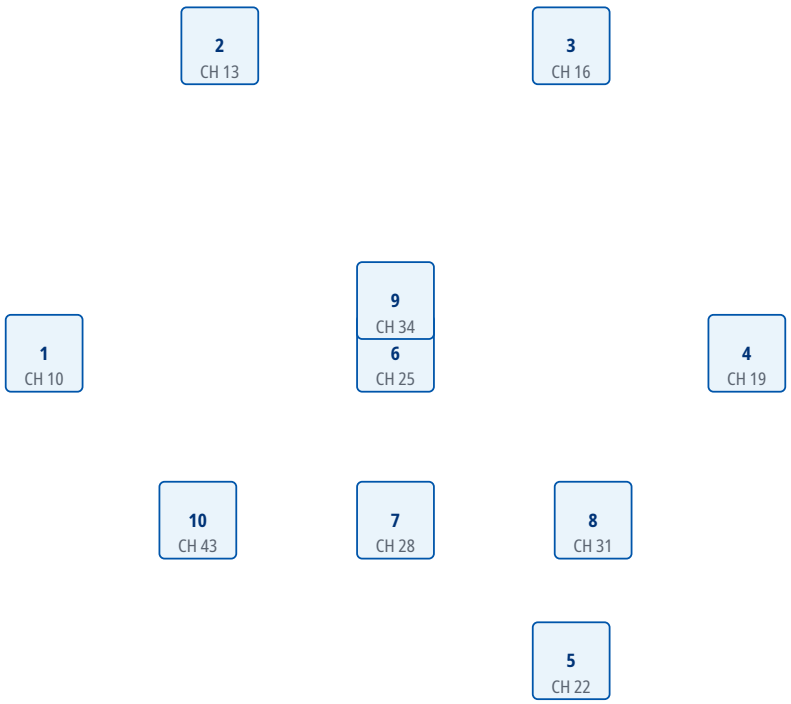
Functions in each DMX mode

	18Ch Mode 18 channels	45Ch Mode 45 channels	57Ch Mode 57 channels
Dimmer	1	1	1
Shutter / strobe	2	2	2
Color mixing	3–12	3–6, 10–45	3–6, 10–51
Color wheel	14, 17		53, 56
Effects / macros	13, 15, 16, 18		52, 54, 55, 57
Pixel control		12 cells	14 cells

Color wheel

1. Red — DMX 0–19
2. Orange — DMX 20–39
3. Yellow — DMX 40–59
4. Green — DMX 60–79
5. Teal — DMX 80–99
6. Blue — DMX 100–119
7. Indigo — DMX 120–139
8. Violet — DMX 140–159
9. Magenta — DMX 160–179
10. White — DMX 180–199

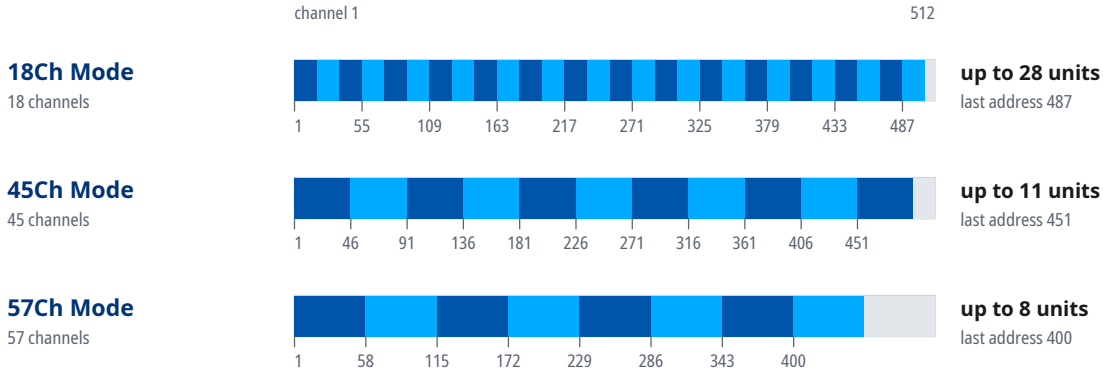
Cells (pixels)



10 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “57Ch Mode”.

8 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “57Ch Mode”

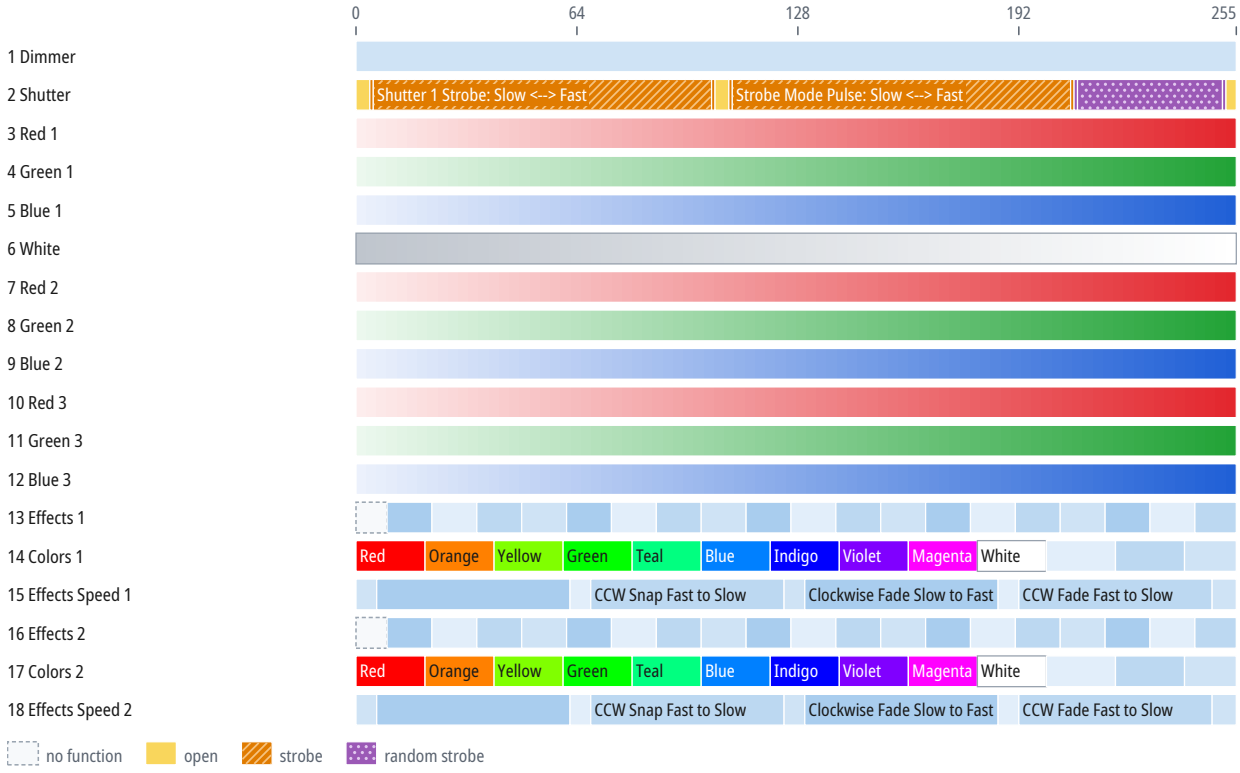
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	286	11	U2 · 115	16	U2 · 400
2	58	7	343	12	U2 · 172	17	U3 · 1
3	115	8	400	13	U2 · 229	18	U3 · 58
4	172	9	U2 · 1	14	U2 · 286	19	U3 · 115
5	229	10	U2 · 58	15	U2 · 343	20	U3 · 172

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 18Ch Mode

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 2 Shutter at 0–3, 104–107 or 252–255 “Shutter Open”.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Shutter	0–3	Shutter 1: Shutter Open
		4	Shutter 1 Strobe: Slow
		5–102	Shutter 1 Strobe: Slow <--> Fast (1–20 Hz)
		103	Shutter 1 Strobe: Fast
		104–107	Shutter 1 Strobe: Shutter Open
		108	Strobe Mode Pulse: Slow
		109–206	Strobe Mode Pulse: Slow <--> Fast (1–20 Hz)
		207	Strobe Mode Pulse: Fast
		208	Shutter 1 Strobe Random: Slow
		209–250	Shutter 1 Strobe Random: Slow <--> Fast (1–20 Hz)
		251	Shutter 1 Strobe Random: Fast
		252–255	Shutter 1 Strobe Random: Shutter Open
3	Red 1	0–255	
4	Green 1	0–255	
5	Blue 1	0–255	
6	White	0–255	
7	Red 2	0–255	

CH	Function	DMX	Description
8	Green 2	0–255	
9	Blue 2	0–255	
10	Red 3	0–255	
11	Green 3	0–255	
12	Blue 3	0–255	
13	Effects 1	0–8	No Function
		9–21	1 Segment Chase
		22–34	2 Segment Chase
		35–47	3 Segment Chase
		48–60	4 Segment Chase
		61–73	5 Segment Chase
		74–86	Segments fill from 1 to all
		87–99	Segments empty from all to 1
		100–112	Segments fill from none to all then empty from all to 1
		113–125	Segments empty from all to none then fill from 1 to all
		126–138	2 opposite segments chase
		139–151	4 opposite segments chase
		152–164	2 opposite segments fill from 2 to all
		165–177	2 opposite segments empty from all to 2
		178–190	2 opposite segments fill from none to all then empty from all to 2
		191–203	Segments fill in opposite directions 1 to all
		204–216	Segments empty in opposite directions all to 1
		217–229	Segments fill then empty in opposite directions
		230–242	3 segment flip flop rotate
		243–255	All chases loop
14	Colors 1	0–19	Red
		20–39	Orange
		40–59	Yellow
		60–79	Green
		80–99	Teal
		100–119	Blue
		120–139	Indigo
		140–159	Violet
		160–179	Magenta
		180–199	White
		200–219	Color Chase Snap
		220–239	Color Chase Fade
		240–255	User Defined
15	Effects Speed 1	0–5	Stop
		6–61	Clockwises Snap Slow to Fast
		62–67	Stop

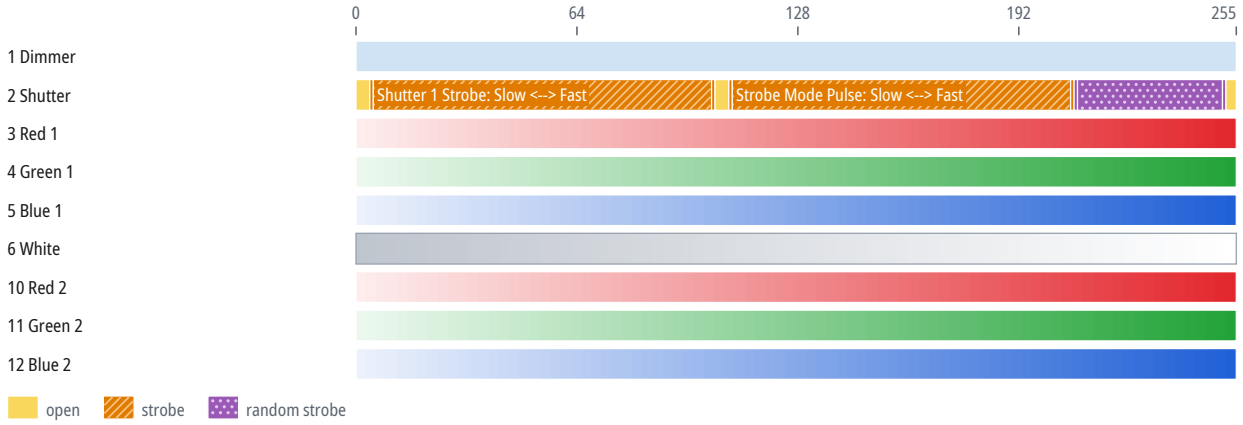
CH	Function	DMX	Description
15	Effects Speed 1 (continued)	68–123	CCW Snap Fast to Slow
		124–129	Stop
		130–185	Clockwise Fade Slow to Fast
		186–191	Stop
		192–247	CCW Fade Fast to Slow
		248–255	Stop
16	Effects 2	0–8	No Function
		9–21	1 Segment Chase
		22–34	2 Segment Chase
		35–47	3 Segment Chase
		48–60	4 Segment Chase
		61–73	5 Segment Chase
		74–86	Segments fill from 1 to all
		87–99	Segments empty from all to 1
		100–112	Segments fill from none to all then empty from all to 1
		113–125	Segments empty from all to none then fill from 1 to all
		126–138	2 opposite segments chase
		139–151	4 opposite segments chase
		152–164	2 opposite segments fill from 2 to all
		165–177	2 opposite segments empty from all to 2
		178–190	2 opposite segments fill from none to all then empty from all to 2
		191–203	Segments fill in opposite directions 1 to all
		204–216	Segments empty in opposite directions all to 1
		217–229	Segments fill then empty in opposite directions
		230–242	3 segment flip flop rotate
		243–255	All chases loop
17	Colors 2	0–19	Red
		20–39	Orange
		40–59	Yellow
		60–79	Green
		80–99	Teal
		100–119	Blue
		120–139	Indigo
		140–159	Violet
		160–179	Magenta
		180–199	White
		200–219	Color Chase Snap
		220–239	Color Chase Fade
		240–255	User Defined
18	Effects Speed 2	0–5	Stop
		6–61	Clockwises Snap Slow to Fast

CH	Function	DMX	Description
18	Effects Speed 2 (continued)	62–67	Stop
		68–123	CCW Snap Fast to Slow
		124–129	Stop
		130–185	Clockwise Fade Slow to Fast
		186–191	Stop
		192–247	CCW Fade Fast to Slow
		248–255	Stop

Mode 45Ch Mode

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 2 Shutter at 0–3, 104–107 or 252–255 “Shutter Open”.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Shutter		Same as CH 2 in the mode “18Ch Mode” (p. 9)
3	Red 1	0–255	
4	Green 1	0–255	
5	Blue 1	0–255	
6	White	0–255	
10	Red 2	0–255	
11	Green 2	0–255	
12	Blue 2	0–255	

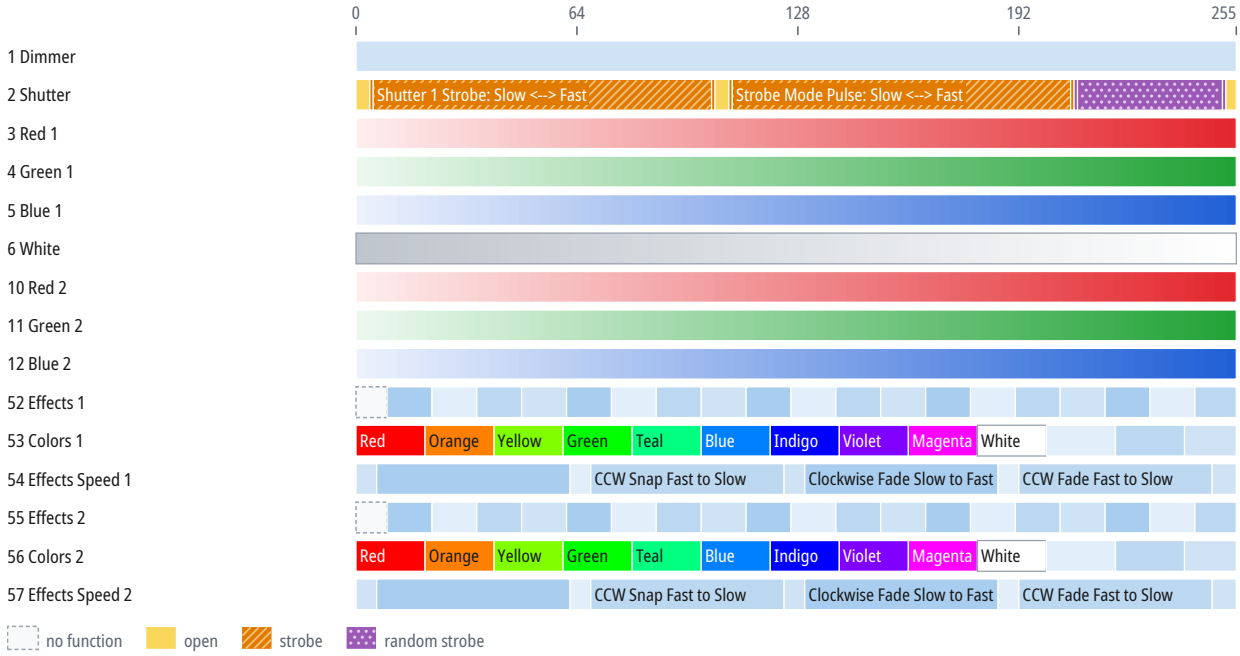
CH 10–45: 12 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 10–12); the table below gives each cell's channel numbers.

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

Mode 57Ch Mode

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 2 Shutter at 0–3, 104–107 or 252–255 “Shutter Open”.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Shutter		Same as CH 2 in the mode “18Ch Mode” (p. 9)
3	Red 1	0–255	
4	Green 1	0–255	
5	Blue 1	0–255	
6	White	0–255	
10	Red 2	0–255	
11	Green 2	0–255	
12	Blue 2	0–255	
52	Effects 1		Same as CH 13 in the mode “18Ch Mode” (p. 10)
53	Colors 1		Same as CH 14 in the mode “18Ch Mode” (p. 10)
54	Effects Speed 1		Same as CH 15 in the mode “18Ch Mode” (p. 10)
55	Effects 2		Same as CH 16 in the mode “18Ch Mode” (p. 11)
56	Colors 2		Same as CH 17 in the mode “18Ch Mode” (p. 11)
57	Effects Speed 2		Same as CH 18 in the mode “18Ch Mode” (p. 11)

CH 10–51: 14 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 10–12); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	10	11	12	2	13	14	15	3	16	17	18
4	19	20	21	5	22	23	24	6	25	26	27
7	28	29	30	8	31	32	33	9	34	35	36
10	37	38	39	11	40	41	42	12	43	44	45
13	46	47	48	14	49	50	51				

9 Technical specifications

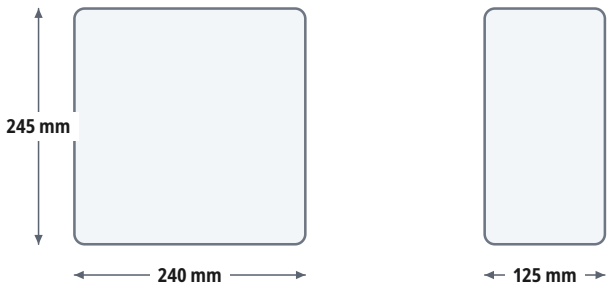
Parameter	Value
Light source	LED
Weight	2.5 kg
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–20 Hz

Dimensions

weight 2.5 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.